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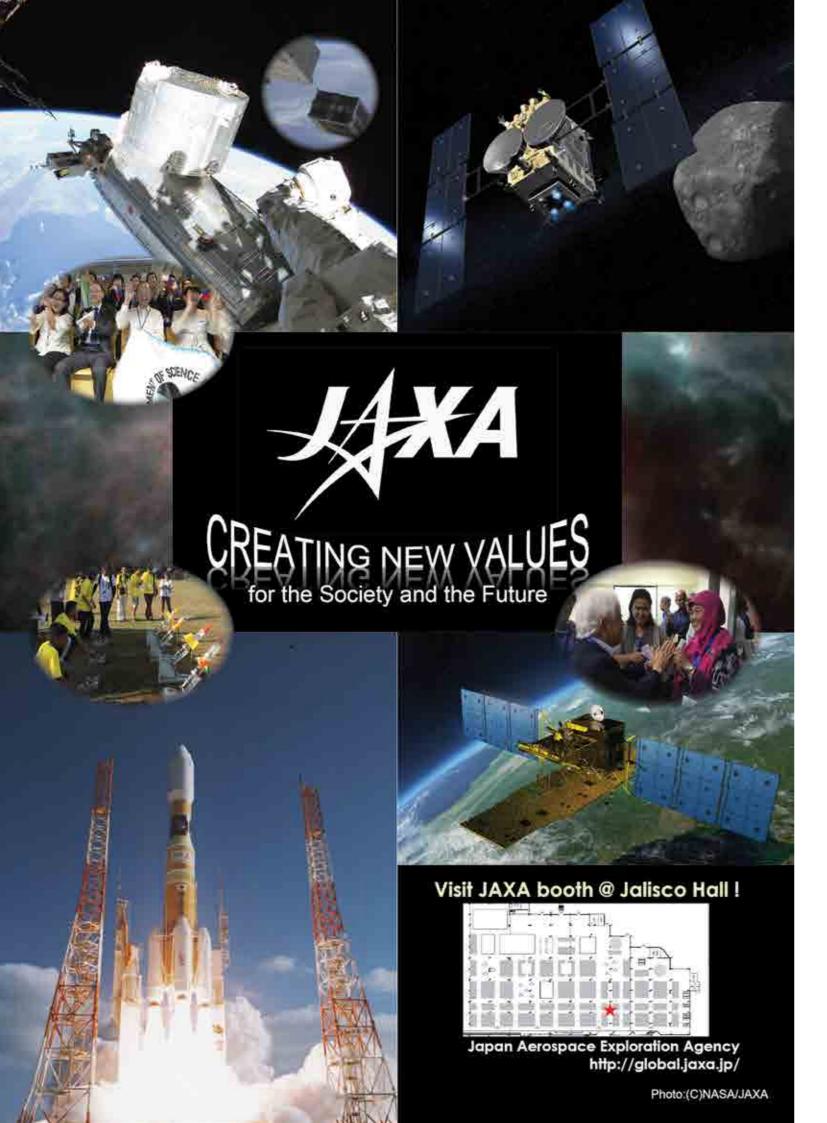


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Contents

τ. /	vveicon	ie wessages
1	1.1	Message from the President of the International Astronautical Federation
1	1.2	Message from the Local Organising Committee (LOC)
1	1.3	Message from the International Programme Committee (IPC) Co-Chairs
2. (Organis	ers
2	2.1	The International Astronautical Federation (IAF)
2	2.2	The International Academy of Astronautics (IAA)
2	2.3	The International Institute of Space Law (IISL)
2	2.4	The Local Organising Committee
3. I	Practica	Il Information
	3.1	City Map of Guadalajara
3	3.2	Guadalajara Airport & Ground Transportation
3	3.3	Registration
3	3.4	Congress Venue Floor Plans
3	3.5	Offices Opening Hours
3	3.6	Information for Authors
	3.7	Congress Proceedings
	3.8	Useful Information
		ss Programme
4	4.1	Programmes at a Glance
4	4.2	Day-by-Day
_	4.3	Meeting Schedule
		al Programme
į	5.1	Category Coordinators and Judges of the Interactive Presentations Competition
į	5.2	Symposium Keynote Speakers
į	5.3	Technical Sessions by Symposium
į	5.4	Technical Session Papers Ordered by Symposium
. 9	Studen	ts And Young Professionals Events
	6.1	Young Professionals events
	6.2	Students events
	6.3	IAF Grant and Recognition programmes for students and YP's
		ted Programmes and Events
	ASSOCIA 7.1	IAF 3G IDEA
	7.2	UN/IAF Workshop
	7.2 7.3	IAF/ISEB Educators Professional Development Workshop
	7.3 7.4	Cross Cultural Communications and Presentation Workshop
	7.5 7.6	IAA Academy Day
	7.6	International Meetings for Members of Parliaments
	7.7 7 .0	IAC Hosts Summit
	7.8	IISL Moot Court Event
	7.9	15 th Space Generation Congress (SGC)
	7.10	AEM Forum & AEM Industry Forum Programmes
. /	Awards	
8	8.1	IAF World Space Award
8	8.2	IAF Allan D. Emil Memorial Award
8	8.3	IAF Frank J. Malina Astronautics Medal
8	8.4	IAF Hall of Fame
8	8.5	IAF Interactive Presentations Award
8	8.6	IISL Awards 2016
. [Exhibiti	on
	9.1	General information
	9.2	Exhibition Area Layout
	9.3	Exhibitors in Alphabetical Order
	9.3 9.4	Exhibitors List
.0. 9	Social E	vents
1. /	Author	Index

International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico

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. Welcome Messages

1.1 Message from the President of the International Astronautical Federation



Welcome to the 67th International Astronautical Congress (IAC) in Guadalajara! This is the first time for the IAC to be held in Mexico and the third time to return to Latin America. Previously, the 49th and 20th IACs were held in Brazil and Argentina respectively. It is very much exciting to be back to this amazing region and I am delighted to welcome you in the beautiful city of Guadalajara.

The theme of this year's congress "Making space accessible and affordable to all countries" is especially suitable, as Latin-America is an emerging region where the growing number of nations are rapidly progressing their space programs. The challenge to make space accessible for all is a critical mission worldwide. We are in an exciting era where space technology is becoming more affordable to all countries

and are realizing the benefits to develop their space programs to overcome social challenges and to build future space industry. In the IAC 2016 Final Programme you will find all about this exciting and world class congress. There will be a wide range of topics through interesting Technical Sessions, Plenaries and GNF Events alongside an impressive Exhibition and numerous Associated Events.

I would like to express my sincere gratitude to all the teams who made this another fantastic IAC happen! This congress would not exist without the dedication and the hard work of the International Programme Committee, the Local Organising Committee, the IAF Secretariat and all the other event organisers and volunteers. Last, but not least, I appreciate your participation to the IAC Guadalajara.

I believe that this IAC will spur international cooperation, lead to fruitful collaborations between advanced and emerging countries, with sharing of knowledge to secure a better future for all of us! The IAC is a are true platform for ALL. Enjoy Guadalajara and this premier event!

Kiyoshi Higuchi

President International Astronautical Federation



1.2 Message from the Local Organising Committee



Please be welcome to Mexico, a country with a kind, supportive, and peaceful vocation, with global responsibility, and a strong commitment to the progress and the major causes of mankind.

Our country has already established the Mexican Space Agency (AEM), which has been wonderfully received by the global space community since its entry into full operation in 2013. In nearly three years, in Mexico we have redoubled efforts and achieved important distinctions, as the Vice Presidency of the International Academy of Astronautics in 2015.

As well as being the venue for the Head of Space Agencies Summit in 2015 and the International Astronautical Congress in 2016.

Mexico is a country in motion and full transformation!

This has been possible thanks to the great vision of state and future of President Enrique Peña Nieto, who introduced for the first time in the country's history the concept of space infrastructure, in the National Development Plan 2013-2018.

As well as the invaluable support of the Secretary of Communications and Transport, Gerardo Ruiz Esparza, whose example of tireless work inspires us every day to strive for the welfare of future generations.

And thanks also to the Undersecretary of Communications, Monica Aspe Bernal, committed, with inexhaustible energy, to the task of fully positioning Mexico into global modernity, knowledge and progress.

The eyes of the world have witnessed how Mexico has changed, as well as in the Space industry.

Therefore, those attending to the IAC 2016 get to know a new Mexico, young and innovative country.

Thank you very much for joining us on the great mission of Moving Mexico into space.

Francisco Javier Mendieta Jiménez

General Director,
Mexican Space Agency (AEM)
President, IAC 2016 Local Organising Committee



International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico





1.3 Message from the International Programme Committee (IPC) **Co-Chairs**

Dear Colleagues and Friends,

We are very pleased to welcome all of you to the 67th International Astronautical Congress, organized for the first time in the traditional city of Guadalajara, the pearl of Jalisco state in Mexico.

Around the theme "Making space accessible and affordable to all countries" the IAC 2016 conference program, and the agendas of associated events such as the Space Generation Congress, the United Nations/IAF Workshop, the International Meeting for Members of Parliament, the IAA Academy Day, the Young Professionals Workshop, and the IAF International Students Workshop will emphasize the importance of promoting international cooperation to ensure that all countries can be part of space exploration, and become major contributors to the space sector. The second Mexican Congress in Space Medicine has been included as a pre-congress activity. It is our intention that all these events represent an excellent occasion to celebrate B2B encounters, to interact with the companies and service providers to the space community, and to take part in a multidisciplinary interchange of discoveries, recent findings, and future projects with an international scientific community dedicated to space activities.

Along with the professional program, various educational and outreach activities will be showing the benefits and opportunities of space study and exploration to teachers, students and kids from Jalisco state.

Take the opportunity to participate in the social activities, and tours that are part of the social program and the chance to taste the varied Mexican gastronomy and live the hospitality of Mexico. We hope you find the IAC 2016 an excellent forum to share your research and ideas with a broad and dynamic scientific space community. Stay tuned on the official web page, the social networks, and the dedicated application. Welcome to Guadalajara and enjoy the IAC 2016!



Sandra I. Ramírez (UAEM).



Naomi Mathers Advanced Instrumentation and Technology Centre Australia

2016 IPC Co-Chairs



Organisers

2.1 The International Astronautical Federation

Created in 1951 to foster dialogue between scientists around the world, and to support international cooperation in all spacerelated activities, the IAF to this day continues to connect space people. The Federation is the world's leading space advocacy body with over 300 members, including all key space agencies, companies, societies, associations and institutes across across 6 continents and 66 countries. Over 40 administrative and technical committees support the Federation in its mission to advance knowledge about space and to foster the development of space assets by facilitating global cooperation. At its annual International Astronautical Congress (IAC) and other thematic conferences, the IAF brings its multidisciplinary and international

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IAF Member Organisations 2016

A9C Capital	Bahrain	Association of Arab Remote Sensing Centers	Libya
Access e.V.	Germany	(AARSC)	,
Advanced Instrumentation and Technology	Australia	Association of Space Explorers (ASE)	United States
Centre (AITC)		Associazione Italiana di Aeronautica e	Italy
Aerojet Rocketdyne	United States	Astronautica (AIDAA)	
Aerospace Research Institute	Iran	Astronautic Technology SDN BHD	Malaysia
Agence Spatiale Algérienne (ASAL)	Algeria	Astronautical Society of India	India
Agencia Espacial Mexicana (AEM)	Mexico	ASTROSCALE Pte. LTD.	Singapore, Republic
Agrupacion Astronautica Espanola	Spain		of
Airbus Defence and Space Ltd	United Kingdom	ATUCOM - Tunisian Association for Communication and Space Sciences	Tunisia
Airbus Defence and Space Netherlands B.V.	The Netherlands	Austrian Research Promotion Agency	Austria
Airbus Defence and Space SA	Spain	AUSTROSPACE	Austria
Airbus Defence and Space SAS	France	Bauman Moscow State Technical University	Russian Federation
Airbus DS GmbH	Germany	Beihang University	China
American Astronautical Society (AAS)	United States	Beijing Sunwise Space Technology Ltd.	China
American Institute of Aeronautics and Astronautics (AIAA)	United States	Belgian Federal Science Policy Office (BELSPO)	Belgium
Andøya Space Center	Norway	Brazilian Space Agency (AEB)	Brazil
Arianespace	France	Bulgarian Aerospace Agency	Bulgaria
Asher Space Research Institute (ASRI)	Israel	California Polytechnic State University	United States
Association Aéronautique & Astronautique de France (3AF)	France	Canadian Aeronautics & Space Institute (CASI)	Canada
Association Dedicated to Development in Astronautics (A.D.D.A)	Romania	Canadian Space Agency	Canada





Canadian Space Commerce Association Canada Engineers Australia Australia (CSCA) Enterprise Estonia Estonia **Canadian Space Society** Canada Eumetsat Germany Center for Planetary Science and Canada **EURISY** France Exploration, Western University Belgium Euro Space Center Center of Space Exploration, Ministry of China Eurockot Launch Services GmbH Germany Education (COSE) Euroconsult France Central American Association for Costa Rica Aeronautics and Space (ACAE) European Conference for Aero-Space Germany Sciences (EUCASS) Central Research Institute for Machine **Russian Federation** European Space Agency (ESA) France Building (FGUP TSNIIMASH) European Space Policy Institute (ESPI) Austria Centre for Mechanical and Aerospace Portugal Science and Technologies (C-MAST) European Test Services (ETS) B.V. The Netherlands Centre National de la Cartographie et de la Tunisia Eurospace France Teledetection (CNCT) Faculty of Aviation and Space Sciences, Turkey Centre National d'Etudes Spatiales (CNES) France Necmettin Erbakan University Centre Royal de Teledetection Spatiale Morocco Federal Aviation Administration Office of **United States** Commercial Space Transportation (FAA/AST) Centro de Investigacion y Difusion Uruguay Aeronautico Espacial (CIDA-E) Finnish Astronautical Society Finland CGS S.p.A.Compagnia Generale per lo Spazio Italy Flinders University Australia China Head Aerospace Technology Co. China **Future Space Leaders Foundation United States** Chinese Society of Astronautics (CSA) China G.A.U.S.S. Srl Italy CIRA Italian Aerospace Research Centre Italy General Organization of Remote Sensing Syria Cluster of Serbian Aeronautical Industry -Serbia (GORS) Geo-Informatics and Space Technology Thailand Development Agency (GISTDA) Comision Nacional de Actividades Espaciales Argentina (CONAE) Georgia Institute of Technology, School of **United States** Commission d'Astronautique de l'Academie Romania Aerospace Engineering Roumaine German Aerospace Industries Association Germany Cosmoexport Aerospace Research Agency **Russian Federation** (BDLI) **GIFAS** Croatian Astronautical and Rocket Croatia France Federation (HARS) **GKN Aerospace Engine Systems** Sweden CSIRO Astronomy & Space Science Australia Global Student Commercial Space Society **United States** (GSCSS) CSL (Centre Spatial de Liège) Belgium GMV Aerospace & Defence SAU **Curtin University** Australia Spain GomSpace Aps Denmark CVA (Community of Ariane Cities) France Graz University of Technology (TU Graz) Cyprus Astronautical Society Austria Cyprus Gumush Aerospace & Defense Turkey Czech Space Alliance Czech Republic The Netherlands HE Space Czech Space Office Czech Republic Hermann-Oberth-Raumfahrt Museum e.V. Germany Danish Astronautical Society Denmark Hungarian Astronautical Society (MANT) Hungary **Dassault Aviation** France IABG Industrieanlagen - Betriebsgesellschaft Germany Deimos Space S.L. Delft University of Technology The Netherlands **ICARE-CNRS** France Department of Space Studies, University of **United States** IHI Aerospace Co, Ltd. Japan North Dakota Indian Space Research Organization (ISRO) India Desà Engineering srl Italy Indonesian National Institute of Aeronautics Deutsche Gesellschaft für Luft-und Indonesia Germany Raumfahrt, Lilienthal-Oberth e.V. (DGLR) and Space (LAPAN) Deutsches Zentrum für Luft- und Raumfahrt Institut d'Estudis Espacials de Catalunya -Spain Germany **Dnipropetrovsk National University** Institut Français d'Histoire de l'Espace France Ukraine Institut Supérieur de l'Aéronautique et de France Dniprotekhservice, SPF, LLC Ukraine l'Espace (ISAE) DTU Space Denmark Pakistan Institute of Space Technology (IST) **EADS Sodern** France Instituto de Aeronáutica e Espaço (IAE) Brazil Ecole Polytechnique Fédérale de Lausanne Switzerland Instituto de Geofisica, Universidad Nacional Mexico Autonoma de Mexico Ecuadorian Civilian Space Agency (EXA) Ecuador Instituto Geográfico Agustín Codazzi (IGAC) Colombia EMXYS (Embedded Instruments and Spain Instituto Nacional de Pesquisas Espaciais Brazil

Instituto Nacional de Tecnica Aeroespacial (INTA)	Spain	National Aeronautics and Space Administration (NASA)	United States
INSYEN AG	Germany	National Aerospace Agency (NASA) of	Azerbaijan
Intelligent Materials and Systems Lab,	Estonia	Azerbaijan Republic	
University of Tartu International Association for the	The Netherlands	National Aerospace Educational Centre of Youth	Ukraine
Advancement of Space Safety		National Aerospace Laboratory (NLR)	The Netherlands
International Institute of Space Commerce	France	National Oceanic and Atmospheric	United States
International Lunar Observatory Association	United States	Administration (NOAA)	Mala da
International Space Center - Space Park Israel Ashdod	Israel	National Space Agency of Malaysia (ANGKASA)	Malaysia
International Space University (ISU)	France	National Space Centre	Ireland
Internationaler Förderkreis für Raumfahrt – Hermann Oberth – Wernher von Braun e.V.	Germany	National Space Research and Development Agency (NASRDA)	Nigeria
Intersputnik International Organization of	Russian Federation	NEC Corporation	Japan
Space Communications		Neptec Design Group	Canada
Invap S.E.	Argentina	Netherlands Space Office (NSO)	The Netherlands
Iranian Space Agency	Iran	Netherlands Space Society (NVR)	The Netherlands
Israel Aerospace Industries. Ltd.	Israel	NGC Aerospace Ltd.	Canada
Israel Space Agency	Israel	Nigerian Meteorological Agency	Nigeria
Istanbul Technical University	Turkey	Norsk Astronautisk Forening	Norway
Italian Space Agency (ASI)	Italy	Norwegian Space Centre	Norway
Japan Aerospace Exploration Agency (JAXA)	Japan	Novespace	France
Japan Manned Space Systems Corporation (JAMSS)	Japan	Office National d'Etudes et de Recherches Aérospatiales (ONERA)	France
Japan Society for Aeronautics and Space	Japan	OHB System AG - Munich	Germany
Sciences (JSASS)	lanan	OHB System AG-Bremen	Germany
Japanese Rocket Society Joanneum Research	Japan Austria	Pakistan Space and Upper Atmosphere Research Commission	Pakistan
JSC Glavcosmos	Russian Federation	PJSC "Elmiz"	Ukraine
JSC NPO Energomash	Russian Federation		Poland
JSC SRC Progress	Russian Federation	Polish Academy of Sciences Polish Astronautical Society	Poland
Kenya National Space Secretariat	Kenya	Politecnico di Torino	Italy
Khrunichev State Research & Production	Russian Federation	Proespaço-The Portuguese Association of	Portugal
Space Center		Space Industries	_
King Abdulaziz City for Science & Technology (KACST)	Saudi Arabia	Project Management Institute Purple Mountain Observatory (PMO)	United States China
Kongsberg Satellite Services AS	Norway	QinetiQ Space nv	Belgium
Korea Aerospace Research Institute (KARI)	Korea, Republic of	Rafael Advanced Defense Systems Ltd.	Israel
Korea Astronomy and Space Science Institute	Korea, Republic of	Ramirez de Arellano y Abogados, S.C. Law Firm	Mexico
Kyiv Politechnic Institute (NTUU "KPI")	Ukraine	RMIT University, Australia	Australia
Kyushu Institute of Technology	Japan	Rocket Research Institute, Inc.	United States
Lavochkin Association	Russian Federation	Romanian Space Agency (ROSA)	Romania
Law Offices of Sterns and Tennen	United States	ROSCOSMOS	Russian Federation
Lithuanian Space Association (LSA)	Lithuania	RUAG Space	Switzerland
Lockheed Martin Corporation	United States	Russian Academy of Sciences	Russian Federation
Max-Planck-Institute for Ornithology	Germany	S.A.B.C.A	Belgium
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Mitsubishi Electric Corporation	Japan	Satrec Initiative	Korea, Republic of
Mitsubishi Heavy Industries, Ltd.	Japan	Secure World Foundation	United States
Mohammed Bin Rashid Space Centre (MBRSC)	United Arab Emirates	SEMECCEL Cité de l'Espace	France
Moscow Aviation Institute	Russian Federation	SENER Ingenieria y Sistemas, S.A.	Spain
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South Africa

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The Netherlands

Ukraine

Turkey

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Shoal Engineering Pty Ltd

Sierra Nevada Corporation

Solar MEMS Technologies S.L.

South African National Space Agency

South African Space Association (SASA)

Space Commercial Services Holdings (Pty)

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Space Generation Advisory Council (SGAC)

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Technology



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The International Academy of Astronautics (IAA) was founded in 1960 by Theodore von Karman. The Academy is an independent international community of leading experts committed to expanding the frontiers of space, the newest realm of human activity. To foster the development of astronautics, the Academy undertakes a number of activities, including the recognition of outstanding contributors through elections and awards. It also facilitates professional communication, develops and promotes new ideas and initiatives, engages the public, and fosters a sense of community among the members. The IAA is a unique nongovernmental organization established in 1960 and recognized by the United Nations in 1996.

It is an honorary society with an action agenda. With 1200 elected members and corresponding members from 87 nations, it works closely with space agencies, industry, the academic community and the national science and engineering academies to determine needs and objectives and to help shape policy and forge cooperation by means of studies, position papers, conferences and publications. The IAA has published nearly 60 studies to date and is engaged in the preparation of 40 others. The Academy also publishes the journal Acta Astronautica containing refereed papers. The Academy now organizes 20 conferences per year and regional meetings focused on the development and promotion of new initiatives. This activity also includes, in cooperation with the International Astronautical Federation and the International Institute of Space Law, the traditional contribution to the International Astronautical Congress (IAC), where the Academy sponsors 13 Symposia. The Academy also continues to enjoy its participation in the COSPAR Assemblies by sponsoring and co-sponsoring symposia and the International Society for Photogrammetry and Remote Sensing (ISPRS) congress this year in Prague. Although the IAA has many connections to these and other similar organizations, it is distinctive as the only international Academy of elected members in the broad area of astronautics and space.



The IAA Human in Space Exploration conference, attended by more than 600 participants, was successfully held in Korolev city near Moscow on 24-26 May 2016. There was 7 parallel technical sessions with 270 papers. The result of the conference will serve to prepare the next IAA Head of Space Agencies summit.

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Trustees Section 4, Social Sciences

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Efim Malitikov (Russian Federation)

Seidu Oneilo Mohammed (Nigeria) Wu Meirong (China) Ger Nieuwpoort (The Netherlands)

2.3 The International Institute of Space Law (IISL)

Founded in 1960, the International Institute of Space Law (IISL) is an independent non-governmental organisation dedicated to fostering the development of space law. The membership of the Institute is composed of individuals and institutions from more than forty countries elected on the basis of their contributions to the field of space law or other social sciences related to space activities. In addition, prospective membership is open to students and young professionals with a demonstrated interest in space law.

The purposes and objectives of the IISL include the promotion of further development of space law and expansion of the rule of law in the exploration and use of outer space for peaceful purposes, the holding of meetings, colloquia and competitions on juridical and social science aspects of space activities, the preparation or commissioning of studies and reports, the publication of books, proceedings, reports and position papers, and the cooperation with appropriate international organizations and national institutions in the field of space law.

The IISL holds an annual Colloquium at the International Astronautical Congress. During this Colloquium the Nandasiri Jasentuliyana Keynote lecture takes place, as well as a special session for Young Scholars. In addition the Institute organises a variety of conferences on space law throughout the year in locations all over the world. It publishes an annual volume of IISL Proceedings with papers and reports of all activities during the year.

Since 1992, the IISL organizes the annual Manfred Lachs Space Law Moot Court Competition. The competition is based on a hypothetical space law case, written by IISL members, in which around sixty student teams from universities in North America, Europe, Asia Pacific and Africa participate. Members of the International Court of Justice judge the World Finals of the competition, making it unique in the world.

The IISL is an officially recognized observer at sessions of the United Nations Committee on the Peaceful Uses of Outer Space, and its Scientific & Technical and Legal Subcommittees.

Further information regarding the IISL can be found at www.iislweb.org.

International Institute of Space Law E: info@iislweb.org

W: www.iislweb.org

F: https://www.facebook.com/spacelaw

T: https://twitter.com/iisl_space



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2.4 The Local Organising Committee (LOC)

President of the LOC

Francisco Javier Mendieta Jimenez

Executive Director of the IAC2016

Enrique Pacheco Cabrera

Mexican Space Agency

Lic. Tiburcio Montalvo Naranjo

General Directors Office Support

Ma Julieta Pacheco Cabrera Thalia Stefany Prado Avíla Belinda Margarita Flores Rivera

LOC Chair Dr. Javier Mendieta **Executive Director** Enrique Pacheco Academic Jalisco Aerospace Clusters Comission

The LOC was supported by four groups:

- a) The Honorary Committee form by all the federal government entities that with direct influence on the activities of the IAC2016, his support has been fundamental to have a direct communication link and to provided guidance to the planning of the congress.
- b) The Academic Commission that was integrated by the most important academic institutions of entities that support the academic involvement in the IAC2016. This probe to be a key aspect to make Mexico into the top 10 of countries in paper
- c) The Jalisco Commission that was an integration of the State Government entities, the local Universities and representatives of the private sector. They act as the focal point for the local support in all the planning and operation of the IAC2016.
- d) Aerospace Cluster Link Mainly supported by FEMIA and the Jalisco Aerospace Council to bring the Mexican aerospace industry to the IAC2016.

HONORARY COMMITTEE







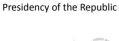








Ministry of Tourism



Ministry of National Defence

Ministry of Public Education







Ministry of Interior

Ministry of Communications and

Transport





Ministry of Economy





Ministry of Treasury



Navy of Mexico



Ministry of Foreign Affairs







Geography and Informatics









ACADEMIC COMMISSION









Mexican Academy of Sciences Mexican Academy of Engineering Mexico State Council of Science



Hidalgo State Council of Science, Zacatecas State Council of Science, Puebla State Council of Science, Technology and Innovation

SIIES

Yucatan State Minister of

Research, Innovation and Higher

Education

National Association of Universities and Higher Education

Institutions



Technology and Innovation



Technology and Innovation



Queretaro State Council of Science, Technology and Innovation



Coahuila State Council of Science National University Autonomous and Technology of Mexico







Regional Centre for Teaching of Space Science and Technology for Latin America and the Caribbean



Mexican Society of Aerospace Science and Technology



Mexican Council for Aerospace Education

Tlaquepaque Municipality

JVC

ACADEMIC COMMISSION



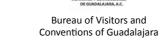
Jalisco State Government

Zapopan Municipality

UNIVERSIDAD DE GUADALAJARA

University of Guadalajara

(学会) Cinvestav





Tlajomulco Municipality



Marista University of Guadalajara



Guadalajara Municipality

Tonalá Municipality



Tech of Monterrey

Guadalajara Campus

ITESO



Jesuit University of Guadalajara

Aerospace Council of Jalisco

AEROSPACE CLUSTERS LINK

CINVESTAV Research Centre



Mexican Federation of the Aerospace Industry

Professional Conference Organiser (PCO)

We are proudly Mexican international company, specialized in MICE (Meetings, Incentive, Conventions and Events) tourism, leaders in technological evolution within the industry. We are your every need consultant specialists for congresses, events and conventions.

We are trend-hunters, information energizers. We mix new knowledge from international markets, transform, and apply it to the emerging potential of Mexico's MICE industry.

We make the most out of relations, and the knowledge and experience they bring into society in an era of technological evolution and culture of efficiency.





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PROGRAMME

PROFESSIONALS EVENTS

26 - 30 September 2016, Guadaiajara, Mexico

Our international certifications on IAPCO and INCON – PCO are the result of our high quality standards and give us an undisputed market leadership.

IAC2016 PCO Management Team

Alejandro Ramírez Tabche, Professional Congress Organizer, CEO, Business Travel Consulting

Jimena Ruiz, Congress Project Manager, Business Travel Consulting

Elena Cuadra, Registration Manager, Business Travel Consulting

Alejandra Pérez San Vicente, Congress Project Leader and Industry

Claudia Pineda, Catering and social industry events, Business Travel Consulting

Ivonne Toquero, Logistics & Operation Director, Business Travel Consulting

Mariana Peñaloza, Logistics & Operation Manager, Business Travel Consulting

Shadia Hasbún Hasbún, Congress Project Consultant, Business Travel Consulting

Valeria Lopez, Cecilia Gochi and Paulina Peñaloza Housing team, Business Travel Consulting

David Lara, Web Developer, Business Travel Consulting

Julián Salinas, Web Designer, Business Travel Consulting

Mariana Espinosa, Congress Development and Research, Business Travel Consulting

Alberto Cortes CTO, Business Travel Consulting

Marian Martínez Pinto, Designer, Business Travel Consulting

Message from the Governor of the state of Jalisco



Welcome to Jalisco, cradle of all the symbols that identify Mexico in the world and meeting point between the modernity and our traditions.

The activity in space and the knowledge it generates are already transforming the world and the way it is conceived. Medicine, biology, physics, mathematics, development of new technologies and all branches of science are crumbling paradigms from the studies done by understanding what happens beyond our planet. Astronautics is also an important engine that drives the economy of those countries that see innovation as a vehicle to generate welfare for people.

In the Government of Jalisco we are convinced that any economic development policy must be coupled with growth, development and well being of people. Considering that nowadays the Aerospace Industry represents work for more than 32 thousand Mexican high-level professionals, in the future it should mean a better quality of life for all who live here. To achieve this, the quality of education and the strengthening of a knowledge society are essential pillars.

Therefore, in Jalisco we work hard to link the efforts of universities, companies and diverse government authorities to position Jalisco as a leader in the sector. For us, this is the meaning of innovation.

Due to all of the above, Guadalajara being the headquarters of the International Astronautical Congress is both an honour and a great opportunity.

Certainly, I want to express my gratitude for the efforts done by the Federal Government, which through the Mexican Space Agency has trusted us and the ecosystem of high technology we have developed to project the capabilities of our country. Finally, I want to congratulate the International Astronautical Federation and all the Organizing Committee for the exceptional program they have prepared.

With everyone working together, we can build a better world, where all human beings live with equality.

Sincerely,

Jorge Aristóteles Sandoval Diaz Governor of the State of Jalisco

Practical Information

3.1 City Map and Introduction to Guadalajara



4.0





The knowledge of the skies has a long tradition throughout Mexico's history. From Pre-Hispanic times to the XX Century dawns, observatories were created and helped to learn the movements and cycles of cosmic objects. By the middle of the XX century, space projects arise in Mexico, which brought Mexico into the design of sounding rocket launchers and communication systems, which has contributed with a new focus to our vision of the universe, since we do not only want to observe it but also to reach it and use it.

The history of Mexican space development is intertwined just like in other countries, with the development of aeronautics. This is how work in aviation brought advances in 1949 forming a group of Mexican technicians that started studies on rocketry. Our country made its first step on space activities with the launching of high atmospheric research sounding rockets in 1957, and later in 1960, with the creation and operation of the Guaymas, Sonora, tracking station.

With the creation of the National Commission for Outer Space (CONEE) in 1962, important work in rocketry and telecommunications was made, which allowed the creation of specialized teams and physical infrastructure to enter the activities that were being developed in the world at that time. This activity was interrupted with the disintegration of CONEE 1977. A second national effort in the space arena was the creation of the Mexican Institute of Communications (IMC) 1987, which coordinated the design and operation of communication satellites, which ran the same fate and was dissolved in 1996.

Since then to this date, there have been specific aerospace developments, in collaborations between higher education institutions such as UNAM, IPN, CONACYT centers, and the University of the Mexican Army and Air Force (UDEFA), with some international groups. On the other hand the Ministry of Communications and Transportation (SCT) have promoted activity on telecommunications, with the participation of some private companies. These efforts, backed by public and private institutions along with many individuals, allowed that today, with the promulgation of the law that creates the Mexican Space Agency on July 30th, 2010, brings forward the dream of many generations of Mexicans who have made contributions to the national aerospace development.

Guadalajara

Guadalajara is the capital of the Mexican state of Jalisco. The city has a population of 1,579,174 and the metropolitan area with a reported population of 5,500,000 in 2012, making it the second most populous metropolitan area in Mexico, behind Mexico City. The city's economy is based on industry, especially information technology with a large number of international firms having manufacturing facilities in the Guadalajara Metro Area. Other, more traditional industries, such as shoes, textiles and food processing are also important. Guadalajara is the cultural centre of western Mexico, considered by most to be the home of Mariachi music and host to a number of large-scale cultural events such as the International Film Festival of Guadalajara and the Guadalajara International Book Fair and many more international renowned cultural events, which draw international crowds. Guadalajara was named American Capital of Culture in 2005.

Guadalajara is the 10th largest city in Latin American in terms of population, urban area and Gross Domestic Product. The city is named after the Spanish city of Guadalajara, with the name meaning "Valley of Stones".

In a 2007 research of the FDI magazine Guadalajara was the highest ranking major Mexican city having the second strongest economic potential of any major North American city and only Chicago scored more highly for sheer economic potential, in the same research was considered the "city of the future" due to its youthful population, low unemployment and large number of recent foreign investment deals, it was also found the third most business friendly city in North America.

Tourism:

Tlaquepaque

Considered one of Latin America's most important handicrafts centres, has hundreds of galleries promoting local artists' works. Traditional very picturesque place, Tlaquepaque is "A town with magic" and of handmade enormous offer. In its multiple stores you can acquire fine and original crafts of traditional ceramic blown and stage glass, petatillo and wooden furniture carved by hand. It is recommended to visit "El Refugio" Cultural Center, the Pantaleón Pandero Museum, Soledad Sanctuary and enjoy the flavour of the typical jalisciense cuisine, surrounded by the Mariachi music in the traditional "El Parian".

Tapalpa

This "Magic Town", located in the mountainous area of Jalisco, is called Tapalpa, a place conformed by white homes with tile roofs. The gastronomy of the place is distinguished for the lamb "al pastor", a nourishing dish that can have the stomach happy

during the silent nights that make evoke the times in that the noise of the televisions didn't interrupt to the thought, maybe altered only for the song of some cricket or the croaking of some frog for, in the dawn, open the way to the song of the roosters and the sounds of the bells that remember you the morning the first mass.

Teguila

Tequila which name is known all around the world for the Liquor named after the region. Site located between the foothills of the Tequila Volcano and the deep valley of the Rio Grande River, is part of an expansive landscape of blue agave, shaped by the culture of the plant which has been used since the 16th century to produce tequila spirit and over at least 2,000 years to make fermented drinks and cloth. Within the landscape are working distilleries reflecting the growth in the international consumption of tequila in the 19th and 20th centuries. Today, the agave culture is seen as part of national identity. Numerous haciendas, or estates, some of which date back to the 18th century can be seen in Tequila and surrounding areas. The area also covers archaeological sites which bear testimony to the Teuchitlan culture which shaped the Tequila area from 200 to 900 A.D., notably through the creation of terraces for agriculture, housing, temples, ceremonial mounds and ball courts. The Sauza and José Cuervo distilleries are located near the centre, and they offer guided visits to their interior to the visitors of the place. Tequila lives for our tequila.





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3.2 Guadalajara Airport & Ground Transportation

3.2.1 Airport

Guadalajara International Airport is providing access to all major international and regional hubs, effectively linking Guadalajara to 80% of the world's air routes. The airport offers more than 350 daily flights; works with 19 commercial and 21 cargo airlines that travel to 46 cities in Mexico, Central America and the United States.

The airport handles approximately 19,000 passengers each day and over 7.6 million passengers each year.

It has currently been expanded to provide greater connectivity. The Guadalajara International Airport is directly linked to the downtown area by a BRT (Bus Rapid Transport) route, with an approximate journey time of 30 minutes. By car, the airport is approximately a 20-minute drive from the anticipated venue site. The airport is situated 17km (12 miles) southeast of Guadalajara. From Mexico City's International Airport, visitors can reach nearly every major destination in Mexico in less than three hours. Mexico has several major airline companies that connect most of Mexico's destinations to metropolitan cities in the U.S., Canada and around the world, as well as other destinations around the country.

3.2.2 Transportation information to / from airport

At the Guadalajara International Airport, you will be able to find different Taxi and Rental Car companies. In the Metropolitan Area, there are 16,000 taxis, of which 5,000 are exclusively for tourist services. In terms of transportation, there is a bus stop just at the corner of the Centre and taxi service is also offered by two taxi ranks that have collaborated with the venue for more than 20 years, for the comfort of the attendees the Centre has a special area for passengers drop off and pick up. Ubers is a service available in Guadalajara also.

Affordable and accessible destination

- Taxi cab fares To / From airport: \$20 / \$ 30 USD
- Expo Guadalajara Convention Centre to main touristic areas:
- Guadalajara / Tlaquepaque downtown: \$10/ \$ 13 USD
- Shopping Mall Plaza del Sol: \$ 3 USD
- Shopping Mall La Gran plaza: \$ 5 USD
- Bus Fares: 50 USD cents
- Metro Fares: 50 USD cents

Estimated flying time between Guadalajara and various destinations within Mexico

Mexico City: 1 hr. 10 min Cancun: 4 hrs. 20 min Monterrey: 1 hr. 20 min

International Direct flights via Mexico City and Cancun

Europe: Frankfurt, Barcelona, Madrid, Paris, Rome and London America: Bogota, Buenos Aires, Caracas, Buenos Aires, Lima, Santiago and Sao Paolo.

Central America: Guatemala, San José, Costa Rica, San Pedro Sula and San Salvador

Asia: Tokyo, Shanghai and Hong Kong

US: Nueva York, Los Angeles, Miami, Chicago, Dallas Canada: Montreal, Toronto.

3.2.3 Major highways / motorways

Guadalajara is 535 km northwest of Mexico City and 344km east of Puerto Vallarta. Highways 15, 15D, 23, 54, 54D, 80, 80D and 90 all have coverage.

Tolls and driving times to main destinations are as follows: Manzanillo (30 USD, 3 hours), Puerto Vallarta (35 USD, 3 hours) and Mexico City (50 USD, 5 hours).

Guadalajara has many car rental agencies. The average cost goes from 50 to 60 USD per day and it will cost you around 30 USD to return the car in any city other than the one you rented it from.

3.2.4 Local Transportation

Roads / street network for cars

The streets of Guadalajara are safe and easy to get around in.

Local bus network coverage

The long distance bus terminal is "Nueva Central Camionera" a large modern V-shaped terminal that is split into 7 separate modules. Each module has ticket desks for a number of bus lines, plus rest rooms and cafeterias. This Bus terminal is 9 km southeast of Guadalajara city centre.

Buses go to and from just about everywhere in western, centre and northern Mexico. Multiple companies, based in different modules, serve all destinations. Guadalajara's other bus terminal is "Antigua Central Camionera" about 1.5 km south of the cathedral near Parque Agua Azul. From here 2nd-class buses serve destinations within 75 km of Guadalajara. There are 2 sides to it: Sala A is for destinations to the east and northeast; Sala B is for destinations to northwest, southwest and south.

Local subway network coverage

There is a local network coverage locally is known as SITEUR (Sistema de Tren Eléctrico Urbano), Spanish for Urban Electrical Train System, is a light train and rapid transit system serving the municipalities of Guadalajara, Zapopan and Tlaquepaque, in the state of Jalisco, Mexico. SITEUR is also the name of the state authority, which operates the system. Opened in 1989, the system currently has two lines: line 1, running from north to south, with 19 stations, and line 2, running from downtown to the east, with 10 stations.

Taxi availability

There are a variety of ways to take a cab in Guadalajara. One can take a cab either by calling a taxi, going to a taxi stop or hailing a cab in the street (just wait for one to pass by and make the stop signal). Terrestrial Transportation Taxis of Guadalajara: among the best transportation to be found in Guadalajara, visitors will be able to visit everything in the city with ease and comfort. In addition, not only are taxis affordable, but also they come with air-conditioning to guarantee all comforts necessary for a passenger. Uber service is available in Guadalajara.

3.2.5 Safety & Security

The Institute responsible for public safety in the State of Jalisco is the State Ministry of Security. They have vast experience in coordinating and providing safety for international events and work very closely with the Army, Navy and Federal and City police forces

With a long history as a host of major events, the City of Guadalajara has become one of the most important cities in the country. Guadalajara has hosted a wide variety of national and international political, social, cultural, and sport events, thus demonstrating it has the experience and capability to safeguard its special visitors in a secure and discrete way. Successful events include the 2009 North American Leaders' Summit, ITU's Plenipotentiary Conference 2010, Pan-American Games in October 2011; and most recently, Iberoamerican Forum 2013 and the World Congress on Information Technology in 2014. These meetings have required varying levels of security, but their successful completion attests to the resources, which Guadalajara has provided to protect both visitors and citizens alike.

Guadalajara is one of the safest cities in one of the safest states in Mexico (Jalisco), with a very low crime rate, well below many major cities in Europe and North America.



3.3 Registration

Registration Rates

Registration Category	Early Registration Before 15/06/2016	Regular Registration from 16/06/2016 - 20/09/2016)	On-Site Registration	Notes
	Fee in €	Fee in €	Fee in €	
Full-paying Participants	€ 815 / \$ 895	€ 945 / \$ 1040	€ 995 / \$ 1095	N/A
Full-paying Participants (Members)	€ 680 / \$ 750	€ 805 / \$ 885	€ 900 / \$ 990	Who are employees or elected officers of an IAF member organization or who are current members of the IAA and the IISL.
Retired Persons	€ 390 / \$ 430	€ 445 / \$ 490	€ 495 / \$ 545	Who meet the IAF's minimum requirements (no longer employed, fully retired and prepared to make at least one presentation on their experiences to a student or public group during the coming six months). Retirees need to upload documentation confirming their status.
Young Professionals	€ 305 / \$ 335	€ 360 / \$ 395	410€	Who are no older than 35 years of age at the time of the Congress
Full-time Students and Primary/secondary level Teachers	€ 75 / \$ 85	€ 85 / \$ 95	€ 95 / \$ 105	There is no age limit on students, while teachers should be primary/secondary level teachers. Students should upload a scanned copy of student ID card, while teachers should upload teacher's license, or other equivalent documents.
Accompanying Persons	€ 55 / \$ 60	€80/\$90	€ 105 / \$ 115	Maximum 1 per Full-paying or Retired Delegate, Accompanying persons are entitled to participate in the Opening and Closing Ceremony, the Space Exhibition, Plenary Events, GNF programme, Highlight Lectures, the Welcome Reception, and other events designated by the organizer, while access to IAC technical sessions is restricted.
Media Representatives		Free of charge		Accredited media are required to provide proof of their status in the form of a press card, and examples of recent journalistic work

What is covered by the fee?

Registration Includes: Admission to the Exhibit Hall, Plenary Program, GNF programme, all scientific and technical sessions, the Opening Ceremony, the Welcome Reception, the Closing Ceremony, coffee breaks and delegate kit.

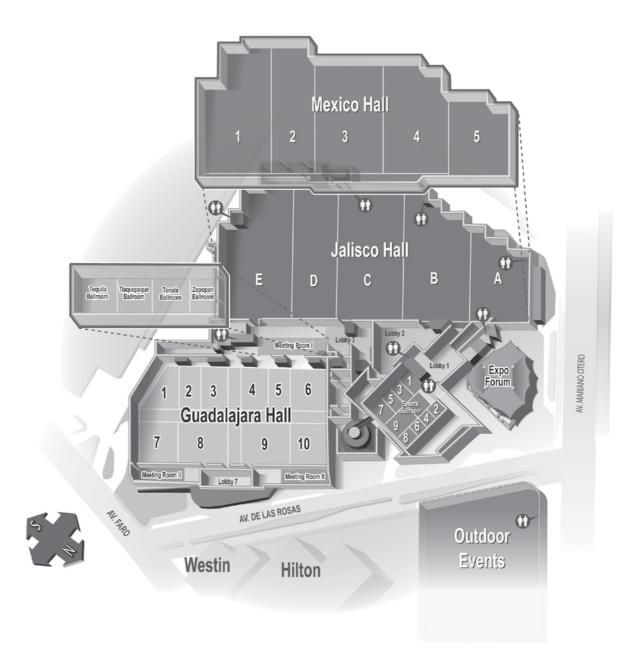
Registration for Accompanying Persons includes: Admission to the Exhibit Hall, GNF programme, Plenary Program, the Opening Ceremony and the Welcome Reception. It DOES NOT include access to the technical sessions. Accompanying Person is defined as a family member, civil partner, translator or administrative assistant.

Accredited press will have to upload a valid Press Card or provide any other document proofing their status of "Media".

3.4 Congress Venue Floor Plans

Expo Guadalajara, boasting close to 70,000 m2 is located in the heart of the commercial district of Guadalajara with 26,576m2 of exhibition space and more than 15,000 m2 of meeting space including the Guadalajara room with 13,000 m2 free of columns which can be divided in up to 10 rooms.

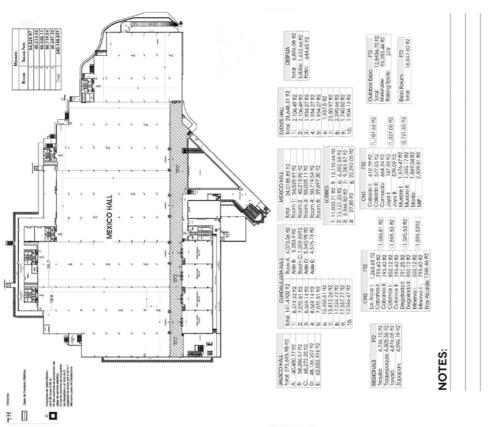
Expo Guadalajara is in the middle of the hotel area, 20 min. away from downtown and only 25 min. away from the airport. There are more than 3,000 hotel rooms within walking distance from Expo Guadalajara ranging from 1 to 5 stars, including the Hilton Hotel located across the street with its 450 rooms.

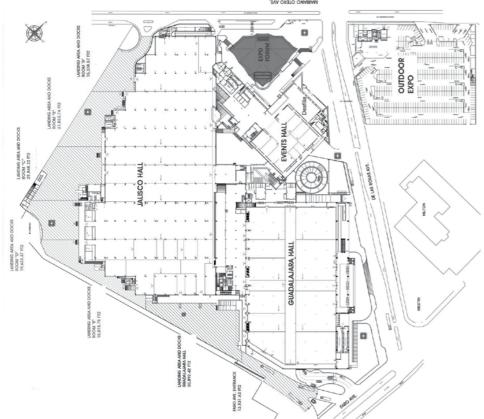


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International Astronautical Congress







3.5 Offices and Exhibition Opening Hours

Registration and Information Desk

Location: Lobby 1 and Lobby 7 Saturday 24 September, 13:00-18:00 Sunday 25 September, 08:00-18:00 Monday 26 Sep -Thursday 29 Sep; 08:00-16:00 Friday 30 September, 08:00-13:00

IAF Secretariat Office

Location: Jalisco Hall E4-2

Friday 23 September - Friday 30 September, 08:00-18:00

LOC Secretariat Office

Location: Ex Presidentes

Friday 23 September - Friday 30 September, 08:00-18:00

IAA Secretariat Office

Location: Jalisco Hall E4-1

Friday 23 September - Friday 30 September, 08:00-18:00

Exhibition Hall

Location: Jalisco Hall A-D

Monday 26 September, 12:00-18:00

Tuesday 27 September - Thursday 29 September, 09:00-18:00

Friday 30 September, 09:00-15:00

IAF Members' Lounge

Location: Jalisco Hall E3-2

Sunday 25 September - Friday 30 September, 08:00-18:00

IISL Members' Lounge

Location: Jalisco Hall E3-3

Sunday 25 September - Friday 30 September, 08:00-18:00

International Press Centre

Location: Jalisco Hall E1

Saturday 24 September, 13:00-20:00 Sunday 25 Sep - Thursday 29 Sep, 07:30-20:00

Friday 30 September, 07:30-17:00

Speaker's Preparation Room

Location: Jalisco Hall E3-1

Sunday 25 September, 14:00-18:00

Monday 26 Sep to Thursday 29 Sept, 08:30-18:00

Friday 30 September: 08:30-15:00

3.6 Information for Authors

All authors are asked to upload their manuscripts and multimedia presentations prior to the Congress in order to make them available to all participants on the online Proceedings of the 67th IAC. You can still update your manuscripts through the IAF platform: www.iafastro.net and multimedia presentations with the latest developments in the Speaker's Preparation Room.

Your presentation will be automatically preloaded on the computer in the Technical Session Room. Please note that speakers are not allowed to insert USB memory sticks into the computers in the Technical Session rooms. Therefore, all updates need to be uploaded before the technical session takes place.

Our help desk team will assist you in uploading presentations during operating hours. Speakers are requested to report to their allocated Technical Session room 20 minutes prior to the start of their session to meet with their Session Chair and to check their presentation. Do not forget to bring two printed courtesy copies of your manuscript and a backup copy of your presentation. Some Session Chairs might also ask you for a short biography to introduce you at the session.

3.7 Congress Proceedings

The IAC 2016 proceedings are available on a password protected site.

The Congress participants will be provided on 26th September with a link and online password to login and access the congress proceedings.

If you did not receive the password, please contact: support@iafastro.org

Please note: the congress proceedings contain only those papers that were submitted for publication by congress presenters and may not contain all papers presented at the congress.





3.8 Useful Information

GOOD TO KNOW

The Silicon Valley of Mexico

The rapid expansion of industrial parks and the important investment in the Information Technology (IT) segment, has consolidated Guadalajara as the second most important metropolis in terms of trade, and the third biggest in relation to industrial production.

5.5 million inhabitants in the Guadalajara Metropolitan Area Population:

2,734 Km2 / 1,055 Square Miles **Territory:**

Weather: 23ºC / 73º F Average

1160 public medical centres and 187 private medical facilities **Medical Centres:**

Tax refund: Foreign tourists can receive a tax refund when purchasing merchandise at affiliated

establishments. You can apply easily at modules in Guadalajara and Puerto Vallarta Airports.

www.taxback.com Tel. 01 800 006 68 29

Currency

The Peso is Mexico's official currency, but US dollars are widely accepted. You can exchange money in banks, most hotels, airports and money exchange establishments. Banks in Guadalajara are generally open Monday through Friday, from 8:00 AM to 4:00 PM and a few also open on Saturdays. You can withdraw money 24-hours a day at ATM's located in shopping centres and banks.

Money exchange establishments are found throughout the Hotel Zone and the city. Exchange rates are posted in full view. Most, especially the ones in the Hotel Zone, are open until quite late. Visa, MasterCard and American Express credit cards are accepted in most stores, hotels and travel agencies. Traveller's checks are also generally accepted.

We recommend using the local currency (Mexican Pesos MXN) although most expenses in Mexico may be paid with major credit or debit cards. Most ATMs accept all major credit and debit cards.

In the unlikely case that you might need medical assistance, it is always good to know that Guadalajara has brand new, modern hospitals and clinics with bilingual staff and advanced medical technology to provide excellent service.

Language

Spanish is the official language of Mexico. However, since Guadalajara is a cosmopolitan destination, most service providers speak English and occasionally even a third language.

Electricity

Guadalajara uses 110 volts AC current, the same as the US and Canada. Even though many places do have three-prong outlets, it's a good idea to bring an adapter with you.

Telephone, mail and Internet service

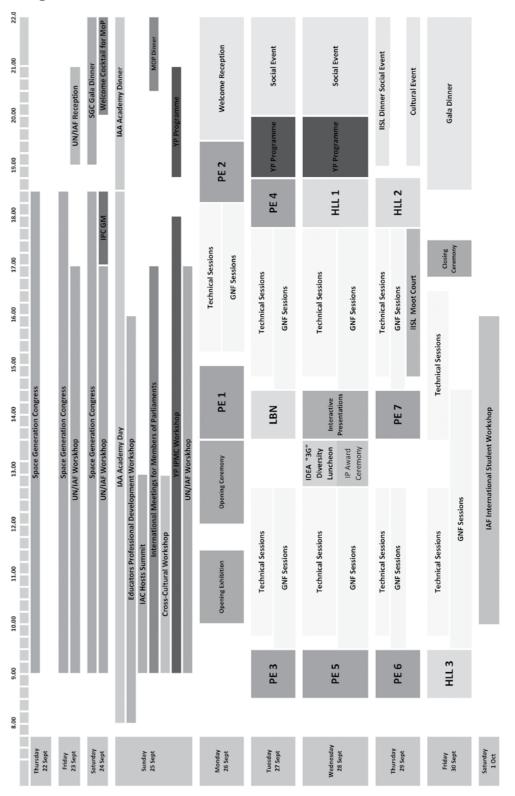
There are telephone booths on Guadalajara's main streets where you can use prepaid phone cards for national and international long distance calls. The dialling code to Mexico is +52 and the city code is (33) most numbers are 8 digits. To dial the US and Canada, dial 001 + the area code and number. For Europe and the rest of the world, dial 00 + the country code, then the area code and phone number. Mobile phones from any country may receive calls in Mexico. Please check with your mobile provider to make sure your phone will work here or if you need to make some special arrangements before travelling. The Post Office is located in downtown Guadalajara, along with overnight delivery services and domestic and international courier services. You can find Internet cafés all over the city and in your hotel's Business Centre. In most cases, Internet access is through high-speed connections.

Location

West of Mexico, 1,566 m - above sea level.

Conference Programme

4.1 Programmes at a Glance





P	ienaries	at a Glar	nce		
19.00	an PE 2- Host Indics: Satellite Communicati cts ons	PE 4 - Next Generation Plenary	HLL 1 - Mars Base Camp	HLL 2 - IAF World The Space Exploratio Award HLL	
00.71	Development Russian Cosmonautics: Remote Sensing Aspects	New Dimensions of Space – What's Next?	pace Space for Global SV Challenges	Spacep Tourism ort Space Norway Transportati - Space on and as Space platfor Medicine	Closing
10.00		e for Global ry	Disruptive Space Technology	Sq2 O N Sq. '	
19:00	of Op Heads of eni Agency ng Press Conference	Shifting the Landscape for Global Space Industry ESA DG Press Briefing	Making the Moon Village and Mars Journey Accessible and Affordable for All	Aiming at a resilient and sustainable space security system	
5.00	PE 1 - Heads of Agencies	LBN - SpaceX: Making Humans a Multiplanetary Species	UNISPACE +50 and the Future of Space	Projection and Stability of the Orbital Debris	China Manned Space Programme and Opportunity for Cooperation
13:00		IRC Lunch	Poster Award Ceremony IDEA 3G Event	Success of commercial space ventures - An inspiration for the next generation	Stardust - a fresh look at planetary defense and space debris removal
12.00		How Planet – Europe Robbie is Schingle paving r the future	WRC-15 allocate spectru m for future	Technology Transfer – How to Make the Most of ession	Space Science From Ground Observatories and Microsatellites at UNAM
0.11		Blue Origin - Rob e Meyerson	Science – the fundament and promoter of space activities	CELSS Tech Integration Transfe Experiment and Make t ESA DG Jam Session	Space Architecture and Systems Engineering: different disciplines or the same?
10.00		One Virgin Web- Galactin- Greg George Wyler Whitesides	WIA-E "Space: New paths towards a balanced and inclusive development"	Space Technology for Emerging Countries – for Latin and South America	
9,00		PE 3- COP21: Space and Climate	PE 5 - Living For a Whole Year on ISS	PE 6 - Realizing Mars Sample Return	HLL 4 - The Saturn System
6,00					set radi ndi
	day	day	sday	ept	ay ept

2016-09-30	13:30-17:30		D6.2/D2.9	C1.9	A6.8	B4.7		B3.8/E7.7	C4.8	C2.9			E1.1			B2.7			A7.3		E2.4	
2016-09-30	09:45-12:45	A3.2C	D2.8/A5.4	C1.8	A6.7	B4.8	B1.6	B3.7	C4.7/C3.5	C2.8	E3.6	A1.7	E1.2	D1.7	E7.5	B5.1	B6.1	A2.6	D5.4		B6.4/GTS.1	C1> C4 D1> D6
2016-09-29	14:45-17:45	A3.5	D2.6	C1.7	A6.6	B4.6B	B1.5	B3.6/A5.3	C4.6	C2.7	E5.5	C3.4	E1.7	D1.6	E4.2	B5.2	B6.3	A2.5	D5.3	D4.5	B2.8/GTS.3	
2016-09-29	09:45-12:45	A3.4	D2.5	C1.6	A6.5	B4.6A	B1.4	B3.5	C4.5	C2.6	E5.4	A1.6	E1.6	5.10	E4.3A/E4.3B	B2.6	E3.5/E7.6	A4.2	D5.2	D4.3	D6.3	Technology Infrastructure
2016-09-28	14:45-17:45	A3.3B	D2.4	C1.5	A6.9	B4.5	A5.1	C3.3	C4.4	C2.5	E5.3	A1.5	E1.5	D1.4	E7.4	B2.5	E3.4	A2.4	E6.3	D3.3	B3.9/GTS.2	Category C
2016-09-28	09:45-12:45	A3.3A	D2.3	C1.4	A6.3	B4.4	B1.3	B3.4/B6.5	C4.3	C2.4	E5.2	A1.4	E1.4	D1.3	E7.3	B2.4	E3.3	A2.3	D5.1	D3.4	E2.2	
2016-09-27	14:45-17:45	A3.2B	D2.7	C1.3	A6.4	B4.3	A5.2	B3.3	C4.9	C2.3	E5.1	A13	E1.3	D1.2	E7.2	B2.3	E3.2	A4.1	E6.2	D4.2	E2.1	A1> A7 B1> B6
2016-09-27	09:45-12:45	A3.2A	D2.2	C1.2	A6.2	B4.1	B1.2	B3.2	C4.2	C2.2	C3.2	A1.2	E1.9	E6.1	E7.1	B2.2	E3.1	A2.2	A7.2	D4.1	E2.3/GTS.4	
2016-09-26	15:15-18:15	A3.1	D2.1	C1.1	A6.1	B4.2	B1.1	B3.1	C4.1	C2.1	C3.1	A1.1	E1.8	1.10	E4.1	B2.1	B6.2	A2.1	A7.1	D3.1	D6.1	Science & Exploration Applications & Operations
Date	Time	Room -Tonalà	Room - Salon Jalisco E2	Room - Salon Jalisco E6	Room - Salon Jalisco E7	Room - Tequila	Room - Tlaquepaque	Room - Guadalajara Hall Salon 2	Room - Zapopan	Room - Salon de Eventos 1	Room - Salon de Eventos 2	Room - Salon de Eventos 3	Room - Salon de Eventos 4	Room - Salon de Eventos 5	Room - Salon de Eventos 6	Room - Salon de Eventos 7	Room - Salon de Eventos 8	Room - Moda 1	Room - Mueble 1	Room - Mueble 2	Room - Joya 1&2	Category A

4.2 Day by Day

Pre-Congress Schedule

Thursday 22 September

Space Generation Congress (SGC) (see page 210)

Friday 23 September

Space Generation Congress (SGC) (see page 210)

UN/IAF Workshop (see page 196)

Saturday 24 September

IPC General Meeting

Space Generation Congress (SGC) and Gala Dinner (see page 210)

UN/IAF Workshop (see page 196)

Sunday 25 September

IAA Academy Day and Academy Dinner (see page 205)

Educators Professional Development Workshop (see page 203)

Cross Cultural Communications and Presentation Workshop (see page 204)

International Meeting for Members of Parliaments (see page 206)

IAC Hosts Summit (see page 207)

IPMC Young Professional Workshop (see page 179)

Young Professionals Networking Event (see page 180)

UN/IAF Workshop (see page 196)

Main Congress Schedule

Monday, 26 September

09:30 - 10:00 VIP Gathering for the Opening of the Exhibition

Location: Guadalajara Hall 1

10:00 - 11:00 Official Opening of the Exhibition Floor and VIP tour

Location: Jalisco Hall A-D

VIP Gathering for Opening Ceremony 11:30 - 12:00

Location: Guadalajara Hall 1

12:00 - 13:30 Opening Ceremony

Location: Guadalajara Hall 4,5,6,9&10

The opening ceremony will feature the following:

- Inaugural Speech by President of Mexico, Enrique Peña Nieto
- Welcome by LOC Chair, Francisco Javier Mendieta Jimenez
- Welcome by President of IAF, Kiyoshi Higuchi
- Welcome by President Elect of IAF, Jean-Yves Le Gall
- Keynote on behalf of Official Industry Anchor Sponsor, by Executive VP, Lockheed Martin Space Systems, Richard F. Ambrose
- Presentation of the IAF World Space Award
- **Cultural Performances**

Speakers:



Enrique Peña Nieto President of Mexico,



Francisco Javier Mendieta Jimenez General Director. Mexican Space Agency (AEM). Mexico



Kiyoshi Higuchi President, International Astronautical Federation



Jean-Yves Le Gall President Elect of IAF, President. Centre National d'Etudes Spatiales (CNES),



Richard F. Ambrose Executive Vice President, Lockheed Martin Space Systems **United States**

13:30 - 15:00 Plenary 1: Heads of Agencies

Location: Guadalajara Hall 4,5,6,9&10

The Heads of Agencies plenary event is one of the highlight of the IAC, bringing together the leaders of the major space agencies worldwide. This year's Heads of Agencies Plenary will focus on the theme "Space Exploration: the past, present and future". The Plenary will be kicked-off with the Heads of Agencies briefly presenting the main developments within their Agency since the last IAC in Jerusalem: major decisions taken; major projects launched and major developments for the next years. The moderator will then run the discussion on Space Exploration and, to conclude an interactive Q&A session with the audience is foreseen.

Panellists:



Charles Bolden Administrator, National Aeronautics and Space Administration (NASA), **United States**



Igor Komarov ROSCOSMOS, Russian Federation



S. Somanath Director, Liquid Propulsion Systems Centre (LPSC) Indian Space Research Organization (ISRO),



CONFERENCE

Sylvain Laporte President, Canadian Space Agency (CSA), Canada



Naoki Okumura President, Japan Aerospace **Exploration Agency** (JAXA),



Johann-Dietrich Woerner Director General. **European Space Agency** (ESA), France



WU Yanhua Vice Administrator, China National Space Agency (CNSA),



Francisco Javier Mendieta Jimenez General Director, Mexican Space Agency (AEM), Mexico



MODERATOR John Horack Professor and Neil Armstrong Chair, The Ohio State University College of Engineering, United States



CO-MODERATOR Minoo Rathnasabapathy Executive Director, Space Generation Advisory Council (SGAC),

15:15 - 15:30 GNF Opening

Location: Guadalajara Hall 8

Message from the President of the International Astronautical Federation (IAF)

The motto 'Connecting Space People' is guiding the development of strategic activities of the IAF with the goal of fostering collaboration between space agencies, industry and research.

In line with the IAF's mission of promoting partnerships in the space community, of advancing international development, sharing knowledge and preparing the workforce of tomorrow, the Federation decided to create a global, comprehensive and appealing platform, targeting students, young professionals, experts, decision & policy makers and all actors that could contribute to the networking spirit of such a platform.

Hence, the Federation developed the concept of the IAF Global Networking Forum (GNF) and was proud to introduce it during

the IAC 2012 in Naples. Given the IAF's diverse stakeholder portfolio, outreach activities of the Federation are tailored according to the respective needs. Not only at the IAC but also at the Spring Meetings, the GNF format is successfully used for involving stakeholders, weaving together requirements of different target groups and services offered by the IAF.

We are looking forward to welcoming you in Guadalajara among the active participants – either on the stage or in the audience. It is the interaction, the critical-constructive dialogue we want to foster through the IAF Global Networking Forum: Meet. Share.



Kiyoshi Higuchi President. International Astronautical Federation (IAF), Japan

15:30 -16:15 **GNF** – Heads of Agency Press Conference

Location: Guadalajara Hall 8

The Heads of Agencies Press conference will give the audience (mainly press representatives) the opportunity to directly address the Heads of Agencies asking relevant and challenging questions.

Speakers:



Charles Bolden Administrator. National Aeronautics and Space Administration (NASA) **United States**



Igor Komarov Federal Space Agency (ROSCOSMOS), Russian Federation



S. Somanath Director, **Liquid Propulsion** Systems Centre (LPSC) Indian Space Research Organization (ISRO),



Sylvain Laporte President, Canadian Space Agency Canada



Naoki Okumura President, Japan Aerospace Exploration Agency (JAXA), Japan



Johann-Dietrich Woerner Director General **European Space Agency** (ESA).



Francisco Javier Mendieta Jimenez General Director Mexican Space Agency (AEM),



Franco Bonacina Director General's Spokesperson and Head of the Protocol Office Director General's Cabinet. European Space Agency (ESA),

MODERATOR

Start time: 15:15 **Technical Sessions**

No	Description	Room
A1.1	Behaviour, Performance and Psychosocial Issues in Space	Salon de Eventos 3
A2.1	Gravity and Fundamental Physics	Moda 1

A 2 1

International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico

Chaco Exploration Overvious





A3.1	Space Exploration Overview	Tonalà
A6.1	Measurements	Salon Jalisco E7
A7.1	Space-Agencies Long-Term Views	Mueble 1
B1.1	International Cooperation in Earth Observation Missions	Tlaquepaque
B2.1	Fixed and Broadcast Communications	Salon de Eventos 7
B3.1	Governmental Human Spaceflight Programs (Overview)	Guadalajara Hall Salon 2
B4.2	Small Space Science Missions	Tequila
B6.2	New Operations Concepts, Advanced Systems and Commercial Space Operations	Salon de Eventos 8
C1.1	Guidance, Navigation & Control (1)	Salon Jalisco E6
C2.1	Space Structures I - Development and Verification (Space Vehicles and Components)	Salon de Eventos 1
C3.1	Space-Based Solar Power Architectures / Space & Energy Concepts	Salon de Eventos 2
C4.1	Propulsion System (1)	Zapopan
D1.1	Innovative and Visionary Space Systems Concepts	Salon de Eventos 5
D2.1	Launch Vehicles in Service or in Development	Salon Jalisco E2
D3.1	Strategies & Architectures as the Framework for Future Building Blocks in Space Exploration and Development	Mueble 2
D6.1	Commercial Space Flight Safety and Emerging Issues	Joya 1&2
E1.8	Open Space: Participatory Space Education and Outreach	Salon de Eventos 4
E4.1	Memoirs & organisational histories	Salon de Eventos 6

Tonalà

16:15 - 17:15 **GNF – The Development of Commercial Remote Sensing Satellites and LEO Communication Constellation**

Location: Guadalajara Hall 8

China Aerospace Science and Technology Corporation (CASC) announced to start the construction of commercial remote sensing satellites constellation on September 2015, including 16 optical satellites with 0.5m GSD, 4 optical satellites with 0.3m GSD, 4 SAR satellites with 0.5m GSD and a certain amount of video satellites. Once completed, the constellation will be able to acquire global high resolution optical data and radar remote sensing data quickly.

The 4 optical satellites with 0.5m GSD developed in the first stage of this project are scheduled to launch at the end of 2016 and the beginning of 2017. Based on mature technology, the satellites meet the needs for professional and quantitative application. The camera's MTF is better than 0.15, with digital quantization of 11bit and the nadir swath width more than 12km. Its great agile capability contributes to target imaging, stereo imaging and five-strip imaging.

These 4 satellites are developed by DFH Satellite Co., Ltd (DFHSat), a subsidiary of China Academy of Space Technology (CAST) which belongs to CASC. At the end of 2015, the company has launched 59 satellites, among which 37 satellites launched during the past 5 years and 52 satellites still in orbit. DFHsat also established small and micro satellite platform types covering levels from 1kg to 1000kg. The VRSS-1 developed by DFH was the first commercial optical remote sensing satellite of China exported to Venezuela.

Other than commercial remote sensing satellites, DFHSat is planning to develop Data Collection Satellite System and low orbit mobile communication satellite constellation. As a stock shared company, DFHsat is full open to space organizations all over the world, conducting deep cooperation concerning satellite delivery, engineering training, joint development and so on.

Organized by:

DFH Satellite CO., Ltd, CAST



Speaker:



Lihua Zhana Proiect Manager DFH Satellite Co. Ltd,



MODERATOR Ming Li Vice-President, China Academy of Space Technology (CAST),

17:15 - 18:15 GNF – Russian Cosmonautics: International Aspects

Location: Guadalajara Hall 8

The main directions of Russian cosmonautics development for the nearest decade were determined by the Federal Space Program for 2016-2025. In the area of human space flights the program provides for:

- 1. The ISS Russian Segment utilization and construction of the ISS RS modules of the 2nd stage that will include Multipurpose Laboratory Module Nauka (Science), Node Module Prichal (Berth), and Scientific-Power Module;
- 2. The Russian orbiting station development;
- 3. The next-generation human transportation system development, which will include Federation spacecraft.

Intensity of the Russian research program implementation aboard the ISS will be increasing in combination with expansion of a number of scientific investigations that will be executed jointly with the ISS Program partners.

The important element of the Russian human spaceflight program aboard the ISS is a consecutive implementation of commercial projects. Development and adoption of new space technologies, which can be used in commercial projects, are underway.

After completion of the ISS flight it is planned to undock from the station the ISS RS new (2nd stage's) modules and use them for creation of a new Russian orbiting station, utilization of which will provide for a wide international cooperation.

Federation human spacecraft of a new-generation is developed for missions to LEO and to cis-lunar orbits. The vehicle will be launched to LEO from Vostochny launch site in 2021 atop Angara-5P launcher that is under development now. For missions to the Moon a new launcher of a super-heavy class will be used.

Both Federation spacecraft and a super-heavy launcher should become key elements of long-range programs for deep space exploration, including missions into cis-lunar space and on the Moon as well; multipurpose missions to asteroids; missions to satellites of planets and on Mars. The missions' configuration forming and development of the future programs architecture are underway.

Organized by:

S.P. Korolev Rocket and Space Corporation Energia



Speaker:



Vladimir L. Solntsev General Director. S.P. Korolev Rocket and Space Corporation Russian Federation





18:15 - 19:30 Plenary 2: Satellite Communications Making Connectivity Accessible and Affordable to Latin-American Countries to Reduce the Digital Divide - Host Plenary

Location: Guadalajara Hall 4,5,6,9&10

Connectivity and Internet access has been always a limitation to allow the inclusion and access to the information society for several millions of inhabitants in this world. This has produced the so-called digital divide that not only produces an impact in the access to basic services but also is an important limitation to their economic growth.

In Latin America, this factor is particularly bigger due the added challenge of geographical disperser communities that also are normally with a very difficult access and with many disadvantages. Just as a reference, in Mexico we have more than 100,000 small communities under this description, they account for around less than 10% of the total population adding restrictions to make feasible to find a suitable business model to provided services.

Panellists:



Richard F. Ambrose Executive Vice President, Lockheed Martin Space Systems, **United States**



Steve Collar (invited) CEO, O3B, **United States**



Mauricio Bouroncle Chief Commercial Americas for Iridium, Mexico



Gerardo Ruiz Esparza Minister of Communications and Transports, Mexico



Carlos Slim Helú (invited) Chairman, CARSO Group, Mexico



Greg Wyler CEO. OneWeb **United States**

Ruy Pinto

Chief Digital

INMARSAT,

United Kingdom

Transformation Officer,



MODERATOR Francisco Javier Mendieta Jimenez General Director, Mexican Space Agency

19:30 - 22:00 Welcome reception

Location: Mexico Hall

Tuesday, 27 September

08:30 - 09:30 Plenary 3: Space and Climate: How Space Agencies Will Contribute to the Implementation and Follow-up of the Paris Agreement during

Location: Guadalajara Hall 4,5,6,9&10

Climate change is one of the most important challenges humankind is facing. Due to their global coverage at different scales (spatial and temporal), space missions have an important role to play in the fight against climate change since the phenomenon is global with local impacts. This has been highlighted in particular through the Mexico Summit Declaration made under the umbrella of International Academy of Astronautics in September 2015. About one year after the great success of the United Nation Framework Convention on Climate Change Conference of the Parties number 21, the so called COP 21, held in France, Space Agencies will present concrete actions in support to the agreement of Paris concerning observation, mitigation and adaptation strategies.

Panellists:



Roberto Battiston President, Italian Space Agency.



Pascal Ehrenfreund Chair of the Executive Board, German Aerospace Center (DLR), Germany



Driss El Hadani Director, Centre Royal de Télédétection Spatiale (CRTS). Morocco



Sergey Krikalev Executive Director of Piloted Spaceflights, ROSCOSMOS. Russian Federation



S. Somanath Director. Liquid Propulsion Systems Centre (LPSC) Indian Space Research Organization (ISRO),



Sylvain Laporte President. Canadian Space Agency (CSA). Canada



Mendieta Jimenez General Director, Mexican Space Agency (AEM). Mexico



Naoki Okumura President, Japan Aerospace **Exploration Agency** (JAXA), Japan



Ellen Stofan Chief Scientist, National Aeronautics and Space Administration (NASA), **United States**



Johann-Dietrich Woerner Director General, European Space Agency (ESA). France



MODERATOR Jean-Yves Le Gall Centre National d'Etudes Spatiales (CNES), France



09:30 - 12:00 GNF Industry Day - Late Breaking News

Location: Guadalajara Hall 8

Organized by:

IAF Industry Relations Committee



Moderator:



Frank Morring Senior Editor, Aviation Week. United States

09:30 - 10:00 GNF - OneWeb: Greg Wyler

Location: Guadalajara Hall 8

OneWeb's mission is to enable affordable Internet access for everyone and to achieve the #1 target of the WSIS (World Summit on the Information Society): to create a community access point at every school in the world. With a constellation of Low Earth Orbit satellites, we can provide connectivity everywhere. By empowering communities to build their own networks, OneWeb transparently extends the reach of MNOs (mobile network operators) and ISPs (Internet service providers).

Speaker:



Greg Wyler Chairman, OneWeb, Ltd., **United States**



Start tim	e: 09:45 Technical Sessions	
No	Description	Room
A1.2	Human Physiology in Space	Salon de Eventos 3
A2.2	Fluid and Materials Sciences	Moda 1
A3.2A	Moon Exploration – Part 1	Tonalà
A5.2	Human Exploration of Mars	Tlaquepaque
A6.2	Modelling and Risk Analysis	Salon Jalisco E7
A7.2	Scientific Motivation and Requirements for Future Space Astronomy and Solar System Science Missions	Mueble 1
B1.2	Future Earth Observation Systems	Tlaquepaque
B2.2	Mobile Satellite Communications and Navigation Technology	Salon de Eventos 7
B3.2	Commercial Human Spaceflight Programs	Guadalajara Hall Salon 2
B4.1	17 th Workshop on Small Satellite Programmes at the Service of Developing Countries	Tequila
C1.2	Guidance, Navigation & Control (2)	Salon Jalisco E6
C2.2	Space Structures II - Development and Verification (Deployable and Dimensionally Stable Structures)	Salon de Eventos 1
C3.2	Wireless Power Transmission Technologies, Experiments and Demonstrations	Salon de Eventos 2
C4.2	Propulsion System (2)	Zapopan
D2.2	Launch Services, Missions, Operations, and Facilities	Salon Jalisco E2
D4.1	Innovative Concepts and Technologies	Mueble 2
E1.9	Space Culture –Public Engagement in Space through Culture	Salon de Eventos 4
E2.1	Student Conference - Part 1	Joya 1&2



10:05 - 10:40 GNF - Virgin Galactic: George Whitesides

Location: Guadalajara Hall 8

Virgin Galactic CEO George Whitesides will present an update on the company's efforts to open space to change the world for good. He will discuss current status of test flights and operational readiness for commercial human spaceflight, including the ongoing testing of the SpaceShipTwo VSS Unity, as well as the ongoing development of the LauncherOne small satellite launch service.

Speaker:



George Whitesides Virgin Galactic, **United States**



10:45 - 11:20 GNF - Blue Origin: Rob Meyerson

Location: Guadalajara Hall 8

On November 23, 2015, Blue Origin's New Shepard vehicle made history by becoming the first rocket to fly to space and successfully return to Earth for a vertical landing. Since then, the exact same rocket has flown a total of four times, demonstrating recovery and reuse. Mr. Meyerson will discuss these current projects and Blue Origin's future plans to open space to the world.

Speaker:



Rob Meyerson President, **United States**

BLUE ORIGIN

11:00 - 14:15 IISL Moot Court Semi Finals (This is a closed session)

Location: Los Arcos & Cabanas 1

11:25 - 12:00 GNF - Planet: Robbie Schingler

Location: Guadalajara Hall 8

Planet co-founder and chief strategy officer Robbie Schingler will discuss the 'Space Renaissance' that is driving a global sensing revolution. He will summarize why commercial companies in space today, more than ever before, have a unique opportunity to build a thriving business while helping humanity better understand itself and our planet.





Speaker:



Robbie Schingler Co-Founder and Chief Strategy Officer, Planet, United States



12:00 - 12:30 GNF - How Europe is Paving the Future with Ariane 6 and Vega C

Location: Guadalajara Hall 8

On September 13th, the European Space Industry gave its final go to the new heavy launcher Ariane 6, accompanied by Vega C, available in 2020 and 2019, respectively. Innovative, well-adapted to new market segments at competitive prices, the launchers will continue the unique success-story of Arianespace, the leader on the commercial satellite market over the last three decades. With the unparalleled reliability and performance of its launch vehicle family, Arianespace is more than ever ready to serve new space applications for the greatest benefit of mankind.

Organized by:

Arianespace European Space Agency (ESA





Speakers:



Stephane Israël Chairman & CEO, Arianespace, France



Johann-Dietrich Woerner Director General, **European Space Agency** (ESA), France

Industry Luncheon (Upon Invitation only) 12:30 - 13:30

Location: Guadalajara Hall 3

Early astronomers first peered at Mars through telescopes. Inaugural fly-bys of the Red Planet dubbed it a "dead world." Mars was a mystery until the Viking missions, which revealed a few of the planet's hidden gems. Today Mars is at the epicenter of how the world will continue our legacy of human spaceflight. A look back informs a look forward into the Red Planet

Speaker:



James H. Crocker Vice President and General Manager, Lockheed Martin Space Systems Company, United States

Late Breaking News: Making Humans a Multiplanetary Species (SpaceX LBN)

Location: Guadalajara Hall 4,5,6,9&10

On the second day of the IAC, during a special keynote entitled "Making Humans a Multiplanetary Species", Elon Musk will discuss the long-term technical challenges that need to be solved to support the creation of a permanent, self-sustaining human presence on Mars. The technical presentation will focus on potential architectures for colonizing the Red Planet that industry, government and the scientific community can collaborate on in the years ahead.

Speaker:



Elon Musk CEO and Founder. SpaceX. **United States**

14:30 - 15:00 Press Conference: Elon Musk, CEO and Founder SpaceX

Location: Guadalajara Hall 7



Elon Musk CEO and Founder, **United States**

14:30 - 16:30 GNF – Shifting the Landscape for Global Space Industry - Growing Partnerships in a Competitive Environment - Systems Integration to Big Data

Location: Guadalajara Hall 8

Organized by:

IAF Industry Relations Committee



Speakers:



John Elbon Vice President/ General Manaaer. The Boeing Company, **United States**

Vincenzo Giorgio

Institutional Marketing

Thales Alenia Space,

Vice President.

and Sales,



Kav Sears Vice President, Lockheed Martin United States

President and Co-

Axiom Space, LLC,

United States

Founder.



Fritz Merkle Member of the Management Board, OHR Germany



Chris Boshuizen Vice Chair and Entrepreneur-in-Residence. Data Collective. **United States**







MODERATOR Carissa Christensen Managing Partner, Tauri Group. **United States**

Start time: 14:45 **Technical Sessions**

No	Description	Room
	•	
A1.3	Medical Care for Humans in Space	Salon de Eventos 3
A3.2B	Moon Exploration – Part 2	Tonalà
A4.1	SETI 1: SETI Science and Technology	Moda 1
A6.4	Mitigation and Standards	Salon Jalisco E7
B2.3	Advanced Satellite Services	Salon de Eventos 7
B3.3	Utilization & Exploitation of Human Spaceflight Systems	Guadalajara Hall Salon 2
B4.3	Small Satellite Operations	Tequila
C1.3	Guidance, Navigation & Control (3)	Salon Jalisco E6
C2.3	Space Structures - Dynamics and Microdynamics	Salon de Eventos 1
C4.9	Hypersonic and Combined Cycle Propulsion	Zapopan
D1.2	Enabling Technologies for Space Systems	Salon de Eventos 5
D2.7	Small Launchers: Concepts and Operations	Salon Jalisco E2
D4.2	Contribution of Space Activities to Solving Global Societal Issues	Mueble 2
E1.3	On Track - Undergraduate Space Education	Salon de Eventos 4
E3.2	International Space Exploration Policies and Programmes	Salon de Eventos 8
E5.1	Architecture for humans in space: design, engineering, concepts and mission planning	Salon de Eventos 2
E6.2	Innovation, Entrepreneurship & Investment: The Mesoscopic Perspective	Mueble 1
E7.2	Legal Perspectives on Space Resources and Off-Earth Mining	Salon de Eventos 6

Press Conference: Johann-Dietrich Woerner, Director General European Space 15:00 - 16:00 Agency

Location: Desfilia



Johann-Dietrich Woerner Director General. **European Space Agency** (ESA).

16:30 - 17:45 GNF - New Dimensions of Space - What's Next?

Location: Guadalajara Hall 8

The space sector is a source of innovation that drives the global economy and is an enabler of many industrial activities. From satellite communications, navigation receivers, and geospatial imaging to weather forecasting and national security, space products and services are crucial for modern societies. Space technologies are part of our daily lives. The space sector is in

transition and today's challenges are characterized by changing paradigms and new user demands, an increasing number of countries and new private actors entering the field, as well as increasing reliance on space. The space sector is thus becoming more diverse and complex and its actors need to adapt. Will new stakeholders benefit from existing structures and resources? How will space agencies adapt to these challenges? Can large industries evolve? What will be the role of SMEs? Will technologies or new users drive the further evolution of the space sector? Is there an impact on all parts of the space value chains? In this panel Dr. Gerd Gruppe, Member of the Executive Board of the German Aerospace Center (DLR), will exchange views with three panelists from various parts of the space sector and beyond, as well as with the audience. After the panel, you will have a better understanding of the new dimensions lying ahead of the space sector.

Organized by:

German Aerospace Center (DLR)



Speakers:



Philippe Moreels Head of Strategy and Business Development. Astroscale Pte. Ltd., Singapore



Bart Reijnen Senior Vice-President On-Orbit Services. Airbus Defence and Germany



Dick Rocket CEO and Co-Founder, NewSpace Global, United States



MODERATOR Gerd Gruppe Member of the Executive Board. German Aerospace Center (DLR). Germany

17:45 - 18:45 Plenary 4: Innovative Solutions for Making Space Accessible and Affordable -**Next Generation PE**

Location: Guadalajara Hall 4,5,6,9&10

The participants will take centre-stage during the Next Generation Plenary and discuss innovative solutions for making space accessible and affordable to all countries – presenting their own research and suggesting bigger ideas for the space industry and space agencies. The panelists were selected through a global competitive process to identify the best world wide candidates and showcase the diversity of successful efforts in towards space accessibility and affordability through solutions with a new perspective. A team of IAF experts evaluated their proposals to score and select participants for the Plenary Event. The plenary will open with remarks by the moderator followed by presentations by the panelists covering their motivations for performing research in space vs. on Earth and discuss results and benefits of their research – not only for deep-space exploration but also for improving life on Earth. This plenary looks forward to a future when the panelists will be in the prime of their careers, executing the decisions of the day and ultimately driving the space community.

Panellists:



Elyka Abello Electrical Power Supply Design Engineer, Bolivarian Agency for Space Activities, Venezuela



Kyle Acierno **Global Business** Development Manager, ispace technologies



Yusuke Muraki Engineer, Japan Aerospace Exploration Agency (JAXA),





Marek Novák Student researcher and medical entrepreneur, Czech Technical University in Prague, Czech Republic



Sinead O'Sullivan Sainsbury Management Fellow. Harvard Business School, **United States**



MODERATOR David Parker Director of Human Spaceflight and Robotic European Space Agency (ESA/ESTEC), The Netherlands

Young Professional Networking Event 19:00 - 21:00

Location: Guadalajara Hall 1 & 7

19:00 - 22:00 German Night Reception (upon invitation only)

Location: Westin Guadalajara

Hosted by:

The Ambassador of the Federal Republic of Germany in Mexico, Viktor Elbling

The Chair of the DLR Executive Board, Prof. Dr. Pascale Ehrenfreund

Wednesday, 28 September

Plenary 5: Living For a Whole Year on ISS: Early Results and Lessons Learned. 08:30 - 09:30 #YearInSpace

Location: Guadalajara Hall 9&10

Two ISS crewmembers just completed a successful, continuous one-year stay in orbit. It has been nearly two decades since anyone has been in space for that long, and this latest one-year stay has built upon the foundation of those earlier missions to leverage advances in space technology and health care. International cooperation has been the key to the success of this adventure, involving the ISS international partners, collaborative research investigations between Russia and the USA, and crewmembers from Russia and the USA.

A crewmember, researcher, and manager will participate to discuss the history, planning, experience and early results of this unique adventure, as well as how it relates to upcoming deep space exploration missions. The moderator will orchestrate an informative dialogue among the panelists and with the audience.

Organized by the Association of Space Explorers and the IAF Human Spaceflight Committee.

Panellists:



William H. Gerstenmaier Associate Administrator for Human Exploration and Operations. National Aeronautics and Space Administration (NASA). United States



Mikhail B. Kornienko Cosmonaut RAS Gagarin, Russian Federation



Michael B. Stenger RAS Gagarin Cosmonaut Training Center, National Aeronautics and Space Administration (NASA) **United States**



MODERATOR John B. Charles Chief Scientist, National Aeronautics and Space Administration United States

09:30 - 10:30 GNF - WIA-E Space: New Paths Towards a Balanced and Inclusive Development

Location: Guadalajara Hall 8

Indispensable for a successful development is a balanced and inclusive evolution in terms of gender, generations and different regions of the world. The panel concentrates on selected space-based applications for specific sections like the improvement of peoples' health in remote areas, health problems of the society, management of migration challenges all over the world as well as job-related options for young women in the space arena.

Organized by: WIA-Europe

Panellists:





Simonetta Di Pippo Director, United Nations Office for Outer Space Affairs (UNOOSA). Austria



Barbara Ryan Director, Intergovernmental Group on Earth Observations (GEO), Switzerland



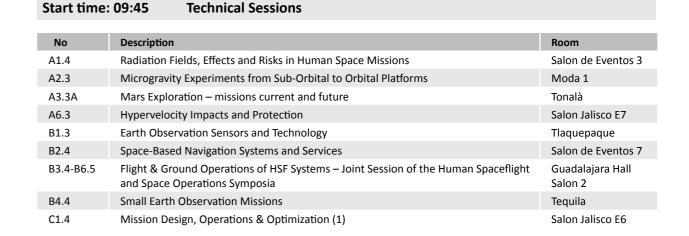
Sandy Magnus Executive Director, American Institute of Aeronautics and Astronautics (AIAA), United States



Minoo Rathnasabapathy Executive Director, Space Generation Advisory Council (SGAC), Austria



MODERATOR Francisco Javier Mendieta Jiménez Director. Mexican Space Agency (AEM), Mexico



International Astronautical Congress





26 - 30 September 2016, Guadalajara, Mexico

C2.4	Advanced Materials and Structures for High Temperature Applications	Salon de Eventos 1
C4.3	Propulsion Technology (1)	Zapopan
D1.3	System Engineering - Methods, Processes and Tools (1)	Salon de Eventos 5
D2.3	Upper Stages, Space Transfer, Entry and Landing Systems	Salon Jalisco E2
D3.4	Space Technology and System Management Practices and Tools	Mueble 2
D5.1	Risk Management for Safety and Quality in Space Programs	Mueble 1
E1.4	In Orbit - Postgraduate Space Education	Salon de Eventos 4
E2.2	Student Conference - Part 2	Joya 1&2
E3.3	Game changers in the space economy	Salon de Eventos 8
E5.2	Models for Successfully Applying Space Technology Beyond Its Original Intent	Salon de Eventos 2
E7.3	Contemporary Considerations about the 1986 Principles Relating to Remote Sensing of the Earth from Space	Salon de Eventos 6

10:30 - 12:00 GNF - Science - the Fundament and Promoter of Space Activities

Location: Guadalajara Hall 8

Ever since the beginning of space activities be it ground-based or eventually space-based, it has been closely intertwined with scientific curiosity and technological progress. Science and space activities have mutually benefitted from each other, triggering a virtuous circle of progress ultimately enabling and serving today's globalised societies and economies with many terrestrial applications unforeseen from the onset. Without space science there would be no applicable or commercial use of space.

In this panel Dr Gerd Gruppe, Member of the Executive Board of the German Aerospace Center (DLR), will explore with four panellists representing space-related projects at the cutting edge of science and technology, as well as with the audience, the current state of the science-space relationship and how it might evolve in the years to come.

The debate will include questions such as...

- Are scientific or technological progresses driving space activities?
- Does science have the power to trigger technological developments?
- How could countries benefit from space science for terrestrial uses?
- How will scientific achievements change todays and future space activities?
- Can we expect radically new applications from a scientific breakthrough?

Organized by:

German Aerospace Center (DLR)



Speakers:



Éric Laliberté Director General for Space Utilization. Canadian Space Agency (CSA), Canada



Claus Lämmerzahl Director Space Science, Center of Applied Space Technology and Microgravity (ZARM),



Frank Flechtner Head of Global Geomonitoring and Gravity Field, GFZ German Research Centre for Geosciences.



Walter Naumann CEO ICARUS Global Observation System GmbH. Germany



MODERATOR Gerd Gruppe Member of the Executive German Aerospace Center (DLR),



GNF - ITU World Radiocommunication Conference (WRC-15) allocates Spectrum 12:00 - 12:30 for Future Innovation, Challenges and Opportunity

Location: Guadalajara Hall 8

The International Telecommunication Union (ITU) holds World Radiocommunication conferences (WRC) every four years to review, and, if necessary, revise the Radio Regulations, the international treaty governing the use of the radio-frequency spectrum and the geostationary-satellite and non-geostationary-satellite orbits. Revisions are made on the basis of an agenda determined by the ITU Council, which takes into account recommendations made by previous World Radiocommunication conferences. The ITU World Radiocommunication Conference 2015 (WRC-15) concluded its deliberations on 27 November 2015 with the signature of the Final Acts that revise the Radio Regulations, the international treaty governing the use of radio-frequency spectrum and satellite orbits. Around 3300 participants, representing 162 out of ITU's 193 Member States attended the four-week conference from 2 to 27 November. Some 500 participants representing 130 other entities, including industry, also attended the conference as observers. WRC-15 addressed over 40 topics related to frequency allocation and frequency sharing for the efficient use of spectrum and orbital resources. The outcomes ensure high quality radiocommunication services for mobile broadband and satellite communications, maritime and aeronautical transport, air and road safety as well as for scientific purposes related to the environment, meteorology and climatology, disaster prediction, mitigation and relief. The decisions of the ITU World Radiocommunication Conferences are aimed at maintaining a stable, predictable and universally applied regulatory environment that secures long-term investments for the multi-trillion-dollar ICT industry including outer space activities. WRC-15 is barely completed that preparatory work for WRC-19 is already shaping up.

The purposes of the presentation will be to analyze the main outcomes of WRC-15 and plans for the next conference that set new challenges as well as bring new opportunities for billions around the world. ITU is committed to connecting all the world's people, whenever they live and whatever their means, and the WRC process is an essential element in that endeavor.

Organized by:

International Telecommunication Union (ITU)



Speaker:



Attila Matas Head of the Space Publications and Registration Division, International Telecommunication Union Switzerland

12:30 - 13:30 IAF "3G" IDEA Diversity Luncheon

Location: Guadalajara Hall 3

Foster the Principles of "3-G" Diversity within the Federation and the Space Sector

- Geography
- Generation
- Gender

For details see section 7.1 page 194.



Speakers:



Dava Newman Deputy Administrator. National Aeronautics and Space Administration (NASA), United States



Kay Sears Vice President. Strategy & Business Development, SSC, LMC, **United States**



Johann-Dietrich Woerner Director General, European Space Agency France

Minoo Rathnasabapathy Executive Director. Space Generation Advisory Council (SGAC), Austria



MODERATOR Jean-Yves Le Gall IAF President Elect, France

Sponsored by:











12:45 - 13:15 Interactive Award Ceremony

Location: Exhibition Hall, Jalisco Hall C

The best IAC Interactive Presentations will be awarded in a dedicated ceremony that will take place on Wednesday 28 September from 12:45 to 13:15 in the Exhibition Hall, Jalisco Hall C.

Prizes will be awarded for the following categories:

- Science and Exploration
- **Applications and Operations**
- Technology
 - Infrastructure
- Space and Society

13:15 - 14:45 Interactive Sessions and IP Cocktail Reception

Location: Exhibition Hall, Jalisco Hall C

The IP Award Ceremony will be followed by an interactive session and a cocktail reception from 13:15 to 14:45 in Exhibition Hall, Jalisco Hall C. An Interactive Presentation is a Multimedia presentation accessible on touch screens during the congress. Presenters will have the opportunity to display their work and interact with a larger number of delegates in an informal and dynamic fashion throughout the session.

Sponsored by:



Location: Exhibition Hall, Jalisco Hall C

Session	Symposia	Description
A1	IAA/IAF SPACE LIFE SCIENCES SYMPOSIUM	Interactive Presentations
A3	SPACE EXPLORATION SYMPOSIUM	Interactive Presentations
A4	45 th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The Next Steps	Interactive Presentations
A5	$19^{ ext{TH}}$ IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM	Interactive Presentations
A6	14 th IAA SYMPOSIUM ON SPACE DEBRIS	Interactive Presentations
B1	EARTH OBSERVATION SYMPOSIUM	Interactive Presentations
B2	SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM	Interactive Presentations
B3	HUMAN SPACEFLIGHT SYMPOSIUM	Interactive Presentations
B6	SPACE OPERATIONS SYMPOSIUM	Interactive Presentations
C1	ASTRODYNAMICS SYMPOSIUM	Interactive Presentations
C2	MATERIALS AND STRUCTURES SYMPOSIUM	Interactive Presentations
C3	SPACE POWER SYMPOSIUM	Interactive Presentations
C4	SPACE PROPULSION SYMPOSIUM	Interactive Presentations
D1	SPACE SYSTEMS SYMPOSIUM	Interactive Presentations
D2	SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM	Interactive Presentations
D3	14 [™] IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND DEVELOPMENT	Interactive Presentations
D4	$14^{ m th}$ IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE	Interactive Presentations
D5	49 th IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE ACTIVITIES	Interactive Presentations
E1	SPACE EDUCATION AND OUTREACH SYMPOSIUM	Interactive Presentations
E3	29th IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS	Interactive Presentations
E5	27th IAA SYMPOSIUM ON SPACE AND SOCIETY	Interactive Presentations
E6	BUSINESS INNOVATION SYMPOSIUM	Interactive Presentations
E7	59 th IISL COLLOQUIUM ON THE LAW OF OUTER SPACE	Interactive Presentations

13:30 - 14:30 GNF - UNISPACE +50 and the Future of Space

Location: Guadalajara Hall 8

Since the dawn of the space age the United Nations has recognized not only the sheer importance of greater international collaboration in outer space, but also the enormous potential of space research & technology for socioeconomic development. In light of this, the United Nations organized throughout the years three global conferences on the Exploration and Peaceful Uses of Outer Space (UNISPACE). By providing a platform for international dialogue on key issues related to space exploration and the practical applications of space technology, as well as facilitating the cooperation of States and organizations in outer space activities for peaceful purposes, the UNISPACE conferences have delivered vast economic, social and technological benefits to humankind.

As mandated by the Committee on Peaceful Uses of Outer Spaces (COPUOS), UNISPACE+50 will take place in 2018 and will mark the fiftieth anniversary of the first conference in 1968. UNISPACE+50 will provide a crucial opportunity for the global space community to take stock of what has been accomplished to date and what can be expected for the future. In particular, UNISPACE+50 will promote a "Space 2030" agenda that considers the development of stronger space governance and engages all key stakeholder in the space arena.

The panel will consider the four key thematic pillars of UNISPACE+50: space economy, space society, space accessibility and

Space economy aims to show the extensive relevance and connections that outer space activities have to the growth and sustainable development of all nations.



Guada/ajara

- Space society will include how nations and governments can carry out their core duties and functions while making the best use of space technologies and space-based services and applications that benefit society.
- Space accessibility concerns the promotion of the peaceful uses of space for humanity, including coordination, communication and capacity-building.
- Space diplomacy will draw attention to the global governance of space, and the vital role of COPUOS as the United Nations platform for space diplomacy, as well as cooperation among nations in using space technologies and applications to address common challenges facing humanity and building constructive, knowledge-based partnerships.

Organized by:

United Nations Office for Outer Space Affairs (UNOOSA)



Speakers:



Simonetta Di Pippo Director. United Nations Office for Outer Space Affairs (UNOOSA).



David Kendall United Nations Committee on the Peaceful Uses of Outer Space (COPUOS),



Jean-Yves Le Gall President, Centre National d'Etudes Spatiales (CNES), France



LI Xinjun Secretary General, Asia-Pacific Space Cooperation Organization (APSCO), China

14:30 - 16:00 GNF - Making the Moon Village and Mars Journey Accessible and Affordable

Location: Guadalajara Hall 8

The panel will review recent discoveries and key missions for upcoming Moon-Mars exploration. They will discuss how exploration towards a Moon Village and Mars Journey can perform research (planetary and space science, human spaceflight, astrobiology, astrophysics, technologies, life support, operations, technical validation and development).

They will discuss how to make it affordable and sustainable. They will address the social, education, peaceful inspirational and economical values of the Moon Village and Mars Journey for humankind. The panel will discuss possible visions and roadmaps towards a sustainable global Moon Village and Mars Journey, accessible and affordable for all.

The panel will address various aspects and questions from the community:

- 1. What are the current plans for different space agencies and space actors in Moon-Mars exploration?
- What Strategic Knowledge Gaps are there? What will upcoming missions and precursor robotic missions
- How to use current lunar data to inspire youth, public, engineers and stakeholders for the next steps of exploration?
- 4. Why a Moon Village and a Journey to mars?
- What drivers to consider: peaceful cooperation, exploration, technology, science, inspiration, jobs and workforce development, innovation and competition, legal aspects, commercial and socio-cultural benefits?
- 6. In relation to Journey to Mars, how to establish an infrastructure in lunar orbit or on the surface of the Moon, from which we can help entrepreneurs, international partners and experiences?
- 7. What could be the architecture, design, construction, and maintenance of a set of permanent habitats and infrastructure for science, manufacturing/production, and other commercial or institutional activities on the Moon and Mars?
- what is the role of small countries and new partners in exploration?
- What are possible collaborations between almost all space agencies and other stakeholders for possible future agreements at a large scale?

Organized by:

European Space Agency (ESA) / ESTEC/ ILEWG COSPAR Panel on Exploration (PEX) IAF ITTACUS Committee





Speakers:



Woerner Director General, European Space Agency (ESA). France



George Nield Associate Administrator for Commercial Space , Transportation, Federal Aviation Administration (FAA), United States



Alexander Degtyarev General Designer, General Director. Yuzhnoye State Design Office. Ukraine



Bob Richards Co-founder and CEO, Moon Express Inc., United States



Tanja Masson-Zwaan President, International Institute of Space Law (IISL), The Netherlands



Start time: 14:45

Fritz Merkle

Member of the

Germany

Management board,



Bernard Foing Chair ESA/ESTEC Staff Committee, Director ILEWG, Chief Scientist & Senior Exploration Officer, **European Space Agency** (ESA/ESTEC), The Netherlands

Technical Sessions

No	Description	Room
A1.5	Astrobiology and Exploration	Salon de Eventos 3
A2.4	Science Results from Ground Based Research	Moda 1
A3.3B	Mars Exploration – Science, Instruments and Technologies	Tonalà
A5.1	Human Exploration of the Moon and Cislunar Space	Tlaquepaque
A6.9	Orbit Determination and Propagation	Salon Jalisco E7
B2.5	Near-Earth and Interplanetary Communications	Salon de Eventos 7
B3.9-GTS.2	Human Spaceflight Global Technical Session	Joya 1&2
B4.5	Access to Space for Small Satellite Missions	Tequila
C1.5	Mission Design, Operations & Optimization (2)	Salon Jalisco E6
C2.5	Smart Materials and Adaptive Structures	Salon de Eventos 1
C3.3	Advanced Space Power Technologies and Concepts	Guadalajara Hall Salon 2
C4.4	Electric Propulsion	Zapopan
D1.4	Space Systems Architectures	Salon de Eventos 5
D2.4	Future Space Transportation Systems	Salon Jalisco E2
D3.3	Novel Concepts and Technologies to Enable Future Building Blocks in Space Exploration and Development	Mueble 2

E1.5

E3.4

E5.3

E6.3

E7.4

Enabling the Future - Developing the Space Workforce



Christina Giannopapa CLIODN Chair, International Astronautical Federation (IAF), France



MODERATOR Isabelle Duvaux-Béchon ESA Strategy Department, European Space Agency (ESA). France

16:00 - 17:00 **GNF – Disruptive Space Technology**

Location: Guadalajara Hall 8

The panel will address how disruptive space technology is transforming our world mainly around small satellite platforms.

Assuring a Safe, Secure and Sustainable Space Environment for Space Activities

Legal Challenges Represented by Large Satellite Infrastructures and Constellations

Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach

Innovation, Entrepreneurship & Investment: The Macroscopic Perspective

Organized by:







Speakers:



Martin N. Sweeting Group Executive Chairman, Surrey Satellite Technology Ltd (SSTL), United Kingdom



David Korsmayer Director of Engineering, NASA Ames Research Center. **United States**



Robbie Schingler Co-Founder and Chief Strategy Officer, Planet. **United States**

Salon de Eventos 4

Salon de Eventos 8

Salon de Eventos 2

Salon de Eventos 6

Mueble 1

17:00 - 17:45 GNF - Space for Global Challenges

Location: Guadalajara Hall 8

Space programmes, activities or services support more and more the challenges we have on Earth. Space is not the solution, but a useful tool that can help addressing access to energy, digital divide, health, education, food and water, communications infrastructure or security on Earth. In particular space supports and can support much more the achievement of the 2015 UN 17 Sustainable Development Goals. An important goal is to understand the needs and expectations expressed by the actors concerned and to "translate" them into new applications or programme requirements for the future space activities. This session will explore new ways and approaches and how to intensify the use and benefits from space for global challenges.

Organized by:

European Space Agency (ESA)



Speakers:



Barbara Ryan Director. Intergovernmental Group on Earth Observations (GEO). Switzerland



Attila Matas Head of the Space Publications and Registration Division, International Telecommunication Union (ITU),



Jörg Feustel-Büechl Advisor. Bavarian State Ministry for Economic Affairs and Media Energy and Technology Germany

Highlight Lecture 1: Mars Base Camp

Location: Guadalajara Hall 9&10

Detailed technical discussion of how to safely execute human exploration of Mars by leveraging the heavy lift capability of Space Launch System (SLS) and the deep space human rated capabilities of Orion. Additionally, an in depth discussion of the significant science that can be accomplished from a human orbiting laboratory providing a global perspective and access to both Martian moons via an excursion system, including low-latency tele robotics; sample collection, analysis, and curation; and direct investigation of Deimos and Phobos and sample return.

Speakers:



Antonelli Space Systems Mars Space Camp initiative Lockheed Martin Corporation, **United States**

Dominic A. (Tony)



Rob Chambers Space Systems Company Lockheed Martin Corporation, **United States**

MODERATOR Wanda Sigur VP and GM, Civil Space, Lockheed Martin Space Systems Company, **United States**

19:00 - 21:00 **Young Professional Networking Event**

Location: Guadalajara Hall 7

19:00 - 21:30 LMC Reception and IAC2017 Official Launch (upon invitation only)

Location: Desfilia

19:30 - 21:30 Zarm Dinner (upon invitation only)

Location: Lula Bistro





Thursday, 29 September

Plenary 6: Realizing Mars Sample Return through Human and Robotic Collaboration

Location: Guadalajara Hall 9&10

Mars sample return has been a priority of the international science community for years. A scenario requiring international partnerships and multiple robotic missions has been advanced by leading space agencies, however the cost is high. With NASA's Journey to Mars and plans for human missions to the lunar vicinity, it is time to consider whether Mars Sample Return can be realized by collaboration between human and robotic missions. As an example, Planetary Protection is one of the tremendous technical challenges of the mission, and securing a safe landing on Earth of the canister containing the Mars sample is highly critical. Could astronauts retrieve a Mars sample canister which is brought to the lunar vicinity robotically and return it to Earth? Human missions to the lunar vicinity will enable mastery of the challenges of future Mars missions and create exciting scientific opportunities for the decades to come. This panel will discuss the challenges and scientific importance of Mars Sample Return, and whether introducing humans in the loop will bring benefits which trigger the political will to finally realize a Mars Sample Return mission.

Panellists

CONFERENCE PROGRAMIME



Masaki Fujimoto Director Department of Solar Systems Sciences. Japan Aerospace **Exploration Agency** (JAXA).



David Parker Director of Human Spaceflight and Robotic Exploration. European Space Agency (FSA/FSTFC) The Netherlands



Ellen Stofan Chief Scientist, National Aeronautics and Space Administration (NASA), United States

Charles Whetsel Manager of Mars Program National Aeronautics and





Cheryl Reed Program Manager. Johns Hopkins University Applied Physics Laboratory United States

MODERATOR

Start time: 09:45 **Technical Sessions**

No	Description	Room
A1.6	Life Support, habitats and EVA Systems	Salon de Eventos 3
A3.4	Small Bodies Missions and Technologies	Tonalà
A4.2	SETI 2: SETI and Society	Moda 1
A6.5	Space Debris Removal Issues	Salon Jalisco E7
B1.4	Earth Observation Data Management Systems	Tlaquepaque
B2.6	Advanced Technologies for Space Communications and Navigation	Salon de Eventos 7
B3.5	Astronaut Training, Accommodation, and Operations in Space	Guadalajara Hall Salon 2
B4.6A	Generic Technologies for Small/Micro Platforms	Tequila
C1.6	Orbital Dynamics (1)	Salon Jalisco E6
C2.6	Space Environmental Effects and Spacecraft Protection	Salon de Eventos 1
C4.5	Propulsion Technology (2)	Zapopan
D1.5	Training, Achievements, and Lessons Learned in Space Systems	Salon de Eventos 5
D2.5	Technologies for Future Space Transportation Systems	Salon Jalisco E2



09:30 - 10:30 GNF - Space Technology for Emerging Countries - for Latin and South America

Location: Guadalajara Hall 8

As emphasized in the UN Agreement on the Sustainable Development Growth (SDG) adopted in 2015, international collaboration is becoming more and more important as it is one of critical factors to improve the welfare of people, especially for developing countries and to protect our planet. It is also analyzed that utilizing space technology effectively for emerging space nations could lead to enhancing their capabilities in improving agriculture, health, education, resource management, disaster management amongst many others.

In this regard, this GNF Session and following Workshop Session are prepared to promote the initiative of IAF members' collaboration and to enhance the utilization of space technology for emerging space nations.

Speakers:



Simonetta Di Pippo Director, **United Nations Office** for Outer Space Affairs (UNOOSA). Austria



Josef Aschbacher Director of Earth Observation, European Space Agency (ESA/ESRIN), Italy



Dava Newman

Deputy Administrator, National Aeronautics and Space Administration (NASA). **United States**



David Nabarro UN Secretary-General's Special Adviser on the SDGs **United Nations** United States

Jörg Feustel-Büechl

Ministry for Economic

Energy and Technology

Affairs and Media.

Advisor.

Ravarian State

(MWMET).

Germany



Luc St-Pierre Senior Programme Coordinator UNSPIDER Austria



Francisco Javier Mendieta Jiménez Director.

Mexican Space Agency (AEM), Mexico



MODERATOR Joo-Jin Lee VP for Developing Countries and Emeraina Members. International Astonautical Federation (IAF),



MODERATOR Christina Giannopapa CLIODN Chair, International Astronautical Federation (IAF),

GNF – 4 Subjects 180 Days CELSS Integration Experiment and Manned Deep 10:30 - 11:30 **Space Exploration**

Location: Guadalajara Hall 8

Space exploration has been a common pursuit of all human kind. SPACEnter, a 4-subject and 180-day integrated experiment of CELSS is a large multinational "human-environment" experiment conducted by China. The experiment is conducted in the newly

26 - 30 September 2016, Guadalajara, Mexico

Organized by:

Space Generation Advisory Council (SGAC)

European Space Agency (ESA)



Guada/ajara



Speakers:



Rodrigo da Costa Business Development, Germany



Giulia Federico Space Generation Advisory Council (SGAC) Space Products and Germany



José Javier Roch Soto Mexican Space Agency (AFM). Mexico



Hugo Simões Young ESA, European Space Agency (ESA/ESTEC), The Netherlands



MODERATOR Angelika Daniels Technology Transfer Programme Office, European Space Agency (ESA/ESTEC),



Location: Guadalajara Hall 8

In the last several years, numerous commercial companies have begun to revolutionize the space industry. The success of reusable rockets, the development of private spaceships, and the potential for a privately owned and operated space station are signs of a new age in space exploration. The move from purely government led space endeavors to privately executed ones is currently underway.

While the approach to space missions is changing, one question remains: Is working in the space industry more appealing to millennials in various engineering fields than other technology companies in other industries with shiny campuses in silicon valley? How can the space industry as a whole attract bright talented people to help overcome the challenges of these new missions and the modern technology that comes with them?

Organized by:

IAF Young Professional Programme



Speakers:



Vice President Strategy & Business Development, Sierra Nevada Corporation's Space **United States**



Sirisha Bandla Specialist, Virgin Galactic, **United States**



Steve Lee Stevenson Astrosat. Scotland



Director, Future Projects & Airbus Defence and Space,





MODERATOR



Petra Rettberg Team Leader of the Astrobiology-Group,, Institute of Aerospace German Aerospace Center, Germany





built CELSS integration experiment facility of Space Institute of Southern China (Shenzhen). Based on the third-generation life

support technology, this study will examine the concordant effects of physical-chemical regenerative and bioregenerative life

support system, so as to reveal the law on dynamic variation of human body in CELSS with continuous tracking on multi-omics,

and to develop new technology on building life support system that works for multi-subjects long stay with high material closure, improved efficiency and greater reliability. The experiment has attracted space medicine and ecological system experimental

projects from all over the world like CNES and DLR to participate in. Through this experiment, the theoretical basis and technology

of bioregengerative life support system will be further enriched and some key technology breakthroughs of the third-generation life support system are expected to be made. And studies on astronauts health maintenance in long-stay closed environment

will be further accumulated. The event will mainly discuss on SPACEnter experiment, and spread out to the further development

in CELSS, the future of space exploration and its implication on medicine development, and relevant extraterrestrial life themes

and manned space exploration. The event will consist of lectures on SPACEnter experiment and topics on extraterrestrial life, and

seminars on the topics and arguments in the lectures. We aspire that more opportunities for communications and developments

between the East and the West in manned space technology will be made, fresh ideas on space medicine and manned space exploration studies will be stimulated, and international cooperation on manned space exploration will be enhanced in order to

Jeffrey Sutton

President and CEO,

Biomedical Research

Institute Director.

National Space

Institute (NSBRI),

United States



Fengyuan ZHUANG Professor Emeritus, Beihang University, China

Yi-Xian Qin

Enaineerina

United States

Director,

Professor of Biomedical

Research Laboratory,

Orthopaedic Bioengineering

11:30 - 12:30 GNF – Technology Transfer – How to Make the Most of It?

Location: Guadalajara Hall 8

achieve our common pursuit.

Space Institute of Southern China

Nick Kanas,

United States

M.D., Professor Emeritus,

University of California,

Organized by:

Speakers:

Numerous interesting, efficient technology transfers have been achieved through ESA Technology Transfer Office Programme whose mission is to inspire and facilitate the use of space technology, systems and know-how for non-space applications. Indeed, the transfer of space technology from space companies to other sectors results in a mutual gain for both industries and benefits the final users by providing high-tech effective solutions. From cooling suits for a Formula 1 racing team to ground penetrating radar to detect cracks in mine tunnels, these programmes offer a platform of new business opportunities for providers of space technology and systems and avenues for optimizing know-how transfer and improving competitiveness.

In this panel, representatives from agencies and industry discuss how to leverage space technology into other industries as well as address the specific needs/goals of non-space sectors.

Furthermore, representatives from Young ESA and SGAC bring in the perspective of how the next generation can help tackle the challenges in space technology transfer in an environment of technology disruption in the wake of New Space. The panel will include a commentary on how these industries see or treat access to information about space technologies, and their awareness of the potential "from space".



MODERATOR John Horack IAF Vice President, Armstrong Chair, The Ohio State University, **United States**

57



13:30 - 14:30 Plenary 7: Projection and Stability of the Orbital Debris Environment in the **Light of Planned Mega-Constellation Deployments**

Location: Guadalajara Hall 9&10

In early 2015 media reported plans by two companies, OneWeb Ltd. (UK) and SpaceX (USA), for the deployment of large low-Earth orbit (LEO) satellite constellations. The OneWeb constellation is planned to consist of 720 Satellites, to be operating at 1,200 km altitude in 18 different orbit planes, to provide global high-speed communication. The SpaceX constellation is planned to consist of 4,000 satellites, to be operating at 1,100 km altitude, to provide global, high-speed internet communication. Both constellations will be deployed in high-inclination orbits.

The proposed Plenary Event will present a panel of experts that will highlight possible effects of large constellation deployments on the current and future orbital debris environment, on possible risks imposed on other space missions during the operation and disposal of such constellations, and on legal aspects of large constellation deployments in the light of existing space debris mitigation guidelines and applicable legal frameworks.

Panellists:



Stephan Hobe Head of Institute of Airand Space-Law. University of Cologne, Germany



Holger Krag Head of ESA Space Debris Office. European Space Agency (ESA), France



Michael Lindsay Mission System Engineering and Analysis OneWeb Ltd. **United States**



Jer-Chyi Liou NASA Chief Orbital Debris National Aeronautics and Space Administration (NASA). United States



MODERATOR Heiner Klinkrad Technical University of Braunschweia. Institute of Space

14:30 - 18:30 IISL Moot Court Finals

Location: Paraninfo University of Guadalajara

14:30 - 16:00 GNF - Aiming at a Resilient and Sustainable Space Security System

Location: Guadalajara Hall 8

Most discussions of space security (basically the security of operational satellites) for intended or unintended interference focuses on the space segment. This proposal takes a much broader view, taking a system perspective that embraces environmental, policy and legal aspects.

A resilient and sustainable space security system involves balanced investments between the following elements:

- The space segment including space situational awareness and space traffic management;
- The spectrum segment including spectrum allocation and management to make optimal use of this inherently limited resource and to minimise the possibility of unintentional jamming and to ensure that sources of intentional jamming are identified.
- The cyberspace segment to ensure that the actual content of communications between ground stations and satellites is not interfered with and that data downlinked from satellites is also not corrupted in any way.
- The ground segment to ensure that physical infrastructure is adequately protected and that people who support satellite

- operations have relevant clearances and are considered to be 'fit and proper' for their duties.
- The policy and legal segments that provide common understandings between nations and within nations, with sanctions and enforcement mechanisms, where appropriate, for those who break relevant laws.
- The end-user segment end users of data from satellites (decision-makers) must be confident that the data they receive has not been tampered with and they need to understand what the data is telling them.

The GNF we propose will study the space security as a system. The forum will focus on the importance of relationships on the interactions and inter-relationships between each of the segments outlined above. In a systems view of any area of human endeavor, the focus is not on organisations or platforms or nodes. Rather the focus is on the quality and depth of the relationships and the transactions between those organisations, platforms and nodes.

Organized by:

The IAF Committee on Space Security





Speakers:



Xavier Pasco Senior Research Fellow Foundation pour la Recherche Stratégique (FRD), France



Peter Havs Associate Director. Eisenhower Center for Space and Defense Studies, United States



Brett Biddington Space Industry Association of Australia. Australia



MODERATOR Serge Plattard Senior Resident Fellow **European Space Policy**

Start time: 14:45 **Technical Sessions**

No	Description	Room
A2.5	Facilities and Operations of Microgravity Experiments	Moda 1
A3.5	Solar System Exploration	Tonalà
A6.6	Space Debris Removal Concepts	Salon Jalisco E7
B1.5	Earth Observation Applications and Economic Benefits	Tlaquepaque
B2.8-GTS.3	Space Communications and Navigation Global Technical Session	Joya 1&2
B3.6-A5.3	Human and Robotic Partnerships in Exploration - Joint session of the Human Spaceflight and Exploration Symposia	Guadalajara Hall Salon 2
B4.6B	Generic Technologies for Nano/Pico Platforms	Tequila
B5.2	Integrated Applications End-to-End Solutions	Salon de Eventos 7
B6.3	Mission Operations, Validation, Simulation and Training	Salon de Eventos 8
C1.7	Orbital Dynamics (2)	Salon Jalisco E6
C2.7	Space Vehicles – Mechanical/Thermal/Fluidic Systems	Salon de Eventos 1
C3.4	Small and Very Small Advanced Space Power Systems	Salon de Eventos 3
C4.6	New Missions Enabled by New Propulsion Technology and Systems	Zapopan
D1.6	System Engineering - Methods, Processes and Tools (2)	Salon de Eventos 5

International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico

D2.6	Future Space Transportation Systems Verification and In-Flight Experimentation	Salon Jalisco E2
D4.5	Space Mineral Resources, Asteroid Mining and Lunar/Mars insitu	Mueble 2
D5.3	Prediction, Measurement and Effects of space environment on space missions	Mueble 1
E1.7	New Worlds - Non-Traditional Space Education and Outreach	Salon de Eventos 4
E4.2	Scientific & technical histories	Salon de Eventos 6
E5.5	Space Societies, Professional Associations and Museums	Salon de Eventos 2

GNF - Spaceport Norway - Space as Platform for Industrial and Business 16:40 - 17:00 Development

Location: Guadalajara Hall 8

SPACEPORT NORWAY, is a new conference and public exhibition, launching for the first time 17 June 2017, in Stavanger, Norway. The space industry is growing and changing, globalization of the industry is accelerating and democratization is gaining ground. New remote sensing technology gives us data and insights we never had before, the cost for access to space is rapidly decreasing. This development has the power to shape new markets and create new business opportunities for a wide range of sectors and companies. Spaceport Norway is a commercial conference and arena, where new business partnerships can be formed and new cross-industrial collaboration can be made. An arena for technology transfer and shared knowledge about new opportunities, built on space technology and services as a platform for industrial development and transformation. Spaceport Norway is also a large scale exhibition open to the public, that will inspire families, kids, and young students by showing cutting edge technology from world class companies and institutions. In this talk, Ole Dokka give a sneak preview of the program and make the case for space as a 21st century business platform and how this can be relevant and valuable for you and your company.

Organized by: **Spaceport Norway**



Speaker:



Ole Dokka Executive Director, Spaceport Norway,

17:00 - 17:45 GNF — Space Medicine and Tourism Space Transportation

Location: Guadalajara Hall 8

To present to the audience the space transportation from the point of view of the implications for space medicine. Also the development of the space medicine in México in the past 5 years is presented with the outcomes about the future on the scope of space tourism transportation.

Organized by:

Mexican Space Agency (AEM)



Speakers:



Melchor J. Antuñano M.D. M.S Director, Aerospace Medical Institute (CAMI) Federal Aviation Administration (FAA) **United States**



Raul Carrillo Expert. National Academy of Medicine, Mexico

17:45 - 18:45 Highlight Lecture 2: The Exploration of Pluto by the New Horizons Mission

Location: Guadalajara Hall 9&10

The New Horizons (NH) mission was selected by NASA in November 2001 to conduct the first in situ reconnaissance of Pluto and the Kuiper belt. The NH spacecraft was launched on 2006 January 19, received a gravity assist from Jupiter during closest approach on 2007 February 28, and flew 12,500 km above Pluto's surface on 2015 July 14. NH carried a sophisticated suite of seven scientific instruments, altogether weighing less than 30 kg and drawing less than 30 W of power, that includes panchromatic and color imagers, ultraviolet and infrared spectral imagers, a radio science package, plasma and charged particle sensors, and a dust counting experiment. These instruments enabled the first detailed exploration of a new class of solar system objects, the dwarf planets, which have exotic volatiles on their surfaces, escaping atmospheres, and satellite systems. NH also provided the first dust density measurements beyond 18 AU and cratering records that document both the ancient and present-day collisional environment in the outer solar system down to sizes of tens of meters. NH obtained unprecedented data on Pluto's small satellites (Styx, Nix, Kerberos, and Hydra), adding significantly to the scientific bounty returned from the NH mission. The NH spacecraft was targeted toward the flyby of a small (~20-40 km) KBO in late-2015, and NASA approved the Kuiper belt Extended Mission (KEM) phase in July 2016, enabling the study of an object (2014 MU69) in a completely different dynamical class (cold classical) than Pluto. Other important scientific objectives of the KEM include: observations of more than 20 other KBOs at resolutions and geometries not feasible from Earth, and studies of the heliospheric plasma, neutral H and He, and the dust environment out to 50 AU from the Sun.

Speakers:



Harold A. Weaver New Horizons Project Scientist. The Johns Hopkins University Applied United States



MODERATOR Ralph McNutt Chief Scientist for Space Science, The Johns Hopkins University Applied Physics Laboratory **United States**



MODERATOR Stamatios Krimigis Emeritus Head of Space Department, The Johns Hopkins University Applied Physics Laboratory, **United States**

19:00 - 22:00 Cultural Event

Location: PALCCO

Pickup point: Motor lobby 2 of Expogudalajara (in front of the Hilton and Westin hotels area)

19:00 - 22:30 IISL Dinner (for registered guests only)

Location: Palacio Municipal De Zapopan





Friday, 30 September

05:30 - 07:30 GNF - Rosetta - Controlled Impact on Comet 67P/ Churyumov Gerasimenko

Location: Guadalajara Hall 8

Live Transmission from ESOC

The decision has been made for the location of Rosetta's controlled impact on Comet 67P/Churyumov-Gerasimenko on 30 September 2016, ending the mission.

The spacecraft will target Ma'at, a region hosting some active pits on the small comet lobe. This region has been chosen for its scientific potential and taking into account key operational constraints involved in executing the descent

The live transmission from ESOC will feature an intervention by the Director General of the European Space Agency (ESA) - Johann-Dietrich Woerner and other guest speakers



08:30 - 09:30 Highlight Lecture 3: The Saturn System as a Natural Laboratory to Investigate the Emergence of Biology

Location: Guadalajara Hall 9&10

Titan and Enceladus comprise a superb natural laboratory for studying the emergence of life, from pre-biotic chemistry in a dynamic geological setting, all the way to contemporary habitability of a salt-water ocean. We are fortunate that both of these important moons are in one planetary system; astrodynamics access to Enceladus is in fact gained by using Titan gravity assists; and Cassini has demonstrated how to conduct operations at Saturn. Mission designs, technologies, and even flight systems can be shared between these targets, making the exploration of both more accessible and affordable than if they were singular. The synergies mean that humanity is poised to follow Cassini back to the Saturn system, this time with the age-old goal in sight of learning how common life may be in the cosmos. The quest to understand how life arises, and where, is an inspiring, provocative, and enduring one.

Speakers:



Jonathan I. Lunine Director. Cornell Universit United States



MODERATOR Brent Sherwood Program Manager. Solar System Mission Formulation. Jet Propulsion United States

09:30 - 10:30 GNF - Astronauts Event

Location: Guadalajara Hall 8

Astronauts from all over the world will be sharing their experiences in space and answering questions from the audience.

This event will be open to the general public.

* Speakers will be announced at the beginning of the IAC 2016

No Description A1.7 Salon de Eventos 3 Biology in Space A2.6 Microgravity Sciences Onboard the International Space Station and Beyond - Part 1 Moda 1 A3.2C Moon Exploration - Part 3 Tonalà A6.7 Operations in Space Debris Environment, Situational Awareness Salon Jalisco E7 B1.6 Biodiversity Tlaquepaque B3.7 Advanced Systems, Technologies, and Innovations for Human Spaceflight Guadalajara Hall

Technical Sessions

20		Salon 2
B4.8	Small Spacecraft for Deep-Space Exploration	Tequila
B5.1	Tools and Technology in Support of Integrated Applications	Salon de Eventos 7
B6.1	Human Spaceflight Operations	Salon de Eventos 8
C1.8	Attitude Dynamics (1)	Salon Jalisco E6
C2.8	Specialised Technologies, Including Nanotechnology	Salon de Eventos 1
C3.5-C4.7	Joint Session on Nuclear Power and Propulsion	Zapopan
D1.7	Hosted Payloads - Concepts, Techniques and Challenges, Missions and Applications	Salon de Eventos 5
D2.8-A5.4	Space Transportation Solutions for Deep Space Missions	Salon Jalisco E2
D5.4	Cyber-security threats to space missions and countermeasures to address them	Mueble 1
E1.2	Lift-Off - Secondary Space Education	Salon de Eventos 4
E2.4	Educational Pico and Nano Satellites	Joya 1&2
E3.6	Enterprise Risk Management	Salon de Eventos 2
E7.5	Current Developments in Space Law with Particular Consideration for Latin America	Salon de Eventos 6

10:30 - 11:30 GNF – Space Architecture and Systems Engineering: different disciplines or the

Location: Guadalajara Hall 8

Start time: 09:45

Space architecture looks at the design of complex systems considering various aspects, taking into account how different design elements affect each other and the project as a whole. These elements are also known as systems, and systems engineers may refer to their parts or whole as subsystems, or systems of systems. Some may argue that systems engineering lacks a human aspect; in human space architecture, the design revolves around human needs and ergonomics. Yet aren't all systems driven or designed by humans at some point? Common terms have been found in both disciplines: big picture, integration, breadth and depth, multidisciplinary, holistic view, etc. They use the expertise of various backgrounds: mathematics, history, psychology, medicine, policy and law, various branches of the fundamental sciences and engineering, and many other tools and operating systems from various other trades and professions. Therefore, are space architecture and systems engineering really two different disciplines, or rather two facets of a single multidiscipline? Does one of them govern the other? Or, are they the same? This panel session will convene experts in the aerospace community working in both areas. This panel aims to generate a vivid discussion of something that we may have already noticed in our daily jobs in industry and academia, but that has not been discussed formally. We will learn from those who have been actively practicing and participating in complex system architecture synthesis, complex systems creation, development and systems integration and operations, and those who are currently at the front line of this ill defined profession. The panel will then draw recommendations based on the discussion to implement them in future collaboration of both Space Architecture and Systems Engineering fields.

Organized by:

AIAA Space Architecture **Technical Committee**





Brent Sherwood Manager, Jet Propulsion Laboratory Solar System Mission Formulation, United States



Olga Bannova
Space Architecture
Professor,
University of Houston,
United States



Speakers:

Olga Zhdanovich Consultant, European Space Agency (ESA/ESTEC), The Netherlands



MODERATOR

Jackelynne SilvaMartinez

Aerospace Engineer,
NASA Johnson Space
Center,
United States

11:30 - 12:30 GNF – Space Science From Earth Observatories At UNAM

Location: Guadalajara Hall 8

October 4, 1957 marked the end of the confinement of the human species to the Earth Surface and its atmosphere. A new perspective of the space around us was constructed along the years as manmade spacecrafts were able to go deeper into the Heliosphere, the cavity dominated by the Sun. Nevertheless, observations of the Sun and the space around us continued to be done from Earth based observatories, and techniques were refined and sophisticated following the technological development. Earth observations became a natural complement of spacecrafts. Mexico has a long tradition for hosting and promoting space observations from its territory. The first geomagnetic observatory dates back to the 1870's. Surveys of the latitudinal change of the cosmic ray flux were done in the 1950's, when the first permanent cosmic ray station was installed in Mexico City. Nowadays UNAM has: magnetic observatories that constitute a National Service, cosmic ray detectors of various kinds operate in several places of the territory and belong to the International Cosmic Ray Network; ionospheric monitor; installations to follow solar wind disturbances; solar observatories in different bands of the electromagnetic spectrum; and a network to observe and study meteoroids (the Mexican Meteoroid Network). The talk will focus on the description of the currently operating observatories, its objectives and scientific contributions, putting them in a historical and worldwide contemporary perspective.

Developing a space program is a complex endeavor and every country has to find its way. The development of space science and technology has been intensified in recent years at UNAM through multidisciplinary collaborations. The Facultad de Ingeniería-UNAM (Engineering Faculty) is developing the space program mainly in the Unidad de Alta Technology (High Technology Unit), located at the UNAM campus in Juriquilla, Queretaro. Currently this Unit is working on three major projects: Microsatellite Condor, for ionospheric studies , microsatellite Quetzal MIT UNAM, for atmospheric pollution measurements and the National Space Laboratory for Space Engineering, with capabilities for integration and testing of satellite systems, funded by the Consejo Nacional de Ciencia y Tecnología (National Council for Science and Technology). We are actively developing interactions with national and international institutions. The collaboration with the Agencia Especial Mexicana (Mexican Space Agency) has helped to understand the national approach, where several vicious cycles should be broken by networking, joint collaborations and industrial liaisons. Space technology education will be promoted, based on the national economic model and the more developed industrial demands.

Organized by:

National Autonomous University of Mexico (UNAM)



Speakers:



José F. Valdés-Galicia Director, Geophysics Institute National Autonomous University of Mexico, Mexico



Gutierrez

Professor,
Department of Design
Engineering
National Autonomous
University of Mexico,
Mexico

Saul D. Santillán

Guada/ajara

12:30 - 13:30 GNF – Stardust – a Fresh Look at Planetary Defense and Space Debris Removal

Location: Guadalajara Hall 8

Stardust is a unique training and research network devoted to develop and master techniques for asteroid and space debris monitoring, removal/deflection and exploitation.

Stardust is funded by the European Commission FP7 Marie Curie Action and for the past 4 years has trained the next generation of engineers, scientists and decision makers to protect our planet, save our space assets, and turn the threat represented by asteroids and space debris in an opportunity. The Stardust network now counts over 20 members including the European Space Agency, major companies like Airbus DS and Deimos, national research centres like CNR and CNRS, national observatories like the Paris Observatory and the Astronomical Observatory of Belgrade, SMEs like Dinamica and SpaceDys, and eight Universities and University research centres around the world, including the University of Tor Vergata, the University of Pisa, the University Polytechnic of Madrid, the University of Southampton, the University of Munich, DFKI in Bremen and the University of Arizona. Stardust, led by the University of Strathclyde in Glasgow, Scotland, has pushed the boundaries of space research with innovative ideas and visionary concepts exploring alternative solutions to the threat represented by asteroids and space debris. Stardust integrated multiple disciplines, from robotics, to applied mathematics, from computational intelligence to astrodynamics, to find practical and effective solutions to the asteroid and space debris issues. This GNF event will present the major achievements of the Stardust network and will discuss, with key experts in the field of asteroids and space debris, existing problems and possible solutions.

Organized by:

Stardust Network

STARDUST

Speakers:



Reader, Stardust Network (University of Strathclyde), Scotland

Massimiliano Vasile



Giovanni Gronchi Associate Professor, Mathematical Physics in the Department of Mathematics at the University of Pisa, Italy



University of Pisa, Italy

Ian Carnelli

Programme Manager,
European Space Agency



Assistant Professor,
Aerospace Systems
in the Department of
Aerospace Science and
Technology, Politecnico di
Milano,
Italy

Francesco Topputo



Moriba Jah
Director,
University of Arizona,
United States



Christophe Bonnal
Senior Expert,
Centre National d'Etudes
Spatiales (CNES),
France



Daniel Scheeres
Distinguished Professor,
University of Colorado at
Boulder,
United States

AUTHORS' INDEX International Astronautical Congress
26 - 30 September 2016, Guadalajara, Mexico

13:30 - 14:30 GNF - China Manned Space Programme and Opportunity for Cooperation

Location: Guadalajara Hall 8

China launched its manned space programme in 1992 and has been implementing it following the "three-step" strategy. So far, all the objectives of the first- and second-step have been achieved with great success. In June 2016, China conducted the debut flight mission of the Long March 7 (CZ-7) carrier rocket towards constructing its manned space station for the third step. The mission also involved the inauguration of the new Wenchang Space Launch Center, located at the Hainan Island in south China. The main payload for this mission was a scaled-down version of a next generation crew vehicle that was successfully recovered in Inner Mongolia after a short orbital flight. It has been already scheduled to launch TG-2 space lab in the middle of September 2016, just several days before the opening of the IAC in Guadalajara, which will be followed by the Shenzhou-11 manned space flight mission in October 2016. Details in progress of CZ-7 and TG-2 missions will be highlighted.

China will construct its manned space station on orbit from 2018 and put it into operation in around 2022. The station modules, construction plan, and experiment facilities on board will be presented in detail.

China's space station will be allowed for international cooperation in the areas of jointly developing the station platform, flying experiments by scientists from all over the world, selecting, training and flying foreign astronauts to the station, and promoting existing human space technology and facilities with a view to contributing to the sustainable development of our Earth planet.

Among others, China Manned Space Agency and the United Nations Office for Outer Space Affairs have signed the Framework Agreement and the Funding Agreement concerning cooperation on the utilization of China's Space Station. Under the framework of the agreements, the both parties will work together to provide United Nations Member States with opportunities to fly their space experiments, their astronauts and/or payload engineers on board China's Space Station. Details pertaining to this collaboration will be explained.

Organized by:

China Manned Space Agency



中国载人航天工程办公室

Speaker:



Zhonggui Wang Deputy Designer, China Manned Space Programme, China



MODERATOR
Ming Li
Vice President,
China Academy of Space
Technology (CAST),
China

Start time: 13:30 Technical Sessions			
No	Description	Room	
A6.8	(joint session with Space Security Committee): Policy, Legal, Institutional and Economic Aspects of Space Debris Detection, Mitigation and Removal	Salon Jalisco E7	
A7.3	Technology Needs for Future Missions, Platforms	Mueble 1	
B2.7	Advanced Space Communications and Navigation Systems	Salon de Eventos 7	
B4.7	Highly Integrated Distributed Systems	Tequila	
C1.9	Attitude Dynamics (2)	Salon Jalisco E6	
C2.9	Advancements in Materials Applications and Rapid Prototyping	Salon de Eventos 1	
C4.8	Advanced Propulsion Systems	Zapopan	

D6.2-D2.9 Joint-Session Creating Safe Transportation Systems for Sustainable Commercial Human Spaceflight E1.1 Ignition - Primary Space Education E7.7-B3.8 Joint IAF-IISL Session on the Legal Framework for Collaborative Space Activities Guadalajara Hall Salon 2

16:30 - 17:30 Closing Ceremony

Location: Guadalajara Hall 9 & 10

The Closing Ceremony provides a formal end to the activities of the IAC. There will be a video summary of the week's highlights, presentation of awards, and at the end of the ceremony, the Congress flag will be handed over to the next host country – Australia.

18:30 - 22:00 Gala Dinner

Location: The Hospicio Cabañas

The IAC2016 gala dinner will take place at the historical "Hospicio Cabañas". This is an emblematic neoclassical building of the city of Guadalajara.

Inside some of the most important murals by José Clemente Orozco are preserved and was declared in 1997 a World Heritage Site by UNESCO.

Admission to the event includes transportation, dinner and show. The ticket will cost 80 Euros or 88 USD and will be available online and onsite at the registration area.

Pickup point: Motor lobby 2 of Expo Guadalajara at 17:30, 17:45, 18:00 and 18:30 (downstairs of lobby in front of Hilton Hotel)



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4.3 Meeting Schedule

Time	Event	Room
Friday, 23 Septem	ber 2016	
08:00-18:00	Space Generation Congress	Holiday Inn: Plenary
08:00-18:00	UN/IAF Workshop	Hilton: Oceania
Saturday, 24 Septe	ember 2016	
08:00-18:00	Space Generation Congress	Holiday Inn: Plenary

Saturday, 24 Septe	ember 2016	
08:00-18:00	Space Generation Congress	Holiday Inn: Plenary
08:00-18:00	UN/IAF Workshop	Hilton: Oceania
09:30-16:30	IPMC Meeting	Business Center 2: Degollado 1&2
10:00-12:00	Finance Committee	Business Center 2: Los Arcos
10:00-13:00	IAA Space Debris Committee	Business Center 2: Colomos 1&2
12:30-13:00	IAA Commission Plenary Session	Regional Halls: Zapopan Hall
13:00-16:00	IAA Commission 1 Meeting Space Physical Sciences	Salon de Eventos 1
13:00-16:00	IAA Commission 2 Meeting Space Life Sciences	Salon de Eventos 2
13:00-16:00	IAA Commission 3 Meeting Space Technology & Systems Development	Salon de Eventos 3
13:00-16:00	IAA Commission 4 Meeting Space System Operation & Utilisation	Salon de Eventos 4
13:00-16:00	IAA Commission 5 Meeting Space Policy, Law & Economy	Salon de Eventos 5
13:00-16:00	IAA Commission 6 Meeting Space & Society, Culture & Education	Salon de Eventos 6
13:30-15:00	Technical Activities Committee (TAC)	Business Center 2: Cabanas 2
14:30-17:00	Space Exploration Committee	Business Center 2: Los Arcos
15:00-17:00	NGCC Meeting	Business Center 2: Cabanas 1
15:30-17:00	IPC Steering Group	Business Center 2: Cabanas 2
16:00-18:00	IAA Scientific Activities Committees	Salon de Eventos 1
17:00-18:30	IPC General Meeting	Guadalajara Hall 7

Sunday, 25 Septem	nber 2016	
08:00-16:00	Educators Professional Development Workshop	Salon de Eventos 3
08:00-18:00	IAA Academy Day	Regional Halls: Zapopan & Tonala Hall
08:00-18:00	IPMC YP Workshop	Salon de Eventos 7
08:00-18:00	UN/IAF Workshop	Hilton: Mexico 2
08:00-18:00	UN/IAF Working Group 1	Hilton: Europe
08:00-18:00	UN/IAF Working Group 2	Hilton: America
08:15-13:30	Cross- Cultural Communications and Presentation Workshop	Business Center 1: Meuble 1 & 2
09:00-13:00	IAC Hosts Summit	Salon de Eventos 1
09:00-17:00	MOP Meeting	H. Congreso del Estado de Jalisco
10:00-13:00	Space Life Sciences Committee	Business Center 2: Cabanas 1
10:00-17:00	SGAC Mars Analogue Simulation Workshop	Salon de Eventos 5
11:00-12:00	Small Satellites Commercial Applications Promotion Committee	Business Center 2: Colomos 1
11:00-13:30	Human Spaceflight Committee	Business Center 2: Colomos 2

Time	Event	Room
12:00-14:00	WD-YPP Committee	Business Center 2: Cabanas 2
13:00-15:00	Earth Observation Committee	Business Center 2: Colomos 1
14:00-15:00	Global Workforce Development Technical Subcommittee	Business Center 2: Cabanas 1
14:00-18:00	IAF Bureau Meeting Session 1	Business Center 2: Los Arcos
14:00-18:00	Materials and Structure Committee	Business Center 2: Colomos 2
14:00-18:00	Astrodynamics Committee	Business Center 2: Cabanas 2
14:15-16:15	PE4 Plenary Rehearsal	Business Center 2: Fray Alcade
15:00-17:00	Space Propulsion Committee	Business Center 2: Degollado 2
15:00-17:00	IAA Board of Trustees	Regional Halls: Tlaquepaque Hall
15:00-17:00	GEOSS Subcommittee Meeting	Busines Center 2: Colomos 1
16:00-18:00	SGAC Executive Board Meeting	Business Center 2: Cabanas 1
16:00-18:00	Commercial Spaceflight Safety Committee	Business Center 2: Degollado 1
17:00-20:00	Space Transportation Committee	Business Center 2: Degollado 2
18:00-19:00	ESL/YSL Meeting	Business Center 2: Colomos 1
18:30-19:30	Press Briefing	Business Center 2: Fray Alcade
19:00-19:30	YP Event - Panel	Guadalajara Hall 7

Monday, 26 Sept	ember 2016	
11:00-12:00	CSAC Preparatory Meeting	Business Center 2: Cabanas 1
11:00-13:00	Space Systems Committee	Business Center 2: Cabanas 2
12:00-13:30	Opening Ceremony	Guadalajara Hall 4,5,6 & 9,10
13:30-15:00	PE1: Heads of Agency	Guadalajara Hall 4,5,6 & 9,10
14:00-16:00	Space Economy Committee	Business Center 2: Cabanas 1
14:00-18:00	IISL Board of Directors	Business Center 2: Los Arcos
15:00-18:00	IAF General Assembly	Guadalajara Hall 7
15:15-15:30	GNF: Opening	Guadalajara Hall 8
15:30-16:15	GNF: HoA Press Conference	Guadalajara Hall 8
16:00-17:00	PE4 Plenary Rehearsal	Guadalajara Hall 4,5,6 & 9,10
16:00-18:00	Enterpreneurship & Investment Committee (EIC)	Business Center 2: Cabanas 1
16:15-17:15	GNF: Development of Commercial Remote Sensing Satellite	Guadalajara Hall 8
17:15-18:15	GNF: Russian Cosmonautics	Guadalajara Hall 8
18:15-19:30	PE2: Host Plenary	Guadalajara Hall 4,5,6 & 9,10

08:00-10:00	SCAN Committee Meeting	Business Center 2: Colomos 2
08:00-18:00	Nomination Committee	Business Center 2: Minerva 1
08:30-09:30	PE3: Space and Climate (COP 21)	Guadalajara Hall 4,5,6 & 9,10
09.00-11:00	IAA SETI Committee	Business Center 2: Cabanas 2
09:00-11:00	Space Security Committee	Business Center 2: Degollado 1
09:30-10:00	GNF LBN: OneWeb	Guadalajara Hall 8
09:30-10:00	CSAC Report from Site Inspection	Business Center 2: Degollado 2
09:30-13:00	Space Operations Committee	Business Center 2: Colomos 1
10:00-10:45	GNF LBN: Virgin Galactic	Guadalajara Hall 8
10:00-11:00	CSAC Interview with Bidder	Business Center 2: Degollado 2
10:00-11:30	Space Societies Committee	Business Center 2: Colomos 2
10:00-12:00	IAA Study Group 3.26	Business Center 2: Minerva 2

Tuesday, 27 September 2016





International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico

AC 2016 *** Guadalajara

Time	Event	Room
10:45-11:30	GNF LBN: Blue Origin	Guadalajara Hall 8
11:00-11:30	CSAC Debriefing	Business Center 2: Degollado 2
11:00-14:15	IISL Moot Court Semi Finals	Business Center 2: Los Arcos & Cabanas 1
11:30-12:00	GNF LBN: Planet	Guadalajara Hall 8
12:00-12:30	GNF LBN: Arianespace	Guadalajara Hall 8
12:00-13:00	ILOA Board Meeting	Business Center 2: Colomos 2
13:00-14:30	Small Satellites Committee	Business Center 2: Degollado 1
13:00-14:30	IAA Study Group 4.18	Business Center 1: Meuble 2
13:00-14:30	IAA Study Group 3.23	Business Center 2: Cabanas 2
13:30-14:45	LBN Making Humans a Multiplanetary Species	Guadalajara Hall 4,5,6 & 9,10
13:30-15:30	Space Astronomy Committee	Business Center 2: Colomos 1
14:00-15:00	Space Economy Committee	Business Center 2: Colomos 2
14:30-15:00	SpaceX Press Conference	Guadalajara Hall 7
14:45-16:45	GNF: Shifting the Landscape for Global Space Industry	Guadalajara Hall 8
15:00-16:00	ESA DG Press Conference	Desfilia
15:00-18:00	ACHA Committee	Business Center 2: Cabanas 2
15:30-17:30	SGAC Advisory Board Meeting	Business Center 2: Cabanas 1
15:30-17:30	HAC Meeting	Business Center 2: Colomos 2
16:45-17:45	GNF: New Dimensions of Space	Guadalajara Hall 8
17:45-18:45	PE4: Next Gen Plenary	Guadalajara Hall 4,5,6 & 9,10
19:00-20:00	YP Networking Event	Guadalajara Hall 7

Wednesday, 28 Se	ptember 2016	
08:00-18:00	Nomination Committee	Business Center 2: Minerva 1
08:00-18:00	Inter Agencies Space Debris Coordination Committee (IADC)	Business Center 2: Minerva 2
08:30-09:30	PE5: 1 Year In Space	Guadalajara Hall 9 & 10
09:00-11:00	SUAC Committee	Business Center 2: Cabanas 2
09:30-10:30	GNF: WIA-Europe Panel	Guadalajara Hall 8
09:45-11:00	Honeywell-Mexico developing aerospace capacities in Mexico	Jalisco Hall E5
09:45-12:30	Mexican Space Technology Development	Guadalajara Hall 4
10:00-11:00	NASA Administrator Student Outreach	Guadalajara Hall 9 & 10
10:00-11:30	IRC Meeting	Business Center 2: Colomos 1
10:00-12:00	AEM - JAPAN Education Meeting	Business Center 2: Cabanas 1
10:30-12:00	GNF: Science: the Fundament and Promoter of Space Activities	Guadalajara Hall 8
10:30-12:00	CLIODN Committee	Business Center 2: Degollado 1
11:00-12:30	Investment Opportunities in Mexico for the Aerospace Sector	Jalisco Hall E5
11:00-13:30	UNISPACE +50 GNF Preparatory Meeting	Business Center 2: Los Arcos
11:30-13:30	ESA CPI For Space Exploration	Guadalajara Hall 7
12:45-13:15	Interactive Presentations Award Ceremony	Jalisco Hall C
12:45-14:45	IISL General Assembly	Salon de Eventos 6
13:00-14:30	Moon Village GNF Preparatory Meeting	Business Center 2: Cabanas 1
13:15-14:45	Interactive Presentations Session	Jalisco Hall C
13:30-14:30	GNF: UNISPACE +50	Guadalajara Hall 8
14:00-16:00	Knowledge & Managment Technical Committee (KMTC)	Business Center 2: Colomos 1

Time	Event	Room
14:30-16:00	GNF: Making the Moon Village and Mars Journey Affordable for All	Guadalajara Hall 8
14:30-16:00	US-German Aerospace Roundtable	Business Center 2: Los Arcos
14:45-17:30	Bavarian Space Mission to Mexico	Jalisco Hall E5
14:45-17:30	The Space Telecom Sector in Mexico	Guadalajara Hall 4
14:45-17:45	WSWA Board of Directors Meeting	Business Center 2: Canabas 1
16:00-17:00	GNF: Disruptive Space Technology	Guadalajara Hall 8
16:00-18:00	Jury Meeting from the student subcommittee of SEOC	Business Center 2: Colomos 1
17:00-17:45	GNF: Space for Global Challenges	Guadalajara Hall 8
17:00-18:00	Emerging Countries GNF Preparatory Meeting	Business Center 2: Cabanas 2
17:45-18.45	HLL1: Mars Base Camp	Guadalajara Hall 9 & 10
19:00-21:00	YP Networking Event	Guadalajara Hall 7

Thursday, 28 Sept	ember 2016	
08:30-09:30	PE6 Realizing Mars Sample Return	Guadalajara Hall 9 & 10
09:00-13:30	IAF Bureau Meeting Session 2	Business Center 2: Los Arcos
09:00-11:30	SEOC Committee	Business Center 2: Cabanas 2
09:30-10:30	GNF: Space Technology for Emerging Countries	Guadalajara Hall 8
09:45-12:30	Canada – Mexico Space Sector Forum	Jalisco Hall E5
09:45-12:30	Human Spaceflight in LATAM	Guadalajara Hall 4
10:30-11:30	GNF: CELSS Integration Experiment	Guadalajara Hall 8
10:30-12:00	ESA DG Jam Session	Guadalajara Hall 7
10:30-12:30	Space Museums and Science Centres Committee	Business Center 2: Cabanas 1
11:30-12:30	GNF: SGAC - Technology Transfer	Guadalajara Hall 8
12:30-13:30	GNF: YP - Success of Commercial Space Ventures	Guadalajara Hall 8
12:30-14:30	IAA History Committee	Business Center 2: Cabanas 2
12:45-14:45	IAA Study Group 3.24	Business Center 1: Meuble 2
13:00-18:00	Workshop on Disaster Management Using Satellite Info	Business Center 2: Degollado 1 & 2
13:30-14:30	PE7 Orbital Debris Environment	Guadalajara Hall 9 & 10
14:30-16:30	GNF: Aiming at a Resilient and Sustainable Space Security System	Guadalajara Hall 8
14.30-16:30	ITACCUS Committee	Business Center 2: Colomos 1
14:30-18:30	IISL Moot Court Finals	Paraninfo University of Guadalajara
14:45-17:30	Small Satellites and Frequency Spectrum Normativity	Guadalajara Hall 4
14:45-17:30	Canada – Mexico Space Sector Forum	Jalisco Hall E5
16:30-17:00	GNF: Spaceport Norway	Guadalajara Hall 8
17:00-17:45	GNF: Tourism Space Transportation and Space Medicine	Guadalajara Hall 8
17:00-18:30	Astrodynamics Committee	Business Center 2: Colomos 1
17:00-19:00	IAC2017 Advisory Committee	Business Center 2: Los Arcos
17:45-18:45	HLL2: Exploration of Pluto	Guadalajara Hall 9 & 10

05:30-07:30GNF: Rosetta Landing - Live Transmission from ESOCGuadalajara Hall 808:30-09:30HLL3: The Saturn SystemGuadalajara Hall 9 & 1009:00-13:00IAF General AssemblyGuadalajara Hall 709:30-10:30GNF: Astronauts EventGuadalajara Hall 8	Friday, 28 Septe	Friday, 28 September 2016		
09:00-13:00 IAF General Assembly Guadalajara Hall 7	05:30-07:30	GNF: Rosetta Landing - Live Transmission from ESOC	Guadalajara Hall 8	
·	08:30-09:30	HLL3: The Saturn System	Guadalajara Hall 9 & 10	
09:30-10:30 GNF: Astronauts Event Guadalajara Hall 8	09:00-13:00	IAF General Assembly	Guadalajara Hall 7	
	09:30-10:30	GNF: Astronauts Event	Guadalajara Hall 8	

International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico





Time	Event	Room
09:45-12:30	Plan de órbita 2.0: taller 1	Jalisco Hall E5
09:45-12:30	Mexican Capacities in Space Science in Mexico	Guadalajara Hall 4
10:30-11:30	GNF: Space Architecture	Guadalajara Hall 8
11:30-12:30	GNF: Space Science at UNAM	Guadalajara Hall 8
12:30-13:30	GNF: Stardust	Guadalajara Hall 8
13:30-14:30	GNF: China Manned Space Programme	Guadalajara Hall 8
15:00-16:00	IAF Bureau Meeting Session 3	Business Center 2: Los Arcos
16:30-17:30	Closing Ceremony	Guadalajara Hall 9 & 10

Technical Programme

5.1 Category Coordinators and Judges of the Interactive **Presentations Competition**



Chairman of the Interactive Presentations Competition

Christophe Bonnal Centre National d'Etudes Spatiales (CNES),



SCIENCE AND EXPLORATION



Maria-Antonietta Perino Thales Alenia Space,

APPLICATIONS AND OPERATIONS



Otto Koudelka Graz University of Technology (TU Graz),

Category C

TECHNOLOGY



CAST China Academy of Space Technology (CAST), China

Category D

INFRASTRUCTURE



John David Bartoe National Aeronautics and Space Administration (NASA), **United States**

Category E

SPACE AND SOCIETY



Lyn Wigbels American Astronautical Society (AAS), **United States**









5.2 Symposium Keynote Speakers

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Nr.	Session name	Date	Time	Room
A7	SYMPOSIUM ON TECHNOLOGICAL REQUIREMENTS FOR SOLAR-SYSTEM SCIENCE MISSIONS	OR FUTURE SPAC	CE ASTRON	NOMY AND
	KEYNOTE: The First Detection of Gravitational Waves Michele Vallisneri, Jet Propulsion Laboratory, United States	2016-09-27	09:45	Mueble 1
C1	ASTRODYNAMICS SYMPOSIUM			
	KEYNOTE: Invariant Manifods in Astrodynamics Gerard Gómez, Universitat de Barcelona & Institut d'Estudis Espacials de Catalunya, Spain	2016-09-28	14:45	Salon Jalisco E6
C2	MATERIALS & STRUCTURES SYMPOSIUM			
	KEYNOTE: Half a century of Space Adventure at Centre Spatial of Liège Prof. Pierre Rochus, Centre Spatial de Liège, Belgium	2016-09-27	09:45	Salon de Eventos 1
C3	SPACE POWER SYMPOSIUM			
	KEYNOTE: Space Solar at the 2016 DEFENSE, DIPLOMACY and Development Technology Innovation Pitch Challenge Dr. Paul Jaffe, Naval Research Laboratory, United States	2016-09-26	15:15	Salon de Eventos 2
C4	SPACE PROPULSION SYMPOSIUM			
	KEYNOTE: Additive Layer Manufacturing will change rocket liquid propulsion Marc Vales, Airbus Safran Launchers, France	2016-09-26	15:15	Zapopan
	KEYNOTE: Green Solid propellants for civilian launchers Max Calabro, The Inner Arch, France	2016-09-27	09:45	Zapopan

Nr.	Session name	Date	Time	Room
C4	SPACE PROPULSION SYMPOSIUM (continue)			
	KEYNOTE: Shock Tunnel Development for Air-breathing Propulsion Testing at True Hypersonic Flight Conditions Zonglin Juang , Institute of Mechanics, China Academy of Science, China	2016-09-27	14.45	Zapopan
900	KEYNOTE: Beamed Energy Propulsion for future space launchers Prof. Kimiya Komurasaki , Graduate School of Engineering, Department of Aeronautics & Astronautics, The university of Tokyo, Japan	2016-09-28	14.45	Zapopan
E1	SPACE EDUCATION AND OUTREACH SYMPOSIUM			
	KEYNOTE: Malina Medal Recipient Keynote Address Bénédicte Escudier , ISAE-SUPAERO, France	2016-09-26	15:15	Salon de Eventos 4
E7	59 th IISL COLLOQUIUM ON THE LAW OF OUTER SPACE			
	KEYNOTE: Space law and diplomacy Prof. Kai-Uwe Schrogl, European Space Agency, France	2016-09-27	09:45	Salon de Eventos 6









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PROGRAM

PROFESSIONALS EVENTS

5.3 Technical Sessions by Symposium

Please check the IAC 2016 Application on your Mobile Phone to get the latest updates on the Technical Programme

Nr.	Session name	Date	Time	Room
A1	IAA/IAF SPACE LIFE SCIENCES SYMPOSIUM			
A1.1	Behaviour, Performance and Psychosocial Issues in Space	Mon, 26 Sep	15:15	Salon de Eventos 3
A1.2	Human Physiology in Space	Tue, 27 Sep	09:45	Salon de Eventos 3
A1.3	Medical Care for Humans in Space	Tue, 27 Sep	14:45	Salon de Eventos 3
A1.4	Radiation Fields, Effects and Risks in Human Space Missions	Wed, 28 Sep	09:45	Salon de Eventos 3
A1.5	Astrobiology and Exploration	Wed, 28 Sep	14:45	Salon de Eventos 3
A1.6	Life Support, habitats and EVA Systems	Thu, 29 Sep	09:45	Salon de Eventos 3
A1.7	Biology in Space	Fri, 30 Sep	09:45	Salon de Eventos
A1.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
A2	MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM			
A2.1	Gravity and Fundamental Physics	Mon, 26 Sep	15:15	Moda 1
A2.2	Fluid and Materials Sciences	Tue, 27 Sep	09:45	Moda 1
A2.3	Microgravity Experiments from Sub-Orbital to Orbital Platforms	Wed, 28 Sep	09:45	Moda 1
A2.4	Science Results from Ground Based Research	Wed, 28 Sep	14:45	Moda 1
A2.5	Facilities and Operations of Microgravity Experiments	Thu, 29 Sep	14:45	Moda 1
A2.6	Microgravity Sciences Onboard the International Space Station and Beyond - Part 1	Fri, 30 Sep	09:45	Moda 1
А3	SPACE EXPLORATION SYMPOSIUM			
A3.1	Space Exploration Overview	Mon, 26 Sep	15:15	Tonalà
A3.2A	Moon Exploration – Part 1	Tue, 27 Sep	09:45	Tonalà
A3.2B	Moon Exploration – Part 2	Tue, 27 Sep	14:45	Tonalà
A3.2C	Moon Exploration – Part 3	Fri, 30 Sep,	09:45	Tonalà
A3.3A	Mars Exploration – missions current and future	Wed, 28 Sep	09:45	Tonalà
A3.3B	Mars Exploration – Science, Instruments and Technologies	Wed, 28 Sep	14:45	Tonalà
A3.4	Small Bodies Missions and Technologies	Thu, 29 Sep	09:45	Tonalà
A3.5	Solar System Exploration	Thu, 29 Sep	14:45	Tonalà
A3.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
A4	45 th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRES	TRIAL INTELLI	GENCE (SE	TI) – The Next
A4.1	SETI 1: SETI Science and Technology	Tue, 27 Sep	14:45	Moda 1
A4.2	SETI 2: SETI and Society	Thu, 29 Sep,	09:45	Moda 1
A4.IP	Interactive Presentations	Wed, 28 Sep		Exhibition Hall, Jalisco Hall C
A5	19TH IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE	SOLAR SYSTE	М	
A5.1	Human Exploration of the Moon and Cislunar Space	Wed, 28 Sep	14:45	Tlaquepaque
A5.2	Human Exploration of Mars	Fri, 27 May	14:45	Tlaquepaque
A5.3-B3.6	Human and Robotic Partnerships in Exploration - Joint session of the Human Spaceflight and Exploration Symposia	Thu, 29 Sep	14:45	Guadalajara Hall Salon 2
A5.4-D2.8	Joint-session: Space Transportation Solutions for Deep Space Missions	Fri, 30 Sep	09:45	Salon Jalisco E2
A5.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C

Nr.	Session name	Date	Time	Room			
A6	SYMPOSIUM ON SPACE DEBRIS						
A6.1	Measurements	Mon, 26 Sep	15:15	Salon Jalisco E7			
A6.2	Modelling and Risk Analysis	Tue, 27 Sep	09:45	Salon Jalisco E7			
A6.3	Hypervelocity Impacts and Protection	Wed, 28 Sep	09:45	Salon Jalisco E7			
A6.4	Mitigation and Standards	Tue, 27 Sep	14:45	Salon Jalisco E7			
A6.5	Space Debris Removal Issues	Thu, 29 Sep	09:45	Salon Jalisco E7			
A6.6	Space Debris Removal Concepts	Thu, 29 Sep	14:45	Salon Jalisco E7			
A6.7	Operations in Space Debris Environment, Situational Awareness	Fri, 30 Sep	09:45	Salon Jalisco E7			
A6.8	(Joint session with Space Security Committee): Policy, Legal, Institutional and Economic Aspects of Space Debris Detection, Mitigation and Removal	Fri, 30 Sep	13:30	Salon Jalisco E7			
A6.9	Orbit Determination and Propagation	Wed, 28 Sep	14:45	Salon Jalisco E7			
A6.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C			
A7	SYMPOSIUM ON TECHNOLOGICAL REQUIREMENTS FOR I SYSTEM SCIENCE MISSIONS	FUTURE SPACE	ASTRONO	MY AND SOLAR-			
A7.1	Space-Agencies Long-Term Views	Mon, 26 Sep	15:15	Mueble 1			
A7.2	Scientific Motivation and Requirements for Future Space Astronomy and Solar System Science Missions	Tue, 27 Sep	09:45	Mueble 1			
A7.3	Technology Needs for Future Missions, Platforms	Fri, 30 Sep	13:30	Mueble 1			
B1	EARTH OBSERVATION SYMPOSIUM						
B1.1	International Cooperation in Earth Observation Missions	Mon, 26 Sep	15:15	Tlaquepaque			
B1.2	Future Earth Observation Systems	Tue, 27 Sep	09:45	Tlaquepaque			
B1.3	Earth Observation Sensors and Technology	Wed, 28 Sep	09:45	Tlaquepaque			
B1.4	Earth Observation Data Management Systems	Thu, 29 Sep	09:45	Tlaquepaque			
B1.5	Earth Observation Applications and Economic Benefits	Thu, 29 Sep	14:45	Tlaquepaque			
B1.6	Biodiversity	Fri, 30 Sep	09:45	Tlaquepaque			
B1.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C			
B2	SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIU	M					
B2.1	Fixed and Broadcast Communications	Mon, 26 Sep	15:15	Salon de Eventos 7			
B2.2	Mobile Satellite Communications and Navigation Technology	Tue, 27 Sep	09:45	Salon de Eventos 7			
B2.3	Advanced Satellite Services	Tue, 27 Sep	14:45	Salon de Eventos 7			
B2.4	Space-Based Navigation Systems and Services	Wed, 28 Sep	09:45	Salon de Eventos 7			
B2.5	Near-Earth and Interplanetary Communications	Wed, 28 Sep	14:45	Salon de Eventos 7			
B2.6	Advanced Technologies for Space Communications and Navigation	Thu, 29 Sep	09:45	Salon de Eventos 7			
B2.7	Advanced Space Communications and Navigation Systems	Fri, 30 Sep	13:30	Salon de Eventos 7			
B2.8-GTS.3	Space Communications and Navigation Global Technical Session	Thu, 29 Sep	14:45	Joya 1&2			
B2.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C			
В3	HUMAN SPACEFLIGHT SYMPOSIUM						
B3.1	Governmental Human Spaceflight Programs (Overview)	Mon, 26 Sep	15:15	Guadalajara Hall Salon 2			
B3.2	Commercial Human Spaceflight Programs	Tue, 27 Sep	09:45	Guadalajara Hall Salon 2			
B3.3	Utilization & Exploitation of Human Spaceflight Systems	Tue, 27 Sep	14:45	Guadalajara Hall Salon 2			
B3.4-B6.5	Flight & Ground Operations of HSF Systems – Joint Session of the Human Spaceflight and Space Operations Symposia	Wed, 28 Sep	09:45	Guadalajara Hall Salon 2			
B3.5	Astronaut Training, Accommodation, and Operations in Space	Thu, 29 Sep	09:45	Guadalajara Hall Salon 2			













Nr.	Session name	Date	Time	Room
B3.6-A5.3	Human and Robotic Partnerships in Exploration - Joint session of the Human Spaceflight and Exploration Symposia	Thu, 29 Sep	14:45	Guadalajara Hal Salon 2
B3.7	Advanced Systems, Technologies, and Innovations for Human Spaceflight	Fri, 30 Sep	09:45	Guadalajara Hal Salon 2
B3.8-E7.7	Joint IAF-IISL Session on the Legal Framework for Collaborative Space Activities	Fri, 30 Sep	13:30	Guadalajara Hal Salon 2
B3.9-GTS.2	Human Spaceflight Global Technical Session	Wed, 28 Sep	14:45	Joya 1&2
B3.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
B4	23rd IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS			
B4.1	17 th Workshop on Small Satellite Programmes at the Service of Developing Countries	Tue, 27 Sep	09:45	Tequila
B4.2	Small Space Science Missions	Mon, 26 Sep	15:15	Tequila
B4.3	Small Satellite Operations	Tue, 27 Sep	14:45	Tequila
B4.4	Small Earth Observation Missions	Wed, 28 Sep	09:45	Tequila
B4.5	Access to Space for Small Satellite Missions	Wed, 28 Sep	14:45	Tequila
B4.6A	Generic Technologies for Small/Micro Platforms	Thu, 29 Sep	09:45	Tequila
B4.6B	Generic Technologies for Nano/Pico Platforms	Thu, 29 Sep	14:45	Tequila
B4.7	Highly Integrated Distributed Systems	Fri, 30 Sep	13:30	Tequila
B4.8	Small Spacecraft for Deep-Space Exploration	Fri, 30 Sep	09:45	Tequila
B5	SYMPOSIUM ON INTEGRATED APPLICATIONS			
B5.1	Tools and Technology in Support of Integrated Applications	Fri, 30 Sep	09:45	Salon de Eventos
B5.2	Integrated Applications End-to-End Solutions	Thu, 29 Sep	14:45	Salon de Eventos
B6	SPACE OPERATIONS SYMPOSIUM			
B6.1	Human Spaceflight Operations	Fri, 30 Sep	09:45	Salon de Eventos
B6.2	New Operations Concepts, Advanced Systems and Commercial Space Operations	Mon, 26 Sep	15:15	Salon de Eventos
B6.3	Mission Operations, Validation, Simulation and Training	Thu, 29 Sep	14:45	Salon de Eventos
B6.4-GTS.1	ISS Spaceflight Operations: Next Generation Perspectives - Global Technical Session	Fri, 30 Sep	13:30	Joya 1&2
B6.5-B3.4	Flight & Ground Operations of HSF Systems – Joint Session of the Human Spaceflight and Space Operations Symposia	Wed, 28 Sep	09:45	Guadalajara Ha Salon 2
B6.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
C1	ASTRODYNAMICS SYMPOSIUM			
C1.1	Guidance, Navigation & Control (1)	Mon, 26 Sep	15:15	Salon Jalisco E
C1.2	Guidance, Navigation & Control (2)	Tue, 27 Sep	09:45	Salon Jalisco E
C1.3	Guidance, Navigation & Control (3)	Tue, 27 Sep	14:45	Salon Jalisco E6
C1.4	Mission Design, Operations & Optimization (1)	Wed, 28 Sep	09:45	Salon Jalisco E
C1.5	Mission Design, Operations & Optimization (2)	Wed, 28 Sep	14:45	Salon Jalisco E
C1.6	Orbital Dynamics (1)	Thu, 29 Sep	09:45	Salon Jalisco E
C1.7	Orbital Dynamics (2)	Thu, 29 Sep	14:45	Salon Jalisco E
C1.8	Attitude Dynamics (1)	Fri, 30 Sep	09:45	Salon Jalisco E
C1.9	Attitude Dynamics (2)	Fri, 30 Sep	13:30	Salon Jalisco E
C1.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
C2	MATERIALS AND STRUCTURES SYMPOSIUM			
C2.1	Space Structures I - Development and Verification (Space Vehicles and Components)	Mon, 26 Sep	15:15	Salon de Eventos
C2.2	Space Structures II - Development and Verification (Deployable and Dimensionally Stable Structures)	Tue, 27 Sep	09:45	Salon de Eventos
C2 2	Chara Structures Dynamics and Migradynamics	Tuo 27 Con	14.45	Color do E colo

Tue, 27 Sep

14:45

Salon de Eventos 1

N				
Nr.	Session name	Date	Time	Room
C2.4	Advanced Materials and Structures for High Temperature Applications	Wed, 28 Sep	09:45	Salon de Eventos 1
C2.5	Smart Materials and Adaptive Structures	Wed, 28 Sep	14:45	Salon de Eventos 1
C2.6	Space Environmental Effects and Spacecraft Protection	Thu, 29 Sep	09:45	Salon de Eventos 1
C2.7	Space Vehicles – Mechanical/Thermal/Fluidic Systems	Thu, 29 Sep	14:45	Salon de Eventos 1
C2.8	Specialised Technologies, Including Nanotechnology	Fri, 30 Sep	09:45	Salon de Eventos 1
C2.9	Advancements in Materials Applications and Rapid Prototyping	Fri, 30 Sep	13:30	Salon de Eventos 1
C2.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
C3	SPACE POWER SYMPOSIUM			
C3.1	Space-Based Solar Power Architectures / Space & Energy Concepts	Mon, 26 Sep	15:15	Salon de Eventos 2
C3.2	Wireless Power Transmission Technologies, Experiments and Demonstrations	Tue, 27 Sep	09:45	Salon de Eventos 2
C3.3	Advanced Space Power Technologies and Concepts	Wed, 28 Sep	14:45	Guadalajara Hall Salon 2
C3.4	Small and Very Small Advanced Space Power Systems	Thu, 29 Sep	14:45	Salon de Eventos 3
C3.5-C4.7	Joint Session on Nuclear Power and Propulsion	Fri, 30 Sep	09:45	Zapopan
C3.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
C4	SPACE PROPULSION SYMPOSIUM			
C4.1	Propulsion System (1)	Mon, 26 Sep	15:15	Zapopan
C4.2	Propulsion System (2)	Tue, 27 Sep	09:45	Zapopan
C4.3	Propulsion Technology (1)	Wed, 28 Sep	09:45	Zapopan
C4.4	Electric Propulsion	Wed, 28 Sep	14:45	Zapopan
C4.5	Propulsion Technology (2)	Thu, 29 Sep	09:45	Zapopan
C4.6	New Missions Enabled by New Propulsion Technology and Systems	Thu, 29 Sep	14:45	Zapopan
C4.7-C3.5	Joint Session on Nuclear Propulsion and Power	Fri, 30 Sep	09:45	Zapopan
C4.8	Advanced Propulsion Systems	Fri, 30 Sep	13:30	Zapopan
C4.9	Hypersonic and Combined Cycle Propulsion	Tue, 27 Sep	14:45	Zapopan
C4.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
D1	SPACE SYSTEMS SYMPOSIUM			
D1.1	Innovative and Visionary Space Systems Concepts	Mon, 26 Sep	15:15	Salon de Eventos 5
D1.2	Enabling Technologies for Space Systems	Tue, 27 Sep	14:45	Salon de Eventos 5
D1.3	System Engineering - Methods, Processes and Tools (1)	Wed, 28 Sep	09:45	Salon de Eventos 5
D1.4	Space Systems Architectures	Wed, 28 Sep	14:45	Salon de Eventos 5
D1.5	Training, Achievements, and Lessons Learned in Space Systems	Thu, 29 Sep	09:45	Salon de Eventos 5
D1.6	System Engineering - Methods, Processes and Tools (2)	Thu, 29 Sep	14:45	Salon de Eventos 5
D1.7	Hosted Payloads - Concepts, Techniques and Challenges, Missions and Applications	Fri, 30 Sep	09:45	Salon de Eventos 5
D1.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
D2	SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS	SYMPOSIUM		
D2.1	Launch Vehicles in Service or in Development	Mon, 26 Sep	15:15	Salon Jalisco E2
D2.2	Launch Services, Missions, Operations, and Facilities	Tue, 27 Sep	09:45	Salon Jalisco E2
D2.3	Upper Stages, Space Transfer, Entry and Landing Systems	Wed, 28 Sep	09:45	Salon Jalisco E2
D2.4	Future Space Transportation Systems	Wed, 28 Sep	14:45	Salon Jalisco E2
D2.4 D2.5	Technologies for Future Space Transportation Systems	Thu, 29 Sep	09:45	Salon Jalisco E2
-2.3		Thu, 29 Sep	14:45	Salon Jalisco E2
D2.6	Future Space Transportation Systems Verification and In-Flight Experimentation	ти, 25 зер	14.43	Salon Jansco L2

C2.3

Space Structures - Dynamics and Microdynamics

Session name

Commercial Human Spaceflight

in Space Exploration and Development

Space Exploration and Development

Innovative Concepts and Technologies

Interactive Presentations

Interactive Presentations

Space Elevator and Tethers

Interactive Presentations

ACTIVITIES

missions

address them

Interactive Presentations

Commercial Human Spaceflight

Ignition - Primary Space Education

Interactive Presentations

Student Conference - Part 1

Student Conference - Part 2

45th STUDENT CONFERENCE

Lift-Off - Secondary Space Education

On Track - Undergraduate Space Education

Enabling the Future - Developing the Space Workforce

Calling Planet Earth - Space Outreach to the General Public

Open Space: Participatory Space Education and Outreach

Space Culture -Public Engagement in Space through Culture

New Worlds - Non-Traditional Space Education and Outreach

In Orbit - Postgraduate Space Education

Nr.

D2.IP

D3

D3.1

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D3.4 D3.IP

D4 D4.1

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D5

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D5.4

D5.IP

D6

D6.1

D6.3

E1

E1.1

E1.2

E1.3

E1.4

E1.5

E1.6

E1.7

E1.8

E1.9

E1.IP

E2

E2.1

E2.2

D6.2-D2.9

D2.8-A5.4

D2.9-D6.2

Space Transportation Solutions for Deep Space Missions

Joint-Session Creating Safe Transportation Systems for Sustainable

Strategies & Architectures as the Framework for Future Building Blocks

Novel Concepts and Technologies to Enable Future Building Blocks in

14th IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE

Space Technology and System Management Practices and Tools

Contribution of Space Activities to Solving Global Societal Issues

Space Mineral Resources, Asteroid Mining and Lunar/Mars insitu

Risk Management for Safety and Quality in Space Programs

Knowledge management and collaboration in space activities

Commercial Space Flight Safety and Emerging Issues

Prediction, Measurement and Effects of space environment on space

SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUES

Cyber-security threats to space missions and countermeasures to

Joint-Session Creating Safe Transportation Systems for Sustainable

Enabling safe commercial spaceflight: vehicles and spaceports

SPACE EDUCATION AND OUTREACH SYMPOSIUM

Time

09:45

13:30

13:15

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ronautical Congress , Guadalajara, Mexico	

14th IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND

49th IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE

Date

Fri, 30 Sep

Fri, 30 Sep

Wed, 28 Sep

Mon, 26 Sep

Wed, 28 Sep

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IISL

Room

Salon Jalisco E2

Salon Jalisco E2

Exhibition Hall, Jalisco Hall C

Mueble 2

Mueble 2

Mueble 2

Exhibition Hall,

Jalisco Hall C

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Mueble 2

Exhibition Hall, Jalisco Hall C

Mueble 1

Mueble 1

Mueble 1

Mueble 1

Exhibition Hall,

Jalisco Hall C

Joya 1&2

Salon Jalisco E2

Joya 1&2

Salon de Eventos 4

Exhibition Hall,

Jalisco Hall C

Joya 1&2

Joya 1&2

Nr.	Session name	Date	Time	Room
E2.3-GTS.4	Student Team Competition	Tue, 27 Sep	09:45	Joya 1&2
E2.4	Educational Pico and Nano Satellites	Fri, 30 Sep	09:45	Joya 1&2
E3	29th IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS A	ND ECONOMIC	CS	
E3.1	Regional cooperation in space: policies, governance and legal tools	Tue, 27 Sep	09:45	Salon de Eventos 8
E3.2	International Space Exploration Policies and Programmes	Tue, 27 Sep	14:45	Salon de Eventos 8
E3.3	Game changers in the space economy	Wed, 28 Sep	09:45	Salon de Eventos 8
E3.4	Assuring a Safe, Secure and Sustainable Space Environment for Space Activities	Wed, 28 Sep	14:45	Salon de Eventos 8
E3.5-E7.6	31st IAA/IISL Scientific-Legal Roundtable: Challenges in regional space cooperation	Thu, 29 Sep	09:45	Salon de Eventos 8
E3.6	Enterprise Risk Management	Fri, 30 Sep	09:45	Salon de Eventos 2
E3.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
E4	50th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM			
E4.1	Memoirs & organisational histories	Mon, 26 Sep	15:15	Salon de Eventos 6
E4.2	Scientific & technical histories	Thu, 29 Sep	14:45	Salon de Eventos 6
E4.3A	History of Mexico and Latin America's Contribution to Astronautics	Thu, 29 Sep	09:45	Salon de Eventos 6
E4.3B	50 th Anniversary of IAA History Symposium	Thu, 29 Sep	09:45	Salon de Eventos 6
E5	27th IAA SYMPOSIUM ON SPACE AND SOCIETY			
E5.1	Architecture for humans in space: design, engineering, concepts and mission planning	Tue, 27 Sep	14:45	Salon de Eventos 2
E5.2	Models for Successfully Applying Space Technology Beyond Its Original Intent	Wed, 28 Sep	09:45	Salon de Eventos 2
E5.3	Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach	Wed, 28 Sep	14:45	Salon de Eventos 2
E5.4	Space Assets and Disaster Management	Thu, 29 Sep	09:45	Salon de Eventos 2
E5.5	Space Societies, Professional Associations and Museums	Thu, 29 Sep	14:45	Salon de Eventos 2
E5.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
E6	BUSINESS INNOVATION SYMPOSIUM			
E6.1	Innovation, Entrepreneurship & Investment: The Microscopic Perspective	Tue, 27 Sep	09:45	Salon de Eventos 5
E6.2	Innovation, Entrepreneurship & Investment: The Mesoscopic Perspective	Tue, 27 Sep	14:45	Mueble 1
E6.3	Innovation, Entrepreneurship & Investment: The Macroscopic Perspective	Wed, 28 Sep	14:45	Mueble 1
E6.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
E7	59th IISL COLLOQUIUM ON THE LAW OF OUTER SPACE			
E7.1	8 th Nandasiri Jasentuliyana Keynote Lecture on Space Law and Young Scholars Session	Tue, 27 Sep	09:45	Salon de Eventos 6
E7.2	Legal Perspectives on Space Resources and Off-Earth Mining	Tue, 27 Sep	14:45	Salon de Eventos 6
E7.3	Contemporary Considerations about the 1986 Principles Relating to Remote Sensing of the Earth from Space	Wed, 28 Sep	09:45	Salon de Eventos 6
E7.4	Legal Challenges Represented by Large Satellite Infrastructures and Constellations	Wed, 28 Sep	14:45	Salon de Eventos 6
E7.5	Current Developments in Space Law with Particular Consideration for Latin America	Fri, 30 Sep	09:45	Salon de Eventos 6
E7.6-E3.5	31st Joint IAA/IISL Scientific Legal Roundtable: The Future of Regional Cooperation	Thu, 29 Sep	09:45	Salon de Eventos 8
E7.7-B3.8	Joint IAF-IISL Session on the Legal Framework for Collaborative Space Activities	Fri, 30 Sep	13:30	Guadalajara Hall Salon 2









International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico



Nr.	Session name	Date	Time	Room
E7.IP	Interactive Presentations	Wed, 28 Sep	13:15	Exhibition Hall, Jalisco Hall C
GTS	GLOBAL TECHNICAL SYMPOSIUM			
GTS.1-B6.4	ISS Spaceflight Operations: Next Generation Perspectives - Global Technical Session	Fri, 30 Sep	13:30	Joya 1&2
GTS.2-B3.9	Human Space Flight Global Technical Session	Wed, 28 Sep	14:45	Joya 1&2
GTS.3-B2.8	Space Communications and Navigation Global Technical Session	Thu, 29 Sep	14:45	Joya 1&2
GTS.4-E2.3	Student Team Competition	Tue, 27 Sep	09:45	Joya 1&2

5.4 Technical Papers by Symposium

A1. IAA/IAF SPACE LIFE SCIENCES SYMPOSIUM

Coordinator(s): Oleg Orlov , SSC RF-Institute of Biomedical Problems RAS, Russian Federation; Peter Graef, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

A1.1. Behaviour, Performance and **Psychosocial Issues in Space**

September 26 2016, 15:15 — Salon de Eventos 3

Co-Chair(s): Nick Kanas, University of California, San Francisco, United States; Vadim Gushin , Institute for Biomedical Problems of the Russian Academy of Sciences, Russian Federation; Rapporteur(s): Gro M. Sandal , University of Bergen, Norway;

IAC-16.A1.1.1

PSYCHOLOGICAL RESILIENCE DURING OVERWINTERING IN

Gro Mjeldheim Sandal, University of Bergen, Norway

IAC-16.A1.1.2

EXAMINING PERSONAL VALUES IN EXTREME ENVIRONMENT CONTEXTS: REVISITING THE QUESTION OF GENERALIZABILITY Nathan Smith, University of Northampton, United Kingdom

IAC-16.A1.1.3

CULTURAL ETHOLOGY AS NEW APPROACH OF INTERPLANETARY CREW'S BEHAVIOR

Carole Tafforin, Ethospace, France

COGNITION PERFORMANCE OF CREWS IN A LUNAR ANALOG MISSION: CHANGE OVER TIME AND RELATIONSHIP WITH EMOTION Wu Ruilin, Beihang University, China

IAC-16.A1.1.5

ISOLATION IN A SPACEY ENVIRONMENT: USING A SEMINARY AND SPACE STUDIES PROGRAMME '14 AS ANALOGS

Funmilayo Erinfolami, African Regional Center for Space Science and Technology Education in English (ARCSSTE-E), Nigeria

MISSION TO MARS: THE PSYCHOLOGICAL HURDLES Nick Kanas, University of California, San Francisco, United States

EXPERIMENTAL STUDIES TO EVALUATE THE PERFORMANCE OF COMPLEX OPERATOR ACTIVITY OF COSMONAUTS JUST AFTER THE YEAR-LONG SPACEFLIGHT

Andrey Kuritsin, Gagarin Cosmonaut Training Center, Russian Federation

IAC-16.A1.1.8 (withdrawn)

SOCIAL DYNAMICS AND PSYCHOLOGICAL WELLBEING ON ISS. TECHNOLOGIES, DEVICES, BEHAVIORS.

Germana Galoforo, Italian Space Agency (ASI), Italy

A1.2. Human Physiology in Space

September 27 2016, 09:45 — Salon de Eventos 3

Co-Chair(s): Inesa Kozlovskaya, State Scientific Center of the Russian Federation - Institute of Biomedical Problems of the Russian Academy of Sciences, Russian Federation; Rupert Gerzer, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR),

Rapporteur(s): Thais Russomano, Microgravity Centre, Brazil;

IAC-16.A1.2.1

INFLUENCE OF SPACEFLIGHT DURATION AND INFLIGHT COUNTERMEASURES ON CREW CONDITION AND PERFORMANCE

Elena Tomilovskaya, Institute for Biomedical Problems, Russian Federation

IAC-16.A1.2.2

NEW WEARABLE TECHNOLOGY FOR SPACE CARDIOLOGY -USEFULNESS DURING THE ONE YEAR SPACE FLIGHT ON BOARD THE INTERNATIONAL SPACE STATION (ISS)

Elena Luchitskaya, Institute for Biomedical Problems, Russian Federation

IAC-16.A1.2.3 (withdrawn)

DEVELOPMENT AND EXPERIMENTAL EVALUATION OF THE ENHANCED DYNAMIC LOAD SENSOR FOR THE INTERNATIONAL SPACE STATION (EDLS-ISS)

Roedolph Opperman, Massachusetts Institute of Technology (MIT), **United States**

IAC-16.A1.2.4

ANATOMICAL AND FUNCTIONAL BRAIN APPROACH ALONG SHORT ABRUPT CHANGES IN G-LEVELS

Diana Dubert, Universitat Rovira i Virgili (URV), Spain

IAC-16.A1.2.5 (withdrawn)

G-LEVEL INDEPENDENT RADIUS ALTERATIONS AFFECT CARDIOVASCULAR RESPONSES TO CENTRIFUGATION Charles Laing, German Aerospace Center (DLR), Germany

IAC-16.A1.2.6

HOW MEASUREMENTS FROM HYPOGRAVITY LOCOMOTION STUDIES CAN INFORM THE ARCHITECTURAL DESIGN OF PLANETARY

Irene Lia Schlacht, Politecnico di Milano, Italy

IAC-16.A1.2.7

CHANGING GRAVITY LEVELS - MANUAL CONTROL AND SPATIAL ORIENTATION ADAPTATION DURING HYPO-GRAVITY CENTRIFUGATION

Laurence R. Young, Massachusetts Institute of Technology (MIT), United States

IAC-16.A1.2.8

THE BENEFITS OF LOWER EXTREMITY LOADING IN SPACE DUE TO THE SEATED EXECUTION OF ORDINARY CALF RAISES AND THE LEG PRESS ON HUMAN SUBJECTS

Thomas Angeli, Vienna University of Technology, Austria

ACCELERATION OF CRITICAL BONE DEFECT HEALING BY ULTRASOUND TREATMENT IN A OSTEOPENIA MODEL Yi-Xian Qin, State University of New York, United States

IAC-16.A1.2.10

SPACE SIMULATED MISSIONS AND IMMUNITY: SALIVARY BASED DIAGNOSTIC

Balwant Rai, JBR health education and research, Denmark

SPACE MEDICINE AND SPACE BIOLOGICAL SCIENCES IN MEXICO Benito Orozco Serna, Mexican Space Agency, Mexico

A1.3. Medical Care for Humans in Space

September 27 2016, 14:45 — Salon de Eventos 3

Co-Chair(s): Oleg Orlov , SSC RF-Institute of Biomedical Problems RAS, Russian Federation; Satoshi Iwase, Aichi Medical University, Japan;

Rapporteur(s): Hanns-Christian Gunga, Charité - University Medicine Berlin, Germany









IAC-16.A1.3.1 (withdrawn)

CENTRIFUGATION TRAINING FOR IMPROVING ORTHOSTATIC TOLERANCE

Nandu Goswami, Medical Universitz of Graz, Austria

IAC-16.A1.3.2

EFFECTIVENESS OF NEWLY FABRICATED SHORT RADIUS
CENTRIFUGE DEVICE WITH ERGOMETRIC OR SQUATTING EXERCISE
AS A COUNTERMEASURE FOR SPACEFLIGHT DECONDITIONING
IN HUMANS. SATOSHI IWASE, NAOKI NISHIMURA, KUNIHIKO
TANAKA*, AND TADAAKI MANO*

Satoshi Iwase, Aichi Medical University, Japan

IAC-16.A1.3.3

FRACTURE RISK IN SPACEFLIGHT AND POTENTIAL TREATMENT OPTIONS

Thomas Swaffield, School of Medicine and Health Sciences, George Washington University, United States

IAC-16.A1.3.4

OVERVIEW OF HUMAN-ENVIRONMENT INTERACTIONS STUDY IN 180-DAY INTEGRATED EXPERIMENT ON CONTROLLED ECOLOGICAL LIFE SUPPORT SYSTEM (CELSS)

Yinghui Li, China Astronaut Research and Training Center, China

IAC-16.A1.3.5

A NUMERICAL MODEL TO ASSESS DECONDITIONING OF THE CARDIOVASCULAR SYSTEM IN LONG-TERM EXPOSURE TO MICROGRAVITY. VERIFICATION AND SIMULATION OF MARS MISSION SCENARIOS.

Antoni Perez-Poch, Universitat Politecnica de Catalunya (UPC BarcelonaTech), Spain

IAC-16.A1.3.6

A MIXED REALITY INTERVENTION FOR AUGMENTING THE VISION OF VIIP IMPACTED ASTRONAUTS VICTOR HUGO ORTIZ, , Mexico

IAC-16.A1.3.7 (withdrawn)

3D BODY MAPPING FOR REAL-TIME MUSCLE VOLUME ASSESSMENT OF ASTRONAUTS DURING LDEM Michael Karnes, , United States

IAC-16.A1.3.8

THE ENHANCED ANTIBACTERIAL POTENCY OF THE ACTIVE COMPOUNDS FOUND IN TURMERIC AND NEEM IN THE PRESENCE OF SUNLIGHT

Dale Srinivas, University of Guyana, Guyana

IAC-16.A1.3.

CONCEPTUAL DRIVERS FOR AN EXPLORATION MEDICAL SYSTEM Erik Antonsen, NASA, United States

A1.4. Radiation Fields, Effects and Risks in Human Space Missions

September 28 2016, 09:45 — Salon de Eventos 3

Co-Chair(s): Guenther Reitz , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Yai-Ping Mimi Shao , Florida Hospital Cancer Institute, United States;

IAC-16.A1.4.1

A NOVEL SPACECRAFT WITH AN INNOVATIVE PAYLOAD FOR DEEP SPACE RADIATION MEASUREMENTS

Premkumar Saganti, Prairie View A&M University, United States

IAC-16.A1.4.2 (withdrawn)

QUANTUM IMAGING DOSIMETRY AND DIRECTIONAL VISUALIZATION OF SPACE RADIATION IN LEO ORBIT BY THE SATRAM/TIMEPIX PAYLOAD ON-BOARD THE ESA PROBA-V SATELLITE

Carlos Granja, Czech Technical University In Prague, Czech Republic

IAC-16.A1.4.3

LUMINESCENCE PROPERTIES OF DEAD SEA CRYSTALS FOR DOSIMETRY

Epifanio Cruz-Zaragoza, Universidad Nacional Autónoma de México, Mexico

IAC-16.A1.4.4

INFLUENCE OF THE ABSORBED DOSE OF SPACE RADIATION ON BIOCHEMICAL PARAMETERS OF BLOOD DURING LONG-TERM SPACE FLIGHTS ON THE RUSSIAN SEGMENT OF THE INTERNATIONAL SPACE STATION

Igor Nichiporuk, SRC RF Institute of Biomedical Problems RAS, Russian Federation

AC-16.A1.4.5

ADAPTATION OF PLANT GROWTH-PROMOTING BACTERIA (PGPB) TO DIFFERENT LEVELS OF IONIZING RADIATION FROM SOILS OF CHERNOBYL AND FUKUSHIMA

Héctor Hugo Palomeque Domínguez, Instituto Tecnológico de Tuxtla Gutiérrez, Mexico

IAC-16.A1.4.6

ESTIMATING ACUTE RADIATION SICKNESS INCIDENCE FOR EXPLORATION MISSIONS OUTSIDE OF LOW EARTH ORBIT Rahul Suresh, University of Texas Medical Branch, United States

IAC-16.A1.4.7

ASTRORAD: PERSONAL RADIATION PROTECTION UTILIZING SELECTIVE SHIELDING FOR DEEP SPACE EXPLORATION Gideon Waterman, , Israel

IAC-16.A1.4.8

THE EFFECT OF MRET NOISE FIELD GENERATOR ON METABOLIC ACTIVITY OF ASTROCYTE CELLS EXPOSED TO RF RADIATION laor Smirnov. . United States

IAC-16.A1.4.9

EFFECT OF SOLAR RADIATION AND COSMIC RAYS ON SUBORBITAL FIGHTS FOR SPACE TOURISM

Somya Shalvi, University of Petroleum and Energy Studies, India

A1.5. Astrobiology and Explorationffects and Risks in Human Space Missions

September 28 2016, 14:45 — Salon de Eventos 3

Co-Chair(s): Inge ten Kate, SETI Institute, United States; Petra Rettberg, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

IAC-16.A1.5.1

THE EUROPEAN ASTROBIOLOGY ROADMAP - ASTROMAP Gerda Horneck, DLR Institute of Aerospace Medicine, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-16.A1.5.2

MARS ANALOGUES FOR SPACE EXPLORATION
Petra Rettberg, Deutsches Zentrum für Luft- und Raumfahrt e.V.
(DLR), Germany

IAC-16.A1.5.3 (withdrawn)

FUNGAL SPORES UNDER CONDITIONS OF MARS SURFACE David Green, Instituto de Astronomia UNAM, Mexico

IAC-16.A1.5.4 (withdrawn)

IDENTIFICATION OF MICROBIAL COMMUNITIES AND ISOLATION OF EXTREMOPHILE BACTERIA FROM THREE ASTROBIOLOGICAL SITES OF INTEREST IN CHIAPAS Héctor Hugo Palomeque Domínguez, Instituto Tecnológico de Tuxtla Gutiérrez, Mexico

IAC-16.A1.5.5

CAN MARS AND EUROPA BE ENVISIONED AS POTENTIAL SCENARIOS FOR LIFE?

Sandra Ignacia Ramirez Jimenez, Universidad Autonoma del Estado de Morelos. Mexico

IAC-16.A1.5.6

SOIL FERTILISATION BY GLACIAL MICROBIAL COMMUNITIES IN A MARTIAN ANALOGUE ENVIRONMENT

Michaela Musilova, Slovak Organisation for Space Activities (SOSA), Slovak Republic

IAC-16.A1.5.7

AN INTELLIGENT CELL SENSOR SYSTEM IN SPACE
Weiqiang Xia, Beijing Institute of Aerospace Systems Engineering,
China

IAC-16.A1.5.8

SYLPH: LIFE DETECTION IN A EUROPA PLUME Brent Sherwood, Caltech/JPL, United States

IAC-16.A1.5.9

CONSIDERING PLANETARY PROTECTION OF OUTER SPACE BODIES - THE EUROPEAN PPOSS PROJECT

Nicolas Walter, European Science Foundation, France

IAC-16.A1.5.10 (withdrawn)

INTERSTELLAR SPACECRAFT CONFIGURATION FOR A GENERAL TERRAFORMING MISSION SCENARIO

Yegor Morozov, Institute of Biophysics, Russian Academy of Sciences, Siberian Branch; Siberian State Aerospace University, Russian Federation

IAC-16.A1.5.11

LIVABILITY ZONE: EXPANDING THE BOUNDARIES OF THE HABITABLE ZONE

Yadvender Singh Dhillon, International Space University (ISU), France

A1.6. Life Support, habitats and EVA Systems

September 29 2016, 09:45 — Salon de Eventos 3

Co-Chair(s): Chiaki Mukai , Japan Aerospace Exploration Agency (JAXA), Japan; Klaus Slenzka , OHB System AG-Bremen, Germany;

IAC-16.A1.6.1 (withdrawn)

LINKING L-SYSTEMS AND MASS BALANCES TO MECHANISTICALLY MODEL PLANT GROWTH IN REDUCED GRAVITY ENVIRONMENTS Lucie Poulet, University Blaise Pascal, France

IAC-16. A1.6.2 (withdrawn)

INCLUSION OF THE SEDIMENT OBTAINED AS THE RESULT OF MINERALIZATION PROCESS OF HUMAN METABOLITES INTO THE BTLSS MATTER TURNOVER

Yegor Morozov, Institute of Biophysics, Russian Academy of Sciences, Siberian Branch; Siberian State Aerospace University, Russian Federation

IAC-16.A1.6.3 (withdrawn)

INTERIOR VOLUMETRIC SENSITIVITY ANALYSES FOR LONG DURATION HABITATS

Samuel Wald, Massachusetts Institute of Technology (MIT), United States

IAC-16.A1.6.4

MICROALGAE CULTIVATION IN SPACE FOR FUTURE EXPLORATION MISSIONS: RESULTS OF THE PREPARATORY ACTIVITIES FOR A SPACEFLIGHT EXPERIMENT ON THE INTERNATIONAL SPACE STATION ISS

Stefan Belz, University of Stuttgart, Germany

IAC-16.A1.6.5

PHYSICOCHEMICAL CONTROL OF THE COMPOSITION OF THE ATMOSPHERE IN THE PHYSICAL MODEL OF THE CLOSED ECOSYSTEM

Sergey Trifonov, Institute of Biophysics, Russian Academy of Sciences, Siberian Branch; Siberian State Aerospace University, Russian Federation

IAC-16.A1.6.6 (withdrawn)

HIPS: A COUNTERMEASURE APPROACH TO ALTERED VESTIBULAR FUNCTIONS IN REDUCED GRAVITY PLANETARY SURFACE OPERATIONS

Poonampreet Kaur Josan, University of North Dakota, United States

IAC-16.A1.6.7

ENVIRONMENTAL SIMULATION CHAMBER FOR VARIABLE GRAVITY APPLICATION

Sandra Podhajsky, OHB System AG-Bremen, Germany

IAC-16.A1.6.8

OVERVIEW OF 180-DAY INTEGRATED EXPERIMENT ON CONTROLLED ECOLOGICAL LIFE SUPPORT SYSTEM (CELSS)

Qingni Yu, National Key Laboratory of Human Factors Engineering, China Astronaut Research and Training Center&State Key Laboratory of Space Medicine Fundamentals and Application, China Astronaut Research and Training Center, China

IAC-16.A1.6.9 (withdrawn)

AN ASSESSMENT OF RADIATION AND IMPACT PROTECTION OF HUMAN SHELTERS ON THE MOON BUILT USING IN-SITU RESOURCES Francesco Spina, ESA european space agency, Germany

IAC-16.A1.6.10

ENVIRONMENTAL REQUIREMENTS FOR PLANT GROWTH ON MARS Lisa Stojanovski, International Space University (ISU)/University of South Australia, Australia

A1.7. Biology in Space

September 30 2016, 09:45 — Salon de Eventos 3

Co-Chair(s): Fengyuan Zhuang , Beihang University, China; Nicole Buckley , Canadian Space Agency, Canada; Rapporteur(s): Cora Thiel , University of Zurich, Switzerland;

IAC-16.A1.7.1 (withdrawn)

EFFECT OF SIMULATED MICROGRAVITY ON THE IMMUNE RESPONSE IN THE CENTRAL NERVOUS SYSTEM, USING AN IN VITRO MODEL OF TRAUMATIC BRAIN INJURY.

Ricardo Jesus Martínez-Tapia, Universidad Nacional Autónoma de México, Mexico

IAC-16.A1.7.2

STUDY OF PLANT GROWTH UNDER THE EFFECTS OF PERCHLORATE AND ITS RADIOLYSIS PRODUCTS ON MARTIAN REGOLITH Axel Garcia Burgos, Skolkovo Institute of Science and Technology, Russian Federation

IAC-16.A1.7.3

MIR-491 INHIBITS SKELETAL MUSCLE DIFFERENTIATION THROUGH TARGETING MYOMAKER

Jian He, State Key Laboratory of Space Medicine Fundamentals and Application, China Astronaut Research and Training Center, China

IAC-16.A1.7.4

RESEARCH ON LIFE SCIENCES AND BIOTECHNOLOGY OF CHINESE MANNED SPACE PROGRAM

PEI HAN, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China

IAC-16.A1.7.5

GROWTH AND PRODUCTION OF SECONDARY METABOLITES OF ERUCA SATIVA MILL

Marlise dos Santos, PUCRS, Brazil

IAC-16.A1.7.6

CHANGES IN ENERGETICS-ASSOCIATED MOLECULES, ENHANCED PROLIFERATION AND OXYGEN METABOLISM IN OLIGODENDROCYTES GROWN IN SIMULATED MICROGRAVITY Araceli Espinosa-Jeffrey, UCLA, United States









26 - 30 September 2016, Guadalajara, Mexico

IAC-16.A1.7.7

THE IMPACT OF THE PHOSPHATIDYLCHOLINE MIXTURE INJECTION ON CORTICAL CYTOSKELETON OF RATS SOLEUS MUSCLE FIBERS DURING SHORT-TERM DISUSE

Nikolay Biryukov, IBMP, Russian Federation

IAC-16.A1.7.8

THE INFLUENCE OF SIMULATED MICROGRAVITY ON MYELINATION OF THE CENTRAL NERVOUS SYSTEM Athena Konicki, UCLA, United States

IAC-16.A1.7.9

THE IMPLICATIONS OF MICROGRAVITY ON CELL MORPHOLOGY AND PROLIFERATION OF STEM CELL PROGENIES TOWARDS ASTRONAUT

Joshua Green, UCLA, United States

A1.P. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

IAC-16.A1.IP.1 (withdrawn)

APPLICATION OF THE ECLSS RELIABILITY ANALYSIS TOOL RELISSA FOR LONG DURATION HUMAN SPACE FLIGHTS Gisela Detrell, Universitat Politecnica de Catalunya (UPC), Spain

IAC-16.A1.IP.2

SLEEP IN SPACE VERSUS SLEEP ON EARTH. Alain GONFALONE, ESA (retired) - SESE Space Environment Simulation Expertise, France

IAC-16.A1.IP.3

ALGORITHM FOR CLASSIFICATION OF EEG SIGNALS IN ASTRONAUTS VICTOR HUGO ORTIZ, , Mexico

IAC-16.A1.IP.4

PATHOPHYSIOLOGY AND CURRENT MANAGEMENT OF SPACE FLIGHT OSTEOPENIA: A REVIEW OF LITERATURE Miguel Ángel Mejía Sánchez, UNAM, Mexico

IAC-16.A1.IP.5

ANALYSIS OF THE WATER BALANCE IN A CLOSED EXPERIMENTAL MODEL OF THE ARTIFICIAL ECOSYSTEM INTENDED FOR A RATED FRACTION OF A HUMAN

Alexander A. Tikhomirov, Institute of Biophysics, Russian Academy of Sciences, Siberian Branch; Siberian State Aerospace University,

IAC-16.A1.IP.6

PERENNIAL SPRINGS FROM THE CANADIAN ARTIC AS ANALOGUE SITES TO MARS

Fatima Li, UNAM, Mexico

IAC-16.A1.IP.7

FOOD PROPOSAL FOR THE SPACE LIVE ALFONSO RODRIGUEZ, AEM, Mexico

IAC-16.A1.IP.8

EXTREME MEASURES: ADVANCED CONCEPTS FOR THE FUTURE OF **HUMAN SPACE EXPLORATION**

Nathan Boll, Space Policy Institute, George Washington University, **United States**

IAC-16.A1.IP.9

PLANTS ON THE MOON: THE CUBESAT SHAPED PLANT GROWTH EXPERIMENT MODULE ON THE LUNAR SURFACE Mikalojus Brazdziunas, Vilnius University, Lithuania

BAMMSAT - A PLATFORM FOR SPACE ENVIRONMENTS STUDIES ON BIOLOGICAL SYSTEMS IN CUBESATS AND CUBESAT-LIKE PAYLOADS David Cullen, Cranfield University, United Kingdom

IAC-16.A1.IP.11

EFFECTS OF REDUCED GRAVITY ON THE CARDIOVASCULAR SYSTEM - CURRENT UNDERSTANDING AND FUTURE RESEARCH Alexander Gibson, Army National Guard, United States

METAGENOMIC EVALUATION OF THE MICROBIOLOGICAL BURDEN OF SKINSUIT THROUGHOUT AN ISS MISSION Peter W. Taylor, School of Pharmacy, University of London, United

IAC-16.A1.IP.13 (withdrawn)

THE HEART IN SPACE ENVIRONMENT Ramiro Iglesias, Instituto Politécnico Nacional, Mexico

IAC-16.A1.IP.14

OSMOADAPTATION STRATEGIES USED BY SALINIBACTER RUBER IN A FUROPAN SCENARIO

Sandra Ignacia Ramirez Jimenez, Universidad Autonoma del Estado de Morelos, Mexico

IAC-16.A1.IP.15

CARDIORESPIRATORY RESPONSES DURING A 30 DAY COMPLETE AUTONOMY EXPEDITION IN ANTARCTICA

Andree-Anne Parent, Université du Québec à Montréal, Canada

IAC-16.A1.IP.16

SOCIODIAGNOSTIC TOOLS AND THEIR LOOKOUT IN MONITORING CREWS IN PROLONGED ISOLATIONS Lucie Davidová, Faculty of Arts, Charles University, Czech Republic

USING A CREW PERFORMANCE CENTERED APPROACH FOR DESIGNING AND EVALUATING HUMAN SPACECRAFT Christine Fanchiana, University of Colorado, Colorado Center for Astrodynamics Research, United States

IAC-16.A1.IP.18

MANNED ROVERS FOR MARS EXPLORATION, MOON AND OTHER

Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

IAC-16.A1.IP.19

UPDATE ON CHALLENGES OF TERRESTRIAL AND EXTRA -TERRESTRIAL ORIGINS OF LIFE BRIJ TEWARI, University of Guyana, Guyana

IAC-16.A1.IP.20

THERMOREGULATION BY SEX: A CARDIOVASCULAR MRI STUDY Anna Colleen Crouch, University of Michigan, United States

IAC-16.A1.IP.21 (withdrawn)

BACTERIAL COLONISATION ON MARS TO SUPPORT FUTURE SPACE SETTI EMENTS

Karunya Raj, University of Petroleum and Energy Studies, India

IAC-16.A1.IP.22 (withdrawn)

HARDWARE FOR CELL CULTURES IN SPACE Luis Zea, University of Colorado Boulder, United States

MODERN PSYCHOLOGY FOR SPACE EXPLORATION Abigail Sherriff, International Space University (ISU), United States

IAC-16.A1.IP.24 (withdrawn)

HINDLIMB UNLOADING AND RELOADING OF MICE LEAD TO DIFFERENT REMODELING OF LEFT VENTRICLE AND RIGHT

Yingxian Li, China Astronaut Research and Training Cednter, Cocos (Keelina) Islands

IAC-16.A1.IP.25

INTERCULTURAL COMPETENCE: BEHAVIOR, PERFORMANCE AND PSYCHOSOCIAL CONSIDERATIONS

Edythe Weeks, Interstellar Travel Meetup, Webster University Worldwide, Washington University and Northern Arizona University, Outer Space Education Alliance L.L.P., United States

IAC-16.A1.IP.26

STUDIES OF MICRO-GRAVITY CONDITIONS OF DENTAL CARE FOR AN INTERPLANETARY SPACE MISSION

Banupriya Thangavel, Smile Craft Dental Clinic, India

IAC-16.A1.IP.27

APPLYING GENETIC ALGORITHMS TO EVALUATE FEMUR MORPHOMETRY ADAPTATION ON MARS GRAVITY Misael Chagas, International Space University (ISU), Brazil

IAC-16.A1.IP.28

ELECTRODEPOSITION OF PTCU PARTICLES FOR THE OXIDATION OF GLUCOSE IN NEUTRAL PH WITH POSSIBLE APPLICATION IN MICROGRAVITY ENVIRONMENTS FOR HUMAN HEALTH

Francisco Mherande Cuevas-Muñiz, Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Mexico

IAC-16.A1.IP.29

A MINIATURIZED INCUBATOR DESIGN FOR MICROGRAVITY BOTANIC EXPERIMENTS IN CUBESATS

Josué Zabeau, Ecole Polytechnique de Montreal, Canada

IAC-16.A1.IP.30

TURMERIC IN ANTIMICROBIAL THERAPY: AN INTERESTING STUDY ON GRAM-VE AND GRAM+VE ORGANISMS Dale Srinivas, University of Guyana, Guyana

IAC-16.A1.IP.31

THE STUDY ON EFFECT OF NEURONS IN SPACE FLIGHT AND CONDITIONS ON BRAIN/NEURONAL PLASTICITY AND CONNECTIVITY

SANDYA RAO, , India

IAC-16.A1.IP.32

FLOWING WATER ON MARS – A NEXT STEP FOR EXTRATERRISTRIAL

Nadeem Alam, Department of Aeronautical Engineering, Babu Banarsi Das National Institute of Technology and Management, Lucknow. India

IAC-16.A1.IP.33 (withdrawn)

COUNTERMEASURE CONSIDERATION OF WEIGHTLESSNESS PHYSIOLOGICAL EFFECTS IN OUR LONG-TERM SPACE FLIGHT Lin-Jie Wang, China Astronaut Research and Training Center, China

INNOVATIONS FOR SPACE EXPLORATION - LESSONS FROM MARTIAN ANALOG ASTRONAUT SIMULATION EXPEDITIONS Nicholas Jewell, Mars Without Borders, Inc, United States

IAC-16.A1.IP.35 (withdrawn)

PERSPECTIVE AUTOMATED CONTROL SYSTEM FOR A COMPLEX OF REGENERATIVE LIFE SUPPORT SYSTEMS OF THE CREW OF THE SPACE STATION

Boris Zaretskiy, Moscow Aviation Institute (National Research University), Russian Federation

IAC-16.A1.IP.36

TERRESTRIAL ATMOSPHERIC DUST VS MARTIAN ATMOSPHERIC DUST; AS NUTRIENT SOURCE FOR CYANOBACTERIA "THE 1ST OXYGEN FACTORY ON MARS" A.O. MUÑOZ LOMELI & H.B. BERALDI CAMPESI UNAM, INSTITUTE OF GEOLOGY.

Antonio Oswaldo Muñoz Lomelí, UNAM, Mexico

IAC-16.A1.IP.37

HEALTH OF AN AQUAPONIC SYSTEM IN A LOW EARTH ORBIT **PHOTOPERIOD**

Kelsey Kalbacher, , Mexico

IAC-16.A1.IP.38

SPACE GARDENING LESSONS FROM HI-SEAS: LIGHTS, CROPS AND GROWING MEDIA

Martha Lenio, , Canada

ΙΔC-16 Δ1 IP 39

WHAT IS LIFE? HOW MOLECULAR ASTROBIOLOGY AND SPACE EXPLORATION ARE BRINGING US CLOSER TO AN ANSWER Adriana Marais, University of KwaZulu-Natal, South Africa

IAC-16.A1.IP.40

THE RESULTS OF EXPEDIENCE ANALYSIS OF HUMAN PRESENCE IN SPACE IN LOW-EARTH ORBIT

Mariya Danilova, Central Research Institute for Machine Building (FGUP TSNIIMASH), Russian Federation

IAC-16.A1.IP.41

DYNAMICS OF AQUAPORIN-3 CONTENT IN ERYTHROCYTES OF THE RUSSIAN COSMONAUTS DURING LONG-TERM SPACE FLIGHTS ON THE RUSSIAN SEGMENT OF THE INTERNATIONAL SPACE STATION Igor Nichiporuk, SRC RF Institute of Biomedical Problems RAS, Russian Federation

IAC-16.A1.IP.43

DESIGN OF AN ARTIFICIAL VISION SYSTEM FOR BIOLOGICAL EXPERIMENTATION UNDER MICROGRAVITY EFFECTS ON BOARD A NANOSATELLITE

Rubí Janet Núñez Dorantes, School of Engineering, National Autonomous University of Mexico, Mexico

IAC-16.A1.IP.44

IMPORTANCE OF PSYCOHOLOGICAL EVALUATION IN AEROSPACE SAFETY. (30 YEARS EXPERIENCE, SECRETARIAT OF NATIONAL DEFENSE (SEDENA) -SECRETARIAT OF MARINE NAVY OF MÉXICO

Armando Rodríguez-López, , Mexico

A2. MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM

Coordinator(s): Nickolay N. Smirnov , Moscow Lomonosov State University, Russian Federation;

Secretary(s): Anastassiia Nikonova, Russian Academy of Sciences, Russian Federation;

Vice-Coordinator(s): Gabriel Pont , Centre National d'Etudes Spatiales (CNES), France;

A2.1. Gravity and Fundamental Physics

September 26 2016, 15:15 — Moda 1

Co-Chair(s): Antonio Viviani , Seconda Universita' di Napoli, Italy; Hanns Selig , ZARM - University of Bremen, Germany; Rapporteur(s): Qi KANG, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., China;

IAC-16.A2.1.1

MICROSCOPE MISSION: FIRST IN-ORBIT INSTRUMENT DATA Françoise Liorzou, Office National d'Etudes et de Recherches Aérospatiales (ONERA), France

WAVELET ANALYSIS FOR THE MICROSCOPE MISSION Hanns Selig, ZARM - University of Bremen, Germany

IAC-16.A2.1.3 (withdrawn)

ATOM INTERFEROMETRY ON SOUNDING ROCKETS Stephan Seidel, Leibniz Universiät Hannover, Germany

IAC-16.A2.1.4

RECENT RESULTS FROM THE LARES MISSION ON TESTING GENERAL RELATIVITY Ignazio Ciufolini, Università del Salento, Centro Fermi, Italy

IAC-16.A2.1.5

RELATIVISTIC REDSHIFT PROBE USING BALLOONS Didier MASSONNET, Centre National d'Etudes Spatiales (CNES), France







FORMATION DESIGN FOR VARIOUS GRAVITATIONAL WAVE MISSIONS

An-Ming Wu, National Space Organization, Taiwan, China

IAC-16.A2.1.7

IAC-16.A2.1.6

ASTROPHYSICAL DATA ANALYSIS FOR THE DETECTION OF GRAVITATIONAL WAVES FROM INSPIRAL COMPACT BINARIES INJECTED IN LIGO'S FIFTH AND SIXTH SCIENCE RUNS Javier M. Antelis. TECNOLOGICO DE MONTERREY. Mexico

GALILEO SATELLITES DORESA AND MILENA IN WRONG ECCENTRIC ORBITS: I.E. HOW TRANSFORM A PROBLEM IN A RESOURCE Francesco Vespe, Agenzia Spaziale Italiana (ASI), Italy

IAC-16.A2.1.9

PROPOSED TESTS OF GENERAL RELATIVITY WITH THE GALILEO 5 AND 6 NAVIGATION SATELLITES

Claus Laemmerzahl, ZARM - University of Bremen, Germany

A2.2. Fluid and Materials Sciences

September 27 2016, 09:45 — Moda 1

Co-Chair(s): Nickolay N. Smirnov, Moscow Lomonosov State University, Russian Federation; Satoshi Matsumoto , Japan Aerospace Exploration Agency (JAXA), Japan;

Rapporteur(s): Jean-Claude Legros , Université Libre de Bruxelles, Belgium;

IAC-16.A2.2.1 (withdrawn)

EFFECT OF GRAVITY ON INTERFACIAL INSTABILITY IN MISCIBLE LIQUIDS INDUCED BY VIBRATIONS

Valentina Shevtsova, Université Libre de Bruxelles, Belgium

IAC-16.A2.2.2

NUMERICAL SIMULATION OF PARTICLE SET EVOLUTION IN OSCILLATING FLUID IN MICROGRAVITY CONDITION Iuliia Brazaluk, Oles Honchar Dnipropetrovsk National University,

IAC-16.A2.2.3

EXPERIMENT STUDY ON MARANGONI CONVECTION IN A LARGE SCALE LIQUID BRIDGE ON GROUND

Li DUAN, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., China

SIGNIFICANCE OF MICROGRAVITY EXPERIMENT OF MARANGONI CONVECTION ONBOARD THE ISS

Satoshi Matsumoto, Japan Aerospace Exploration Agency (JAXA),

IAC-16.A2.2.5

COLLOIDAL SELF-ASSEMBLING IN SPACE: RESULTS FROM CHINA SJ-10 RECOVERBLE SATELLITE

YUren WANG, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., China

IAC-16.A2.2.6 (withdrawn)

RESULTS OF DCMIX2 SPACE EXPERIMENT: TEMPERATURE DEPENDENCE OF TRANSPORT COEFFICIENTS IN A BINARY MIXTURE OF TOLUENE-CYCLOHEXANE

Valentina Shevtsova, Université Libre de Bruxelles, Belgium

IAC-16.A2.2.7

ONE MATHEMATICAL MODEL OF HEAT AND MASS TRANSFER IN MICROGRAVITY CONDITION

Dmytro Yevdokymov, Oles Honchar Dnipropetrovsk National University, Ukraine

IAC-16.A2.2.8

COMPUTATIONAL STUDY OF THE EFFECT OF THE MICROGRAVITY IN A MICROFLUIDIC DEVICE

Francisco Mherande Cuevas-Muñiz, Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Mexico

IAC-16.A2.2.9 (withdrawn)

ON BOARD ELECTRONIC DEVICES SAFETY SUBJECT TO HIGH FREQUENCY ELECTROMAGNETIC RADIATION EFFECTS Valeriv Nikitin, Moscow Lomonosov State University, Russian

IAC-16.A2.2.10

FEASIBILITY AND TRANSITION IN SMOLDERING PHENOMENON Vinayak Malhotra, SRM University Chennai, India

A2.3. Microgravity Experiments from Sub-**Orbital to Orbital Platforms**

September 28 2016, 09:45 — Moda 1

Co-Chair(s): Raffaele Savino , , Italy; Rainer Willnecker , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR),

Rapporteur(s): Peter Hofmann, OHB System AG - Munich,

IAC-16.A2.3.1 (withdrawn)

EVALUATION OF ENGINEERING ASPECTS OF THE MAIUS-1 SOUNDING ROCKET MISSION Jens Grosse, University of Bremen, Germany

IAC-16.A2.3.2

DESIGN OF THE MAIUS-2/3 ATOM INTERFEROMETER ON A SOUNDING ROCKET

Michael Elsen, ZARM - University of Bremen, Germany

RECENT DEVELOPMENTS ON HEAT PIPES FOR GROUND AND MICROGRAVITY CONDITIONS

Anselmo Cecere, Università degli Studi di Napoli "Federico II", Italy

IAC-16.A2.3.4

STUDY ON THE MIGRATION OF SLIPRING DEBRIS IN SPACE ENVIRONMENT-AN IN-FLIGHT EXPERIMENT ONBOARD SPACE

Rui Li, Beijing Institute of Control Engineering, China Academy of Space Technology, China

IAC-16.A2.3.5 (withdrawn)

MICROGRAVITY EFFECTS ON CHRONOAMPEROMETRIC AMMONIA OXIDATION AT PLATINUM NANOPARTICLES ON MODIFIED MESOPOROUS CARBON SUPPORTS Carlos Poventud-Estrada, , Puerto Rico

IAC-16.A2.3.6

PARABOLIC FLIGHT EXPERIMENT TO VALIDATE TETHERED-TUGS DYNAMICS AND CONTROL FOR RELIABLE SPACE TRANSPORTATION APPLICATIONS

Riccardo Benvenuto, Politecnico di Milano, Italy

IAC-16.A2.3.7

CHINA'S RECOVERABLE AND REUSABLE SATELLITE FOR SPACE **EXPERIMENT**

Ming Li, China Academy of Space Technology (CAST), China

IAC-16.A2.3.8

COMMERCIAL SUBORBITAL VEHICLE MICROGRAVITY RESEARCH EXPERIMENT PAYLOAD STANDARDS Vatsala Khetawat, , India

IAC-16.A2.3.9

COMMERCIAL SUPPORT SERVICES FOR MICROGRAVITY EXPERIMENTS ON PARABOLIC FLIGHTS Norbert Alexander Pilz, Blue Sky Solutions, Germany

Research

September 28 2016, 14:45 — Moda 1

Italy; Valentina Shevtsova , Université Libre de Bruxelles,

Rapporteur(s): Nickolay N. Smirnov , Moscow Lomonosov State University, Russian Federation;

IAC-16.A2.4.1

MATHEMATICAL MODELING OF MHD PROCESSES FOR ASTROPHYSICAL OBJECTS IN 3D STATEMENT ON MESHES OF HIGH

Nickolay N. Smirnov, Moscow Lomonosov State University, Russian

IAC-16.A2.4.2 (withdrawn)

INSTABILITY OF THERMOCAPILLARY-BUOYANCY CONVECTION IN WEAKLY EVAPORATING LIQUID

IAC-16.A2.4.3 (withdrawn)

BONE LOSS AND ITS MECHANISMS UNDER SIMULATED SPACE ENVIRONMENT

Sciences, China

IAC-16.A2.4.4

Chinese Academy of Sciences., China

THE TERNARY SYSTEMS 1,2,3,4-TETRAHYDRONAPHTALENE, ISOBULTYLBENZENE, N-DODECANE MEASURED IN THE DCMIX1 EXPERIMENT

IAC-16.A2.4.6

MODEL OF ADHESIVE PERFORMANCE FOR SPACE APPLICATIONS. Ricardo Vazquez-Robledo, School of Engineering, National Autonomous University of Mexico, Mexico

IAC-16.A2.4.7

SPHERICAL CAVITY

Victor Kozlov, PSHPU, Russian Federation

STEADY THERMAL CONVECTION IN ROTATING ANNULUS EXCITED BY

Alevtina Ivanova, , Russian Federation

Microgravity Experiments

Co-Chair(s): Gabriel Pont , Centre National d'Etudes Spatiales (CNES), France; Rainer Willnecker, Deutsches Zentrum für Luftund Raumfahrt e.V. (DLR), Germany;

Rapporteur(s): Satoshi Matsumoto , Japan Aerospace Exploration Agency (JAXA), Japan;

DESIGN AND DEVELOPMENT OF AN AUTONOMOUS CONTROL SYSTEM FOR A MICRO LABORATORY ONBOARD A NANOSATELLITE Joel Edmundo Morales Sánchez, Facultad de Ingeniería-UNAM, Mexico

IAC-16.A2.5.2 (withdrawn)

MODEL-BASED SOFTWARE ARCHITECTURE FOR A COLD GAS **EXPERIMENT ON A SOUNDING ROCKET** Benjamin Weps, DLR (German Aerospace Center), Germany

IAC-16.A2.5.3

DEVELOPMENT OF ILR - 33 AMBER SOUNDING ROCKET FOR MICROGRAVITY EXPERIMENTS

Blazej Marciniak, Institute of Aviation, Poland

IAC-16.A2.5.4

NEW MICROGRAVITY AND HYPERGRAVITY FACILITY IN THE CZECH Jaroslav Kousal, Czech Technical University In Prague, Czech

IAC-16.A2.5.5

PROGRESS ON CONCEPTS FOR NEXT-GENERATION DROP TOWER

Thorben Könemann, ZARM Fab GmbH, Germany

IAC-16.A2.5.6

PARABOLIC FLIGHT WITH LIGHT AIRCRAFT Hanns Selig, ZARM - University of Bremen, Germany

IAC-16.A2.5.7 (withdrawn)

MECHANICAL DECOUPLING OF EXPERIMENTS FROM STRUCTURAL VIBRATIONS AND SYSTEMATIC RESIDUAL ACCELERATIONS ON SMALL AIRPLANES USED AS MICROGRAVITYPLATFORM Andreas Gierse, ZARM - University of Bremen, Germany

IAC-16.A2.5.8 (withdrawn)

THE NATIONAL RESEARCH COUNCIL OF CANADA MICROGRAVITY AIRCRAFT FACILITIES

Tim Leslie, National Research Council, Canada

IAC-16.A2.5.9

MICROGRAVITY ACTIVE VIBRATION ISOLATION SYSTEM ON PARABOLIC FLIGHT

Zhang Yongkang, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China

IAC-16.A2.5.10 (withdrawn)

UNMANNED PARABOLIC FLIGHT PLATFORM FOR REDUCED GRAVITY

Marcello Valdatta, University of Bologna / Polaris, Italy

A2.6. Microgravity Sciences Onboard the International Space Station and Beyond -Part 1

September 30 2016, 09:45 — Moda 1

Co-Chair(s): Bernard Zappoli , Centre National d'Etudes Spatiales (CNES), France; Peter Hofmann, OHB System AG -Munich, Germany;

Rapporteur(s): Angelika Diefenbach , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

IAC-16.A2.6.1

ANITA (ANALYSING INTERFEROMETER FOR AMBIENT AIR ON THE ISS): TRACE GAS MONITORING WITH ANITA 1 AND PLANS FOR THE NEXT GENERATION, ANITA 2

IAC-16.A2.6.2

DECLIC RELOADED

Hervé Burger, Centre National d'Etudes Spatiales (CNES), France

IAC-16.A2.6.3 (withdrawn)

CRITICAL PHENOMENA STUDIES UTILIZING DECLIC Carole Lecoutre, CNRS-ICMCB, France

Peter Hofmann, OHB System AG - Munich, Germany

A2.4. Science Results from Ground Based

Co-Chair(s): Antonio Viviani, Seconda Universita' di Napoli,

Valentina Shevtsova, Université Libre de Bruxelles, Belgium

Jufang Wang, Institute of Modern Physics, Chinese Academy of

THERMOCAPILLARY CONVECTION EXPERIMENT IN AN OPEN ANNULAR POOL ON SJ-10 SATELLITE

Qi KANG, National Microgravity Laboratory, Institute of Mechanics,

SORET, DIFFUSION AND THERMODIFFUSION COEFFICIENTS OF

Quentin Galand, Université Libre de Bruxelles, Belgium

ZONAL FLOW GENERATED BY OSCILLATING CORE IN A ROTATING

IAC-16.A2.4.8

EXTERNAL FORCE FIELD

A2.5. Facilities and Operations of

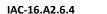
September 29 2016, 14:45 — Moda 1

IAC-16.A2.5.1

International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico







PRIMARY SPACING EVOLUTION DURING MICROSTRUCTURE FORMATION IN 3D DIRECTIONAL SOLIDIFICATION: MICROGRAVITY EXPERIMENTS CONDUCTED IN THE DECLIC-DSI Jorge Pereda, IM2NP - Aix-Marseille Université & CNRS UMR 7334,

IAC-16.A2.6.5

e.V. (DLR), Germany

CONTAINERLESS PROCESSING ON ISS: STATUS OF EXPERIMENTS IN ESA'S EML. THE ELECTROMAGNETIC LEVITATOR Angelika Diefenbach, Deutsches Zentrum für Luft- und Raumfahrt

IAC-16.A2.6.6 (withdrawn)

INVESTIGATION OF THE DUSTY PLASMA PHYSICS UNDER MICROGRAVITY CONDITIONS Vladimir Fortov, Russian Academy of Sciences, Russian Federation

IAC-16.A2.6.7 (withdrawn)

IMPLEMENTATION OF A FOAM RHEOLOGY EXPERIMENT IN MICROGRAVITY

Giampietro Tonoli, TU Braunschweig, Germany

THE DESIGN AND DEMONSTRATION OF THE THERMAL CONTROL SYSTEM IN SCIENTIFIC EXPERIMENTS RACK Dong Guo, , China

IAC-16.A2.6.9

PORTABLE ON ORBIT PRINTER 3D: 1ST EUROPEAN ADDITIVE MANUFACTURING MACHINE ON INTERNATIONAL SPACE STATION Giorgio Musso, Thales Alenia Space Italia, Italy

A3. SPACE EXPLORATION SYMPOSIUM

Coordinator(s): Bernard Foing, ESA/ESTEC, The Netherlands; Christian Sallaberger, Canadensys Aerospace Corporation, Canada;

A3.1. Space Exploration Overview

September 26 2016, 15:15 — Tonalà

Co-Chair(s): Christian Sallaberger , Canadensys Aerospace Corporation, Canada; Kathy Laurini, National Aeronautics and Space Administration (NASA), United States;

Rapporteur(s): Keyur Patel , National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States; Norbert Frischauf , , Austria;

IAC-16.A3.1.1 (withdrawn)

THE NATIONAL UNIVERSITY OF MEXICO (UNAM) NETWORK OF SPACE SCIENCE OBSERVATORIES FROM EARTH JOSE F. VALDES-GALICIA, Instituto de Geofisica, Universidad Nacional Autonoma de Mexico, Mexico

IAC-16.A3.1.2

ENGAGING THE PRIVATE SECTOR IN SPACE EXPLORATION - ESA'S **APPROACH**

Bernhard Hufenbach, European Space Agency (ESA), The Netherlands

IAC-16.A3.1.3

PHILAE / ROSETTA: A GIANT STEP IN THE SPACE EXPLORATION OF THE SOLAR SYSTEM

Jean-Pierre Bibring, , France

IAC-16.A3.1.4

ENABLING SOLAR SYSTEM SCIENCE WITH THE SPACE LAUNCH

Ralph L. McNutt, Jr., Johns Hopkins University Applied Physics Laboratory, United States

POSSIBILITIES OF INTERNATIONAL COOPERATION IN VENERA-D PROJECT. ENGINEERING CHALLENGES.

Viktor A. Vorontsov, Lavochkin Association, Russian Federation

IAC-16.A3.1.6

A DEEP SPACE INVENTORY TOUR OF THE MAIN ASTEROID BELT Alison Gibbings, OHB System AG, Germany

IAC-16.A3.1.7

SPACE EXPLORATION MISSIONS AND TECHNOLOGIES AT AIRBUS **DEFENCE & SPACE**

Didier Morancais, Airbus Defence and Space SAS, France

IAC-16.A3.1.8

LAVOCHKIN ASSOCIATION SPACECRAFT FOR FUNDAMENTAL AND APPLIED SCIENTIFIC RESEARCH.

Sergey Lemeshevskii, Lavochkin Association, Russian Federation

IAC-16.A3.1.9

UNDERSTANDING HUMAN SPACE EXPLORATION Cesare Guariniello, Purdue University, United States

IAC-16.A3.1.10

PLANETARY PROTECTION AND THE SEARCH FOR LIFE ON THE ICY MOONS OF THE SOLAR SYSTEM: A TECHNOLOGY ROADMAP Paul Iliffe, International Space University (ISU), France

A3.2A. Moon Exploration - Part 1

September 27 2016, 09:45 — Tonalà

Co-Chair(s): Bernard Foing , ESA/ESTEC, The Netherlands; David Korsmeyer , National Aeronautics and Space Administration (NASA), United States;

Rapporteur(s): Nadeem Ghafoor . Canadensys Aerospace Corporation, Canada; Sylvie Espinasse, European Space Agency (ESA), The Netherlands;

IAC-16.A3.2A.1

UPDATE ON THE GOOGLE LUNAR XPRIZE IN 2016 Andrew Barton, X PRIZE Foundation, United States

JAPANESE LUNAR POLAR EXPLORATION MISSION Tatsuaki Hashimoto, Japan Aerospace Exploration Agency (JAXA),

OHB VISIONS FOR FUTURE LUNAR EXPLORATION Andrea Jaime-Albalat, OHB System AG - Munich, Germany

ADVANCED SPACECRAFT FOR FUNDAMENTAL AND APPLIED MOON RESEARCH

Maxim Martynov, Lavochkin Association, Russian Federation

IAC-16.A3.2A.5

PROSPECT OF THE MOON POLAR RESOURCES Andrea Rusconi, Leonardo - Finmeccanica S.p.A, Italy

IAC-16.A3.2A.7 (withdrawn)

THE LUNAR POLAR HYDROGEN MAPPER (LUNAH-MAP) CUBESAT

Hannah Kerner, Arizona State University, United States

IAC-16.A3.2A.8

SCIENTIFIC MOTIVATION AND TECHNOLOGICAL IMPLEMENTATION SCHEMATIC FOR KOREAN LUNAR LANDER

Gwanghyeok Ju, Korea Aerospace Research Institute (KARI), Korea, Republic of

IAC-16.A3.2A.9

LUNAR POLAR SAMPLE RETURN MISSION Antonella Ferri, Thales Alenia Space Italia (TAS-I), Italy

IAC-16.A3.2A.10

FLIGHT-SYSTEM ARCHITECTURE OF HAKUTO'S LUNAR MICROROVER FOR THE GOOGLE LUNAR XPRIZE

John Walker, ispace Technologies, Inc., Japan

A3.2B. Moon Exploration - Part 2

September 27 2016, 14:45 — Tonalà

Co-Chair(s): Bernard Foing , ESA/ESTEC, The Netherlands; David Korsmeyer , National Aeronautics and Space Administration (NASA), United States;

Rapporteur(s): Nadeem Ghafoor, Canadensys Aerospace Corporation, Canada; Sylvie Espinasse, European Space Agency (ESA), The Netherlands:

IAC-16.A3.2B.1 (withdrawn)

GUIDANCE, NAVIGATION, AND CONTROL SYSTEMS FOR THE EXPLORATION OF THE MOON

Guillermo Ortega, European Space Agency (ESA), The Netherlands

IAC-16.A3.2B.2 INTERNATIONAL LUNAR OBSERVATORY ASSOCIATION 4 MISSION

REALIZATION, SEPTEMBER 2016 Steve Durst, International Lunar Observatory Association, United

IAC-16.A3.2B.3 (withdrawn)

MOONRIDERS: NASA AND HAWAII'S INNOVATIVE LUNAR SURFACE FLIGHT EXPERIMENT FOR LANDING IN LATE 2017 Robert Kelso, Pacific International Space Center for Exploration Systems (PISCES), United States

IAC-16.A3.2B.4 (withdrawn)

AN OVERVIEW OF CHALLENGES IN DESIGN AND DEVELOPMENT OF LUNAR ROVER FOR MOON EXPLORATION

ACHUTANANDA PARHI, Indian Space Research Organization (ISRO),

IAC-16.A3.2B.5

DEVELOPMENT OF ROVER DEPLOYMENT SYSTEM FOR LUNAR LANDING MISSION

Masataku Sutoh, Japan Aerospace Exploration Agency (JAXA),

SURFACE ENVIRONMENT MODELLING AND TECHNOLOGY DEVELOPMENT FOR SMALL MISSIONS & PAYLOADS AT THE LUNAR SOUTH POLE

Nadeem Ghafoor, Canadensys Aerospace Corporation, Canada

IAC-16.A3.2B.7

LATEST DEVELOPMENTS IN CANADIAN LUNAR ROVER PROTOTYPES Peter Visscher, Ontario Drive and Gear, Canada

IAC-16.A3.2B.8

THE LIBS INSTRUMENT FOR CHANDRAYAAN-2 ROVER: ENGINEERING MODEL DEVELOPMENT ASPECTS A.S. Laxmiprasad, Laboratory for Electro-Optics Systems (LEOS)-ISRO, India

SUBSURFACE PLANETARY ICY SAMPLES COLLECTION: THE TOOL-SOIL ENERGY EXCHANGE MODEL TO DRIVE PENETRATORS DESIGN Michèle Lavagna, Politecnico di Milano, Italy

IAC-16.A3.2B.10 (withdrawn)

A NOVEL CONCEPT FOR IN-SITU MANUFACTURE OF REINFORCED SINTERED CONSTRUCTION ELEMENTS AND A NUMERICAL ASSESSMENT OF MATERIAL PROPERTIES

Francesco Spina, ESA european space agency, Germany

A3.2C. Moon Exploration – Part 3

Guadalajara

September 30 2016, 09:45 — Tonalà

Co-Chair(s): Bernard Foing , ESA/ESTEC, The Netherlands; David Korsmeyer, National Aeronautics and Space Administration (NASA). United States:

Rapporteur(s): Nadeem Ghafoor, Canadensys Aerospace Corporation, Canada; Sylvie Espinasse, European Space Agency

IAC-16.A3.2C.1

TOWARDS A MOON VILLAGE: ENABLING TECHNOLOGY AND PRECURSOR MISSIONS Bernard Foing, ESA/ESTEC, The Netherlands

IAC-16.A3.2C.2 (withdrawn)

FEASIBILITY OF A VILLAGE IN THE MOON Guillermo Ortega, European Space Agency (ESA), The Netherlands

IAC-16.A3.2C.3

HUMAN ASSISTED ROBOTIC VEHICLE STUDIES - A CONCEPTUAL **END-TO-END MISSION ARCHITECTURE** Benjamin Lehner, TU Delft, The Netherlands

IAC-16.A3.2C.4

ALCIDES: A NOVEL LUNAR MISSION CONCEPT STUDY FOR THE DEMONSTRATION OF ENABLING TECHNOLOGIES IN DEEP-SPACE **EXPLORATION AND HUMAN-ROBOTS INTERACTION** Hady Ghassabian Gilan, DLR Institute of Space Systems, Bremen, Germany, University of Padova, Italy

IAC-16.A3.2C.5

ANALYSIS OF A MOON OUTPOST FOR MARS ENABLING TECHNOLOGIES THROUGH A VIRTUAL REALITY ENVIRONMENT Andrea Emanuele Maria Casini, Politecnico di Torino, Italy

IAC-16.A3.2C.6

DESIGN FOR THE FUTURE: FLEXHAB PROJECT, THE FUTURE LUNAR EXPLORATION HABITAT AT ESA Orla Punch, SpaceShip EAC, ESA, Germany

IAC-16.A3.2C.8

IAC-16.A3.2C.9

LUNAR MISSION ONE: A NEW WAY TO EXPLORE OUTER SPACE David Iron, , United Kingdom

USING THE FRAMEWORK OF INTERNATIONAL ORGANIZATIONS TO DEVELOP AN INTERNATIONAL LUNAR DECADE CAMPAIGN David Dunlop, National Space Society, United States

IAC-16.A3.2C.10 (withdrawn)

LUNAR MISSION PLANNING AND DATA DISSEMINATION WITH NASA'S LUNAR MAPPING AND MODELING PORTAL Brian Day, NASA Ames Research Center, United States

A3.3A. Mars Exploration – missions current and future

September 28 2016, 09:45 — Tonalà

Co-Chair(s): Pierre W. Bousquet , Centre National d'Etudes Spatiales (CNES), France; Vincenzo Giorgio , Thales Alenia Space . Italia, Italy;

Rapporteur(s): Amalia Ercoli Finzi , Politecnico di Milano, Italy; Cheryl Reed , The Johns Hopkins University Applied Physics Laboratory, United States;

IAC-16.A3.3A.1

(NASA). United States

AN OVERVIEW OF THE STATUS OF NASA'S INSIGHT MARS MISSION (2018 LAUNCH) INSIGHT: [INTERIOR EXPLORATION USING SEISMIC INVESTIGATIONS, GEODESY AND HEAT TRANSPORT Ramon P. De Paula, National Aeronautics and Space Administration











IAC-16.A3.3A.2

EXOMARS 2016 MISSION: READY FOR LAUNCH Carlo Cassi, Thales Alenia Space Italia, Italy

IAC-16.A3.3A.3

PERSPECTIVE AND CONCEPTUAL PROJECTS OF MARS EXPLORATION Oleg Grafodatskiy, NPO Lavochkine, Russian Federation

IAC-16.A3.3A.4

PHOBOS SAMPLE RETURN: MISSION AND SPACECRAFT DESIGN Lisa Peacocke, Airbus Defence and Space Ltd, United Kingdom

DEVELOPMENT OF JAPANESE MARS AIRPLANE Hiroki Nagai, Tohoku University, Japan

IAC-16.A3.3A.6

SMALL MARS SATELLITE: A LOW-COST SYSTEM FOR MARS **EXPLORATION**

Pietro Pasolini, University of Naples "Federico II", Italy

IAC-16.A3.3A.7

CONCEPT OF SAMPLE RETURN MISSION FOR MARS SURFACE **EXPLORATION**

Nadeem Alam, Department of Aeronautical Engineering, Babu Banarsi Das National Institute of Technology and Management, Lucknow,, India

THE USE OF MECHANICS PHYSICS FOR A SAFE LANDING ON MARS. Yair Israel Piña López, Universidad Nacional Autónoma de México,

IAC-16.A3.3A.9 (withdrawn)

THE DREAM AND THE REALITY OF HUMAN EXPLORATION OF MARS Wenyi CAI, China Academy of Launch Vehicle Technology(CALT),

IAC-16.A3.3A.10

MARS 2020 ROVER MISSION STATUS IN 2016 Douglas Bernard, Jet Propulsion Laboratory - California Institute of Technology, United States

A3.3B. Mars Exploration - Science, **Instruments and Technologies**

September 28 2016, 14:45 — Tonalà

Co-Chair(s): Pierre W. Bousquet , Centre National d'Etudes Spatiales (CNES), France; Vincenzo Giorgio, Thales Alenia Space

Rapporteur(s): Amalia Ercoli Finzi, Politecnico di Milano, Italy; Cheryl Reed , The Johns Hopkins University Applied Physics Laboratory, United States;

IAC-16.A3.3B.1

IRENA, DEMONSTRATING RE-ENTRY TECHNOLOGIES FOR MARS **AEROCAPTURE**

Pierre W. Bousquet, Centre National d'Etudes Spatiales (CNES), France

IAC-16.A3.3B.2

EXOMARS 2016: SCHIAPARELLI MISSION ANALYSIS Davide Bonetti, Deimos Space SLU, Spain

IAC-16.A3.3B.3

LAUNCH CAMPAIGN OF EXOMARS 2016 PLANETARY PROTECTION IMPLEMENTATION

Diana Margheritis, Thales Alenia Space Italia, Italy

EXOMARS: SAMPLE PREPERATION AND DISTRIBUTION SYSTEM AND INSTRUMENTS UNDER DEVELOPMENT

Peter Hofmann, OHB System AG - Munich, Germany

IAC-16.A3.3B.5

THERMAL AND HEAT TRANSFER STUDIES USING THE HABIT INSTRUMENT ON THE EXOMARS 2018 SURFACE PLATFORM. Álvaro Tomás Soria Salinas, Luleå University of Technology, Sweden

IAC-16.A3.3B.6

LYMAN ALPHA ABSORPTION CELL PHOTOMETER ABOARD ISRO'S MOM SPACECRAFT: DEVELOPMENT CHALLENGES, ONBOARD OPERATIONS AND PRELIMINARY RESULTS

VISWANATHAN M, Laboratory for Electro-Optics Systems (LEOS)-

IAC-16.A3.3B.7 (withdrawn)

MEDA, SIX SENSES FOR THE NASA MARS2020 ROVER: DESIGNING A VERSATILE INSTRUMENT TO PULSE THE MARS CLIMATE Isaias Carrasco, Centro de Astrobiologia (INTA-CSIC), Spain

DESIGN CONCEPTS AND IMPLEMENTATION OF THE LIGHTWEIGHT ADVANCED ROBOTIC ARM DEMONSTRATOR (LARAD) Róbert Marc, Airbus Defence and Space, United Kingdom

IAC-16.A3.3B.9

LABORATORY AND EIFEL FIELD SPECTROSCOPY OF MARS ANALOGUE SAMPLES Bernard Foing, ESA/ESTEC, The Netherlands

IAC-16.A3.3B.10

THE WATER OF MARS IS DRINKABLE? Carlos Rebellon, , United States

IAC-16.A3.3B.11

WHAT ROLE CAN FUNGI PAY IN TERRAFORMING MARS? Rose Tasker, , Australia

A3.4. Small Bodies Missions and **Technologies**

September 29 2016, 09:45 — Tonalà

Co-Chair(s): Stephan Ulamec , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Susan McKenna-Lawlor, Space Technology (Ireland) Ltd., Ireland;

Rapporteur(s): Marc D. Rayman , Jet Propulsion Laboratory - California Institute of Technology, United States; Norbert Frischauf,, Austria;

IAC-16.A3.4.1

THE FINAL YEAR OF THE ROSETTA MISSION Andrea Accomazzo, European Space Agency (ESA), Germany

ROSETTA END OF MISSION SCIENCE OPERATIONS Raymond Hoofs, European Space Agency (ESA), Spain

ROSETTA LANDER - PHILAE: OPERATIONS ON COMET 67P/ CHURYUMOV-GERASIMENKO, ANALYSIS OF WAKE-UP ACTIVITIES AND FINAL STATE

Stephan Ulamec, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

HAYABUSA2 EARTH SWING-BY OPERATION RESULTS Takanao Saiki, Japan Aerospace Exploration Agency (JAXA), Japan

CRUISE STATUS OF HAYABUSA2: ROUND TRIP MISSION TO ASTEROID 162173 RYUGU

Yuichi Tsuda, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-16.A3.4.6 (withdrawn)

DAWN AT CERES: THE FIRST EXPLORATION OF THE FIRST DWARF

Marc D. Rayman, Jet Propulsion Laboratory - California Institute of Technology, United States

IAC-16.A3.4.7

THE OSIRIS-REX LASER ALTIMETER (OLA) Menachem (Manny) Nimelman, MDA Robotics & Automation,

IAC-16.A3.4.8

LUMINESCENCE DATING OF ASTEROID SURFACES THROUGH REMOTE SENSING Rita Schulz, European Space Agency (ESA), The Netherlands

ASTEROID IMPACT MISSION: EFFECTIVE STRATEGIES TO LAND ON SMALL BINARIES

Michèle Lavagna, Politecnico di Milano, Italy

IAC-16.A3.4.10

ASTEROID IMPACT DEFLECTION ASSESSMENT: DOUBLE ASTEROID REDIRECTION TEST

Cheryl L.B. Reed, The Johns Hopkins University Applied Physics Laboratory, United States

A3.5. Solar System Exploration

September 29 2016, 14:45 — Tonalà

Co-Chair(s): Junichiro Kawaguchi , Japan Aerospace Exploration Agency (JAXA), Japan; Mariella Graziano, GMV Aerospace & Defence SAU, Spain;

Rapporteur(s): Alain Ouellet , Canadian Space Agency, Canada; Charles E. Cockrell Jr., National Aeronautics and Space Administration (NASA), United States:

IAC-16.A3.5.1

THE FIRST JAPAN'S PLANETARY ORBITER AKATSUKI AND ITS SCIENTIFIC RESULTS

Masato Nakamura, ISAS/JAXA, Japan

IAC-16.A3.5.2

ICESHUTTLE TEREDO: AN ICE-PENETRATING ROBOTIC SYSTEM TO TRANSPORT AN EXPLORATION AUV INTO THE OCEAN OF JUPITER'S MOON FUROPA

Marius Wirtz, DFKI GmbH, Robotics Innovation Center, Germany

IAC-16.A3.5.3

AUTONOMOUS VISION-BASED NAVIGATION FOR JUICE Gregory Jonniaux, Airbus Defence and Space, France

IAC-16.A3.5.4

ROLE OF ENTRY PROBES IN THE EXPLORATION OF THE SOLAR SYSTEM GIANTS

Sushil Atreya, University of Michigan, United States

IAC-16.A3.5.5

PARAMETRIC STUDIES OF TRAJECTORY CONTROL SYSTEMS FOR HIGH ALTITUDE BALLOONS TO BE USED FOR EXPLORATION OF PLANETARY SYSTEMS WITH ATMOSPHERES Christopher Yoder, North Carolina State University, United States

IAC-16.A3.5.6

A SOLAR SAIL SYSTEM DESIGN FOR THE MAGNETOTAIL DETECTION

Chao Chen, Aerospace System Engineering Shanghai, China, China

IAC-16.A3.5.7

MISSION AND SYSTEM TRADES FOR ESA'S TURBULENCE HEATING OBSERVER (THOR) SCIENCE MISSION Andy Braukhane, OHB System AG, Germany

IAC-16.A3.5.8

SERB, A NANOSATELLITE DEDICATED TO OBSERVE THE SUN AND

Mustapha Meftah, CNRS - LATMOS, France

A3.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Bernard Foing , ESA/ESTEC, The Netherlands; Christian Sallaberger, Canadensys Aerospace Corporation, Canada:

IAC-16.A3.IP.1

STUDY ON NEO DETECTION AND IMPACT WARNING SYSTEM UTILIZING ARTIFICIAL EQUILIBRIUM POINT Toshinori Ikenaga, Japan Aerospace Exploration Agency (JAXA),

IAC-16.A3.IP.2 (withdrawn)

AFRICA2MOON MISSION CONCEPT Khutso Ngoasheng, SKA Africa, South Africa

IAC-16.A3.IP.3 (withdrawn)

CHALLENGES IN SPACE DYNAMICS MODELING. SIMULATION & VALIDATION OF LUNAR LANDER MOTIONS REKHACHANDRA R, ISRO Satellite Centre (ISAC), India

IAC-16.A3.IP.4

NUMERICAL AND EXPERIMENTAL STUDY OF PLUME EFFECTS FOR CHANDRAYAAN-2 MISSION

Abhishek Sharma, Indian Space Research Organization (ISRO), India

IAC-16.A3.IP.5 (withdrawn)

METEORITE MINERALS AND GRANULAR PHYSICS: UNIQUE EARLY SOLAR SYSTEM CONDITIONS, FIRST PRINCIPLES CONDENSED MATTER PHYSICS AND TECHNOLOGICAL APPLICATIONS Martin Elvis, Harvard-Smithsonian Center for Astrophysics (CfA). **United States**

IAC-16.A3.IP.6

SEMI-ACTIVELY CONTROLLED LANDING LEGS FOR A SPACECRAFT Tatsuaki Hashimoto, Japan Aerospace Exploration Agency (JAXA), Japan

THE METHODOLOGY OF COMPARING THE EFFECTIVENESS OF DIFFERENT SCENARIO FOR LUNAR EXPLORATION BY MANNED AND AUTOMATIC MEANS

Oleg Saprykin, TSNIIMASH, Russian Federation IAC-16.A3.IP.8

AIM VISION BASED GNC

Andrea Pellacani, G.M.V. Space and Defence, S.A., Spain

IAC-16.A3.IP.9

AFRICA 2 MOON PROGRAMME Carla Sharpe, SKA South Africa, South Africa

IAC-16.A3.IP.10

IAC-16.A3.IP.11

Tuvuan Yin. . China

A POSSIBLE ITALIAN CONTRIBUTION IN THE NASA ASTEROID REDIRECT ROBOTIC MISSION (ARRM) Marco Tantardini, Agenzia Spaziale Italiana (ASI), Italy

IMPROVED MULTI-CONIC METHOD IN TRAJECTORY DESIGN AND EMERGENCY MANEUVER STRATEGY OF THE LUNAR SOUTH POLE RETURN MISSION

FENG FEI, The Academy of Equipment, China

IAC-16.A3.IP.12 (withdrawn) ANALYSIS ON PARAMETRIC EXCITATION VIBRATION OF DRILL PIPE OF LUNAR SOIL SAMPLER

IAC-16.A3.IP.13 (withdrawn)

THE ROBOTIC IN-SITU SURFACE EXPLORATION SYSTEM FOR SPACE **EXPLORATION OBJECTIVES**

Drew Goodman, West Virginia University, United States









IAC-16.A3.IP.14

EXPERIMENTAL RESULTS OF SOLAR WIND HELIUM IMPLANTATION INTO LUNAR REGOLITH SIMULANT

Aaron Olson, University of Wisconsin, United States

IAC-16.A3.IP.15

SATELLITES OF NEAR-EARTH ASTEROIDS

Samantha Rieger, University of Colorado Boulder, United States

AUTONOMOUS SPACECRAFT TO MEASURE THE GRAVITATIONAL FIELD AND THE MASSES OF PLANETS AND SMALL BODIES OF THE SOLAR SYSTEM.

Sergiy Matviyenko, Yuzhnoye State Design Office, Ukraine

IAC-16.A3.IP.17

A NOVEL GUIDANCE ALGORITHM FOR PLANETARY PROXIMITY

IAC-16.A3.IP.18

GUIDANCE, NAVIGATION AND CONTROL DURING THE LANDER DEPLOYMENT PHASE OF THE ASTEROID IMPACT MISSION (AIM) Tiago Hormigo, Spin.Works, Portugal

FINITE ELEMENT METHODS FOR THE ELECTROSTATIC TRACTOR METHOD

Kyoto University, Japan

IAC-16.A3.IP.20

HOBOCOP - A DISTRIBUTED NETWORK OF SMALL SATELLITES TO STUDY THE SUN

Benjamin Corbin, , United States

CRITICAL PATH DEVELOPMENT MODEL

IAC-16.A3.IP.22 (withdrawn)

MITIGATE EFFECTS OF SPATIAL DISORIENTATION IN LUNAR GRAVITY Poonampreet Kaur Josan, University of North Dakota, United States

IAC-16.A3.IP.23

AOBA VELOX-IV CAMERA SYSTEM DESIGN FOR LUNAR HORIZON GLOW IMAGING IN A FUTURE LUNAR MISSION Necmi Cihan Örger, Laboratory of Spacecraft Environment Interaction Engineering, Kyushu Institute of Technology Japan,

IAC-16.A3.IP.25

MODELING OF THE PERCUSSIVE MECHANISM OF A SPECIAL PLANETARY DRILLING SYSTEM

Ramesh Malla, University of Connecticut, United States

SOLAR SINTERING ON LUNAR REGOLITH SIMULANT (JSC-1) FOR 3D PRINTING.

Avishek Ghosh, International Space University (ISU), France

METAL ALLOYS FOR ADDITIVE MANUFACTURING PLUS SILICON AND OXYGEN FROM REGOLITH

Peter Schubert, Indiana University-Purdue University Indianapolis,

IAC-16.A3.IP.28

GAS RADIATION HEATING FOR LUNAR RETURN VEHICLES RE-ENTERING AT HYPER-VELOCITY

Jun-ming LYU, China Academy of Aerospace Aerodynamics(CAAA),

IAC-16.A3.IP.29

VALIDATION AND VERIFICATION APPROACH FOR THE ABSOLUTE AND RELATIVE VISION BASED NAVIGATION SYSTEMS IN THE LUNAR LANDING SCENARIO

Lorenzo Cercós Pita, GMV Aerospace & Defence SAU, Spain

IAC-16.A3.IP.30 (withdrawn)

COMPUTATIONAL OPTIMAL GUIDANCE FOR MOON POWERED DESCENT AND SAFE LANDING VIA GAUSS PSEUDOSPECTRAL

Xiuqiang Jiang, Nanjing University of Aeronautics and Astronautics,

IAC-16.A3.IP.31

THE RESEARCH OF DEEP SPACE EXPLORATION SAMPLE RETURN CAPSULE'S REENTRY TECHNOLOGY

Zhuoyi Xing, Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST), China

ON THE INTEGRATION OF HAZARD DETECTION AND AVOIDANCE SYSTEMS WITH AUTONOMOUS NAVIGATION SYSTEMS FOR PLANETARY LANDING APPLICATIONS

IAC-16.A3.IP.33

AOBA VELOX-IV ATTITUDE AND ORBIT CONTROL SYSTEM DESIGN FOR A LEO MISSION APPLICABLE TO A FUTURE LUNAR MISSION Jose Rodrigo Cordova Alarcon, Laboratory of Spacecraft Environment Interaction Engineering, Kyushu Institute of Technology Japan, Japan

IAC-16.A3.IP.34 (withdrawn)

STUDY ON THE CONCEPTUAL DESIGN OF MANNED LUNAR ROVERS ACCORDING TO THE RUGGED HIGHLAND Baoqui Qiu, , China

ACCORDING TO THE BOUNDARY BETWEEN MARE AND HIGHLAND Baoaui Qiu. . China

IAC-16.A3.IP.36

LUNAR ORBITER

Kyungin Kang, Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of

IAC-16.A3.IP.37

STRATEGY FOR LUNAR BASE DEVELOPMENT

Madhu Thangavelu, University of Southern California, United States

IAC-16.A3.IP.38

REGOLITH SIMULANT UNDER VACUUM AND REDUCED GRAVITY ENVIRONMENT.

Avishek Ghosh, International Space University (ISU), France

IAC-16.A3.IP.39

COMMUNICATION RELAY SMALL SATELLITE FOR LUNAR FARSIDE LANDING EXPLORATION MISSION

Lihua Zhang, DFH Satellite Co. Ltd., China

HUMAN SPACE ACTIVITY

Madhu Thangavelu, University of Southern California, United States

IAC-16.A3.IP.41 (withdrawn)

TERRAFORMING MOON USING A SWARM OF ROVERS Kartik Shah, University of Petroleum and Energy Studies, India

IAC-16.A3.IP.42

EXPLORATION Kyle Acierno, , Japan IAC-16.A3.IP.43

IMPROVED UNDERSTANDING OF MELTING PROBE CONCEPTS FOR EXTRATERRESTRIAL ICE EXPLORATION Kai Schüller, RWTH Aachen, Germany

IAC-16.A3.IP.44

GNC DESIGN AND VALIDATION FOR PINPOINT LANDING ON

Ambroise Bidaux-Sokolowski, GMV Innovating Solutions, Poland

A4. 45th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL **INTELLIGENCE (SETI) – The Next Steps**

Coordinator(s): Claudio Maccone, International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF), Italy;

A4.1. SETI 1: SETI Science and Technology

September 27 2016, 14:45 — Moda 1

Co-Chair(s): Claudio Maccone , International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF), Italy; Dan Werthimer, University of California, United States; Rapporteur(s): Joseph Lazio, Jet Propulsion Laboratory -California Institute of Technology, United States;

IAC-16.A4.1.1

ADVANCING SETI SEARCH METHODS AT NEAR-INFRARED AND OPTICAL WAVELENGTHS

Shelley Wright, University of California, San Diego, United States

IAC-16.A4.1.2

A SEARCH FOR SPATIALLY UNRESOLVED LASER EMISSION IN KECK HIRES SPECTROSCOPY

Nathaniel Tellis, University of California, Japan

IAC-16.A4.1.3

THE BREAKTHROUGH LISTEN SEARCH FOR INTELLIGENT LIFE BEYOND THE EARTH

Andrew Siemion, University of California / ASTRON / Radboud University, United States

IAC-16.A4.1.4

SETI@HOME IN 2016-PROGRESS, PLANS AND A DELUGE OF DATA Eric Korpela, University of California, United States

IAC-16.A4.1.5

INITIAL RESULTS OF UCLA SETI OBSERVATIONS Jean-Luc Margot, University of California, Los Angeles, United

IAC-16.A4.1.6

SETI OBSERVATION WITH THE RATAN-600 TELESCOPE IN 2015 YEAR AND DETECTION OF A STRONG SIGNAL IN THE DIRECTION OF

Alexander Panov, Skobeltsyn Institute of Nuclear Physics, Russian Federation

IAC-16.A4.1.7

SETI IN THE SOLAR NEIGHBORHOOD WITH LOFAR J. Emilio Enriquez, Radboud University Niimeaen, The Netherlands

A REAL-TIME FFT-KLT IMPLEMENTATION FOR SETI RESEARCH AT SARDINIA RADIO TELESCOPE

Andrea Melis, INAF - Istituto Nazionale di AstroFisica, Italy

IAC-16.A4.1.9

ASTROBIOLOGY WITH THE LARGE MILLIMETER TELESCOPE Miguel Chavez Dagostino, Instituto Nacional de Astrofísica, Óptica y Electrónica, Mexico

IAC-16.A4.1.10

WHAT'S IN A SIGNAL ANYWAY: LESSONS FROM STUDYING NONHUMAN COMMUNICATION SIGNALS. Denise Herzing, , United States

A4.2. SETI 2: SETI and Society

September 29 2016, 09:45 — Moda 1

Co-Chair(s): Leslie I. Tennen, Law Offices of Sterns and Tennen,

Rapporteur(s): Andrew Siemion . University of California / ASTRON / Radboud University, United States;

IAC-16.A4.2.1

NEW NUMERICAL DETERMINATION OF HABITABILITY IN THE GALAXY: THE SETI CONNECTION Rodrigo Ramirez, Instituto de Astronomia UNAM, Mexico

IAC-16.A4.2.2

BREAKTHROUGH LISTEN - A NEW SEARCH FOR LIFE IN THE UNIVERSE

S. Pete Worden, Breakthrough Prize Foundation, United States

IAC-16.A4.2.3

A SHORT HISTORY OF SETI AROUND THE WORLD Stephane Dumast, SETI League, Canada

COMPUTERS FOR SETI, KURZWEIL'S SINGULARITY AND EVO-SETI Claudio Maccone, International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF), Italy

IAC-16.A4.2.5 (withdrawn)

NO-LINEAR DYNAMICS AND PHASE TRANSITIONS IN THE POPULATION OF COSMIC CIVILIZATIONS Alexander Panov, Skobeltsyn Institute of Nuclear Physics, Russian

Federation

IAC-16.A4.2.6 ANTHROPOMORPHISM IN THE SEARCH FOR EXTRA-TERRESTRIAL INTELLIGENCE

Ulrike M. Bohlmann, ESA, France

IAC-16.A4.2.7

SOCIAL MEDIA AND THE SETI POST DETECTION DECLARATION OF PRINCIPLES Patricia M. Sterns, Law Offices of Sterns and Tennen, United States

IAC-16.A4.2.8 UV ASTRONOMY FROM SPACE: ON THE AGES OF EXO-WORLDS

Miquel Chavez Dagostino, Instituto Nacional de Astrofísica, Óptica y Electrónica, Mexico

LEO SATELLITE FOR SETI BY UNIVERSITIES IN AN ECONOMICAL WAY Vinayak Nair, University of Petroleum and Energy Studies, India IAC-16.A4.2.10 (withdrawn)

DR BOBBIE VAILE: A SHORT LIFE DEDICATED TO SETI RESEARCH AND **EDUCATION**

Carol Oliver, University of New South Wales, Australia

A4.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Claudio Maccone, International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF), Italv:

ORBITAL STABILITY REGIONS FOR HYPOTHETICAL NATURAL

OPERATIONS WITH OBSERVABILITY CONSTRAINTS Ying Lei, Beijing Institude of technology, China

IAC-16.A3.IP.19 DEVELOPMENT OF A 3D ASTEROID CHARGING MODEL BASED ON

Kohei Yamaguchi, Research Institute for Sustainable Humanosphere,

IAC-16.A3.IP.21 (withdrawn) THE OPENING OF THE CIS-LUNAR COMMERCIAL FRONTIER: A

John Culton, , United States

A CONCEPT STUDY OF HAPTIC FORCE FEEDBACK SPACESUIT TO

IAC-16.A3.IP.27

United States

Jean-Francois Hamel, NGC Aerospace Ltd., Canada

IAC-16.A3.IP.35 (withdrawn) STUDY ON THE CONCEPTUAL DESIGN OF MANNED LUNAR ROVERS

CONCEPTUAL DESIGN OF POLARIMETRIC CAMERA FOR KOREAN

ADVANCES IN MODULAR ASSEMBLY IN LOW EARTH ORBIT(MALEO)

AN APPROACH TO STUDY ADDITIVE MANUFACTURING OF

IAC-16.A3.IP.40 LUNAREVOLUTION-ROLE OF THE MOON IN THE FUTURE OF

THE ISPACE 5 PHASED APPROACH TO LUNAR RESOURCE









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IAC-16.A4.IP.1

SENDING A DEEP SPACE PROBE FOR SETI RESEARCH Shashank Pathak, University of Petroleum and Energy Studies, India

IAC-16.A4.IP.2

NEUTRON STAR COLLISIONS - GALACTIC STAKING RUSH? Lori Walton, Tigerstar Geoscience, Canada

IAC-16.A4.IP.3

INNOVATIVE IDEA FOR TRANSMISSION OF INFORMATION AND FAULT ANALYSIS

Kiran Renduchintala, SRM University, kattankulathur, chennai, INDIA. India

IAC-16.A4.IP.4

DO MEXICAN PUBLIC DOCUMENTS CONCERNING SPACE ACTIVITIES INCLUDE ANY MENTION ABOUT MESSAGING EXTRATERRESTRIAL INTELLIGENCE, METI, AND/OR SEARCH FOR EXTRA-TERRESTRIAL INTELLIGENCE, SETI?

Julio Daniel Carbajal Smith, , Mexico

IAC-16.A4.IP.5 (withdrawn)

QUANTIFYING THE COSMIC BACKGROUND
H. Paul Shuch, The SETI League, Inc., United States

IAC-16.A4.IP.6 (withdrawn)

ADVANCED DIGITAL SIGNAL PROCESSING USING THE KARHUNEN-LOEVE TRANSFORM

Stephane Dumas†, SETI League, Canada

IAC-16.A4.IP.7 (withdrawn)

A RATIONALE FOR ALIEN MEGASTRUCTURES

Gregory Matloff, New York City College of Technology, United States

A5. 19th IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM

Coordinator(s): Christian Sallaberger , Canadensys Aerospace Corporation, Canada; Maria Antonietta Perino , Thales Alenia Space Italia, Italy;

A5.1. Human Exploration of the Moon and Cislunar Space

September 28 2016, 14:45 — Tlaquepaque

Co-Chair(s): Michael Raftery , Boeing Defense Space & Security, United States; Nadeem Ghafoor , Canadensys Aerospace Corporation. Canada:

Rapporteur(s): Marc Haese , DLR, German Aerospace Center, Germany;

IAC-16.A5.1.1

TOWARDS A MOON VILLAGE: DESIGN RESULTS FROM ESTEC AND COMMUNITY WORKSHOPS

Bernard Foing, ESA/ESTEC, The Netherlands

IAC-16.A5.1.2

MARS-LUNAR GREENHOUSE (M-LGH) PROTOTYPE FOR BIO REGENERATIVE LIFE SUPPORT SYSTEMS IN FUTURE PLANETARY OUTPOSTS

Roberto Furfaro, University of Arizona, United States

IAC-16.A5.1.3

THE ISECG SCIENCE WHITE PAPER: SCIENTIFIC OPPORTUNITIES OF THE GLOBAL EXPLORATION ROADMAP

Juergen Schlutz, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

AC-16.A5.1.4

THE OPENING OF THE CIS-LUNAR COMMERCIAL FRONTIER: A CRITICAL PATH DEVELOPMENT MODEL

John Culton... United States

IAC-16.A5.1.5

RESILIENT CISLUNAR ARCHITECTURE TO ENABLE KEY MARS TECHNOLOGIES AND OPERATION CONCEPTS

Matthew Duggan, The Boeing Company, United States

IAC-16.A5.1.6

CONCEPT OF CREW-TENDED PLATFORM IN CIS-LUNAR SPACE: INITIAL CONFIGURATION

Josh Hopkins, Lockheed Martin Corporation, United States

AC-16.A5.1.7

A VIEW TO THE NEXT EDITION OF THE GLOBAL EXPLORATION

Kathy Laurini, National Aeronautics and Space Administration (NASA), United States

IAC-16.A5.1.8

CONCEPT STUDY OF A CIS-LUNAR OUTPOST ARCHITECTURE AND ASSOCIATED ELEMENTS THAT ENABLE A PATH TO MARS William Pratt, Lockheed Martin Space Systems Company, United States

IAC-16.A5.1.9

A SUSTAINABLE BRIDGE BETWEEN LOW EARTH ORBITS AND CISLUNAR INFRASTRUCTURES: THE LUNAR SPACE TUG Martina Mammarella, Politecnico di Torino, Italy

C-16.A5.1.10

LUNAR PROVING GROUND LOGISTICS RESUPPLY – PERFORMANCE CONSIDERATIONS

Kevin Post, The Boeing Company, United States

IAC-16.A5.1.11 (withdrawn)

ANTHROPOMORPHIC ROBOTICS APPLYING IN ON-PLANET ACTIVITY
AND MOON AND MARS EXPLORATION PROSPECTS
Vladislav Sychkov, SPA "Android Technics", Russian Federation

A5.2. Human Exploration of Mars

September 27 2016, 14:45 — Tlaquepaque

Co-Chair(s): Kathy Laurini , National Aeronautics and Space Administration (NASA), United States; Maria Antonietta Perino , Thales Alenia Space Italia, Italy;

Rapporteur(s): Norbert Frischauf, Austria;

IAC-16.A5.2.1

PRELIMINARY ANALYSIS AND DESIGN FOR AN END-TO-END MARS FLYBY MANNED MISSION

Luigi Mascolo, Polytechnic of Turin, Italy

AC-16.A5.2.2

ALL SOLAR ELECTRIC OR ALL CHEMICAL, THAT IS THE QUESTION Jean-Marc Salotti, Laboratoire de l'Intégration du Matériau au Système, France

IAC-16.A5.2.

EFFECT OF SPECIFIC IMPULSE LIMITATIONS ON NEP AND SEP MISSIONS

porzia federica Maffione, Politecnico di Torino, Italy

IAC-16.A5.2.4

MARS MISSION RADIATION SAFETY ASSURANCE Oleg Dotsenko, Yuzhnoye State Design Office, Ukraine

IAC-16.A5.2.5 (withdrawn)

MARS HABITAT SETTLEMENT- A SCALED DOWN CONCEPTUAL DESIGN CAPABLE FOR SUSTAINING LIFE Sam Dakka, Sheffield Hallam University, United Kingdom

IAC-16.A5.2.6 (withdrawn)

ONE-WAY VERSUS RETURN MARS MISSION ARCHITECTURES - A COMPARISON OF LIFECYCLE OPERATING COSTS Sydney Do, Massachusetts Institute of Technology (MIT), United States

IAC-16.A5.2.7

IMPLICATIONS OF NEW DISCOVERIES IN THE MARTIAN ENVIRONMENT

Jacob Cohen, International Space University (ISU), United States

IAC-16.A5.2.8

H2-CO2 FUEL CELL AS A PROMISING ALTERNATIVE TO PRODUCE ELECTRICITY AND USEFUL ORGANIC MATERIALS ON MARS Yoshitsugu Sone, Japan Aerospace Exploration Agency (JAXA)/ISAS, Japan

IAC-16.A5.2.9

UTILITY OF ADDITIVE MANUFACTURING ON MARTIAN ANALOGS AND MANNED MARS MISSIONS Zak Wilson, , United States

IAC-16.A5.2.10

MARTIAN MOON HUMAN EXPLORATION ARCHITECTURE

Timothy Cichan, Lockheed Martin Corporation, United States

IAC-16.A5.2.11

MISSION ANALYSIS OF POTENTIAL EARTH-MARS CYCLER Michele Pagone, Politecnico di Torino, Italy

IAC-16.A5.2.12

CYCLING PATHWAYS TO OCCUPY MARS VIA LUNAR RESOURCES Buzz Aldrin, Buzz Aldrin Enterprises, LLC & President of the ShareSpace Foundation, United States

A5.3-B3.6. Human and Robotic Partnerships in Exploration - Joint session of the Human Spaceflight and Exploration Symposia

September 29 2016, 14:45 — Guadalajara Hall Salon 2

Co-Chair(s): Christian Sallaberger , Canadensys Aerospace Corporation, Canada; Mark Hempsell , Hempsell Astronautics Limited, United Kingdom;

Rapporteur(s): Juergen Schlutz , Deutsches Zentrum für Luftund Raumfahrt e.V. (DLR), Germany;

IAC-16.A5.3-B3.6.1

ABOUT RESULTS OF COMPARING THE EFFECTIVENESS OF DIFFERENT SCENARIO FOR LUNAR EXPLORATION Oleg Saprykin, TSNIIMASH, Russian Federation

IAC-16.A5.3-B3.6.2

THE UTILIZATION OF ISS CANADIAN ROBOTICS TO ADVANCE VARIABLE AUTONOMY ROBOTIC TECHNIQUES AND TECHNOLOGIES FOR FUTURE DEEP SPACE EXPLORATION MISSIONS FROM CISLUNAR SPACE TO MARS

Richard Rembala, MDA, Canada

IAC-16.A5.3-B3.6.3

SPECIAL ROBOTICS FOR COSMONAUTS SUPPORT ON THE INTERNATIONAL SPACE STATION AND PERSPECTIVE ORBITAL STATIONS APPLYING

Vladislav Sychkov, SPA "Android Technics", Russian Federation

IAC-16.A5.3-B3.6.4

ASTRONAUT-ROBOT INTERACTION FOR COOPERATIVE
MANIPULATION ON EXTRATERRESTRIAL SURFACES: OBJECT
TRANSFER TO ONE ANOTHER THROUGH VISUAL SERVOING AND
GESTURE CONTROL

Pradyumna Nanda Vyshnav, Aalto University, Finland

IAC-16.A5.3-B3.6.5

APPLICATION OF VIRTUAL REALITY TECHNOLOGIES FOR ERGONOMIC STUDIES OF INTERACTION BETWEEN COSMONAUTS AND HUMANOID ROBOTIC ASSISTANT

Igor G. Sokhin, Yu.A. Gagarin Research and Test Cosmonaut Training Center, Russian Federation

IAC-16.A5.3-B3.6.6 (withdrawn)

TELE-ROBOTIC BASALT CONSTRUCTION AND TESTING OF A VERTICAL TAKEOFF, VERTICAL LANDING PAD PROTOTYPE FOR LUNAR/MARS OPERATIONS

Rodrigo Romo, Pacific International Space Center for Exploration Systems (PISCES), United States

IAC-16.A5.3-B3.6.7

VIRTUAL PROTOTYPING OF HUMAN-MASHINE INTERACTION FOR REMOTE CONTROL OF SPACE AUTONOMOUS MANIPULATION ROBOTS BASED ON AUGMENTED REALITY TECHNOLOGY Alexey Karpov, , Russian Federation

IAC-16.A5.3-B3.6.8

HUMAN ROBOTIC PARTNERSHIP DURING EIFEL VOLCANIC AREA SIMULATION CAMPAIGN Bernard Foing, ESA/ESTEC, The Netherlands

IAC-16.A5.3-B3.6.9

THE USE OF ELECTROENCEPHALOGRAPHY FOR CONTROLLING ROBOTIC ASSISTANTS DURING PLANETARY SURFACE EVAS Yuval Brodsky, Newton VR Ltd., Israel

IAC-16.A5.3-B3.6.10

PATH PLANNING ALGORITHM FOR OBSTACLE AVOIDANCE OF MULTI-ARM SPACE WALKING ROBOT Xiaoyu Chu, Beijing Institute of Technology, China

A5.4-D2.8. Space Transportation Solutions for Deep Space Missions

September 30 2016, 09:45 — Salon Jalisco E2

Co-Chair(s): Charles E. Cockrell Jr., National Aeronautics and Space Administration (NASA), United States; Ernst Messerschmid, University of Stuttgart, Germany; K. Bruce Morris, RUAG Space, Sweden; Yuguang Yang, China Aerospace Science & Industry Corporation (CASIC), China;

Rapporteur(s): Gerhard Schwehm, European Space Agency (ESA), Spain; Steve Creech, National Aeronautics and Space Administration (NASA), United States;

IAC-16.D2.8-A5.4.1

NASA'S SPACE LAUNCH SYSTEM: AN EVOLVING CAPABILITY FOR EXPLORATION

Steve Creech, National Aeronautics and Space Administration (NASA). United States

IAC-16.D2.8-A5.4.2

NEAR-TERM SLS-ORION MISSIONS LEADING TO HUMANS ON MARS Michael Fuller, Orbital ATK, United States

IAC-16.D2.8-A5.4.3

ENERGY AND RESOURCE ANALYSIS OF A LARGE-SCALE EARTH-MARS HUMAN TRANSPORT SYSTEM

Jeffery Greenblatt, Emerging Futures, LLC, United States

IAC-16.D2.8-A5.4.4

Chen Zhao, Shanghai Key Laboratory of Spacecraft Mechanism, Aerospace System Engineering Shanghai, China

IAC-16.D2.8-A5.4.5

THE ANALYSIS OF TRANSPORTATION AND PROPULSION DEMAND FOR DEEP SPACE EXPLORATION MISSION Yuan Yong, , China

IAC-16.D2.8-A5.4.6

ASTEROID-DERIVED STORABLE PROPELLANTS FOR FASTER, CHEAPER DEEP SPACE MISSIONS David Gump, Deep Space Industries Inc., United States

IAC-16.D2.8-A5.4.7

MOON-TO-EARTH TRANSFER ARCHITECTURE RESEARCH BASED ON LUNAR SPACE ELEVATOR

Xiaohui Wang, Beihang University, China

9









IAC-16.D2.8-A5.4.8

AGENT-BASED MODELING AND EVALUATION OF MANNED LUNAR EXPLORATION MISSION

Zilong Cheng, National University of Defense Technology, China

PARAMETRIC PREDICTION OF RE-ENTRY VEHICLE DYNAMICS Vinayak Malhotra, SRM University Chennai, India

DEPLOYMENT OF FORMATION FOR MONITORING OF NEAR-EARTH

An-Ming Wu, National Space Organization, Taiwan, China

IAC-16.D2.8-A5.4.11

CISLUNAR TRANSFER ORBIT DESIGN FOR NANOSATS Wang Zhaokui, Tsinghua University, China

A5.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Christian Sallaberger , Canadensys Aerospace Corporation, Canada; Maria Antonietta Perino, Thales Alenia

IAC-16.A5.IP.1

DESIGNING A PILOT EXPERIMENT TO TEST MOON WALKING PATTERN UNDERWATER

Irene Lia Schlacht, Politecnico di Milano, Italy

IAC-16.A5.IP.2 (withdrawn)

OF ROSETTA SPACE MISSION: DISCOVERY AND GROUNBASED **EXPLORATION IN 1969-2016**

Klim Churyumov, Kiev National University, Ukraine

IAC-16.A5.IP.3

AUTONOMOUS AQUAPONIC SYSTEM TO RECREATE AN ECOSYSTEM

Pierre Foullon, ESTACA, France

IAC-16.A5.IP.4 (withdrawn)

REACHING FOR THE MOON AND BEYOND? SOCIOPOLITICAL FRONTIERS IN THE SPACE RACE TO MARS

SAFETY ANALYSIS OF SPACESUIT DESIGN FOR MARTIAN SURFACE Carlos Manuel Entrena Utrilla, Space Generation Advisory Council

IAC-16.A5.IP.6 (withdrawn)

ARES PLAN: A LATIN AMERICAN PROPOSAL FOR MANNED **EXPLORATION TO MARS**

Hector Omar Pensado-Diaz, Centro de Investigación Atmosferica y Ecologica, Mexico

IAC-16.A5.IP.7

CHEMICAL START TO TERRAFORMING: AN APPROACH TO MAKE A GARDEN ON MARS

Audrey Douglas, , United States

IAC-16.A5.IP.8

MANNED MISSION TO MARS: A DISCUSSION ON SOLUTIONS OF TECHNICAL DIFFICULTIES

Ankita Vashishtha, , India

IAC-16.A5.IP.9

MARS IN INDIGENOUS AUSTRALIA Rose Tasker, , Australia

IAC-16.A5.IP.10

CASE STUDY OF MANNED MISSION TO PLUTO Lakshya Dutt, , India

IAC-16.A5.IP.11 (withdrawn)

HOW TO IMPROVE THE EFFICIENCY OF EXTRA-VEHICULAR ACTIVITIES ON MARS? DEVELOPMENT, ASSEMBLY AND TEST OF A NEW EMBEDDED RECORDING INTERFACE FOR EVA Camille Gontier, SUPAERO- Ecole Nationale Supérieure de l'Aéronautique et de l'Espace, France

IAC-16.A5.IP.12

MANNED ROVERS FOR MARS EXPLORATION, MOON AND OTHER

Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

IAC-16.A5.IP.13

NEW PROJECT OF PRIVATE SCIENTIFIC AND COMMERCIAL PILOTED EXPEDITION TO MARS AND PHOBOS.

Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

A6. SYMPOSIUM ON SPACE DEBRIS

Coordinator(s): Christophe Bonnal , Centre National d'Etudes Spatiales (CNES), France; J.-C. Liou, National Aeronautics and Space Administration (NASA), United States

A6.1. Measurements

September 26 2016, 15:15 — Salon Jalisco E7

Co-Chair(s): Daniel Oltrogge, Analytical Graphics, Inc., United States: Thomas Schildknecht , Astronomical Institute University of Bern (AIUB) / SwissSpace Association, Switzerland; Rapporteur(s): Vladimir Agapov , Russian Academy of Sciences, Russian Federation:

INCREASING OF NEW GEO/HEO SPACE DEBRIS DISCOVERY RATE WITH ISON OPTICAL NETWORK

Igor Molotov, Keldysh Institute of Applied Mathematics, RAS,

IAC-16.A6.1.2

AUTONOMOUS DETECTION AND FOLLOW-UP TRACKING OF NEW **OBJECTS AT HIGH NEAR-EARTH ORBITS**

ALEXANDER LAPSHIN, Astronomical Scientific Center JSC, Russian

IAC-16.A6.1.3

ANALYSIS OF THE BRIGHTNESS VARIABILITY OF GEO OBJECTS Tommaso Cardona, University of Rome "La Sapienza", Italy

LIGHT CURVE DATABASE OF ASTRONOMICAL INSTITUTE OF THE UNIVERSITY OF BERN

Jiri Silha, Astronomical Institute University of Bern (AIUB), Switzerland

IAC-16.A6.1.5

BROADBAND ARRAY SPECTROGRAPH SYSTEM (BASS) THERMAL IR OBSERVATIONS OF NAK DROPLETS IN LOW EARTH ORBIT (LEO) Mark A. Skinner, Boeing, United States

IAC-16.A6.1.6

MEASUREMENTS OF ABSORPTION CROSS SECTION FOR SPACE DEBRIS IDENTIFICATION BY USING REVERBERATION CHAMBER Fabio Santoni, University of Rome "La Sapienza", Italy

IAC-16.A6.1.7

THE PERFORMANCE ANALYSIS OF TELESCOPE ARRAY FOR OBSERVATION OF SPACE DEBIRS IN LEO

Jingjing Hu, University of Chinese Academy of Sciences; National Astronomical Observatories, Chinese Academy of Sciences, China IAC-16.A6.1.8

AVERAGE CROSS-SECTIONAL AREA OF DEBRISAT FRAGMENTS USING VOLUMETRICALLY CONSTRUCTED 3D REPRESENTATIONS Thomas Scruggs, University of Florida, United States

IAC-16.A6.1.9 (withdrawn)

IDEA OSG 1: PRELAUNCH STATUS REPORT

Nobu Okada, ASTROSCALE Pte. LTD., Singapore, Republic of

IAC-16.A6.1.10

FAULT-TOLERANT FEATURE-BASED ESTIMATION OF SPACE DEBRIS ROTATIONAL MOTION DURING ACTIVE REMOVAL MISSIONS Gabriele Biondi, Politecnico di Torino, Italy

A6.2. Modelling and Risk Analysis

September 27 2016, 09:45 — Salon Jalisco E7

Co-Chair(s): Carmen Pardini, ISTI-CNR, Italy; Marlon Sorge, United States:

Rapporteur(s): Benjamin Bastida Virgili , European Space Agency (ESA), Germany;

IAC-16.A6.2 (withdrawn)

COLLISION RISK IN GEOSYNCHRONOUS EARTH ORBIT Daniel Oltrogge, Analytical Graphics, Inc., United States

IAC-16.A6.2.1

COLLISION RISK IN LOW EARTH ORBIT Daniel Oltrogge, Analytical Graphics, Inc., United States

IAC-16.A6.2.2

REVISITING THE CATALOGED DEBRIS COLLISION RISK FOR THE IRIDIUM AND COSMO-SKYMED SATELLITE CONSTELLATIONS Carmen Pardini, ISTI-CNR, Italy

IAC-16.A6.2.3

EFFECT OF CUBESATS ON COLLISION AVOIDANCE WARNINGS AND LONG-TERM DEBRIS GROWTH IN NEAR-EARTH ENVIRONMENT Glenn Peterson, The Aerospace Corporation, United States

IAC-16.A6.2.4

MEGA-CONSTELLATIONS, SMALL SATELLITES AND THEIR IMPACT ON THE SPACE DEBRIS ENVIRONMENT

Benjamin Bastida Virgili, European Space Agency (ESA), Germany

IAC-16.A6.2.5

INFLUENCES OF MEGA CONSTELLATIONS ON THE ORBITAL ENVIRONMENT

Shiki Kitajima, Kyushu University, Japan

STUDY OF DISPOSAL OPTIONS FOR REDUCING THE FUTURE DEBRIS **ENVIRONMENT IN MEDIUM EARTH ORBIT** Alan B. Jenkin, The Aerospace Corporation, United States

IAC-16.A6.2.7

THE EFFECT OF THE GNSS DISPOSAL STRATEGIES ON THE LONG TERM EVOLUTION OF THE MEO REGION Alessandro Rossi, IFAC-CNR, Italy

IAC-16.A6.2.8

PRELIMINARY CHARACTERIZATION RESULTS FROM THE DEBRISAT

Moises Rivero, University of Florida, United States

IAC-16.A6.2.9

RELEASE OF LIQUID METAL DROPLETS FROM COSMOS 1818 AND

Carsten Wiedemann, Technische Universität Braunschweig, Germany

IAC-16.A6.2.10

DEGRADATION OF MLI AND PAINTING INDUCED GENERATION OF

Sophie Duzellier, ONERA, France

IAC-16.A6.2.11

SPACECRAFT DESIGN OPTIMISATION FOR DEMISE AND SURVIVABILITY

Mirko Trisolini, University of Southampton, United Kingdom

A6.3. Hypervelocity Impacts and Protection

September 28 2016, 09:45 — Salon Jalisco E7

Co-Chair(s): Norman Fitz-Coy , University of Florida, United

Rapporteur(s): Frank Schaefer , Fraunhofer - Institut für Kurzzeitdynamik, Ernst-Mach-Institut (EMI), Germany;

IAC-16.A6.3.1

A VULNERABILITY ANALYSIS METHOD OF SPACECRAFT UNDER SPACE DEBRIS IMPACT

Sen Liu, China Aerodynamics Research and Development Center,

IAC-16.A6.3.2

INFLUENCE ON SHIELDING PERFORMANCE OF AEROGEL/ FIBERGLASS COMPOSITE STUFFED IN SHIELD Xuezhong Wen, China Aerodynamics Research and Development Center, China

IAC-16.A6.3.3

A STUDY OF DAMAGE ON WOVEN MULTI-SHOCK SHIELD BY A HIGH-SPEED IMPACT OF ALUMINUM SPHERE AT DIFFERENT AMBIENT

Gongshun Guan, Harbin Institute of Technology, China

IAC-16.A6.3.4

EXPERIMENTAL STUDY OF THE CRYOGENIC EFFECT ON HYPERVELOCITY IMPACT CHARACTERISTICS OF ALUMINUM ALLOY WHIPPLE STRUCTURE

Zizheng GONG, China Academy of Space Technology (CAST), China

AN UPDATE ON DEBRISAT'S DEBRIS CATEGORIZATION SYSTEM Joe Kleespies, University of Florida, United States

IAC-16.A6.3.6

SIZE CHARACTERIZATION USING A TWO-DIMENSIONAL APPROXIMATION FOR DEBRISAT FRAGMENTS Matthew Moraguez, University of Florida, United States

IAC-16.A6.3.7

MICROMETEOROID AND ORBITAL DEBRIS IMPACT HARDNESS ASSURANCE OF AN ORBITAL SPACEPLANE Anton Nikiforov, Yuzhnoye State Design Office, Ukraine

A6.4. Mitigation and Standards

September 27 2016, 14:45 — Salon Jalisco E7

Co-Chair(s): Christian Cazaux , Centre National d'Etudes Spatiales (CNES), France; Holger Krag, European Space Agency

Rapporteur(s): Tetsuo Yasaka, QPS Institute, Japan;

IAC-16.A6.4.1

IMPACT OF END-OF-LIFE MANOEUVRES ON THE RESIDENT POPULATIONS IN PROTECTED REGIONS

Stefan Frey, European Space Agency (ESA), Germany

IAC-16.A6.4.2

CHARACTERISATION OF THE DYNAMICAL STRUCTURE OF THE CIRCUMTERRESTRIAL SPACE FOR PASSIVE DEBRIS MITIGATION Camilla Colombo, Politecnico di Milano, Italy

SPACECRAFT DESIGN EVOLUTION TOWARDS SPACE ENVIRONMENT PROTECTION

Silvia Occhigrossi, Thales Alenia Space Italia (TAS-I), Italy

IAC-16.D2.8-A5.4.9

IAC-16.D2.8-A5.4.10

Space Italia, Italy;

COMET 67P/CHURYUMOV-GERASIMENKO – A MAIN TARGET

FOR MARS SETTLERS

Julie Patarin-Jossec, , France

IAC-16.A5.IP.5









IAC-16.A6.4.5

APPLICABILITY OF DRAG AUGMENTATION SYSTEMS TO ENABLE FUTURE LEO SPACECRAFT COMPLIANCE WITH DEBRIS MITIGATION

Chiara Palla, Cranfield University, United Kingdom

IAC-16.A6.4.6

ARTICA: TEST CAMPAIGN FOR QB50 AND FIRST IN ORBIT RESULTS Davide Rastelli, N.P.C. New Production Concept, Italy

IAC-16.A6.4.7

(SESAM) OF THE ESA'S DEBRIS RISK ASSESSMENT AND MITIGATION ANALYSIS (DRAMA) TOOL

IAC-16.A6.4.8

SENSIBILITY ANALYSIS WITH DEBRISK: THE CNES' DEBRIS ASSESSMENT SOFTWARE

Omaly Pierre, CNES, France

IAC-16.A6.4.9

Saul Santilllan- Gutierrez, Facultad de Ingeniería-UNAM, Mexico

IAC-16.A6.4.10

CHALLENGES FACED BY LEO SATELLITES DUE TO SPACE DEBRIS Shreyash Patel, University of Petroleum and Energy Studies, India

A6.5. Space Debris Removal Technologies

September 29 2016, 09:45 — Salon Jalisco E7

Sapienza", Italy; Seishiro Kibe , Japan Aerospace Exploration Agency (JAXA), Japan;

Rapporteur(s): Fabio Santoni , University of Rome "La Sapienza", Italy;

IAC-16.A6.5.1

EUROPEAN FACILITIES CROSS-VALIDATION

Andrea Pellacani, G.M.V. Space and Defence, S.A., Spain

DEVELOPING A RELIABLE CAPTURE SYSTEM FOR THE CLEANSPACE

Muriel Richard-Noca, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

APPROACHES TO THE SPACE DEBRIS PROBLEM IN RUSSIA Olea Sokolov, Commercial Space Technologies Ltd., United Kinadom

IAC-16.A6.5.4 (withdrawn)

VISUAL GUIDANCE AND NAVIGATION SYSTEM FOR SPACE DEBRIS MITIGATION AND DEMONSTRATION DURING ADRAS-1 MISSION Shinichi Kimura, Tokyo University of Science, Japan

IAC-16.A6.5.5

A NOVEL METHOD OF PATH PLANNING FOR SPACE ROBOT CAPTURING TUMBLING FAILED SATELLITE WITH THE BEST CONFIGURATION

Hongwen Zhang, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, Xi'an, China

ENERGY AND MOMENTUM CONSIDERATIONS IN THE DEPLOYMENT DYNAMICS OF NETS FOR ACTIVE SPACE DEBRIS REMOVAL Eleonora Botta, McGill University, Canada

IAC-16.A6.5.7

TETHER FORCE TRANSMISSION CAPABILITIES FOR APPLICATIONS AT ACTIVE DEBRIS REMOVAL MISSIONS

Marcel Becker, TU Braunschweig, Germany

IAC-16.A6.5.8

REFINEMENT OF PARAMETERS OF A SPACE VEHICLE DESTINED FOR LARGE-SIZE SPACE DEBRIS COLLECTION IN LEO USING DETACHABLE THRUSTER DE-ORBITING KITS

Dmitriy Grishko, Bauman Moscow State Technical University, Russian Federation

IAC-16.A6.5.9 (withdrawn)

ION BEAM SHEPHERD RELATIVE DYNAMICS AND PROXIMITY FORMATION FLYING CONTROL

Anatoliy Alpatov, Institute of Technical Mechanics of the National Academy of Science and State Space Agency of Ukraine, Ukraine

IAC-16.A6.5.10

TAXONOMY OF LEO SPACE DEBRIS POPULATION FOR ADR SELECTION.

Marko Jankovic, German Research Centre for Artificial Intelligence,

IAC-16.A6.5.11

ADR GNC CONCEPT FOR THE DREAM CHASER: THE ENVISAT DE-ORBITING CASE

Julien Peyrard, GMV Aerospace & Defence SAU, Spain

A6.6. Space Debris Removal Concepts

September 29 2016, 14:45 — Salon Jalisco E7

Co-Chair(s): Louisa Innocenti, European Space Agency (ESA), France; Nicolas Bérend, ONERA - The French Aerospace Lab,

Rapporteur(s): Gerrit Hausmann, OHB System AG - Munich,

IAC-16.A6.6.1

AIRBUS DEFENCE AND SPACE'S VISION AND ACTIVITIES IN ACTIVE DEBRIS REMOVAL AND ON-ORBIT SERVICING Aurelien Pisseloup, EADS Astrium, France

IAC-16.A6.6.2 (withdrawn)

ADRAS 1 AND ASTROSCALE'S PLANS FOR DEBRIS REMOVAL AND SPACECRAFTS EOL SERVICES

Nobu Okada, ASTROSCALE Pte. LTD., Singapore, Republic of

IAC-16.A6.6.3 (withdrawn)

RECENT OHB SYSTEM SPACE ROBOTICS ACTIVITIES FOR ADR AND

Marc Scheper, OHB System AG-Bremen, Germany

IAC-16.A6.6.4

DEBRIS DETUMBLERS: A NEW APPROACH TO ACTIVE DEBRIS

Houman Hakima, University of Toronto Institute for Aerospace Studies, Canada

IAC-16.A6.6.4

PROJECT MODEL: A CANADIAN SOLUTION FOR ACTIVE DEBRIS

Mark Seymour, Asteria Space Consulting, United States

IAC-16.A6.6.5

A COMPLETE IP-BASED NAVIGATION SOLUTION FOR THE APPROACH AND CAPTURE OF ACTIVE DEBRIS

Marcos Avilés Rodrigálvarez, GMV Aerospace & Defence SAU, Spain

IAC-16.A6.6.6

3D RECONSTRUCTION OF A SPACE DEBRIS CAPTURING NET TRAJECTORY DURING MICROGRAVITY EXPERIMENTS - RESULTS AND LESSON LEARNT

Riccardo Benvenuto, Politecnico di Milano, Italy

IAC-16.A6.6.7

EXPERIMENTS ON TETHER-NET CAPTURE AND NET CLOSING MECHANISM OF SPACE DEBRIS

Inna Sharf, McGill University, Canada

IAC-16.A6.6.8

REVIEW OF FINAL PAYLOAD TEST RESULTS FOR THE REMOVEDEBRIS ACTIVE DEBRIS REMOVAL MISSION

Jason Forshaw, Surrey Space Centre, University of Surrey, United Kinadom

IAC-16.A6.6.9

ACTIVE SPACE DEBRIS REMOVAL USING CONCENTRATED SUNLIGHT Yingying Liu, Northwestern Polytechnical University, China

IAC-16.A6.6.10 (withdrawn)

TARGET SEQUENCE DESIGN FOR LOW-THRUST MULTIPLE ADR

Juan Luis Gonzalo, Technical University of Madrid (UPM), Spain

IAC-16.A6.6.11

DESIGNING MULTIPLE SPACE DEBRIS REMOVAL MISSIONS CONSIDERING FUEL EFFICIENCY AND ENVIRONMENTAL REMEDIATION

Ryusuke Harada, Kyushu University, Japan

A6.7. Operations in Space Debris **Environment, Situational Awareness**

Niccolò Bellini, N.P.C. New Production Concept, Italy

September 30 2016, 09:45 — Salon Jalisco E7

Co-Chair(s): Juan Carlos Dolado Perez, Centre National d'Etudes Spatiales (CNES), France; T.S. Kelso, Center for Space Standards and Innovation, United States;

Rapporteur(s): Carsten Wiedemann , Technische Universität Braunschweig, Germany;

IAC-16.A6.7.1

REALIZATION AND TEST CAMPAIGN OF MORAL FIRST PROTOTYPE: AN INNOVATIVE ALTAZ MOUNT FOR FAST AND PRECISE POINTING FOR ONE METER CLASS TELESCOPE

IAC-16.A6.7.2

SPACE AWARENESS SYSTEMS FOR SSA/SST AND SPACE IMAGING Andrea Pietropaolo, Thales Alenia Space Italia, Italy

IAC-16.A6.7.3

SPACE-BASED PSEUDO-FIXED LATITUDE OBSERVATION MODE BASED ON THE CHARACTERISTICS OF GEOSYNCHRONOUS EARTH ORBIT BEIT

Yun-peng Hu, National University of Defense Technology, China

IAC-16.A6.7.4

DECOMMISSIONING AND COLLISION AVOIDANCE IN DEGRADED

Claire FREMEAUX, Centre National d'Etudes Spatiales (CNES), France

IAC-16.A6.7.5

TRADING SPACECRAFT FUEL USE AND MISSION PERFORMANCE TO DETERMINE THE OPTIMAL COLLISION PROBABILITY IN EMERGENCY COLLISION AVOIDANCE SCENARIOS

Jason Reiter, The Pennsylvania State University, United States

IAC-16.A6.7.6

COLLISION RISK MANAGEMENT FOR AUTONOMOUS SPACECRAFT Nicolas BATAILLE, Centre National d'Etudes Spatiales (CNES), France

IAC-16.A6.7.7

CURRENT STATUS AND FUTURE DEVELOPMENT OF THE RUSSIAN HAZARD PREVENTION SYSTEM WHILE PROVIDING FLIGHT SAFETY OF CONTROLLED SPACECRAFT Maxim Matiushin, Central Research Institute of Machine Building

(FSUE/TSNIIMASH), Russian Federation

IAC-16.A6.7.8

IMPLICATIONS OF PROPOSED SMALL SATELLITE CONSTELLATIONS ON SPACE TRAFFIC MANAGEMENT AND LONG-TERM DEBRIS GROWTH IN NEAR-EARTH ENVIRONMENT

Glenn Peterson, The Aerospace Corporation, United States

IAC-16.A6.7.9

OPERATIONAL APPROACH FOR SPACE OBJECT CATALOGUING

Noelia Sanchez Ortiz, Deimos Space S.L., Spain

IAC-16.A6.7.10

THE DUAL USE OPTION OF THE MID FREQUENCY APERTURE ARRAY FOR SPACE DEBRIS TRACKING Carla Sharpe, SKA South Africa, South Africa

A6.8. (joint session with Space Security Committee): Policy, Legal, Institutional and **Economic Aspects of Space Debris Detection,** Mitigation and Removal

September 30 2016, 13:30 — Salon Jalisco E7

Co-Chair(s): David B. Spencer, The Pennsylvania State University, United States; Serge Plattard, European Space Policy Institute (ESPI), Austria;

Rapporteur(s): Alexander Soucek, European Space Agency (ESA), France; David Finkleman, International Academy of Astronautics, United States;

IAC-16.A6.8.1

HOW TO RESUSCITATE THE INTERNATIONAL CODE OF CONDUCT! Serge Plattard, European Space Policy Institute (ESPI), Austria

IAC-16.A6.8.2 (withdrawn)

OUTCOMES AND SOME PROPOSALS FROM INTERNATIONAL SYMPOSIUM ON ENSURING STABLE USE OF OUTER SPACE **ACTIVITIES**

Susumu Yoshitomi, Japan Space Forum, Japan

IAC-16.A6.8.3

THE EVOLUTION OF U.S. POLICY FOR ADDRESSING THE THREAT OF SPACE DEBRIS: PAST, PRESENT, AND POTENTIAL FUTURE Brian Weeden, Secure World Foundation, United States

IAC-16.A6.8.4

CHALLENGING ISSUES OF INTERNATIONAL COOPERATION IN THE DEVELOPMENT OF A PRACTICAL APPROACH WITH REGARD TO SPACE DEBRIS MITIGATION

Anna Prokopchik, ROSCOSMOS, Russian Federation

IAC-16.A6.8.5 (withdrawn)

THREAT OF ACTIVE DEBRIS INTO THE ORBITS: LEGAL AND POLICY ISSUES AND OPPORTUNITIES (ASIA PACIFIC) Rushi Ghadawala, Aryavarta Space Organization, India

IAC-16.A6.8.6

REVISITING 'RES COMMUNIS' AND ENVIRONMENTAL LAW APPROACH TO SPACE DEBRIS ISSUE

Shashank Khurana, B.I.T.S-Pilani, Dubai, United Arab Emirates

IAC-16.A6.8.7

NANOSATELLITES AND THEIR DEMAND FOR CHANGES IN SPACE

Matteo Emanuelli, Space Generation Advisory Council (SGAC),

IAC-16.A6.8.8 (withdrawn)

LEGAL CONCERNS OF ACTIVE DEBRIS REMOVAL FROM GEO USING GRAVITY FLYBY THE MOON

Syamsurijal Syamsurijal, , France

IAC-16.A6.8.9 POSSIBLE FUTURE SPACE DEBRIS MITIGATION AND REMOVAL LEGAL, REGULATORY AND TECHNICAL SCENARIOS Stefano Antonetti, D-Orbit, Italy

IAC-16.A6.4.4 ASSESSMENT OF PASSIVE AND ACTIVE SOLAR SAILING STRATEGIES FOR END-OF-LIFE RE-ENTRY

Camilla Colombo, Politecnico di Milano, Italy

UPGRADE OF THE SPACECRAFT ENTRY SURVIVAL ANALYSIS MODULE

Davide Bonetti, Deimos Space SLU, Spain

LISETTE FARAH, SAUL D. SANTILLAN GTZ, J. ALBERTO RAMIREZ AGUILAR, CARLOS ROMO FUENTES, JORGE A. FERRER PÉREZ, XU TANG YU. RAFAEL G. CHAVEZ MORENO

Co-Chair(s): Fabrizio Piergentili , University of Rome "La

ROSPA, SPACE-LIKE CONTACT DYNAMIC SCENARIO SETUP AND

IAC-16.A6.5.2

ONE MISSION









IAC-16.A6.8.10

CRITICAL ISSUES ON COMMERCIAL OPERATION OF SPACE DEBRIS REMOVAL

Shaofei Wang, China Academy of Launch Vehicle Technology, China

IAC-16.A6.8.11

NEEDS OF AN INTERNATIONAL POLICY AND A REGULATION FRAMEWORK FOR OPERATIONAL DEBRIS MITIGATION SYSTEMS Annamaria Nassisi, Thales Alenia Space Italia, Italy

A6.9. Modelling and Orbit Determination

September 28 2016, 14:45 — Salon Jalisco E7

Co-Chair(s): Heiner Klinkrad, European Space Agency (ESA), Germany; Moriba Jah , University of Arizona, United States;

IMPROVING THE ORBIT PROPAGATION ACCURACY OF TWO-LINE-ELEMENT SATELLITE DATA

Jullian Rivera, Rutgers, The State University of New Jersey, United

IAC-16.A6.9.2 (withdrawn)

THE EFFECT OF EARTH RADIATION PRESSURE ON THE LONG TERM ORBIT OF SPACE DEBRIS

Stuart Grey, University College London, United Kingdom

IAC-16.A6.9.3 (withdrawn)

ANALYSIS OF THE COUPLED ORBIT AND ATTITUDE DYNAMICS OF SPACE DEBRIS IN GEOSTATIONARY EARTH ORBIT CLEMENCE LE FEVRE, CNES, France

IAC-16.A6.9.4 (withdrawn)

PROBABILISTIC ORBIT DETERMINATION FOR REAL-TIME MULTI-MODALITY DATA FUSION

Mark P. Bolden, The Pennsylvania State University, United States

IAC-16.A6.9.5

ASSOCIATING OPTICAL MEASUREMENTS OF GEOCENTRIC OBJECTS WITH A GENETIC ALGORITHM: APPLICATION TO EXPERIMENTAL

Michiel Zittersteijn, Astronomical Institute University of Bern (AIUB), Switzerland

IAC-16.A6.9.6

MAPPING SENSORS MEASUREMENTS TO RESIDENT SPACE OBJECTS ENERGY AND STATE PARAMETERS SPACE VIA EXTREME LEARNING

Roberto Furfaro, University of Arizona, United States

IAC-16.A6.9.7

ON THE PERFORMANCE ANALYSIS OF INITIAL ORBIT DETERMINATION ALGORITHMS

Juan Carlos Dolado Perez, Centre National d'Etudes Spatiales (CNES), France

IAC-16.A6.9.8

ANALYSIS OF THE ORBIT DETERMINATION ACCURACY USING LASER RANGES AND ANGULAR MEASUREMENTS

Emiliano Cordelli, Astronomical Institute University of Bern (AIUB),

IAC-16.A6.9.9

SPACE DEBRIS POPULATION ON THE LARES SATELLITE ORBIT Giampiero Sindoni, Sapienza University of Rome, Italy

IAC-16.A6.9.10

THE TRIVIAL SOLUTION PROBLEM AND A SOLVABLE METHOD OF INITIAL ORBIT DETERMINATION USING SPACE-BASED ANGLE-ONLY **MEASUREMENTS**

Qingbo Gan, Academy of Opto-Electronics, Chinese Academy of Sciences, China

A6.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Christophe Bonnal, Centre National d'Etudes Spatiales (CNES), France; Darren McKnight, Integrity Applications Incorporated (IAI), United States; Tetsuo Yasaka, QPS Institute, Japan;

IAC-16.A6.IP.1 (withdrawn)

STEADY STATE HEAT TRANSFER EXPERIMENTS IN THE SLIP REGIME USING THE OXFORD LOW DENSITY WIND TUNNEL Nathan Donaldson, University of Oxford, United Kingdom

IAC-16.A6.IP.2 (withdrawn)

TETHERED SYSTEMS FOR SPACE DEBRIS REMOVAL: THE TEDDY **PROJECT**

Laura Costanza, Aviospace, Italy

IAC-16.A6.IP.3

ADAPTIVE REMEDIATION OF THE SPACE DEBRIS ENVIRONMENT USING FEEDBACK CONTROL

Gian Luigi Somma, University of Southampton, United Kingdom

QUICK METHODS OF PLANNING OF OBSERVATION SESSIONS OF ORBITAL OBJECTS IMPLEMENTED BY SPACE VEHICLES Tatyana V. Labutkina, Dnepropetrovsk National University named after Oles' Gonchar, Ukraine

IAC-16.A6.IP.6

EXPANSION OF THE NOTION OF A MECHANICAL CONFLICT OF ORBITAL OBJECTS: A SERIAL CONFLICT AND A POLYCONFLICT. FAST METHODS OF FORECASTING THEM

Tatyana V. Labutkina, Dnepropetrovsk National University named after Oles' Gonchar, Ukraine

IAC-16.A6.IP.7

COLLISION-FREE PATH PLANNING OF SPACE ROBOT FOR MULTIPLE

Zhanxia Zhu, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, Xi'an, China

IAC-16.A6.IP.8 (withdrawn)

EVALUATION OF DRAG AUGMENTATION SYSTEM DESIGN REQUIREMENTS FOR A WIDE RANGE OF SMALL LEO SATELLITE

Chiara Palla, Cranfield University, United Kingdom

IAC-16.A6.IP.9 (withdrawn)

FORTE: ISON ROBOTIC TELESCOPE CONTROL SOFTWARE Vladimir Kouprianov, Central Astronomical Observatory, RAS,

IAC-16.A6.IP.10 (withdrawn)

USE OF AN OPTIMISATION TECHNIQUE FOR THE CORRELATION OF AEROTHERMAL DATA ON GEOMETRIC PRIMITIVES FOR DEBRIS DEMISE CALCULATIONS

Nathan Donaldson, University of Oxford, United Kingdom

SPACE DEBRIS EVENTS ANALYSIS PLATFORM AND ITS APPLICATION You cheng Yu, National Astronomical Observatories, Chinese Academy of Sciences, China

IAC-16.A6.IP.12

FEASIBILITY STUDY OF ACTIVE DEBRIS REMOVAL USING HYBRID PROPULSION SYSTEM

Stefania Tonetti, Deimos Space SLU, Spain

IAC-16.A6.IP.13

BALLISTIC LIMIT EQUATIONS' PREDICTIVE INDICATORS Guanghui Jia, Beihang University, China

IAC-16.A6.IP.14 (withdrawn)

A LIGHT WEIGHT ROBOT ARM FOR CAPTURING SPACE DEBRIS Shin-Ichiro Nishida, Tottori University, Japan

IAC-16.A6.IP.15

DAMAGE OF QUARTZ GLASS UNDER HYPERVELOCITY IMPACT Zhixuan Zhou, China Aerodynamics Research and Development

IAC-16.A6.IP.16

APPLICATIONS OF IMAGE DECONVOLUTION FOR OPTICAL SPACE DEBRIS OBSERVATION

Rong-Yu Sun, Purple Mountain Observatory (PMO), China

IAC-16.A6.IP.17 (withdrawn)

USE OF SPACE DEBRIS AS THE PROPULSIVE MASS FOR ROCKET

Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

IAC-16.A6.IP.18 (withdrawn)

ANALYSIS OF LIRIS INFRARED IMAGERY FOR ACTIVE DEBRIS REMOVAL MISSIONS

Özgün YILMAZ, Cranfield University, United Kingdom

IAC-16.A6.IP.19

THE AUTOMATION OF THE EQUO ON-GROUND OBSERVATORY AT BROGLIO SPACE CENTER FOR SPACE SURVEILLANCE Tommaso Cardona, University of Rome "La Sapienza", Italy

IAC-16.A6.IP.20

DEVELOPMENT OF THE ITALIAN OBSERVATORY NETWORK FOR SPACE SURVEILLANCE

Gioacchino Scire, University of Rome "La Sapienza", Italy

IAC-16.A6.IP.21 (withdrawn)

THE ADAPS AS A GRADUALLY DEVELOPING BALLISTIC DATA PROCESSING SYSTEM

Viktor Voropaev, Keldysh Institute of Applied Mathematics, RAS, Russian Federation

A VISUAL PERCEPTION AND INTELLIGENCE SERVO SYSTEM USED FOR SPATIAL DEBRIS ACTIVE CLEARING ROBOTS

ZHIHUI ZHENG, National Key Laboratory of Science and Technology on Aerospace Intelligence Control, Beijing Aerospace Automatic Control Institute, China

IAC-16.A6.IP.23

MONITORING THE HEALTH OF GEOSYNCHRONOUS SPACECRAFT USING PHOTOMETRIC OBSERVATIONS Toshiya Enomoto, Kyushu University, Japan

IAC-16.A6.IP.24

ENVIRONMENTAL IMPACT OF SPACE DEBRIS REPOSITIONING Claudio Bombardelli, Technical University of Madrid (UPM), Spain

VISION BASED ATTITUDE DETERMINATION USING A SIMULTANEOUS LOCALIZATION AND MAPPING ALGORITHM DURING RELATIVE CIRCUMNAVIGATION OF NON-COOPERATIVE OBJECTS Andrea Antonello, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-16.A6.IP.26

USING THE ANALYTIC HIERARCHY PROCESS IN THE ASSESSMENT OF THE PROBABILITY FOR AN EXPLOSION TO OCCUR DURING THE ATMOSPHERIC RE-ENTRY

Cristina De Persis, Trinity College, Ireland

IAC-16.A6.IP.27 (withdrawn)

THE SOLEM EVOLUTION MODEL AND ITS UNCERTAINTY ANALYSIS Xiaowei Wang, National Astronomical Observatories, Chinese Academy of Sciences, China

IAC-16.A6.IP.28 (withdrawn)

E.DEORBIT - ELEMENTS OF AN ADR MISSION THAT REQUIRE AN IN-ORBIT-DEMONSTRATION AND WAYS TO ACHIEVE IT Marc Scheper, OHB System AG-Bremen, Germany

IAC-16.A6.IP.29

A FLEXIBLE AND ADAPTIVE CAPTURE DEVICE FOR ORBITAL DEBRIS REMOVAL BASED ON OCTOPUS-INSPIRED PNEUMATIC SOFT ROBOT Liangliang HAN, Institute of Aerospace System Engineering Shanghai, CASC, China

IAC-16.A6.IP.30

COMPUTATION AND DYNAMIC ANALYSIS OF DEPLOYMENT OF INFLATABLE MEMBRANE STRUCTURE FOR DEBRIS REMOVAL Benke Shi, Beihana University, China

IAC-16.A6.IP.31 (withdrawn)

EVALUATION OF THE IMPACT RESISTANCE OF GLARE UNDER HYPERVELOCITY IMPACT LOADING

Chunsen Shi, Delft University of Technology (TU Delft), The

IAC-16.A6.IP.32

EXPERIMENT AND NUMERICAL SIMULATION OF HYPERVELOCITY IMPACT ON HONEYCOMB BY VOLCANO ROCK SIMULACRUM FOR MICRO-METEOROIDS

Bin Jia, Harbin Institute of Technology, China

IAC-16.A6.IP.33

STOCHASTIC MODELING OF HYPERVELOCITY IMPACTS INCLUDING MOMENTUM ENHANCEMENT IN ATTITUDE PROPAGATION OF SPACE DEBRIS

Luc Sagnieres, McGill University, Canada

IAC-16.A6.IP.34

DYNAMIC PROGRAMMING AND AUTONOMOUS APPROACH TECHNOLOGY IN ON-ORBIT MAINTENANCE FOR MICRO SATELLITE CONSTELLATION

Shan Lu, Shanghai Aerospace Control Technology Institute, China

IAC-16.A6.IP.35 (withdrawn)

THE RESEARCH OF TINY NON-COOPERATIVE SPACE TARGET RELATIVE ORBIT DETERMINATION WITH INTERMITTENT MEASUREMENT INFORMATION Fei Han, Harbin Institute of Technology, China

INTERNATIONAL SPACE SITUATIONAL AWARENESS SYSTEM FOR AVOIDING ORBITAL COLLISIONS: FRAMEWORK, CHALLENGES AND RECOMMENDATIONS

Changfang Zhang, Center for National Security and Strategic Studies, National Unversity of Defense Technology, China

IAC-16.A6.IP.37

GENERAL FRAMEWORK FOR NON-COOPERATIVE SATELLITE'S TUMBLING MOTION ESTIMATION USING A SINGLE IMAGING SENSOR AND AN FPGA/DSP HARDWARE PLATFORM Konrad Bojar, PIAP, Poland

IAC-16.A6.IP.38

THE NONLINEARITY CHARACTER OF THE ELECTRODYNAMIC TETHER Shohei Kudo, The University of Electro-Communications, Japan

IAC-16.A6.IP.39 (withdrawn)

THE PROCESS ANALYSIS AND ORBIT PREDICTION OF THE DECAYING SPACE DEBRIS

Liu Yisi, Chinese Academy of Sciences, China

A7. SYMPOSIUM ON TECHNOLOGICAL REQUIREMENTS FOR FUTURE SPACE **ASTRONOMY AND SOLAR-SYSTEM SCIENCE MISSIONS**

Coordinator(s): Jakob van Zyl , National Aeronautics and Space Administration (NASA), United States;



26 - 30 September 2016, Guadalajara, Mexico





A7.1. Space-Agencies Long-Term Views

September 26 2016, 15:15 — Mueble 1

Co-Chair(s): Brent Sherwood, Caltech/JPL, United States; Pietro Ubertini , INAF, Italy;

Rapporteur(s): Jakob van Zyl , National Aeronautics and Space Administration (NASA), United States;

IAC-16.A7.1.1

NASA ASTROPHYSICS PROGRAM: RESULTS, PROGRESS, AND LONG TERM STRATEGY

Paul Hertz, National Aeronautics and Space Administration (NASA), **United States**

IAC-16.A7.1.2

THE FUTURE OF SPACE ASTRONOMY: ELECTROMAGNETIC VS GRAVITATIONAL WAVES & HE NEUTRINOS? Pietro Ubertini, INAF, Italy

IAC-16.A7.1.3

A VIEW ON NEXT FUTURE OF SCIENCE FROM SPACE Enrico Flamini, Italian Space Agency (ASI), Italy

IAC-16.A7.1.4 (withdrawn)

NASA PLANETARY SCIENCE: RESULTS, PROGRESS, AND STRATEGY James L. Green, National Aeronautics and Space Administration (NASA)/Goddard Space Flight Center, United States

OCEAN WORLDS EXPLORATION

Jonathan Lunine, Cornell University, United States

THE SPACE SCIENCE DECADAL SURVEYS: LESSONS LEARNED AND BEST PRACTICES

Michael Moloney, National Academies of Sciences, Engineering, and Medicine, United States

A7.2. Scientific Motivation and **Requirements for Future Space Astronomy** and Solar System Science Missions

September 27 2016, 09:45 — Mueble 1

Co-Chair(s): Jakob van Zyl , National Aeronautics and Space Administration (NASA), United States; Pietro Ubertini , INAF,

Rapporteur(s): Brent Sherwood, Caltech/JPL, United States;

IAC-16.A7.2.1

KEYNOTE: THE FIRST DETECTION OF GRAVITATIONAL WAVES Michele Vallisneri, Jet Propulsion Laboratory - California Institute of Technology, United States

IAC-16.A7.2.2

A NOVEL ORBITER MISSION CONCEPT FOR VENUS WITH THE **ENVISION PROPOSAL**

Marta Rocha de Oliveira, International Space University (ISU),

IAC-16.A7.2.3 (withdrawn)

THE CONSERT EXPERIMENT ON ROSETTA-PHILAE Wlodek Kofman, Institut de Planet. et d'Astrophysique de Grenoble IPAG/PLANETO, France

IAC-16.A7.2.4

JUPITER ICY MOONS EXPLORER (JUICE)

Olivier Witasse, European Space Agency (ESA), The Netherlands

SCIENCE OF THE EUROPA MULTIPLE FLYBY MISSION

Robert Pappalardo, Jet Propulsion Laboratory - California Institute of Technology, United States

AUGMENTING NASA EUROPA CLIPPER BY A SMALL PROBE: EUROPA TOMOGRAPHY PROBE (ETP) MISSION CONCEPT Mauro Di Benedetto, Sapienza Università di Roma, Italy

A7.3. Technology Needs for Future Missions, **Platforms**

September 30 2016, 13:30 — Mueble 1

Co-Chair(s): Brent Sherwood, Caltech/JPL, United States; Jakob van Zyl , National Aeronautics and Space Administration (NASA), United States;

Rapporteur(s): Pietro Ubertini , INAF, Italy;

IAC-16.A7.3.1

EARTH ATMOSPHERE UV BACKGROUND MEASUREMENT AND SIPM CHARACTERIZATION USING NANO-SATELLITES Gustavo Medina Tanco, UNAM, Mexico

IAC-16.A7.3.2

IMPLEMENTING INDEPENDENT COMPONENT ANALYSIS TO REMOVE ATMOSPHERIC FOREGROUNDS FROM THE LARGE MILLIMETER TELESCOPE DATA.

Iván Rodríguez Montoya, Instituto Nacional de Astrofísica, Óptica y Electrónica, Mexico

IAC-16.A7.3.3

HOUSEKEEPING ARCHITECTURE DESIGN BASED ON RECONFIGURABLE LOGIC DEVICES FOR USE IN THE K-EUSO TELESCOPE

William Hidber, UNAM, Mexico

IAC-16.A7.3.4 (withdrawn)

FROM PLANETARY TRANSITS TO SPACECRAFT DESIGN: ACHIEVING PLATO'S POINTING PERFORMANCE

Farid Gamgami, OHB System AG, Germany

IAC-16.A7.3.5

EUROPA TOMOGRAPHY PROBE (ETP) MISSION FEASIBILITY -SPACECRAFT DESIGN

Virginia Notaro, Sapienza Università di Roma, Italy

ASIST: ASTEROID SYNTHETIC IMAGING AND SPACE TRACKING Chrishma Singh-Derewa, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

THE PLATO VIEWPOINT: MULTIPLE, PARTIALLY OVERLAPPING, EYES TO CATCH GLIMPSES OF WORLDS OUTSIDE OUR SOLAR SYSTEM. Roberto Ragazzoni, INAF - Osservatorio astronomico di Padova,

IAC-16.A7.3.8 (withdrawn)

VIS-NIR IMAGING SPECTROMETRY IN THE SOLAR SYSTEM **EXPLORATION (JUICE)**

Giuseppe Piccioni, Institute for Space Astrophysics and Planetology

B1. EARTH OBSERVATION SYMPOSIUM

Coordinator(s): Andrew Court , TNO, The Netherlands; Gunter Schreier, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

B1.1. International Cooperation in Earth **Observation Missions**

September 26 2016, 15:15 — Tlaquepaque

Co-Chair(s): John Hussey , Consultant, United States; Pierre Ranzoli, Eumetsat, Germany;

Rapporteur(s): David Brent Smith , National Oceanic and Atmospheric Administration (NOAA), United States;

IAC-16.B1.1.1

2016 ACTIVITIES OF THE CEOS Alex Held, CSIRO, Australia

IAC-16.B1.1.2

AMERIGEOSS: A GEO REGIONAL INITIATIVE FOR THE AMERICAS Nancy D Searby, NASA Headquarters, United States

IAC-16.B1.1.3

COOPERATION IN EARTH OBSERVATION MISSIONS IN AFRICA: A ROLE FOR AFRIGEOSS

Ganiyu Agbaje, National Space Research and Development Agency (NASRDA), Abuja Nigeria, Nigeria

IAC-16.B1.1.4

GEO: TEN YEARS OF ACTIVITIES AND THE LAUNCH INTO THE NEW

Catherine Doldirina, Joint Research Centre (JRC) of the European Commission, Italy

IAC-16.B1.1.5

THE USE OF EARTH OBSERVATION TO ADDRESS SDG 13 CLIMATE CHANGE IN MEXICO

Sandra Cabrera Alvarado, University of Luxembourg, Luxemburg

IAC-16.B1.1.6 (withdrawn)

METOP-C AND ITS ROLE WITHIN EUMETSAT'S POLAR ORBITING SERIES OF SATELLITES

Jan Svoboda, Eumetsat, Germany

IAC-16.B1.1.7

INTERNATIONAL COOPERATION BASED ON COSMO-SKYMED

Claudia A. M. Fiorentino, Italian Space Agency (ASI), Italy

IAC-16.B1.1.8 (withdrawn)

INTERNATIONAL COOPERATION IN EARTH OBSERVATIONS: A QUESTION OF WHAT, HOW AND WHY FOR SECONDARY NATION Su Wai Ng, National Space Agency of Malaysia (ANGKASA), Malaysia

IAC-16.B1.1.9

SENSING PROGRESS: SPACE SOLUTIONS FOR FOOD & WATER

Andrew Butler, International Space University (ISU), Australia

IAC-16.B1.1.10

NEW CONCEPT OF INTERNATIONAL SATELLITE CONSTALLATION OF COMPACT THERMAL INFRARED CAMERA

Yusuke Muraki, Japan Aerospace Exploration Agency (JAXA), Japan

B1.2. Future Earth Observation Systems

September 27 2016, 09:45 — Tlaquepaque

Co-Chair(s): Benoit Boissin, Centre National d'Etudes Spatiales (CNES), France; Timo Stuffler, OHB System AG - Munich, Germany:

Rapporteur(s): Gunter Schreier , Deutsches Zentrum für Luftund Raumfahrt e.V. (DLR), Germany;

IAC-16.B1.2.1

AN OVERVIEW OF SATELLITE PROJECT OF THE NATIONAL HIGH RESOLUTION EARTH OBSERVATION SYSTEM (NHREOS) Ming Li, China Academy of Space Technology (CAST), China

IAC-16.B1.2.2 (withdrawn)

ADVANCES IN THE DEVELOPMENT OF FUTURE ESA EARTH OBSERVATION MISSIONS

Pierluigi Silvestrin, European Space Agency (ESA), The Netherlands

IAC-16.B1.2.3

TOWARDS DISRUPTIONS IN EARTH OBSERVATION? NEW EARTH OBSERVATION SYSTEMS AND MARKETS EVOLUTION: POSSIBLE SCENARIOS AND IMPACTS

Gil DENIS, Airbus Defence and Space, France

IAC-16.B1.2.4 (withdrawn)

OCAPI: THE "OCEAN COLOUR ADVANCED PERMANENT IMAGER" David Antoine, Curtin University, Australia

IAC-16.B1.2.5 (withdrawn)

A WIDE-SWATH FREQUENT REVISIT CANADIAN HYPERSPECTRAL MISSION

Shen-En Qian, Canadian Space Agency, Canada

IAC-16.B1.2.6 (withdrawn)

AN OVERVIEW OF HIGH RESOLUTION THERMAL INFRARED EXPLORATORY STUDIES AT THE EUROPEAN SPACE AGENCY: PAST, PRESENT AND FUTURE

Amanda Regan, European Space Agency (ESA), The Netherlands

IAC-16.B1.2.7 (withdrawn)

STUDY OF A LASER INTERFEROMETER EMPLOYED FOR THE RANGING METROLOGY OF A LOW-LOW GRAVITY MISSION BEYOND GRACE FOLLOW-ON

Filippo Ales, Airbus Defence and Space, Germany

IAC-16.B1.2.8

A NOVEL APPROACH TO MICROWAVE INTERFEROMETRIC RADIOMETRY IN THE GEOSTATIONARY ORBIT USING FORMATION

Ahmed Kiyoshi Sugihara El Maghraby, University of Southampton, United Kingdom

IAC-16.B1.2.9

COSMO-SKYMED: FROM THE FIRST TOWARDS THE SECOND GENERATION

Manfredi Porfilio, Italian Space Agency (ASI), Italy

IAC-16.B1.2.10

NEXT GENERATION OF SAR SERVICES: CAPABILITIES AND APPLICATIONS OF THE MISSION "HRWS" (HIGH RESOLUTION WIDE

Pierre-Alexis Journel, Airbus Defence and Space, Germany

IAC-16.B1.2.11

THE WORLD'S FIRST COMMERCIAL SAR AND OPTICAL 16-SATELLITE CONSTELLATION

Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), United

B1.3. Earth Observation Sensors and Technology

September 28 2016, 09:45 — Tlaquepaque

Singapore, Singapore, Republic of;

Stefano Lorenzini, Finmeccanica, Italy

Co-Chair(s): Andrew Court, TNO, The Netherlands; Ralph Girard , Canadian Space Agency, Canada; Rapporteur(s): Yean Joo Chong , National University of

IAC-16.B1.3.1

LIGHTNING IMAGING FROM GEO: AN INNOVATIVE SENSOR FOR METEOSAT THIRD GENERATION

IAC-16.B1.3.2

DESIGN OF SENTINEL-5 UV2VIS SPECTROMETER OPTIC Roland Le Goff, Sodern, France

IAC-16.B1.3.3

A COMPACT AND HIGH PERFORMANCE CAMERA FOR SMALL EARTH OBSERVATION SATELLITES

Giuseppe Capuano, TECHNO SYSTEM DEV., Italy









IAC-16.B1.3.4

SPATIAL HETERODYNE OBSERVATION OF WATER (SHOW) CAPABILITY DEMONSTRATION

Daniel Gratton, Canadian Space Agency, Canada

IAC-16.B1.3.5

THE TECHNIQUES AND IN-ORBIT APPLICATION OF GF-2 SATELLITE CAMERA

DongJing Cao, CAST, China

IAC-16.B1.3.6

ON BOARD PAYLOAD DATA PROCESSING FOR GNSS-R; USING FFT-PROCESSING TO COMPUTE DOPPLER DELAY MAPS Bas van de Kerkhof, National Aerospace Laboratory (NLR), The

IAC-16.B1.3.7 (withdrawn)

THE FUTURE PERSPECTIVES OF THE ITALIAN P-BAND AIRBORNE

Claudia Facchinetti, Italian Space Agency (ASI), Italy

IAC-16.B1.3.8

EUROPEAN C-BAND KLYSTRON DESIGN AND CURRENT **DEVELOPMENT STATUS**

Paolo Galantini, Finmeccanica, Italy

IAC-16.B1.3.9

VERY-LOW-FREQUENCY RADIO WAVES DETECTOR IN THE FIRST SLOVAK SATELLITE SKCUBE

Michaela Musilova, Slovak Organisation for Space Activities (SOSA), Slovak Republic

IAC-16.B1.3.10

ON-BOARD PROCESSING OF SAR DATA Brian Lawrence, Canadian Space Agency, Canada

B1.4. Earth Observation Data Management Systems

September 29 2016, 09:45 — Tlaquepaque

Co-Chair(s): Gunter Schreier, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; James E. Graf , National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States;

Rapporteur(s): Na Yao , China Academy of Space Technology (CAST), China;

IAC-16.B1.4.1

THE SENTINEL-1 PAYLOAD DATA GROUND SEGMENT DESIGN -SCALABILITY AND FLEXIBILITY FOR A GROWING MISSION Bernard Pruin, Werum Software & Systems AG, Germany

IAC-16.B1.4.2

IMPACT ON QUALITY AND PROCESSING TIME DUE TO CHANGE IN PRE-PROCESSING OPERATION SEQUENCE ONMODERATE **RESOLUTION SATELLITE IMAGES**

Marco Schmidt, Bochum University of Applied Sciences, Germany

IAC-16.B1.4.3

SENTINEL-3 PAYLOAD DATA GROUND SEGMENT ARCHITECTURE AND OPERATIONS

Marc Niezette, Telespazio VEGA Deutschland GmbH, Germany

IAC-16.B1.4.4

DESIGNING A WEB PLATFORM PARADIGM FOR SATELLITE IMAGES BASED ON USER PREFERENCES

Avid Roman-Gonzalez, Universidad de Ciencias y Humanidades -UCH. Peru

DATABASE CONCEPTS AND REQUIREMENTS TO OPTIMIZE THE MANAGEMENT OF THE COSMO-SKYMED INSTITUTIONAL USERS COMMUNITY

Maria girolamo Daraio, Italian Space Agency (ASI), Italy

IAC-16.B1.4.6 (withdrawn)

CURRENT CHALLENGES FACING SPACEBORNE HYPERSPECTRAL REMOTE SENSING TECHNOLOGY AND THEIR POTENTIAL SOLUTIONS Conor MacDonald, , Australia

IAC-16.B1.4.7

MOVING TARGET DETECTION AND IMAGING BASED ON SPACEBORNE VIDEO SAR Jian Liang, Northwestern Polytechnical University, China

DESIGN OF A TELECOMMUNICATION, COMMAND AND DATA HANDLING SYSTEM (TCDH) FOR A REMOTE SENSING MISSION MIGUEL ANGEL ALVARADO, Facultad de Ingeniería-UNAM, Mexico

IAC-16.B1.4.9 (withdrawn)

SAR RAW DATA REDUCTION USING DYNAMIC 4 PATH - BLOCK GAIN TREE STRUCTURED VECTOR QUANTIZATION Hyeon-Cheol Lee, Korea Aerospace Research Institute (KARI), Korea,

IAC-16.B1.4.10

Republic of

A PARTICLE SWARM OPTIMIZATION BASED INPUT VARIABLE SELECTION METHOD FOR SPACE WEATHER PREDICTION MODEL Liu Shuai, Academy of Eqiupment, China

B1.5. Earth Observation Applications and Economic Benefits

September 29 2016, 14:45 — Tlaquepaque

Co-Chair(s): Luigi Bussolino, Bussolino and Associates, Italy; Paul Kamoun, Thales Alenia Space France, France; Rapporteur(s): Yean Joo Chong, National University of Singapore, Singapore, Republic of;

IAC-16.B1.5.1

NEW PARADIGMS FOR COMMERCIAL BENEFITS FROM INDIA'S EO

Sridhara Murthi K. R., Jain University, India

PERFORMANCE EVALUATION OF REMOTE SENSING BASED URBAN INDICES AND ASSESSMENT OF URABANIZATION DYNAMICS IN BANGALORE-INDIA

Vivek Kumar Gautam, ISRO Satellite Centre (ISAC), ISRO, India

IAC-16.B1.5.3

EO APPLICATIONS AND ECONOMIC IMPACTS FOR UNDERWATER CULTURAL HERITAGE (UCH): RESULTS OF THE EU FP7 ITACA (INNOVATION TECHNOLOGIES AND APPLICATIONS FOR COASTAL ARCHAEOLOGICAL SITES) PROJECT Rosario Pavone, SME4SPACE, Belgium

IAC-16.B1.5.4 (withdrawn)

LINEAMENT STUDY IN GROUNDWATER EXPLORATION USING SPACE BASED TECHNOLOGY: A CASE STUDY OF OWO LGA, ONDO STATE,

Oluwasegun Oluwaseun Onibudo, National Space Research and Development Agency (NASRDA), Abuja Nigeria, Nigeria

IMPROVING WATER QUALITY MEASUREMENT: AN ALGORITHM TO ESTIMATE CHLOROPHYLL-A IN CASE-II SHALLOW WATER Palani Murugan, ISRO Satellite Centre (ISAC), ISRO, India

IAC-16.B1.5.6

COSMO-SKYMED MISSION: SOCIAL AND ECONOMIC BENEFITS Maria girolamo Daraio, Italian Space Agency (ASI), Italy

SPACEBORNE SAR TECHNOLOGY APPLICATION IN THE SMART GRID Chen Sisi, , China

IAC-16.B1.5.8

THE UNITED NATIONS OFFICE FOR OUTER SPACE AFFAIRS AND ITS CONTRIBUTIONS TO IMPLEMENT THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

Werner R. Balogh, United Nations, Austria

IAC-16.B1.5.9

SPACEBORNE X- AND C-BAND SAR DATA EXPLOITATION FOR SHIP **ROUTE ANALYSIS**

Maria Daniela Graziano, University of Naples "Federico II", Italy

IAC-16.B1.5.10

A NEW INITIATIVE TO BRIDGE THE GAP BETWEEN EARTH OBSERVATION DATA AND END USERS: THE CLIMATE ONLINE USER DATA (CLOUD)

Shreya Santra, , France

IAC-16.B1.5.11

EUROPEAN UNION'S INITIATIVES TO FOSTER COPERNICUS USER AND MARKET UPTAKE

Agnieszka Lukaszczyk, European Commission, Belgium

B1.6. Biodiversity

September 30 2016, 09:45 — Tlaquepaque

Co-Chair(s): David Brent Smith , National Oceanic and Atmospheric Administration (NOAA), United States; Ralph Girard, Canadian Space Agency, Canada;

Rapporteur(s): Simonetta Cheli, European Space Agency (ESA),

IAC-16.B1.6.1

FOREST ABOVEGROUND BIOMASS MAPPING IN MEXICO USING SAR, OPTICAL AND AIRBORNE LIDAR DATA

Mikhail Urbazaev, Friedrich-Schiller-University Jena, Germany

IAC-16.B1.6.2 (withdrawn)

INTER-SEASONAL CHANGE OF VEGETATION COVER AND SURFACE TEMPERATURE DISTRIBUTION: A CASE STUDY OF ONDO STATE,

Henry Ibitolu, Federal University of Technology Akure, Ondo state, Nigeria, Nigeria

IAC-16.B1.6.3

INVESTIGATION ON MONITORING AND REPORTING FOREST FIRES

Shashank Khurana, B.I.T.S-Pilani, Dubai, United Arab Emirates

SPACE BASED TECHNOLOGY, CLIMATE CHANGE AND WATER MANAGEMENT: CASE STUDY OF THE LAKE CHAD BASIN REGION OF

Abubakar Babagana, Seabed International, Nigeria

IAC-16.B1.6.5 (withdrawn) PROJECT AQUACULTURE

Daniele Trimarchi, , Italy

IAC-16.B1.6.6

SEASONAL AND INTERANNUAL VARIABILITY OF CHLOROPHYLL AND SURFACE TEMPERATURE IN THE GULF OF MEXICO: 1998-2015 Jushiro Cepeda-morales, , Mexico

SPACE TECHNOLOGY AND INTELLIGENT MATHEMATICAL MODELS

FOR BIODIVERSITY MONITORING IN AZERBAIJAN Sevda R. Ibrahimova, Azerbaijan National Aerospace Agency,

IAC-16.B1.6.8

SPACE TECHNOLOGY AND APPLICATIONS FOR MONITORING AND PROTECTING BIODIVERSITY AND ECOSYSTEMS: A NEW THEMATIC PRIORITY OF THE UNITED NATIONS PROGRAMME ON SPACE APPLICATIONS

Werner R. Balogh, United Nations, Austria

B1.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Andrew Court , TNO, The Netherlands; Gunter Schreier, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germanv:

IAC-16.B1.IP.1

CUBESATS AS PLATFORM FOR REMOTE SENSING APPLICATIONS WITH SATELLITE NAVIGATION SIGNALS Karishma Inamdar, International Spacde University, France

IAC-16.B1.IP.2

CROP DISEASE AND PEST DETECTION USING GEOSPATIAL **TECHNIQUES**

Oniosun Temidayo Isaiah, Federal University of Technology Akure, Ondo state, Nigeria, Nigeria

IAC-16.B1.IP.3

EVALUATION OF THE IMPACT OF BIOMASS BURNING ON AMMONIA CONCENTRATIONS IN THE UNITED STATES USING SATELLITE AND GROUND BASED MEASUREMENTS

Casey Bray, North Carolina State University, United States

IAC-16.B1.IP.4

SPACE BASED CLIMATE CHANGE MONITORING OF CONTRAILS AND CIRRUS CLOUD - PROGRESS AND FUTURE DIRECTIONS Harijono Djojodihardjo, , Indonesia

IAC-16.B1.IP.5 (withdrawn)

USING SHORT TIME BASELINE INSAR FOR MONITORING COASTAL ZONE STATUS

Parviz Tarikhi, , Iran

IAC-16.B1.IP.6

MODEL AND SIMULATION OF HIGH ALTITUDE SOUNDING BALLOONS: DYNAMICS, STRESS-STRAIN AND THERMAL ANALYSIS Ricardo Singer Genovese, Universidad Nacional Autónoma de México, Mexico

IAC-16.B1.IP.7

MONITORING THE DUST STORMS IN THE EASTERN REGION OF SYRIA USING REMOTE SENSING TECHNIQUE & GEOGRAPHIC INFORMATION SYSTEM Ahmad Yaghi, General Organization of Remote Sensing (GORS),

IAC-16.B1.IP.8 (withdrawn) THE PRISMA MISSION HYPERSPECTRAL PAYLOAD EXTENDED ACQUISITION CAPABILITIES

IAC-16.B1.IP.9

DESIGN AND SIMULATION OF A SCANNING CONSTELLATION FOR REGIONAL COVERAGE

Yashena Zhana. . China

IAC-16.B1.IP.10

MULTI-COMPONENT ATMOSPHERE DETECTION TECHNOLOGY BASED ON SPACE-BASED FILAMENT LASER Xun LIU, Beijing Institute of Space Mechanics & Electricity, CAST,

IAC-16.B1.IP.11 (withdrawn)

Marco Meini, Finmeccanica, Italy

EVALUATING AMMONIA (NH3) PREDICTIONS IN THE NOAA NATIONAL AIR QUALITY FORECAST CAPABILITY (NAQFC) USING GROUND-BASED AND SATELLITE-BASED MEASUREMENTS William Battye, North Carolina State University, United States

IAC-16.B1.IP.12

IDENTIFICATION OF CHANGES IN A FORESTED AREA USING POLARIMETRIC SAR DATA AT C-BAND

Alejandro Monsivais-Huertero, Instituto Politécnico Nacional,









IAC-16.B1.IP.13

A STABLE AND HIGHLY ACCURATE POINTING CUBESAT EARTH IMAGER FOR VLEO EARTH OBSERVATION

JM (Hans) Kuiper, Delft University of Technology (TU Delft), The Netherlands

IAC-16.B1.IP.14

A NOVEL DESIGN APPROACH TO TIMING SEQUENCE FOR ULTRA-HIGH RESOLUTION SPACEBORNE SAR

Fan Feng, China Academy of Space Technology (Xi'an), China

IAC-16.B1.IP.15

IR CAMERA PAYLOAD FOR EARTH MONITORING ONBOARD A 3U CUBESAT

Juan Salvador Palacios Fonseca, Instituto Nacional de Astrofísica, Óptica y Electrónica, Mexico

IAC-16.B1.IP.16

AN OCEAN WAVE SIMULATOR AS A BASIS FOR MODELLING SAR BACKSCATTERING OF OCEAN WAVE SPECTRA

Fabricio Otoniel Pérez Pérez, CENTRO DE INVESTIGACION EN MATEMATICAS A.C. (CIMAT), Mexico

IAC-16.B1.IP.17 (withdrawn)

SEA SURFACE WIND SPEED RETRIEVAL THROUGH SENTINEL-1 WAVELENGTH CUT-OFF

Giuseppe Grieco, Matera Space Geodesy Center, Agenzia Spaziale Italiana (ASI), Italy

IAC-16.B1.IP.18

CALIBRATION AND VALIDATION FOR THE UNITED STATES NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION'S JOINT POLAR SATELLITE SYSTEM SERIES OF SATELLITES

Harry A. Cikanek, National Oceanic and Atmospheric Administration (NOAA), United States

IAC-16.B1.IP.19 (withdrawn)

DESIGN AND IMPLEMENTATION OF AN INNOVATIVE CHARGED PARTICLE MONITORING SYSTEM ON-BOARD A CUBESAT Tanaya Kolankari, College of Engineering, Pune, India

IAC-16.B1.IP.20 (withdrawn)

ERIS CHETUMAL: GROUND STATION EXPERIENCE IN THE GERMAN-MEXICAN INTERNATIONAL COOPERATION SCIENTIFIC AND THECNICAL AGREEMENT

Azael de la Cruz, , Mexico

IAC-16.B1.IP.21

VALIDATION OF AGGREGATION/DISAGGREGATION ALGORITHM TO SMAP RADAR AND RADIOMETER OVER A TROPICAL FOREST Juan Carlos Hernandez S. Instituto Politécnico Nacional, Mexico

A GEO-SPATIAL ASSESSMENT OF DROUGHT IN NORTHERN NIGERIA USING VEGETATION INDICES AND LAND SURFACE TEMPERATURE

Henry Ibitolu, Federal University of Technology Akure, Ondo state, Nigeria, Nigeria

IAC-16.B1.IP.23

MAIN APPLICATIONS OF GEOSYNCHRONOUS SYNTHETIC APERTURE RADAR IN EARTHQUAKE RESPONSE

Hongbo JIANG, Institute of crustal dynamics, China earthquake administration, China

THE CHINESE L-SAR DOUBLE-STAR SYSTEM AND ITS APPLICATION IN **EARTHOUAKE MONITORING**

Jingfa Zhang, Institute of Crustal Dynamics, CEA, China

IΔC-16 R1 IP 25

OBTAINING THE LAND SURFACE TEMPERATURE FROM LANDSAT DATA IN THE APRM PENINSULA DE ZAPATA Gustavo Martín Morales, , Cuba

IAC-16.B1.IP.26

RESEARCH ON TDICCD IMAGING MECHANISM DURING REMOTE-SENSING SATELLITE ATTITUDE MANEUVER Na Yao, Qian Xuesen Laboratory of Space Technology, China

IAC-16.B1.IP.27

AN EYE ON EARTH: AN OVERVIEW ON FUTURE OPTICAL EARTH **OBSERVATION INSTRUMENTS**

Luís Ferreira, Airbus DS GmbH, Germany

Academy of Space Technology (CAST), China

IAC-16.B1.IP.28

DENEL SPACETEQ CUBE SATELLITE MISSIONS AND CAPABILITIES Lumka Msibi, DENEL Spaceteq, South Africa

ΙΔC-16 R1 IP 29

A DYNAMIC SOFTWARE RESTRUCTION METHOD BASED ON AT697 Zhao Wang, Chinese Academy of Sciences, China

IAC-16.B1.IP.30

A LIQUID LENS IMAGING SYSTEM FOR SPACE-BASED OBJECT MEASURING AND TRACKING

Hanmo Zhang, Shanghai Aerospace Control Technology Institute,

IAC-16.B1.IP.31

RETRIEVAL OF ATMOSPHERE HUMIDITY PROFILES FROM GNSS RADIO OCCULTATION OBSERVATIONS Francesco Vespe, Agenzia Spaziale Italiana (ASI), Italy

B2. SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM

Coordinator(s): Manfred Wittig , European Space Agency (ESA), retired, The Netherlands; Otto Koudelka, Joanneum Research, Austria;

B2.1. Fixed and Broadcast Communications

September 26 2016, 15:15 — Salon de Eventos 7

Co-Chair(s): Desaraju Venugopal, Devas Multimedia Pvt. Ltd., India; Robert D. Briskman, Sirius XM Radio, United States; Rapporteur(s): Laszlo Bacsardi, Budapest University of Technology and Economics, Hungary;

IAC-16.B2.1.1

DTH SERVICE- CHALLENGE FROM INTERNET Mohanavelu K, , India

IAC-16.B2.1.2

DFH-4S PLATFORM DEVELOPMENT AND IN-ORBIT FLIGHT Min Wang, China Academy of Space Technology (CAST), China

REDUNDANT OPTICAL LINK FOR TELEMETRY SYSTEMS TO SATELLITES IN GEOSTATIONARY ORBIT Erika Partida, UPSLP, Mexico

IAC-16.B2.1.4

INTERNET OVER SATELLITE - POTENTIAL FOR DIGITAL INCLUSION Mohanavelu KS, , India

IAC-16.B2.1.5

LINK QUALITY PARAMETERS IN VSAT NETWORKS FOR EFFECTIVE OPERATION AND FOR WEATHER MONITORING Franz Teschl, Graz University of Technology (TU Graz), Austria

IAC-16.B2.1.6

X BAND TRANSMISSION EVOLUTION TOWARDS DVB-S2 FOR SMALL

Miquel Angel Fernandez, SYRLINKS, France

IAC-16.B2.1.7

THE HTS NETWORK LOAD PREDICTION BASED ON ZTS-SVR SUPPORT VECTOR MACHINE ALGORITHM

Xiaotian ZHENG, China Academy of Space Technology@CAST@Space Star Technology Co., Ltd. (SSTC) China Academy of Space Technology (CAST), China

IAC-16.B2.1.8

RELIABLE AND EFFICIENT INTERPLANETARY COMMUNICATION SYSTEM USING A CHAIN OF SATELLITES. PROBES AND ROVERS Shahanshah Alam. Department of Electrical & Electronics Engineering, Babu Banarsi Das National Institute of Technology and Management, Lucknow,, India

IAC-16.B2.1.9

THE STUDY ON SPACE COMMUNICATION AND RELAY SATELLITE

Juan Lu, Beijing Institute of Aerospace Systems Engineering, China

B2.2. Mobile Satellite Communications and **Navigation Technology**

September 27 2016, 09:45 — Salon de Eventos 7

Co-Chair(s): Jean-Paul Aguttes , Centre National d'Etudes Spatiales (CNES), France; Joe M. Straus , The Aerospace Corporation, United States;

Rapporteur(s): Peter Buist , National Aerospace Laboratory (NLR), The Netherlands;

IAC-16.B2.2.1 (withdrawn)

A METHODOLOGY FOR GNSS SYSTEM PERFORMANCE VERIFICATION, A GALILEO SYSTEM PERSPECTIVE. Gaetano Galluzzo, ESA, The Netherlands

IAC-16.B2.2.2

COMPLEX MODELLING AND TESTING OF GLOBAL TELECOMMUNICATION HARDWARE Alexander Kharlan, Yaliny, Russian Federation

IAC-16.B2.2.3

USING LEO COMMUNICATION SATELLITES TO ENHANCE NAVIGATION AND POSITIONING PERFORMANCE FOR GNSS Lidong Zhu, University of electronic science and technology of

IAC-16.B2.2.4

5G NETWORK- STUDY AND CURRENT STATUS Shahanshah Alam, Department of Electrical & Electronics Engineering, Babu Banarsi Das National Institute of Technology and Management, Lucknow,, India

IAC-16.B2.2.5

RELATIVE POSITION AND ATTITUDE DETERMINATION FOR MICRO/ NANO-SATELLITES AND DRONES USING SIGNAL DIRECTION BASED ON ANTENNA ARRAYS

Jiao Wang, National Key Laboratory of Aerospace Flight Dynamic, Northwestern Polytechnical University, China

IAC-16.B2.2.6 (withdrawn)

A NOVEL IMPLEMENTATION OF BEACON RECEIVER USING FPGA Kalpataru Sharma, Indian Space Research Organization (ISRO), India

IAC-16.B2.2.7

TESTING VOR PERFORMANCES IN THE STRATOSPHERE: THE STRATONAV EXPERIMENT Paolo Marzioli, Sapienza - University of Rome, Italy

IAC-16.B2.2.8 (withdrawn)

CONTINUOUS OPERATING REFERENCE STATIONS (CORS) IN NIGERIA: THE CHALLENGES OF ITS OPERABILITY Abdulkareem Umar, , Nigeria

IAC-16.B2.2.9

RESEARCH ON THE INS/CNS/LNS INTEGRATED NAVIGATION SYSTEM FOR THE LEO SPACECRAFT Ye Biao. . China

IAC-16.B2.2.10

OPTIMAL DISPOSAL ORBIT DESIGN FOR MEO NAVIGATION CONSTELLATIONS

Min Hu, Equipment Academy, China

IAC-16.B2.2.11 (withdrawn)

SPECIFIC EMITTER VERIFICATION BASED SECURE SPACE VEHICLE COMMUNICATION

Shaowei Li, China Academy of Launch Vehicle Technology(CALT),

B2.3. Advanced Satellite Services

September 27 2016, 14:45 — Salon de Eventos 7

Co-Chair(s): Eva Maria Aicher, Tesat-Spacecom GmbH & Co. KG, Germany; K.R. Sridhara Murthi, NIAS, India; Rapporteur(s): Enrique Pacheco Cabrera , Agencia Espacial Mexicana (AEM), Mexico;

IAC-16.B2.3.1

SATELLITE RADIO ADVANCED SERVICES/TECHNOLOGY Robert D. Briskman, Sirius XM Radio, United States

IAC-16.B2.3.2 (withdrawn)

SPECTRUM DETECTION BASED ON PARTICLE SWARM SVM Haiyue Li, State Key Laboratory of Astronautic Dynamics, Xi'an Satellite Control Center; Xi'an Jiaotong University, China

IAC-16.B2.3.3 (withdrawn)

A FEM-BASED METHOD RESEARCHING OF ORBIT PROPAGATION Shi Li, Aerospace System Engineering Shanghai, China, China

IAC-16.B2.3.4

SATELLITE COMMUNICATION ADOPTS MULTI-TRANSDUCER NODE DISTRIBUTIVE BEAM FORMING (DBF)

Tong Yang, China Academy of Space Technology (CAST), China

IAC-16.B2.3.5 (withdrawn)

SMALL SATELLITE NAVIGATION, RENDEZVOUS, AND DOCKING SYSTEM: CONCEPT DESIGN AND OPTIMIZATION Eryn Culton, US DoD, United States

IAC-16.B2.3.6

THE ALGORITHMS ANDPERFORMANCE ANALYSIS OF SPACECRAFT INERTIAL NAVIGATION SYSTEM BASED ON ROTATION MODULATION Jingwen Tan, Northwestern Polytechnical University, China

B2.4. Space-Based Navigation Systems and Services

September 28 2016, 09:45 — Salon de Eventos 7

Co-Chair(s): Kristian Pauly , OHB System, Germany; Rita Lollock, The Aerospace Corporation, United States; Rapporteur(s): Norbert Frischauf, , Austria;

IAC-16.B2.4.1 (withdrawn)

DEVELOPING THE FUTURE GALILEO SPACE SEGMENT Noah Saks, Airbus Defence and Space, Germany

IAC-16.B2.4.2 (withdrawn)

ASSESSMENT OF AUXILIARY SPACE-BASED ELEMENTS FOR THE GALILEO 2ND GENERATION SYSTEM Frank te Hennepe, OHB System, Germany

GNSS-RELATED PROJECTS UNDER HORIZON 2020 IN POLAND Michal Moroz, Blue Dot Solutions, Poland

IAC-16.B2.4.4

TOTAL ELECTRON CONTENT (TEC) MONITORING SYSTEM BASED ON

VICTOR JOSE GATICA-ACEVEDO, IPN, Mexico









IAC-16.B2.4.5

GNSS RADIO OCCULTATION: AN AUGMENTATION TOOL TO IMPROVE GEODETIC SURVEYING

Francesco Vespe, Agenzia Spaziale Italiana (ASI), Italy

IAC-16.B2.4.6 (withdrawn)

SWAIR - SPACE WEATHER IMPACT ON GNSS SERVICE FOR AIR NAVIGATION

Tiago Marques, University of Coimbra, Portugal

IAC-16.B2.4.7

PERFORMANCE CHARACTERIZATION OF EGNOS AND DGPS
POSITIONING ON THE DANUBE RIVER

Constantin Alexandru Pandele, Institute for Space Sciences, Romania

B2.4.8 (withdrawn)

THE FUTURE OF GNSS TRAIN CONTROL AND MANAGEMENT SYSTEMS, THE ITALIAN TECHNOLOGICAL INVESTMENTS Claudia Facchinetti, Italian Space Agency (ASI), Italy

IAC-16.B2.4.9

SBAS PERFORMANCE MONITORING AND SIMULATING TOOLS Petr Bares, IGUASSU Software Systems, Czech Republic

IAC-16.B2.4.10

HIGH ACCURACY GNSS BASED NAVIGATION IN GEO Vincenzo Capuano, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland

IAC-16.B2.4.11 (withdrawn)

RESEARCH ON THE RELATIONSHIP OF PERIODIC BEHAVIORS OF GNSS SATELLITE ORBIT AND CLOCK OFFSET Peiyuan Zhou, , China

IAC-16.B2.4.12

A POSSIBLE SPACE VLBI CONSTELLATION NAVIGATION SYSTEM UTILIZING THE STABLE ORBITS AROUND THE TLPS IN THE EARTH-MOON SYSTEM.

Bin Liu, Nanjing University, China

B2.5. Near-Earth and Interplanetary Communications

September 28 2016, 14:45 — Salon de Eventos 7

Co-Chair(s): Manfred Wittig , European Space Agency (ESA), retired, The Netherlands; Ramon P. De Paula , National Aeronautics and Space Administration (NASA), United States; Rapporteur(s): Dipak Srinivasan , The Johns Hopkins University Applied Physics Laboratory, United States;

IAC-16.B2.5.1

NEWSPACE: BUSINESS MODELS AT THE INTERFACE OF SPACE AND DIGITAL ECONOMY - CHANCES IN AN INTERCONNECTED WORLD Norbert Frischauf, SpaceTec Partners SPRL, Belgium

IAC-16.B2.5.2

LESSONS LEARNED FROM 30 YEARS OF EXPERIENCE IN GROUND NETWORKS DESIGN

Petrus Hyvönen, SSC, Sweden

IAC-16.B2.5.3

OPPORTUNITIES AND CHALLENGES OF SATELLITE COMMUNICATIONS IN MARITIME VHF BANDS Nader Alagha, ESA, The Netherlands

IAC-16.B2.5.4

SMALL SATELLITES FOR TELECOMMUNICATIONS AND SCIENCE MISSIONS

Otto Koudelka, Graz University of Technology (TU Graz), Austria

IAC-16.B2.5.5

THE NASA INTERPLANETARY NETWORK AND THE ADOPTION OF COMMUNICATIONS LASERS.

Roberto Cabrera, UPSLP, Mexico

IAC-16.B2.5.6

DESIGN AND DEVELOPMENT OF A SATELLITE ON-BOARD COMMUNICATION SYSTEM WITH NAVIGATION CAPABILITIES Paul Bajanaru, GMV - Romania, Romania

IAC-16.B2.5.7

HIGH PRECISION ONE-WAY DOPPLER MEASUREMENT EXPERIMENT OF NEW HORIZONS BASED ON CHINA'S DEEP SPACE NETWORK ANTENNA

Lue Chen, National Key Laboratory of Science and Technology on Aerospace Flight Dynamics, China

IAC-16.B2.5.8

THE PROPAGATION CHARACTERISTIC OF THE QPSK SIGNALS IN REENTRY PLASMAS

Runhui WU, China Academy of Launch Vechicles Technology, China

IAC-16.B2.5.9

FPGA IMPLEMENTATION OF A HIGH THROUGHPUT ERROR CORRECTING TELE-COMMAND DECODER Rakshith Ramesh, , India

IAC-16.B2.5.10

DESIGN AND HARDWARE IMPLEMENTATION OF CCSDS PROXIMITY-1 PROTOCOL FOR ROVER COMMUNICATION – DATA AND TIMING SERVICES

UNNIKRISHNAN E, ISRO Satellite Centre (ISAC),ISRO, India

B2.6. Advanced Technologies for Space Communications and Navigation

September 29 2016, 09:45 — Salon de Eventos 7

Co-Chair(s): Edward W. Ashford , Graz University of Technology (TU Graz), Austria; Elemer Bertenyi , Canadian Aeronautics and Space Institute, Canada;

Rapporteur(s): Nader Alagha , ESA, The Netherlands;

IAC-16.B2.6.1 (withdrawn)

OUTERNET: THE DEVELOPMENT OF 1U CUBESAT PLATFORMS TO ENABLE LOW-COST GLOBAL DATA PROVISION Syed Karim, Outernet Inc, United States

IAC-16.B2.6.2

DESIGN AND ANALYSIS OF MULTI-BAND PATCH FRACTAL ARRAY WITH OPTIMIZED FEED NETWORK FOR X BAND APPLICATIONS. Advait Kulkarni, , India

IAC-16.B2.6.3

INTEROPERATING NETWORK COMMUNICATIONS ARCHITECTURE (INCA) - AN EVOLVING COMMERCIAL MISSION TO DEMONSTRATE DELAY TOLERANT NETWORK TECHNOLOGIES COMBINED WITH QUALITY OF SERVICE BASED ROUTING FOR SPACE COMMUNICATION SYSTEMS

 ${\it Gary \ Barnhard, \, , \, United \ States}$

IAC-16.B2.6.4

DEVELOP OF AN ADAPTIVE GMSK MODULATOR USING SDR TECHNIQUES IMPLEMENTED IN A FPGA.

Geraldo Salazar Diaz, Insituto de Ingenieria UNAM, Mexico

IAC-16.B2.6.5

ANALYSIS AND MODELING OF TRAFFIC CHARACTERISTICS FOR HIGH-EFFICIENT SCHEDULING IN TDRSS LEI WANG, Tsinghua University, China

IAC-16.B2.6.6 (withdrawn)

SMALL SATELLITE NAVIGATION, RENDEZVOUS, AND DOCKING SYSTEM: CONCEPT DESIGN AND OPTIMIZATION Eryn Culton, US DoD, United States

IAC-16.B2.6.7

NEW RECEIVING GROUND STATION USING ACTIVE PHASED ARRAY ANTENNA FOR SATELLITES

Nobuyuki Kaya, Kobe University, Japan

IAC-16.B2.6.8

THE EXPLOITATION OF SPACE SOLUTIONS TO RESPOND TO GLOBAL REQUESTS OF THE DEVELOPING CIVIL SOCIETY: AN OVERVIEW ON THE ITALIAN ACTIVITIES IN THE ARTES ADVANCED TECHNOLOGIES AND PRODUCTS FRAMEWORK FOR SATCOM AND NAVIGATION Orietta Lanciano, ASI - Italian Space Agency, Italy

IAC-16.B2.6.9

SIMULATION AND IMPLEMENTATION OF COGNITIVE RADIO ALGORITHMS FOR SATELLITE COMMUNICATIONS Pedro Rodrigues, Tekever, Portugal

IAC-16.B2.6.10

EFFECTS OF INCLINOMETER ERROR ON STAR SENSOR POSITION ACCURACY

Shabnam Yazdani, K. N. Toosi University of Technology, Iran

IAC-16.B2.6.11

STUDY OF LASER DIODE DEGRADATION IN A GAMMA RADIATION ENVIRONMENT FOR OPTICAL COMMUNICATIONS Yair Israel Piña López, Universidad Nacional Autónoma de México,

IAC-16.B2.6.12

RESEARCH ON WIDE-BAND SPECTRUM SENSING FOR THE COMMUNICATION SATELLITE BASED ON COMPRESSIVE SAMPLING Jianjun Zhang, China Academy of Space Technology (CAST), China

IAC-16.B2.6.13

RESEARCH ON NETWORKING COMMUNICATION TECHNOLOGY BASED ON SMALL SPACECRAFT

Peng Qin, China Academy of Launch Vehicle Technology(CALT), China

IAC-16.B2.6.14 (withdrawn)

FEDERATED VECTOR TRACKING FOR SPACE VEHICLE NAVIGATION IN HIGH EARTH ORBITS

Sara Pourdaraei, Beijing University of Aeronautics and Astronautics, China

B2.7. Advanced Space Communications and Navigation Systems

September 30 2016, 13:30 — Salon de Eventos 7

Co-Chair(s): Amane Miura , National Institute of Information and Communications Technology, Japan; Morio Toyoshima, National Institute of Information and Communications Technology, Japan;

Rapporteur(s): Giovanni B. Palmerini , Universita' di Roma 'La Sapienza', Italy;

IAC-16.B2.7.1

ADVANCED HIGH THROUGHPUT COMMUNICATION SATELLITES Manfred Wittig, European Space Agency (ESA), retired, The Netherlands

IAC-16.B2.7.2

A STUDY OF HTS NETWORK LOAD OPTIMIZATION BASED ON SUBSCRIBERS BEHAVIOR ANALYSIS

Xiaotian ZHENG, China Academy of Space Technology@CAST®Space Star Technology Co., Ltd. (SSTC) China Academy of Space Technology (CAST), China

IAC-16.B2.7.3

LEO-TO-GROUND OPTICAL COMMUNICATIONS USING SOTA (SMALL OPTICAL TRANSPONDER) –PAYLOAD VERIFICATION RESULTS AND EXPERIMENTS ON SPACE QUANTUM COMMUNICATIONS—
Alberto Carrasco-Casado, National Institute of Information and Communications Technology, Japan

IAC-16.B2.7.4 (withdrawn)

STUDY ON DEVELOPMENT OF NEXT GENERATION DATA RELAY SATELLITE SYSTEM

Zhengan Zhai, Beijing Space Information Relay and Transmission Technology Research Center (BSIR), China

IAC-16.B2.7.5

FROM PROTOTYPE TECHNOLOGY TO FLIGHT: INFUSING THE FRONTIER RADIO INTO SPACE MISSIONS
Dipak Srinivasan, The Johns Hopkins University Applied Physics
Laboratory, United States

IAC-16.B2.7.6

DYNAMIC COMPENSATION OF DETERIORATED ANTENNA PATTERN BY DEFORMATION OF LARGE DEPLOYABLE REFLECTOR OF MOBILE COMMUNICATION SATELLITE.

Maki Akioka, National Institute of Information and Communications Technology, Japan

IAC-16.B2.7.8 (withdrawn)

THE ITALIAN APPROACH FOR CIVIL AVIATION: THE ADOPTION OF NEW NAVIGATION SYSTEMS AND APPLICATIONS Claudia Facchinetti, Italian Space Agency (ASI), Italy

IAC-16.B2.7.7 (withdrawn)

INTER SATELLITE COMMUNICATION MODULES FOR ARAMIS SMALL SATELLITES

M.Rizwan Mughal, Institute of Space Technology (IST), Pakistan

IAC-16.B2.7.9 (withdrawn)

SENSABILITY AND EXCITABILITY METRICS APPLIED TO NAVIGATION SYSTEMS ASSESSMENT Martin Espana, National Space Activities Commission (CONAE),

Martin Espana, National Space Activities Commission (CONAE), Argentina

IAC-16.B2.7.10

HANDOFF MANAGEMENT AND PERFORMANCE OPTIMIZATION OF SATELLITE NETWORK BASED ON CROSS-LAYER DESIGN AND NETWORK CODING

Wang Chunfeng, China Academy of Space Technology (CAST), China

IAC-16.B2.7.11

THE EVALUATION RESULTS OF SIGNAL PROCESSOR SECTION OF THE SATELLITE COMMUNICATION FACILITIES UNDER CONDITION OF A VERY ROUGH RADIO ENVIRONMENT

ISAO NAKAZAWA, National Institute of Information and Communications Technology, Japan

IAC-16.B2.7.12

RESEARCH ON COMPENSATION FOR SCALE FACTOR OF RATE BIASED RLG POSITION AND ORIENTATION SYSTEM

Xu Binghua, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, Xi'an, China, China

B2.8-GTS.3. Space Communications and Navigation Global Technical Session

September 29 2016, 14:45 — Joya 1&2

Co-Chair(s): Edward W. Ashford , Graz University of Technology (TU Graz), Austria; Kevin Shortt , Canadian Space Society, Germany;

Rapporteur(s): Stephanie Wan , Space Generation Advisory Council (SGAC), United States;

IAC-16.B2.8-GTS.3.1

THE GPS L1 ACQUISITION-TRACKING TRANSITION METHOD OF HIGH SENSITIVITY AND DYNAMIC FOR HEO ORBIT Jia Tian, China Academy of Space Technology (Xi'an), China

IAC-16.B2.8-GTS.3.2

DEVELOPMENT OF NAVIGATION SATELLITE SYSTEM AND APPLICATION CHARACTERISTIC ANALYSIS

Jie Xin, Engineer, China

IAC-16.B2.8-GTS.3.3

GROUNDS FOR TURKISH DATA RELAY SYSTEM
CELAL DUDAK, TUBITAK Uzay, Space Technologies Research
Institute, Turkey









IAC-16.B3.3.7

IAC-16.B2.8-GTS.3.6

SIMULATION OF INFORMATION TRANSFER ON QUANTUM-BASED SATELLITE NETWORK

István Vercseg, University of West Hungary, Hungary

und Raumfahrt e.V. (DLR), Germany;

COMMUNICATION IN VHF BAND SNEHA VELAYUDHAN, Rochester Institute Of Technology, United

IAC-16.B2.8-GTS.3.8

COMPARISON BETWEEN GENERATION OF ANALOG AND DIGITAL QPSK MODULATION FOR SATELLITES COMMUNICATION SYSTEMS Mohamed Elhady Keshk, Kyushu Institute of Technology, Japan

IAC-16.B2.8-GTS.3.9 FPGA IMPLEMENTATION OF A HIGH THROUGHPUT ERROR CORRECTING TELE-COMMAND DECODER

IAC-16.B2.8-GTS.3.10 (withdrawn)

Nil Angli, Surrey Satellite Technology Ltd (SSTL), United Kingdom

B2.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Manfred Wittig, European Space Agency (ESA), retired, The Netherlands; Otto Koudelka , Joanneum Research, Austria;

IAC-16.B2.IP.1

ENVIRONMENTS USING GNSS MULTIPATH PROPAGATION MODEL

IAC-16.B2.IP.2

CONNECTIVITY FOR YOUR CITIZENS Susana Villanueva, Thales Alenia Space, France

IAC-16.B2.IP.3

PARABOLIC ANTENNAS THAT TRACK LOW ORBIT SATELLITES FROM EARTH STATIONS BASED ON A HEXAPOD STEWART PLATFORM TYPE VICTOR AGUILAR. . Mexico

IAC-16.B2.IP.4

A COMPACT AND RELIABLE METHODOLOGY TO DESIGN OSCILLATOR AT S-BAND FREQUENCIES SUITABLE FOR SATELLITES COMMUNICATIONS SYSTEMS

J. Raul Loo-Yau. . Mexico

IAC-16.B2.IP.5

SBAS PERFORMANCE MONITORING AND SIMULATING TOOLS Petr Bares, IGUASSU Software Systems, Czech Republic

B3. HUMAN SPACEFLIGHT SYMPOSIUM

Coordinator(s): Cristian Bank, Rovsing A/S, Denmark; Support(s): Guillaume Girard , INSYEN AG, Germany;

B3.1. Governmental Human Spaceflight Programs (Overview)

September 26 2016, 15:15 — Guadalajara Hall Salon 2

Co-Chair(s): Carlo Mirra , Airbus Defence & Space, Germany; Kevin D. Foley , The Boeing Company, United States; Rapporteur(s): Rainer Willnecker, Deutsches Zentrum für Luft-

IAC-16.B3.1.1

BEYOND THE INTERNATIONAL SPACE STATION William H. Gerstenmaier, National Aeronautics and Space Administration (NASA), United States

IAC-16.B3.1.2

THE INTERNATIONAL SPACE STATION: THE FIRST STEP ON THE JOURNEY TO MARS

Kirk Shireman, NASA Johnson Space Center, United States

IAC-16.B3.1.3

ASTEROID REDIRECT MISSION Michele Gates, NASA Headquarters, United States

IAC-16.B3.1.4

ESA SPACE EXPLORATION STRATEGY AND PROGRAMMES

Thomas Reiter, European Space Agency (ESA), The Netherlands IAC-16.B3.1.5

JAXA'S INITIATIVE ON HUMAN SPACEFLIGHT PROGRAM FOR ISS

Takashi Hamazaki, Japan Aerospace Exploration Agency (JAXA),

IAC-16.B3.1.6

CANADA AND THE INTERNATIONAL SPACE STATION PROGRAM: OVERVIEW AND STATUS SINCE IAC 2015 Timothy Braithwaite, Canadian Space Agency, United States

NEW PROGRESS OF CHINA HUMAN SPACEFLIGHT TECHNOLOGY Chuanfeng Wei, Institute of Manned Space System Engineering, China Academy of Space Technology (CAST), China

IAC-16.B3.1.8 (withdrawn)

ORION PROGRAM PRODUCTION READINESS

Scott Norris, Lockheed Martin Space Systems Company, United

IAC-16.B3.1.9

THE ORBITAL-HUB: LOW COST PLATFORM FOR HUMAN SPACEFLIGHT AFTER ISS

Oliver Romberg, Deutsches Zentrum für Luft- und Raumfahrt e.V.

B3.2. Commercial Human Spaceflight

September 27 2016, 09:45 — Guadalajara Hall Salon 2

Co-Chair(s): Michael E. Lopez Alegria, MLA Space, LLC, United States; Michael W. Hawes, Lockheed Martin Corporation, United States; Sergey K. Shaevich, Khrunichev State Research & Production Space Center, Russian Federation;

IAC-16.B3.2.1

LAUNCH. LAND. REPEAT. Ariane Cornell, Blue Origin LLC, IAC-16.B3.2.2

LEGAL CONSIDERATIONS FOR FLYING ASTRONAUTS ON COMMERCIAL SPACE VEHICLES

Margaret Roberts, National Aeronautics and Space Administration (NASA), United States

IAC-16.B3.2.3

SPACE COMMERCIAL FLIGHTS - THE PAST, THE PRESENT AND

Alexander G. Derechin, S.P. Korolev Rocket and Space Corporation Energia, Russian Federation

Pengxin Han, China Academy of Launch Vehicle Technology, China

SPACESHIPTWO: A SUBORBITAL VEHICLE FOR HUMAN SPACEFLIGHT AND MICROGRAVITY RESEARCH

IAC-16.B3.2.6

ABOUT THE POSSIBILITY OF USE ANTHROPOMORPHIC MANIPULATORS AND TRANSPORT ROBOTIC SYSTEMS TO CREATE THE COMMERCIAL SYSTEM FOR ENERGY, COMMUNICATIONS AND LOGISTICS SUPPORT ON THE MOON SURFACE Olea Saprykin, TSNIIMASH, Russian Federation

IAC-16.B3.2.7

THE DREAM CHASER® PROGRAM'S PATH TO CREWED MISSIONS Kathryn Benzin, Sierra Nevada Corporation, United States

IAC-16.B3.2.8

ANALYSIS OF THE SIMILARITIES AND DIFFERENCES BETWEEN AVIATION TOURISM AND SUBORBITAL TOURISM DEVELOPMENT

IAC-16.B3.2.9

BOEING CST-100 STARLINER UPDATE Chrisopher Ferguson, Boeing, United States

IAC-16.B3.2.10

SPACEX CREW DRAGON UPDATE Garrett Reisman, SpaceX, United States

B3.3. Utilization & Exploitation of Human Spaceflight Systems

September 27 2016, 14:45 — Guadalajara Hall Salon 2

Maria Stella Lavitola, Thales Alenia Space Italia, Italy; Rapporteur(s): Shannon Ryan , Defence Science and Technology Organisation (DSTO), Australia;

IAC-16.B3.3.1

INTERNATIONAL RESEARCH RESULTS AND ACCOMPLISHMENTS FROM THE INTERNATIONAL SPACE STATION--A NEW COMPILATION Tara Ruttley, National Aeronautics and Space Administration

IAC-16.B3.3.2

ESA'S FUTURE UTILISATION PROGRAMME FOR THE ISS AND **COMPLEMENTARY PLATFORMS** Jason Hatton, European Space Agency (ESA), The Netherlands

IAC-16.B3.3.3

RUSSIAN ISS RESEARCH PROGRAM

George Karabadzhak, Central Research Institute for Machine Building (FGUP TSNIIMASH), Russian Federation

IAC-16.B3.3.4

CANADIAN SPACE AGENCY UTILISATION OF THE INTERNATIONAL SPACE STATION IN 2015

IAC-16.B3.3.5

THE FIRST JAXA MICE EXPERIMENT IN KIBO OPERATIONS, ITS UNIQUE FEATURES AND OPERATIONAL CONSIDERATIONS Keiichiro Sakagami, Japan Aerospace Exploration Agency (JAXA),

IAC-16.B3.3.6

ORPHAN DRUG DEVELOPMENT FOR DUCHENNE MUSCULAR DYSTROPHY BY PROTEIN CRYSTALLIZATION IN SPACE Yoshihiro Urade, Osaka Bioscience Institute, Japan

OPPORTUNITIES FOR LOW-EARTH ORBIT UTILIZATION, CURRENT AND FUTURE

Jeffrey Manber, Nanoracks LLC, United States

IAC-16.B3.3.8

DEEP SPACE COMMONALITY AND STANDARDS CONCEPTS Matthew Duagan, The Boeing Company, United States

IAC-16.B3.3.9

CONCEPTUAL DESIGN OF A HUMAN SPACEFLIGHT PLATFORM AS ISS SUCCESSOR

Marius Schwinning, University of Stuttgart, Germany

IAC-16.B3.3.10

LIFE IN LOW-EARTH ORBIT AFTER THE INTERNATIONAL SPACE

Sam Scimemi, National Aeronautics and Space Administration (NASA), United States

B3.4-B6.5. Flight & Ground Operations of HSF Systems – Joint Session of the Human **Spaceflight and Space Operations Symposia**

September 28 2016, 09:45 — Guadalajara Hall Salon 2

Co-Chair(s): Dieter Sabath , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Helmut Luttmann , Airbus Defence and Space - Space Systems, Germany; Rapporteur(s): Rachid Amekrane, Airbus DS GmbH, Germany;

IAC-16.B3.4-B6.5.1

BARTOLOMEO - COMMERCIAL EXTERNAL PAYLOAD HOSTING FACILITY ON ISS

Christian Steimle, Airbus Defence and Space, Germany

IAC-16.B3.4-B6.5.2

ADAPTING COLUMBUS OPERATIONS AND PROVIDING A BASIS FOR **FUTURE ENDEAVOURS**

Jan Marius Bach, DLR (German Aerospace Center), Germany

IAC-16.B3.4-B6.5.3 (withdrawn)

DESIGNING, IMPLEMENTING AND DEPLOYING AN INNOVATIVE VOICE COMMUNICATION SYSTEM FOR NEXT GENERATION OPS CONCEPTS AT THE GERMAN SPACE OPERATIONS CENTER AND THE EUROPEAN ASTRONAUT TRAINING CENTER. Markus Töpfer, German Aerospace Center (DLR), Berlin, Germany

IAC-16.B3.4-B6.5.4

THE EUROPEAN ASTRONAUT CENTRE (EAC), MOVING FROM ISS TO THE FUTURE SPACE EXPLORATION

Victor Demaria-Pesce, ESA european space agency, Germany

COMMERCIAL UTILIZATION OF EUROPEAN ISS ELEMENTS Hauke Ernst, Airbus Defence and Space, Germany

IAC-16.B3.4-B6.5.6

A MISSION PLANNING SYSTEM FOR SPACE STATION OPERATION Dongyang Qiu, National University of Defense Technology, China

IAC-16.B3.4-B6.5.7 (withdrawn)

DESIGN AND REALIZATION OF PAYLOAD OPERATION AND APPLICATION GROUND SYSTEM OF CHINA'S SPACE STATION Hongfei Wang, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China

RESEARCH ON DESIGN OF SATELLITE NAVIGATION SIGNAL STRUCTURE Jie Xin, Engineer, China

IAC-16.B2.8-GTS.3.5

IAC-16.B2.8-GTS.3.4

STUDY ON DEVELOPMENT OF NEXT GENERATION DATA RELAY

Zhengan Zhai, Beijing Space Information Relay and Transmission Technology Research Center (BSIR), China

IAC-16.B2.8-GTS.3.7

A LOW-COST MOBILE GROUND STATION FOR SATELLITE

States

Rakshith Ramesh, India

BUSINESS BEYOND THE 70S, A COST-EFFECTIVE APPROACH TO

DETECTION OF GNSS SIGNALS PROPAGATION IN URBAN Petra Pisova. . Czech Republic

DESIGN AND IMPLEMENTATION OF A POSITIONING SYSTEM FOR

IAC-16.B3.2.4 A SMALL SCALE COMMERCIAL SUBORBITAL TOURISM VEHICLE

Sirisha Bandla, Virgin Galactic L.L.C, United States

Eva Yi-Wei Chang, University of Science & Technology, Taiwan,

Co-Chair(s): Kevin D. Foley , The Boeing Company, United States;

(NASA)/Johnson Space Center, United States

Nicole Buckley, Canadian Space Agency, Canada









IAC-16.B3.4-B6.5.8

CONCEPTUAL DESIGN OF A MOBILE PARALLEL SYMMETRY ROBOT FOR IN SPACE ASSEMBLY

Ling-bin ZENG, Shanghai Aerospace System Engineering Institute,

IAC-16.B3.4-B6.5.9

SPACE STATION'S ROBOTIC ARM DURING CAPTURE SATELLITE AND FUZZY NEURAL NETWORK SLIDING MODE CONTROL FOR COMPOUND BODY STABLE MOVEMENT

Jie Liang, , China

IAC-16.B3.4-B6.5.10

INTERORBITAL TOW WITH POWER SUPPLY SYSTEM ON FUEL ELEMENTS.

Sergei Matvienko, Yuzhnoye SDO European Representation, Ukraine

IAC-16.B3.4-B6.5.11

"QUASI-COPLANAR INSERTION" TO IMPLEMENT QUICK TWO-ORBIT RENDEZVOUS PROFILE OF SOYUZ SPACECRAFT

Rafail Murtazin, Rocket Space Corporation Energia, Russian

B3.5. Astronaut Training, Accommodation, and Operations in Space

September 29 2016, 09:45 — Guadalajara Hall Salon 2

Co-Chair(s): Alan T. DeLuna, ATDL Inc., United States; Igor V. Sorokin , S.P. Korolev Rocket and Space Corporation Energia, Russian Federation:

Rapporteur(s): Keiichi Murakami , Japan Aerospace Exploration Agency (JAXA), Japan;

ISSUES OF CREW TRAINING FOR INTERPLANETARY MISSIONS Igor G. Sokhin, Yu.A. Gagarin Research and Test Cosmonaut Training Center, Russian Federation

IAC-16.B3.5.3

MAIN RESULTS OF TRAINING AND ACTIVITY OF THE ISS-43/44/45/46 CREW IN THE COURSE OF A ONE-YEAR MISSION ABOARD THE ISS

Andrey Kuritsin, Gagarin Cosmonaut Training Center, Russian

IAC-16.B3.5.4

3D VISUAL TRAINING FOR OPERATIONS ON-BOARD THE INTERNATIONAL SPACE STATION AND BEYOND Frank Nicolini, ESA, European Astronaut Centre (EAC), Germany

IAC-16.B3.5.5

HOW TO PREVENT MIND-WANDERING DURING EN EVA? PRESENTATION OF A MIND-WANDERING DETECTION METHOD USING ECG TECHNOLOGY IN A MARS-ANALOG ENVIRONMENT. Camille Gontier, SUPAERO- Ecole Nationale Supérieure de l'Aéronautique et de l'Espace, France

IAC-16.B3.5.6

USING TACTILE HAPTICS IN PLANETARY SPACESUITS AS A SPATIAL DISORIENTATION TRAINING TOOL

Poonampreet Kaur Josan, University of North Dakota, United States

B3.6-A5.3. Human and Robotic Partnerships in Exploration - Joint session of the Human **Spaceflight and Exploration Symposia**

September 29 2016, 14:45 — Guadalaiara Hall Salon 2

Co-Chair(s): Christian Sallaberger , Canadensys Aerospace Corporation, Canada; Mark Hempsell, Hempsell Astronautics Limited, United Kingdom;

Rapporteur(s): Juergen Schlutz, Deutsches Zentrum für Luftund Raumfahrt e.V. (DLR), Germany;

IAC-16.B3.6-A5.3.1

ABOUT RESULTS OF COMPARING THE EFFECTIVENESS OF DIFFERENT SCENARIO FOR LUNAR EXPLORATION Oleg Saprykin, TSNIIMASH, Russian Federation

IAC-16.B3.6-A5.3.2

THE UTILIZATION OF ISS CANADIAN ROBOTICS TO ADVANCE VARIABLE AUTONOMY ROBOTIC TECHNIQUES AND TECHNOLOGIES FOR FUTURE DEEP SPACE EXPLORATION MISSIONS FROM CISLUNAR SPACE TO MARS

Richard Rembala, MDA, Canada

IAC-16.B3.6-A5.3.3

SPECIAL ROBOTICS FOR COSMONAUTS SUPPORT ON THE INTERNATIONAL SPACE STATION AND PERSPECTIVE ORBITAL STATIONS APPLYING

Vladislav Sychkov, SPA "Android Technics", Russian Federation

IAC-16.B3.6-A5.3.4

ASTRONAUT-ROBOT INTERACTION FOR COOPERATIVE MANIPULATION ON EXTRATERRESTRIAL SURFACES: OBJECT TRANSFER TO ONE ANOTHER THROUGH VISUAL SERVOING AND GESTURE CONTROL

Pradyumna Nanda Vyshnav, Aalto University, Finland

IAC-16.B3.6-A5.3.5

APPLICATION OF VIRTUAL REALITY TECHNOLOGIES FOR ERGONOMIC STUDIES OF INTERACTION BETWEEN COSMONAUTS AND HUMANOID ROBOTIC ASSISTANT

Igor G. Sokhin, Yu.A. Gagarin Research and Test Cosmonaut Training Center, Russian Federation

IAC-16.B3.6-A5.3.6 (withdrawn)

TELE-ROBOTIC BASALT CONSTRUCTION AND TESTING OF A VERTICAL TAKEOFF, VERTICAL LANDING PAD PROTOTYPE FOR LUNAR/MARS OPERATIONS

Rodrigo Romo, Pacific International Space Center for Exploration Systems (PISCES), United States

IAC-16.B3.6-A5.3.7

VIRTUAL PROTOTYPING OF HUMAN-MASHINE INTERACTION FOR REMOTE CONTROL OF SPACE AUTONOMOUS MANIPULATION ROBOTS BASED ON AUGMENTED REALITY TECHNOLOGY Alexey Karpov, , Russian Federation

IAC-16.B3.6-A5.3.8

HUMAN ROBOTIC PARTNERSHIP DURING EIFEL VOLCANIC AREA SIMULATION CAMPAIGN

Bernard Foing, ESA/ESTEC, The Netherlands

IAC-16.B3.6-A5.3.9

THE USE OF ELECTROENCEPHALOGRAPHY FOR CONTROLLING ROBOTIC ASSISTANTS DURING PLANETARY SURFACE EVAS Yuval Brodsky, Newton VR Ltd., Israel

IAC-16.B3.6-A5.3.10

PATH PLANNING ALGORITHM FOR OBSTACLE AVOIDANCE OF MULTI-ARM SPACE WALKING ROBOT

Xiaoyu Chu, Beijing Institute of Technology, China

B3.7. Advanced Systems, Technologies, and **Innovations for Human Spaceflight**

September 30 2016, 09:45 — Guadalajara Hall Salon 2

Co-Chair(s): Lionel Suchet , Centre National d'Etudes Spatiales (CNES), France; Sebastien Barde, Centre National d'Etudes Spatiales (CNES), France;

Rapporteur(s): Gi-Hyuk Choi, Korea Aerospace Research Institute (KARI), Korea, Republic of;

IAC-16.B3.7.1

RESULTS AND RECOMMENDATIONS OF A MOON AND MARS HUMAN EXPLORATION READINESS GAP ANALYSIS AND ROADMAP

Petrus Batenburg, Nederlandse Vereninging voor Ruimtevaart (NVR), The Netherlands

IAC-16.B3.7.2 (withdrawn)

NASA'S ADVANCED EXPLORATION SYSTEMS: INNOVATIVE APPROACHES TO SPACE SYSTEMS DESIGN AND DEVELOPMENT Jason Crusan, NASA, United States

IAC-16.B3.7.3

CONCEPTS FOR JOINT INTERNATIONAL EXPLORATION MODULES Matthew Duggan, The Boeing Company, United States

IAC-16.B3.7.4

ORION EUROPEAN SERVICE MODULE ON THE WAY TO FIRST FLIGHT MODEL DELIVERY

Markus Jäger, Airbus Defence & Space, Space Systems, Germany

IAC-16.B3.7.5 (withdrawn)

ASSESSMENT OF THE ORION-SLS INTERFACE MANAGEMENT PROCESS IN ACHIEVING THE EIA 731.1 SYSTEMS ENGINEERING CAPABILITY MODEL GENERIC PRACTICES LEVEL 3 CRITERIA Shamim Rahman, National Aeronautics and Space Administration (NASA)/Stennis Space Center, United States

IAC-16.B3.7.6

DESIGN STATUS OF THE LIFE SUPPORT RACK ACLS FOR ACCOMMODATION ON THE ISS AND BEYOND Klaus Bockstahler, EADS Astrium Space Transportation, Germany

IAC-16.B3.7.7

STARARM: PERSONAL ROBOTIC ARM

Chrishma Singh-Derewa, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-16.B3.7.8

PROOF OF CONCEPT DEMONSTRATION OF NOVEL TECHNOLOGIES FOR LUNAR SPACESUIT DUST MITIGATION

Kavya K. Manyapu, The Boeing Company, United States

INVESTIGATION OF TETHERED ARTIFICIAL GRAVITY VEHICLE CONCEPTS FOR MANNED MARS EXPLORATION Emily Petersen, , United States

IAC-16.B3.7.10

A FEASIBLE, NEAR-TERM APPROACH TO HUMAN STASIS FOR LONG-**DURATION DEEP SPACE MISSIONS**

Mark Schaffer, SpaceWorks Enterprises, Inc., United States

IAC-16.B3.7.11

SOFT AND ENERGY-EFFICIENT ROBOTIC CAPTURE OF TUMBLING SPACECRAFTS

Silvio Cocuzza, Space Mechatronic Systems Technology Laboratory, University of Strathclyde, United Kingdom

B3.8-E7.7. Joint IAF-IISL Session on the Legal **Framework for Collaborative Space Activities**

September 30 2016, 13:30 — Guadalajara Hall Salon 2

Co-Chair(s): Bernhard Schmidt-Tedd , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Cristian Bank, Roysing A/S. Denmark:

Rapporteur(s): Olga Stelmakh-Drescher, Institute of Air and Space Law, McGill University, Canada;

IAC-16.E7.7-B3.8.1

INTERNATIONAL COOPERATION IN CHINA'S SPACE UNDERTAKINGS: MELTING DOWN POLITICAL OBSTACLES THROUGH LEGAL MEANS Xiaodan Wu, China Central University of Finance and Economics,

IAC-16.E7.7-B3.8.2

BUILDING BLOCKS FOR INTERNATIONAL COOPERATIVE AGREEMENT IN THE SPACE SECTOR

Philippe Clerc, Centre National d'Etudes Spatiales (CNES), France

IAC-16.E7.7-B3.8.3

THE CHALLENGES OF THE LEGISLATIVE BASE AS APPLIED TO THE COLLABORATIVE SPACE PROGRAMS IN MULTISECTORAL ECONOMY Yuri Makarov, Peoples' Friendship University of Russia, Russian Federation

IAC-16.E7.7-B3.8.4

THE INTER-AGENCY SPACE DEBRIS COORDINATION COMMITTEE: A COLLABORATIVE EFFORT AND ITS EFFECTS ON NORM-MAKING Alexander Soucek, European Space Agency (ESA), France

IAC-16.E7.7-B3.8.5

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION COOPERATION WITH LATIN AMERICA, THE MIDDLE EAST AND **AFRICA**

Robin Frank, National Aeronautics and Space Administration (NASA), United States

IAC-16.E7.7-B3.8.6 (withdrawn)

FUTURE OF REGIONAL CO-OPERATION IN AFRICAN SPACE POLICIES, GOVERNANCE AND LEGAL TOOLS. Nomfuneko Irene Majaja, , South Africa

B3.9-GTS.2. Human Spaceflight Global **Technical Session**

September 28 2016, 14:45 — Joya 1&2

Co-Chair(s): Cristian Bank, Rovsing A/S, Denmark; Guillaume Girard , INSYEN AG, Germany;

IAC-16.B3.9-GTS.2.1

ORION: LESSONS FROM EFT-1 AND EM-1, AA-2, AND EM-2 STATUS Scott Norris, Lockheed Martin Space Systems Company, United States

IAC-16.B3.9-GTS.2.3 (withdrawn)

HIPS: A CONCEPT STUDY TO USE HAPTIC INTEGRATION TECHNOLOGY IN PLANETARY SPACESUITS FOR SENSORY **DEGRADATION MITIGATION**

Poonampreet Kaur Josan, University of North Dakota, United States IAC-16.B3.9-GTS.2.4

ADVANCED MEDICAL TECHNOLOGIES IN SUPPORT OF MANNED COMMERCIAL SPACE FLIGHTS

Melchor Antunano, U.S. Federal Aviation Administration (FAA), **United States**

IAC-16.B3.9-GTS.2.5

EXAMINING THE VALUE OF MOUNTAINEERING EXPEDITIONS FOR SKILL DEVELOPMENT AND LEARNING TRANSFER: IMPLICATIONS FOR ASTRONAUT SURVIVAL TRAINING Nathan Smith, University of Northampton, United Kingdom

IAC-16.B3.9-GTS.2.6 (withdrawn)

"ASTRONAUT 2.0": CONNECTING THE PHYSICAL AND SOCIAL PERCEPTIONS ON HUMAN IDENTITY, FORM AND FUNCTION IN SPACE TO DEFINE THE PARAMETERS OF SPACE FARING INDIVIDUALS Sara Langston, Senmurv Consulting LLC, United States

IAC-16.B3.9-GTS.2.7

SIMULATING LONG DURACTION DEEP SPACE MISSIONS Eleanor Morgan, United States

B3.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Cristian Bank , Rovsing A/S, Denmark; Martin Zell, European Space Agency (ESA), The Netherlands;

IAC-16.B3.IP.1 (withdrawn)

INNOVATIVE PASSIVE THERMAL CONTROL SYSTEMS FOR MANNED SPACE MODULES AND VALIDATION ON-BOARD THE INTERNATIONAL SPACE STATION

Filomena Iorizzo, Argotec, Italy

International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico









THE CONCEPT OF USING ANTHROPOMORPHIC ROBOTS DURING HUMAN EXPLORATION OF THE MOON

Oleg Saprykin, TSNIIMASH, Russian Federation

IAC-16.B3.IP.3 (withdrawn)

ATOMIC CLOCKS ENSEMBLE IN SPACE OPERATIONS. THE ISS EXTERNAL SCIENTIFIC PAYLOAD LOOKING FOR EXPERIMENTAL CONFIRMATIONS ON THE GENERAL RELATIVITY THEORY Mauro Augelli, Centre National d'Etudes Spatiales (CNES), France

RING SPACE STATIONS OF NEWST GENERATION Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

IAC-16.B3.IP.5

NEW PROJECT OF PRIVATE SCIENTIFIC AND COMMERCIAL PILOTED EXPEDITION TO MARS AND PHOBOS.

Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

IAC-16.B3.IP.6

SPACE ROBOTIC SYSTEMS FOR ASTRONAUTS' SUPPORT DURING FUTURE SPACE MISSIONS AND ON-PLANET ACTIVITY. Olga Emeldyashcheva, TSNIIMASH, Russian Federation

B4. 23rd IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS

Coordinator(s): Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), United Kingdom; Rhoda Shaller Hornstein, United States:

B4.1. 17th Workshop on Small Satellite **Programmes at the Service of Developing** Countries

September 27 2016, 09:45 — Tequila

Co-Chair(s): Sias Mostert , Space Commercial Services Holdings (Pty) Ltd, South Africa; Werner R. Balogh, United Nations,

Rapporteur(s): Danielle Wood , National Aeronautics and Space Administration (NASA), United States; Pierre Molette, , France; Sergei Chernikov , , Austria;

IAC-16.B4.1.1

CAPACITY BUILDING IN SPACE TECHNOLOGY DEVELOPMENT: ACTIVITIES OF THE UNITED NATIONS BASIC SPACE TECHNOLOGY INITIATIVE

Werner R. Balogh, United Nations, Austria

IAC-16.B4.1.2

THE 3 LEVELS OF SMALL SATELLITE CAPACITY BUILDING. EXPLAINED WITH REAL WORLD EXAMPLES.

Tom Segert, Berlin Space Technologies GmbH, Germany

IAC-16.B4.1.3

NANOSATELLITES: ACTUAL MISSION THAT CAN PERFORM Natalia Indira Vargas-Cuentas, , Bolivia

IAC-16.B4.1.4

BIRDS PROJECT: AN INNOVATIVE WAY TO EDUCATE POST-GRADUATE STUDENTS FROM DEVELOPING COUNTRIES George Maeda, Kyushu Institue of Technology, Japan

IAC-16.B4.1.5 (withdrawn)

SATREC INITIATIVE AND ITS INTERNATIONAL COLLABORATION IN EARTH OBSERVATION MISSIONS

Sungdong Park, Satrec Initiative, Korea, Republic of

IAC-16.B4.1.6

THE RADICE-LAWAL CONSTELLATION: THE GATEWAY TO TECHNOCRATIC LIBERATION OF DEVELOPING NATIONS Abdul Lawal, University of Glasgow, Space Advanced Research Team, United Kingdom

IAC-16.B4.1.7 (withdrawn)

NANO-SATELLITE AS A CAPACITY BUILDING TOOL FOR CHILE'S SPACE CAPABII ITIES

Alejandro Lopez Telgie, , Chile

IAC-16.B4.1.8

IRAZÚ: CUBESAT MISSION ARCHITECTURE AND DEVELOPMENT Marco Gomez Jenkins, Costa Rica Institute of Technology (ITCR),

IAC-16.B4.1.9

OPPORTUNITIES OF SSAU SPACE SCIENTIFIC-EDUCATIONAL PROGRAMS FOR DEVELOPING COUNTRIES Igor V. Belokonov, Samara State Aerospace University (SSAU),

Russian Federation IAC-16.B4.1.10

INCA PROGRAM FOR DEVELOPING A NANOSATELLITE AT THE UCH Avid Roman-Gonzalez, Universidad de Ciencias y Humanidades -UCH. Peru

IAC-16.B4.1.11

IKUNS: ITALIAN KENYAN UNIVERSITY NANO SATELLITE Lorenzo Arena, University of Rome "La Sapienza", Italy

IAC-16.B4.1.12

SWEET CUBESAT - WATER DETECTION AND WATER QUALITY MONITORING FOR THE 21ST CENTURY

Kelly Antonini, Technische Universität München, Germany

DEVELOPMENT OF THE SATELLITE PLATFORM QUETZAL FOR MONITORING THE POLLUTION EMISSION COLUMN AND THE REMOTE SENSING OF NATIONAL TERRITORY.

Carlos Romo Fuentes, Facultad de Ingeniería-UNAM, Mexico

IAC-16.B4.1.14

THERMAL TESTS FOR CUBESAT IN BRAZIL: LESSONS LEARNED AND THE CHALLENGES FOR THE FUTURE.

George Fernandes, National Institute for Space Research - INPE.

IAC-16.B4.1.15

REGULATION OF SMALL SATELLITES IN DEVELOPING COUNTRIES TO PROMOTE SPACE SUSTAINABILITY

Christopher Roberts, Institute of Air and Space Law, McGill University, Canada

IAC-16.B4.1.16 (withdrawn)

SPACE PROPULSION AND THERMO-VACUUM LABORATORY AT

Jorge Alfredo Ferrer Perez, Universidad Nacional Autónoma de México, Mexico

B4.2. Small Space Science Missions

September 26 2016, 15:15 — Tequila

Co-Chair(s): Larry Paxton, The Johns Hopkins University Applied Physics Laboratory, United States; Stamatios Krimigis, The Johns Hopkins University Applied Physics Laboratry, United

ACHIEVING SCIENCE WITH CUBESATS: THINKING INSIDE THE BOX Thomas H. Zurbuchen, University of Michigan, United States

IAC-16.B4.2.2 (withdrawn)

CONDUCTING COMETARY ASTROPHYSICS WITH THE TWINKLE SMALL-SAT

Thomas Wilson, University College London, United Kingdom

IAC-16.B4.2.3

IMPLEMENTATION OF A 80MM REFRACTOR TELESCOPE IN A 2-U

Angel Colin, Universidad Autonoma de Nuevo Leon, Mexico

IAC-16.B4.2.4

BUILDING LARGE TELESCOPES IN ORBIT USING SMALL SATELLITES Christopher Saunders, SSTL, United Kingdom

IAC-16.B4.2.5

TWINKLE - A MISSION TO UNRAVEL THE STORY OF PLANETS IN OUR GALAXY

Marcell Tessenyi, University College London, United Kingdom

IAC-16.B4.2.6

THREE STELLAR YEARS (AND COUNTING) OF PRECISION PHOTOMETRY BY THE BRITE ASTRONOMY CONSTELLATION Karan Sarda, Space Flight Laboratory, University of Toronto, Canada

IAC-16.B4.2.7

MICROSCOPE, A CNES MICROSATELLITE TO CHECK EINSTEIN EQUIVALENCE PRINCIPLE, AND ITS RF EQUIPMENTS Miguel Angel Fernandez, SYRLINKS, France

IAC-16.B4.2.8 (withdrawn)

QBITO, A CUBESAT TO STUDY THE LOWER THERMOSPHERE Ignacio Barrios, E-USOC, Universidad Politécnica de Madrid, Spain

IAC-16.B4.2.9

INTEGRATION AND GROUND TEST CAMPAIGN RESULTS OF URSA

Lorenzo Arena, University of Rome "La Sapienza", Italy

IAC-16.B4.2.10

DEVELOPMENT OF 1U STANDARDIZED CUBESAT OF STEP CUBE LAB. FOR ON-ORBIT VERIFICATION OF SPACE RELEVANT RESEARCH **OUTPUTS FROM UNIVERSITIES IN KOREA**

Tae-Yong Park, Chosun University, Korea, Republic of

CSES SATELLITE MISSION IN CHINA AND THE STEREO SEISMO-ELECTROMAGNETIC MONITORING SYSTEM Xuemin Zhang, Institute of Earthquake Science, CEA, China

DEVELOPMENT OF A SYSTEM OF MULTIPLE SMALL SATELLITES FOR SPACE RADIATION MONITORING

Mikhail Podzolko, Skobeltsyn Institute of Nuclear Physics, Russian

B4.3. Small Satellite Operations

September 27 2016, 14:45 — Tequila

Co-Chair(s): Andreas Hornig , University of Stuttgart, Germany; Helen Walker, STFC, United Kingdom;

Rapporteur(s): Norbert Lemke, OHB System AG - Munich, Germany:

SMALL SATELLITE REGULATION - WRC-15 OUTCOME AND RESULTS OF THE ITU-R WP7B STUDIES DURING 2012-2015 PERIOD Attila MATAS, International Telecommunication Union (ITU), Switzerland

IAC-16.B4.3.2

NEW SPACE OPERATIONS IN THE INTERNET OF THINGS ERA-ANYWHERE, ANYTIME, ANYTHING! Andreas Horniq, University of Stuttgart, Germany

IAC-16.B4.3.3

FULLY AUTOMATED MISSION PLANNING AND CAPACITY ANALYSIS TOOL FOR THE DEIMOS-2 AGILE SATELLITE Stefania Tonetti, Deimos Space SLU, Spain

IAC-16.B4.3.4

A COMPARISON OF SCHEDULING ALGORITHMS FOR LOW COST **GROUND STATION NETWORKS**

Alexander Kleinschrodt, University of Würzburg, Germany

DIFFERENTLY Juan José Díaz Infante, , Mexico

BUY VS. MAKE TRADEOFFS FOR EDUCATIONAL CUBESATS

IAC-16.B4.3.7

CUBESAT GROUND STATION MODULE: TRANSMITTING, RECEIVING

Håkon Ånes, Norwegian University of Science and Technology, Norway

SOLUTION FOR A GROUND STATION NETWORK PROVIDING A HIGH BANDWIDTH AND HIGH ACCESSIBILITY DATA LINK FOR NANO- AND MICROSATELLITES

Giovanni Pandolfi, Leaf Space s.r.l., Italy

IAC-16.B4.3.9

MULTI-SATELLITE ON-BOARD BEHAVIOUR PLANNING USING

Netherlands

IAC-16.B4.3.10

NANOBED-MX INTERNATIONAL COLLABORATION FOR NANOSATELLITES: A REAL-TIME SURVEILLANCE MISSION CASE STUDY

Steve Greenland, Clyde Space Ltd, United Kingdom

IAC-16.B4.3.11

GOMX3 APPROACH

Gilles Nies, Saarland University, Germany

DOING FORENSIC ON DTUSAT-2 USING THE BEACON COUNTER Rene Fleron, DTU Space, Denmark

Helen Walker, STFC, United Kingdom

B4.4. Small Earth Observation Missions

September 28 2016, 09:45 — Tequila

Co-Chair(s): Amnon Ginati, European Space Agency (ESA), The Netherlands; Larry Paxton , The Johns Hopkins University

Rapporteur(s): Carsten Tobehn, European Space Agency (ESA), The Netherlands:

IAC-16.B4.4.1

GOMX-4A/B: A FORMATION FLYING PRECURSOR MISSION FOR CONTINUOUS ARCTIC SURVEILLANCE USING NANO-SATELLITES

IAC-16.B4.4.2

EMSA/ESA SAT-AIS INITIATIVE - NEXT GENERATION PAYLOAD FIRST RESULTS AND MICRO-SATELLITES STATUS Carsten Tobehn, European Space Agency (ESA), The Netherlands

IAC-16.B4.4.3

DESIGN AND TESTING OF A DUAL-CAMERA PAYLOAD FOR ESEO

IAC-16.B4.3.5 ULISES 1, AN UNUSUAL SATELLITE - DOING EVERYTHING

IAC-16.B4.3.6

John Bellardo, Cal Poly, SLO, United States

AND DISPLAYING CUBESAT DATA THROUGH A WEB-BASED GRAPHICAL USER INTERFACE

IAC-16.B4.3.8

ADAPTIVE GENETIC ALGORITHM Zixuan Zheng, Delft University of Technology (TU Delft), The

MASTERING OPERATIONAL LIMITATIONS OF LEO SATELLITES - THE

IAC-16.B4.3.13

WHAT UKUBE-1 OPERATIONS TAUGHT US

Applied Physics Laboratory, United States;

Jesper A. Larsen, GomSpace ApS, Denmark

Indrek Sünter, Tartu Observatory, Estonia









IAC-16.B4.4.4

KAZSTSAT: KAZAKH-BRITISH TECHNOLOGY DEMONSTRATION AND EARTH OBSERVATION MISSION

Vladimir Ten, Ghalam LLP, Kazakhstan

IAC-16.B4.4.5

PICOSATELLITE BEESAT-4: 3-AXIS ATTITUDE CONTROL AND GPS BASED POSITIONING AND ORBIT DETERMINATION Sascha Weiss, TU Berlin, Germany

IAC-16.B4.4.6

HYPERSPECTRAL OBSERVATIONS OF VEGETATION PHENOLOGY AT HOURLY TIMESCALES WITH A CONSTELLATION OF SMALL SATELLITES.

Anton Ivanov, Ecole Polytechnique Fédérale de Lausanne (EPFL), Space Engineering Center (eSpace), Switzerland

PAST PRESENT AND FUTURE SOUTH AFRICAN EARTH OBSERVATION MISSIONS. PROF JAN DU PLESSIS (UNIVERSITY OF STELLENBOSCH) Jan du Plessis, Private, South Africa

IAC-16.B4.4.8 (withdrawn)

SAT4EO HIGH-RESOLUTION OPTICAL EARTH OBSERVATION SYSTEM BASED ON INNOVATIVE COST-EFFECTIVE SPACECRAFT Stefania Cornara, Deimos Space S.L., Spain

SATREC INITIATIVE'S NEXT GENERATION HIGH PERFORMANCE SMALL SAT FOR EARTH OBSERVATION

Eugene D Kim, Satrec Initiative, Korea, Republic of

IAC-16.B4.4.10

KENT RIDGE 1 - A HYPER SPECTRAL MISSION IN NEAR EQUATORIAL

Tom Segert, Berlin Space Technologies GmbH, Germany

ANTARCTIC GLACIER AND SEA ICE OBSERVATION WITH A CHINESE CUBE SATELLITE

Shufan Wu, Shanghai Engineering Center for Microsatellite, China

IAC-16.B4.4.12

THE FIRST UAE MULTI-DISCIPLINARY SPACE PROGRAM - A CUBESAT TO MONITOR VEGETATION AND DEMONSTRATE NEW TECHNOLOGY Carlos Niederstrasser, Orbital ATK, Inc., United States

B4.5. Access to Space for Small Satellite Missions

September 28 2016, 14:45 — Tequila

Co-Chair(s): Alex da Silva Curiel , Surrey Satellite Technology Ltd (SSTL), United Kingdom; Philip Davies, Deimos Space UK Ltd, United Kingdom;

Rapporteur(s): Jeffery Emdee, The Aerospace Corporation, United States;

IAC-16.B4.5.1

NASA'S CUBESAT LAUNCH INITIATIVE - ENABLING BROAD ACCESS TO SPACE

Jason Crusan, NASA, United States

IAC-16.B4.5.2

SMALL SATELLITE STANDARDIZATION: LESSONS LEARNED FROM THE **CUBESAT REVOLUTION**

Jordi Puig-Suari, California Polytechnic State University, United States

IAC-16.B4.5.3

LAUNCHING THE SMALL SATELLITE REVOLUTION: REALISING A RELIABLE, COST EFFECTIVE AND DEDICATED LAUNCH SERVICE. Andy Bradford, Firefly Space Systems, United Kingdom

SKOLKOVO LAUNCH SERVICES: AFFORDABLE LAUNCH OPPORTUNITY FOR BUILDING UP RUSSIAN PRIVATE SPACE ECOSYSTEM

Alexey Belyakov, Skolkovo Foundation, Russian Federation

IAC-16.B4.5.5

VERTICAL LAUNCH OF SMALL SATELLITES FROM THE UK Philip Davies, Deimos Space UK Ltd, United Kingdom

AN INNOVATIVE LAUNCH VIBRATION ISOLATION SYSTEM FOR

David Pignatelli, California Polytechnic State University, United

IAC-16.B4.5.7

A REVIEW OF DE-ORBIT TECHNIQUES FOR THE ADVANCEMENT OF ON-ORBIT MANUFACTURING

Marcus Murbach, NASA, United States

IAC-16.B4.5.8

SPIRAL CONING MANOEUVRE FOR IN-ORBIT LOW THRUST CHARACTERISATION IN CUBESATS

ALEJANDRO MACARIO ROJAS, The University of Manchester, United Kinadom

SMALL SATELLITE LAUNCH OPPORTUNITIES: STATISTICAL ANALYSIS AND TREND FORECAST

Qin Xu, The University of Manchester, United Kingdom

IAC-16.B4.5.10

SMALL LAUNCH VEHICLES - A 2016 STATE OF THE INDUSTRY SURVEY Carlos Niederstrasser, Orbital ATK, Inc., United States

IAC-16.B4.5.11

INNOVATION TO FLIGHT PORTAL Lauren Wong, NASA JPL, United States

IAC-16.B4.5.12 (withdrawn)

WHERE ARE ALL THE SMALL SATELLITE LAUNCH VEHICLES? Timo Wekerle, ITA-DCTA, Brazil

B4.6A. Generic Technologies for Small/Micro **Platforms**

September 29 2016, 09:45 — Tequila

Co-Chair(s): Nicholas Waltham , Rutherford Appleton Laboratory, United Kingdom; Philip Davies, Deimos Space UK Ltd, United Kingdom;

Rapporteur(s): Jian Guo , Delft University of Technology (TU Delft), The Netherlands;

IAC-16.B4.6A.1

CARBONITE-1: ONE YEAR OF HIGH RESOLUTION VIDEO IMAGING Nimal Navarathinam, Surrey Satellite Technology Ltd (SSTL), United

IAC-16.B4.6A.2

DESIGN AND ON-ORBIT TEST FOR VIDEO SATELLITE: TIANTUO-2 Junhua XIANG, National University of Defense Technology, China

IAC-16.B4.6A.3

IN ORBIT DEMONSTRATION (IOD) USING THE LEOS-50 PLATFORM Tom Segert, Berlin Space Technologies GmbH, Germany

IAC-16.B4.6A.4

PRELIMINARY IN-ORBIT RESULTS OF STAR OF AOXIANG Xiaozhou Yu, Shaanxi Engineering Laboratory for Microsatellites,

IAC-16.B4.6A.5

IN-ORBIT DEMONSTRATION OF TECHNOLOGIES WITH THE EURO IOD PROGRAM

Norbert M.K. Lemke, OHB System AG - Munich, Germany

IAC-16.B4.6A.6

A MICRO-MECHATRONIC SOLAR ARRAY DRIVE ASSEMBLY FOR SMALL/MICRO-SATELLITES

Rui Li, Beijing Institute of Control Engineering, China Academy of Space Technology, China

IAC-16.B4.6A.7

DEVELOPMENT OF A SOLAR ARRAY DRIVE MECHANISM FOR THE USE ON MICRO-SATELLITE PLATFORMS

Giorgos Galatis, Delft University of Technology (TU Delft), The Netherlands. Germany

IAC-16.B4.6A.8

SPHERICAL REACTION WHEEL FOR MICROSATELLITE ATTITUDE

Linyu Zhu, Delft University of Technology (TU Delft), The Netherlands, The Netherlands

IAC-16.B4.6A.9

PROPULSION OPTIONS FOR SMALL SATELLITES Elizabeth Driscoll, Aerojet Rocketdyne, United States

IAC-16.B4.6A.10

THE EXO-BRAKE AS A DE-ORIBT MECHANISM: ANALYSIS AND RECENT FLIGHT EXPERIENCE THROUGH SOAREX AND TECHEDSAT FLIGHT TESTS

Marcus Murbach, NASA, United States

IAC-16.B4.6A.11

THE RESEARCH OF SOLID COOL GAS MICRO-PROPULSION MODULE TECHNOLOGY WITH HIGH TOTAL IMPULSE AND LOW POWER CONSUMPTION

Xuhui Liu, Beijing Institute of Control Engineering, China

IAC-16.B4.6A.12 (withdrawn)

SMALL SATELLITE NAVIGATION, RENDEZVOUS, AND DOCKING SYSTEM: CONCEPT DESIGN AND OPTIMIZATION Ervn Culton, US DoD, United States

IAC-16.B4.6A.13

ACTIVE CONTROL OF AUTONOMOUS CAPILLARY SYSTEMS FOR LAB-ON-CHIP DEVICES SUITABLE FOR MICRO- AND NANO-SATELLITES **BIOLOGICAL EXPERIMENTS** Pablo Rodríguez Llorca, , Spain

IAC-16.B4.6A.14

SOFTWARE ARCHITECTURE USING REAL-TIME DESIGN PATTERN FOR SMALL SATELLITES

Aayush Kumar Singha, SRM University, Chennai, India

B4.6B. Generic Technologies for Nano/Pico Platforms

September 29 2016, 14:45 — Tequila

Co-Chair(s): Joost Elstak , Airbus Defence and Space Netherlands, The Netherlands; Nicholas Waltham, Rutherford Appleton Laboratory, United Kingdom;

IAC-16.B4.6B.1 (withdrawn)

SMALL SATELLITE NAVIGATION, RENDEZVOUS, AND DOCKING SYSTEM: CONCEPT DESIGN AND OPTIMIZATION Eryn Culton, US DoD, United States

IAC-16.B4.6B.2

X BAND TRANSMISSION EVOLUTION TOWARDS DBV-S2 FOR SMALL SATELLITES.

Miguel Angel Fernandez, SYRLINKS, France

IAC-16.B4.6B.3

SDR BASED RF OBSERVATION FROM NANO-SATELLITES Jesper A. Larsen, GomSpace ApS, Denmark

IAC-16.B4.6B.4 (withdrawn)

HIGHLY INTEGRATED COMMUNICATIONS, POWER MANAGEMENT, AND ATTITUDE DETERMINATION AND CONTROL SIDE PANEL FOR CURESAT STANDARD NANOSATELLITES Sebastian Grau, Technische Universität Berlin, Germany

IAC-16.B4.6B.5 (withdrawn)

MULTIPLE-QUANTUM-WELL MODULATING-RETRO-REFLECTOR CUBESAT PAYLOAD OPERATING AT 1070 NM FOR ASYMMETRIC FREE-SPACE OPTICAL COMMUNICATIONS

Jan Stupl, SGT Inc. / NASA Ames Research Center, United States

IAC-16.B4.6B.6 (withdrawn)

ERROR MITIGATION TECHNIQUES FOR ON-BOARD COMPUTER

Fernando Rodriquez, Clyde Space Ltd, United Kingdom

IAC-16.B4.6B.7 (withdrawn)

FAILURE FRIENDLY CUBESATS: DEVELOPING GUIDELINES TO **FACILITATE ON-ORBIT FAILURE ANALYSIS** Jordi Puig-Suari, California Polytechnic State University, United

IAC-16.B4.6B.8

LAUNCH OF A 3 UNIT CUBESAT WITH INTEGRATED PROPULSION SYSTEM: D-SAT QUALIFICATION, ACCEPTANCE AND TRANSPORTATION LOGISTICS. Alessio Fanfani, D-Orbit, Italy

IAC-16.B4.6B.9

States

COST-EFFECTIVE ATTITUDE CONTROL VALIDATION TEST METHODS FOR CUBESATS APPLIED TO POLARCUBE Maxim Clarke, Delft University of Technology (TU Delft), United

IAC-16.B4.6B.10

DEVELOPMENT OF A LOW-COST SUN SENSOR FOR NANOSATELLITES Andrea Antonello, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

HIGH ENERGY DENSITY BATTERY ARRAY FOR CUBESAT MISSIONS Ronnie Nader, Ecuadorian Civilian Space Agency (EXA), Ecuador

DEVELOPMENT PHILOSOPHY AND FLIGHT RESULTS OF ARC EVENT GENERATOR AND INVESTIGATION SATELLITE HORYU-IV Mengu Cho, Kyushu Institute of Technology, Japan

IAC-16.B4.6B.13

COMPENSATING EXTERNAL GRAVITATIONAL TORQUES IN A SPACECRAFT SIMULATOR. JORGE PRADO, UNAM, Mexico

B4.7. Highly Integrated Distributed Systems

September 30 2016, 13:30 — Tequila

Co-Chair(s): Marco D'Errico , Seconda Universita' di Napoli, Italy; Rainer Sandau, International Academy of Astronautics,

Rapporteur(s): Jaime Esper , National Aeronautics and Space Administration (NASA), United States; Michele Grassi, University of Naples "Federico II", Italy;

IAC-16.B4.7.1

IAA STUDY ON LEAN SATELLITES Mengu Cho, Kyushu Institute of Technology, Japan

IAC-16.B4.7.2

FORMOSAT-7 – USING A SMALL SATELLITE CONSTELLATION AND GROUND NETWORK FOR WEATHER MONITORING Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), United Kinadom

IAC-16.B4.7.3

DATA AUTHENTICATION, INTEGRITY AND CONFIDENTIALITY MECHANISMS FOR FEDERATED SATELLITE SYSTEMS Olga Korobova, Skolkovo Institute of Science and Technology, Russian Federation

MISSION ANALYSIS AND DESIGN OF FAR FLYERS (FRACTIONATED-

Salvatore Sarno, Seconda Università di Napoli, Italy

APERTURE RADAR BASED ON FORMATION FLYING FOR PARASITIC

CUBESATS TO POCKETQUBES: OPPORTUNITIES AND CHALLENGES

QUSAD - AN INTERACTIVE, SPACE MISSION ANALYSIS, DESIGN, AND

Benjamin Grzesik, Technische Universität Braunschweig, Germany

INTEGRATED MONITORING OF REFUGEES IN THE MEDITERRANEAN

FDIR APPROACH OF A MODULAR SATELLITE PLATFORM

AOCS DESIGN FOR NANOSATELLITE CONSTELLATIONS

ALGORITHMS IN DISTRIBUTED SATELLITE SYSTEM

AN OVERVIEW OF PERFORMANCE ANALYSIS FOR ROUTING

Etim Offiong, African Regional Center for Space Science and

B4.8. Small Spacecraft for Deep-Space

Qing Chen, Research Center of Satellite Technology, Harbin Institute

SEA WITH SMALL SATELLITE CONSTELLATIONS

Andrea Zuanetti, Politecnico di Milano, Italy

Jaan Viru, Tartu University, Estonia

INFUSING 'LEAN' INTO LEANSATS

Merlin F. Barschke, Technische Universität Berlin, Germany

Stefano Speretta, Delft University of Technology (TU Delft), The

IAC-16.B4.7.4

IAC-16.B4.7.5

IAC-16.B4.7.6

IAC-16.B4.7.7

ARCHITECTURE

IAC-16.B4.7.8

SIMULATION TOOLKIT

Netherlands

EARTH REMOTE SENSING)







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TECHNICAL PROGRAMME

PROFESSIONALS
EVENTS

PROGRAMMES & EVENTS

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AUTHORS

Technology Education in English (ARCSSTE-E), Nigeria

Exploration
September 30 2016, 09:45 — Tequila

of Technology, China

IAC-16.B4.7.11

Co-Chair(s): Leon Alkalai , National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States; Rene Laufer , Baylor University, United States; Rapporteur(s): Amanda Stiles , SpaceX, United States;

IAC-16.B4.8.1

MISSION ANALYSIS FOR JAXA'S EARTH-MOON LIBRATION-ORBIT CUBESAT

Stefano Campagnola, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-16.B4.8.2

ARGOMOON: A NANO-EYEWITNESS FOR SPACE EXPLORATION Alessandro Lamberti, Araotec, Italy

IAC-16.B4.8.3

SOLVING COMMUNICATIONS AND NAVIGATION REQUIREMENTS FOR SMALL LUNAR MISSIONS

Jonathan Friend, Surrey Satellite Technology Ltd (SSTL), United Kinadom

AC-16.B4.8.4

AUTONOMOUS NAVIGATION: OPTICAL STATE ACQUISITION SYSTEMS FOR LUNAR AND INTERPLANETARY SMALL SATELLITES Amin Ali Mody, SRM University, India

IAC-16.B4.8.5

CLOSE-PROXIMITY OPERATIONS CONCEPT OF THE ASTEROID IMPACT MISSION (AIM)

Marc Scheper, OHB System AG-Bremen, Germany

IAC-16.B4.8.6

CUBESAT ORBITING DIDYMOS ASTEROID SYSTEM - SIMULATIONS IN THE CONTEXT OF AIDA MISSION

Mugurel Balan, Institute of Space Science, Romania

IAC-16.B4.8.7

NEOTWIST - AN ASTEROID IMPACTOR MISSION FEATURING SUB-SPACECRAFT FOR ENHANCED MISSION CAPABILITY Kilian A. Engel, Airbus DS GmbH, Germany

IAC-16.B4.8.8

NEURAL NETWORKS FOR PLUME DETECTION: INTERPLANETARY CUBESAT CASE STUDY

Lorenzo Feruglio, Politecnico di Torino, Italy

IAC-16.B4.8.9

NANOSATELLITE FORMATION FLYING TO ENHANCE SCIENCE IN BINARY ASTEROID ENVIRONMENT Andrea Capannolo, Politecnico di Milano, Italy

IAC-16.B4.8.10

USING THE CUBESAT AMBIPOLAR THRUSTER TO CREATE A MARS ARRAY OF RESEARCH SATELLITES: MARSCAT Edgar Bering, University of Houston, United States

IAC-16.B4.8.11

ENVIRONMENTAL DESIGN IMPLICATIONS FOR DEEP SPACE SMALLSATS

Peter Kahn, NASA Jet Propulsion Laboratory, United States

IAC-16.B4.8.12 (withdrawn)

ORBIT DETERMINATION OF FEMTOSATELLITES USED IN PLANETARY EXPLORATION MISSIONS

Tracie Perez, The University of Texas at Arlington, United States

B5. SYMPOSIUM ON INTEGRATED APPLICATIONS

Coordinator(s): Amnon Ginati , European Space Agency (ESA), The Netherlands; Larry Paxton , The Johns Hopkins University Applied Physics Laboratory, United States;

B5.1. Tools and Technology in Support of Integrated Applications

September 30 2016, 09:45 — Salon de Eventos 7

Co-Chair(s): Carsten Tobehn, European Space Agency (ESA), The Netherlands; Larry Paxton, The Johns Hopkins University Applied Physics Laboratory, United States; Rapporteur(s): David Y. Kusnierkiewicz, The John Hopkins

IAC-16.B5.1.1

PROJECT AQUACULTURE Daniele Trimarchi, , Italy

University. United States:

IAC-16.B5.1.2 (withdrawn)

DOWNSTREAM APPLICATIONS DRIVING CUBESAT TECHNOLOGY DEVELOPMENT

Pamela Anderson, Clyde Space Ltd, United Kingdom

IAC-16.B5.1.3

SPACE TECHNOLOGY, MARITIME ACTIVITIES AND SOCIO ECONOMIC DEVELOPMENT OF AFRICA.

Abubakar Babagana, Seabed International, Nigeria

IAC-16.B5.1.4

AUTONOMOUS AND COORDINATED OPERATIONS OF A NANOSATELLITE WITH A ROBOT ON EARTH Eduardo Valadez. . Mexico

IAC-16.B5.1.5

HOW TO USE MAGRICULTURE WHICH EXPLOITS SPACE BASED TECHNOLOGY TO SOLVE THE PROBLEM OF FOOD AND WATER INSECURITY IN GLOBAL SOUTH AND HOW DATA DISTRIBUTION TECHNOLOGY GIVES BIRTH TO E-GOVERNMENT FOR CAPACITY BUILDING.

King Kumire, ISU, South Africa

IAC-16.B5.1.6

CAPSULE: A FAULT-TOLERANT MULTI-CLOUD STORAGE SERVICE FOR SATELLITE IMAGERY.

J.I. Gonzalez, Cinvestav, Unidad Tamaulipas Laboratorio De Tecnologías De Información, Mexico

IAC-16.B5.1.7

NATIONAL EMERGENCY INFORMATION MANAGEMENT SYSTEMS: PERSPECTIVES ON DESIGN AND IMPLEMENTATION Murthy Remilla, ISRO Satellite Centre (ISAC),ISRO, India

IAC-16.B5.1.8

SPACE ORBITING SPECTROSCOPY TO CHARACTERIZE AEROSOL EMISSIONS OF MEXICO'S POPOCATEPETL VOLCANO Hector Vargas, , Mexico

IAC-16.B5.1.9

DECONFLICTING AVIATION AND SPACE OPERATIONS

David Finkleman, International Academy of Astronautics, United

States

B5.2. Integrated Applications End-to-End Solutions

September 29 2016, 14:45 — Salon de Eventos 7

Co-Chair(s): Amnon Ginati , European Space Agency (ESA), The Netherlands; Boris Penne , OHB System AG-Bremen, Germany; **Rapporteur(s):** Yuval Brodsky , tinTree International eHealth, South Africa;

IAC-16.B5.2.1

INTELLIGENT SPACE INFRASTRUCTURE. INTEGRATING EARTH OBSERVATION AND COMMUNICATIONS IN A LOW EARTH ORBIT CONSTELLATION.

Jorge Sánchez, Agencia Espacial Mexicana (AEM), Mexico

IAC-16.B5.2.2 (withdrawn)

MODELING TREE STRUCTURE OF A MANGROVE USING LIDAR IMAGERY

Jonathan V. Solórzano, Centro del Cambio Global y la Sustentabilidad en el Sureste A.C., Mexico

IAC-16.B5.2.3

UP-SCALING REGIONAL OIL SPILL MANAGEMENT SYSTEMS FOR GLOBAL REQUIREMENTS: NEEDS AND CONTRIBUTIONS OF INDIA Murthy Remilla, ISRO Satellite Centre (ISAC),ISRO, India

IAC-16.B5.2.4

SPATIAL MODELLING OF MALARIA SEVERITY ZONES IN OSOGBO AREA, NIGERIA.

Tijesu Ojumu, , Nigeria

IAC-16.B5.2.5

EQUATOR-SAR MISSION: A COST EFFECTIVE ACTIVE REMOTE SENSING MISSION FOR DEVELOPING NATIONS

Abdul Lawal, University of Glasgow, Space Advanced Research Team, United Kingdom

IAC-16.B5.2.6 (withdrawn)

GLOBAL FRESHWATER - HAZARD POLLUTION MONITORING (GF-HPM) FOR REAL-TIME CONTAMINATION DETECTION Dan Cohen, The Hebrew University of Jerusalem, Israel

IAC-16.B5.2.7 (withdrawn)

MEOSAR: GALILEO'S CONTRIBUTION TO SEARCH-AND-RESCUE OF PEOPLE IN DISTRESS

Frank te Hennepe, OHB System, Germany

IAC-16.B5.2.8

OPTIMIZING THE INTERACTION BETWEEN DRONES AND SPACE INFRASTRUCTURES

Stefano Ferretti, European Space Agency (ESA), Italy

IAC-16.B5.2.9

AICRAFT MONITORING BY THE FUSION OF SATELLITE AND GROUND ADS-B DATA

Xuan Zhang, Shanghai Engineering Center for Microsatellites, China

IAC-16.B5.2.10 (withdrawn)

GOVERNANCE - HOW SPACE-BASED EO, POSITIONING AND MODELLING POWERS INTEGRATED GIS SOLUTIONS Mukund Kadursrinivas Rao, National Institute of Advanced Studies (NIAS), India

IAC-16.B5.2.11

DISASTER MANAGEMENT OF REMOTE AREAS BY CONSTELLATION OF CUBESATS

Giancarlo Santilli, Universidade de Brasília, Brazil

IAC-16.B5.2.12

ENHANCING PRODUCTIVITY AND CREATIVITY: APPLYING SPACE SCIENCE TO IMPROVE THE WORKPLACE ENVIRONMENT ON EARTH AND PREPARING OUR WORKFORCE FOR LIFE IN OUTER SPACE Nancy C. Wolfson, Interstellar Travel Meetup, Webster University Worldwide, Washington University and Northern Arizona University, Outer Space Education Alliance L.L.P., United States

B6. SPACE OPERATIONS SYMPOSIUM

Coordinator(s): John Auburn , Consultant, Italy; Pierre Jean, Canadian Space Agency, Canada;

B6.1. Human Spaceflight Operations

September 30 2016, 09:45 — Salon de Eventos 8

Co-Chair(s): Mario Cardano , Thales Alenia Space France, Italy; Michael McKay , European Space Agency (ESA), Germany; Rapporteur(s): Helmut Luttmann , Airbus Defence and Space -Space Systems, Germany;

IAC-16.B6.1.1

NASA PLAN FOR DEVELOPING COMMERCIAL ISIM OF LEO Sam Scimemi, National Aeronautics and Space Administration (NASA), United States

IAC-16.B6.1.2

OPERATIONS DATA FILES - DRIVING FORCE BEHIND INTERNATIONAL SPACE STATION OPERATIONS

Tom Hoppenbrouwers, Space Applications Services N.V./S.A., Belgium

IAC-16.B6.1.3

ANALOG SIMULTATION OF A MISSION TO MARS - A CASE STUDY IN POLAND

Damian M. Bielicki, Birkbeck, University of London, United Kingdom

IAC-16.B6.1.4

THE ESA EUROPEAN DRAWER RACK (EDR) MK II: A VERSATILE PAYLOAD SYSTEM FACILITY FOR THE INTERNATIONAL SPACE STATION UTILISATION

Giorgio Cabodi, Thales Alenia Space, Italy

IAC-16.B6.1.5

ISS FSL GROUND SOFTWARE INTERFACE - UNLEASHING THE YAMCS TOOL SUITE

Mathieu Schmitt, Space Applications Services N.V., Belgium

International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico





IAC-16.B6.1.6

THE COMBINED SYSTEM OF RAPPROCHEMENT AND JOINING. Sergei Matvienko, Yuzhnoye SDO European Representation, Ukraine

IAC-16.B6.1.8

BRINGING TWO DISPARATE INDUSTRIES TOGETHER FOR SPACE Nicole Buckley, Canadian Space Agency, Canada

B6.2. New Operations Concepts, Advanced **Systems and Commercial Space Operations**

September 26 2016, 15:15 — Salon de Eventos 8

Co-Chair(s): Pierre LODS, Centre National d'Etudes Spatiales (CNES), France; Thomas Kuch, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

Rapporteur(s): Keiichiro Sakagami , Japan Aerospace Exploration Agency (JAXA), Japan;

IAC-16.B6.2.1

ROBOTIC SERVICING OF GEOSYNCHRONOUS SATELLITES Gordon Roesler, DARPA, United States

IAC-16.B6.2.2

AUTONOMOUS GEOSTATIONARY STATION KEEPING USING ELECTRIC **PROPULSION**

Julien Bernard, International Space University (ISU), France

IAC-16.B6.2.3 (withdrawn) CONTACTLESS ON-ORBIT RESCUE SCHEME FOR SATELLITE

WITH UNIAXIAL CONSTANT MAGNETIC MOMENT USING **ELECTROMAGNETIC FORMATION**

Huan Huang, National University of Defense Technology, China

IAC-16.B6.2.4 (withdrawn)

PLANNING LASER LINKS FOR A DATA RELAY SYSTEM: THE GROUND SYSTEM DESIGN OF TDP-1

Gregor Rossmanith, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

RAPID AND ADAPTIVE MISSION PLANNER FOR MULTI-SATELLITE MISSIONS USING A SELF-ADAPTIVE MULTI-AGENT SYSTEM Jonathan Bonnet, IRT Saint Exupéry, France

IAC-16.B6.2.6

INTEGRATED FLIGHT & GROUND SOFTWARE FRAMEWORK FOR FAST MISSION TIMELINES

Richard Duke, Surrey Space Centre - University of Surrey, United Kinadom

IAC-16.B6.2.7 (withdrawn)

ADAPTIVE REARRANGEMENT BASED HKTM-STORAGE DATA COMPRESSION WITHOUT ANY UPLINK DATA REQUIREMENT Rahul Mishra, ISRO Satellite Centre (ISAC), India

IAC-16.B6.2.8

DEVELOPMENT OF ANYWHERE SATELLITE OPERATION SYSTEM Hiroyuki Nagamatsu, Japan Aerospace Exploration Agency (JAXA)/ ISAS, Japan

IAC-16.B6.2.9

SLE PROTOCOL SERVICES: RESULTS OF AN ARCHITECTURE APPLIED AT THE NATIONAL INSTITUTE FOR SPACE RESEARCH. Antonio Cassiano Julio Filho, Instituto Nacional de Pesquisas Espaciais (INPE), Brazil

IAC-16.B6.2.10

FEASIBILITY OF A PROPOSED LOW COST SATELLITE COMMUNICATION SYSTEM FOR SOUTH AMERICA AND MAXICO Ivan Lavlinski, Florida Institute of Technology, United States

IAC-16.B6.2.11

THE EUCLID GROUND SEGMENT AND OPERATIONS - CHALLENGES IN THE QUEST FOR DARK ENERGY AND DARK MATTER Andreas Rudolph, European Space Agency (ESA), Germany

IAC-16.B6.2.12

RULES OF ENGAGEMENT IN SPACE OPERATIONS David Finkleman, International Academy of Astronautics, United

B6.3. Mission Operations, Validation, **Simulation and Training**

September 29 2016, 14:45 — Salon de Eventos 8

Co-Chair(s): Paolo Ferri, European Space Agency (ESA), Germany; Zeina Mounzer, Telespazio VEGA Deutschland GmbH,

Rapporteur(s): Thomas Uhlig, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

IAC-16.B6.3.1

MEXICAN EARTH STATION FOR RECEPTION OF SCIENTIFIC DATA FROM MEXICAN AND FOREIGN SATELLITES, TRACKING, TELEMETRY AND COMMAND.

Jose Alberto Ramirez Aquilar, UNAM, Mexico

COSMO-SKYMED SYSTEM MONITORING AND COORDINATION FUNCTION (FMCS): NEW TOOLS AND PERFORMANCE PARAMETERS Luca Fasano, Italian Space Agency (ASI), Italy

IAC-16.B6.3.3

WHAT HAPPENS ABOVE THUNDERSTORMS: FIRST OPERATIONAL CONCEPT AND LESSONS LEARNED FROM THE THOR EXPERIMENT DURING THE SHORT DURATION MISSION ON-BOARD THE INTERNATIONAL SPACE STATION

Alice Michel, Belgian User Support and Operation Centre, Belgium

OPTIMISING OPERATIONAL TRAINING WITH 'MATES': MULTI-AGENT TRAINING ENVIRONMENT SIMULATOR Guillaume Tanier, CGI, Germany

IAC-16.B6.3.5 (withdrawn)

PRACTICAL ASSESSMENT OF JITTER CAUSED BY FUEL SLOSH DURING IMAGING FOR THE RAPIDEYE SATELLITES Kam Shahid, BlackBridge, Germany

IAC-16.B6.3.6

GROUND FACILITY FOR VISION BASED PLANETARY LANDING: SETUP

Michèle Lavagna, Politecnico di Milano, Italy

IAC-16.B6.3.7 (withdrawn)

EXOMARS 2016 - SUPPORT TO MISSION PREPARATION AND **EXECUTION**

Maurizio Costa, Thales Alenia Space Italia, Italy

IAC-16.B6.3.8

SCIENCE PLANNING CYCLES: PLANETS VERSUS COMETS Donald Merritt, , Spain

IAC-16.B6.3.9

PROTOS: A POWER SIMULATION AND OPTIMIZATION TOOL TO PREDICT AND EXTEND THE MISSION LIFE OF THE RAPIDEYE SATELLITES

Jesse Eyer, Planet Labs Inc., Germany

IAC-16.B6.3.10

ELECTRIC ORBIT RAISING MISSION SIMULATOR Matteo Aquilano, SES Engineering, Luxemburg

IAC-16.B6.3.11

ROBOTIC LOGISTICS AND MAINTENANCE ON THE INTERNATIONAL SPACE STATION AND ENABLING DEXTEROUS SERVICING Lyndsey Poynter, MDA Robotics & Automation, Canada

IAC-16.B6.3.12 (withdrawn)

MULTIMODAL HUMAN-COMPUTER INTERACTION TECHNOLOGIES AND VALIDATION FOR THE ROBOT ASTRONAUT Chen Meng, Institute of Aerospace System Engineering Shanghai, CASC. China

B6.5-B3.4. Flight & Ground Operations of **HSF Systems – Joint Session of the Human Spaceflight and Space Operations Symposia**

September 28 2016, 09:45 — Guadalajara Hall Salon 2

Co-Chair(s): Dieter Sabath . Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Helmut Luttmann , Airbus Defence and Space - Space Systems, Germany; Rapporteur(s): Rachid Amekrane, Airbus DS GmbH, Germany;

IAC-16.B3.4-B6.5.1

BARTOLOMEO - COMMERCIAL EXTERNAL PAYLOAD HOSTING FACILITY ON ISS

Christian Steimle, Airbus Defence and Space, Germany

IAC-16.B3.4-B6.5.2

ADAPTING COLUMBUS OPERATIONS AND PROVIDING A BASIS FOR **FUTURE ENDEAVOURS**

Jan Marius Bach, DLR (German Aerospace Center), Germany

IAC-16.B3.4-B6.5.3 (withdrawn)

DESIGNING, IMPLEMENTING AND DEPLOYING AN INNOVATIVE VOICE COMMUNICATION SYSTEM FOR NEXT GENERATION OPS CONCEPTS AT THE GERMAN SPACE OPERATIONS CENTER AND THE **EUROPEAN ASTRONAUT TRAINING CENTER**

Markus Töpfer, German Aerospace Center (DLR), Berlin, Germany

IAC-16.B3.4-B6.5.4

THE EUROPEAN ASTRONAUT CENTRE (EAC), MOVING FROM ISS TO THE FUTURE SPACE EXPLORATION

Victor Demaria-Pesce, ESA european space agency, Germany

IAC-16.B3.4-B6.5.5

COMMERCIAL UTILIZATION OF EUROPEAN ISS ELEMENTS Hauke Ernst, Airbus Defence and Space, Germany

IAC-16.B3.4-B6.5.6

A MISSION PLANNING SYSTEM FOR SPACE STATION OPERATION Donavana Oiu, National University of Defense Technology, China

IAC-16.B3.4-B6.5.7 (withdrawn)

DESIGN AND REALIZATION OF PAYLOAD OPERATION AND APPLICATION GROUND SYSTEM OF CHINA'S SPACE STATION Hongfei Wang, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China

IAC-16.B3.4-B6.5.8

CONCEPTUAL DESIGN OF A MOBILE PARALLEL SYMMETRY ROBOT FOR IN SPACE ASSEMBLY

Ling-bin ZENG, Shanghai Aerospace System Engineering Institute,

IAC-16.B3.4-B6.5.9

SPACE STATION'S ROBOTIC ARM DURING CAPTURE SATELLITE AND FUZZY NEURAL NETWORK SLIDING MODE CONTROL FOR COMPOUND BODY STABLE MOVEMENT Jie Liang, , China

IAC-16.B3.4-B6.5.10

INTERORBITAL TOW WITH POWER SUPPLY SYSTEM ON FUEL ELEMENTS.

Sergei Matvienko, Yuzhnoye SDO European Representation, Ukraine

IAC-16.B3.4-B6.5.11

"QUASI-COPLANAR INSERTION" TO IMPLEMENT QUICK TWO-ORBIT RENDEZVOUS PROFILE OF SOYUZ SPACECRAFT Rafail Murtazin, Rocket Space Corporation Energia, Russian

B6.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): John Auburn , Consultant, Italy; Pierre Jean , Canadian Space Agency, Canada;

IAC-16.B6.IP.1

ARCTIC FOX PROJECT - A FRAMEWORK TO PROVIDE SELF-ADAPTIVE SUPPORT TO SPACE GROUND SYSTEMS: A PROOF OF CONCEPT Moacyr Gonçalves Cereja Junior, Instituto Nacional de Pesquisas Espaciais (INPE), Brazil

IAC-16.B6.IP.2

MULTIOBJECTIVE OPTIMIZATION OF SKIP TRAJECTORY FOR SMV WITH THRUST FNGINE

Yangang Liang, National University of Defense Technology, China

C1. ASTRODYNAMICS SYMPOSIUM

Coordinator(s): Alfred Ng , Canadian Space Agency, Canada; Anna Guerman , Centre for Mechanical and Aerospace Science and Technologies (C-MAST), Portugal;

C1.1. Guidance, Navigation & Control (1)

September 26 2016, 15:15 — Salon Jalisco E6

Co-Chair(s): Igor V. Belokonov , Samara State Aerospace University, Russian Federation; Yong Chun Xie, Beijing Institute of Control Engineering, China; Rapporteur(s): Anton de Ruiter, Ryerson University, Canada;

IAC-16.C1.1.1

ACCURACY OF POSITION CONTROL OF HAYABUSA2 IN ASTEROID PROXIMITY PHASE

Fuyuto Terui, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-16.C1.1.2

ARTIFICIAL HORSESHOE ORBITS USING LOW THRUST PROPULSION Callum S. Arnot, University of Strathclyde, United Kingdom

IAC-16.C1.1.3

COORDINATED CONTROL OF A SPACE MANIPULATOR TESTED ON A FREE FLOATING PLATFORM

Marco Sabatini, Università di Roma "La Sapienza", Italy

IAC-16.C1.1.4

SIMULATING ATTITUDE ACTUATION OPTIONS USING THE BASILISK ASTRODYNAMICS SOFTWARE ARCHITECTURE John Alcorn, University of Colorado, Colorado Center for Astrodynamics Research, United States

IAC-16.C1.1.5

AUTONOMOUS ORBIT CORRECTIONS USING MODEL PREDICTIVE CONTROL UNDER CONSTRAINED REORIENTATIONS RaviKumar L, ISRO Satellite Centre (ISAC), India

IAC-16.C1.1.6

6-DOF FORMATION KEEPING CONTROL FOR THREE-CRAFT ELECTROMAGNETIC FORMATION CONSIDERING THE EARTH'S MAGNETIC FIELD

Huan Huang, National University of Defense Technology, China

IAC-16.C1.1.7

ATTITUDE AND ORBIT CONTROL FOR SOLAR SAIL BASED ON REFLECTANCE MODULATION Li Huan, , China

IAC-16.C1.1.8

SUPER TWISTING SLIDING MODE SYNCHRONIZATION WITH ON-OFF THRUSTERS FOR RENDEZVOUS IN AN ELLIPTIC ORBIT seyed aliakbar Kasaeian, , Iran

IAC-16.C1.1.9

ADAPTIVE CONTROL FOR FORMATION FLYING UNDER DISTRUBANCES

Serafin Chavez-Barranco, INAOE, Mexico









IAC-16.C1.1.10

OPTIMAL CONTROL OF TETHERED SPACE-TUG SYSTEM FOR SPACE DEBRIS REMOVAL USING TIMESCALE SEPARATION Rui Zhong, Beijing University of Aeronautics and Astronautics, China

IAC-16.C1.1.11

TRACKING CONTROL OF FLEXIBLE SPACECRAFT WITH SINC **FUNCTION-BASED PROFILER** Toshio Kamiya, NEC Corporation Space Systems Div., Japan

C1.2. Guidance, Navigation & Control (2)

September 27 2016, 09:45 — Salon Jalisco E6

Co-Chair(s): Moriba Jah , University of Arizona, United States; Shoji Yoshikawa, Mitsubishi Electric Corporation, Japan; Rapporteur(s): Stephan Theil, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

IAC-16.C1.2.1

MAPPING ASTEROID SURFACES WITH ROVER SWARMS William Crowe, UNSW Australia, Australia

IAC-16.C1.2.2

HIL TESTING OF A VISION-BASED AUTONOMOUS GNC FOR THE AIM MISSION

Matteo Suatoni, G.M.V. Space and Defence, S.A., Spain

IAC-16.C1.2.3

EMBEDDED MODEL CONTROL GNC FOR THE NEXT GENERATION **GRAVITY MISSION**

Luigi Colangelo, Politecnico di Torino, Italy

DEVELOPMENT OF A COMBINED ATTITUDE AND POSITION CONTROLLER FOR A SATELLITE SIMULATOR Henrique Daitx. . United Kinadom

IAC-16.C1.2.5 (withdrawn)

INTEGRATED 6-DOF SPACECRAFT ORBIT-ATTITUDE DYNAMICS MODELING AND ITS APPLICATION IN HOVERING CONTROL OVER AN **ASTEROID**

Yue Wang, Beihang University, China

IAC-16.C1.2.6

FAR RANGE FORMATION FLIGHT WITH HIGH RISK DEBRIS IN LOW EARTH ORBIT USING RELATIVE ORBITAL ELEMENTS Mohamed Khalil Ben Larbi, Technische Universität Braunschweig, Institute of Aerospace Systems, Germany

IAC-16.C1.2.7

AUTONOMOUS NAVIGATION AND GUIDANCE FOR TERMINAL MANEUVER FOR DOCKING USING MODEL PREDICTIVE STATIC PROGRAMMING (MPSP) AND UNSCENTED KALMAN FILTER (UKF) RaviKumar L, ISRO Satellite Centre (ISAC), India

FRACTIONATED SATELLITE SYSTEMS: STATION KEEPING STRATEGIES Daniele Filippetto, Politecnico di Milano, Italy

IAC-16.C1.2.9

BOUNDED MOTIONS NEAR EQUILIBRIUM POINTS OF CONTACT BINARY ASTEROIDS BY A HAMILTONIAN STRUCTURE-PRESERVING CONTROLLER AND ITS APPLICATIONS

Yuying Liang, , China

IAC-16.C1.2.10

RATE ESTIMATION AND DAMPING OF A HIGHLY ASYMMETRICAL TUMBLING SPACECRAFT USING MAGNETOMETER DATA Shubha Kapoor, Indian Space Research Organization (ISRO), India

IAC-16.C1.2.11

REACTION-WHEELS BASED AOCS FOR HIGH-POINTING ACCURACY AND STABILITY

Francesca Cirillo, Airbus Defence & Space, Germany

IAC-16.C1.2.12 (withdrawn)

MAGNETOMETER ONLY ATTITUDE ESTIMATION FOR SPIN SATELLITES

Halil Ersin Soken, Japan Aerospace Exploration Agency (JAXA)/ISAS,

C1.3. Guidance, Navigation & Control (3)

September 27 2016, 14:45 — Salon Jalisco E6

Co-Chair(s): Arun Misra , Mc Gill Institute for Aerospace Engineering (MIAE), Canada; Fuyuto Terui , Japan Aerospace Exploration Agency (JAXA), Japan;

Rapporteur(s): Bernard Lübke-Ossenbeck, OHB System AG-Bremen, Germany;

IAC-16.C1.3.1 (withdrawn)

AUTONOMOUS COLLABORATIVE ON-ORBIT SERVICING OF MODULAR RECONFIGURABLE SATELLITES Juan Manuel Romero Martin, University of Strathclyde, United Kinadom

IAC-16.C1.3.2

EXPERIMENTAL VALIDATION OF THE ESTIMATION OF UNCOOPERATIVE SPACE OBJECTS POSE, MOTION AND INERTIA PROPERTIES VIA STEREOVISION

Vincenzo Pesce, Politecnico di Milano, Italy

IAC-16.C1.3.3 (withdrawn)

NAVIGATION CONCEPT AND CHALLENGES FOR INFRARED ASTRONOMY SATELLITE SWARM INTERFEROMETRY (IRASSI) MISSION

Meltem Eren Copur, Universität der Bundeswehr München,

IAC-16.C1.3.4

SPACECRAFT POSE ESTIMATION USING A MONOCULAR CAMERA Jian-Feng Shi, Carleton University, Canada

ANALYSIS AND PERFORMANCE EVALUATION OF ZEM/ZEV GUIDANCE AND ITS SLIDING ROBUSTIFICATION FOR AUTONOMOUS RENDEZVOUS IN RELATIVE MOTION Roberto Furfaro, University of Arizona, United States

RADIOMETRIC MEASUREMENT BASED NAVIGATION AND PERFORMANCE TREND FOR MARS LANDING Zhengshi Yu, School of Aerospace Engineering, Beijing Institute of Technology, China

IAC-16.C1.3.7 (withdrawn)

POSITION AND VELOCITY ESTIMATION OF RE-ENTRY VEHICLES USING FAST UNSCENTED KALMAN FILTERS Sanat Biswas, UNSW Australia, Australia

IAC-16.C1.3.8

ON-BOARD ORBIT MODEL ACCURACY STUDY FOR CHANDRAYAAN-2 LANDER-CRAFT NAVIGATION Surya Prakash, ISRO Satellite Centre (ISAC), India

PERFORMANCE ANALYSIS OF THREE DIFFERENT COST POLICIES FOR THE CONTROL OF A CAMERA IN RELATIVE CIRCUMNAVIGATION

Andrea Antonello, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-16.C1.3.10

INFORMATION FUSION IN STAR SENSOR SYSTEMS Roland Strietzel, Deutsche Gesellschaft für Luft-und Raumfahrt, Lilienthal-Oberth e.V. (DGLR), Germany

IAC-16.C1.3.11

MARS ENTRY GUIDANCE DESIGN USING A NOVEL RECEDING HORIZON SUBOPTIMAL CONTROLLER

Yuechen Huang, National University of Defense Technology, China

IAC-16.C1.3.12 (withdrawn)

COVARIANCE ANALYSIS OF ORBIT DETERMINATION FOR MARS ORBITER MISSION

C1.4. Mission Design, Operations & Optimization (1)

September 28 2016, 09:45 — Salon Jalisco E6

Co-Chair(s): Kathleen Howell , Purdue University, United States; Vincent Martinot, Thales Alenia Space France, France; Rapporteur(s): Massimiliano Vasile, University of Strathclyde, United Kingdom; Xiaoqian Chen, National University of Defense Technology, China;

IAC-16.C1.4.1

STATISTICAL MULTICRITERIA EVALUATION OF ASTEROID **DEFLECTION METHODS**

Nicolas Thiry, University of Strathclyde, United Kingdom

IAC-16.C1.4.2 (withdrawn)

KINETIC IMPACTOR MISSION DESIGN TOOL FOR NEAR EARTH **OBJECT DEFLECTION**

Christopher Kenny, International Space University (ISU), Switzerland

IAC-16.C1.4.3

ROBUST MISSION DESIGN USING INVARIANT MANIFOLDS Lamberto Dell'Elce, University of Liège, Belgium

IAC-16.C1.4.4

ORBIT DESIGN OF A PASSIVE DISTRIBUTED RADAR BASED ON FORMATION FLYING

Salvatore Sarno, Seconda Università di Napoli, Italy

IAC-16.C1.4.5

OPTIMISATION OF LOW-THRUST AND HYBRID EARTH-MOON TRANSFERS

Nicola Sullo, University of Glasgow, United Kingdom

OPTIMIZATION OF INTERPLANETARY TRAJECTORY OF THE SPACECRAFT WITH ELECTRIC PROPULSION TAKING INTO ACCOUNT THE POSSIBILITY OF ABNORMAL OPERATION OF THE PROPULSION Mikhail S. Konstantinov, Moscow Aviation Institute, Russian

IAC-16.C1.4.7

TRAJECTORY OPTIMIZATION FOR SOLAR SAIL IN CISLUNAR NAVIGATION CONSTELLATION WITH MINIMAL LIGHTNESS NUMBER CONTROL

Xiao Pan, Beijing University of Aeronautics and Astronautics, China

IAC-16.C1.4.8

ASSESSMENT OF HYBRID PROPULSION FOR GEOSTATIONARY TRANSFER ORBITS: A MISSION DESIGN APPROACH Simone Ceccherini, Politecnico di Milano, Italy

IAC-16.C1.4.9

METHOD OF OPTIMIZATION OF THE SERVICING SPACE-BASED SYSTEM ORBITS AND DETACHED UNITS MANEUVERES PARAMETERS IN THE PROBLEM OF ON-ORBIT-SERVICING OF THE GIVEN MULTI-SATELLITE SPACE INFRASTRUCTURE

Yury Razoumny, People's Friendship University of Russia / Moscow Aviation Institute, Russian Federation

IAC-16.C1.4.10

TRAJECTORY DESIGN FOR SATURNIAN OCEAN WORLDS ORBITERS USING MULTIDIMENSIONAL POINCARÉ MAPS Diane Davis, a.i. solutions, Inc., United States

IAC-16.C1.4.11

ADVANCED METHODS OF LOW COST MISSION DESIGN FOR OUTER PLANETS MOONS' ORBITERS AND LANDERS Alexey Grushevskii, Keldysh Institute of Applied Mathematics of

RAS, Russian Federation

IAC-16.C1.4.12

AN APPROACH TO ESTIMATE THE TOTAL PROBABILITY OF IMPACT WITH THE GALILEAN SATELLITES GIVEN FAILURE FOR THE EUROPA

C1.5. Mission Design, Operations & Optimization (2)

September 28 2016. 14:45 — Salon Jalisco E6

Co-Chair(s): Johannes Schoenmaekers , European Space Operations Centre, Germany; Richard Epenoy, Centre National

Rapporteur(s): Michèle Lavagna, Politecnico di Milano, Italy;

IAC-16.C1.5.1

BREAKWELL LECTURE: INVARIANT MANIFOLDS IN ASTRODYNAMICS

IAC-16.C1.5.2

ACCURATE MODELING AND NEAR OPTIMAL ASCENT TRAJECTORY OF MICROSATELLITE LAUNCH VEHICLES VIA FIREWORK ALGORITHM Marco Pallone, University of Rome "La Sapienza", Italy

ORBIT SELECTION AND INSTRUMENT DESIGN Stefania Cornara, Deimos Space S.L., Spain

IAC-16.C1.5.4

RETURN MISSION

Juan L. Cano, Deimos Space S.L., Spain

IAC-16.C1.5.5

MISSION DESIGN OF DESTINY+

IAC-16.C1.5.6

Olga Starinova, Samara State Aerospace University, Russian

IAC-16.C1.5.8

TARGET MARTIAN ORBIT SELECTION FOR ISRO MARS ORBITER

Kiran B S, ISRO Satellite Centre (ISAC), India

IAC-16.C1.5.9

TRAJECTORIES DESIGN OF A SAMPLE RETURN MISSION TO PHOBOS Simone Centuori, Elecnor Deimos, Spain

Stefano Campagnola, Japan Aerospace Exploration Agency (JAXA),

A HAYABUSA 2 EXTENSION PLAN: ASTEROID SELECTION AND TRAJECTORY DESIGN

C1.6. Orbital Dynamics (1)

September 29 2016, 09:45 — Salon Jalisco E6

Co-Chair(s): Daniel Scheeres , University of Colorado, Colorado Center for Astrodynamics Research, United States; Filippo Graziani, G.A.U.S.S. Srl, Italy;

Anatta Sonney, ISRO Satellite Centre (ISAC), ISRO, India

d'Etudes Spatiales (CNES), France;

Gerard Gomez, University of Barcelona, Spain

SENTINEL-3 COVERAGE-DRIVEN MISSION DESIGN: COUPLING OF

DESIGN OF RETURN TRANSFERS FOR THE LUNAR POLAR SAMPLE

Takayuki Yamamoto, Japan Aerospace Exploration Agency (JAXA),

OPTIMAL CONTROL OF SOLAR SAIL SPACE SYSTEM FOR MONITORING OF POTENTIALLY DANGEROUS ASTEROIDS Federation

IAC-16.C1.5.7

ASTEROID BELT MULTIPLE FLY-BY OPTIONS FOR M-CLASS MISSIONS Joan Pau Sanchez Cuartielles, Cranfield University, United Kingdom

MISSION

IAC-16.C1.5.10

MISSION ANALYSIS FOR THE MARTIAN MOONS EXPLORER (MMX)

IAC-16.C1.5.11

Japan

Bruno Sarli, Japan Aerospace Exploration Agency (JAXA)/ISAS, Japan









Rapporteur(s): Gerard Gomez, University of Barcelona, Spain; Simei Ji , Beijing Institute of Technology, China;

PRELIMINARY RESULTS ON THE DYNAMICS OF LARGE AND FLEXIBLE SPACE STRUCTURES IN HALO ORBITS

Andrea Colagrossi, Politecnico di Milano, Italy

IAC-16.C1.6.2

DYNAMICS OF SPACECRAFT ORBITAL MOTION AROUND ASTEROID

Angi Lang, N.E. Bauman Moscow State Technology University, Russian Federation

IAC-16.C1.6.3

LONG-TERM ORBIT PROPAGATION USING SYMPLECTIC INTEGRATION ALGORITHMS

Koundinya Kuppa, The Pennsylvania State University, United States

IAC-16.C1.6.4

TRANSFERS BETWEEN LIBRATION POINT ORBITS USING LUNAR **GRAVITY ASSIST**

Yi Qi, Beihang University, China

IAC-16.C1.6.5

INFLUENCE OF TETHER DEPLOYMENT ON THE ATMOSPHERIC STAGE OF TETHER-ASSISTED PAYLOAD RETURN MISSION FROM ELLIPTICAL

Vladimir S. Aslanov, Samara State Aerospace University, Russian Federation

IAC-16.C1.6.6

AN ACCURATE AND ROBUST METHOD FOR INTERPLANETARY ORBIT

An-Ming Wu, National Space Organization, Taiwan, China

IAC-16.C1.6.7

ORBITAL DYNAMICS OF A SOLAR SAIL ACCELERATED BY THERMAL **DESORPTION OF COATINGS**

Roman Ya. Kezerashvili, New York City College of Technology, The City University of New York, United States

IAC-16.C1.6.8

EFFECTIVENESS OF KS ELEMENTS IN ORBIT PREDICTION USING EARTH'S GRAVITY, DRAG AND SOLAR RADIATION PRESSURE Xavier James Raj, Indian Space Research Organization (ISRO), India

USING EQUINOCTIAL ORBITAL ELEMENTS AND QUASI-AVERAGE ELEMENT METHOD TO CONSTRUCT ANALYTICAL SOLUTIONS FOR GEOSTATIONARY SATELLITE

Bin Liu, Nanjing University, China

IAC-16.C1.6.10

ARTIFICIAL SATELLITES ORBITING PLANETARY SATELLITES: CRITICAL INCLINATION AND HELIO-SYNCHRONOUS ORBITS Rodolpho V. Moraes, Federal University of São Paulo (UNIFESP),

IAC-16.C1.6.11

ANALYSIS OF THE INFLUENCE OF AREA-TO-MASS RATIO ERROR ON THE ORBITAL MOTION OF A SOLAR POWER SATELLITE Shunan Wu, Dalian University of Technology, China

IAC-16.C1.6.12

A HEURISTIC STRATEGY TO COMPUTE ENSEMBLES OF TRAJECTORIES FOR 3D LOW-COST EARTH-MOON TRANSFERS

Priscilla Sousa Silva, Instituto Tecnológico de Aeronáutica (ITA),

IAC-16.C1.6.13

SOLAR RADIATION PRESSURE ASSISTED TRANSFERS BETWEEN LISSAJOUS ORBITS OF THE SUN-EARTH SYSTEM Stefania Soldini, JAXA, Japan

C1.7. Orbital Dynamics (2)

September 29 2016, 14:45 — Salon Jalisco E6

Co-Chair(s): Antonio Prado , INPE, Brazil; Josep J. Masdemont , Universitat Politecnica de Catalunya (UPC), Spain; Rapporteur(s): Laureano Cangahuala, Jet Propulsion Laboratory, United States;

IAC-16.C1.7.1

DE-ORBITING AND RE-ENTRY ANALYSIS WITH GENERALISED INTRUSIVE POLYNOMIAL EXPANSIONS Carlos Ortega Absil, University of Strathclyde, United Kingdom

IAC-16.C1.7.2 (withdrawn)

COMPUTATION OF PERIODIC ORBITS IN MULTI-BODY MODELS USING CELL MAPPING

Dayung Koh, University of Southern California, United States

IAC-16.C1.7.3

MISSION ANALYSIS FOR A SPACE WEATHER MONITORING SYSTEM NEAR THE SUN-EARTH L1 AND L5 LIBRATION POINTS Aurelie Heritier, Deimos Space UK Ltd. United Kinadom

QUASI-PERIODIC INVARIANT TORI OF TIME-PERIODIC DYNAMICAL SYSTEMS: APPLICATIONS TO SMALL BODY EXPLORATION Nicola Baresi, University of Colorado, Colorado Center for Astrodynamics Research, United States

MODELLING AND STABILITY ANALYSIS OF GENERIC NON-KEPLERIAN ELLIPTIC ORBITS FOR SOLAR SAILS WITH REFLECTION CONTROL

Jianlin Chen, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, China

THE CALCULATION FEATURES OF FLYBY MANEUVERS OF A SPACE VEHICLE SEQUENTIALLY TAKING THE OBJECTS OF LARGE-SIZE SPACE DEBRIS TO LOW DISPOSAL ORBITS

Dmitriy Grishko, Bauman Moscow State Technical University,

IAC-16.C1.7.7 (withdrawn)

THE CONSEQUENCES OF STIFFNESS IN NUMERICAL SOLUTIONS OF ASTRODYNAMICS PROBLEMS

David Finkleman, International Academy of Astronautics, United

IAC-16.C1.7.8

THE EFFECT OF SOLAR RADIATION PRESSURE ON SOLAR ORBITER **GRAVITY ASSIST MANEUVERS**

Dusan Marceta, University of Belgrade, Faculty of Mathematics,

PERIODIC ORBITS DESIGN BASED ON THE CENTER MANIFOLD THEORY IN THE CIRCULAR RESTRICTED THREE-BODY PROBLEM Yuki Akiyama, Kyushu University, Japan

IAC-16.C1.7.10

PERIODIC AND QUASI-PERIODIC MOTIONS FOR A SOLAR SAIL IN THE EARTH-MOON SYSTEM

Marc Jorba-Cuscó, University of Barcelona, Spain

IAC-16.C1.7.11

SOLAR REFLECTORS ABOUT THE SUN-EARTH ARTIFICIAL COLLINEAR FOUILIBRIUM POINTS

Francisco Salazar, Universidade Estadual Paulista - Grupo de Dinâmica Orbital, Brazil

IAC-16.C1.7.12 (withdrawn)

ANALYSIS OF BALLISTIC CAPTURE DYNAMICS WITH A SEMIANALYTICAL APPROACH Diogene Alessandro Dei Tos, Politecnico di Milano, Italy

C1.8. Attitude Dynamics (1)

September 30 2016, 09:45 — Salon Jalisco E6

Co-Chair(s): Gianmarco Radice , University of Glasgow, United Kingdom; Hao-Chi Chang, National Space Organization, Taiwan, China

Rapporteur(s): Shinji Hokamoto , Kyushu University, Japan;

IAC-16.C1.8.1

INVERSE DYNAMICS PARTICLE SWARM OPTIMIZATION APPLIED TO CONSTRAINED MINIMUM-TIME MANEUVERS USING REACTION

Dario Spiller, Sapienza - University of Rome, Italy

IAC-16.C1.8.2

CONCEPT DESIGN FOR A SATELLITE WITH MICRO VIBRATION ISOLATOR

Takuma Shibata, The Graduate Universty for Advanced Studies[SOKENDAI], Japan

IAC-16.C1.8.3

TORQUE DISTRIBUTION ALGORITHM FOR EFFECTIVE USE OF REACTION WHEELS TORQUE AND ANGULAR MOMENTUM Mikihiro Suaita, Mitsubishi Electric Corporation, Japan

IAC-16.C1.8.4

USING AERODYNAMIC TORQUES TO AID DETUMBLING INTO AN AEROSTABLE STATE

Zhou Hao, The University of Manchester, United Kingdom

IAC-16.C1.8.5

AN ATTITUDE DETERMINATION AND CONTROL SYSTEM FOR A NANO-SATELLITE ALTERNATIVE LAUNCH PLATFORM Simone Battistini, Universidade de Brasília, Brazil

IAC-16.C1.8.6

ANALYSIS AND DESIGN OF LOGICAL DIFFERENTIAL CONTROL LAW XinXin Yu, Beijing Institute of Control Engineering(BICE), China Academy of Space Technology(CAST), China

IAC-16.C1.8.7

STABILITY ANALYSIS OF 3-AXIS ATTITUDE CONTROL SYSTEM OF SINGLE WING SATELLITE

Yeong-Wei Wu, Boeing Integrated Defense Systems, United States

IAC-16.C1.8.8

SIMPLE ADAPTIVE CONTROL OF A SATELLITE WITH LARGE FLEXIBLE **APPENDAGES**

Derek Gransden, Delft University of Technology (TU Delft), The

IAC-16.C1.8.9

NUMERICAL EVALUATION OF ON-ORBIT ATTITUDE BEHAVIOR FOR MICROSATELLITES WITH VARIABLE SHAPE FUNCTION Kyosuke Tawara, Tokyo Institute of Technology, Japan

IAC-16.C1.8.10 (withdrawn)

ACS FEED-FORWARD FOR MANIPULATOR CONTROL DURING COUPLED SATELLITE DETUMBLING

Barrett Dillow, University of Maryland, College Park, United States

IAC-16.C1.8.11

CHAOTIC MOTIONS OF TETHERED SATELLITES WITH LOW THRUST Vladimir S. Aslanov, Samara State Aerospace University, Russian

IAC-16.C1.8.12

CONSTRAINT FORCE ALGORITHM FOR DYNAMICS MODELING OF FLEXIBLE MULTIBODY SPACECRAFT

Fei Liu, Beijing Institute of Technology, China

IAC-16.C1.8.13 (withdrawn)

DYNAMICS AND UNDERACTUATED ROBUST CONTROL OF RIGID-FLEXIBLE COUPLING TETHERED SYSTEM FOR SPACE DEORBIT Liang Sun, Beihang University, China

C1.9. Attitude Dynamics (2)

September 30 2016, 13:30 — Salon Jalisco E6

Co-Chair(s): James O'Donnell , National Aeronautics and Space Administration (NASA)/Goddard Space Flight Center, United States: Michael Yu Ovchinnikov , Keldysh Institute of Applied Mathematics, RAS, Russian Federation;

Rapporteur(s): Paolo Teofilatto , University of Rome "La Sapienza", Italy;

IAC-16.C1.9.1

PERIODIC ORBIT-ATTITUDE SOLUTIONS ALONG PLANAR ORBITS IN A PERTURBED CIRCULAR RESTRICTED THREE-BODY PROBLEM FOR THE EARTH-MOON SYSTEM

Lorenzo Bucci, Politecnico di Milano, Italy

IAC-16.C1.9.2

ORBIT-ATTITUDE COUPLED MOTION AROUND SMALL BODIES: SUN-SYNCHRONOUS ORBITS WITH SUN-TRACKING ATTITUDE MOTION Shota Kikuchi, University of Tokyo, Japan

IAC-16.C1.9.3 (withdrawn)

A FLUID-DYNAMIC ATTITUDE CONTROL SYSTEM FOR TECHNOSAT Daniel Noack, Technische Universität Berlin, Germany

CAPTURING AND DOCKING SPACECRAFT WITH FLUX PINNED INTERFACES

Frances Zhu, Cornell University, United States

IAC-16.C1.9.5

IAC-16.C1.9.4

STAR TRACKER PERFORMANCE DURING THE EARLY PHASES OF THE LISA PATHFINDER MISSION

Jonathan Grzymisch, European Space Agency (ESA-ESTEC), The

FRACTIONAL PID CONTROL OF SPACECRAFT ATTITUDE DYNAMICS USING ROTATION MATRICES

Eric Butcher, University of Arizona, United States

IAC-16.C1.9.7

GAIN-SCHEDULED ATTITUDE CONTROL WITH POWER TRACKING AND SINGULARITY AVOIDANCE OF DOUBLE-GIMBAL VARIABLE-SPEED CONTROL MOMENT GYROS

Takahiro Sasaki, Osaka Prefecture University, Japan

IAC-16.C1.9.8

OPERATIONS IN SPACE OF SPACESTAR: THE NEW STAR TRACKER FOR FUTURE RECURRENT PLATFORMS FRANCO BOLDRINI, Selex ES, Italy

IAC-16.C1.9.9 (withdrawn)

THE CONTROL OF SPACE TETHERED SYSTEM

Alexey Malashin, Moscow State University, Russian Federation IAC-16.C1.9.10 (withdrawn)

LONG TERM PASSIVE ATTITUDE STABILISATION USING RADIATION **TOROUES**

Stuart Grey, University College London, United Kingdom

DUAL TENSOR SOLUTION TO THE EXTENDED WAHBA PROBLEM Daniel Condurache, Technical University of Iasi, Romania

IAC-16.C1.9.12 (withdrawn)

DESIGN AND VALIDATION OF THE ATTITUDE CONTROL SYSTEM FOR THREE-AXIS STABILIZED NANO-SATELLITES

Dechao Ran, , China

IAC-16.C1.9.13 MOTION PREDICTION OF NON-COOPERATIVE TARGET BASED ON AUTOREGRESSIVE MODEL

Mingming Wang, Northwestern Polytechnical University, China









C1.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Alfred Ng , Canadian Space Agency, Canada; Anna Guerman , Centre for Mechanical and Aerospace Science and Technologies (C-MAST), Portugal;

IAC-16.C1.IP.1

AERO-GRAVITY MANEUVERS CONSIDERING LIFT AROUND EERTH, MARS AND VENUS

Antonio Prado, National Institute for Space Research - INPE, Brazil

SEARCH FOR ORBITS IN THE JUPITER SYSTEM TO EXPLORE THE **GALILEAN MOONS**

Josué Cardoso dos Santos, São Paulo State University (FEG-UNESP),

IAC-16.C1.IP.3

INCREASED ZERO REACTION WORKSPACE OF A HYPER-REDUNDANT

Alessandro Tringali, Space Mechatronic Systems Technology Laboratory, University of Strathclyde, United Kingdom

IAC-16.C1.IP.4 (withdrawn)

A HIGH-ORDER IMPACT PROBABILITY COMPUTATION TOOL FOR EARTH-RESONANT RETURNS OF NEAR-EARTH OBJECTS Matteo Losacco, Politecnico di Milano, Italy

IAC-16.C1.IP.5 (withdrawn)

A NOVEL APPROACH FOR DETERMINATION OF INERTIAL CHARACTERISTICS OF TUMBLING SPACECRAFT

Chuan Ma, National Key Laboratory of Aerospace Flight Dynamic, Northwestern Polytechnical University, China

IAC-16.C1.IP.6

A NOVEL METHOD FOR UN-COOPERATIVE TARGET'S INERTIAL PROPERTIES IDENTIFICATION BASED ON ANGULAR VELOCITY ONLY Weihua Ma, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, China

IAC-16.C1.IP.7

APPLICATION OF BROUWER-LYDDANE AVERAGING METHOD TO ORBITAL DYNAMICS IN THE GRAVITATIONAL FIELD OF SMALL

Yuechen Ma, Beihang University (BUAA), China

IAC-16.C1.IP.8

EVALUATION OF A SIMPLE BARBER POLE BRAKING MECHANISM IN THE DEPLOYMENT OF BARE CONDUCTIVE TETHER FOR DEBRIS REMOVAL

Kenta Nozaki, Waseda University, Japan

IAC-16.C1.IP.9

FLUIDIC THRUST VECTOR CONTROL FOR RENDEZVOUS MISSIONS Courtney Bright, University of New South Wales ADFA, Australia

IAC-16.C1.IP.10

FORMATION RECONFIGURATION OF REFLECTIVITY MODULATED SOLAR SAILS AROUND SUN-EARTH LIBRATION POINT Zhangpeng Lou, University of Science and Technology of China,

IAC-16.C1.IP.11 IMPROVEMENT AND VALIDATION OF MICROGRAVITY PROPELLANT

SLOSHING MODELS FOR HIGH-ACCURACY POINTING MISSIONS Francesca Cirillo, Airbus Defence & Space, Germany

IAC-16.C1.IP.12 (withdrawn)

MODELLING COORBITAL MOTION IN CURVILINEAR COORDINATES Claudio Bombardelli, Technical University of Madrid (UPM), Spain

PREDICTION OF ATTITUDE MOTION OF NONFUNCTIONAL SATELLITES OR SPENT ROCKET STAGES FOR LONG TIME IN ORBIT Vladimir S. Aslanov, Samara State Aerospace University, Russian Federation

REACHABLE RELATIVE MOTION DESIGN AND NONLINEAR CONTROL OF SPACE ROBOTIC ARM ACTUATED MICROGRAVITY PLATFORM Shuquan Wang, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China

IAC-16.C1.IP.15 (withdrawn)

RESEARCH ON GEO SATELLITE RESIDUAL PROPELLANT ESTIMATION USING SOLAR RADIATION METHOD

Hou Fen, CHINESE academy of space technology, China

C2. MATERIALS AND STRUCTURES SYMPOSIUM

Coordinator(s): Constantinos P. Stavrinidis, European Space Agency (ESA), The Netherlands;

C2.1. Space Structures I - Development and Verification (Space Vehicles and Components)

September 26 2016, 15:15 — Salon de Eventos 1

Co-Chair(s): Alwin Eisenmann , IABG Industrieanlagen -Betriebsgesellschaft mbH, Germany; Andreas Rittweger, DLR (German Aerospace Center). Germany: Rapporteur(s): Jochen Albus , Airbus DS GmbH, Germany:

IAC-16.C2.1.1

SEMI-ANALYTICAL METHODS FOR RAPID PRE-DIMENSIONING OF LAUNCHER STRUCTURES SUBJECTED TO BOOSTER LOAD

Andreas Rittweger, DLR (German Aerospace Center), Germany

IAC-16.C2.1.2

THE DEVELOPMENT STATUS OF THE STRUCTURE SUBSYSTEM FOR ENHANCED EPSILON LAUNCH VEHICLE

Hiroshi Ikaida, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-16.C2.1.3 (withdrawn)

THE FAILURE MODE ANALYSIS OF THE 1/20 END FRAME OF THE INTERSTAGE SECTION

Shengnan Wang, China Academy of Launch Vehicle Technology,

IAC-16.C2.1.4

STRUCTURAL DESIGN, ANALYSIS AND TESTING OF LAUNCH VEHICLE INTERFACE FOR SMALL SATELLITE, PRATHAM, IIT BOMBAY Sumit Jain, Indian Institute of Technology, India

IAC-16.C2.1.5 (withdrawn)

STRUCTURAL- AND THERMOMECHANICAL ANALYSES OF ADHESIVELY BONDED JOINTS FOR MODULAR SATELLITE STRUCTURES

Thomas A. Schervan, RWTH Aachen University, Germany

IAC-16.C2.1.6

ULTRALIGHT PBO COMPOSITE OVERWRAPPED PRESSURE VESSELS FOR CHANGE'S 5 DETECTOR

Fei Yan, Shanghai Institute of Space Propulsion, China

IAC-16.C2.1.7

CRYOGENIC PROPERTIES OF CARBON FIBER REINFORCED COMPOSITES SUPPORT STRUCTURE Hongfei Zheng, , China

IAC-16.C2.1.8

NUMERICAL SIMULATION AND ANALYSIS FOR POINT SEPARATING PYROSHOCK SOURCE AND THE LOAD FORMING MECHANISM OF THE INTERFACE OF SPACECRAFT AND LAUNCH VEHICLE Xin Zhao, Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST), China

IAC-16.C2.1.9

DESIGN, VERIFICATION AND GROUND QUALIFICATION APPROACH FOR THE STRUCTURE OF THE EUROPEAN SERVICE MODULE OF THE ORION MULTI-PURPOSE CREW VEHICLE Gandolfo Di Vita, ESA, The Netherlands

IAC-16.C2.1.10

CUBESAT SYSTEM STRUCTURAL DESIGN

Jorge Enrique Herrera-Arroyave, Universidad Autonoma de Nuevo Leon, Mexico

IAC-16.C2.1.11

CHARACTERIZATION OF SPRING STIFFNESS VARIATION OF SOLID ROCKET MOTOR FLEX SEALS DUE TO COMBUSTION CHAMBER PRESSURE

Arun Krishnan, Indian Space Research Organization (ISRO), India

IAC-16.C2.1.12 (withdrawn)

PLASTIC ZONE AT THE MIXED MODE CRACK TIP IN NICKEL-BASED SINGLE CRYSTAL PLATE BASED ON A MODIFIED YIELD CRITERION Lihong Yang, Harbin Engineering University, China

IAC-16.C2.1.13

AN OVERVIEW OF EXPERIMENTAL AND NUMERICAL EFFORTS ON SUPERCRITICAL INJECTION AND COMBUSTION FOR LIQUID ROCKET

Li Pengfei, Xi'an Aerospace Propulsion Institute, China

C2.2. Space Structures II - Development and **Verification (Deployable and Dimensionally** Stable Structures)

September 27 2016, 09:45 — Salon de Eventos 1

Co-Chair(s): Jean-Alain Massoni , Thales Alenia Space France, France; Paolo Gasbarri, Università di Roma "La Sapienza", Italy; Rapporteur(s): Pierre Rochus, CSL (Centre Spatial de Liège),

IAC-16.C2.2.1

PAOLO SANTINI MEMORIAL LECTURE: HALF A CENTURY OF SPACE ADVENTURE AT CENTRE SPATIAL OF LIÈGE Pierre Rochus, CSL (Centre Spatial de Liège), Belgium

DEVELOPMENT OF DIMENSIONALLY STABLE STRUCTURE OF DRAWTUBE OF OPTICAL DEVICE OF COMPOSITE MATERIAL Antonina Kulik, Yuzhnoye State Design Office, Ukraine

IAC-16.C2.2.3

VERIFICATION TESTING OF THE GOSSAMER-1 DEPLOYMENT DEMONSTRATOR

Patric Seefeldt, German Aerospace Center (DLR), Germany

IAC-16.C2.2.4

IMPEDANCE CONTROL OF A MULTI-ARM SPACE ROBOT FOR CAPTURING A NON-COOPERATIVE TARGET Angelo Stolfi, Università di Roma "La Sapienza", Italy

IAC-16.C2.2.5

A HIGH-ACCURACY MICRO-DEFORMATION MEASUREMENT METHOD FOR HIGH-RESOLUTION SPACE CAMERA COMPLEX STRUCTURED

Li JIANG, China Academy of Launch Vehicle Technology, China

IAC-16.C2.2.6 (withdrawn)

THE RESEARCH OF THE VIBRATION RELIABILITY OF THE CERAMIC PACKAGING BGA AND CGA DEVICES

Wei Zhang, China Academy of Launch Vehicle Technology(CALT),

ATTITUDE AND VIBRATION CONTROL OF A SATELLITE CONTAINING FLEXIBLE SOLAR ARRAYS BY USING REACTION WHEELS. THRUSTERS. AND PIEZOELECTRIC TRANSDUCERS AS SENSORS AND ACTUATORS. Ijar M. Da Fonseca, ITA-DCTA, Brazil

IAC-16.C2.2.8 (withdrawn)

GROUND EXPERIMENTS OF BOOM-MEMBRANE INTEGRATED DEPLOYABLE STRUCTURES FOR MICRO SATELLITES Hiroshi Furuya, Tokyo Institute of Technology, Japan

IAC-16.C2.2.9 (withdrawn)

A MODULAR AND EFFICIENT SYSTEM FOR ANTENNA DEPLOYMENT IN SWAYAM: A PLATFORM FOR RELIABLE BI- DIRECTIONAL COMMUNICATION

Tanvi Katke, College of Engineering, Pune, India

IAC-16.C2.2.10

A STUDY ON THE ASYMMETRIC SPINNING DEPLOYMENT OF MEMBRANE STRUCTURE WITH VARIATION THICKNESS Hiroyuki Kinoshita, Tokai University, Japan

IAC-16.C2.2.11

DESIGN AND GROUND TEST OF THE ISOLATOR FOR SATELLITE ATTITUDE CONTROL ACTUATOR

Yinghui Cui, Institute of Telecommunication Satellite, CAST, China

IAC-16.C2.2.12

FBG OPTICAL SENSORS FOR ENVIRONMENTAL TESTS OF MICROSATELLITES

Claudio Paris, Museo Storico della Fisica e Centro Studi e Ricerche Enrico Fermi, Italy

IAC-16.C2.2.13

TOPOLOGY OPTIMIZATION AND FDM PROTOTYPING OF BIONIC INSPIRED STRENGTHENING-RIBS IN MEMBRANES OF SPACECRAFT Qingxi Hu, Shanghai University;, China

C2.3. Space Structures - Dynamics and Microdynamics

September 27 2016, 14:45 — Salon de Eventos 1

Co-Chair(s): Harijono Djojodihardjo , , Indonesia; Ijar M. Da Fonseca, ITA-DCTA, Brazil;

Rapporteur(s): Luigi Scatteia, PricewaterhouseCoopers Advisory, France:

IAC-16.C2.3.1

VIBRATION ANALYSIS, CONTROL AND GENETIC ALGORITHM OPTIMIZATION OF A PIEZOELECTRIC ELEMENTS BONDED ROTATING SPACECRAFT APPENDAGE COMPOSITE STRUCTURE Harijono Djojodihardjo, , Indonesia

IAC-16.C2.3.2 (withdrawn)

A DAMAGE IDENTIFICATION TECHNOLOGY OF STRUCTURE UNDER BASE EXCITATION USING STRAIN MODAL ANALYSIS JiangNing Xia, Beijing Institute of Structure & Environment Engineering, China

IAC-16.C2.3.3 (withdrawn)

OPTIMAL DESIGN OF THE MICRO-VIBRATION ISOLATION FOR SPACEBORNE CRYOCOOLER Feng Zhenwei, DFH Satellite Co., Ltd., China Academy of Space Technology (CAST), China

IAC-16.C2.3.4

ANALYSIS OF THE INFLUENCE OF SMALL ASYMMETRIES IN THE DYNAMICS OF MOTION OF SPACE LANDING VEHICLE IN CONDITIONS OF RESONANCE WITH APPLICATION SPECIAL AEROELASTIC BRAKING DEVICES

Vsevolod Koryanov, Bauman Moscow State Technical University, Russian Federation

IAC-16.C2.3.5 (withdrawn)

DESIGN OF HYBRID SPACECRAFT SEAT TO ATTENUATE HUMAN SEGMENTAL BIODYNAMIC RESPONSES DURING IMPACT CONDITIONS

B. Kapil Bharadwaj, Indian Institute of Science, India

International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico









IAC-16.C2.3.6 (withdrawn)

EXPERIMENTAL VALIDATION OF ALGORITHMS USED TO CONTROL THE DYNAMICS OF TWO FLOATING ROBOTIC MANIPULATORS DURING AN OPERATION OF RENDEZVOUS AND DOCKING/ BERTHING ON A GLASS TABLE

Ijar M. Da Fonseca, ITA-DCTA, Brazil

IAC-16.C2.3.7

DYNAMIC LOAD SYNTHESIS FOR SHOCK NUMERICAL SIMULATION IN SPACE STRUCTURE DESIGN

Riccardo Monti, Thales Alenia Space Italia, Italy

IAC-16.C2.3.8

FEASIBILITY STUDY ON SPACEBORNE COOLER MICRO-VIBRATION ENERGY HARVESTING SYSTEM USING PIEZOELECTRIC Seong-Cheol Kwon, Chosun University, Korea, Republic of

IAC-16.C2.3.9 (withdrawn)

ON-ORBIT IDENTIFICATION OF INERTIA PARAMETERS OF COMBINED SPACECRAFT USING SPACE MANIPULATOR LI Haiyan, , China

IAC-16.C2.3.10

PREDICTION OF THE MICROVIBRATION FROM GROUND TEST AND ITS IN-ORBIT EVALUATION OF THE GEOSTATIONARY METEOROLOGICAL SATELLITE 'HIMAWARI-8' Osamu Takahara, Mitsubishi Electric Corporation, Japan

IAC-16.C2.3.11

ACTIVE-PASSIVE INTEGRATED VIBRATION CONTROL FOR THE CONTROL MOMENT GYROS AND ITS APPLICATION ON SATELLITES Mou Li, Beijing Institute of technology(BIT), China

IAC-16.C2.3.12

STRUCTURAL DYNAMIC ANALYSIS OF A NANOSATELLITE LAUNCH

Salvatore Paiano, G.A.U.S.S. Srl, Italy

IAC-16.C2.3.13

SOME METHODS FOR MODELLING MULTI-SCALE SPACECRAFTS DYNAMICS WITH SGS

Lyudmila Kuzmina, Kazan National Research Technical University, Russian Federation

THE IMPACT OF AERO-ELASTIC EFFECTS ON THE CONTROLLABILITY OF CONVENTIONAL LAUNCH VEHICLES

Erwin Mooij, Delft University of Technology (TU Delft), The

C2.4. Advanced Materials and Structures for **High Temperature Applications**

September 28 2016, 09:45 — Salon de Eventos 1

Co-Chair(s): David E. Glass, National Aeronautics and Space Administration (NASA), United States; Marc Lacoste, Herakles (Safran group), France:

Rapporteur(s): Zijun Hu, China Academy of Launch Vehicle

IAC-16.C2.4.1 (withdrawn)

DESIGN AND QUALIFICATION OF AFT BAY THERMAL PROTECTION SYSTEM OF KSLV-II

JONGMIN KIM, Korea Aerospace Research Institute (KARI), Korea, Republic of

IAC-16.C2.4.2

CARBON / CARBON HIGH THICKNESS SHELL FOR HYPERSONIC

Marta Albano, Agenzia Spaziale Italiana (ASI), Italy

ADVANCED SILICA TILE THERMAL PROTECTION SYSTEM FOR REUSABLE LAUNCH VEHICLES: DEVELOPMENT & QUALIFICATION C Venkateswaran, Vikram Sarabhai Space Centre, Thiruvananthapuram-695 022, INDIA, India

IAC-16.C2.4.4

CURRENTLY PERFORMED RESEARCH AND DEVELOPMENT ACTIVITIES IN THE FIELD OF ATMOSPHERIC ENTRY AT IRS Georg Herdrich, Institute of Space Systems, Germany

IAC-16.C2.4.5

IMPROVEMENT AND QUALIFICATION OF A PLASMA WIND-TUNNEL TO CO2 FLOWS FOR MARS ENTRY TESTING Christian Mundt, Universität der Bundeswehr München, Germany

THE STUDY OF A 4D RADIAL-ROD LOW EROSION FINE WOVEN C/C COMPOSITE Li Ya-di, , China

IAC-16 C2 4 7

INVESTIGATION ON THE ABLATION PERFORMANCE OF EPDM INSULATION MATERIAL UNDER DENSE PARTICLE STREAM Yanjun BAI, The xi'an institute of aerospace propulsion technology,

IAC-16.C2.4.8

SIMULATION OF ACOUSTIC EMISSION WAVE PROPAGATION IN THERMAL PROTECTION SYSTEM WITH PLAIN WEAVE C/SIC

Denghong Xiao, Beijing Electro-Mechanical Engineering Institute, CASIC, China

IAC-16.C2.4.9

EFFECT OF INTERFACIAL PROPERTIES ON NONLINEAR BEHAVIOR OF THE 4D IN-PLANE BRAIDED C/C COMPOSITES

Kunlong WEI, Xi'an institute of aerospace propulsion technology,

IAC-16.C2.4.10

FINITE VOLUME METHOD FOR MODELING THE THERMAL ENVIRONMENT TO CARRY OUT THERMAL PROTECTION STRUCTURE COUPLING ANALYSIS

XIANG ZHANG, China Academy of Launch Vehicle Technology(CALT),

BASED ON THE MINIMUM ENERGY PRINCIPLE PREDICTION OF CRACK SPACING AND DEPTH OF CERAMICS UNDER THERMAL SHOCK

Tao Yongqiang, , China

C2.5. Smart Materials and Adaptive Structures

September 28 2016, 14:45 — Salon de Eventos 1

Co-Chair(s): Hiroshi Furuya, Tokyo Institute of Technology, Japan; Pavel M. Trivailo, RMIT University, Australia, Australia; Rapporteur(s): Paolo Gaudenzi, Sapienza University of Rome,

IAC-16.C2.5.1

IMPACT OF LARGE FIELD ANGLES ON THE REQUIREMENTS FOR DEFORMABLE MIRRORS IN IMAGING SATELLITES Brij Agrawal, Naval Postgraduate School, United States

AN OPTIMIZATION OF SSDI SYSTEM FOR A BEAM STRUCTURE Shigeru Shimose, Japan Aerospace Exploration Agency (JAXA),

IAC-16.C2.5.3 (withdrawn)

A SMA WIRE ACTUATED HOLD-DOWN AND RELEASE DEVICE USING TWO BALL LOCK MECHANISMS Dawei Huang, China

IAC-16.C2.5.4 (withdrawn)

DEVELOPMENT OF A COMPOSITE BASED WIRING TECHNIQUE FOR SMALL SATELLITE APPLICATIONS B. Kapil Bharadwai, Indian Institute of Science, India

IAC-16.C2.5.5

NEW APPLICATION OF SHAPE MEMORY ALLOY SPRING ACTUATOR TO CALIBRATION MECHANISM WITH DUAL-FUNCTION OF LAUNCH LOCKING AND FAIL-SAFE

Myeong-Jae Lee, Chosun University, Korea, Republic of

IAC-16.C2.5.6

MULTIPLE FAILURE MODES-COUPLED PIEZOELECTRIC VIBRATION INHIBITION SYSTEM LAYOUT OPTIMIZATION Lin Ye. . China

IAC-16.C2.5.7 (withdrawn)

LOCATION OF A MAXIMUM DEFLECTION POINT WITH FIBER BRAGG GRATINGS IN POLARIZATION-MAINTAINING OPTICAL FIBER Joel Quintana, University of Texas at El Paso, United States

IAC-16.C2.5.8

SHAPE MEMORY ALLOYS FOR SPACE DEBRIS CAPTURE APPLICATIONS

Louis Wei-yu Feng, University of Cape Town, South Africa

IAC-16.C2.5.9

ROBUST MOTION CONTROL AND VIBRATION OPTIMAL CONTROL FOR A FREE-FLYING FLEXIBLE SPACE MANIPULATOR WITH ELASTIC

Xiaoyan Yu, Fuzhou University, China

IAC-16.C2.5.10 (withdrawn)

DYNAMIC IMPACT CHARACTERISTICS OF DEFECTIVE FUNCTIONALLY GRADED HONEYCOMBS

Tao Fan, Harbin Engineering University, China

IAC-16.C2.5.11

PROPAGATION CHARACTERISTICS OF ACOUSTIC EMISSION WAVE IN A CYLINDRICAL COMPOSITE CABIN WITH VARIABLE DIAMETERS Denghong Xiao, Beijing Electro-Mechanical Engineering Institute, CASIC. China

IAC-16.C2.5.12

DYNAMICS AND CONTROL OF A FLEXIBLE CLAMPED-FREE BEAM ON A ROTATING HUB BY USING THE STATE-DEPENDENT RICCATI **EQUATION (SDRE) STRATEGY**

Vinicius Piro Barragam, ITA-DCTA, Brazil

C2.6. Space Environmental Effects and **Spacecraft Protection**

September 29 2016, 09:45 — Salon de Eventos 1

Co-Chair(s): Anatolii Lohvynenko , Yuzhnoye State Design Office, Ukraine; Giuliano Marino , CIRA Italian Aerospace Research Centre. Italy:

Rapporteur(s): Kyeum-rae Cho, Pusan National University, Korea, Republic of;

IAC-16.C2.6.1

MATERIALS ANALYSIS OF HYPERVELOCITY IMPACT AND PROTECTING SPACECRAFT OF SPACE DERRIS THANGAVEL SANJEEVIRAJA, Hindustan University, India

IAC-16 C2 6 2

EFFECT OF SOLAR PARTICLES ON LEO SATELLITES Shreyash Patel, University of Petroleum and Energy Studies, India

IAC-16.C2.6.3

ELECTROMAGNETIC ABSORPTION PROPERTIES OF SPACECRAFT AND SPACE DEBRIS

Fabio Santoni, University of Rome "La Sapienza", Italy

IAC-16.C2.6.4

TWO TYPES OF RADIATION HARDENED SOCS FOR SATELLITES

Hui Cao, Xi'an Microelectronics Technology Institute, China Aerospace Science and Technology Corporation (CASC), China

IAC-16.C2.6.5

DEVELOPMENT OF A PAYLOAD FOR THE CHARACTERIZATION OF FRAM MICROCONTROLLERS TO RADIATIONS Federica Lacirianola, Politecnico di Torino, Italy

IAC-16.C2.6.6

INDUSTRY FOR THE NEAR-SUN ORBITS. Elena Ancona, Polytechnic of Turin, Italy

IAC-16.C2.6.7 (withdrawn)

EFFECTS OF SOLAR FLARE ON GEOSTATIONARY SATELLITES Abbishek G., India

IAC-16.C2.6.8

TRANSPORT ANALYSIS AND EXPERIMENTS ON THE DEEP DIELECTRIC CHARGING OF SPACECRAFT MATERIALS

IAC-16.C2.6.9 (withdrawn)

SOLAR WIND INTERACTION WITH EARTH'S MAGNETOSPHERE AND NEAR EARTH ORBITAL OBJECTS

PARALLEL AND OCTREE-BASED ACCELERATION OF OUTGASSING CONTAMINATION SIMULATION FOR SPACECRAFT WITH COMPLEX

SIMULATION ON INTERNAL ELECTROSTATIC CHARGE IN DIELECTRIC WITH BOTH-SIDES GROUNDING

Xue Yuxiong, Lanzhou Institute of Physics, China

IAC-16.C2.6.12

ON MYLAR SUBSTRATE

Marialaura Clausi, Sapienza - University of Rome, Italy

C2.7. Space Vehicles – Mechanical/Thermal/ **Fluidic Systems**

September 29 2016, 14:45 — Salon de Eventos 1

Co-Chair(s): Brij Agrawal , Naval Postgraduate School, United States; Oleg Alifanov , Moscow Aviation Institute, Russian

Aerodynamics, China;

FUTURE ACTUATOR DEVELOPMENT - A NEW APPROACH AND FIRST

Oliver Kunz, RUAG Space AG, Switzerland

IAC-16.C2.7.2 (withdrawn)

NANOSTRUCTURED RIGID FOAMS FOR SPACE APPLICATIONS Tomas Vlcek, TOSEDA s.r.o., Czech Republic

Bustanul Arifin, Indonesian National Institute of Aeronautics and

STUDY ON A NOVEL SELF-ADAPTIVE SPACECRAFT THERMAL CONTROL SYSTEM WITH MOTORIZED THERMAL SHADE AND LOOP

Dong La, Shanghai Institute of Satellite Engineering, China

IAC-16.C2.7.5 (withdrawn)

NUMERICAL ANALYSIS OF INTEGRATED MODEL OF FLOW FIELD AND CARBON/CARBON STRUCTURE FOR TEMPERAYURE RESPONSE IN ARC TUNNEL

Zhaowei Wang, China Academy of Launch Vehicle, China

TEMPERATURE RESTRICTIONS FOR MATERIALS USED IN AEROSPACE

Chaoyang Zhou, Lanzhou Institute of Physics, China

Rohan Kulkarni, , India IAC-16.C2.6.10

Zi-long Jiao, Beijing Institute of Spacecraft Environment Engineering,

IAC-16.C2.6.11

UV-C EFFECTS ON CARBON NANOSTRUCTURED FILMS FABRICATED

Rapporteur(s): Guoliang Mao, Beijing Institute of

IAC-16.C2.7.1

RESULTS

IAC-16.C2.7.3 THE THERMAL ANALYSIS OF LAPAN'S IR MICRO BOLOMETER OPTICAL DESIGN

Space (LAPAN), Indonesia







IAC-16.C2.7.6

THERMAL MODELING AND SIMULATION FOR 'PRATHAM' IIT **BOMBAY STUDENT SATELLITE**

Manmohan Verma, Indian Institute of Technology, India

IAC-16.C2.7.7

QUICK DESIGN TOOL FOR STRATIFICATION PROCESSES IN CRYOGENIC FUEL TANKS WITH FOCUS ON SANDWICH COMMON

Marco Vietze, Universität der Bundeswehr München, Germany

IAC-16.C2.7.8 (withdrawn)

PARAMETER STUDY OF LAP STRUCTURE BETWEEN SKIRT AND COMPOSITE MATERIAL CASE OF SRM

Wang Liqiang, The 41st Institute of Academy of China Aerospace Science and Technology Corporation, China

IAC-16.C2.7.9

THERMAL-VACUUM TESTS OF THE AMAZONIA-1 SATELLITE TM PERFORMED AT INPE WITH SUCCESS

Jose Sergio Almeida, The Brazilian Institute for Space Research -

IAC-16.C2.7.10

WAVERIDER DESIGN AND ANALYSIS BASED ON SHOCK-FITTING

Bingyan Chen, China Academy of Aerospace Aerodynamics(CAAA),

C2.8. Specialised Technologies, Including Nanotechnology

September 30 2016, 09:45 — Salon de Eventos 1

Co-Chair(s): Mario Marchetti , Associazione Italiana di Aeronautica e Astronautica (AIDAA), Italy; Pierre Rochus, CSL (Centre Spatial de Liège), Belgium;

Rapporteur(s): Banachena Ai, China Aerospace Science and Industry Corporation, China;

IAC-16.C2.8.1 (withdrawn)

EMBEDDED CHIP-SCALE ELECTROCHEMICAL DOUBLE LAYER CAPACITORS WITH PSEUDOCAPACITIVE FUNCTIONALIZATION AND TAILORED IONIC LIQUID-BASED ELECTROLYTES Tyler Colling, Georgia Institute of Technology, United States

IAC-16.C2.8.2

ELECTROMAGNETIC CHARACTERIZATION OF ADVANCED NANOSTRUCTURED MATERIALS

Davide Micheli, "Sapienza" University of Rome,, Italy

IAC-16.C2.8.3 (withdrawn)

ROBUST CNT FIELD EMITTERS FOR HARSH ENVIRONMENT **FLECTRONICS**

Valerie Scott, JPL, United States

IAC-16.C2.8.4

SYNTHESIS OF SILICATES ANALOGOUS TO COSMIC DUST USING MULTIPLE ION IMPLANTATIONS

Josh Young, , United States

IAC-16.C2.8.5

MULTIFUNCTIONAL SENSORS FOR UV AND MECHANICAL DAMAGE **DETECTION OF AEROSPACE STRUCTURES**

Marialaura Clausi, Sapienza - University of Rome, Italy

IAC-16.C2.8.6

IMITATION OF THE MATERIALS ELECTROMAGNETIC REFLECTION COEFFICIENT IN METROLOGICAL AND LOW RADAR OBSERVABILITY APPLICATIONS BY USING NANO COMPOSITES AND SWARM INTELLIGENCE ALGORITHM

Davide Micheli, "Sapienza" University of Rome,, Italy

IAC-16.C2.8.7

MULTIFUNCTIONAL FIBER REINFORCED POLYMER COMPOSITES USING CARBON AND BORON NITRIDE NANOTUBES Behnam Ashrafi, National Research Council, Canada

IAC-16.C2.8.8

NANOCOMPOSITE MATERIALS AND STRUCTURES: NEW PERSPECTIVES FOR HUMAN LIFE IN SPACE Fabiana Milza, University of Rome "La Sapienza", Italy

IAC-16.C2.8.9

Jean-Paul Collette, , Belgium

IAC-16.C2.8.10

REVEALER1601C - A MULTIPLE-CORE DIGITAL SIGNAL PROCESSOR FOR DEMANDING SPACE APPLICATIONS

Aerospace Science and Technology Corporation (CASC), China

IAC-16.C2.8.11

COATINGS FOR OPTICAL PROPULSION APPLICATIONS Sydney Taylor, Arizona State University, United States

IAC-16.C2.8.12

ARRAYS FOR LEAD DETECTION BY ANODIC STRIPPING VOLTAMMETRY

Jendai Robinson, University of Cincinnati, United States

C2.9. Advancements in Materials **Applications and Rapid Prototyping**

September 30 2016, 13:30 — Salon de Eventos 1

Co-Chair(s): Giuliano Marino, CIRA Italian Aerospace Research Centre, Italy; Sylvie Béland, National Research Council, Canada; Rapporteur(s): John R. Koenig , Southern Research Institute,

IAC-16.C2.9.1

ADDITIVE MANUFACTURING: A GROWING PARADIGM FOR ADVANCING SPACE MATERIALS Priti Wanjara, NRC Institute for Biodiagnostics, Canada

IAC-16.C2.9.2

ADDITIVE LAYER MANUFACTURING FOR ENTRY CAPSULES. Roberto Gardi, CIRA Italian Aerospace Research Centre, Italy

IAC-16.C2.9.3

REVISITING THE SHAPES OF SPACECRAFT STRUCTURES ACCORDING TO 3D ADDITIVE MANUFACTURING

Luciano Pollice, Sapienza Università di Roma, Italy

IAC-16.C2.9.4 (withdrawn)

ADDITIVE MANUFACTURING FOR RAPID NON-CONVENTIONAL NANOSATELLITE STRUCTURES USING LASER SINTERED TITANIUM Matthew Driedger, University of Manitoba, Canada

IAC-16.C2.9.5 (withdrawn)

MECHANICAL PROPERTIES OF ADDITIVE MANUFACTURED ALUMINUM PERIODIC CELLULAR STRUCTURE (PCS) FOR SPACE APPLICATIONS

Florian Gallien, Ecole Polytechnique Fédérale de Lausanne (EPFL), Swiss Space Center (SSC), Switzerland

IAC-16.C2.9.6 (withdrawn)

SELECTION OF MATERIALS FOR A 3U SATELLITE EQUIPPED WITH SOLAR SAIL

Tanvi Katke, College of Engineering, Pune, India

IAC-16.C2.9.7

SELECTIVE LASER MELTING FOR PRODUCTION OF A NOVEL HIGH TEMPERATURE ELECTROTHERMAL PROPULSION SYSTEM Federico Romei, University of Southampton, United Kingdom

IAC-16.C2.9.8

RESEARCH ON 3D PRINTING METHOD OF CFRP VIA 5-DOF MOTION

Xiaoqin Li, Anhui University of Science&Technology ;Aerospace System Engineering Institute Shanghai, China

IAC-16.C2.9.9

TEMPERATURE HOMOGENIZATION DESIGN AND ANALYSIS FOR THERMAL RADIATOR IN SPACE

Liu Xin, China Academy of Launch Vehicle Technology, China

IAC-16.C2.9.10

COUPLING NUMERICAL METHOD RESEARCH OF THERMAL **ENVIRONMENT/ABLATION FOR 3-DIMENSIONAL HYPERSONIC**

Jiatong Shi, China Academy of Aerospace Aerodynamics(CAAA),

IAC-16.C2.9.11

INVESTIGATION OF THE GRID-DEPENDENCY IN HEAT TRANSFER SIMULATION FOR HYPERSONIC VEHICLE

Xiang Zhang, Beijing Electro-Mechanical Engineering Institute, CASIC. China

IAC-16.C2.9.12

INFLUENCE OF WALL TEMPERATURE ON SHOCK TRAIN STRUCTURES IN A SCRAMJET ISOLATOR

Guo-hao DING, China Aerodynamics Research and Development

C2.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Constantinos P. Stavrinidis, European Space Agency (ESA), The Netherlands; Pavel M. Trivailo, RMIT

TIME DELAY ESTIMATION CONTROL OF FLEXIBLE-JOINT DUAL-ARM SPACE ROBOT

Jie Liang, , China

MAGNETIC FLAME SPREAD

Vinayak Malhotra, SRM University Chennai, India

IAC-16.C2.IP.3

EQUIPMENT USING THE PHASE CHANGE MATERIAL Taig Young Kim, Korea Polytechnic University, Korea, Republic of

IAC-16.C2.IP.4

AXIAL HAMMERING PATTERN

Yuanxun Zhang, Center of Space Exploration, Ministry of Education (COSE), China

IAC-16.C2.IP.5

ASSEMBLY TO CONVERGENT SUB ASSEMBLY UNDER REDUCED PRE LOAD CONDITION

Paul Murugan J, Indian Space Research Organization (ISRO), India

IAC-16.C2.IP.6 (withdrawn)

WITH FLEXIBLE ARMS IMPACTED BY A SATELLITE ADAPTIVE NEURAL NETWORK CONTROL AND VIBRATION SUPPRESSION FOR COMBINED SYSTEM

Jing Cheng, Fuzhou University, China

IAC-16.C2.IP.7

THE EXPERIMENTAL STUDY OF SURFACE CATALYTIC EFFECT ON THE

Zhang Hongjun, Beijing Aerospace Technology Institute, China

SPACECRAFT EJECTION MECHANISM USING SODIUM AZIDE Subham Gupta, SRM University, kattankulathur, chennai, INDIA,

IAC-16.C2.IP.9

INVESTIGATION ON HEAT TRANSFER OF SUBMERGED WATER JET IMPINGEMENT ON MICRO-CHANNEL HEAT SINK Yao Pan, China Academy of Launch Vehicle Technology R&D Center,

IAC-16.C2.IP.10

SPACE SIMULATION CHAMBERS STATE-OF-THE-ART Roy Stevenson Soler Chisabas, Brazilian National Institute for Space Research - INPF, Brazil

FOR SPACE MISSIONS

Aerospace Science and Technology Corporation (CASC), China

UNSTEADY NUMERICAL SIMULATION AND ATTITUDE CONTROL ON SEPARATION TRAJECTORIES OF MISSILE EJECTED FROM AIRCRAFT Wei Yang, Beijing Electro-Mechanical Engineering Institute, CASIC,

THE SPIN-STABILIZATION SOLID ROCKET MOTOR CHARGED WITH HIGH ENERGY GRAIN

Shitij Arora, Vikram Sarabhai Space Centre (VSSC), India

IAC-16.C2.IP.14 (withdrawn)

Silvio Cocuzza, Space Mechatronic Systems Technology Laboratory, University of Strathclyde, United Kinadom

IAC-16.C2.IP.15

Huiling Zhan, China Academy of Aerospace Aerodynamics(CAAA),

IAC-16.C2.IP.16

METHOD FOR CUBESAT THERMAL-VACUUM TESTING SPECIFICATIONS

Roy Stevenson Soler Chisabas, Brazilian National Institute for Space Research - INPE, Brazil

FIRST STAGE AERODYNAMIC OPTIMIZATION OF THE LAUNCH

C3. SPACE POWER SYMPOSIUM

Coordinator(s): Koji Tanaka , ISAS, JAXA, Japan; Leopold Summerer, European Space Agency (ESA), The

C3.1. Space-Based Solar Power Architectures

September 26 2016, 15:15 — Salon de Eventos 2

Co-Chair(s): John C. Mankins , ARTEMIS Innovation

IAC-16.C3.1.1

IAC-16.C2.IP.11 A RADIATION HARDENED MULTICORE DSP PROCESSOR DESIGNED

Hui Cao, Xi'an Microelectronics Technology Institute, China

IAC-16.C2.IP.13 DESIGN CRITICALITIES AND STRUCTURAL INTEGRITY ANALYSIS OF

REACTION CONTROL OF A SPACE MANIPULATOR WITH COMPLIANT

INVESTIGATION OF AN EFFECTIVE APPROACH FOR AERODYNAMICS COMPUTATION OF MARS ENTRY VEHICLES

IAC-16.C2.IP.17

VEHICLE IN LANDING AREA CONTROL TECHNOLOGY Linfei Du., China

Netherlands:

Management Solutions, LLC, United States; Leopold Summerer, European Space Agency (ESA), The Netherlands; Rapporteur(s): Koji Tanaka, ISAS/JAXA, Japan; Nobuyuki Kaya, Kobe University, Japan;

KEYNOTE: SPACE SOLAR AT THE 2016 DEFENSE, DIPLOMACY, AND DEVELOPMENT TECHNOLOGY INNOVATION PITCH CHALLENGE Paul Jaffe, Naval Research Laboratory, United States

LOW COST CONCENTRATOR SOLAR ARRAY

Hui Cao, Xi'an Microelectronics Technology Institute, China

VANADIUM DIOXIDE-BASED VARIABLE REFLECTIVITY RADIATION

EMPLOYMENT OF VERTICALLY ALIGNED CARBON NANOFIBER

University, Australia, Australia;

IAC-16.C2.IP.1

IAC-16.C2.IP.2

PARAMETRIC STUDY ON THE DESIGN OF THE THERMAL CONTROL

DESIGN METHOD FOR DRILLING AND SAMPLING DEVICE WITH

ASSESSMENT OF STRUCTURAL INTEGRITY OF HPS3 FLEX SEAL SUB

COLLISION ANALYSIS FOR FREE-FLYING SPACE MANIPULATOR

STAGNATION HEAT-TRANSFER RATES IN HIGH-ENTHALPY SHOCK









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CONFERENCE

IAC-16.C3.1.2

STRATEGY OF INTRODUCTION OF PRACTICAL SPS UTILIZING EQUATORIAL ORBITS

Tanaka Koji, ISAS/JAXA, Japan

IAC-16.C3.1.3

NEW DEVELOPMENTS IN SPACE SOLAR POWER

John C. Mankins, ARTEMIS Innovation Management Solutions, LLC,

United States

IAC-16.C3.1.4

USING RESOURCES ON ASTEROID FOR MANUFACTURING OF SSPS--A NEW ATTEMPT AND ITS POTENTIAL

Ming Li, China Academy of Space Technology (CAST), China

IAC-16.C3.1.5 (withdrawn)

SMALLER CONCENTRATED SBSP SATELLITES IN SUN-SYNCHRONOUS

Ali Baghchehsara, VDev Systems and Services, DLR Hamburg, Hochschule Bremen, Germany

IAC-16.C3.1.6

IMPROVEMENT ON THE SANDWICH PANEL FOR SOLAR POWER SATELLITE

Nobuyuki Kaya, Kobe University, Japan

IAC-16.C3.1.7

ASSEMBLY AND OPERATION OF A "TIN CAN" SPS
Peter Schubert, Indiana University-Purdue University Indianapolis,

C3.2. Wireless Power Transmission Technologies, Experiments and Demonstrations

September 27 2016, 09:45 — Salon de Eventos 2

Co-Chair(s): Frank Little , Texas A&M University, United States; Nobuyuki Kaya , Kobe University, Japan;

Rapporteur(s): Massimiliano Vasile , University of Strathclyde, United Kinadom:

IAC-16.C3.2.1

SPACE-TO-SPACE POWER BEAMING - AN EVOLVING COMMERCIAL MISSION TO UNBUNDLE SPACE POWER SYSTEMS TO FOSTER SPACE APPLICATIONS

Gary Barnhard, , United States

IAC-16.C3.2.2

THE CURRENT STATUS OF MICROWAVE POWER TRANSMISSION FOR SSPS

Shoichiro Mihara, Japan Space Systems (J-spacesystems), Japan

IAC-16.C3.2.3

SIDELOBE REDUCTION FOR GEO TO EARTH WIRELESS POWER TRANSFER

Peter Schubert, Indiana University-Purdue University Indianapolis, United States

IAC-16.C3.2.4

CHARACTERIZATION OF RF TO DC CONVERTERS FOR L-BAND AND S-BAND POWER TRANSMISSION

Marek Novák, Czech Technical University In Prague, Czech Republic

IAC-16.C3.2.5

OPTIMAL DESIGN OF RECTENNA ARRAY IN MPT SYSTEM FOR SSPS Yazhou Dong, China Academy of Space Technology (CAST), China

IAC-16.C3.2.6

SEA-BASED RECTENNAE FOR EARTH AND TITAN
Peter Schubert, Indiana University-Purdue University Indianapolis,
United States

IAC-16.C3.2.7 (withdrawn)

LASER BASED POWER AND DATA TRANSMISSION TECHNOLOGY DEMONSTRATION AND APPLICATIONS ON-BOARD INTERNATIONAL SPACE STATION

Frank Steinsiek, Airbus Defense and Space, Germany

IAC-16.C3.2.8

CONCORD OF SUBSYSTEMS PARAMETERS OF SPACE LASER POWER TRANSMISSION COMPLEX

Vladimir Gridin, Russian Academy of Sciences, Russian Federation

IAC-16.C3.2.9

ENABLING INTERSTELLAR TRAVEL – THE NEED FOR A DIVERSE MIX OF ADVANCED ENERGY CONCEPTS: SAFE TRACKING LASER POWER TRANSMISSION, HARVESTING PROBES, FUTURE PROPULSION SYSTEMS AND HOW TO START TODAY.

Bastian Paetzold, 100 Year Starship, United Kingdom

C3.3. Advanced Space Power Technologies and Concepts

September 28 2016, 14:45 — Guadalajara Hall Salon 2

Co-Chair(s): Carla Signorini , European Space Agency (ESA), The Netherlands; Lee Mason , National Aeronautics and Space Administration (NASA)/Glenn Research Center, United States; Rapporteur(s): Koji Tanaka , ISAS, JAXA, Japan; Matthew Perren, Airbus Defence & Space, United Kingdom;

C-16.C3.3.1

THERMAL RUNAWAY RISKS OF ENERGY STORAGE DEVICES IN SPACE APPLICATIONS

Omar Mendoza, Japan Aerospace Exploration Agency (JAXA)/ISAS, Japan

IAC-16.C3.3.2

SYNTHESIS, CHARACTERIZATION AND ELECTROCHEMICAL ANALYSIS OF COMPOSITE CATHODE MATERIAL 0.5LI2MNO3-0.25LIMN2O4-0.25LINI0.5MN0.5O2 DOPED WITH GRAPHENE FOR LIB APPLICATIONS

Monica LopezdeVictoria, Institute of Functional Nanomaterials, University of Puerto Rico, San Juan, PR, USA, United States

IAC-16.C3.3.3 (withdrawn)

DESIGNING EFFECTIVE THERMAL MANAGEMENT SYSTEMS FOR LITHIUM ION BATTERY ASSEMBLIES INTENDED FOR HUMAN SPACEFLIGHT APPLICATIONS

Tara RuthAnn Sprinkle, , United States

IAC-16.C3.3.4 (withdrawn)

DESIGN REQUIREMENTS OF DIRECT BOROHYDRIDE—HYDROGEN PEROXIDE FUEL CELL SYSTEM FOR SPACE MISSIONS

Taek Hyun Oh, Korea Aerospace Research Institute (KARI), Korea, Republic of

IAC-16.C3.3.5

RESEARCH ON CONTROL STRATEGY OF FUEL CELL POWER SYSTEM FOR SPACECRAFT APPLICATION $% \left(1\right) =\left(1\right) \left(1\right)$

Longlong Zhang, Shandong Aerospace Electro-technology Institute, China Academy of Space Technology, China

IAC-16.C3.3.6

DEPLOYABLE GOSSAMER STRUCTURES FOR FLEXIBLE PHOTOVOLTAICS

Jan Thimo Grundmann, DLR (German Aerospace Center), Germany

AC-16.C3.3.7

RESEARCH ON POWER BUS INTERCONNECTION AND POWER
CONTROL TECHNOLOGY FOR SPACECRAFTS
Vinchun Thou, Paijing Spacecrafts, Ching Academy of Space

Xinshun Zhou, Beijing Spacecrafts, China Academy of Space Technology (CAST), China

IAC-16.C3.3.8

SOLAR SIMULATOR TO CHARACTERIZE SOLAR PANELS. JOSE EDUARDO VILLA HERRERA, Facultad de Ingeniería-UNAM, Mexico IAC-16.C3.3.9

ENERGY CENTERED DESIGN OPTIMIZATION OF HALE SOLAR-POWERED AIRPLANE

Xiongfeng ZHU, Beijing Special Engineering Design and Research Institute, China

C3.4. Small and Very Small Advanced Space Power Systems

September 29 2016, 14:45 — Salon de Eventos 3

Co-Chair(s): Massimiliano Vasile , University of Strathclyde, United Kingdom; Shoichiro Mihara, Japan Space Systems (J-spacesystems), Japan;

Rapporteur(s): Alex Ignatiev , University of Houston, United States:

IAC-16.C3.4.1 (withdrawn)

DESIGN OF A ROBUST ELECTRICAL POWER SYSTEM OF A 3U CUBESAT

Shubham Pisal, College of Engineering, Pune, India

IAC-16.C3.4.2

DESIGN AND IMPLEMENTATION OF ELECTRICAL SYSTEM FOR STU-2 CUBESATS

Kun Chen, Shanghai Engineering Center for Microsatellites, China

IAC-16.C3.4.3

SPACE SOLAR POWER, MIRROR DEVELOPMENT, & THE INTERNATIONAL SPACE STATION
Lewis Fraas, , United States

IAC-16.C3.4.4

DESIGN AND DEVELOPMENT OF AN AEROSPACE POWER SYSTEM Emilio Mondragón Vincent, Student, Mexico

IAC-16.C3.4.5 (withdrawn)

ENERGY EXTRACTION THROUGH SHOCK WAVES DURING RE-ENTRY TO PROVIDE BACKUP FOR SPACECRAFT BATTERIES

Rohan Kulkarni. . India

IAC-16.C3.4.6 (withdrawn)

DESIGN OF MICROWAVE BEAM POWERED SENSORS FOR SPACE SWARM NETWORKS

Marek Novák, Czech Technical University In Prague, Czech Republic

IAC-16.C3.4.7

A NEW EUROPEAN HIGH FIDELITY SOLAR ARRAY SIMULATOR FOR NEAR EARTH AND DEEP SPACE APPLICATIONS. Hjalti Pall Thorvardarson, Rovsing A/S, Denmark

AC-16.C3.4.8

SOLAR SIMULATOR FOR NANOSATELLITES Marco Antonio Saavedra Lautensach, School of Engineering,

National Autonomous University of Mexico, Mexico

THE DESIGN EEA

THE DESIGN FEATURES OF INFLATABLE LARGE-SCALE MIRROR CONCENTRATORS FOR SPACE HIGH-TEMPERATURE SOLAR POWER PLANTS

Victor Leonov, N.E. Bauman Moscow State Technical University, Russia, Russian Federation

C3.5-C4.7. Joint Session on Nuclear Power and Propulsion

September 30 2016, 09:45 — Zapopan

Co-Chair(s): Jerome BRETEAU , European Space Agency (ESA), France; Leopold Summerer , European Space Agency (ESA), The Netherlands;

Rapporteur(s): George Schmidt , National Aeronautics and Space Administration (NASA), United States; Vito Salvatore, Italy;

IAC-16.C3.5-C4.7.1

EUROPEAN RADIOISOTOPE-BASED SPACE NUCLEAR POWER SYSTEMS

Richard Ambrosi, University of Leicester, United Kingdom

IAC-16.C3.5-C4.7.2

WHAT IS NUCLEAR POWER'S NICHE IN DEEP SPACE MISSIONS? Reina Buenconsejo, IDA Science and Technology Policy Institute, United States

IAC-16.C3.5-C4.7.3 (withdrawn)

CONCEPTUAL MISSION DESIGN FOR THE EUROPA JUPITER SYSTEM USING THERMONUCLEAR FUSION PROPULSION SYSTEM Saroj Kumar, Propulsion Research Center, University of Alabama in Huntsville, United States

IAC-16.C3.5-C4.7.4 (withdrawn)

DEMOCRITOS: DEMONSTRATOR PROJECTS OF A MW CLASS NUCLEAR ELECTRIC SPACECRAFT.

Emmanouil Detsis, European Science Foundation (ESF), France

IAC-16.C3.5-C4.7.5

THE PLAUSIBILITY OF UTILIZATION OF GAS CORE REACTORS FOR DEEP SPACE MISSIONS

Ugur Guven, , United States

IAC-16.C3.5-C4.7.6
MULTI-PHYSICS IMPACT AND CRITICALITY MODELING OF SPACE

REACTOR SYSTEMS
Roger X. Lenard, LPS, United States

IAC-16.C3.5-C4.7.7
POTENTIAL USE OF THERMOELECTRIC GENERATORS FOR SMALL

SATELLITES MISSIONS.

Inna Uwarowa, Students Space Association, Warsaw University of

Technology, Poland IAC-16.C3.5-C4.7.8

COMPUTATIONAL MAGNETO-HYDRO DYNAMICS OF A MAGNETIC FLUX COMPRESSION REACTION CHAMBER Gherardo Romanelli, TU Delft, Italy

IAC-16.C3.5-C4.7.9 (withdrawn)

THORIUM BASED NUCLEAR TECHNOLOGY FOR THE DEVELOPMENT OF MARTIAN CIVILIZATION

Souray Karmakar. St. Peter's University. Chennai. India

C3.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Koji Tanaka , ISAS, JAXA, Japan; Leopold Summerer , European Space Agency (ESA), The Netherlands;

IAC-16.C3.IP.1

MTG PVA QUALIFICATION. EXTENSIVE ESD CHARACTERIZATION ON GEO PVA ARCHITECTURE.

Emanuele Ferrando, Selex Galileo, Italy

IAC-16.C3.IP.2 (withdrawn)

THE PROJECTS OF THE LARGE INFORMATION-ENERGETIC SPACE PLATFORMS.

 ${\it Oleg Aleksandrov, AVIASTAR\ Inc\ www.aviastar.us,\ United\ States}$

C4. SPACE PROPULSION SYMPOSIUM

Coordinator(s): Christophe Bonhomme , Centre National d'Etudes Spatiales (CNES), France; Giorgio Saccoccia , European Space Agency (ESA), The Netherlands; Helen Webber , Reaction Engines Ltd., United Kingdom; Riheng Zheng , China Aerospace Science & Industry Corporation (CASIC), China; Toru Shimada , Institute of Space and

X RS'









Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan;

C4.1. Propulsion System (1)

September 26 2016, 15:15 — Zapopan

Spatiales (CNES), France; Patrick Danous, Snecma, France; Rapporteur(s): Vanniyaperumal Narayanan, Indian Space Research Organization (ISRO), India;

KEYNOTE: ADDITIVE LAYER MANUFACTURING WILL CHANGE **ROCKET LIQUID PROPULSION**

IAC-16.C4.1.2

OVERVIEW OF LE-9 ENGINE DEVELOPMENT FOR H3 LAUNCH

Nobuki Negoro, Mitsubishi Heavy Industries, Ltd., Japan

VULCAIN 2.1®, THE EUROPEAN REFERENCE FOR ARIANE 6 LOWER STAGE CRYOGENIC ENGINE

IAC-16.C4.1.4

LOX/METHANE REUSABLE ROCKET PROPULSION AT REACH WITH LARGE SCALE DEMONSTRATORS TESTED Yoan Boué, Airbus Safran Launchers, France

IAC-16.C4.1.5

Feiping Du, Xi'an Aerospace Propulsion Institute, China

CHALLENGES IN RESTART OF PRESSURE FED LIQUID UPPER STAGE Space Research Organization (ISRO), India

IAC-16.C4.1.7

LEVERAGING ADDITIVE MANUFACTURING FOR AFFORDABLE COMMERCIAL LAUNCH APPLICATIONS ENABLED BY THE AEROJET ROCKETDYNE ULTRA-LOW-COST BANTAM ENGINE FAMILY Joaquin Castro, Aeroiet Rocketdyne, United States

ARIANE 6

Patrick Danous, Snecma, France

DEVELOPMENT OF AN UP-RATED VERSION OF EARTH STORABLE PUMP FED LIQUID ENGINE FOR ISRO LAUNCH VEHICLES. Aneesh Rajan, LPSC, ISRO, India

IAC-16.C4.1.10

STATIC CHARACTERISTIC ANALYSIS OF 180KN LOX/KEROSENE UPPER STAGE ENGINE

Yuanqi Li, Xian Aerospace Propulsion Institute, China

LVM3 VEHICLE

Vanniyaperumal Narayanan, Indian Space Research Organization (ISRO), India

IAC-16.C4.1.12 (withdrawn)

MODERNIZATION OF HIGH POWER LIQUID PROPELLANT **ENGINES FOR THEIR REUSE**

IAC-16.C4.1.13

EFFECT OF FUEL INJECTION SCHEMES IN A VORTEX COMBUSTION

Vikash Kumar, Liquid Propulsion System centre, India

IAC-16.C4.1.14

THE DESIGN AND TEST OF 250N THRUSTER WITH HAN-BASED **PROPELLANT**

Xin Qiu, Shanghai Institute of Space Propulsion, China

IAC-16.C4.1.15 (withdrawn)

MULTIDISCIPLINARY DESIGN OPTIMIZATION OF A SPACECRAFT BI-PROPELLANT PROPULSION SYSTEM USING A COMPUTATIONALLY IMPROVED FRAMEWORK

Mehran Mirshams, K. N. Toosi University of Technology, Iran

C4.2. Propulsion System (2)

September 27 2016, 09:45 — Zapopan

Co-Chair(s): Stéphane Henry, Herakles (Safran group), France; Toru Shimada , Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan;

KEYNOTE: GREEN SOLID PROPELLANTS FOR CIVILIAN LAUNCHERS Max Calabro. The Inner Arch. France

IAC-16.C4.2.2

DEVELOPMENT AND QUALIFICATION OF S200 SOLID ROCKET BOOSTER FOR GSLV MK-III

Arun Krishnan, Indian Space Research Organization (ISRO), India

DESIGN AND DEVELOPMENT OF FLEX NOZZLE FOR LARGE SOLID

V MAHESH, Indian Space Research Organization (ISRO), India

IAC-16.C4.2.4

THRUST OSCILLATIONS IN STATIC TESTS OF LARGE SEGMENTED SOLID BOOSTER OF ISRO

KIRAN PINUMALLA, Vikram Sarabhai Space Centre, Thiruvananthapuram-695 022, INDIA, India

IAC-16.C4.2.5

ENHANCED EPSILON LAUNCH VEHICLE AND FUTURE PLAN Hirotaka Uehara, IHI Aerospace Co, Ltd., Japan

DEVELOPMENT OF SOLID PROPULSION SYSTEM FOR ENHANCED EPSILON LAUNCH VEHICLE AND M-35 STATIC FIRING TEST Koki Kitagawa, Japan Aerospace Exploration Agency (JAXA)/ISAS,

PERFORMANCE EVALUATION OF COMPOSITE PROPELLANT SLURRY MIXING BY PERISTALTIC CONTINUOUS MIXER Akihiro Iwasaki, The Graduate Universty for Advanced Studies (SOKENDAI), Japan

IAC-16.C4.2.8

MODELING DISTRIBUTED COMBUSTION IN SRM Domenico Simone, University of Brasilia, Brazil

IAC-16.C4.2.9

ERROSIVE BURNING MODELLING ON SOLID ROCKET MOTORS. APPLICATION TO DEVELOPMENT OF SRM 120.

Florin Mingireanu, Romanian Space Agency (ROSA), Romania

SECONDARY COMBUSTION IN STAGED HYBRID ROCKET ENGINE Dongeun Lee, Konkuk University, Korea, Republic of

IAC-16.C4.2.11

DEVELOPMENT OF MODULE-TYPE HYBRID ROCKET ENGINE WITH MULTI-SECTION SWIRL INJECTION METHOD FOR FLIGHT

Shigeru Aso, Kyushu University, Japan

IAC-16.C4.2.12

VERIFICATION OF THE THROTTLING CHARACTERISTICS OF AXIAL-INJECTION END-BURNING TYPE HYBRID ROCKETS Yuji Saito, Hokkaido University, Japan

IAC-16.C4.2.13

FLAME EMISSION SPECTROSCOPY IN A PARAFFIN-BASED HYBRID

Keith Stober, Stanford University, United States

IAC-16.C4.2.14

A TEST BENCH FOR THE CHARACTERIZATION OF SOLID ROCKET ENGINES: DESIGN, CONSTRUCTION AND VALIDATION Javier M. Antelis, TECNOLOGICO DE MONTERREY, Mexico

C4.3. Propulsion Technology (1)

September 28 2016, 09:45 — Zapopan

Co-Chair(s): Angelo Cervone , Delft University of Technology (TU Delft), The Netherlands; Didier Boury, Herakles (Safran group),

Rapporteur(s): John Harlow, Aerojet Rocketdyne, United Kingdom;

IAC-16.C4.3.1

NEW ACHIEVEMENTS IN THE HYPROB-BREAD LOX/LCH4 DEMONSTRATOR DEVELOPMENT

Francesco Battista, CIRA Italian Aerospace Research Centre, Italy

LOX/METHANE THRUST CHAMBER DEMONSTRATOR- FROM SUBSCALE TO FULL SCALE TESTING Roland Blasi, Airbus Safran Launchers, Germany

IAC-16.C4.3.3

SPRAY AND COMBUSTION CHARACTERISTICS OF LOX/GH2 COAXIAL INJECTORS AT SUPERCRITICAL PRESSURES Zhaobo Ding, Beijing Aerospace Propulsion Institute, China

IAC-16.C4.3.4

ETID SANDWICH NOZZLE DEMONSTRATOR FOR UPPER STAGE

Klas Lindblad, GKN Aerospace Engine Systems, Sweden

IAC-16.C4.3.5

ADDITIVE MANUFACTURING AND ITS APPLICABILITY ON ROCKETS **ENGINES**

Ulf Palmnäs, GKN Aerospace Engine Systems, Sweden

IAC-16.C4.3.6

FLUIDIC CONTROL OF TRANSITION IN DUAL BELL LAUNCHER

Vladeta Zmijanovic, ICARE-CNRS, France

IAC-16.C4.3.7

GROWTH OF SPACECRAFT PROPULSION SYSTEMS IN ISRO Banavara Krishnamurthy Venkataramu, LPSC, ISRO, India

DEVELOPMENT OF HIGH PERFORMANCE LIQUID APOGEE MOTOR FOR GEOSTATIONARY SPACECRAFT

ARUN KUMAR P, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO), India

IAC-16.C4.3.9 (withdrawn)

EXTENDING LIFETIME OF ROCKET ENGINE COMBUSTION CHAMBER Toshiya Kimura, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-16.C4.3.10 (withdrawn)

INVESTIGATION OF DYNAMICS CHARACTERISTICS OF THE HOT GAS BELLOWS OF THE LOX/KEROSENE ROCKET ENGINE Fu Ping, Xi'an Aerospace Propulsion Institute, China

IAC-16.C4.3.11 (withdrawn)

NUMERICAL SIMULATION OF COMBUSTION STABILITY OF **COAXIAL SWIRL INJECTOR**

Yuangi Li, Xian Aerospace Propulsion Institute, China

IAC-16.C4.3.12

CFD ANALYSIS OF SEMICRYO LOX BOOSTER TURBOPUMP. KHALID RASHID, Indian Space Research Organization (ISRO), India

IAC-16.C4.3.13 (withdrawn)

NUMERICAL SIMULATION OF LRE AND HRE REACTING FLOWFIELDS Giuliano Ranuzzi, CIRA Italian Aerospace Research Center, Capua,

IAC-16.C4.3.14

STUDY OF FLOW CHARACTERISTICS FOR LIQUID FILM IN THE IMPINGING STREAM VORTEX CHAMBER BY CFD AND EXPERIMENT Jingqiu Pei, Science and Technology on Combustion, Internal Flow and Thermal-Structure Laboratory, Northwestern Polytechnical University, China

C4.4. Electric Propulsion

September 28 2016, 14:45 — Zapopan

Co-Chair(s): Garri A. Popov, Research Institute of Applied Mechanics and Electrodynamics, Russian Federation; Vanessa Vial, Snecma, France;

Rapporteur(s): Norbert Puettmann, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

IAC-16.C4.4.1

KEYNOTE: BEAMED ENERGY PROPULSION FOR FUTURE SPACE **LAUNCHERS**

Kimiya Komurasaki, University of Tokyo, Japan

IAC-16.C4.4.2

ELECTRICAL PROPULSION APPLICATION IN CHINA Min Wang, China Academy of Space Technology (CAST), China

IAC-16.C4.4.3

ELECTRIC PROPULSION IN GERMANY: STATUS OF THE HEMP SYSTEM DEVELOPMENT, PRELIMINARY RESULTS OF THE LIFETIME

Norbert Püttmann, DLR, German Aerospace Center, Germany

IAC-16.C4.4.4

ELECTRIC PROPULSION ACTIVITIES IN AIRBUS DS 2016 Nicoletta Wagner, Airbus DS GmbH, Germany

IAC-16.C4.4.5

APPLICATION OF PYROLYTIC GRAPHITE GRIDS FOR A 20 MN ION **THRUSTER**

Yoshiki Matsunaga, Japan Aerospace Exploration Agency (JAXA),

IAC-16.C4.4.6

DEVELOPMENT OF A 10KW PROTOTYPE ION THRUSTER Yide Zhao, Lanzhou Institute of Physics, China Academy of Space

MICRO-PROPULSION BASED ON VACUUM ARCS: ACCESSIBLE **TECHNOLOGIES FOR CUBESAT MISSIONS**

Jonathan Kolbeck, George Washington University, United States

IAC-16.C4.4.8

PPS®1350-E DEVELOPMENT STATUS Vanessa Vial, Snecma, France

IAC-16.C4.4.9

EFFECT OF MAGNETIC FIELD CONFIGURATION AND ANODE CONFIGURATION ON 5 KW CLASS ANODE LAYER TYPE HALL

Yusuke Egawa, Kyushu University, Japan

IAC-16.C4.4.10

EXPERIMENTAL RESEARCH OF RADIO-FREQUENCY ION THRUSTER Ruslan Akhmetzhanov, Research Institute of Applied Mechanics and Electrodynamics, Russian Federation

Co-Chair(s): Christophe Bonhomme , Centre National d'Etudes

Marc Vales, Snecma, France

Sabin Patrick, , France

EFFECT OF BEARING SUPPORTING STIFFNESS ON CRITICAL SPEED AND DYNAMIC STABILITY OF TURBO-PUMP ROTOR SYSTEM IN LOX/ KEROSENE ROCKET ENGINE

Abraham Varghese, Liquid Propulsion Systems Centre(LPSC), Indian

IAC-16.C4.1.8 VINCI® PROPULSION SYSTEM: TRANSITION FROM ARIANE 5 ME TO

IAC-16.C4.1.9

DEVELOPMENT STATUS OF CE20 CRYOGENIC ENGINE FOR GSLV

MULTIDISCIPLINE APPROACH TO THE DESIGN AND Vladimir Tkach, JSC NPO Energomash, Russian Federation









IAC-16.C4.4.11

RESISTOJET DESIGN FOR SOLID IODINE PROPELLANT Mario Angel Andrade Gonzalez, , Mexico

IAC-16.C4.4.12 (withdrawn)

DISCHARGE AND PHYSICAL CHARACTERISTICS OF AN ABLATIVE LIQUID-FED PULSED PLASMA THRUSTER FOR SMALL SATELLITES William Yeong Liang Ling, University of Tokyo, Japan

IAC-16.C4.4.13

DEVELOPMENT OF A HARDWARE-IN-THE-LOOP TEST FACILITY USED FOR CHARACTERIZING THE NEW PULSED PLASMA THRUSTER

Christoph Montag, Institute of Space Systems, Universität Stuttgart,

IAC-16.C4.4.14 (withdrawn)

OPERATING THE ALTERNATIVE PROPELLANT IODINE IN RADIO FREQUENCY ION THRUSTERS

Nina Sarah Mühlich, Justus-Liebiq Universität Giessen, Germany

C4.5. Propulsion Technology (2)

September 29 2016, 09:45 — Zapopan

Co-Chair(s): Jacques Gigou, European Space Agency (ESA), France; Walter Zinner, Airbus Safran Launchers, Germany; Rapporteur(s): Zvika Zuckerman , Rafael Advanced Defense

IAC-16.C4.5.1

INVESTIGATION ON EXHAUST PLUME RADIATION OF LOX/KEROSENE **ROCKET ENGINE**

Yuanqi Li, Xian Aerospace Propulsion Institute, China

IAC-16.C4.5.2

STRUCTURAL DYNAMIC ANALYSIS OF 18,000-KG THRUST LOX/ KEROSENE ENGINE

Song Yan, Xi'an Aerospace Propulsion Institute, China

SIMULATION OF THE VORTEX-COOLED THRUST CHAMBER BASED ON GASEOUS OXYGEN AND KEROSENE

Yong Wang, Xi'an Aerospace Propulsion Institute, China

IAC-16.C4.5.4

EVALUATION OF THE PERFORMANCE POTENTIAL OF AERODYNAMICALLY THRUST VECTORED AEROSPIKE NOZZLES Jan Sieder, TU Dresden, Germany

IAC-16.C4.5.5

DESIGN BOUNDARIES OF A LIQUID-FUELLED PROPULSION SYSTEM FOR A 500 N SOUNDING ROCKET

Christian Bach, Dresden University of Technology (DUT) / Technische Universität Dresden, Germany

PARAMETRIC OPTIMIZATION OF A BISTABLE ELECTROMECHANICAL VALVE ACTUATOR FOR TANK PRESSURIZATION Victor Casado, Airbus Safran Launchers, Germany

IAC-16.C4.5.7

DEVELOPMENT OF THERMAL PROTECTION BOOT FOR S200 FLEX SEAL OF LARGE SOLID ROCKET BOOSTER FLEX NOZZLE S KARTHEEKEYAN, Vikram Sarabhai Space Centre (VSSC), India

IAC-16.C4.5.8

TESTING AND QUALIFICATION OF BOOSTER FLEX SEALS FOR S200 SOLID ROCKET BOOSTER

Santhoshbabu s, Indian Space Research Organization (ISRO), India

IAC-16.C4.5.9

PARAFFIN-BASED FUELS FOR HYBRID PROPULSION: CHARACTERIZATION OF WAXES AND ITS BLENDS. Anastasia Petrova, Politecnico di Milano, Italy

IAC-16.C4.5.10

RESEARCH ON ABLATION CHARACTERISTIC OF EPDM INSULATOR IN USE OF DIFFERENT PROPELLANT

Yiwen Guan, Northwestern Polytechnical University, NPU, China

IAC-16.C4.5.11 (withdrawn)

DEVELOPMENT OF A NITROUS OXIDE-BASED MONOPROPELLANT PROPULSION SYSTEM FOR SMALL SATELLITES

Vincent Tarantini, Space Flight Laboratory, University of Toronto, Canada

C4.6. New Missions Enabled by New **Propulsion Technology and Systems**

September 29 2016, 14:45 — Zapopan

Co-Chair(s): Giorgio Saccoccia, European Space Agency (ESA). The Netherlands; Jerrol Littles , Aerojet Rocketdyne, United

Rapporteur(s): Mariano Andrenucci, Sitael Spa, Italy;

IAC-16.C4.6.1

CONCEPTUAL STUDY ON FLIGHT DEMONSTRATION OF MIXTURE-RATIO-CONTROLLED THROTTLING OF HYBRID ROCKET Toru Shimada, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan

IAC-16.C4.6.2

FINMECCANICA COLD GAS MICRO-PROPULSION IN ORBIT PERFORMANCES: LISA PATHFINDER AND MICROSCOPE Marco MOLINA, Leonardo - Finmeccanica S.p.A, Italy

IAC-16.C4.6.3 (withdrawn)

ENABLING A VERY LOW EARTH ORBIT MISSION, A CONTROL STRATEGY WITH ELECTRIC PROPULSION Luigi Ansalone, Agenzia Spaziale Italiana (ASI), Italy

IAC-16.C4.6.4 (withdrawn)

LOW POWER PLASMA THRUSTERS FOR CUBESATS Joao Lousada, DLR (German Aerospace Center), Germany

HIGHLY MINIATURIZED FEEP PROPULSION SYSTEM (NANOFEEP) FOR ATTITUDE AND ORBIT CONTROL OF CUBESATS Daniel Bock, TU Dresden, Germany

IAC-16.C4.6.6

HIGH EFFICIENCY IONIC LIQUID ELECTROSPRAY PROPULSION FOR

David Krejci, Massachusetts Institute of Technology (MIT), United

IAC-16.C4.6.7 (withdrawn)

SOLAR SAIL PROPULSION SYSTEM IN CUBE SATELLITES FOR ORBIT MANEUVERING APPLICATIONS

Sayed Umair Daimi, College of Engineering, Pune, India

IAC-16.C4.6.8

MANUFACTURING COMPACT ELECTROSPRAY THRUSTERS TO DEORBIT A NANOSATELLITE

Josué Zabeau, Ecole Polytechnique de Montreal, Canada

IAC-16.C4.6.9 D-RAISE: A PROPULSION SYSTEM FOR GEO SATELLITE PLATFORMS

TO REDUCE OPERATIONAL RISKS AND TIME TO ORBIT. Elena Toson, D-Orbit, Italy

TEST ACTIVITIES ON HYBRID MOTOR DEMONSTRATOR FOR LANDER MODULE SYSTEM

Stefano Carapellese, Avio Spa, Italy

IAC-16.C4.6.11 (withdrawn) INTERSTELLAR MISSION TO BETA PICTORIS: UTILIZATION OF A GAS CORE NUCLEAR PROPULSION SYSTEM AND ANALYSIS OF MISSION

Kartik Shah, University of Petroleum and Energy Studies, India

C4.7-C3.5. Joint Session on Nuclear Power and Propulsion

September 30 2016, 09:45 — Zapopan

Co-Chair(s): Jerome BRETEAU, European Space Agency (ESA), France; Leopold Summerer, European Space Agency (ESA), The Netherlands:

Rapporteur(s): George Schmidt , National Aeronautics and Space Administration (NASA), United States; Vito Salvatore, Italv:

IAC-16.C3.5-C4.7.1

EUROPEAN RADIOISOTOPE-BASED SPACE NUCLEAR POWER

Richard Ambrosi, University of Leicester, United Kingdom

IAC-16.C3.5-C4.7.2

WHAT IS NUCLEAR POWER'S NICHE IN DEEP SPACE MISSIONS? Reina Buenconsejo, IDA Science and Technology Policy Institute,

IAC-16.C3.5-C4.7.3 (withdrawn)

CONCEPTUAL MISSION DESIGN FOR THE EUROPA JUPITER SYSTEM USING THERMONUCLEAR FUSION PROPULSION SYSTEM Saroj Kumar, Propulsion Research Center, University of Alabama in Huntsville, United States

IAC-16.C3.5-C4.7.4 (withdrawn)

DEMOCRITOS: DEMONSTRATOR PROJECTS OF A MW CLASS NUCLEAR ELECTRIC SPACECRAFT.

Emmanouil Detsis, European Science Foundation (ESF), France

IAC-16.C3.5-C4.7.5

THE PLAUSIBILITY OF UTILIZATION OF GAS CORE REACTORS FOR DEEP SPACE MISSIONS

Ugur Guven, , United States

IAC-16.C3.5-C4.7.6

MULTI-PHYSICS IMPACT AND CRITICALITY MODELING OF SPACE REACTOR SYSTEMS

Roger X. Lenard, LPS, United States

IAC-16.C3.5-C4.7.7

POTENTIAL USE OF THERMOELECTRIC GENERATORS FOR SMALL SATELLITES MISSIONS.

Inna Uwarowa, Students Space Association, Warsaw University of Technology, Poland

IAC-16.C3.5-C4.7.8

COMPUTATIONAL MAGNETO-HYDRO DYNAMICS OF A MAGNETIC FLUX COMPRESSION REACTION CHAMBER Gherardo Romanelli, TU Delft, Italy

IAC-16.C3.5-C4.7.9 (withdrawn)

THORIUM BASED NUCLEAR TECHNOLOGY FOR THE DEVELOPMENT OF MARTIAN CIVILIZATION Sourav Karmakar, St. Peter's University, Chennai, India

IAC-16.C4.6.12

MINIMUM INTERSTELLAR PRECURSOR MISSION Anushree Soni, International Space University (ISU), Canada

C4.8. Advanced Propulsion Systems

September 30 2016, 13:30 — Zapopan

Co-Chair(s): Constanze Syring , Euro Engineering AG, Germany; Salvatore Borrelli , CIRA Italian Aerospace Research Centre,

Rapporteur(s): Youngbin Yoon , Seoul National University, Korea. Republic of:

IAC-16.C4.8.1

SODIUM BOROHYDRIDE-BASED NONTOXIC HYPERGOLIC FUELS WITH H2O2 AS AN OXIDIZER

Hongjae Kang, Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of

IAC-16.C4.8.2

EXPERIMENTAL STUDY ON THE IMPULSE MECHANISM GENERATED BY LASER ABLATING POLYMER IN THE ATMOSPHERE AND VACUUM Xiaokang Li, National University of Defense Technology, China

IAC-16.C4.8.3 (withdrawn)

LASER ABLATION PROPULSION FROM GROUND TO ORBIT NEAR-TERM DEVELOPMENT PROSPECTS.

IOURI PIGULEVSKI, , Switzerland

IAC-16.C4.8.4

COMPUTATIONAL PLASMA PHYSICS SIMULATIONS OF ELECTRIC SAIL FORCE GENERATION

Thomas Gemmer, North Carolina State University, United States

IAC-16.C4.8.5

DEVELOPMENT OF A HIGH DENSITY LIQUID PROPULSION SYSTEM FOR APPLICATION TO SMALL SATELLITES

Ryota Koyama, The University of TOKYO, Graduate school, Japan

IAC-16.C4.8.6 (withdrawn)

STEERING CONCEPT OF A HELIOGYRO SOLAR SAIL SMALL

Peerawan Wiwattananon, National Institute of Aerospace, United States

IAC-16.C4.8.7

THOUSAND ASTRONOMICAL UNIT (TAU) LASER SAIL Shanthini K, International Space University (ISU), France

IAC-16.C4.8.8

COMPARATIVE ORBITAL PERFORMANCE STUDY OF A SOLAR WIND ION FOCUSING THRUSTER (SWIFT)

Thomas Gemmer, North Carolina State University, United States

IAC-16.C4.8.9

SOLAR MAGNETIC SAILING CONFIGURATION AND INTER-PLANETARY TRAVEL - AN EXPLORATORY STUDY Harijono Djojodihardjo, , Indonesia

IAC-16.C4.8.10

INERTIAL FRAMES AND BREAKTHROUGH PROPULSION PHYSICS Marc Millis, Tau Zero Foundation, United States

IAC-16.C4.8.11 (withdrawn)

STRUCTURAL DYNAMICS AND CONTROL IMPLICATIONS FOR MODAL DAMPING OF A SIMPLIFIED TWO-BLADE HELIOGYRO MODEL Sarah Smith, University of Colorado Boulder, United States

C4.9. Hypersonic and Combined Cycle **Propulsion**

September 27 2016, 14:45 — Zapopan

Co-Chair(s): Helen Webber , Reaction Engines Ltd., United Kingdom; Riheng Zheng , China Aerospace Science & Industry Corporation (CASIC), China:

Rapporteur(s): Salvatore Borrelli , CIRA Italian Aerospace Research Centre, Italy;

IAC-16.C4.9.1

KEYNOTE: SHOCK TUNNEL DEVELOPMENT FOR AIR-BREATHING PROPULSION TESTING AT TRUE HYPERSONIC FLIGHT CONDITIONS Zonglin Juang, Institute of Mechanics, Chinese Academy of Sciences,

IAC-16.C4.9.2

SABRE TECHNOLOGY DEVELOPMENT James Barth, Reaction Engines Ltd., United Kingdom









26 - 30 September 2016, Guadalajara, Mexico

IAC-16.C4.9.3

RESEARCH ON AERODYNAMIC PERFORMANCE OF A TYPICAL HYPERSONIC INWARDTURNING INLET

Anyuan YU, China Aerodynamics Research and Development Center,

IAC-16.C4.9.4

PRELIMINARY DESIGN AND PERFORMANCE STUDIES OF A WIDE RANGE ROCKET-BASED COMBINED CYCLE ENGINE

Feiteng Luo, Science and Technology on Scramjet Laboratory, Beijing Power Machinery Research Institute, China

IAC-16.C4.9.5

DEVELOPMENT OF AN INTEGRATED PLATFORM FOR SCRAMJET ENGINE OPTIMIZATION DESIGN

Yuanguang Wang, Beijing Electro-Mechanical Engineering Institute, CASIC, China

IAC-16.C4.9.6

RESEARCH ON SHOCK TRAIN LEADING EDGE DETECTION IN **SCRAMJET**

Chengyi Su, Science and Technology on Scramjet Laboratory, Beijing Power Machinery Research Institute, China

THE RESEARCH OF AIR-TURBO-ROCKET (ATR) PROPULSION SYSTEM BASED ON DOUBLE SOLID PROPELLANT GAS-GENERATOR Yang LIU, Science and Technology on Combustion, Internal Flow and Thermal-Structure Laboratory, Northwestern Polytechnical University, China

IAC-16.C4.9.8

A PRE-COOLED AND FUEL-RICH PRE-BURNED MIXED-FLOW TURBOFAN CYCLE FOR GROUND-TO-MA5 ENGINES Wei Zhao, Chinese Academy of Sciences, China

IAC-16.C4.9.9

INVESTIGATION OF AN AIR TURBOROCKET BASED PROPULSION

Yen-Sen Chen, American Institute of Aeronautics and Astronautics (AIAA), Taiwan, China

IAC-16.C4.9.10

LIFE EVALUATION OF REUSABLE RAMJET ENGINE SUBJECTED TO CREEP-FATIGUE INTERACTION

Lili Fu, School of Astronautics, Northwestern Polytechnical University, China

IAC-16.C4.9.11

MIXING ENHANCEMENT USING SECONDARY GAS EJECTION METHOD IN SUPERSONIC-SUBSONIC SHEAR LAYER Chenxi Zhang, Northwestern Polytechnical University, NPU, China

IAC-16.C4.9.12

A PARALLEL DIRECT-CONNECT TEST SYSTEM FOR SOLID DUCTED

Jiming Cheng, Science and Technology on Combustion, Internal Flow and Thermal-structure Laboratory, Northwestern Polytechnical University, China

IAC-16.C4.9.13 (withdrawn)

MULTI-POINTS INTEGRATED AIRFRAME/ENGINE CONFIGURATION OPTIMIZATION OF HYPERSONIC VEHICLE

Qing Wang, College of Mechanical and Electrical Engineering, Xi'an Polytechnic University, China

IAC-16.C4.9.14

AIRFRAME-PROPULSION INTEGRATED DESIGN AND WIND TUNNEL TEST FOR AIR-BREATHING HYPERSONIC VEHICLE

Zi-han Jiao, China Academy of Launch Vehicle Technology, China

IAC-16.C4.9.15

PERFORMANCE EVALUATION AND THE STATUS OF TRRE Wenhui Ling, Science and Technology on Scramjet Laboratory, Beijing Power Machinery Research Institute, China

IAC-16.C4.9.16 (withdrawn)

DESIGN OF LIQUID PROPELLANT SUPPLY SYSTEM WITH WIDE REGULATION RANGE OF PRIMARY ROCKET IN ROCKET-BASED COMBINED CYCLE (RBCC) ENGINE Jingjing Bai, , China

C4.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Christophe Bonhomme, Centre National d'Etudes Spatiales (CNES), France; Giorgio Saccoccia, European Space Agency (ESA), The Netherlands; Helen Webber, Reaction Engines Ltd., United Kingdom; Riheng Zheng , China Aerospace Science & Industry Corporation (CASIC), China; Toru Shimada, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan;

IAC-16.C4.IP.1 (withdrawn)

GAS-CORE NUCLEAR ROCKET ENGINES AND NOT STANDARD PROPULSIVE MASS FOR THEM

Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

IAC-16.C4.IP.2

CFD ANALYSIS OF COMBUSTION INSTABILITY IN AXIAL-INJECTED HYBRID ROCKET ENGINES DURING THROTTLING TRANSIENT Goutham Karthikeyan, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency, Japan

IAC-16.C4.IP.3

EVALUATION OF DEFLAGRATION-TO-DETONATION TRANSITION ENERGY OF CHEMICAL ROCKET PROPELLANTS Akiyo Takahashi, Institute of Space and Astronautical Science (ISAS),

IAC-16.C4.IP.4

DESIGN, STUDY AND MANUFACTURING OF A COMPOSITE SOLID ROCKET PROPELLANT

Hamed Gamal, Cairo University, Egypt

Japan Aerospace Exploration Agency, Japan

IAC-16.C4.IP.5

IMPROVEMENT OF NONLINEAR COEFFICIENT ON COMBUSTION INSTABILITY PREDICTION IN SOLID ROCKET MOTORS Shaojuan Wei, Northwestern Polytechnical University NPU, China

IAC-16.C4.IP.6

NUMERICAL MODELING OF LARGE FREE-SURFACE FLUID FLOW IN **FUEL TANKS IN FLIGHT**

Oleksandr Brazaluk, Oles Honchar Dnipropetrovsk National University, Ukraine

IAC-16.C4.IP.7

EFFECT OF DIFFERENT THERMAL CURE CYCLES ON THE PROPELLANT CURING OF SOLID ROCKET MOTOR: A NUMERICAL STUDY Khadar Voli, Indian Space Research Organization (ISRO), India

IAC-16.C4.IP.8 (withdrawn)

INVESTIGATION OF WAGON-WHEEL FUEL GRAIN DESIGN OF HYBRID

Xintian Li, China Academy of Launch Vehicle Technology, China

IAC-16.C4.IP.9

NUMERICAL SIMULATION OF INNER FLOW FIELD OF A PINTLE INJECTOR VARIABLE THRUST HYBRID ROCKET ENGINE Bo Zhao, Beihang University, China

IAC-16.C4.IP.10 (withdrawn)

SIZE EFFECT STUDY OF GRAIN PORT ON A LONG-TIME WORKING HYBRID ROCKET MOTOR Xingliang Sun, BUAA, China

IAC-16.C4.IP.12

THE GLASS-MEMBRANE MEMS IGNITER WITH IMPROVED PERFORMANCE FOR CUBE-SAT APPLICATION Daeban Seo, KARI, Korea, Republic of

IAC-16.C4.IP.13

DR. V.A. MENSHIKOV ASSOCIATION OF PARTICIPANTS OF THE PROJECT "INTERNATIONAL GLOBAL MONITORING AND FORECASTING AEROSPACE SYSTEM" (ASSOCIATION "IGMASS"),

Valery Menshikov, , Russian Federation

IAC-16.C4.IP.14

STUDY ON THE PROPELLANT ABLATION PROPERTIES OF LASER ABLATION PROPULSION

Jian Li, College of Aerospace Science and Engineering, National University of Defense Technology, China

IAC-16.C4.IP.15 (withdrawn)

NUMERICAL RESEARCH ON ABLATION OF PTFE/AL PROPELLANT USING CONTINUOUS LASER BEAM

Yu Zhang, College of Aerospace Science and Engineering, National University of Defense Technology, China

IAC-16.C4.IP.16

DEVELOPMENT AND QUALIFICATION OF A HIGH PERFORMANCE SOLID STRAPON MOTOR

V MAHESH, Indian Space Research Organization (ISRO), India

IAC-16.C4.IP.17

INFLUENCE OF AFTER-BURNING CHAMBER DOME LENGTH ON SECONDARY COMBUSTION FOR SOLID DUCTED ROCKET MOTOR Bingle Jin, , China

IAC-16.C4.IP.18 (withdrawn)

CAVITY AND JET INJECTION EFFECTS ON SUPERSONIC

COMPRESSIBLE RAMP FLOW

Kangping Zhang, China Aerodynamics Research and Developement Center, China

IAC-16.C4.IP.20 (withdrawn)

RESEARCH ON THE COMBINATION ACTUATOR SYSTEM OF ADJUSTABLE NOZZI E IN RAMJET Lili Fu, School of Astronautics, Northwestern Polytechnical University, China

IAC-16.C4.IP.21 (withdrawn)

5KW CLASS OF ANNULAR-GEOMETRY ION THRUSTER DEVELOPMENT

Tianping Zhang, Lanzhou Institute of Physics, China

IAC-16.C4.IP.22 (withdrawn)

A MODULAR, VIABLE AND VERSATILE SYSTEM FOR DEPLOYMENT OF SOLAR SAIL IN A 3U SATELLITE

Tanvi Katke, College of Engineering, Pune, India

IAC-16.C4.IP.23

CIRA LIQUID PROPULSION TEST FACILITIES: VISION AND ROADMAP NUNZIA FAVALORO, CIRA Italian Aerospace Research Centre, Italy

IAC-16.C4.IP.24

CONCEPT AND DEVELOPMENT OF USING HYDROGEN PER OXIDE AS A PROPELLEANT

Nadeem Alam, Department of Aeronautical Engineering, Babu Banarsi Das National Institute of Technology and Management, Lucknow.. India

IAC-16.C4.IP.25 (withdrawn)

DEVELOPMENT OF A CRYOGENIC ROCKET ENGINE AT DELFT AEROSPACE ROCKET ENGINEERING

Mathijs Van de Poel, Delft University of Technology (TU Delft), Belaium

IAC-16.C4.IP.27

DEVELOPMENT OF A NEXT-GENERATION THRUST BALANCE WITH NANO-NEWTON RESOLUTION

Florian Nürmberger, TU Dresden, Germany

IAC-16.C4.IP.28

DEVELOPMENT OF SMALL SOLID ROCKET BOOSTERS FOR THE ILR-33 SOUNDING ROCKET

Pawel Nowakowski, Institute of Aviation, Poland

IAC-16.C4.IP.29

DYNAMIC LOAD IDENTIFICATION OF A SECOND STAGE LIQUID ROCKET ENGINE BASED ON TIKHONOV REGULARIZATION METHOD Song Yan, Xi'an Aerospace Propulsion Institute, China

IAC-16.C4.IP.30

ELECTRIC PROPULSION ANOMALIES AND FAILURES: ANALYSIS OF ON ORBIT TRACK RECORD

Joseph Homer Saleh, Georgia Institute of Technology, United States

IAC-16.C4.IP.31

EXPERIMENTAL INVESTIGATION FOR RELIABLE START-UP OF 5W MICROWAVE ELECTROTHERMAL THRUSTER AS MEANS OF PRIMARY PROPULSION FOR NANO AND SMALL SATELLITES IN REALISTIC SPACE CONDITION Rohan M Ganapathy, Bellatrix Aerospace Private Limited, India

IAC-16.C4.IP.32

EXPERIMENTAL INVESTIGATION OF COMBUSTION IN MEMS BASED MICROTHRUSTERS

Aakash Patil, University of Pune, India

IAC-16.C4.IP.33 (withdrawn)

EXPERIMENTAL STUDY ON THE CURRENT-SHEET EVOLUTION FOR A PULSED INDUCTIVE THRUSTER Xiaokana Li, National University of Defense Technology, China

IAC-16.C4.IP.34

FAST TRANSIT ACCESS TO THE OUTER SOLAR SYSTEM Edgar Bering, University of Houston, United States

IAC-16.C4.IP.35

FEASIBILITY STUDY ON NON-CATALYTIC IGNITOR FOR HYDROGEN PEROXIDE/POLYETHYLENE HYBRID ROCKET

Eunkwang Lee, Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of

IAC-16.C4.IP.36

IMPINGING INJECTOR DESIGN FOR A PARAFFIN-NITROUS OXIDE HYBRID ROCKET ENGINE USED IN SOUNDING ROCKETS PART I: CFD SIMULATION OF CANDIDATE DESIGNS

Jeremy Chan-Hao Wang, University of Toronto Aerospace Team (UTAT), Canada

IMPINGING INJECTOR DESIGN FOR A PARAFFIN-NITROUS OXIDE HYBRID ROCKET ENGINE USED IN SOUNDING ROCKETS PART II: **COLD-FLOW TESTING OF CANDIDATE DESIGNS** Jeremy Chan-Hao Wang, University of Toronto Aerospace Team

IAC-16.C4.IP.38

(UTAT), Canada

INVESTIGATIONS OF REAL-FLUID CHARACTERISTICS IN HIGH-PRESSURE LIQUID ROCKET ENGINES

Li Pengfei, Xi'an Aerospace Propulsion Institute, China

IAC-16.C4.IP.39

LIQUID-PROPELLANT ROCKET ENGINES FAULT DIAGNOSTIC BASED ON DYNAMIC CLOUD BP NETWORKS

Nie Yao, College of Aerospace Science and Engineering, National University of Defense Technology, China

IAC-16.C4.IP.40 (withdrawn)

LOW COST PROPULSION TECHNIQUE TO TRANSFER SATELLITE TO LOW MOON ORBIT

Aman Singhal, University of Petroleum and Energy Studies, India

IAC-16.C4.IP.41

LV ENERGETICS INCREASE BY IMPROVEMENT OF PNEUDRAULIC PROPELLANT FEED SYSTEMS CHARACTERISTICS OF PROPULSION

Anatolii Lohvynenko, Yuzhnoye State Design Office, Ukraine







IAC-16.C4.IP.42

NEURO-FUZZY MODEL TO EVALUATE FEED-BACK SENSORS OF MIXTURE-RATIO CONTROL SYSTEM (MRCS) AND CONTROL THE PERFORMANCE OF ROCKET-ENGINE

Elayaperumal Ezhilrajan, Indian Space Research Organization (ISRO), India

IAC-16.C4.IP.43

NUMERICAL STUDY OF LOX/KEROSENE COMBUSTION IN A SINGLE ELEMENT COAXIAL BI-SWIRL INJECTOR AT SUPERCRITICAL CONDITIONS

Abhishek Sharma, Indian Space Research Organization (ISRO), India

IAC-16.C4.IP.44

PROGRESS IN CIRA DEVELOPMENT PLAN ON ELECTRIC PROPULSION Vito Salvatore, CIRA Italian Aerospace Research Center, Capua, Italy

IAC-16.C4.IP.45

SYSTEM & MAGNETOHYDRODYNAMIC SIMULATION INVESTIGATION ON PULSED INDUCTIVE THRUSTERS

Bixuan Che, National University of Defense Technology, China

IAC-16.C4.IP.46

THE KINEMATICS ANALYSIS ON SWAY UNIT OF LOX/KEROSENE

Jian ZHAO, Xi'an Aerospace Propulsion Institute, China

IAC-16.C4.IP.47

THE LHT-100 HALL ELECTRIC PROPULSION SUBSYSTEM **DEVELOPMENT FOR THE XX-2 SATELLITE** Li-Cheng Tian, Lanzhou Institute of Physics, China

IAC-16.C4.IP.48

VALUE ANALYSIS AND VALUE-INFORMED TRADEOFFS FOR THE ADOPTION OF ELECTRIC PROPULSION ONBOARD COMMUNICATION

Fan Geng, Georgia Institute of Technology, United States

IAC-16.C4.IP.49

EXPERIMENTAL STUDY ON COMBUSTION CHARACTERISTICS OF A SINGLE BI-SWIRL INJECTOR FOR VARIABLE THRUST LOX/KEROSENE

Nanjia Yu, Beijing University of Aeronautics and Astronautics, China

D1. SPACE SYSTEMS SYMPOSIUM

Coordinator(s): Jill Prince, National Aeronautics and Space Administration (NASA), United States; Reinhold Bertrand, European Space Agency (ESA), Germany;

D1.1. Innovative and Visionary Space **Systems Concepts**

September 26 2016, 15:15 — Salon de Eventos 5

Co-Chair(s): Peter Dieleman , National Aerospace Laboratory (NLR), The Netherlands; Tibor Balint, Royal College of Art,

Rapporteur(s): Camillo Richiello , CIRA Italian Aerospace Research Centre, Italy;

IAC-16.D1.1.1

STRATOBUS: GEO-STATIONARY STRATOSPHERIC MULTI-MISSION PLATFORM INTEGRATED AND COMPLEMENTING SPACE SYSTEMS Chessel Jean-Philippe, Thales Alenia Space France, France

IAC-16.D1.1.2

SMART AND LIGHTWEIGHT ROBOTIC CAPTURING SYSTEM OF NON-COOPERATIVE SPACECRAFTS

Silvio Cocuzza, Space Mechatronic Systems Technology Laboratory, University of Strathclyde, United Kingdom

IAC-16.D1.1.3

DREAM CHASER FOR EUROPEAN UTILIZATION (DC4EU): ESA PILOT

Andrea Jaime-Albalat, OHB System AG - Munich, Germany

IAC-16.D1.1.4 (withdrawn)

UNMANNED BIOMEDICAL SPACE STATION CONCEPT Georges Constantinos, , Australia

IAC-16.D1.1.5

AN INNOVATIVE MULTI-SPECTRAL AND MULTI-ANGLE BASED CUBESAT FOR EARTH OBSERVATION APPLICATIONS Alice Pellegrino, Sapienza - University of Rome, Italy

DYNAMICS OF VARIABLE TOPOLOGY-TRANSFORMABLE SPACECRAFT Xin Ning, Northwestern Polytechnical University, China

IAC-16.D1.1.7

IMPLEMENTATION OF REAL-TIME HIGH-ACCURACY ATTITUDE AND POSITION DETERMINATION SYSTEM THROUGH EARTH OBSERVATION SATELLITE PAYLOAD

Ran Qedar, Space Products and Innovation, Germany

IAC-16.D1.1.8

TETHERED DOCKING SYSTEMS: ADVANCES FROM FELDS **EXPERIMENT**

Davide Petrillo, University of Padova - DII, Italy

IAC-16.D1.1.9 (withdrawn)

AN ASSESSMENT OF LUNAR SETTLEMENT REQUIREMENTS AND TRANSPORTATION OPTIONS

Mark Schaffer, SpaceWorks Enterprises, Inc., United States

IAC-16.D1.1.10 (withdrawn)

PRELIMINARY PLAN AND ANALYSIS FOR HUMAN FACTORS OF A SPACE STATION WITH TEN THOUSAND INHABITANTS Peng Tianya, , China

THE EMERGENT CAPABILITIES OF DISTRIBUTED SATELLITE SYSTEMS Beniamin Corbin. . United States

D1.2. Enabling Technologies for Space Systems

September 27 2016, 14:45 — Salon de Eventos 5

Co-Chair(s): Steven Arnold , The Johns Hopkins University Applied Physics Laboratory, United States; Xavier Roser , Thales Alenia Space France, France;

Rapporteur(s): Eiichi Tomita, Japan Aerospace Exploration Agency (JAXA), Japan;

AUTOMATED DESIGN OF CUBESATS AND SMALL SPACECRAFTS Himangshu Kalita, Arizona State University, United States

IAC-16.D1.2.2

DEVELOPING A PLUG AND PLAY SOLUTION FOR SATELLITE MANUFACTURING

Ran Qedar, Space Products and Innovation, Germany

IAC-16.D1.2.3 (withdrawn)

ON THE DEVELOPMENT OF A NOVEL CUBESAT STANDARD STRUCTURE FOR MODERN MISSIONS

Malcolm McRobb, Clyde Space Ltd, United Kingdom

IAC-16.D1.2.4 (withdrawn)

AN VERSATILE APPROACH FOR ASSEMBLING REFLECTORS IN SPACE Ling-bin ZENG, Shanghai Aerospace System Engineering Institute,

SELF-SUPERVISED LEARNING AS AN ENABLING TECHNOLOGY FOR FUTURE SPACE EXPLORATION ROBOTS: ISS EXPERIMENTS Guido de Croon, TU Delft, The Netherlands

IAC-16.D1.2.6

STARARM: PERSONAL ROBOTIC ARM

Chrishma Sinah-Derewa, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-16.D1.2.7

CAPABILITIES OF STEREO VISION SYSTEMS FOR FUTURE SPACE

Marco Carpentiero, University of Rome "La Sapienza", Italy

SPACE MULTI-RIGID ARM SYSTEM BASED SPACE FLEXIBLE CAPTURE ARM MODEL CONSTRAINTS DESIGN Fan Yang, Academy of Equipment, China

IAC-16.D1.2.9

RAPID THERMAL DEFORMATION ANALYSIS OF ON-ORBIT SATELLITES BASED ON TELEMETRIC DATA OF TEMPERATURE PAN TENG, China Academy of Space Technology (CAST), China

IAC-16.D1.2.10

SPACECRAFT JOINING USING A TETHERED ELECTROMAGNETIC

Matteo Duzzi, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-16.D1.2.11

MODELING AND PERFORMANCE ANALYSIS OF A NEW INFLATABLE ELECTRODYNAMIC TETHER FOR SATELLITE DEORBITING Wei Zheng, China Academy of Space Technology (CAST), China

IAC-16.D1.2.12

DRON SIMULATION FOR THE CONTROL OF A SATELLITE TRAJECTORY WITH FIXED ATTITUDE

Raziel Campos-Sanchez, INAOE, Mexico

D1.3. System Engineering - Methods, Processes and Tools (1)

September 28 2016, 09:45 — Salon de Eventos 5

Co-Chair(s): DAPENG WANG, China Academy of Space Technology (CAST), China; Dmitry Payson, United Rocket and Space Corporation, Russian Federation;

Rapporteur(s): Franck Durand-Carrier , Centre National d'Etudes Spatiales (CNES), France;

IAC-16.D1.3.1

DESIGNING THE DESIGN AT JPL'S INNOVATION FOUNDRY Tibor Balint, Royal College of Art, United Kingdom

SPACE SYSTEM CONCEPT DESIGN: A VALUE-CENTRIC ARCHITECTURE BASED ON SYSTEM CHARACTERISTIC SPACE Qin Xu, The University of Manchester, United Kingdom

IAC-16.D1.3.3 (withdrawn)

A MICROSATELLITE STANDARD - GETTING THE BEST OF BOTH

Bryan Dean, Space Advisory Company, South Africa

IAC-16.D1.3.4

ESA MISSION SCIENTIFIC VALIDATION BY MEANS OF END-TO-END PERFORMANCE SIMULATORS Raffaella FRANCO, ESA, The Netherlands

IAC-16.D1.3.5

A METHOD OF RESEARCH OF SELECTED PROCESSES IN SATELLITE NETWORKS ROUTING DATA PACKETS ON THE BASE OF TWO ACCURACY LEVEL SIMULATION MODELS

Tatyana V. Labutkina, Dnepropetrovsk National University named after Oles' Gonchar, Ukraine

IAC-16.D1.3.6

INDUSTRY 4.0 APPROACHES FOR PRODUCTION OF LARGE QUANTITIES OF SATELLITES

Klaus Schilling, University Wuerzburg, Germany

IAC-16.D1.3.7

A MULTI ATTRIBUTE COLLABORATIVE TRADESPACE EXPLORATION APPLIED TO CONCURRENT DESIGN Loris Franchi, Politecnico di Torino, Italy

IAC-16.D1.3.8

TRL BEST PRACTICES A NEW ECSS HANDBOOK Franck Durand-Carrier, Centre National d'Etudes Spatiales (CNES),

IAC-16.D1.3.9

NEW APPROACH TO PRECISE SATELLITE THERMAL DESIGN Nikolay Mullin, Bauman Moscow State Technical University, Russian

IAC-16.D1.3.10

MULTIDISCIPLINARY THERMAL DESIGN OPTIMIZATION FOR THE JAMES WEBB SPACE TELESCOPE

Giuseppe Cataldo, National Aeronautics and Space Administration (NASA)/Goddard Space Flight Center, United States

IAC-16.D1.3.11

AN ENERGY OPTIMIZATION TOPOLOGY CONTROL ALGORITHM FOR SPACECRAFT CLUSTER NETWORK

Yang Yu, Research Center of Satellite Technology, Harbin Institute of Technology, China

IAC-16.D1.3.12

A ROBOTIC TESTING FRAMEWORK FOR THE MODEL BASED ENGINEERING ENVIRONMENT

Chrishma Singh-Derewa, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

D1.4. Space Systems Architectures

September 28 2016, 14:45 — Salon de Eventos 5

Co-Chair(s): Franck Durand-Carrier , Centre National d'Etudes Spatiales (CNES), France; Peter Dieleman , National Aerospace Laboratory (NLR), The Netherlands;

Rapporteur(s): Jill Prince , National Aeronautics and Space Administration (NASA), United States;

IAC-16.D1.4.1

DREAM CHASER FOR EUROPEAN UTILIZATION (DC4EU) John Olson, Sierra Nevada Corporation, United States

PROBA-3 MISSION: HOW MULTINATIONAL COOPERATIVE PROJECTS CAN OPEN UP SPACE TO NEW ACTORS DIEGO RODRIGUEZ, SENER Ingenieria y Sistemas, S.A., Spain

IAC-16.D1.4.3

VIDEOSAT – A CONTINUOUS OBSERVATION CONSTELLATION Bryan Dean, Space Advisory Company, South Africa

IAC-16.D1.4.4 (withdrawn)

COST EFFICIENT APPROACH TO DESIGNING A RELIABLE SATELLITE PLATFORM Ekaterina Rezugina, Yaliny, Russian Federation

IAC-16.D1.4.5

A PLATFORM FOR SMALL SATELLITES FOR QUANTUM COMMUNICATIONS AND CRYPTOGRAPHY: CONCEPTUAL DESIGN AND PRELIMINARY RESULTS OF QCOMSAT PROJECT. Josue Lopez, , Mexico

A RECONFIGURABLE SIGNAL PROCESSING INSTRUMENT FOR COMMERCIAL SMALLSAT MISSIONS AND 'BIG DATA' **OPPORTUNITIES**

Pieter van Duijn, HEAD Aerospace Netherlands, The Netherlands

IAC-16.D1.4.7

MODULARITY AND OPERABILITY CONCEPTS OF RTU'S IN MODERN SATELLITE AVIONICS

Stefan Bedrich, OHB System AG - Munich, Germany









IAC-16.D1.4.8

ADAPTIVE CODING MODULATION FOR EARTH OBSERVATION SATELLITES IN LEO ORBIT

Mario Cossu, Thales Alenia Space Italia, Italy

IAC-16.D1.4.9 (withdrawn)

STUDY ON DEVELOPMENT OF NEXT GENERATION DATA RELAY

Zhengan Zhai, Beijing Space Information Relay and Transmission Technology Research Center (BSIR), China

IAC-16.D1.4.10 (withdrawn)

CUBESAT SLIDING-MODE ATTITUDE CONTROL WITH REACTION WHEELS AND COMPENSATION FOR CORIOLIS MOMENTS AT RAPID SLEW RATES

Brian Gasberg Thomsen, Aalborg University, Denmark

IAC-16.D1.4.11

A DESIGN OF SPACECRAFT INTEGRATED AVIONICS Bowen Cheng, Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology(CAST), China

D1.5. Training, Achievements, and Lessons **Learned in Space Systems**

September 29 2016, 09:45 — Salon de Eventos 5

Co-Chair(s): Eiichi Tomita , Japan Aerospace Exploration Agency (JAXA), Japan; Klaus Schilling, University Wuerzburg, Germany; Rapporteur(s): Otfrid Liepack , National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States;

DESIGN AND DEVELOPMENT OF THE UNSW QB50 CUBESAT - ECO Joon Wayn Cheong, University of New South Wales, Australia

IAC-16.D1.5.2

DENEL SPACETEQ CUBE SATELLITE MISSIONS AND CAPABILITIES Lumka Msibi, DENEL Spaceteq, South Africa

ON THE VARIETY OF ENGINEERING APPROACHES WITHIN A MICRO-SATELLITE COMPANY

Hubert Anton Moser, LuxSpace Sarl, Luxemburg

IAC-16.D1.5.4

THE DEVELOPMENT OF NEW TECHNOLOGIES AND MANAGERIAL COMPETENCIES FOR LUNAR LANDING

Benjamin Davis, Dulles University, United States

IAC-16.D1.5.5 (withdrawn)

EXPERIENCES ON TRAINING SYSTEM ENGINEERS FOR MULTI-DISCIPLINARY SPACE PROJECTS

Mohammad Ebrahimi, Aerospace Research Institute, Iran

IAC-16.D1.5.6

LESSONS LEARNED FROM THE DEVELOPMENT OF LIT - LABORATORY OF INTEGRATION AND TEST AT INPE - BRAZILIAN NATIONAL INSTITUTE FOR SPACE RESEARCH Carlos Lino, INPE, Brazil

IAC-16.D1.5.7

LESSONS LEARNED IN AUTOMATIC OPERATION OF OBSERVATORIES FOR SPACE DEBRIS OBSERVATION

Francesco Diprima, University of Rome "La Sapienza", Italy

D1.6. System Engineering - Methods, **Processes and Tools (2)**

September 29 2016, 14:45 — Salon de Eventos 5

Co-Chair(s): Geilson Loureiro, National Institute for Space Research - INPE, Brazil; Norbert Frischauf,, Austria; Rapporteur(s): Otfrid Liepack, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States;

USER EXPERIENCE DESIGN IN INNOVATION TO FLIGHT PORTAL Chrishma Sinah-Derewa, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-16.D1.6.2

SCENARIO-BASED NEEDS ANALYSIS FOR A REMOTE SENSING MILITARY MISSION

Brenda Carolina Lopez Villafranca, Instituto Nacional de Pesquisas Espaciais (INPE), Brazil

PROGRESSIVE DEPLOYMENT OF A LEO CONSTELLATION PROVIDING SUPPORT SERVICES TO LEO CLIENT SATELLITES: A TRADE-OFF **ANALYSIS**

Gianluca Palermo, Sapienza Università di Roma, Italy

IAC-16.D1.6.4

LARGE SPACE SYSTEMS RISK, SCHEDULE AND REPORTING COORDINATION

Giancarlo Filippazzo, ESA, Italy

IAC-16.D1.6.5 (withdrawn)

RELIABILITY-BASED MULTIDISCIPLINARY OPTIMIZATION FOR REMOTE SENSING SATELLITE DESIGN Ali Jafarsalehi, K. N. Toosi University of Technology, Iran

IAC-16.D1.6.6

RAPID, AUTOMATED TEST, VERIFICATION AND VALIDATION FOR **CUBESATS**

Yaseen Zaidi, Cape Peninsula University of Technology, South Africa

IAC-16.D1.6.7

TOWARD THE IMPROVEMENT OF LEAN SATELLITES RELIABILITY THROUGH TESTING - THE HORYU-IV (AEGIS) NANO-SATELLITE CASE

Pauline Faure, LaSEINE, Kyushu Institute of Technology, Japan

IAC-16.D1.6.8

A REAL-TIME LAUNCHING CALIBRATION SYSTEM AND FAILURE ANALYSIS APPROACH FOR THE REAL-TIME MEXICAN SATELLITE SPACE LAUNCH CENTER

Omar Ariosto Niño Prieto, OneSide Tech, Mexico

COMBINED GROUND-BASED AND IN-FLIGHT CALIBRATION PROCESSES FOR STAR TRACKERS

Emanuele Medaglia, University of Rome "La Sapienza", Italy

ANALYSIS OF FLAME DEFLECTOR PIT SIMULATOR FOR SEMI-CRYOGENIC ENGINE TEST FACILITY

Abhishek Sharma, Indian Space Research Organization (ISRO), India

IAC-16.D1.6.11 (withdrawn)

DESIGN AND IMPLEMENTATION OF A FORMAL AUTOMATIC MODEL-BASED TEST-FRAMEWORK FOR ON-BOARD SOFTWARE

Kilian Höflinger, Simualtion and Software Technology, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-16.D1.6.12

SOFTWARE DEVELOPMENT FOR GLOBAL TELECOM SATELLITE NETWORK COMPLEX SIMULATIONS

Alexander Kharlan, Yaliny, Russian Federation

D1.7. Hosted Playloads - Concepts, Techniques and Challenges, Missions and **Applications**

September 30 2016, 09:45 — Salon de Eventos 5

Co-Chair(s): DAPENG WANG . China Academy of Space Technology (CAST), China; Igor V. Belokonov , Samara State Aerospace University, Russian Federation;

Rapporteur(s): Steven Arnold , The Johns Hopkins University Applied Physics Laboratory, United States;

ESA'S DISTRIBUTED SPACE WEATHER SENSOR SYSTEM (D3S) UTILIZING HOSTED PAYLOADS FOR OPERATIONAL SPACE WEATHER MONITORING

Stefan Kraft, ESOC - European Space Agency, Germany

IAC-16.D1.7.2

THE XCUBE CONCEPT: EXTENDING THE CUBESAT STANDARD FROM NANO-SATS TO HOSTED EXPERIMENTS Arthur Descamps, ESTACA, France

IAC-16.D1.7.3 (withdrawn)

COLLISION DYNAMICS FOR DUAL-ARM SPACE ROBOT CAPTURING A TARGET AND RECURRENT FUZZY NEURAL NETWORK CONTROL FOR CLOSED CHAIN SYSTEM

Jing Cheng, Fuzhou University, China

IAC-16.D1.7.4

ON-ORBIT SERVICING READINESS ASSESSMENT: THE SERVICER PERSPECTIVE

Tiago Henrique Matos de Carvalho, Cranfield University, United

IAC-16.D1.7.5

A ROBOTIC TESTING FRAMEWORK FOR THE MODEL BASED ENGINEERING ENVIRONMENT

Chrishma Sinah-Derewa, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-16.D1.7.6

ON ORBIT SERVICING MISSION: GNC ARCHITECTURES DRIVEN BY CLIENT REQUIREMENTS

Aureliano Rivolta, Politecnico di Milano, Italy

IAC-16.D1.7.7

AN EFFICIENT DESIGN AND INTEGRATION TECHNOLOGY FOR CUBESAT PAYLOAD Xuan Zhang, Shanghai Engineering Center for Microsatellites, China

IAC-16.D1.7.8

DESIGN OF A MODULAR NANOSATELLITE SYSTEM FOR T-SAT3 Matthew Driedger, University of Manitoba, Canada

D1.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Jill Prince, National Aeronautics and Space Administration (NASA), United States; Reinhold Bertrand, European Space Agency (ESA), Germany;

IAC-16.D1.IP.1 (withdrawn)

ADJUSTING COST ESTIMATION MODELS FOR INDIGENOUS APPLICATIONS USING TECHNOLOGY READINESS LEVELS Mohammad Ebrahimi, Aerospace Research Institute, Iran

DEVELOPMENT OF A FAULT PROTECTION ARCHITECTURE BASED **UPON STATE MACHINES**

Peter Schulte, Georgia Institute of Technology, School of Aerospace Engineering, United States

IAC-16.D1.IP.3

A SURROGATE MODELLING METHOD FOR ESTIMATING ORBITAL

Nicholas Crisp, The University of Manchester, United Kingdom

AN ECONOMIC FLAVORED ALGORITHM FOR SPACECRAFT SUBSYSTEM MANAGEMENT AND OPTIMIZATION Francesco Feltrin, , Italy

IAC-16.D1.IP.5

ABSOLUTE PASSIVE MODE PECULIARITIES AND APPLICATIONS FOR LEO MISSIONS

Vladimir Ten, Ghalam LLP, Kazakhstan

IAC-16.D1.IP.6

NEW TOPOLOGY OF DEBRIS IMPACT POINTS DISPERSION Alexander S. Filatyev, Central Aero-HydroDynamic Institute, Russian

IAC-16.D1.IP.7

INCORPORATION OF KNOWLEDGE BASED SYSTEMS IN TRADESPACE EXPLORATION FOR SPACE MISSION DESIGN Loris Franchi, Politecnico di Torino, Italy

IAC-16.D1.IP.8

APPLICATION OF OPTIMIZATION TO SUPPORT RESPONSIVE NANOSATELLITE SYSTEM ENGINEERING Steve Greenland, Clyde Space Ltd, United Kingdom

IAC-16.D1.IP.9

CASES STUDIES ON THE RADIATION HARDENING ASSURANCE **TECHNIQUES**

Hui Cao, Xi'an Microelectronics Technology Institute, China Aerospace Science and Technology Corporation (CASC), China

A HIGH SPEED RELAY SATELLITE SYSTEM FOR THE NEW SPATIAL INFORMATION NETWORK

Linghua Guo, China Academy of Space Technology (CAST), China

IAC-16.D1.IP.11 (withdrawn)

SOS MODELING AND SIMULATION METHOD FOR MULTI-SATELLITE SPACE MISSIONS

Yuzhu Zhang, National Space Science Center, Chinese Academy of Sciences, China

IAC-16.D1.IP.12

RESEARCH OF APPLICATION OF MBSE THROUGHOUT THE WHOLE LIFECYCLE OF CUBESAT SYSTEM Jian Shao, , China

IAC-16.D1.IP.13 (withdrawn)

DESIGN OF SPACE MISSIONS THROUGH THE EFFECTIVE COOPERATION OF SYSTEMS ENGINEERING TOOLS Fabrizio Stesina, Politecnico di Torino, Italy

IAC-16.D1.IP.14

LAUNCH: A MODEL BASED SYSTEMS ENGINEERING PLATFORM FOR RAPID COLLABORATION ON NASA LAUNCH-FLIGHT SYSTEM INTEGRATION LAUNCH

Priyanka Srivastava, NASA Jet Propulsion Laboratory, United States

IAC-16.D1.IP.15 (withdrawn)

THE DEVELOPMENT COURSE OF SYSTEMS ENGINEERING STANDARDS & SPECIFICATIONS AND ITS INDICATIONS TO AFROSPACE INDUSTRY

Xinhua Zheng, China Academy of Aerospace Systems Science and Engineering, China

UNCERTAINTY-BASED MULTIDISCIPLINARY DESIGN OPTIMIZATION OF LAUNCH VEHICLES

Xiaohui Wang, Beihang University, China

D2. SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM

Coordinator(s): Emmanuelle David , German Aerospace Center (DLR), Germany; Steve Creech, National Aeronautics and Space Administration (NASA), United States;





Secretary(s): Yuguang Yang , China Aerospace Science & Industry Corporation (CASIC), China;

D2.1. Launch Vehicles in Service or in Development

September 26 2016. 15:15 — Salon Jalisco E2

Co-Chair(s): Giorgio Tumino , European Space Agency (ESA), France; Iwao Igarashi , Mitsubishi Heavy Industries Ltd. -Nagoya Aerospace Systems, Japan;

Rapporteur(s): Randolph Kendall, The Aerospace Corporation, United States;

IAC-16.D2.1.1

STATUS OF NASA'S SPACE LAUNCH SYSTEM Garry Lyles, NASA Marshall Space Flight Center, United States

IAC-16.D2.1.2

THE ARIANE 6 LAUNCH SYSTEM, STATUS Pier Domenico Resta, European Space Agency (ESA), France

ARIANE 6 DESIGN FOR EXPLOITATION Siegfrid Chavy, EADS Space, France

IAC-16.D2.1.4

CURRENT STATUS AND EVOLVING PLAN OF JAPANESE FLAGSHIP LAUNCH SYSTEM, H-IIA/H-IIB AND H3

Akihiro Sato, Mitsubishi Heavy Industries, Ltd., Japan

IAC-16.D2.1.5

DISCUSSION ON REUSABLE TECHNICAL ROUTE OF CHINA'S LONG MARCH LAUNCH VEHICLE

Rao Dalin, China Academy of Launch Vehicle Technology, China

IAC-16.D2.1.7

ARIANE 5: LAUNCHER EXPLOITATION ACCOMPANIMENT ACTIVITIES Julio Monreal, European Space Agency (ESA), France

U.S. AIR FORCE EELV FALCON 9 CERTIFICATION PROCESS Akhil Gujral, The Aerospace Corporation, United States

IAC-16.D2.1.9

EVOLUTION OF INDIAN PSLV AS A VERSATILE LAUNCHER FOR PLANETARY EXPLORATION SPACE MISSIONS Ramakrishnan Sundaram, Indian Space Researh Organisation, India

IAC-16.D2.1.10

THE VEGA DEVELOPMENT PROGRAMME Giorgio Tumino, European Space Agency (ESA), France

ENHANCED EPSILON'S DEVELOPMENT RESULT AND PREPARATION STATUS FOR THE SECOND LAUNCH

Ryoma Yamashiro, Japan Aerospace Exploration Agency (JAXA),

IAC-16.D2.1.12

CURRENT STATUS OF ULA LAUNCH VEHICLES George Sowers, United Launch Alliance, United States

D2.2. Launch Services, Missions, Operations and Facilities

September 27 2016, 09:45 — Salon Jalisco E2

Co-Chair(s): Francesco Santoro , Altec S.p.A., Italy; Yves Gerard , Airbus Defence & Space, France:

Rapporteur(s): Igor V. Belokonov , Samara State Aerospace University (SSAU), Russian Federation;

IAC-16.D2.2.1 (withdrawn)

APPLICATION OF THE FRENCH SPACE OPERATION ACT FOR THE ARIANE 5 ES GALILEO MISSION AND OPERATIONS Nicolas Verstappen, ESA - APT, France

GROUND INFRASTRUCTURES SYNERGY BETWEEN THE LAUNCH PADS AT THE FRENCH GUIANA SPACE CENTRE Patrick Burdaszewski, CNES, France

IAC-16.D2.2.3

LAUNCH OPPORTUNITIES OF JSC SRC "PROGRESS" FOR PIGGYBACK PAYLOADS Evgenii Kosmodemyanskii, JSC SRC Progress, Russian Federation

ARIANE 6: A NEW WAY TO DEVELOP LAUNCHERS IN EUROPE Guillaume Collange, Airbus Safran Launchers, France

IAC-16.D2.2.5

ELABORATION OF ARIANE 6 OPERATIONAL CONCEPT WITH A CONCURRENT ENGINEERING APPROACH

Emmanuelle David, German Aerospace Center (DLR), Germany

IAC-16.D2.2.6

FUTURE LAUNCHERS: OPERATIONAL GROUND CONCEPTS FOR A COMPETITIVE LAUNCH BASE

Laura Appolloni, Centre National d'Etudes Spatiales (CNES), France

IAC-16.D2.2.7 (withdrawn)

A EUROPEAN SMALL SATELLITES LAUNCH BASE AT ANDØYA SPACE CENTER

Marina Petrozzi Ilstad, , Norway

IAC-16.D2.2.8 (withdrawn)

A NEW ORBITAL LAUNCH SITE IN THE UK Kenneth MacTaggart, Upper Quartile, United Kinadom

THE COMPLETELY REDUNDANT DESIGN OF THE TEST LAUNCH CONTROL SYSTEM FOR MANNED RENDEZVOUS AND DOCKING LAUNCH VEHICLE

Wenjing CHEN, China Aerospace Science and Technology Corporation (CASC), China

IAC-16.D2.2.10

LAUNCHING THE SWARM: FROM LAUNCHER TO MOTHERSHIP Abe Bonnema, ISIS - Innovative Solutions In Space B.V., The

IAC-16.D2.2.11

JALISCO AIR AND SPACEPORT (JASP) Luis Fragoso, . Mexico

IAC-16.D2.2.12

ESTABLISHING ROUTINE DEDICATED RIDESHARE MISSIONS FOR SMALL SATELLITES

Melissa Wuerl, Spaceflight Inc., United States

D2.3. Upper Stages, Space Transfer, Entry and Landing Systems

September 28 2016, 09:45 — Salon Jalisco E2

Co-Chair(s): Chiara Manfletti , ESA, France; Oliver Kunz , RUAG Space AG, Switzerland;

Rapporteur(s): Oleg Ventskovskiy, , Ukraine;

IAC-16.D2.3.1

DREAM CHASER GLOBAL

Luciano Saccani, Sierra Nevada Corporation, United States

IAC-16.D2.3.2

NEO-SPACETUG: A COMPACT SOLAR ELECTRICAL PROPULSION CARRIER MODULE FOR EXPLORATION, SERVICE & ORBITAL

Xavier Roser, Thales Alenia Space France, France

IAC-16.D2.3.3

ROBOTIC GRIPPER TECHNOLOGY FOR CARGO TRANSFER IN LOW **EARTH ORBIT**

Marco Dolci, Politecnico di Torino, Italy

IAC-16.D2.3.4

PRE-DESIGN OF AN ACTIVE CENTRAL MECHANISM FOR SPACE DOCKING

Tharek Mohtar, Politecnico di Torino, Italy

IAC-16.D2.3.5

VENUS: AN ELECTRIC ORBIT RAISING STAGE FOR VEGA Gianluca Ascanio, CGS S.p.A.Compagnia Generale per lo Spazio,

IAC-16.D2.3.6

LAUNCH VEHICLE UPPER STAGE AMPOULIZATION AS A MEANS OF PAYLOAD CAPABILITY IMPROVEMENT

Roman Mykhalchyshyn, Yuzhnoye State Design Office, Ukraine

IAC-16.D2.3.7

INNOVATION ON UPPER STAGE ARCHITECTURE AND LOW COST MANUFACTURING METHODS AT MT AEROSPACE Carina Ludwig, MT Aerospace AG, Germany

IAC-16.D2.3.8

CHOICE OF SEPARATION PARAMETERS FROM A PLATFORM COMMITS UNDIRECTED MOVEMENT FOR GROUP OF NANOSATELLITES

Igor V. Belokonov, Samara State Aerospace University (SSAU), Russian Federation

IAC-16.D2.3.9

VISION BASED HAZARD DETECTION FOR PLANETARY LANDING: GROUND EXPERIMENTAL VALIDATION

Marco Ciarambino, Politecnico di Milano, Italy

IAC-16.D2.3.10

VISION-AIDED NAVIGATION SYSTEM FOR REUSABLE ROCKET UPRIGHT LANDING Shibo Gao, Beijing Aerospace Automatic Control Institute, China

SUITABILITY OF RE-USABILITY FOR A LUNAR RE-SUPPLY SYSTEM

Etienne Dumont, DLR (German Aerospace Center), Germany

IAC-16.D2.3.12 CONVERTING RETIRED ISS INTO A CISLUNAR CYCLER James Burke, The Planetary Society, United States

D2.4. Future Space Transportation Systems

September 28 2016, 14:45 — Salon Jalisco E2

Co-Chair(s): Charles E. Cockrell Jr., National Aeronautics and Space Administration (NASA), United States; José Gavira Izquierdo , European Space Agency (ESA), The Netherlands; Rapporteur(s): Philippa Davies, Reaction Engines Ltd., United Kinadom:

IAC-16.D2.4.1

ADVANCED LAUNCHER CONCEPTS FOR A FUTURE MARKET - AN

Rolf Janovsky, OHB System AG-Bremen, Germany

IAC-16.D2.4.2

ANGELA - A NEW GENERATION LAUNCHER Menko Wisse, Airbus-Safran Launchers, Germany

IAC-16.D2.4.3

EVOLUTION OF THE SPACELINER TOWARDS A REUSABLE TSTO-LAUNCHER

Martin Sippel, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-16.D2.4.4

A ROAD MAP TOWARD JAPAN'S FUTURE REUSABLE SPACE TRANSPORTATION SYSTEM

Kazunori Mochizuki, Mitsubishi Heavy Industries, Ltd., Japan

IAC-16.D2.4.5

SYSTEM STUDY OF UPPER-STAGE REUSABLE LAUNCH VEHICLE WITH SOLID ROCKET BOOSTER

Tetsuya ONO, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-16.D2.4.6

ARIANE CLASS SYSTEM VEHICLE STUDIES LEADING TO PROPULSION AND REUSABILITY DEMONSTRATIONS

IAC-16.D2.4.7

SPACE TRANSPORTATION SYSTEM OF A NEW GENERATION FOR THE LUNAR SPACE EXPLORATION PROGRAM

IAC-16.D2.4.8 (withdrawn)

COMPARISON BETWEEN VTOL AND HOTOL HYPERSONIC

IAC-16.D2.4.9 (withdrawn)

CONCEPT STUDY OF REUSABLE MULTI-PURPOSE MANNED SPACECRAFT

IAC-16.D2.4.10

REUSABLE SOLAR ELECTRIC PROPULSION (SEP) TUGS AS PART OF A

D2.5. Technologies for Future Space **Transportation Systems**

September 29 2016, 09:45 — Salon Jalisco E2

Co-Chair(s): Patrick M. McKenzie , RUAG Space, United States; Sylvain Guédron, ESA - APT, France;

IAC-16.D2.5.1

Eric Louaas, Centre National d'Etudes Spatiales (CNES), France

Wang Xiaowei, China Academy of Launch Vehicle Technology, China

UPDATE ON RISK REDUCTION ACTIVITIES FOR A LIQUID ADVANCED BOOSTER FOR NASA'S SPACE LAUNCH SYSTEM Andrew Crocker, Dynetics, United States

THE STUDY OF RETURNING FLIGHT AND LANDING FOR A REUSABLE SOUNDING ROCKET

Shunsuke Sato, Japan Aerospace Exploration Agency (JAXA), Japan

Anping Chen, China Academy of Launch Vehicle Technology, China

IAC-16.D2.5.7

AN EXPERIMENTAL STUDY AND FLIGHT TRAJECTORY ANALYSIS ON

JEAN-MARC BAHU, CNES, France

Guada/ajara

Rafail Murtazin, Rocket Space Corporation Energia, Russian

TRANSPORTATION SYSTEM AIMED AT SUBORBITAL FLIGHTS: IMPACT ON SYSTEM ARCHITECTURE, SIZING AND PERFORMANCE Roberta Fusaro, Politecnico di Torino, Italy

Zhiping Zhao, , China

CIS-LUNAR EXPLORATION ARCHITECTURE Michael Elsperman, The Boeing Company, United States

Rapporteur(s): Giuseppe Rufolo , CIRA Italian Aerospace Research Centre, France:

TECHNOLOGICAL DEMONSTRATORS PREPARING THE FUTURE LAUNCH SYSTEMS.

IAC-16.D2.5.2

RECOVERY TECHNOLOGY OF LAUNCH VEHICLE STAGE

IAC-16.D2.5.4

IAC-16.D2.5.5 A HYDRAULIC BLOWDOWN SERVO SYSTEM FOR LAUNCH VEHICLE

IAC-16.D2.5.6 MT AEROSPACE'S RECENT DEVELOPMENTS IN CFRP MANUFACTURING TECHNOLOGIES Carina Ludwia, MT Aerospace AG, Germany

ADVANCED MORPHING SPACE TRANSPORTATION SYSTEM FOR WIDER CROSS RANGE AND DOWN RANGE Shigeru Aso, Kyushu University, Japan









IAC-16.D2.5.8

REUSABLE LAUNCH VEHICLE – CONCEPT AND TECHNOLOGY OF INDIAN SPACE RESERCH ORGANISATION

Nadeem Alam, Department of Aeronautical Engineering, Babu Banarsi Das National Institute of Technology and Management, Lucknow,, India

IAC-16.D2.5.9

TECHNOLOGY ROADMAPS PREPARATION FOR EUROPEAN HYPERSONIC AND RE-ENTRY SPACE TRANSPORTATION SYSTEMS Nicole Viola, Politecnico di Torino, Italy

IAC-16.D2.5.10

KEY AERODYNAMIC TECHNOLOGIES FOR THE REUSABLE SPACE TRANSPORTATION SYSTEM

Huaping Zhen, Beijing Institute of Space Long March Vehicle, China

IAC-16.D2.5.11

MATRIOCHKA SPACE PROJECT D2S5 Bertrand Bocquet, ESTACA, France

IAC-16.D2.5.12

MANUFACTURING OF NEXT GENERATION LAUNCHER PAYLOAD FAIRING BY MEANS OF COST EFFICIENT OUT-OF-AUTOCLAVE PROCESS

Matteo Rendina, RUAG Space, Switzerland

IAC-16.D2.5.13

RE-USABLE PAYLOAD FAIRING
Matteo Rendina, RUAG Space, Switzerland

D2.6. Future Space Transportation Systems Verification and In-Flight Experimentation

September 29 2016, 14:45 — Salon Jalisco E2

Co-Chair(s): David E. Glass , National Aeronautics and Space Administration (NASA), United States; Julio Aprea , European Space Agency (ESA), France;

Rapporteur(s): Tetsuo Hiraiwa , Japan Aerospace Exploration Agency (JAXA). Japan:

IAC-16.D2.6.1

RECENT FLIGHT TEST RESULT OF EXPERIMENTAL WINGED ROCKET AND ITS FUTURE PLAN FOR SUBORBITAL TECHNOLOGY DEMONSTRATION

Koichi Yonemoto, Kyushu Institute of Technology, Japan

IAC-16.D2.6.2

THE PRIDE PROGRAMME: AN APPLICATION DRIVEN APPROACH FOR THE DEFINITION OF AN AFFORDABLE REUSABLE SPACE TRANSPORTATION SYSTEM

Giorgio Tumino, European Space Agency (ESA), France

IAC-16.D2.6.3

IXV CMC THERMAL PROTECTION SYSTEM POST-FLIGHT PRELIMINARY ANALYSIS

Thierry Pichon, Airbus Safran Launchers, France

IAC-16.D2.6.4

FLIGHT DEMONSTRATION RESULTS OF H-IIA UPGRADE PROGRAM Chikara Ishikawa, Japan Aerospace Exploration Agency (JAXA),

IAC-16.D2.6.5

A COMPARATIVE ASSESSMENT OF VARIOUS METHODS FOR RECOVERING REUSABLE LOWER STAGES

Gerald Webb, Commercial Space Technologies Ltd., United Kingdom

IAC-16.D2.6.6

REUSABLE ROCKET STAGE EXPERIMENTAL VEHICLE AND DEMONSTRATION

Paolo Baiocco, CNES, France

IAC-16.D2.6.7

INVESTIGATIONS ON FLIGHT CONTROL FOR ROCKET FIRST STAGE RECOVERY

Jean DESMARIAUX, CNES, France

IAC-16.D2.6.8 (withdrawn)

MODELLING AND SIMULATION OF HYPERSONIC VEHICLE Ya Yang, Harbin Engineering University, China

IAC-16.D2.6.9

SEPARATION DYNAMIC STUDIES OF A WING BODY HYPERSONIC RE-ENTRY TECHNOLOGY DEMONSTRATOR VEHICLE Jeyakumar D, Indian Space Research Organization (ISRO), India

IAC-16.D2.6.10

THE APPLICATION OF ATTITUDE FOR HIGH-ORDER NONSINGULAR TERMINAL SLIDING MODE CONTROL OF DYNAMICS MODEL OF HYPERSONIC VEHICLE BY DIFFERENTIAL LINEARIZED PROCESSING THROUGH CHANNEL OF SPEED AND HEIGHT Jie Liang, , China

IAC-16.D2.6.11

RESEARCH ON HYPERSONIC FLUTTER TEST TECHNIQUE FOR HYPERSONIC VEHICLES

Chen Ji, China Academy of Aerospace Aerodynamics(CAAA), China

IAC-16.D2.6.12

VERIFICATION, VALIDATION AND ACCREDITATION OF THE SPACECRAFT VIRTUAL FLIGHT EXPERIMENT
WEI XU, Science and Technology on Space Physics Laboratory, China

D2.7. Small Launchers: Concepts and Operations

September 27 2016, 14:45 — Salon Jalisco E2

(s): Steve Cook , Dynetics, United States; **Co-Chair(s):** Harry A. Cikanek , National Oceanic and

Atmospheric Administration (NOAA), United States; Nicolas

Bérend , ONERA - The French Aerospace Lab, France;

IAC-16.D2.7.1

LAUNCHERONE: VIRGIN GALACTIC'S DEDICATED LAUNCH VEHICLE FOR SMALL SATELLITES

Sirisha Bandla, Virgin Galactic L.L.C, United States

AC-16.D2.7.2

BLOOSTAR, THE ENABLER FOR MORE EFFICIENT SATELLITES IN LEO Jose Mariano Lopez Urdiales, Zero2infinity, Spain

IAC-16.D2.7.3

ALTAIR (AIR LAUNCH SPACE TRANSPORTATION SYSTEM USING AN AUTOMATED AIRCRAFT AND AN INNOVATIVE ROCKET) - GENERAL OVERVIEW & FIRST RESUITS

Nicolas Bérend, ONERA - The French Aerospace Lab, France

C-16.D2.7.4

DEVELOPMENT OF A LOW-COST LIQUID-FUEL SOUNDING ROCKET. *Luis Zárate, Other, Mexico*

IAC-16.D2.7.5

MATRIOCHKA SPACE PROJECT D2S7 Valentin RAMAJO, ESTACA, France

IAC-16.D2.7.6

THE TOROGOZ SOUNDING ROCKET PROGRAM IN EL SALVADOR: A PROGRESS REPORT

Luis Salaverria, , El Salvador

IAC-16.D2.7.7

DEPLOYED PAYLOAD ANALYSIS FOR A SINGLE STAGE TO ORBIT SPACEPLANE

Federico Toso, University of Strathclyde, Glasgow, United Kingdom

-16.D2.7.8

LS-1: A NEW SMALL LAUNCHER DEDICATED TO MICRO/NANO SATELLITE MISSIONS

Shufan Wu, Shanghai Engineering Center for Microsatellite, China

IAC-16.D2.7.9

KEY TECHNOLOGY DEVELOPMENTS FOR THE FIREFLY ALPHA SMALL LAUNCH VEHICLE – TEST PROGRAMME RESULTS & OUTCOMES Andy Bradford, Firefly Space Systems, United Kingdom

IAC-16.D2.7.10

BLUE BOOMERANG: A DESIGN FOR A LOW-COST SMALL SATELLITE LAUNCHER

Simon Feast, Reaction Engines Ltd., United Kingdom

IAC-16.D2.7.11

CURRENT PROJECTS FOR SUPER-SMALL LAUNCH VEHICLES
Alan Webb, Commercial Space Technologies Ltd., United Kingdom

D2.8-A5.4. Space Transportation Solutions for Deep Space Missions

September 30 2016, 09:45 — Salon Jalisco E2

Co-Chair(s): Charles E. Cockrell Jr., National Aeronautics and Space Administration (NASA), United States; Ernst Messerschmid, University of Stuttgart, Germany; K. Bruce Morris, RUAG Space, Sweden; Yuguang Yang, China Aerospace Science & Industry Corporation (CASIC), China;

Rapporteur(s): Gerhard Schwehm, European Space Agency (ESA), Spain; Steve Creech, National Aeronautics and Space Administration (NASA), United States;

IAC-16.D2.8-A5.4.1

NASA'S SPACE LAUNCH SYSTEM: AN EVOLVING CAPABILITY FOR EXPLORATION

Steve Creech, National Aeronautics and Space Administration (NASA), United States

IAC-16.D2.8-A5.4.2 (withdrawn)

NEAR-TERM SLS-ORION MISSIONS LEADING TO HUMANS ON MARS Michael Fuller, Orbital ATK, United States

IAC-16.D2.8-A5.4.3

ENERGY AND RESOURCE ANALYSIS OF A LARGE-SCALE EARTH-MARS HUMAN TRANSPORT SYSTEM

Jeffery Greenblatt, Emerging Futures, LLC, United States

IAC-16.D2.8-A5.4.4

A NOVEL VEHICLE CONCEPT USED FOR MULTI-TASK DEEP-SPACE FXPI ORATION

Chen Zhao, Shanghai Key Laboratory of Spacecraft Mechanism, Aerospace System Engineering Shanghai, China

IAC-16.D2.8-A5.4.5

THE ANALYSIS OF TRANSPORTATION AND PROPULSION DEMAND FOR DEEP SPACE EXPLORATION MISSION *Yuan Yong, , China*

IAC-16.D2.8-A5.4.6

ASTEROID-DERIVED STORABLE PROPELLANTS FOR FASTER, CHEAPER DEEP SPACE MISSIONS

David Gump, Deep Space Industries Inc., United States

IAC-16.D2.8-A5.4.7

MOON-TO-EARTH TRANSFER ARCHITECTURE RESEARCH BASED ON LUNAR SPACE ELEVATOR

Xiaohui Wang, Beihang University, China

IAC-16.D2.8-A5.4.8

AGENT-BASED MODELING AND EVALUATION OF MANNED LUNAR EXPLORATION MISSION

Zilong Cheng, National University of Defense Technology, China

IAC-16.D2.8-A5.4.9

PARAMETRIC PREDICTION OF RE-ENTRY VEHICLE DYNAMICS Vinayak Malhotra, SRM University Chennai, India

IAC-16.D2.8-A5.4.10

DEPLOYMENT OF FORMATION FOR MONITORING OF NEAR-EARTH

An-Ming Wu, National Space Organization, Taiwan, China

IAC-16.D2.8-A5.4.11

CISLUNAR TRANSFER ORBIT DESIGN FOR NANOSATS
Wang Zhaokui, Tsinghua University, China

D2.9-D6.2. Joint-Session Creating Safe Transportation Systems for Sustainable Commercial Human Spaceflight

September 30 2016, 13:30 — Salon Jalisco E2

Co-Chair(s): Markus Jäger , Airbus Defence & Space, Space Systems. Germany:

Rapporteur(s): Martin Sippel, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

IAC-16.D6.2-D2.9.1

DEVELOPMENT OF GLOBAL SAFETY SYNERGIES FOR SPACE EXPLORATION REGULATIONS, AND BRIDGING WITH AVIATION STANDARDS

Aline Decadi, HE Space Operations, France

IAC-16.D6.2-D2.9.2

FACILITATING SUSTAINABLE COMMERCIAL SPACE TRANSPORTATION THROUGH AN EFFICIENT INTEGRATION INTO AIR TRAFFIC MANAGEMENT

Sven Kaltenhaeuser, DLR, German Aerospace Center, Germany

IAC-16.D6.2-D2.9.3

PROSPECTS OF SUBORBITAL SPACE TOURISM FROM THE ROLLOUT OF SECOND SPACESHIPTWO AND DEVELOPMENT OF LYNX MARK II AND NEW SHEPARD

Eva Yi-Wei Chang, University of Science & Technology, Taiwan, China

IAC-16.D6.2-D2.9.4

A UNIFIED SCHEME OF A COMMERCIAL SINGLE-TURN SPACE TOURIST OPERATION

Olga Voynova, FGUP TSNIIMASH, Russian Federation

IAC-16.D6.2-D2.9.5

THE ROCKETPLANE XS-1 MACH 12 SUBORBITAL SPACEPLANE - A CASE STUDY FOR HIGH SPEED POINT TO POINT TRANSPORTATION SAFETY & OPERATIONAL ISSUES

Charles Lauer, Rocketplane Global, Inc., United States IAC-16.D6.2-D2.9.6

A CONCEPTUAL STUDY OF A SUBORBITAL PASSENGER FLIGHT
VEHICLE WITH AIRCRAFT-LIKE CONFIGURATION
Yi Li, Northwestern Polytechnical University, China

D2.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Christophe Bonnal , Centre National d'Etudes Spatiales (CNES), France; Daniel L. Dumbacher , Purdue University, United States;

IAC-16.D2.IP.1

A STANDARD SPACE TRANSPORTATION AND INFRASTRUCTURAL SYSTEM FOR AN AFFORDABLE THREE STEPS PATH TO MARS MANNED MISSIONS

Giorgio Gaviraghi, Unispace Exponential Creativity, Italy

IAC-16.D2.IP.2 LUNAR BASED MASS DRIVER APPLICATIONS

Manfred Ehresmann, Institute of Space Systems, Universität Stuttgart, Germany

IAC-16.D2.IP.3

REAL-TIME DATA ACQUISITION PLATFORM USING THE OPENROCKET SIMULATOR

Roberto Aguilar, Central American Association for Aeronautics and Space (ACAE), Costa Rica

IAC-16.D2.IP.4

NG ROCKETS

 ${\it Oleg Aleksandrov, AVIASTAR\ Inc\ www.aviastar.us,\ United\ States}$









IAC-16.D2.IP.5

NUMERICAL INVESTIGATIONS ON AERODYNAMIC DRAG REDUCTION OF HIGH ALTITUDE AND HIGH SPEED VEHICLES USING AN ENERGY DEPOSITION METHOD

Daixian Zhang, China Aerodynamics Research and Developement Center, China

IAC-16.D2.IP.6

METHODOLOGICAL APPROACH FOR SUPPORT OF ROCKET COMPLEXES RESISTANCE TO EXTERNAL FACTORS Olexandr Kashanov, Yuzhnoye State Design Office, Ukraine

IAC-16.D2.IP.7

CASE STUDY: DESIGN OF A SPACEPORT IN SOUTHERN HEMISPHERE FOR SPACE TOURISM VIABILITY Ugur Guven, , United States

IAC-16.D2.IP.8

REQUIREMENT ANALYSIS OF SPACE TRANSPORTING SYSTEM SERVED FOR APPLICATION MISSION OF THE SPACE STATION Kouan Hao, Aerospace System Engineering Shanghai, China, China

IAC-16.D2.IP.9 (withdrawn)

THE INFINITE STAGING ROCKET – PULSE MODE TESTING Vitaly Yemets, Oles Honchar Dnipropetrovsk National University,

IAC-16.D2.IP.10

PARTICLE SWARM OPTIMIZATION BASED PI CONTROLLER DESIGN FOR SERVO ACTUATION SYSTEM OF REUSABLE LAUNCH VEHICLE PRIYA KURIAN, ISRO, India

IAC-16.D2.IP.11

A MODEL-BASED APPROACH TO THE PRELIMINARY DESIGN OF A SPACE TUG AIMED AT EARLY REQUIREMENT'S VERIFICATION Sara Cresto Aleina, Politecnico di Torino, Italy

IAC-16.D2.IP.12 (withdrawn)

TRAJECTORY, PROPULSION & GENERAL PARAMETERS OPTIMIZATION FOR SUBORBITAL LAUNCH VEHICLE

Shijie Sun, CALT, CASC, China

IAC-16.D2.IP.13

MULTIDISCIPLINARY SHAPE OPTIMIZATION OF FUTURE RE-USABLE SPACE VEHICLE

Sagar Satpathy, Politecnico di Milano, Italy

IAC-16.D2.IP.14

METAMODEL-BASED SIMULATION OPTIMIZATION OF A TWO STAGE LIQUID PROPULSION BASED SPACE TRANSPORTATION SYSTEM H.R. Fazeley, K. N. Toosi University of Technology, Iran

IAC-16.D2.IP.15

ADVANTAGES AND PROSPECT OF MULTI-SATELLITE LAUNCHING UPPER-STAGE

Xubin Zhang, Beijing Institute of Astronautical Systems Engineering,

D3. 14th IAA SYMPOSIUM ON **BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND DEVELOPMENT**

Coordinator(s): Alain Pradier , European Space Agency (ESA), The Netherlands; John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States;

D3.1. Strategies & Architectures as the Framework for Future Building Blocks in **Space Exploration and Development**

September 26 2016, 15:15 — Mueble 2

Co-Chair(s): John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States; Maria Antonietta Perino, Thales Alenia Space Italia, Italy;

Rapporteur(s): Anouck Girard , University of Michigan, United

A PATHWAY TO A THRIVING COMMERCIAL SPACE ECONOMY Robert Pittman, NASA Ames Research Center, United States

IAC-16.D3.1.2

EXTENDING SPACE EXPLORATION BY EVOLVING AN EARTH-MOON PLANETARY DEFENSE CAPABILITY Nikola Schmidt, Charles University, Czech Republic

IAC-16.D3.1.3 (withdrawn)

STEPS TOWARDS A MOON INFRASTRUCTURE Maria Antonietta Perino, Thales Alenia Space Italia, Italy

IAC-16.D3.1.4

DESIGN AND INTEGRATION OF MODULAR DEEP SPACE HABITAT USING A ROBUST OPTIMIZATION FRAMEWORK William O'Neill, Purdue University, United States

IAC-16.D3.1.5

DESIGN CONSIDERATIONS FOR SPACECRAFT OPERATIONS DURING UNCREWED DORMANT PHASES OF HUMAN EXPLORATION

Julie Williams-Byrd, NASA LaRC, United States

IAC-16.D3.1.6

A FRAMEWORK FOR INTERNATIONAL COLLABORATION ON LUNAR MISSIONS

Peter Thoreau, International Space University (ISU), France

IAC-16.D3.1.7

PIONEERING SPACE WITH THE INTERNATIONAL COMMUNITY: RESULTS FROM THE 2015 SPACE GENERATION CONGRESS **EXPLORATION WORKING GROUP**

Andrew Owens, Massachusetts Institute of Technology (MIT), United States

IAC-16.D3.1.8

O'MOON: MODULAR AUTONOMOUS POWER INFRASTRUCTURE SOLUTION FOR FUTURE MOON AND MARS EXPLORATION AND COLONISATION

Enrique Garcia Bourne, , United Kingdom

IAC-16.D3.1.9

CHALLENGING THE PARADIGMS OF REUSABLE SPACECRAFT ARCHITECTURE: A FRESH LOOK AT AN EARLY CONCEPT Fred Francis, , United States

IAC-16.D3.1.10

PRELIMINARY FINDINGS FROM A MULTI-ROBOT SYSTEM FOR LARGE-SCALE EXTRA-PLANETARY ADDITIVE CONSTRUCTION Samuel Wilkinson. .

D3.3. Novel Concepts and Technologies for Enable Future Building Blocks in Space **Exploration and Development**

September 28 2016, 14:45 — Mueble 2

Co-Chair(s): Alain Pradier, European Space Agency (ESA), The Netherlands; Christopher Moore, National Aeronautics and Space Administration (NASA), United States:

Rapporteur(s): Alain Dupas , European Bank for Reconstruction and Development, France; Junjiro Onoda , Japan Society for Aeronautics and Space Sciences (JSASS), Japan;

IAC-16.D3.3.1

ADVANCED CONCEPTS FOR MOON EXPLOITATION - A PRELIMINARY STUDY ON LUNAR MASSIVE IN-SITU RESOURCE UTILIZATION TO FUTURE SPACE MISSIONS COSTS REDUCTION Simone Flavio Rafano Carnà, Politecnico di Milano, Italy

IAC-16.D3.3.2

EUROPEAN TECHNOLOGIES FOR CREW HABITATS AND FOOD PRODUCTION IN SPACE

Anna Barbara Imhof, Liquifer Systems Group (LSG), Austria

IAC-16.D3.3.3 (withdrawn)

EVA SUIT DESIGN AND OPERATIONAL RECOMMENDATIONS NECESSARY FOR ESA'S LUNAR EXPLORATION GOALS Vinita Marwaha Madill, Space Generation Advisory Council (SGAC), United Kinadom

IAC-16.D3.3.4

ARTIFICIAL GRAVITY CONCEPTUAL ORBITING STATION DESIGN Remco Timmermans, International Space University (ISU), The

IAC-16.D3.3.6

DEVELOPMENT AND TESTING OF A TRAINABLE ANALOG NEURAL NETWORK ON AN OBSTACLE AVOIDING ROBOT WITH APPLICATION TO LUNAR IN-SITU RESOURCE UTILIZATION

Samantha Larson, Carleton Univeristy, Canada

IAC-16.D3.3.7

APPLICATIONS OF SPINTRONICS IN FUTURE SPACE EXPLORATION

Seyed Ali Nasseri, Space Generation Advisory Council (SGAC),

IAC-16.D3.3.8

SPACE SUPER COMPUTING: MISSION DEFINITION, ARCHITECTURE CONCEPTS, SELECTION AND ASSESSMENT

Hui Cao, Xi'an Microelectronics Technology Institute, China Aerospace Science and Technology Corporation (CASC), China

SELF-ASSEMBLY OF STRUCTURES ON THE LUNAR SURFACE USING ROBOTIC ENSEMBLES

Gustavo Medina Tanco, UNAM, Mexico

D3.4. Space Technology and System **Management Practices and Tools**

September 28 2016, 09:45 — Mueble 2

Co-Chair(s): John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States; Paivi Jukola, Aalto

Rapporteur(s): Maria Antonietta Perino , Thales Alenia Space Italia, Italy;

IAC-16.D3.4.1

PUBLIC-PRIVATE PARTNERSHIPS FOR DEVELOPMENT OF ADVANCED EXPLORATION SYSTEMS

Christopher Moore, National Aeronautics and Space Administration (NASA), United States

CAPABILITY DEMONSTRATION: CSA PROGRAM FOR INCREASE SPACE READINESS OF SPACE SCIENCE AND TECHNOLOGY WHILE TRAINING THE NEXT GENERATION

Jean-Claude Piedboeuf, Canadian Space Agency, Canada IAC-16.D3.4.3 (withdrawn)

IMPACTS OF EARLY STAGE TECHNOLOGY PORTFOLIO ALLOCATION Nikolai Joseph, The Tauri Group, United States

IAC-16.D3.4.4

PROPOSAL FOR PLANNING BASED ON CAPABILITIES FOR THE BRAZILIAN SPACE PROGRAM Carlos Lino, INPE, Brazil

IAC-16.D3.4.5 (withdrawn)

GAMESPACE EXPLORATION PROCESSES FOR DECENTRALIZED SPACE SYSTEMS ENGINEERING

Dmitry Smirnov, Skolkovo Institute of Science and Technology, Russian Federation

IAC-16.D3.4.6

BUILDING BLOCKS OF A ROBUST ECONOMY IN EARTH'S ORBIT: THE MACHINERY OF COMMERCIALIZATIONS Ioana Cozmuta, Science & Technology, United States

IAC-16.D3.4.7

OUTCOME AND STATUS OF NASA'S NEXT STEP AWARDS Jason Crusan, NASA, United States

IAC-16.D3.4.8

SCHEDULING AND BUDGETING OF THE METOP SATELLITES WITH COMBINED ESTIMATE TECHNIQUE

Giuliani Garbi, Brazilian Institute for Space Research, Brazil

IAC-16.D3.4.9

DECISION ANALYSIS METHODS USED TO MAKE APPROPRIATE INVESTMENTS IN HUMAN EXPLORATION CAPABILITIES AND **TECHNOLOGIES**

Julie Williams-Byrd, NASA LaRC, United States

IAC-16.D3.4.10

TOOLS AND METHODS FOR EVALUATING CONCEPTS T Paivi Jukola, Aalto University, Finland

D3.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Alain Pradier, European Space Agency (ESA), The Netherlands; John C. Mankins , ARTEMIS Innovation Management Solutions, LLC, United States;

IAC-16.D3.IP.1

ENERGY-EFFICIENT MOTION OF A SPACE MANIPULATOR Silvio Cocuzza, Space Mechatronic Systems Technology Laboratory, University of Strathclyde, United Kingdom

IAC-16.D3.IP.2

SPACE REALIZATION: A CURRICULUM BASED LEARNING MODULE DESIGNED TO USE OUTER SPACE AS A TOOL FOR UNLOCKING NEW PATHWAYS OF HIGHER LEARNING

Cameron Ashkar, The Global Alliance for Outer Space Development, Inc., United States

IAC-16.D3.IP.3

LIFE BEYOND EARTH: THE RINGS OF THE EARTH JM Reyes, , Spain

D4. 14th IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE

Coordinator(s): Giuseppe Reibaldi , International Academy of Astronautics (IAA), France; Yu LU, China Academy of Launch Vehicle Technology, China, China;

D4.1. Innovative Concepts and Technologies

September 27 2016, 09:45 — Mueble 2

Co-Chair(s): Giorgio Saccoccia, European Space Agency (ESA), The Netherlands; Roger X. Lenard, LPS, United States; Rapporteur(s): Paivi Jukola, Aalto University, Finland;

IAC-16.D4.1.1

FOUR PILLARS TO ADDRESS THE FUTURE OF SPACE Simonetta DI PIPPO, United Nations, Austria

IAC-16.D4.1.2

APPROACH TO TECHNOLOGY PRIORITIZATION IN SUPPORT OF MOON INITIATIVES IN THE FRAMEWORK OF ESA EXPLORATION **TECHNOLOGY ROADMAPS**

Sara Cresto Aleina, Politecnico di Torino, Italy





IAC-16.D4.1.3

ROADMAPPING FOR EUROPE: SPACEPLAN 2020 - FINAL RESULTS Jason Forshaw, Surrey Space Centre, University of Surrey, United

IAC-16.D4.1.4

CONCEPTUAL DESIGN OF THE SPACE SUPER COMPUTING Hui Cao, Xi'an Microelectronics Technology Institute, China Aerospace Science and Technology Corporation (CASC), China

IAC-16.D4.1.5 (withdrawn)

ASIF: THE ASI SUPPORTED IRRADIATION FACILITIES, AN **EXAMPLE OF NATIONAL COORDINATION** Luigi Ansalone, Agenzia Spaziale Italiana (ASI), Italy

IAC-16.D4.1.6

HUMAN EXPLORATION OF VENUS: A COMPARATIVE STUDY OF CREWED MISSIONS TO MARS AND VENUS Hamed Gamal, Cairo University, Eavpt

IAC-16.D4.1.7

RESULTS OF THE SELF DEPLOYABLE HABITAT FOR EXTREME ENVIRONMENTS (SHEE) PROJECT.

Joshua Nelson, International Space University (ISU), France

IAC-16.D4.1.8

SETTLING MARS: A CITY MASTER PLAN Bora Aliaj, International Space University (ISU), Albania

INTERSTELLAR PROBE: REQUIREMENTS

Ralph L. McNutt, Jr., Johns Hopkins University Applied Physics Laboratory, United States

IAC-16.D4.1.10

STRATEGIES TO IMPLEMENT A PRECURSOR INTERSTELLAR MISSION: FROM MISSION CONCEPTS TO FINANCING OPTIONS Marta Rocha de Oliveira, International Space University (ISU),

D4.2. Contribution of Space Activities to **Solving Global Societal Issues**

September 27 2016, 14:45 — Mueble 2

Co-Chair(s): Giuseppe Reibaldi , International Academy of Astronautics (IAA), France; John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States;

IAC-16.D4.2.1

FUTURE SPACE TECHNOLOGIES FOR SUSTAINABILITY ON EARTH Stefano Ferretti, European Space Agency (ESA), Italy

IAC-16.D4.2.2

CONTRIBUTION OF SPACE ACTIVITIES TO DEVELOPMENT OF GLOBAL COMMUNITY

Tomas Hrozensky, Space Generation Advisory Council (SGAC), Slovak

IAC-16.D4.2.3

ELABORATION OF A "COORDINATION PLATFORM FOR THE USE OF SPACE CAPABILITIES TO SUPPORT SUSTAINABLE DEVELOPMENT GOALS (INCLUDING MIGRATION)

Isabelle Duvaux-Bechon, European Space Agency (ESA), France

IAC-16.D4.2.4

SPACE SCIENCE AND TECHNOLOGY AS A CONTRIBUTOR TO SOLVE SOCIAL NEEDS IN MEXICO

Enrique Pacheco Cabrera, Mexican Space Agency, Mexico

IAC-16.D4.2.5

SPACE AS A TOOL TO EMPOWER WOMEN AND IMPLEMENT THE 2030 AGENDAS

Annalisa Donati, United Nations/OOSA, Austria

IAC-16.D4.2.6

THE SPACE TECHNOLOGY SCOREBOARD - A NEW METHODOLOGY FOR COMPARING NATIONAL SPACE TECHNOLOGY LEVELS Soyoung Chung, Korea Aerospace Research Institute (KARI), Korea, Republic of

IAC-16.D4.2.7 (withdrawn)

SPACE EXPLORATION: A COMMON GOAL, A COMMON FUTURE. Juan Pablo Vargas Pallini, , Colombia

IAC-16.D4.2.8

SOCIAL APPLICATIONS OF SPACE TECHNOLOGY IN TABASCO,

AMANDA GOMEZ, Agencia Espacial Mexicana (AEM), Mexico

IAC-16.D4.2.9

HOW ASSETS IN OUTER SPACE CAN HELP THE REFUGEE CRISIS IN **INNOVATIVE WAYS-13-D9.2.8** Tara Halt, George Washington University, United States

IAC-16.D4.2.10

THE PLANETARY BELT, A SYMBIOTIC ARTIFICIAL PLANET AT GEOSTATIONARY ORBIT CONNECTED TO EARTH BY A SPACE ELEVATOR SYSTEM TO FACE GLOBAL CHALLENGES Giorgio Gaviraghi, Unispace Exponential Creativity, Italy

IAC-16.D4.2.11

ACTIVITIES TOWARDS THE DEVELOPMENT OF A SPACE WEATHER STRATEGY IN MEXICO

Americo Gonzalez-Esparza, Instituto de Geofisica, Universidad Nacional Autonoma de Mexico, Mexico

D4.3. Space Elevator Tether and Space Mineral Resources

September 29 2016, 09:45 — Mueble 2

Co-Chair(s): Akira Tsuchida , Earth-Track Corporation, Japan; Peter Swan , International Space Elevator Consortium, United

Rapporteur(s): Robert E Penny, Cholla Space Systems, United States:

IAC-16.D4.3.1

CRITICAL TECHNOLOGIES FOR SPACE ELEVATOR - STATUS REPORT

Sakurako Takahashi, Japan Manned Space Systems Corporation (JAMSS), Japan

IAC-16.D4.3.2

IMPACT OF ASCENDING AND DESCENDING CLIMBERS ON SPACE ELEVATOR CABLE DYNAMICS

Yoji Ishikawa, Obayashi Corporation, Japan

IAC-16.D4.3.3

CONCEPT FOR A SPACE ELEVATOR EARTH PORT Robert E Penny, Cholla Space Systems, United States

IAC-16.D4.3.4

THE SPACE ELEVATOR TOWER John Knapman, , United Kingdom

IAC-16.D4.3.5

DYNAMIC BEHAVIOR AND MECHANISM OF DRIVING ROLLER FOR CLIMBER MODEL IN SPACE ELEVATOR Fumihiro Inoue, , Japan

ELECTRODYNAMICS TETHERS REDUCING EXTERNAL DISTURBING

Thais Oliveira, Instituto Nacional de Pesquisas Espaciais (INPE),

IAC-16.D4.3.7 (withdrawn)

HOW DO REALISTIC MAGNETOSPHERIC FIELDS AFFECT SPACE

Anders Jorgensen, New Mexico Tech, United States

IAC-16.D4.3.8

SPACE ELEVATOR DEVELOPMENT SEQUENCE Peter Swan, International Space Elevator Consortium, United States

IAC-16.D4.3.9

STUDY ABOUT THE PERFORMANCE FOR SIMULTANEOUS DEPLOYMENT OF THE CABLES FROM GEO STATION UNDER THE SPACE ELEVATOR CONSTRUCTION Kohki Tao, Shizuoka University, Japan

IAC-16.D4.3.10

DEVELOPMENT OF MICROSATELLITES FOR VERIFYING THE BASIC TECHNOLOGIES OF SPACE ELEVATOR IN SPACE Yoshiki Yamagiwa, Shizuoka University, Japan

IAC-16.D4.3.11

CONFINEMENT STUDY REVIEW FOR FUTURE SPACE INFRASTRUCTURE

Tamiyasu Shimamiya, Japan Manned Space Systems Corporation,

IAC-16.D4.3.12

MOTION OF SPACECRAFT TETHERED TO AN ASTEROID Alexander Burov, Dorodnitsyn Computing Center, Russian Academy of Sciences, Russian Federation

IAC-16.D4.3.13

THE NEED FOR ARTIFICIAL GRAVITY IN THE TETHERING SATELLITE WITH CONNECTION BY THE SPACE ELEVATOR SATOSHI IWASE, NAOKI NISHIMURA. KUNIHIKO TANAKA*. TADAAKI MANO* DEPARTMENT OF PHYSIOLOGY, AICHI MEDICAL UNIVERSITY, NAGKUTE 480-1195

Satoshi Iwase, Aichi Medical University, Japan

IAC-16.D4.3.14 (withdrawn)

REDIRECTION OF TUMBLING ASTEROIDS AND ORBITAL DEBRIS BY MEANS OF SPACE TETHERS

Nahum Melamed, The Aerospace Corporation, United States

IAC-16.D4.3.15

POWERED SWING-BY USING TETHER CUTTING Tsubasa Yamasaki, Kyushu University, Japan

D4.5. Space Mineral Resources, Asteroid Mining and Lunar/Mars insitu

September 29 2016, 14:45 — Mueble 2

Co-Chair(s): Peter Swan , International Space Elevator Consortium, United States; Roger X. Lenard, LPS, United States; Rapporteur(s): Susan McKenna-Lawlor , Space Technology (Ireland) Ltd., Ireland:

IAC-16.D4.5.1

ARCHITECTURE FOR AN ASTEROID MINING INDUSTRY Scott Dorrington, UNSW Australia, Australia

IAC-16.D4.5.2 (withdrawn)

AN INTEGRATED ECONOMICS MODEL FOR ISRU IN SUPPORT OF A MARS COLONY—INITIAL RESULTS Robert Shishko, JPL, United States

IAC-16.D4.5.3 (withdrawn)

POLICY RECOMMENDATIONS FOR ECONOMICALLY AND SOCIALLY VALUABLE ASTEROID RESOURCE EXPLOITATION ACTIVITIES Anthony Hennig, American Society of Mechanical Engineers, United

IAC-16.D4.5.4

SPACE CURRENCY - WATER

Peter Swan, International Space Elevator Consortium, United States

IAC-16.D4.5.5

LEGAL AND REGULATORY IMPLICATIONS OF EMERGING ACTIVITIES

Alyssa Picard, Science and Technology Policy Institute, United States

IAC-16.D4.5.6 (withdrawn)

MISSION PLANNING AND DESIGN OF ROVERS FOR SEARCHING AND MINING OF PRECIOUS METALS ON NEA

Dishant Kothia, University of Petroleum and Energy Studies, India

IAC-16.D4.5.7

THE CASE FOR SOLAR THERMAL STEAM PROPULSION SYSTEM FOR INTERPLANETARY TRAVEL: ENABLING SIMPLIFIED ISRU UTILIZING NEOS AND SMALL BODIES

Salil Rabade, Arizona State University, United States

IAC-16.D4.5.8

OPTIMIZED BUCKET WHEEL DESIGN FOR ASTEROID EXCAVATION Ravi teja Nallapu, Arizona State University, United States

IAC-16.D4.5.9

HIGH EARTH ORBIT: THE PRIME LOCATION FOR PROCESSING AND DISTRIBUTING ASTEROID RESOURCES

David Gump, Deep Space Industries Inc., United States

IAC-16.D4.5.10

HIGH EARTH ORBIT NECROMANCER FOR NEO CAPTURE AND RETRIEVAL

Michael Woods, HEO Robotics, Australia

D4.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Giuseppe Reibaldi , International Academy of Astronautics (IAA), France;

IAC-16.D4.IP.1

CONCEPT OF UNDERSTANDING BLACK HOLE USING SATELLITE Nadeem Alam, Department of Aeronautical Engineering, Babu Banarsi Das National Institute of Technology and Management.

IAC-16.D4.IP.2

SPACE ELEVATOR COMMON LEXICON FROM THREE MAJOR

Peter Swan, International Space Elevator Consortium, United States

D5. 49th IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE ACTIVITIES

Coordinator(s): Jeanne Holm , University of California, United States; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;

D5.1. Safety and quality: "SUCCESS" is the

September 28 2016, 09:45 — Mueble 1

Co-Chair(s): Alexander S. Filatyev , Central Aero-HydroDynamic Institute, Russian Federation; Manola Romero , 3AF, France; Rapporteur(s): Pierre Molette, , France;

IAC-16.D5.1.1 (withdrawn)

NEO COLLISION RISK REDUCTION UNDER B-PLANE UNCERTAINTY Nahum Melamed, The Aerospace Corporation, United States

IAC-16.D5.1.2

A FRAMEWORK FOR OVERSIGHT OF SOFTWARE'S SUPPLIERS OF SAFETY-CRITICAL SPACE SYSTEMS BASED ON CIVIL AVIATION BEST

BENEDITO SAKUGAWA, Agência Nacional de Aviação Civil - ANAC,







INNOVATION AND PRACTICE OF TECHNICAL RISK MANAGEMENT METHODS IN CHINESE LAUNCH VEHICLE ENGINEERING Chunlai Xu, China Aerospace Science and Technology Corporation (CASC), China

IAC-16.D5.1.4

STUDY ON LIFE CYCLE QUALITY MANAGEMENT OF THE AEROSPACE ADVANCED DEVELOPMENT FLIGHT DEMONSTRATION PROJECT Haiguang Liu, China Academy of Launch Vehicle Technology(CALT), China

IAC-16.D5.1.5

LAUNCHER MISSION RISK REDUCTION WITH ADVANCED ADAPTIVE GUIDANCE ALGORITHMS

Olga Yanova, TsAGI, Russian Federation

IAC-16.D5.1.6 (withdrawn)

SYSTEM-THEORETIC PROCESS ANALYSIS APPLIED FOR A LAUNCH AND RESCUE OPERATION OF THE SARA SPACE VEHICLE Jonas Bianchini Fulindi, Instituto Tecnológico de Aeronáutica (ITA), Brazil

IAC-16.D5.1.7 (withdrawn)

A GENERALIZED TECHNOLOGY READINESS LEVEL MODEL FOR SPACE PROGRAM

Kuan Ma, China Academy of Aerospace Systems Science and Engineering, China

IAC-16.D5.1.8

STUDY OF RELIABILITY IMPROVEMENT USING SYSTEM MODELS Atsuo Mizuno, Churyo Engineering Co., Ltd., Japan

IAC-16.D5.1.9

A QUALITY MANAGEMENT METHOD FOR INTEGRATED EQUIPMENT BASED ON RISK MATRIX

Hui Yang, China Academy of Launch Vehicle Technology(CALT),
China

IAC-16.D5.1.10

STUDY FOR PROCESS RELIABILITY MODELING AND CONTROLLING METHOD OF SPACE PRODUCT

Xiao Hu, China Academy of Launch Vehicle Technology(CALT), China

IAC-16.D5.1.11 (withdrawn)

INNOVATION AND PRACTICE OF CLOSED LOOP PROBLEM SOLVING MANAGEMENT

Hu Yun, China Academy of Launch Vehicle Technology(CALT), China

D5.2. Knowledge Management and Collaboration in Space Activities

September 29 2016, 09:45 — Mueble 1

Co-Chair(s): Lionel Baize , Centre National d'Etudes Spatiales (CNES), France; Roberta Mugellesi-Dow , European Space Agency (ESA), United Kingdom;

Rapporteur(s): Jeanne Holm , University of California, United States; Patrick Hambloch , University of Alabama in Huntsville, United States;

IAC-16.D5.2.1

KNOWLEDGE MANAGEMENT POLICY AT ESA Hugo Maree, European Space Agency (ESA), The Netherlands

IAC-16.D5.2.2 (withdrawn)

ESTABLISHING A CUSTOMIZED KNOWLEDGE MANAGEMENT SYSTEM FOR A NEW SPACE PROJECT ORGANIZATION WITHIN AN EXISTING INSTITUTION ON A NANOSATELLITE PROJECT EXAMPLE Mart Vihmand, Tallinn University of Technology, Estonia

IAC-16.D5.2.3

NASA'S PUBLIC-PRIVATE PARTNERSHIP ROUNDTABLE: OVERVIEW AND OBSERVATIONS

Philip McAlister, NASA, United States

IAC-16.D5.2.4

MATRIOCHKA SPACE PROJECT D5S2

Armelle Frenea-Schmidt, , France

IAC-16.D5.2.5

MARS MISSION CONCEPT DESIGNS WITH GAMIFICATION AND KNOWLEDGE MANAGEMENT OUTCOMES

Ozan Kara, Koc University, Turkey

IAC-16.D5.2.6

ADVANCING MODEL BASED SYSTEMS ENGINEERING IN AEROSPACE PROJECTS

Patrick Hambloch, University of Alabama in Huntsville, United States

IAC-16.D5.2.7

CREATING A KNOWLEDGE TOOLBOX: TOP 15 TOOLS FROM NASA Edward J. Hoffman, National Aeronautics and Space Administration (NASA), United States

IAC-16.D5.2.8

CNES TCC :AN OPEN INNOVATION TOOL INGESTED IN CORPORATE INTERNAL CULTURE

Hélène BEN AÏM DRIEUX, Centre National d'Etudes Spatiales (CNES), France

IAC-16.D5.2.9

THE PROJECT IS OVER – THE KNOWLEDGE IS LOST? DLR'S PROJECT DATABASE.

Uwe Knodt, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-16.D5.2.10 (withdrawn)

THE ROLE OF CONSULTING STAFF ORGANIZATIONS FOR KNOWLEDGE MANAGEMENT IN CHINESE LARGE AEROSPACE ENTERPRISE

Dongfang Liu, China Academy of Launch Vehicle Technology, China

IAC-16.D5.2.11

PRACTICAL STUDIES ON INTERNAL KNOWLEDGE ACQUISITION AND SHARING METHODS FOR AEROSPACE COMPANIES
Wen Zhang, China Academy of Launch Vehicle Technology, China

D5.3. Prediction and measurement of space weather conditions and impacts on space missions

September 29 2016, 14:45 — Mueble 1

Co-Chair(s): Jean-Francois Roussel , Office National d'Etudes et de Recherches Aérospatiales (ONERA), France; Mengu Cho , Kyushu Institute of Technology, Japan;

Rapporteur(s): Justin Likar , UTC Aerospace Systems, United States:

IAC-16.D5.3.2

MISSION ARCHITECTURES FOR SPACE WEATHER MONITORING FROM THE SUN-EARTH LAGRANGE POINTS L1 AND L5 Alessandro Grasso, OHB System AG-Bremen, Germany

IAC-16.D5.3.3

DESIGN AND IMPLEMENTATION OF THE SPACE ENVIRONMENT INFORMATION SERVICE PLATFORM
Peng Wang, Equipment Academy, China

IAC-16.D5.3.4 (withdrawn)

SERVICE ORIENTED DESIGN METHOD FOR SPACE ENVIRONMENT EFFECT MODEL BASE

Peng Wang, Equipment Academy, China

IAC-16.D5.3.5 (withdrawn)

NUMERICAL MODELING OF SPACECRAFT POTENTIAL
MODULATIONS DUE TO TIME-VARYING PLASMA WAVE FIELDS
Yohei Mivake, Kobe University, Japan

IAC-16.D5.3.6

ELECTRON INDUCED SEUS IN ADVANCED TECHNOLOGIES Christophe Inguimbert, ONERA, France

IAC-16.D5.3.7

RADIATION EFFECTS VULNERABILITY EVALUATION OF SPACEBORNE ELECTRONICS USED IN COMPUTATION INTENSIVE SPACE TASKS Hui Cao, Xi'an Microelectronics Technology Institute, China Aerospace Science and Technology Corporation (CASC), China

IAC-16.D5.3.8

ENDUROSAT'S CUBESAT NANO-SATELLITE AND MODULES SPACE QUALIFICATION TEST CAMPAIGN

Vincenzo Quaranta, CIRA Italian Aerospace Research Centre, Italy

IAC-16.D5.3.9

DEVELOPMENT IN THE NATIONAL POLYTECHNIC INSTITUTE OF MEXICO OF A THERMAL VACUUM CHAMBER FOR ENVIRONMENTAL TESTING OF AEROSPACE COMPONENTS.

Daniel Lara-Favela, Instituto Politécnico Nacional, Mexico

D5.3. Cyber-Security Threats To Space Missions And Countermeasures To Address Them

September 30 2016, 09:45 — Mueble 1

Co-Chair(s): Deganit Paikowsky , Tel Aviv University, Israel; Stefano Zatti , ESA, Italy;

Rapporteur(s): Luca del Monte , European Space Agency (ESA), France;

IAC-16.D5.4.1

ADDRESSING THE INTERNATIONAL LEGAL FRAMEWORK FOR CYBER-SECURITY THREATS IN SPACE MISSIONS

Helena Correia Mendonça, Vieira de Almeida & Associados, Portugal

IAC-16.D5.4.2

WHAT MAKES SPACE ATTRACTIVE FOR CYBER ATTACKS AND WHY CYBER ATTAKS POSE A SIGNIFICANT THREAT TO SPACE SYSTEMS? Deganit Paikowsky, Tel Aviv University, Israel

IAC-16.D5.4.3

THE ESA CYBER SECURITY TRAINING RANGE Angelika Mann, ESA european space agency, Italy

IAC-16.D5.4.4

REINFORCING CRITICAL AUTHENTICATION SYSTEMS AGAINST UNAUTHORIZED USERS

Arnoldo Esteban Cervantes García, Pinnacle Aerospace, Mexico

IAC-16.D5.4.5

SHARING SPACE DATA BY DESIGN

David Finkleman, International Academy of Astronautics, United States

IAC-16.D5.4.6

MAPPING AND OPTIMIZING BIG SPACE DATA - AN INTERNATIONAL, INTERDISCIPLINARY AND INTERCULTURAL PERSPECTIVE ON THE SPACE RELATED DATA PROCESSES

Daniel Brack, Asher Space Research Institute, Technion, I.I.T., Israel

D5.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Jeanne Holm , University of California, United States; Roberta Mugellesi-Dow , European Space Agency (ESA), United Kingdom;

IAC-16.D5.IP.1

MINING POTENTIAL INFORMATION OF MASSIVE ASTRONOMICAL DATA BY THE METHODS OF KNOWLEDGE MANAGEMENT Rong Sun, Beijing Institute of Astronautical Systems Engineering, China

IAC-16.D5.IP.2

KNOWLEDGE SHARING IN THE FIELD OF SPACE PROJECT MANAGEMENT IN THE CZECH REPUBLIC Michal Kunes, Czech Space Office, Czech Republic

IAC-16.D5.IP.3

A SOFTWARE ARCHITECTURE INTENDED FOR STAKEHOLDER MANAGEMENT, ANALYSIS AND OPTIMIZATION. Antoni Perez-Poch, Universitat Politecnica de Catalunya (UPC BarcelonaTech), Spain

IAC-16.D5.IP.4 (withdrawn)

A METHOD OF CREATING SPECIAL DOCUMENTS FOR ENTERPRISE KNOWLEDGE ACQUISITION

Junpeng Du, China Academy of Launch Vehicle Technology, China

D6. SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUES

Coordinator(s): Christophe Chavagnac, Airbus Defence and Space SAS, France; John Sloan, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States;

D6.1. Commercial Space Flight Safety and Emerging Issues

September 26 2016, 15:15 — Joya 1&2

Co-Chair(s): Christophe Chavagnac , Airbus Defence and Space SAS, France; John Sloan , Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States; Rapporteur(s): Gennaro Russo , Associazione Italiana di Aeronautica e Astronautica (AIDAA), Italy;

IAC-16.D6.1.1

CREATING A SAFETY CULTURE IN COMMERCIAL HUMAN SPACEFLIGHT

Therese Jones, , United States

IAC-16.D6.1.2

FRENCH RECOMMENDATIONS ON SUBORBITAL AIRCRAFT OPERATIONS

Patrice Desvallées, , France

IAC-16.D6.1.3 (withdrawn)

SAFETY INSPECTION PARADIGM SHIFT FROM AVIATION TO COMMERCIAL SPACE TRANSPORTATION
Schedir Neferteti Illoldi, Federal Aviation Administration Office of

AC-16.D6.1.4

THE ROLE OF COMMERCIAL SPACE TRANSPORTATION IN AN INTERNATIONAL MOON VILLAGE

Commercial Space Transportation (FAA/AST), United States

George Nield, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States

IAC-16.D6.1.5

THE IMPORTANCE OF A COMMERCIAL SPACE TRANSPORTATION ONLINE DIGITAL DOCUMENT COLLECTION & FRAMEWORK TO KEEP THE PUBLIC INFORMED AND CURRENT: WARTS & ALL. HTTP://CONTENTDM.NMSU.EDU.

Patricia Hynes, New Mexico Space Grant Consortium, United States IAC-16.D6.1.6

THE ELEMENTS OF A COMMERCIAL HUMAN SPACEFLIGHT SAFETY REPORTING SYSTEM

Ian Christensen, Secure World Foundation, United States

1





IAC-16.D6.1.7

THE URGENCY OF SPACE TRAFFIC MANAGEMENT IN SCHEDULED COMMERCIAL SPACE FLIGHT

Ridha Aditya Nugraha, Air Power Centre of Indonesia, Indonesia

IAC-16.D6.1.8

FROM AVIATION TOURISM TO SUBORBITAL SPACE TOURISM: THE INSURANCE ISSUE

Eva Yi-Wei Chang, University of Science & Technology, Taiwan,

D6.2-D2.9. Joint-Session Creating Safe **Transportation Systems for Sustainable Commercial Human Spaceflight**

September 30 2016, 13:30 — Salon Jalisco E2

Co-Chair(s): Markus Jäger , Airbus Defence & Space, Space Systems, Germany;

Rapporteur(s): Martin Sippel, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

IAC-16.D6.2-D2.9.1

DEVELOPMENT OF GLOBAL SAFETY SYNERGIES FOR SPACE EXPLORATION REGULATIONS, AND BRIDGING WITH AVIATION **STANDARDS**

Aline Decadi, HE Space Operations, France

IAC-16.D6.2-D2.9.2

FACILITATING SUSTAINABLE COMMERCIAL SPACE TRANSPORTATION THROUGH AN EFFICIENT INTEGRATION INTO AIR TRAFFIC MANAGEMENT

Sven Kaltenhaeuser, DLR, German Aerospace Center, Germany

IAC-16.D6.2-D2.9.3

PROSPECTS OF SUBORBITAL SPACE TOURISM FROM THE ROLLOUT OF SECOND SPACESHIPTWO AND DEVELOPMENT OF LYNX MARK II AND NEW SHEPARD

Eva Yi-Wei Chang, University of Science & Technology, Taiwan,

IAC-16.D6.2-D2.9.4

A UNIFIED SCHEME OF A COMMERCIAL SINGLE-TURN SPACE **TOURIST OPERATION**

Olga Voynova, FGUP TSNIIMASH, Russian Federation

IAC-16.D6.2-D2.9.5

THE ROCKETPLANE XS-1 MACH 12 SUBORBITAL SPACEPLANE - A CASE STUDY FOR HIGH SPEED POINT TO POINT TRANSPORTATION **SAFETY & OPERATIONAL ISSUES**

Charles Lauer, Rocketplane Global, Inc., United States

IAC-16.D6.2-D2.9.6

A CONCEPTUAL STUDY OF A SUBORBITAL PASSENGER FLIGHT VEHICLE WITH AIRCRAFT-LIKE CONFIGURATION Yi Li. Northwestern Polytechnical University. China

D6.3. Enabling safe commercial spaceflight: vehicles and spaceports

September 29 2016, 09:45 — Joya 1&2

Co-Chair(s): Christophe Chavagnac , Airbus Defence and Space SAS, France; John Sloan, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States; Rapporteur(s): Francesco Santoro , Altec S.p.A., Italy;

IAC-16.D6.3.1

ADVANCES IN ITALIAN SPACEPORTS IDENTIFICATION AS INFRASTRUCTURES FOR SUBORBITAL FLIGHT ACTIVITIES AND MISSION PROFILES

Francesco Santoro, Altec S.p.A., Italy

IAC-16.D6.3.2

CONTINUED DEVELOPMENT OF INTERNATIONAL URBAN SPACEPORTS

Charles Lauer, Rocketplane Global, Inc., United States

IAC-16.D6.3.3

ALOHA AND THE REGULATION OF COMMERCIAL SPACEPORTS Mclee Kerolle, International Institute for Air and Space Law, Leiden, **United States**

IAC-16.D6.3.4

THE RECENT STATUS OF SPACEPORTS AS THE ANCHOR FOR SPACE ACTIVITIES IN IAPAN

Misuzu Onuki, Space Frontier Foundation, Japan

IAC-16.D6.3.5

THE ROCKETPLANE XS-1 SUBORBITAL SATELLITE LAUNCH **SPACEPLANE** Charles Lauer, Rocketplane Global, Inc., United States

IAC-16.D6.3.6

AIR MEETS SPACE: SHAPING THE FUTURE OF COMMERCIAL SPACE

Ralph Tüllmann, DLR-GfR, Germany

IAC-16.D6.3.7

TRAFFIC COORDINATION & INTEGRATION Diane Howard, Embry-Riddle Astronautical University, United States

IAC-16.D6.3.8 (withdrawn)

BRIDGING THE GAP BETWEEN INDUSTRY AND ACADEMIA Jane Kinney, Commercial Spaceflight Federation, United States

E1. SPACE EDUCATION AND OUTREACH SYMPOSIUM

Coordinator(s): Lisa Antoniadis, Switzerland; Naomi Mathers, Advanced Instrumentation and Technology Centre (AITC), Australia;

E1.1. Ignition - Primary Space Education

September 30 2016, 13:30 — Salon de Eventos 4

Co-Chair(s): David Cook, University of Alabama in Huntsville, United States; Kaori Sasaki , Japan Aerospace Exploration Agency (JAXA), Japan:

Rapporteur(s): Ian Christie , Victorian Space Science Education Centre, Australia;

IAC-16.E1.1.1

ORBITAL MECHANICS AT THE ELEMENTARY SCHOOL-LEVEL; A REAL-LIFE EXPERIENCE.

Ted Avraham, Tel Aviv University, United States

IAC-16.E1.1.2 (withdrawn)

"MISSION X - TRAIN LIKE AN ASTRONAUT" IN ITALY: AN **EDUCATIONAL BEST PRACTICE**

Germana Galoforo, Italian Space Agency (ASI), Italy

A GROUND STATION IN THE CLASSROOM

Roberto Falconi, Ecuadorian Civilian Space Agency (EXA), Ecuador

THE FRUITS OF JAXA SPACE EDUCATION CENTER -INFLUENCES ON THE JAPANESE SOCIETY THROUGH FORMAL EDUCATION SUPPORT-Ayami Kojima, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-16.E1.1.5

FAKE MARS, REAL STEM Sophie Milam, , United States

IAC-16.E1.1.6

FUTURE MARTIAN SCIENTIST DESCRIBES A TERRAFORMING APPROACH

Audrey Douglas, , United States

IAC-16.E1.1.7

SPACE EDUCATION ACTIVITIES UNDER THE FRAMEWORK OF THE ASIA-PACIFIC REGIONAL SPACE AGENCY FORUM (APRSAF) Mika Hosobata, Japan Aerospace Exploration Agency (JAXA), Japan

SPACE EDUCATION AND OUTREACH: IMPACTS AND CHALLENGES IN

Manisha Dwa, Nepal Astronomical Society (NASO), Nepal

IAC-16.E1.1.9

USE OF OPTICAL TELESCOPE AND STELLARIUM SKY SIMULATION FOR ASTRONOMY EDUCATION AND OUTREACH IN NEPAL Mahesh Thakuri, Pokhara Astronomical Society, Nepal

E1.2. Lift-Off - Secondary Space Education

September 30 2016, 09:45 — Salon de Eventos 4

Co-Chair(s): Andrea Jaime, OHB System AG - Munich, Germany; Ian Christie, Victorian Space Science Education Centre, Australia:

Rapporteur(s): David Cook , University of Alabama in Huntsville,

TAKE SPACE TO GRASSROOTS AND IGNITE THE PASSION OF SPACE CAREER IN HIGH SCHOOL STUDENTS THROUGH SPACE EDUCATION

Kingsley Ukaegbu, Federal University of Technology Owerri, Nigeria

IAC-16.E1.2.2

BEYOND THE PIXEL - INTERDISCIPLINARY EARTH OBSERVATION **EDUCATION FROM THE ISS IN SCHOOLS**

Annette Ortwein, University of Bonn, Germany

IAC-16.E1.2.3

COMPUTER SCIENCE APPROACH TO LEARNING ASTROPHYSICS: STUDENT DEVELOPS OPEN SOURCE SOFTWARE FOR ASTRONOMY CURRICULUM

Peter Amidon, School for Independent Learners, United States

IAC-16.E1.2.4

ASTRO PI: RUNNING YOUR CODE ABOARD THE INTERNATIONAL SPACE STATION

David Honess, Raspberry Pi, United Kingdom

IAC-16.F1.2.5

NEW EDUCATIONAL TOOL FOR TEACHING HIGH-SCHOOL STUDENTS AT UNIVERSITY SCIENTIFIC-EDUCATIONAL CENTRES Vera Mayorova, Bauman Moscow State Technical University,

Russian Federation IAC-16.E1.2.6

SENTINEL-2: A NEW SOURCE OF EARTH OBSERVATION IMAGES AND AN OPPORTUNITY TO PROPOSE INNOVATIVE EDUCATIONAL TOOLS TO TEACHERS

Gil DENIS, Planete Sciences, France

SPACE AS A PEDAGOGY FOR CROSS CURRICULAR TEACHING Toshiaki Takemae, Japan Aerospace Exploration Agency (JAXA),

IAC-16.F1.2.8

INFLUENTIAL PEOPLE IN FEMALE STUDENTS DECISION TO SELECT ACADEMY/ACADEMIC FOCUS: AN INTERNATIONAL COMPARATIVE

OWUSU ANSAH BOAKYE. United States

IAC-16.E1.2.9 (withdrawn)

SPACE EDUCATION: THE ITALIAN SCHOOL-WORK ALTERNATION PROJECT - LEARNING BY DOING

Doreen Hagemeister, Italian Space Agency (ASI), Italy

Guada/ajara

IAC-16.F1.2.10

STANDARD FRAMEWORK TO INCREASE INTEREST AND PARTICIPATION OF INDIAN HIGH SCHOOL AND UNDERGRADUATE STUDENTS IN SPACE SCIENCES

Arnav Saikia, Manipal Institute of Technology, Manipal University,

IAC-16.F1.2.11

THE SOCIETAL EFFECTS OF PHYSIOLOGICAL CONSEQUENCES OF SPACEFLIGHT: HOW OUR VISION DEFINES US Eva Figueroa-Piercy, , United States

E1.3. On Track - Undergraduate Space Education

September 27 2016, 14:45 — Salon de Eventos 4

Co-Chair(s): Hubert Diez, CNES, France; Lisa Antoniadis,, Switzerland.

Rapporteur(s): Michal Kunes, Czech Space Office, Czech

IAC-16.E1.3.1

SPACE ENGINEERING EDUCATION PROGRAM OF THE MEXICAN SPACE AGENCY AS A BOOSTER OF SPECIALIZED PROFESSIONALS IN

Isai Fajardo, Mexican Space Agency, Mexico

IAC-16.E1.3.2

APPROPRIATE ASSESSMENT OUTCOMES FOR COMMERCIAL SPACE OPERATIONS UNDERGRADUATE DEGREE PROGRAMS Diane Howard, Embry-Riddle Astronautical University, United States

IAC-16.E1.3.3

HANDS-ON PRACTICES FOR SPACE SYSTEMS ENGINEERING EDUCATION USING PICO-SATELLITE TRAINING KIT HEPTA-SAT Masahiko Yamazaki, Nihon University, Japan

IAC-16.F1.3.4

HANDS-ON ACTIVITY ON SPACE SYSTEMS AT SAPIENZA - UNIVERSITY

Alice Pellegrino, Sapienza - University of Rome, Italy

IAC-16.E1.3.5 (withdrawn)

COLLABORATION MODELS IN UNDERGRADUATE EDUCATION FOR SATELLITE TECHNOLOGY IN VNSC

The Huynh Hoang, Vietnam National Satellite Center (VNSC),

IAC-16.E1.3.6

MULTIDISCIPLINARY SPACE EDUCATION IN A BLENDED LEARNING ENVIRONMENT: THE NEW SPACEFLIGHT MINOR AT DELFT LINIVERSITY OF TECHNOLOGY Kevin Cowan, Delft University of Technology (TU Delft), The

IAC-16.E1.3.7

Netherlands

THE AEROSPACE DEVELOPMENT AND RESEARCH GROUP OF THE NATIONAL UNIVERSITY OF COLOMBIA, GIDA-UN, A TOOL FOR AEROSPACE EDUCATION IN COLOMBIA.

Oscar Ivan Ojeda Ramirez, Universidad Nacional de Colombia,

IAC-16.E1.3.8

APPLICATION OF THE EDUCATIONAL PROGRAM FOR THE SATELLITE **GROUND STATION OPERATION**

Masaaki Komatsu, Kushiro National College of Technology, Japan



VELCOME

GES

ORMATION

PROGRAMME

INDEX

IAC-16.E1.3.9 (withdrawn)

SPACESHIP TEC 21: AN AEROSPACE PROGRAM BASED ON ROCKETS DESIGNED BY UNDERGRADUATE AND GRADUATE STUDENTS AND RELATED OUTREACH ACTIVITIES FOR ELEMENTARY AND MIDDLE SCHOOL STUDENTS

LUIS PONCE, TECNOLOGICO DE MONTERREY, Mexico

IAC-16.E1.3.10

A UNIVERSITY NANO SATELLITE FOR STUDENT INTERNATIONAL COOPERATION THROUGH HANDS-ON EDUCATION Lorenzo Arena, University of Rome "La Sapienza", Italy

IAC-16.F1.3.11

SPACE CLUB, FEDERAL UNIVERSITY OF TECHNOLOGY AKURE, ONDO STATE NIGERIA

Oniosun Temidayo Isaiah, Federal University of Technology Akure, Ondo state, Nigeria, Nigeria

IAC-16.E1.3.12

MATRIOCHKA SPACE PROJECT E1S3
Bertrand Bocquet, ESTACA, France

IAC-16.E1.3.13 (withdrawn)

STUDENT ROCKETS AT ANDØYA SPACE CENTER

Jøran Grande, NAROM - Norwegian Centre for Space-Related

Education, Norway

E1.4. In Orbit - Postgraduate Space Education

September 28 2016, 09:45 — Salon de Eventos 4

Co-Chair(s): Emmanuel Zenou , SUPAERO- Ecole Nationale Supérieure de l'Aéronautique et de l'Espace, France; Franco Bernelli-Zazzera , Politecnico di Milano, Italy; Rapporteur(s): David B. Spencer , The Pennsylvania State University, United States; Thierry Dana-Picard , Jerusalem College of Technology (JCT), Israel;

IAC-16.E1.4.1

DTUSAT THE IDEAL CDIO PROJECT Rene Fleron, DTU Space, Denmark

IAC-16.E1.4.2

ESA ACADEMY – THE EDUCATION PROGRAMME FOR UNIVERSITY STUDENTS

Hugo Marée, ESA/ESTEC, The Netherlands

IAC-16.E1.4.3

INCORPORATING HUMAN SPACE EXPLORATION IN TO INDUSTRIAL DESIGN SCHOOL CURRICULUM

Michal Kracik, Academy of Fine Arts in Krakow, Faculty of Industrial Design, Poland

IAC-16.E1.4.4 (withdrawn)

LESSONS LEARNED IN THE CREATION OF A MULTI-DISCIPLINARY SPACE STUDIES PROGRAM IN THE UAE.

Carlos Niederstrasser, Orbital ATK, Inc., United States

IAC-16.E1.4.5

MARS TREATYMAKING WORKSHOP RESULTS AND INSIGHTS FROM ISU SSP16

Miranda Bradshaw, International Space University (ISU), United Kingdom

IAC-16.E1.4.6

MICRO-SATELLITE TECHNOLOGY EDUCATION AND PRACTICE IN RCSSTEAP, CHINA

Xinsheng Wang, Beihang University, China

IAC-16.E1.4.7

ROBOTIC PLANETARY EXPLORATION ANALOGUE MISSIONS AT THE INTERNATIONAL SPACE UNIVERSITY, LATEST RESULTS Ewan Reid, Mission Control Space Services Inc., Canada

IAC-16.E1.4.8

SATELLITE-BASED EXPERIMENTS FOR A GRADUATE PROGRAM IN TELECOMMUNICATIONS ENGINEERING TECHNOLOGY SNEHA VELAYUDHAN, Rochester Institute Of Technology, United States

IAC-16.E1.4.9

SEEDS, THE INTERNATIONAL POST-GRADUATE MASTER PROGRAM FOR SPACE EXPLORATION

Nicole Viola, Politecnico di Torino, Italy

IAC-16.E1.4.10

SOUTHERN HEMISPHERE SPACE STUDIES PROGRAM – STRENGTHENING SPACE SKILLS IN THE GLOBAL SOUTH Michael Davis, Space Industry Association of Australia, Australia

AC-16.E1.4.11

SPACE TECHNOLOGY EDUCATION & TRAINING EXCHANGE PLATFORM OPEN TO THE WORLD

Zhao Sheng, China Academy of Space Technology (CAST), China

IAC-16.E1.4.12

THE INTERNATIONAL SPACE EDUCATION ON POST-GRADUATE LEVEL IN BEIHANG UNIVERSITY

YI Xiao Su, Beihang University (BUAA), China

E1.5. Enabling the Future - Developing the Space Workforce

September 28 2016, 14:45 — Salon de Eventos 4

Co-Chair(s): Amalio Monzon , Airbus Group, United Kingdom; Olga Zhdanovich , European Space Agency (ESA), The Netherlands;

Rapporteur(s): Bettina Boehm , European Space Agency (ESA), France; Edward J. Hoffman , National Aeronautics and Space Administration (NASA), United States;

IAC-16.E1.5.1 (withdrawn)

ASTRONAUTS4HIRE: ENABLING THE NEXT GENERATION OF SCIENTIST-ASTRONAUTS

Shawna Pandya, University of Alberta, Canada

IAC-16.E1.5.2

A VIRTUAL CAREER FAIR FOR SPACE TO ATTRACT MORE TALENTS AND HIRE THE BEST CANDIDATES. RETEVICON SUMMIT: A CASE STUDY

Bernd Michael Weiss, Alpha Initiatives / International Space University (ISU), Germany

-16.E1.5.3

FIVE YEARS OF IAF IPMC YOUNG PROFESSIONALS WORKSHOP Birgit Hartman, European Space Agency (ESA), France

IAC-16.E1.5.4

OIL AND GAS INDUSTRY VS. SPACE INDUSTRY UNIVERSITY RECRUITMENT

Becca Browder, , United States

IAC-16.E1.5.5

IMPORTANCE AND CHALLENGES OF HANDS-ON-EXPERIENCE IN ASTRONAUTICAL EDUCATION

Christian Bach, Dresden University of Technology (DUT) / Technische Universität Dresden, Germany

AC-16.F1.5.6

SPACEBOARD—EMPOWERING SPACE ACADEMIA Maxime Sixdeniers, SpaceBoard, Germany

IAC-16.E1.5.7

DEVELOPING THE QUALITY OF SAPCE WORKFORCE FROM CHINA SPACE TEAM MATURITY ASSESMENT PERSPECTIVE BASED ON FACTOR ANALYSIS

Xiaoyan Miao, China Aerospace System Science and Engineering Academy, China

IAC-16.E1.5.8

SPACE OUTREACH ACTIVITIES IN MIDDLE EAST, ONE STEP FORWARD Behnoosh Meskoob, Istanbul Technical University, Turkey

IAC-16.E1.5.9

THE 20-MINUTE WIND TUNNEL: DESIGNING EASILY REPLICABLE STEM TOOLS IN ORDER TO GROW THE AEROSPACE WORKFORCE Christina Carmen, University of Alabama in Huntsville, United States

IAC-16.E1.5.10

SPACE GENERATION REGIONAL WORKSHOPS – ENCOURAGING REGIONAL AND NATIONAL DISCUSSIONS

Minoo Rathnasabapathy, Space Generation Advisory Council (SGAC), Austria

IAC-16.E1.5.11

SPACE SYSTEMS DESIGN AND MANUFACTURING COMPETITIONS, FROM TRAINING TO NEW SOLUTION TO INDUSTRY PROBLEMS Sajjad Ghazanfarinia, Satellite Research Institute, Iran

IAC-16.E1.5.12

TOWARDS CREATING A SUSTAINABLE WORKFORCE FOR ARCSSTE-E: STRATEGIES, CAPACITY AND CAPABILITY BUILDING FOR ANGLOPHONE COUNTRIES

Lami Ali-Fadiora, African Regional Centre for Space Science and Technology Education in English, Nigeria

IAC-16.E1.5.13

POLISH SPACE PROFESSIONALS ASSOCIATION - THE BOTTOM-UP CREATED ORGANISATION FOR SUPPORTING THE DEVELOPMENT OF POLISH SPACE SECTOR.

Tadeusz Kocman, OHB System AG, Germany

IAC-16.E1.5.14

LABORATORY FOR SPACE INSTRUMENTATION LINX: A BROAD STRATEGY FOR THE BUILD-UP OF MEXICAN HUMAN RESOURCES AND INFRASTRUCTURE IN SPACE TECHNOLOGY USING ASTROPARTICLE PHYSICS AS A MOTIVATING FORCE Gustavo Medina Tanco, UNAM, Mexico

IAC-16.E1.5.15

TELEMETRY AND DATA ACQUISITION PLATFORM FOR SOUNDING ROCKET LINKED TO A GROUND STATION

Mariano Jimenez Brenes, Central American Association for Aeronautics and Space (ACAE), Costa Rica

E1.6. Calling Planet Earth - Space Outreach to the General Public

September 29 2016, 09:45 — Salon de Eventos 4

Co-Chair(s): Kerrie Dougherty , , Australia; Thierry Dana-Picard , Jerusalem College of Technology (JCT), Israel; Rapporteur(s): Frank Friedlaender , Lockheed Martin Space Systems Company, United States;

IAC-16.E1.6.1

THE LIGHTSAIL STORY, PUBLIC OUTREACH STRATEGIES & RESULTS Bill Nye, The Planetary Society, United States

IAC-16.E1.6.2

ELECTRONIC PUBLISHING AND SOCIAL NETWORKS TO REACH OUT DISTANT AUDIENCES

Mario Arreola, Agencia Espacial Mexicana (AEM), Mexico

IAC-16.E1.6.3

ASTROBIOLOGY AS AN EDUCATIONAL FRAMEWORK FOR THE GENERAL PUBLIC

Julie Novakova, Charles University, Czech Republic

IAC-16.E1.6.4

INTRODUCTION AND PLANNING OF "OPENSLSAT" FOR EDUCATION AND OUTREACH IN JAPAN

Masahiro Nohmi. Shizuoka University. Japan

IAC-16.E1.6.5

REACHING THE OTHER 65%: ENLISTING THE SCIENCE, TECHNOLOGY, ENGINEERING, ARTS AND MATH (STEAM) STUDENTS FOR SPACE OUTREACH

C. Hans Culton, Global Student Commercial Space Society (GSCSS), Finland

IAC-16.E1.6.6

OUTREACH ACTIVITIES IN THE ASTEROID MISSIONS OF JAPAN HAYABUSA AND HAYABUSA2

Makoto Yoshikawa, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-16.E1.6.7 (withdrawn)

"ADOPT AN ASTRONAUT" CAMPAIGN INCREASING INTERNATIONAL PARTNERSHIPS AND PUBLIC OUTREACH WHILE STIMULATING EMERGING SPACE PROGRAMS AND STEM EDUCATION Pierre Bertrand, Massachusetts Institute of Technology (MIT), United States

IAC-16.E1.6.8 (withdrawn)

IMPORTANCE OF OUTREACH ACTIVITIES FOR SPACE DEBRIS ISSUES Susumu Yoshitomi, Japan Space Forum, Japan

IAC-16.E1.6.9 (withdrawn)

SPACE OUTREACH IN GHANA: DEVELOPMENTAL PLANS FOR SPACE SCIENCE EDUCATION

Andoh Michael Afful, Royal Melbourne Institute of Technology (RMIT), Australia

IAC-16.E1.6.10

WHY SPACE: REACHING OUT TO THE YOUNG PEOPLE AND THE PUBLIC

Funmilayo Erinfolami, African Regional Center for Space Science and Technology Education in English (ARCSSTE-E), Nigeria

E1.7. New Worlds - Innovative Space Education and Outreach

September 29 2016, 14:45 — Salon de Eventos 4

Co-Chair(s): Olga Zhdanovich , European Space Agency (ESA), The Netherlands; Vera Mayorova , Bauman Moscow State Technical University, Russian Federation; Rapporteur(s): Carol Christian , STScI, United States;

IAC-16.E1.7.1

PARENTAL AWARENESS AND CONFIDENCE

IAC-16.E1.7.2

A NEW TEACHING METHOD: MASSIVE OPEN ONLINE COURSE (MOOC) APPLIED TO SPACE EDUCATION
Lisa Antoniadis... Switzerland

Laura Rodriguez Amaya, Texas State University, United States

IAC-16.E1.7.3

FOLK SPACE – USING MUSIC TO ADVOCATE FOR SPACE TO THE VOTING PUBLIC

L.K. Tamanini, , United States
IAC-16.E1.7.4 (withdrawn)

PROMOTING SPACE CULTURE AMONG POPULATION FROM DISADVANTAGEOUS BACKGROUNDS: THE EXPERIENCE OF EXPOINGENIO - THE SPACE IN CHIAPAS, MEXICO, 2015.

Raul Mendoza Azpiri, , Mexico

IAC-16.E1.7.5

SPACE CAMP PROJECT IN BORDEAUX

Jean-Marc Salotti, Laboratoire de l'Intégration du Matériau au Système. France

C-16.E1.7.6

BRAND IDENTITY IN SOCIAL MEDIA FOR SMALL SPACE PROJECTS Julia Marek, Wroclaw University of Technology, Poland

130

159

SOCIAL EVE & TECHNI







IAC-16.E1.7.7

ESA INTOUCH - CONCEPTUAL MOBILE APPLICATION DEVELOPED THROUGH CROWD SOURCING TO INVOLVE THE GENERAL PUBLIC AND FOSTER AN INTEREST IN EUROPEAN SPACE ACTIVITIES AND THEIR BENEFITS.

Daniel Schultz, ESA european space agency, The Netherlands

IAC-16.E1.7.8 (withdrawn)

CREATING A VIRTUAL MOON COLONY BY OPEN-SOURCE COLLABORATION

Kim Holder, , Mexico

IAC-16.E1.7.9

INNOVATIVE COLLABORATIVE EDUCATIONAL PROGRAMS FOR SPACE SYSTEMS ENGINEERS

Vera Mayorova, Bauman Moscow State Technical University, Russian Federation

IAC-16.E1.7.10

LASERS, PENGUINS, AND POLAR BEARS: NOVEL OUTREACH AND EDUCATION APPROACHES FOR NASA'S ICESAT-2 MISSION Valerie Anne Casasanto, NASA Goddard/University of Maryland, Baltimore County (UMBC), United States

IAC-16.E1.7.11

THE SPACE GREETING CARDS MISSION Lan Chen, Print 365 Network Technology Co., Ltd, China

E1.8. Open Space: Participatory Space **Education and Outreach**

September 26 2016, 15:15 — Salon de Eventos 4

Co-Chair(s): Kerrie Dougherty , , Australia; Valerie Anne Casasanto , NASA Goddard/University of Maryland, Baltimore County (UMBC), United States;

Rapporteur(s): Andrea Jaime, OHB System AG - Munich,

IAC-16.E1.8.1

KEYNOTE: MALINA MEDAL RECIPIENT KEYNOTE ADDRESS Benedicte Escudier, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France

IAC-16.E1.8.2 (withdrawn)

PUBLIC OUTREACH WITH NASA LUNAR AND PLANETARY MAPPING

Brian Day, NASA Ames Research Center, United States

IAC-16.E1.8.3 #COSMOSMHACK

Giuseppina Pulcrano, Italian Space Agency (ASI), Italy

IAC-16.E1.8.4

SPACEUP GLIC MUNICH: INNOVATION IN SPACE Andrea Jaime-Albalat, OHB System AG - Munich, Germany IAC-16.E1.8.5 (withdrawn)

THUMBSAT AND THUMBNET - TINY SATELLITES, HUGE RESULTS Shaun Whitehead, Scoutek Ltd, United Kingdom

IAC-16.E1.8.6

BEST PRACTICES OF PITCH COMPETITIONS, DIFFERENCES FOR THE SPACE INDUSTRY, AND IMPLICATIONS FOR SPACE COMMERCIALIZATION STARTUPS

Bernd Michael Weiss, Alpha Initiatives / International Space University (ISU), Germany

IAC-16.E1.8.7 (withdrawn)

GEOGRAPHIC INFORMATION TECHNOLOGIES AS AN OUTREACH ACTIVITY IN GEO-SCIENTIFIC EDUCATION Shimrit Maman. . Israel

IAC-16.E1.8.7

ONE DAY AEROSPACE JOURNALIST: JAXA SPACE EDUCATION PROGRAM FOR SECONDARY INFORMAL EDUCATION KEIKO MIYATA, Japan Aerospace Exploration Agency (JAXA), Japan

E1.9. Space Culture

September 27 2016, 09:45 — Salon de Eventos 4

Co-Chair(s): Lisa Antoniadis, , Switzerland; Nelly Ben Hayoun, Royal Holloway, University of London, United Kingdom; Rapporteur(s): Nahum Mantra, Laboratorio Arte Alameda, Mexico:

IAC-16.E1.9.1

HOMO LUDENS: AN ANALYSIS OF PLAY AND PERFORMANCE DURING SPACEFLIGHT TO INSPIRE THE CULTURAL SECTOR TO DESIGN FOR NEW MODES OF SPACE AND SPATIALITY. Sarah Jane Pell, ESA Topical Team Arts & Science, Australia

SPACE WITHOUT ROCKETS: CULTURAL AND HUMAN FACTORS APPROACHES TO SUSTAINABLE SPACE TRAVEL. Rob La Frenais, Bournemouth University, United Kingdom

IAC-16.E1.9.3

REUNION ISLAND FROM SPACE: THE MAKING OF A GREAT BOOK

Guy Pignolet, Science Sainte Rose, La Reunion

IAC-16.E1.9.4

WHERE DO COSMONAUTS COME FROM? Ruth McAvinia, , Ireland

IAC-16.E1.9.5 (withdrawn)

ADDRESSING RELIGIOUS OPPOSITION TO HUMAN SPACE EXPLORATION.

Michael Waltemathe, Ruhr-University Bochum, Germany

IAC-16.E1.9.6

CAN A NEW ARCHITECTURAL LANGUAGE BE USED TO ELICIT AN EMOTIONAL AND CULTURAL REACTION TOWARDS SPACE **EXPLORATION AND CELESTIAL MINING?**

Tanya Eskander, Royal College of Art, United Kingdom

IAC-16.E1.9.7 (withdrawn)

AN UNEXPECTED INREACH: AN ONSITE ART INTERVENTION WITH THE CLUSTER MISSION FLIGHT CONTROL TEAM AT THE EUROPEAN SPACE OPERATIONS CENTRE

Sascha Mikloweit, , Germany

IAC-16.E1.9.8

COSMUSEUM PROJECT: MEMORIES & SOUVENIRS FROM PLANET

Ioannis MICHALOUDIS, Charles Darwin University, Australia

IAC-16.E1.9.9

WORLD SPACE WEEK CELEBRATION IN AIRBUS DEFENCE AND SPACE : REVIEW AND LESSONS LEARNT

Max Grimard, Airbus Defence and Space SAS, France

IAC-16.E1.9.10

MEET THE LOM - A NANOSATELLITE USING SCIENCE FICTION TO INTRODUCE SCIENCE FACTS TO AUDIENCES Stefan G. Bucher, , United States

IAC-16.F1.9.11

HIGHLIGHTING WOMEN IN SPACE ACTIVITIES LOURDES GARCIA HERNANDEZ, Mexican Space Agency, Mexico

IAC-16.E1.9.12 (withdrawn)

THE VITAE PROJECT - AN INTERACTIVE, LIVING LUNAR SCULPTURE Shaun Whitehead, Scoutek Ltd, United Kingdom

ESAT MX. SCHOOL OF SATELLITES. SOCIAL IMPACT OF LEARNING TO BUILD SATELLITES IN A DEVELOPING COUNTRY. Juan José Díaz Infante, , Mexico

IAC-16.E1.9.14

THE NEED FOR A CATHARSIS INTO THE SPACE PROGRAMME. UTILIZING THE GREEK TRAGEDY'S COERSIVE SYSTEMS INTO SPACE EDUCATION AND OUTREACH.

Nelly Ben Hayoun, Royal Holloway, University of London, United

E1.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Chris Welch , International Space University (ISU), France; Lisa Antoniadis, , Switzerland;

IAC-16.E1.IP.1

STRATEGIES TO PROMOTE WOMEN PARTICIPATION IN THE SPACE COMMUNITY!

Anushree Soni, International Space University (ISU), Canada

IAC-16.E1.IP.2

STEM EDUCATION IN ROMANIA VIA SPACE-THEMED HANDS-ON CONTESTS FOR SECONDARY SCHOOL STUDENTS Virgiliu Pop, Romanian Space Agency (ROSA), Romania

IAC-16.E1.IP.3 (withdrawn)

BUILDING FOUNDATIONS FOR INTERNATIONAL COLLABORATION THROUGH EDUCATIONAL OUTREACH INITIATIVES Juan Lopez, NASA, United States

IAC-16.E1.IP.4

SPACE EDUCATIONAL OUTREACH FOR THE AFRICAN CHILD Tenda Madima, Parliament of the Republic of South Africa, South

IAC-16.E1.IP.5 (withdrawn)

THE SPACE GEODESY CENTER OF MATERA OF THE ITALIAN SPACE AGENCY AS A SPACE EDUCATION CENTER Doreen Hagemeister, Italian Space Agency (ASI), Italy

IAC-16.E1.IP.6

THE INTEGRATIVE DESIGN APPROACH TO LUNAR SETTLEMENT Tomova Mori. . United States

IAC-16.E1.IP.7

PARABOLIC FLIGHT MICROGRAVITY EDUCATIONAL ACTIVITIES IN BARCELONA: THE "BARCELONA ZERO-G CHALLENGE". Antoni Perez-Poch, Universitat Politecnica de Catalunya (UPC BarcelonaTech), Spain

IAC-16.E1.IP.8 (withdrawn)

ESAT, A HANDS-ON TRAINING SATELLITE

Ignacio Barrios, E-USOC, Universidad Politécnica de Madrid, Spain

COSTA RICA AEROSPACE CAMP 2015: EXPERIENCES AND RESULTS Leonora de Lemos, Universidad de Costa Rica, Costa Rica

IAC-16.E1.IP.10

INTERNATIONAL COSMONAUTIC DAY'S ADVANTAGES FOR PUBLIC ENGAGEMENT IN SPACE

Tatiana Tischenko, ROSCOSMOS, Russian Federation

IAC-16.E1.IP.11

YURI'S NIGHT RETROSPECTIVE, THE FIRST 15 YEARS OF THE WORLD SPACE PARTY

Alan Steinberg, Rice University, United States

IAC-16.E1.IP.12

THE OUTREACH ACTIVITY ABOUT SPACE DEVELOPMENT USING FREE MAGAZINE

Ayano Kido, Tokyo Metropolitan University, Japan

IAC-16.F1.IP.13

SPACE SUITS AS A HANDS ON EDUCATIONAL OUTREACH ACTIVITY -LESSONS FROM THE 2015 PROJECT OF THE ISRAEL SPACE AGENCY AND THE HEINLEIN PRIZE TRUST

Tal Inbar, The Fisher Institute for Air and Space Strategic Studies, Israel

IAC-16.E1.IP.14

PHOS PROJECT: LESSON LEARNED FROM EXPERIMENTING A PULSATING HEAT PIPE ON BOARD A SOUNDING ROCKET (REXUS18) AND REFURBISHMENT STRATEGIES Gian Marco Guidi, , Italy

IAC-16.E1.IP.15 (withdrawn)

IGNITING MINDS THROUGH ROCKET SCIENCE Gagan Agrawal, , France

IAC-16.E1.IP.16 (withdrawn)

ENABLING THE FUTURE OF "SPACE" IN NIGERIA OMONZOKPIA EJALE, NASRDA, Nigeria

IAC-16.E1.IP.17 (withdrawn)

PROMOTION OF SPACE SCIENCES AT UNDERGRADUATE LEVEL THROUGH THE LESSONS LEARNT FROM PARIKSHIT STUDENT SATELLITE MODEL

Arnav Saikia, Manipal Institute of Technology, Manipal University,

IAC-16.E1.IP.18

THE DEATH STAR CHALLENGE: AN AMBITIOUS AND MOTIVATING ENGINEERING PROJECT TO PROMOTE ASTRONAUTICS AND TRANSFORM SOCIETY'S VISION ABOUT SPACE RESEARCH Antoni Perez-Poch, Universitat Politecnica de Catalunya (UPC BarcelonaTech), Spain

IAC-16.E1.IP.19

CHALLENGES IN UNDERGRADUATE EDUCATION FOR SPACE **ENGINEERING**

Ugur Guven, , United States

IAC-16.E1.IP.20

NOTING CLOUDS TO LEARN PHYSICS. Martin Hernandez Sustaita, , Mexico

IAC-16.E1.IP.21 (withdrawn) SPACE EDUCATION AND OUTREACH IN GHANA

EMMANUEL PROVEN- ADZRI, Ghana Space Science and Technology

IAC-16.E1.IP.22

INTERACTIVE STRATEGIES TO INCREASE PUBLIC ENGAGEMENT IN

Bora Aliaj, International Space University (ISU), Albania

IAC-16.E1.IP.23 (withdrawn)

ADVANCED ROBOTICS AND AUTOMATION-HUMAN AND INTEGRATED ROBOTIC/UNMANNED SYSTEMS. A NEW HYBRID SPACE EDUCATION. SANDYA RAO, , India

IAC-16.E1.IP.24 (withdrawn)

TEAM SPACEIL - LANDING THE 1ST ISRAELI SPACECRAFT ON THE MOON

Ayelet Weizman, SpaceIL, Israel

IAC-16.E1.IP.25 (withdrawn)

RUSSIAN KOSMOS: IMAGINARY SPACE FLIGHTS Olesya Turkina, , Russian Federation

IAC-16.E1.IP.26 (withdrawn)

ENGAGING THE PUBLIC IN SPACE BY INTEGRATING SCIENCE AND ENGINEERING WITH THE ARTS Jancy McPhee, SciArt Exchange, United States

IAC-16.E1.IP.27 (withdrawn)

SPACE SCHOOL: JAXA SPACE EDUCATION PROGRAM FOR SECONDARY EDUCATION KEIKO MIYATA, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-16.E1.IP.28

ARISS AS AN EFFECTIVE TOOL TO ENGAGE MIDDLE SCHOOL STUDENTS

Kimberly Dutour, University of Alabama in Huntsville, United States







IAC-16.E1.IP.29

15 YEARS OF ARCSSTE-E'S POSTGRADUATE DIPLOMA PROGRAMME: ACHIEVEMENTS, CHALLENGES AND FUTURE LOOKS. Oladosu Olakunle, African Regional Center for Space Science and Technology Education in English (ARCSSTE-E), Nigeria

IAC-16.E1.IP.30

STUDY ON THE OPTIMAL CANDY AS FUEL FOR HYBRID ROCKETS AND LAUNCHING EXPERIMENT OF CANDY HYBRID ROCKET FOR SPACE EDUCATION

Yutaka Wada, Chiba Institute of Technology, Japan

IAC-16.E1.IP.31

THE TRAINING PROGRAM OF MULTIDISCIPLINARY DESIGN OPTIMIZATION FOR COLLABORATIVE SPACECRAFT DESIGN Rong Sun, Beijing Institute of Astronautical Systems Engineering,

IAC-16.E1.IP.32 (withdrawn)

USING PROJECT BASED COURSES AS A "FIRST CONTACT" BETWEEN STUDENTS AND SPACE TECHNOLOGY

Roger Birkeland, Norwegian University of Science and Technology,

IAC-16.E1.IP.33

SPACE PHOTOGRAPHY ON THE USE OF PHOTOGRAPHY AS POPULARIZER OF SCIENCE. BY CINTIA DURÁN Cintia Durán, , Mexico

IAC-16.E1.IP.34

QUANTUM COMPUTING ACADEMY TRAINS FUTURE RESEARCHERS TO OPTIMIZE APPLICATIONS FOR SPACEFLIGHT Monica Ebert, School for Independent Learners, United States

IAC-16.E1.IP.35

THE SPACE ARCHITECTURE APPROACH: TEACHING TO DESIGN AND PLAN FOR SPACE HABITATION

Olga Bannova, University of Houston, United States

IAC-16.E1.IP.36 (withdrawn)

COSMIC COLLEGE: JAXA INFORMAL SPACE EDUCATION PROGRAM Tomoko Ohkubo, Japan Aerospace Exploration Agency (JAXA), Japan

E2. 45th STUDENT CONFERENCE

Coordinator(s): Marco Schmidt, Bochum University of Applied Sciences, Germany; Stephen Brock, American Institute of Aeronautics and Astronautics (AIAA), United States:

E2.1. Student Conference – Part 1

September 27 2016, 14:45 — Joya 1&2

Co-Chair(s): Benedicte Escudier , Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France; Franco Bernelli-Zazzera, Politecnico di Milano, Italy;

Rapporteur(s): Emmanuel Zenou . SUPAERO- Ecole Nationale Supérieure de l'Aéronautique et de l'Espace, France; Jeong-Won Lee , Korea Aerospace Research Institute (KARI), Korea, Republic

ANALYSIS OF SPECTRAL DATA VIR-DAWN ON ASTEROID (4) VESTA: FROM LABORATORY TO REMOTE SENSING.

Melissa Mirino, Universita Roma 3, Italy

IAC-16.E2.1.2

GIS-BASED MAPPING AND STATISTICAL ANALYSIS OF ATMOSPHERIC POLLUTION IN PORT HARCOURT, SOUTHERN NIGERIA Kingsley Ukaegbu, Federal University of Technology Owerri, Nigeria

IAC-16.E2.1.3 (withdrawn)

OBSERVATORIES OF SOLAR CORONA AND ACTIVE REGIONS (OSCAR) Liam O'Halloran, University College Dublin / NASA Ames Research Center, Ireland

IAC-16.F2.1.4

DESIGN OF A 3U CUBESAT FOR METEOR DETECTION AND CHARACTERIZATION Manuel Ortega, Université Pierre et Marie Curie, France

CHARACTERIZATION OF IONOSPHERIC TOTAL ELECTRON CONTENT ON RADIO FREQUENCY IN GHANA EQUATORIAL REGION UNDER THE SKA PROJECT SITE

Linda Abakah Sikafo, Ghana Space Science and Technology Institute,

IAC-16.E2.1.6 (withdrawn)

SMALL SATELLITE NAVIGATION, RENDEZVOUS, AND DOCKING SYSTEM: CONCEPT DESIGN AND OPTIMIZATION Eryn Culton, US DoD, United States

IAC-16.F2.1.7

FEASIBILITY OF TIME TRAVELLING Shiny Praveen Thote, SRM University Chennai, India

ELECTRIC PROPULSION APPROACH FOR TRANSPORTATION OF TELECOM SATELLITES FROM GTO TO GEO. Matteo Aquilano, SES Engineering, Luxemburg

E2.2. Student Conference – Part 2

September 28 2016, 09:45 — Joya 1&2

Co-Chair(s): Jeong-Won Lee , Korea Aerospace Research Institute (KARI), Korea, Republic of; Marco Schmidt, Bochum University of Applied Sciences, Germany;

Rapporteur(s): Benedicte Escudier , Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France; Carlos Duarte, Agencia Espacial Mexicana (AEM), Mexico:

IAC-16.E2.2.1

DESIGN AND DEVELOPMENT OF A COMPOSITE SOLID ROCKET PROPELLANT

Hamed Gamal, Cairo University, Egypt

ENGINEERING ARTIFICIAL BIOSPHERES FOR LONG-DURATION EXPLORATION IN SPACE: DEVELOPMENT OF PLANT MODULES FOR LIFE SUPPORT STRUCTURES

Brittany Zimmerman, Department of Space Studies, University of North Dakota, United States

IAC-16.E2.2.3

EVALUATION OF FOUR MOVEMENT MECHANISMS FOR A MICROSCOPY-BASED MONITORING SYSTEM OF AN ELYTRA SAMPLE IN MICROGRAVITY CONDITIONS

Jennifer Solis Ocampo, Central American Association for Aeronautics and Space (ACAE), United States

IAC-16.E2.2.4

PREDATOR (PRESSURE DEPENDENCY ON ALTITUDE VERIFICATOR) EXPERIMENT

Jan Lukacevic, Czech Technical University In Prague, Czech Republic

IAC-16.E2.2.5

MANUFACTURING OF THE PROTOTYPE INFLATABLE CONICAL ANTENNA - REXUS DEPLOYMENT (PICARD) Thomas Lund, University of Strathclyde, United Kingdom

IAC-16.E2.2.6

COMPARISON OF THE EMISSIONS OF CURRENT EXPENDABLE LAUNCH VEHICLES AND FUTURE SPACEPLANES Robert Garner, University of Strathclyde, United Kingdom

IAC-16.E2.2.7

DEVELOPMENT OF A TOOL FOR MULTI-LAYER INSULATION MANIPULATION AND HANDLING Martin Dullweber, University of Bremen, Germany

IAC-16.E2.2.8 (withdrawn)

SMALL SATELLITE NAVIGATION, RENDEZVOUS, AND DOCKING SYSTEM: CONCEPT DESIGN AND OPTIMIZATION Eryn Culton, US DoD, United States

IAC-16.E2.2.9

DESIGN AND TEST OF A 10N HYDROGEN-PEROXIDE MONOPROPELLANT THRUSTER

Christopher T. Lyne, Vanderbilt University, United States

IAC-16.E2.2.10

STUDENT CONCEPT OF A MULTI-U NANOSATELLITE FOR EARTH-TO-MOON TRANSFER AND LUNAR OPERATION OF A SMALL SCIENTIFIC

Eduardo Cucchetti, ISAE-Supaero University of Toulouse, France

IAC-16.E2.2.11

AUTONOMOUS AQUAPONIC SYSTEM TO RECREATE AN ECOSYSTEM FOR MARS SETTLERS

E2.3-GTS.4. Student Team Competition

September 27 2016, 09:45 — Joya 1&2

Space Administration (NASA), United States; Naomi Mathers, Advanced Instrumentation and Technology Centre (AITC),

Germany; Michelle Mendes, World Space Week Association, United States;

IAC-16.E2.3-GTS.4.1

CARRYING TWO FEMTOSATS

IAC-16.E2.3-GTS.4.2 (withdrawn)

PALLAS: A PORTABLE ASTEROID LIFT AND LOCK AGGREGATE SYSTEM Charlotte Kiang, Cornell University, United States

IAC-16.E2.3-GTS.4.3 (withdrawn)

Daniele Trimarchi, . Italy

IAC-16.E2.3-GTS.4.4

AN EXPLORING ROVER FOR NASA

Juan Carlos Mariscal, Facultad de Ingeniería-UNAM, Mexico

IAC-16.E2.3-GTS.4.5 (withdrawn)

THERMAL SYSTEM DESIGN AND ORBITAL ANALYSIS OF SWAYAM: AN OVERVIEW OF THE DESIGN PRINCIPLES AND TECHNICAL CONSIDERATIONS

Tanvi Katke, College of Engineering, Pune, India

DOUBLE-LOOP DUAL-BAND VHF/UHF MONOPOLE ANTENNA FOR ALEKSANDR NANOSATELLITES

IAC-16.E2.3-GTS.4.7

NEXT EXPLORATION UNIVERSAL STATION (NEXUS)

IAC-16.E2.3-GTS.4.8

FEASIBILITY STUDY FOR AN AUTONOMOUS EARTH-TO-MOON TRANSFER AND LUNAR OPERATIONS OF A 27U NANOSATELLITE Edoardo Cucchetti, Student, France

IAC-16.E2.3-GTS.4.9

ALTERNATIVE APPROACHES FOR REMOTE SENSING: A STRATOSPHERIC BALLOON EDUCATIONAL EXPERIMENT TO ANALYSE PHOTOSYNTHETIC ACTIVITY OF PLANTS

Geiner Gustavo Fonseca Naranjo, Universidad de Costa Rica, Costa

E2.4. Educational Pico and Nano Satellites

September 30 2016, 13:30 — Joya 1&2

Co-Chair(s): Xiaozhou Yu , Northwestern Polytechnical University, The Netherlands; Rapporteur(s): Franco Bernelli-Zazzera , Politecnico di Milano,

IAC-16.E2.4.1

INNOVATIVE SMALL SATELLITE STRUCTURAL CONCEPT FOR **EFFECTIVE SYSTEM INTEGRATION**

Arnav Saikia, Manipal Institute of Technology, Manipal University,

IAC-16.F2.4.2

IMPLEMENTATION OF THE METHODOLOGY OF NASA SYSTEMS ENGINEERING PROCESS FOR TECHNICAL MANAGEMENT OF AZTECHSAT-1 PROJECT Roberto Villalobos, Instituto Politécnico Nacional, Mexico

IAC-16.E2.4.3

DESING AND CONSTRUCTION OF EYECTION SYSTEM FOR CANSAT'S Abel Carrillo, Research student, Mexico

IAC-16.E2.4.4

ESTCUBE-2 MISSION ANALYSIS: PLASMA BRAKE EXPERIMENT FOR DEORBITING

Iaroslav Iakubivskyi, Tartu Observatory, Estonia

IAC-16.E2.4.5

BOOM OF THE CUBESAT: A STATISTIC SURVEY OF CUBSATS LAUNCH IN 2003-2015

Weijian Pang, Northwestern Polytechnical University, NPU, China

IAC-16.E2.4.6 (withdrawn)

DEVELOPMENT AND APPLICATION OF A LOW-COST NANOSATELLITE ATTITUDE DETERMINATION AND CONTROL SYSTEM SIMULATOR Conor MacDonald, , Australia

IAC-16.E2.4.7

DESIGN AND DEVELOPMENT OF AN ONBOARD IN LOOP SIMULATION SYSTEM FOR IN ORBIT TESTING AND VALIDATION OF ACTIVE MAGNETIC CONTROL SYSTEM OF A NANO-SATELLITE Shrikanth Yadav, PES Institute of Technology, India

IAC-16.E2.4.8 (withdrawn)

DESIGN AND DEVELOPMENT OF A REAL-TIME ON BOARD COMPUTER SYSTEM FOR AN ACTIVELY STABILIZED NANO SATELLITE Sayed Umair Daimi, College of Engineering, Pune, India

IAC-16.F2.4.9

LESSONS LEARNED ON THE NATIONAL AND INTERNATIONAL REGULATION IN DEVELOPMENT AND LAUNCH OF MEXICAN MICRO AND NANO SATELLITES PROJECTS

Brigette Vázquez, Facultad de Ingeniería-UNAM, Mexico

IAC-16.E2.4.10

FIRST COSTA RICAN NANO SATELLITE GROUND BASE STATION: MATERIALIZING FEFORTS.

Geiner Gustavo Fonseca Naranjo, Universidad de Costa Rica, Costa

IAC-16.E2.4.11

DESIGN AND ARCHITECTURE OF A NANOSATELLITE FOR EARTH-TO-MOON TRANSFER AND LUNAR OPERATION

Pierre Foullon, ESTACA, France

Co-Chair(s): Carolyn Knowles , National Aeronautics and

Rapporteur(s): Andrea Jaime, OHB System AG - Munich,

A NEWLY DEVELOPED AND LAUNCHED ANDROID-BASED PICOSAT

Xingzhi Hu, National University of Defense Technology, China

PROJECT AQUACULTURE

UNAM SPACE IN SAMPLE RETURN ROBOT CHALLENGE: CREATING

IAC-16.E2.3-GTS.4.6

Zouhair Brigech, Concordia University, Canada

Maria Grulich, Technical University of Munich, Germany

Edoardo Cucchetti, Student, France









IAC-16.E2.4.12

A STUDY OF SELF-HEALING COMPOSITES IN MICROGRAVITY WITHIN A CUBESAT

Jan Clarence Dee, Concordia University, Canada

E3. 29th IAA SYMPOSIUM ON **SPACE POLICY, REGULATIONS AND ECONOMICS**

Coordinator(s): Bernhard Schmidt-Tedd , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Jacques Masson, European Space Agency (ESA), The Netherlands;

E3.1. Regional cooperation in space: policies, governance and legal tools

September 27 2016, 09:45 — Salon de Eventos 8

Co-Chair(s): Ciro Arevalo Yepes , , Colombia; Elisabeth Back Impallomeni, University of Padova, Italy;

Rapporteur(s): Laura Delgado Lopez , , United States;

IAC-16.E3.1.1

STUDY ON THE DEVELOPMENT OF A SOUTH AMERICAN SPACE

Jackelynne Silva-Martinez, Georgia Institute of Technology and SGAC, United States

IAC-16.E3.1.2

SUSTAINABLE ACCESS TO SPACE FOR FUTURE SPACE ACTORS Juan Esteban Gramajo Gonzalez, Space Generation Advisory Council (SGAC), Guatemala

IAC-16.E3.1.3 (withdrawn)

BULDING INNOVATIVE COOPERATION STRATEGIES FOR SPACE DEVELOPMENT IN THE CENTRAL AMERICAN REGION FROM A NGO: THE CASE OF ACAE

Carlos Alvarado Briceño, Central American Association for Aeronautics and Space (ACAE), Costa Rica

IAC-16.E3.1.4 (withdrawn)

USING INNOVATION AND ACHIEVEMENTS AS MEANS TO A SPACE POLICY WITH PUBLIC SUPPORT IN LATIN AMERICA.

Alejandro Chavarri, American Institute of Aeronautics and Astronautics (AIAA), Mexico

IAC-16.E3.1.5

THE DIFFICULTIES OF SPACE COOPERATION IN LATIN AMERICA: PERSPECTIVES AND SOLUTIONS

Camilo Guzman Gomez, UNIVERSIDAD SERGIO ARBOLEDA, Colombia

A VISION FOR A CENTRAL AMERICAN SPACE AGENCY Luis Salaverria, , El Salvador

IAC-16.F3.1.7

LEGAL ASPECTS OF SPACE COOPERATION TO TURN INTO PRACTICAL BENEFITS. A PROPOSAL FOR THE LATIN AMERICAN REGION: AQUARELSAT, THE WATER MONITORING CONSTELLATION Cynthia Jimenez-Monroy, , Switzerland

IAC-16.E3.1.8

APSCO AFTER ITS FIRST DECADE: A CRITICAL ASSESSMENT OF ITS CURRENT POLITICAL AND LEGAL COOPERATIVE POTENTIAL AND RELATED IMPEDIMENTS

Christoph Beischl, London Institute of Space Policy and Law, United

IAC-16.E3.1.9

SPECIFICS OF SPACE COOPERATION POTENTIAL BETWEEN JAPAN

Yuichiro Nagai, University of Tokyo, Japan

IAC-16.E3.1.10

TOWARDS A LONG-TERM GOAL OF ESTABLISHING ASIAN-PACIFIC SPACE AGENCY - THE NEXT GENERATION PERSPECTIVE Soyoung Chung, Space Generation Advisory Council (SGAC), Korea, Republic of

IAC-16.E3.1.11 (withdrawn)

WHY REGIONAL COOPERATION IN SPACE ACTIVITIES IS PROPOSED

Meshack Ndiritu. African Union Commission and Space Generation Advisory Council (SGAC), Ethiopia

IAC-16.E3.1.12

THE NEW AFRICAN SPACE POLICY AND STRATEGY Peter Martinez, University of Cape Town, South Africa

IAC-16.E3.1.13

COMPARATIVE ANALYSIS OF ESA SMALL MEMBER STATES SPACE POLICIES, STRATEGIES AND GOVERNANCE IN THE FRAME OF EUROPEAN SPACE INTEGRATION

Maarten Adriaensen, European Space Agency (ESA), France

IAC-16.E3.1.14 (withdrawn)

SPECTRUM MANAGEMENT AND EARTH OBSERVATIONS: AN OPPORTUNITY FOR IMPROVED REGIONAL COOPERATION Laura Delgado Lopez, , United States

IAC-16.E3.1.15

SPACE FOR SUSTAINABLE DEVELOPMENT Stefano Ferretti, European Space Agency (ESA), Italy

E3.2.International Space Exploration Policies and Programmes

September 27 2016, 14:45 — Salon de Eventos 8

Co-Chair(s): Nicolas Peter, European Space Agency (ESA),

Rapporteur(s): Marc Haese, DLR, German Aerospace Center,

US-RUSSIA COOPERATION IN HUMAN SPACE EXPLORATION AND IMPLICATIONS FOR FUTURE INTERNATIONAL SPACE EXPLORATION Mariel Borowitz, Georgia Institute of Technology, United States

IAC-16.E3.2.2

THE UNITED NATIONS HUMAN SPACE TECHNOLOGY INITIATIVE IN THE PERIOD 2015 - 2016

Takanori Mivoshi, United Nations, Austria

IAC-16.E3.2.3

PROGRAMMATIC SUSTAINABILITY IN HUMAN EXPLORATION **PROGRAMS**

Andrew Aldrin, Florida Institute of Technology, United States

IAC-16.E3.2.4

CHINA'S LUNAR EXPLORATION ACTIVITIES AND RELEVANT POLICIES Zhenjun Zhang, Chinese Society of Astronautics (CSA),

IAC-16.E3.2.5

CHINA'S SPACE PROGRAMME - HARE OR TORTOISE? William Carey, , The Netherlands

IAC-16.E3.2.6 (withdrawn)

KENNEDY, NIXON, AND 21ST CENTURY SPACE EXPLORATION John Logsdon, Space Policy Institute, George Washington University,

IAC-16.E3.2.7

THE "MOON VILLAGE" CONCEPT

Piero Messina, European Space Agency (ESA), France

BUILDING CONSENSUS: MULTINATIONAL NON-BINDING INITIATIVES ON SPACE EXPLORATION

Nathan Boll, Space Policy Institute, George Washington University,

IAC-16.E3.2.9

PLANETARY DEFENSE AS A GATEWAY TO SPACE FOR COMMERCIAL AND DEEP SPACE EXPLORATION

Nikola Schmidt, Charles University, Czech Republic

IAC-16.E3.2.10

U.S. POLICY CONSIDERATIONS ON INTERNATIONAL COOPERATION BEYOND 2024

Kathryn Robison, The University of Alabama, United States

IAC-16.E3.2.11

THE NEED FOR A GLOBAL SPACE ADMINISTRATION. Michael Saxton, Embry Riddle Aeronautical University, United States

IAC-16.E3.2.12 (withdrawn)

CISLUNAR HABITATION: AN ISU SUMMER SESSION PROJECT Alexander MacDonald, NASA HQ, United States

IAC-16.E3.2.13

COSMO ANTHROPOLOGY AND PATHWAY TO EXPLORATION Koichi Kikuchi, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-16.E3.2.14

REACHING THE MOON AND BEYOND? SOCIOPOLITICAL FRONTIERS IN THE SPACE RACE TO MARS Julie Patarin-Jossec, , France

E3.3. Game changers in the space economy

September 28 2016, 09:45 — Salon de Eventos 8

Co-Chair(s): Claire Jolly, Organisation for Economic Cooperation and Development (OECD), France; Max Grimard, Airbus Defence and Space SAS, France;

IAC-16.E3.3.1

WHAT NEXT? REINVENTING THE SPACE ECONOMY Veronica La Regina, RHEA System B.V., The Netherlands

IAC-16.E3.3.2 (withdrawn)

THE FOURTH INDUSTRIAL REVOLUTION AND SPACE Matteo Tugnoli, European Space Policy Institute (ESPI), Austria

IAC-16.E3.3.3

GLOBAL RISK & GLOBAL CHALLENGES - SPACE AS A GAME CHANGER FOR SOCIOECONOMIC SUSTAINABLE DEVELOPMENT Christopher Lehnert, German Aerospace Center (DLR), Germany

WHAT IS THE "NEW SPACE"?

Deganit Paikowsky, Tel Aviv University, Israel

IAC-16.E3.3.5

FUTURE ISSUES FOR COMMERCIAL SPACE SUSTAINABILITY SUGGESTED BY SPACE INDUSTRY SOCIO-ECONOMIC TRENDS Ian Christensen, Secure World Foundation, United States

THE CURRENT STATE AND THE FUTURE OF SPACE INTERNET - THE SPACE GENERATION PERSPECTIVE

Laszlo Bacsardi, Budapest University of Technology and Economics,

IAC-16.E3.3.7

NEWSPACE COMMERCIAL EARTH OBSERVATION SMALL SATELLITES - A GAME CHANGER OR A BUBBLE?

Narayan Prasad Nagendra, Dhruva Space, India

IAC-16.E3.3.8

ECONOMIC DEVELOPMENT OF LOW EARTH ORBIT: AN EDITED COLLECTION OF ECONOMIC RESEARCH PAPERS FROM NASA Patrick Besha, NASA, United States

IAC-16.E3.3.9 (withdrawn)

COMMERCIAL WEATHER SATELLITES: CHALLENGES AND **OPPORTUNITIES**

Mariel Borowitz, Georgia Institute of Technology, United States

IAC-16.E3.3.10

SPACE MARKET FACING THE ECONOMIC GROWTH IN SOUTH AMERICAN COUNTRIES

Natalia Indira Vargas-Cuentas, , Bolivia

IAC-16.E3.3.11

MAXIMIZING OPPORTUNITIES FOR AUSTRALIAN PLAYERS IN GLOBAL SUPPLY CHAINS

Alexandra Seneta, Commonwealth of Australia, Australia

IAC-16.E3.3.12

FUTURE INDIAN SPACE - PERSPECTIVES OF GAME CHANGERS Mukund Kadursrinivas Rao, National Institute of Advanced Studies

E3.4. Assuring a Safe, Secure and Sustainable **Space Environment for Space Activities**

September 28 2016, 14:45 — Salon de Eventos 8

Co-Chair(s): Chen Shenyan , Beihang University, China; Ray Williamson, Secure World Foundation, United States; Rapporteur(s): Peter Stubbe , German Aerospace Center (DLR), Germany:

IAC-16.E3.4.1

GLOBAL SPACE GOVERNANCE AND THE FUTURE OF SPACE Simonetta DI PIPPO. United Nations. Austria

THE APPLICATION OF TCBM TO ASSURE A SAFE, SECURE AND SUSTAINABLE SPACE ENVIRONMENT FOR SPACE ACTIVITIES Guoyu Wang, Beijing Institute of technology(BIT), China

IAC-16.E3.4.3

THE CHINESE/RUSSIAN CONTRIBUTION TO THE PREVENTION OF AN ARMS RACE IN SPACE: AN ANALYSIS

Fabio Tronchetti, University of Mississippi, China

IAC-16.E3.4.4

A COMPARATIVE STUDY ON THE NATIONAL SPACE SECURITY POLICY BETWEEN USA AND CHINA

Zhenjun Zhang, Chinese Society of Astronautics (CSA),

IAC-16.E3.4.5

STATUS UPDATE ON THE UN COPUOS WORKING GROUP ON THE LONG-TERM SUSTAINABILITY OF OUTER SPACE ACTIVITIES Peter Martinez, University of Cape Town, South Africa

IAC-16.E3.4.6

CURRENT CHALLENGES TO THE SAFETY OF OUTER SPACE ACTIVITIES Peter Stubbe, German Aerospace Center (DLR), Germany

IAC-16.E3.4.7

SUSTAINABLE TECHNOLOGY MANAGEMENT MODEL FOR SPACE DEBRIS CONTROL

Lisette Farah Simón, Facultad de Contaduría y Administración,

IAC-16.E3.4.8

ASSESSING OPPORTUNITIES FOR INTERNATIONAL COOPERATION IN THE MONITORING OF SPACE OBJECTS AND EVENTS Richard Buenneke, U.S. Department of State, United States

IAC-16.E3.4.9

LEGAL CHALLENGES OF ACTIVE SPACE DEBRIS REMOVAL AND POSSIBILITIES FOR INDUSTRY INVOLVEMENT Cordula Steinkogler, University of Vienna, Austria

IAC-16.E3.4.10 (withdrawn)

SPACE WEATHER IMPLICATIONS FOR INFRASTRUCTURE AND SOCIO-ECONOMIC DEPENDENCE: THE STATUS OF NATIONAL AND INTERNATIONAL SCIENCE, POLICY AND COOPERATION FRAMEWORKS FOR ACHIEVING SPACE SUSTAINABILITY Sara Langston, Senmurv Consulting LLC, United States









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PROGRAMME

PROFESSIONALS
EVENTS

PROGRAMMES & EVENTS

& TECHNICAL TOURS

INDE

FOR FUTURE SPACE ACTIVITIES

Aureliano Rivolta, Politecnico di Milano, Italy

IAC-16.F3.4.12

IAC-16.E3.4.11

SECURITY IN SPACE: CHALLENGES TO INTERNATIONAL COOPERATION AND OPTIONS FOR MOVING FORWARD Massimo Pellegrino, European Union Institute for Security Studies (EUISS), France

THE ON ORBIT SERVICING ANSWER TO SAFETY AND SUSTAINABILITY

IAC-16.E3.4.13 (withdrawn)

MULTI LATERAL INITIATIVES FOR LONG TERM SUSTAINABILITY OF OUTER SPACE ACTIVITIES

 $\it V.$ Gopala Krishnan, Indian Space Research Organization (ISRO), India

E3.5-E7.6. 31st Joint IAA/IISL Scientific Legal Roundtable: The Future of Regional Cooperation

September 29 2016, 09:45 — Salon de Eventos 8

Co-Chair(s): Marco Ferrazzani , European Space Agency (ESA), France:

Rapporteur(s): Marc Haese, DLR, German Aerospace Center, Germany; Nicola Rohner-Willsch, Deutsches Zentrum für Luftund Raumfahrt e.V. (DLR), Germany;

IAC-16.E3.5-E7.6.1

THE DIFFICULTIES OF SPACE COOPERATION IN LATIN AMERICA Camilo Guzman Gomez, UNIVERSIDAD SERGIO ARBOLEDA, Colombia

IAC-16.E3.5-E7.6.2

THE IMPORTANCE OF REGIONAL COOPERATION IN THE DEVELOPMENT OF LARGE SPACE SYSTEMS

Mark Sirangelo, Sierra Nevada Corporation, United States

IAC-16.E3.5-E7.6.3

THE ROLE OF REGIONAL SPACE COOPERATION IN PROCURING SPACE SECURITY IN THE ASIA-PACIFIC REGION: A PROSPECT FOR FUTURE

Yun Zhao, The University of Hong Kong, Hong Kong

IAC-16.E3.5-E7.6.4

REALIZING A REGIONAL AFRICAN SPACE PROGRAMME
Timiebi Aganaba-Jeanty, World Space Week Association, Canada

IAC-16.E3.5-E7.6.5

EUROPEAN REGIONAL COOPERATION IN SPACE: LEGAL ASPECTS Frans G. Von der Dunk, University of Nebraska, College of Law, The Netherlands

E3.6. Enterprise Risk Management

September 30 2016, 09:45 — Salon de Eventos 2

Co-Chair(s): Maria-Gabriella Sarah , European Space Agency (ESA), France; Ruediger Suess , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

Rapporteur(s): David M. Lengyel , George Washington University, United States;

IAC-16.E3.6.1 (withdrawn)

RISK MANAGEMENT PRACTICES WITHIN NASA Jeevan Perera, NASA, United States

IAC-16.E3.6.2

ENTERPRISE RISK MANAGEMENT IN THE EYES OF THE ISO 21504:2015 GUIDANCE FOR PROJECT PORTFOLIO MANAGEMENT Ruediger Suess, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-16.E3.6.3

LESSONS LEARNED FROM THE INTEGRATION OF ENTERPRISE RISK MANAGEMENT AND KNOWLEDGE MANAGEMENT David M. Lengyel, George Washington University, United States

IAC-16.E3.6.4

ENTERPRISE RISK MANAGEMENT AT ESA IN SUPPORT OF THE DECISION MAKING PROCESS

Maria-Gabriella Sarah, European Space Agency (ESA), France

IAC-16.E3.6.5 (withdrawn)

ERM 2.0 : FROM COMPLIANCE TO OPERATIONAL DIMENSION Vincent LEROY, , France

IAC-16.E3.6.6 (withdrawn)

"CONTROLS IN PLACE" AS MEANS TO TACKLE UNCERTAINTY IN TIMES OF CHANGE

Dirk Schulze, OHB System AG, Germany

IAC-16.E3.6.7 (withdrawn)

SPATIAL AND MEDICAL ANTHROPOLOGY OF HUMAN RESOURCES: FUNDAMENTAL ELEMENTS OF CYBERDEFENCE IN SPACE MISSIONS. Isabelle Tisserand, 313S - Vice-President of 313S Cybersecurity Department, France

IAC-16.E3.6.8

ETHICS AND PUBLIC INTEGRITY IN SPACE EXPLORATION

Adam Greenstone, National Aeronautics and Space Administration
(NASA), United States

C-16.E3.6.9

INSTITUTIONAL RISK MANAGEMENT AND COSMIC HAZARDS

Joseph Pelton, International Space University (ISU), United States

IAC-16.E3.6.10 (withdrawn)

INSTITUTIONAL SPACE ASSET PROTECTION PROGRAM RISK MANAGEMENT

James Leatherwood, NASA, United States

IAC-16.E3.6.11

A STRATEGIC APPROACH TO MEDICAL CARE FOR EXPLORATION MISSIONS

Michael Canga, NASA, United States

ΛC-16 E2 6 12

INTEGRATING SPACEFLIGHT HUMAN SYSTEM RISK RESEARCH Jennifer Mindock, Wyle Labs/NASA-JSC, United States

IAC-16.E3.6.13 (withdrawn)

A FEASIBILITY STUDY ON THE RECOVERY OF REUSABLE ROCKET USING RIDM

Hyojung Ahn, Korea Aerospace Research Institute (KARI), Korea, Republic of

E3.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Bernhard Schmidt-Tedd , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Jacques Masson , European Space Agency (ESA), The Netherlands;

IAC-16.E3.IP.1 (withdrawn)

THE SPACE DEVELOPMENT MATRIX: AN INTERNATIONAL PORTAL TO FORECASTING AND VALUATING A SUSTAINABLE SPACE BASED ECONOMY

Jason Aspiotis, Crowd 2 Space International, United States

IAC-16.E3.IP.2 (withdrawn)

MACROECONOMIC SYSTEM ENGINEERING: THE FOUNDATION FOR BUILDING A SUSTAINABLE SPACE BASED ECONOMY Jason Aspiotis, Crowd 2 Space International, United States

IAC-16.E3.IP.3

ORBITAL CONGESTION: ASSESSING THE PROSPECTS FOR EFFECTIVE GOVERNANCE STRUCTURES THROUGH REGIME THEORY Marco Aliberti, European Space Policy Institute (ESPI), Austria

IAC-16.E3.IP.4 (withdrawn)

ANALYSIS OF CHINA AEROSPACE INDUSTRY DEVELOPMENT IMPACT ON IMPROVING THE COMPETITIVENESS OF THE NATION Rao Cheng long, China Academy of Launch Vehicle Technology(CALT), China

IAC-16.E3.IP.5

SPACE VALUE CHAINS AND ROLES IN MIXED INTERSECTORAL ENVIRONMENT

Dmitry Payson, United Rocket and Space Corporation, Russian Federation

IAC-16.E3.IP.6 (withdrawn)

SPACE PROTECTION: HOW CHANGING PERCEPTIONS COULD AFFECT THE LONG-TERM SUSTAINABILITY OF SPACE

Victoria Samson, Secure World Foundation, United States

IAC-16.E3.IP.7 (withdrawn)

CHALLENGES IN TRANSFERRING GOVERNMENT FUNDED EARTH OBSERVATION SATELLITE SYSTEMS TO PRIVATE SECTOR Virendra K. Jha, , Canada

IAC-16.E3.IP.8

SMALL SATELLITES: MARKET, TREND AND GAME CHANGER Annamaria Nassisi, Thales Alenia Space Italia, Italy

IAC-16.E3.IP.9

SPACE TECHNOLOGIES: THE PARADIGM SHIFT FROM RELIANCE ON THE SATELLITE INFRASTRUCTURE TO ALTERNATIVE, PRIVATE SECTOR TECHNOLOGIES

Sinead O'Sullivan, Space Generation Advisory Council (SGAC), United States

IAC-16.E3.IP.10

THE EFFECT OF SOUTHEAST ASIAN COOPERATION IN SPACE ON NASA'S FUTURE PARTNERSHIPS

Rebecca Miller, Science and Technology Policy Institute, United

IAC-16.E3.IP.11

REACHING FOR THE MOON AND BEYOND? SOCIOPOLITICAL FRONTIERS IN THE SPACE RACE TO MARS Julie Patarin-Jossec, , France

IAC-16.E3.IP.12

SPACE COOPERATION OR SPACE CONFLICT: A STRATEGIC NET ASSESSMENT FRAMEWORK

Lini ZHOU, National University of Defense Technology, China

IAC-16.E3.IP.13

ON LEGAL AND ECONOMICAL ASPECTS OF THE JOINT EARTH REMOTE SENSING SYSTEM DEVELOPMENT BY RUSSIA AND BELARUS Daria Makarova, People's Friendship University of Russia, Russian Federation

IAC-16.E3.IP.14

EMERGING LEO ECONOMY

Carissa Christensen, The Tauri Group, United States

E4. 50th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM

Coordinator(s): Ake Ingemar Skoog , , Germany; Christophe Rothmund , Airbus Safran Launchers, France; Philippe Jung, Association Aéronautique & Astronautique de France (3AF), France;

E4.1. Memoirs and Organisational Histories

September 26 2016, 15:15 — Salon de Eventos 6

Co-Chair(s): Niklas Reinke , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Radu Rugescu , Association Dedicated to Development in Astronautics (A.D.D.A), Romania; **Rapporteur(s):** Theo Pirard , Space Information Center, Belgium;

IAC-16.E4.1.1

KENNETH GATLAND, 1924-1977, A BIOGRAPHY Mali Perera, The British Interplanetary Society, United Kingdom

IAC-16.E4.1.2

ENGINEERING THE SATURN V: PERSONAL RECOLLECTIONS OF THE DEVELOPMENT AND TESTING OF THE ROCKET THAT TRANSPORTED MAN TO THE MOON

Christina Carmen, University of Alabama in Huntsville, United States

IAC-16.E4.1.3

KARL HENIZE AND HIS SPACE CAREER

Charles Lundquist, University of Alabama in Huntsville, United States

IAC-16.E4.1.4

THE ROLE OF HSUE-SHEN TSIEN IN THE FOUNDATION OF CHINA ACADEMY OF SPACE TECHNOLOGY $\ensuremath{\mathsf{T}}$

Ming Li, China Academy of Space Technology (CAST), China

IAC-16.E4.1.5

KARL POGGENSEE - A WIDELY UNKNOWN GERMAN ROCKET PIONEER - THE EARLY YEARS 1930-1934 - A CHRONOLOGY Karlheinz Rohrwild, Internationaler Förderkreis für Raumfahrt – Hermann Oberth – Wernher von Braun e.V. Germanv

IAC-16.E4.1.6

AURELIUS BISAIL - FIRST ROCKET POWERED MODEL AIRPLANES IN VIENNA - AUSTRIA - SUMMER 1928 Karlheinz Rohrwild, Internationaler Förderkreis für Raumfahrt –

IAC 16 E4 1 7

THE MOD PAYLOAD SPECIALISTS – WHEN BRITAIN HAD AN ASTRONAUT CORPS

Hannes Mayer. Karl Franzens Universität Graz. Austria

Hermann Oberth - Wernher von Braun e.V., Germany

IAC-16.E4.1.8

AUSTRIAN SOCIETY FOR THE ADVANCEMENT OF SPACE EXPLORATION - "ÖSTERREICHISCHEN GESELLSCHAFT ZUR FÖRDERUNG DER RAUMFORSCHUNG" - 1931-1938 Karlheinz Rohrwild, Internationaler Förderkreis für Raumfahrt – Hermann Oberth – Wernher von Braun e.V., Germany

E4.2. Scientific and Technical Histories

September 29 2016, 14:45 — Salon de Eventos 6

Co-Chair(s): Christophe Rothmund , Airbus Safran Launchers, France; Kerrie Dougherty , , Australia;

Rapporteur(s): Paivi Jukola , Aalto University, Finland; William Jones, United States;

IAC-16.E4.2 (withdrawn)

THE VIKING ROCKET---SOME NEW OBSERVATIONS
Frank H. Winter, National Air and Space Museum, United States

IAC-16.E4.2.1

THE RANGER PROJECT'S LEGACY FOR EMERGING SPACE PROGRAMS James Burke, The Planetary Society, United States

IAC-16.E4.2.4

FROM DEALER OF DEATH TO GUARDIAN OF LIFE: MAN-RATING THE GEMINI TITAN II LAUNCH VEHICLE

Benjamin Davis, Dulles University, United States

IAC-16.E4.2.5

SUD AVIATION X 407 CASSEUR - THE UNKNOWN STEPPING STONE TO DIAMANT

Philippe Jung, Association Aéronautique & Astronautique de France (3AF), France







THE ROLE OF THE AUSTRALIAN DEFENCE SCIENTIFIC SERVICE IN SPACE-RELATED RESEARCH AND INNOVATION Kerrie Dougherty, , Australia

IAC-16.E4.2.7

ROSETTA: 27 YEARS OF MISSION EVOLUTION FROM FIRST FEASIBILITY CONCEPTS TO FINAL IMPACT ON THE COMET Klaus Schilling, University Wuerzburg, Germany

IAC-16.E4.2.8

STUDENT ROCKETS OF THE TECHNION IN THE 1980'S AND 1990'S Tal Inbar, The Fisher Institute for Air and Space Strategic Studies,

IAC-16.E4.2.9

SPACE SAIL CUP DESIGN COMPETETION IN 1989: THE FIRST TIME FOR CHINA ENGINEERS TO ATTEMPT DEEP SPACE MISSION DESIGN Ming Li, China Academy of Space Technology (CAST), China

IAC-16.E4.2.10

ANTI SATELLITE SYSTEMS: THE HIDE FACE OF SPACE. Angel Felix Cuellar Villarroel, , Spain

E4.3A. History of Mexico and Latin America's **Contribution to Astronautics**

September 29 2016, 09:45 — Salon de Eventos 6

Co-Chair(s): Otfrid Liepack , National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States; Pablo De Leon , University of North Dakota, United States; Rapporteur(s): Charles Lundquist, University of Alabama in Huntsville, United States; John Harlow, Aerojet Rocketdyne, United Kingdom;

IAC-16.E4.3A.1

THE INSTITUTIONALIZATION OF THE SPACE ACTIVITIES IN MÉXICO,

FEDERICO LAZARIN, , Mexico

IAC-16.E4.3A.2

THE CONDOR PROJECT

Pablo de Leon, University of North Dakota, United States

IAC-16.E4.3A.3

SPACE IN FRENCH GUIANA, 50 YEARS OF HISTORY Antoine ARVEILLER, , French Guiana

IAC-16.E4.3A.4

TEÓFILO TABANERA, FATHER OF THE ARGENTINE SPACE PROGRAM Pablo de Leon, University of North Dakota, United States

E4.3B. 50th Anniversary of IAA History Symposium

September 29 2016, 09:45 — Salon de Eventos 6

Co-Chair(s): Ake Ingemar Skoog,, Germany; R. Cargill Hall,, United States:

Rapporteur(s): Charles Lundquist , University of Alabama in Huntsville, United States; John Harlow, Aerojet Rocketdyne, United Kingdom;

FIFTY YEARS OF IAA HISTORY SYMPOSIA (1967 - 2016) Ake Ingemar Skoog, , Germany

IAC-16.E4.3B.2

50 YEARS OF HISTORY OF ASTRONAUTICS SYMPOSIUM Philippe Jung, Association Aéronautique & Astronautique de France

E5. 27th IAA SYMPOSIUM ON SPACE AND SOCIETY

Coordinator(s): Geoffrey Languedoc, Canadian Aeronautics & Space Institute (CASI), Canada; Olga Bannova , University of Houston, United States;

E5.1. Space Architecture: technical aspects, design, engineering, concepts and mission

September 27 2016, 14:45 — Salon de Eventos 2

Co-Chair(s): Brent Sherwood, Caltech/JPL, United States; Olga Bannova, University of Houston, United States; Rapporteur(s): Anna Barbara Imhof , Liquifer Systems Group (LSG). Austria:

IAC-16.E5.1.1

SPACE ARCHITECTURE. A TOOL TO REMOVE ROADBLOCKS ON THE SPACE EXPLORATION HIGHWAY

Olga Bannova, University of Houston, United States

IAC-16.E5.1.2

SPACE ARCHITECTURE FOR MOONVILLAGE Brent Sherwood, Caltech/JPL, United States

STRUCTURAL CONCEPTS FOR LUNAR HABITATS James Burke, The Planetary Society, United States

IAC-16.E5.1.4 (withdrawn)

MARS ICE HOUSE: USING THE PHYSICS OF PHASE CHANGE IN 3D PRINTING A HABITAT WITH H20

Christina Ciardullo, Carnegie Mellon University, United States

IAC-16.E5.1.5

WE ARE ON MARS! HOW DO WE FIX OUR HABITAT? Jackelynne Silva-Martinez, Georgia Institute of Technology and SGAC. United States

IAC-16.E5.1.6 (withdrawn)

SUSTAINABILITY-STRATEGIES FOR AN EXTENDED HUMAN PRESENCE

Marlies Arnhof, Vienna University of Technology, Austria

IAC-16.E5.1.7

EDEN ISS: HUMAN FACTORS AND SUSTAINABILITY FOR SPACE AND EARTH ANALOGUE

Irene Lia Schlacht, Politecnico di Milano, Italy

IAC-16.F5.1.8

ARCHITECTURAL TOOLS FOR INFLUENCING THE PERCEPTION OF TIME IN SPACE

Maria Kolodziejczyk, ESA/ESTEC, Poland

DESIGN AND IMPLEMENTATION OF A FRIENDLY ENVIRONMENT FOR LONG-LASTING STAY IN SPACE

Yuanguang Wang, Beijing Electro-Mechanical Engineering Institute, CASIC, China

IAC-16.E5.1.10 (withdrawn)

SANCTUARIES IN THE SKY. A COMPARATIVE ANALYSIS OF RELIGIOUS- AND SPACE ARCHITECTURE. Michael Waltemathe, Ruhr-University Bochum, Germany

E5.2. Models for Successfully Applying Space **Technology Beyond Its Original Intent**

September 28 2016, 09:45 — Salon de Eventos 2

Co-Chair(s): Nona Minnifield Cheeks, National Aeronautics and Space Administration (NASA)/Goddard Space Flight Center, United States; Olga Bannova , University of Houston, United

Rapporteur(s): Anna Barbara Imhof , Liquifer Systems Group (LSG), Austria:

IAC-16.E5.2.1 (withdrawn)

ACCELERATING NASA TECHNOLOGY TRANSFER THROUGH STRATEGIC INTELLECTUAL PROPERTY MANAGEMENT Mark Dvorscak, National Aeronautics and Space Administration (NASA), United States

IAC-16.E5.2.2

SPACE RESEARCH AND TECHNOLOGY INTEGRATOR FOR ECONOMIC **DEVELOPMENT AND SOCIETAL BENEFITS**

Nona Minnifield Cheeks, National Aeronautics and Space Administration (NASA)/Goddard Space Flight Center, United States

IAC-16.E5.2.2

INNOVATIVE APPROACHES TO HUMAN RESPIRATORY SYSTEM PROTECTION

Guzel Kamaletdinova, Tambov State Technical University, Russian Federation

IAC-16.E5.2.3

PUBLIC - PRIVATE INITIATIVES TO FOSTER TECHNOLOGY TRANSFERS, THE "KETLAB" CASE STUDY IN ITALY Silvia Ciccarelli, Italian Space Agency (ASI), Italy

IAC-16.E5.2.4

THE IMPORTANCE OF THE LATIN AMERICAN APPROACH IN THE DEVELOPMENT OF SPACE TECHNOLOGICAL CAPABILITIES: A VIEWPOINT FROM MEXICO

Sofía Andrea Huerta Ramírez, Universidad Nacional Autónoma de México, Mexico

IAC-16.F5.2.5

NEW WAYS OF SCIENTIFIC COMMUNICATION: OPEN ACCESS AND OPEN DATA

Alfonso Lamanna, ASI - Italian Space Agency, Italy

IAC-16.E5.2.6

SPACE ASSETS, TECHNOLOGY AND SERVICES IN SUPPORT OF **ENERGY POLICY**

Christopher Vasko, Eindhoven University of Technology, France

IAC-16.E5.2.7

TELEMEDICINE/E-HEALTH FOR UNIVERSAL HEALTHCARE: NEED ANALYSIS AND COMPREHENSIVE LEGAL FRAMEWORK FOR INDIA Murthy Remilla, ISRO Satellite Centre (ISAC), ISRO, India

IAC-16.E5.2.8 (withdrawn)

CAPE (CLIMATE ANTICIPATION PERSONAL ENVIRONMENT): CONSTRUCTING THE CAAS-WARDROBE

Sue Fairburn, Gray's School of Art, Robert Gordon University, United

IAC-16.E5.2.9

APPLICATION OF TELEMEDICINE IN UNCONVENTIONAL AREAS IN INDIA: CASE STUDY OF KARNATAKA PRISONS TELEMEDICINE PROJECTIN PPP MODE

Murthy Remilla, ISRO Satellite Centre (ISAC), ISRO, India

E5.3. Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach

September 28 2016, 14:45 — Salon de Eventos 2

Chairman(s): Richard Clar, Art Technologies, United States; Co-Chair(s): Nahum Romero , Equilibrio. Medio ambiente y responsabilidad social, United Kingdom;

Rapporteur(s): Daniela de Paulis , Rietveld Academy/ASCA University of Amsterdam, The Netherlands;

IAC-16.E5.3.1

ART /αRT/ - SCI•ENCE /'SAIƏNS/ ADV. N. Ale de la Puente, , Mexico

Guada/ajara

IAC-16.E5.3.2

FROM ARTSCIENCE TO SPACE AND MOON VILLAGE Bernard Foing, ESA/ESTEC, The Netherlands

IAC-16.E5.3.3

DESIGN SPACE FOR SPACE DESIGN: DIALOGS THROUGH BOUNDARY OBJECTS AT THE INTERSECTIONS OF ART, DESIGN, SCIENCE, AND **ENGINEERING**

Tibor Balint, Royal College of Art, United Kingdom

IAC-16.E5.3.4

FIRST LIGHT: OBTAINING A COSMIC PERSPECTIVE THROUGH EXPLORATIONS OF ASTRONOMY, MATTER AND LIGHT. Melanie King, Royal College of Art, United Kingdom

IAC-16.E5.3.5

CLIMATEXCHANGE: CREATING MOVING CLOUDS INTO DIAPHANOUS SCULPTURES MADE OF THE SPACE TECHNOLOGY NANOMATERIAL SILICA AEROGEL

Ioannis MICHALOUDIS, Charles Darwin University, Australia

IAC-16.E5.3.6

SPACE MATTER Jorge Ramirez, , Mexico

IAC-16.E5.3.7

CONCEALED BEAUTY IN BROKEN SYMMETRY: THE CREATION OF A COSMIC ART INSTALLATION THROUGH ART AND PARTICLE PHYSICS Yuri Tanaka, Tokyo National University of Fine Arts and Music, Japan

IAC-16.F5.3.8

HOLOGRAPHY SCENOGRAPHY: BUDGET THEATRE TECH FOR SPACE Renate Pohl, Memorial University of Newfoundland, Grenfell Campus, Canada

IAC-16.E5.3.9 (withdrawn)

THE FINAL FRONTIER: HOW ARTISTS WILL INSPIRE THE NEXT GENERATION TO HOMESTEAD IN SPACE

Mandy Sweeney, Museum of Science Fiction, United States

IAC-16.E5.3.10

'TO SPACE'- THE CREATION OF A LIVE THEATRE PERFORMANCE PIECE ABOUT SPACE EXPLORATION, FORMED THROUGH A COLLABORATION BETWEEN ARTISTS, THEATRE MAKERS, SCIENTISTS AND SPECIALIST SPACE-RELATED RESEARCH CENTRES. Niamh Shaw, reland

E5.4. Space Assets and Disaster Management

September 29 2016, 09:45 — Salon de Eventos 2

Co-Chair(s): Geoffrey Languedoc, Canadian Aeronautics & Space Institute (CASI), Canada; Jillianne Pierce, Space Florida,

Rapporteur(s): Alexander Gibson , Army National Guard, United States;

IAC-16.E5.4.1

NASA DISASTER RESPONSE

Ernesto Diaz, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-16.E5.4.2

KINETIC INTERCEPTION STRATEGY FOR ASTEROID DEFLECTION USING DEFUNCT SPACE ASSETS

Daniel Brack, Asher Space Research Institute, Technion, I.I.T., Israel

IAC-16.F5.4.3

THE ITALIAN SPACE ASSETS FOR EU MARITIME SURVEILLANCE Patrizia Sacco, Italian Space Agency (ASI), Italy









26 - 30 September 2016, Guadalajara, Mexico

IAC-16.E5.4.4

USING EARTH OBSERVATION DATA TO HELP ACHIEVE THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS Krystal Wilson, , United States

IAC-16.E5.4.5

THE ROLE OF SATELLITE DATA IN ENHANCING EU MEMBERS' PORT SECURITY AGAINST MARITIME TERRORISM AND DISASTERS Carlo Golda, University of Genova, Italy

IAC-16.E5.4.6

FROM SPACE POSSIBILITIES TO EARTHLY PRACTICE - INTEGRATED LISE OF SPACE-DERIVED INFORMATION FOR CIVIL PROTECTION Jakub Ryzenko, Crisis Informatin Centre, SRC & Warsaw University,

IAC-16.E5.4.7 (withdrawn)

MODELLING AND PROTOTYPING A DISASTER TV CHANNEL AND A DISASTER DATA SERVICE USING COMMERCIAL SATELLITE TV INFRASTRUCTURE

Khutso Ngoasheng, SKA Africa, South Africa

IAC-16.E5.4.8

TEN YEARS OF KNOWLEDGE AND EXPERIENCE UNDER UN-SPIDER TO BRING SPACE-BASED DATA AND INFORMATION IN DISASTER MANAGEMENT

Luc St-Pierre, United Nations Office for Outer Space Affairs, Austria

IAC-16.E5.4.9

LICENSING THE EXTRAORDINARY: TOWARDS A STANDARD LICENSING SCHEME FOR THE OPEN ACCESS AND USE OF SATELLITE EARTH OBSERVATION DATA FOR DISASTER RECOVERY Nathan Clark, University of Copenhagen, Denmark

MONITORING OF SEISMIC ACTIVITY AT SUB-SATELLITE TRACK USING IONOSPHERE DISTRUBANCES REGISTERED BY SATELLITE SENSORS Alexander Makarov, Yuzhnoye State Design Office, Ukraine

E5.5. Space Societies, Professional Associations and Museums

September 29 2016, 14:45 — Salon de Eventos 2

Co-Chair(s): Jean-Baptiste Desbois, SEMECCEL Cité de l'Espace, France; Scott Hatton, The British Interplanetary Society, United

Rapporteur(s): Minoo Rathnasabapathy, Space Generation Advisory Council (SGAC), Austria;

IAC-16.E5.5.1

A MARS YARD IN THE MUSEUM: RESEARCH, EDUCATION AND OUTREACH

Kerrie Dougherty, , Australia

IAC-16.E5.5.2

THE ROLE OF ASTRONAUTS IN THE DIFFUSION OF SPACE CULTURE Fabrizio Perrelli, Italian Space Agency (ASI), Italy

IAC-16.E5.5.3

CHILDREN SPACE CONGRESS: WHEN THE YOUNG ONES ARE IN CHARGE IN LA CITÉ DE L'ESPACE...

Ines Prieto, SEMECCEL Cité de l'Espace, France

IAC-16.E5.5.4

SPACE ACTIVITIES IN ETHIOPIA Nebiyu Mohammed, , Ethiopia

IAC-16.E5.5.5

SPACE MUSEUM 2.0: CREATING A NEW SPACE MUSEUM WITH THE INVOLVMENT AND PARTICIPATION OF THE GENERAL PUBLIC Tal Inbar, The Fisher Institute for Air and Space Strategic Studies, Israel

IAC-16.E5.5.6

SPACEBOARD—THE PROFESSIONAL NETWORK OF THE SPACE INDUSTRY

Maxime Sixdeniers, SpaceBoard, Germany

IAC-16.E5.5.7

SHAPING THE SPACE TECHNOLOGY ROADMAP THROUGH INTERNATIONAL COOPERATION: RED GLOBAL MX Antonio Eduardo GUTIÉRREZ NAVA, Space Generation Advisory Council (SGAC), Germany

E5.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Geoffrey Languedoc . Canadian Aeronautics & Space Institute (CASI), Canada; Olga Bannova, University of Houston, United States;

IAC-16.E5.IP.1

HUMAN RESOURCES AS A KEY FACTOR TO DEFINE THE SUCCESS OF A NEW SPACE AGENCY: THE MEXICAN SPACE AGENCY EXAMPLE Victoria Valle Pinto, Agencia Espacial Mexicana (AEM), Mexico

IAC-16.E5.IP.2

SPACE AND SOCIETY MUSIC IN SPACE David Lemus, , Mexico

IAC-16.E5.IP.3

EXOPLANET LOT: USING CONTEMPORARY ART TO VISUALISE POTENTIAL CULTURES AND TECHNOLOGIES ON EARTHLIKE

Rob La Frenais, Bournemouth University, United Kingdom

IAC-16.E5.IP.4

INVISIBLE NANOATRACTIONS: SILICA AEROGEL VERSUS RARE-**FARTH MAGNETS**

Ioannis MICHALOUDIS, Charles Darwin University, Australia

SPIRITED SKIES PROJECT: SILICA AEROGEL DOMES FOR THE HABITAT OF THE FUTURE

Ioannis MICHALOUDIS, Charles Darwin University, Australia

IAC-16.E5.IP.6

ACTING IN THE WEIGHTLESS ENVIRONMENT: PREPARATION AND PERFORMANCE

Ruth McAvinia, , Ireland

IAC-16.E5.IP.7

DEVELOPMENT OF THE POLISH SPACE CAPABILITIES Paweł Chodosiewicz, Ministry of Defense Poland, Poland

E6. BUSINESS INNOVATION SYMPOSIUM

Coordinator(s): Ken Davidian , Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States;

E6.1. Innovation, Entrepreneurship & **Investment: The Microscopic Perspective**

September 27 2016, 09:45 — Salon de Eventos 5

Co-Chair(s): Luigi Scatteia, PricewaterhouseCoopers Advisory, France; Misuzu Onuki , Space Frontier Foundation, Japan; Rapporteur(s): Marc Boucher, Canadian Space Commerce Association (CSCA), Canada;

IAC-16.E6.1.1

DEVELOPMENT ROADMAP AND BUSINESS CASE FOR A PRIVATE MARS SETTLEMENT.

Carlos Manuel Entrena Utrilla, Space Generation Advisory Council (SGAC), Spain

IAC-16.E6.1.2

IN-ORBIT SPACECRAFT MANUFACTURING: NEAR-TERM BUSINESS

Ruslan Skomorohov, ISU, France

IAC-16.E6.1.3

MOBILE APPLICATION FOR BUSINESS TRAVELLERS USING SATELLITE IMAGES AND GROUND DATA TO ADDRESS AEDES MOSQUITO RISK AREAS: A BUSINESS CASE

Ana Cristina van Oijhuizen Galhego Rosa, , The Netherlands

IAC-16.E6.1.4

SPACE EXPLORATION THROUGH SELF-REPLICATION TECHNOLOGY COMPENSATES FOR DISCOUNTING IN NPV COST-BENEFIT ANALYSIS - A BUSINESS CASE?

Alex Ellery, Space Exploration and Engineering Group, Carleton Univeristy, Canada

IAC-16.E6.1.5

A NOVEL APPROACH TO INNOVATION PLATFORMS: SYMBIOTIC ON/ OFF SPACES, CROSS-INDUSTRY SPONSOR

Jean-Dominique Coste, Airbus Defence & Space, Germany

IAC-16.E6.1.6

INNOVATION AND R&D AT OHB SYSTEM: INNOVATION FROM AN UPCOMING LSI'S POINT OF VIEW

Egbert Jan van der Veen, OHB System, Germany

THE INNOVATION LANDSCAPE WITHIN A LARGE GOVERNMENT AGENCY: PROMISING PRACTICES FROM THE U.S. NATIONAL AFRONAUTICS AND SPACE ADMINISTRATION

Danielle Wood, National Aeronautics and Space Administration (NASA), United States

THE NECESSITY OF PUBLIC PRIVATE PARTNERSHIP PROJECTS AND COOPERATION DEVELOPMENT FRAMEWORK TO EXECUTE AEROSPACE INITIATIVES IN CENTRAL AMERICA. THE CASE OF ESAI, EL SALVADOR, CENTRAL AMERICA: NETWORKING ANALYSIS, **CURRENT SITUATION AND PERSP**

Luis Alfaro, EL Salvador Aerospace Institute (ESAI), Korea, Republic

IAC-16.E6.1.9

INTELLIGENT CITY MANAGEMENT - BASED ON LAND COVER FEATURE CHANGES DETECTED BY SATELLITE IMAGERY Wei Sun, Twenty First Century Aerospace Technology Co., Ltd., China

IAC-16.E6.1.10

THE MODEL OF PUBLIC- PRIVATE PARTNERSHIPS IN TELECOMMUNICATIONS IN COLOMBIA AS A MODEL FOR FINANCING OF SPACE PROJECTS IN LATIN AMERICA Camilo Guzman Gomez, UNIVERSIDAD SERGIO ARBOLEDA,

IAC-16.E6.1.11

PLACEHOLDER FOR WINNER OF THE "\$PACE IS BUSINESS" PAPER-WRITING COMPETITION

Ken Davidian, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States

E6.2. Innovation, Entrepreneurship & **Investment: The Mesoscopic Perspective**

September 27 2016, 14:45 — Mueble 1

Co-Chair(s): Paola Belingheri , Women in Aerospace Europe (WIA-E), The Netherlands; Thomas Olson, Center for Space Commerce and Finance, United States;

Rapporteur(s): Nicole Jordan , X PRIZE Foundation, United

FROM AVIATION TO SPACE TOURISM - CONSUMER ISSUE: A STUDY OF TOURIST ATTITUDE TOWARDS THE SPACE TRAVEL AND INNOVATIVE SPACE TOURISM TECHNOLOGY IN CHINA AND TAIWAN Eva Yi-Wei Chang, University of Science & Technology, Taiwan,

IAC-16.E6.2.3 (withdrawn)

SUPPORTING THE CANADIAN SPACE SECTOR, THE CANADIAN SPACE COMMERCE ASSOCIATION MODEL Marc Boucher, Canadian Space Commerce Association (CSCA),

IAC-16.E6.2.4

SPACE DEVELOPMENT CENTERS AS CONTRIBUTORS TO THE DEVELOPMENT OF THE SPACE SECTOR IN MEXICO Jose Rafael Torres Coronado, Mexican Space Agency, Mexico

IAC-16.E6.2.5

BUT CAN IT BLEND?: AN ANALYSIS OF THE SUCCESS OF INCUBATORS TO NURTURE AND FUND SPACE-RELATED STARTUP ENTERPRISES Thomas Olson, Center for Space Commerce and Finance, United

IAC-16.E6.2.6 (withdrawn)

FRESH WIND OF NEW SPACE EAST TO WEST: HOW ESA-BICS COULD BE EXTENDED TO CANADA

Maria Lucas Rhimbassen, HEC Montreal, Canada

IAC-16.E6.2.7

AN HISTORIC EVENT ANALYSIS OF THE EVOLVING HUMAN SUBORBITAL TRANSPORTATION INDUSTRY Ken Davidian, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States

IAC-16.E6.2.8

THE OPENING OF THE CIS-LUNAR COMMERCIAL FRONTIER: A CRITICAL PATH DEVELOPMENT MODEL John Culton, , United States

IAC-16.E6.2.10

BREAKING THE ICE FOR SPACE BUSINESS AND INVESTMENT IN

Misuzu Onuki, Space Frontier Foundation, Japan

IAC-16.E6.2.11

INTELLECTUAL PROPERTY MANAGEMENT STRATEGIES OF START-UPS IN SPACE-RELATED INNOVATION Paola Belingheri, LUISS Guido Carli University, Italy

IAC-16.E6.2.12 (withdrawn)

THE USE OF SPIN-OFF RESULTS AS A MARKETING TOOL FOR EMERGING SPACE COUNTRIES

Walter Peeters, International Space University (ISU), France

E6.3. Innovation, Entrepreneurship & **Investment: The Macroscopic Perspective**

September 28 2016, 14:45 — Mueble 1

Co-Chair(s): Elizabeth Seward , Airbus Defence and Space Ltd, United Kingdom; Joerg Kreisel, JOERG KREISEL International Consultant (JKIC), Germany;

Rapporteur(s): Ian Christensen, Futron Corporation, United States:

IAC-16.E6.3.1

ENTREPRENEURIAL PRACTICES IN HIGHLY INSTITUTIONALIZED EUROPEAN SPACE SECTOR

Daniel Sagath, Vrije Universiteit Amsterdam, The Netherlands



IAC-16.E6.3.2

NAVIGATING THE AEROSPACE SECTOR AS A YOUNG ENTREPRENEUR Jennifer Lauren Napier, Space Generation Advisory Council (SGAC),

IAC-16.E6.3.3

CURRENT TRENDS AND PERSPECTIVES OF THE PRIVATE ENTREPRENEURSHIP DEVELOPMENT IN RUSSIAN SPACE INDUSTRY Daria Makarova, People's Friendship University of Russia, Russian

IAC-16.E6.3.4

INNOVATION, ENTREPRENEURSHIP AND CORPORATE SOCIAL RESPONSIBILITY: AN OPPORTUNITY TO GAIN BROAD PUBLIC

Chioma Semanas, , United States

IAC-16.E6.3.5

OPEN SERVICE INNOVATION FOR A NEW SPACE ECONOMY Paola Belingheri, LUISS Guido Carli University, Italy

SPACECROWD - NEXTGEN EARLY-STAGE EQUITY FOR SPACE-**ENABLED BUSINESS VENTURES**

Joerg Kreisel, JOERG KREISEL International Consultant (JKIC),

IAC-16.E6.3.7

SPACE SOLUTIONS ALLIANCE: ESTABLISHING CROSS-INDUSTRY PARTNERSHIPS TO PROMOTE SPACE INNOVATIONS Angelika Daniels, ESA european space agency, The Netherlands

IAC-16.E6.3.8

NEWSPACE RECENT EVOLUTION: AN OPPORTUNITY FOR EUROPE TO ENTER THE GAME?

Max Grimard, Airbus Defence and Space SAS, France

IAC-16.E6.3.9 (withdrawn)

AMERICAN REGION

Sylvia DeKeizer, , Puerto Rico

IAC-16.E6.3.10

OF COMPANIES

Filippo Ugolini, Agt Engineering, Italy

IAC-16.E6.3.11 (withdrawn)

BRINGING DOWN THE REGULATORY ENTRY BARRIERS TO THE SPACE

Pablo Zurdo Santos, , United Kingdom

E6.IP. Interactive Presentations

Coordinator(s): Ken Davidian , Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United

IAC-16.E6.IP.1

REMOTE WORKFORCE IN SPACE – HOW ENTREPRENEURS AND STARTUPS WITH LIMITED RESOURCES CAN RETAIN TALENT TO SUSTAIN THEIR BUSINESS

Bernd Michael Weiss, Alpha Initiatives / International Space University (ISU), Germany

IAC-16.E6.IP.2

ANALYSIS OF CAPACITIES AND NEEDS OF CZECH ORGANISATIONS INVOLVED IN SPACE RESEARCH AND DEVELOPMENT Michal Vaclavik, Czech Space Office, Czech Republic

IAC-16.E6.IP.3

SPACE ADVERTISING AS THE INNOVATION FOR SPACE BUSINESS Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States IAC-16 F6 IP.4 (withdrawn)

NEWEST CARRIER ROCKETS OF A SUPERHEAVY CLASS AS REAL WAY TO SPACE. (BUSINESS START-UP)

Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

IAC-16.E6.IP.5

COMMERCIAL SPACE STATIONS WITH ARTIFICIAL GRAVITATION AS REAL BUSINESS

Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

IAC-16.E6.IP.6

NEW TECHNICAL AND BUSINESS PROJECT OF PRIVATE SELF-PAYBACK PILOTED EXPEDITION TO PHOBOS AND MARS. Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

E7. 59th IISL COLLOQUIUM ON THE LAW **OF OUTER SPACE**

Coordinator(s): Catherine Doldirina . Joint Research Centre (JRC) of the European Commission, Italy; Lesley Jane Smith,

Publication officer(s): Rafael Moro-Aquilar, Orbspace,

E7.1. 8th Nandasiri Jasentuliyana Keynote **Lecture on Space Law and Young Scholars**

September 27 2016, 09:45 — Salon de Eventos 6

Co-Chair(s): Rosa María Ramirez de Arellano , Ramirez de Arellano y Abogados, S.C. Law Firm, Mexico; Tanja Masson-Zwaan, International Institute of Air and Space Law, Leiden University, The Netherlands;

Rapporteur(s): Christopher Johnson, Secure World Foundation, United States;

KEYNOTE: SPACE LAW AND DIPLOMACY

Kai-Uwe Schrogl, European Space Agency (ESA), France

IAC-16.E7.1.2

ARTICLE III OF OUTER SPACE TREATY AND ITS RELEVANCE IN THE INTERNATIONAL SPACE LEGAL FRAMEWORK.

Pierfrancesco Breccia, Sapienza - University of Rome, Italy

IAC-16.E7.1.3

THE IMPACT OF NATIONAL SPACE LEGISLATION ON THE INTERPRETATION OF INTERNATIONAL PRINCIPLES OF GLOBAL COOPERATION

Philip De Man, Catholic University of Louvain, Belgium

LEGAL ISSUES OF A MOON-VILLAGE: FROM THE APPLICATION OF CURRENT SPACE LAW TO THE NEW CHALLENGES OF INTERNATIONAL COOPERATION

PETROS Eloi, IDEST, University Paris Sud, France

IAC-16.E7.1.5

BIG DATA FROM SPACE - LEGAL ISSUES RELATED TO ACCESS AND DISSEMINATION OF LARGE VOLUMES OF SPACE-GENERATED DATA Dimitra Stefoudi, Leiden University, The Netherlands

CAPACITY-BUILDING OF THE INTERNATIONAL LEGAL FRAMEWORK FOR MITIGATING CONSEQUENCES FROM NON-OPERATIONAL SMALL SATELLITES: ADVANCING SPACE LAW TOWARDS NEWSPACE PARADIGM

Olga Stelmakh-Drescher, Institute of Air and Space Law, McGill University, Canada

SCARCITY IN SPACE: THE SPECTRUM/ORBIT TRADING SOLUTION (?) Konstantina Liperi, , Cyprus

IAC-16.E7.1.8

ALTERNATIVE DISPUTE RESOLUTION IN THE FIELD OF SATELLITE COMMUNICATIONS

Simona Spassova, University of Luxembourg, Luxemburg

IAC-16.E7.1.9

THE PUBLIC SERVICE EXEMPTION IN THE SPACE PROTOCOL IN LIGHT OF THAT FOUND IN THE LUXEMBOURG PROTOCOL TUGRUL CAKIR, , France

IAC-16.E7.1.10

INTERNATIONAL TRADE IN LAUNCH SERVICES UNDER THE WTO

Joyeeta Chatterjee, Dentons US LLP, United States

IAC-16.E7.1.11

INNOVATIVE CONTRACTS FOR INNOVATIVE SPACE: "BEST EFFORTS" AND THE EMERGENCE OF ENVIRONMENTAL SUSTAINABILITY PROVISIONS IN SPACE INDUSTRY CONTRACTS

Nicholas Puschman, European Space Agency (ESA), France

IAC-16.E7.1.12 (withdrawn) INTERNATIONAL COOPERATION IN SPACE ACTIVITIES IN EUROPE, THE ARIANE 6 PROJECT EXAMPLE

Caroline Thro, , France

IAC-16.E7.1.13

THE POSSIBLE LIABILITY OF THE STATE WHICH DOES NOT FALL WITHIN THE CONCEPT OF THE LAUNCHING STATE Akiko Watanabe, Japan

IAC-16.E7.1.14

PLANETARY DEFENCE AND COLLATERAL DAMAGE Hannes Mayer, Karl Franzens Universität Graz, Austria

E7.2. Legal Perspectives on Space Resources and Off-Earth Mining

September 27 2016, 14:45 — Salon de Eventos 6

Co-Chair(s): Fabio Tronchetti , University of Mississippi, China; Mark Sundahl, Cleveland State University, United States; Rapporteur(s): Guoyu Wang, Beijing Institute of technology(BIT), Ching:

IAC-16.E7.2.1

THE HAGUE SPACE RESOURCES GOVERNANCE WORKING GROUP: A PROGRESS REPORT

Tanja Masson-Zwaan, International Institute of Air and Space Law, Leiden University, The Netherlands

IAC-16.E7.2.2

TITLE IV OF THE U.S. COMMERCIAL SPACE LAUNCH COMPETITIVENESS ACT OF 2015: A CRITICAL STEP FORWARD IN FACILITATING THE DEVELOPMENT OF A VIABLE SPACE

Sagi Kfir, Deep Space Industries Inc., United States

IAC-16.E7.2.3

THE RELATIONSHIP BETWEEN THE OUTER SPACE TREATY AND CUSTOMARY INTERNATIONAL LAW Ram S. Jakhu, McGill Univeristy, Canada

IAC-16.E7.2.4

COSPAR RECOMMENDATIONS IN A NEW CONTEXT? ENVIRONMENTAL ASPECTS OF SPACE MINING Mahulena Hofmann, University of Luxembourg, Luxemburg

IAC-16.E7.2.5

"THE DAWN OF AN INTERNATIONAL REGIME FOR SPACE RESOURCES: MULTILATERAL PERSPECTIVES" OLAVO DE OLIVEIRA BITTENCOURT NETO, Catholic University of Santos, Brazil

IAC-16.E7.2.6

THE END OF THE CONCEPT OF "COMMON HERITAGE OF MANKIND"? - THE VIEWS OF STATE PARTIES TO THE MOON AGREEMENT

Irmgard Marboe, University of Vienna, Austria

IAC-16.E7.2.7 (withdrawn)

THE LEGALITY OF UNILATERAL EXPLOITATION OF NON-RENEWABLE RESOURCES IN OUTER SPACE AND THE NEED FOR AN INTERNATIONAL COORDINATING AND BENEFIT-SHARING MECHANISM

Jinyuan SU, Xi'an Jiaotong University School of Law, China

IAC-16.E7.2.8

IS OUTER SPACE PROPER THE "COMMON HERITAGE OF MANKIND"? Virgiliu Pop, Romanian Space Agency (ROSA), Romania

IAC-16.E7.2.9

3D PRINTING USING MATERIAL FROM CELESTIAL BODIES: A METHOD TO CIRCUMVENT THE NON-APPROPRIATION PRINCIPLE? Michail Chatzipanagiotis, , Cyprus

IAC-16.E7.2.10 (withdrawn)

UTILIZATION - CONSUMPTION - APPROPRIATION: ASTEROID MINING IS IN THE PIPELINE Annette Froehlich, European Space Policy Institute (ESPI)German Aerospace Center (DLR), Austria

IAC-16.E7.2.11

THE PARADOX OF UNITED STATES' POSITION ON THE REGULATION OF SPACE RESOURCE EXTRACTION

Melissa K. Force, MK Force Consulting, United States

IAC-16.E7.2.12 (withdrawn)

OFF-EARTH MINING: LESSONS TO BE LEARNED FROM DEEP SEABED AND ANTARCTICA

Lotta Viikari, University of Lapland, Finland

IAC-16.E7.2.13

LEGAL CHALLENGES IN FRONT OF PRIVATE SECTORS ON EXPLORATION OF SPACE RESOURCES AND OFF-EARTH MINING Hamid Kazemi, . Iran

IAC-16.E7.2.14 (withdrawn)

THE APPLICATION OF INTERNATIONAL TRADE LAW TO SPACE MINING ACTIVITIES

V. Gopala Krishnan, Indian Space Research Organization (ISRO),

IAC-16.E7.2.15

SPACE RESOURCES: BETWEEN ECONOMIC AND LEGAL COMMONS Eytan Tepper, Institute of Air and Space Law, McGill University,

IAC-16.E7.2.16

SPACE RESOURCES EXPLOITATION FROM THE INTERNATIONAL AND DOMESTIC LAW PERSPECTIVES: THE RUSSIAN APPROACH Olga Volynskaya, ROSCOSMOS, Russian Federation

E7.3. Contemporary Considerations about the 1986 Principles Relating to Remote Sensing of the Earth from Space

September 28 2016, 09:45 — Salon de Eventos 6

Co-Chair(s): Martha Mejia-Kaiser , Independent Researcher, Germany; Maureen Williams, Chair, ILA Space Law Committee, UK & UBA, Conicet, Buenos Aires, Argentina; Rapporteur(s): KUMAR ABHIJEET, National Law School of India

University, India;

THE NEED OF AN INTERNATIONAL CONVENTION ON REMOTE

Alvaro Fabricio Dos Santos, Advocacy General of the Union - AGU,

Austria

Federation

SUPPORT

IAC-16.E6.3.6

THE CASE OF BRINGING SOCIO ECONOMICAL CHANGE, BY INTRODUCING THE SPACE INDUSTRY IN THE CARIBBEAN LATIN

ISAAC: INFERENTIAL SEMANTIC ANALYSIS FOR THE AGGREGATION







IAC-16.E7.3.2

TOWARDS A NEW APPROACH TO SUPPORT THE1986 UN PRINCIPLES ON REMOTE SENSING

Ali Akbar Golroo, Aerospace Research Institute, Iran

IAC-16.E7.3.3

THE ROLE OF SOVEREIGNTY IN REMOTE SENSING AND CUSTOMARY INTERNATIONAL LAW

Andrea Harrington, University of Mississippi, United States

IAC-16.E7.3.4 (withdrawn)

CONTEMPORARY CONSIDERATIONS ABOUT THE 1986 UN PRINCIPLES RELATING TO REMOTE SENSING OF THE EARTH FROM SPACE

Ranjana Kaul, Dua Associates, India

IAC-16.E7.3.5

THE SATELLITE AND THE INDIVIDUAL: THE LEGAL RESOLUTION OF REMOTE SENSING

PJ Blount, University of Mississippi School of Law, United States

IAC-16.E7.3.6

MIGRATION FLOWS IN THE EU AND REMOTE SENSING Gabriella Catalano, Università di Roma "La Sapienza", Italy

IAC-16.E7.3.7

IS THERE THE NEED TO EXPAND THE SCOPE OF THE UNITED NATIONS REMOTE SENSING PRINCIPLES? Catherine Doldirina, Joint Research Centre (JRC) of the European Commission, Italy

IAC-16.E7.3.8 (withdrawn)

SATELLITE DATA AND THE ICJ: NEW DEVELOPMENTS? Olivier Ribbelink, T.M.C. Asser Institute, The Netherlands

IAC-16.E7.3.9

TIME FOR IMPROVEMENT: THE 1986 UN REMOTE SENSING PRINCIPLES IN THE INFORMATION AGE Stefan A. Kaiser, , Germany

E7.4. Legal Challenges Represented by Large **Satellite Infrastructures and Constellations**

September 28 2016, 14:45 — Salon de Eventos 6

Co-Chair(s): PJ Blount, University of Mississippi School of Law, United States; Steven Freeland, Western Sydney University,

Rapporteur(s): Alexander Soucek, European Space Agency (ESA), France;

IAC-16.E7.4.1

ENSURING SUSTAINABILITY OF TECHNOLOGY AND THE LAW Lesley Jane Smith, Leuphana University of Lüneburg/Weber-Steinhaus & Smith, Germany

IAC-16.E7.4.2

NON-GSO FSS SATELLITE SYSTEMS – TOMORROW CHALLENGES FOR THE ITU RADIO REGULATIONS Yvon HENRI, ITU, Switzerland

IAC-16.E7.4.3 (withdrawn)

THE DEVELOPMENT AND REGULATION OF SMALL SATELLITES Jilian Wang, China Great Wall Industry Corporation, China

IAC-16.E7.4.4 (withdrawn)

THE NECESSITY AND FEASIBILITY OF LEGAL AND REGULATORY FRAMEWORKS FOR SMALL SATELLITES GOVERNANCE Guoyu Wang, Beijing Institute of technology(BIT), China

BRINGING INTO USE OF FREQUENCY ASSIGNMENTS FOR NON-GSO CONSTELLATIONS: NEW REGULATORY FRAMEWORK REQUIRED Elina Morozova, Intersputnik International Organization of Space Communications, Russian Federation

IAC-16.E7.4.6

BLACK MARKET LAUNCHES OF SMALL SATELLITES: A NEW CHALLENGE FOR THE SPACE LAW REGIME George Anthony Long, , United States

IAC-16.E7.4.7

EVOLVING OPERATOR "DUTY OF CARE" FOR LARGE SATELLITE CONSTELLATIONS James Rendleman, , United States

IAC-16.E7.4.8

DEALING WITH THE REGULATORY VACUUM IN LEO: NEW INSURANCE SOLUTIONS FOR SMALL SATELLITES CONSTELLATIONS Neta Palkovitz, ISIS- Innovative Solutions In Space B.V., The

IAC-16.E7.4.9 (withdrawn)

LEGAL CHALLENGE AHEAD: HOW TO AVOID "SMALL SAT WARS"? Ntorina Antoni, LL.M. (adv), Attorney at Law, Swiss Space Systems Holding SA, Switzerland

IAC-16.E7.4.10

RESPONSIVE, ON-DEMAND SMALL SATELLITE CONSTELLATION LAUNCHES FROM THE STRATOSPHERE: AN OPPORTUNITY FOR THE **EUROPEAN LAWMAKER**

Annelie Schoenmaker, . Spain

IAC-16.E7.4.11

THE LEGAL DIMENSIONS OF CYBER-CONFLICT WITH REGARD TO LARGE SATELLITE INFRASTRUCTURES AND CONSTELLATIONS Larry Martinez, International Institute of Space Law (IISL), United

IAC-16.E7.4.12

REIMAGINING NATIONAL REGULATORY APPROACHES TO THIRD PARTY LIABILITY INSURANCE: TOWARDS A SINGLE AGGREGATED

Edmond Boulle, Satellite Applications Catapult, United Kingdom

E7.5. Current Developments in Space Law with Particular Consideration for Latin **America**

September 30 2016, 09:45 — Salon de Eventos 6

Co-Chair(s): OLAVO DE OLIVEIRA BITTENCOURT NETO, Catholic University of Santos, Brazil; Ranjana Kaul, Dua Associates,

Rapporteur(s): Luis F. Castillo Arganaras , National Council of Scientific and Technical Research (CONICET) of Argentina and Universidad Argentina de la Empresa (UADE), Argentina;

IAC-16.E7.5.1

SPACE LAW AS A SOURCE OF INTERNATIONAL COOPERATION CARLOS GABRIEL ARGUELLES ARREDONDO, , Mexico

IAC-16.E7.5.2 (withdrawn)

ONE SPACE, ONE GOAL, ONE UNIVERSITY. Juan Pablo Vargas Pallini, , Colombia

IAC-16.E7.5.3

THE CONVENTION ON REGISTRATION OF OBJECTS LAUNCHED INTO OUTER SPACE AND ITS IMPLEMENTATION IN COLOMBIA'S NATIONAL LEGAL SYSTEM

Jairo Becerra, Universidad del Rosario, Colombia

IAC-16.E7.5.4

COMMON ELEMENTS IN THE LATIN AMERICAN MECHANISMS IN COOPERATION IN THE PEACEFUL EXPLORATION AND USE OF OUTER

Setsuko Aoki, Keio University, Japan

IAC-16.E7.5.5

THE DEVELOPMENT OF SPACE TECHNOLOGY AND INTERNATIONAL COOPERATION. CASE STUDY: ARGENTINA AND CHINA Luis Fernando Castillo Argañarás, National Council of Scientific and Technical Research (CONICET) of Argentina and Universidad Argentina de la Empresa (UADE), Argentina

IAC-16.E7.5.6

RECENT BRAZILIAN INITIATIVES TO ADDRESS LEGAL GAPS AND BARRIERS THAT AFFECT THE DEVELOPMENT OF THE NATIONAL SPACE INDUSTRY

TATIANA VIANA, Sapienza - University of Rome, Italy

IAC-16.E7.5.7

THE PROPOSAL OF A PUBLIC -PRIVATE PARTNERSHIPS AS AN ELEMENT OF EVOLUTION OF SPACE LAW IN COLOMBIA Camilo Guzman Gomez, UNIVERSIDAD SERGIO ARBOLEDA, Colombia

IAC-16.E7.5.8

PRIVATISATION OF PSLV: WHAT THE LAW OF OUTER SPACE DEMANDS?

KUMAR ABHIJEET, National Law School of India University, India

THE SECOND AFRICAN NATIONAL SPACE LAW: THE NIGERIAN NASRDA ACT AND THE DRAFT REGULATIONS ON LICENSING AND SUPERVISION

Frans von der Dunk, University of Nebraska-Lincoln, The Netherlands

IAC-16.E7.5.10

UNGA RESOLUTION 70/27 'NO FIRST PLACEMENT OF WEAPONS IN SPACE': A POSITIVE CONTRIBUTION TO PREVENT AN ARMS RACE IN OUTER SPACE?

Fabio Tronchetti, University of Mississippi, China

IAC-16.E7.5.11

THE INTERNATIONAL SPACE SOFT LAW AND ITS ROLES IN INTERNATIONAL SPACE GOVERNANCE Shouping Li, Beijing Institute of Technology, China

IAC-16.E7.5.12

LATIN AMERICAN SPACE ACTIVITIES IN THE 21ST CENTURY: TO WHAT MUSICAL BEAT, SAMBA OR SALSA?

Sylvia Ospina, S. Ospina & Associates - Consultants, United States

E7.6-E3.5. 31st Joint IAA/IISL Scientific **Legal Roundtable: The Future of Regional** Cooperation

September 29 2016, 09:45 — Salon de Eventos 8

Co-Chair(s): Marco Ferrazzani, European Space Agency (ESA),

Rapporteur(s): Marc Haese , DLR, German Aerospace Center, Germany; Nicola Rohner-Willsch, Deutsches Zentrum für Luftund Raumfahrt e.V. (DLR), Germany;

IAC-16.E7.6-E3.5.1

THE DIFFICULTIES OF SPACE COOPERATION IN LATIN AMERICA Camilo Guzman Gomez, UNIVERSIDAD SERGIO ARBOLEDA,

IAC-16.E7.6-E3.5.2

THE IMPORTANCE OF REGIONAL COOPERATION IN THE DEVELOPMENT OF LARGE SPACE SYSTEMS Mark Sirangelo, Sierra Nevada Corporation, United States

THE ROLE OF REGIONAL SPACE COOPERATION IN PROCURING SPACE SECURITY IN THE ASIA-PACIFIC REGION: A PROSPECT FOR

Yun Zhao, The University of Hong Kong, Hong Kong

IAC-16.E7.6-E3.5.4

REALIZING A REGIONAL AFRICAN SPACE PROGRAMME Timiebi Aganaba-Jeanty, World Space Week Association, Canada

IAC-16.E7.6-E3.5.1.5

EUROPEAN REGIONAL COOPERATION IN SPACE: LEGAL ASPECTS Frans G. Von der Dunk, University of Nebraska, College of Law, The

E7.7-B3.8. Joint IAF-IISL Session on the Legal Framework for Collaborative Space Activities

September 30 2016, 13:30 — Guadalajara Hall Salon 2

Co-Chair(s): Bernhard Schmidt-Tedd , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Cristian Bank, Rovsing A/S, Denmark;

Rapporteur(s): Olga Stelmakh-Drescher , Institute of Air and Space Law, McGill University, Canada;

IAC-16.E7.7-B3.8.1

INTERNATIONAL COOPERATION IN CHINA'S SPACE UNDERTAKINGS: MELTING DOWN POLITICAL OBSTACLES THROUGH LEGAL MEANS Xiaodan Wu, China Central University of Finance and Economics, China

IAC-16.E7.7-B3.8.2

BUILDING BLOCKS FOR INTERNATIONAL COOPERATIVE AGREEMENT IN THE SPACE SECTOR

Philippe Clerc, Centre National d'Etudes Spatiales (CNES), France

IAC-16.F7.7-B3.8.3

THE CHALLENGES OF THE LEGISLATIVE BASE AS APPLIED TO THE COLLABORATIVE SPACE PROGRAMS IN MULTISECTORAL ECONOMY Yuri Makarov, Peoples' Friendship University of Russia, Russian

IAC-16.E7.7-B3.8.4

THE INTER-AGENCY SPACE DEBRIS COORDINATION COMMITTEE: A COLLABORATIVE EFFORT AND ITS EFFECTS ON NORM-MAKING Alexander Soucek, European Space Agency (ESA), France

IAC-16.F7.7-B3.8.5

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION COOPERATION WITH LATIN AMERICA, THE MIDDLE EAST AND

Robin Frank, National Aeronautics and Space Administration (NASA), United States

IAC-16.E7.7-B3.8.6 (withdrawn)

FUTURE OF REGIONAL CO-OPERATION IN AFRICAN SPACE POLICIES, GOVERNANCE AND LEGAL TOOLS. Nomfuneko Irene Majaja, , South Africa

E7.IP. Interactive Presentations

September 28 2016, 13:15 — Exhibition Hall, Jalisco Hall C

Coordinator(s): Lesley Jane Smith , Leuphana University of Lüneburg/Weber-Steinhaus & Smith, Germany; Mahulena Hofmann, University of Luxembourg, Luxemburg; Rapporteur(s): Nicholas Puschman, European Space Agency (ESA), France;

IAC-16.E7.IP.1 (withdrawn)

REDUCING LAUNCH COSTS - THE LEGAL BASIS OF AERIAL AND SUBORBITAL SATELLITE LAUNCHES. Hamza Hameed, Leiden University, The Netherlands

IAC-16.E7.IP.2 (withdrawn)

RECONSIDERATION OF PATENT RIGHTS: A REALITY CHECK FOR OUTER SPACE INVENTIONS Amitava Chakraborty, , United States









IAC-16.E7.IP.3

PUBLIC SYSTEM OF OWNERSHIP FOR GALILEO SATELLITES: ISSUES OF RESPONSIBILITY, LIABILITY AND REGISTRATION Andreas Loukakis, University of Luxembourg, Luxemburg

IAC-16.E7.IP.4 (withdrawn)

LAW & POLICY COLLIDE IN SPACE
Anja Nakarada Pecujlic, University of Vienna, Austria

IAC-16.E7.IP.5

THE POTENTIAL COMMERCIALIZATION OF CHINA'S SPACE STATION AND ITS RELEVANCE TO SPACE LAW

Jie Long, The University of Hong Kong, Hong Kong

IAC-16.E7.IP.6 (withdrawn)

DISTINGUISHING ON-ORBIT JURISDICTION FROM SPACE TRAFFIC MANAGEMENT IN THE AMERICAN REGULATORY CONTEXT Danielle Miller, University of Nebraska, College of Law, United States

IAC-16.E7.IP.7

POLICY IMPLICATIONS FROM THE 4TH ISU SSP MARS TREATYMAKING WORKSHOP

Miranda Bradshaw, International Space University (ISU), United Kingdom

IAC-16.E7.IP.8

INVESTMENT PROTECTIONS FOR SPACE MINING OPERATIONS: ENSURING THE BENEFITS OF SPACE FOR ALL

Daniel Porras, Georgetown University Law Center, United States

IAC-16.E7.IP.9 (withdrawn)

SATELLITE JAMMING, HUMAN RIGHTS PROTECTION AND NATIONAL SECURITY

Elena Carpanelli, , Italy

IAC-16.E7.IP.10

ON-ORBIT TRANSFER OF SATELLITES BETWEEN STATES: LEGAL ISSUES-WITH SPECIAL EMPHASIS ON LIABILITY AND REGISTRATION Upasana Dasgupta, Institute of Air and Space Law, McGill University, India

IAC-16.E7.IP.11 (withdrawn)

MAKING AN EXCEPTION IN THE INTERNATIONAL LAW ON THE WEAPONIZATION OF SPACE FOR THE MITIGATION OF NEOS. AN ARMS RACE IN SPACE?

Dimitrios Stratigentas, , Greece

IAC-16.E7.IP.12

COOPERATION AMONG BRICS IN SPACE MATTER: A REVIEW OF BRAZILIAN AGREEMENTS

Jonathan Andrade, , Brazil

IAC-16.E7.IP.13 (withdrawn)

SPACE LAW AND HUMAN RIGHTS: THE FUTURE IN ITS CONVERGENCE

Deepika Jeyakodi, , The Netherlands

IAC-16.E7.IP.14 (withdrawn)

THE RELATIONSHIP BETWEEN APPROPRIATION AND OWNERSHIP IN THE CONTEXT OF INTERNATIONAL SPACE LAW Yangzi Tao, Beijing Institute of Technology, China

IAC-16.E7.IP.15

THE MINERAL RIGHTS IN OUTER SPACE MINING Barbara Skardzińska, University of Warsaw, Poland

IAC-16.E7.IP.16

LEGAL CHALLENGES OF CYBER SECURITY IN SPACE Kinga Kolasa-Sokolowska, , Poland

IAC-16.E7.IP.17

APPLICABLE NORMATIVE TO INTERNATIONAL SPACE CRIMINAL LAW

Víctor Iván Coello Marcelín, , Mexico

IAC-16.E7.IP.18

COMMERCIALISATION OF REMOTE SENSING ACTIVITIES: A NEED FOR AN INTERNATIONAL TREATY

Nandini Paliwal, International Institute of Air and Space Law, Leiden University, Netherlands Antilles

IAC-16.E7.IP.19 (withdrawn)

THE IMPACT OF SPACE RELATED NON GOVERNMENTAL ORGANISATIONS IN DEVELOPING SPACE LAW AND POLICY AND SPACE EXPLORATION
Sidhant Sharma, Leiden University, The Netherlands

IAC-16.E7.IP.20

ASTEROID MINING: THE LAW AWAKENS

Grey Dodge, , United States

IAC-16.E7.IP.21

NATIONAL SPACE LAW: THE CASE OF FRANCE AND NEW CHALLENGES FOR SPACE ACTIVITIES

Anne-Sophie Martin, University of Rome "La Sapienza", Italy

IAC-16.E7.IP.22 (withdrawn)

STATE RESPONSIBILITY AND LIABILITY IN SPACE LAW VIS A VIS GENERAL INTERNATIONAL LAW

Upasana Dasgupta, Institute of Air and Space Law, McGill University, India

IAC-16.E7.IP.23

ASTEROID MINING & ITS LEGAL IMPLICATIONS

Neil Modi. . India

IAC-16.E7.IP.24

SHAPING A LEGAL SYSTEM FOR CHINA'S BEIDOU NAVIGATION SATELLITE SYSTEM

Dejian KONG, International Institute of Air and Space Law, Leiden University, The Netherlands

IAC-16.E7.IP.25

LEGALITY OF NON-COOPERATIVE SATELLITE REMOVAL Siqing LI, , China

IAC-16.E7.IP.26

THE U.S. COMMERCIAL SPACE LAUNCH COMPETITIVENESS ACT AND THE OUTER SPACE TREATY: A CONTRADICTION OR A LACUNA? GEORGIA MARIA KALOGIROU, , Greece

IAC-16.E7.IP.27

IS NON-EXISTENCE OF A TREATY EQUAL TO INEFFECTIVE TREATY? AN EXAMINATION ON THE APPLICATION OF THE MOON AGREEMENT

Merve ERDEM, , Turkey

IAC-16.E7.IP.28

THE U.S. SPACE ACT OF 2015 AND THE PRIVATE INTERNATIONAL LAW: FROM INTELLECTUAL PROPERTY RIGHTS TO PROPERTY RIGHTS IN SPACE

Elie Aoun, Université de Lille 2, France

IAC-16.E7.IP.29

NEW IMPLICATIONS OF LUNAR EXPLOITATION AND MOON AGREEMENT

AMIT KUMAR PADHY, Hidayatullah National Law University, India

AC-16.E7.IP.30

LEGAL APPROACH TO THE EXPLOITATION OF NATURAL RESOURCES OF THE ASTEROID BY THE NON-GOVERNMENTAL SECTOR: AN ANALYSIS FROM THE PERSPECTIVE OF CHINA

Mingyan Nie, Institute of Air and Space Law, University of Cologne, Germany

AC-16.E7.IP.31

A NEW ERA FOR SPACEFARING NATIONS: MINING THE WAY TO A DOCTRINAL RESOLUTION TO PROPERTY RIGHTS IN SPACE Richard Burks, Duke University, United States

IAC-16.E7.IP.32 (withdrawn)

MINING IN OUTER SPACE: SOVÉREIGNTY, JURISDICTION AND PROPERTY RIGHTS (UN-)RECONCILED

Ksenia Shestakova, , Russian Federation

IAC-16.E7.IP.33

UNPREDICTABLE FUTURE? ----THE PRINCIPLE IN OUTER SPACE TREATY ON SPACE RESOURCES MINING AND NATIONAL COMMERCIAL SPACE LEGISLATION

Juqian Li, CHINA UNIVERSITY OF POLITICAL SCIENCE AND LAW, China

IAC-16.E7.IP.34

PATENTS IN OUTER SPACE: AN APPROACH TO THE LEGAL FRAMEWORK OF FUTURE INVENTIONS

Juan Jimenez, UNIVERSIDAD SERGIO ARBOLEDA, Colombia

AC-16.E7.IP.35

SMALL SATELLITES LEO CONSTELLATIONS: ADAPTATION OF THE REGULATORY REGIME AND DEVELOPMENT PERSPECTIVES Ceren Canet Sahin, , France

IAC-16.E7.IP.36

THE ENVIRONMENTAL IMPACT OF SPACE TOURISM: A LEGAL GUIDELINE

Alberto Rueda Carazo, Universidad de Jaen, Spain

GTS - Global Technical Symposium

GTS2-B3.9. Human Spaceflight Global Technical Session

September 28 2016, 14:45 — Joya 1&2

Co-Chair(s): Cristian Bank , Rovsing A/S, Denmark; Guillaume Girard , INSYEN AG, Germany;

IAC-16.B3.9-GTS.2.1

ORION: LESSONS FROM EFT-1 AND EM-1, AA-2, AND EM-2 STATUS Scott Norris, Lockheed Martin Space Systems Company, United States

IAC-16.B3.9-GTS.2.3 (withdrawn)

HIPS: A CONCEPT STUDY TO USE HAPTIC INTEGRATION TECHNOLOGY IN PLANETARY SPACESUITS FOR SENSORY DEGRADATION MITIGATION

Poonampreet Kaur Josan, University of North Dakota, United States

IAC-16.B3.9-GTS.2.4

ADVANCED MEDICAL TECHNOLOGIES IN SUPPORT OF MANNED COMMERCIAL SPACE FLIGHTS

Melchor Antunano, U.S. Federal Aviation Administration (FAA), United States

IAC-16.B3.9-GTS.2.5

EXAMINING THE VALUE OF MOUNTAINEERING EXPEDITIONS FOR SKILL DEVELOPMENT AND LEARNING TRANSFER: IMPLICATIONS FOR ASTRONAUT SURVIVAL TRAINING

 ${\it Nathan Smith, University of Northampton, United Kingdom}$

IAC-16.B3.9-GTS.2.6 (withdrawn)

"ASTRONAUT 2.0": CONNECTING THE PHYSICAL AND SOCIAL PERCEPTIONS ON HUMAN IDENTITY, FORM AND FUNCTION IN SPACE TO DEFINE THE PARAMETERS OF SPACE FARING INDIVIDUALS Sara Langston, Senmury Consulting LLC, United States

IAC-16.B3.9-GTS.2.7

SIMULATING LONG DURACTION DEEP SPACE MISSIONS Eleanor Morgan, United State

GTS3-B2.8-GTS.3 Space Communications and Navigation Global Technical Session

September 29 2016, 14:45 — Joya 1&2

Co-Chair(s): Edward W. Ashford , Graz University of Technology (TU Graz), Austria; Kevin Shortt , Canadian Space Society, Germany;

Rapporteur(s): Stephanie Wan , Space Generation Advisory Council (SGAC), United States;

IAC-16.B2.8-GTS.3.1

THE GPS L1 ACQUISITION-TRACKING TRANSITION METHOD OF HIGH SENSITIVITY AND DYNAMIC FOR HEO ORBIT Jia Tian, China Academy of Space Technology (Xi'an), China

IAC-16.B2.8-GTS.3.2

DEVELOPMENT OF NAVIGATION SATELLITE SYSTEM AND APPLICATION CHARACTERISTIC ANALYSIS

Jie Xin, Engineer, China

IAC-16.B2.8-GTS.3.3

GROUNDS FOR TURKISH DATA RELAY SYSTEM
CELAL DUDAK, TUBITAK Uzay, Space Technologies Research
Institute, Turkey

IAC-16.B2.8-GTS.3.4

RESEARCH ON DESIGN OF SATELLITE NAVIGATION SIGNAL STRUCTURE

Jie Xin, Engineer, China

IAC-16.B2.8-GTS.3.5

STUDY ON DEVELOPMENT OF NEXT GENERATION DATA RELAY SATELLITE SYSTEM

Zhengan Zhai, Beijing Space Information Relay and Transmission Technology Research Center (BSIR), China

IAC-16.B2.8-GTS.3.6

SIMULATION OF INFORMATION TRANSFER ON QUANTUM-BASED SATELLITE NETWORK

István Vercseg, University of West Hungary, Hungary

IAC-16.B2.8-GTS.3.7

A LOW-COST MOBILE GROUND STATION FOR SATELLITE COMMUNICATION IN VHF BAND

 ${\it SNEHA\ VELAYUDHAN,\ Rochester\ Institute\ Of\ Technology,\ United\ States}$

IAC-16.B2.8-GTS.3.8

COMPARISON BETWEEN GENERATION OF ANALOG AND DIGITAL QPSK MODULATION FOR SATELLITES COMMUNICATION SYSTEMS Mohamed Elhady Keshk, Kyushu Institute of Technology, Japan

IAC-16.B2.8-GTS.3.9

FPGA IMPLEMENTATION OF A HIGH THROUGHPUT ERROR CORRECTING TELE-COMMAND DECODER Rakshith Ramesh, India

IAC-16.B2.8-GTS.3.10 (withdrawn)

BUSINESS BEYOND THE 70S, A COST-EFFECTIVE APPROACH TO THE ARCTIC

Nil Angli, Surrey Satellite Technology Ltd (SSTL), United Kingdom

GTS.4-E2.3. Student Team Competition

September 27 2016, 09:45 — Joya 1&2

Co-Chair(s): Carolyn Knowles , National Aeronautics and Space Administration (NASA), United States; Naomi Mathers, Advanced Instrumentation and Technology Centre (AITC), Australia;

Rapporteur(s): Andrea Jaime , OHB System AG - Munich, Germany; Michelle Mendes , World Space Week Association, United States;

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IAC-16.E2.3-GTS.4.1

A NEWLY DEVELOPED AND LAUNCHED ANDROID-BASED PICOSAT CARRYING TWO FEMTOSATS Xingzhi Hu, National University of Defense Technology, China

IAC-16.E2.3-GTS.4.2 (withdrawn)

PALLAS: A PORTABLE ASTEROID LIFT AND LOCK AGGREGATE SYSTEM Charlotte Kiang, Cornell University, United States

IAC-16.E2.3-GTS.4.3 (withdrawn)

PROJECT AQUACULTURE Daniele Trimarchi, , Italy

IAC-16.E2.3-GTS.4.4

UNAM SPACE IN SAMPLE RETURN ROBOT CHALLENGE: CREATING AN EXPLORING ROVER FOR NASA

Juan Carlos Mariscal, Facultad de Ingeniería-UNAM, Mexico

IAC-16.E2.3-GTS.4.5 (withdrawn)

THERMAL SYSTEM DESIGN AND ORBITAL ANALYSIS OF SWAYAM: AN OVERVIEW OF THE DESIGN PRINCIPLES AND TECHNICAL CONSIDERATIONS

Tanvi Katke, College of Engineering, Pune, India

IAC-16.E2.3-GTS.4.6

DOUBLE-LOOP DUAL-BAND VHF/UHF MONOPOLE ANTENNA FOR ALEKSANDR NANOSATELLITES

Zouhair Brigech, Concordia University, Canada

NEXT EXPLORATION UNIVERSAL STATION (NEXUS) Maria Grulich, Technical University of Munich, Germany

FEASIBILITY STUDY FOR AN AUTONOMOUS EARTH-TO-MOON TRANSFER AND LUNAR OPERATIONS OF A 27U NANOSATELLITE Edoardo Cucchetti, Student, France

IAC-16.E2.3-GTS.4.9

ALTERNATIVE APPROACHES FOR REMOTE SENSING: A STRATOSPHERIC BALLOON EDUCATIONAL EXPERIMENT TO ANALYSE PHOTOSYNTHETIC ACTIVITY OF PLANTS Geiner Gustavo Fonseca Naranjo, Universidad de Costa Rica, Costa

Students and Young Professionals Events

6.1 Young Professionals events

All young professionals, please join us at these events included in your registration.

6.1.1 2016 IPMC Young Professionals Workshop

Date: Sunday 25 September

Time: 09:00 - 18:00 Venue: Salon de Eventos 7



The goal of the IPMC YP Workshop is to gather inputs from young professionals in the international space community to gain the knowledge they need to better develop and empower the next generation workforce. For that purpose, three working groups conducted research on three different topics:

- Low-cost and high-performance space projects: How do you improve Project Management processes, methodology and tools for innovative agile low-cost and high-performance space project?
- Knowledge management in the aerospace sector: Identify and assess the existing knowledge management practices in the Aerospace Industry and propose recommendations for the future
- 5 years of IPMC Workshop: practice and aspirations: Which recommendations and conclusions made by the YP workshop are proven by practical realizations? From the YP perspective, which are the first steps to be undertaken to update and implement past recommendations?

The observations and recommendations from these three working groups will be explained and discussed on Sunday 25 September 2016 in Events Ballroom 7 (Salon de Eventos 7), gathered in the IPMC YP Workshop report and delivered to the IPMC participants, their member organizations and the other member organizations of the IAF.

We encourage everyone to join us on Sunday 25 September afternoon from 1h30 PM in Events Ballroom 7 for the presentations and Q&A on the three research topics outlined above.

This workshop is sponsored by:







6.1.2 2016 Young Professionals Programme

Sunday, 25 September

Welcome Reception 19:00

– Guadalajara Hall 7

Introduction to YPP by IAF President Higuchi

Tuesday, 27 September

YPP Panel Discussion and Networking Reception 19:00

– Guadalajara Hall 7

Panel Topic: Making space accessible and affordable to all countries

Moderator:

Victoria Alonso Perez (Chipsafer)

Additional Moderator:

Marc Becnel (RadioBro Corporation)

Panelists:

• Dr. Jan Wörner (ESA)

- General Charles Bolden (NASA)
- Dr. Conrado Varotto (CONAE)

Wednesday, 28 September

Joint YPP/ISU/SGAC

– Guadalajara Hall 7

Speaker:

• Jose-Mariano Lopez Urdiales (Zero 2 Infinity)

Thursday, 29 September

Panel Discussion in the GNF 12:30

– Guadalajara Hall 8

Panel Topic: Success of commercial space ventures - An inspiration for the next generation

Moderator:

• Dr. John Horack (IAF Vice-President)

Panelists:

- John Roth (Sierra Nevada Corporation)
- Sirisha Bandla (Virgin Galactic)
- Steve Lee (Stevenson Astrosat)

6.1.3 Global Technical Symposium

Venue: All in room Joya 1&2

GTS.1-B6.4 ISS Spaceflight Operations: Next Generation Perspectives - Global Technical

Date and Time: Friday, 30 September at 13:30

GTS.2-B3.9 **Human Space Flight Global Technical Session**

Date and Time: Wednesday, 28 September at 14:45

Space Communications and Navigation Global Technical Session GTS.3-B2.8

Date and Time: Thursday, 29 September at 14:45

GTS.4-E2.3 **Student Team Competition**

Date and Time: Tuesday, 27 September at 09:45











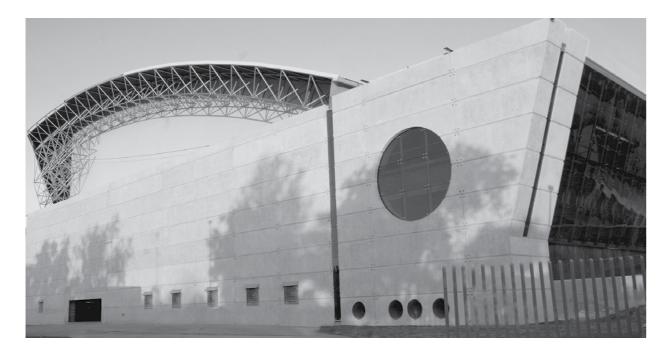




6.1.4 Additional YP events

• GNF Event: SGAC: Technology Transfer - How to make the most if it

Thursday 29 September, 11:30-12:30, Guadalajara Hall 8



6.2 Students events

6.2.1 International Student competition – E.2 Symposium – Student Conference

Coordinators:

Stephen Brock and Marco Schmidt

The IAC E2 Symposium, the "Student Conference," presents technical papers from various disciplines. Additionally, all authors present their work in the frame of an international student competition. All presentations are scientific contributions from students, undergraduate and graduate. Their papers may be on any project in space sciences, industry, or technology.

The Student Conference sessions E2.1 and E2.2 are reserved for students presenting papers of no more than two student authors (single student competition). The Student Team Competition, E2.3, addresses team projects. The project teams may be of any size, but the paper must represent the student work and be authored by three or more students at the undergraduate or graduate level.

All students presenting papers in the E2.1 and E2.2 sessions compete in the student competition for gold and silver medals. Graduate and undergraduate students will be considered separately. Additionally, a best paper prize is awarded for an outstanding technical paper. The best technical paper is selected from all entries. Students presenting in session E2.3 compete for the Hans von Muldau Team Award.

The winners of the student competition receive the prizes during the closing ceremony at the end of the IAF congress.

6.2.2 International Space Education Board (ISEB) Student Programme

I welcome you to attend the dedicated student programs, which will be held during the 67th International Astronautical Congress (IAC). These student activities, organized by the International Space Education Board (ISEB), were carefully crafted to inspire our future space leaders, engineers, scientists, and innovators from around the world.

As this year's ISEB Chair, I take this opportunity to highlight our purpose, which is to provide a mechanism for enhanced cooperation among Members, with a twofold objective of (1) increasing science, technology, engineering, and mathematics (STEM) literacy achievement in connection with space and (2) supporting the future workforce needs of space programs.

The ISEB discusses global issues of importance to each Member's outreach and education programs and implements joint education initiatives. The quality of the student programs designed for the 67th IAC reflects the collaborative effort of the ISEB's Founding Members and Associate Members, respectively: the Canadian Space Agency (CSA); the European Space Agency (ESA); the Japan Aerospace Exploration Agency (JAXA); the National Aeronautics and Space Administration (NASA); the Centre National d'Études Spatiales (CNES); the Victorian Space Science Education Centre (VSSEC), the Korea Aerospace and Research Institute (KARI), the South African National Space Agency (SANSA), and the Agencia Espacial Mexicana (AEM).

This year, ISEB Member agencies will sponsor approximately 60 students to attend the Congress, while also providing special guest speakers, research-related activities, a dedicated International Student Zone, and an ISEB Space Ambassadors' education outreach activity.

On behalf of the ISEB, I would like to thank the International Astronautical Federation and the members of the Local Organizing Committee for their assistance in helping us bring a quality program to this year's participants. In particular, I wish our students a fruitful conference and a memorable experience in Guadalajara.

Sincerely,

Donald G. James Associate Administrator for Education Chair, International Space Education Board



26 - 30 September 2016, Guadalajara, Mexico

International Space Education Board (ISEB) **Student Programme**

Sunday, September 25 – Salon De Eventos 3

09:00 – 16:30 Educator Professional Development Workshop

Sunday, September 25 – Ciudad De Mexico (1, 2, and 3)

14:00 – 15:00	Student Orientation with ISEB HoEs (Room 1)
15:15 – 17:15	Cross Cultural Workshop Part 1 (Room 2)
17:30 - 19:00	Cross Cultural Workshop Part 2 and Reception (Room 3)

Monday, September 26 – Commencement Day – Expo Guadalajara

10:00 - 11:30	Opening Exhibition
12:00 - 13:30	IAC Opening Ceremony
13:30 - 15:00	Plenary 1
16:30-17:30	Heads of ISEB Agencies Q&A Session at the International Student Zone (ISZ)
18:00 - 19:00	Plenary 2
19:30 - 22:00	IAC Reception

Tuesday, September 27 – Expo Guadalajara, ISZ

08:30 – 09:30 **Plenary 3**

09:45 – 12:45	Technical Sessions
12:30 – 13:30	Lunchtime Session (NASA/AEM/SANSA) (Open to All Students) ISZ
14:00 – 17:00	Technical Sessions
17:00 – 18:00	Plenary 4
19:00 – 20:30	Student Networking Night – Real Inn – Ciudad De Mexic

Wednesday, September 28 – Expo Guadalajara, ISZ

08:30 - 09:30	Plenary 5
09:45 - 12:45	Technical Sessions
12:30 – 13:30	Lunchtime Session (JAXA/ESA/CNES) (Open to All Students) ISZ
13:30 - 14:30	JAXA Student Presentations at ISZ
14:45 – 17:45	Technical Sessions
17:45-18:45	Highlight Lecture
19:00 -22:00	ISEB No-Host Dinner

Thursday, September 29 – Expo Guadalajara, ISZ

08:30 - 09:30	Plenary 6
09:00 - 12:00	Technical Sessions
12:30 – 13:30	Lunchtime Session (CSA/VSSEC/KARI) (Open to All Students) ISZ
13:30 - 14:30	Plenary 7
14:45 – 17:45	Technical Sessions
17:00 – 17:45	Outreach Activity Training (ISEB Students Only) ISZ
17:45 - 18:45	Highlight Lecture

Friday, September 30 – ISEB Outreach Day – Expo Guadalajara, ISZ

09:00 – 10:30	Outreach Activity (Group 1)
10:30 – 11:00	Tour of Exhibits (Group 1)
12:00 – 13:30	Outreach Activity (Group 2)
13:30 – 14:00	Tour of Exhibits (Group 2)
14:00 – 15:00	Technical Sessions
15:00 – 16:30	Tear-down of the ISZ
16:30 – 17:30	Closing Ceremony

Saturday, October 1 – ISEB Teambuilding – University of Guadalajara

09:00 – 16:30 ISEB Students and Staff



















6.2.3 IAF International Student Workshop

1 October 2016 - Instituto Tecnológico y de Estudios Superiores de Monterrey

The International Astronautical Federation is organizing its third International Student Workshop, on the theme: Space Innovation to Reduce the Digital Divide, this time, in cooperation with the Instituto Tecnológico y de Estudios Superiores de Monterrey in conjunction with the 67th International Astronautical Congress (IAC), 26 – 30 September 2016 in Guadalajara, Mexico.

The workshop will be held at the Guadalajara campus of the Instituto Tecnológico y de Estudios Superiores de Monterrey on Saturday 1 October 2016 (the day immediately after IAC2016)

Students from around the world will be able to present their research in front of an assembly of peers and a panel of senior space experts with a prize certificate being awarded for the best presentation. All areas of space activity may be presented: technology, business, policy, law, education, etc.

During the day-long workshop, participants will have the opportunity to:

- Gain first-hand knowledge of innovative space ideas and activities.
- Present their work and get feedback.
- Interact with students from Mexico and from all over the world.
- Learn about the Instituto Tecnológico

If you wish to attend the workshop, please contact Emma Huis, emma.huis@iafastro.org









6.3. IAF Grant and Recognition programmes for students and YP

6.3.1 Young Space Leaders Recognition Programme

These awards are issued to students and young professionals who are in the course of their academic or professional activities, and have helped promote astronautics by enhancing outreach opportunities, expanding knowledge of space among the general public or fostering deeper engagement within the international space community. The four winners will be awarded their prizes during the Closing Ceremony of the 67th IAC on 30 September. They will also be invited to the gala dinner as guests of honor of the IAF President, Mr. Kiyoshi Higuchi.



Victoria Alonsoperez

Victoria is an Electronics and Telecommunication Engineer and an entrepreneur. She invented Chipsafer, a platform that can track and detect anomalies in cattle behavior remotely and autonomously. Thanks to Chipsafer in 2012 she was the winner of the International Telecommunication Union Young Innovators Competition and in 2013 she won the Best Young Inventor Award from the World Intellectual Property Organization (WIPO). In 2014 the Inter-American Development Bank selected Chipsafer as the Most Innovative Startup of Latin America and the Caribbean, and the MIT Technology Review selected Victoria as the Innovator of the Year - Argentina & Uruguay.

Victoria graduated from Universidad de la Republica, the International Space University, and Singularity University. From 2014 until 2016 Victoria served as Chair of Space Generation Advisory Council, and she is currently a member of the Advisory Board. Victoria is also the New Generation Member of the Board of Directors of the Space Foundation.



Andrea Bovd

Andrea Boyd is an ISS Flight Controller stationed at the European Astronaut Centre.

A Mechatronic Engineer from The University of Adelaide, Australia, she specialised in robotics in South Korea, worked as an Automation Engineer for many industries then spent years underground and in the end to end process plant, turning ore into refined products, as a Mining Control Systems Specialist onsite in the remote desert.

Andrea certified as an ISS Flight Operations Engineer for payload control and cross-certified in later years for crew operations, serving in the European Space Agency's Human Spaceflight and Robotic Exploration Directorate. With ten years combined mining and aerospace engineering, she has lived, worked and studied in over 75 nations, assists with IAC2017 Adelaide, serves on IAF committees, co-authored a new textbook on Space Mining and is on the Australian of the Year Honour Roll for her volunteer work around the world at schools, universities and NGOs, inspiring young people to pursue ambitious careers.



Amalio Monzón

Amalio Monzón, currently Head of Engineering Quality Wing Development at Airbus, is an aerospace manager with more than 10 years of experience acquired in different positions in the United Kingdom, Germany, France and Spain.

He holds an Executive MBA, a MSc in Economics & Business, a MSc in Industrial Engineering and a BSc in Aeronautical

In his early career, Amalio participated in several educational programmes such as the Student Parabolic Flight Campaign and the European Student Moon Orbiter of the European Space Agency or the Aeronautics Competition of NASA. Subsequently, he co-founded and led as President the Laboratory for Microgravity and Space Research (LEEM), a Spain-based non-profit organisation whose mission is to promote Space among students and young professionals through hands-on projects as well as bring them closer to the senior professionals, scientists and leaders of the sector.

From 2008, Amalio actively contributes to the activities of the International Astronautical Federation supporting its Young Professional Programme, serving in the Technical Activities Committee and coordinating the Global Workforce Development Subcommitee. Likewise he has presented numerous papers in the International Astronautical Congress and published in Space journals and magazines in the fields of workforce development and microgravity research.

Beyond these activities, Amalio has been also engaged as mentor and assessor in the Fly Your Ideas contest, a partnership between Airbus and UNESCO aimed at encouraging young people to pursue careers in engineering and STEM areas by offering students the opportunity to work on the most important challenges facing the aviation industry.



Takashi Ohtani

Mr. Ohtani is an Associate Senior Engineer in the Systems Engineering Group of the Chief Engineer Office at the Japan Aerospace Exploration Agency (JAXA). He is in charge of Systems Engineering (SE) / Project Management (PM) processes & methodologies, R&D management, and knowledge management at the agency level. He also provides oversight and assessment for the JAXA's

He joined JAXA in 2005, he had worked as an Attitude and Orbit Control Subsystem (AOCS) engineer in the Guidance and

Control Group. He had studied on robust and precise attitude control for large flexible satellite, and developed high reliable Inertial Reference Unit (IRU) that has been used for Japanese satellites. He had also worked on several flight projects and missions (e.g., Engineering Test Satellite-VIII (ETS-VIII), Optical Inter-orbit Communications Engineering Test Satellite (OICETS), Greenhouse gases Observing Satellite (GOSAT), Space Infrared telescope for Cosmology and Astrophysics (SPICA), Super Low Altitude Test Satellite (SLATS), and Japan Astrometry Satellite Mission for Infrared Exploration (JASMINE)).

Between 2009 and 2011, he had worked in the Space Technology Demonstration Research Center as a Lead Systems Engineer and Deputy Project Manager for Small Demonstration Satellite - 4 (SDS-4). After the launch in 2012, he had led the operations team as a Spacecraft Operations Conductor. In 2013, he was promoted to the Associate Senior Engineer, and had mainly conducted the new space mission studies and project formulation.

In 2014, he had been an International Visiting Research Fellow at the European Space Research and Technology Center (ESTEC) of the European Space Agency (ESA) and conducting the research regarding SE/PM processes, methodologies, and new space mission studies.

He honored the Outstanding Technology Award from the Society of Instruments and Control Engineers (SICE) in 2011 for the world's first achievements of in-orbit advanced attitude control experiments using Linear Parameter Varying (LPV) Techniques for Japanese large flexible satellite ETS-VIII. He also received the JAXA Presidential Award in 2012 and the Space Frontier Award from the Japan Society of Mechanical Engineers (JSME) in 2013, for the success of SDS-4 spacecraft systems development and its mission operations. Furthermore, he was awarded the JAXA Vice Presidential Award in 2016 for the reformation of JAXA's project management process.

He serves on the IAF International Project/Program Management Committee (IPMC) and Knowledge Management for Space Organizations Technical Committee (KMTC) as the JAXA representative. He is the chair of the IPMC's Standing Space Agency Sub-Committee (SSASC). He is also a technical committee member of the International Conference on Systems Engineering and Concurrent Engineering for Space Applications (SECESA) and a program sub-committee member for Systems Engineering and Information Technology Session of the International Symposium on Space Technology

He is a member of the International Council on Systems Engineering (INCOSE), the Japan Society for Aeronautical and Space Sciences (JSASS), SICE, and JSME. His research interests are in spacecraft systems design, spacecraft attitude control, systems engineering, project management, and R&D management. He has authored or co-authored more than 70 conference and journal papers.

6.3.2 Emerging Space Leaders Grant Programme

Fourteen students and young professionals were chosen by the Emerging Space Leaders Steering Committee composed of six highly experienced space stakeholders. They will attend the 67th International Astronautical Congress and have the opportunity to extend their network, gain knowledge and meet all the relevant people in space industry.



Yuval Brodsky

IYuval has a highly inter-disciplinary scientific and engineering background, and focuses on integrated applications and solutions using a wide range of methodologies and infrastructure, including space-based assets. He has worked on numerous projects in the fields of eHealth, disaster response/relief, public health, natural resource management, mobile asset tracking, and many others.

Yuval is a Director at the African Centre for eHealth Excellence (Acfee), where he specializes in the conception and development of eHealth services. He has worked for the European Space Agency in the Integrated Applications programme, and as a consultant in the fields of eHealth, human performance in extreme environments, astronautics and astronaut training.

Yuval has a wealth of diverse experiences that provide him with a unique and valuable design and assessment perspective. In addition to his interest in health ICT, Yuval has a keen interest in human performance in extreme environments, such as high altitude and space. He has worked as a systems engineer on a successful balloon-sat project, and is involved in the design of a proposed Mars analogue and habitat. He has worked as a forest firefighter and urban firefighter and an inshore rescue specialist with the Canadian Coast Guard.

Yuval graduated from McMaster University in 2009 with an honors B.Sc. in Earth and Environmental Sciences, with a minor in Geographic Information Systems (GIS) and Remote Sensing (RS). In 2010 he earned his M.Sc. in Space Management from the International Space University.



Upasana Dasaupta

Upasana Dasgupta is a lawyer, entitled to practice law in India. She has pursued Masters in Air and Space Law (Thesis) from McGill University, Montreal, Canada on Erin J.C. Arsenault Fellowship, She takes keen interest in space law and was awarded the Nicolas M. Matte Prize from McGill University for highest marks in "Space Law". During her stint at McGill University, she also worked as a research assistant and researched on national space laws of space-faring nations on licensing of space launches and other space operations and on export control restrictions under national laws on launch of satellites. She was the advisor to the

Indian Delegation to 38th International Civil Aviation Organisation Assembly held in 2013. At present, she works as an associate of Cyril Amarchand Mangaldas, one of the biggest law firms of India. She would be joining McGill University to pursue doctoral studies in Fall, 2016..



Geraldo Salazar Diaz

I have been working in the past year in the Space Instrumentation Laboratory of the Electric Engineering Faculty, at the UNAM. There I studied the effects of the radiation in electronic components, especially in FPGAs SRAM, and the fault tolerance techniques that we can apply to reduce and mitigate these effects. In the laboratory it's been developed a GMSK modulator described in VHDL language as a software radio and implemented in an Artix7 FPGA. This modulator is part of the downlink in a micro satellite carrying a HD camera for remote perception applications in a LEO orbit of 500 km, the main project of the laboratory. We propose

the use of FPGAs COTS and the implementation of fault tolerance techniques over the use of military and hardened electronic space components, due to the first ontion is less expensive and the fact that we can achieve a level of trust good enough for electronic applications in low orbit satellite with the applications of fault tolerance techniques. My goal is to improve the communication system making it adaptive and intelligent, becoming a Cognitive Radio. With that idea in mind, I have studied the different kinds of modulations available for space applications, and what parameters we can modify in our communication system that can improve our communication link for a certain characteristic of the channel. My perspectives about this work are develop Cognitive Radio in a FPGA COTS, using software defined radio, and test the system in an operative satellite.



Manisha Dwa

Manisha Dwa, Project Coordinator and one of the Board of Directors at Nepal Astronomical Society- NASO is responsible for design/developing and test different outreach and educational and research activities on astronomy/astrophysics and space science covering primary level students to University graduates and academics. Her research interest lies in STEM education and art-craft. She is also a member at National Astronomy Olympiad Organizing Committee-Nepal and International Board of International Olympiad on Astronomy and Astrophysics (IOAA), focal point for Universe Awareness (UNAWE) programs for Nepal.

She also coordinates Women in Astronomy Nepal (WIAN) and a renowned female landscape astrophotographer. Her works has been featured in different national magazines and newspapers..



Sinead O'Sullivan

Sinead O'Sullivan is a Sainsbury Management Fellow at the Harvard Business School. She is also the Co-Lead of the Space Generation Advisory Council's "Space Technologies for Disaster Management" research group. In addition, she is the CEO of AviOptix, a drone based data collection and analysis services. Through AviOptix, Sinead is exploring the role of private-sector technologies for humanitarian disaster relief. She holds a Masters in Aerospace Engineering from Georgia Institute of Technology, USA and a Bachelor of Aerospace Engineering from Queen's University of Belfast, UK.



Jonathan Kolbeck

Jonathan Kolbeck is an aerospace engineer who is currently pursuing his Ph.D. in Mechanical and Aerospace Engineering at The George Washington University (GW) in Washington, DC. He holds a B.Sc. in Mechanical Engineering and a M.Sc. in Aerospace Engineering, both from the Technical University of Berlin, Germany. His main interest and current research field is electric propulsion, especially for miniaturized satellites such as CubeSats. His most recent project involves increasing the efficiency of the micro-cathode arc thruster (µCAT) developed at GW. He has two United States patent applications which focus on vacuum arc

application and the µCAT. His third patent application was filed in Germany for a safe-and-arm device for university sounding rockets. Jonathan has presented at the International Electric Propulsion Conference in Kobe, Japan and at other various poster sessions in California and Washington, DC. He was part of the Alpbach Summer School organized by the European Space Agency in 2015, where he had the opportunity of leading his team in designing a mission to test the theory of general relativity in space using entangled photons. Jonathan is a space advocate, and with his research in the field of electric propulsion, he hopes to enable universities, developing countries, and smaller organizations to partake in the exploration of



Oniosun Temidayo Isaiah

Oniosun Temidayo Isaiah is in his final semester as an undergraduate student of Meteorology and Climate Science at the Federal University of Technology, Akure and the President of the University Space club under the University Centre for Space Research and Applications inaugurated by the African Regional Centre for Space Science and Technology Education in English (ARCSSTEF). Over the past years, he has successfully led the Club in organizing Space Related Events and many Space Related Projects with wide media coverage. Being a lover of computer programs, he was instrumental in setting up a World Class Meteorological Station at the

Obafemi Awolowo University, Ile-Ife. He is a web editor for SGAC and a member of the Youth for Global Navigation Satellite Systems (YGNSS) project group of the Space Generation Advisory Council of the United Nations. He was a volunteer coder for the AMADEE-15 Mars Simulation Mission by the Austria Space Forum where he assisted in the coding of the Spacesuit Helmet. He is a former intern at the Strategic Space Applications Division of the Nigerian National Space Research and Development Agency (NASRDA). He is passionate about Astrophysics and Satellite development and is currently in charge of organizing the first Asteroid Search campaign in West Africa, a collaboration between the Space Club of the Federal University of Technology, Akure and the International Astronomical Search Collaboration (IASC).



Shatirsingh (Ishraj) Inderjeet

Ishraj S. Inderjeet is a recent graduate in Bachelor of Aerospace Engineering with Honours from Royal Melbourne Institute of Technology (RMIT) University in Melbourne, Australia.

During his studies. Ishrai led many aerospace organisations and activities. He executed roles such as President of the aerospace club at RMIT University, Victorian State Representative for the Australian Youth Aerospace Association, and chaired, in 2014 and 2015, the two most successful 'Aerospace Industry Night' conferences at RMIT University in 20 years. Ishraj is currently the

Communications Manager at the Royal Aeronautical Society (Melbourne) and National Point of Contact (Mauritius) at the Space Generation Advisory Council – a United Nations Program on Space Applications.

For his contributions to the aerospace community, Ishraj achieved numerous awards: 'NASA Space Apps 2014 - Galactic Problem Solver,' 'Boeing Prize 2012,' amongst others. In 2013, Ishraj received the Australian Government's 'International Student Exchange Program' scholarship to go on a oneyear exchange program at Delft University of Technology (TU Delft) in The Netherlands. Ishraj was one of four students in Australia to be awarded the 'Northrop Grumman Global Externship Program 2014/15' scholarship to do an internship at Mount Stromlo Observatory in Canberra, designing Australia's next astronomy CubeSat mission. In 2016, Ishraj was the sole recipient of the 'Sir Ross and Sir Keith Smith Fund' full scholarship to attend the Southern Hemisphere - Space Studies Program by the International Space University (ISU) in Australia.

Ishraj is grateful to the International Astronautical Federation committee for selecting him as one of only 14 people worldwide to participate in the prestigious 2016 Emerging Space Leaders Grant Programme.



Michaela Musilova

Michaela Musilova is an astrobiologist with a research focus on life in extreme environments (extremophiles). Similar life could potentially be found on other planetary bodies, such as Mars, which is why extremophiles are very important for the search for extraterrestrial life. Michaela holds a PhD degree in physical geography, microbiology and astrobiology from the University of Bristol, UK. She studied at both University College London, UK and the California Institute of Technology, USA for her MSc degree in Planetary Science (completed with First Class Honours and a Dean of Science commendation). Michaela is also a graduate from

the International Space University's Space Studies Program (ISU SSP), 2015. Michaela's astrobiology and space research experience includes: working on astrobiology and planetary protection research projects at the NASA Jet Propulsion Laboratory; simulating lunar and planetary surfaces through NASA's and the UK Space Agency's MoonLite project; searching for exoplanets at the University of London Observatory; and being an analogue astronaut at the Mars Desert Research Station, USA. She is currently the vice-chair of the Slovak Organisation for Space Activities (SOSA), a visiting lecturer for ISU SSP 2016 and the senior research advisor for Mission Control Space Services Inc.. Michaela returned to Slovakia to try to increase the number of space-related research/industry there, improve SOSA's international collaborations and create a Slovak space research centre. She also enjoys participating in STEAM outreach activities from teaching at schools, giving public presentations, to working with the media and more, as well as encouraging people to pursue their dreams.



Marek Novák

Marek Novák, 22 years old, is a student researcher and medical entrepreneur. He pursues a degree in electrical engineering at the Czech Technical University in Prague. He has been working for three years as medical hardware and software developer specialized in infant care devices development. In past, he got awarded by Intel, NASA and United Technologies for his design of non-distractive system for vital functions monitoring. Now he is working on wireless power transmission using microwaves. He works on development of tools for characterization of microwaves to DC converters which are the key component for space based

solar power stations and RF harvesting systems in general. In 2015, following this research, he founded a medical hardware start-up called "X.GLU" which developed a battery-less glucose meter powered by RF field generated by smartphone.

In future, he plans to work on continuous vital function monitoring solution for crew isolation experiments to provide tools and data for enhancing current psychosocial analysis tools of crews. He believes that the affordability of space to everyone lies in multidisciplinary approach to effectively use the space research results on Earth on one side and by supporting and motivating the young generation into scientific and technical subjects on the other. To support the latter, he recently co-founded a non-profit organization which supports student research activities in his country.



Tijesu Ojumu

Tijesu is a Geospatial analyst by discipline. He is a recent graduate of the Department of Remote Sensing and GIS from the Federal University Of Technology, Akure, Nigeria.

He is versatile in the applications of GIS in various fields as he has been able to partake in a couple of GIS based projects accross Nigeria. Tijesu is a motivated tech enthusiast who is also passionate about leveraging on technology to build a better world. He is presently working on a GIS-based project in his home community



Marta Rocha de Oliveira

Marta Rocha de Oliveira is an aerospace engineer dedicated to space exploration, currently working on the mission profile of a Venus mission proposal to ESA and developing a Venus cluster furnace at NASA's Goddard Space Flight Center with the Solar System Exploration Division. Previously, she worked as a Horizon 2020 Space and Aeronautics National Contact Point for the Portuguese Ministry of Science and Education closely with the European Commission to youch for national interests. Her selection to ESA's Alpbach program allowed her to start working on orbital mechanics applications of genetic algorithms which was also the subject of

her aerospace engineering master's degree thesis supervised by IST Lisbon and Imperial College London. Additionally, she holds a bachelor's degree in physics engineering from IST and is a laureate of the Concours Général des Lycées of the French Ministry of Education. She was awarded a full scholarship to participate in the International Space University Space Studies Program hosted by NASA's Glenn Research Center and Ohio University where she was first introduced to Venus simulation chambers. Her goal is to find opportunities to continue to develop the Portuguese and Brazilian space networks and to raise awareness to the opportunities in space. Her hope is to significantly contribute in developing both countries' capabilities in the space sector. Having had a multicultural education allowed her to develop her training in the space sector internationally and to become fluent in five languages. Her other interests include traveling, piloting and reading.



Lisa Stojanovski

Lisa Stojanovski is a science communicator currently based in Perth. Australia. She is also a YouTube video producer for the channel TMRO, where she interviews astronauts and leaders in the space industry, and explains the science experiments aboard the International Space Station. Lisa holds a Bachelor of Science (Honours) from Western Sydney University where her research focused on hibernation in mice. Lisa completed the International Space University's Southern Hemisphere Space Studies Program in 2016. She is currently studying a Graduate Certificate in Space Studies with the University of South Australia where she is

 $working\ with\ NASA\ scientist\ Dr\ Christopher\ McKay\ to\ determine\ conditions\ needed\ to\ grow\ plants\ on\ Mars.$

Lisa is passionate about increasing global scientific literacy so that science and space can be accessible to all. She recently spoke to over 3000 schoolchildren as part of National Youth Leaders Day in Brisbane, Australia. Lisa believes in providing equal opportunities to access space, and has interviewed the Australian public about their opinions on having an Australian Space Agency. Through International Space University, she learnt about the power of international cooperation and recommended Australia become an associate member of the European Space Agency in her submission to the recent review of the Australian Space Activities Act..



Mahesh Thakuri

I am Mahesh Thakuri, an amateur astronomer working as a communicator and popularizer of physics and astronomy in Nepal. I am a student of Master of Science in Physics with major Astrophysics at Tribhuvan University and freelance teacher of Physics and Mathematics. I am one of the founders of Pokhara Astronomical Society and currently working as its chairman. It is a nonprofit organization working in the field of astronomy and space science in Nepal. I have conducted many astronomy outreaches and given talks on the importance of science and astronomy to school students and general public. I coordinate and conduct workshops and

trainings programs like Galileo Teacher Training Program (GTTP), Water Rocket Competition, Global Astronomical Month, Yuri's Night Space Party, Solar Observation and Night Sky Observation. Similarly, we organize different kinds of webinar with renowned scientist from different parts of the world along with documentaries of space activities. I am now reaching thousands of students with different proceedings to popularize astronomy and space science generating interest for school students to pursue higher education in science. I frequently give talks, advocate and help different government and other organization to promote scientific programs to increase science literacy rate in our country. I have a dream of building an observatory and planetarium in Nepal for the possible research and science awareness. I believe it is the time for developing country to invest in the space sector for the better future of its economy. And international cooperation play crucial role in it.



6.3.3 Future Space Leaders Grant Programme

The Future Space Leaders Foundation (FSLF) organizes the Future Space Leaders Grant Programme providing opportunities for U.S. graduate students and young professionals pursuing space and satellite-related careers to participate in the 67th International Astronautical Congress (IAC).





Travis Doom is an engineering graduate of Arizona State University. He started his career working for ASU's highlyranked science policy think tank in Washington, DC. Now as an aerospace analyst with The Tauri Group, Travis supports strategic investment planning across NASA's technology portfolio, as well as in-depth market and industry studies. Travis' goal as a Future Space Leader is to build strong linkages between the science policy and aerospace communities. Travis is excited to be participating at IAC 2016 in Mexico, especially as more countries emerge, seeking to leverage space capabilities to help address complicated issues, such as socioeconomic development.



Alexander Gibson is a Space Operations Officer in the US Army National Guard, Project Engineer in the Oil & Gas Industry, and Regional Coordinator for the Space Generation Advisory Council. He graduated from Imperial College London in 2006 with a BEng in Materials Science and Engineering, for which he studied micrometeorite impacts on the Hubble Space Telescope. He has had a lifelong interest in space, attending Space School UK and being the first British alumni of the European Space Camp in Norway. He is currently studying for dual Master's degrees in Aerospace Engineering and Engineering Management at the University of Colorado, Boulder, specializing in Bioastronautics.



Tara Halt is a first year graduate student at George Washington University, where she studies International Science and Technology Policy with a concentration in Space Policy. In December, she graduated from Embry-Riddle Aeronautical University with a Bachelor of Science in Commercial Space Operations. She recently finished an internship at the Commercial Spaceflight Federation. Previously, Tara has interned at NewSpace Global and the FAA Office of Commercial Space Transportation.



Kavya K. Manyapu is a Flight Crew Operations Engineer at the Boeing Company building the CST-100 'Starliner' Spacecraft for NASA, and a Ph.D. Candidate in Aerospace Sciences at the University of North Dakota researching technologies for planetary spacesuits. She has previously worked on the Orion program at Lockheed Martin and other space exploration projects. With a M.S from MIT in Aeronautics and Astronautics and a B.S In Aerospace Engineering from Georgia Tech, she is interested in building technologies to propel human space exploration with a belief in the universal applicability of space research for the betterment & sustainability of our planet. Her paper at IAC Mexico focuses on new technologies for dust mitigation of lunar spacesuits. Kavya enjoys educating and inspiring students to pursue careers in STEM field.



Tomoya Mori is a young professional whose passion lies at the intersection of space exploration, business, education and multimedia. He recently graduated from Brown University with a B.A in Astronomy and now works at WayPaver Foundation as a research assistant, focusing on lunar resource acquisition, processing and storage. In 2014, Tomoya cofounded "Metaplaneta," a creative think tank that promotes a multidisciplinary approach to space and has organized integrative space workshops in Japan, Singapore and USA. In addition, Tomoya is also an active science writer, and has contributed to Space.com, Air&Space Smithsonian Magazine and Wired Japan. At IAC, Tomoya will talk about the "Integrated Design Approach to Space Exploration," an innovative discovery process that he has been developing to stimulate innovation by catalyzing interdisciplinary fusion within the space industry.



William O'Neill is a PhD student at Purdue University studying System of Systems Engineering. The main focus of his research is portfolio optimization of modular spacecraft in regards to deep space human exploration missions. Bill is also a graduate co-op at Johnson Space Center in the Flight Dynamics Division supporting the International Space Station and the Orion Vehicle.



Javier Stober is a Ph.D. Candidate in Aeronautics and Astronautics at Stanford University, focusing on experimental investigations of hybrid rocket motors. Javier grew up in Florida, watching space shuttle launches and firing rockets of his own. He earned Bachelor's Degrees in Mechanical Engineering and Aerospace Engineering from the University of Florida in 2010, and a Master's Degree in Aeronautics and Astronautics from Stanford University in 2012. Javier has also worked in the aerospace industry at small and large, public and private organizations, including NASA, Boeing, and Space Propulsion Group, Inc.



Danielle Wood is a space systems engineer and researcher with expertise in technology policy for the US and emerging nations. She currently serves as the Special Assistant to the Deputy Administrator at NASA Headquarters in Washington, DC. Previously, Dr. Wood held positions at the Aerospace Corporation, Johns Hopkins University, NASA's Goddard Space Flight Center and the United Nations Office of Outer Space Affairs. Dr. Wood studied at the Massachusetts Institute of Technology, where she earned a PhD in Systems Engineering, M.S. in Aerospace Engineering, M.S. in Technology Policy and B.S. in Aerospace Engineering. At the 2016 IAC, Dr. Wood will present a paper on innovation dynamics within government agencies.



Brittany Zimmerman is from San Bernardino, California, and Stevens Point, Wisconsin. She has a Bachelor of Science in Mechanical Engineering from the Milwaukee School of Engineering. After graduation she was an Aerospace Systems Engineer for several years before returning to the world of academia where she is currently finishing her thesis for her Master of Science in Space Studies degree. She is a key member in the school's rocketry team, leads the Dakota Space Society and can be found participating in volunteer and outreach activities weekly. Brittany is interested in engineering biospheres and life support systems for long-duration spaceflight with an emphasis on hybrid bioregenerative and physical-chemical systems.



Associated Events

7.1 IAF "3G" International Platform for Diversity and Equality in Astronautics (IDEA)

Wednesday, 28 September, 2016 Date:

12:30 - 13:30 Time:

Guadalajara Hall 3, EXPO Guadalajara



INTERNATIONAL PLATFORM FOR DIVERSITY AND EQUALITY IN ASTRONAUTICS

3G GEOGRAPHY . GENERATION . GENDER

Background:

The IAF President Elect, Mr. Jean-Yves Le Gall, has developed an Agenda for his term as IAF President which he intends to implement starting from September 2016 for a period of 3 years:

THE IAF GLOBAL INNOVATION AGENDA 2016-2019

Connecting @ll Space People

This Agenda will be presented to the IAF General Assembly on Monday 26 September 2016, at the IAC 2016 in Guadalajara. One of the most important points in this agenda is focusing on diversity:

- Foster the Principles of "3-G" Diversity within the Federation and the Space Sector

 - Generation
- Gender

These are the main pillars of a "3-G" Diversity principle of the Federation. Geographical diversity and global reach have been traditional features of the IAF since its creation. Attracting the young generation has been in the focus of the IAF during the recent years with manifold newly created activities and programmes tuned to this target community. This has resulted in a significant increase of the number of young people engaged and participating in IAF activities. Gender diversity is still an area where strong progress needs to be achieved. Dedicated promotion of opportunities for female space actors within the Federation and the space sector in general, presenting successful role models and encouraging the young generation of the female space community to aim for leadership positions shall help to reach a balanced and inclusive representation within the governance of the IAF, its Technical and Administrative Committees, as well as the IAC speakers' and authors' community.

Implementation:

Implementing the "3G" Diversity Focus as part of the IAF Global Innovation Agenda 2016 - 2019 calls for the creation of an IAF Platform which will allow the Federation to take a leading role in the effort to promote and advance diversity and equality principles amongst a global space community, become an exemplary organisation in terms of geographical, generational, gender and any other diversity aspects, and live up to its motto Connecting @II Space People.

The President Elect has decided to create such platform and initiate activities already at IAC 2016 in Guadalajara.

IAF "3G" IDEA provides a framework for an intensive and open exchange on diversity and equality aspects within the IAF and amongst IAF member organisations as well as potential IAF members and other organisations promoting diversity. On the basis of IAF "3G" IDEA, events of different nature shall be organized during the annual International Astronautical Congress, IAF Global Conferences, IAF Spring Meetings and other occasions, focusing on "3G" diversity topics. Such events can be, but are not limited

- Keynotes or lectures
- Moderated panel discussions
- **Networking events**
- Mentoring sessions
- Social events
- "Diversity" Luncheons or Dinners
- Competitions and awards ceremonies

Focus of these events shall be to contribute to:

- Connecting and engaging space communities in remote areas to IAF activities;
- Further increasing the involvement of and the offer to the young generation within the Federation and its activities;
 - Reviving the IAF mentoring programme;
- Attracting specifically the female space community to become active and take over leadership within IAF bodies;
- Providing an international platform to connect gender diversity organisations from different countries, such as WIA US, WIA Europe, WIA Canada, WIA Africa, WIA Japan, etc.
- Establishing IAF focus on all diversity aspects and promoting diversity as a basic principle to the entire global space community.





The International Astronautical Federation

is pleased to invite you to the Inauguration of its



that will take place at the IAC 2016 in Guadalajara, Mexico





Wednesday 28 September from 12:30 to 13:30, EXPO Guadalajara, Guadalajara Hall 3

Programme

Opening, Moderation and Introduction

Jean-Yves Le Gall (IAF President Elect)

Keynote - Focus on Geographical Diversity

Jan Woerner (Director General, European Space Agency)

Keynote – Focus on **G**eneration Diversity

Dava Newman (Deputy Administrator, NASA)

Keynote - Focus on Gender Diversity

Kay Sears (Vice President, Strategy & Business Development, SSC, LMC)



15th Space Generation Congress -Anniversary Report

Minoo Rathnasabapathy (Executive Director, Space Anniversary Report Generation Advisory Council)

Networking time & interview opportunities



We look forward to seeing you in Guadalajara!

Connecting @ll Space People

















7.2 UN/IAF Workshop

Date: 23 - 25 September 2016

08:00 - 16:30 Time:

Hilton Guadalajara, Room Oceania, Ave. de la Rosas 2933, Guadalajara, Jalisco, 44530, Mexico Venue:

25TH UN/IAF WORKSHOP ON SPACE TECHNOLOGY FOR SOCIO-ECONOMIC BENEFITS: "Integrated Space Technologies and Applications for a Better Society"

The 25th meeting in the series of workshops jointly organized by the United Nations Office for Outer Space Affairs (UNOOSA) and the International Astronautical Federation (IAF) will be held in conjunction with and as an associated event of the 67th International Astronautical Congress (IAC). It will discuss space science, technology and its applications in support of sustainable development with a focus on the use of integrated space technologies and applications for a better society, in particularly also in the developing countries.

Primary objectives of this event include the following:

- Teconomic, social and environmental development;
- To examine relevant affordable and accessible space-related technologies and information resources;
- To increase awareness among policy- and decision makers and the research and academic community of space technology applications and consider initiatives to help integrate space solutions into policy- and decision making processes;
- To discuss the role of space science, technology and applications in support of the 2030 Agenda for Sustainable Development;
- To strengthen international and regional cooperation in that area;
- To present relevant capacity building initiatives;
- To consider associated legal and regulatory matters; and
- To identify issues for consideration at UNISPACE+50.

The current workshop is being organized with participation of the International Academy of Astronautics (IAA), Committee on Space Research (COSPAR) and International Institute of Space Law (IISL). Its programme will address, through plenary and poster sessions and panel discussions, a range of space technologies that can provide cost-effective solutions and essential information for planning and implementation of programmes or projects in support of sustainable development. It also will discuss international and regional initiatives and capacity building activities in this area.

The programme of the workshop will include technical sessions addressing the following themes:

Technical Session 1: Space and Sustainable Development

Technical Session 2: Space Technology Capacity Building

Technical Session 3: Disaster Management and Early Warning

Technical Session 4: Space for Global Health and Education

Technical Session 5: Space Solutions for Managing Growing Cities and Populations

Technical Session 6: Environment and Biodiversity

Technical Session 7: Connectivity for Reducing Social Divide

A concluding round table discussion with participation of heads of space agencies and representatives of other relevant national, regional and international institutions and organizations will contribute to create a direct dialogue with the workshop participants on how space technology and its applications and relevant policies can contribute to creating a better society. The round table will also link the workshop objectives to the preparations for UNISPACE+50. To be held in 2018, UNISPACE+50 will celebrate the 50th anniversary of the first UNISPACE conference and will bring together the Member States of the United Nations with the aim to reach consensus on a global space agenda for the next two decades.

Participation in the meeting is open to all registrants of the IAC, and there is no registration fee associated with the workshop. Additional information on the workshop is available on the UNOOSA website:

Christian Feichtinger

http://www.unoosa.org/oosa/en/ourwork/psa/schedule/2016/workshop mexico uniaf.html

For further information, please contact:

UNOOSA: IAF:

UN Office for Outer Space Affairs IAF Secretariat

E-mail: unpsa@unoosa.org E-mail: info@iafastro.org





Programme

Honorary Committee (in alphabetical order):

S. Di Pippo Director, Office for Outer Space Affairs, United Nations Director General, Mexican Space Agency (AEM) F.J. Mendieta Jiménez K. Higuchi President, International Astronautical Federation (IAF) J.D. Woerner Director General, European Space Agency (ESA)

Honorary Committee (in alphabetical order):

W. Balogh Office for Outer Space Affairs, United Nations

J.-C. Bigot European Space Agency (ESA)

M. Cho Kyushu Institute of Technology, Japan

K. Conole National Aeronautics and Space Administration (NASA), United States of America

C. Feichtinger International Astronautical Federation (IAF) Committee on Space Research (COSPAR) J.-L. Fellous

C. Giannopapa ESA/IAF- Committee for Liaison with International Organisations and Developing Nations (CLIODN)

A. Ginati ESA/International Academy of Astronautics (IAA) C. Lechtenboerger German Aerospace Center (DLR)/IAF-CLIODN International Institute of Space Law (IISL) T. Masson-Zwaan

J. Ortner **EURISY**

E. Pacheco Mexican Space Agency (AEM)

S. Saveliev International Astronautical Federation/ROSCOSMOS L. St-Pierre Office for Outer Space Affairs, United Nations C. Welch IAF/International Space University (ISU)

Honorary Committee (in alphabetical order):

E. Pacheco Mexican Space Agency (AEM) D. Muñoz Mexican Space Agency (AEM) R. Ramírez de Arellano Mexican Space Agency (AEM) Mexican Space Agency (AEM) R. Torres Mexican Space Agency (AEM) H. Moreno

Focal Point UNOOSA:

Office for Outer Space Affairs United Nations Office at Vienna

P.O. Box 500

A-1400 Vienna, Austria

Werner Balogh

Email: werner.balogh@unoosa.org

Kurian Maniyanipurathu

Email: kurian.maniyanipurathu@unoosa.org

Focal Point Local Organizer:

Mexican Space Agency Av. Insurgentes Sur 1685, 2nd, 3rd and 13th Floor Col. Guadalupe Inn, Deleg. Alvaro Obregon Mexico, D.F. C.P. 01020

Enrique Pacheco

Email: IAC2016@aem.gob.mx





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ROGRAMME

OGRAMME

STUDENTS & YOUR
PROFESSIONALS
EVENTS

PROGRAMMES & EVENTS

14:30

Focal Point International Astronautical Federation:

International Astronautical Federation

3 Rue Mario Nikis 75015 Paris, France

Christian Feichtinger Myriam Morabet

Email: christian.feichtinger @iafastro.org Email: myriam.morabet@iafastro.org

Friday, 23 September 2016

Morning			
08:00	Arrival, Registration		
09:00	Opening Ceremony		
	Master of Ceremony: Marcela Torres, BTC-PCO		
09:00	Welcome / Opening Remarks		
	 Francisco Javier Mendieta Jiménez, Mexican Space Agency Kiyoshi Higuchi, International Astronautical Federation Christina Giannopapa, European Space Agency Simonetta Di Pippo, United Nations Office for Outer Space Affairs 		
09:30	Keynote Addresses and Workshop Introduction		
	Chairperson: Karl Doetsch, Past President IAF, Canad Rapporteur: Rei Kawashima, UNISEC, Japan	da	
09:30	Keynote I	Gustavo Medina (Invited) National Autonomous University of Mexico (UNAM) Mexico	
10:00	Space in Support of Addressing Global Challenges	Simonetta Di Pippo United Nations Office for Outer Space Affairs	
10:30-11:15	Group Photo	All participants	
	Coffee/Tea Break		
11:15	25 Years of UN/IAF Workshops – A Review	Sergey Chernikov Austria	
11:35	Workshop Background and Objectives and Linkages to the Work of the United Nations	Werner Balogh United Nations Office for Outer Space Affairs	
12:00	Announcements and Practical Arrangements for the Workshop	Mexico Local Organizing Committee	
12:15	Lunch		
	Set-up of Poster Presentations		
Afternoon			
14:00	Session 1: Space and Sustainable Development		
	Chairperson: Julio Castillo, Mexican Space Agency Rapporteur: Teresa Castillo, Mexican Space Agency		
14:00	Space Contributions to Implementing the 2030 Agenda for Sustainable Development	Jose Eduardo De La Torre Barcena National Institute of Statistics and Geography (INEGI) Mexico	
14:15	Sustainable Development: Challenges and Opportunities for Space in Listening to the Field	Stefano Ferretti European Space Policy Institute (ESPI) Austria	

Isabelle Duvaux-Béchon European Space Agency (ESA)

ESA Programmes Supporting Global Challenges

14:45	DLR Contributions to Face Global Challenges	Christiane Lechtenboerger German Aerospace Center (DLR)
15:00	Making Space for Earth: NASA Earth Science Applications and Capacity Building for Development	Danielle Wood National Aeronautics and Space Administration (NASA) United States of America
15:15	Cooperation in Space Activities in Latin America: a Need for Sustainable Development	Camilo Guzman Gomez University Sergio Arboleda Colombia
15:30	The Space Policy as a Factor to Strengthen the Scientific and Technological Development in Developing Countries	Nickté Basurto Mexican Space Agency Mexico
15:45	Industry Participation in India's Space Programme: Current Trends & Perspectives for Developing Countries	Narayan Nagendra Friedrich-Alexander-Universität Erlangen-Nürnberg/ Dhruva Space India
16:00	Poster Session	
	Coffee/Tea will be provided during the Poster Session	n
18:00	Adjourn	
18:30	Departure to the UN/IAF Workshop Gala Dinner at Centro Cultural Refugio - Tlaquepaque Buses will be outside Hilton Hotel	

Saturday, 24 September 2016

Morning			
9:00	Session 2: Space Technology Capacity Building		
	Chairperson: Chris Welch, IAF/International Space Un Rapporteur: Rodrigo Dibildox, Mexican Space Agency	•	
9:00	Capacity Building at the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean (CRECTEALC)	Sergio Camacho CRECTEALC Mexico	
9:15	Capacity Building in Space Technology Development – The United Nations/Japan Long- term Fellowship Programme	Mengu Cho Kyushu Institute of Technology Japan	
9:30	International Satellite Program in Research and Education (INSPIRE): A new international academic program for collaborative small satellite development	Amal Chandran University of Colorado at Boulder United States of America	
9:45	Space Capacity Building in Mexico	Rafael Torres Mexican Space Agency Mexico	
10:00	University Space Engineering Consortium (UNISEC)-Global	Rei Kawashima UNISEC-Global Secretariat Japan	
10:15	Capacity Building in Human Space Technology – Utilising the Chinese Manned Space Station	Luc St-Pierre United Nations Office for Outer Space Affairs	
10:30	Capacity Building in Human Space Technology – Spaceflight Opportunities Using Dreamchaser	Luciano Saccani Sierra Nevada Corporation United States of America	
10:45	Coffee/Tea Break		

Response, UN-SPIDER-10



11:15

11:15

International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico

Session 3: Disaster Management and Early Warning

Rapporteur: Lourdes García, Mexican Space Agency

OOSA's Work in Disaster Management/Emergency

Chairperson: Luc St-Pierre, United Nations Office for Outer Space Affairs

Luc St-Pierre

United Nations Office for Outer Space Affairs

15:30	Intelligent City Management - Based on Land Cover Feature Changes	Wei Sun Twenty First Century Aerospace Technology Co. Ltd China
15:45	Precision Agriculture in Mexico	Gustavo Arriaga Mexican Space Agency
16:00	Coffee/Tea Break	
16:30	Panel Discussion Building Capacity for Space Science, Technology and its Applications to Contribute to Economic, Social and Environmental Sustainable Development	Panel participants Moderator: Enrique Pacheco (AEM) Participants • Sergio Camacho, CRECTEALC, Mexico • Mengu Cho, Kyutech, Japan • David Muñoz, Mexican Space Agency • Fernando Stancato, Embraer, Brazil • Luc St-Pierre, United Nations Office for Outer Space Affairs

11:30 Impacts of OOSA's Technical Assistance Missions Xavier Rodriguez **EIEGO** Dominican Republic 11:45 Regional Coordination for Trans-boundary Hazards Julio Castillo Mexican Space Agency 12:00 Innovative Approach in Early Warning Systems -Gerald Bawden National Aeronautics and Space Administration Tsunami Early Warning Using GPS Data (NASA) **United States of America** 12:15 FATMAP - Knowledge Management for Misha Gopaul Preparedness **FATMAP** United Kingdom 12:30 Use of GIS Technology on Measuring Impacts of Shantosh Karki Flooding on People's Livelihood UNOCHA 12:45 Disaster Management of Remote Areas by Giancarlo Santilli Constellation of CubeSats University of Brasilia Brazil 13:00 Lunch Afternoon 14:00 Session 4: Space for Global Health and Education Chairperson: Chiaki Mukai, Japan Aerospace Exploration Agency (JAXA) Rapporteur: Suresh Bhattarai, Space Generation Advisory Council/Nepal Astronomical Society, Nepal 14:00 NASA Education: Challenging Students to Become **Donald James** Our Future Innovators National Aeronautics and Space Administration (NASA) **United States of America** 14:15 Space and Global Health Ramesha Krishnamurthy World Health Organization (WHO) 14:30 The Experience of CONAE on Early Warning and Camilo Rotela Response Space Applications - Operative tools on CONAE **Health and Disasters** Argentina 14:45 Mexican Space Agency Approach to Space Hugo Moreno Medicine Development Mexican Space Agency 15:00 Use of Cubesats to Develop Space Biological Angelica Meneses **Experiment Capacities** Autonomous University of Morelos José Luis García CINVESTAV, Monterey Mexico 15:15 **Session 5: Space Solutions for Managing Growing Cities and Populations** Chairperson: Sanath Panawennage, Arthur C Clarke Institute for Modern Technologies, Sri Lanka Rapporteur: Camilo Guzman Gomez, University Sergio Arboleda, Colombia 15:15 Creating a Resilient City Using Space Data Jeanne Holm City of Los Angeles **United States of America**

	5 September 2016		
Morning 08:30	Arrival, Registration		
9:00	Session 6: Environment and Biodiversity		
3.00	Chairperson: Gunter Schreier, DLR, Germany Rapporteur: Rogel Mari Sese, Regulus SpaceTech/No	ntional Space Development Program, Philippines	
9:00	Group on Earth Observations	Barbara Ryan Group on Earth Observations	
9:15	Report on the United Nations/Kenya Conference on Space Technology and Applications for Wildlife Management and Protecting Biodiversity	Remi Chandran National Institute for Environmental Studies (NIES) Japan	
9:30	The IPSP Mexico Project: Earth Observation Products to Address Environmental Problems in the Bacalar Area	Pasquale Iervolino University of Surrey, Surrey Space Centre United Kingdom	
9:45	The China-Brazil Earth Resources Satellites Program Revisited	Olavo de O. Bittencourt Neto Catholic University of Santos/IISL Brazil	
10:00	Remote Sensing Payload Developments for Cubesats	Julio Rolon Garrido Instituto Politecnico Nacional CITEDI Research Center Mexico	
10:15	Architecture for Monitoring Water Basins, Water Pollution and Illegal Deforestation in Guatemala	Juan Esteban Gramajo Gonzalez International Space University France	
10:30	Coffee/Tea Break		
11:00	Session 7: Connectivity for Reducing Social Divide		
	Chairperson: Attila Matas, International Telecommunication Union (ITU) Rapporteur: Milan Mijovic, Union University Belgrade, Serbia		
11:00	ITU's Contributions for Reducing Social Divide	Attila Matas ITU	

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18:00

18:30

Adjourn

Cocktail Reception at the Solarium, Hilton Hotel





11:15

International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico

Present and Future of HUMSAT Programme: from

11:15	Demonstration to Application	Pernando Aguado Ageiet University of Vigo Spain
11:30	Mexican Regulation for Small Satellites	Estephania Flores Instituto Federal de Telecomunicaciones (IFT) Mexico
11:45	Connectivity from Research Institutions in Mexico	Jorge Preciado Center for Scientific Research and Higher Education at Ensenada (CICESE) Mexico
12:00	Coordination of Mexico Conectado Program	Carmen Rodriguez (Invited) University of Guadalajara Mexico
12:15	Special Presentations on KiboCube Programme	
	Chairperson: Office for Outer Space Affairs Rapporteur: Fernando Aguado Agelet, University of N	Vigo, Spain
12:15	KiboCUBE – Supporting Space Technology Capacity Building in Developing Countries	Koichi Wakata Japan Aerospace Exploration Agency (JAXA)
12:30	1st Kenyan University Nano Satellite Precursor Flight (1KUNS-PF)	Mwangia Mbuthia University of Nairobi Kenya
12:45	Lunch	
Afternoon		
13:30	Session 8: Observations and Recommendations and	the Way Forward
	Chairperson and Moderator: Simonetta Di Pippo, Off Rapporteur: Narayan Nagendra, Dhruva Space, India	
13:30	Round Table Discussion The round-table will link the Workshop to the preparations for UNISPACE+50 and how UNISPACE+50 will act as a catalyst to optimizing the future use of space-based solutions to contribute to addressing the World's challenges.	Moderator: Simonetta Di Pippo, Office for Outer Space Affairs Participants Pascale Ehrenfreund, DLR David Kendall, Chairman COPUOS Ramesha Krishnamurthy, WHO Javier Mendieta, AEM Chiaki Mukai, JAXA Johann-Dietrich Woerner, ESA
15:00	Discussion and Finalization of Workshop Observations and Recommendations and the Way Forward	Office for Outer Space Affairs
16:00	Closing Session	
	Master of Ceremony: Arturo Serrano, CICESE, and Of	fice for Outer Space Affairs
16:00	Closing Remarks	 David Muñoz, AEM, Mexico Christina Giannopapa, International Astronautical Federation Simonetta Di Pippo, United Nations Office for Outer Space Affairs
16:30	Adjourn	

Fernando Aguado Agelet

7.3 IAF/ISEB Educators Professional Development Workshop

Date: Sunday, 25 September 2016

Time: 08:00 - 16:30 Venue: Salon de Eventos 3

Time:	Programme:
08:30 - 09:00	Registration
09:00 - 09:05	Introduction:
	Mr. Michael Pakakis, VSSEC Director
09:05 - 09:15	Looking to the Future (Pt 1)
	Dr. W. Michael Hawes, DSc Vice President & Orion Program Manager, Lockheed Martin Space Systems Company
09:15 - 09:25	Looking to the Future (Pt 2)
	Mr. Adnan Mohammed Al Rais Manager, Business Development and External Relations, Deputy Project Manager of UAE Mars Mission, Mohammed Bin Rashid Space Centre
09:20 - 10:15	Classroom Instruction that Works Pt 1.
	Mr. Ian Christie, Curriculum Developer, VIctorian Space Science Education Centre, Melbourne.
	Classroom Instruction That Works will give insight into techniques which can be used in the classroom with confidence that there is good science to show that these techniques have a significant effect on student learning. Building on the work of MidContinent Research in Education and Learning, Denver, Colorado.
10:15 - 10:30	Morning Tea
10:30 - 12:00	Powerful Science Activities with Simple Equipment
	Participants will take part in activities which VSSEC uses in its outreach program to teach fundamental science without needing expensive or elaborate tools and equipment. The program has a built in requirement that teachers pass on their knowledge to each other to ensure that the skills are spread widely.
12:00 - 13:00	Tickle My Droid Pt 1
	Using Sphero robotic droids and the Tickle iPad app to lead students into 21st century skills in computer coding and robotics. These are extremely engaging tools for building an understanding of algorithms, logical thinking and processes, for applying mathematical skills and for learning the basic concepts of computer programming
13:00 - 13:40	Lunch (Kindly sponsored by Lockheed Martin Space Systems Co.)
13:40 - 14:40	Tickle My Droid Pt 2
	Teaching students to use <i>Scratch</i> to demonstrate their understanding of topics in the humanities as well as the sciences.
14:40 - 15:00	Afternoon tea
15:00 - 16:00	Classroom Instruction that Works Pt 2.

Short activities to illustrate and reinforce the use of the nine most effective classroom techniques.





16:00 - 16:15

Making sense of it all

A short review of the day's program.

16:30

Finish







7.4 Cross-Cultural Communications and Presentation Workshop

Date: Sunday, 25 September 2016

Time: 8:15 - 13:30

enue: Room Mueble 1, Business Center 1

The Cross-Cultural Communications and Presentation Workshop is organised for Emerging and Future Space leader Grants recipients and Next Generation Plenary speakers to provide them with the opportunity to improve their oral skills for their presentations and to sensitize them to the issues of speaking at large multi-cultural events.

Session presenters:



Scott Madry

Scott Madry is a research associate professor at the University of North Carolina at Chapel Hill and a member of the faculty of the International Space University in Strasbourg, France. He has been doing international teaching and research for some 30 years and is interested in effective international communications and presentation skills.



Carol Carnett

Carol Carnett is an attorney and a teacher of English to Speakers of Other Languages. She is Director of English Programs for the International Space University Summer Space Studies Program and Southern Hemisphere Space Studies Program, where she teaches English language skills, including writing and presentation workshops focused on effective English communication in international meetings and conferences.

7.5 Academy Day

e: Sunday, 25 September 2016

Time: 09:30 – 17:30

Venue: Zapopan and Tonala Regional rooms

THE INTERNATIONAL ACADEMY OF ASTRONAUTICS (IAA) - IAA PLENARY SESSION - OPEN MEETING

	IAA Plenary Session - Open Meeting
09:30	Opening of the Academy Day, Peter Jankowitsch, IAA President
09:35	Welcome address, Francisco Mendieta, IAA Vice-President
09:45	Results of the IAA Head of Space Agencies Summit, Mexico, Sept 2015, <i>Francisco Mendieta</i> , IAA Vice-President
	Results of the IAA Head of Space Agencies Summit on Climate Change and Disaster Management, Mexico, Sept 2015, <i>Dr. Francisco Mendieta, IAA Vice-President</i>
10:15	Results of the IAA conference Moscow Conference to prepare the IAA Heads of Space Agencies on Space Exploration, <i>Prof. Anatoly Perminov, Dr. Dmitry Payson</i> , <i>Russia</i>
10:30	The 2016 Laurels for Team Achievement: New Horizons Pluto Mission Team, <i>Dr. Ralph L. McNutt, Jr., Prof. Stamatios M. Krimigis</i> , <i>USA</i>
11:30	How space technology promotes national economic development and benefits mankind, <i>Prof. Weimin Bao</i> , China
12:00	The impact of the asteroid that create the Chicxulub crater, <i>Dr. Jaime Urrutia</i> , President Mexican Academy of Sciences
12:30	Tiber Trek may lead to occupy Mars, <i>Dr. Buzz Aldrin</i> , Astronaut, Gemini 12 & Apollo XI
13:00	IAA Luncheon (Registration closed)
14:30	Study Groups Presentations Chair: <i>Gregg Vane</i> , USA
14:35	Study 1.8 Global Satellite System for monitoring and forecasting of the Earth seismic activity, <i>Dr. Olexandr Makarov / Dr. Oleg Ventskovsky</i>
	Study 1.13 Planetary Science Enabled by the New Generation of Cube-Sats and Miniaturized Scientific Instruments, <i>Dr. John D. Baker</i>
	Study 2.14 Medical Support for an International Human Expedition to Mars, <i>Dr. Oleg Orlov / Dr. Jeffrey R. Davis</i>
	Study 3.22 Next-Generation Space System Development Basing on On-Orbit-Servicing Concept, Dr. Yury Razoumny
	Study 4.18 Definition and Requirements of Small Satellites Seeking Low-Cost and Fast-Delivery, <i>Prof. Mengu Cho</i>
	Study 5.11 Comparative assessment of regional cooperation in space: policies, governance & legal Tools, Dr. Sylvia Ospina
	Study 5.15 Space Traffic Management Towards a Roadmap for Implementation, <i>Mrs. Corinne Jorgenson</i>
	Study 6.16 STEM/STEAM for Space - Grand Challenges, <i>Dr. Wesley Harris</i>
17:30	End of Session
18:30	Awards Gala Dinner & Induction Ceremony for Newly Elected (Registration closed)





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7.6 7th International Meeting for Members of Parliaments

Date: 24 September – 27 September 2016

Venue: Hotel Congreso del Estado de Jalisco, Guadalajara

The International Meeting for Members of Parliaments (MoP) is an annual event held in conjunction with the International Astronautical Congress. This events brings together a selected number of Parliamentarians from around the world interested in space matters. The MoP event serves as a forum of exchange amongst Parliamentarians and high level experts from government, industry and academia.

With MoP event, IAF aims to exchange on current space issues and promote the use of space as a tool for decision and policy makers in developing, implementing and monitoring sectorial policies i.a. agriculture, maritime, disasters and resource management, regional development, environment, climate change, security and migration. The Parliamentarians have the opportunity to meet high level international space leaders through networking events.

Aim:

- **Bring** together Members of Parliament from different regions around the world, providing a platform of exchange on space matters
- Exchange with specialists and space decision makers on the space as an enabler in expanding the frontiers of knowledge; assisting decide and policy makers in sectorial policies; growth and jobs; and inspiring and motivating the next generations
- **Guiding** delegations through the relevant events of the International Astronautical Congress

This year's topic will be Space and the Information Society: Connecting the World via Space - Policies, Technologies and Applications.



7.7 IAC Hosts Summit

Date: Sunday 25 September 2016

Time: 09:00 – 13:00

Venue: Expo Guadalajara – Room: Salon de Eventos 1

Discussion, Q&A

Time at	Dua susuana
Time:	Programme
Opening	Welcome Address by CSAC Chairman, Philippe Willekens
09:00 - 09:10	Opening Address by IAF VP Technical Activities and IAC Evolution; Professor and Neil Armstrong Chair, The Ohio State University, Dr. John Horack
Session 1:	The IAC: An inspiration for the Young Generation
09:10 - 09:50	What is it young people want from the IAC both as participants and co-organizers?
	What are the new initiatives to actively engage, inspire and support the next generation of students and young professionals to prepare them to be the future leaders of the international space community?
	How can the IAF and the university-community work together to make the IAC an ever more valuable experience for the young generation
	Presentation by IAF VP Education and Workforce Development; Professor, International Space University (ISU), Prof. Chris Welch
	Presentation by Space Generation Advisory Council (SGAC) Executive Director, Minoo Rathnasabapathy Discussion , Q&A
Session 2:	The IAC: A platform for the New Space Community?
09:50 - 10:50	The IAC offers unique opportunities to reach and engage new audiences with the space sector.
	How does the IAC keep its audience engaged and what is the strategy to tap into new communities?
	New space companies are playing an increasingly important role. How do we get these people in?
	Moderator: IAF VP Technical Activities and IAC Evolution, Professor and Neil Armstrong Chair, The Ohio State University, Dr. John Horack
	Panellists: IAF VP Industry Relations; General Director, Yuzhnoye State Design Office, Alexander Degtyarev
	IAF VP Global Membership Development and Global Conferences; Sr. Staff, Industry Organization, Lockheed Martin Corporation, Mary Lassiter Snitch
	Blue Origin, Business Development and Strategy, Ariane Cornell
	Discussion, Q&A
10:50 - 11:10	Coffee break
Session 3:	Keynote: The IAC and the New Media Age
11:10 - 11:30	The media revolution brings with it certain challenges and opportunities.
	How is the IAC adapting to the changing media landscape?
	Which new initiatives is the IAF undertaking in order to remain up-to-date?
	•

IAF VP Publications and Communications; Head of Institute, Institute of Communications Network &

Satellite Communications, Graz University of Technology (TU Graz), Prof. Otto Koudelka





Session 4: IAC2016: Act Local, Think Global

11:30 - 11:50 How to organize and run a successful IAC with a focus on innovative formats and a new approach?

How can a local organizer optimize the benefit of convening a global space community for the benefit of

national space development?

Presentation by IAC 2016 LOC Executive Director, Mexican Space Agency, Enrique Pacheco

Discussion, Q&A

Session 5: How to win a bid

11:50 - 12:50 What are the must-haves in an IAC bid?

What do you have as the additional incentive to be selected?

What are the successful practices and challenges involved in hosting the World's Premier Global Space

Event?

Moderator: CSAC Chairman, Phillippe Willekens

Panellists: IAC2017, Chief Executive, Brett Biddington

IAC2018, LOC, Peter Von Kampen

Discussion, Q&A

12:50 - 13:00 **Closing remarks:**

> CSAC Chairman, Philippe Willekens IAF President, Kiyoshi Higuchi

13:00 - 14:00 Hosts Summit Lunch (Upon invitation only)

7.8 IISL Manfred Lachs Space Law Moot Court Competition

Date: Thursday, 29 September 2016

Time: 14:30 - 18:30

Paraninfo, Universidad de Guadalajara, Guadalajara, Mexico Venue:

25th MANFRED LACHS SPACE LAW MOOT COURT COMPETITION ORGANIZED BY THE INTERNATIONAL INSTITUTE OF SPACE LAW (IISL)



The Manfred Lachs Space Law Moot Court Competi-tion is organized annually by the International Institute of Space Law (IISL). Preliminary regional competi-tions are or-ganized between April and June. The winning teams of the pre-limi-naries meet in the World Finals held in conjunction with the annual IISL Colloquium, and traditionally have been jud-ged by Judges of the International Court of Justice.

This year we celebrate the 25th anniversary of the competition! Four teams, from Africa, Asia Pacific, Europe and North America, will compete in the World Finals. These events will take place in Guadalajara during the IAC. The name of the 2016 Moot Court Problem is Case Concerning Space Debris, Commercial Spaceflight Services and Liability (Banché v Rastalia). The Moot Problem presents legal issues arising out of the unsuccessful attempt to remove a derelict satellite by a commercial space flight



vehicle which, suffering incapacitation as a result of the debris fallout, is forced to make an emergency landing that results in disagreements relating to the liability for damages caused by the landing and costs for the rescue and return of passengers and the commercial vehicle.

The semi-finals will be held on Tuesday, 27 September in a closed session. The Final Round will be held in the afternoon of Thursday, 29 September and will be judged by three members of the International Court of Justice in The Hague.

Following the awards ceremony at the conclusion of the Final Round, the IISL will host its annual dinner. All who are interested to attend the Final Round are welcome, but are requested to contact IISL beforehand. The IISL Dinner is reserved for guests with confirmed and paid reservations (latest deadline: 23 Sept.). A Brochure including the names of all participating universities, judges, sponsors and a summary of the Problem will be available in advance for those attending the finals.

Exact timings and transportation arrangements will be announced at the start of the IAC.

Contact details of the Co-Chairs of the Manfred Lachs Moot Court Committee: Martha Mejía-Kaiser, lachsmootchair2@iislweb.org Melissa K. Force, Esq. melissakforce@aol.com Les Tennen, Esq. lachsmootchair1@iislweb.org

Websites:







7.9 15th Space Generation Congress (SGC)

Date: 22 – 24 September 2016

Venue: Holiday Inn Expo Guadalajara, Avenida Lopez Mateos Sur 2500. Avenue Mariano Otero, Guadalajara

45050, Jalisco, Mexico (2 km from Expo Guadalajara, IAC venue)

Website: www.spacegeneration.org

THE GLOBAL SPACE CONGRESS FOR UNIVERSITY STUDENTS AND YOUNG PROFESSIONALS INTERESTED IN TODAY'S KEY SPACE ISSUES



The Space Generation Congress (SGC) is the annual meeting of the Space Generation Advisory Council (SGAC) held in conjunction with the International Astronautical Congress. SGC gathers a select group of top university students and young professionals from various areas of the international sector - government, industry, and academia, who have a passion for space.

With SGC, SGAC aims to hone and promote the perspectives of tomorrow's space leaders on today's key space issues. SGC delegates also have the opportunity to meet many high-level international space leaders through networking events. SGC is proudly endorsed by the United Nations Office of Outer Space Affairs.



Aims

The aim of the SGC is threefold:

- First, to strengthen the international network of the Space Generation Advisory Council. From the perspective of the individual delegate, many of whom come from developing countries, it is a chance to interact and engage with the incoming generation of space policy professionals from all over the world. From the perspective of the Space Generation Advisory Council, it allows us to consolidate our international links in order to best represent and facilitate the voice of the next space generation.
- Second, to examine and consider key questions that are facing the space and international community at large and to provide input to international thinking from the next generation of space professionals.
- Third, to allow tomorrow's space sector leaders to grow their network within their generation and to also have the opportunity to interact with today's space leaders by way of our high-level speakers

SGC 2016 Programme - See SGC website for detailed schedule, speakers, and sessions

Thursday, 22 September

SGC Sessions 09:00 - 18:00

19:50 - 22:30 SGC Opening Dinner

Friday, 23 September

09:00 – 18:00 SGC Sessions

20:00 - 23:00 SGC International Night

Saturday, 24 September

SGC Sessions 09:00 - 16:00

16:00 - 18:00 SGC Working Groups Final Presentations

19:30 - 22:00 SGC 2016 Closing Dinner

** Note:

All sessions require advanced registration unless specified. Booking is essential. "SGC Sessions" include featured speakers, Working Group time, networking opportunities**

SGC GALA DINNER - Saturday, 24 September

19:30 SGC 2016 Closing Reception and Dinner (advanced booking required)

Address: Hacienda La Providencia

Prolongación Río Blanco 1727, Vistas del Centinela

45190 Zapopan, Jalisco, Mexico

(18.3 km from Expo Guadalajara, IAC venue)

For more information on how to attend the SGC 2016 Closing Dinner, please email arnau.pons@

spacegeneration.org

Wrapping up three days of SGAC's 15th Space Generation Congress, the annual SGC Closing Dinner honours the extraordinary work of SGAC's volunteer members, and appreciation of the continuous support of our partners to inspire the next generation of space leaders.

SGAC would like to thank all the Sponsors and Supporters of the Space Generation Congress 2016.





The Space Generation Advisory Council in support of the United Nations Programme on Space Applications (SGAC) is a nongovernmental, non-profit organisation, which aims to represent students and young space professionals to the United Nations, industry, agencies and academia. SGAC has permanent observer status in the UN Committee on the Peaceful Uses of Outer Space (COPUOS). SGAC has a long history, and was conceived at the Third United Nations Conference on the Exploration and Peaceful Uses of Space (UNISPACE-III) in Vienna in 1999. The SGAC Executive Council is made up of representatives from each of the six UN regions, and has a larger body of representatives from nation states. Our focus is on pragmatic space policy advice to policy makers based on the interests of students and young professionals, broadly in the age range 18-35, interested in space from around the world.

For more information, please contact:

Minoo Rathnasabapathy

SGAC Executive Director minoo.rathnasabapathy@spacegeneration.org Carmen Felix SGC 2016 Congress Manager carmen.felix@spacegeneration.org

SGC 2016 Congress Deputy Manager arnau.pons@spacegeneration.org

Arnau Pons





26 - 30 September 2016, Guadalajara, Mexico

SGAC at the IAC

Sunday, 25th September 2016, 10:00 - 17:00 - SGAC Mars Analogue Simulations Workshop (advanced registration required)

Are you interested in Human Space Exploration, and in particular in future human Mars missions? Do you want to learn how those missions are currently prepared here on Earth? Join the SGAC Space Exploration Project group on this Mars Analogue Simulations workshop and listen to interesting talks on state-of-the-art analogue Mars research, learn about the risks and challenges, and get an insight on SGAC's plans to conduct a Mars Analogue Simulation in 2017 (PMAS 2017). Each participant gets the chance to continue and develop the final work on this workshop along with experts of the SGAC Space Exploration Project Group. The SGAC Mars Analogue Simulations Workshop is open to students and young professionals.

Wednesday, 28th September 2016, 15:30 - SGAC Booth Reception

Join SGAC and Space Foundation for drinks at our Booth (Booth #A34) and get acquainted with fellow SGAC members, IAC delegates, speakers and panellists.

Wednesday, 28th September 2016, 19:00 - SGAC/ISU/YPP Reception

This is the annual reception of the SGAC in partnership with the International Space University (ISU) and the IAF's Workforce Development/YPP Committee. Join the reception, and enjoy some drinks and nibbles while you network with other young professionals in the space sector! -No registration needed, this event is FREE to all SGC 2016 delegates, registered IAC 2016 Young Professionals, and invited guests. Collect your invitation at the SGAC or ISU Booth.

Thursday, 29th September 2016, 11:30 – 12:30 – SGAC Global Networking Forum: Technology Transfer – "How to Make the Most of It?"

Numerous interesting, efficient technology transfers have been achieved through ESA Technology Transfer Office Programme whose mission is to inspire and facilitate the use of space technology, systems and knowledge for non-space applications. Indeed, the transfer of space technology from space companies to other sectors results in a mutual gain for both industries and benefits the final users by providing high-tech effective solutions. From cooling suits for a Formula 1 racing team to ground-penetrating radar to detect cracks in mine tunnels, these programmes offer a platform of new business opportunities for providers of space technology and systems and avenues for optimizing knowledge transfer and improving competitiveness. In this panel, representatives from agencies and industry discuss how to leverage space technology into other industries as well as address the specific needs of non space sectors. Furthermore, representatives from Young ESA and SGAC bring the perspective of how the next generation can help tackle the challenges in space technology transfer in an environment of technology disruption in the wake of New Space. The panel will include a commentary on how these industries see or treat access to information about space technologies, and their awareness of the potential "from space".

On-site contact: Minoo Rathnasabapathy, SGAC Executive Director Tel: +43 6604113552

Email: minoo.rathnasabapathy@spacegeneration.org

Web: www.spacegeneration.org

The Space Generation Advisory Council in support of the United Nations Programme on Space Applications (SGAC) is a nongovernmental, non-profit organisation, which aims to represent students and young space professionals to the United Nations, industry, agencies and academia. SGAC hosts conferences around the world to mobilize today's young minds on key space issues.

SGAC 2016 Space Generation Leadership Award

One of the main missions of SGAC is to facilitate access to the world's major space conferences for young professionals and students. The Space Generation Leadership Award enabling five outstanding SGAC members to attend the 15th Space Generation Congress and the 67th International Astronautical Congress in Guadalajara, Mexico.

Every year, SGAC receives an outstanding number of high quality applications. Congratulations to all selected awardees of the SGAC 2016 Space Generation Leadership Awards.



Daniel Brack

Daniel has just begun his PhD studies at the University of Colorado in Boulder. He has recently completed his MSc studies at the faculty of Aerospace Engineering at the Technion -- Israel Institute of Technology where he focused his research on relative motion estimation between two orbiting objects. Daniel also holds a BSc in Aerospace Engineering from the Technion. In addition, Daniel is an ISU¬ SSP14 alum and a team project associate chair in ISU SSP16. Daniel is one of the Space Generation Advisory Council National Point of Contacts for Israel and has been working on promoting the SGAC activities in Israel. He has also been involved in several nano satellite STEM projects in the past such as the QB50 project and the Technion's SAMSON mission.



Chantelle Dubois

Chantelle Dubois is an undergraduate computer engineering student at the University of Manitoba and former business and outreach lead for the University of Manitoba Space Applications and Technology Society. Chantelle joined the SGAC in 2014 as a web editor, and interned at the organisation's headquarters in Vienna in Fall 2015. Currently, she a co-coordinator for the SGAC web team, the chair of the Winnipeg chapter of the Canadian Space Society, and the Marketing Manager for the Canadian Space Commerce Association.



Henry Ibitolu

Henry was born and raised in Nigeria. He is currently a Geospatial Data Analyst at Onidex Geospatial Solutions. He earned his Bachelor's degree in Meteorology at the Federal University of Technology, Akure, Nigeria in 2014, during which he had his Internship at the Nigerian National Space Research and Development Agency (NASRDA), and was exposed to issues relating to application of Space-based technology for humanity. Likewise, he participated at the Inaugural Astronomy Summer School for West African Students, where he gained more insights in Space Science. Henry has been active within the SGAC network since 2013, firstly with the YGNSS project group and most recently was selected as an Analogue Astronaut for the upcoming Poland Mars Analogue Simulation (PMAS) 2017. Previously, he volunteered for a year as a Science Teacher at a Community High School, where he initiated a Space Club which helped inspire the students with the beauty of our cosmos. He hopes to use his future involvement in the space industry to inspire the younger generation and advocate for effective STEAM education in Africa.



Hansley Noruthun

Hansley Noruthun is a scholar of London's Chartered Management Institute (CMI) and presently working in parallel with Massachusetts Institute of Technology (MIT) in regards to an entrepreneurship programme. Hansley is a Bioscientist, an elected associate of King's College London and alumnus of the International Space University. His research portfolio comprises of advanced analytical techniques, molecular & microbiology practice and In vivo experimentation. He was previously selected as a local UNICEF representative, Top Ten Student in the Country 2008 Award in French language and rewarded with a scientific teaching registration by the UK government. He has been privileged to be involved in projects using the Short-arm centrifuge at DLR, an Astronaut Payload Training at the European Space Agency & European Astronaut Centre and a commercial airline travel study with University of Oxford. In 2015, he was awarded a full UK Space Agency and European Space Agency scholarship to attend the International Space University's Space Studies Program hosted by NASA's Glenn Research Center. He hopes to find international opportunities to help him bring this change, especially for Mauritius.



Ramasamy Venugopal

He is passionate about using space and astronomy for the larger benefit of society. He is currently the project manager at the IAU-Office of Astronomy for Development that aims to leverage astronomy to further sustainable development. He volunteers with SGAC as an Executive Secretary and World Space Week Association as astronomy liaison and content contributor. He has a bachelors in telecom engineering from India and a masters in space studies from the International Space University. He has previously worked with telecom majors Ericsson and Verizon

7.10 AEM Forum Programme & AEM Industry Forum Programme

Wednesday, 28 September - Friday, 30 September 2016 Date:

AEM Forum Programme

Location: Guadalajara Hall 4

Event	Schedule
Mexican Space Technology Development	Wednesday Morning Session 09:45 – 12:30
The Space Telecom Sector in Mexico	Wednesday Afternoon Session 14:45 – 17:30
Small Satellites and Frequency Spectrum normativity and Mexican Space Ports and Use of Launchers and Stratospheric Balloons	Thursday Morning Session 09:45 – 12:30
Human Space Flight in LATAM	Thursday Afternoon Session 14:45 – 17:30
Mexican Capacities in Space Science in Mexico	Friday Morning Session 09:45 – 12:30

AEM Industry Forum Programme

Location: Jalisco Hall E-5

Event	Schedule
Honeywell-Mexico developing aerospace capacities in Mexico	Wednesday Morning Session 09:45 – 10:50
Investment Opportunities in Mexico for the Aerospace Sector	Wednesday Morning Session 11:00 – 12:30
Bavarian Space Mission to Mexico	Wednesday Afternoon Session 14:45 – 17:30
Plan de órbita 2.0: taller 1	Friday Morning Session 09:45 – 12:30

Awards 2016

8.1 IAF World Space Award

The IAF World Space Award is the IAF most prestigious award. It is presented for exceptional impact to the world's progress in



2016 Awardee Yuri Koptev

Having graduated from The Bauman Moscow State Technical University in 1965, Y. N. Koptev worked at different enterprises of the rocket-space industry at the Ministry of General Machine-Building Industry of the USSR (MOM), where he ran the gamut from senior engineer to Deputy Minister – leading civil- and science – oriented space programmes.

In February 1992 after the dissolution of the USSR, he became one of the initiators of the establishment of the Russian Space Agency -special central agency authorized for the rocket-space issues, in charge of which he had been for 12 years.

Outstanding organizing skills, deep scientific knowledge and persistence allowed Y. N. Koptev to save the entirety of the rocketspace industry during the reformation of the Soviet political and economic systems in the 1990-s and to prevent disorganisation of the scientific and technical potential and industrial system of this branch of industry.

Upon his initiative international large-scale projects were launched by the Russian Space Agency. The leading national enterprises and the Russian Academy of Science were deeply engaged in these projects.

Scientific and applied research of the near Earth space, implementation of the man-in-space program on the on-orbit station "Mir" by foreign astronauts, and launching of foreign space vehicles scientific equipment by Russian carrier boosters gave an opportunity to raise funds for Russian industry at the amount of over 6 billion dollars in the period between 1994 and 2004. Koptev contributed greatly to the development of ideology, engineering solutions and international agreements for the International Space Station establishment projects and Russian rocket "Souz" launch from the Guiana Space Centre (The European Space Agency (ESA).

8.2 IAF Allan D. Emil Memorial Award

Allan D. Emil (1898 – 1976) was a noted U.S. lawyer and philanthropist who became one of the foremost lawyers in the field of flight, and was appointed counsel to the Institute of the Aeronautical Sciences. Since 1977, the IAF's Allan D. Emil Memorial Award has been presented annually for an outstanding contribution to space science, space technology, space medicine or space law. This contribution either involved the participation of more than one nation or furthered the possibility of greater international cooperation in astronautics.

The recipient of this year's award is Dr. Charles Elachi.



Allan D. Emil (1898 - 1976)



2016 Awardee Charles Elachi

Charles Elachi has been the Director of the Jet Propulsion Laboratory since May, 2001. Professor of Electrical Engineering and Planetary Science at Caltech. Dr. Elachi received his B.Sc. ('68) in physics from University of Grenoble, France; the Dipl. Ing. ('68) 26 - 30 September 2016, Guadalajara, Mexico

in engineering from the Polytechnic Institute, Grenoble, and both a M.Sc. ('69) and Ph.D. ('71) degree in electrical sciences from the California Institute of Technology. He also has a M.Sc. ('83) degree in geology from the University of California, Los Angeles, and an MBA ('79) from the University of Southern California.

Dr. Elachi joined JPL in 1970. Prior to becoming Director, Dr. Elachi was JPL's Director for Space and Earth Science Programs (beginning in 1982) where he was responsible for the development of numerous flight missions and instruments for Earth observation, planetary exploration and astrophysics.

He has been a principal investigator on a number of NASA-sponsored studies and flight projects including the Shuttle Imaging Radar series (Science Team Leader), the Magellan Imaging Radar (Team Member), and the Cassini Titan Radar (Team Leader). He is the author of over 230 publications in the fields of active microwave remote sensing and electromagnetic theory, and he holds several patents in those fields.

In 1989 Dr. Elachi was elected to the National Academy of Engineering and has served on a number of academy committees. Dr. Elachi has received numerous awards, including the Aviation Week Lifetime Achievement Award (2016), 2016 National Space Trophy, an American University of Beirut Honorary Doctorate (2013), the Association of Space Explorers (ASE) Congress Crystal Helmet Award (2012), the Pasadena Arts Council Inaugural AxS (Arts & Sciences) Award (2012), Lebanese American University Honorary Doctorate (2012), National Academy of Engineering Arthur M. Bueche Award (2011), "Chevalier de la Légion d'Honneur, France" (2011), Space Foundation J.E. Hill Lifetime Space Achievement Award (2011), AIAA Carl Sagan Award (2011), Occidental College honorary Doctor of Science degree (2011), Sigma Xi William Procter Prize for Scientific Achievement (2008), International von Kármán Wings Award (2007), the America's Best Leaders by U.S. News & World Report and the Center for Public Leadership at Harvard University's Kennedy School of Government (2006), the Royal Society of London Massey Award (2006), the Lebanon Order of Cedars (2006 and 2012), the Philip Habib Award for Distinguished Public Service (2006), the American Astronautical Society Space Flight Award (2005), the Bob Hope Distinguished Citizen Award (2005), NASA Outstanding Leadership Medal (2004, 2002, 1994), Takeda Award (2002), the Wernher von Braun Award (2002), UCLA Dept. of Earth and Science Distinguished Alumni Award (2002), Dryden Award (2000), NASA Distinguished Service Medal (1999), the COSPAR Nordberg Medal (1996), the NASA Outstanding Leadership Medal (1994), the IEEE Medal of Engineering Excellence (1992), the IEEE Geoscience and Remote Sensing Distinguished Achievement Award (1987) and the NASA Exceptional Scientific Achievement Medal (1982).

8.3 IAF Frank J. Malina Astronautics Medal

Since 1986, the IAF's Frank J. Malina Astronautics Medal has been presented annually to an educator who has demonstrated excellence in taking the fullest advantage of the resources available to them to promote the study of astronautics and related space sciences. The International Astronautical Federation is delighted to announce that the winner of the 2016 Malina Medal is Prof. Bénédicte Escudier.

The recipient of this year's award is Prof. Bénédicte Escudier.



Frank J. Malina (1912 - 1981)



Bénédicte Escudier

A graduate of SUPAERO (1979), passionate about Aerospace Engineering and Teaching, Bénédicte Escudier has been involved in the development of Space activities at SUPAERO after working for three years in the private sector as Head of Mission Performances and Attitude Control Simulation for a military Earth observation satellite project.

First women as Professor at SUPAERO, she reached rapidly the head of Space department of SUPAERO, and she has developed and supervised all Space-related courses in Space System Engineering and Space Science at ISAE-SUPAERO. She has also created and managed Post-Graduate Programs (TAS Astro). She has also contributed to international programs (Erasmus Mundus, SEEDS...) through European and Worldwide Partnerships.

More broadly, Bénédicte, especially at the head of International Affairs, participated to the strengthen of the international influence of SUPAERO and ISAE, creating opportunities for students to access US universities, ESA and NASA Programs since the 80s, by increasing the number of exchange students (over 130 incoming and outgoing students every year for engineering

courses) through bilateral partnerships (especially double degree agreements). She also developed exchange programs and research opportunities with Canada, Brazil, Mexico, Argentina, China... And many other countries in the world.

Most of French Engineers, Managers and Experts in the field of Space Engineering have attended Bénédicte's Courses during the last 30 years. She is very well known and respected in the domain, and her network is highly profitable for ISAE-SUPAERO and more especially students from the institution.

8.4 IAF Hall of Fame

The IAF Hall of Fame is intended to create a standing forum of personalities that have contributed substantially to the progress of space science, technology, and space benefits to mankind, within the framework of the IAF activities. It will consist of a permanent gallery of these personalities, including a citation, biographical information, and a picture, in a special part of the IAF web presence.

The recipients of this year's awards are Mr. Norman Crabill, Dr. Manfred Fuchs, Dr. U R Roo and Prof. Wang Xiji.



2016 Awardee Norman Crabill

"I was one of the cohort that was in the right place at the right time: NASA's evolution from Aeronautical Research to Space Exploration. I worked at NASA's Langley Research Center with the pioneers of our space program, from 1949 (NACA) to 1986 (NASA).

One of Langley's early space projects was ECHO I, a 100 foot diameter balloon to be the first communication satellite and an explorer of the upper atmosphere. My job was to put it 200 miles up over Wallops Island to test its inflation process before putting it into orbit. I designed the two-stage solid propellant SHOTPUT rocket, solving the dynamic roll- resonance problem of unguided sounding rockets with help from coworkers. The first one was launched on October 28, 1959. It took 5 launches to get the balloon to open properly. For ECHO II, the 135 foot diameter follow-on, I tested its deployment process by launching it on a one-stage Douglas THOR rocket from Canaveral, with a real-time down-linked TV and a recoverable film camera on front of the THOR which monitored the balloon's unfolding. Two launches were required in 1960 to get the balloon to open properly. Some of the astronauts at the Cape at that time came over to see our real-time TV downlink.

We used the same SHOTPUT rocket to test the Italian SAN MARCO satellite at Wallops two times, before its launch into its satellite orbit.

Following that was LUNAR ORBITER, the precursor to the APOLLO program. Langley was given the job of finding landing sites for APOLLO, and I became the Mission Design Manager in the LUNAR ORBITER Project Office. With 5 launches planned, we should be able to get enough photos for Apollo. My job was to get answers to: When do we launch, What are the trajectories, and Where do we take the pictures? NASA Headquarters told us to consult with the US Geological Survey in Flagstaff AZ to select the sites on the Moon to be photographed, so I and my assistant Tom Young visited Larry Rowan there and selected a number of promising sites. We changed the mission concept from shooting all 212 frames at one site on each mission, to doing 10 sites on each mission, causing extensive changes to the mission profile, and the operation of the on-board film-camera system, which we successfully developed with our Boeing contractor. Our first mission, August 1976, succeeded in getting the photos, including an un-planned first photo of the Earth from the Moon, and discovering the Lunar Gravity Field anomalies, which we had to account for in real time, and which influenced the APOLLO trajectories too.

After the third successful mission, APOLLO didn't need any more sites, and Project Manager Cliff Nelson asked me "What will we do with numbers 4 and 5?" I said "We'll map the Moon on number 4, and do other Science on number 5". And we did. All told, FIVE successful missions in 1966 -1967, a first for NASA Lunar missions at that time."





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2016 Awardee **Manfred Fuchs**

Manfred Fuchs was born in 1938 in Latsch, South Tirol, Italy. At the age of 17 he became the youngest pilot in Italy. One year later he went to Germany. After his studies of Aeronautics in Munich and Hamburg he began his career in the newly created space company ERNO and became involved in projects like ARIANE-1, SPACELAB, and COLUMBUS.

Manfred Fuchs was one of the early Post World War II space pioneers in Germany. He started his industrial career in ERNO, Bremen, until he and his wife created their own space company OHB which was developed in less than 30 years to the number one national space enterprise in Germany with subsidiary companies in various European countries and almost 2500 employees.

OHB's success story is based on many things but in the center are innovative solutions and small satellites. The early work in this field laid the basis for winning the SAR-Lupe constellation for the German Ministry of Defense with 5 radar reconnaissance satellites all launched and operated without a problem. Then, in 2007 a large ESA contract for the development of small geostationary satellites gave OHB the opportunity to further improve their capabilities in the field of telecommunications satellites. A major company highlight was the successful acquisition of the contract to develop and build 14 Galileo satellites in 2010. In the same year Thales-Alenia with OHB as subcontractor won 6 Meteosats from ESA/Eumetsat which created a dramatic increase of the order book. All along OHB acquired other companies in Europe. The most important ones were Carlo Gavazzi, MAN-Technologie AG in 2005 and Kayser-Threde in 2007. OHB has eventually become an "Aktiengesellschaft" and in 2015 a "Societe Europeen" (SE).



2016 Awardee **U R Rao**

Professor U R Rao is an internationally renowned space scientist who has made original contributions to the development of space technology in India and its extensive application to communications and remote sensing of natural resources.

Prof. Rao was the Director of ISRO Satellite Centre at Bangalore during 1972-1984 and Chairman of the Indian Space Research Organisation and Secretary, Department of Space during 1984-1994. Presently he is the Chairman of the Governing Council of the Physical Research Laboratory at Ahmedabad, which is considered as the cradle of India's Space Program / Chairman, Karnataka Science & Technology Academy / Chairman, Advisory Committee for Space Science, ISRO / Chancellor, Indian Institute of Space Science and Technology.



2016 Awardee **Wang Xiji**

Professor Wang Xiji has devoted his academic and professional career to the promotion ofinto China's space industry for over 65 years. Hegraduated from southwest combined university in machinery department in 1942 and studied in Virginia institute of technology in dynamic and fuel major in U.S. since 1948. In 1950, he came back to China and took up teaching in Dalian institute of technology and Shanghai Jiaotong University.

Since 1958, as one of the organizers of the early research on rocket technology of China, Professor Wangserved as the technical leader of China's first liquid fuel rocket and follow-on meteorological rocket. Then he creatively combined sounding rocket technology with guided missile technology and put forward technical concept of first launch vehicle. He took charge of system design of longmarch-1 launch vehicle and the development of nuclear test sampling rocket series. He served successively as the director of Beijing institute of space machinery and electricity institute, vice president and director of science and technology committee of CAST and chief engineer of the ministry of astronautics since 1965.

Professor Wang became thechief designer of recoverable satelliteand took charge of development concept based upon domestic technological and industrial basis. The satellite return technology reached international advance level. In 1975, China's first recoverable satellite was successfully launched then and China became the third country in the world mastering this high technology. He won the national scientific and technological progress prize of special class for returnable satelliteand dongfanghong-1 satellite in 1985. He was also the chief designer of double star programs which was significant international space cooperation with ESA in 21st century.

Under his leadership, a great number of new technologies were adopted and a series of critical technologies were broken through and thus the function of the satellites was enhanced and its lifetime lengthened. In 1987, he was elected as the member of International Academy of Astronautics (IAA). Due to his initiation and participation in the development of two new disciplines of uncontrolled rocket and space return technologies Professor Wang was elected as the member of Chinese Academy of Science in 1993.

8.5 IAF Interactive Presentations Competition Award

To be announced

IAC 2016 ***

Cuadajajara



8.6 IISL Awards 2016

8.6.1 IISL Lifetime Achievement Award



Prof. Joanne Irene Gabrynowicz

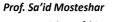
Iln recognition of her dedication and academic leadership in the field of space law through her decades of distinguished services to the international space law community and the International Institute of Space Law, to which she has made invaluable contributions as a Director and as the Chair of its Publications Committee; her services as Professor and Director of the National Center for Remote Sensing, Air, and Space Law of the University of Mississippi School of Law and as Editor in Chief of the Journal of Space Law, her longstanding role in the organisation of the Eilene M. Galloway Symposium on Critical Issues in Space Law, and her significant contributions in national and international bodies including the United Nations Committee on Peaceful Uses of Outer Space for the development of international law in the field of outer space and its applications.



Dr. Milton "Skip" Smith

In recognition of his many decades of outstanding services to the international space law community and the International Institute of Space Law, to which he has made invaluable contributions as a Director, his long dedicated services, and exemplary initiatives for the establishment and accomplishment of a glorious record of the Manfred Lachs Space Law Moot Court Competition over the past twenty five years, his unflinching commitment and his notable roles for the further development of international law and international cooperation in the field of exploration and peaceful uses of Outer Space

8.6.2 IISL Distinguished Service Award



In recognition of his outstanding and dedicated services to the International Institute of Space Law and to the international legal community, his significant contributions for over three decades to the fields of telecommunications and outer space law across the transatlantic space community and beyond, his academic leadership as Director of the London Institute of Space Policy and Law, and his long-standing role to support his national delegation to the United Nations Committee on Peaceful Uses of Outer Space



Prof. Irmgard Marboe

In recognition of her outstanding and dedicated services to the development of international space law and to the international legal community, her rare scholarship, her significant contributions in her role as the chairperson of the Working Group on National Legislation Relevant to the Peaceful Exploration and Use of Outer Space of the Legal Subcommittee of the UN COPUOS, her active contributions to Colloquia organised by International Institute of Space Law over the years and her notable role in the elaboration and adoption of the Austrian Outer Space Act

8.6.3 IISL Award of Appreciation





Mr. Yvon Henri & Mr. Attila Matas

In recognition of their longstanding and dedicated contributions to the international space and telecommunications community and for their notable role in the Radiocommunication Bureau of the International Telecommunication Union (ITU) in effectively managing the procedures for registration of all space system frequency assignments and also providing assistance and support to administrations, operators and frequency assignment customers on all issues related to space service frequency management

8.6.4 IISL Certificate of Gratitude (joint award)



Indian Space Research Organization (ISRO)

In recognition of its nurturing an exemplary spirit of international cooperation in promoting the capacity for space law among the young generation in the Asia Pacific Region, its longstanding support to the organisation of the Manfred Lachs Space Law Moot Court Competition by organising the Indian funding round of the Competition since a decade and supporting its winning team to participate in the Regional Round, and for its valuable contributions in organising the 2016 Asia Pacific Regional Round in collaboration with the National Law School of India University, Bangalore, India



National Law School of India University (NLSIU)

In recognition of its nurturing an exemplary spirit of international cooperation in promoting the capacity for space law among the young generation in the Asia Pacific Region, its longstanding support to the organisation of the Manfred Lachs Space Law Moot Court Competition by organising the Indian funding round of the Competition for more than a decade and for its valuable contributions in organising the 2016 Asia Pacific Regional Round at its campus in collaboration with the Indian Space Research Organisation, Bangalore, India.

8.6.5 Diederiks-Verschoor Award for Best Paper by a Young Author

To be announced



Exhibition

9.1 General Information

Stand Set-up: Delivery of Exhibits and Stand Construction				
:	September 24 (Saturday) September 25 (Sunday)	08:00 - 18:00 08:00 - 18:00		
Ribbon-cutting ceremon	ny and VIP Exhibition Tour:			
•	September 26 (Monday)	10:00 - 11:30		
Exhibition Hours:				
•	September 26 (Monday)	12:30 - 18:30		
•	September 27 (Tuesday)	09:00 - 18:00		
•	September 28 (Wednesday)	09:00 - 18:00		
•	September 29 (Thursday)	09:00 - 18:00		
•	September 30 (Friday)	09:00 - 12:00		
Stand Dismantling:				
•	September 30 (Friday)	12:00 - 22:00		

After 18:00 hrs on September 25, THERE MUST BE NO HEAVY OR NOISY LOADING OR UNLOADING OF MATERIALS, DRILLING, OR ANY TYPE OF SET UP EQUIPMENT, and there will be no access to the docks. Entry will only be given to boxes and materials of small dimensions during the schedules and according to the rules established below in the section on ENTRY/EXIT OF MATERIALS and all set-up operations will be completely suspended in order to leave way for cleaning of the area.

Any maneuver after 18:00 hrs. of September 25, GENERATES OVER TIME which may be contracted in the services module of the venue and should be covered by the vendors that have not finished set-up. The percentage for medical services should be covered according to the times contracted. It is the set-up company's responsibility to watch all the equipment and tools used for the job.

9.2 Exhibition Area Layout



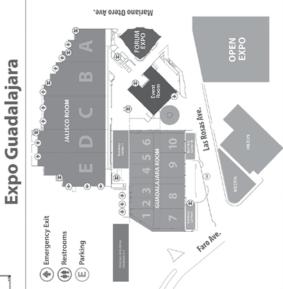
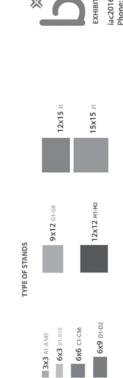


Exhibit Area Jalisco Room







^{**} It is strictly forbidden to carry on any set-up activity or decoration of your stand on September 26.

^{***} During the exhibit schedule, entry or exit of any type of merchandise, furniture, or any other object is forbidden. ENTRY THROUGH THE LOADING AND UNLOADING AREA WILL REQUIRE THE PRESENTATION OF THIS MANUAL, DULY SIGNED. OTHERWISE, ACCESS WILL BE DENIED WITHOUT EXCEPTION.

9.3 Exhibitors in alphabetical order

Exhibitors	Stand	Exhibitors	Stand
About Space Applications	A42	JAXA	A78 - A81
Access Orbital/SPACEPORT	A39	Korea Aerospace Research Institute-	G4
AEM	H1	KARI	
Airbus Defence and Space GmbH	C11	Lockheed Martin	11
American Institute of Aeronautics and	A104, A105,	MIRA AL CIELO	A24
Astronautics	A106 & A107	Mohammed bin Rashid Space Centre	C33 & C34
Antwerpspace	A16	Mxspace	C24
Apsco/Chinese Society of Astronautics	В9	NanoRacks	A37
ASI - Agenzia Spaziale Italiana	A98, A99, A100,	NEC	B2a
	A101, A102,	NL Space Pavilion	D1, A62 & A63
Astronomy Calarra white about 1. Add are both	A103	NORWAY	B16
Astro- und Feinwerktechnik Adlershof GmbH	B10A	NOTIMEX	B15
ATMEL	A35	OFVC	C47
Austrospace	A82	ROOM	A40
Beijing Landspace Technology Co.Ltd.	C40	ROSA - Romanian Space Agency	A28
Beijing Sunwise Space Technology Ltd	A119	SCN- Sierra Nevada Corporation	A108 & A109
Berlin Space	B2b	SEDENA	C42 & C41a
BLUEDOT	A27	SEMAR	C39, C41b +
Bremen Pavillion	C45	C 11 AC 1 D 1111	A116 & A117
CANIETI	A83, A84, A86,	South Africa Pavillion	G2
C, IIII E I I	A87 & B4	Space Generation	A34
China HEAD Aerospace Technology Co.	C35 & C36	Space Industry Association of Australia	C43
CNES	C22, A94 - A97	SPACEPORT NORWAY	A27
CONACYT	A30 & TENDRÁ	Springer Nature	A36
	MAS	SSC	A22 & A23
DGAC	A17 & A18	Surrey Satellite Technology Limited	C49
DHV Technology	A20	Syrlinks	A118
DLR	C44, C46, A120 & A121	The British Interplanetary Society	A90-A93 + A139 & A138
D-Orbit	A29	UNAM SPACE	A25 & A26
Famex	B11	UAE Space Agency	C31 + C32
Fondo Sectorial AEM-CONACYT	A64 to A77	Universidad de Guadalajara	C23 & B10a
GomSpace	A04 to A77	Universidad de Puebla	A38
International Space University (ISU)	A33	University Of Southern California, Viterbi	A61
Israeli Aerospace Industries Ltd (IAI)	B7 & B8	UNOOSA	В3
Italian Trade Agency	C3b - C4	Virgin Galactic	A19

9.4 Exhibitor List

Stand: A42 **About Space Applications** Aisle 4 Contact person: Mauro Ricci Tel: +31 71 781 781 4 mauro.ricci@esa-external.com Email:



Web: www.ice cubes service.Com Space Applications is an independent Belgian company founded in 1987. We operate primarily in Europe and the USA with an office in Noordwijk, the Netherlands, a subsidiary in Houston, Texas and a presence in various other locations.

and security markets and related industries: • Specify, design, develop, integrate and deliver mission critical systems, robotic systems, ground segments, command and control centres and spacecraft payloads.

Our aim is to research and develop innovative systems, solutions and products and provide services to the aerospace

- · Provide end-to- end services that include the development and operation of scientific and engineering solutions to meet the needs of the customer, such as a complete space system.
- · Provide expert support and consultancy services for complex, multi-disciplinary and specialist science, engineering, training and operations activities.

We work for institutional and commercial customers in the following domains: manned and unmanned spacecraft, launch/re-entry vehicles, robotics, the environment and security. A significant part of these activities is the development of advanced information systems. The photograph adjacent shows our offices in Zaventem, Belgium. Space Applications Services has contributed to a large number of ESA programmes, covering:

- the Human Spaceflight and Robotic Exploration Programme (previously Human Spaceflight Microgravity and Exploration program (Columbus ISS, ATV, Exomars, Mars Sample Return);
- the Earth Observation program (Earth Watch, Copernicus, TerraSAR, the Earth Exploration Core and Opportunity Missions).
- · the Navigation program (GALILEO),
- the ESA Technology Research Programe TRP, General Support Technology Program GSTP and General Studies GS
- Future Launchers Preparatory Programme FLPP.

These activities have been contracted with the European Space Research and Technology Centre (ESTEC), the European Space Research Institute (ESRIN), the European Astronaut Centre (EAC), ESA Head Quarters.

Research and Technology Development

The company performs research to keep our capabilities ahead of state-of- the-art and focussed on providing our customers with the best scientific and technological solutions. To this end the company is involved in the European Commission's H2020 programme, the EUREKA ITEA Cluster programme supporting innovative, industry-driven, precompetitive research and development in the area of Software-intensive Systems & Dryces (SiSS) as well as in Nationally funded research and technology development .

The company has a Business Innovation Unit which focuses on establishing innovative commercial activities based on

stand: A39	Access Orbital/SPACEPORT		Aisle 6
SPACEPORT	Contact person: Carlos Agnesi	Tel: Email:	carlosagnesi@hotmail.com

Spaceport Mexico aims to be a full capability space payload launch facility to support the emerging generation of reusable horizontal launch vehicles for the latest small commercial satellite payloads, space tourism and space research and

Stand: H1	AEM		Aisle 4	
SCT AEM STOCK	Contact person: Enrique Pacheco	Tel: Email: Web:	+52 (55) 36911310 IAC2016@aem.gob.mx http://www.gob.mx/aem	

Contact person: Verena Korte





Stand: C11 Airbus Defence and Space GmbH Aisle 7 Tel: +49 (0)89 3179 4645

> Email: verena.korte@airbus.com

Web: www.airbus.com

Airbus Defence and Space is one of the three Divisions of the Airbus Group and Europe's Number 1 defence and space company. It is the world's second largest space company and one of the top 10 defence companies globally, with revenues of around €13 billion per year and approx. 33,500 employees. The Chief Executive Officer of Airbus Defence and Space is Dirk Hoke. Airbus Defence and Space puts a strong focus on core businesses: Space, Military Aircraft, Missiles and related systems and services.

Airbus Defence and Space develops and engineers cutting-edge and peerlessly reliable products in the field of defence and space. Its defence and space technologies enable governments and institutions to protect natural resources. societies and individual freedom. The aircraft, satellites and services help to monitor climate and crops, and to secure borders. Airbus Defence and Space solutions guarantee sovereignty in foreign affairs and defence matters. And its portfolio also ensures communication, mobility, the expansion of knowledge and the safeguarding of the environment. Pioneering the future together.

Stand: A104, A105, A106 & A107

AIRBUS

American Institute of Aeronautics and Astronautics

Aisle 6

Aisle 3

Aisle 7

Contact person: Madhurita Sengupta

+703 264 7550 MadhuritaS@aiaa.org Email:

Web: www.aiaa.org

The American Institute of Aeronautics and Astronautics (AIAA) is more than 30,000 engineers and scientists from 88 countries dedicated to the global aerospace profession. AIAA convenes five yearly forums; publishes books, technical journals, and Aerospace America; hosts a collection of 140,000 technical papers; develops and maintains standards; honors and celebrates achievement; and advocates on policy issues. AIAA serves aerospace professionals around the world—who are shaping the future of aerospace—by providing the tools, insights, and collaborative exchanges to advance the state of the art in engineering and science for aviation, space, and defense. Visit www.aiaa.org

Stand: A16

Antwerpspace

Contact person: Vanessa Peeters Mobile:

+32 (0) 3 829 50 07

Email: vanessa.peeters@antwerpspace.be

Web: www.antwerpspace,be

AUSTROSPACE, the association of Austrian space industries and research institutions, is a non-profit organization focusing on giving comprehensive information about Austrian space activities and representing common interests of Austrian suppliers and users of space technologies. The members of AUSTROSPACE account for the predominant part of Austrian contributions to international space programs and cover a broad spectrum of space technologies and applications in the areas of space transportation, telecommunication, navigation, earth observation, meteorology and space science.

Tel:

Stand: B9

Apsco/Chinese Society of Astronautics

Contact person: Gao Ye Yoyo

+86 10 63702677 gaoyoyo@apsco.int

Email: Web: www.apsco.int

"Asia-Pacific Space Cooperation Organization (APSCO), duly notified by the UN as an inter-government organization, has eight Member States, one Associate and one Observer. The purpose of the APSCO is to explore and exploit outer space through peaceful uses of space for socio-economic development in the Asia-pacific Region. APSCO's fields of cooperation extend to: Earth observation, disaster management, environmental protection, satellite communications and satellite navigation and positioning; Space science research; Education, training and exchange of scientists / technologists. APSCO has established Six Cooperative Networks: Space Segment Network; Disaster Monitoring Network; Data Sharing Network; Ground-Based Space Object Observation Network; Education and Training Centre Network and Space Application Network. APSCO Data Sharing Service Platform (DSSP) is a network for sharing satellite remote sensing data with 35 Authorized Users to provide application services and satellite data to Member States. Under APSCO's Joint SMMS Constellation Program, Member States will form a constellation of existing space segment, develop eight new satellites and receive satellite data for all participating countries with their own ground station. Student Small Satellite (SSS) project is aimed to enhance space education capabilities of MS by engaging the academicians and students in the entire systems engineering process to build, launch and operate a satellite in space. Asia-Pacific Ground-Based Optical Space Objects Observation System (APOSOS) is aimed to enhance observation duration and perspective through the network of groundbased space observation system. APSCO Contributes to the international cooperation in space policy and space law. APSCO, through Degree Education (Master & D. program in cooperation with BUAA with National Scholarship of China (MASTA&DOCSTA) has so far sponsored 132 masters' and 21 doctoral students with full scholarship and about 30 new students will be enrolled in 2016."

Stand: A98, A99, A100, A101, A102 & Δ103

ASI - Agenzia Spaziale Italiana

Aisle 5

Aisle 7

Aisle 6

Aisle 8

Entrance Aisle 3

Contact person: Donatella Marucci

+39 06 8567810 Email: donatella.marucci@asi.it

Web: http://www.asi.it/

The Italian Space Agency, created in 1988, coordinates Italy's efforts in Space. ASI activities range from space science to earth observation, telecommunications and navigation, launchers development. Italy is the third contributor to the European Space Agency, and participates in many major scientific missions as well as in the construction and activities of the International Space Station. ASI has developed COSMO-SkyMed, a space based radar system for Earth observation. L'Agenzia Spaziale Italiana è nata nel 1988, per dare un coordinamento unico agli sforzi e agli investimenti che l'Italia ha dedicato al settore spazio fin dagli anni Sessanta.

Stand: B10A

Astro-

Astro- und Feinwerktechnik Adlershof GmbH

Contact person: Stefanie Sahrawi

+49 30 6392 1010

Fmail: S.Sahrawi@astrofein.com

Web: http://www.astrofein.com/

Small satellite busses (up to 350 kg) and payloads/components for small satellites (1 to 400 kg) are the core business activities of the company. We are specialized in attitude control components, complete AOC-subsystems, power subsystem components, structures & amp; mechanism and scientific & amp; optical payloads. Additional to that we offer ground support equipment and AOCS test beds.

Stand: A35

Adlershof GmbH

und Feinwerktechnik

ATMEL

Contact person: Elisabeth David Tel:

+(33) (2) 40 18 17 36 Email: elisabeth.david@atmel.com

Web:

www.atmel.com

The Aerospace product line of Atmel has more than 30 years of experience in space products. Most of the products are designed and produced to be rad hard but not only. Indeed recently we have introduced also rad tolerant products based on existing automotive products. Rad tolerant product are hardened against Single Event Latch-up and screened according the highest space requirement. The portfolio is made with: Micro-controllers and processors. Memories. Communication devices, ASICs and FPGA to ASIC conversion service

Stand: A82

AUSTROSPACE

Austrospace

Contact person: Matthias Mäke-Kail +43-1-80199-6950 Tel:

matthias.maeke-kail@tttech.com Email:

Web: http://www.austrospace.at/

AUSTROSPACE, the association of Austrian space industries and research institutions, is a non-profit organization focusing

Comprehensive information about Austrian space activities

Representation of common interests of Austrian suppliers and users of space technologies vis-à-vis Austrian authorities and international organizations

Stand: C40

Beijing Landspace Technology Co.Ltd.

Tel: 86)180-0755-1987

Contact person: Patrick LANDSPACE

Email: zenglei@landspacetech.com Web: www.landspacetech.com

Founded in 2015, LandSpace Technology Co. Ltd., a purely private and commercial Chinese company registered in Beijing, is committed to offer new options for global clients seeking launch opportunities. LandSpace's brand new launch vehicle is in developing and will equip the clients with more momentum for their space journey.

LandSpace-1 (LS-1) is a solid-propellant launcher designed and manufactured by LandSpace. It can deliver small satellites up to 400kg into 500km sun-synchronous orbit. The first commercial flight will be executed before the end of 2017. This reliable and cost-effective launcher will be a desirable choice for customers worldwide.

LS-1 can support a variety of launch types including single-satellite launch, multiple-satellites launch and piggyback launch. The standard Ø 660mm adapter is used to interface with the satellite. Bolt connection, 300 clamp-band, POD and other specific need can also be provided upon the client's requirement.





Stand: **A119**

Aisle 3

SunWise Space

Tel: Contact person: Linwei JIA

Beijing Sunwise Space Technology Ltd

Email: jiaalw@sina.com

Web: www.sunwisespace.com

Sunwise space technology Ltd. (Sunwise Space) is a wholly owned subsidiary of Beijing Institute of Control Engineering. With aerospace background, Sunwise Space adheres to integrating aerospace and commercial application. Sunwise Space, replying on advanced aerospace technology and brand influence, has established the self R&D platform in the fields of testing product R&D, industry and aerospace testing system integration, aerospace product testing, robot control and wind power. Sunwise Space – the leading enterprise in aerospace testing and control.

Stand: B2b

Berlin Space

Aisle 8

Aisle 6

Aisle 7



Tel: **Contact person:** Tom Segert Email: segert@berlin-space-tech.com Web: http://www.berlin-space-tech.com/

Berlin Space Technologies (BST) is a leader in small satellite systems. We build on the 30-year tradition of small satellites made in Berlin. BST is vertically integrated and builds 85% of its subsystems in-house. This makes BST the ideal partner for your mission.

Stand: A27

BLUEDOT

Tel: Contact person: Maciej Mickiewicz

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Web:

BLUE DOT

(PL) KOSMONAUTA net Kosmonauta.net, media branch of Blue Dot Solutions Sp. z o.o. (PL)

Space Sector Poland: The booth presents several leading Polish accents (i.e. companies, projects and initiatives) in space and space-related sectors, such as IT, electronics or automation. Poland joined the EU in 2004 and became the 20th ESA member state in 2012. Right now the Polish space sector consists of c.a. 300 entities. Check more at: www.kosmonauta. net, www.blueds.eu, www.spacesector.pl

Blue Dot Solutions sp. z o.o. is the company created on the basis of Kosmonauta.net media organization, founded by graduates of Polish and foreign universities, who had various experience in conducting space industry projects. Currently the company is offering technological expertise services, as well as product definition of services utilising satellite data and providing information services related to the space sector. Together with Black Pearls VC fund, the City of Gdańsk, Interizon Foundation and other partners Blue Dot Solutions is developing the Space3ac space accelerator, which is based on the POSITION and CaBilAvi projects (both conducted within the Horizon 2020 programme), supporting entities developing products and solutions based on satellite navigation.

The company is also working on internal projects utilising Global Navigation Satellite Systems, Earth Observation, integrated applications and microcontrollers. One of them is the continuation of an earlier project carried out for the European Space Agency and the European Investment Bank (EIB) in Jordan in the Middle East (water management area).

The interdisciplinary team of the company has a broad contact network in over 50 countries, and in such space industry centers as: ECSAT (Harwell), ESTEC (Noordwijk), ESRIN (Frascati), the City of Bremen, ESA Business Incubation Bavaria and the network offered by the International Space University. The company's results are regularly presented and published at International Astronautical Congresses (IAC).

The Blue Dot Solutions company is the owner of the Kosmonauta.net brand - the largest Polish language space news service. Since 2009 over seven thousand articles, reports, summaries and analyses on the space industry have been published. The company also manages the Polish language desk at ESA. The www.kosmonauta.net website is visited monthly by 50 - 55 thousand unique readers. The website maintains an English language section focusing on events in Europe and Poland.

Stand: C45

Bremen Pavillion

Contact person: Bianka Hanssen

Tel: +0421 9600-126

Email: Bianka.Hanssen@wfb-bremen.de

Web:

Aerospace Bremen at BremenInvest supports and promotes the development of players within the aeronautics and space industries innovation cluster In Bremen, the aeronautics and space industries sectors with more than 140 companies and 20 research institutes and universities cover approximately 12,000 employees with an annual turnover of more than 4 billion euros. Bremen calculates, in terms of residents, the highest aeronautics and aerospace employment density in

Mayor contributors are leading enterprises in the sector with R&D and production activities such as the Airbus Group, Rheinmetall Defence Electronics, OHB and their suppliers companies. The success is due to the excellent skills of people in Bremen and in the fields of aerospace and space industries. Contineous training is ensured by a variety of study and training courses.

Jobs of the future, especially for highly-qualified people, characterize the industry. This is strongly supported by cuttingedge research such as: material sciences and manufacturing technologies, space systems and research, remote sensing and atmospheric research, simulation and calculation, bionics and more.

Cluster activities in companies, research institutions and associations are supported by appropriate economic development measures. These include the Bremen Aerospace Research Programme 2020 and the Center for Eco-efficient Materials & Technologies EcoMAT.

The goals of Aerospace Bremen are:

Contact person: Edgar Moreno

- · increase the visibility of companies through the increasing strength of the cluster
- improve the added value through increasing competitiveness and innovativecapacity, as well as settlements and formations of companies
- Erhalt und Ausbau der Bremer industriellen Arbeitsanteile an den Großprogrammen der ESA, der EU und bei nationalen Programmen wie dem Luftfahrt-Forschungsprogramm (LuFo) des Bundes
- · maintain and expand the Bremen industrial workloads within the major programs of ESA, EU and national programs such as the Aerospace Research Program (LuFo) of the German Federal Governement For further infomation please contact: aerospace@bremen-invest.com

Tel:

Stand: A83, A84, A86, CANIETI A87 & B4

+834 312-0785

Aisle 8

Aisle 2

Aisle 4 and 5

Aisle 5

Email: emoreno@canietigdl.com.mx Web: http://www.canieti.org/Inicio.aspx

The National Chamber of the Electronics Telecommunications and Information Technology Industries (CANIETI) represents the High Tech Industry in Mexico, serving as a link between our members, government, academia and society in general. Our main purpose is to achieve the competitive development of the national industry with a sense of unity and social responsibility, providing global presence to CANIETI and its partners in an institutional fashion, promoting the generation of business for members, by presenting companies and their products worldwide. Also consolidating, developing and boosting the competitiveness of the sectors we represent in addition to managing all activities that strengthen the industry, working with a shared vision and a commitment that allows the companies to provide the benefits of technology to all corners of the country.

Stand: C35 & C36

China HEAD Aerospace Technology Co.

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Email: roger@head-aerospace.com Web: www.head-aerospace.com

China HEAD Aerospace Technology Co. (HEAD) is the leading space company engaged in promote the international cooperation between China and worldwide

The core businesses of HEAD are space products import, exports of Chinese Space Products, Technology Cooperation, we also develop our micro satellites and so on.

Many years of operation in space area, we know the best way for space companies outside China to enter local market. HEAD has established a business bridge proved to be effective, which enable us to be a shortcut to access China space market, a surprising company you can find to support procuring Chinese space products and services for your space missions, a reliable partner of your business development with China.

Stand: C22, A94 - A97 CNES

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Web: https://cnes.fr/fr

CNES proposes France's space policy to the public authorities and implements it within five key strategic areas: Ariane, the Sciences, Observation, Telecommunications and Defence

Its 2450 employees are divided between its four centres: the Toulouse Space Centre for the design of orbital systems, the

Launch Vehicle Directorate for the development of launch systems, the Guiana Space Centre for the implementation of European launchers and its Headquarters for the drawing up of the space policy.

CNES works very closely with the industry, with its European partners within the framework of the European Space Agency and with the European Commission as well as with all space powers worldwide.'

Stand: A30 & **TENDRÁ MAS**

cnes

INNOVATION & INSPIRATION

CONACYT

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CONACYT

228





Stand: A17 & A18

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inicio/

Tel:

Stand: A20

DHV Technology

Aisle 3

Aisle 3



Contact person: Dr. Miguel A. Vázquez

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www.dhvtechnology.com

Stand: C44, C46, A120 & A121

DLR

Aisle 6 and 7

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Web: www.DLR.de

DLR is the national aeronautics and space research centre of the Federal Republic of Germany. Its extensive research and development work in aeronautics, space, energy, transport and security is integrated into national and international cooperative ventures. In addition to its own research, as Germany's space agency, DLR has been given responsibility by the federal government for the planning and implementation of the German space programme. DLR is also the umbrella organisation for the nation's largest project management agency.

DLR has approximately 8000 employees at 16 locations in Germany: Cologne (headquarters), Augsburg, Berlin, Bonn, Braunschweig, Bremen, Goettingen, Hamburg, Juelich, Lampoldshausen, Neustrelitz, Oberpfaffenhofen, Stade, Stuttgart, Trauen, and Weilheim. DLR also has offices in Brussels, Paris, Tokyo and Washington D.C.

Stand: A29

D-Orbit Aisle 5



Contact person: Stefano Antonetti Tel: +(39) 02 3671 4010

stefano.antonetti@deorbitaldevices.com Email: Web: http://www.deorbitaldevices.com/

D-Orbit is a satellite systems company providing commissioning and decommissioning solutions for spacecraft, launch vehicles, and next-generation satellites constellations. Founded in 2011, the company is based near Lake Como, Italy with subsidiaries in Washington, DC, and Lisbon, Portugal. The firm currently employs approximately 35 people.

D-Orbit adds value by streamlining the initial and final phases of satellite missions, with components and services that enable customers to simplify spacecraft design, increase reliability, improve the use of mission resources, reduce operational costs and increase the revenue-generating phase of a space mission. We are the first European company to be registered as Benefit Corporation, and the first aerospace company to have received the B-Corp certification worldwide

D-Orbit has a patented product line of smart, modular commissioning and decommissioning systems, based on solid rocket motor propulsion and proprietary core technologies. The propulsion technology has already passed ground testing, and the avionics has already been both ground and space tested. A complete, fully functional, miniaturized decommissioning system will fly at the beginning of 2017 on D-SAT, a self-decommissioning satellite designed and built.

Our Innovative Products

D-Orbit aims at disrupting commissioning and decommissioning, redefining how they are performed to address current shortcomings and create value in the process. Our flagship products are: D-Raise, a commissioning device for fullelectric satellite platforms, that speeds up the transfer maneuver from parking orbit to operational orbit by boosting the perigee up to an altitude of 10,000km, helping operators anticipating the revenue-generation phase, while preventing unnecessary deterioration of solar arrays and other electronic components; and D-Orbit Decommissioning Device (D3), an independent, smart motor specialized in decommissioning maneuvers, to be installed on satellites before launch, in order to remove them at the end-of-life or in case of major failure in a quick, safe and controlled manner.

Stand: B11

FAMEX

Morales

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https://www.f-airmexico.com.mx/

Aisle 8 and 9

Aisle 3

Aisle 5

Aisle 3

To establish in mexico an international aerospace fair, sustainable, with prestige and leadership in the world aeronautical community, which promotes the aerospace industry, the civil and military aviation of the country, the technologies and the products of defense; as well as to offer a platform of impulse to the educational institutions of the branch.

Stand: A64-A77

FAIE

FONDO SECTORIAL AEM - CONACYT

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Aisle 6 and 7

macias.jesus@aem.gob.mx

Tel: Email: Web:

CONACYT

SCT AEM SERVINE

Stand: A21

GomSpace

Tel: +4 523 280 689 Contact person: Annette Marquart

Email: annette@gomspace.com Web: www.gomspace.com/

Stand: A33

G MSPACE

International Space University (ISU)

Tel:

Contact person: Geraldine Moser Fmail:

geraldine.moser@isunet.edu Web:

http://www.isunet.edu/

The International Space University founded in 1987 is the world's premier international space education institution. ISU offers the Master of Space Studies program at its Central Campus in Strasbourg. Since 1988, ISU has conducted the nineweek Space Studies Program at different host institutions. Since its founding, more than 4,200 students from over 100 countries have completed ISU programs

Stand: **B7 & B8**

Israeli Aerospace Industries Ltd (IAI)

Tel: +972-3-9353111 Contact person: Anat Hagai ahagai@iai.co.il Email:

Web: http://www.iai.co.il/

Israel Aerospace Industries LTD (IAI) is a globally recognized leader in development and production of commercial and military aerospace and defense systems. IAI provides world leading unique solutions for a broad spectrum of needs in space, air, land, sea, cyber and homeland security. IAI is active in both the defense market and in the commercial aviation market. The company's core areas of activity include: Space, Unmanned Aerial Systems (UAS), Military Aircraft & Helicopter Upgrades, Intelligence Surveillance, Reconnaissance Systems (ISR), Theater Defense, Naval Systems, Homeland Security, Ground Systems, Cyber and Robotics.

In space - IAI is the Israeli Space House, offering a One-Stop-Shop for satellites, ground systems and launchers. IAI satellites portfolio includes observation satellites (optical - OFEQ, EROS, OPTSAT series and Synthetic Aperture Radar -TECSAR series), communication satellites, like the AMOS series and a full range of space sub-systems. IAI also offers the Shavit launcher, enabling launch of mid-size satellites to LEO orbits.

Stand: C3b - C4

Italian Trade Agency

Aisle 4 and 5

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www.italtrade.com





ICE-Italian Trade Commission

The ICE- Italian Trade Commission is the Italian public agency under the Italian Ministry of Economic Development, whose role is to develop, facilitate and promote the Italian economic and trade relationships abroad, with particular attention to the requirements of the small and medium – sized companies.

The ICE search to develop the internationalization of Italian companies, the commercialization of the italian goods and services in the international markets and promotes the image of italian products in the world.

The agency develops a useful activity for achieving tasks that have been entrusted, and provides information, assistance and consulting services to Italian companies operating in the international trade: encourages cooperation in industrial, agricultural and agrifood sectors, in the distribution and in the tertiary sector, in order to increase the presence of Italian

In the development of its activity, the Agency works closely with the regions, chambers of commerce, industry, crafts and agriculture, business organizations, and other public and private subjects involved in designing plans and strategies for the promotion and internationalization of the companies, which are adopted by the Italian authority."

Stand: A78-A81

JAXA

Aisle 7 and 8



Contact person: Satoki Kurokawa Tel: +81-50-3362-3778 Email: kurokawa.satoki@jaxa.jp Web: http://global.jaxa.jp/

In 2003, JAXA was launched through the merger of three aerospace-related institutions. Since then, we have marked numerous achievements, from rocket and satellite launches to the involvement in the ISS and space science research. In addition, we are achieving world firsts symbolized by the Epsilon Launch Vehicle and the Asteroid Explorer "Hayabusa 2." We will continue to improve people's daily lives and lead the world to prosperity through aerospace technology.

Stand: G4

Korea Aerospace Research Institute- KARI

Aisle 2 and 3



Contact person: Isabelle Kim 82-42-860-2114

Email: isabellevincit@gmail.com Web: http://www.kari.re.kr/

KARI was established on October 10, 1989 as a national aerospace research institution with the purpose of contribution to solid development of the national economy improving the quality of people's lives through a new exploration and technological advancements, development, and dissemination in the field of aerospace science and technology in the Republic of Korea. KARI is trying to realize the dream of sky and space with endless challenge.

Stand: I1

LOCKHEED MARTIN

Lockheed Martin Aisle 5 and 6

Contact person: Patricia Fekete Tel:

Email:

patricia.fekete@lmco.com

Web: http://www.lockheedmartin.com/

Aisle 4

For more than 50 years, Lockheed Martin heritage companies have led the way in the design and production of spacecraft that have helped scientists understand our planet from a new perspective

Space is a demanding environment. But with systems built by Lockheed Martin, space is where the future takes flight, through partnerships that raise global communications, weather forecasting, space exploration and national security to

Headquartered in Bethesda, Maryland, Lockheed Martin is a global security and aerospace company that employs approximately 98,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services.

Stand: A24



MIRA AL CIELO

01 (55) 6649 2278 Contact person: Meria Bulos

> noosferac@gmail.com Email: miraalcielo.squarespace.com Web:

The Arts and Astronomy Mira al Cielo Festival is a social based project by non-profit organisation Noosfera Arts for Development in which through the dissemination of space exploration, astronomy and the arts we contribute to close the gap in access to knowledge, training and vocational orientation among children and young people in a festive, fun and educational environment by the hand of experts, scientists, artists and shows of the highest quality that result in initiatives and projects that strengthen the individual and social development in Mexico in the context of the XXI Century space exploration.

Stand: C33 & C34

ــــــرکز محمد بن راشید

Mohammed bin Rashid Space Centre

Contact person: Nasser Nabil Al Boom Tel: +97146071240

> Email: maryam.almushrak@mbrsc.ae

Aisle 2

Aisle 6

Aisle 7

Web: mbrsc.ae

Mohammed bin Rashid Space Centre is a Dubai Government entity which works on the advancement of scientific innovation and technology in Dubai and the UAE. The Centre works on a variety of research projects in the field of space science and advanced technologies.

Among its more prominent projects is the design, development, implementation of all phases of the Emirates Mars Mission - Hope. MBRSC's projects include DubaiSat-1, DubaiSat-2 and the KhalifaSat, currently underway being built entirely by Emirati hands and expertise at MBRSC's Space Technologies Laboratories. MBRSC provides space imaging, earth station services and support to other satellites.

Stand: C24

Stand: A37

Mxspace Aisle 7 and 8

MXSPACE

Contact person: José Oldak +(55) 38 73 03 69 Tel:

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NanoRacks

ш NANORACKS

410 303 2702 Contact person: Abby Dickes Tel: Email: adickes@nanoracks.com Web: http://nanoracks.com/

NanoRacks LLC was formed in 2009 to provide commercial hardware and services for the U.S. National Laboratory onboard the International Space Station via a Space Act Agreement with NASA. NanoRacks' main office is in Houston, Texas, right alongside the NASA Johnson Space Center. The Business Development office is in Washington, DC. Additional offices are located in Silicon Valley, California and Leiden, Netherlands.

In July 2015, NanoRacks signed a teaming agreement with Blue Origin to offer integration services on their New Shepard space vehicle. The Company has grown into the Operating System for Space Utilization by having the tools, the hardware and the services to allow other companies, organizations and governments to realize their own space plans.

As of July 2016, over 375 payloads have been launched to the International Space Station via NanoRacks services, and our customer base includes the European Space Agency (ESA) the German Space Agency (DLR,) the American space agency (NASA,) US Government Agencies, Planet Labs, Urthecast, Space Florida, NCESSE, Virgin Galactic, pharmaceutical drug companies, and organizations in Vietnam, UK, Romania and Israel.

Stand: B2a

NEC

NEC

NL Space Pavilion

81 3 5419 3630 Contact person: Hirokazu Aoki Tel:

> Email: h-aoki@wr.jp.nec.com http://www.nec.com/ Web:

Stand: CD1, A62 &

A63

Aisle 2 and 3

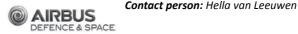
h.van.leeuwen@airbusDS.nl

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mikel.vogels@nag.aero

Participating Organisations

Airbus Defence and Space Netherlands B.V.



Email:

Airbus Defence and Space Netherlands B.V. is supplier of high-tech products and services for the international aerospace industry. Since its founding in 1968, the company has build-up expertise in space technology in areas such as Earth observation, telecommunications and science. The portfolio includes solar arrays, launcher structures and instruments & systems.

Hyperion Technologies B.V.

Contact person: Bert Monna

Aisle 8

Aisle 6 and 7

Aisle 6

Aisle 6

NORWAY

Contact person: Nina Soleng

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institucional.aem@gmail.com Web: http://www.notimex.gob.mx/

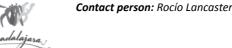
52 (33) 31227544

Guada/ajari

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Stand: C47 OFVC Aisle 7 and 8



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Tel:

Tel:

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Web:

Stand: A40 ROOM

Stand: A28

Contact person: Lena De Winnie Tel:

Email: lena.clarke@gmail.com

Web:

'ROOM - the Space Journal', a unique and independent publication covering all aspects of the global space industry and space exploration. Each issue contains special reports and exclusive articles under the headings of Astronautics. Space Security, Space Environment and Space Lounge, the latter a section for more popular material. ROOM publishes articles from leaders and experts in their field, whose work and research is interesting and often influential for future development. Our respected international readership ranges from the CEOs of global space companies and the leaders of government agencies to project leaders, astronauts, scientists, engineers and students, as well as general readers with

ROOM publishes articles from leaders and experts in their field, whose work and research is interesting and often influential for future development in aerospace, science and space exploration, industry and commerce. Contributors include astronauts, cosmonauts, scientists, industry CEOs, heads of agencies, project managers, engineers, professors and post-graduate students. ROOM has a distinguished Editorial Board of international leaders, representing organisations, industry and academia from aerospace and related domains across the globe.

ROSA - Romanian Space Agency

Stand: A108 & A109 SCN- Sierra Nevada Corporation

Contact person: Alexandra Dita

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Web: http://www2.rosa.ro/index.php/en/

ROSA is acting on behalf of the Romanian Government for: ESA; EU - Space & Security Research, NATO - Science for Peace and Security and Space-related RTO issues. On the 20th of January 2011 Romania, represented by ROSA, signed its Accession Agreement to the ESA Convention, becoming the 19th ESA Member State. ROSA is currently managing the national support programme on Space Technology and Advanced Research (STAR). Under this programme ROSA manages a set of Competence Centres:

- Romanian nanoSatellite Technology (ROST-CC)
- Laser-Plasma Acceleration of Particles for Radiation Hardness Testing Smart Sensors and Big Data Technology for Space Applications

an interest in space. ROOM is sold in retail in Barnes and Noble accross the USA.

- Atmospheric Remote Sensing and Space Earth observation
- Computer Assisted and Information Feedback Training for Human Spaceflight Support
- Microlaunchers and Space Vehicles
- Romanian Marine and Coastal Regions Development

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Web: www.sncspace.com

KONGSBERG

Stand: B15

Stand: B16

(thermal vacuum, vibration and radiation), in cooperation with our partners. One of the achievements of Hyperion Technologies is an interface and data acquisition unit, currently operating on the ISS.

component lifetime and gives satellite builders an increased level of confidence in their mission

Email:

Hyperion Technologies develops best-in-class nano-satellite components, enabling satellite builders to construct next generation CubeSats and small satellites. The components of Hyperion Technologies are small, use little power due to

their very high efficiency and are robust. One of the assets offered by Hyperion's products over competing products is an increase in expected lifetime, as all products are designed and verified to be radiation tolerant. This gives the highest

The product portfolio of Hyperion Technologies includes amongst others star trackers and highly integrated attitude

determination and control systems. Hyperion also offers custom design services for satellite components, and testing

b.monna@hyperiontechnologies.nl

ISIS - Innovative Solutions In Space BV

Email: sales@isispace.nl Contact person: Jeroen Rotteveel

utive Solutions In Space ISIS- Innovative Solutions In Space is a very vertically integrated small satellite company from Delft with 45 engineers. The company is focused on satellites in the range of 1 -20 kilograms and provides R&D, services, products and subsystems, launch services, satellite platforms and tur-key solutions to a broad range of customers

Moog Bradford

MOOG

info.bradford@moog.com Contact person: P. van Put Email:

Moog Bradford is a high-tech European developer and manufacturer of satellite attitude and orbit control subsystems, propulsion, and thermal subsystems and components. The activities are organized in product lines; each of which top positions (first or second) within the European supplier field

NLR - Netherlands Aerospace Centre

Contact person: Peter Dieleman

Email: dieleman@nlr.nl

NLR, the Netherlands Aerospace Centre serves the space sector with capabilities that include design of satellites and development of heat transfer systems. NLR is specialist in the field of earth observation and navigation. In partnership with ESA, NLR is contributing to the development of European satellite-navigation system.

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spaceinstitute@tudelft.nl

NSO

Netherlands

BRADFORD

Contact person: J. Wamsteker

The Netherlands Space Office acts as the Dutch agency for space affairs. The Netherlands Space Office (NSO) was established by the Dutch government in order to develop the Netherlands' space programme and to bring that programme to action. The NSO is the face of the Dutch space community for international space organisations like ESA, NASA and JAXA as well as the central point of contact for the space community within the Netherlands

Tel:

SpaceNed

SpaceNed

ASSOCIATION OF SPACE COMPANIES IN THE NETHERLANDS

Contact person: Jeroen Rotteveel info@spacened.nl

SpaceNed is the Association of Space in The Netherlands, rebranded form NISO in 2009. The objective of SpaceNed is to strengthen the position of its members in the international space market. Members cover Industry, SME, research institutes and universities, active in both the upstream and the downstream space markets.

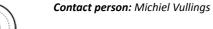
TNO



On-site contact person: Dr. Henri Werij Email: henri.werij@tno.nl

TNO has been active in the field of advanced space instruments for over 50 years, developing instruments for earth observation (optical, rader) and astronomy. Examples include the development of instruments for measuring the ozone layer and air quality (SCIAMACHY, OMI and TROPOMI) and instrumentation for space telescopes (HIPPARCOS, ISO and

TU Delft Space Institute



TU DELFT

INSTITUTE

The TU Delft Space Institute bundles and creates expertise on Space for local, regional and global impact on research, education and valorization. There is special attention for new technologies that enable extreme miniaturization and

Email:

demonstrating them in Space. The institute has three focal themes: Sensing from Space, Distributed Space Systems and Space Robotics

234





Sierra Nevada Corporation (SNC) provides customer-focused technology solutions in the areas of aerospace, aviation, electronics and systems integration. SNC has been honored as one of "The World's Top 10 Most Innovative Companies in Space," and one of America's fastest growing companies. SNC's Space Systems business area based in Louisville, Colorado, designs and manufactures advanced spacecraft, space vehicles, rocket motors and spacecraft subsystems and components for the U.S. Government, commercial customers, as well as for the international market. SNC has more than 25 years of space heritage, participating in more than 450 successful space missions and delivering 4,000+ systems, subsystems and components around the world.

Stand: C41a & C42		
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SEDENA

Aisle 4

SEDENA

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Stand: C39, C41b, A116 & A117

SEMAR

Stand: G2

SEMAR

Aisle 3

Contact person: Capitan Bautista

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South Africa Pavillion

Space Generation

Aisle 4 and 5

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Stand: A34

Contact person: Carmen Felix

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The Space Generation Advisory Council in support of the United Nations Programme on Space Applications (SGAC) is a non-governmental, non-profit organisation, which aims to represent students and young space professionals to the United Nations, industry, agencies and academia. SGAC hosts conferences around the world to mobilize today's young minds on key space issues.

Stand: C43

Space Industry Association of Australia

Aisle 6

Aisle 5



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IAC2017 in Adelaide Australia is structured around the theme Unlocking Imagination, Fostering Innovation and Strengthening Security. These three ideas capture the essence of human involvement with the space environment in the 21st Century. The space environment is harsh and near earth space is fragile. The interests of all nations and people with respect to access to space can only be met if that access is safe and assured. Technical political and policy challenges must be overcome for this end state to be achieved. Technological innovations, notably the increasing reach of the internet and miniaturization, are combining to reduce barriers of entry to space and to encourage entrepreneurs to develop space-based businesses that could not be contemplated even a decade ago.

Australia has responsibilities for land and ocean areas that account for nearly 15% of the world's surface. We make extensive use of satellite communications, global timing and navigation systems and earth observation data to meet our sovereign prerogatives and to fulfill our obligations under international law. Space cooperation with regional nations is increasing and we continue to value our long-standing relationships with partners in North America and Europe. Australia is making substantial investments in developing capabilities in space-based communications, space situational awareness, and space-based remote sensing. Industry is expected to play an increasingly important role in these developments. Your hosts, the Space Industry Association of Australia are determined to place further emphasis on B2B interactions at IAC2017 in Adelaide. We also plan to showcase the importance of Science, Technology, Engineering and Mathematics (STEM) education as pathways to careers that are essential to the modern global economy. We invite all members of the space community to attend only the third IAC to be held south of the Equator and only the second to be held in Australia from 25-29 September next year.

Stand: A27 SPACEPORT NORWAY

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Tel:

Stand: A36 Aisle 6 **Springer Nature**

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Springer is one of the world's leading global research, educational and professional publishers; home to an array of respected and trusted brands providing quality content through a range of innovative products and services. Springer is the world's largest academic book publisher and numbers almost 13,000 staff in over 50 countries.

Stand: A22 & A23

SSC

Aisle 4

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Email: kmortensen@uspacenet.com

Web: www.sscspace.com

SSC provides advanced space services to commercial and institutional customers worldwide. Built on decades of experience, we offer proven expertise in space engineering, satellite management services, and launch services for sounding rockets and balloons. WE HELP EARTH BENEFIT FROM SPACE. www.sscspace.com

Stand: C49

Svrlinks @

Surrey Satellite Technology Limited

Aisle 4

Aisle 3

Aisle 4

SURREY

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Weh: http://www.sstl.co.uk/

Surrey Satellite Technology Limited 25 years of space innovation, where an innovative approach to the design, build, launch and limited to the design of toperation of satellites, has propelled SSTL to the forefront of the small satellite industry. SSTL's drive to change the economics of space means that we continue to push the boundaries of space, exploiting advances in technologies and continuing to challenge conventions, bringing affordable space exploration to our customers. SSTL delivers complete mission solutions for remote sensing, science, navigation and telecommunications as well as supplying avionics suites, subsystems and ground infrastructure. SSTL's vertically integrated projects have given us a reputation for delivering to short schedules and within tight budgets. To date we have delivered 48 satellites to international customers. Based in Guildford, UK, SSTL employs 500 staff and is an independent company within the Airbus Group. SST-US serving the US market www.sst-us.com; SSTL-UK serving the rest of the world www.sstl.co.uk.

Stand: **A118** Syrlinks

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Syrlinks is an advanced and cost-effective Radio-communication manufacturer with more than 20 years experience and > 200 cumulated years in Orbit with 100% reliability. Space portfolio is one the largest offer of the LEO radio market, with in-flight proven High Data Rate transmitters, TT&C transceivers, GNSS receiver, OCXO.

Product concept is focused on reliability, low consumption, and miniaturization. Additional Navigation solutions are available, such as SDR GNSS/GPS Receivers for Space & Defense market, and high-fidelity GNSS signal Recorder & Playback equipment. Syrlinks portfolio is mainly focused on 3 product lines:

- Mini Satellite (ESA Class 3, NASA Level II), for missions up to 7-10 years in orbit. (ECSS components)
- Microsatellite, for missions up to 5 years in orbit.
- Cube/Nanosatellite, for missions up to 2 years in orbit. Ultra miniature and High End Transmitters & Transceivers.

Radios for Micro & Cube/Nanosatellite product line are mainly based on mastery of COTS, and stressing tests on Qualified Models



Aisle 1

Aisle 6 and 7



Stand: A90-A93 + A139 & A138

The British Interplanetary Society

Aisle 3

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Web:

gill@bis-space.com www.bis-space.com

The British Interplanetary Society (BIS) is Britain's leading think tank on space development. Founded in 1933, it is the world's longest established organization devoted solely to supporting and promoting the exploration of space and astronautics. The BIS is financially independent, has charitable status, and obtains its main income from a worldwide membership. The British Interplanetary Society is devoted to initiating, promoting and disseminating new concepts and technical information about space flight and astronautics through meetings, symposia, publications, visits and exhibitions

Participating Organisations

UK Space Agency

Contact person: Web: www.gov.uk/ukspaceagency

UK SPACE

The UK Space Agency is responsible for all strategic decisions on the UK civil space programme and provide a clear, single voice for UK space ambitions. At the heart of UK efforts to explore and benefit from space, we are responsible for ensuring that the UK retains and grows a strategic capability in space-based systems, technologies, science and applications. We lead the UK's civil space programme in order to win sustainable economic growth, secure new scientific knowledge and provide benefit to all citizens.

Commercial Space Technologies Limited (CST)

Contact person:

Commercial Space Technologies Limited (CST) has been a general consultancy in the space field for over 30 years, delivering in-depth technical analysis of all space programmes to government departments, space agencies, private companies and the insurance sector. It has a base of operations in London and a representative office in Moscow, with a Russian speaking staff. The expertise and contacts that CST has developed during its extensive period of operations, has enabled it to adeptly provide trading and management services between Western and Russian space related industries and institutions. CST also brokers the services of Russian and Ukrainian launchers to an international clientele, supporting its customers through contractual milestones, customs and integration procedures and launch campaign logistics. At present, CST has facilitated the launch of 33 satellites, on 5 different launch vehicles, from 3 different launch sites technical information about space flight and astronautics through meetings, symposia, publications, visits and exhibitions.

Seradata

Seradata 7

www.seradata.com Contact person: Web:

Seradata produces SpaceTrak, the renowned online satellite and launch database which is available via annual subscription. Delivered via a powerful website, our experienced analysts provide comprehensive, consistent, independent and authoritative information covering every orbital spacecraft since Sputnik. SpaceTrak is used by space agencies, manufacturers, operators and insurers worldwide.

QinetiQ

QinetiQ

Contact person: Web: www.QinetiQ.be

Commercial and defence customers - including the European Space Agency (ESA) and NASA - work with QinetiQ to define and deliver their satellite missions and to enhance their spacecraft with our satellite technology

We enable them to achieve first-off challenging missions, to extend the life of their spacecraft, enhance payload capability and operational flexibility, and reduce launch costs. Alongside building complete satellites, our team provides end-to- end mission solutions that support the 'big picture'. We also provide equipment for spacecraft, including next generation

The Science & Technology Facilities Council (STFC)

Science & Technology

Contact person: Web:

The Science & Technology Facilities Council (STFC) is represented by RAL Space, their space science department and the UK Astronomy Technology Centre, the national centre for astronomical technology.

RAL Space undertakes world-leading space research and technology development, provides space test and groundbased facilities, designs and builds instruments, analyses and processes data and operates S- and X-band ground-station facilities. RAL Space scientists and engineers work with groups developing concepts from around the world, both for

UK ATC designs and builds instruments for many of the world's major telescopes, including project management of UK and international consortia. UK ATC scientists carry out observational and theoretical research into fundamental questions such as the origins of planets and of galaxies.

Stand: C31 + C32

UAE Space Agency

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www.space.gov.ae

The main aims of the UAE Space Agency are:

. To organise, regulate and support the space sector in the UAE and to enhance its position. and encourage the development and use of space science and technology.

• The establishment of international partnerships in the space sector and to enhance the role of the state and its position in the space sector.

• Contribute to the diversification of the national economy through the space sector.

• Raise awareness of the importance of the space technologies, enhance national capabilities and encourage peaceful application of space research.

Stand: A25 & A26

UNAM SPACE Aisle 4



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UNAM Space is a mexican student team founded in 2012 by students of the School of Engineering of the National Autonomous University of Mexico aimd at creating Space Engineering, as well as spread and impulse the development of space science and technology to improve people's lives, take this knowledge to the youth and make a better world. Our research and work is focused on autonomous space rovers.

The team has tested its knowledge and skills in three robotics competitions convened by NASA: 4th Annual Lunabotics Mining Competition (2013); 2015 and 2016 NASA's Sample Return Robot Challenge. The next step is to turn this work and experience into a sustainable and accesible industry and give the world space community (Academia, Industry and Space Agencies) new ideas and knowledge to create technology and take human kind further than any imagined border.

Stand: C23 & B10a

Universidad de Guadalajara

Universidad de Guadalajara

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Stand: A38 Universidad de Puebla Aisle 6

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Stand: A61

UNIVERSITY OF SOUTHERN CALIFORNIA, VITERBI

Aisle 3



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Located in Los Angeles, a global center for arts, technology and international trade, the University of Southern California (USC) is one of the world's leading private research universities. USC boasts a uniquely diverse student body and offers extensive opportunities for interdisciplinary study and research.

The Viterbi School of Engineering, internationally recognized for excellence in education, is among the nation's highest in volume of research activity. More than a third of the Viterbi School's faculty members are fellows in their respective professional societies. With over 35 faculty members elected to the National Academy of Engineering, and more than 50 winners of National Science Foundation Career Awards, the school ranks among the nation's very best in these important metrics of a school's present and future strength.

WELCOM

ORGANISE

The Viterbi School offers a wide range of Master's and PhD programs in the following fields:

Aerospace & Mechanical Engineering
Astronautical Engineering (one of the only standalone ASTE departments in the U.S.)
Biomedical Engineering

Chemical Engineering, Materials Science & Petroleum Engineering Civil & Environmental Engineering

Computer Science
Electrical Engineering
Industrial & Systems Engineering

Informatics

Virgin Galactic

UNITED NATIONS Office for Outer Space Affair

Stand: B3

UNOOSA

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Aisle 8 and 9

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Web: http://www.unoosa.org/

The United Nations Office for Outer Space Affairs (UNOOSA) works to bring the benefits of space to humankind. The Office promotes international cooperation in the peaceful uses of outer space and facilitates the use of space science and technology for sustainable economic and social development.

One of UNOOSA's key responsibilities is building the space capacity of non-space-faring countries, particularly developing countries. The Office provides capacity-building and advisory services through workshops, training courses, projects, education curricula and other initiatives on topics that include remote sensing, satellite navigation, satellite meteorology, tele-education. space science, and space law.

Through its United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) programme, UNOOSA also supports United Nations member states to access and use satellite data for disaster recovery and risk reduction.

UNOOSA serves as the secretariat for the United Nations General Assembly's only committee dealing exclusively with international cooperation in the peaceful uses of outer space: the United Nations

Committee on the Peaceful Uses of Outer Space (COPUOS) and its Technical and Scientific and Legal Subcommittees. COPUOS reviews international cooperation in the use of outer space, studies space-related activities that could be undertaken by the United Nations, encourages space research programmes, and considers legal problems arising from the exploration of outer space. In addition to supporting the work of COPUOS, UNOOSA is the executive secretariat of the International Committee on Global Navigational Satellite Systems, which facilitates compatibility, interoperability and transparency among satellite navigation systems. UNOOSA has also recently become secretariat to the Space Mission Planning Advisory Group.

UNOOSA is also responsible for implementing the Secretary-General's responsibilities underinternational space law and maintaining the United Nations Register of Objects Launched into OuterSpace.UNOOSA is located at the United Nations Office at Vienna, Austria, and has offices in Bonn, Germany, and Beijing, China.

Stand: A19

Aisle 3



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Web: http://www.virgingalactic.com/

Virgin Galactic is the world's first commercial spaceline. Founded by Sir Richard Branson and owned by the Virgin Group and Aabar Investments PIS, Virgin Galactic aims to open access to space to change the world for good. Virgin Galactic is developing reliable, affordable, and frequent services both for human spaceflight and satellite launch. To launch the small satellite revolution, Virgin Galactic is developing LauncherOne, a flexible launch service for commercial and government-built satellites. LauncherOne rockets are designed and manufactured in Long Beach, California, and will be air-launched from a dedicated 747-400 carrier from various locations. To revolutionize human spaceflight, Virgin Galactic is testing the SpaceShipTwo VSS Unity, a reusable space launch system. The number of customers who paid to reserve places to fly on SpaceShipTwo is already greater than the total number of humans who have ever been to space throughout history. SpaceShipTwo and its carrier aircraft, WhiteKnightTwo, are manufactured and tested in Mojave, California by Virgin Galactic's manufacturing wing, The Spaceship Company. Commercial operations will be based in New Mexico at Spaceport America, the world's first purpose-built commercial spaceport.

10 Social Events

Opening Ceremony

Date: Monday, 26 September

Time: 12:00-13:30

The opening ceremony of the congress will be held in "Guadalajara's" room at Expo Guadalajara on September 26th, from 12:00-13:30, with the presence of world famous personalities, members of the space sector and government representatives.

Welcome Reception

Date: Monday, 26 September

Time: 19:30 - 22:00

Be part of the welcome reception where you will live a totally Mexican experience, in "Mexico's" room at Expo Guadalajara on Monday September 26th from 7:30 pm. You will enjoy Mexican shows, games, typical Mexican food, margaritas and many more surprises.

Cultural Event

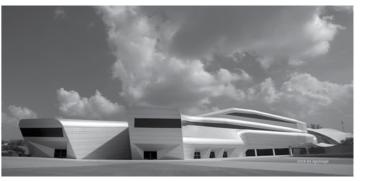
Date: Thursday, 29 September

Time: 19:00 - 22:00 Cost: €49/\$55 pp

A cultural event designed for all our participants will be host at Palcco museum where you can live and learn more about the culture of Guadalajara. It will be on Thursday September 29th, you have to be in Expo Guadalajara at 7:00 pm for the pickup. The admission ticket includes transportation to PALCCO and return to the EXPO convention centre, food, museum visit and a Mariachi Gala performance with the Symphonic Orchestra. The cost of the ticket will be 49 Euros or 55 USD and will be available online and onsite at the registration area.

Pickup point: Motor lobby of Expo Guadalajara at 19:00 pm (downstairs of lobby in front of Hilton Hotel).







IAC-16.E1.IP.30

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OGRAMME

PROFESSIONALS
EVENTS

Gala Dinner

Date: Friday, 30 September

Time: 18:30 - 22:00 Cost: €80/\$88 pp

The IAC2016 gala dinner will take place at the historical "Hospicio Cabañas". This is an emblematic neoclassical building of the city of Guadalajara. Inside some of the most important murals by José Clemente Orozco are preserved and was declared in 1997 a World Heritage Site by UNESCO.

Admission to the event includes transportation, dinner and show. The ticket will cost 80 Euros or 88 USD and will be available online and onsite at the registration area.

Pickup point: Motor lobby 2 of Expo Guadalajara at 17:30, 17:45, 18:00 and 18:30 (downstairs of lobby in front of Hilton Hotel)





11 Authors' Index

A = Author CA = Co-author

Α			Akiyama, Hiroaki Akiyama, Yuki
			Akobian, Bagrat
Name	Role	Paper	Al Mheiri, Saif
A, SOMANATHAN A R, Rajkumar	CA CA	IAC-16.A3.IP.3 IAC-16.C4.IP.16	Al Yassi, Hamad
A., Jayashree	CA	IAC-16.C4.3.12	Al-Messabi, Hana
A.Cherian, Shajimon	CA	IAC-16.C4.1.9	Alagha, Nader
Aabloo, Alvo	CA	IAC-16.D4.1.7	Alam, Nadeem
Abe, Shuji	CA	IAC-16.A6.2.5	Alam, Nadeem
Abe, Takumi	CA	IAC-16.A3.5.1	Alam, Nadeem Alam, Nadeem
ABHIJEET, KUMAR	CA	IAC-16.E7.5.8	Alam, Nadeem
Aboutanios, Elias	CA	IAC-16.D1.5.1	Alam, Nadeem
Abrahams, Aysha	CA	IAC-16.E1.5.9	Alam, Nadeem
Abrahamsen, Malin	CA	IAC-16.D2.2.7	Alam, Shahanshal
Abrego-Martínez, Juan Carlos	CA	IAC-16.A1.IP.28	Alam, Shahanshal
Abt, Valentin	CA	IAC-16.D1.7.2	Alam, Shahanshal
Accomazzo, Andrea	A	IAC-16.A3.4.1	Alam, Shahanshal
Aceti, Roberto	CA	IAC-16.D2.3.5	Alawani, Mohame
Acevedo, Raul	CA	IAC-16.A2.3.5	Albano, Marta
Acierno, Kyle	CA CA	IAC-16.A3.IP.42	Albano, Marta
Acierno, Kyle Ackermann, Nicolas	CA	IAC-16.D3.1.7 IAC-16.B4.4.6	Albat, Ruedeger
Acuna, Dora	CA	IAC-16.A1.7.8	Albi, Riccardo
Adam Siade, Juan Alberto	CA	IAC-16.E3.4.7	Albino, Vito
Aderoju, Olaide	CA	IAC-16.B5.2.4	Alcorn, John
Aderoju, Olaide Monsor	CA	IAC-16.B1.5.4	Aldaas, Abed
ADESINA, EKUNDAYO	CA	IAC-16.B2.2.8	Alderliesten, Rene
Adriaensen, Maarten	Α	IAC-16.E3.1.13	Aldrin, Andrew Aldrin, Andrew
Adriaensen, Maarten	CA	IAC-16.E5.2.6	Aldrin, Buzz
Adriaensen, Maarten	CA	IAC-16.E1.5.3	Aleksandrov, Oleg
Afful, Andoh Michael	CA	IAC-16.E1.6.9	Aleksandrov, Oleg
Afouna, Mahmoud	CA	IAC-16.D4.1.6	Aleksandrov, Oleg
Aganaba-Jeanty, Timiebi	CA	IAC-16.E7.6-E3.5.4	Aleksandrov, Oleg
Agapov, Vladimir	CA	IAC-16.A6.1.2	Aleksandrov, Oleg
Agarwal, Deepak K.	CA	IAC-16.A3.IP.4	Aleksandrov, Oleg
Agarwal, Deepak K.	CA	IAC-16.C4.IP.43	Aleksandrov, Oleg
Agarwal, Deepak K.	CA	IAC-16.C4.3.12	Aleksandrov, Oleg
Agarwal, Deepak K.	CA CA	IAC-16.D1.6.10	Aleksandrov, Oleg
Agarwal, Prakhar	CA	IAC-16.E1.IP.15 IAC-16.B1.1.3	Aleksandrov, Oleg
Agbaje, Ganiyu Agbaje, Ganiyu	CA	IAC-16.E1.5.12	Aleksandrov, Oleg
Aglietti, Guglielmo	CA	IAC-16.B6.2.6	Aleksandrov, Oleg
Aglietti, Guglielmo	CA	IAC-16.D4.1.3	Aleksandrov, Oleg
Aglietti, Guglielmo	CA	IAC-16.A6.6.8	Alekseeva, Evgeni
Agnolon, David	CA	IAC-16.A7.3.4	Ales, Filippo
Agostini, Livio	CA	IAC-16.D1.1.5	Alessi, Elisa Maria
Agostini, Livio	CA	IAC-16.B4.1.11	Alessi, Elisa Maria
Agostini, Livio	CA	IAC-16.E1.3.10	_ Alessi, Elisa Maria Alexander, Leslie
Agrawal, Brij	CA	IAC-16.C2.5.1	Alfano, Salvatore
Agrawal, Gagan	CA	IAC-16.E1.IP.15	Alfano, Salvatore
Agrawal, Gagan	CA	IAC-16.D3.1.6	Alfaro, Luis
Agrawal, Vinod Kumar	CA	IAC-16.E2.4.7	Alger, Mike
Agu, Ants	CA	IAC-16.B4.4.3	Ali, Anwar
Aguilar, Andres	CA	IAC-16.E3.1.1	Ali, Mohammad
Aguilar, Roberto	CA	IAC-16.D2.IP.3	Ali-Fadiora, Lami
Aguilar, Roberto	CA	IAC-16.E2.2.3	Ali-Fadiora, Lami
Aguilar, Vincent	CA	IAC-16.A1.IP.29	Ali-Fadiora, Lami
AGUILAR, VICTOR	CA	IAC-16.B2.IP.3	Aliaj, Bora
Ahn, Hyojung Ai, Weidang	CA CA	IAC-16.E3.6.13	Aliaj, Bora
Aibe, Yoichi	CA	IAC-16.A1.6.8 IAC-16.D4.3.11	Aliaj, Bora
Aiga, Masanori	CA	IAC-16.D4.3.10	Aliaj, Bora
Aja Von-Putlitz, Genaro Eduardo	CA	IAC-16.D4.3.10	Aliberti, Marco
Ajith, MR	CA	IAC-16.C2.4.3	Alier, Marc
Akhmetov, Ravil N.	CA	IAC-16.D2.2.3	Alifanov, Oleg
Akhmetzhanov, Ruslan	CA	IAC-16.C4.4.10	_ Alkalai, Leon
Akhtman, Yosef	CA	IAC-16.B4.4.6	Allehidan, Mohan
Akin, David	CA	IAC-16.C1.8.10	Allen, May
Akioka, Maki	CA	IAC-16.B2.7.3	Alles, Jeffrey W.
Akioka, Maki	CA	IAC-16.B2.7.6	Alleyne, Camille

Akiyama, Hiroaki	CA	IAC-16.E1.IP.30
Akiyama, Yuki	CA	IAC-16.C1.7.9
Akobian, Bagrat	CA	IAC-16.D5.1.5
Al Mheiri, Saif	CA	IAC-16.B4.4.12
Al Yassi, Hamad	CA	IAC-16.B4.4.12
Al-Messabi, Hanan	CA	IAC-16.B4.4.12
Alagha, Nader	CA	IAC-16.B2.5.3
Alam, Nadeem	Α	IAC-16.A1.IP.32
Alam, Nadeem	CA	IAC-16.C4.IP.24
Alam, Nadeem	CA	IAC-16.D4.IP.1
Alam, Nadeem	CA	IAC-16.B2.1.8
Alam, Nadeem	CA	IAC-16.B2.2.4
Alam, Nadeem	Α	IAC-16.A3.3A.7
Alam, Nadeem	Α	IAC-16.D2.5.8
Alam, Shahanshah	CA	IAC-16.B2.1.8
Alam, Shahanshah	CA	IAC-16.B2.2.4
Alam, Shahanshah	CA	IAC-16.A3.3A.7
Alam, Shahanshah	CA	IAC-16.D2.5.8
Alawani, Mohamed	CA	IAC-16.B4.4.12
Albano, Marta	CA	IAC-16.A6.1.6
Albano, Marta	CA	IAC-16.C2.4.2
Albat, Ruedeger	CA	IAC-16.D2.1.7
Albi, Riccardo	CA	IAC-16.B4.3.8
Albino, Vito	CA	IAC-16.D6.3.1
	CA	IAC-16.C1.1.4
Alcorn, John Aldaas, Abed	CA	
		IAC-16.E1.5.8
Aldrin Andrew	CA CA	IAC-16.A6.IP.31
Aldrin, Andrew		IAC-16.A5.2.12
Aldrin, Andrew	CA	IAC-16.E3.2.3
Aldrin, Buzz	CA	IAC-16.A5.2.12
Aleksandrov, Oleg	CA	IAC-16.A1.IP.18
Aleksandrov, Oleg	CA	IAC-16.A5.IP.12
Aleksandrov, Oleg	CA	IAC-16.A5.IP.13
Aleksandrov, Oleg	CA	IAC-16.A6.IP.17
Aleksandrov, Oleg	CA	IAC-16.B3.IP.4
Aleksandrov, Oleg	CA	IAC-16.B3.IP.5
Aleksandrov, Oleg	CA	IAC-16.C3.IP.2
Aleksandrov, Oleg	CA	IAC-16.C4.IP.1
Aleksandrov, Oleg	CA	IAC-16.D2.IP.4
Aleksandrov, Oleg	CA	IAC-16.E6.IP.3
Aleksandrov, Oleg	CA	IAC-16.E6.IP.4
Aleksandrov, Oleg	CA	IAC-16.E6.IP.5
Aleksandrov, Oleg	CA	IAC-16.E6.IP.6
Alekseeva, Evgeniia	CA	IAC-16.D3.3.4
Ales, Filippo	CA	IAC-16.B1.2.7
Alessi, Elisa Maria	CA	IAC-16.A6.IP.24
Alessi, Elisa Maria	CA	IAC-16.A6.2.7
Alessi, Elisa Maria	CA	IAC-16.A6.4.2
Alexander, Leslie	CA	IAC-16.D3.1.5
Alfano, Salvatore	CA	IAC-16.A6.2
Alfano, Salvatore	CA	IAC-16.A6.2.1
Alfaro, Luis	CA	IAC-16.E6.1.8
Alger, Mike	CA	IAC-16.A3.IP.32
Ali, Anwar	CA	IAC-16.B2.7.7
Ali, Mohammad	CA	IAC-16.C4.IP.16
Ali-Fadiora, Lami	CA	IAC-16.A1.1.5
Ali-Fadiora, Lami	CA	IAC-16.E1.5.12
Ali-Fadiora, Lami	CA	IAC-16.E1.6.10
Aliaj, Bora	CA	IAC-16.E1.IP.1
Aliaj, Bora	CA	IAC-16.E1.IP.22
Aliaj, Bora	CA	IAC-16.D4.1.6
Aliaj, Bora	CA	IAC-16.D4.1.8
Aliberti, Marco		
•	CA	IAC-16.E3.IP.3
Alifanov Olog	CA	IAC-16.E1.IP.18
Alifanov, Oleg	CA	IAC-16.C2.4.2
Alkalai, Leon	CA	IAC-16.D1.6.1
Alkalai, Leon Allehidan, Mohammed	CA CA	IAC-16.E3.IP.2
Alkalai, Leon Allehidan, Mohammed Allen, May	CA CA CA	IAC-16.E3.IP.2 IAC-16.B4.6A.9
Alkalai, Leon Allehidan, Mohammed	CA CA	IAC-16.E3.IP.2

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IAC-16.B4.6B.10







Bannova, Olga

Barad, Kuldeep

CA

CA



IAC-16.E5.1.1

IAC-16.B4.8.4

Allik, Viljo

Allouis, Elie

Almario, Daniela

Alnagbi, Bushra

Alotaibi, Ghanim

Alpatov, Anatoliy

Altobelli, Nicolas

Alvarez, Rogelio

Amberger, Stefan Ambrose, Robert

Ambrosi, Richard

Ambrosi, Richard

Amidon, Peter

Amils, Ricardo

Amnell, Henrik

Amzler, Robert

Ancona, Elena

Anderson, David P. Anderson, Molly

Anderson, Pamela

Anderson, Pamela

Anderson, Rodney

Andrade, Jonathan

Andrade Gonzalez, Mario Angel

Ando, Hiroki

Andre, Yves

Andrew, William ANDRUSYSZYN, François

ANDRUSYSZYN, François

ANDRUSYSZYN, François

ANDRUSYSZYN, François

Anifowose, A. Yekini Biodun

Anesio, Alexandre M.

Angeletti, Federica

Angeli, Thomas

Angli, Nil

Anih, Samuel

Anlong, Gong

Anma, Kenichi

Ansalone, Luigi

Anselmo, Luciano

Antelis, Javier M.

Antelis, Javier M.

Antelis, Javier M.

ANTOINE, PATUREAU

Antoine, David ANTOINE, PATUREAU

Antol, Jeffrey

Anton, Alfredo

Anton, Wilma Antonello, Andrea

Antonello, Andrea Antonello, Andrea

Antonello, Andrea

Antonello, Andrea

Annadurai, Mylswamy

Annamalai, Vinoth Kumar

Anli, Zhang

AN, Xueyan Ancona, Elena

Ambrosio, Ana Maria

Ambrosio, Ana Maria

Aminou, Donny M.A.

Amir-Taha, Nour-El-Dine

Amirthanayagam, Ahilan

AMBROSIO, ELISA PAOLA

Alsalhi, Zainab

Almeida, Jose Sergio

Almeida Prado, Antonio Fernando

Almeida Prado, Antonio Fernando

Alonso Torres, Edgar Giovanni

ALVARADO, MIGUEL ANGEL

Alvarado Briceño, Carlos

Alvarado Briceño, Carlos

26 - 30 September 2016, Guadalajara, Mexico

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31
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CADEMY



IAC-16.B4.4.3	Antonello, Andrea	CA	IAC-16.A3.2C.4
IAC-16.A3.3B.8	Antonetti, Stefano	CA	IAC-16.A6.8.9
IAC-16.E7.5.3	Antoni, LL.M. (adv), Attorney at Law,	CA	IAC-16.E7.4.9
IAC-16.C2.7.9	Ntorina		
IAC-16.C1.IP.2	Antoniadis, Lisa	CA	IAC-16.E1.7.2
IAC-16.C1.6.10	Antonini, Kelly	CA	IAC-16.B4.1.12
IAC-16.B4.4.12	Antonsen, Erik	CA	IAC-16.A1.3.9
IAC-16.A3.3A.8	Antonsen, Erik	CA	IAC-16.E3.6.11
IAC-16.E1.5.8	Antropov, Nikolay	CA	IAC-16.C4.4.10
IAC-16.A6.5.9	Antunano, Melchor Aoki, Setsuko	CA	IAC-16.B3.9-GTS.2.4 IAC-16.E7.5.4
IAC-16.E1.5.8	Aoki, Yoshio	CA	IAC-16.D4.3.10
IAC-16.A3.4.2 IAC-16.B1.4.8	AOUF, NABIL	CA	IAC-16.A6.IP.18
IAC-16.B1.4.8	Aoun, Elie	CA	IAC-16.E7.IP.28
IAC-16.E3.1.3	Aparicio Estrada, Monica	CA	IAC-16.A6.4.9
IAC-16.B2.IP.3	Apodaca Moreno, Maria Regina	CA	IAC-16.D3.3.9
IAC-16.B2.1.5	Appolloni, Laura	CA	IAC-16.D2.2.6
IAC-16.D3.1.5	Aguilano, Matteo	CA	IAC-16.E2.1.8
IAC-16.E1.4.9	Aquilano, Matteo	CA	IAC-16.B6.3.10
IAC-16.C3.5-C4.7.1	Arato, Laszlo	CA	IAC-16.A6.5.2
IAC-16.B6.2.9	Arbinger, Christian	CA	IAC-16.D6.3.6
IAC-16.D5.1.2	Arcea, Dieter	CA	IAC-16.D3.3.9
IAC-16.A2.6.9	Arcea, Dieter	CA	IAC-16.A7.3.1
IAC-16.E1.2.3	Arena, Lorenzo	CA	IAC-16.A6.1.6
IAC-16.A1.5.2	Arena, Lorenzo	CA	IAC-16.B4.2.9
IAC-16.B1.3.1	Arena, Lorenzo	CA	IAC-16.B2.2.7
IAC-16.D1.7.2	Arena, Lorenzo	CA	IAC-16.B4.1.11
IAC-16.C3.2.9	Arena, Lorenzo	CA	IAC-16.E1.3.4
IAC-16.C4.3.4	Arena, Lorenzo	CA	IAC-16.E1.3.10
IAC-16.A3.2A.7	Arena, Lorenzo	CA	IAC-16.C2.6.3
IAC-16.E1.IP.31	ARGUELLES ARREDONDO, CARLOS	CA	IAC-16.E7.5.1
IAC-16.C1.6.7	GABRIEL		IAC-10.L7.J.1
IAC-16.C2.6.6	Arias Estrada, Miguel Octavio	CA	IAC-16.B1.IP.15
IAC-16.A4.1.4	Arifin, Bustanul	CA	IAC-16.C2.7.3
IAC-16.D3.1.5	Arita, Makoto	CA	IAC-16.D2.1.4
IAC-16.B2.6.1	Arizpe, Pablo Alejandro	CA	IAC-16.E2.4.3
IAC-16.B5.1.2	Armellin, Roberto	CA	IAC-16.C1.IP.4
IAC-16.C1.7.2	Arnakova, Evgenia	CA	IAC-16.C1.5.6
IAC-16.A3.5.1	Arney, Dale	CA	IAC-16.D3.4.9
IAC-16.E7.IP.12	Arnhof, Marlies	CA	IAC-16.E5.1.6
IAC-16.C4.4.11	Arnocz, Istvan	CA	IAC-16.E6.3.2
IAC-16.B4.2.7	Arnot, Callum S.	CA	IAC-16.C1.1.2
IAC-16.D1.5.1	ARNOULD, PEERIS	CA	IAC-16.D2.7.5
IAC-16.D2.7.5	ARNOULD, PEERIS	CA	IAC-16.E1.3.12
IAC-16.E1.3.12	ARNOULD, PEERIS	CA	IAC-16.D2.5.11
IAC-16.D2.5.11	ARNOULD, PEERIS	CA	IAC-16.D5.2.4
IAC-16.D5.2.4	Arora, Shitij	CA	IAC-16.C2.IP.13
IAC-16.A1.5.6	Arreola, Mario	CA	IAC-16.E1.6.2
IAC-16.B2.2.7	Arriaga, L. G.	CA	IAC-16.A1.IP.28
IAC-16.A1.2.8	Arriaga, L. G.	CA	IAC-16.A2.2.8
IAC-16.B2.8-GTS.3.10	Arroyo Jaén Alberto	CA	IAC-16.C1.4.12
IAC-16.B1.5.4	Arroyo, Jaén Alberto Arterburn, David	CA	IAC-16.D1.2.12 IAC-16.D5.2.6
IAC-16.E1.6.10	ARVEILLER, Antoine	CA	
IAC-16.A3.IP.11	Asami, Kenichi	CA	IAC-16.E4.3A.3 IAC-16.B2.8-GTS.3.8
IAC-16.C2.IP.15	Asberto, Andrea	CA	IAC-16.B2.8-G13.3.8
IAC-16.C3.2.2	Ascanio, Gianluca	CA	IAC-16.D2.3.5
IAC-16.B1.5.2	Ashkar, Cameron	CA	IAC-16.A1.IP.25
IAC-16.C2.IP.2	Ashkar, Cameron	CA	IAC-16.D3.IP.2
IAC-16.C4.6.3	Ashkar, Cameron	CA	IAC-16.C3.2.9
IAC-16.A6.2.2	Ashrafi, Behnam	CA	IAC-16.C2.8.7
IAC-16.A6.2.7	Aslanov, Evgenii V.	CA	IAC-16.C2.8.7
IAC-16.A2.1.7	Aslanov, Vladimir S.	CA	IAC-16.C1.IP.13
IAC-16.C4.2.14	Aslanov, Vladimir S. Aslanov, Vladimir S.	A	IAC-16.C1.6.5
IAC-16.E1.3.9	Aslanov, Vladimir S. Aslanov, Vladimir S.	A	IAC-16.C1.8.11
IAC-16.B1.2.4	Aso, Shigeru	CA	IAC-16.C4.2.11
IAC-16.D2.4.6	Aso, Shigeru	CA	IAC-16.D2.5.7
IAC-16.D2.6.7	Asphaug, Erik	CA	IAC-16.D2.5.7
IAC-16.D3.1.5	Aspirate, Link Aspirate, Jason	CA	IAC-16.E3.IP.1
IAC-16.A6.9.7	Aspiotis, Jason	CA	IAC-16.E3.IP.2
IAC-16.E3.6.12	Assadian, Nima	CA	IAC-16.C1.1.8
IAC-16.A6.IP.25	Atchison, Justin	CA	IAC-16.A6.8.7
IAC-16.B1.IP.1	Atek, Sofiane	CA	IAC-16.C2.9.3
IAC-16.D1.IP.4	Atreya, Sushil	CA	IAC-16.A3.5.4
IAC-16.C1.3.9	Augelli, Mauro	CA	IAC-16.B3.IP.3

Augelli, Mauro

CA

IAC-16.B3.IP.3

Augustyn, Sławomir	CA	IAC-16.E5.IP.7
Aurigemma, Renato	CA	IAC-16.A3.3A.6
Avachare, Ganesh	CA	IAC-16.B1.IP.19
Avariaskin, Denis	CA	IAC-16.D2.3.8
Avilés Rodrigálvarez, Marcos	CA	IAC-16.A3.IP.29
Avilés Rodrigálvarez, Marcos	CA	IAC-16.A6.6.5
Avraham, Ted	CA	IAC-16.E1.1.1
Ayllon, Natanael	CA	IAC-16.B1.3.8
AZEMA, Guillaume	CA	IAC-16.A6.7.6
Ånes, Håkon	CA	IAC-16.B4.3.7

Name	Role	Paper
B, Ajith	CA	IAC-16.C4.3.8
B S, Kiran	CA	IAC-16.C1.5.8
BABAGANA, ABUBAKAR	CA	IAC-16.B1.6.4
BABAGANA, ABUBAKAR	CA	IAC-16.B5.1.3
Babuscia, Alessandra	CA	IAC-16.A3.2A.7
Bach, Christian	CA	IAC-16.E1.5.5
Bach, Christian	CA	IAC-16.C4.5.4
Bach, Christian	CA	IAC-16.C4.5.5
Bach, Jan Marius	A	IAC-16.B3.4-B6.5.2
Bacsardi, Laszlo	CA	IAC-16.E3.3.6
Bacsardi, Laszlo	CA	IAC-16.B2.8-GTS.3.6
Baevsky, Roman	CA	IAC-16.A1.2.2
Baghchehsara, Ali	CA	IAC-16.C3.1.5
Baghi, Quentin	CA	IAC-16.A2.1.1
Bahmani, Camille	CA	IAC-16.E1.7.5
BAHU, JEAN-MARC	CA	IAC-16.D2.4.6
BAHU, JEAN-MARC	CA	IAC-16.D2.6.7
BAI, BO	CA	IAC-16.B4.6A.4
BAI, BO	CA	IAC-16.E2.4.5
Bai, Chongyan	CA	IAC-16.A3.IP.31
Bai, Haibo	CA	IAC-16.C2.5.3
Bai, Jingjing	CA	IAC-16.C4.9.16
BAI, Yanjun	CA	IAC-16.C2.4.7
Bai, Yanping	CA	IAC-16.E1.7.11
Bai, Yanqiang	CA	IAC-16.A1.3.4
Bai, Yanqiang	CA	IAC-16.A1.6.8
Bai, Zhifu	CA	IAC-16.D2.1.5
Bai, Zhifu	CA	IAC-16.D5.2.10
Baiguera, Matteo	CA	IAC-16.D3.3.1
Bailey, Brent	CA	IAC-16.A6.6.4
Baiocco, Paolo	CA	IAC-16.D2.2.6
Baiocco, Paolo	CA	IAC-16.D2.5.1
Baiocco, Paolo	CA	IAC-16.D2.6.6
Baiocco, Paolo	CA	IAC-16.D2.6.7
Baj, Girish	CA	IAC-16.C4.6.7
Bajanaru, Paul	Α	IAC-16.B2.5.6
Baker, Christopher	CA	IAC-16.D3.4.3
Bakhtiari Mojaz, Sahar	CA	IAC-16.E1.5.11
Baksheeva, Elena	CA	IAC-16.B3.IP.2
Baksheeva, Elena	CA	IAC-16.B3.2.6
Balan, Mugurel	CA	IAC-16.B2.4.7
Balan, Mugurel	CA	IAC-16.B4.8.6
Baldesarra, Mark	CA	IAC-16.B2.4.1
Balint, Tibor	CA	IAC-16.D1.3.1
Balint, Tibor	CA	IAC-16.E5.3.3
Balogh, Werner R.	CA	IAC-16.B4.1.1
Balogh, Werner R.	CA	IAC-16.D4.2.1
Balogh, Werner R.	CA	IAC-16.E3.2.2
Balogh, Werner R.	CA	IAC-16.B1.5.8
Balogh, Werner R.	CA	IAC-16.B1.6.8
Bandla, Sirisha	CA	IAC-16.B3.2.5
Bandla, Sirisha	CA	IAC-16.D2.7.1
Bando, Mai	CA	IAC-16.D4.3.15
Bando, Mai	CA	IAC-16.C1.7.9
Banerdt, William Bruce	CA	IAC-16.A3.3A.1
Bangcheng, Ai	CA	IAC-16.A3.3A.1
Bangcheng, Ai		IAC-16.D2.6.11
	CA	IAC-16.C2.9.10
Bank, Cristian	CA	
Bannister, Nigel	CA	IAC-16.E1.4.9
Bannova, Olga	CA	IAC-16.E1.IP.35

Barad, Kuldeep	CA	IAC-16.B4.8.4
Baranov, Andrey	CA	IAC-16.C1.4.9
Baranov, Andrey	CA	IAC-16.A6.5.8
Baranov, Andrey	CA	IAC-16.C1.7.6
BARANOV, Dimitri	CA	IAC-16.D2.2.3
Baranwal, Priyanka	CA	IAC-16.C4.IP.40
Barba, Nathan	CA	IAC-16.D4.5.7
Barbee, Brent	CA	IAC-16.A3.IP.15
Barber, Simeon	CA	IAC-16.A3.2A.5
Bares, Petr	CA	IAC-16.B2.IP.5
Bares, Petr	CA	IAC-16.B2.4.9
Baresi, Nicola	CA	IAC-16.C1.4.3
Baresi, Nicola	CA	IAC-16.C1.7.4
Barnes, Marshall	CA	IAC-16.C3.2.9
Barnhard, Gary	CA	IAC-16.C3.2.1
Barnhard, Gary	CA	IAC-16.B2.6.3
Baronti, Federico	CA	IAC-16.E1.IP.14
Barraclough, Simon	CA	IAC-16.C1.IP.9
BARRE, Baptiste	CA	IAC-16.D2.7.5
BARRE, Baptiste	CA	IAC-16.E1.3.12
BARRE, Baptiste	CA	IAC-16.D2.5.11
BARRE, Baptiste	A	IAC-16.D5.2.4
Barreteau, Renaud	CA	IAC-16.D3.2.4
Barrios, Ignacio	CA	IAC-16.E1.IP.8
	CA	
Barrios, Ignacio	CA	IAC-16.B4.2.8 IAC-16.D4.1.6
Barrow, Liz		
Barschke, Merlin F.	CA	IAC-16.B4.7.7
Barth, James		IAC-16.C4.9.2
Bartkowiak, Bartosz	CA	IAC-16.C4.IP.28
Bartkowiak, Bartosz	CA	IAC-16.A2.5.3
Barton, Andrew	CA	IAC-16.A3.2A.1
Bartone, Emanuele	CA	IAC-16.A4.2.8
Bartos, Alec	CA	IAC-16.A3.1.10
Baruah, Rishiraj	CA	IAC-16.E7.2.14
Barve, Sourabh	CA	IAC-16.B1.IP.19
Barve, Sourabh	CA	IAC-16.C4.6.7
Basheer, Shireen	A	IAC-16.D3.1.6
Basso, Valter	CA	IAC-16.A3.2C.5
Bastante, Juan Carlos	CA	IAC-16.B2.4.2
Bastida Virgili, Benjamin	CA	IAC-16.A6.2.4
Bastida Virgili, Benjamin	CA	IAC-16.A6.4.1
BATAILLE, Nicolas	CA	IAC-16.A6.7.6
Bataille, Philippe	CA	IAC-16.B2.1.6
Bataille, Philippe	CA	IAC-16.B4.2.7
Bataille, Philippe	CA	IAC-16.B4.6B.2
Batenburg, Petrus	CA	IAC-16.B3.7.1
Battagliere, Maria Libera	CA	IAC-16.B1.1.7
Battagliere, Maria Libera	CA	IAC-16.B1.4.5
Battagliere, Maria Libera	CA	IAC-16.B1.5.6
Battista, Francesco	CA	IAC-16.C4.IP.44
Battista, Francesco	Α	IAC-16.C4.3.1
Battistini, Simone	CA	IAC-16.B5.2.11
Battistini, Simone	CA	IAC-16.C1.8.5
Battler, Melissa M.	CA	IAC-16.E1.4.7
Battye, William	CA	IAC-16.B1.IP.11
Bauer, Martin	CA	IAC-16.B1.3.2
Baumann, Ingo	CA	IAC-16.B2.5.1
Baxter, Sarah	CA	IAC-16.E5.3.10
Bazaldua Morquecho, Danton Iván	CA	IAC-16.B2.6.11
Bazdresch, Miguel	CA	IAC-16.E1.4.8
Bazdresch, Miguel	CA	IAC-16.B2.8-GTS.3.7
Beaudette, David	CA	IAC-16.B2.8-G13.3.7
Beblo-Vranesevic, Kristina	CA	IAC-16.A6.6.4
Becatti, Giulia		
Becedas Rodríguez, Jonathan	CA	IAC-16.E1.IP.14
	CA	IAC-16.B4.4.8
Becerra, Jairo	CA	IAC-16.E7.5.3
Becerril Ortega, Luis	CA	IAC-16.D5.3.9
Becker, Marcel	CA	IAC-16.A6.5.7
Becklake, John	CA	IAC-16.E4.1.1
Bedrich, Stefan	CA	IAC-16.D1.4.7
Beglov, Rushan	CA	IAC-16.A5.1.6
BEHAR, Jean-Baptiste	CA	IAC-16.A2.1.5
Behruzi, Philipp	CA	IAC-16.C1.IP.11









Bezerra Pessoa Filho, José Bezy, Jean-Loup Bharadwaj, B. Kapil

Beischl, Christoph	CA	IAC-16.E3.1.8
Bekembayev, Arman	CA	IAC-16.D1.IP.5
Belfi, Federico	CA	IAC-16.E1.IP.14
Belikov, Vladimir	CA	IAC-16.A6.IP.5
Belikov, Vladimir	CA	IAC-16.A6.IP.6
Belikov, Vladimir	CA	IAC-16.D1.3.5
Belingheri, Paola	CA	IAC-16.E6.2.11
Belingheri, Paola	CA	IAC-16.E6.3.5
Bell, Jim	CA	IAC-16.A3.2A.7
Bellanca, Andrea	CA	IAC-16.A2.3.6
Bellardo, John	CA	IAC-16.B4.3.6
Bellardo, John	CA	IAC-16.B4.5.2
Belley, Katia	CA	IAC-16.B3.1.6
Bellini, Niccolò	CA	IAC-16.A6.4.6
Bellini, Niccolò	CA	IAC-16.A6.7.1
Belloni, Federico	CA	IAC-16.B4.4.6
Belogurov, Albert	CA	IAC-16.C4.4.10
Belokonov, Igor V.	CA	IAC-16.B4.1.9
Belokonov, Igor V.	CA	IAC-16.D2.3.8
Belter, Daniel	CA	IAC-16.A1.5.8
Beltrame, Giovanni	CA	IAC-16.A1.IP.29
Beltrame, Giovanni	CA	IAC-16.C4.6.8
Belyakov, Alexey	CA	IAC-16.B4.5.4
Belz, Stefan	CA	IAC-16.A1.6.4
BEN AÏM DRIEUX, Hélène	CA	IAC-16.D5.2.8
Ben Hayoun, Nelly	CA	IAC-16.E1.9.14
Ben Larbi, Mohamed Khalil	CA	IAC-16.C1.2.6
Ben Larbi, Mohamed Khalil	CA	IAC-16.B4.7.6
Bender, Florian	CA	IAC-16.B4.3.10
Bender, Florian	CA	IAC-16.B3.4-B6.5.2
Benedetti, Gianluca	CA	IAC-16.A5.2.1
Benedictus, Rinze	CA CA	IAC-16.A6.IP.31
Benitez-Rodriguez, Jorge		IAC-16.A5.IP.6
Benvenuto, Riccardo	CA	IAC-16.A2.3.6
Benvenuto, Riccardo	CA	IAC-16.A6.6.6
Benzin, Kathryn	CA	IAC-16.B3.2.7
Benzin, Kathy	CA	IAC-16.A6.5.11
Beraldi Campesi, Hugo	CA CA	IAC-16.A1.IP.36
Berdal, Quentin	CA	IAC-16.B4.3.8 IAC-16.E2.3-GTS.4.2
Berg, Eric	CA	IAC-16.E2.3-G13.4.2
Berg, Marco Berga, Marco	CA	IAC-16.A5.2.11
Bergeon, Nathalie	CA	IAC-16.A3.2.11
Bergeron, Martin	CA	IAC-16.B1.2.5
Bergé, Joël	CA	IAC-16.B1.2.3
Bering, Edgar	CA	IAC-16.C4.IP.34
Bering, Edgar	CA	IAC-16.B4.8.10
Bermudez, Bárbara	CA	IAC-16.B4.2.3
Bermudez-Reyes, Barbara	CA	IAC-16.C2.1.10
Bernal, Cesar	CA	IAC-16.A6.6.8
Bernal Mencia, Pablo	CA	IAC-16.C1.IP.12
Bernard, Douglas	CA	IAC-16.A3.3A.10
Bernard, Julien	CA	IAC-16.B6.2.2
Bernard, Julien	CA	IAC-16.D3.1.6
Bernede, Noemie	CA	IAC-16.B1.5.10
Bernini, Jacopo	CA	IAC-16.E5.1.7
Berrighi, Gianni	CA	IAC-16.C1.9.8
BERTACHINI DE ALMEIDA PRADO,		
ANTONIO FERNANDO	CA	IAC-16.D4.3.6
Bertinelli, Massimo	CA	IAC-16.D1.4.8
Bertrand, Pierre	CA	IAC-16.E1.6.7
Bertrand, Reinhold	CA	IAC-16.A3.2C.2
Besha, Patrick	CA	IAC-16.E3.2.12
	CA	
	CA	IAC-16.E3.3.8
Besha, Patrick		IAC-16.E3.3.8 IAC-16.A2.3.5
	CA	
Besha, Patrick Betancourt, Luis	CA CA	IAC-16.A2.3.5
Besha, Patrick Betancourt, Luis Bethancourt, Juan	CA CA CA	IAC-16.A2.3.5 IAC-16.E5.5.7
Besha, Patrick Betancourt, Luis Bethancourt, Juan Bettiol, Laura	CA CA CA	IAC-16.A2.3.5 IAC-16.E5.5.7 IAC-16.A5.IP.5
Besha, Patrick Betancourt, Luis Bethancourt, Juan Bettiol, Laura Bettiol, Laura	CA CA CA CA	IAC-16.A2.3.5 IAC-16.E5.5.7 IAC-16.A5.IP.5 IAC-16.A6.8.7
Besha, Patrick Betancourt, Luis Bethancourt, Juan Bettiol, Laura Bettiol, Laura Bevilacqua, Marco	CA CA CA CA CA	IAC-16.A2.3.5 IAC-16.E5.5.7 IAC-16.A5.IP.5 IAC-16.A6.8.7 IAC-16.C4.6.9
Besha, Patrick Betancourt, Luis Bethancourt, Juan Bettiol, Laura Bettiol, Laura Bevilacqua, Marco Bewick, Charlotte	CA CA CA CA CA CA	IAC-16.A2.3.5 IAC-16.E5.5.7 IAC-16.A5.IP.5 IAC-16.A6.8.7 IAC-16.C4.6.9 IAC-16.B2.4.2

CA CA CA CA CA

IAC-16.B4.5.12 IAC-16.B1.2.6

IAC-16.C2.3.5

haradwaj, B. Kapil	A	IAC-16.C2.5.4
hat, M.S.	CA	IAC-16.C1.2.7
hattarai, Suresh	CA	IAC-16.E1.1.8
HAVE, VIVEK	CA	IAC-16.E2.4.8 IAC-16.C2.2.9
hide, Ojas ianchini Eulindi, Jonas	CA CA	
ianchini Fulindi, Jonas ianucci, Giovanni	CA	IAC-16.D5.1.6 IAC-16.B1.3.3
iao, Ye	CA	IAC-16.B2.2.9
ibring, Jean-Pierre	CA	IAC-16.A3.1.3
icchieri, Alessandro	CA	IAC-16.D1.4.8
idaux-Sokolowski, Ambroise	CA	IAC-16.A3.IP.44
ideev, Alexey	CA	IAC-16.A5.1.6
iebricher, Alexander	CA	IAC-16.E1.3.13
iele, Jens	CA	IAC-16.A3.4.3
ielicki, Damian M.	CA	IAC-16.A3.2C.4
ielicki, Damian M.	CA	IAC-16.B6.1.3
illia, Bernard	CA	IAC-16.A2.6.4
illot, Carole	CA	IAC-16.D2.3.2
inetti, Mario	CA	IAC-16.D6.3.1
inghua, Xu	CA	IAC-16.B2.7.12
insted, Kim	CA	IAC-16.E1.1.5
iondi, Gabriele	CA	IAC-16.A6.1.10
ioulez, Philippe irkeland, Roger	CA CA	IAC-16.A2.6.2 IAC-16.E1.IP.32
irkeland, Roger	CA	IAC-16.B4.3.7
irkeland, Roger	CA	IAC-16.E3.3.6
iryukov, Nikolay	CA	IAC-16.A1.7.7
iryukova, Natalia	CA	IAC-16.B3.3.3
isgaard, Morten	CA	IAC-16.B4.3.11
ishnoi, Shagun	CA	IAC-16.C4.IP.40
isi, Mario	CA	IAC-16.D5.3.2
iswal, Soumit Kumar	CA	IAC-16.C2.1.11
iswal, Soumit Kumar	CA	IAC-16.C4.5.7
iswal, Soumit Kumar	CA	IAC-16.C4.5.8
iswas, Sanat	A	IAC-16.C1.3.7
IZE, Sébastien	CA	IAC-16.A2.1.5
lack, Martin	CA	IAC-16.A1.IP.10
lake, Curt	CA	IAC-16.D2.2.12
lanco, Gonzalo lanco, Gonzalo	CA CA	IAC-16.A6.4.7 IAC-16.A3.3B.2
lanco Amable, Michel	CA	IAC-16.A1.IP.28
lanco Amable, Michel	CA	IAC-16.A2.2.8
lasi, Roland	CA	IAC-16.C4.1.4
lasi, Roland	CA	IAC-16.C4.3.2
londe, Didier	CA	IAC-16.A2.6.2
lonski, Daniel	CA	IAC-16.B2.2.1
lount, PJ	CA	IAC-16.E7.3.5
lumberg, Dan Gabriel	CA	IAC-16.E1.8.7
lunt, Paul	CA	IAC-16.B2.4.10
OAKYE, OWUSU ANSAH	A	IAC-16.E1.2.8
ock, Daniel	CA	IAC-16.C4.6.5
ockstahler, Klaus	CA	IAC-16.B3.7.6
ocquet, Bertrand	CA	IAC-16.D2.7.5
ocquet, Bertrand	Α Α	IAC-16.E1.3.12
ocquet, Bertrand	CA	IAC-16.D2.5.11 IAC-16.D5.2.4
ocquet, Bertrand oden, Ralf	CA	IAC-16.D3.2.4
ogatyy, Aleksandr	CA	IAC-16.C4.4.10
ogdanov, Aleksey	CA	IAC-16.A5.1.11
ogdanov, Aleksey	CA	IAC-16.B3.6-A5.3.3
ogdanov, Aleksey	CA	IAC-16.B3.6-A5.3.5
ogdanova, Yulia	CA	IAC-16.D5.3.2
oggero, Luca	CA	IAC-16.D2.4.8
ohlmann, Ulrike M.	CA	IAC-16.A4.2.6
ohmeier, Maria	CA	IAC-16.A1.5.2
oithias, Hélène	CA	IAC-16.A3.1.7
ojar, Konrad	CA	IAC-16.A6.IP.37
olasco, Sergio	CA	IAC-16.E6.3.10
olden, Mark P.	CA	IAC-16.A6.9.4
OLDRINI, FRANCO	Α	IAC-16.C1.9.8
oll, Nathan	CA	IAC-16.A1.IP.8
oll, Nathan ombardelli, Claudio	CA	IAC-16.E3.2.8
ombardelli, Claudio ombardelli, Claudio	CA CA	IAC-16.A6.IP.24 IAC-16.C1.IP.12
omparuciii, ciduulu	LA	IMC-10.C1.IP.12

Bond, Alan	CA IAC-:	16.D2.7.10
Bonetti, Davide		16.A6.4.7
Bonetti, Davide		16.A3.3B.2
Bonnal, Christophe		16.D2.6.6
Bonnema, Abe Bonnet, Jonathan		16.D2.2.10
Bonnet, Jonathan Booth, Stephanie		16.B6.2.5 16.D3.4.3
Borg, Kyle		16.E2.3-GTS.4.7
Borggräfe, Andreas		16.A3.1.2
Borggräfe, Andreas		16.D1.1.3
Borowitz, Mariel		16.E3.2.1
Borowitz, Mariel	CA IAC-1	16.E3.3.9
Borshchova, Aleksandra	CA IAC-:	16.A6.IP.5
Borshchova, Aleksandra		16.D1.3.5
Botta, Eleonora		16.A6.5.6
Bottacini, Massimiliano		16.B3.7.4
Botteron, Cyril		16.B2.4.10
Botti, Veronica		16.C4.6.4
Boucher, Marc Bouffard, Damien		16.E6.2.3 16.B4.4.6
BOUILLY, Thibaut		16.B4.4.6 16.D2.6.6
Boulanger, Damien		16.A2.1.1
Boulle, Edmond		16.E7.4.12
Bourgeois, Eric	911 1110	16.D2.6.6
Bourgeois, Eric		16.D2.6.7
Bourokba, Farah		16.E4.3A.3
Bousquet, Pierre W.	CA IAC-:	16.A3.3B.1
Bouwmeester, Jasper	CA IAC-1	16.E1.3.6
Bouwmeester, Jasper		16.B4.7.5
Boué, Yoan		16.C4.1.4
Bowles, Neil		16.A3.1.6
Bowles, Neil		16.C1.5.7
Boye Hansen, Lars		16.B1.5.3
Brack, Daniel		16.E5.4.2
Brack, Daniel Bradford, Andy		16.D5.4.6 16.D2.7.9
Bradford, Andy		16.B4.5.3
Bradford, John		16.D1.1.9
Bradford, John		16.B3.7.10
Bradshaw, Miranda		16.E7.IP.7
Bradshaw, Miranda		16.E1.4.5
Bradshaw, Miranda	CA IAC-:	16.D3.3.4
Braithwaite, Timothy		16.B3.1.6
Braithwaite, Timothy		16.B3.6-A5.3.2
Braukhane, Andy		16.A3.1.6
Braukhane, Andy		16.A3.5.7
Braun, Vitali		16.A6.2.9
Braxmaier, Claus		16.B1.2.7
Braxmaier, Claus		16.A2.3.1
Braxmaier, Claus Bray, Casey		16.A2.3.2 16.B1.IP.3
Bray, Casey Brazaluk, Iuliia		16.A2.2.2
Brazaluk, Oleksandr		16.C4.IP.6
Brazdziunas, Mikalojus		16.A1.IP.9
Breccia, Pierfrancesco		16.E7.1.2
Bremer, Stefanie		16.A2.1.2
Bret-Dibat, Thierry	CA IAC-1	16.B1.2.4
Bretel, Alexander	CA IAC-1	16.E5.2.6
Bretschneider, Jens	CA IAC-1	16.A1.6.4
Bridges, Christopher P.		16.B6.2.6
Brieß, Klaus		16.B4.4.5
Briess, Klaus		16.B4.5.12
Brieß, Klaus		16.C1.9.3
Briganti, Luca		16.B3.4-B6.5.5
Bright, Courtney		16.C1.IP.9
Brilkov, Ivan Brilli, Simone		16.B4.2.12 16.B4.6B.8
Briqech, Zouhair		16.84.68.8 16.E2.3-GTS.4.6
Briskman, Robert D.		16.B2.3.1
Brito, André		16.A6.IP.28
Brito, André		16.A6.6.3
Brodsky, Yuval		16.B3.6-A5.3.9
Browder, Becca		16.E1.5.4
Brox, Lise		16.C4.3.4

Brucato, John Robert	CA	IAC-16.A1.5.9
Bruderrek, Christian	CA	IAC-16.B3.4-B6.5.5
Bruner, Janna	CA	IAC-16.E3.3.6
Bruno, Giovanni	CA	IAC-16.D5.3.8
Bruno, Vieille	CA	IAC-16.C4.1.3
Bruno, Vieille	CA	IAC-16.C4.1.8
Brunskill, Christopher	CA	IAC-16.B4.3.10
Bryant, Robert	CA	IAC-16.C4.8.6
Bryukhanov, Nikolay	CA	IAC-16.A5.1.6
Bryukvina, Olga	CA	IAC-16.C1.9.9
Brzytwa, Philip	CA	IAC-16.D2.2.12
Bu, Huijiao	CA	IAC-16.B3.4-B6.5.6
Bucci, Lorenzo	CA	IAC-16.D3.3.1
Bucci, Lorenzo	CA	IAC-16.C1.9.1
Bucher, Stefan G.	CA	IAC-16.E1.9.10
Buckle, James	CA	IAC-16.D1.2.3
Buckley, Nicole	CA	IAC-16.B3.3.4
Buckley, Nicole	CA	IAC-16.A5.1.3
Buckley, Nicole	CA	IAC-16.B6.1.8
Budnik, Sergey	CA	IAC-16.C2.4.2
Buenconsejo, Reina	CA	IAC-16.C3.5-C4.7.2
Buenneke, Richard	CA	IAC-16.E3.4.8
Bueno dos Santos, Marcio	CA	IAC-16.B4.1.14
Buenrostro, Ana	CA	IAC-16.E2.3-GTS.4.4
Buffenoir, François	CA	IAC-16.D2.6.3
Buffington, Brent	CA	IAC-16.C1.4.12
Bugnet, Olivier	CA	IAC-16.D2.1.2
Bukley, Angie	CA	IAC-16.A2.3.8
Bultitude, James	CA	IAC-16.D1.5.1
Burdaszewski, Patrick	CA	IAC-16.D2.2.2
Burg, Alexander	CA	IAC-16.E2.3-GTS.4.7
Burger, Eduardo Escobar	CA	IAC-16.C2.IP.10
Burger, Eduardo Escobar	CA	IAC-16.C2.IP.16
Burger, Eduardo Escobar	CA	IAC-16.D1.6.2
Burger, Hervé	Α	IAC-16.A2.6.2
Burgess, Christopher	CA	IAC-16.A6.6.8
Burgoyne, Hayden	CA	IAC-16.E2.3-GTS.4.7
Burke, James	CA	IAC-16.D3.1.2
Burke, James	CA	IAC-16.E5.1.3
Burke, James	CA	IAC-16.D2.3.12
Burke, James	CA	IAC-16.E5.4.2
Burke, James	CA	IAC-16.E4.2.1
Burkhalter, Mathias	CA	IAC-16.C2.7.1
Burkhardt, Holger	CA	IAC-16.D2.4.2
Burks, Richard	CA	IAC-16.E7.IP.31
Burmann, Bastian	CA	IAC-16.A3.IP.18
Burmann, Bastian	CA	IAC-16.B4.8.5
Burnham, Zach	CA	IAC-16.A3.2A.7
Burov, Alexander	CA	IAC-16.D4.3.12
Burrallo, Bastien	CA	IAC-16.D2.7.5
Burrallo, Bastien	CA	IAC-16.E1.3.12
Burrallo, Bastien	CA	IAC-16.E1.5.12
- " - "		
Burrallo, Bastien	CA	IAC-16.D5.2.4 IAC-16.A4.1.6
Bursov, Nikolaj Bussev, Ben	CA	IAC-16.A5.1.3
,,	CA	IAC-16.A5.1.3
Butcher, Eric	CA	
Butler, Andrew	CA	IAC-16.B1.1.9
BUURSINK, Jeroen	CA	IAC-16.B4.6A.7
BUURSINK, Jeroen	A	IAC-16.D1.5.3
Byagowi, Ahmad	CA	IAC-16.D1.7.8
Byagowi, Ahmad	CA	IAC-16.C2.9.4
Bégout, Pierre	CA	IAC-16.E1.7.5
Bérend, Nicolas	CA	IAC-16.D2.7.3
Bök, Christian	CA	IAC-16.E5.IP.5

С	

Name	Role	Paper
Cabodi, Giorgio	CA	IAC-16.B6.1.4
Cabrera, Carlos	CA	IAC-16.A2.3.5
Cabrera, Roberto	Α	IAC-16.B2.5.5
Cabrera Alvarado, Sandra	CA	IAC-16.B1.1.5
Cabrera Rico, Juan Antonio	CA	IAC-16.B2.1.3
Cabrera Rico, Juan Antonio	CA	IAC-16.B2.5.5









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AUTHOR

Cacoveanu, Remus	CA	IAC-16.B2.5.6	_
Cai, Guobiao Cai, Qiaoyan	CA CA	IAC-16.C4.IP.10 IAC-16.B3.2.4	-
CAI, Wenyi	CA	IAC-16.A3.3A.9	
CAKIR, TUGRUL	CA	IAC-16.E7.1.9	
Calabro, Max	CA	IAC-16.C4.2.1	
Calado, Renato	CA	IAC-16.D1.6.2	_
Caldwall Barrett	CA	IAC-16.B4.2.3	_
Caldwell, Barrett Calisti, Luana	CA CA	IAC-16.A3.1.9 IAC-16.B4.1.11	-
Calisti, Luana	CA	IAC-16.E1.3.10	
Calle, Carlos	CA	IAC-16.A3.2B.3	
Callens, Natacha	CA	IAC-16.E1.4.2	
Callies, Joerg	CA	IAC-16.B1.2.6	_
Caltagirone, Francesco Calvo-Alvarado, Julio	CA CA	IAC-16.B1.1.7	_
Calvo-Alvarado, Julio Calvo-Obando, Ana Julieta	CA	IAC-16.B4.1.8 IAC-16.B4.1.8	
Calzada Diaz, Abigail	CA	IAC-16.A3.2C.4	
Calzada Diaz, Abigail	CA	IAC-16.B6.1.3	
Camacho-Lara, Sergio	CA	IAC-16.C1.1.9	
Campagnola, Stefano	CA	IAC-16.C1.5.5	_
Campagnola, Stefano	CA	IAC-16.C1.5.10 IAC-16.B4.8.1	_
Campagnola, Stefano Campbell, Brian	CA CA	IAC-16.B4.8.1 IAC-16.E1.7.10	_
Campitelli, Luigi	CA	IAC-16.E6.3.10	_
Campos-Sanchez, Raziel	CA	IAC-16.D1.2.12	
Canals Pou, Alberto	CA	IAC-16.A3.2B.10	
Canals Pou, Alberto	CA	IAC-16.A3.2C.3	_
Canas Ferreira, Joao	CA	IAC-16.B2.6.9	_
Cancar, Priscilla Canetri, Marco	CA CA	IAC-16.E2.3-GTS.4.2 IAC-16.A6.6.5	_
Canga, Michael	CA	IAC-16.A1.3.9	
Canga, Michael	CA	IAC-16.E3.6.11	
Canga, Michael	CA	IAC-16.E3.6.12	
Cano, Juan L.	CA	IAC-16.A3.3B.2	
Cano, Juan L.	CA	IAC-16.C1.5.4	_
Cano, Juan L. Cano, Juan L.	CA CA	IAC-16.C1.5.9 IAC-16.B4.8.7	_
Cano, Juan-Luis	CA	IAC-16.C1.7.3	
Cantwell, Brian	CA	IAC-16.C4.2.13	
Canu, Claudio	CA	IAC-16.A6.IP.19	
Canuto, Enrico	CA	IAC-16.C1.2.3	_
Cao, DongJing	CA CA	IAC-16.B1.3.5 IAC-16.C2.IP.11	-
Cao, Hui Cao, Hui	CA	IAC-16.D1.IP.9	
Cao, Hui	CA	IAC-16.D4.1.4	
Cao, Hui	CA	IAC-16.D3.3.8	
Cao, Hui	CA	IAC-16.C2.6.4	
Cao, Hui	CA	IAC-16.D5.3.7	
Cao, Hui	CA	IAC-16.C2.8.10	-
Cao, Su Cao, Xibin	CA CA	IAC-16.D6.2-D2.9.6 IAC-16.D1.3.11	
Cao, Xibin	CA	IAC-16.B4.7.10	
Cao, Yan	CA	IAC-16.A6.3.4	
Capaccioni, Fabrizio	CA	IAC-16.A3.IP.10	
Capannolo, Andrea	CA	IAC-16.B4.8.9	_
Capitaine, Thierry	CA	IAC-16.B4.3.8 IAC-16.D1.1.3	_
Caporicci, Marco Caporicci, Marco	CA CA	IAC-16.D1.1.3	_
Cappelletti, Chantal	CA	IAC-16.C2.2.12	
Cappelletti, Chantal	CA	IAC-16.C2.3.12	
Cappelletti, Chantal	CA	IAC-16.B5.2.11	
Cappelletti, Chantal	CA	IAC-16.C1.8.5	
Cappello, Domenico	CA	IAC-16.E2.3-GTS.4.3	
Cappello, Domenico Cappello, Domenico	CA CA	IAC-16.B1.6.5 IAC-16.B5.1.1	_
Caprarelli, Graziella	CA	IAC-16.E1.4.10	
Capria, Maria Teresa	CA	IAC-16.A1.5.1	
Capuano, Giuseppe	CA	IAC-16.B1.IP.8	
Capuano, Giuseppe	CA	IAC-16.B1.3.3	
Capuano, Maurizio	CA	IAC-16.A3.3B.3	
Capuano, Vincenzo Carapellese, Stefano	A CA	IAC-16.B2.4.10 IAC-16.C4.6.10	-
Carapellese, Steralio Carbajal Smith, Julio Daniel	CA	IAC-16.C4.6.10	
Carbognani, Enrico	CA	IAC-16.B3.6-A5.3.9	
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Carbognani, Franco	CA	IAC-16.B3.6-A5.3.9
Cardenio, Christian	CA	IAC-16.B4.8.8
Cardillo, Daniele	CA	IAC-16.C4.3.1
Cardillo, Pier francesco	CA	IAC-16.E1.8.3
Cardillo, Pier francesco	CA	IAC-16.B1.6.5 IAC-16.B5.1.1
Cardillo, Pier francesco Cardini, Valerio	CA CA	IAC-16.B5.1.1
Cardona, Jose-Angel	CA	IAC-16.B4.2.3
Cardona, Tommaso	CA	IAC-16.A6.IP.19
Cardona, Tommaso	CA	IAC-16.A6.IP.20
Cardona, Tommaso	CA	IAC-16.A6.1.3
Cardona, Tommaso	CA	IAC-16.B4.2.9
Cardona, Tommaso	CA	IAC-16.B2.2.7
Cardona, Tommaso	CA	IAC-16.E1.3.4
Cardona, Tommaso	CA	IAC-16.D1.5.7
Cardona, Tommaso	CA	IAC-16.A6.7.1
Cardoso dos Santos, Josué Carey, William	CA CA	IAC-16.C1.IP.2 IAC-16.E3.2.5
Carletti, Nicolò	CA	IAC-16.E3.4.11
Carli, Ruggero	CA	IAC-16.C1.3.9
Carlier, Thierry	CA	IAC-16.B1.2.4
Carmen, Christina	CA	IAC-16.E7.IP.31
Carmen, Christina	CA	IAC-16.E4.1.2
Carmen, Christina	CA	IAC-16.E1.5.9
Carmona, Jesus	CA	IAC-16.C1.1.9
Carneiro, Sergio	CA	IAC-16.C2.3.12
Carneiro de Aguiar, Lucas Rafael	CA	IAC-16.C2.3.12
Carpanelli, Elena	CA	IAC-16.E7.IP.9
Carpenter, James	CA	IAC-16.A3.2A.5
Carpenter, James	CA	IAC-16.A5.1.3
Carpentiero, Marco	CA	IAC-16.D1.2.7
Carrasco, Isaias Carrasco-Casado, Alberto	CA CA	IAC-16.A3.3B.7 IAC-16.B2.7.3
Carrasquilla, Maria	CA	IAC-16.A6.2.8
Carrasquilla-Batista, Arys	CA	IAC-16.B4.1.8
Carrasquilla-Batista, Arys	CA	IAC-16.E3.1.3
Carreira, Lúcia	CA	IAC-16.A3.IP.18
Carrillo, Abel	CA	IAC-16.E2.4.3
Carrillo Esper, Raul	CA	IAC-16.A1.2.11
Carrizo, Juan	CA	IAC-16.B2.7.9
Carron, Andrea	CA	IAC-16.C1.3.9
Carter, Mark	CA	IAC-16.C4.IP.34
Carvajal-Godínez, Johan	CA	IAC-16.B4.1.8
Carvajal-Godínez, Johan	CA	IAC-16.B4.7.5
Carvajal-Godínez, Johan Carvalho, Jean Paulo dos Santos	CA CA	IAC-16.B4.7.9 IAC-16.C1.IP.2
Casado, Victor	CA	IAC-16.C1.IP.2
Casalino, Lorenzo	CA	IAC-16.A3.IP.10
Casasanto, Valerie Anne	CA	IAC-16.E1.7.10
Casasco, Massimo	CA	IAC-16.C1.2.2
Case, Anthony	CA	IAC-16.B4.8.10
Casini, Andrea Emanuele Maria	CA	IAC-16.A3.2C.5
Casotto, Stefano	CA	IAC-16.C1.3.5
Cassel, Eduardo	CA	IAC-16.A1.7.5
Cassi, Carlo	CA	IAC-16.A3.3A.2
Cassiano Julio Filho, Antonio	CA	IAC-16.B6.2.9
Cassibry, Jason	CA	IAC-16.C3.5-C4.7.3
Castagnolo, Dario	CA	IAC-16.D1.1.3
Castellini Francesco, Luis Ángel	CA	IAC-16.E2.3-GTS.4.4
Castellini, Francesco	CA	IAC-16.C1.9.5
Castillo, Edgar Castillo Argañarás, Luis Fernando	CA CA	IAC-16.A4.2.8 IAC-16.E7.5.5
Castillo-Reyes, Jose Manuel	CA	IAC-16.E7.5.5
Castrio-Reyes, Jose Marider Castro, Guillermo	CA	IAC-16.E1.IP.3
Castro, Joaquin	CA	IAC-16.C4.1.7
Casu, Silvia	CA	IAC-16.A4.1.8
Catalano, Gabriella	CA	IAC-16.E7.3.6
Cataldo, Giuseppe	CA	IAC-16.D1.3.10
Causa, Flavia	CA	IAC-16.A3.3A.6
Cawthorne, Andrew	CA	IAC-16.B1.2.11
Cawthorne, Andrew	CA	IAC-16.B4.6A.1
Ccastañeda, Omar	CA	IAC-16.D1.4.5
Ceccaroni, Marta	CA	IAC-16.A3.IP.10
Ceccherini, Simone	A	IAC-16.C1.4.8
Cecere, Anselmo	CA	IAC-16.A2.3.3

Celik, Onur	CA	IAC-16.E2.3-GTS.4
Centuori, Simone	CA	IAC-16.C1.5.9
Cepeda-morales, Jushiro	CA	IAC-16.B1.6.6
Ceppi, Giulio	CA	IAC-16.E5.1.7
Ceppi, Giulio	CA	IAC-16.A3.2C.6
Cercós Pita, Lorenzo	CA	IAC-16.A3.IP.29
Cerioni, Cristina	CA	IAC-16.B1.1.9
Ceriotti, Matteo	CA	IAC-16.C1.4.5
Ceriotti, Matteo	CA	IAC-16.C1.6.12
Cerisano, Jody	CA	IAC-16.A1.2.1
Cervantes García, Arnoldo Esteban	CA	IAC-16.D5.4.4
Cervone, Angelo	CA	IAC-16.E1.3.6
	CA	IAC-16.C3.5-C4.7.8
Cervone, Angelo Cesco, Nathalie		IAC-16.D2.5.1
	CA	
Chabot, Thomas	CA	IAC-16.A6.6.8
Chacko, Tintu	CA	IAC-16.C1.5.8
Chagas, Milton	CA	IAC-16.D3.4.8
Chagas, Misael	CA	IAC-16.A1.IP.27
Chagas, Misael	CA	IAC-16.A3.1.10
CHAIZE, Mathieu	CA	IAC-16.D2.1.3
CHAIZE, Mathieu	CA	IAC-16.D2.2.4
Chakraborty, Amitava	CA	IAC-16.E7.IP.2
Chalard, Patrick	CA	IAC-16.E1.7.5
Chales, Rodrigo	CA	IAC-16.C2.2.7
CHANDRAN, ANAND	CA	IAC-16.A3.3B.6
Chandran, Remi	CA	IAC-16.B1.6.8
Chandrasekhar, M.G.	CA	IAC-16.B2.1.1
Chandrasekhar, M.G.	CA	IAC-16.B2.1.4
Chandrashekharan, Prasanth	CA	IAC-16.C4.2.4
Chang, Eva Yi-Wei	CA	IAC-16.D6.1.8
Chang, Eva Yi-Wei	CA	IAC-16.B3.2.8
Chang, Eva Yi-Wei	CA	IAC-16.E6.2.1
Chang, Eva Yi-Wei	CA	IAC-16.D6.2-D2.9.
Chang, Hao-Chi	CA	IAC-16.C1.8.7
Chang, Juntao	CA	IAC-16.C4.9.6
Chang, Ming-Shong	CA	IAC-16.B4.7.2
Chang Diaz, Franklin	CA	IAC-16.C4.IP.34
Changwan, MIN	CA	IAC-16.D2.IP.12
Chanrion, Olivier	CA	IAC-16.B6.3.3
Chao, Cheng	CA	IAC-16.C3.3.5
Chapman, Todd	CA	IAC-16.A5.1.6
Charania, A.C.	CA	IAC-16.B3.2.5
Charania, A.C.	CA	IAC-16.D2.7.1
Charlebois, Denis	CA	IAC-16.B3.3.4
Charlesworth, Amber	CA	IAC-16.E3.4.8
Chatterjee, Joyeeta	CA	IAC-16.E7.1.10
Chatzipanagiotis, Michail	CA	IAC-16.E7.2.9
Chaumette, Francois	CA	IAC-16.A6.6.8
Chavarri, Alejandro	CA	IAC-16.E3.1.4
Chaves Jimenez, Adolfo	CA	IAC-16.B4.1.8
-	CA	
Chavez, Rafael Guadalupe		IAC-16.B4.1.16
Chavez Dagostino, Miguel	CA	IAC-16.A4.1.9
Chavez Dagostino, Miguel	CA	IAC-16.A4.2.8
Chavez Moreno, Rafael Guadalupe	CA	IAC-16.B2.IP.4
Chavez Moreno, Rafael Guadalupe	CA	IAC-16.B4.1.13
Chavez Moreno, Rafael Guadalupe	CA	IAC-16.B6.3.1
Chavez-Barranco, Serafin	CA	IAC-16.C1.1.9
Chavy, Siegfrid	CA	IAC-16.D2.1.3
Che, Bixuan	CA	IAC-16.C4.IP.33
Che, Bixuan	Α	IAC-16.C4.IP.45
Chen, Anping	CA	IAC-16.D2.5.5
Chen, Bingyan	CA	IAC-16.C2.7.10
Chen, Chao		
,	CA	IAC-16.A3.5.6
Chen, Chaoyun	CA	IAC-16.B3.4-B6.5.
Chen, Dong	CA	IAC-16.E2.3-GTS.4
Chen, Hailong	CA	IAC-16.A1.3.4
Chen, Han	CA	IAC-16.C2.7.4
Chen, Hui	CA	IAC-16.D2.8-A5.4.
Chen, Ji	CA	IAC-16.B4.8.10
Chen, Jianlin	Α	IAC-16.C1.7.5
Chen, JuanJuan	CA	IAC-16.C4.IP.21
Chen, Juanjuan	CA	IAC-16.C4.4.6
Chen, Jun	CA	IAC-16.C4.9.14
Chen, Jun	CA CA	IAC-16.B4.6A.11
Chen, Kun		IAC-16.C3.4.2

Chen, Lan	CA	IAC-16.E1.7.11
Chen, Li	CA	IAC-16.C2.IP.1
Chen, Li Chen, Li	CA CA	IAC-16.C2.IP.6 IAC-16.B3.4-B6.5.9
Chen, Li	CA	IAC-16.C2.5.9
Chen, Li	CA	IAC-16.D2.6.10
Chen, Li	CA	IAC-16.D1.7.3
Chen, Liang	CA	IAC-16.B3.2.4
Chen, Lin	CA	IAC-16.C4.9.14
Chen, Lue	CA CA	IAC-16.B2.5.7
Chen, MengYun Chen, Ming	CA	IAC-16.A2.5.9 IAC-16.B2.5.7
Chen, Ming	CA	IAC-16.C1.8.13
Chen, Nan	CA	IAC-16.D2.2.9
Chen, Qing	CA	IAC-16.A6.IP.35
Chen, Qing	CA	IAC-16.D1.3.11
Chen, Qing	CA	IAC-16.B4.7.10
Chen, Wei-Jen	CA	IAC-16.D6.2-D2.9.3
Chen, Wen	CA	IAC-16.D1.7.7
CHEN, Wenjing Chen, Xiaoping	CA CA	IAC-16.D2.2.9 IAC-16.A1.7.3
Chen, Xiaoqian	CA	IAC-16.E2.3-GTS.4.1
Chen, Xiaoqian	CA	IAC-16.C1.9.12
Chen, Yen-Sen	CA	IAC-16.C4.9.9
Cheng, Andy	CA	IAC-16.A3.4.10
Cheng, Bowen	CA	IAC-16.D1.4.11
Cheng, Jiming	CA	IAC-16.C4.9.12
Cheng, Jing	CA	IAC-16.C2.IP.6
Cheng, Jing	CA	IAC-16.D1.7.3
Cheng, Mousen	CA	IAC-16.C4.IP.33
Cheng, Mousen Cheng, Mousen	CA CA	IAC-16.C4.IP.45
Cheng, Qian	CA	IAC-16.B5.2.9
Cheng, Wenhua	CA	IAC-16.A3.IP.11
Cheng, Wenhua	CA	IAC-16.B1.IP.9
Cheng, Xiao	CA	IAC-16.B4.4.11
Cheng, Xiaoli	CA	IAC-16.A3.IP.28
Cheng, Yongmei	CA	IAC-16.D2.3.10
Cheng, Yuqiang	CA	IAC-16.C4.IP.39
Cheng, Zhaoyi	CA	IAC-16.D2.5.5
Cheng, Zilong	CA	IAC-16.D2.8-A5.4.8
Cheng long, Rao Cheong, Joon Wayn	CA A	IAC-16.E3.IP.4 IAC-16.D1.5.1
Cherciu, Claudiu	CA	IAC-16.B2.4.7
Cherciu, Claudiu	CA	IAC-16.B4.8.6
Cherian, Shajimon A.	CA	IAC-16.C4.3.8
Chern, Rock Jeng-Shing	CA	IAC-16.D6.1.8
Chern, Rock Jeng-Shing	CA	IAC-16.B3.2.8
Chern, Rock Jeng-Shing	CA	IAC-16.D6.2-D2.9.3
Chernikova, Anna	CA	IAC-16.A1.2.2
Chessa, Jack	CA	IAC-16.C2.5.7
Cheung, Kar-Ming	CA	IAC-16.A3.2A.7
CHIAN, Wen-Lung	CA	IAC-16.C1.8.7
Chikirev, Vladimir	CA CA	IAC-16.B3.3.3 IAC-16.C4.2.5
Chinen, Katsunori Ching, Michael	CA	IAC-16.C4.2.5
Chirtu, Cris	CA	IAC-16.B6.3.11
Chitu, Cristian Corneliu	CA	IAC-16.B2.5.6
Chiu, Nikita	CA	IAC-16.E3.4.11
Chiuri, Daniele Emanuele	CA	IAC-16.B4.3.8
Cho, Mengu	CA	IAC-16.A3.IP.23
Cho, Mengu	CA	IAC-16.A3.IP.33
Cho, Mengu	CA	IAC-16.B4.1.4
Cho, Mengu	CA	IAC-16.B4.6B.12
Cho, Mengu	CA	IAC-16.D1.6.7
Cho, Mengu	CA	IAC-16.B4.7.1
Choi Young-lup	A CA	IAC-16.E5.IP.7
Choi, Young-Jun Chopra, Sharad	CA	IAC-16.A3.IP.36 IAC-16.B4.4.3
Chopra, Sharad	CA	IAC-16.C3.4.5
Chopra, Sharad	CA	IAC-16.D4.5.6
Chowdhury, Sreemon	CA	IAC-16.E1.IP.23
Christensen, Carissa	CA	IAC-16.E3.IP.14
Christensen, Ian	CA	IAC-16.D6.1.6
Christensen, Ian	CA	IAC-16.D4.2.6







DalBello, Richard

DalBello, Richard

Dali, Liu

Dalin, Rao

Daly, Michael

Damonte, Giulia Danciu, Adrian



IAC-16.B3.2.5 IAC-16.D2.7.1

IAC-16.C2.9.8

IAC-16.D2.1.5

IAC-16.A3.4.7

IAC-16.C3.IP.1 IAC-16.A3.IP.29

CA

CA

CA CA

26 - 30 September 2016, Guadalajara, Mexico





Christensen, Ian	CA	IAC-16.E3.3.5	Colin, Angel	CA	IAC-16.B4.2.3
Christensen, Joseph	CA	IAC-16.A3.1.10	Colin, Angel	CA	IAC-16.C2.1.10
Christian, James	CA	IAC-16.A3.2A.7	Collange, Guillaume	CA	IAC-16.D2.2.4
Christiansen, Rowena	CA	IAC-16.B1.1.9	Collaud, Xavier	CA	IAC-16.A6.5.2
Chu, Vicky	CA	IAC-16.B4.7.2	Collette, Jean-Paul	CA	IAC-16.C2.8.9
Chu, Xiaoyu	CA	IAC-16.B3.6-A5.3.10	Colley, Dan	CA	IAC-16.E5.3.10
Chua, Syiu Chi	CA	IAC-16.C3.2.6	Colling, Tyler	CA	IAC-16.C2.8.1
Chunfeng, Wang	CA	IAC-16.B2.7.10	Collins, Patrick	CA	IAC-16.C3.1.2
Chung, Soyoung	CA	IAC-16.E3.1.10	Colmenarejo, Pablo	CA	IAC-16.A6.6.5
Chung, Soyoung	CA	IAC-16.D4.2.6	Colombo, Camilla	CA	IAC-16.A6.IP.3
Chung, Soyoung	CA	IAC-16.A6.8.6	Colombo, Camilla	CA	IAC-16.A6.2.7
Churyumov, Klim	CA	IAC-16.A5.IP.2	Colombo, Camilla	CA	IAC-16.A6.2.11
Chutjian, Ara	CA	IAC-16.C2.8.4	Colombo, Camilla	CA	IAC-16.B1.2.8
Ciarambino, Marco	CA	IAC-16.D2.3.9	Colombo, Camilla	CA	IAC-16.A6.4.2
Ciarambino, Marco	CA	IAC-16.B6.3.6	Colombo, Camilla	CA	IAC-16.A6.4.4
Ciardullo, Christina	CA	IAC-16.E5.1.4	Colombo, Camilla	CA	IAC-16.C1.6.13
Ciccarelli, Silvia	CA	IAC-16.E5.2.3	Colombo, Camilla	CA	IAC-16.C1.7.7
Ciccarelli, Silvia	CA	IAC-16.E6.3.10	Comtois, Alain-Steve	CA	IAC-16.A1.IP.15
Ciccarelli, Silvia	CA	IAC-16.B1.5.3	Cona, Federica	CA	IAC-16.B4.8.2
Cicero, Giorgiomaria	CA	IAC-16.E1.IP.14	Concu, Raimondo	CA	IAC-16.A4.1.8
Cichan, Timothy	CA	IAC-16.A5.2.10	Condurache, Daniel	CA	IAC-16.C1.9.11
Cichan, Timothy	CA	IAC-16.A5.1.8	Conroy, Lorraine	CA	IAC-16.E5.3.10
Cichan, Timothy	CA	IAC-16.B3.9-GTS.2.1	Constantinos, Georges	CA	IAC-16.D1.1.4
Cieslinski, Dawid	CA	IAC-16.C4.IP.28	Constantoudis, Vassilios	CA	IAC-16.E5.IP.4
Cieslinski, Dawid	CA	IAC-16.A2.5.3	Conte, Davide	CA	IAC-16.E2.3-GTS.4.7
Cikanek, Harry A.	CA	IAC-16.B1.IP.18	Conte-Galvan, Roberto	CA	IAC-16.D4.2.8
Cimminiello, Nicola	CA	IAC-16.A3.3A.6	Cook, Bruce	CA	IAC-16.B1.6.1
Cinelli, Ilaria	CA	IAC-16.A1.IP.34	Cook, Roz	CA	IAC-16.E3.3.11
Ciobanu, Ion	CA	IAC-16.B4.8.6	Cooley, Sam	CA	IAC-16.B3.9-GTS.2.5
Cirillo, Francesca	CA	IAC-16.C1.IP.11	Cooney, Ryan	CA	IAC-16.B1.3.4
Cirillo, Francesca	CA	IAC-16.C1.2.11	Corbin, Benjamin	CA	IAC-16.A3.IP.20
Cisneros, Juan Carlos	Α	IAC-16.B5.1.8	Corbin, Benjamin	CA	IAC-16.D1.1.11
Ciufolini, Ignazio	CA	IAC-16.A2.1.4	Corcho, Claudia	CA	IAC-16.D3.3.1
Clarence Dee, Jan	CA	IAC-16.E2.3-GTS.4.6	Cordelli, Emiliano	CA	IAC-16.A6.9.8
Clarence Dee, Jan	CA	IAC-16.E2.4.12	Cordero, Federico	CA	IAC-16.C1.9.5
Clark, Craig	CA	IAC-16.B4.3.10	Cordova Alarcon, Jose Rodrigo	CA	IAC-16.A3.IP.23
Clark, Craig	CA	IAC-16.D1.2.3	Cordova Alarcon, Jose Rodrigo	CA	IAC-16.A3.IP.33
Clark, Craig	CA	IAC-16.B2.6.1	Corley, Bill	CA	IAC-16.B3.4-B6.5.5
Clark, Craig	CA	IAC-16.B4.6B.6	Cornara, Stefania	CA	IAC-16.A6.IP.12
Clark, Craig	CA	IAC-16.B5.1.2	Cornara, Stefania	CA	IAC-16.A6.4.7
Clark, Nathan	CA	IAC-16.E5.4.9	Cornara, Stefania	CA	IAC-16.B4.3.3
Clark, Torin	CA	IAC-16.A1.2.7	Cornara, Stefania	CA	IAC-16.B4.4.8
Clarke, Maxim	CA	IAC-16.B4.6B.9	Cornara, Stefania	CA	IAC-16.C1.5.3
Clausi, Marialaura	CA	IAC-16.C2.6.12	Cornelissen, Joep	CA	IAC-16.E6.3.1
Clausi, Marialaura	CA	IAC-16.C2.8.5	Cornell, Ariane	CA	IAC-16.B3.2.1
Claverie, Alain	CA	IAC-16.B1.2.3	Coronel, Gabriel G.	CA	IAC-16.C2.IP.16
Clenet, Harold	CA	IAC-16.B4.4.6	Coronel, Gabriel G.	CA	IAC-16.D1.6.2
Clerc, Philippe	CA	IAC-16.E7.7-B3.8.2	Corpino, Sabrina	CA	IAC-16.D1.IP.7
Cloarec, Tristan	CA	IAC-16.E2.3-GTS.4.8	Corpino, Sabrina	CA	IAC-16.D1.3.7
Cloarec, Tristan	CA	IAC-16.E2.4.11	Corpino, Sabrina	CA	IAC-16.B4.8.8
Coates, Adam	CA	IAC-16.A3.3B.8	Correia Mendonça, Helena	CA	IAC-16.D5.4.1
Cobb, Jeff	CA	IAC-16.A4.1.4	CORTES, ELLIOT	CA	IAC-16.C4.2.14
Cobo Arévalo, Antonio	CA	IAC-16.D3.IP.3	CORTES, ELLIOT	CA	IAC-16.E1.3.9
Cocco, Magda	CA	IAC-16.D5.4.1	CORTES CASTELLANOS, BRENDA	CA	IAC-16.E1.9.11
Cockell, Charles	CA	IAC-16.A1.5.2	Cosby, Matthew	CA	IAC-16.B4.8.3
Cocuzza, Silvio	CA	IAC-16.C1.IP.3	Cosi, Massimo	CA	IAC-16.B1.IP.8
Cocuzza, Silvio	CA	IAC-16.C2.IP.14	Cossu, Mario	CA	IAC-16.D1.4.8
Cocuzza, Silvio	CA	IAC-16.D3.IP.1	Costa, Laura	CA	IAC-16.B2.1.5
Cocuzza, Silvio	CA	IAC-16.D3.IP.1	Costa, Laura Costa, Maurizio	CA	IAC-16.B2.1.5
Cocuzza, Silvio	A	IAC-16.B3.7.11	Costanza, Laura	A	IAC-16.B6.3.7
Codispoti, Giuseppe	CA	IAC-16.E5.4.3	Coste, Jean-Dominique	CA	IAC-16.A6.1F.2
Coello Marcelín, Víctor Iván	CA	IAC-16.E5.4.3	Coster, Nicole	CA	IAC-16.E3.IP.2
Cohen, Dan	CA		Costeri, Nicole Cotronei, Vittorio	CA	
Cohen, Jacob	CA	IAC-16.B5.2.6	Cotti, Joe	CA	IAC-16.B3.3.1
Cohen, Luchino		IAC-16.A5.2.7 IAC-16.B3.3.1	Coulon, Didier		IAC-16.B1.5.10
	CA		Couzin, Patrice	CA	IAC-16.D2.1.2
Cohen, Luchino	CA	IAC-16.B3.3.4			IAC-16.D2.3.2
Colograssi Andrea	CA	IAC-16.B1.1.6	Covar Kovin	CA	IAC-16.D1.6.8
Colangolo Luigi	CA	IAC-16.C1.6.1	Cowardin Heather	A CA	IAC-16.E1.3.6
Colongelo, Luigi	CA	IAC-16.C1.2.3	Cowley Aidea	CA	IAC-16.A6.2.8
Colarrete, Anthony	CA	IAC-16.A3.2A.7	Cowley, Aidan	CA	IAC-16.A3.2B.10
Colasurdo, Guido	CA	IAC-16.A7.3.5	Cowley, Aidan	CA	IAC-16.B3.4-B6.5.4
Coletta, Alessandro	CA	IAC-16.B1.1.7	Cowley, Aidan	CA	IAC-16.A1.6.9
Coletta, Alessandro	CA	IAC-16.B1.4.5	Cowley, Aidan	CA	IAC-16.A3.2C.5
Coletta, Alessandro	CA	IAC-16.E5.4.3	Cowley, Aidan	CA	IAC-16.A3.2C.6

Cox, Rachel	CA	IAC-16.A3.2B.3
Cozmuta, Ioana	CA	IAC-16.D3.4.6
Craig, Douglas	CA	IAC-16.D3.4.9
Crawley Derkaczew, Joanna	CA	IAC-16.E5.3.10
Creatini, Francesco	CA	IAC-16.E1.IP.14
Creech, Steve	CA	IAC-16.D2.8-A5.4.1
Cremins, Tom	CA	IAC-16.E3.2.12
Cremonese, Gabriele	CA	IAC-16.A3.IP.10
Cresto Aleina, Sara	CA	IAC-16.D1.IP.13
Cresto Aleina, Sara	CA	IAC-16.D2.IP.11
Cresto Aleina, Sara	CA	IAC-16.D4.1.2
Cresto Aleina, Sara	CA	IAC-16.D2.4.8
Cresto Aleina, Sara	CA	IAC-16.D2.5.9
Crisan, Alexandru Mihai	CA	IAC-16.B2.5.6
Crisp, Nicholas	CA	IAC-16.D1.IP.3
Crocker, Andrew	CA	IAC-16.D2.5.3
Croitoru, Antonia Nicoleta	CA	IAC-16.B2.4.7
Crouch, Anna Colleen	CA	IAC-16.A1.IP.20
Crowe, William	CA	IAC-16.C1.2.1
Crowe, William	CA	IAC-16.C1.3.7
Crowe, William	CA	IAC-16.D1.5.1
Crowe, William	CA	IAC-16.D4.5.10
Crumbly, Chris	CA	IAC-16.D2.8-A5.4.1
Crusan, Jason	Α	IAC-16.D3.4.7
Crusan, Jason	Α	IAC-16.B4.5.1
Crusan, Jason	Α	IAC-16.B3.7.2
Cruz, Imanol	CA	IAC-16.A3.IP.29
Cruz-Colmenares, Janeth	CA	IAC-16.D4.2.8
Cruz-Zaragoza, Epifanio	Α	IAC-16.A1.4.3
Cruz-Zaragoza, Epifanio	CA	IAC-16.A3.3A.8
Cruz-Zaragoza, Epifanio	CA	IAC-16.B2.6.11
Cucchetti, Edoardo	CA	IAC-16.E2.3-GTS.4.8
Cucchetti, Edoardo	CA	IAC-16.E2.4.11
Cucchetti, Eduardo	CA	IAC-16.E2.2.10
Cuellar Villarroel, Angel Felix	CA	IAC-16.E4.2.10
Cuevas-Muñiz, Francisco Mherande	A	IAC-16.A1.IP.28
Cuevas-Muñiz, Francisco Mherande	Α	IAC-16.A2.2.8
Cui. Fan	CA	IAC-16.A3.IP.31
Cui, Pingyuan	CA	IAC-16.C1.3.6
Cui, WeiXin	CA	IAC-16.B1.IP.29
Cui, Yinghui	CA	IAC-16.C2.2.11
Cui, Zhanguo	CA	IAC-16.C3.3.5
Cullen, David	CA	IAC-16.A1.IP.10
COLPAN, EFDAL	CA	IAC-16.D5.2.2
you, LI DIL		

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Name	Role	Paper
D, Jeyakumar	CA	IAC-16.D2.6.9
D, Nataraj	CA	IAC-16.B2.1.1
D, Nataraj	CA	IAC-16.B2.1.4
D'Errico, Marco	CA	IAC-16.C1.4.4
D'Errico, Marco	CA	IAC-16.B1.5.9
D'Errico, Marco	CA	IAC-16.B4.7.4
da Costa, Loures	CA	IAC-16.B4.5.12
da Costa, Rodrigo	CA	IAC-16.A3.1.7
da Costa, Rodrigo	CA	IAC-16.B3.1.9
da Costa, Rodrigo	CA	IAC-16.A6.6.1
da Costa, Rodrigo	CA	IAC-16.B3.7.6
Da Fonseca, Ijar M.	CA	IAC-16.C2.2.7
Da Fonseca, Ijar M.	CA	IAC-16.C2.3.6
da Silva Curiel, Alex	CA	IAC-16.B1.2.11
da Silva Curiel, Alex	CA	IAC-16.B4.6A.1
da Silva Curiel, Alex	CA	IAC-16.B4.7.2
Dafnis, Athanasios	CA	IAC-16.C2.1.5
Dai, Donghong	CA	IAC-16.C4.9.6
Dai, Jian	CA	IAC-16.C4.IP.49
Daimi, Sayed Umair	Α	IAC-16.C4.6.7
Daimi, Sayed Umair	CA	IAC-16.E2.4.8
Dainotto, Angelo	CA	IAC-16.B4.6B.8
Daitx, Henrique	CA	IAC-16.C1.2.4
Daiying, Deng	CA	IAC-16.C2.9.10
Dakka, Sam	CA	IAC-16.A5.2.5
Dakshayani, B.P.	CA	IAC-16.C1.3.8
Dakshayani, B.P.	CA	IAC-16.C1.3.12
Dakshayani, B.P.	CA	IAC-16.C1.5.8

Danciu, Adrian	CA	IAC-16.A3.IP.29
Dang, Hongxing	CA	IAC-16.B1.IP.14
Daniels, Angelika	CA	IAC-16.E6.3.7
Daniels, Karen	CA	IAC-16.A3.IP.5
Danilova, Mariya	CA	IAC-16.A1.IP.40
Dann, Bronwyn Jane	CA	IAC-16.E5.3.5
Danous, Patrick	CA	IAC-16.C4.1.3
Danous, Patrick	CA	IAC-16.C4.1.8
Danziger, Björn	CA	IAC-16.B4.6A.3
Daraio, Maria girolamo	CA	IAC-16.B1.4.5
Daraio, Maria girolamo	CA	IAC-16.B1.5.6
Dargent, Thierry	CA	IAC-16.D1.1.1
Darnis, Jean-Pierre	CA	IAC-16.B1.2.3
Dasgupta, Upasana	CA	IAC-16.E7.IP.10
Dasgupta, Upasana	CA	IAC-16.E7.IP.22
Daumer, Martin	CA	IAC-16.A1.2.6
David, Emmanuelle	CA	IAC-16.D2.1.2
David, Emmanuelle	CA	IAC-16.D2.2.5
Davidian, Ken	CA	IAC-16.E6.1.11
Davidian, Ken	CA	IAC-16.E6.2.7
Davidová, Lucie	CA	IAC-16.A1.IP.16
Davidsen, Peter	CA	IAC-16.C1.9.5
Davies, Cadi	CA	IAC-16.A1.IP.12
Davies, Jackie	CA	IAC-16.D5.3.2
Davies, Philip	CA	IAC-16.B4.5.5
Davis, Benjamin	CA	IAC-16.D1.5.4
Davis, Benjamin	CA	IAC-16.E4.2.4
Davis, Diane	CA	IAC-16.C1.4.10
Davis, Michael	CA	IAC-16.E1.4.10
Day, Brian	CA	IAC-16.E1.8.2
Day, Brian	CA	IAC-16.A3.2C.10
de Bras de Fer, Thibault	CA	IAC-16.A6.4.4
de Chambure, Daniel	CA	IAC-16.D2.1.7
de Crombrugghe, Guerric	CA	IAC-16.D2.7.3
de Croon, Guido	CA	IAC-16.D1.2.5
de la Cruz, Azael	CA	IAC-16.B1.IP.20
de la Puente, Ale	CA	IAC-16.E5.3.1
De la Rosa Nieves, Saul	CA	IAC-16.A1.IP.43
De la Rosa Nieves, Saul	CA	IAC-16.A2.4.6
De la Rosa Nieves, Saul	CA	IAC-16.B1.4.8
De la Rosa Nieves, Saul	CA	IAC-16.C3.4.8
de la Torre, Jose Eduardo	CA	IAC-16.B1.1.2
de la Torre Sangrà, David	CA	IAC-16.A3.3A.6
de Lafontaine, Jean	CA	IAC-16.A3.IP.32
de Lemos, Leonora de Leon, Pablo	CA CA	IAC-16.E1.IP.9 IAC-16.E2.2.2
De Leon, Pablo	CA	IAC-16.E2.2.2
De Leon, Pablo de Leon, Pablo	CA CA	IAC-16.B3.5.6 IAC-16.E4.3A.2
de Leon, Pablo de Leon, Pablo	CA	IAC-16.E4.3A.4
De Leon, Pablo	CA	IAC-16.E4.3A.4 IAC-16.B3.7.8
De Luca, Giuseppe Francesco	CA	IAC-16.B3.7.8
De Luca, Giuseppe Francesco De Luca, Giuseppe Francesco	CA	IAC-16.B1.1.7
De Luca, Giuseppe Francesco De Luca, Giuseppe Francesco	CA	IAC-16.B6.3.2
De Man, Philip	CA	IAC-16.A6.7.2
De Maupeou d'Ableiges, Benoît	CA	IAC-16.E7.1.3
de Oliveira, Yanomi	CA	IAC-16.D1.7.2
DE OLIVEIRA BITTENCOURT NETO, OLAVO	CA	IAC-16.E7.2.5
De Paula, Ramon P.	CA	IAC-16.A3.3A.1
De Persis, Cristina	CA	IAC-16.A6.IP.26
De Persis, Cristina De Persis, Cristina	CA	IAC-16.B1.5.10
De Quattro, Nicola	CA	IAC-16.B1.IP.1
De Quattro, Nicola	CA	IAC-16.A3.2C.4
De Rosa, Diego	CA	IAC-16.A3.2B.1
De Rose, Francesco	CA	IAC-16.C1.IP.11
de Vellis, Jean	CA	IAC-16.A1.7.6
de Vellis, Jean	CA	IAC-16.A1.7.8
de Weck, Olivier	CA	IAC-16.A5.2.6
De Winne, Frank	CA	IAC-16.B3.4-B6.5.4
De Zaiacomo, Gabriele	CA	IAC-16.A3.3B.2
ac accomo, Guarricic		
De Zajacomo, Gabriele	LA I	IAC-10.C 1 3 4
De Zaiacomo, Gabriele De Zaiacomo, Gabriele	CA CA	IAC-16.C1.5.4 IAC-16.C1.5.9









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AUTHORS

Dean, Bryan	CA	IAC-16.D1.4.3
Debas, Gilles	CA	IAC-16.D2.2.5
Debierre, Jean-Marc	CA	IAC-16.A2.6.4
Decadi, Aline	CA	IAC-16.D6.2-D2.9.1
DeGroote, Raphael	CA	IAC-16.B4.3.8
Degtyarev, Alexander	CA	IAC-16.E5.4.10
Dehaene, Thomas Dehaene, Thomas	CA CA	IAC-16.B2.1.6 IAC-16.B4.6B.2
Dei Tos, Diogene Alessandro	A	IAC-16.C1.7.12
DeKeizer, Sylvia	CA	IAC-16.E6.3.9
Del Bianco, Alberto	CA	IAC-16.D6.3.1
del Monte, Luca	CA	IAC-16.A3.1.2
DELAGE, Rémi	CA	IAC-16.A6.6.1
Delahaye, Ann	CA	IAC-16.A2.3.6
Delaurentis, Daniel	CA	IAC-16.A3.1.9
Deleflie, Florent	CA	IAC-16.A6.2.7
Delfini, Andrea	CA	IAC-16.A6.1.6
Delfini, Andrea	CA	IAC-16.C2.6.3
Delfini, Andrea	CA	IAC-16.C2.8.2
Delgado Lopez, Laura	CA	IAC-16.E3.1.14
Dell' Aversana, Pasquale	CA	IAC-16.A3.3A.6
Dell'Elce, Lamberto	CA	IAC-16.C1.4.3
Delmas, Cedric	CA	IAC-16.A3.4.3
Demaria-Pesce, Victor	CA	IAC-16.B3.4-B6.5.4
Dempster, Andrew	CA	IAC-16.C1.3.7
Dempster, Andrew G.	CA	IAC-16.D1.5.1
Denaro, Angelo	CA	IAC-16.A5.1.9
Deng, Fan	CA	IAC-16.C4.9.14
Deng, Tao	CA	IAC-16.D2.5.5
Deng, Yibing	CA	IAC-16.A1.6.8
Deng, Zhongmin	CA	IAC-16.A6.IP.30
DENIS, Gil	CA	IAC-16.B1.2.3
DENIS, Gil	CA	IAC-16.E1.2.6
Denis, Vincent	CA	IAC-16.C2.1.9
Deran, Ahmet	CA	IAC-16.A3.2A.7
Derechin, Alexander G.	CA	IAC-16.B3.2.3
Derleth, Jason	CA	IAC-16.D3.4.3
Desai, Vishal	CA	IAC-16.B1.IP.19
Desai, Vishal	CA	IAC-16.C4.6.7
Descamps, Arthur	CA	IAC-16.D1.7.2
DESMARIAUX, Jean	CA	IAC-16.D2.6.7
Desvallées, Patrice	CA	IAC-16.D6.1.2
Detrell, Gisela	CA	IAC-16.A1.IP.1
Detsis, Emmanouil	CA	IAC-16.C3.5-C4.7.4
DHAWAN, SUVRITI	CA	IAC-16.E2.1.7
Dhende, Hrishikesh	CA	IAC-16.C4.IP.22
Dhende, Hrishikesh	CA	IAC-16.C2.9.6
Dhillon, Yadvender Singh	CA	IAC-16.A1.5.11
Dhrishit, MP	CA	IAC-16.C4.5.8
Di Battista, Ruben	CA	IAC-16.B4.3.8
Di Battista, Ruben	CA	IAC-16.E1.5.5
Di Benedetto, Mauro	Α	IAC-16.A7.2.6
Di Benedetto, Mauro	CA	IAC-16.A7.3.5
di Ciaccio, Simona	CA	IAC-16.E5.5.2
Di Giampietro, Marco	CA	IAC-16.B1.3.1
Di Gregorio, Paolo Roberto	CA	IAC-16.E2.3-GTS.4.3
Di Gregorio, Paolo Roberto	CA	IAC-16.B1.6.5
Di Gregorio, Paolo Roberto	CA	IAC-16.B5.1.1
Di Iorio, Alessio	CA	IAC-16.B1.5.3
Di Lizia, Pierluigi	CA	IAC-16.C1.IP.4
Di Marco, Paolo	CA	IAC-16.E1.IP.14
Di Paola, Daniele	CA	IAC-16.B4.8.2
DI PIPPO, Simonetta	CA	IAC-16.D4.1.1
DI PIPPO, Simonetta	CA	IAC-16.E3.4.1
DI PIPPO, Simonetta	CA	IAC-16.B1.5.8
Di Prizio, Davide	CA	IAC-16.E1.IP.14 IAC-16.A6.9.9
Di Sabato, Tommaso	CA CA	IAC-16.A6.9.9
Di Tana, Valerio Di Tana, Valerio	CA	IAC-16.B3.IP.1
Di Vita, Gandolfo	CA	IAC-16.B4.8.2
Diaz, Diana	CA	IAC-16.C2.1.9
Diaz, Diana Diaz, Ernesto	CA	
		IAC-16.E5.4.1
Diaz, Marcos Diaz Artiles, Ana	CA CA	IAC-16.B4.1.7 IAC-16.E2.3-GTS.4.2
Diaz Artiles, Ana Diaz de Cerio Goenaga, Rainer	CA	IAC-16.E2.3-G15.4.2
Diaz de Cerio Goenaga, Rainer Diaz de Cerio Goenaga, Rainer	CA	IAC-16.E7.IP.7
Diaz de Cerio Goenaga, Rainer Diaz de Cerio Goenaga, Rainer	CA	
	CA	IAC-16.D3.3.4 IAC-16.A3.4.7
	I CA	IAC-10.A3.4./
Dickinson, Cameron Diedrich, Thomas	CA	IAC-16.A3.1.7

Diego Peñaloza, Cristian	CA	IAC-16.D5.3.9
Diekmann, Andreas	CA	IAC-16.B3.4-B6.5.4
Diez, Eduard	CA	IAC-16.D2.7.3
Diggavi, Shivanand	CA	IAC-16.E2.4.7
Dillow, Barrett	CA	IAC-16.C1.8.10
Dinesh Kumar, Babu	CA	IAC-16.B1.4.2
DING, Guo-hao	CA	IAC-16.C2.9.12
Ding, Jifeng Ding, Lan	CA CA	IAC-16.C2.1.8 IAC-16.A2.2.5
Ding, Zhaobo	CA	IAC-16.C4.3.3
Dinicola, Michael	CA	IAC-16.C4.5.5
Dinsmore, Craig	CA	IAC-16.D3.1.5
Dionisio, Roberto	CA	IAC-16.B1.3.8
Dionisio, Sabrina	CA	IAC-16.C1.2.3
Diprima, Francesco	CA	IAC-16.A6.IP.19
Diprima, Francesco	A	IAC-16.D1.5.7
Dittus, Hansjörg	CA	IAC-16.A2.1.9
Dittus, Hansjörg Djojodihardjo, Harijono	CA CA	IAC-16.B3.1.9 IAC-16.B1.IP.4
Djojodihardjo, Harijono	CA	IAC-16.B1.IP.4
Djojodihardjo, Harijono	CA	IAC-16.C4.8.9
Djokic, Drazen	CA	IAC-16.C2.8.7
Do, Sydney	CA	IAC-16.A5.2.6
Oodge, Grey	CA	IAC-16.E7.IP.20
Doi, Hinata	CA	IAC-16.D4.3.2
Polado Perez, Juan Carlos	CA	IAC-16.A6.9.5
Oolado Perez, Juan Carlos	A	IAC-16.A6.9.7
Polci, Marco	CA	IAC-16.D2.3.3
Oolci, Marco	CA CA	IAC-16.B3.7.7 IAC-16.B1.1.4
Ooldirina, Catherine Ooldirina, Catherine	CA	IAC-16.B1.1.4
Dolgopolov, Vladimir P.	CA	IAC-16.A3.2A.4
Dolgov, Pavel	CA	IAC-16.A3.2A.4
Domínguez-González, Raúl	CA	IAC-16.A6.7.9
Oonahue, Benjamin	CA	IAC-16.D2.8-A5.4.2
Donaldson, Nathan	CA	IAC-16.A6.IP.1
Donaldson, Nathan	CA	IAC-16.A6.IP.10
Donati, Annalisa	CA	IAC-16.D4.2.5
Donchev, Anton	CA	IAC-16.A3.3B.8
Oong, Shi-wei	CA	IAC-16.C3.2.5
Oong, Wenbo	CA CA	IAC-16.A2.5.9 IAC-16.B1.IP.23
Dong, Yanfang Dong, Yazhou	CA	IAC-16.C3.2.5
Dong, Yongpeng	CA	IAC-16.C2.7.5
Dong, Zhenghong	CA	IAC-16.D1.2.8
Dong, Zhifeng	CA	IAC-16.A3.IP.12
Dongqing, Gu	CA	IAC-16.B2.2.9
Donlon, Craig	CA	IAC-16.B1.2.6
Doom, Travis	CA	IAC-16.E3.IP.14
Doonan, Jenni	CA	IAC-16.B4.6B.6
Oorrington, Scott	CA	IAC-16.D4.5.1
Oos Santos, Alvaro Fabricio Ios Santos, Marlise	CA	IAC-16.E7.3.1 IAC-16.A1.7.5
los Santos, Marise los Santos Carvalho, Jean Paulo	CA	IAC-16.A1.7.5
Potsenko, Oleg	CA	IAC-16.A5.2.4
Dougherty, Kerrie	CA	IAC-16.E4.2.6
Dougherty, Kerrie	CA	IAC-16.E5.5.1
Dougherty, Michele K.	CA	IAC-16.A7.2.6
Douglas, Audrey	CA	IAC-16.A5.IP.7
Douglas, Audrey	CA	IAC-16.E1.1.6
Doule, Ondrej	CA	IAC-16.D4.1.7
Doxaran, David	CA	IAC-16.B1.2.4
Doyle, Ronan	CA	IAC-16.A1.IP.12
Oragasanu, Claudiu Gabriel Oragasanu, Claudiu Gabriel	CA CA	IAC-16.B2.4.7 IAC-16.B4.8.6
Orake, Darrell	CA	IAC-16.A3.2A.7
Oreuilles, Gilles	CA	IAC-16.B1.4.1
Drever, Mike	CA	IAC-16.A5.1.8
Orew, Jamie	CA	IAC-16.B4.5.7
Drew, Jamie	CA	IAC-16.A4.2.2
Drew, Jamie	CA	IAC-16.B4.6A.10
Driedger, Matthew	CA	IAC-16.D1.7.8
Driedger, Matthew	CA	IAC-16.C2.9.4
Oriscoll, Elizabeth	CA	IAC-16.B4.6A.9
Orolshagen, Gerhard	CA	IAC-16.A6.2.10
Oron', Mykola	CA	IAC-16.D2.IP.9
Oronov, Pavel	CA	IAC-16.C4.4.10
Drouet, Sidney	CA	IAC-16.B4.6B.11
Drube, Line	CA	IAC-16.B4.8.7

Du, Feiping	CA	IAC-16.C4.1.5
Du, Junpeng	CA	IAC-16.D5.IP.4
Du, Junpeng	CA	IAC-16.D5.2.10
Du, Lan	CA	IAC-16.B2.4.11
Du, Linfei	CA	IAC-16.C2.IP.17
Du, Xin	CA	IAC-16.C4.9.14
du Plessis, Jan	CA	IAC-16.B4.4.7
Duan, Guangfei	CA	IAC-16.D3.3.1
DUAN, Li	CA	IAC-16.A2.2.3
DUAN, Li	CA	IAC-16.A2.4.4
Duan, Qiong	CA	IAC-16.E1.5.7
Duan, Xingyue	CA	IAC-16.C4.8.2
Duarte, Carlos	CA	IAC-16.D4.2.8
Duarte, Carlos	CA	IAC-16.E1.6.2
Dubayah, Ralph	CA	IAC-16.B1.6.1
Dubert, Diana	Α	IAC-16.A1.2.4
Dubois-Matra, Olivier	CA	IAC-16.C1.2.2
Dubresson, Antoine	CA	IAC-16.E1.7.5
Dubroca, Guilhem	CA	IAC-16.B1.3.2
DUDAK, CELAL	CA	IAC-16.B2.8-GTS.3.3
Dudal, Clement	CA	IAC-16.B2.1.6
Dudal, Clement	CA	IAC-16.B4.2.7
Dudal, Clement	CA	IAC-16.B4.6B.2
Dueck, Andreas	CA	IAC-16.C2.1.5
Duggan, Matthew	CA	IAC-16.B3.3.8
Duggan, Matthew	CA	IAC-16.A5.1.5
Duggan, Matthew	CA	IAC-16.B3.7.3
Duke, Richard	CA	IAC-16.B6.2.6
Dullweber, Martin	CA	IAC-16.E2.2.7
Dumas†, Stephane	CA	IAC-16.A4.IP.6
Dumas†, Stephane	CA	IAC-16.A4.2.3
Dumbacher, Daniel L.	CA	IAC-16.A3.1.9
Dumont, Etienne	CA	IAC-16.D2.3.11
Dunham, David	CA	IAC-16.A3.2A.7
Dunklee, Ron E.	CA	IAC-16.B3.4-B6.5.5
Dunlop, David	CA	IAC-16.A3.2C.9
Dunn, Jocelyn	CA	IAC-16.E1.1.5
Dupont, Cedric	CA	IAC-16.D2.7.3
Durand-Carrier, Franck	CA	IAC-16.D1.3.8
Durante, Daniele	CA	IAC-16.A7.2.6
Durante, Daniele	CA	IAC-16.A7.3.5
Durin, Gianfranco	CA	IAC-16.D3.3.7
Durst, Steve	CA	IAC-16.A3.2B.2
Durán, Cintia	CA	IAC-16.E1.IP.33
Duskalieva, Almira	CA	IAC-16.E7.IP.32
Dussap, Claude-Gilles	CA	IAC-16.A1.6.1
Dutertre, Charline	CA	IAC-16.D2.1.7
DUTHEIL, Jean Philippe	CA	IAC-16.C4.1.4
Dutour, Kimberly	CA	IAC-16.E1.IP.28
Dutt, Lakshya	CA	IAC-16.A4.IP.1
Dutt, Lakshya	Α	IAC-16.A5.IP.10
Dutt, Lakshya	CA	IAC-16.A6.4.10
Dutt, Lakshya	CA	IAC-16.A1.4.9
Dutt, Lakshya	CA	IAC-16.A4.2.9
Dutt, Lakshya	CA	IAC-16.C2.6.2
Duvaux-Bechon, Isabelle	CA	IAC-16.D4.2.3
Duvaux-Bechon, Isabelle	CA	IAC-16.E5.2.6
Duzellier, Sophie	Α	IAC-16.A6.2.10
Duzellier, Sophie	CA	IAC-16.D5.3.6
Duzzi, Matteo	CA	IAC-16.D1.1.8
Duzzi, Matteo	CA	IAC-16.D1.2.10
Dvorscak, Mark	CA	IAC-16.E5.2.1
Dwa, Manisha	CA	IAC-16.E1.1.8
Dyakonov, Grigoriy	CA	IAC-16.C4.4.10
Dyakov, Pavel	CA	IAC-16.C1.9.9
Díaz García, Héctor	CA	IAC-16.D5.3.9
Díaz García, Héctor	CA	IAC-16.E2.4.2
Díaz Infante, Juan José	CA	IAC-16.E1.9.13
Díaz Infante, Juan José	CA	IAC-16.B4.3.5
Döringshoff, Klaus	CA	IAC-16.A2.3.2
Dörr, Simon	CA	IAC-16.B1.2.7
2011, 31111011	CA	IAC-10.D1.Z./

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Name	Role	Paper
E, UNNIKRISHNAN	CA	IAC-16.B2.5.10
E N, Anandapadmanabhan	CA	IAC-16.C4.2.3
Ebert, Monica	CA	IAC-16.A5.IP.7

Ebert, Monica	CA	IAC-16.E1.IP.34
Ebert, Monica	CA	IAC-16.E1.2.3
Ebert, Monica	CA	IAC-16.E1.2.11
Ebert, Monica	CA	IAC-16.E1.1.6
Ebrahimi, Masoud	CA	IAC-16.C1.1.8
Ebrahimi, Masoud	CA	IAC-16.B2.6.10
Ebrahimi, Mohammad	CA	IAC-16.D1.IP.1
Ebrahimi, Mohammad	CA	IAC-16.D1.5.5
Ecoffet, R.	CA	IAC-16.D5.3.6
Eder, Valentin	CA	IAC-16.B2.1.5
Edmondo, Scorzafava	CA	IAC-16.A6.7.2
Edmundson, Perry	CA	IAC-16.A3.2B.7
Edmundson, Perry	CA	IAC-16.E1.4.7
Eduardo, Malagon	CA	IAC-16.D3.3.9
Eenmäe, Tõnis	CA	IAC-16.B4.4.3
Egawa, Yusuke	CA	IAC-16.C4.4.9
Eggl, Siegfried	CA	IAC-16.B4.8.7
Ehrenfreund, Pascale	CA	IAC-16.A1.5.2
Ehresmann, Manfred	CA	IAC-16.D2.IP.2
Ehrpais, Hendrik	CA	IAC-16.E2.4.4
Eiblmaier, Matthias	CA	IAC-16.A3.4.1
Eigenbrod, Christian	CA	IAC-16.A2.5.5
Eissfeller, Bernd	CA	IAC-16.C1.3.3
EJALE, OMONZOKPIA	CA	IAC-16.E1.IP.16
ELIA, Gianpaolo	CA	IAC-16.C4.IP.23
Ellena, Giulia	CA	IAC-16.A5.IP.1
Ellery, Alex	CA	IAC-16.E6.1.4
Elliott, John	CA	IAC-16.A1.5.8
Elliott, John	CA	IAC-16.B4.8.11
Eloi, PETROS	CA	IAC-16.E7.1.4
Els, Paul	CA	IAC-16.A1.IP.39
Elsen, Michael	CA	IAC-16.A2.3.1
Elsen, Michael	CA	IAC-16.A2.3.2
Elsner, Jens	CA	IAC-16.B2.6.9
Elsperman, Michael	CA	IAC-16.D2.4.10
•	CA	
Elvis, Martin	CA	IAC-16.A3.IP.5
Emami, M. Reza		IAC-16.A6.6.4
Emanuelli, Matteo	CA	IAC-16.B4.3.8
Emanuelli, Matteo	CA	IAC-16.A6.8.7
Emanuelli, Matteo	CA	IAC-16.A6.8.9
Emdee, Jeffery	CA	IAC-16.D2.1.8
Emeldyashcheva, Olga Emmanuel, Robert	CA CA	IAC-16.B3.IP.6
		IAC-16.B4.2.7
Engel, Kilian A.	CA	IAC-16.B4.8.7
Engle, James	CA CA	IAC-16.B3.3.8
Engle, James		IAC-16.A5.1.5
Enomoto, Toshiya	CA	IAC-16.A6.IP.23
Enriquez, J. Emilio	A	IAC-16.A4.1.7
Enriquez-Caldera, Rogerio	CA	IAC-16.C1.1.9
Enriquez-Caldera, Rogerio	CA	IAC-16.D1.2.12
Entrena Utrilla, Carlos Manuel	CA	IAC-16.A5.IP.5
Entrena Utrilla, Carlos Manuel	CA	IAC-16.D4.1.8
Entrena Utrilla, Carlos Manuel	CA	IAC-16.E6.1.1
ERDEM, Merve	CA	IAC-16.E7.IP.27
Eren Copur, Meltem	CA	IAC-16.C1.3.3
Erinfolami, Funmilayo	CA	IAC-16.A1.1.5
Erinfolami, Funmilayo	CA	IAC-16.E1.5.12
Erinfolami, Funmilayo	CA	IAC-16.E1.6.10
Ermanni, Paolo	CA	IAC-16.D2.7.3
Ernst, Hauke	CA	IAC-16.B3.4-B6.5.5
Ernst, Robert	CA	IAC-16.D2.4.1
Escalante Ramírez, Boris	CA	IAC-16.A1.IP.43
Escobar Hernández, Jonathan	CA	IAC-16.A7.3.1
Escudier, Benedicte	CA	IAC-16.E1.8.1
Escudier, Benedicte	CA	IAC-16.E1.4.9
Escudier, Philippe	CA	IAC-16.B1.2.4
Eskander, Tanya	CA	IAC-16.E1.9.6
ESNAULT, François-Xavier	CA	IAC-16.A2.1.5
Espana, Martin	CA	IAC-16.B2.7.9
Espinosa, Amaya	CA	IAC-16.D2.5.1
Espinosa-Jeffrey, Araceli	CA	IAC-16.A1.7.6
Espinosa-Jeffrey, Araceli	CA	IAC-16.A1.7.8
Espinosa Jeffrey, Araceli	CA	IAC-16.A1.7.9
Esposito, Francesca	CA	IAC-16.A3.3A.6
	L CA	INC 10.MJ.JM.U









ssig, James	CA	IAC-16.C3.2.9
Stable, Stéphane	CA	IAC-16.A6.6.1
steves, David	CA	IAC-16.A3.IP.18
strada, Monica Aparicio	CA	IAC-16.B6.3.1
strada-Rojo, Francisco	CA	IAC-16.A1.7.1
strada-Solís, Martin de Jesus	CA	IAC-16.A1.IP.28
theve, Willy	CA	IAC-16.E1.9.3
vang, Thomas Haraldsen	CA	IAC-16.B4.3.7
Evans, Thomas	CA	IAC-16.A3.IP.13
wald, Reinhold	CA	IAC-16.A1.IP.1
wald, Reinhold	CA	IAC-16.B3.3.9
wald, Reinhold	CA	IAC-16.A1.6.4
yer, Jesse	CA	IAC-16.B6.3.5
yer, Jesse	CA	IAC-16.B6.3.9
zhilrajan, Elayaperumal	CA	IAC-16.C4.IP.42

Esteves, David	CA	IAC-16.A3.IP.18
Estrada, Monica Aparicio	CA	IAC-16.B6.3.1
Estrada-Rojo, Francisco	CA	IAC-16.A1.7.1
Estrada-Solís, Martin de Jesus	CA	IAC-16.A1.IP.28
Etheve, Willy	CA	IAC-16.E1.9.3
Evang, Thomas Haraldsen	CA	IAC-16.B4.3.7
Evans, Thomas	CA	IAC-16.A3.IP.13
Ewald, Reinhold	CA	IAC-16.A1.IP.1
Ewald, Reinhold	CA	IAC-16.B3.3.9
Ewald, Reinhold	CA	IAC-16.A1.6.4
Eyer, Jesse	CA	IAC-16.B6.3.5
Eyer, Jesse	CA	IAC-16.B6.3.9
Ezhilrajan, Elayaperumal	CA	IAC-16.C4.IP.42
F		
F		
F Name	Role	Paper
	Role CA	Paper IAC-16.C3.2.1
Name		
Name Faber, Daniel	CA	IAC-16.C3.2.1
Name Faber, Daniel Facchinetti, Claudia	CA A	IAC-16.C3.2.1 IAC-16.B1.3.7
Name Faber, Daniel Facchinetti, Claudia Facchinetti, Claudia	CA A A	IAC-16.C3.2.1 IAC-16.B1.3.7 IAC-16.B2.4.8
Name Faber, Daniel Facchinetti, Claudia Facchinetti, Claudia Facchinetti, Claudia	CA A A	IAC-16.C3.2.1 IAC-16.B1.3.7 IAC-16.B2.4.8 IAC-16.B2.7.8
Name Faber, Daniel Facchinetti, Claudia Facchinetti, Claudia Facchinetti, Claudia Facciolati, Luca	CA A A CA	IAC-16.C3.2.1 IAC-16.B1.3.7 IAC-16.B2.4.8 IAC-16.B2.7.8 IAC-16.B3.IP.1
Name Faber, Daniel Facchinetti, Claudia Facchinetti, Claudia Facchinetti, Claudia Facciolati, Luca Facciolati, Luca	CA A A CA	IAC-16.C3.2.1 IAC-16.B1.3.7 IAC-16.B2.4.8 IAC-16.B2.7.8 IAC-16.B3.IP.1 IAC-16.B4.8.2
Name Faber, Daniel Facchinetti, Claudia Facchinetti, Claudia Facchinetti, Claudia Facciolati, Luca Facciolati, Luca Faenza, Martina	CA A A CA CA CA CA	IAC-16.C3.2.1 IAC-16.B1.3.7 IAC-16.B2.4.8 IAC-16.B2.7.8 IAC-16.B3.IP.1 IAC-16.B4.8.2 IAC-16.A6.IP.12

Name	Role	Paper
aber, Daniel	CA	IAC-16.C3.2.1
acchinetti, Claudia	A	IAC-16.B1.3.7
acchinetti, Claudia	Α	IAC-16.B2.4.8
acchinetti, Claudia	Α	IAC-16.B2.7.8
acciolati, Luca	CA	IAC-16.B3.IP.1
acciolati, Luca	CA	IAC-16.B4.8.2
aenza, Martina	CA	IAC-16.A6.IP.12
ajardo, Isai	CA	IAC-16.E1.3.1
Fairburn, Sue	A	IAC-16.E5.2.8
alcke, Heino	CA	IAC-16.A4.1.7
Falconi, Roberto	A	IAC-16.E1.1.3
alguère, Didier	CA	IAC-16.D5.3.6
Falke, Albert	CA	IAC-16.B4.8.7
alker, John	CA	IAC-16.D3.4.3
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allerini, Leonardo	CA	IAC-16.C4.6.2
an, Li	CA	IAC-16.B2.2.10
an, Tao	CA	IAC-16.C2.1.12
an, Tao	CA	IAC-16.C2.5.10
anchiang, Christine	CA	IAC-16.A1.IP.17
anfani, Alessio	CA	IAC-16.B4.6B.8
anpei, Lei	CA	IAC-16.C4.IP.38
anpei, Lei	CA	IAC-16.C2.1.13
anpei, Lei	CA	IAC-16.C4.3.10
antinati, Cinzia	CA	IAC-16.A3.4.3
antino, Elena	CA	IAC-16.A3.3A.6
anucci, Luca	CA	IAC-16.E1.IP.14
araci, Marco	CA	IAC-16.B1.IP.8
aragalli, Michele	CA	IAC-16.E1.4.7
arah Simón, Lisette	CA	IAC-16.E3.4.7
arahvashi, Esfandiar	CA	IAC-16.B4.7.6
arid, Ahmed	CA	IAC-16.B4.1.12
arine, Pierre-André	CA	IAC-16.B2.4.10
Farley, Kenneth	CA	IAC-16.A3.3A.10
arrés, Ariadna	CA	IAC-16.C1.7.10
asano, Giancarmine	CA	IAC-16.C1.4.4
asano, Giancarmine	CA	IAC-16.B4.7.4
asano, Luca	CA	IAC-16.B1.1.7
·		
asano, Luca	CA	IAC-16.B6.3.2
asoulas, Stefanos	CA	IAC-16.A1.6.4
aure, Pauline	CA	IAC-16.B4.6B.12
aure, Pauline	CA	IAC-16.D1.6.7
auzi, Ahmad	CA	IAC-16.C2.7.3
AVALORO, NUNZIA	CA	IAC-16.C4.IP.23
avier, Jean Jacques	CA	IAC-16.A1.IP.23
avier, Jean Jacques	CA	IAC-16.A3.IP.26
avier, Jean Jacques	CA	IAC-16.A3.IP.38
azeley, H.R.	A	IAC-16.D2.IP.14
azeley, H.R.	CA	IAC-16.C4.1.15
azeley, H.R.	CA	IAC-16.D1.6.5
east, Simon	CA	IAC-16.D2.7.10
ederico, Giulia	CA	IAC-16.D1.2.2
EI, FENG	CA	IAC-16.A3.IP.11
EI, FENG	CA	IAC-16.B1.IP.9
EI, FENG	CA	IAC-16.B1.4.10
		1/10 10.01.4.10

Felix, Carmen	CA	IAC-16.E3.6.9
Fellous, Jean-Louis	CA	IAC-16.A1.5.9
Feltrin, Francesco	CA	IAC-16.D1.IP.4
Fen, Hou	CA	IAC-16.C1.IP.15
Fendall, Myron Feng, Fan	CA	IAC-16.C3.2.9 IAC-16.B1.IP.14
Feng, Han	CA	IAC-16.D1.7.7
Feng, Louis Wei-yu	CA	IAC-16.C2.5.8
Feng, Rui	CA	IAC-16.B3.4-B6.5.8
Fenili, André	CA	IAC-16.C2.5.12
Fenoglio, Franco	CA	IAC-16.D3.1.3
Fenoglio, Franco	CA	IAC-16.A3.2A.9
Fenoglio, Franco	CA	IAC-16.A5.1.8
Ferella, Luca	CA	IAC-16.C1.4.8
Ferella, Luca	CA	IAC-16.B4.8.1
Feresin, Fred Ferguson, Chrisopher	CA	IAC-16.B1.3.1 IAC-16.B3.2.9
Fernandes, George	CA	IAC-16.B4.1.14
Fernandez, Miguel Angel	CA	IAC-16.B2.1.6
Fernandez, Miguel Angel	CA	IAC-16.B4.2.7
Fernandez, Miguel Angel	CA	IAC-16.B4.6B.2
Fernández, Ana I.	CA	IAC-16.B5.2.2
Ferra, Lionel	CA	IAC-16.B6.1.2
Ferrand Broussy, Bruno	CA	IAC-16.B1.4.1
Ferrando, Emanuele	CA	IAC-16.C3.IP.1
Ferrari, Fabio	CA	IAC-16.A3.4.9
Ferrari, Fabio Ferrari, Fabio	CA	IAC-16.B4.8.5 IAC-16.B4.8.9
Ferrario, Lorenzo	CA	IAC-16.64.6.9
Ferraris, Simona	CA	IAC-16.D2.3.3
FERREIRA, Eugenio	CA	IAC-16.A6.6.1
Ferreira, Luís	CA	IAC-16.B1.IP.27
Ferreira, Luís	CA	IAC-16.E1.8.4
Ferreira, Maurício Gonçalves Vieira	CA	IAC-16.B6.2.9
Ferreira, Mário	CA	IAC-16.B2.6.9
Ferrer, Jorge Alfredo	A	IAC-16.C2.1.10
Ferrer, Jorge Alfredo	CA	IAC-16.B4.1.13
Ferrer Perez, Jorge Alfredo	CA CA	IAC-16.B4.1.16
Ferrer Perez, Jorge Alfredo Ferrer Perez, Jorge Alfredo	CA	IAC-16.E3.4.7 IAC-16.B6.3.1
Ferretti, Stefano	CA	IAC-16.E3.1.15
Ferretti, Stefano	CA	IAC-16.D4.2.1
Ferretti, Stefano	CA	IAC-16.B5.2.8
Ferretto, Davide	CA	IAC-16.D1.IP.13
Ferretto, Davide	CA	IAC-16.D2.IP.11
Ferri, Antonella	CA	IAC-16.A3.2A.9
Ferri, Paolo	CA	IAC-16.A3.4.1
Ferrino, Marinella	CA	IAC-16.A3.2C.5
Feruglio, Lorenzo	CA	IAC-16.D1.IP.7
Feruglio, Lorenzo Feruglio, Lorenzo	CA A	IAC-16.D1.3.7 IAC-16.B4.8.8
Figueroa González, Perla Abigail	CA	IAC-16.A1.5.5
Figueroa-Piercy, Eva	CA	IAC-16.E1.2.11
Filacchione, Gianrico	CA	IAC-16.A3.IP.10
Filatyev, Alexander S.	CA	IAC-16.D1.IP.6
Filipowicz, Dorota	CA	IAC-16.D3.3.4
Filippazzo, Giancarlo	CA	IAC-16.D1.6.4
Filippeschi, Sauro	CA	IAC-16.E1.IP.14
Filippetto, Daniele	CA	IAC-16.C1.2.8
Filippova, Liliya	CA	IAC-16.A4.1.6
Filosa, Andrea	CA	IAC-16.A3.2C.3
Filosa, Andrea Finke, Felix	CA CA	IAC-16.B4.8.2
Finke, Felix Finkleman, David	CA	IAC-16.A2.1.9 IAC-16.B6.2.12
Finkleman, David	CA	IAC-16.60.2.12
Finkleman, David	CA	IAC-16.B5.1.9
Finkleman, David	CA	IAC-16.D5.4.5
Fiorentino, Claudia A. M.	CA	IAC-16.B1.1.7
Fiorentino, Claudia A. M.	CA	IAC-16.B1.2.9
Fiorini, Davide	CA	IAC-16.B1.IP.8
Fioriti, Davide	CA	IAC-16.E1.IP.14
Fioriti, Marco	CA	IAC-16.D2.4.8
Fisackerly, Richard	CA CA	IAC-16.A3.2A.5 IAC-16.D5.4.6
Fishbain, Barak		

Fitz-Coy, Norman	CA	IAC-16.A6.2.8
Fitz-Coy, Norman	CA	IAC-16.A6.3.5
Fitz-Coy, Norman	CA	IAC-16.A6.3.6
Fitz-Coy, Norman	CA	IAC-16.D1.6.6
Fitzgerald, Michael	CA CA	IAC-16.D4.3.8
Flamini, Enrico Flamini, Enrico	CA	IAC-16.A3.IP.10
Fleischer, Jennifer	CA	IAC-16.D3.3.4
Fleron, Rene	CA	IAC-16.B4.3.12
Fleron, Rene	CA	IAC-16.E1.4.1
Flitcroft, Steve	CA	IAC-16.A3.3B.8
Flohrer, Tim	CA	IAC-16.A6.4.1
Florczuk, Wojciech	CA	IAC-16.A2.5.3
Foing, Bernard Foing, Bernard	CA	IAC-16.A5.IP.1 IAC-16.A1.2.6
Foing, Bernard	CA	IAC-16.A3.2B.1
oing, Bernard	CA	IAC-16.E5.1.7
Foing, Bernard	CA	IAC-16.A3.3B.9
Foing, Bernard	CA	IAC-16.A5.1.1
oing, Bernard	CA	IAC-16.E5.3.2
Foing, Bernard	CA	IAC-16.B3.6-A5.3.8
Foing, Bernard	CA	IAC-16.A3.2C.1
Foing, Bernard	CA CA	IAC-16.A3.2C.2
oing, Bernard oley, Cathy	CA	IAC-16.A3.2C.6 IAC-16.E5.3.10
omina, Elena	CA	IAC-16.E3.3.10
Ong, Cheng-Joe	CA	IAC-16.B4.7.2
onseca, Manuel	CA	IAC-16.B1.5.3
onseca Naranjo, Geiner Gustavo	CA	IAC-16.E2.3-GTS.4.9
onseca Naranjo, Geiner Gustavo	CA	IAC-16.E2.4.10
Fontaine, Jean-Pierre	CA	IAC-16.A1.6.1
Fontanesi, Simone	CA CA	IAC-16.E1.IP.14
Forbes, James Force, Melissa K.	CA	IAC-16.B4.8.10 IAC-16.E7.2.11
ormaro, Roberto	CA	IAC-16.E7.2.11
Formicola, Giuseppe	CA	IAC-16.B1.3.3
Forshaw, Jason	CA	IAC-16.B6.2.6
orshaw, Jason	CA	IAC-16.D4.1.3
orshaw, Jason	CA	IAC-16.A6.6.8
ortov, Vladimir	CA	IAC-16.A2.6.6
oullon, Pierre	CA	IAC-16.A5.IP.3 IAC-16.E2.2.11
Foullon, Pierre Foullon, Pierre	CA	IAC-16.E2.2.11
oulon, Pierre Foulon, Bernard	CA	IAC-16.D1.7.2
Fraas, Lewis	CA	IAC-16.C3.4.3
ragiacomo, Manrico	CA	IAC-16.C4.3.1
ragoso, Luis	CA	IAC-16.D2.2.11
ragoso-Alcalá, Elvis	CA	IAC-16.A1.7.1
rancesconi, Alessandro	CA	IAC-16.D1.IP.4
Francesconi, Alessandro Francesconi, Alessandro	CA CA	IAC-16.D1.1.8 IAC-16.D1.2.10
Francesconi, Alessandro	CA	IAC-16.D1.2.10
Franchi, Loris	CA	IAC-16.D1.IP.7
Franchi, Loris	CA	IAC-16.D1.3.7
ranchi, Loris	CA	IAC-16.B4.8.8
Francis, Fred	CA	IAC-16.D3.1.9
rancisco, Tiago	CA	IAC-16.A3.4.1
RANCO, Raffaella	CA	IAC-16.D1.3.4
ranco-Cendejas, Rafael	CA	IAC-16.A1.IP.12
rank, Jeremy	CA	IAC-16.D3.1.5
rank, Robin rankl, Kathrin	CA CA	IAC-16.E7.7-B3.8.5 IAC-16.C1.3.3
ranki, kathrin ranzoni, Ugo	CA	IAC-16.C1.3.3
reeland, Steven	CA	IAC-16.E7.2.3
reeman, Anthony	CA	IAC-16.D1.3.1
rei, Timothée	CA	IAC-16.A6.5.2
REMEAUX, Claire	CA	IAC-16.A6.7.4
renea-Schmidt, Armelle	Α	IAC-16.D2.7.5
renea-Schmidt, Armelle	CA	IAC-16.E1.3.12
renea-Schmidt, Armelle	CA	IAC-16.D2.5.11
renea-Schmidt, Armelle	A	IAC-16.D5.2.4
	CA	IAC-16.A6.4.1
	C^	100 10 00 01
Frey, Stefan FREZET, Michel Frezza, Lorenzo	CA CA	IAC-16.A6.6.1 IAC-16.B2.2.7

Frick, Andreas	CA	IAC-16.B4.8.11
Frick, Warren	CA	IAC-16.B4.5.10
Friend, Jonathan	CA	IAC-16.B4.8.3
Frigerio, Alessandro	CA	IAC-16.E1.IP.14
Frioult, Marcy	CA	IAC-16.A1.5.11
Frischauf, Norbert	CA	IAC-16.B2.5.1
Fritsch, Dieter	CA	IAC-16.B4.3.2
Froehlich, Annette	CA	IAC-16.E7.2.10
Frosi, Anna	CA	IAC-16.B3.IP.1
Frosi, Anna	CA	IAC-16.B4.8.2
Frost, Chad	CA	IAC-16.D1.7.2
Fu, Lili	CA	IAC-16.C4.IP.20
Fu, Lili	CA	IAC-16.C4.9.10
Fu, Qiu-jun	CA	IAC-16.C4.9.14
Fu, Yu	CA	IAC-16.E7.IP.33
Fucetola, Corey	CA	IAC-16.C4.6.6
Fujii, Shinichiro	CA	IAC-16.D4.3.9
Fujita, Koki	CA	IAC-16.A6.IP.23
Fujita, Koki	CA	IAC-16.A6.6.11
Fujiwara, Teruo	CA	IAC-16.C3.2.2
Fukuda, Seisuke	CA	IAC-16.C3.3.1
Fukuhara, Tetsuya	CA	IAC-16.A3.5.1
Fuller, Michael	CA	IAC-16.D2.8-A5.4.2
Fumanti, Marco	CA	IAC-16.B1.5.3
Funase, Ryu	CA	IAC-16.B4.8.1
Funtova, Irina	CA	IAC-16.A1.2.2
Furfaro, Roberto	CA	IAC-16.C1.3.5
Furfaro, Roberto	CA	IAC-16.A5.1.2
Furfaro, Roberto	CA	IAC-16.A6.9.6
Furuya, Hiroshi	CA	IAC-16.C2.2.8
Fusaro, Roberta	CA	IAC-16.D4.1.2
Fusaro, Roberta	CA	IAC-16.D2.4.8
Fusaro, Roberta	CA	IAC-16.D2.5.9
Fusaro, Roberta	CA	IAC-16.D6.3.1
Fuse, Tetsuharu	CA	IAC-16.B2.7.3

Name	Role	Paper
G, Abbishek	CA	IAC-16.A1.IP.21
G. Abbishek	CA	IAC-16.C2.6.7
G, Abbishek	CA	IAC-16.C2.6.9
G, Abbishek	CA	IAC-16.C3.4.5
G. Abbishek	CA	IAC-16.D4.5.6
G, Levin	CA	IAC-16.C4.IP.16
G, Levin	CA	IAC-16.A3.2B.4
G, Mahesh	CA	IAC-16.C4.1.6
G. Abdelhady, Mohamed	CA	IAC-16.C4.IP.4
G.N., Rao	CA	IAC-16.A3.3B.6
Gaboriaud, Alain	CA	IAC-16.B2.1.6
Gaboriaud. Alain	CA	IAC-16.B4.6B.2
Gaboyer, Frederic	CA	IAC-16.A1.5.2
Gabriel, Michal	CA	IAC-16.E2.2.4
Gabrielli, Alessandro	CA	IAC-16.C2.4.2
GABRIELLI, Pierre	CA	IAC-16.D2.7.5
GABRIELLI, Pierre	CA	IAC-16.E1.3.12
GABRIELLI, Pierre	A	IAC-16.D2.5.11
GABRIELLI, Pierre	CA	IAC-16.D5.2.4
Gadagkar, Aakanksha	CA	IAC-16.C3.4.1
Gadimova, Sharafat	CA	IAC-16.D4.1.1
Gaeta, Michele	CA	IAC-16.B4.1.11
Gaeta, Michele	CA	IAC-16.E1.3.10
Gaier, James R.	CA	IAC-16.B3.7.8
Gaino, Marco	CA	IAC-16.D1.1.8
Gajare, Tanmay	CA	IAC-16.C3.4.1
Galaburda, Dmitriy	CA	IAC-16.E5.4.10
Galaktionov, Alexey	CA	IAC-16.D6.2-D2.9.4
Galand, Quentin	CA	IAC-16.A2.4.5
Galantini, Paolo	CA	IAC-16.B1.3.8
Galatis, Giorgos	CA	IAC-16.B4.6A.7
, 0	CA	IAC-16.D3.3.9
	CA	IAC-16.B4.8.2
,		IAC-16.B1.IP.12
Galaviz, Diego Galbiati, Claudio Galeana-Pizaña, Jose Galeone, Piero		IAC-16.B4.8.









Galfetti, Luciano

Galfetti, Luciano	CA	IAC-16.C4.5.9
Galhego Thibes Xavier da Costa, Maria	CA	IAC-16.C1.6.10
ívia		
Galica, Carol	CA	IAC-16.B4.5.1
Gallardo-Cruz, J. Alberto	CA	IAC-16.B5.2.2
Gallegos Baez, Elizabeth de María Gallien, Florian	CA A	IAC-16.B2.1.3 IAC-16.C2.9.5
Galluzzo, Gaetano	CA	IAC-16.C2.9.5
Galoforo, Germana	CA	IAC-16.E1.IP.5
Galoforo, Germana	CA	IAC-16.A1.1.8
Galoforo, Germana	CA	IAC-16.E1.2.9
Galoforo, Germana	CA	IAC-16.E1.1.2
Galvan-Garza, Raquel	CA	IAC-16.A1.2.7
Gamal, Hamed	A	IAC-16.C4.IP.4
Gamal, Hamed	A	IAC-16.D4.1.6 IAC-16.E2.2.1
Gamal, Hamed	CA	
Gamal, Hamed Gamgami, Farid	CA	IAC-16.E1.5.8 IAC-16.D2.4.1
Gamgami, Farid	CA	IAC-16.A7.3.4
Gamper, Eduard	CA	IAC-16.A6.2.9
Gan, Qingbo	CA	IAC-16.A6.9.10
Ganatra, Devanshu	CA	IAC-16.E7.IP.23
Gancet, Jeremi	CA	IAC-16.D4.1.7
Gang, Qiang	CA	IAC-16.C4.9.15
Gao, Ai	CA	IAC-16.A3.IP.17
Gao, Ai	CA	IAC-16.C1.3.6
Gao, Lei	CA	IAC-16.A6.IP.22 IAC-16.D2.3.10
Gao, Lei Gao, Shibo	CA	IAC-16.D2.3.10
Gao, Shibo	A	IAC-16.D2.3.10
Gao, Yong	CA	IAC-16.C2.4.8
Gao, Yong	CA	IAC-16.C2.5.11
Gao, Yongfei	CA	IAC-16.D2.8-A5.4.11
Gao, Yuan	CA	IAC-16.B4.4.11
Garante, Enrico	CA	IAC-16.B4.8.2
Garbi, Giuliani	CA	IAC-16.D3.4.8
Garcia, Antonio	CA	IAC-16.A7.3.4
Garcia, Laura Garcia, Manuel	CA	IAC-16.A1.5.2 IAC-16.A2.3.9
Garcia, Maria de la Luz	A	IAC-16.A2.3.9
Garcia, Matthieu	CA	IAC-16.D2.2.6
Garcia Bourne, Enrique	CA	IAC-16.D3.1.8
Garcia Bourne, Enrique	CA	IAC-16.D3.3.4
Garcia Burgos, Axel	CA	IAC-16.B1.IP.1
Garcia Burgos, Axel	CA	IAC-16.A1.7.2
Garcia Cordero, Jose Luis	CA	IAC-16.A1.IP.43
GARCIA HERNANDEZ, LOURDES	CA	IAC-16.E1.9.11
Garcia Ramos, Abril Garcia Yarnoz, Daniel	CA	IAC-16.B1.IP.20
Garcia Yarnoz, Daniel Garcia Yarnoz, Daniel	CA	IAC-16.E3.2.2 IAC-16.B4.8.1
García Arellano, Octavio	CA	IAC-16.E1.3.1
García González, Alma Rosa	CA	IAC-16.D5.3.9
García Sánchez, José Francisco	CA	IAC-16.D5.3.9
Gard, Joseph	CA	IAC-16.B3.1.3
Gardi, Roberto	CA	IAC-16.C2.9.2
Garg, Prateek	CA	IAC-16.C4.IP.43
Gargioli, Eugenio	CA	IAC-16.A5.2.11
Gargioli, Eugenio	CA	IAC-16.E1.4.9
Gargioli, Eugenio Garland, Martin	CA CA	IAC-16.A5.1.9 IAC-16.A3.3B.8
Garnand, Martin Garner, Robert	CA	IAC-16.A3.3B.8
Garofalo, Erik	CA	IAC-16.A5.2.1
Garrabos, Yves	CA	IAC-16.A2.6.3
Garrett, Michael Albert	CA	IAC-16.A4.1.3
Garrett, Mike	CA	IAC-16.A4.1.7
Garvie, Laurence	CA	IAC-16.D4.5.7
Garvie, Laurence	CA	IAC-16.D4.5.8
Gasbarri, Paolo	CA	IAC-16.C1.1.3
Gasbarri, Paolo	CA	IAC-16.C2.2.4
Gasbarri, Paolo	CA	IAC-16.C2.3.7
Gasiewski, Albin J. Gasparyan, Artur	CA	IAC-16.B4.6B.9 IAC-16.E1.5.6
Gasparyan, Artur	CA	IAC-16.E5.5.6
Gass, Volker	CA	IAC-16.A6.4.1
Gass, Volker	CA	IAC-16.C2.9.5

Gates, Michele	CA	IAC-16.B3.1.3
Gath, Peter	CA	IAC-16.B1.2.7
GATICA-ACEVEDO, VICTOR JOSE	CA	IAC-16.B2.4.4
Gatzke, Sten	CA	IAC-16.E6.1.5
Gaudenzi, Paolo	CA	IAC-16.D1.6.3
Gaudenzi, Paolo	CA	IAC-16.A7.3.5
Gaudenzi, Paolo	CA	IAC-16.C2.9.3 IAC-16.A3.4.7
Gaudreau, Daniel		
Gautam, Suman	CA	IAC-16.E1.1.9 IAC-16.B1.5.2
Gautam, Vivek Kumar	CA	
Gavaldà, Josefina	CA	IAC-16.A1.2.4 IAC-16.D2.IP.1
Gaviraghi, Giorgio Gaviraghi, Giorgio	CA	IAC-16.D2.IP.1
Gay, Adrien	CA	IAC-16.B4.2.7
Gaylor, David	CA	IAC-16.A6.9.6
Gayosso, Aldo	CA	IAC-16.D3.3.9
Gaza, Razvan	CA	IAC-16.A1.4.7
Ge, Haipeng	CA	IAC-16.A6.6.9
Gemmer, Thomas	CA	IAC-16.A3.5.5
Gemmer, Thomas	CA	IAC-16.C4.8.4
Gemmer, Thomas	CA	IAC-16.C4.8.8
Genaro, Gino	CA	IAC-16.E3.1.1
Geng, Fan	CA	IAC-16.C4.IP.30
Geng, Fan	CA	IAC-16.C4.IP.48
Genova, Anthony	CA	IAC-16.A3.2A.7
Genta, Giancarlo	CA	IAC-16.A5.2.3
Genta, Giancarlo	CA	IAC-16.D2.3.3
Gerhardt, David	CA	IAC-16.B4.3.11
Gerndt, Andreas	CA	IAC-16.B4.5.11
Gerstenmaier, William H.	CA	IAC-16.B3.1.1
Gerth, Ingo	CA	IAC-16.A3.IP.18
Gerth, Ingo	CA	IAC-16.A3.5.7
Gerth, Ingo	CA	IAC-16.B4.8.5
Geurts, Koen	CA	IAC-16.A3.4.3
Ghadawala, Rushi	CA	IAC-16.A6.8.5
Ghafoor, Nadeem	CA	IAC-16.A3.2B.6
Ghafoor, Nadeem	CA	IAC-16.A3.2B.7
Ghail, Richard	CA	IAC-16.A7.2.2
Ghassabian Gilan, Hady	CA	IAC-16.B1.IP.1
Ghassabian Gilan, Hady	CA	IAC-16.A3.2C.4
Ghassabian Gilan, Hady	CA	IAC-16.B6.1.3
Ghazanfarinia, Sajjad	CA	IAC-16.E1.5.11
Gherardi, Daniele	CA	IAC-16.A3.5.3
Gholipour, Javad	CA	IAC-16.C2.9.1
Ghosh, Avishek	Α	IAC-16.A3.IP.26
Ghosh, Avishek	Α	IAC-16.A3.IP.38
Ghosh, Avishek	CA	IAC-16.B6.1.3
Giacomelli, Gene	CA	IAC-16.A5.1.2
Giambusso, Matthew	CA	IAC-16.C4.IP.34
Gianfermo, Andrea	CA	IAC-16.B2.2.7
Giangi, Marilena	CA	IAC-16.C4.2.8
Giannopapa, Christina	CA	IAC-16.E3.1.13
Giannopapa, Christina	CA	IAC-16.E3.3.3
Giannopapa, Christina	CA	IAC-16.E5.2.6
Giannopapa, Christina	CA	IAC-16.E6.3.1
Gibbings, Alison	CA	IAC-16.A3.1.6
Gibbings, Alison	CA	IAC-16.C1.5.7
Gibbon, Dave	CA	IAC-16.C2.9.7
Gibbs, Mark	CA	IAC-16.D5.3.2
Gibson, Alexander	CA	IAC-16.A1.IP.11
Gibson, Bill	CA	IAC-16.E3.IP.2
Gibson, Stephen	CA	IAC-16.C3.5-C4.7.1
Gierse, Andreas	CA	IAC-16.A2.1.2
Gierse, Andreas	CA	IAC-16.A2.5.6
Gierse, Andreas	CA	IAC-16.A2.5.7
Gignac, Didier	CA	IAC-16.D4.1.3
Gil, Paulo J.S.	CA	IAC-16.A7.2.2
Gil, Valerie	CA	IAC-16.B3.3.4
Gil-Fernandez, Jesus	CA	IAC-16.C1.2.2
Gilbert, Chris	CA	IAC-16.D3.3.2
Gill, Eberhard	CA	IAC-16.B4.3.9
Gill, Eberhard	CA	IAC-16.B4.6A.8
Gill, Eberhard	CA	IAC-16.B4.7.5
Gindilis, Lev	CA	IAC-16.A4.1.6
Giner Abati, Francisco	CA	IAC-16.A1.1.3

Giorgi, Gabriele	CA	IAC-16.A2.1.9
Girard, Ralph	CA	IAC-16.B1.2.5
Girard, Ralph	CA	IAC-16.B1.3.4
Girard, Ralph	CA	IAC-16.B1.3.10
Giribet, Juan	CA	IAC-16.B2.7.9
Gisi, Michael	CA	IAC-16.A2.6.1
Giuliani, Roberto	CA	IAC-16.E1.8.3
Giuliani, Roberto	CA	IAC-16.B1.6.5
Giuliani, Roberto	CA	IAC-16.B5.1.1
		IAC-16.B3.1.1
Giunti, Lorenzo	CA	
Giunti, Lorenzo	CA	IAC-16.B1.3.1
Giusti, Alfonso	CA	IAC-16.A6.1.6
Giusti, Alfonso	CA	IAC-16.C2.6.3
Giusti, Alfonso	CA	IAC-16.C2.8.2
Giusti, Alfonso	CA	IAC-16.C2.8.6
Gjersvik, Amund	CA	IAC-16.E1.IP.32
Gleizes, Marie-Pierre	CA	IAC-16.B6.2.5
Glover, Tim	CA	IAC-16.C4.IP.34
Glowacki, Pawel	CA	IAC-16.D1.7.8
Godber, Austin	CA	IAC-16.A3.2A.7
Goettsche, Flemming	CA	IAC-16.C3.4.7
Gohlke, Martin	CA	IAC-16.B1.2.7
Goita, Kalifa	CA	IAC-16.B1.IP.12
Golda, Carlo	CA	IAC-16.E5.4.5
Goldberg, Mitchell	CA	IAC-16.B1.IP.18
Golikov, Alexander	CA	IAC-16.D1.IP.6
Golkar, Alessandro	CA	IAC-16.D3.4.5
Golkar, Alessandro	CA	IAC-16.B4.7.3
Golroo, Ali Akbar	CA	IAC-16.E7.2.13
Golroo, Ali Akbar	CA	IAC-16.E7.3.2
Golubev, Yury	CA	IAC-16.C1.4.11
Gomes, Luis	CA	IAC-16.B4.6A.1
GOMEZ, AMANDA	CA	IAC-16.D4.2.8
Gomez, Felipe	CA	IAC-16.A1.5.2
Gomez, Gerard	CA	IAC-16.C1.5.1
Gomez, Gerard	CA	IAC-16.C1.6.13
Gomez de Castro, Ana Ines	CA	IAC-16.A4.2.8
Gomez Guzman, Camilo	CA	IAC-16.E7.6-E3.
Gomez Herrera, Damian	CA	IAC-16.D5.3.9
Gomez Jenkins, Marco	A	IAC-16.B4.1.8
Gomez Ruiz, Arturo	CA	IAC-16.A4.1.9
Gomez-Aguilera, Luis	CA	IAC-16.D4.2.8
GONFALONE, Alain	CA	IAC-16.A1.IP.2
Gong, Changhui	CA	IAC-16.B2.1.9
Gong, Lixia	CA	IAC-16.B1.IP.23
GONG, Zizheng	CA	IAC-16.A6.3.4
Gontier, Camille	CA	IAC-16.A5.IP.11
Gontier, Camille	CA	IAC-16.B3.5.5
Gonzaga Trabasso, Luís	CA	IAC-16.B4.5.12
GONZALEZ, J.L.	CA	IAC-16.B5.1.6
Gonzalez, Miguel	CA	IAC-16.D4.2.8
Gonzalez, Virgilio	CA	IAC-16.C2.5.7
Gonzalez-Arjona, David	CA	
*		IAC-16.A3.IP.29
Gonzalez-Arjona, David	CA	IAC-16.C1.2.2
Gonzalez-Esparza, Americo	CA	IAC-16.D4.2.11
GonzalezConde, Enrique	CA	IAC-16.D1.3.8
Gonzalo, Juan Luis	CA	IAC-16.A6.6.10
González, Enrique	CA	IAC-16.B4.4.8
Gonçalves Cereja Junior, Moacyr	CA	IAC-16.B6.IP.1
Goodliff, Kandyce	CA	IAC-16.D3.1.5
Goodman, Drew	CA	IAC-16.A3.IP.13
Goodwin, Candice	CA	IAC-16.B6.1.3
Gopala Krishnan, V.	CA	IAC-16.E7.2.14
Gopala Krishnan, V.	CA	IAC-16.E3.4.13
Gopi, R	CA	IAC-16.C2.4.3
Gorbunova, Irina	CA	IAC-16.C1.5.6
Gordo, Paulo	CA	IAC-16.A6.2.10
Gordon, Karsten	CA	IAC-16.B4.7.7
Gorret, Bastien	CA	IAC-16.A6.5.2
Gosselin-Boucher, Vincent	CA	IAC-16.A1.IP.15
Goswami, Adwaita	CA	IAC-16.A3.2B.8
Goswami, Nandu	CA	IAC-16.A1.3.1
Goto, Tomohiko	CA	IAC-16.D5.1.8
Govila, KanuPriya	CA	IAC-16.C1.1.5
Govila, KanuPriya	CA	IAC-16.C1.2.10

Gow, Alasdair	CA	IAC-16.D1.2.3
Grafodatskiy, Oleg	CA	IAC-16.A3.1.5
Grafodatskiy, Oleg	CA	IAC-16.A3.1.8
Grafodatskiy, Oleg	CA	IAC-16.B4.2.12
Grafodatskiy, Oleg	CA	IAC-16.A3.3A.3
Gramajo Gonzalez, Juan Esteban	CA	IAC-16.E3.1.2
Gramajo Gonzalez, Juan Esteban	CA	IAC-16.A6.8.7
Gramiccia, Luciano	CA	IAC-16.A3.3A.6
Grande, Jøran	CA	IAC-16.E1.3.13
Granja, Carlos	CA	IAC-16.A1.4.2
Gransden, Derek	CA	IAC-16.A6.IP.31
Gransden, Derek	CA	IAC-16.C2.3.14
Gransden, Derek	CA	IAC-16.C1.8.8
Grant, Cordell	CA	IAC-16.B4.2.6
Grantier, Julie	CA	IAC-16.B3.7.4
Grassi, Gilberto	CA	IAC-16.D1.1.8
Grassi, Gilberto	CA	IAC-16.D1.2.10
Grassi, Michele	CA	IAC-16.A3.3A.6
Grasso, Alessandro	CA	IAC-16.D5.3.2
Graterol Nisi, Gabriel	CA	IAC-16.C2.9.3
Gratton, Daniel	CA	IAC-16.B1.3.4
Grau, Sebastian	CA	IAC-16.B4.6B.4
Graw, Valerie	CA	IAC-16.E1.2.2
Graziani, Filippo	CA	IAC-16.C2.2.12
Graziani, Filippo	CA	IAC-16.C2.3.12
Graziani, Filippo	CA	IAC-16.C1.8.5
Graziani, Filippo	CA	IAC-16.B4.7.1
Graziano, Maria Daniela	CA	IAC-16.B1.5.9
Graziano, Mariella	CA	IAC-16.A6.5.11
Grebenshikov, Aleksandr	CA	IAC-16.A5.1.11
Grebenshikov, Aleksandr	CA	IAC-16.B3.6-A5.3.3
Green, David	CA	IAC-16.A1.IP.12
Green, David	Α	IAC-16.A1.5.3
Green, James L.	CA	IAC-16.A7.1.4
Green, Joshua	CA	IAC-16.A1.7.9
Green, Shannon	CA	IAC-16.D1.5.1
Green, Simon	CA	IAC-16.C1.5.7
Greenblatt, Jeffery	CA	IAC-16.D2.8-A5.4.3
Greenland, Steve	CA	IAC-16.D1.IP.8
Greenland, Steve	CA	IAC-16.B4.3.10
Greenland, Steven	CA	IAC-16.D1.2.3
Greenstone, Adam	CA	IAC-16.E3.6.8
Greeson, Erin	CA	IAC-16.E1.6.1
Greve, Joan	CA	IAC-16.A1.IP.20
Grey, Stuart	CA	IAC-16.A6.9.2
Grey, Stuart	CA	IAC-16.C1.9.10
Gridin, Vladimir	CA	IAC-16.C3.2.8
Grieco, Giuseppe	CA	IAC-16.B1.IP.17
Grigoriev, Anatoly	CA	IAC-16.A1.4.4
Grimard, Max	CA	IAC-16.E1.9.9
Grimard, Max	CA	IAC-16.E6.3.8
Grimont, Patrick	CA	IAC-16.B1.4.1
Grinberg, Anna	CA	IAC-16.B3.4-B6.5.5
Grishin, Alexey	CA	IAC-16.A1.2.1
Grishin, Roman	CA	IAC-16.C4.4.10
Grishko, Dmitriy	CA	IAC-16.A6.5.8
Grishko, Dmitriy	CA	IAC-16.C1.7.6
Grishko, Dmitriy	CA	IAC-16.E1.2.5
Groenewald, Ben	CA	IAC-16.E1.5.9
Grosse, Jens	CA	IAC-16.A2.3.1
Grosse, Jens	CA	IAC-16.A2.3.2
Grossi, Armando	CA	IAC-16.B4.2.9
Grubisic, Angelo	CA	IAC-16.B1.2.8
Grubisic, Angelo	CA	IAC-16.C2.9.7
Grulich, Maria	CA	IAC-16.C2.9.7
Grulich, Maria		
	CA	IAC-16.A6.8.7
Grundmann, Jan Thimo	CA	IAC-16.C2.2.3
Grundmann, Jan Thimo	CA	IAC-16.C3.3.6
Gruntman, Mike	CA	IAC-16.D4.1.9
Grushevskii, Alexey	CA	IAC-16.C1.4.11
Grys, Szymon	CA	IAC-16.E1.7.6
Grzesik, Benjamin	CA	IAC-16.C1.2.6
Grzesik, Benjamin	CA	IAC-16.B4.7.6
Grzymisch, Jonathan	CA	IAC-16.A3.2B.1
Grzymisch, Jonathan	CA	IAC-16.C1.9.5

CA IAC-16.C2.9.5









WELCOME

ORGAN

7

PRACTICA

PROGRAMME

PROGRAMME

PROFESSIONALS EVENTS

PROGRAMMES & EVENTS

Gu, Ming	CA	IAC-16.D1.4.11
Guan, Gongshun	CA	IAC-16.A6.3.3
Guan, Heshi	CA	IAC-16.A6.3.3
Guan, Jingwen	CA	IAC-16.C2.8.7
Guan, Xin	CA	IAC-16.C2.2.11
Guan, Yiwen	CA	IAC-16.C4.5.10 IAC-16.B1.IP.30
Guang, Yang Guariniello, Cesare	CA	IAC-16.B1.IP.30
Guarmeno, Cesare Guarneros Luna, Ali	CA	IAC-16.B4.5.7
Guarneros Luna, Ali Guarneros Luna, Ali	CA	IAC-16.E2.4.2
GUEDEA, JULIO	CA	IAC-16.E1.3.9
Guelou, Yann	CA	IAC-16.D2.5.1
Guerman, Anna	CA	IAC-16.D4.3.12
Guerrieri, Pietro	CA	IAC-16.C4.6.9
Guevara Ayala, Vicente	CA	IAC-16.D1.6.8
Guichard, José	CA	IAC-16.D1.2.12
Guida, Raffaella	CA	IAC-16.B1.1.5
Guidi, Gian Marco	CA	IAC-16.E1.IP.14
Guijarro, Nuria	CA	IAC-16.A6.7.9
Guilhem, Pierre	CA	IAC-16.D2.2.5
Guillaume, Chemla	CA	IAC-16.C4.1.3
Guillaume, Fabien	CA	IAC-16.A1.5.11
Guillaume, Prigent	CA	IAC-16.A6.4.8
Guillon, Herve	CA	IAC-16.B4.2.7
Guinn, Joseph	CA	IAC-16.D3.1.5
Guiso, Gaia	CA	IAC-16.A6.8.11
Guitian, Zhang	CA	IAC-16.C4.9.10
Gujral, Akhil	CA	IAC-16.D2.1.8
Gump, David	CA	IAC-16.D4.5.9
Gump, David	CA	IAC-16.D2.8-A5.4.6
Guo, Baozhu	CA	IAC-16.D1.IP.15
Guo, Dong	CA	IAC-16.A2.6.8
Guo, Feng	CA	IAC-16.A2.3.4
Guo, Feng	CA	IAC-16.B4.6A.6
Guo, Jian	CA	IAC-16.B4.3.9
Guo, Jian	CA	IAC-16.B4.6A.4
Guo, Jian	CA	IAC-16.B4.6A.7
Guo, Jian	CA	IAC-16.B4.6A.8
Guo, Jian	CA	IAC-16.B4.6B.9
Guo, Jian	CA	IAC-16.B4.7.5
Guo, Jian	CA	IAC-16.E2.4.5
Guo, Jinhua	CA	IAC-16.B3.2.4
Guo, Linghua	CA	IAC-16.D1.IP.10
Guo, Qianrui	CA	IAC-16.B1.2.1
Guo, Yuanyuan	CA	IAC-16.E1.4.6
Gupta, Subham	CA	IAC-16.C2.IP.8
Gurzadyan, Vahe	CA	IAC-16.A2.1.4
Gutierrez Rosas, Erik	CA	IAC-16.E2.3-GTS.4.4
Gutierrez-Magness, Angelica	CA	IAC-16.B1.1.2
GUTIÉRREZ NAVA, Antonio Eduardo	A	IAC-16.E5.5.7
Gutiérrez Trejo, Luis Gerardo	CA	IAC-16.E2.3-GTS.4.4
Guven, Ugur	CA	IAC-16.A4.IP.1
Guven, Ugur	CA	IAC-16.A5.IP.10
Guven, Ugur	CA	IAC-16.C4.IP.40
Guven, Ugur	CA	IAC-16.D2.IP.7
Guven, Ugur	CA	IAC-16.E1.IP.19
Guven, Ugur	CA	IAC-16.A6.4.10
Guven, Ugur	CA	IAC-16.A1.4.9
Guven, Ugur	CA	IAC-16.A4.2.9
Guven, Ugur	CA	IAC-16.C2.6.2
· •	CA	IAC-16.C4 6 11
Guven, Ugur	CA CA	IAC-16.C4.6.11
· •	CA CA	IAC-16.C4.6.11 IAC-16.C3.5-C4.7.5 IAC-16.E1.IP.3

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lame	Role	Paper	
laack, Henning	CA	IAC-16.A3.1.6	
labaguchi, Yuta	CA	IAC-16.D2.4.4	
labu, Hiroto	CA	IAC-16.C4.2.7	
lackett, John	CA	IAC-16.A3.2B.6	
lackmann, Eva	CA	IAC-16.A2.1.9	
laddaji, Alissa	CA	IAC-16.A1.5.9	

Haemmerli, Bastien	CA	IAC-16.D2.7.3
Haessler, Stefan	CA	IAC-16.D2.2.5
Haeuplik-Meusburger, Sandra	CA	IAC-16.E1.IP.35
Haeuplik-Meusburger, Sandra	CA	IAC-16.E5.1.1
Hagemeister, Doreen Hagemeister, Doreen	CA	IAC-16.E1.IP.5 IAC-16.A1.1.8
Hagemeister, Doreen	CA	IAC-16.E1.2.9
Hagemeister, Doreen	CA	IAC-16.E1.1.2
Hahn, Inseob	CA	IAC-16.A2.6.3
Haigneré, Claudie	CA	IAC-16.E3.2.7
Hailei, Wu	CA	IAC-16.A6.IP.34
Haiyan, Ll Haiyan, Ll	CA	IAC-16.C1.1.7 IAC-16.C2.3.9
Haiyan, LI	CA	IAC-16.C1.8.12
Haiyun, ZHAO	Α	IAC-16.E1.4.12
Hakima, Houman	CA	IAC-16.A6.6.4
Hall, Joshua Lee	CA	IAC-16.B3.IP.1
Hall, Joshua Lee	CA	IAC-16.B4.8.2
Hall, R. Cargill Halt, Tara	CA CA	IAC-16.E4.3B.1 IAC-16.D4.2.9
Halt, Tara	CA	IAC-16.B1.5.10
Hamada, Yushi	CA	IAC-16.C4.4.9
Hamara, Michal	CA	IAC-16.A6.1.4
Hamazaki, Takashi	CA	IAC-16.B3.1.5
Hambloch, Patrick	CA	IAC-16.D5.2.6 IAC-16.E7.IP.1
Hameed, Hamza Hamel, Jean-Francois	CA	IAC-16.E7.IP.1
Hamel, Jean-Francois	CA	IAC-16.A6.6.4
Hammond, Jennifer	CA	IAC-16.B3.3.8
Hampe, Jens	CA	IAC-16.D6.2-D2.9.2
Hampl, Milos	CA	IAC-16.E2.2.4
Hampton, Joseph	CA	IAC-16.A3.3B.8
Han, Bo Han, Dapeng	CA	IAC-16.D1.2.9 IAC-16.B4.6A.2
Han, Fei	CA	IAC-16.A6.IP.35
Han, KaiLiang	CA	IAC-16.B1.IP.29
HAN, Liangliang	CA	IAC-16.A6.IP.29
HAN, Liangliang	CA	IAC-16.B6.3.12
HAN, PEI	CA	IAC-16.A1.7.4
Han, Pengxin Han, Youngmin	CA	IAC-16.B3.2.4 IAC-16.C4.IP.12
Han, Zengyao	CA	IAC-16.C2.1.8
Hanada, Toshiya	CA	IAC-16.A6.IP.23
Hanada, Toshiya	CA	IAC-16.A6.2.5
Hanada, Toshiya	CA	IAC-16.A6.6.11
Hance, Ian William	CA	IAC-16.E1.9.8
Hanessian de la Garza, Ana Virginia Hanessian de la Garza, Ana Virginia	CA	IAC-16.B4.4.1 IAC-16.B4.6B.3
Hangai, Masatake	CA	IAC-16.C3.2.2
Hanson, Andrea	CA	IAC-16.A1.3.9
Hanssen, Ramon	CA	IAC-16.E1.3.6
Hao, Kouan	CA	IAC-16.D2.IP.8
Hao, Zhou	CA	IAC-16.B4.5.9
Hao, Zhou Haohai, Xu	CA CA	IAC-16.C1.8.4 IAC-16.C4.1.10
Hapgood, Mike	CA	IAC-16.D5.3.2
Harada, Ryusuke	CA	IAC-16.A6.6.11
Hardgrove, Craig	CA	IAC-16.A3.2A.7
Hariharan, Sriram	CA	IAC-16.B4.4.3
Harkins, James	CA	IAC-16.C1.9.5
Harmond, Ralf Harper, Mackenzie Casey	CA CA	IAC-16.D2.5.6 IAC-16.A3.IP.26
Harper, Mackenzie Casey	CA	IAC-16.A3.IP.38
Harrington, Andrea	CA	IAC-16.E7.IP.7
Harrington, Andrea	CA	IAC-16.E1.4.5
Harrington, Andrea	CA	IAC-16.E7.3.3
Harris, Alan	CA	IAC-16.B4.8.7
Harrison Richard	CA	IAC-16.C3.2.9
Harrison, Richard Hartman, Birgit	A	IAC-16.D5.3.2 IAC-16.E1.5.3
Hartwich, Ruediger	CA	IAC-16.B3.7.6
Hashimoto, Tatsuaki	CA	IAC-16.A3.IP.6
	CA	IAC-16.A3.2A.2
Hashimoto, Tatsuaki Hasimoto, Rogelio	CA	IAC 10.A3.2A.2

Hassan, Noorul	CA	IAC-16.D3.3.1
Hatton, Jason	CA	IAC-16.B3.3.1
Hatton, Jason	CA	IAC-16.B3.3.2
Hausmann, Gerrit	CA	IAC-16.A3.2A.3
Hausmann, Gerrit	CA	IAC-16.A6.6.3
Havenhill, Maria	CA CA	IAC-16.E3.6.12
Haverkort, Boudewijn Hay, Jason	CA	IAC-16.B4.3.11 IAC-16.D3.4.9
Hayakawa, Yukio	CA	IAC-16.C4.4.5
Haynes, Anthony	CA	IAC-16.D2.7.10
He, Baocheng	CA	IAC-16.C4.9.6
He, Guo-qiang	CA	IAC-16.C4.9.16
He, Guoqiang	CA	IAC-16.C4.9.4
He, HaiBo	CA	IAC-16.C2.IP.12
He, HaiBo	CA	IAC-16.C2.9.11
He, Jian	CA	IAC-16.A1.7.3
He, Liang	CA	IAC-16.E2.3-GTS.4.
He, Qi He, Weiqiang	CA CA	IAC-16.D5.2.10 IAC-16.D5.3.7
He, Weigiang	CA	IAC-16.D5.3.7
He, Xiongwen	CA	IAC-16.D1.4.11
He, Yu	CA	IAC-16.A2.3.4
He, Yu	CA	IAC-16.B4.6A.6
He, Zhen	CA	IAC-16.C4.IP.14
He, Zhen	CA	IAC-16.C4.IP.15
Hedegaard, Mads Jacob Kalisz	CA	IAC-16.D3.1.6
Hedima, Risku	CA	IAC-16.A3.1.10
Hein, Andreas	CA	IAC-16.E6.1.2
Heine, Thomas	CA	IAC-16.B4.8.10
Heineman, William	CA	IAC-16.C2.8.12
Heinemann, Sascha Heinzel, Gerhard	CA CA	IAC-16.E1.2.2 IAC-16.B1.2.7
Heizmann, Sören	CA	IAC-16.E2.3-GTS.4.
Held, Alex	CA	IAC-16.B1.1.1
Helisch, Harald	CA	IAC-16.A1.6.4
Hello, David	CA	IAC-16.E1.2.6
Henderson, Clare	CA	IAC-16.E5.3.10
Henn, Norbert	CA	IAC-16.A1.6.4
Hennig, Anthony	CA	IAC-16.D4.5.3
HENRI, Yvon	CA	IAC-16.E7.4.2
Heppener, Marc	CA	IAC-16.B3.3.1
Heppener, Marc	CA CA	IAC-16.B3.3.2 IAC-16.D2.IP.2
Herdrich, Georg Herdrich, Georg	CA	IAC-16.C2.4.4
Herdrich, Georg	CA	IAC-16.C4.4.13
Heredia, Aurelio	A	IAC-16.B5.1.8
Heritier, Aurelie	CA	IAC-16.C1.5.4
Heritier, Aurelie	CA	IAC-16.C1.7.3
Heritier, Aurelie	CA	IAC-16.D5.3.2
Hermanns, Holger	CA	IAC-16.B4.3.11
Hermaszewski, Clément	CA	IAC-16.E2.3-GTS.4.
Hermaszewski, Clément	CA	IAC-16.E2.4.11
Hernandez S, Juan Carlos	CA	IAC-16.B1.IP.21
Hernandez Sustaita, Martin	CA	IAC-16.E1.IP.20
HERNÁNDEZ, HUMBERTO Hernández, José	CA CA	IAC-16.B4.6B.13 IAC-16.B5.1.8
Hernández Gómez, Matías	CA	IAC-16.B5.2.2
Hernández-Chávez, Alejandro	CA	IAC-16.A1.7.1
Herrera-Arroyave, Jorge Enrique	A	IAC-16.C2.1.10
Herrmann, Nicole	CA	IAC-16.D3.1.7
Herrmann, Nicole	CA	IAC-16.D5.2.3
Herrmann, Sven	CA	IAC-16.A2.1.9
Hertz, Paul	CA	IAC-16.A7.1.1
Herzing, Denise	CA	IAC-16.A4.1.10
Hestroffer, Daniel	CA	IAC-16.B4.8.7
Hettrich, Sebastian	CA	IAC-16.A3.2C.4
Hettrich, Sebastian	CA	IAC-16.B6.1.3
Hew, Yayu Monica	CA	IAC-16.D3.3.1
Hidber, William Hildebrandt, Marc	CA	IAC-16.A7.3.3 IAC-16.A3.5.2
Hinojosa, Kevil	CA	IAC-16.C4.2.14
Hipkin, Victoria	CA	IAC-16.A5.1.3
Hiram, Naru	CA	IAC-16.A3.5.1
Hire, Ajinkya	CA	IAC-16.C4.IP.22

Hiroso Chikaka	CA	IAC 16 A2 F 1
Hirose, Chikako	CA	IAC-16.A3.5.1
Hoang, The Huynh Hoban, Libby	CA CA	IAC-16.E1.3.5 IAC-16.D1.2.3
Hoban, Libby	CA	IAC-16.B2.6.1
Hoban, Libby	CA	IAC-16.B4.6B.6
Hoban, Libby	CA	IAC-16.B5.1.2
Hobbs, Stephen	CA	IAC-16.A6.IP.8
Hoeck, Birte	CA	IAC-16.D2.5.6
Hoffman, Edward J.	CA	IAC-16.D5.2.7
Hoffman, Jeffrey	CA	IAC-16.A3.2C.5
Hoffman, Stephen	CA	IAC-16.D3.1.5
Hoffman, Tom	CA	IAC-16.A3.3A.1
Höflinger, Kilian		IAC-16.D1.6.11
Hofmann, Mahulena	CA	IAC-16.E7.2.4
Hofmann, Peter	CA	IAC-16.A3.2A.3
Hofmann, Peter	CA CA	IAC-16.A3.3B.4 IAC-16.A2.6.1
Hofmann, Peter Hogue, M.D.	CA	IAC-16.A3.2B.3
Hoheneder, Waltraut	CA	IAC-16.D3.3.2
Hokamoto, Shinji	CA	IAC-16.D4.3.15
Hokamoto, Shinji	CA	IAC-16.C1.7.9
Holder, Kim	CA	IAC-16.E1.7.8
Hollingsworth, Peter	CA	IAC-16.D1.IP.3
Hollingsworth, Peter	CA	IAC-16.D1.3.2
Holst, Rasmus	CA	IAC-16.B4.4.1
Holst, Rasmus	CA	IAC-16.D1.4.10
Holste, Kristof	CA	IAC-16.C4.4.14
Holtmann, Peter	CA	IAC-16.C4.4.3
Holzinger, Marcus	CA	IAC-16.C4.IP.48
Homeister, Maren	CA	IAC-16.A3.1.6
Homeister, Maren	CA	IAC-16.A3.5.7
Homenick, Christa	CA	IAC-16.C2.8.7
Homma, Yukihiro	CA	IAC-16.C3.2.2
Honess, David	CA	IAC-16.E1.2.4
Hong, Dongpao	CA	IAC-16.D5.1.10
Hong-Bae, Kim	CA	IAC-16.E3.6.13
Hongjun, Zhang	CA CA	IAC-16.C2.IP.7
Honglin, Kang	CA	IAC-16.C2.IP.7 IAC-16.A2.6.1
Honne, Atle Hoofs, Raymond	CA	IAC-16.A3.4.2
Hoofs, Raymond	CA	IAC-16.B6.3.8
Hooper, Nina	CA	IAC-16.A3.IP.5
Hopkins, Josh	CA	IAC-16.A5.1.6
Hopkins, Josh	CA	IAC-16.A5.1.8
Hoppenbrouwers, Tom	CA	IAC-16.B6.1.2
Hori, Keiichi	CA	IAC-16.C4.2.6
Hormigo, Tiago	CA	IAC-16.A3.IP.18
Horn, Rainer	CA	IAC-16.B2.5.1
Horneck, Gerda	A	IAC-16.A1.5.1
Hornig, Andreas	CA	IAC-16.B4.3.2
Hornig, Andreas	CA	IAC-16.E3.3.6
Horstmann, Andre	CA	IAC-16.A6.2.9
Horstmann, Andre	CA	IAC-16.A6.2.10
Hoshino, Takeshi	CA	IAC-16.A3.2A.2
Hoshino, Takeshi	CA	IAC-16.A3.2B.5
Hosobata, Mika	CA	IAC-16.E1.1.7
Hosomi, Naomasa	CA	IAC-16.C4.2.7
Hostein, Bertrand	CA	IAC-16.B1.4.1
Hovland, Scott Howard, Diane	CA CA	IAC-16.B3.7.6 IAC-16.E1.3.2
Howard, Diane	CA	IAC-16.E1.3.2
Howell, Kathleen	CA	IAC-16.C1.9.1
Howell, Kathleen	CA	IAC-16.C1.9.2
Hrinda, Glenn A.	CA	IAC-16.B3.7.9
Hrozensky, Tomas	CA	IAC-16.D4.2.2
Hsu, Roger	CA	IAC-16.D1.4.6
Hu, Jingjing	CA	IAC-16.A6.1.7
Hu, Min	CA	IAC-16.B2.2.10
Hu, Qingxi	A	IAC-16.C2.2.13
Hu, Quan	CA	IAC-16.B3.6-A5.3.10
Hu, Quan	CA	IAC-16.C1.8.12
HU, Wenrui	CA	IAC-16.A2.4.4
Hu, Xiao	CA	IAC-16.D5.1.10
Hu, Xingzhi	CA	IAC-16.E2.3-GTS.4.1
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International Astronautical Congress 26 - 30 September 2016, Guadalajara, Mexico

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Hu, Zhenyu	CA	IAC-16.A3.IP.34
Hu, Zhenyu	CA	IAC-16.A3.IP.35
Hu, Zhenyu	CA	IAC-16.D2.8-A5.4.4
Hu, Zhiwei	CA	IAC-16.C4.IP.18
Huan, Li	CA	IAC-16.C1.1.7
Huang, Dawei	CA	IAC-16.C2.5.3
Huang, Hai	CA	IAC-16.E1.4.6
Huang, Huan	CA	IAC-16.B6.2.3
Huang, Huan	CA	IAC-16.C1.1.6
HUANG, HUIMING	CA	IAC-16.B2.6.5
Huang, Jian	CA	IAC-16.C3.3.9
Huang, Jie	CA	IAC-16.A6.IP.15
Huang, Jie	CA	IAC-16.A6.3.1
Huang, Jie	CA	IAC-16.A6.3.2
Huang, Xiang En	CA	IAC-16.A3.IP.27
Huang, Xuegang	CA	IAC-16.A6.3.2
Huang, Yong	CA	IAC-16.D2.IP.5
Huang, Yongjie	CA	IAC-16.C4.4.6
Huang, Yuechen	Α	IAC-16.C1.3.11
Hubault, Armelle	CA	IAC-16.A3.4.1
Huerta Ramírez, Sofía Andrea	CA	IAC-16.E5.2.4
Hufenbach, Bernhard	CA	IAC-16.A3.1.2
Hufenbach, Bernhard	CA	IAC-16.B3.1.4
Hufenbach, Bernhard	CA	IAC-16.D1.1.3
Hufenbach, Bernhard	CA	IAC-16.A5.1.7
Hughes, David	CA	IAC-16.A4.1.9
Hurtado, Miguel	CA	IAC-16.A6.7.9
Hussein, Hesham	CA	IAC-16.A1.4.7
Hutchinson, Ian	CA	IAC-16.E1.4.9
Huyhn, Thomas	CA	IAC-16.A6.2.8
Huynh, Phuong-Anh	CA	IAC-16.A2.1.1
Hynes, Patricia	CA	IAC-16.D6.1.5
Hyvönen, Petrus	CA	IAC-16.B2.5.2
Häberle, Jürgen	CA	IAC-16.C4.3.2
Høyland, Per	CA	IAC-16.D3.3.4

Name	Role	Paper
lakubivskyi, laroslav	CA	IAC-16.E2.4.4
Ianelli, Samantha	CA	IAC-16.C2.4.2
Ibitolu, Henry	CA	IAC-16.B1.IP.22
Ibitolu, Henry	Α	IAC-16.B1.6.2
Ibrahimova, Sevda R.	CA	IAC-16.B1.6.7
Ichikawa, Tsutomu	CA	IAC-16.A3.5.1
Iervolino, Pasquale	CA	IAC-16.B1.1.5
less, Luciano	CA	IAC-16.A7.2.6
less, Luciano	CA	IAC-16.A7.3.5
Iglesias, Ramiro	CA	IAC-16.A1.IP.13
Igoh, Hiroshi	CA	IAC-16.C4.8.5
Ikaida, Hiroshi	CA	IAC-16.C2.1.2
Ikaida, Hiroshi	CA	IAC-16.D2.4.5
Ikeda, Hitoshi	CA	IAC-16.A3.IP.1
Ikenaga, Toshinori	CA	IAC-16.A3.IP.1
Iki, Kentaro	CA	IAC-16.C1.IP.8
Ilbis, Erik	CA	IAC-16.B4.4.3
Ilbis, Erik	CA	IAC-16.E2.4.4
Iliffe, Paul	CA	IAC-16.A3.1.10
Ilin, Andrew	CA	IAC-16.C4.IP.34
Illoldi, Schedir Neferteti	CA	IAC-16.D6.1.3
Imamura, Takeshi	CA	IAC-16.A3.5.1
Imhof, Anna Barbara	CA	IAC-16.D4.1.7
Imhof, Anna Barbara	CA	IAC-16.D3.3.2
Imhof, Barbara	CA	IAC-16.D4.2.1
Imhof, Barbara	CA	IAC-16.E5.1.7
Imken, Travis	CA	IAC-16.A1.5.8
Imken, Travis	CA	IAC-16.B4.8.11
Imoto, Takayuki	CA	IAC-16.C2.1.2
Imoto, Takayuki	CA	IAC-16.D2.1.11
Imperi, Luigi	CA	IAC-16.A7.2.6
Imperi, Luigi	CA	IAC-16.A7.3.5
Imshenetskiy, Anton	CA	IAC-16.A3.IP.7

Imshenetskiy, Anton	CA	IAC-16.B3.6-A5.3.1
Inamdar, Karishma	CA	IAC-16.B1.IP.1
Inamdar, Karishma	CA	IAC-16.A1.5.11
Inatani, Yoshifumi	CA	IAC-16.D2.5.4
Inbar, Tal	CA	IAC-16.E1.IP.13
Inbar, Tal	CA	IAC-16.E4.2.8
Inbar, Tal	CA	IAC-16.E5.5.5
INDENNIDATE, DANIELA	CA	IAC-16.E5.2.5
Inderjeet, Ishraj	CA	IAC-16.B1.1.9
Inguimbert, Christophe	Α	IAC-16.D5.3.6
Inoue, Fumihiro	CA	IAC-16.D4.3.5
Inoue, Ryota	CA	IAC-16.C2.2.10
Invigorito, Marco	CA	IAC-16.C4.IP.44
Ioannidis, Dimitrios	CA	IAC-16.B1.5.3
Iorizzo, Filomena	CA	IAC-16.B3.IP.1
Iorizzo, Filomena	CA	IAC-16.B4.8.2
Ireland, Peter	CA	IAC-16.A6.IP.1
Ireland, Peter	CA	IAC-16.A6.IP.10
Iron, David	CA	IAC-16.A3.2C.8
Isaacson, Sivan	CA	IAC-16.E1.8.7
Isakowitz, Steve	CA	IAC-16.B3.2.5
Isakowitz, Steve	CA	IAC-16.D2.7.1
Ishii, Nobuaki	CA	IAC-16.A3.IP.1
Ishii, Nobuaki	CA	IAC-16.A3.5.1
Ishikawa, Chikara	CA	IAC-16.D2.6.4
Ishikawa, Hiroaki	CA	IAC-16.C3.3.1
Ishikawa, Yoji	CA	IAC-16.D4.3.2
Ishikawa, Yoji	CA	IAC-16.D4.3.9
Ishikawa, Yoji	CA	IAC-16.D4.3.10
Ishin, Sergey	CA	IAC-16.B4.2.12
Issler, Jean-Luc	CA	IAC-16.B2.1.6
Issler, Jean-Luc	CA	IAC-16.B4.2.7
Issler, Jean-Luc	CA	IAC-16.B4.6B.2
Istrate, Emanuel	CA	IAC-16.E5.3.8
Italiana, Giuseppe F. De Luca c/o Agenzia	CA	IAC-16.A6.4.3
Ito, Takashi	CA	IAC-16.D2.4.4
Ivanov, Andrey	CA	IAC-16.C4.4.10
Ivanov, Anton	Α	IAC-16.B4.4.6
Ivanov, Anton	CA	IAC-16.D1.3.9
Ivanov, Ivan	CA	IAC-16.D5.3.8
Ivanova, Alevtina	Α	IAC-16.A2.4.8
Ivashkin, Vyacheslav V.	CA	IAC-16.C1.6.2
Iwagami, Naomoto	CA	IAC-16.A3.5.1
Iwasaki, Akihiro	CA	IAC-16.C4.2.7
Iwase, Satoshi	CA	IAC-16.A1.3.2
Iwase, Satoshi	CA	IAC-16.D4.3.13
lwuji, Martin	CA	IAC-16.E2.1.2
Izam, Muhammad Izzuddin Mohd	CA	IAC-16.A3.IP.27
Izzo, Paolo	CA	IAC-16.C2.9.3

Name	Role	Paper
J, Jayaprakash	CA	IAC-16.C2.IP.13
J, Paul Murugan	CA	IAC-16.C2.IP.5
J, Paul Murugan	CA	IAC-16.C2.IP.13
Jackson, David	CA	IAC-16.D5.3.2
Jackson, David	CA	IAC-16.B4.8.10
Jacob, Thomson M	CA	IAC-16.C4.2.2
Jacobs, Carla	CA	IAC-16.B6.3.3
Jacobs, Jeffrey	CA	IAC-16.C3.2.9
Jacobs, Martin	CA	IAC-16.D1.4.3
Jafarsalehi, Ali	CA	IAC-16.D1.6.5
Jaffe, Paul	A	IAC-16.C3.1.1
Jaffe, Paul	CA	IAC-16.C3.4.3
Jagtap, Adesh	CA	IAC-16.C3.4.1
Jah, Moriba	CA	IAC-16.A6.9.6
Jah, Moriba	CA	IAC-16.D5.4.5
Jaime, Andrea	CA	IAC-16.A3.3B.4
Jaime-Albalat, Andrea	CA	IAC-16.D1.1.3
Jaime-Albalat, Andrea	CA	IAC-16.E1.8.4
Jaime-Albalat, Andrea	CA	IAC-16.A3.2A.3
Jain, Ayush	CA	IAC-16.A6.4.10

Jain, Sumit	CA	IAC-16.C2.1.4
Jain, Sumit Jakhu, Ram S.	CA CA	IAC-16.C2.7.6
Jaknu, kam 5. Jakubinek, Michael	CA	IAC-16.E7.2.3 IAC-16.C2.8.7
James Raj, Xavier	CA	IAC-16.C1.6.8
Janardhanan Nair, Jayaprakash	CA	IAC-16.C2.IP.5
Jandhyala, Krishna Kishore	CA	IAC-16.B5.2.3
Jang, Hyun	CA	IAC-16.E6.1.8
Janhunen, Pekka	CA	IAC-16.E2.4.4
Jankovic, Marko	CA	IAC-16.A6.5.10
Jankowska, Marlena	CA	IAC-16.B6.1.3
Janovsky, Rolf Janovsky, Rolf	CA CA	IAC-16.A3.2A.3 IAC-16.D2.4.1
Jaquet, Julien	CA	IAC-16.E1.7.2
Jasinski, Marie	CA	IAC-16.D2.2.5
Jason, Susan	CA	IAC-16.B4.2.5
Jason, Susan	CA	IAC-16.B4.8.3
Jasper, Lee	CA	IAC-16.A7.3.6
Jaworski, Jaroslaw	CA	IAC-16.D3.3.4
Jaworski, Maciej	CA	IAC-16.C3.5-C4.7.7
Jayachandran, R	CA	IAC-16.C4.2.2
Jayaprakash, J	CA CA	IAC-16.C4.2.4
IC, Pisharady IC, Pisharady	CA	IAC-16.A3.IP.4 IAC-16.C4.IP.43
JC, Pisharady	CA	IAC-16.C4.3.12
JC, Pisharady	CA	IAC-16.D1.6.10
Jean, Sabbagh	CA	IAC-16.B3.3.1
Jean-Philippe, Chessel	CA	IAC-16.D1.1.1
Jeannin, Nicolas	CA	IAC-16.D1.4.8
Jefferies, Sharon	CA	IAC-16.D3.1.5
Jehle, Michael	CA	IAC-16.B4.4.6
Jellicorse, John Jenkin, Alan B.	CA CA	IAC-16.B3.7.5 IAC-16.A6.2.3
Jenkin, Alan B.	CA	IAC-16.A6.2.6
Jenkin, Alan B.	CA	IAC-16.A6.7.8
Jensen, Morten	CA	IAC-16.B4.6B.3
Jewell, Emmy	CA	IAC-16.A1.IP.34
Jewell, Nicholas	CA	IAC-16.A1.IP.34
Jewell, Susan	CA	IAC-16.A1.IP.34
Jeyakodi, Deepika	CA	IAC-16.E7.IP.13
Jha, Virendra K.	CA	IAC-16.E3.IP.7
Ji, Chen	CA CA	IAC-16.D2.6.11
Jia, Bin Jia, Guanghui	CA	IAC-16.A6.IP.32 IAC-16.A6.IP.13
Jia, Shengwei	CA	IAC-16.D5.1.10
JIANG, Hongbo	CA	IAC-16.B1.IP.23
JIANG, Huan	CA	IAC-16.A2.4.4
JIANG, HUAN	CA	IAC-16.D2.6.12
JIANG, Li	CA	IAC-16.C2.2.5
Jiang, Lixiang	CA	IAC-16.C2.6.10
Jiang, Qin	CA	IAC-16.C2.3.3
Jiang, Shichen	CA CA	IAC-16.C2.7.4 IAC-16.A3.IP.30
Jiang, Xiuqiang Jiang, Yubiao	CA	IAC-16.A3.IP.30
Jianguo, Huang	CA	IAC-16.D2.IP.5
Jianhe, Su	CA	IAC-16.C2.7.8
Jianhua, Chen	CA	IAC-16.C4.IP.46
Jianhua, Chen	CA	IAC-16.C4.1.5
Jianhua, Chen	CA	IAC-16.C4.3.10
Jianjun, Luo	CA	IAC-16.C1.IP.6
Jianping, Yuan	CA	IAC-16.C1.IP.6
Jianping, Yuan	CA	IAC-16.D1.1.6
lianping, Yuan	CA	IAC-16.B2.2.5
Jianping, Yuan Jianyu, Huang	CA CA	IAC-16.C1.7.5 IAC-16.A6.7.3
Jiao, Zi-han	CA	IAC-16.C4.9.14
liao, Zi-long	CA	IAC-16.C2.6.10
Jiawan, Ren	CA	IAC-16.C4.9.10
lie, Xiao	CA	IAC-16.A3.IP.34
lie, Xiao	CA	IAC-16.A3.IP.35
limenez, Gilberto	CA	IAC-16.A1.7.2
Jimenez, Juan	CA	IAC-16.E7.IP.34
Jimenez Brenes, Mariano	CA	IAC-16.E1.5.15
Jimenez-Escalona, Jose	CA	IAC-16.B1.IP.12
Jimenez-Monroy, Cynthia Jiménez Monroy, David	CA	IAC-16.E3.1.7
Jiménez-González, Raúl Antonio	CA CA	IAC-16.E5.IP.1 IAC-16.A2.2.8
Jin, Bingle	CA	IAC-16.C4.IP.17
,	- C/ 1	10.07.11.17

Jin, Liang	CA	IAC-16.C2.4.8
Jin, Liang	CA	IAC-16.C2.5.11
Jing, Peiwen	CA	IAC-16.E3.4.2
Jing, Qianfeng	CA	IAC-16.A3.5.6
Jingyan, Qin	CA	IAC-16.E5.IP.5
Jinxiu, Zhang	CA	IAC-16.A6.IP.35
Jinxiu, Zhang	CA	IAC-16.D1.3.11
Jinxiu, Zhang	CA	IAC-16.B4.7.10
Jo, Mun-Shin	CA	IAC-16.C2.5.5
Jochum, Markus	CA	IAC-16.B1.2.10
Jocqueviel, Martin	CA	IAC-16.A3.IP.1
Iohann, Ulrich	CA	IAC-16.B1.2.7
Johann, Ulrich	CA	IAC-16.B4.8.7
John, Bejoy	CA	IAC-16.C4.1.9
Iohn, Olson	CA	IAC-16.D1.1.3
John, Olson	CA	IAC-16.D2.3.1
Iohn, Olson	CA	IAC-16.A6.5.11
IOHN, OLUSOJI NESTER	CA	IAC-16.B1.1.3
IOHN, OLUSOJI NESTER	CA	IAC-16.E1.5.12
IOHN, OLUSOJI NESTER	CA	IAC-16.E1.6.10
Johns, William	CA	IAC-16.B3.7.4
Johnson, Christopher	CA	IAC-16.E7.IP.7
Johnson, Christopher	CA	IAC-16.E1.4.5
Johnson, Erik	CA	IAC-16.A3.2A.7
Johnson-Green, Perry	CA	IAC-16.B3.3.4
Johnson-Green, Perry	CA	IAC-16.B6.1.8
Johnston, Andrew	CA	IAC-16.C2.8.7
Iones, Danny Royce	CA	IAC-16.C3.1.5
ones, Howard	CA	IAC-16.A3.2B.6
ones, Howard	CA	IAC-16.A3.2B.7
ones, Therese	CA	IAC-16.D6.1.1
ones, William	CA	IAC-16.A3.1.10
ones-Wilson, Laura	CA	IAC-16.C1.9.4
ongerden, Marijn	CA	IAC-16.B4.3.11
Ionniaux, Gregory	A	IAC-16.A3.5.3
Iorba, Angel	CA	IAC-16.C1.7.10
Jorba-Cuscó, Marc	CA	IAC-16.C1.7.10
Jorgensen, Anders	CA	IAC-16.D4.3.7
Josan, Poonampreet Kaur	CA	IAC-16.A3.IP.22
losan, Poonampreet Kaur	CA	IAC-16.D1.2.6
Iosan, Poonampreet Kaur	CA	IAC-16.B3.9-GTS.2.3
Iosan, Poonampreet Kaur	CA	IAC-16.A1.6.6
osan, Poonampreet Kaur	CA	IAC-16.B3.5.6
losan, Poonampreet Kaur	CA	IAC-16.B3.7.7
Iosan, Poonampreet Kaur	CA	IAC-16.B6.1.3
Joseph, Nikolai	CA	IAC-16.D3.4.3
loshi, Chirag	CA	IAC-16.E2.4.8
loumel, Pierre-Alexis	CA	IAC-16.B1.2.10
Ju, Gwanghyeok	CA	IAC-16.A3.2A.8
· · · · · · · · · · · · · · · · · · ·	CA	IAC-16.C4.9.1
Juang, Zonglin Jukola, Paivi	CA	IAC-16.C4.9.1
	CA	IAC-16.A6.4.8
Julien, Annaloro	CA	IAC-16.C4.IP.12
Jung, Juyeong	CA	
lung, Philippe		IAC-16.E4.3B.2
Jung, Philippe	CA	IAC-16.E4.2.5
Junike, Nils	CA	IAC-16.B1.4.1
Junique, Thomas	CA	IAC-16.B4.2.7
Junjiro, Onoda	CA	IAC-16.C2.5.2
Jurado, Eric	CA	IAC-16.A3.4.3
Juárez-Patiño, Olga Lidia	CA	IAC-16.A1.IP.44
Jäger, Markus	CA	IAC-16.B3.7.4

Name	Role	Paper
K, Kalyani	CA	IAC-16.A3.3B.6
K, Mohanavelu	CA	IAC-16.B2.1.1
K, Narayanan	CA	IAC-16.B2.1.1
K, Narayanan	CA	IAC-16.B2.1.4
K, Shanthini	CA	IAC-16.A3.1.10
K, Shanthini	CA	IAC-16.C4.8.7
K.V.S., Bhaskar	CA	IAC-16.A3.3B.6
Kabade, Mansi	CA	IAC-16.C4.IP.22
Kabeer, Ahemedul	CA	IAC-16.C2.IP.5
Kaczmarczik, Ulrich	CA	IAC-16.A2.5.5
Kaddoum, Elsy	CA	IAC-16.B6.2.5
Kaethler, Stan	CA	IAC-16.A3.1.10









Kahn, Kar	oli	CA	IAC-16.B4.4.3
Kahn, Pet		CA	IAC-16.A1.5.8
Kahn, Pet		CA	IAC-16.B4.8.11
Kaiser, Ste		CA	IAC-16.E7.3.9
Kakihara,		CA	IAC-16.B4.8.1
Kalbacher		CA	IAC-16.A1.IP.37
Kalde, Jaa		CA	IAC-16.B4.4.3
Kalde, Jaa		CA	IAC-16.B4.7.9
Kalegaev,		CA	IAC-16.B4.2.12
Kalita, Hir		CA	IAC-16.D1.2.1
Kalluru, K	•	CA	IAC-16.C4.2.4
	U, GEORGIA MARIA	CA	IAC-16.E7.IP.26
	user, Sven	A	IAC-16.D6.2-D2.9.2
Kamalaka		CA	IAC-16.A3.3B.6
	nova, Guzel	CA	IAC-16.E5.2.2
Kamata, Y	ukio	CA	IAC-16.A3.5.1
Kamath, l		CA	IAC-16.A5.1.10
Kamiya, T	oshio	CA	IAC-16.C1.1.11
Kamps, O		CA	IAC-16.A3.3B.9
Kamps, O	scar	CA	IAC-16.B3.6-A5.3.8
Kanani, Ke		CA	IAC-16.A3.5.3
Kanas, Nic		CA	IAC-16.A1.1.6
Kanata, Sa	ıyaka	CA	IAC-16.C1.9.7
Kanawka,	Krzysztof	CA	IAC-16.B2.4.3
Kandela, I		CA	IAC-16.E2.3-GTS.4.6
Kandela, I	Rami	CA	IAC-16.E2.4.12
Kang, Eun	Su	CA	IAC-16.B1.4.9
Kang, Hor		CA	IAC-16.C4.IP.35
Kang, Hor	igjae	Α	IAC-16.C4.8.1
Kang, Jin		CA	IAC-16.B2.3.5
Kang, Jin		CA	IAC-16.E2.1.6
Kang, Jin		CA	IAC-16.B2.6.6
Kang, Jin		CA	IAC-16.B4.6A.12
Kang, Jin		CA	IAC-16.B4.6B.1
Kang, Kyu	ngin	CA	IAC-16.A3.IP.36
KANG, Qi		CA	IAC-16.A2.2.3
KANG, Qi		CA	IAC-16.A2.4.4
Kaniewski	, Damian	CA	IAC-16.A2.5.3
Kanzler, R	onny	CA	IAC-16.A6.4.7
Kapgate, I	Vitin	CA	IAC-16.B1.IP.19
Kapgate, I	Nitin	CA	IAC-16.C3.4.1
Kapgate, I	Nitin	CA	IAC-16.C4.6.7
Kapoor, S	nubha	CA	IAC-16.C1.2.10
Kaptein, A	lexander	CA	IAC-16.B1.2.10
Kapuš, Jal	rub	CA	IAC-16.B1.3.9
Kara, Oza	1	CA	IAC-16.D5.2.5
Karabadzl	nak, George	CA	IAC-16.B3.3.3
Karabadzl	nak, Georgy	CA	IAC-16.B3.3.1
Karchaev,	Kharun	CA	IAC-16.A3.1.5
Karchaev,	Kharun	CA	IAC-16.A3.2A.4
Karchaev,	Kharun	CA	IAC-16.A3.3A.3
Karim, Sye	ed	A	IAC-16.B2.6.1
Karlsson,	Evelina	CA	IAC-16.E3.3.3
Karma, Al	ain	CA	IAC-16.A2.6.4
KARMAKA	AR, SOURAV	CA	IAC-16.C4.6.4
KARMAKA	AR, SOURAV	CA	IAC-16.B6.1.3
Karmakar	Sourav	A	IAC-16.C3.5-C4.7.9
Karmali, F	aisal	CA	IAC-16.A1.2.7
Karnes, N	ichael	CA	IAC-16.A1.3.7
Karpov, A	exey	Α	IAC-16.B3.6-A5.3.7
KARTHEEI	(EYAN, S	CA	IAC-16.C4.2.3
KARTHEEI	(EYAN, S	CA	IAC-16.C4.5.7
KARTHEEI	(EYAN, S	CA	IAC-16.C4.5.8
Karthikey	an, Goutham	CA	IAC-16.C4.IP.2
	savad aliakhar	CA	IAC-16 C1 1 8

Katke, Tanvi	CA	IAC-16.C4.6.7
Katke, Tanvi	CA	IAC-16.C2.9.6
Kauerhoff, Tilo	CA	IAC-16.B2.5.1
Kaul, Ranjana	CA	IAC-16.E7.3.4
Kawabata, Yosuke Kawabata, You	CA CA	IAC-16.C1.5.5 IAC-16.E1.IP.30
Kawaguchi, Junichiro	CA	IAC-16.C1.9.2
Kawaguchi, Junichiro	CA	IAC-16.C4.8.5
Kawakami, Michio	CA	IAC-16.D2.1.4
Kawakatsu, Yasuhiro	CA	IAC-16.C1.5.5
Kawakatsu, Yasuhiro	CA	IAC-16.B4.8.1
Kawamoto, Satomi	CA	IAC-16.C1.IP.8
Kawamoto, Satomi	CA	IAC-16.A6.2.5
Kawasaki, Kazuyoshi Kawasaki, Shigeo	CA CA	IAC-16.B2.7.11 IAC-16.C3.2.2
Kay, Ritchie	CA	IAC-16.A3.4.1
Kaya, Nobuyuki	CA	IAC-16.C3.1.6
Kaya, Nobuyuki	CA	IAC-16.B2.6.7
Kazemi, Hamid	CA	IAC-16.E7.2.13
Kazemi, Hamid	CA	IAC-16.E7.3.2
Kazmerchuk, Pavel	CA	IAC-16.A3.2A.4
Keidar, Michael	CA	IAC-16.C4.4.7
Kelkar, Sachin Kelso, Robert	CA CA	IAC-16.A3.5.5 IAC-16.A3.2B.3
Kelso, T.S.	CA	IAC-16.A6.2
Kempf, Sascha	CA	IAC-16.A1.5.8
Kenny, Christopher	CA	IAC-16.A1.5.11
Kenny, Christopher	Α	IAC-16.C1.4.2
Keppler, Jochen	CA	IAC-16.A1.6.4
Kern, Peter	CA	IAC-16.A1.6.4
Kerner, Hannah Kerolle, Mclee	CA CA	IAC-16.A3.2A.7 IAC-16.D6.3.3
Kerschen, Gaetan	CA	IAC-16.C1.4.3
Kesavarao, Pusuluri	CA	IAC-16.B5.2.3
Keshk, Mohamed Elhady	CA	IAC-16.B2.8-GTS.3.8
Kessler, Claudia	CA	IAC-16.E1.2.1
Kezerashvili, Roman Ya.	CA	IAC-16.C1.6.7
Kezerashvili, Roman Ya.	CA	IAC-16.C2.6.6
Kfir, Sagi	CA	IAC-16.E7.2.2
Khabibullin, Roman Khachatryan, Harutyun	CA CA	IAC-16.C1.5.6 IAC-16.A2.1.4
Khamala, Erick	CA	IAC-16.E3.1.11
Khan, Mohammad Asgar	CA	IAC-16.E2.4.12
Kharlamov, Maxim	CA	IAC-16.A1.1.7
Kharlan, Alexander	CA	IAC-16.B2.2.2
Kharlan, Alexander	CA	IAC-16.D1.6.12
Khartov, Sergey	CA	IAC-16.C4.4.10
Khetawat, Vatsala	CA CA	IAC-16.A2.3.8 IAC-16.C3.1.7
Khoo, Shen Mi Khoroshylov, Serhii	CA	IAC-16.C3.1.7
Khurana, Shashank	CA	IAC-16.B1.6.3
Khurana, Shashank	CA	IAC-16.A6.8.6
Khutorovsky, Zakhary	CA	IAC-16.A6.1.2
Kiang, Charlotte	CA	IAC-16.E2.3-GTS.4.2
Kicman, Pawel	CA	IAC-16.A3.IP.44
Kido, Ayano Kioffor Bagul	CA	IAC-16.E1.IP.12
Kieffer, Raoul Kikuchi, Koichi	CA CA	IAC-16.B2.4.1 IAC-16.E3.2.13
Kikuchi, Shota	CA	IAC-16.E3.2.13
Kikuya, Yuhei	CA	IAC-16.C1.8.9
Kim, Byungjin	CA	IAC-16.B4.1.5
Kim, Byungjin	CA	IAC-16.B4.4.9
Kim, Daryl	CA	IAC-16.A6.1.5
Kim, Ee-Eul	CA	IAC-16.B4.1.5
Kim, Ee-Eul	CA	IAC-16.B4.4.9
Kim, Eugene D Kim, Eugene D	CA CA	IAC-16.B4.1.5 IAC-16.B4.4.9
KIM, JONGMIN	CA	IAC-16.B4.4.9
Kim, Keun Su	CA	IAC-16.C2.4.1
Kim, Sangkyun	CA	IAC-16.A3.IP.33
Kim, Sungsoo S.	CA	IAC-16.A3.IP.36
Kim, Taegyu	CA	IAC-16.C2.5.5
Kim, Taig Young	CA	IAC-16.C2.IP.3
Kim, Youngil	CA	IAC-16.C4.8.1
Kimura, Shinichi	CA	IAC-16.A6.5.4

Kimura, Toshiya	CA	IAC-16.C4.3.9	Korobova, Olga
King, Adam	CA	IAC-16.A3.1.10	Korpela, Eric
King, Melanie	CA	IAC-16.E5.3.4	Kortmann, Martin
King, PJ	CA	IAC-16.D2.7.9	Koryanov, Victor
King, PJ	CA	IAC-16.B4.5.3	Koryanov, Vsevolod
Kingston, Christopher	CA	IAC-16.C2.8.7	Kosenko, Ivan
Kingston, Erinstopher Kingston, Jennifer	CA	IAC-16.A1.IP.10	Kosenkov, Ivan
Kingston, Jennifer	CA	IAC-16.A6.IP.8	Kosenkov, Ivan
Kingston, Jennifer	CA	IAC-16.A6.4.5	Koskina, Katerina
	CA		·
Kingston, Jennifer	CA	IAC-16.D1.7.4	Kosmodemyanskii, Evgenii
Kinkaid, Nathan		IAC-16.C1.2.1	Kostera, Martin
Kinkaid, Nathan	CA	IAC-16.D4.5.1	Kothawala, Alimurtaza Kothawala. Alimurtaza
Kinnafick, Florence	CA	IAC-16.B3.9-GTS.2.5	
Kinney, Jane	CA	IAC-16.D6.3.8	Kothia, Dishant
Kinoshita, Hiroyuki	CA	IAC-16.C2.2.10	Kothia, Dishant
Kirchner, Frank	CA	IAC-16.A6.5.10	Kotiuk, Anastasia
Kirilin, Alexander	CA	IAC-16.D2.2.3	Koudelka, Otto
Kirschner, Marco	CA	IAC-16.C2.4.5	Koudelka, Otto
Kirschner, Volker	CA	IAC-16.B1.3.2	Koudelka, Otto
Kisdi, Aron	CA	IAC-16.A3.3B.8	Koudelka, Otto
Kishi, Koichi	CA	IAC-16.C4.2.5	Kouprianov, Vladimir
Kitagawa, Koki	CA	IAC-16.C4.2.6	Kousal, Jaroslav
Kitajima, Shiki	CA	IAC-16.A6.2.5	Kouyama, Toru
Kitamura, Hitoshi	CA	IAC-16.C2.3.10	Kovacs III, Emerich
Kitazawa, Yukihito	CA	IAC-16.A6.IP.23	Kovacs III, Emerich
Kitov, Vladimir	CA	IAC-16.A1.2.1	Kovinskiy, Alexander
Kjærgaard, Anders	CA	IAC-16.A1.1.2	Kovinsky, Alexander
Klai, Saliha	CA	IAC-16.B6.1.5	Kovtukh, Alexander
Klar, Peter	CA	IAC-16.C4.4.14	Kowalski, Julia
Kleespies, Joe	Α	IAC-16.A6.3.5	Koyama, Ryota
Klein, Volker	CA	IAC-16.A2.6.1	Koyama, Yoshisada
Kleinschrodt, Alexander	CA	IAC-16.B4.3.4	Kozhevnikov, Vladimir
Klesh, Andrew	CA	IAC-16.A3.2A.7	Kozlov, Nikolai
Klutse, Nana Ama Browne	CA	IAC-16.E2.1.5	Kozlov, Pavel
Kminek, Gerhard	CA	IAC-16.A1.5.9	Kozlov, Victor
Knapman, John	CA	IAC-16.D4.3.4	Kozlov, Victor
Knodt, Uwe	CA	IAC-16.D5.2.9	Kozlovskaya, Inesa
Kobayashi, Teiu	CA	IAC-16.C4.1.2	Kozlowski, Rolf
Kobrick, Ryan L.	CA	IAC-16.E1.IP.11	Kracik, Michal
Kocman, Tadeusz	CA	IAC-16.E1.5.13	Kraetzig, Benjamin
Koehne, Jessica	CA	IAC-16.C2.8.12	Kraft, Stefan
Koenig, Rolf	CA	IAC-16.A2.1.4	Kraft, Stefan
Kofler, Romana	CA	IAC-16.E3.4.1	Krag, Holger
	CA	IAC-16.A1.2.1	Krag, Holger
Kofman, Igor			
Kofman, Wlodek	CA	IAC-16.A7.2.3	Krasteva, Mariya
Koh, Dayung	CA	IAC-16.C1.7.2	Kreis, Matthias
Koizumi, Hiroyuki	CA	IAC-16.C4.4.12	Kreisel, Joerg
Koji, Tanaka	CA	IAC-16.C3.1.2	Kreiter, Kyle
Koji, Tanaka	CA	IAC-16.C3.2.2	Krejci, David
Kojima, Ayami	CA	IAC-16.E1.1.4	Krimigis, Stamatios
Kojima, Hiroki	CA	IAC-16.D4.3.10	Krishnan, Arun
Kolankari, Tanaya	A	IAC-16.B1.IP.19	Krishnan, Arun
Kolankari, Tanaya	CA	IAC-16.C3.4.1	Krishnan, Arun
Kolar, Jan	CA	IAC-16.E6.IP.2	Krisko, Paula H.
Kolasa-Sokolowska, Kinga	CA	IAC-16.E7.IP.16	KRM, Rao
Kolbeck, Jonathan	CA	IAC-16.C4.4.7	Kron, Michael
Kolev, Dimitar	CA	IAC-16.B2.7.3	Kronig, Luzius
Kolodziejczyk, Agata	CA	IAC-16.A3.2C.6	Kryuchkov, Boris
Kolodziejczyk, Agata	CA	IAC-16.B6.1.3	Kryuchkov, Boris I.
Kolodziejczyk, Maria	CA	IAC-16.E5.1.8	Krčál, Jan
Komatsu, Masaaki	CA	IAC-16.E1.3.8	KS, Mohanavelu
Komurasaki, Kimiya	CA	IAC-16.C4.4.1	Ku, Michelle
	CA	IAC-16.C4.4.9	KUANG, LINLING
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Komurasaki, Kimiya	CA	IAC-16.C1.8.9	Kubiak, Hanna
Komurasaki, Kimiya Kondo, Naoto		IAC-16.C1.8.9 IAC-16.E7.IP.24	Kubiak, Hanna Kubiak, Hanna
Komurasaki, Kimiya Kondo, Naoto KONG, Dejian	CA CA	IAC-16.E7.IP.24	Kubiak, Hanna
Komurasaki, Kimiya Kondo, Naoto KONG, Dejian Kong, Xiao	CA CA CA	IAC-16.E7.IP.24 IAC-16.D5.IP.1	Kubiak, Hanna Kubitschek, Daniel
Komurasaki, Kimiya Kondo, Naoto KONG, Dejian Kong, Xiao Konicki, Athena	CA CA CA	IAC-16.E7.IP.24 IAC-16.D5.IP.1 IAC-16.A1.7.8	Kubiak, Hanna Kubitschek, Daniel Kublik, Dominik
Komurasaki, Kimiya Kondo, Naoto KONG, Dejian Kong, Xiao Konicki, Athena Konstantinov, Mikhail S.	CA CA CA CA	IAC-16.E7.IP.24 IAC-16.D5.IP.1 IAC-16.A1.7.8 IAC-16.C1.4.6	Kubiak, Hanna Kubitschek, Daniel Kublik, Dominik Kubo, Eriko
Komurasaki, Kimiya Kondo, Naoto KONG, Dejian Kong, Xiao Konicki, Athena Konstantinov, Mikhail S. Kontogiannis, Efthymios Akis	CA CA CA CA CA	IAC-16.E7.IP.24 IAC-16.D5.IP.1 IAC-16.A1.7.8 IAC-16.C1.4.6 IAC-16.B4.4.12	Kubiak, Hanna Kubitschek, Daniel Kublik, Dominik Kubo, Eriko Kubo-oka, Toshihiro
Komurasaki, Kimiya Kondo, Naoto KONG, Dejian Kong, Xiao Konicki, Athena Konstantinov, Mikhail S. Kontogiannis, Efthymios Akis Kopnin, Vadim	CA CA CA CA CA CA CA CA	IAC-16.E7.IP.24 IAC-16.D5.IP.1 IAC-16.A1.7.8 IAC-16.C1.4.6 IAC-16.B4.4.12 IAC-16.A1.1.7	Kubiak, Hanna Kubitschek, Daniel Kublik, Dominik Kubo, Eriko Kubo-oka, Toshihiro Kucera, Jaromír
Komurasaki, Kimiya Kondo, Naoto KONG, Dejian Kong, Xiao Konicki, Athena Konstantinov, Mikhail S. Kontogiannis, Efthymios Akis Kopnin, Vadim Koppel, Christophe	CA	IAC-16.E7.IP.24 IAC-16.D5.IP.1 IAC-16.A1.7.8 IAC-16.C1.4.6 IAC-16.B4.4.12 IAC-16.A1.1.7 IAC-16.A5.2.2	Kubiak, Hanna Kubitschek, Daniel Kublik, Dominik Kubo, Eriko Kubo-oka, Toshihiro Kucera, Jaromír Kudenko, Yurii A.
Komurasaki, Kimiya Kondo, Naoto KONG, Dejian Kong, Xiao Konicki, Athena Konstantinov, Mikhail S. Kontogiannis, Efthymios Akis Kopnin, Vadim Koppel, Christophe Kornienko, Mikhail	CA	IAC-16.E7.IP.24 IAC-16.D5.IP.1 IAC-16.A1.7.8 IAC-16.C1.4.6 IAC-16.B4.4.12 IAC-16.A1.1.7 IAC-16.A5.2.2 IAC-16.A1.1.7	Kubiak, Hanna Kubitschek, Daniel Kublik, Dominik Kubo, Eriko Kubo-oka, Toshihiro Kucera, Jaromír Kudenko, Yurii A. Kudo, Shohei
Komurasaki, Kimiya Kondo, Naoto KONG, Dejian Kong, Xiao Konicki, Athena Konstantinov, Mikhail S. Kontogiannis, Efthymios Akis Kopnin, Vadim Koppel, Christophe Kornienko, Mikhail Kornienko, Mikhail	CA	IAC-16.E7.IP.24 IAC-16.D5.IP.1 IAC-16.A1.7.8 IAC-16.C1.4.6 IAC-16.B4.4.12 IAC-16.A1.1.7 IAC-16.A5.2.2	Kubiak, Hanna Kubitschek, Daniel Kublik, Dominik Kubo, Eriko Kubo-oka, Toshihiro Kucera, Jaromír Kudenko, Yurii A.

imura, Toshiya	CA	IAC-16.C4.3.9	Korobova, Olga	А	IAC-16.B4.7.3
ing, Adam	CA	IAC-16.A3.1.10	Korpela, Eric	CA	IAC-16.A4.1.4
ing, Melanie	CA	IAC-16.E5.3.4	Kortmann, Martin	CA	IAC-16.C2.1.5
ing, PJ	CA	IAC-16.D2.7.9	Koryanov, Victor	CA	IAC-16.C1.4.11
ing, PJ	CA	IAC-16.B4.5.3	Koryanov, Vsevolod	A	IAC-16.C2.3.4
ingston, Christopher	CA	IAC-16.C2.8.7	Kosenko, Ivan	CA	IAC-16.D4.3.12
ingston, Jennifer	CA	IAC-16.A1.IP.10	Kosenkov, Ivan	CA	IAC-16.E7.1.6
ingston, Jennifer	CA	IAC-16.A6.IP.8	Kosenkov, Ivan	CA	IAC-16.B4.5.4
ingston, Jennifer	CA	IAC-16.A6.4.5	Koskina, Katerina	CA	IAC-16.E1.9.8
ingston, Jennifer	CA	IAC-16.D1.7.4	Kosmodemyanskii, Evgenii	CA	IAC-16.D2.2.3
inkaid, Nathan	CA	IAC-16.C1.2.1	Kostera, Martin	CA	IAC-16.E6.IP.2
inkaid, Nathan	CA	IAC-16.D4.5.1	Kothawala, Alimurtaza	CA	IAC-16.C2.2.9
innafick, Florence	CA	IAC-16.B3.9-GTS.2.5	Kothawala, Alimurtaza	CA	IAC-16.E2.3-GTS.4.5
inney, Jane	CA	IAC-16.D6.3.8	Kothia, Dishant	CA	IAC-16.C3.4.5
inoshita, Hiroyuki	CA	IAC-16.C2.2.10	Kothia, Dishant	CA	IAC-16.D4.5.6
irchner, Frank	CA	IAC-16.A6.5.10	Kotiuk, Anastasia	CA	IAC-16.A6.IP.6
irilin, Alexander	CA	IAC-16.D2.2.3	Koudelka, Otto	CA	IAC-16.B2.1.5
irschner, Marco	CA	IAC-16.C2.4.5	Koudelka, Otto	CA	IAC-16.B2.5.1
irschner, Volker	CA	IAC-16.B1.3.2	Koudelka, Otto	CA	IAC-16.B2.5.4
isdi, Aron	CA	IAC-16.A3.3B.8	Koudelka, Otto	CA	IAC-16.B2.7.1
ishi, Koichi	CA	IAC-16.C4.2.5	Kouprianov, Vladimir	CA	IAC-16.A6.IP.9
itagawa, Koki	CA	IAC-16.C4.2.6	Kousal, Jaroslav	A	IAC-16.A2.5.4
itajima, Shiki	CA	IAC-16.A6.2.5	Kouyama, Toru	CA	IAC-16.A3.5.1
itamura, Hitoshi	CA	IAC-16.C2.3.10	Kovacs III, Emerich	CA	IAC-16.D1.7.8
itazawa, Yukihito	CA	IAC-16.A6.IP.23	Kovacs III, Emerich	CA	IAC-16.C2.9.4
itov, Vladimir	CA	IAC-16.A1.2.1	Kovinskiy, Alexander	CA	IAC-16.A1.1.7
jærgaard, Anders	CA	IAC-16.A1.1.2	Kovinsky, Alexander	CA	IAC-16.B3.5.3
lai, Saliha	CA	IAC-16.B6.1.5	Kovtukh, Alexander	CA	IAC-16.B4.2.12
lar, Peter	CA	IAC-16.C4.4.14	Kowalski, Julia	CA	IAC-16.A3.IP.43
leespies, Joe	Α	IAC-16.A6.3.5	Koyama, Ryota	CA	IAC-16.C4.8.5
lein, Volker	CA	IAC-16.A2.6.1	Koyama, Yoshisada	CA	IAC-16.B2.7.3
leinschrodt, Alexander	CA	IAC-16.B4.3.4	Kozhevnikov, Vladimir	CA	IAC-16.C4.4.10
lesh, Andrew	CA	IAC-16.A3.2A.7	Kozlov, Nikolai	CA	IAC-16.A2.4.7
lutse, Nana Ama Browne	CA	IAC-16.E2.1.5	Kozlov, Pavel	CA	IAC-16.C1.4.9
minek, Gerhard	CA	IAC-16.A1.5.9	Kozlov, Victor	A	IAC-16.A2.4.7
napman, John	CA	IAC-16.D4.3.4	Kozlov, Victor	CA	IAC-16.A2.4.8
nodt, Uwe	CA	IAC-16.D5.2.9	Kozlovskaya, Inesa	CA	IAC-16.A1.2.1
obayashi, Teiu	CA	IAC-16.C4.1.2	Kozlowski, Rolf	CA	IAC-16.B3.4-B6.5.3
obrick, Ryan L.	CA	IAC-16.E1.IP.11	Kracik, Michal	CA	IAC-16.E1.4.3
ocman, Tadeusz	CA	IAC-16.E1.5.13	Kraetzig, Benjamin	CA	IAC-16.E2.3-GTS.4.7
oehne, Jessica	CA	IAC-16.C2.8.12	Kraft, Stefan	CA	IAC-16.D5.3.2
	CA		Kraft, Stefan	CA	
oenig, Rolf ofler, Romana	CA	IAC-16.A2.1.4 IAC-16.E3.4.1		CA	IAC-16.D1.7.1 IAC-16.A6.2.4
	CA		Krag, Holger	CA	
ofman, Igor		IAC-16.A1.2.1	Krag, Holger		IAC-16.E7.7-B3.8.4
ofman, Wlodek	CA	IAC-16.A7.2.3	Krasteva, Mariya	CA	IAC-16.E2.3-GTS.4.6
oh, Dayung	CA	IAC-16.C1.7.2	Kreil, Matthias	CA	IAC-16.A2.3.9
oizumi, Hiroyuki	CA	IAC-16.C4.4.12	Kreisel, Joerg	CA	IAC-16.E6.3.6
oji, Tanaka	CA	IAC-16.C3.1.2	Kreiter, Kyle	CA	IAC-16.A6.1.8
oji, Tanaka	CA	IAC-16.C3.2.2	Krejci, David	CA	IAC-16.C4.6.6
ojima, Ayami	CA	IAC-16.E1.1.4	Krimigis, Stamatios	CA	IAC-16.D4.1.9
ojima, Hiroki	CA	IAC-16.D4.3.10	Krishnan, Arun	CA	IAC-16.C2.IP.5
olankari, Tanaya	A	IAC-16.B1.IP.19	Krishnan, Arun	CA	IAC-16.C2.1.11
olankari, Tanaya	CA	IAC-16.C3.4.1	Krishnan, Arun	CA	IAC-16.C4.2.2
olar, Jan	CA	IAC-16.E6.IP.2	Krisko, Paula H.	CA	IAC-16.A6.2.8
olasa-Sokolowska, Kinga	CA	IAC-16.E7.IP.16	KRM, Rao	CA	IAC-16.B5.1.7
olbeck, Jonathan	CA	IAC-16.C4.4.7	Kron, Michael	CA	IAC-16.A2.3.9
olev, Dimitar	CA	IAC-16.B2.7.3	Kronig, Luzius	CA	IAC-16.B4.4.6
olodziejczyk, Agata	CA	IAC-16.A3.2C.6	Kryuchkov, Boris	CA	IAC-16.A1.1.7
olodziejczyk, Agata	CA	IAC-16.B6.1.3	Kryuchkov, Boris I.	CA	IAC-16.B3.6-A5.3.7
olodziejczyk, Maria	CA	IAC-16.E5.1.8	Krčál, Jan	CA	IAC-16.B4.3.11
omatsu, Masaaki	CA	IAC-16.E1.3.8	KS, Mohanavelu	CA	IAC-16.B2.1.4
omurasaki, Kimiya	CA	IAC-16.C4.4.1	Ku, Michelle	CA	IAC-16.C4.IP.48
omurasaki, Kimiya	CA	IAC-16.C4.4.9	KUANG, LINLING	CA	IAC-16.B2.6.5
ondo, Naoto	CA	IAC-16.C1.8.9	Kubiak, Hanna	CA	IAC-16.B3.2.5
ONG, Dejian	CA	IAC-16.E7.IP.24	Kubiak, Hanna	CA	IAC-16.D2.7.1
ong, Xiao	CA	IAC-16.D5.IP.1	Kubitschek, Daniel	CA	IAC-16.C1.1.4
onicki, Athena	CA	IAC-16.A1.7.8	Kublik, Dominik	CA	IAC-16.A2.5.3
onstantinov, Mikhail S.	CA	IAC-16.C1.4.6	Kubo, Eriko	CA	IAC-16.A6.5.4
ontogiannis, Efthymios Akis	CA	IAC-16.B4.4.12	Kubo-oka, Toshihiro	CA	IAC-16.B2.7.3
opnin, Vadim	CA	IAC-16.A1.1.7	Kucera, Jaromír	CA	IAC-16.A2.5.4
oppel, Christophe	CA	IAC-16.A5.2.2	Kudenko, Yurii A.	CA	IAC-16.A1.6.5
ornienko, Mikhail	CA	IAC-16.A1.1.7	Kudo, Shohei	CA	IAC-16.A6.IP.38
ornienko, Mikhail	CA	IAC-16.A1.2.1	Kueppers, Michael	CA	IAC-16.A3.4.2
ornienko, Mikhail	CA	IAC-16.B3.5.3	Kuiper, JM (Hans)	CA	IAC-16.B1.IP.13
	- , t	20.00.0.0	Kukoba, Tatyana		10.01.11.13

262

Kasaeian, seyed aliakbar

Kashanov, Olexandr

Kaspar, Kamalanathan Kasper, Justin

Kasten-Monges, Jorge Kasten-Monges, Marina de J. Katakami, Koki

Kashimura, Hiroki

Katke, Tanvi Katke, Tanvi Katke, Tanvi

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IAC-16.C1.1.8

IAC-16.D2.IP.6

IAC-16.A3.5.1

IAC-16.A3.1.10

IAC-16.B4.8.10

IAC-16.D4.2.8

IAC-16.D4.2.8 IAC-16.C4.2.11

IAC-16.C4.IP.22 IAC-16.C2.2.9 IAC-16.E2.3-GTS.4.5



Lafabrie, Philippe Lafabrie, Philippe







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W. III. A		
Kulik, Antonina	CA	IAC-16.C2.2.2
Kulkarni, Advait	CA	IAC-16.B2.6.2
Kulkarni, Avinash K	CA	IAC-16.C1.2.10
Kulkarni, Rohan	CA	IAC-16.A1.IP.21
Kulkarni, Rohan	CA	IAC-16.C2.6.7
Kulkarni, Rohan	CA	IAC-16.C2.6.9
Kulkarni, Rohan	CA	IAC-16.C3.4.5
Kulkarni, Rohan	CA	IAC-16.D4.5.6
Kulu, Erik	CA	IAC-16.E2.4.4
Kumao, Takeru	CA	IAC-16.D4.3.10
Kumar, Saroj	CA	IAC-16.C3.5-C4.7.3
Kumar, Vikash	CA	IAC-16.C4.1.13
Kumar S., Sunil	CA	IAC-16.A3.IP.4
Kumar S., Sunil	CA	IAC-16.C4.IP.43
Kumar S., Sunil	CA	IAC-16.D1.6.10
Kumire, King	CA	IAC-16.B5.1.5
Kunes, Michal	CA	IAC-16.D5.IP.2
Kunes, Michal	CA	IAC-16.E6.IP.2
Kunimori, Hiroo	CA	IAC-16.B2.7.3
Kunst, Daniela	CA	IAC-16.A2.1.9
Kuntzer, Thibault	CA	IAC-16.E1.7.2
Kunz, Oliver	CA	IAC-16.C2.7.1
Kuppa, Koundinya	CA	IAC-16.C1.6.3
Kuppusamy, Balaji	CA	IAC-16.B1.4.3
KURIAN, PRIYA	CA	IAC-16.D2.IP.10
Kurian, Thomas	CA	IAC-16.C2.IP.5
Kurian, Thomas	CA	IAC-16.C2.IP.13
Kuritsin, Andrey	CA	IAC-16.A1.1.7
Kuritsin, Andrey	CA	IAC-16.B3.5.2
Kuritsin, Andrey	CA	IAC-16.B3.5.3
Kuritsin, Andrey	CA	IAC-16.B3.6-A5.3.5
Kurmazenko, Eduard	CA	IAC-16.A1.IP.35
Kuroda, Masataka	CA	IAC-16.E1.IP.30
Kussmaul, Anna	CA	IAC-16.E3.IP.5
Kustavus, Allan	CA	IAC-16.B4.4.3
Kuuste, Henri	CA	IAC-16.B4.4.3
Kuzmina, Lyudmila	CA	IAC-16.C2.3.13
Kvell, Urmas	CA	IAC-16.B4.4.3
Kwon, Sejin	CA	IAC-16.C4.IP.35
Kwon, Sejin	CA	IAC-16.C4.R-33
Kwon, Seong-Cheol	CA	IAC-16.B4.2.10
Kwon, Seong-Cheol	CA	IAC-16.C2.3.8
Könemann, Thorben	CA	IAC-16.A2.5.5
Kütt, Johan	CA	IAC-16.B4.4.3
Kütt, Johan	CA	IAC-16.E2.4.4
Nutt, Jollan	- CA	IAC-10.L2.4.4

L		
Name	Role	Paper
L, RaviKumar	CA	IAC-16.C1.1.5
L, RaviKumar	CA	IAC-16.C1.2.7
L, RaviKumar	CA	IAC-16.C1.2.10
L, RaviKumar	CA	IAC-16.B2.5.10
L, SOWMIA NARAYANAN	CA	IAC-16.D2.1.9
L'Abbate, Michelangelo	CA	IAC-16.A6.4.3
L'Abbate, Michelangelo	CA	IAC-16.A6.7.2
L'Archevêque, Régent	CA	IAC-16.B1.3.10
L. Hashimoto, George	CA	IAC-16.A3.5.1
L.S., Satyamurthy	CA	IAC-16.E5.2.9
La, Dong	CA	IAC-16.C2.7.4
La Frenais, Rob	CA	IAC-16.E5.IP.3
La Frenais, Rob	CA	IAC-16.E1.9.2
La Regina, Veronica	CA	IAC-16.A3.1.2
La Regina, Veronica	CA	IAC-16.E3.3.1
La Regina, Veronica	CA	IAC-16.A6.8.9
La Saponara, Valeria	CA	IAC-16.C2.8.5
Labutkina, Tatyana V.	CA	IAC-16.A6.IP.5
Labutkina, Tatyana V.	CA	IAC-16.A6.IP.6
Labutkina, Tatyana V.	CA	IAC-16.D1.3.5
Lachat, Daisy	CA	IAC-16.A3.3B.8
Lacirignola, Federica	Α	IAC-16.C2.6.5
Ladevie, Francois	CA	IAC-16.E4.3A.3
Laemmerzahl, Claus	CA	IAC-16.A2.1.9
Lafabrie, Philippe	CA	IAC-16.B2.1.6

afabrie, Philippe	CA	IAC-16.B4.2.7
afabrie, Philippe	CA	IAC-16.B4.6B.2
afaye, Murielle	CA	IAC-16.B1.2.3
aherrere, Jean-Marc	CA	IAC-16.B1.2.4
ahoz, Carlos aing, Charles	CA CA	IAC-16.D5.1.2 IAC-16.A1.2.5
akshantha, Wickramaarachchige	CA	IAC-16.C2.8.4
al, Bhavya	CA	IAC-16.E3.IP.10
al, Bhavya	CA	IAC-16.B4.2.1
al, Bhavya	CA	IAC-16.D4.5.5
al, Bhavya	CA	IAC-16.C3.5-C4.7.2
am, Chung	CA	IAC-16.D1.5.1
am, Try amanna, Alfonso	CA CA	IAC-16.C1.4.12 IAC-16.E5.2.5
amarca, Vito	CA	IAC-16.B4.1.11
amarca, Vito	CA	IAC-16.E1.3.10
amarche, Luc	CA	IAC-16.B3.6-A5.3.2
amberti, Alessandro	CA	IAC-16.B3.IP.1
amberti, Alessandro	Α	IAC-16.B4.8.2
ambeta, Mike	CA	IAC-16.D1.7.8
ambeta, Mike	CA	IAC-16.C2.9.4
ampani, Luca anciano, Orietta	CA CA	IAC-16.C2.9.3 IAC-16.B2.6.8
andgraf, Markus	CA	IAC-16.B3.6-A5.3.1
andis, Geoffrey	CA	IAC-16.C3.4.3
ane, Oliver	CA	IAC-16.C2.9.7
ang, Anqi	CA	IAC-16.C1.6.2
ange, Christian	CA	IAC-16.A5.1.7
angener, Tobias	CA	IAC-16.A6.IP.12
anger, Martin	CA	IAC-16.B4.1.12
anger, Martin angley, Christopher S.	CA CA	IAC-16.C4.6.12 IAC-16.B3.6-A5.3.2
angston, Sara	CA	IAC-16.B3.9-GTS.2.6
angston, Sara	A	IAC-16.E3.4.10
anzante, Giovanni	CA	IAC-16.A3.3A.6
APSHIN, ALEXANDER	CA	IAC-16.A6.1.2
aqua, Kurtis	CA	IAC-16.C2.8.7
ara-Favela, Daniel	CA	IAC-16.D5.3.9
ara-Favela, Daniel	CA	IAC-16.E2.4.2
arch, Sascha	CA CA	IAC-16.D2.4.1
arin, Vladimir O. arin, Vladimir O.	CA	IAC-16.A6.IP.5 IAC-16.A6.IP.6
arin, Vladimir O.	CA	IAC-16.D1.3.5
arios, Eduardo	CA	IAC-16.A2.3.5
arsen, Ida M.	CA	IAC-16.D2.2.7
arsen, Jesper A.	Α	IAC-16.B4.4.1
arsen, Jesper A.	CA	IAC-16.D1.4.10
arsen, Jesper A.	A	IAC-16.B4.6B.3
arsen, Kim Guldstrand arson, Samantha	CA CA	IAC-16.B4.3.11
atiri, Anis	CA	IAC-16.D3.3.6 IAC-16.B2.1.6
atiri, Anis	CA	IAC-16.B2.1.6
atiri, Anis	CA	IAC-16.B4.6B.2
attes, Philippe	CA	IAC-16.E1.2.6
audan, Katarina	CA	IAC-16.E2.3-GTS.4.7
auer, Charles	CA	IAC-16.D6.3.2
auer, Charles	CA	IAC-16.D6.3.5
auer, Charles	CA	IAC-16.D6.2-D2.9.5
aufer, Rene aufer, Rene	CA CA	IAC-16.D2.IP.2 IAC-16.E1.4.7
AURENT, Philippe	CA	IAC-16.E1.4.7
aurenzi, Susanna	CA	IAC-16.C2.6.12
aurenzi, Susanna	CA	IAC-16.C2.8.5
aurenzi, Susanna	CA	IAC-16.C2.8.8
auria, Michel	CA	IAC-16.A6.5.2
aurini, Daniele	CA	IAC-16.B3.7.6
aurini, Kathy	CA	IAC-16.B3.1.2
aurini, Kathy	CA	IAC-16.A5.1.7
avagna, Michèle	CA	IAC-16.A3.IP.10
avagna, Michèle avagna, Michèle	CA CA	IAC-16.C1.2.8 IAC-16.A3.2B.9
avagna, Michèle	CA	IAC-16.C1.3.2
avagna, Michèle	CA	IAC-16.A2.3.6
avagna, Michèle	CA	IAC-16.D2.3.9
avagna, Michèle	CA	IAC-16.D3.3.1

Lavagna, Michèle	CA	IAC-16.A3.4.9	Leonov, Victor	CA	IAC-16.C3.4.9
Lavagna, Michèle	CA	IAC-16.A3.4.9	Leonov, Victor	CA	IAC-16.C3.4.9
Lavagna, Michèle	CA	IAC-16.A6.6.6	Lepore, Fabio	CA	IAC-16.B3.IP.1
Lavagna, Michèle	CA	IAC-16.B6.3.6	LEROY, Vincent	CA	IAC-16.E3.6.5
Lavagna, Michèle	CA	IAC-16.B4.8.5	Leslie, Tim	CA	IAC-16.A2.5.8
Lavagna, Michèle	CA	IAC-16.B4.8.9	Letterio, Federico	CA	IAC-16.A6.4.7
Lavagna, Michèle	CA	IAC-16.D1.7.6	Leudiere, Vincent	CA	IAC-16.D2.5.1
Lavagna, Michèle	CA	IAC-16.C1.9.1	Leuko, Stefan	CA	IAC-16.A1.5.1
Lavlinski, Ivan	CA	IAC-16.B6.2.10	Leung, Thomas Siu Hong	CA	IAC-16.C4.IP.37
Lavrenko, Elena	CA		Leung, Thomas Siu-Hong	CA	
		IAC-16.B3.3.3	•		IAC-16.C4.IP.36
Law, Emily	CA	IAC-16.E1.8.2	LEVEQUE, Thomas	CA	IAC-16.A2.1.5
Law, Emily	CA	IAC-16.A3.2C.10	Lewis, Hugh G.	CA	IAC-16.A6.IP.3
Lawal, Abdul	CA	IAC-16.B4.1.6	Lewis, Hugh G.	CA	IAC-16.A6.2.4
Lawal, Abdul	CA	IAC-16.B5.2.5	Lewis, Hugh G.	CA	IAC-16.A6.2.7
Lawlor McKenna, Susan	CA	IAC-16.A1.5.9	Lewis, Hugh G.	CA	IAC-16.A6.2.11
Lawrence, Brian	CA	IAC-16.B1.3.10	León Pérez, Laura	CA	IAC-16.A6.8.7
Laxmiprasad, A.S.	CA	IAC-16.A3.2B.8	Li, Baoming	CA	IAC-16.B2.7.2
Laxmiprasad, A.S.	CA	IAC-16.A3.3B.6	Li, Bin	CA	IAC-16.C4.IP.29
Laynes, Arron	CA	IAC-16.B1.IP.18	Li, Bin	CA	IAC-16.C4.5.2
Lazar, Florin-Cristian	CA	IAC-16.A3.IP.38	Li, Binchao	CA	IAC-16.C4.IP.29
LAZARIN, FEDERICO	CA	IAC-16.E4.3A.1	Li, Dan	CA	IAC-16.D5.1.3
Lazarov, Vasilen	CA	IAC-16.D5.3.8	Li, Danming	CA	IAC-16.C4.IP.45
Lazbin, Igor	CA	IAC-16.A3.2A.7	Li, Fatima	CA	IAC-16.A1.IP.6
Lazurenko, Alexey	CA	IAC-16.C4.4.3	Li, Feng	CA	IAC-16.C4.IP.29
Le, Jialing	CA	IAC-16.C4.9.3	Li, Feng	CA	IAC-16.B2.1.2
Le, My Hanh	CA	IAC-16.E6.1.8	Li, Feng	CA	IAC-16.C4.5.2
LE FEVRE, CLEMENCE	CA	IAC-16.A6.9.3		CA	IAC-16.C4.5.2
			Li, Feng		
Le Goff, Roland	CA	IAC-16.B1.3.2	Li, Guoqiang	CA	IAC-16.D2.IP.5
Le Querrec, Laurent	CA	IAC-16.D2.2.5	Li, Haiyang	CA	IAC-16.C1.3.11
Leatherwood, James	CA	IAC-16.E3.6.10	Li, Haiyue	CA	IAC-16.B2.3.2
Lebat, Vincent	CA	IAC-16.A2.1.1	Li, He	CA	IAC-16.A2.4.3
Leblanc, Olivier	CA	IAC-16.A1.5.11	Li, Hongwei	CA	IAC-16.C2.1.3
Lebofsky, Matt	CA	IAC-16.A4.1.3	Li, Hongxing	CA	IAC-16.A1.IP.24
Lebofsky, Matt	CA	IAC-16.A4.1.4	Li, Jialian	CA	IAC-16.A1.6.8
Leccese, Giuseppe	CA	IAC-16.C4.2.13	Li, Jian	CA	IAC-16.C4.IP.14
	CA	IAC-16.D6.3.6		CA	IAC-16.C4.9.7
Lechner, Veit			Li, Jiang		
Lecoutre, Carole	CA	IAC-16.A2.6.3	LI, Jiang	CA	IAC-16.C2.4.9
Ledesma-García, Janet	CA	IAC-16.A1.IP.28	Li, Jiang	CA	IAC-16.C4.5.10
Ledesma-García, Janet	CA	IAC-16.A2.2.8	Li, Jianming	CA	IAC-16.D2.5.5
Ledkov, Alexander	CA	IAC-16.C1.6.5	_ LI, Jilin	CA	IAC-16.B2.1.7
Lee, Changjin	CA	IAC-16.C4.2.10	LI, Jilin	CA	IAC-16.B2.7.2
Lee, David	CA	IAC-16.A1.IP.10	Li, Jing	CA	IAC-16.A6.3.2
Lee, Dongeun	CA	IAC-16.C4.2.10	Li, Jingyuan	CA	IAC-16.D5.1.3
Lee, Eunkwang	A	IAC-16.C4.IP.35	Li, Jinxian	CA	IAC-16.C4.IP.17
<u> </u>	CA			CA	
Lee, Eunkwang		IAC-16.C4.8.1	Li, Jinxian		IAC-16.C4.9.12
Lee, Hungu	CA	IAC-16.B4.1.5	Li, Juan	CA	IAC-16.C4.4.6
Lee, Hungu	CA	IAC-16.B4.4.9	Li, Junyan	CA	IAC-16.D2.5.5
Lee, Hyeon-Cheol	CA	IAC-16.B1.4.9	Li, Juqian	CA	IAC-16.E7.IP.33
Lee, Jongkwang	CA	IAC-16.C4.IP.12	Li, Kegin	CA	IAC-16.D5.1.4
Lee, Myeong-Jae	CA	IAC-16.C2.5.5	Li, Liming	CA	IAC-16.B4.8.10
Lefeber, René	CA	IAC-16.E7.2.1	Li, Lin	CA	IAC-16.C3.3.5
Lefebvre, Luc	CA	IAC-16.B3.1.6	Li, Ming	CA	IAC-16.C3.1.4
Lefebvre, Luc	CA	IAC-16.B6.1.8		CA	IAC-16.E4.1.4
			Li, Ming		
Legars, Denis	CA	IAC-16.D2.1.3	Li, Ming	CA	IAC-16.B1.2.1
Lehner, Benjamin	A	IAC-16.A3.2C.3	Li, Ming	CA	IAC-16.A2.3.7
Lehnert, Christopher	CA	IAC-16.E3.3.3	Li, Ming	CA	IAC-16.A6.3.4
Lehnhardt, Kris	CA	IAC-16.A1.3.3	Li, Ming	CA	IAC-16.E4.2.9
Lei, Chen	CA	IAC-16.A6.7.3	Li, Mou	CA	IAC-16.C2.3.11
Lei, Ying	CA	IAC-16.A3.IP.17	Li, Mou	CA	IAC-16.B3.6-A5.3.10
LEKEUX, Anne	CA	IAC-16.C4.1.8	Li, Mutian	CA	IAC-16.B3.7.11
Lemercier, Sonia	CA	IAC-16.D2.2.5	Li, Naitian	CA	IAC-16.C2.4.8
Lemeshevskii, Sergey	CA	IAC-16.A3.1.5	Li, Naitian	CA	IAC-16.C2.5.11
Lemeshevskii, Sergey	CA	IAC-16.A3.1.8	Li, Renjie	CA	IAC-16.D1.IP.16
Lemeshevskii, Sergey	CA	IAC-16.B4.2.12	Li, Renjie	CA	IAC-16.D2.8-A5.4.7
Lemeshevskii, Sergey	CA	IAC-16.A3.3A.3	Li, Rui	CA	IAC-16.A2.3.4
Lemke, Norbert M.K.	CA	IAC-16.B4.6A.5	Li, Rui	A	IAC-16.B4.6A.6
Lemmens, Stijn	CA	IAC-16.A6.4.1	Li, Sen	CA	IAC-16.D5.1.9
Lemmens, Stijn	CA	IAC-16.A6.4.7	Li, Shaojun	CA	IAC-16.D2.3.10
Lemus, David	CA	IAC-16.E5.IP.2	Li, Shaowei	CA	IAC-16.B2.2.11
Lenard, Roger X.	CA	IAC-16.C3.5-C4.7.6	Li, Shi	CA	IAC-16.D2.IP.8
Lengyel, David M.	CA	IAC-16.E3.6.3	Li, Shi	CA	IAC-16.B2.3.3
Lenio, Martha	CA	IAC-16.A1.IP.38	Li, Shouping	CA	IAC-16.E7.5.11
Lenio, Martha	CA	IAC-16.E1.1.5	LI, Siqing	CA	IAC-16.E7.IP.25
Leon, Gloria	CA	IAC-16.A1.1.2	Li, SU	A	IAC-16.E1.4.12
LEONARD, PINEAU	CA	IAC-16.D2.4.6	Li, Ting	CA	IAC-16.A1.6.8









Li, Tinghe	CA	IAC-16.C4.9.15
Li, Wanyuan	CA	IAC-16.C2.2.13
Li, Wanyuan	CA	IAC-16.C2.9.8
LI, Wei	CA	IAC-16.B1.IP.10
Li, Wei	CA	IAC-16.C1.IP.6
Li, Wei	CA	IAC-16.B2.3.6
Li, Wenbo	CA	IAC-16.C2.3.11
Li, Wenjiong	CA	IAC-16.A1.7.3
Li, Xiaojun	CA	IAC-16.C3.2.5
Li, Xiaokang	CA	IAC-16.C4.IP.33
Li, Xiaokang	CA	IAC-16.C4.IP.45
Li, Xiaokang	CA	IAC-16.C4.8.2
Li, Xiaoqin	CA	IAC-16.C2.9.8
<u> </u>	A	IAC-16.C4.IP.8
Li, Xintian		
Li, Yan	CA	IAC-16.C4.9.6
Li, Yang	CA	IAC-16.A6.IP.11
Li, Yanlong	CA	IAC-16.A3.IP.34
Li, Yanlong	CA	IAC-16.A3.IP.35
Li, Yaqun	CA	IAC-16.D5.1.9
Li, Yi	CA	IAC-16.A6.IP.15
Li, Yi	CA	IAC-16.C2.7.5
Li, Yi	CA	IAC-16.D6.2-D2.9.6
Li, Yinghui	CA	IAC-16.A1.3.4
Li, Yinghui	CA	IAC-16.A1.6.8
Li, Yingxian	CA	IAC-16.A1.IP.24
Li, Yuanqi	CA	IAC-16.C4.IP.38
Li, Yuanqi	CA	IAC-16.C2.1.13
Li, Yuangi	CA	IAC-16.C4.1.10
Li, Yuanqi	CA	IAC-16.C4.9.10
Li, Yuanqi	CA	IAC-16.C4.3.10
Li, Yuanqi	Α	IAC-16.C4.3.11
Li, Yuanqi	CA	IAC-16.C4.5.1
Li, Yuheng	CA	IAC-16.A1.IP.24
Li, Zhengjun	CA	IAC-16.C3.2.5
LI, Zhi	CA	IAC-16.B1.4.10
Li, Zongfeng	CA	IAC-16.A2.5.9
Liang, Chen	CA	IAC-16.C2.1.7
Liang, Jian	CA	IAC-16.B1.4.7
Liang, Jie	CA	IAC-16.C2.IP.1
Liang, Jie	CA	IAC-16.B3.4-B6.5.9
Liang, Jie	CA	IAC-16.D2.6.10
Liang, Yangang	CA	IAC-16.B6.IP.2
Liang, Yuying	CA	IAC-16.C1.2.9
	CA	
Lightholder, Jack		IAC-16.A3.2A.7
Liias, Paul	CA	IAC-16.B4.4.3
Liljeblad, Michael	CA	IAC-16.B2.5.2
Lima, Glaydson L. B.	CA	IAC-16.C2.3.6
Lin, Chen-Tsung	CA	IAC-16.C1.8.7
LIN, JIANG	CA	IAC-16.A6.3.2
LIN, Mo	CA	IAC-16.B2.1.7
Linares, Richard	CA	IAC-16.A6.9.6
Lindblad, Helena	CA	IAC-16.C4.3.4
Lindblad, Klas	CA	IAC-16.C4.3.4
Ling, Jer	CA	IAC-16.B4.7.2
Ling, Shukuan	CA	IAC-16.A1.IP.24
Ling, Wenhui	CA	IAC-16.C4.9.4
Ling, Wenhui	CA	IAC-16.C4.9.15
Ling, William Yeong Liang	CA	IAC-16.C4.4.12
Lino, Carlos	CA	IAC-16.D3.4.4
Lino, Carlos	CA	IAC-16.D1.5.6
Lino, Carlos	CA	IAC-16.D1.6.2
Lionnet, Pierre	CA	IAC-16.A1.5.9
Liorzou, Françoise	CA	IAC-16.A2.1.1
Liou, JC.	CA	IAC-16.A6.2.8
Liperi, Konstantina	CA	IAC-16.E7.1.7
Lips, Tobias	CA	IAC-16.A6.4.7
Liqiang, Wang	CA	IAC-16.C2.7.8
Lisowski, Jakub	CA	IAC-16.A3.IP.44
List, Meike	CA	IAC-16.A2.1.2
List, Meike	CA	IAC-16.A2.1.9
Littles, Jerrol	CA	IAC-16.C4.1.7
Liu, Bin	CA	IAC-16.B2.4.12
	C/ t	
	CA	IAC-16.C1.6.9
Liu, Bin	CA	
		IAC-16.C1.6.9 IAC-16.D5.1.9 IAC-16.B1.IP.30

Liu, Cong	CA	IAC-16.A6.IP.30
Liu, Dali	CA	IAC-16.C2.2.13
Liu, Dongfang	CA	IAC-16.D5.2.10
Liu, Fei	A CA	IAC-16.C1.8.12
Liu, Fucheng Liu, Haiguang	CA CA	IAC-16.B1.IP.30 IAC-16.B3.2.4
Liu, Haiguang	CA	IAC-16.D5.1.4
Liu, Hongju	CA	IAC-16.A1.7.3
Liu, Hongjun	CA	IAC-16.C4.1.10
Liu, Hongjun	CA	IAC-16.C4.5.1
Liu, Jingbo	CA	IAC-16.A1.2.9
Liu, Jun	CA	IAC-16.C4.1.14
LIU, Kai	CA	IAC-16.C4.9.7
Liu, Lin Liu, Lin	CA CA	IAC-16.B2.4.12 IAC-16.C1.6.9
Liu, Nai-Chen	CA	IAC-16.B4.7.2
Liu, Sen	CA	IAC-16.A6.IP.15
Liu, Sen	Α	IAC-16.A6.3.1
Liu, Sen	CA	IAC-16.A6.3.2
LIU, Shichang	CA	IAC-16.C4.9.7
Liu, Tianhua	CA	IAC-16.B3.4-B6.5.8
Liu, Wei	CA	IAC-16.A2.5.9
Liu, Weiwei Liu, Xi	CA CA	IAC-16.D1.4.11 IAC-16.D4.1.4
Liu, Xi	CA	IAC-16.D4.1.4
Liu, Xin	CA	IAC-16.C2.5.3
Liu, Xinglong	CA	IAC-16.D2.7.8
Liu, Xuhui	CA	IAC-16.B4.6A.11
LIU, Xun	CA	IAC-16.B1.IP.10
LIU, Yang	CA	IAC-16.C4.9.7
LIU, YANG	CA	IAC-16.C4.9.11
LIU, YANG	CA CA	IAC-16.C4.9.16 IAC-16.C4.3.14
LIU, Yang Liu, Yang	CA	IAC-16.C3.3.9
LIU, Yang	CA	IAC-16.C4.5.10
Liu, Yingying	CA	IAC-16.A6.6.9
Liu, Zhou	CA	IAC-16.C2.IP.15
Liu, Zhuoqun	CA	IAC-16.E2.3-GTS.4.1
Liu, Ziqiang	CA	IAC-16.D2.6.11
Lixin, Zhou	CA	IAC-16.C4.IP.38
Lixin, Zhou Lizy-Destrez, Stéphanie	CA CA	IAC-16.C2.1.13 IAC-16.E1.4.9
Llorens Aymerich, Isaac	CA	IAC-16.B4.3.10
Lo Zito, Fabio	CA	IAC-16.B1.4.1
Lobykin, Andrey	CA	IAC-16.B3.7.3
Lockney, Daniel	CA	IAC-16.E5.2.1
Lodiot, Sylvain	CA	IAC-16.A3.4.1
Lodiot, Sylvain	CA	IAC-16.A3.4.2
Logsdon, John	CA	IAC-16.E3.2.6 IAC-16.A3.2B.8
Lohar, K.A. Lohvynenko, Anatolii	CA CA	IAC-16.C4.IP.41
Loiseaux, Didier	CA	IAC-16.B1.3.2
Lokesha, H.V.	CA	IAC-16.B2.2.6
Lolage, Abhishek	CA	IAC-16.E2.4.8
Lommatsch, Valentina	CA	IAC-16.A3.4.3
Lonchakov, Yuri	CA	IAC-16.A1.1.7
Lonchakov, Yuri	CA	IAC-16.B3.5.2
Lonchakov, Yuri	CA	IAC-16.B3.5.3
Lonchakov, Yuri Long, George Anthony	CA CA	IAC-16.B3.6-A5.3.5 IAC-16.E7.4.6
Long, George Anthony Long, Jie	CA	IAC-16.E7.4.6
Long, Jun	CA	IAC-16.B4.6A.11
Longley, Jack	CA	IAC-16.A1.IP.10
Longley, Jack	CA	IAC-16.A6.IP.8
Longmier, Benjamin	CA	IAC-16.C4.IP.34
Longo, Francesco	CA	IAC-16.B1.IP.8
Longo, José	CA	IAC-16.D2.5.9
Longobardi, Pasquale	CA	IAC-16.B1.3.3
Longuski, James	CA CA	IAC-16.A5.2.12 IAC-16.B2.IP.4
loo-Yau I Raul	CA	
Loo-Yau, J. Raul Lopez, Ivan	CA	IAC-16.A1 7 8
Loo-Yau, J. Raul Lopez, Ivan Lopez, Josue	CA A	IAC-16.A1.7.8 IAC-16.D1.4.5
Lopez, Ivan		

Lopez Telgie, Alejandro	CA	IAC-16.B4.1.7
Lopez Urdiales, Jose Mariano	CA	IAC-16.D2.7.2
Lopez Villafranca, Brenda Carolina	CA	IAC-16.D1.6.2
Lopez-Caraballo, Adrian	CA	IAC-16.A1.7.2
Lopez-Mesa, Ivan	CA	IAC-16.C1.1.9
LopezdeVictoria, Monica	CA	IAC-16.C3.3.2
Lorenzini, Stefano	CA	IAC-16.B1.3.1
Lorenzoni, Leila Los, Helena	CA CA	IAC-16.A3.3B.2 IAC-16.E1.5.13
Losacco, Matteo	CA	IAC-16.E1.5.13
Losekamm, Martin	CA	IAC-16.E1.8.4
Losi, Luca	CA	IAC-16.B6.3.6
Lou, Zhangpeng	CA	IAC-16.C1.IP.10
Lou, Ziren	CA	IAC-16.B1.2.7
Louaas, Eric	CA	IAC-16.D2.5.1
Louaas, Eric	CA	IAC-16.D2.6.6
Loucks, Michel	CA	IAC-16.A5.1.10
Loukakis, Andreas	CA	IAC-16.E7.IP.3
Loureiro, Geilson	CA	IAC-16.C2.IP.10
Loureiro, Geilson	CA	IAC-16.C2.IP.16
Loureiro, Geilson	CA	IAC-16.D3.4.8
Loureiro, Geilson	CA	IAC-16.D5.1.2
Loureiro, Geilson	CA	IAC-16.D1.6.2
Lousada, Joao Lousada, Joao	CA	IAC-16.A5.IP.5 IAC-16.E3.4.11
Lousada, Joao Lousada, Joao	CA	IAC-16.E3.4.11
Louvet, Anne-Claire	CA	IAC-16.C4.6.4
Low, Kay-Soon	CA	IAC-16.A3.IP.23
Low, Kay-Soon	CA	IAC-16.A3.IP.33
Lowe, Christopher	CA	IAC-16.B4.3.10
Lozada-Balderrama, Vicente	CA	IAC-16.A1.IP.44
Lozano, Paulo	CA	IAC-16.C4.6.6
Lu, Juan	CA	IAC-16.B2.1.9
Lu, Shan	CA	IAC-16.A6.IP.34
Lu, Shan	CA	IAC-16.B1.IP.30
Lucas, Aline	CA	IAC-16.A1.7.5
Lucas Rhimbassen, Maria	CA	IAC-16.E6.2.6
Lucas Rodriguez, Rafael	CA	IAC-16.B2.2.1
Luceri, Vincenza	CA	IAC-16.A2.1.8
Luchitskaya, Elena	CA	IAC-16.A1.2.2
Luchkova, Tanja Ludwig, Carina	CA A	IAC-16.D6.2-D2.9.2 IAC-16.D2.3.7
Ludwig, Carina	CA	IAC-16.D2.5.6
Ludwig, Jonathan	CA	IAC-16.C1.9.3
Lukacevic, Jan	CA	IAC-16.E2.2.4
Lukaszczyk, Agnieszka	CA	IAC-16.B1.5.11
Lukyanchikov, A.V.	CA	IAC-16.A3.2A.4
Lumpkins, Sarah	CA	IAC-16.E3.6.12
Luna, Ximena	CA	IAC-16.A7.3.3
und, Thomas	CA	IAC-16.E2.2.5
undquist, Charles	CA	IAC-16.E4.1.3
Lunesu, Maria Ilaria	CA	IAC-16.A4.1.8
Lunghi, Paolo	CA	IAC-16.A2.3.6
Lunghi, Paolo	CA	IAC-16.B6.3.6
Lunghi, Paolo	CA	IAC-16.B4.8.9
Lunine, Jonathan	CA	IAC-16.A7.1.5
Lunine, Jonathan	CA CA	IAC-16.A1.5.8
Lunine, Jonathan Luntama, Juha-Pekka	CA	IAC-16.B4.8.11 IAC-16.D1.7.1
Luo, Chunqin	CA	IAC-16.C4.9.4
Luo, Feiteng	A	IAC-16.C4.9.4
Luo, Feiteng	CA	IAC-16.C4.9.15
.UO, Jianjun	CA	IAC-16.B2.3.6
uo, Jianjun	CA	IAC-16.C1.9.13
uo, Qing	CA	IAC-16.A6.3.2
Luo, Sha	CA	IAC-16.B1.IP.29
Luo, Wenbo	CA	IAC-16.D1.2.9
Luo, Ya-Zhong	CA	IAC-16.B3.4-B6.5.6
Luong, Kevin	CA	IAC-16.A4.1.4
Lupi, Adriano	CA	IAC-16.D1.7.1
Luttmann, Matthias	CA	IAC-16.C1.2.6
Lv, Huaibei	CA	IAC-16.D2.1.5
Ly, Jeffrey	CA	IAC-16.E2.3-GTS.4.2
Lyles, Garry Lysova, Natalya	CA CA	IAC-16.D2.1.1 IAC-16.A1.2.1

Lysyy, Sergey	CA	IAC-16.B3.IP.6
Lytle, Bill	CA	IAC-16.A1.4.7
LYU, Jun-ming Lyu, Shimeng	CA CA	IAC-16.A3.IP.28
Läkk, Hanna	CA	IAC-16.A3.2C.6
Lämmerzahl, Claus	CA	IAC-16.A2.5.5
Lätt, Silver	CA	IAC-16.B4.4.3
López, David	CA	IAC-16.E1.IP.18
López Soriano, Pablo	CA	IAC-16.A3.2C.3
López-González, Berenice	CA	IAC-16.A1.IP.28
López-González, Berenice	CA	IAC-16.A2.2.8
López-Pérez, Agustín	CA	IAC-16.B4.2.3
Lüdtke, Daniel	CA	IAC-16.A2.5.2
Lülf, Martin	CA	IAC-16.A2.1.9
VI		
Name	Role	Paper
M, VISWANATHAN	CA	IAC-16.A3.3B.6
M Ganapathy, Rohan	CA	IAC-16.C4.IP.31
M. Sato, Takao	CA	IAC-16.A3.5.1
M.S, Arunkumar	CA	IAC-16.C4.1.9
Ma, Chuan	CA	IAC-16.C1.IP.5
Ma, Kuan	CA	IAC-16.D5.1.7
Ma, Kuan	CA	IAC-16.E1.5.7
Ma, QianYing	CA	IAC-16.A1.1.4
Ma, Weihua	CA	IAC-16.C1.IP.6
Ma, Xue	CA	IAC-16.D1.2.9
Ma, Yuechen	CA	IAC-16.C1.IP.7
Ma, Zhaoxia	CA	IAC-16.A6.IP.15
Ma, Zhaoxia	CA	IAC-16.A6.3.1
MACARIO ROJAS, ALEJANDRO	CA	IAC-16.B4.5.8
Macaulay, Cameron James	CA	IAC-16.E5.3.10
Maccone, Claudio	CA	IAC-16.A4.1.6
Maccone, Claudio	CA	IAC-16.A4.1.8
Maccone, Claudio	CA	IAC-16.A4.2.4
MacDonald, Alexander	CA	IAC-16.E3.2.12
MacDonald, Alexander	CA	IAC-16.E3.3.8
MacDonald, Conor	CA	IAC-16.B1.4.6
MacDonald, Conor	CA	IAC-16.E2.4.6
Macdonald, Malcolm	CA	IAC-16.B4.3.10
Machchhar, Deep	CA	IAC-16.C4.6.7
Mackey, Paul	CA	IAC-16.A3.2B.3
Macret, Jean Luc	CA	IAC-16.D4.1.3
MacTaggart, Kenneth	CA	IAC-16.D2.2.8
Maddock, Christie	CA	IAC-16.D2.7.7
Madima, Tenda	CA	IAC-16.E1.IP.4
Madry, Scott	CA	IAC-16.E3.6.9
Maeda, George	CA	IAC-16.B4.1.4
Maeda, Takao	CA	IAC-16.A3.IP.6
Maekawa, Kazuhiko	CA	IAC-16.C3.2.2
Maffione, porzia federica	A	IAC-16.A5.2.3
Magagi, Ramata	CA	IAC-16.B1.IP.12
Maggiore, Paolo	CA	IAC-16.A3.2C.5
Magli, Enrico	CA	IAC-16.B1.IP.8
Magnani, Marco	CA	IAC-16.D3.3.1
Magniant, Sonia	CA	IAC-16.C4.1.4
Mahajan, Monika	CA	IAC-16.C4.1.4
Mahajan, Monika	CA	IAC-16.A3.3B.6
MAHESH, V	CA	IAC-16.C4.IP.16
MAHESH, V	CA	IAC-16.C4.2.3
ИАНЕSH, V ИАНЕSH, V	CA	IAC-16.C4.5.7
· · · · · · · · · · · · · · · · · · ·	CA	IAC-16.C4.5.8
Mahoney, Erin	CA	IAC-16.D3.1.7
Mahoney, Erin	CA	IAC-16.D3.4.7
Mahoney, Erin	CA	IAC-16.D5.2.3
Mahoney, Erin	CA	IAC-16.B3.7.2
Mahrdt, Christoph	CA	IAC-16.B1.2.7
Maibaum, Michael	CA	IAC-16.A3.4.3
Maibaum, Olaf	CA	IAC-16.A2.5.2
	CA	IAC-16.C1.2.7
Maini, Smiti Maioli, Luca Maioli, Luca	CA CA	IAC-16.B4.1.11 IAC-16.E1.3.10









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OGRAMME

PROGRAMME

PROFESSIONAL

Majcherczak, Didier	CA	IAC-16.B1.3.2
Majewski, Laurent	CA	IAC-16.A6.IP.18 IAC-16.C4.2.11
Maji, Yudai Makarfi, Abubakar Umar	CA CA	IAC-16.C4.2.11 IAC-16.B4.1.6
Makarfi, Abubakar Umar	CA	IAC-16.B5.2.5
Makarov, Alexander	CA	IAC-16.E5.4.10
Makarov, Nikolay	CA	IAC-16.E3.IP.13
Makarov, Nikolay	CA	IAC-16.E6.3.3
Makarov, Yuri	CA	IAC-16.E7.7-B3.8.3
Makarova, Daria	CA	IAC-16.E3.IP.13
Makarova, Daria	CA	IAC-16.E6.3.3
Makthoum, Mohamed	CA	IAC-16.D3.1.6
Malaichamy, Saagar Malashin, Alexey	CA CA	IAC-16.C4.IP.31 IAC-16.C1.9.9
Malaurie, Paul	CA	IAC-16.D1.7.2
Malhotra, Vinayak	A	IAC-16.C2.IP.2
Malhotra, Vinayak	CA	IAC-16.A2.2.10
Malhotra, Vinayak	Α	IAC-16.D2.8-A5.4.9
Malla, Ramesh	CA	IAC-16.A3.IP.25
Mallikarjuna, Vaibhav	CA	IAC-16.C4.6.4
Malyshev, Veniamin V.	CA	IAC-16.A6.7.7
Maman, Shimrit	CA	IAC-16.E1.8.7
Mammarella Marco	CA CA	IAC-16.E1.IP.14 IAC-16.A3.IP.29
Mammarella, Marco Mammarella, Martina	CA	IAC-16.A3.IP.29
Manako, Hiroyasu	CA	IAC-16.C4.1.2
Manasa, C L	CA	IAC-16.D2.8-A5.4.9
Manber, Jeffrey	CA	IAC-16.B3.3.7
Mandel, Oliver	CA	IAC-16.B1.2.7
Mangeot, Alexandre	CA	IAC-16.A5.IP.11
Mankins, John C.	CA	IAC-16.C3.1.1
Mankins, John C.	CA	IAC-16.C3.1.3
Mankins, John C.	CA	IAC-16.B2.6.7
Mann, Angelika	CA	IAC-16.D5.4.3
Manna, Shyam Sundar	CA CA	IAC-16.C4.5.7
Manna, Shyam Sundar Manolis, Ilias	CA	IAC-16.C4.5.8 IAC-16.B1.2.6
Manrique, Adriana	CA	IAC-16.E1.7.10
Manyapu, Kavya K.	CA	IAC-16.B3.7.8
Mao, Liheng	CA	IAC-16.A6.IP.30
Mao, Liheng	CA	IAC-16.D1.IP.16
Mao, Liheng	CA	IAC-16.D2.8-A5.4.7
Marais, Adriana	CA	IAC-16.A1.IP.39
Marboe, Irmgard	CA	IAC-16.E7.2.6
Marc, Róbert	CA	IAC-16.A3.3B.8
Marcenat, Camille	CA CA	IAC-16.E2.3-GTS.4.8 IAC-16.E2.4.11
Marcenat, Camille Marceta, Dusan	CA	IAC-16.E2.4.11
Marchetti, Mario	CA	IAC-16.A6.1.6
Marchetti, Mario	CA	IAC-16.C2.4.2
Marchetti, Mario	CA	IAC-16.C2.6.3
Marchetti, Mario	CA	IAC-16.C2.8.2
Marchetti, Mario	CA	IAC-16.C2.8.6
Marcil, Isabelle	CA	IAC-16.B3.3.1
Marcil, Isabelle	CA	IAC-16.B3.3.4
Marciniak, Blazej	CA	IAC-16.A2.5.3
Marcon, Marco	CA	IAC-16.A6.6.6 IAC-16.E2.3-GTS.4.4
Marcos, Genaro Marcovati, Andrea	CA CA	IAC-16.E2.3-G15.4.4
Marcy, Geoff	CA	IAC-16.D3.3.1
Maree, Hugo	A	IAC-16.D5.2.1
Marek, Julia	CA	IAC-16.E1.7.6
Marenco, Mattia	CA	IAC-16.B3.IP.1
Marengo, Marco	CA	IAC-16.E1.IP.14
Margaronis, Konstantinos	CA	IAC-16.D4.1.3
Margheritis, Diana	CA	IAC-16.A3.3B.3
Margot, Jean-Luc	CA	IAC-16.A4.1.5
Mari, Silvia	CA	IAC-16.B1.1.7
Mariani, Mirco J.	CA	IAC-16.A7.3.5
Marimon, Xavier	CA	IAC-16.A1.2.4
Marino, Francesco Mariscal, Juan Carlos	CA A	IAC-16.A5.2.1 IAC-16.E2.3-GTS.4.4
Mariën, Geraldine	CA	IAC-16.E2.3-G15.4.4
Markus, Michael	CA	IAC-16.B6.1.2
Markus, Thorsten	CA	IAC-16.E1.7.10

Marmuse, Florian	CA	IAC-16.E2.3-GTS.4.8
Marmuse, Florian	CA	IAC-16.E2.3-G13.4.8
Marne, Aniket	CA	IAC-16.C2.2.9
Marne, Aniket	CA	IAC-16.E2.3-GTS.4.5
Marotta, Armando	CA	IAC-16.A7.3.5
Marotta, Eleonora	CA	IAC-16.B4.1.11
Marotta, Eleonora	CA	IAC-16.E1.3.10
Marpu, Prashanth	CA	IAC-16.B4.4.12
Marques, Tiago Marquez Gonzalez, Eloy Normando	CA CA	IAC-16.B2.4.6
Marshall, Paul	CA	IAC-16.B3.9-GTS.2.1
Marteinsson, Viggo	CA	IAC-16.A1.5.2
Martian, Alexandru	CA	IAC-16.B2.5.6
Martin, Anne-Sophie	CA	IAC-16.E7.IP.21
Martin, Gary	CA	IAC-16.E1.8.6
Martin, Patrick	CA	IAC-16.A3.4.2
Martinez, Israel	CA	IAC-16.B2.IP.3
Martinez, Juan Ramon	CA	IAC-16.E7.5.3
Martinez, Larry Martinez, Peter	CA CA	IAC-16.E7.4.11 IAC-16.E3.1.12
Martinez, Peter	CA	IAC-16.C2.5.8
Martinez, Peter	CA	IAC-16.E3.4.5
Martinez, Simon	CA	IAC-16.A1.7.2
Martinez Rodriguez, Pablo	CA	IAC-16.C4.5.6
Martinez-Rubi, Yadienka	CA	IAC-16.C2.8.7
Martinot, Vincent	CA	IAC-16.A6.9.5
Martins, Bernardo	CA	IAC-16.B4.7.2
Martins, Rafael	CA	IAC-16.C3.4.7
Martorana, Rosario Martynov, Maxim	CA CA	IAC-16.B1.3.8 IAC-16.A3.1.5
Martynov, Maxim	CA	IAC-16.A3.1.8
Martynov, Maxim	CA	IAC-16.A3.2A.4
Martynov, Maxim	CA	IAC-16.A3.3A.3
Martín, Javier	CA	IAC-16.C1.5.9
Martín Morales, Gustavo	CA	IAC-16.B1.IP.25
Martín-Torres, F. Javier	CA	IAC-16.A3.3B.5
Martínez-Tapia, Ricardo Jesus	CA	IAC-16.A1.7.1
Marwaha Madill, Vinita	CA	IAC-16.D3.3.3
Marzioli, Paolo	CA	IAC-16.B2.2.7
Marée, Hugo Masali, Melchiorre	CA	IAC-16.E1.4.2 IAC-16.A5.IP.1
Masali, Melchiorre	CA	IAC-16.A1.2.6
Mascetti, Gabriele	CA	IAC-16.A3.IP.10
Mascolo, Luigi	CA	IAC-16.D1.1.5
Mascolo, Luigi	Α	IAC-16.A5.2.1
Masdemont, Josep J.	CA	IAC-16.C1.6.13
Mase, Robert	CA	IAC-16.A3.4.6
Masheleni, Hambani	CA	IAC-16.E3.1.11
Mashimo, Taiki	CA CA	IAC-16.A3.IP.6
Mason, Shawn Massari, Mauro	CA	IAC-16.A6.6.4 IAC-16.B4.7.8
Masse, Robert	CA	IAC-16.B4.6A.9
Massey, Dave	CA	IAC-16.B2.5.2
Massimiani, Chiara	CA	IAC-16.B6.2.6
Massobrio, Federico	CA	IAC-16.A5.1.9
Masson-Zwaan, Tanja	CA	IAC-16.E7.2.1
MASSONNET, Didier	CA	IAC-16.A2.1.5
Massotti, Luca	CA	IAC-16.C1.2.3
Mastrogiusanna Marsa	CA	IAC-16.B6.2.1
Mastrogiuseppe, Marco Masuda, Koichi	CA	IAC-16.A3.IP.10 IAC-16.A3.2A.2
Mata, Lilibeth	CA	IAC-16.A3.2A.2
MATARAZZI, Carolina	CA	IAC-16.E5.4.3
MATAS, Attila	CA	IAC-16.B4.3.1
Mathew, Mariamma	CA	IAC-16.C2.4.3
Matiushin, Maxim	CA	IAC-16.A6.7.7
Matloff, Gregory	CA	IAC-16.A4.IP.7
Matos de Carvalho, Tiago Henrique	CA	IAC-16.D1.7.4
Matsumori, Barry	CA	IAC-16.B3.2.5
Matsumori, Barry	CA	IAC-16.D2.7.1
Matsumoto, Kotaro	CA	IAC-16.C4.2.7
Matsumoto, Satoshi Matsunaga, Yoshiki	CA	IAC-16.A2.2.4 IAC-16.C4.4.5
Matthias, Carsten	CA	IAC-16.B3.7.6
Matunaga, Saburo	CA	IAC-16.C1.8.9
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Matvienko, Sergei	CA	IAC-16.B3.4-B6.5
Matvienko, Sergei	CA	IAC-16.B6.1.6
Matviyenko, Sergiy Matyszewski, Jan	CA CA	IAC-16.A3.IP.16 IAC-16.A2.5.3
Matzner, Richard	CA	IAC-16.A2.1.4
Mauro, Stefano	CA	IAC-16.A6.1.10
Mauro, Stefano	CA	IAC-16.D2.3.4
Maury, Roland	CA	IAC-16.B1.4.1
Maximova, Maria	CA	IAC-16.A1.7.7
May, Edward	CA	IAC-16.B1.IP.20
Mayer, Hannes	CA	IAC-16.E4.1.7
Mayer, Hannes	CA	IAC-16.E7.1.14
Mayo Anzurez, Jessica Yobana	CA	IAC-16.D5.3.9
Mayorova, Vera Mayorova, Vera	CA	IAC-16.D1.3.9 IAC-16.E1.7.9
Mayorova, Vera	CA	IAC-16.E1.7.5
Mazanek, Daniel	CA	IAC-16.B3.1.3
Mazzoleni, Andre	CA	IAC-16.A3.5.5
Mazzoleni, Andre	CA	IAC-16.C4.8.4
Mazzoleni, Andre	CA	IAC-16.C4.8.8
Mazzotta, Daniele Giuseppe	CA	IAC-16.A3.2C.3
Mazzotta, Daniele Giuseppe	CA	IAC-16.A3.2C.5
Mbuthia, Mwangi	CA	IAC-16.B4.1.11
Mbuthia, Mwangi	CA	IAC-16.E1.3.10
McAlister, Philip	CA	IAC-16.D5.2.3
McAvinia, Ruth McAvinia, Ruth	CA	IAC-16.E5.IP.6 IAC-16.E7.IP.7
McAvinia, Ruth	CA	IAC-16.E1.9.4
McAvinia, Ruth	CA	IAC-16.E1.4.5
McBarron, Kelsey	A	IAC-16.E7.IP.7
McBarron, Kelsey	Α	IAC-16.E1.4.5
McBarron, Kelsey	CA	IAC-16.D3.3.4
McCabe, Matthew	CA	IAC-16.D1.IP.2
McCarthy, Brian	CA	IAC-16.C1.4.10
McCoy, Kelli	CA	IAC-16.A1.5.8
McInnes, Colin R.	CA	IAC-16.C1.1.2
McInnes, Colin R. McInnes, Colin R.	CA	IAC-16.C1.6.12 IAC-16.C1.7.11
McKay, Chris	CA	IAC-16.C1.7.11
McNamara, Roger	CA	IAC-16.B3.9-GTS
McNutt, Jr., Ralph L.	CA	IAC-16.A3.1.4
McNutt, Jr., Ralph L.	CA	IAC-16.D4.1.9
McPhee, Jancy	CA	IAC-16.E1.IP.26
McRobb, Malcolm	Α	IAC-16.D1.2.3
McSweeney, Clair	CA	IAC-16.E5.3.10
McVey, John	CA CA	IAC-16.A6.2.3
McVey, John McVey, John	CA	IAC-16.A6.2.6 IAC-16.A6.7.8
Md Rujhan, Khairuz Zaki	CA	IAC-16.C3.2.6
Medaglia, Emanuele	CA	IAC-16.D1.6.9
Medel, Juan Ramon	CA	IAC-16.E3.4.11
Medepalli, Abhilash	CA	IAC-16.A3.1.10
Medina Tanco, Gustavo	CA	IAC-16.D3.3.9
Medina Tanco, Gustavo	CA	IAC-16.E1.5.14
Medina Tanco, Gustavo	CA	IAC-16.A7.3.1
Medina Tanco, Gustavo Adolfo	CA	IAC-16.A7.3.3
Meftah, Mustapha	A	IAC-16.A3.5.8
Meini, Marco	CA	IAC-16.B1.IP.8
Meister, Loïc Mejía Sánchez, Miguel Ángel	CA CA	IAC-16.B6.2.2 IAC-16.A1.IP.4
Melamed, Nahum	CA	IAC-16.D3.1.2
Melamed, Nahum	CA	IAC-16.D5.1.1
Melamed, Nahum	CA	IAC-16.D4.3.14
Melanson, Philip	CA	IAC-16.B1.3.10
Melgar, Isabel	CA	IAC-16.E3.1.1
Melin, Grégoire	CA	IAC-16.E1.7.5
Melis, Andrea	CA	IAC-16.A4.1.8
Mellemkjaer Jensen, Rasmus	CA	IAC-16.C3.4.7
Melotti, Ezio	CA	IAC-16.B3.6-A5.3
Melton, Robert G.	CA	IAC-16.C1.8.1
Memon, Kamran	CA	IAC-16.D3.3.4
Mendieta Jimenez, Francisco Javier Mendieta Jimenez, Francisco Javier	CA CA	IAC-16.D4.2.4 IAC-16.D4.2.11
Mendoza, Gustavo	CA	IAC-16.B5.1.4
	- CA	17 to 10.03.1.4

Mendoza, Omar	CA	IAC-16.A5.2.8
Mendoza, Omar	CA	IAC-16.C3.3.1
Mendoza Azpiri, Raul	CA	IAC-16.E1.7.4
Mendoza Torres, José Eduardo	CA	IAC-16.B1.IP.15
Mendoza-Torres, Alberto	CA	IAC-16.C1.1.9
Meng, Chen	CA	IAC-16.A6.IP.29
Meng, Chen	CA	IAC-16.B6.3.12
Meng, Xiang	CA	IAC-16.E2.4.5
Menicucci, Alessandra	CA	IAC-16.B4.7.5
Menshikov, Valery	CA	IAC-16.C4.IP.13
Mercier, Flavien	CA	IAC-16.A2.1.5
Mercier, Gaétan	CA	IAC-16.A3.IP.32
Merkle, Fritz	CA	IAC-16.A2.1.9
Merrell, Phil	CA	IAC-16.A3.2B.2
Merrifield, Jim	CA	IAC-16.A6.IP.10
Merritt, Donald	CA	IAC-16.B6.3.8
Merz, Klaus	CA	IAC-16.A6.2.7
Mesalam, Ramy	CA	IAC-16.C3.5-C4.7.1
Meskoob, Behnoosh	CA	IAC-16.E2.3-GTS.4.7
Meskoob, Behnoosh	CA	IAC-16.E1.5.8
Messidoro, Piero	CA	IAC-16.E1.4.9
Messina, Michele	CA	IAC-16.B4.3.8
Messina, Piero	CA	IAC-16.E3.2.7
Metcalfe, Laurie	CA	IAC-16.B6.3.11
Meurisse, Alexandre	CA	IAC-16.A3.2B.10
Meyer, Jan-Christian	CA	IAC-16.A6.IP.28
Meyer, Jan-Christian	CA	IAC-16.A6.6.3
Meyyappan, Meyya	CA	IAC-16.C2.8.12
Miao, Jun	CA	IAC-16.B3.4-B6.5.8
Miao, Xiaoyan	CA	IAC-16.E1.5.7
MICHALOUDIS, Ioannis	CA	IAC-16.E5.IP.4
MICHALOUDIS, Ioannis	CA	IAC-16.E5.IP.5
MICHALOUDIS, Ioannis	CA	IAC-16.E1.9.8
·	CA	IAC-16.E5.3.5
MICHALOUDIS, Ioannis		
Michaud, Gabriele	CA	IAC-16.B2.1.6
Michaud, Gabriele	CA	IAC-16.B4.6B.2
Michel, Alice	CA	IAC-16.B6.3.3
Michel Valencia, Rene Horacio	CA	IAC-16.B1.5.10
Micheletti Cremasco, Margherita	CA	IAC-16.A5.IP.1
Micheletti Cremasco, Margherita	CA	IAC-16.A1.2.6
Micheli, Davide	CA	IAC-16.A6.1.6
Micheli, Davide	CA	IAC-16.C2.6.3
Micheli, Davide	CA	IAC-16.C2.8.2
Micheli, Davide	CA	IAC-16.C2.8.6
Mier Hicks, Fernando	CA	IAC-16.C4.6.6
Migliaccio, Maurizio	CA	IAC-16.B1.IP.17
Migliavacca, Mirco	CA	IAC-16.B1.6.1
Mignone, Andrea	CA	IAC-16.C3.5-C4.7.8
Migoni, Carlo	CA	IAC-16.A4.1.8
Mihara, Shoichiro	CA	IAC-16.C3.2.2
Mihnea Eduard, Ion	CA	IAC-16.B4.8.6
Mikhaylyuk, Mikhail	CA	IAC-16.B3.6-A5.3.5
Mikhaylyuk, Mikhail	CA	IAC-16.B3.6-A5.3.7
Mikkelsen, Ole	CA	IAC-16.C1.9.5
Mikloweit, Sascha	CA	IAC-16.E1.9.7
Milam, Sophie	CA	IAC-16.E1.1.5
Miller, Danielle	CA	IAC-16.E7.IP.6
Miller, Rebecca	CA	IAC-16.E3.IP.10
Millis, Marc	CA	IAC-16.C4.8.10
Milstein, Oren	CA	IAC-16.A1.4.7
Milyayev, Konstantin	CA	IAC-16.D2.7.11
Milyayev, Konstantin	CA	IAC-16.A6.5.3
Milyayev, Konstantin	CA	IAC-16.D2.6.5
Milza, Fabiana	CA	IAC-16.C2.8.8
Mindock, Jennifer	CA	IAC-16.E3.6.11
Mindock, Jennifer	CA	IAC-16.E3.6.12
Minesugi, Kenji	CA	IAC-16.C2.5.2
Mingireanu, Florin	CA	IAC-16.C4.2.9
Minnifield Cheeks, Nona	CA	IAC-16.E5.2.2
Minton, David	CA	IAC-16.A5.2.12
Miranda Blancas, Ricardo	CA	IAC-16.A1.IP.14
Mirino, Melissa	CA	
		IAC-16.E2.3-GTS.4.9
Mirino, Melissa	CA	IAC-16.E2.1.1
Mirkadyrov, Allen	CA	IAC-16.E1.1.5

CA

CA

CA

CA

CA

IAC-16.D2.IP.14

IAC-16.C4.1.15

IAC-16.D1.6.5

IAC-16.A2.1.4

IAC-16.B6.2.7







Narayan, R

Narayanan, Gopal

CA CA



IAC-16.C4.3.7

IAC-16.A4.1.9

Mirshams, Mehran

Mirshams, Mehran

Mirshams, Mehran

Mirzoyan, Sergey

Mishra, Rahul

Mishra, Rahul	CA	IAC-16.B6.2.7
Mishra, Ratnesh	CA	IAC-16.C2.1.4
Mishra, Ratnesh	CA	IAC-16.C2.7.6
Misra, Arun	CA	IAC-16.A6.5.6
Misra, Arun	CA	IAC-16.C1.8.11
Mistretta, Antonio	CA	IAC-16.B1.3.8
Mitic, Slobodan	CA	IAC-16.C4.4.14
Miton, Corentin	Α	IAC-16.D2.7.5
Miton, Corentin	CA	IAC-16.E1.3.12
Miton, Corentin	CA	IAC-16.D2.5.11
Miton, Corentin	CA	IAC-16.D5.2.4
Mitrofanow, Andrei	CA	IAC-16.A2.3.9
Miyachi, Akihira	CA	IAC-16.C3.2.2
Miyake, Masazumi	CA	IAC-16.B3.1.5
Miyake, Yohei	CA	IAC-16.D5.3.5
MIYATA, KEIKO	CA	IAC-16.E1.IP.27
MIYATA, KEIKO	CA	IAC-16.E1.8.7
Miyoshi, Takanori	CA	IAC-16.E3.2.2
Mizuchi, Masato	CA	IAC-16.C4.2.11
Mizuno, Atsuo	CA	IAC-16.D5.1.8
Mizuno, Hiroyasu	CA	IAC-16.B3.3.5
MN, PRAKASH	CA	IAC-16.C4.1.6
Mocak, Miroslav	CA	IAC-16.B1.3.9
Mochizuki, Kazunori	CA	IAC-16.D2.4.4
Modi, Neil	CA	IAC-16.E7.IP.23
Mody, Amin Ali	CA	IAC-16.B4.8.4
Mogensen, Andreas	CA	IAC-16.A1.IP.12
Mohammed, Nebiyu	CA	IAC-16.E5.5.4
Mohan, Manu	CA	IAC-16.C4.1.6
Mohan Sundara, Siva	CA	IAC-16.C1.1.5
MOHAN SUNDARA, SIVA	CA	IAC-16.C1.2.10
Mohanty, Susmita	CA	IAC-16.D3.3.2
Mohtar, Tharek	CA	IAC-16.D2.3.4
Moiseev, Dmitry	CA	IAC-16.A6.7.7
Moissl-Eichinger, Christine	CA	IAC-16.A1.5.2
Moktar, Khalil	CA	IAC-16.A3.IP.27
Moldwin, Mark	CA	IAC-16.B4.8.10
Molfese, Cesare	CA	IAC-16.A3.3A.6
MOLINA, Marco	CA	IAC-16.E1.IP.14
MOLINA, Marco	CA	IAC-16.A3.2A.5
MOLINA, Marco	CA	IAC-16.B1.3.8
MOLINA, Marco	CA	IAC-16.C4.6.2
MOLINA, Marco	CA	IAC-16.C1.9.8
Molina, Sergio	CA	IAC-16.B4.4.8
Moloney, Michael	CA	IAC-16.A7.1.6
Molotov, Igor	CA	IAC-16.A6.1.1
Momonoi, Yu	CA	IAC-16.D4.3.10
Monaghan, Euan	CA	IAC-16.A1.5.2
Monchaux, David	CA	IAC-16.D2.2.6
Mondragón Vincent, Emilio	CA	IAC-16.C3.4.4
Monge, Luis	CA	IAC-16.E2.2.3
Monge, Luis	CA	IAC-16.E1.5.15
Monreal, Julio	CA	IAC-16.D2.1.7
Monserrat-Filho, José	CA	IAC-16.E7.3.1
Monsivais-Huertero, Alejandro	CA	IAC-16.B1.IP.12
Monsivais-Huertero, Alejandro	CA	IAC-16.B1.IP.21
Montag, Christoph	CA	IAC-16.C4.4.13
Montalbano, Joel	CA	IAC-16.B3.1.2
Montanari, Chiara	CA	IAC-16.E5.1.7
Montenegro Quiñonez, Carlos Alberto	CA	IAC-16.E6.1.3
Montero de Jesus, Cecilia	CA	IAC-16.A5.IP.6
Montez, Carlos	CA	IAC-16.A4.2.8
Monti, Riccardo	CA	IAC-16.C2.3.7
Montorsi, Guido	CA	IAC-16.D1.4.8
Montoya Lorenzana, Lilia	CA	IAC-16.A1.IP.14
Montoya Lorenzana, Lilia	CA	IAC-16.A1.5.5
Mooij, Erwin	A	IAC-16.C2.3.14
Mooij, Erwin	CA	IAC-16.C1.8.8
Moon, Yongjin		
	CA	IAC-16.C1.3.3
Moore, Christopher	CA CA	IAC-16.C1.3.3 IAC-16.D3.4.1

IAC-16.A3.3B.7

Mora Portela, Darío	CA	IAC-16.A6.6.5
Mora Vargas, Andrés	CA	IAC-16.D2.IP.3
Mora Vargas, Andrés	CA	IAC-16.E1.IP.9 IAC-16.E2.2.3
Mora Vargas, Andrés Mora Vargas, Andrés	CA	IAC-16.E2.2.3
Moraguez, Matthew	CA	IAC-16.A6.1.8
Moraguez, Matthew	CA	IAC-16.A6.3.6
Morales Sánchez, Joel Edmundo	CA	IAC-16.A2.5.1
Morales-Navas, Camila	CA	IAC-16.A2.3.5
Morancais, Didier	CA	IAC-16.A3.1.7
More, Nikhil Moreels, Philippe	CA	IAC-16.A2.3.9 IAC-16.A6.1.9
Moreels, Philippe	CA	IAC-16.A6.6.2
Morel, Eric	CA	IAC-16.B1.2.3
Moreno, Claudia	CA	IAC-16.A2.1.7
Moretti, Francesco	CA	IAC-16.D6.3.1
Morgan, Eleanor	CA	IAC-16.B3.9-GTS.2.7
Morganti, Nicolò	CA	IAC-16.E1.IP.14
Mori, Osamu	CA	IAC-16.C2.2.10
Mori, Tomoya Morillo, Pablo	CA	IAC-16.E1.IP.6 IAC-16.B4.4.8
Morimoto, Hitoshi	CA	IAC-16.B4.4.8
MORIN, Pierre	CA	IAC-16.D2.7.5
MORIN, Pierre	CA	IAC-16.E1.3.12
MORIN, Pierre	CA	IAC-16.D2.5.11
MORIN, Pierre	CA	IAC-16.D5.2.4
Morino, Yoshiki	CA	IAC-16.C1.IP.8
Morita, Taichi	CA	IAC-16.C4.4.9
Morita, Yasuhiro	CA	IAC-16.C2.1.2
Morita, Yasuhiro Morita, Yasuhiro	CA	IAC-16.D2.1.11 IAC-16.C4.2.5
Morita, Yasuhiro	CA	IAC-16.C4.2.5
Morita, Yasushi	CA	IAC-16.C4.2.5
Morita Gagliardi, Alessandro Takeshi	CA	IAC-16.A3.IP.1
Moritz, Christian	CA	IAC-16.C4.5.6
Moriya, Shin-ichi	CA	IAC-16.C4.3.9
Moriyama, Eriko	CA	IAC-16.B3.3.5
Morlang, Frank	CA	IAC-16.D6.2-D2.9.2
Morozov Genrih	CA	IAC-16.B2.4.3 IAC-16.A1.IP.35
Morozov, Genrih Morozov, Yegor	A	IAC-16.A1.IP.35
Morozov, Yegor	A	IAC-16.A1.5.10
Morozova, Elina	CA	IAC-16.E7.4.5
Morrison, Brandon	CA	IAC-16.E3.3.6
Mortensen, Andreas	CA	IAC-16.C2.9.5
Morzhukhina, Alena	CA	IAC-16.C2.4.2
Morán Solares, Luz Ernestina	CA	IAC-16.A1.2.11
Mosebach, Herbert	CA	IAC-16.A3.3B.4
Moseman, Travis Moser, Hubert Anton	CA A	IAC-16.A5.1.5 IAC-16.D1.5.3
Moskalov, Sergii	CA	IAC-16.D1.5.3
Mota, Fatima	CA	IAC-16.A2.6.4
MOTOMURA, Taiichi	CA	IAC-16.C4.1.4
Mou, Yongqiang	CA	IAC-16.A6.3.4
Mozzillo, Raffaele	CA	IAC-16.D1.3.7
Msibi, Lumka	CA	IAC-16.B1.IP.28
Msibi, Lumka	CA	IAC-16.D1.5.2
Muehlbauer, Quirin	CA	IAC-16.A6.6.3
Mueting Joel	CA	IAC-16.E1.9.1
Mueting, Joel Mugellesi-Dow, Roberta	CA	IAC-16.C1.3.5 IAC-16.D5.2.1
Mughal, M.Rizwan	CA	IAC-16.B2.7.7
Mugnuolo, Raffaele	CA	IAC-16.A3.IP.10
Muirhead, Brian	CA	IAC-16.B3.1.3
Mukundan, Vijith	CA	IAC-16.C2.4.3
Muller, Christian	CA	IAC-16.A1.5.1
Mullin, Nikolay	CA	IAC-16.D1.3.9
Mundt, Christian	CA	IAC-16.C2.4.5
Mundt, Christian	CA	IAC-16.C2.7.7
Munemasa, Yasushi	CA	IAC-16.B2.7.3
Munsami, Valanathan Munyady, Mukish	CA	IAC-16.E3.1.11 IAC-16.C3.1.7
		IAC-16.A3.5.1
Murakami, Shin-ya	CA	
Murakami, Shin-ya Muraki, Yusuke	CA	IAC-16.B1.1.10

Murbach, Marcus	CA	IAC-16.B4.5.7
Murbach, Marcus	CA	IAC-16.B4.6A.10
Murrow, David	CA	IAC-16.A1.4.7
Murtazin, Rafail	CA	IAC-16.B3.4-B6.5.1
Murtazin, Rafail	CA	IAC-16.D2.4.7
Murthi, K.R. Sridhara	CA	IAC-16.E3.1.9
Murthi K. R., Sridhara	CA	IAC-16.E3.3.12
Murthi K. R., Sridhara	CA	IAC-16.B1.5.1
Murugan, Palani	CA	IAC-16.B1.5.2
Murugan, Palani	CA	IAC-16.B1.5.5
Muruganandham, Shivaprakash	CA	IAC-16.E1.5.6
Muruganandham, Shivaprakash	CA	IAC-16.E5.5.6
Murugesan, Vivek	CA	IAC-16.C4.IP.31
Murushkin, Sergey	CA	IAC-16.D1.IP.5
Musilova, Michaela	CA	IAC-16.B1.3.9
Musilova, Michaela	CA	IAC-16.E1.4.7
Musilova, Michaela	CA	IAC-16.A1.5.6
Musso, Giorgio	CA	IAC-16.A2.6.9
Muthusamy, Rajkumar	CA	IAC-16.B3.6-A5.3.4
Muthuswamy, Loganathan	CA	IAC-16.B4.8.4
Muñoz, Elisa	CA	IAC-16.A3.3B.7
Muñoz, Pablo	CA	IAC-16.A3.4.2
Muñoz, Ricardo	CA	IAC-16.D3.3.9
Muñoz Lomelí, Antonio Oswaldo	CA	IAC-16.A1.IP.36
Muñoz Silva, Arturo	CA	IAC-16.D1.2.12
Mykhalchyshyn, Roman	CA	IAC-16.D2.3.6
Myrrhe, Jacqueline	CA	IAC-16.E3.2.5
Mäusli, Pierre-Alain	CA	IAC-16.A6.5.2
Métrailler, Lionel	CA	IAC-16.A6.5.2
Mühlich, Nina Sarah	CA	IAC-16.C4.4.14
Müller, Vitali	CA	IAC-16.B1.2.7

Name	Role	Paper
Nader, Nourhane	CA	IAC-16.C4.6.4
Nader, Ronnie	CA	IAC-16.B4.6B.11
Nader, Ronnie	CA	IAC-16.E1.1.3
Nagai, Hiroki	CA	IAC-16.A3.3A.5
Nagai, Yuichiro	CA	IAC-16.E3.1.9
Nagamatsu, Hiroyuki	CA	IAC-16.B6.2.8
Nagano, Hiroshi	CA	IAC-16.C4.4.5
Nagata, Harunori	CA	IAC-16.C4.2.12
Nagayama, Takashi	CA	IAC-16.C4.2.5
Nagendra, Narayan Prasad	CA	IAC-16.E3.3.7
Nair, Vinayak	CA	IAC-16.A4.IP.1
Nair, Vinayak	CA	IAC-16.A5.IP.10
Nair, Vinayak	CA	IAC-16.A6.4.10
Nair, Vinayak	CA	IAC-16.A1.4.9
Nair, Vinayak	Α	IAC-16.A4.2.9
Nair, Vinayak	CA	IAC-16.C2.6.2
Najera, Felix	CA	IAC-16.D1.4.5
Nakamuka, Daichi	CA	IAC-16.E3.1.10
Nakamura, Masato	CA	IAC-16.A3.5.1
Nakamura, Shuji	CA	IAC-16.C3.2.2
Nakamura, Takahiro	CA	IAC-16.D2.5.4
Nakamura, Taro	CA	IAC-16.C4.2.7
Nakano, Nobuyuki	CA	IAC-16.C4.2.6
Nakarada Pecujlic, Anja	CA	IAC-16.E7.IP.4
Nakashima, Hideki	CA	IAC-16.C4.4.9
Nakatsuka, Junichi	CA	IAC-16.A3.5.1
Nakau, Koji	CA	IAC-16.B1.1.10
NAKAZAWA, ISAO	CA	IAC-16.B2.7.11
Nakazawa, Satoru	CA	IAC-16.A3.4.5
Naldi, Stefano	CA	IAC-16.A6.7.1
Naletto, Giampiero	CA	IAC-16.A3.IP.10
Nallapu, Ravi teja	Α	IAC-16.D4.5.8
Namba, Hirotaka	CA	IAC-16.D4.3.10
Nandakumar, K	CA	IAC-16.C4.1.13
Nandi, Sumita	CA	IAC-16.C1.4.12
Nannipieri, Pietro	CA	IAC-16.E1.IP.14
Napier, Jennifer Lauren	CA	IAC-16.E3.IP.3
Napier, Jennifer Lauren	CA	IAC-16.E6.3.2
Nara, Tokio	CA	IAC-16.D2.1.4

Narayanan, Gopal	CA	IAC-16.A4.1.9
Narayanan, Vanniyaperumal	CA	IAC-16.C4.1.11
Nardi, Davide	CA	IAC-16.C2.9.3
Narita, Kaneaki	CA	IAC-16.B3.1.5
Narsai, Pavan	CA	IAC-16.C4.2.13
Narumi, Tomohiro	CA	IAC-16.A6.5.4
Naseh, Hassan	CA	IAC-16.D2.IP.14
Nasseri, Seyed Ali	CA	IAC-16.D3.3.7
Nasseri, Seyed Ali	CA	IAC-16.E3.4.11
Nassisi, Annamaria	CA	IAC-16.E3.IP.8
Nassisi, Annamaria	CA	IAC-16.A6.8.11
Natale, Pasquale Nathanson, Emil	CA CA	IAC-16.C4.3.1 IAC-16.A1.6.4
Naudet, Joris	CA	IAC-16.A3.IP.8
Naudet, Joris	CA	IAC-16.A2.3.6
Nava Dino, Claudia Georgina	CA	IAC-16.A1.IP.37
Navarathinam, Nimal	A	IAC-16.B4.6A.1
Navarrini, Alessandro	CA	IAC-16.A4.1.8
Navarro, Luz	CA	IAC-16.A1.7.1
Nayar, Rashmi	CA	IAC-16.E2.3-GTS.4.9
Ndiritu, Meshack	CA	IAC-16.E3.1.11
Neely, Andrew	CA	IAC-16.C1.IP.9
Negi, Kuldeep	CA	IAC-16.C1.5.8
Negoro, Nobuki	CA	IAC-16.C4.1.2
Negus, David	CA	IAC-16.A1.IP.12
Nelson, Derek	CA	IAC-16.A3.2A.7
Nelson, John	CA	IAC-16.D3.4.3
Nelson, Joshua	CA	IAC-16.D4.1.7
Nenarokomov, Aleksey V.	CA	IAC-16.C2.4.2
Neti, Bhargavi	CA	IAC-16.E2.4.8
Neubert, Torsten	CA	IAC-16.B6.3.3
Neumann, Thomas	CA	IAC-16.E1.7.10
Neustaeter, Kenton	CA	IAC-16.E2.3-GTS.4.6
Neveu, David	CA	IAC-16.A3.IP.32
Neviaser, Andrew	CA	IAC-16.A1.3.3
Newman, Dava	CA	IAC-16.E6.1.7
Newman, Josh	CA	IAC-16.A3.2B.6
Ng, Su Wai	CA	IAC-16.B1.1.8
Ngoasheng, Khutso	CA	IAC-16.A3.IP.2
Ngoasheng, Khutso	CA	IAC-16.A3.IP.9
Ngoasheng, Khutso	CA	IAC-16.E5.4.7
Nguyen, Kevin Ni, Runli	CA CA	IAC-16.A1.7.6 IAC-16.D1.2.9
Ni, Wei-Tou	CA	IAC-16.D1.2.9
Nichele, Fabio	CA	IAC-16.B4.6B.8
Nichiporuk, Igor	CA	IAC-16.A1.IP.41
Nichiporuk, Igor	CA	IAC-16.A1.4.4
Nicolini, Davide	CA	IAC-16.D2.3.5
Nicolini, Frank	CA	IAC-16.B3.5.4
Nicollier, Claude	CA	IAC-16.E1.7.2
Nie, Mingyan	CA	IAC-16.E7.IP.30
Niederstrasser, Carlos	CA	IAC-16.B4.4.12
Niederstrasser, Carlos	CA	IAC-16.E1.4.4
Niederstrasser, Carlos	CA	IAC-16.B4.5.10
Niedner, Malcolm	CA	IAC-16.D1.3.10
Nield, George	CA	IAC-16.D6.1.4
Nielsen, Jens	CA	IAC-16.D1.4.10
Nies, Gilles	Α	IAC-16.B4.3.11
Niezette, Marc	CA	IAC-16.B1.4.3
Nightingale, Emily	CA	IAC-16.D4.5.5
Niitsu, Mayuki	CA	IAC-16.D2.1.4
Nikiforov, Anton	CA	IAC-16.A6.3.7
Nikita, Chernov	CA	IAC-16.A6.5.8
Nikita, Chernov	CA	IAC-16.C1.7.6
Nikitin, Valeriy	CA	IAC-16.A2.2.9
Nikonov, Vasily	CA	IAC-16.D4.3.12
Nimbalkar, Pratik	CA	IAC-16.C4.IP.22
Nimbalkar, Pratik	CA	IAC-16.C2.9.6
Nimelman, Menachem (Manny)	CA	IAC-16.A3.4.7
Ning, Xin	CA	IAC-16.D1.1.6
Nishida, Shin-Ichiro	CA	IAC-16.A6.IP.14
Nishihira, Shintaro	CA	IAC-16.D2.1.4
Nishikawa, Takayoshi	CA	IAC-16.B3.3.5
Nistico', Enrico Andrea	CA	IAC-16.A3.3B.3

270

Mora, Luis









IAC-16.A5.IP.4

IAC-16.E3.IP.11

IAC-16.E3.2.14

IAC-16.C2.1.4

IAC-16.C2.7.6

IAC-16.A4.IP.1

IAC-16.A5.IP.10

IAC-16.C4.IP.40

IAC-16.A6.4.10

CA

CA CA

CA CA

Nix, Tamar CA IAC-16.A1.4.7 Niño Prieto, Omar Ariosto CA IAC-16.D1.6.8 Njoku, John Didacus CA IAC-16.E2.1.2 Noack, Daniel IAC-16.C1.9.3 Nogueira, Paulo Roberto Murger CA IAC-16.B4.1.14 Nohmi, Masahiro CA IAC-16.D4.3.10 Nohmi, Masahiro IAC-16.E1.6.4 IAC-16.D2.1.4 Noma, Takashi IAC-16.D2.1.4 IAC-16.A6.7.9 IAC-16.D2.4.4 IAC-16.D2.5.4 IAC-16.B4.4.3 IAC-16.C2.9.5 CA CA CA CA Nomen, Jaime Nonaka, Satoshi Nonaka, Satoshi Noorma, Mart Norman, Andrew GTS.2.1

Norris, Scott	CA	IAC-16.B3.1.8
Norris, Scott	CA	IAC-16.B3.9-G7
Notaro, Virginia	CA	IAC-16.A7.2.6
Notaro, Virginia	CA	IAC-16.A7.3.5
Novakova, Julie	CA	IAC-16.E1.6.3
Novara, Carlo	CA	IAC-16.C1.2.3
Novin zadeh, Alireza	CA	IAC-16.C4.1.15
Novák, Marek	CA	IAC-16.C3.2.4
Novák, Marek	CA	IAC-16.C3.4.6
Nowakowski, Pawel	CA	IAC-16.C4.IP.28
Nowakowski, Pawel	CA	IAC-16.A2.5.3
Nozaki, Kenta	Α	IAC-16.C1.IP.8
Noël, Alexis	CA	IAC-16.A1.IP.29
Noël, Alexis	CA	IAC-16.C4.6.8
Nucera, Fortunato	CA	IAC-16.D3.3.1
Nugent, Ryan	CA	IAC-16.B4.3.6
Nugent, Ryan	CA	IAC-16.B4.5.2
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Name	Role	Paper
D'Halloran, Liam	CA	IAC-16.E2.1.3
D'Neill, Stephanie	CA	IAC-16.E5.3.10
D'Neill, William	CA	IAC-16.A3.1.9
D'Neill, William	CA	IAC-16.D3.1.4
D'Rourke, Laurence	CA	IAC-16.A3.4.2
D'Rourke, Laurence	CA	IAC-16.A3.4.3
D'Sullivan, Sinead	CA	IAC-16.E3.IP.9
OCAMPO-TORRES, Francisco J.	CA	IAC-16.B1.IP.16
OCAMPO-TORRES, Francisco J.	CA	IAC-16.B1.6.6
Occhigrossi, Silvia	CA	IAC-16.A6.4.3
Ochanda, Nicholas	CA	IAC-16.A3.1.10
Ochiai, Toshimasa	CA	IAC-16.A1.7.8
Offiong, Etim	CA	IAC-16.B4.7.11
Offringa, Marloes	CA	IAC-16.A3.3B.9
Offringa, Marloes	CA	IAC-16.B3.6-A5.3.8
Ogawae, Hiroyuki	CA	IAC-16.D2.4.4
Ogimoto, Kenji	CA	IAC-16.E1.IP.30
Ogneva, Irina	CA	IAC-16.A1.7.7
Ogohara, Kazunori	CA	IAC-16.A3.5.1
Ogura, Satoshi	CA	IAC-16.C1.5.5
Oguri, Kenshiro	CA	IAC-16.B4.8.1
Dh, David	CA	IAC-16.A1.5.8
Oh, Hyun-Ung	CA	IAC-16.B4.2.10
Oh, Hyun-Ung	CA	IAC-16.C2.3.8
Oh, Hyun-Ung	CA	IAC-16.C2.5.5
Oh, Taek Hyun	CA	IAC-16.C3.3.4
Dhkubo, Tomoko	CA	IAC-16.E1.IP.27
Ohkubo, Tomoko	CA	IAC-16.E1.IP.36
Ohkubo, Tomoko	CA	IAC-16.E1.8.7
Ohtake, Makiko	CA	IAC-16.A3.2A.2
Ohtsuki, Shoko	CA	IAC-16.A3.5.1
Djanen, Samu-Pekka	CA	IAC-16.B4.4.3
Djeda Ramirez, Oscar Ivan	CA	IAC-16.E3.1.1
Djeda Ramirez, Oscar Ivan	CA	IAC-16.E1.3.7
Djumu, Tijesu	CA	IAC-16.B5.2.4
Okada, Masashi	CA	IAC-16.D2.1.4
Okada, Nobu	A	IAC-16.A6.1.9
Okada, Nobu	A	IAC-16.A6.6.2
Okita, Koichi	CA	IAC-16.C4.1.2
Okninski, Adam	CA	IAC-16.C4.IP.28

Okninski, Adam	CA	IAC-16.A2.5.3
Okuizumi, N.	CA	IAC-16.C2.2.10
Dladejo, Sunday	CA	IAC-16.B5.2.4
Dlakunle, Oladosu	CA	IAC-16.E1.IP.29
Oldak, Jose	CA	IAC-16.B4.3.10
Dlentšenko, Georgi	CA	IAC-16.B4.4.3
Olguin, Lorenzo	CA	IAC-16.B4.2.3
Dliveira, Bruno	CA	IAC-16.A3.IP.18
Oliveira, Thais	CA	IAC-16.D4.3.6
Oliver, Carol	CA	IAC-16.A4.2.10
Oliver, Carol	CA	IAC-16.E5.5.1
Olivieri, Lorenzo	CA	IAC-16.D1.2.10
Olivieri, Lorenzo	CA	IAC-16.B4.6B.10
Olmedo Aguilar, Jose Manuel	CA	IAC-16.A4.2.8
Olmedo Aguilar, Nestor Daniel	CA	IAC-16.A4.2.8
Diofsson, Håkan	CA	IAC-16.C4.3.4
Olsen, Chris	CA	IAC-16.C4.IP.34
Olsen, John	CA	IAC-16.C1.2.1
Olsen, John	CA	IAC-16.D4.5.1
Olsen, Øystein	CA	IAC-16.B5.2.7
Olson, Aaron	CA	IAC-16.A3.IP.14
Olson, John	CA	IAC-16.D1.4.1
Olson, Thomas	CA	IAC-16.E6.2.5
Oltrogge, Daniel	CA	IAC-16.A6.2
Oltrogge, Daniel	CA	IAC-16.A6.2.1
Oluwafemi, Funmilola	CA	IAC-16.A5.IP.5
Olvera, Ana	CA	IAC-16.E1.IP.3
Onevsky, Maxim	CA	IAC-16.E5.2.2
Onga, Tadaoki	CA	IAC-16.C4.1.2
Onibudo, Oluwasegun Oluwaseun	CA	IAC-16.B1.5.4
DNO, Tetsuya	CA	IAC-16.D2.1.11
DNO, Tetsuya	CA	IAC-16.D2.4.5
Dnuki, Misuzu	CA	IAC-16.E6.2.10
Dnuki, Misuzu	CA	IAC-16.D6.3.4
Opiela, John	CA	IAC-16.A6.2.8
Opperman, Roedolph	CA	IAC-16.A1.2.3
Oralmagambetov, Baubek	CA	IAC-16.D1.IP.5
Oregel, Karlos	CA	IAC-16.A1.7.9
Oricchio, Domenico	CA	IAC-16.E3.IP.8
Orlandini, Giulia	CA	IAC-16.E1.IP.14
Orlova, Elizaveta	Α	IAC-16.E7.IP.7
Orlova, Elizaveta	CA	IAC-16.E1.4.5
Orozco Serna, Benito	CA	IAC-16.A1.2.11
Prozco Serna, Benito	CA	IAC-16.A4.2.8
Örger, Necmi Cihan	CA	IAC-16.A3.IP.23
Örger, Necmi Cihan	CA	IAC-16.A3.IP.33

Name	Role	Paper
P, ARUN KUMAR	CA	IAC-16.C4.3.8
P, Sajeev	CA	IAC-16.C4.1.9
Paces, Pavel	CA	IAC-16.E2.2.4
Pacheco Cabrera, Enrique	CA	IAC-16.D4.2.4
Padhi, R.	CA	IAC-16.C1.2.7
PADHY, AMIT KUMAR	CA	IAC-16.E7.IP.29
PADHY, ANKIT KUMAR	CA	IAC-16.E7.IP.29
Padilla, Eunice	CA	IAC-16.B4.2.3
Paetzold, Bastian	CA	IAC-16.C3.2.9
Pagano, Antonio	CA	IAC-16.A3.3B.2
Page, John	CA	IAC-16.C1.2.1
Pagone, Michele	CA	IAC-16.A5.2.11
Paiano, Salvatore	Α	IAC-16.C2.3.12
Paikowsky, Deganit	CA	IAC-16.E3.3.4
Paikowsky, Deganit	CA	IAC-16.D5.4.2
PAIROT, Jean-Michel	CA	IAC-16.A6.6.1
Paissoni, Christopher Andrea	CA	IAC-16.A5.1.9
Pakosz, Michal	CA	IAC-16.C4.IP.28
Pakosz, Michal	CA	IAC-16.A2.5.3
Palacios Fonseca, Juan Salvador	CA	IAC-16.B1.IP.15
Palatin, Véronique	CA	IAC-16.D2.5.1
Palermo, Gianluca	CA	IAC-16.D1.6.3
Palermo, Gianluca	CA	IAC-16.A7.3.5
Palisoc, Art	CA	IAC-16.C3.4.3

Paliwal, Nandini	CA	IAC-16.E7.IP.18	Patarin-Jossec, Julie
Palkovitz, Neta	CA	IAC-16.E7.4.8	Patarin-Jossec, Julie
Pall Thorvardarson, Hjalti	CA	IAC-16.C3.4.7	Patarin-Jossec, Julie
Palla, Chiara	CA	IAC-16.A6.IP.8	Patel, Anjan
Palla, Chiara	CA	IAC-16.A6.4.5	Patel, Anjan
Pallone, Marco	CA	IAC-16.C1.5.2	Patel, Shreyash
Palmade, Jean-Luc	CA	IAC-16.C1.5.3	Patel, Shreyash
Palmerini, Giovanni B.	CA	IAC-16.C1.1.3	Patel, Shreyash
Palmerini, Giovanni B.	CA	IAC-16.D1.2.7	Patel, Shreyash
Palmieri, Paolo	CA	IAC-16.C2.1.9	Patel, Shreyash
	CA		•
Palmnäs, Ulf		IAC-16.C4.3.4	Patel, Shreyash
Palmnäs, Ulf	CA	IAC-16.C4.3.5	Patel, Shreyash
Palo, Sibani	CA	IAC-16.C1.2.7	Pathak, Shashank
Palomba, Ernesto	CA	IAC-16.A1.5.1	Pathak, Shashank
Palomeque Domínguez, Héctor Hugo	A	IAC-16.A1.4.5	Pathak, Shashank
Palomeque Domínguez, Héctor Hugo	Α	IAC-16.A1.5.4	Pathak, Shashank
Palomo, Pedro	CA	IAC-16.A6.4.7	Pathak, Shashank
Paludo, Carla	CA	IAC-16.A1.7.5	Pathak, Shashank
Pan, Xiao	CA	IAC-16.C1.4.7	Pathak, Yashwant
Pan, Yao	CA	IAC-16.C2.IP.9	Patil, Aakash
Panasyuk, Mikhail	CA	IAC-16.B4.2.12	Patrice, PLOTARD
Pandele, Constantin Alexandru	CA	IAC-16.B2.4.7	Patrice, PLOTARD
Pandele, Constantin Alexandru	CA	IAC-16.B4.8.6	Patrick, Sabin
Pandey, Garima	CA	IAC-16.E1.5.6	•
,,			Patruno, Silvio
Pandey, Garima	CA	IAC-16.E5.5.6	Paul, Jose
Pandolfi, Giovanni	Α	IAC-16.B4.3.8	Paulo Salgueiro Moraes, Marcos
Pandya, Shawna	CA	IAC-16.E1.5.1	Pauly, Kristian
Panelli, Mario	CA	IAC-16.C4.3.1	Pavlis, Erricos C.
Pang, Weijian	CA	IAC-16.B4.6A.4	Pavone, Rosario
Pang, Weijian	CA	IAC-16.E2.4.5	Pavone, Rosario
Pangaro, Paul	CA	IAC-16.E5.3.3	Payson, Dmitry
Panov, Alexander	CA	IAC-16.A4.1.6	Payson, Dmitry
Panov, Alexander	CA	IAC-16.A4.2.5	Payson, Dmitry
Panza, Christian	CA	IAC-16.A3.2B.9	Payson, Dmitry
Paolozzi, Antonio	CA	IAC-16.A2.1.4	Peacocke, Lisa
Papadimitriou, Angeliki	CA	IAC-16.E3.1.13	Pearson, David
Papanagiotou, Emmanuel	CA	IAC-16.E2.3-GTS.4.6	Peck, Mason
Papanagiotou, Emmanuel	CA	IAC-16.E2.4.12	Peeters, Walter
Papat, Sayali	CA	IAC-16.C3.4.1	Pegg, Katherine
Pappalardo, Robert	CA	IAC-16.A7.2.5	PEI, Jingqiu
Parca, Giorgia	CA	IAC-16.E5.4.3	Pei, Jingqiu
Pardini, Carmen	CA	IAC-16.A6.2.2	Peinado, Veronica
Pardini, Carmen	CA	IAC-16.A6.2.7	Peklevskiy, Andrey
Pardo Spiess, Monika Johanna	CA	IAC-16.C4.IP.4	Pell, Sarah Jane
Pardo Spiess, Monika Johanna	CA	IAC-16.D4.1.6	Pell, Sarah Jane
Pardo Spiess, Monika Johanna	CA	IAC-16.E3.1.1	Pellacani, Andrea
Parent, Andree-Anne	CA		Pellacani, Andrea
-		IAC-16.A1.IP.15	
PARHI, ACHUTANANDA	CA	IAC-16.C4.IP.16	Pellander, Erik
PARHI, ACHUTANANDA	CA	IAC-16.A3.2B.4	Pelle, Stewart
Pari, Pierpaolo	CA	IAC-16.A4.1.8	Pelle, Stewart
Parigini, Cristina	CA	IAC-16.A6.4.7	Pellegrino, Alice
Parigini, Cristina	CA	IAC-16.A3.3B.2	Pellegrino, Alice
Paris, Claudio	CA	IAC-16.A2.1.4	Pellegrino, Alice
Paris, Claudio	CA	IAC-16.C2.2.12	Pellegrino, Alice
Paris, Claudio	CA	IAC-16.A6.9.9	Pellegrino, Massimo
Park, Jung Ho	CA	IAC-16.D4.2.6	Pellon-Bailon, Jose-Luis
Park, Sungdong	CA	IAC-16.B4.1.5	Pelton, Joseph
Park, Sungdong			Peltz, Leora
, , ,	CA	IAC-16.B4.4.9	-
Park, Tae-Yong	A	IAC-16.B4.2.10	Peng, Fujun
Parodi, Luciano	CA	IAC-16.B1.1.2	Peng, Fujun
PARRA, ALEJANDRO	CA	IAC-16.E1.3.9	Peng, Fujun
Partida, Erika	CA	IAC-16.B2.1.3	Peng, Fujun
Pascale, Enzo	CA	IAC-16.B4.2.5	Peng, Wei
Pasco, Xavier	CA	IAC-16.B1.2.3	Peng, Xiaobo
Pascual, Vicenç	CA	IAC-16.A1.2.4	Pengfei, Li
Pasolini, Pietro	CA	IAC-16.A3.3A.6	Pengfei, Li
Pasquali, Michele	CA	IAC-16.C2.9.3	Penny, Robert E
Pastore, Roberto	CA	IAC-16.A6.1.6	Pensado-Diaz, Hector Omar
Pastore, Roberto	CA	IAC-16.C2.6.3	Pepe, Vanessa
Pastore, Roberto	CA	IAC-16.C2.8.2	Pepe, Vanessa
•			•
Pastore, Roberto	CA	IAC-16.C2.8.6	Peralta, Candelario
Pastorelli, Stefano	CA	IAC-16.A6.1.10	Perczynski, Piotr
Pastorelli, Stefano	CA	IAC-16.D2.3.4	Pereda, Jorge
Patamia, Steven	CA	IAC-16.D4.3.7	Pereira, Vasco
Patankar, Kunal	CA	IAC-16.A6.1.8	Perera, Jeevan

almerini, Giovanni B.	CA	IAC-16.D1.2.7	Patel, Shreyash	Α	IAC-16.A6.4.10
almieri, Paolo	CA	IAC-16.C2.1.9	Patel, Shreyash	CA	IAC-16.A1.4.9
almnäs, Ulf	CA	IAC-16.C4.3.4	Patel, Shreyash	CA	IAC-16.A4.2.9
almnäs, Ulf	CA	IAC-16.C4.3.5	Patel, Shreyash	Α	IAC-16.C2.6.2
alo, Sibani	CA	IAC-16.C1.2.7	Pathak, Shashank	CA	IAC-16.A4.IP.1
alomba, Ernesto	CA	IAC-16.A1.5.1	Pathak, Shashank	CA	IAC-16.A5.IP.10
alomeque Domínguez, Héctor Hugo	Α	IAC-16.A1.4.5	Pathak, Shashank	CA	IAC-16.A6.4.10
alomeque Domínguez, Héctor Hugo	A	IAC-16.A1.5.4	Pathak, Shashank	CA	IAC-16.A1.4.9
alomo, Pedro	CA	IAC-16.A6.4.7	Pathak, Shashank	CA	IAC-16.A4.2.9
aludo, Carla	CA	IAC-16.A1.7.5	Pathak, Shashank	CA	IAC-16.C2.6.2
an, Xiao	CA	IAC-16.C1.4.7	Pathak, Yashwant	CA	IAC-16.A1.7.5
an, Yao	CA	IAC-16.C2.IP.9	Patil, Aakash	CA	IAC-16.C4.IP.32
anasyuk, Mikhail	CA	IAC-16.B4.2.12	Patrice, PLOTARD	CA	IAC-16.D2.1.3
andele, Constantin Alexandru	CA	IAC-16.B2.4.7	Patrice, PLOTARD	CA	IAC-16.D2.2.4
andele, Constantin Alexandru	CA	IAC-16.B4.8.6	Patrick, Sabin	CA	IAC-16.C4.1.3
andey, Garima	CA	IAC-16.E1.5.6	Patruno, Silvio	CA	IAC-16.B4.8.2
andey, Garima	CA	IAC-16.E5.5.6	Paul, Jose	CA	IAC-16.C4.5.7
andolfi, Giovanni	Α	IAC-16.B4.3.8	Paulo Salgueiro Moraes, Marcos	CA	IAC-16.B6.IP.1
andya, Shawna	CA	IAC-16.E1.5.1	Pauly, Kristian	CA	IAC-16.B2.4.2
anelli, Mario	CA	IAC-16.C4.3.1	Pavlis, Erricos C.	CA	IAC-16.A2.1.4
ang, Weijian	CA	IAC-16.B4.6A.4	Pavone, Rosario	CA	IAC-16.E6.3.10
ang, Weijian	CA	IAC-16.E2.4.5	Pavone, Rosario	CA	IAC-16.B1.5.3
angaro, Paul	CA	IAC-16.E5.3.3	Payson, Dmitry	CA	IAC-16.E3.IP.5
anov, Alexander	CA	IAC-16.A4.1.6	Payson, Dmitry	CA	IAC-16.E3.IP.13
anov, Alexander	CA	IAC-16.A4.2.5	Payson, Dmitry	CA	IAC-16.E6.3.3
anza, Christian	CA	IAC-16.A3.2B.9	Payson, Dmitry	CA	IAC-16.E7.7-B3.8.3
aolozzi, Antonio	CA	IAC-16.A2.1.4	Peacocke, Lisa	CA	IAC-16.A3.3A.4
apadimitriou, Angeliki	CA	IAC-16.E3.1.13	Pearson, David	CA	IAC-16.A1.IP.10
apanagiotou, Emmanuel	CA	IAC-16.E2.3-GTS.4.6	Peck, Mason	CA	IAC-16.C1.9.4
apanagiotou, Emmanuel	CA	IAC-16.E2.4.12	Peeters, Walter	CA	IAC-16.E6.2.12
apat, Sayali	CA	IAC-16.C3.4.1	Pegg, Katherine	CA	IAC-16.A6.6.1
appalardo, Robert	CA	IAC-16.A7.2.5	PEI, Jingqiu	CA	IAC-16.C4.9.7
arca, Giorgia	CA	IAC-16.E5.4.3	Pei, Jingqiu	CA	IAC-16.C4.3.14
ardini, Carmen	CA	IAC-16.A6.2.2	Peinado, Veronica	CA	IAC-16.A3.3B.7
ardini, Carmen	CA	IAC-16.A6.2.7	Peklevskiy, Andrey	CA	IAC-16.B3.3.3
ardo Spiess, Monika Johanna	CA	IAC-16.C4.IP.4	Pell, Sarah Jane	CA	IAC-16.E1.9.1
ardo Spiess, Monika Johanna	CA	IAC-16.D4.1.6	Pell, Sarah Jane	CA	IAC-16.B3.9-GTS.2.6
ardo Spiess, Monika Johanna	CA	IAC-16.E3.1.1	Pellacani, Andrea	CA	IAC-16.A3.IP.8
arent, Andree-Anne	CA	IAC-16.A1.IP.15	Pellacani, Andrea	CA	IAC-16.A6.5.1
ARHI, ACHUTANANDA	CA	IAC-16.C4.IP.16	Pellander, Erik	CA	IAC-16.B2.5.1
ARHI, ACHUTANANDA	CA	IAC-16.A3.2B.4	Pelle, Stewart	CA	IAC-16.A3.2A.9
ari, Pierpaolo	CA	IAC-16.A4.1.8	Pelle, Stewart	CA	IAC-16.A5.2.11
arigini, Cristina	CA	IAC-16.A6.4.7	Pellegrino, Alice	CA	IAC-16.D1.1.5
arigini, Cristina	CA	IAC-16.A3.3B.2	Pellegrino, Alice	CA	IAC-16.B2.2.7
aris, Claudio	CA	IAC-16.A2.1.4	Pellegrino, Alice	CA	IAC-16.E1.3.4
aris, Claudio	CA	IAC-16.C2.2.12	Pellegrino, Alice	CA	IAC-16.E1.5.5
aris, Claudio	CA	IAC-16.A6.9.9	Pellegrino, Massimo	CA	IAC-16.E3.4.12
ark, Jung Ho	CA	IAC-16.D4.2.6	Pellon-Bailon, Jose-Luis	CA	IAC-16.A3.4.1
ark, Sungdong	CA	IAC-16.B4.1.5	Pelton, Joseph	CA	IAC-16.E3.6.9
ark, Sungdong	CA	IAC-16.B4.4.9	Peltz, Leora	CA	IAC-16.B3.7.8
ark, Tae-Yong	Α	IAC-16.B4.2.10	Peng, Fujun	CA	IAC-16.A6.IP.29
arodi, Luciano	CA	IAC-16.B1.1.2	Peng, Fujun	CA	IAC-16.C2.2.13
ARRA, ALEJANDRO	CA	IAC-16.E1.3.9	Peng, Fujun	CA	IAC-16.A3.5.6
artida, Erika	CA	IAC-16.B2.1.3	Peng, Fujun	CA	IAC-16.C2.9.8
ascale, Enzo	CA	IAC-16.B4.2.5	Peng, Wei	CA	IAC-16.C2.IP.17
asco, Xavier	CA	IAC-16.B1.2.3	Peng, Xiaobo	CA	IAC-16.D2.5.2
ascual, Vicenç	CA	IAC-16.A1.2.4	Pengfei, Li	CA	IAC-16.C4.IP.38
asolini, Pietro	CA	IAC-16.A3.3A.6	Pengfei, Li	CA	IAC-16.C2.1.13
asquali, Michele	CA	IAC-16.C2.9.3	Penny, Robert E	CA	IAC-16.D4.3.3
estore, Roberto	CA	IAC-16.A6.1.6	Pensado-Diaz, Hector Omar	CA	IAC-16.A5.IP.6
astore, Roberto	CA	IAC-16.C2.6.3	Pepe, Vanessa	CA	IAC-16.E1.5.6
astore, Roberto	CA	IAC-16.C2.8.2	Pepe, Vanessa	CA	IAC-16.E5.5.6
astore, Roberto	CA	IAC-16.C2.8.6	Peralta, Candelario	CA	IAC-16.B5.2.2
estorelli, Stefano	CA	IAC-16.A6.1.10	Perczynski, Piotr	CA	IAC-16.D2.4.1
astorelli, Stefano	CA	IAC-16.D2.3.4	Pereda, Jorge	CA	IAC-16.A2.6.4
atamia, Steven	CA	IAC-16.D4.3.7	Pereira, Vasco	CA	IAC-16.C1.9.5









International Astronautical Cong 26 - 30 September 2016, Guadalajara, Mexico



Perera, Mali	Α	IAC-16.E4.1.1	Pietropaoli, Luca	CA	IAC-16.E3.IP.8
Perez, Guy	CA	IAC-16.E6.1.6	Pietropaolo, Andrea	CA	IAC-16.A6.7.2
Perez, Rodrigo	CA	IAC-16.E1.6.2	Pigeon, Carl	CA	IAC-16.C4.IP.36
Perez, Tracie	CA	IAC-16.B4.8.12	Pigeon, Carl	CA	IAC-16.C4.IP.37
PEREZ AYUCAR, MIGUEL	CA	IAC-16.A3.4.2	Piggott, Scott	CA	IAC-16.C1.1.4
PEREZ AYUCAR, MIGUEL	CA	IAC-16.B6.3.8	Pignatelli, David	CA	IAC-16.B4.5.6
Perez Ramirez, Bryan	CA	IAC-16.E2.3-GTS.4.4	Pignolet, Guy	CA	IAC-16.E1.9.3
Perez Soriano, Tatiana	CA	IAC-16.B4.7.5	PIGULEVSKI, IOURI	CA	IAC-16.C4.8.3
Perez-Poch, Antoni	A	IAC-16.D5.IP.3	Pilchen, Guy	Α	IAC-16.D2.1.2
Perez-Poch, Antoni	A	IAC-16.E1.IP.7	Pillet, Karine	CA	IAC-16.D3.3.4
Perez-Poch, Antoni	A	IAC-16.E1.IP.18	Pilz, Norbert Alexander	CA	IAC-16.A2.3.9
Perez-Poch, Antoni	CA	IAC-16.A1.2.4	Pimenov, Alexander	CA	IAC-16.D6.2-D2.9
Perez-Poch, Antoni	A	IAC-16.A1.3.5	Piness, Jessica	CA	IAC-16.A5.IP.5
Perino, Maria Antonietta	CA	IAC-16.D3.1.3	Ping, Fu	CA	IAC-16.C4.3.10
Perino, Maria Antonietta	CA	IAC-16.A3.2A.9	PING, TANG	CA	IAC-16.A3.IP.34
Perkins, Nekisha	CA	IAC-16.B3.3.1	PING, TANG	CA	IAC-16.A3.IP.35
Perkins, Tristan	CA	IAC-16.B1.1.9	Pingyuan, Cui	CA	IAC-16.A3.IP.17
Perkinson, Marie-Claire	CA	IAC-16.A3.1.7	Pink, Ryan	CA	IAC-16.A1.IP.10
Perkinson, Marie-Claire	CA	IAC-16.A3.3A.4	Pinsky, Lawrence	CA	IAC-16.B4.8.10
Perkinson, Marie-Claire	CA	IAC-16.C3.5-C4.7.1	PINUMALLA, KIRAN	CA	IAC-16.C4.2.4
Perlick, Volker	CA	IAC-16.A2.1.9	Piperno, Osvaldo	CA	IAC-16.E5.2.3
Perras, Alexandra	CA	IAC-16.A1.5.2	Pirat, Camille	CA	IAC-16.A6.5.2
Perrel, Françoise	CA	IAC-16.D2.7.3	Pirat, Camille	CA	IAC-16.E1.7.2
Perrelli, Fabrizio	CA	IAC-16.E5.5.2	Piro Barragam, Vinicius	CA	IAC-16.C2.5.12
Perrodin, Delphine	CA	IAC-16.A4.1.8	Pirondini, Fabrizio	CA	IAC-16.C1.5.3
Persson, Stefan	CA	IAC-16.C4.3.4	Pirrotta, Simone	CA	IAC-16.B4.1.11
Pesce, Vincenzo	CA	IAC-16.C1.3.2	Pirrotta, Simone	CA	IAC-16.E1.3.10
Pesce, Vincenzo	CA	IAC-16.A2.3.6	Pisal, Shubham	A	IAC-16.C3.4.1
Pesce, Vincenzo	CA	IAC-16.A6.6.6 IAC-16.B2.6.9	Pisanu, Tonino	CA	IAC-16.A3.IP.10
Pessoa, Luis	CA		Pisanu, Tonino	CA	IAC-16.A4.1.8
Petersen, Emily	CA	IAC-16.B3.7.9	Piso, Marius-Ioan	CA	IAC-16.B4.8.6
Peterson, Glenn	CA CA	IAC-16.A6.2.3	Pisova, Petra	CA CA	IAC-16.B2.IP.1
Peterson, Glenn	CA	IAC-16.A6.2.6	Pisseloup, Aurelien Pisseloup, Aurelien	CA	IAC-16.A3.3B.1 IAC-16.A6.6.1
Peterson, Glenn		IAC-16.A6.7.8	Pisseloup, Aurelien	CA	IAC-16.A6.6.8
Petraz, Stefano	CA CA	IAC-16.B6.3.7	Pittet, Jean-Noel	CA	IAC-16.A6.1.4
Petrillo, Davide	CA	IAC-16.D1.1.8	Pittman, Robert	CA	IAC-16.D3.1.1
Petrov, Vladislav	CA	IAC-16.A1.4.4	Piña López, Yair Israel	CA	IAC-16.D3.1.1
Petrova, Anastasia Petrozzi Ilstad, Marina	CA	IAC-16.C4.5.9 IAC-16.D2.2.7	Piña López, Yair Israel	A	IAC-16.A3.3A.8
Petruccione, Francesco	CA	IAC-16.D2.2.7	Piña López, Yair Israel	A	IAC-16.B2.6.11
Petukhov, Viacheslav	CA	IAC-16.C1.4.6	Plattard, Serge	CA	IAC-16.A6.8.1
Peyrard, Julien	A	IAC-16.A6.5.11	Pletser, Vladimir	CA	IAC-16.A2.5.9
Pfau, Jens	CA	IAC-16.B6.3.4	Plevin, Pierre	CA	IAC-16.A5.IP.3
Pfeifer, Marius	CA	IAC-16.A3.4.8	Pliego Caballero, Samuel	CA	IAC-16.A7.3.1
Pfeiffer, Lukas	CA	IAC-16.A2.3.6	Pliewischkies, André	CA	IAC-16.D5.2.9
Phanse, Ajinkya	CA	IAC-16.C3.4.1	Plokhikh, Andrey	CA	IAC-16.C4.4.10
Phelan, Ronan	CA	IAC-16.E5.3.10	Ploom, Indrek	CA	IAC-16.B4.4.3
Philip, N K	CA	IAC-16.A3.IP.3	Ploom, Indrek	CA	IAC-16.E2.4.4
Philip, N K	CA	IAC-16.C1.1.5	Plourde, Patrick	CA	IAC-16.B1.3.10
Philip, N K	CA	IAC-16.C1.2.7	Podhajsky, Sandra	CA	IAC-16.A1.6.7
Philip, N K	CA	IAC-16.C1.2.10	Podzolko, Mikhail	CA	IAC-16.B4.2.12
Philippov, Vladimir	CA	IAC-16.A4.1.6	Pohl, Renate	CA	IAC-16.E5.3.8
Phillips, Sean	CA	IAC-16.C1.4.10	Polli, Aldo	CA	IAC-16.C4.6.2
Phillips III, James	CA	IAC-16.A3.2B.3	Pollice, Luciano	CA	IAC-16.A7.3.5
Phipps, Andy	CA	IAC-16.A6.6.8	Pollice, Luciano	CA	IAC-16.C2.9.3
Piacquadio, Stefano	CA	IAC-16.E1.IP.14	Pollini, Alexandre	CA	IAC-16.A6.6.8
Piazza, Aurore	CA	IAC-16.D1.7.2	Pomerantz, William	CA	IAC-16.B3.2.5
Picard, Alyssa	CA	IAC-16.D4.5.5	Pomerantz, William	CA	IAC-16.D2.7.1
Picard, Alyssa	CA	IAC-16.C3.5-C4.7.2	PONCE, LUIS	CA	IAC-16.E1.3.9
Picard, Martin	CA	IAC-16.A3.2B.6	Ponce, Octavio	CA	IAC-16.E5.5.7
Piccioni, Giuseppe	CA	IAC-16.A3.IP.10	Pont, Gabriel	CA	IAC-16.A2.6.2
Piccioni, Giuseppe	CA	IAC-16.A7.3.8	Pontani, Mauro	CA	IAC-16.C1.5.2
ichon, Thierry	CA	IAC-16.D2.6.3	Pontijas Fuentes, Irene	CA	IAC-16.A6.4.7
Piedboeuf, Jean-Claude	CA	IAC-16.D3.4.2	Pontijas Fuentes, Irene	CA	IAC-16.A3.3B.2
Pierce, Jillianne	CA	IAC-16.E7.2.2	Pontuschka, Maurício	CA	IAC-16.C2.3.6
Piergentili, Fabrizio	CA	IAC-16.A6.IP.19	Pop, Virgiliu	CA	IAC-16.E1.IP.2
Piergentili, Fabrizio	CA	IAC-16.A6.1.6	Pop, Virgiliu	CA	IAC-16.E7.2.8
Piergentili, Fabrizio	CA	IAC-16.B4.1.11	Popov, Garri A.	CA	IAC-16.C4.4.10
Piergentili, Fabrizio	CA	IAC-16.E1.3.4	Popp, Katja	CA	IAC-16.E6.3.6
Piergentili, Fabrizio	CA	IAC-16.E1.3.10	Poppé, Marino	Α	IAC-16.D1.5.3
Piergentili, Fabrizio	CA	IAC-16.C2.6.3	Porat, Yuval	CA	IAC-16.E3.4.11
Pierre, Omaly	CA	IAC-16.A6.4.8	Porfilio, Manfredi	CA	IAC-16.B1.1.7
Pierre-Philippe, Mathieu	CA	IAC-16.D1.1.5	Porfilio, Manfredi	CA	IAC-16.B1.2.9
Piest, Baptist	CA	IAC-16.A2.3.2	Porras, Daniel	CA	IAC-16.E7.IP.8

Portabella, Marcos	CA	IAC-16.B1.IP.17
Portelli, Claudio	CA	IAC-16.A6.4.3
Portelli, Claudio	CA	IAC-16.A6.7.2
Portigliotti, Stefano	CA	IAC-16.A3.3B.2
Posselt, Winfried	CA	IAC-16.A3.1.6
Possenti, Andrea	CA	IAC-16.A3.IP.10
Possenti, Andrea	CA	IAC-16.A4.1.8
Post, Kevin	CA	IAC-16.A5.1.10
POUFFARY, Benoit	CA	IAC-16.D2.1.2
POUFFARY, Benoit	CA	IAC-16.D2.1.2
Poulet, Lucie	CA	IAC-16.A1.6.1
Pourdaraei, Sara	CA	IAC-16.B2.6.14
Poventud-Estrada, Carlos	A	IAC-16.A2.3.5
Povoleri, Angelo	CA	IAC-16.C1.9.5
Poynter, Lyndsey	CA	IAC-16.B6.3.11
Pozos Flores, Angel	CA	IAC-16.A4.2.8
Prabhune, Bhagyashree	CA	IAC-16.C2.2.9
Prabhune, Bhagyashree	CA	IAC-16.E2.3-GTS.4.5
Prabhuraj, D K	CA	IAC-16.B5.2.10
Prado, Antonio	CA CA	IAC-16.C1.IP.1
PRADO, JORGE		IAC-16.B4.6B.13
Prakash, Surya	CA	IAC-16.C1.3.8
Prasad, Simon	CA	IAC-16.B4.6A.1
Prasad Nagendra, Narayan	CA	IAC-16.B4.1.2
Pratt, William	CA	IAC-16.A5.1.8
Preciado Velazco, Jorge	CA	IAC-16.D4.2.8
Preti, Giampaolo	CA	IAC-16.A3.IP.10
Prevost, Lilian	CA	IAC-16.D2.1.7
Price, Harry	A	IAC-16.E7.IP.7
Price, Harry	CA	IAC-16.E1.4.5
Prieto, Ines	CA	IAC-16.E5.5.3
Prieto-Corona, Belén	CA	IAC-16.A1.IP.44
Procopio, Dorico	CA	IAC-16.C1.9.8
Prokopchik, Anna	CA	IAC-16.A6.8.4
Prokopyev, Dmitry	CA	IAC-16.C4.5.9
Propst, Martin	CA	IAC-16.C4.5.4
Proshkin, Vladimir	CA	IAC-16.A1.IP.35
Prost, Jean-Pierre	CA	IAC-16.D1.1.1
PROVEN- ADZRI, EMMANUEL	CA	IAC-16.E1.IP.21
Provin, Laurie	CA	IAC-16.B3.4-B6.5.5
Pruin, Bernard	CA	IAC-16.B1.4.1
Prunariu, Dumitru-Dorin	CA	IAC-16.E3.4.12
Pudsey, Adrian	CA	IAC-16.C2.4.5
Puglia, Jonata	CA	IAC-16.B4.3.8
Puhan, Bagmisikha	CA	IAC-16.E5.2.7
Puig-Suari, Jordi	CA	IAC-16.B4.3.6
Puig-Suari, Jordi	CA	IAC-16.B4.5.2
Puig-Suari, Jordi	CA	IAC-16.B4.5.6
Puig-Suari, Jordi	CA	IAC-16.B4.6B.7
Pulcrano, Giuseppina	CA	IAC-16.E1.8.3
Pulcrano, Giuseppina	CA	IAC-16.B1.6.5
Pulcrano, Giuseppina	CA	IAC-16.B5.1.1
Punch, Orla	CA	IAC-16.A3.1.10
Punch, Orla	CA	IAC-16.A3.2C.6
Punzo, Francesco	CA	IAC-16.A3.3A.6
Puschman, Nicholas	CA	IAC-16.E7.1.11
Pérez, Ana Alexandra	CA	IAC-16.E2.3-GTS.4.7
Pérez Pérez, Fabricio Otoniel	CA	IAC-16.B1.IP.16
Püttmann, Norbert	CA	IAC-16.C4.4.3
Pützfeld, Dirk	CA	IAC-16.A2.1.9

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Name	Role	Paper
Qedar, Ran	CA	IAC-16.D1.1.7
Qedar, Ran	CA	IAC-16.D1.2.2
Qi, Wenwen	CA	IAC-16.B1.IP.26
Qi, Yi	A	IAC-16.C1.6.4
Qian, Shen-En	CA	IAC-16.B1.2.5
Qiang, Gang	CA	IAC-16.C4.9.4
Qiao, Li	CA	IAC-16.C1.3.7
Qichen, Tian	CA	IAC-16.B1.IP.9
Qin, Peng	CA	IAC-16.B2.6.13
Qin, Yi-Xian	CA	IAC-16.A1.2.9
Qingguo, Lin	CA	IAC-16.C4.1.14

Qiu, Baogui	CA	IAC-16.A3.IP.34
Qiu, Baogui	CA	IAC-16.A3.IP.35
Qiu, Dongyang	CA	IAC-16.B3.4-B6.5.6

Qiu, Baogui	CA	IAC-16.A3.IP.35
Qiu, Dongyang	CA	IAC-16.B3.4-B6.5.6
R		
Name D. Harikrichnan	Role	Paper
R, Harikrishnan	CA	IAC-16.C4.2.3
R, HUTTON	CA	IAC-16.D2.1.9
R, REKHACHANDRA	CA	IAC-16.A3.IP.3
R, Santhanakrishnan	CA	IAC-16.C2.6.1
R., Sivakumar	CA	IAC-16.B1.5.5
Rabade, Salil	A	IAC-16.D4.5.7
Rabbow, Elke	CA	IAC-16.A1.5.2
Rabe, Karin	CA	IAC-16.A3.IP.5
Rabineau, Jérémy	CA	IAC-16.A5.IP.11
Rachuk, Vladimir	CA	IAC-16.C4.4.10
Racioppa, Paolo	CA	IAC-16.A7.2.6
Racioppa, Paolo	CA	IAC-16.A7.3.5
Rade, Domingos	CA	IAC-16.C2.2.7
Radice, Gianmarco	CA	IAC-16.B4.1.6
Radice, Gianmarco	CA	IAC-16.C1.6.11
Radice, Gianmarco	CA	IAC-16.B5.2.5
Radtke, Jonas	CA	IAC-16.A6.2.4
Radu, Silvana	CA	IAC-16.B2.4.7
Radu, Silvana	CA	IAC-16.B4.8.6
Radutu, Alina	CA	IAC-16.B2.4.7
Rafano Carnà, Simone Flavio	CA	IAC-16.A2.3.6
Rafano Carnà, Simone Flavio	CA	IAC-16.D3.3.1
Ragauskas, Ugnius	CA	IAC-16.A2.5.10
Ragazzoni, Roberto	CA	IAC-16.A7.3.7
Raghavan, Jeenu	CA	IAC-16.C4.2.4
RAHA, BIJOY	CA	IAC-16.A3.2B.8
Rahman, Shamim	Α	IAC-16.B3.7.5
Rahmat, Meysam	CA	IAC-16.C2.8.7
Rahme, Maricruz	CA	IAC-16.E1.IP.3
Rai, Balwant	CA	IAC-16.A1.2.10
Rainjonneau, Serge	CA	IAC-16.B6.2.5
Raj, Baldev	CA	IAC-16.E3.3.12
Raj, Karunya	CA	IAC-16.A1.IP.21
Raj, Karunya	CA	IAC-16.C2.6.7
Raj, Karunya	CA	IAC-16.C2.6.9
Raja, V.L.N. Sridhar	CA	IAC-16.A3.2B.8
Raja, V.L.N. Sridhar	CA	IAC-16.A3.3B.6
Rajan, Aneesh	CA	IAC-16.C4.1.9
Raju, Sathyanarayana	CA	IAC-16.B2.2.6
RAMAJO, Valentin	А	IAC-16.D2.7.5
RAMAJO, Valentin	CA	IAC-16.E1.3.12
RAMAJO, Valentin	CA	IAC-16.D2.5.11
RAMAJO, Valentin	CA	IAC-16.D5.2.4
Ramesh, Rakshith	CA	IAC-16.B2.5.9
Ramesh, Rakshith	CA	IAC-16.B2.8-GTS.3.9
Ramirez, Jorge	CA	IAC-16.E5.3.6
Ramirez, Julio	CA	IAC-16.B4.1.8
Ramirez, Rodrigo	CA	IAC-16.A4.2.1
Ramirez Aguilar, Alberto	CA	IAC-16.B4.1.16
Ramirez Aguilar, Alberto	CA	IAC-16.E3.4.7
Ramirez Aguilar, Alberto	CA	IAC-16.B2.IP.4
Ramirez Aguilar, Jose Alberto	CA	IAC-16.B2.IP.4
<u> </u>		
Ramirez Aguilar, Jose Alberto	CA	IAC-16.B6.3.1
Ramirez Jimenez, Antonio	CA	IAC-16.B4.4.8
Ramirez Jimenez, Sandra Ignacia	CA	IAC-16.A1.IP.14
Ramirez Jimenez, Sandra Ignacia	CA	IAC-16.A1.5.5
Ramirez Olivos, Jose Miguel	CA	IAC-16.E5.5.7
Rammer Sancher Mariela		

CA

CA

IAC-16.E1.7.1

IAC-16.A5.IP.6

Ramirez Sanchez, Mariela

Ramirez-Enriquez, Julieta Ivette









Ran, Dechao

Ranuzzi, Giuliano

Rao, Mukund Kadursrinivas

Rao, Mukund Kadursrinivas

Rao, Mukund Kadursrinivas

Ran, Lixin Ransom, Stephen

RAO, M.V.H.

RAO, M.V.H.

RAO, SANDYA

RAO, SANDYA

Rao A, Divya

Raposo, Ana

Rasky, Dan Rastelli, Davide

Rastelli, Davide Rasuo, Bosko

Ratcliffe, Andrew

Rathnasabapathy, Minoo

Rathnakara, K.

Rathod, Abhijit

Rathod, Abhijit

Rathod, Abhijit

Rathod, Abhijit

Rathod, Abhijit Rathod, Bhavesh

Raut, Akshay Raut, Akshay

Ravan, Shirish Ravikumar, L.

Rayman, Marc D. Razgunas, Matas

Razoumny, Vladimir Razoumny, Yury

Re, Cristina

Rebellon, Carlos

REBOLLAR, BLANCA

Reddy, Meghana Reece, Mike

Reed, Cheryl L.B.

Reed, Helen

Reed, Rebekah

Regan, Amanda

Regnier, Marine

Regnier, Pascal Reibaldi, Giuseppe

Reibaldi, Giuseppe

Reichstein, Markus

Reisman, Garrett

Remba, Jonathan

Rembala, Richard Remilla, Murthy

Remilla, Murthy

Remilla, Murthy

Remilla, Murthy

Reid, Ewan

Reiter, Jason Reiter, Thomas

Reeves, J.D.

Reed, Jaime Reed, Nikolai

Rarata, Grzegorz Rasel, Ernst Maria

Rasel, Ernst Maria RASHID, KHALID

Rao, V. Koteswara

AUTHORS

			tronautical (6, Guadalajara, N	
Ramos, Igor		CA	IAC-16.D4.2.8	R
Ramsayer, Kate		CA	IAC-16.E1.7.10	Re
Ramírez Luque, Jua	an Antonio	CA	IAC-16.A3.3B.5	Re

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IAC-16.C1.9.12

IAC-16.C3.2.5

IAC-16.D4.1.7

IAC-16.C4.3.13

IAC-16.A3.2B.8

IAC-16.A3.3B.6

IAC-16.E3.1.9

IAC-16.E3.3.12

IAC-16.B5.2.10

IAC-16.A1.IP.31

IAC-16.E1.IP.23

IAC-16.B2.5.10

IAC-16.E2.4.7

IAC-16.D1.2.2

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IAC-16.C4.3.12

IAC-16.D3.1.1

IAC-16.A6.4.6

IAC-16.A6.7.1

IAC-16.C1.7.8

IAC-16.A6.6.1

IAC-16.B2.2.6

IAC-16.E1.5.10

IAC-16.C4.IP.22

IAC-16.C2.2.9

IAC-16.C4.6.7

IAC-16.C2.9.6

IAC-16.C3.4.1

IAC-16.C2.1.4

IAC-16.C2.7.6

IAC-16.E5.4.8

IAC-16.C1.5.8

IAC-16.A3.4.6

IAC-16.A2.5.10

IAC-16.C1.4.9

IAC-16.C1.4.9

IAC-16.A3.IP.10

IAC-16.E1.3.1

IAC-16.E2.1.7

IAC-16.A3.4.10

IAC-16.B4.8.10

IAC-16.B4.3.4

IAC-16.A1.3.9

IAC-16.D3.4.9

IAC-16.B1.2.6

IAC-16.A3.3B.1

IAC-16.A3.5.3

IAC-16.E7.2.1

IAC-16.E6.3.8

IAC-16.B1.6.1

IAC-16.E1.4.7

IAC-16.B3.2.10

IAC-16.A6.7.5

IAC-16.B3.1.4

IAC-16.B1.IP.6

IAC-16.E5.2.7

IAC-16.E5.2.9

IAC-16.B1.5.5

IAC-16.B5.2.3

IAC-16.B3.6-A5.3.2

Rocha de Oliveira, Marta

IAC-16.A3.3B.10

IAC-16.C3.5-C4.7.1

IAC-16.C3.5-C4.7.1

IAC-16.E2.3-GTS.4.5



Remilla, Murthy	CA	IAC-16.B5.1.7
Ren, Leisheng	CA	IAC-16.B5.1.7
Ren, Xingyu	CA	IAC-16.C1.6.11
Rendina, Matteo	CA	IAC-16.D2.5.12
Rendina, Matteo	CA	IAC-16.D2.5.13
Rendleman, James	CA	IAC-16.E7.4.7
Renduchintala, Kiran	CA	IAC-16.A4.IP.3
Renduchintala, Kiran Renduchintala, Kiran	CA CA	IAC-16.A2.2.10 IAC-16.E2.1.7
Repin, Igor	CA	IAC-16.B3.3.3
Reschke, Millard	CA	IAC-16.A1.2.1
Ressouche, A	CA	IAC-16.B2.1.6
Ressouche, A	CA	IAC-16.B4.6B.2
Resta, Pier Domenico	A	IAC-16.D2.1.2
Resta, Pier Domenico	CA	IAC-16.D2.2.5
Retat, Ingo	CA	IAC-16.B3.1.9
Retat, Ingo	CA	IAC-16.A6.5.7
Retat, Ingo	CA CA	IAC-16.A6.6.8 IAC-16.A1.5.1
Rettberg, Petra	CA	IAC-16.A1.5.1
Rettberg, Petra Rettberg, Petra	CA	IAC-16.A1.5.2
Revesz, Istvan	CA	IAC-16.A5.IP.5
Reybeyre, Pierre	CA	IAC-16.A2.6.1
Reyes, JM	CA	IAC-16.D3.IP.3
Reyes, Yessica	CA	IAC-16.E2.3-GTS.4.4
Reyes Mantilla, Camilo Andres	CA	IAC-16.E7.IP.7
Reyes Mantilla, Camilo Andres	CA	IAC-16.E1.4.5
Reyes Mantilla, Camilo Andres	CA	IAC-16.D3.3.4
Rezaei, Mohammadreza	CA	IAC-16.E1.5.8
Rezugina, Ekaterina	CA	IAC-16.B2.2.2
Ribbelink, Olivier Riccardi, Annalisa	CA CA	IAC-16.E7.3.8 IAC-16.C1.7.1
Ricci, Daniele	CA	IAC-16.C1.7.1
Ricci, Daniele	CA	IAC-16.C4.3.1
Riccobono, Dario	CA	IAC-16.A5.2.1
RICHARD, Yves	CA	IAC-16.B4.2.7
Richard-Noca, Muriel	CA	IAC-16.A6.5.2
Richter, Friedrich	CA	IAC-16.E1.7.7
Richter, Lutz	CA	IAC-16.A3.2A.3
Richter, Lutz	CA	IAC-16.A3.3B.4
Rideau, Pascal	CA	IAC-16.D1.1.1
Rieger, Florian	CA	IAC-16.B5.2.7
Rieger, Samantha	CA	IAC-16.A3.IP.15
Rienow, Andreas Ries, John	CA CA	IAC-16.E1.2.2 IAC-16.A2.1.4
Ries, Lionel	CA	IAC-16.B4.2.7
Rievers, Benny	CA	IAC-16.A2.1.2
Rievers, Benny	CA	IAC-16.A2.1.9
Rigby, Graham	CA	IAC-16.D1.7.8
Rigby, Graham	CA	IAC-16.C2.9.4
Riley, David	CA	IAC-16.C1.7.3
Riley, David	CA	IAC-16.D5.3.2
Rinaldi, Riccardo	CA	IAC-16.B4.8.2
Rittweger, Andreas	CA	IAC-16.C2.1.1
Rittweger, Jörn	CA	IAC-16.A5.IP.1
Rittweger, Jörn	CA	IAC-16.A1.2.6
Riva, Stefano Rivera, Jullian	CA CA	IAC-16.C3.IP.1 IAC-16.A6.9.1
Rivera Caicedo, Juan Pablo	CA	IAC-16.A6.9.1
Rivero, Moises	CA	IAC-16.A6.2.8
Rivolta, Aureliano	CA	IAC-16.E3.4.11
Rivolta, Aureliano	CA	IAC-16.C4.6.4
Rivolta, Aureliano	CA	IAC-16.D1.7.6
Rizzi, Francesco	CA	IAC-16.A3.2B.9
Rizzi, Jean-Michel	CA	IAC-16.D2.1.2
Roberts, Christopher	CA	IAC-16.B4.1.15
Roberts, Margaret	CA	IAC-16.B3.2.2
Roberts, Peter C.E.	CA	IAC-16.C1.8.4
Robinson, Jendai	CA	IAC-16.C2.8.12
Robinson, Julie A.	CA	IAC-16.B3.3.1
Robinson, Kimberly Robinson, Mark	CA CA	IAC-16.D2.8-A5.4.1 IAC-16.A3.2A.7
Robison, Kathryn	CA	IAC-16.E3.2.10
Rocha de Oliveira, Marta	CA	IAC-16.A3.1.10
Rocha de Oliveira, Marta	CA	IAC-16 A7 2 2

Rocha de Oliveira, Marta	CA	IAC-16.D4.1.10
Rochus, Pierre	CA	IAC-16.C2.2.1
Rodrigues, Manuel	CA	IAC-16.A2.1.1
Rodrigues, Pedro	CA	IAC-16.B2.6.9
RODRIGUEZ, ALFONSO	CA	IAC-16.A1.IP.7
Rodriguez, David	CA	IAC-16.A3.1.10
RODRIGUEZ, DIEGO	CA	IAC-16.D1.4.2
Rodriguez, Fernando	A	IAC-16.B4.6B.6
Rodriguez Amaya, Laura	CA	IAC-16.E1.7.1
Rodriguez Amaya, Laura	CA	IAC-16.E1.2.8
Rodriguez Dominguez, Rene	CA	IAC-16.E6.1.8
Rodriguez III, Manuel A.	CA	IAC-16.A2.3.5
Rodriguez Llamas, Luis Felipe	CA	IAC-16.D5.3.9
Rodriguez-Manfredi, Jose	CA	IAC-16.A3.3B.7
Rodríguez Llorca, Pablo	CA	IAC-16.B4.6A.13
Rodríguez Montoya, Iván	CA CA	IAC-16.A7.3.2 IAC-16.B1.IP.15
Rodríguez Pedroza, Berenice	CA	
Rodríguez Pupo, Eya Caridad		IAC-16.A1.5.5
Rodríguez-Camacho, Mario	CA	IAC-16.A1.IP.44
Rodríguez-López, Armando	A	IAC-16.A1.IP.44
Roe, Mark	CA	IAC-16.A6.6.8
Roelof, Edmond	CA	IAC-16.D4.1.9
Roemer, Stephan	CA	IAC-16.B4.6A.5
Roesler, Gordon	CA	IAC-16.B6.2.1
Rognini, Michele	CA	IAC-16.E1.IP.14
Rohrbeck, Mathias	CA	IAC-16.A3.5.7
Rohrwild, Karlheinz	CA	IAC-16.E4.1.5
Rohrwild, Karlheinz	CA	IAC-16.E4.1.6
Rohrwild, Karlheinz	CA	IAC-16.E4.1.8
Rojas Quesada, Mariela	CA	IAC-16.E2.2.3
Rojas-Mendizabal, Veronica	CA	IAC-16.D4.2.8
Rokicka, Karolina	CA	IAC-16.A2.5.3
Roma, Alfredo	CA	IAC-16.B5.2.8
Roma, Ilaria	CA	IAC-16.A3.3A.6
Roman-Gonzalez, Avid	CA	IAC-16.B4.1.3
Roman-Gonzalez, Avid	CA	IAC-16.B4.1.10
Roman-Gonzalez, Avid	CA	IAC-16.E3.3.10
Roman-Gonzalez, Avid	CA	IAC-16.B1.4.4
Romanelli, Gherardo	CA	IAC-16.C3.5-C4.7.8
Romani, Marco	CA	IAC-16.B1.5.3
Romani, Romano	CA CA	IAC-16.C3.IP.1 IAC-16.D2.7.3
Romano, Diego Giuseppe Romberg, Oliver	CA	IAC-16.D2.7.3
Romei, Federico	CA	IAC-16.C2.9.7
Romero, Francisco	CA	IAC-16.E2.9.7
Romero Martin, Juan Manuel	CA	IAC-16.B4.3.10
Romo, Rodrigo	CA	IAC-16.C1.3.1
	CA	IAC-16.A3.2B.3
Romo, Rodrigo	CA	IAC-16.B3.6-A5.3.6
Romo Fuentes, Carlos	CA	IAC-16.B4.1.13
Romo Fuentes, Carlos	CA	IAC-16.B4.1.16
Romo Fuentes, Carlos		
Romo Fuentes, Carlos Romualdo Ramos, Netsaualkoyotl	CA CA	IAC-16.B6.3.1 IAC-16.D5.3.9
Román López, Jesús	A CA	IAC-16.A1.4.3
Román López, Jesús	CA	IAC-16.B2.6.11
Rong, Jili Poos, Tobias	CA	IAC-16.C1.3.6
Roos, Tobias	CA	IAC-16.E2.3-GTS.4.7
Rosado, Helena	CA	IAC-16.A1.IP.12
Rosciano, Elisa	CA	IAC-16.A2.1.8
Rosciano, Elisa	CA	IAC-16.B2.4.5
Roser, Xavier	CA	IAC-16.D1.1.1
Roser, Xavier	CA	IAC-16.D2.3.2
Roshanian, Jafar	CA	IAC-16.B2.6.10
Rosich Tell, Betlem	CA	IAC-16.B1.4.1
Rossi, Alessandro	CA	IAC-16.A6.IP.24
Rossi, Alessandro	CA	IAC-16.A6.1.3
Rossi, Alessandro	CA	IAC-16.A6.2.4
Rossi, Alessandro	CA	IAC-16.A6.2.7
Rossi, Alessandro	CA	IAC-16.A6.4.2
Rossi, Massimiliano	CA	IAC-16.B1.3.3
Rossiyskaya, Ekaterina	CA	IAC-16.B3.3.3
Rossmanith, Gregor	CA	IAC-16.B6.2.4
Roth, John	CA	IAC-16.D1.1.3
Roth, John	CA	IAC-16.D2.3.1 IAC-16.D3.1.2
Rousek, Tomas	CA	

CA

IAC-16.D4.1.10

Rocha de Oliveira, Marta

Rousseau, Frederique	CA	IAC-16.B2.1.6
Rousseau, Frederique	CA	IAC-16.B4.6B.2
Roussel, Jean-Francois	CA	IAC-16.A6.2.10
Roussel, Jean-Francois	CA	IAC-16.D5.3.6
Rout, Bibhudutta	CA	IAC-16.C2.8.4
Roy, Marc	CA	IAC-16.D1.7.8
RUAN, Ningjuan	CA	IAC-16.B1.IP.10
Rucinski, Marek	CA	IAC-16.A3.3B.8
Rudin, Hannah	CA	IAC-16.E2.3-GTS.4.2
Rudolph, Andreas	CA	IAC-16.B6.2.11
Rudolph, Andreas	CA	IAC-16.A3.4.1
Rudy, Richard	CA	IAC-16.A6.1.5
Rueda Carazo, Alberto	CA	IAC-16.E7.IP.36
Ruff, Gary	CA	IAC-16.D3.1.5
Rui hao, Wang	CA	IAC-16.A1.6.8
Ruilin, Wu	CA	IAC-16.A1.1.4
Ruisheng, LIU	CA	IAC-16.E1.4.11
Ruiz, Xavier	CA	IAC-16.A1.2.4
Ruiz Ciriaco, Francisco	CA	IAC-16.D1.6.8
Rukavishnikov, Ilya	CA	IAC-16.A1.2.1
Rusconi, Andrea	Α	IAC-16.A3.2A.5
Russell, Ray	CA	IAC-16.A6.1.5
Russitano Lanza, Martina	CA	IAC-16.A3.1.10
Russo, Enrico	CA	IAC-16.E5.4.3
Russomano, Thais	CA	IAC-16.A1.7.5
Ruttley, Tara	A	IAC-16.B3.3.1
Ruy, Ghislain	CA	IAC-16.D2.4.1
Ruà, Emanuele Giovanni	CA	IAC-16.B4.1.11
Ruà, Emanuele Giovanni	CA	IAC-16.E1.3.10
Rybakin, Boris	CA	IAC-16.A2.4.1
Rygalov, Vadim	CA	IAC-16.E2.2.2
Rysak, Damian	CA	IAC-16.A2.5.3
Ryzenko, Jakub	CA	IAC-16.E5.4.6

Name	Role	Paper
S, Lakshmi	CA	IAC-16.C2.6.1
s, Santhoshbabu	CA	IAC-16.C2.1.11
s, Santhoshbabu	CA	IAC-16.C4.5.7
s, Santhoshbabu	CA	IAC-16.C4.5.8
S, Sudhakar	CA	IAC-16.B2.5.10
Saavedra Lautensach, Marco Antonio	CA	IAC-16.C3.3.8
Saavedra Lautensach, Marco Antonio	CA	IAC-16.C3.4.8
Sabath, Dieter	CA	IAC-16.B3.4-B6.5.2
Sabatini, Marco	CA	IAC-16.C1.1.3
Sabatini, Marco	CA	IAC-16.C2.2.4
Sabatini, Marco	CA	IAC-16.D1.2.7
Sabbatinelli, Beatrice	CA	IAC-16.E6.1.6
Sabella, Gianluca	CA	IAC-16.B1.4.1
Saccani, Luciano	CA	IAC-16.D2.3.1
Sacco, Patrizia	CA	IAC-16.E5.4.3
Saccoccia, Giorgio	CA	IAC-16.D4.1.2
Saccoccia, Giorgio	CA	IAC-16.E1.4.9
Saccoccia, Giorgio	CA	IAC-16.D2.5.9
Sachkov, Mikhail	CA	IAC-16.A4.2.8
Sackey, Daniel	CA	IAC-16.D3.3.4
Sadler, Phil	CA	IAC-16.A5.1.2
Safronov, Viktor	CA	IAC-16.B3.IP.2
Safronov, Viktor	CA	IAC-16.B3.2.6
Saganti, Premkumar	CA	IAC-16.A1.4.1
Sagath, Daniel	CA	IAC-16.E3.1.13
Sagath, Daniel	CA	IAC-16.E6.3.1
Sagle, Laura	CA	IAC-16.C2.8.12
Sagliano, Marco	CA	IAC-16.C1.2.4
Sagnieres, Luc	Α	IAC-16.A6.IP.33
Sahin, Ceren Canet	CA	IAC-16.E7.IP.35
Saiki, Takanao	CA	IAC-16.A3.4.4
Saiki, Takanao	CA	IAC-16.A3.4.5
Saikia, Arnav	CA	IAC-16.E1.IP.17
Saikia, Arnav	CA	IAC-16.E1.2.10
Saikia, Arnav	CA	IAC-16.E2.4.1
Saikia, Sarag	CA	IAC-16.A5.2.12
Saint-Alme, Alexandre	CA	IAC-16.D2.7.5

276 277

IAC-16.A7.2.2

CA

 CA

CA

CA

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CA

 $\mathsf{C}\mathsf{A}$

CA

 $\mathsf{C}\mathsf{A}$

CA









Saint-Alme, Alexandre

Saint-Alme, Alexandre

Saint-Alme, Alexandre

Saito, Yasuhiro

Sakagami, Keiichiro Sakai, Shigeyuki

Sakai, Shin-ichiro Sakai, Shin-ichiro

Sakai, Shin-ichiro

Sakamoto, Hiraku

Sakamoto, Hiraku Sakamoto, Noboru

Sakamoto, Seiichi Saks, Noah

Sakurai, Ryu

Salaun, J-L.

Salaun, J-L.

Salaverria, Luis

Salaverria, Luis

Salaverria, Luis

Salazar, Francisco

Saleny, Vratislav

Salmon, Thierry

Salmon, Thierry

Salotti, Jean-Marc

Salotti, Jean-Marc Salvan, Laura

Salvati, Antonello

Salvatore, Vito

Salvatore, Vito

Salvatore, Vito Salyasari, Noriandini Dewi

Salzgeber, Frank

Samson, Victoria

Sanchez, Enrique

Sanchez, Juan Carlos

Sampayo García, Jose Luis

Sanchez Cuartielles, Joan Pau

Sanchez Cuartielles, Joan Pau

Sanchez Gestido, Manuel

Sanchez H, Dulce Carolina

Sanchez H, Dulce Carolina

Sanchez Ortiz, Noelia

Sandal, Gro Mjeldheim

Sandal, Gro Mjeldheim

SANJEEVIRAJA, THANGAVEL

SANJEEVIRAJA, THANGAVEL

Sansores-Sastre, Antonio

Santillian- Gutierrez, Saul

Santilllan- Gutierrez, Saul

Santillan- Gutierrez, Saul

Santillán Gutierrez, Saúl Daniel

Santillán Gutierrez, Saúl Daniel

Sandal, Gro M.

Sander, Tobias

Sanders, Brian T.

Sanders, Brian T.

Sandham, Neil

Sang, Xiaoru

Sanjuan, Jose Sannino, Jean-Michel

Sansoè, Claudio

Santhoshbabu, S

Santilli, Giancarlo

Santoni, Fabio

Santoni, Fabio

Santiago-Cruz, Lauro

Saleous, Aisha Sallam, Montaser

Salazar Diaz, Geraldo

Saleh, Joseph Homer

Saleh, Joseph Homer

Salem Condory, Behnam

SAKUGAWA, BENEDITO

Saito. Yuii

279

26 - 30 September 2016, Guadalajara, Mexic

IAC-16.E1.3.12

IAC-16.D2.5.11

IAC-16.D5.2.4

IAC-16.D2.4.5

IAC-16.C4.2.12

IAC-16.B3.3.5

IAC-16.D5.1.8

IAC-16.C1.1.11

IAC-16.C1.2.12

IAC-16.C1.8.2

IAC-16.C2.2.8

IAC-16.C2.2.10

IAC-16.D2.4.4

IAC-16.E1.IP.30

IAC-16.B2.4.1

IAC-16.D5.1.2

IAC-16.E5.3.7

IAC-16.B2.1.6

IAC-16.B4.6B.2

IAC-16.E3.1.6

IAC-16.E6.1.8

IAC-16.D2.7.6

IAC-16.C1.7.11

IAC-16.B2.6.4

IAC-16.C4.IP.30

IAC-16.C4.IP.48

IAC-16.E1.5.8

IAC-16.D4.1.7 IAC-16.E1.5.8

IAC-16.E1.5.8

IAC-16.A6.6.1

IAC-16.A6.6.8

IAC-16.A5.2.2

IAC-16.E1.7.5

IAC-16.E1.7.5

IAC-16.B1.5.3

IAC-16.C4.IP.23

IAC-16.C4.IP.44

IAC-16.C4.3.1

IAC-16.B1.6.3

IAC-16.E6.3.7

IAC-16.D1.6.8

IAC-16.E3.IP.6

IAC-16.B5.1.8

IAC-16.D3.3.9

IAC-16.A3.1.6

IAC-16.C1.5.7

IAC-16.A6.IP.18

IAC-16.B2.IP.4

IAC-16.B6.3.1

IAC-16.A6.7.9

IAC-16.A1.1.2

IAC-16.A1.1.1

IAC-16.C2.4.5

IAC-16.B4.6B.9

IAC-16.A7.3.6

IAC-16.C4.IP.18

IAC-16.A2.5.9

IAC-16.C2.6.1 IAC-16.B1.2.7

IAC-16.C4.1.8 IAC-16.D4.2.8

IAC-16.C2.6.5

IAC-16.C4.2.3

IAC-16.B1.IP.6 IAC-16.B5.2.11

IAC-16.B4.1.13 IAC-16.B4.1.16

IAC-16.A6.4.9

IAC-16.E3.4.7

IAC-16.B6.3.1

IAC-16.A6.IP.19

IAC-16.A6.1.6

IAC-16.A1.IP.26

IAC-16.B3.9-GTS.2.5

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	DEMY OF	143 (13E)	
Santoni, Fabio	CA	IAC-16.D1.1.5	
Santoni, Fabio	CA	IAC-16.B4.1.11	
Santoni, Fabio	CA	IAC-16.E1.3.4	
Santoni, Fabio	CA	IAC-16.E1.3.10	
Santoni, Fabio	CA	IAC-16.C2.6.3	
Santoni, Fabio	CA	IAC-16.C2.8.2	
Santoni, Fabio	CA	IAC-16.C2.8.6	
Santonicola, M. Gabriella	CA	IAC-16.C2.6.12	
Santonicola, M. Gabriella	CA	IAC-16.C2.8.5	
Santonicola, M. Gabriella	CA	IAC-16.C2.8.8	
Santoro, Francesco	CA	IAC-16.D6.3.1	
Santra, Shreya	CA	IAC-16.B1.5.10	
Sant'Anna, Nilson	CA	IAC-16.B6.IP.1	
Saotome, Osamu	CA	IAC-16.C2.3.6	
Saprykin, Oleg	CA	IAC-16.A3.IP.7	
Saprykin, Oleg	CA	IAC-16.B3.IP.2	
Saprykin, Oleg	CA	IAC-16.B3.2.6	
Saprykin, Oleg	CA	IAC-16.A5.1.11	
Saprykin, Oleg	CA	IAC-16.B3.6-A5.3.1	
Saprykin, Oleg	CA	IAC-16.B3.6-A5.3.3	
Sarah, Maria-Gabriella	CA	IAC-16.E3.6.4	
Sarda, Karan	CA	IAC-16.B4.2.6	
Sarli, Bruno	CA	IAC-16.D3.1.7	
Sarli, Bruno	CA	IAC-16.E3.1.1	
Sarli, Bruno	CA	IAC-16.C1.5.5	
Sarli, Bruno	CA	IAC-16.C1.5.11	
Sarno, Salvatore	CA	IAC-16.C1.4.4	
Sarno, Salvatore	CA	IAC-16.B4.7.4	
Sarris, Emmanuel	CA	IAC-16.D4.1.3	
Sarsfield, Mark	CA	IAC-16.C3.5-C4.7.1	
Carti Francesco	C A	IAC 16 E1 2 6	

Santoni, Fabio	CA	IAC-16.B4.1.11
Santoni, Fabio	CA	IAC-16.E1.3.4
Santoni, Fabio	CA	IAC-16.E1.3.10
Santoni, Fabio	CA	IAC-16.C2.6.3
Santoni, Fabio	CA	IAC-16.C2.8.2
Santoni, Fabio Santonicola, M. Gabriella	CA CA	IAC-16.C2.8.6 IAC-16.C2.6.12
Santonicola, M. Gabriella	CA	IAC-16.C2.8.5
Santonicola, M. Gabriella	CA	IAC-16.C2.8.8
Santoro, Francesco	CA	IAC-16.D6.3.1
Santra, Shreya	CA	IAC-16.B1.5.10
Sant'Anna, Nilson	CA	IAC-16.B6.IP.1
Saotome, Osamu	CA	IAC-16.C2.3.6
Saprykin, Oleg	CA	IAC-16.A3.IP.7
Saprykin, Oleg	CA	IAC-16.B3.IP.2
Saprykin, Oleg	CA CA	IAC-16.B3.2.6
Saprykin, Oleg Saprykin, Oleg	CA	IAC-16.A5.1.11 IAC-16.B3.6-A5.3.1
Saprykin, Oleg	CA	IAC-16.B3.6-A5.3.3
Sarah, Maria-Gabriella	CA	IAC-16.E3.6.4
Sarda, Karan	CA	IAC-16.B4.2.6
Sarli, Bruno	CA	IAC-16.D3.1.7
Sarli, Bruno	CA	IAC-16.E3.1.1
Sarli, Bruno	CA	IAC-16.C1.5.5
Sarli, Bruno	CA	IAC-16.C1.5.11
Sarno, Salvatore	CA	IAC-16.C1.4.4
Sarno, Salvatore	CA	IAC-16.B4.7.4
Sarris, Emmanuel	CA	IAC-16.D4.1.3
Sarsfield, Mark	CA	IAC-16.C3.5-C4.7.1
Sarti, Francesco	CA	IAC-16.E1.2.6
Sasaki, Kenji	CA	IAC-16.C3.2.2
Sasaki, Susumu	CA	IAC-16.C3.1.2
Sasaki, Takahiro Sasaki, Takuro	CA CA	IAC-16.C1.9.7 IAC-16.C3.2.2
Sato, Akihiro	CA	IAC-16.D2.1.4
Sato, Kazutaka	CA	IAC-16.A5.2.8
Sato, Kenta	CA	IAC-16.A6.5.4
Sato, Masao	CA	IAC-16.C3.2.2
Sato, Shunsuke	CA	IAC-16.C1.5.5
Sato, Shunsuke	CA	IAC-16.D2.5.4
Sato, Tatsuki	CA	IAC-16.A6.5.4
Satoh, Naoki	CA	IAC-16.A5.1.7
Satoh, Takehiko	CA	IAC-16.A3.5.1
Satpathy, Sagar	CA	IAC-16.D2.IP.13
Saucedo, Gerardo	CA	IAC-16.D2.7.4
Saunders, Chris	CA	IAC-16.B4.6A.5
Saunders, Chris Saunders, Christopher	CA CA	IAC-16.B4.8.3
Saunders, Christopher	CA	IAC-16.B4.2.4 IAC-16.B4.2.5
Savini, Giorgio	CA	IAC-16.B4.2.5
Savino, Raffaele	CA	IAC-16.A2.3.3
Savino, Raffaele	CA	IAC-16.A3.3A.6
Savoia, Matteo	CA	IAC-16.A3.2A.5
Saxton, Michael	CA	IAC-16.E3.2.11
Scaringello, Andrea	CA	IAC-16.B4.3.8
Scavuzzi, Juliana	CA	IAC-16.B4.1.15
Scavuzzi, Juliana	CA	IAC-16.D5.4.1
Scavuzzi, Juliana	CA	IAC-16.E7.5.6
Scepanovic, Sanja	CA	IAC-16.D5.4.6
Schaffer, Mark	A	IAC-16.D1.1.9
Schaub Hanspeter	A	IAC-16.B3.7.10
Schaub, Hanspeter Scheeres, Daniel	CA CA	IAC-16.C1.1.4 IAC-16.A3.IP.15
Scheeres, Daniel	CA	IAC-16.C1.4.3
Scheeres, Daniel	CA	IAC-16.C1.7.4
Scheibelhut, Neil	CA	IAC-16.E1.1.5
Scheper, Marc	A	IAC-16.A6.IP.28
Scheper, Marc	CA	IAC-16.D2.4.1
Scheper, Marc	CA	IAC-16.A6.6.3
Scheper, Marc	CA	IAC-16.D5.3.2
Scheper, Marc	CA	IAC-16.B4.8.5
Scherrmann, Marcel	CA	IAC-16.E2.3-GTS.4.7
Schervan, Thomas A.	CA	IAC-16.C2.1.5
Schier, James	CA	IAC-16.D3.1.5

Schildknecht, Thomas	CA	IAC-16.A6.1.4	Seidel, Stephan Tobias	CA	IAC-16.A2.3.1
Schildknecht, Thomas	CA	IAC-16.A6.9.5	Seine, Ruediger	CA	IAC-16.B3.5.4
Schildknecht, Thomas	CA	IAC-16.A6.9.8	Seitzer, Patrick	CA	IAC-16.A6.1.3
Schilgen, Caspar	CA	IAC-16.E6.3.6	Selg, Fabian	CA	IAC-16.E1.2.2
Schilling, Alexander	CA	IAC-16.E1.5.6	Selig, Hanns	CA	IAC-16.A2.1.2
Schilling, Alexander	CA	IAC-16.E5.5.6	Selig, Hanns	CA	IAC-16.A2.5.6
Schilling, Klaus	CA	IAC-16.B4.3.4	SELLERIAN, Serge	CA	IAC-16.D2.2.2
Schilling, Klaus	CA	IAC-16.D1.3.6	Semanas, Chioma	CA	IAC-16.C3.2.9
Schilling, Klaus	CA	IAC-16.E4.2.7	Semanas, Chioma	CA	IAC-16.E6.3.4
Schillirò, Francesco	CA	IAC-16.A4.1.8	Senan, C. Rajeev	CA	IAC-16.C4.3.8
Schirg, Florian	CA	IAC-16.E6.2.11	Seneta, Alexandra	CA	IAC-16.E3.3.11
Schiøler, Henrik	CA	IAC-16.D1.4.10	Seo, Daeban	CA	IAC-16.C4.IP.12
Schlacht, Irene Lia	CA	IAC-16.A5.IP.1	Sephton, Mark	CA	IAC-16.A1.5.9
Schlacht, Irene Lia	CA	IAC-16.A1.2.6	Serpokryl, Viktoria	CA	IAC-16.A6.IP.6
Schlacht, Irene Lia	CA	IAC-16.E5.1.7	Serra, Romain	CA	IAC-16.C1.7.1
Schlacht, Irene Lia	CA	IAC-16.A3.2C.6	Serrano Baza, César Augusto	CA	IAC-16.E2.3-GTS.4.4
Schlechten, Jonathan	CA	IAC-16.A3.2C.3	Serrano-Santoyo, Arturo	CA	IAC-16.D4.2.8
Schlegel, Hans	CA	IAC-16.B3.1.9	Serva, Stefano	CA	IAC-16.B1.1.7
Schloerb, Peter	CA	IAC-16.A4.1.9	Serva, Stefano	CA	IAC-16.B1.2.9
Schlotterer, Markus	CA	IAC-16.C1.2.4	Seward, Elizabeth	CA	IAC-16.A3.1.7
Schlutz, Juergen	Α	IAC-16.A5.1.3	Seymour, Mark	CA	IAC-16.A6.6.4
Schlutz, Juergen	CA	IAC-16.A5.1.7	Seymour, Mark	CA	IAC-16.A7.3.6
Schmidt, Marco	CA	IAC-16.B1.4.2	Sgambati, Antonella	CA	IAC-16.D1.1.3
Schmidt, Nikola	CA	IAC-16.D3.1.2	Sganga, Riccardo	CA	IAC-16.A6.4.7
Schmidt, Nikola	CA	IAC-16.E3.2.9	Shah, Kartik	CA	IAC-16.A3.IP.41
Schmitt, Mathieu	CA	IAC-16.B6.1.5	Shah, Kartik	CA	IAC-16.C4.6.11
Schmullius, Christiane	CA	IAC-16.B1.6.1	Shah, Ronak	CA	IAC-16.C4.0.11
		IAC-16.B1.6.1			
Schneider, Stephan	CA		Shah, Ronak	CA	IAC-16.E3.6.11
Schoenmaker, Annelie	CA	IAC-16.E7.4.10	Shahid, Kam	CA	IAC-16.B6.3.5
Schrage, Thomas	CA	IAC-16.B1.2.10	SHAJI, A	CA	IAC-16.C4.IP.16
Schrama, Ernst	CA	IAC-16.E1.3.6	Shalvi, Somya	CA	IAC-16.A4.IP.1
Schrogl, Kai-Uwe	CA	IAC-16.E7.1.1	Shalvi, Somya	CA	IAC-16.A5.IP.10
Schrogl, Kai-Uwe	CA	IAC-16.E3.2.7	Shalvi, Somya	CA	IAC-16.A6.4.10
Schröder, Kai-Uwe	CA	IAC-16.C2.1.5	Shalvi, Somya	CA	IAC-16.A1.4.9
Schubert, Daniel	CA	IAC-16.E5.1.7	Shalvi, Somya	CA	IAC-16.A4.2.9
Schubert, Peter	CA	IAC-16.A3.IP.27	Shalvi, Somya	CA	IAC-16.C2.6.2
Schubert, Peter	CA	IAC-16.C3.1.7	Shang, Guoqiang	CA	IAC-16.C3.3.9
Schubert, Peter	CA	IAC-16.C3.2.3	Shao, Jian	CA	IAC-16.D1.IP.12
Schubert, Peter	CA	IAC-16.C3.2.6	Shar, Mansoor	CA	IAC-16.E3.3.6
Schulte, Peter	Α	IAC-16.D1.IP.2	Sharf, Inna	CA	IAC-16.A6.IP.33
Schulte, Wolfgang	CA	IAC-16.A3.3B.4	Sharf, Inna	CA	IAC-16.A6.5.6
Schultz, Daniel	CA	IAC-16.E1.7.7	Sharf, Inna	CA	IAC-16.A6.6.7
Schultz, Johannes	CA	IAC-16.E1.2.2	Sharma, Abhishek	A	IAC-16.A3.IP.4
Schulz, Rita	CA	IAC-16.A3.4.8	Sharma, Abhishek	A	IAC-16.C4.IP.43
Schulze, Dirk	CA	IAC-16.E3.6.6	Sharma, Abhishek	CA	IAC-16.D1.6.10
Schumann, Sandra	CA	IAC-16.A2.6.5	Sharma, Kalpataru	CA	IAC-16.B2.2.6
Schwendner, Petra	CA	IAC-16.A1.5.2	Sharma, Sagar	CA	IAC-16.E2.4.8
Schwinning, Marius	CA	IAC-16.B3.3.9		CA	
Schönherr, Tony	CA		Sharma, SC	CA	IAC-16.C2.4.3
· · ·		IAC-16.C4.4.12	Sharma, Sidhant		IAC-16.E7.IP.19
Schönherr, Tony	CA	IAC-16.C4.4.13	Sharma, Tanay	CA	IAC-16.E3.4.10
Schüller, Kai	CA	IAC-16.A3.IP.43	Sharman, Rob	CA	IAC-16.C4.3.5
Schütze, Daniel	CA	IAC-16.B1.2.7	Sharpe, Carla	CA	IAC-16.A3.IP.9
Scimemi, Sam	CA	IAC-16.B3.3.10	Sharpe, Carla	CA	IAC-16.A6.7.10
Scimemi, Sam	CA	IAC-16.B6.1.1	Shaw, Amy	CA	IAC-16.A3.4.7
Scire, Gioacchino	CA	IAC-16.A6.IP.20	Shaw, Niamh	CA	IAC-16.E5.IP.6
Scire, Gioacchino	CA	IAC-16.B4.2.9	Shaw, Niamh	CA	IAC-16.E5.3.10
Scire, Gioacchino	CA	IAC-16.E1.3.4	Sheehan, J.P.	CA	IAC-16.B4.8.10
Scott, Chris	CA	IAC-16.B3.5.4	SHEHAJ, Endrit	CA	IAC-16.B2.4.10
Scott, Jonathan	CA	IAC-16.A1.IP.12	Sheldon, Douglas	CA	IAC-16.B4.8.11
Scott, Valerie	CA	IAC-16.C2.8.3	Shelhamer, Mark	CA	IAC-16.E3.6.12
Scowen, Paul	CA	IAC-16.A3.2A.7	Shen, Lin	CA	IAC-16.D2.5.2
Scruggs, Thomas	CA	IAC-16.A6.1.8	Shen, Xuhui	CA	IAC-16.B1.IP.23
Seabra, João	CA	IAC-16.A3.IP.18	Shen, Xuhui	CA	IAC-16.B4.2.11
Seabra, João	CA	IAC-16.B4.8.5	Shen, Yin	CA	IAC-16.A3.IP.12
Searby, Nancy D	CA	IAC-16.B1.1.2	Sheng, Ruiqing	CA	IAC-16.A3.IP.31
Seco, Jacob Luis López	CA	IAC-16.B4.4.3	Sheng, Senran	CA	IAC-16.A6.6.9
Seefeldt, Patric	Α	IAC-16.C2.2.3	Sheng, Zhao	CA	IAC-16.E1.4.11
Seefeldt, Patric	CA	IAC-16.C3.3.6	Sherriff, Abigail	CA	IAC-16.A1.IP.23
Segan, Stevo	CA	IAC-16.C1.7.8	Sherwood, Brent	CA	IAC-16.E5.1.2
Segert, Tom	CA	IAC-16.B4.1.2	Sherwood, Brent	CA	IAC-16.A1.5.8
Segert, Tom	CA	IAC-16.B4.4.10	Sherwood, Brent	CA	IAC-16.B4.8.11
Segert, Tom	CA	IAC-16.E3.3.7	Shestakova, Ksenia	CA	IAC-16.E7.IP.32
Segert, Tom	CA	IAC-16.B4.6A.3	Shevtsova, Valentina	CA	IAC-16.A2.2.1
			Shevtsova, Valentina	CA	IAC-16.A2.2.1
Seihert Marc					
Seibert, Marc Seidel, Stephan	CA CA	IAC-16.D3.1.5 IAC-16.A2.1.3	Shevtsova, Valentina	CA	IAC-16.A2.4.2









ORGANISE

INFORMATIO

OGRAMME

ROGRAMME

ROFESSIONALS
EVENTS

PROGRAMMES & EVENTS

CHNICAL E

AUTHORS'

Shi, Benke	CA	IAC-16.A6.IP.30
Shi, Chunsen	CA	IAC-16.A6.IP.31
SHI, Hongbin	CA	IAC-16.C2.4.9
Shi, Jian-Feng Shi, Jiatong	CA CA	IAC-16.C1.3.4 IAC-16.C2.9.10
Shi, Jiatong Shi, Pingyan	CA	IAC-16.B2.8-GTS.3.1
Shi, Xiaobo	CA	IAC-16.C4.5.1
Shi, Yue	CA	IAC-16.B1.IP.26
Shibata, Takuma	CA	IAC-16.C1.8.2
Shijie, Xu	CA	IAC-16.C1.IP.7
Shima, Takeya	CA	IAC-16.C2.3.10
Shimada, Takanobu	CA	IAC-16.A3.2A.2
Shimada, Toru	CA	IAC-16.C4.IP.2
Shimada, Toru	CA	IAC-16.C4.IP.3
Shimada, Toru	CA	IAC-16.C4.2.11
Shimada, Toru	A	IAC-16.C4.6.1
Shimamiya, Tamiyasu	CA	IAC-16.D4.3.11
Shimomura, Takashi	CA	IAC-16.C1.9.7
Shimose, Shigeru	CA	IAC-16.C2.5.2
Shimoyama, Hajime	CA	IAC-16.E5.3.7
Shiomi, Kenta	CA	IAC-16.D2.5.7
Shiotani, Bungo	CA	IAC-16.A6.2.8
Shirasawa, Yoji	CA	IAC-16.C2.2.10
Shireman, Kirk	CA	IAC-16.B3.1.2
Shironita, Sayoko	CA	IAC-16.A5.2.8
Shiroyama, Hideaki	CA	IAC-16.E3.1.9
Shishko, Robert	CA	IAC-16.D4.5.2
Shojaee, Shila	CA	IAC-16.A6.4.3
Shrivastava, Poorva	CA CA	IAC-16.C2.IP.2 IAC-16.E3.IP.12
Shu, WANG		IAC-16.E3.IP.12
Shuai, Liu	CA CA	IAC-16.B1.4.10
Shuch, H. Paul SHUI, Haitao	CA	IAC-16.B4.6A.2
Shuvalov, Valentin	CA	IAC-16.E5.4.10
Sibeck, David	CA	IAC-16.B4.8.10
Sibychan, Jerrin Job	CA	IAC-16.C4.IP.22
Sibychan, Jerrin Job	CA	IAC-16.C2.9.6
Sieder, Jan	CA	IAC-16.C4.5.4
Sieder, Jan	CA	IAC-16.C4.5.5
Siemion, Andrew	CA	IAC-16.A4.1.3
Siemion, Andrew	CA	IAC-16.A4.1.4
Siemion, Andrew	CA	IAC-16.A4.1.7
Sierks, Holger	CA	IAC-16.A3.4.3
Sikafo, Linda Abakah	CA	IAC-16.E2.1.5
Silha, Jiri	Α	IAC-16.A6.1.4
Sills, Liam	CA	IAC-16.B1.2.11
Silva, Pedro	CA	IAC-16.B2.6.9
Silva, Vinicius Derrico da	CA	IAC-16.B4.1.14
Silva-Martinez, Jackelynne	CA	IAC-16.E3.1.1
Silva-Martinez, Jackelynne	CA	IAC-16.E5.1.5
Silveira Fachel, Flávia Nathiely	CA	IAC-16.A1.7.5
Silvestrin, Pierluigi	CA	IAC-16.B1.2.2
Silvestrin, Pierluigi	CA	IAC-16.B1.2.6
Simard, Benoit	CA	IAC-16.C2.8.7
Simioni, Emanuele	CA	IAC-16.A3.IP.10
Simo, Jules	CA	IAC-16.C1.3.5
Simone, Domenico	CA	IAC-16.C4.2.8
Simonov, Mikhail	CA	IAC-16.E7.7-B3.8.3
Simpson, Kevin	CA	IAC-16.C3.5-C4.7.1
Sinayskiy, Ilya	CA	IAC-16.A1.IP.39
Sindoni, Giampiero	CA	IAC-16.A2.1.4
Sindoni, Giampiero	CA	IAC-16.C2.2.12
Sindoni, Giampiero	CA	IAC-16.A6.9.9
Singare, Sumit	CA	IAC-16.C2.2.9
Singer Genovese, Ricardo	CA	IAC-16.B1.IP.6
Singh, Abhishek Kumar	CA	IAC-16.C1.3.12
Singh, Balbir	CA	IAC-16.A6.8.5
Singh, Pravinjit	CA	IAC-16.C3.1.7
Singh, Pushpendra	CA	IAC-16.A1.IP.32
Singh, Pushpendra	CA	IAC-16.D2.5.8
Singh-Derewa, Chrishma	CA	IAC-16.D1.IP.14
Singh-Derewa, Chrishma	A	IAC-16.D1.2.6
Singh-Derewa, Chrishma	CA	IAC-16.D1.3.12
Singh-Derewa, Chrishma	CA	IAC-16.D1.6.1
Singh-Derewa, Chrishma	Α	IAC-16.B3.7.7

Singh-Derewa, Chrishma	CA	IAC-16.D1.7.5
Singh-Derewa, Chrishma	CA	IAC-16.A7.3.6
Singha, Aayush Kumar Singhal, Aman	CA A	IAC-16.B4.6A.14 IAC-16.C4.IP.40
Sinogas, Pedro	CA	IAC-16.B2.6.9
Sippel, Martin	CA	IAC-16.D2.4.3
Sippel, Martin	CA	IAC-16.D6.2-D2.9.2
Siraev, Ramil	CA	IAC-16.A2.4.8
Sirangelo, Mark	A	IAC-16.E7.6-E3.5.2
Sirilli, Matteo	CA CA	IAC-16.C2.6.12
Sisaïd, Idriss Sisi, Chen	CA	IAC-16.D3.1.8 IAC-16.B1.5.7
Sisinni, Giuseppe	CA	IAC-16.D5.3.8
Sivamurugan, T	CA	IAC-16.C2.4.3
Sivolap, Valeriy	CA	IAC-16.A1.1.7
Sivolap, Valeriy	CA	IAC-16.B3.5.2
Sivolap, Valeriy	CA	IAC-16.B3.5.3
Sivolap, Valeriy	CA	IAC-16.B3.6-A5.3.5
Sixdeniers, Maxime Sixdeniers, Maxime	CA CA	IAC-16.E1.5.6 IAC-16.E5.5.6
Skafså, Ole Martin	CA	IAC-16.E5.5.6 IAC-16.B4.3.7
Skardzińska, Barbara	CA	IAC-16.E7.IP.15
Skinner, Mark A.	CA	IAC-16.A6.1.5
Skipitis, Tautvydas	CA	IAC-16.A2.5.10
Skomorohov, Ruslan	CA	IAC-16.E6.1.2
Skoog, Ake Ingemar	CA	IAC-16.E4.3B.1
Skouloudi, Maria	CA	IAC-16.E5.IP.5
Skvortsov, Sergey	CA	IAC-16.E5.2.2
Slavinskis, Andris Slavinskis, Andris	CA CA	IAC-16.B4.4.3 IAC-16.B4.7.9
Slavinskis, Andris	CA	IAC-16.B4.7.9
Slenzka, Klaus	CA	IAC-16.E2.4.4
Sloan, John	CA	IAC-16.D6.1.4
Slošiar, Rudolf	CA	IAC-16.B1.3.9
Smetek, Jaromir	CA	IAC-16.A2.5.3
Smirnov, Dmitry	CA	IAC-16.D3.4.5
Smirnov, Igor	CA	IAC-16.A1.4.8
Smirnov, Nickolay N.	CA	IAC-16.A2.2.9
Smirnov, Nickolay N. Smirnov, Nickolay N.	CA CA	IAC-16.A2.4.1 IAC-16.C1.9.9
Smirnova, Maria	CA	IAC-16.A2.2.9
Smith, Brian	CA	IAC-16.B3.6-A5.3.2
Smith, David Brent	CA	IAC-16.B1.1.2
Smith, Katharine	CA	IAC-16.D1.IP.3
Smith, Katharine	CA	IAC-16.D1.3.2
Smith, Katharine	CA	IAC-16.B4.5.8
Smith, Lesley Jane	CA	IAC-16.E7.4.1
Smith, Lesley Jane	CA	IAC-16.A6.8.9
Smith, Nathan Smith, Nathan	CA CA	IAC-16.A1.1.2 IAC-16.B3.9-GTS.2.5
Smith, Neil	CA	IAC-16.B3.9-G13.2.5
Smith, Niall	CA	IAC-16.E5.3.10
Smith, Sarah	CA	IAC-16.C4.8.11
SMORALDI, Antonio	CA	IAC-16.C4.IP.23
Sneha, Shruti	CA	IAC-16.A1.IP.32
Sneha, Shruti	CA	IAC-16.C4.IP.24
Sneha, Shruti	CA	IAC-16.D4.IP.1
Sneha, Shruti	CA	IAC-16.A3.3A.7
Sneha, Shruti Snodgrass, Colin	CA CA	IAC-16.D2.5.8 IAC-16.A3.1.6
Snodgrass, Colin	CA	IAC-16.A3.1.6
Sobczak, Kamil	CA	IAC-16.A2.5.3
Soeda, Kentaro	CA	IAC-16.C4.2.12
Soeder, James	CA	IAC-16.D3.1.5
Sofrony Esmeral, Jorge Ivan	CA	IAC-16.E1.3.7
Soken, Halil Ersin	CA	IAC-16.C1.2.12
Sokhin, Igor G.	CA	IAC-16.B3.5.2
Sokhin, Igor G.	CA	IAC-16.B3.5.3
Sokhin, Igor G.	CA	IAC-16.B3.6-A5.3.5
Sokolov, Nikolay Sokolov, Oleg	CA CA	IAC-16.A6.7.7 IAC-16.D2.7.11
Sokolov, Oleg	CA	IAC-16.D2.7.11
Sokolov, Oleg	CA	IAC-16.D2.6.5
Soldini, Stefania	CA	IAC-16.C1.6.13

SOLÍS, EDUARDO	CA	IAC-16.E2.3-GTS
Solórzano, Jonathan V.	CA	IAC-16.B5.2.2
Somma, Gian Luigi	CA	IAC-16.A6.IP.3
Sone, Yoshitsugu	CA	IAC-16.A5.2.8
Sone, Yoshitsugu	CA CA	IAC-16.C3.3.1 IAC-16.C4.IP.49
Song, Jian Song, Lingcai	CA	IAC-16.C4.IP.49
Song, Younggil	CA	IAC-16.A2.6.4
Songerwala, Abdulhussain	CA	IAC-16.B1.IP.19
Songerwala, Abdulhussain	CA	IAC-16.C4.6.7
Soni, Anushree	CA	IAC-16.E1.IP.1
Soni, Anushree	CA	IAC-16.E1.IP.22
Soni. Anushree	CA	IAC-16.D3.1.6
Soni, Anushree	CA	IAC-16.C4.6.12
Soni, Pramod Kumar	CA	IAC-16.C1.3.12
Sonney, Anatta	CA	IAC-16.C1.3.12
Sorace, Roberta	CA	IAC-16.E5.2.5
Sorge, Marlon	CA	IAC-16.A6.2.3
Sorge, Marlon	CA	IAC-16.A6.2.6
Sorge, Marlon	CA	IAC-16.A6.2.8
Sorge, Marlon	CA	IAC-16.A6.7.8
Soria Salinas, Álvaro Tomás	CA	IAC-16.A3.3B.5
Sorice Genaro, Andreia Fatima	CA	IAC-16.E3.1.1
Sorli, Massimo	CA	IAC-16.A6.1.10
Sorli, Massimo	CA	IAC-16.D2.3.4
Sorokin, Igor V.	CA	IAC-16.B3.3.1
Soromenho, Tiago	CA	IAC-16.E3.IP.1
Soromenho, Tiago	CA	IAC-16.E3.IP.2
SOSA-SOSA, VICTOR J.	CA	IAC-16.B5.1.6
Soto Najera, Marcelino Paul	CA	IAC-16.D5.3.9
Sotudeh, Jordan	CA	IAC-16.E7.IP.4
Sotudeh, Jordan	CA	IAC-16.A6.8.7
Soucek, Alexander	CA	IAC-16.E7.4
Soucek, Alexander	CA	IAC-16.E7.7-B3.8
Sourgens, Elisabeth	CA	IAC-16.A3.1.2
Sourgens, Elisabeth	CA	IAC-16.B3.1.4
Sousa, Bruno	CA	IAC-16.E1.9.7
Sousa Silva, Priscilla	CA	IAC-16.C1.4.5
Sousa Silva, Priscilla	CA	IAC-16.C1.6.12
Southwell, Ben	CA	IAC-16.D1.5.1
Sowers, George	CA	IAC-16.D2.1.12
Spassova, Simona	CA	IAC-16.E7.IP.3
Spassova, Simona	CA	IAC-16.E7.1.8
Spatola, Antonino	CA	IAC-16.B1.3.8
Speidel, Jan	CA CA	IAC-16.B2.4.2
Spencer, David B	CA	IAC-16.D1.IP.2
Spencer, David B.		IAC-16.A6.9.4 IAC-16.C1.6.3
Spencer, David B.	CA CA	
Spencer, David B. Spera, Gerardo		IAC-16.A6.7.5
. ,	CA CA	IAC-16.A6.4.3 IAC-16.B4.7.5
Speretta, Stefano	CA	IAC-16.B4.7.5
Spierings, Adriaan Spiero, François	CA	IAC-16.C2.9.5
Spiero, François	CA	IAC-16.A5.1.3
Spiero, François	CA	IAC-16.A3.1.7
Spietz, Peter	CA	IAC-16.C3.3.6
Spiller, Dario	CA	IAC-16.C1.8.1
Spina, Francesco	A	IAC-16.A3.2B.10
Spina, Francesco	CA	IAC-16.A1.6.9
Spina, Francesco	CA	IAC-16.A3.2C.3
Spondylis, Elias	CA	IAC-16.B1.5.3
Spores, Ron	CA	IAC-16.B4.6A.9
Sprinkle, Tara RuthAnn	CA	IAC-16.C3.3.3
Sproewitz, Tom	CA	IAC-16.C2.2.3
Sproewitz, Tom	CA	IAC-16.C3.3.6
Squire, Jared	CA	IAC-16.C4.IP.34
Sridharan, Saish	CA	IAC-16.D1.2.2
Srinivas, Dale	CA	IAC-16.A1.IP.30
Srinivas, Dale	CA	IAC-16.A1.3.8
Srinivasan, Dipak	CA	IAC-16.B2.7.5
Srivastava, Priyanka	CA	IAC-16.D1.IP.14
Srivastava, Priyanka	CA	IAC-16.D1.6.1
St-Pierre, Luc	CA	IAC-16.E5.4.8
St-Pierre, Luc	CA	IAC-16.B1.5.8
Stabile, Jordan	CA	IAC-16.E3.IP.2

Stabler, Richard	CA	IAC-16.A1.IP.12
Stafford, Matthew	CA	IAC-16.D3.1.5
Stam, D. M.	CA	IAC-16.E1.3.6
Stamov, Lyuben	CA	IAC-16.A2.4.1
	CA	
Stang, Gerald		IAC-16.E3.4.12
Starikov, Evgeny	CA	IAC-16.A4.1.6
Starinova, Olga	CA	IAC-16.C1.5.6
Starke, Mario	CA	IAC-16.B4.7.7
Starr, Richard	CA	IAC-16.A3.2A.7
Stausland, Christoffer	CA	IAC-16.E1.IP.32
Stausland, Christoffer	CA	IAC-16.E1.3.13
Stede, Gunnar	CA	IAC-16.B1.2.7
Steeves, Geoffrey	CA	IAC-16.E1.4.7
•	CA	
Stefanescu, Irina Beatrice		IAC-16.B2.4.7
Stefanescu, Raluca	CA	IAC-16.A3.IP.8
Stefoudi, Dimitra	CA	IAC-16.E7.1.5
Steimle, Christian	CA	IAC-16.B3.4-B6.5.1
Steimle, Christian	CA	IAC-16.B3.4-B6.5.5
Steinberg, Alan	CA	IAC-16.E1.IP.11
Steinkogler, Cordula	CA	IAC-16.E3.4.9
Steinsiek, Frank	CA	IAC-16.C3.2.7
Stella, Fulvio	CA	IAC-16.C4.2.8
Stelmakh-Drescher, Olga	CA	IAC-16.E7.1.6
, ,		
Stenger, Marvin	CA	IAC-16.B4.3.11
Stephenson, Keith	CA	IAC-16.C3.5-C4.7.1
Sterns, Patricia M.	CA	IAC-16.A4.2.7
Stesina, Fabrizio	Α	IAC-16.D1.IP.13
Stesina, Fabrizio	CA	IAC-16.D2.IP.11
Stettner, Armin	CA	IAC-16.A2.6.1
Stevenin, Hervé	CA	IAC-16.A5.IP.1
Stevens, Edward	CA	IAC-16.B4.7.2
Stevens, Michael	CA	IAC-16.B4.8.10
Stevenson Soler Chisabas, Roy	CA	IAC-16.C2.IP.10
Stevenson Soler Chisabas, Roy	CA	IAC-16.C2.IP.16
Stewart, Brian	CA	IAC-16.B6.2.6
Stewart, Merinda	CA	IAC-16.E7.2.1
Steyn, Hano	CA	IAC-16.B4.4.7
Steyn, Willem	CA	IAC-16.A6.6.8
Stimmer, Jonathan	CA	IAC-16.A3.1.10
Stober, Keith	CA	IAC-16.C4.2.13
Stojanovski, Lisa	CA	IAC-16.A1.6.10
Stolfi, Angelo	CA	IAC-16.C2.2.4
Stoll, Enrico	CA	IAC-16.A6.2.9
Stoll, Enrico	CA	IAC-16.C1.2.6
Stoll, Enrico	CA	IAC-16.A6.5.7
Stoll, Enrico	CA	IAC-16.B4.7.6
Storozh, Alexandr	CA	IAC-16.D2.2.3
Stratigentas, Dimitrios	CA	IAC-16.E7.IP.11
Stride, Claire	CA	IAC-16.E1.2.6
Strietzel, Roland	CA	IAC-16.C1.3.10
Strippoli, Luigi	CA	IAC-16.A6.5.11
Stroud, Colin	CA	IAC-16.C3.5-C4.7.1
Stubbe, Peter	CA	IAC-16.E3.4.6
Stuffler, Timo	CA	IAC-16.D1.1.3
Stuffler, Timo	CA	IAC-16.A6.6.3
Stuffler, Timo	CA	IAC-16.A2.6.1
Stupl, Jan	CA	IAC-16.B4.6B.5
Su, Chengyi		
	CA	IAC-16.C4.9.6
SU, Jinyuan	CA	IAC-16.E7.2.7
Su, Peiran	CA	IAC-16.C4.9.15
Suatoni, Matteo	CA	IAC-16.A3.IP.8
Suatoni, Matteo	CA	IAC-16.C1.2.2
Subbotin, Stanislav	CA	IAC-16.A2.4.7
Subha Jayan, K P	CA	IAC-16.C4.5.7
Subramanian, Kannan	CA	IAC-16.C1.5.8
Sudars, Martins	CA	
		IAC-16.A3.3B.1
Suess, Ruediger	CA	IAC-16.E3.6.2
Sugihara El Maghraby, Ahmed Kiyoshi	Α	IAC-16.B1.2.8
Sugimoto, Yohei	CA	IAC-16.A3.IP.1
Sugimoto, Yohei	CA	IAC-16.B1.1.10
Sugita, Mikihiro	CA	IAC-16.C1.8.3
Sugiyama, Ko-ichiro	CA	IAC-16.A3.5.1
Sulla, Joseph	CA	IAC-16.A3.2B.2
Sullo, Nicola	CA	IAC-16.C1.4.5
Juno, Nicola		
Summerer, Leopold	CA	IAC-16.A3.1.2



CA CA

CA CA

Takahashi, Yukihiro

Takemae, Toshiaki

Takenaka, Hideki

Takase, Kohei Takei, Yuto



IAC-16.A3.5.1 IAC-16.C4.4.9

IAC-16.A3.4.4

IAC-16.E1.2.7

IAC-16.B2.7.3





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ECHNICAL OGRAMME

PROFESSIONALS
EVENTS

PROGRAMMES & EVENTS

CHNICAL DURS

AUTHOR

Sun, Jun	CA	IAC-16.B1.IP.30
Sun, Liang	CA	IAC-16.C1.8.13
Sun, Rong	CA	IAC-16.D2.IP.15
Sun, Rong	CA	IAC-16.D5.IP.1
Sun, Rong	CA	IAC-16.E1.IP.31
Sun, Rong-Yu	CA	IAC-16.A6.IP.16
Sun, Shijie	CA	IAC-16.D2.IP.12
Sun, Wei	CA	IAC-16.E6.1.9
Sun, Weijia	CA	IAC-16.A1.IP.24
Sun, Xiaojing	CA	IAC-16.C4.4.6
Sun, Xingliang	CA	IAC-16.C4.IP.10
Sun, Yue	CA	IAC-16.A6.IP.34
Sun, Yunkui	CA	IAC-16.C4.4.6
Sundaram, Ramakrishnan	CA	IAC-16.D2.1.9
Sundaramoorthy, Prem	CA	IAC-16.B4.7.5
Suresh, Rahul	CA	IAC-16.A1.4.6
Surmacz, Pawel	CA	IAC-16.A2.5.3
Sutoh, Masataku	CA	IAC-16.A3.2A.2
Sutoh, Masataku	CA	IAC-16.A3.2B.5
Suzuki, Kenji	CA	IAC-16.B2.7.3
Suzuki, Makoto	CA	IAC-16.A3.5.1
Svoboda, Jan	CA	IAC-16.B1.1.6
Swaffield, Thomas	CA	IAC-16.A1.3.3
Swan, Cathy	CA	IAC-16.D4.IP.2
Swan, Peter	CA	IAC-16.D4.IP.2
Swan, Peter	CA	IAC-16.D4.3.3
Swan, Peter	CA	IAC-16.D4.3.8
Swan, Peter	CA	IAC-16.D4.5.4
Sweeney, Mandy	CA	IAC-16.E5.3.9
Sweeting, Martin	CA	IAC-16.B4.6A.1
Sweeting, Martin	CA	IAC-16.B4.8.3
Syamsurijal, Syamsurijal	CA	IAC-16.A6.8.8
Sychkov, Vladislav	CA	IAC-16.A5.1.11
Sychkov, Vladislav	CA	IAC-16.B3.6-A5.3.3
Sychkov, Vladislav	CA	IAC-16.B3.6-A5.3.5
Sylvester, Andre	CA	IAC-16.D3.1.5
Sylvestre, Bruno	CA	IAC-16.A6.6.4
Syromiatnikov, Anton	CA	IAC-16.E1.9.3
Sánchez, Fermín	CA	IAC-16.E1.IP.18
Sánchez, Jorge	CA	IAC-16.B5.2.1
Sánchez, Juan Carlos	CA	IAC-16.B3.2.1
Sánchez Ayala, Lizbeth	CA	IAC-16.A7.3.1
Sánchez Nogales, Mariano	CA	IAC-16.A1.IP.14
Sánchez Nogales, Mariano	CA	IAC-16.A3.3B.2
<u> </u>	CA	IAC-16.C1.5.9
Söllner, Gerd Sünter, Indrek	CA	
Sunter, murek	LA	IAC-16.B4.4.3

1			
Name	Role	Paper	
T, Jayachandran	CA	IAC-16.C2.IP.5	
T, Jayachandran	CA	IAC-16.C4.IP.16	
T, Jayachandran	CA	IAC-16.C2.1.11	
T, Jayachandran	CA	IAC-16.C4.2.2	
T, Jayachandran	CA	IAC-16.C4.2.3	
T, Jayachandran	CA	IAC-16.A3.2B.4	
T. Lyne, Christopher	CA	IAC-16.E2.2.9	
T.J., Durga Pushpavalli	CA	IAC-16.A3.3B.6	
Tabanera, Marcela	CA	IAC-16.E4.3A.4	
Tabanera, Marisol	CA	IAC-16.E4.3A.4	
Tabarah, Edward	CA	IAC-16.B3.1.6	
Taccola, Matteo	CA	IAC-16.B1.2.6	
Tachikawa, Sumitaka	CA	IAC-16.A3.5.1	
Tafforin, Carole	CA	IAC-16.A1.1.3	
Taguchi, Makoto	CA	IAC-16.A3.5.1	
Taillebot, Virginie	CA	IAC-16.D4.1.7	
Taing, Stefan	CA	IAC-16.B2.6.9	
Tajmar, Martin	CA	IAC-16.C4.IP.27	
Tajmar, Martin	CA	IAC-16.C4.5.4	
Tajmar, Martin	CA	IAC-16.C4.5.5	
Takahara, Osamu	CA	IAC-16.C2.3.10	
Takahashi, Akiyo	CA	IAC-16.C4.IP.3	_
Takahashi, Ryo	CA	IAC-16.E5.3.7	
Takahashi, Sakurako	CA	IAC-16.D4.3.1	

Takeuchi, Hiroshi CA IAC-16.81.4.8 Talk, Douglas Talk, Douglas CA IAC-16.D1.1.9 Talk, Douglas CA IAC-16.D1.1.9 Talk, Douglas CA IAC-16.D1.1.5 Tamal, Veronica CA IAC-16.D1.4.5 Tamal, Veronica CA IAC-16.C1.1.2 Tamal, Veronica CA IAC-16.C2.1.2 Tam, Jingwen CA IAC-16.C2.3.6 Tan, Vingwen CA IAC-16.C3.2.6 Tan, Vingwen CA IAC-16.C3.1.5 Tanka, Asanton CA IAC-16.C3.1.5 Tanka, Asanton CA IAC-16.C3.2.2 Tanka, Satoshi CA IAC-16.C3.2.2 Tanka, Satoshi CA IAC-16.C3.2.2 Tanka, Satoshi CA IAC-16.C3.2.2<	Takenaka, Hideki	CA	IAC-16.B2.7.3
Talk, Douglas Talk, Douglas CA IAC-16.B3.7.10 Tamai, Veronica CA IAC-16.B3.7.10 Tamanini, L.K. CA IAC-16.E1.7.3 Tamanini, L.K. CA IAC-16.E1.7.3 Tamura, Takashi CA IAC-16.B2.3.6 Tan, Xiaomin CA IAC-16.B3.2.3.6 Tan, Xiaomin CA IAC-16.B3.1.P14 Tan, Yonghua CA IAC-16.B3.1.P14 Tan, Yonghua CA IAC-16.B3.1.P14 Tan, Yonghua CA IAC-16.B4.1.P46 Tan, Xonghua CA IAC-16.C4.1.P46 Tan, Xonghua CA IAC-16.C4.1.P46 Tan, Xonghua CA IAC-16.C4.1.P46 Tan, Xonghua CA IAC-16.C4.1.P46 Tanaka, Atomu CA IAC-16.C3.3.1 Tanaka, Xohoei CA IAC-16.C3.3.1 Tanaka, Satoshi CA IAC-16.C3.3.1 Tanaka, Satoshi CA IAC-16.A3.2.2 Tanaka, Satoshi CA IAC-16.C3.3.2 Tanaka, Satoshi CA IAC-16.C3.3.1 Tanaka, Yuri CA IAC-16.B3.2.10 Tang, Jingshi CA IAC-16.C3.3.1 Tang, Bo CA IAC-16.C3.3.1 Tang, Lei CA IAC-16.C1.6.9 Tang, Lei CA IAC-16.C1.6.9 Tang, Lei CA IAC-16.C1.6.9 Tang, Lei CA IAC-16.C2.4.9 Tang, Lei CA IAC-16.C2.4.9 Tang, Lei CA IAC-16.C2.4.1 Tang, Lei CA IAC-16.C2.4.9 Tang, Shuo CA IAC-16.C2.4.9 Tang, Shuo CA IAC-16.C2.4.9 Tang, Shuo CA IAC-16.C2.4.9 Tang, Yongkang CA IAC-16.C2.4.9 Tang, Yongkang CA IAC-16.C3.3.1 Tang, Shiu CA IAC-16.C3.3.1 Tang, Shiu CA IAC-16.C3.3.1 Tang, Yongkang CA IAC-16.C3.3.1 Tang, Yongkang CA IAC-16.C3.3.1 Tang, Yongkang CA IAC-16.C3.3.1 Tang, Shuo CA IAC-16.C4.2.11 Tani, Yasuhiro CA IAC-16.C4.2.5 Tani, Yasuhiro CA IAC-16.C4.2.11 Tani, Jenshiro CA IAC-16.C4.2.11 Tani, Yasuhiro CA IAC-16.C4.2.5 Tani, Yasuhiro CA IAC-16.C4.2.5 Tani, Yasuhiro CA IAC-16.C4.2.5 Tani, Yasuhiro CA IAC-16.C4.2.6 Tani, Yasuhiro CA IAC-16.C4.2.11 Tani, Jenshiro CA IAC-16.C4.2.11 Tani, Jenshir	Takeuchi, Hiroshi	CA	IAC-16.A3.4.4
Talk, Douglas	Takla, Mina	CA	IAC-16.E1.5.8
Tamal, Veronica			
Tamanini, L.K.			
Tamura, Takashi CA IAC-16.82.3.6 Tan, Jingwen CA IAC-16.82.3.6 Tan, Xiaomin CA IAC-16.82.3.6 Tan, Xiaomin CA IAC-16.82.3.6 Tan, Xiaomin CA IAC-16.82.3.6 Tan, Xiaomin CA IAC-16.64.1.74 Tan, Yonghua CA IAC-16.C4.1.5 Tanaka, Atomu CA IAC-16.C4.1.5 Tanaka, Atomu CA IAC-16.C4.1.5 Tanaka, Atomu CA IAC-16.C3.3.1 Tanaka, Xohei CA IAC-16.C3.3.1 Tanaka, Satoshi CA IAC-16.C3.2.2 Tanaka, Satoshi CA IAC-16.C3.2.2 Tanaka, Satoshi CA IAC-16.C3.2.2 Tanaka, Satoshi CA IAC-16.C3.2.2 Tanaka, Yuri CA IAC-16.C3.2.2 Tanaka, Yuri CA IAC-16.C3.2.1 Tanaka, Yuri A IAC-16.E5.IP.4 Tanaka, Yuri A IAC-16.E5.IP.4 Tanaka, Yuri A IAC-16.E5.3.7 Tang, Bo CA IAC-16.C1.5.9 Tang, Lei CA IAC-16.C1.6.9 Tang, Lei CA IAC-16.C1.6.9 Tang, Lei CA IAC-16.C1.6.9 Tang, Lei CA IAC-16.C1.6.9 Tang, Lei CA IAC-16.C2.4.11 Tang, Lei CA IAC-16.C2.4.11 Tang, Lei CA IAC-16.C2.4.11 Tang, Lei CA IAC-16.C2.4.9 TANG, Ping CA IAC-16.C2.4.9 Tang, Shuo CA IAC-16.C2.4.9 Tang, Shuo CA IAC-16.C2.4.9 Tang, Yongkang CA IAC-16.C3.1.3 Tang, Yon			
Tan, Jingwen		-	
Tan, Xiaomin			
Tan, Yonghua	, 0		
Tan, Yonghua			
Tanaka, Atomu			
Tanaka, Atomu Tanaka, Kohei CA IAC-16.C3.3.1 Tanaka, Naohiro CA IAC-16.C3.3.1 Tanaka, Satoshi CA IAC-16.C3.2.2 Tanaka, Satoshi CA IAC-16.C3.2.2 Tanaka, Satoshi CA IAC-16.C3.2.2 Tanaka, Satoshi CA IAC-16.C3.2.2 Tanaka, Satoshi CA IAC-16.E3.3.4 Tanaka, Yuri CA IAC-16.E3.17 Tang, Bo CA IAC-16.E3.3.10 Tang, Bo CA IAC-16.E3.3.10 Tang, Jingshi CA IAC-16.C2.3.10 Tang, Lingshi CA IAC-16.C1.6.9 Tang, Lei CA IAC-16.C1.6.9 Tang, Lei CA IAC-16.C2.P111 Tang, Lei CA IAC-16.D3.3.8 Tang, Liang CA IAC-16.D3.3.8 Tang, Liang CA IAC-16.D3.3.8 Tang, Liang CA IAC-16.C2.2.11 TANG, Min CA IAC-16.C2.2.11 TANG, Ping CA IAC-16.E3.3.1 Tang, Shuo CA IAC-16.E3.3.1 Tang, Shuo CA IAC-16.B6.3.12 Tang, Yongkang CA IAC-16.B6.3.12 Tang, Yongkang CA IAC-16.A1.3.4 Tangy, Jacques Tang, Yongkang CA IAC-16.A1.3.4 Tanguy, Jacques CA IAC-16.A1.5.8 Tang, Zhili CA IAC-16.C2.2.5 Tani, Yasuhiro CA IAC-16.C2.5.7 Tanier, Guillaume CA IAC-16.C3.3.1 Tanier, Guillaume CA IAC-16.C3.3.1 Taniguchi, Alana CA IAC-16.C3.3.1 Taniguchi, Alana CA IAC-16.C3.3.1 Tank, Jens CA IAC-16.C3.3.1 Tank, Jens CA IAC-16.C3.3.1 Tank, Jens CA IAC-16.C3.2.6 Tantardini, Marco CA IAC-16.C3.3.1 Tank, Jens CA IAC-16.C3.3.1 Tank, Jens CA IAC-16.C3.2.6 Tantardini, Marco CA IAC-16.C3.3.1 Tank, Jens CA IAC-16.C3.2.6 Tantardini, Marco CA IAC-16.C3.3.1 Tank, Jens CA IAC-16.C3.1.10 Tano, Yongzi CA IAC-16.C3.1.10 Tao, Yongzi CA IAC-16.C3.1.11 Tao, Yangzi CA IAC-16.C3.1.11 Tanya, Yuliang CA IAC-16.C3.1.11 Tanya, Yuliang CA IAC-16.C3.1.11 Tanya, Yuliang CA IAC-16.C3.1.11 Tanya, Yuliang CA IAC-16.C3.1.11 Tank, Jens CA IAC-16.C3.1.11 Tanya, Yuliang CA IAC-16.C3.1.11 Tanya, Yongzi CA IAC-16.C3.1.11 Tanya, Yongzi CA IAC-16.C3.1.11 Tanya, Yongzi CA IAC-16.C3.1.		-	
Tanaka, Kohei Tanaka, Naohiro Tanaka, Naohiro CA IAC-16.C3.2.2 Tanaka, Satoshi CA IAC-16.A3.4.4 Tanaka, Satoshi CA IAC-16.A3.4.2 Tanaka, Satoshi CA IAC-16.A3.4.4 Tanaka, Yuri CA IAC-16.E5.IP.4 Tanaka, Yuri A IAC-16.E5.IP.4 Tanaka, Yuri A IAC-16.E5.3.7 Tang, Bo CA IAC-16.D2.3.10 Tang, Jingshi CA IAC-16.C1.6.9 Tang, Lei CA IAC-16.C1.6.9 Tang, Lei CA IAC-16.C2.IP.11 Tang, Lei CA IAC-16.D3.3.8 Tang, Liang CA IAC-16.D3.3.8 Tang, Liang CA IAC-16.D3.3.8 Tang, Liang CA IAC-16.C2.17 TANG, Min CA IAC-16.C2.4.9 TANG, Ping CA IAC-16.C2.4.9 TANG, Ping CA IAC-16.B6.3.12 Tang, Yongkang CA IAC-16.B6.3.12 Tang, Yongkang CA IAC-16.A1.3.4 Tang, Yongkang CA IAC-16.A1.3.4 Tang, Yongkang CA IAC-16.C2.2.5 Tani, Yasuhiro CA IAC-16.C2.5 Tani, Yasuhiro CA IAC-16.C2.5 Tanier, Guillaume CA IAC-16.C3.1 Taniguchi, Alana CA IAC-16.C3.1 Taniguchi, Shuichi CA IAC-16.C3.1 Tann, Haruhito CA IAC-16.C3.1 Tanno, Haruhito CA			
Tanaka, Naohiro CA IAC-16.A3.2.2 Tanaka, Satoshi CA IAC-16.A3.2.4 Tanaka, Satoshi CA IAC-16.A3.2.4 Tanaka, Yuri A IAC-16.E5.IP.4 Tanga, Bo CA IAC-16.E2.3.10 Tang, Bo CA IAC-16.C2.3.10 Tang, Jingshi CA IAC-16.C2.1P.11 Tang, Lei CA IAC-16.C2.IP.11 Tang, Lei CA IAC-16.C2.IP.11 Tang, Lei CA IAC-16.C2.2.11 TANG, Min CA IAC-16.C2.2.11 TANG, Min CA IAC-16.C2.4.9 TANG, Ping CA IAC-16.C2.4.9 TANG, Ping CA IAC-16.A1.3.4 Tang, Shuo CA IAC-16.A1.3.4 Tang, Yongkang CA IAC-16.A1.3.4 Tang, Zhili CA IAC-16.A1.3.4 Tanguy, Jacques CA IAC-16.C2.2.5 Tani, Yasuhiro CA IAC-16.C2.2.5 Tani, Yasuhiro CA IAC-16.C2.5.7 Tanier, Guillaume			
Tanaka, Satoshi CA IAC-16.A3.2A.2 Tanaka, Satoshi CA IAC-16.A3.4.4 Tanaka, Yuri CA IAC-16.E5.IP.P4 Tanaka, Yuri A IAC-16.E5.IP.P4 Tanaka, Yuri A IAC-16.E5.IP.P4 Tang, Jingshi CA IAC-16.D2.3.10 Tang, Jingshi CA IAC-16.C2.IP.11 Tang, Lei CA IAC-16.C2.IP.11 Tang, Lei CA IAC-16.D4.1.4 Tang, Lei CA IAC-16.C2.2.11 TANG, Min CA IAC-16.C2.2.11 TANG, Min CA IAC-16.C2.2.1 TANG, Ping CA IAC-16.E0.2.9.6 Tang, Shuo CA IAC-16.E0.2.9.6 Tang, Shuo CA IAC-16.D2.9.6 Tang, Shuo CA IAC-16.E2.2.1 Tang, Shuo CA IAC-16.E2.2.9 Tang, Shuo CA IAC-16.A1.3.4 Tang, Shuo CA IAC-16.A1.3.4 Tang, Shuo CA IAC-16.A1.3.4 Tang, Shui CA			
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Tanier, Guillaume CA IAC-16.86.3.4 Taniguchi, Alana CA IAC-16.A1.7.6 Taniguchi, Alana CA IAC-16.A1.7.9 Taniguchi, Shuichi CA IAC-16.C3.3.1 Tank, Jens CA IAC-16.C4.2.6 Tanno, Haruhito CA IAC-16.C4.2.6 Tanno, Haruhito CA IAC-16.C4.2.6 Tano, Haruhito CA IAC-16.C4.2.6 Tano, Haruhito CA IAC-16.C4.2.6 Tano, Haruhito CA IAC-16.C4.2.6 Tanno, Haruhito CA IAC-16.C4.2.6 Tano, Vallang CA IAC-16.C4.3.IP.10 Tao, Sheng CA IAC-16.C1.9.12 Tao, Yangzi CA IAC-16.E7.1.12 Tao, Yangzi CA IAC-16.E7.4.4 TAO, Yuliang CA IAC-16.E7.4.4 TAO, Yuliang CA IAC-16.E7.4.4 TAO, Yuliang CA IAC-16.E1.P.10 Tapla, Alma CA IAC-16.E1.P.10 Tapla, Alma CA IAC-16.E1.IP.3		CA	IAC-16.C4.2.11
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Taploo, Anmol CA IAC-16.E2.1.7 Tarantini, Vincent CA IAC-16.C4.5.11 Target-Buckley, Christine CA IAC-16.E1.9.8 Tarikhi, Parviz CA IAC-16.B1.IP.5 Tasaki, Kazuyuki CA IAC-16.B3.3.1 Tasker, Rose CA IAC-16.A5.IP.9 Tasker, Rose CA IAC-16.A3.3B.11 Tate-Brown, Judy CA IAC-16.B3.3.1 Tatnall, Adrian CA IAC-16.B3.2.8 Taylor, Ben CA IAC-16.B1.2.8 Taylor, Ben CA IAC-16.B6.2.6 Taylor, Matt CA IAC-16.B3.4.2 Taylor, Peter W. CA IAC-16.A1.IP.12 Taylor, Sydney CA IAC-16.C2.8.11 Tchou-Kien, David CA IAC-16.D2.5.1 te Hennepe, Frank CA IAC-16.B5.2.7 Team, AV4 CA IAC-16.A3.IP.23			
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Tasaki, Kazuyuki CA IAC-16.83.3.1 Tasker, Rose CA IAC-16.A5.IP.9 Tasker, Rose CA IAC-16.A3.38.11 Tate-Brown, Judy CA IAC-16.83.3.1 Tatnall, Adrian CA IAC-16.B1.2.8 Tawara, Kyosuke CA IAC-16.C1.8.9 Taylor, Ben CA IAC-16.B6.2.6 Taylor, Matt CA IAC-16.A3.4.2 Taylor, Peter W. CA IAC-16.A1.IP.12 Taylor, Sydney CA IAC-16.C2.8.11 Tchou-Kien, David CA IAC-16.D2.5.1 te Hennepe, Frank CA IAC-16.B2.4.2 te Hennepe, Frank CA IAC-16.B5.2.7 Team, AV4 CA IAC-16.A3.IP.23			IAC-16.B1.IP.5
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Tatnall, Adrian CA IAC-16.B1.2.8 Tawara, Kyosuke CA IAC-16.C1.8.9 Taylor, Ben CA IAC-16.B6.2.6 Taylor, Matt CA IAC-16.A3.4.2 Taylor, Peter W. CA IAC-16.A1.IP.12 Taylor, Sydney CA IAC-16.C2.8.11 Tchou-Kien, David CA IAC-16.D2.5.1 te Hennepe, Frank CA IAC-16.B2.4.2 te Hennepe, Frank CA IAC-16.B5.2.7 Team, AV4 CA IAC-16.A3.IP.23	Tasker, Rose	CA	IAC-16.A3.3B.11
Tawara, Kyosuke CA IAC-16.C1.8.9 Taylor, Ben CA IAC-16.B6.2.6 Taylor, Matt CA IAC-16.A3.4.2 Taylor, Peter W. CA IAC-16.A1.IP.12 Taylor, Sydney CA IAC-16.C2.8.11 Tchou-Kien, David CA IAC-16.D2.5.1 te Hennepe, Frank CA IAC-16.B2.4.2 te Hennepe, Frank CA IAC-16.B5.2.7 Team, AV4 CA IAC-16.A3.IP.23	Tate-Brown, Judy	CA	IAC-16.B3.3.1
Taylor, Ben CA IAC-16.B6.2.6 Taylor, Matt CA IAC-16.A3.4.2 Taylor, Peter W. CA IAC-16.A1.IP.12 Taylor, Sydney CA IAC-16.C2.8.11 Tchou-Kien, David CA IAC-16.D2.5.1 te Hennepe, Frank CA IAC-16.B2.4.2 te Hennepe, Frank CA IAC-16.B5.2.7 Team, AV4 CA IAC-16.A3.IP.23	Tatnall, Adrian	CA	IAC-16.B1.2.8
Taylor, Matt CA IAC-16.A3.4.2 Taylor, Peter W. CA IAC-16.A1.IP.12 Taylor, Sydney CA IAC-16.C2.8.11 Tchou-Kien, David CA IAC-16.D2.5.1 te Hennepe, Frank CA IAC-16.B2.4.2 te Hennepe, Frank CA IAC-16.B5.2.7 Team, AV4 CA IAC-16.A3.IP.23	Tawara, Kyosuke	CA	IAC-16.C1.8.9
Taylor, Peter W. CA IAC-16.A1.IP.12 Taylor, Sydney CA IAC-16.C2.8.11 Tchou-Kien, David CA IAC-16.D2.5.1 te Hennepe, Frank CA IAC-16.B2.4.2 te Hennepe, Frank CA IAC-16.B5.2.7 Team, AV4 CA IAC-16.A3.IP.23	Taylor, Ben	CA	IAC-16.B6.2.6
Taylor, Sydney CA IAC-16.C2.8.11 Tchou-Kien, David CA IAC-16.D2.5.1 te Hennepe, Frank CA IAC-16.B2.4.2 te Hennepe, Frank CA IAC-16.B5.2.7 Team, AV4 CA IAC-16.A3.IP.23	Taylor, Matt	CA	IAC-16.A3.4.2
Tchou-Kien, David CA IAC-16.D2.5.1 te Hennepe, Frank CA IAC-16.B2.4.2 te Hennepe, Frank CA IAC-16.B5.2.7 Team, AV4 CA IAC-16.A3.IP.23	• •		
te Hennepe, Frank CA IAC-16.B2.4.2 te Hennepe, Frank CA IAC-16.B5.2.7 Team, AV4 CA IAC-16.A3.IP.23			
te Hennepe, Frank CA IAC-16.B5.2.7 Team, AV4 CA IAC-16.A3.IP.23			
Team, AV4 CA IAC-16.A3.IP.23			
·			
ieam, AV4 CA IAC-16.A3.IP.33			
Team, BIRDS CA IAC-16.B4.1.4	iedili, BIKUS	CA	IAC-10.04.1.4

Team, HORYU-IV	CA	IAC-16.B4.6B.12	Tischenko, Tatiana
Team, HORYU-IV	CA	IAC-16.D1.6.7	Tiseo, Barbara
Team, MAIUS	CA	IAC-16.A2.1.3	Tisserand, Isabelle
Team, MAIUS	CA	IAC-16.A2.3.2	Titov, Dmitry M.
Team, QUANTUS	CA	IAC-16.A2.3.1	Tiwari, Pratik
Teeney, Leo	CA CA	IAC-16.A3.2B.10 IAC-16.A1.6.9	Tiwari, Pratik Tiwari, Pratik
Teeney, Leo Teeney, Leo	CA	IAC-16.A3.2C.3	Tkach, Vladimir
Tellis, Nathaniel	CA	IAC-16.A4.1.2	Tobehn, Carsten
Temidayo Isaiah, Oniosun	CA	IAC-16.B1.IP.2	Toda, Tomoaki
Temidayo Isaiah, Oniosun	CA	IAC-16.E1.3.11	Tokudome, Shinichir
Ten, Vladimir	Α	IAC-16.D1.IP.5	Tokudome, Shinichir
Ten, Vladimir	CA	IAC-16.B4.4.4	Tokudome, Shinichir
Teng, Pan	CA	IAC-16.B1.2.1	Tokunaga, Tatsuru
TENG, PAN	CA	IAC-16.D1.2.9	Toldbo, Christina Ayo
Tenil, Justine	CA	IAC-16.D2.7.5	Tolochko, Oleg
Tenil, Justine	CA	IAC-16.E1.3.12	Tolstel, Oleg
Tenil, Justine Tenil, Justine	A CA	IAC-16.D2.5.11 IAC-16.D5.2.4	Tolstel, Oleg Tomilovskaya, Elena
Tennen, Leslie I.	CA	IAC-16.D3.2.4	Tomkus, Vidmantas
Tennyson, Jonathan	CA	IAC-16.B4.2.5	Tonetti, Stefania
Teofilatto, Paolo	CA	IAC-16.C1.5.2	Tonetti, Stefania
Teplyakov, Vadim	CA	IAC-16.B2.2.2	Tong, Zongkai
Teplyakov, Vadim	CA	IAC-16.D1.6.12	Tong, Zongkai
Tepper, Eytan	CA	IAC-16.E7.2.15	Tonicello, Ferdinand
Terra, Maisa	CA	IAC-16.C1.4.5	Tonoli, Giampietro
Terra, Maisa	CA	IAC-16.C1.6.12	Tonoli, Giampietro
Terui, Fuyuto	CA	IAC-16.C1.1.1	Toole, Kendra
Teschl, Franz	CA	IAC-16.B2.1.5	Topputo, Francesco
Teselkin, Sergey Teselkin, Sergey	CA CA	IAC-16.A3.1.5 IAC-16.B4.2.12	Topputo, Francesco Topputo, Francesco
Tessenyi, Marcell	CA	IAC-16.B4.2.12	Tordi, Massimiliano
Teti, Frank	CA	IAC-16.A3.4.7	Torres, Jose
Tetuh, Emmanuel Tetuh	CA	IAC-16.D3.3.1	Torres, Jose
Teule, Frits	CA	IAC-16.D1.4.6	Torres Coronado, Jos
TEWARI, BRIJ	CA	IAC-16.A1.IP.19	Tosa, Naoko
Thakuri, Mahesh	CA	IAC-16.E1.1.9	Toscano, Pietro
Thangavel, Banupriya	CA	IAC-16.A1.IP.26	Toshimasa, Ochiai
Thangavelautham, Jekanthan	CA	IAC-16.D1.2.1	Toso, Federico
Thangavelautham, Jekanthan	CA	IAC-16.D4.5.7	Toson, Elena
Thangavelautham, Jekanthan Thangavelu, Madhu	CA CA	IAC-16.D4.5.8	Toson, Elena Toson, Elena
Thangavelu, Madhu	CA	IAC-16.A3.IP.37 IAC-16.A3.IP.40	Toson, Elena
Thangavelu, Madhu	CA	IAC-16.D3.1.2	Totani, Tsuyoshi
Thiel, Christian	CA	IAC-16.B1.6.1	Touzard, Jerome
Thirkettle, Anthony Charles	CA	IAC-16.C2.1.9	Townend, Martin
Thiry, Nicolas	CA	IAC-16.A3.IP.19	Toyoda, Kazuhiro
Thiry, Nicolas	CA	IAC-16.C1.4.1	Toyoshima, Morio
Thoesen, Andrew	CA	IAC-16.D4.5.8	Toyota, Hiroyuki
Thoma, Ioanna	CA	IAC-16.E7.4	Tozzi, Alessandro
Thomsen, Benjamin	CA	IAC-16.A6.6.7	Trabasso, Luíz Gonza
Thomsen, Brian Gasberg Thoreau, Peter	CA A	IAC-16.D1.4.10 IAC-16.D3.1.6	Tranter, Martyn Travaglini, Roberto
Thorn, Allyson	CA	IAC-16.B3.3.1	Trentlage, Christoph
Thote, Shiny Praveen	A	IAC-16.E2.1.7	Trentlage, Christoph
Thro, Caroline	CA	IAC-16.E7.1.12	Trifonov, Sergey
Thro, Caroline	CA	IAC-16.E3.4.11	Trifonov, Sergey
Tian, Guanzhi	CA	IAC-16.D2.IP.15	Trillaud, Frederic
Tian, Hui	CA	IAC-16.C4.IP.10	Trimarchi, Daniele
Tian, Jia	CA	IAC-16.B2.8-GTS.3.1	Trimarchi, Daniele
Tian, Li-Cheng	CA	IAC-16.C4.IP.47	Trimarchi, Daniele
Tianping, Zhang	CA	IAC-16.C4.4.6	Tringali, Alessandro
Tianya, Peng Ticker, Ronald	CA CA	IAC-16.D1.1.10 IAC-16.B3.1.3	Tringali, Alessandro Tringali, Alessandro
Tikhomirov, Alexander A.	CA	IAC-16.B3.1.5	Tripp, Jeffrey
Tikhomirov, Alexander A.	CA	IAC-16.A1.6.5	Trisolini, Mirko
Tikhomirova, Natalia	CA	IAC-16.A1.IP.5	Trivailo, Olga
Tikhonova, Aleksandra	CA	IAC-16.A6.IP.5	Trivedi, Rohit
Tikhonova, Aleksandra	CA	IAC-16.D1.3.5	Trois, Alessio
Tiliacos, Eutimio	CA	IAC-16.B1.5.3	Trojan, Ondrej
Tilvaldyev, Shehret	CA	IAC-16.C2.3.4	Tronchetti, Fabio
Timmermans, Remco	CA	IAC-16.E1.4.7	Tronchetti, Fabio
Timmermans, Remco	CA	IAC-16.D3.3.4	Trotti, Matteo
Tinetti, Giovanna	CA	IAC-16.B4.2.5	Troyac Dhilinno
Tinsley, Tim	CA	IAC-16.C3.5-C4.7.1	Troyas, Philippe Trucco, Roberto

Tischenko, Tatiana	CA	IAC-16.E1.IP.10
Tiseo, Barbara	CA	IAC-16.D5.3.8
Tisserand, Isabelle	CA	IAC-16.E3.6.7
Titov, Dmitry M.	CA	IAC-16.C2.4.2
Tiwari, Pratik Tiwari, Pratik	CA CA	IAC-16.A4.IP.3 IAC-16.C2.IP.2
Tiwari, Pratik	CA	IAC-16.C2.IP.2
Tkach, Vladimir	A	IAC-16.C4.1.12
Tobehn, Carsten	CA	IAC-16.B4.4.2
Toda, Tomoaki	CA	IAC-16.A3.5.1
Tokudome, Shinichiro	CA	IAC-16.D2.1.11
Tokudome, Shinichiro	CA	IAC-16.C4.2.6
Tokudome, Shinichiro	CA	IAC-16.D2.4.5
Tokunaga, Tatsuru	CA	IAC-16.D2.1.4
Toldbo, Christina Ayoe	CA	IAC-16.A1.IP.1
Tolochko, Oleg	CA	IAC-16.C2.8.2
Tolstel, Oleg	CA	IAC-16.B3.IP.2
Tolstel, Oleg	CA	IAC-16.B3.2.6
Tomilovskaya, Elena	CA	IAC-16.A1.2.1
Tomkus, Vidmantas	CA	IAC-16.A1.IP.9
Tonetti, Stefania	CA	IAC-16.A6.IP.12
Tonetti, Stefania	CA	IAC-16.B4.3.3
Tong, Zongkai	CA	IAC-16.C2.4.8
Tong, Zongkai	CA	IAC-16.C2.5.11
Tonicello, Ferdinando	CA	IAC-16.C3.4.7
Tonoli, Giampietro	CA A	IAC-16.E1.5.10 IAC-16.A2.6.7
Tonoli, Giampietro Toole, Kendra	CA	IAC-16.A2.6.7
Topputo, Francesco	CA	IAC-16.E1.2.1
Topputo, Francesco	CA	IAC-16.C1.4.8
Topputo, Francesco	CA	IAC-16.B4.7.8
Tordi, Massimiliano	CA	IAC-16.A3.IP.10
Torres, Jose	CA	IAC-16.B4.3.10
Torres, Jose	CA	IAC-16.D1.4.5
Torres Coronado, Jose Rafael	CA	IAC-16.E6.2.4
Tosa, Naoko	CA	IAC-16.E5.3.5
Toscano, Pietro	CA	IAC-16.A2.3.3
Toshimasa, Ochiai	CA	IAC-16.A1.7.6
Toso, Federico	CA	IAC-16.D2.7.7
Toson, Elena	CA	IAC-16.E1.5.5
Toson, Elena	CA	IAC-16.B4.6B.8
Toson, Elena	CA	IAC-16.C4.6.9
Toson, Elena	CA	IAC-16.A6.8.9
Totani, Tsuyoshi	CA	IAC-16.C4.2.12
Touzard, Jerome	CA	IAC-16.C2.1.9
Townend, Martin	CA	IAC-16.C3.5-C4.7.1
Toyoda, Kazuhiro Toyoshima, Morio	CA	IAC-16.A3.IP.23 IAC-16.B2.7.3
Toyota, Hiroyuki	CA	IAC-16.B2.7.3
тоуота, нігоуикі Tozzi, Alessandro	CA CA	IAC-16.A3.5.1 IAC-16.E1.3.4
Trabasso, Luíz Gonzaga	CA	IAC-16.E1.3.4
•	CA	
Tranter, Martyn Travaglini, Roberto	CA	IAC-16.A1.5.6 IAC-16.A6.4.7
Trentlage, Christopher	CA	IAC-16.C1.2.6
Trentlage, Christopher	CA	IAC-16.B4.7.6
Trifonov, Sergey	CA	IAC-16.A1.IP.5
Trifonov, Sergey	CA	IAC-16.A1.6.5
Trillaud, Frederic	CA	IAC-16.B1.IP.6
Trimarchi, Daniele	CA	IAC-16.E2.3-GTS.4.3
Trimarchi, Daniele	CA	IAC-16.B1.6.5
Trimarchi, Daniele	CA	IAC-16.B5.1.1
Tringali, Alessandro	A	IAC-16.C1.IP.3
Tringali, Alessandro	CA	IAC-16.C2.IP.14
Tringali, Alessandro	CA	IAC-16.D3.IP.1
Tripp, Jeffrey	CA	IAC-16.A3.4.7
Trisolini, Mirko	CA	IAC-16.A6.2.11
Trivailo, Olga	CA	IAC-16.D2.4.3
Trivedi, Rohit	CA	IAC-16.A2.6.4
Trois, Alessio	CA	IAC-16.A4.1.8
Trojan, Ondrej	CA	IAC-16.E2.2.4
Tronchetti, Fabio	CA	IAC-16.E3.4.3
Tronchetti, Fabio	CA	IAC-16.E7.5.10
Trotti, Matteo	CA	IAC-16.B4.6B.8
Troyas, Philippe	CA	IAC-16.D4.1.3
Trucco, Roberto	CA	IAC-16.A3.IP.10





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IAC-16.C4.2.2 IAC-16.C4.2.3

IAC-16.C4.2.S IAC-16.A3.2B.4 IAC-16.C4.5.7 IAC-16.C4.5.8 IAC-16.A3.2B.4 IAC-16.B2.5.10





Totalia Lagranda	C 4	146.16.44.3.0
Trujillo, Leonardo	CA	IAC-16.A4.2.8
Trusculescu, Marius Florin	CA	IAC-16.B2.4.7
Trusculescu, Marius Florin	CA	IAC-16.B4.8.6
Tsiganis, Kleomenis	CA	IAC-16.A6.4.2
Tsiotras, Panagiotis	CA	IAC-16.A6.IP.25
Tsiotras, Panagiotis	CA	IAC-16.C1.3.9

Trujillo, Leonardo	CA	IAC-10.A4.2.8
Trusculescu, Marius Florin	CA	IAC-16.B2.4.7
Trusculescu, Marius Florin	CA	IAC-16.B4.8.6
Tsiganis, Kleomenis	CA	IAC-16.A6.4.2
Tsiotras, Panagiotis	CA	IAC-16.A6.IP.25
Tsiotras, Panagiotis	CA	IAC-16.C1.3.9
Tsodikovich, Yevgeny	CA	IAC-16.E3.3.6
Tsuda, Yuichi	CA	IAC-16.C1.5.11
Tsuda, Yuichi	CA	IAC-16.A3.4.4
Tsuda, Yuichi	CA	IAC-16.A3.4.5
Tsuda, Yuichi	CA	IAC-16.C1.9.2
Tsujioka, Mitsutoshi	CA	IAC-16.D2.4.4
Tsunoda, Hiroaki	CA	IAC-16.C2.2.10
Tubby, Wayne	CA	IAC-16.A3.3B.8
Tubiana, Cecilia	CA	IAC-16.A3.4.3
Tuccar, Adnan	CA	IAC-16.D1.2.2
Tuchin, Andrey	CA	IAC-16.C1.4.11
Tuchin, Denis	CA	IAC-16.C1.4.11
Tucker Doswell, Jayfus	CA	IAC-16.A1.3.6
Tugnoli, Matteo	Α	IAC-16.E3.3.2
Tulupov, Vladimir	CA	IAC-16.B4.2.12
Tumino, Giorgio	CA	IAC-16.D2.1.10
Tumino, Giorgio	CA	IAC-16.D2.6.2
Tumova, Zuzana	CA	IAC-16.E2.2.4
Tuninetti, Carlo	CA	IAC-16.D2.3.5
Tunstill, Lisa	CA	IAC-16.E4.1.2
Tuozzi, Alberto	CA	IAC-16.B2.6.8
Tuozzi, Alberto	CA	IAC-16.E5.4.3
Turconi, Andrea	CA	IAC-16.D4.1.3
Turkina, Olesya	CA	IAC-16.E1.IP.25
Turnbull, Oliver	CA	IAC-16.D5.3.2
Turner, Neil	CA	IAC-16.D2.7.10
Tusa, Sebastiano	CA	IAC-16.B1.5.3
Tuttle, Sean	CA	IAC-16.C1.IP.9
Tyc, George	CA	IAC-16.B1.2.11
Tyler, Laurence	CA	IAC-16.A3.3B.8
Tyni, Mats	CA	IAC-16.B2.5.2
Tyurenkova, Veronika	CA	IAC-16.A2.2.9
Tyurenkova, Veronika	CA	IAC-16.A2.4.1
Töpfer, Markus	CA	IAC-16.B3.4-B6.5.3
Tüllmann, Ralph	CA	IAC-16.D6.3.6

Name	Role	Paper
Ubertini, Pietro	CA	IAC-16.A7.1.2
Uchitomi, Motoko	CA	IAC-16.E3.1.9
Udupa, Subramanya	CA	IAC-16.B2.5.10
Uegaki, Natsuyo	CA	IAC-16.C4.2.7
Uehara, Hirotaka	CA	IAC-16.C4.2.5
Ueno, Munetala	CA	IAC-16.A3.5.1
Ugolini, Filippo	CA	IAC-16.E6.3.10
Ugolini, Francesco	CA	IAC-16.E6.3.10
Ugom, Michael Ifeanyi	CA	IAC-16.E1.2.1
Ui, Kyoichi	CA	IAC-16.C2.1.2
Ukaegbu, Kingsley	CA	IAC-16.E2.1.2
Ukaegbu, Kingsley	CA	IAC-16.B1.5.10
Ukaegbu, Kingsley	CA	IAC-16.E1.2.1
Ukai, Takaya	CA	IAC-16.A3.1.9
Ulamec, Stephan	CA	IAC-16.A3.4.3
Ulloa, Adrian	CA	IAC-16.E3.1.1
Ulrich, Steve	CA	IAC-16.C1.3.4
Umar, Abdulkareem	CA	IAC-16.B2.2.8
Umeda, Minoru	CA	IAC-16.A5.2.8
Umeda, Minoru	CA	IAC-16.C3.3.1
Umemura, Sayaka	CA	IAC-16.B3.3.1
Urade, Yoshihiro	CA	IAC-16.B3.3.6
Urbanek, Jakub	CA	IAC-16.A3.4.1
Urbazaev, Mikhail	CA	IAC-16.B1.6.1
Urbina-Martinez, Jorge L.	CA	IAC-16.B2.IP.4
Uriguen, Manuel	CA	IAC-16.B4.6B.11
Ushakov, Igor	CA	IAC-16.A1.2.1
Ushakova, Sofya	CA	IAC-16.A1.IP.5
Ushakova, Sofya	CA	IAC-16.A1.6.5

Usop, Filarius Peter	CA	IAC-16.C3.2.6
Usov, Vitali	CA	IAC-16.B3.6-A5.3.7
Usuki, Tomoaki	CA	IAC-16.C4.6.1
Utashima, Masayoshi	CA	IAC-16.A3.IP.1
Uwarowa, Inna	CA	IAC-16.C3.5-C4.7.7

CA

CA

Name V, Eswaran

V, Eswaran

V, Eswaran V, Eswaran

V, Eswaran V, Eswaran V, Eswaran V, Mahesh V, Ravichandran

V, Ravichandran	CA	IAC-16.B2.5.10
V. Moraes, Rodolpho	CA	IAC-16.C1.6.10
Vacca, Valentina	CA	IAC-16.A4.1.8
Vaclavik, Michal	CA	IAC-16.E6.IP.2
Vaclavik, Michal	CA	IAC-16.A2.5.4
Valadez, Eduardo	CA	IAC-16.B5.1.4
Valdatta, Marcello	CA	IAC-16.B2.2.7
Valdatta, Marcello	CA	IAC-16.A2.5.10
Valdes, Carlos	CA	IAC-16.D4.2.11
VALDES-GALICIA, JOSE F.	CA	IAC-16.A3.1.1
Valdes-Sada, Pedro	CA	IAC-16.B4.2.3
Valente, Giuseppe	CA	IAC-16.A4.1.8
Vales, Marc	CA	IAC-16.C4.1.1
Vallat, Claire	CA	IAC-16.A3.4.2
Valle Pinto, Victoria	CA	IAC-16.E5.IP.1
Valli, Monica	CA	IAC-16.C4.6.9
Vallisneri, Michele	CA	IAC-16.A7.2.1
Valsecchi, Giovanni	CA	IAC-16.A6.IP.24
Valsecchi, Giovanni	CA	IAC-16.A6.2.7
Valsecchi, Giovanni B.	CA	IAC-16.A6.4.2
Valverde, Alfredo	CA	IAC-16.B4.1.8
Valérie, Dekorver	CA	IAC-16.C4.1.8
van Burg, Elco	CA	IAC-16.E6.3.1
van de Kerkhof, Bas	CA	IAC-16.E6.3.1
Van de Poel, Mathijs	CA	IAC-16.C4.IP.25
	CA	IAC-16.C4.IP.25
van der Marel, Hans	CA	IAC-16.B1.3.6
van der Merwe, Hans	CA	
van der Veen, Egbert Jan		IAC-16.E6.1.6
van Duijn, Pieter	CA	IAC-16.D1.4.6
Van Hoof, Denis	CA	IAC-16.B6.1.5
van Oijhuizen Galhego Rosa, Ana Cristina	CA	IAC-16.E6.1.3
Van Zyl, Robert	CA	IAC-16.D1.6.6
Vananti, Alessandro	CA	IAC-16.A6.9.5
Vananti, Alessandro	CA	IAC-16.A6.9.8
Vandenhoeck, Ray	CA	IAC-16.D3.3.4
Vannier, Pauline	CA	IAC-16.A1.5.2
Vanreusel, Joost	CA	IAC-16.E1.4.2
Varacalli, Giancarlo	CA	IAC-16.B1.IP.8
Varatharajoo, Renuganth	CA	IAC-16.C1.4.9
Vargas, Hector	Α	IAC-16.B5.1.8
Vargas Fajardo, Juan Angelo	CA	IAC-16.E1.3.7
Vargas Pallini, Juan Pablo	CA	IAC-16.D4.2.7
Vargas Pallini, Juan Pablo	CA	IAC-16.E7.5.2
Vargas-Cuentas, Natalia Indira	CA	IAC-16.B4.1.3
Vargas-Cuentas, Natalia Indira	CA	IAC-16.B4.1.10
Vargas-Cuentas, Natalia Indira	CA	IAC-16.E3.3.10
Vargas-Cuentas, Natalia Indira	CA	IAC-16.B1.4.4
Varghese, Abraham	CA	IAC-16.C4.1.6
Vasconcelos, João	CA	IAC-16.A3.IP.18
Vasconcelos, João	CA	IAC-16.B4.8.5
Vashishtha, Ankita	CA	IAC-16.A5.IP.8
Vasile, Massimiliano	CA	IAC-16.A3.IP.19
Vasile, Massimiliano	CA	IAC-16.C1.3.1
Vasile, Massimiliano	CA	IAC-16.C1.4.1
Vasile, Massimiliano	CA	IAC-16.C1.7.1
Vasilev, Lev	CA	IAC-16.D6.2-D2.9.4
Vasilyeva, Ekaterina	CA	IAC-16.C2.8.2
Vasko, Christopher	CA	IAC-16.E5.2.6
Vassilieva, Galina	CA	IAC-16.E3.2.6
Vaughn, Mandy	CA	IAC-16.B3.2.5
Vaughn, Mandy Vaughn, Mandy	CA	IAC-16.B3.2.5
	(A	IAC-ID DZ Z T

Vazquez, Roberto	CA	IAC-16.B4.2.3
Vazquez Torres, Fabiola Vazquez-Robledo, Ricardo	CA CA	IAC-16.A1.2.11 IAC-16.A2.4.6
Veergnes, Laurent	CA	IAC-16.A1.7.6
Vega, Jaime	CA	IAC-16.E2.4.3
Veit, Elisabeth	CA	IAC-16.E3.1.15
Vekinis, Giorgios	CA	IAC-16.A3.3B.1
VELAYUDHAN, SNEHA	CA	IAC-16.E1.4.8
/ELAYUDHAN, SNEHA	CA	IAC-16.B2.8-GTS.3.7
Velazquez, Fernando Velazquez de la Rosa, Miguel	CA CA	IAC-16.B1.IP.6 IAC-16.B1.IP.15
Velez, Tatiana	CA	IAC-16.B1.IP.13
Velichko, Vladimir	CA	IAC-16.A1.IP.5
Vemula, Girish Kumar	CA	IAC-16.C4.5.8
Venditti, Floriano	CA	IAC-16.D2.4.1
Vendittozzi, Cristian	CA	IAC-16.C2.2.12
Vendittozzi, Cristian	CA	IAC-16.B5.2.11
Vendt, Riho Venkataramu, Banavara Krishnamurthy	CA CA	IAC-16.B4.4.3 IAC-16.C4.3.7
Venkatesh, HS	CA	IAC-16.C4.3.7
Venkateswaran, C	CA	IAC-16.C2.4.3
/enkitakrishnan, PV	CA	IAC-16.C2.4.3
Ventura-Gonzalez, Daniel	CA	IAC-16.A1.2.4
/enugopal, Desaraju	CA	IAC-16.B2.1.1
Venugopal, Desaraju	CA	IAC-16.B2.1.4
/ERA, DOMINGO /erberne, Onno	CA CA	IAC-16.B4.6B.13 IAC-16.A6.IP.12
Vercseg, István	CA	IAC-16.A6.IP.12
Verhoeven, Chris	CA	IAC-16.E1.3.6
Verkhovsky, Igor	CA	IAC-16.B3.2.3
Verma, Manmohan	Α	IAC-16.C2.7.6
/ermilion, David	CA	IAC-16.E4.1.2
/ernon, Steven	CA	IAC-16.A3.1.4
Vernon, Steven	CA	IAC-16.D4.1.9 IAC-16.B4.8.1
Verspieren, Quentin	CA CA	IAC-16.B4.8.1
Verstappen, Nicolas Vespe, Francesco	CA	IAC-16.B1.IP.31
Vespe, Francesco	CA	IAC-16.A2.1.8
Vespe, Francesco	CA	IAC-16.B2.4.5
Vestnes, Frida	CA	IAC-16.E1.IP.32
Vial, Vanessa	CA	IAC-16.C4.4.8
/ialard, Marie	CA	IAC-16.B4.2.7
/IANA, TATIANA	CA	IAC-16.E7.5.6
Vicario de Miguel, Gonzalo	CA	IAC-16.A6.IP.12
/icario de Miguel, Gonzalo	CA	IAC-16.A6.4.7
Vicario de Miguel, Gonzalo Vietze, Marco	CA A	IAC-16.B4.3.3
/ihmand, Mart	CA	IAC-16.C2.7.7 IAC-16.D5.2.2
/iikari, Lotta	CA	IAC-16.E7.2.12
/ijayakumar, L.J.	CA	IAC-16.B5.2.3
/ikner, Alexandra Martinussen	CA	IAC-16.A3.1.10
/ila, Luis	CA	IAC-16.A3.IP.25
/ilhena de Moraes, Rodolpho	CA	IAC-16.C1.IP.2
/ILLA HERRERA, JOSE EDUARDO	CA	IAC-16.C3.3.8
/ILLA HERRERA, JOSE EDUARDO	CA	IAC-16.C3.4.8
/illa Montero, Marc	CA	IAC-16.A3.2B.10
/illagran de Leon, Juan Carlos	CA	IAC-16.E5.4.8
/illalobos, Roberto	CA	IAC-16.E2.4.2
/illanueva, Susana /illareal-Méndez, Marcelo	CA CA	IAC-16.B2.IP.2
/illaseñor Hernández, Carlos Alejandro	CA	IAC-16.B4.2.3 IAC-16.D5.3.9
/INET, Pierre	CA	IAC-16.C4.1.4
/inogradov, Pavel	CA	IAC-16.E1.9.3
/iola, Nicole	CA	IAC-16.D2.IP.11
/iola, Nicole	CA	IAC-16.D4.1.2
/iola, Nicole	CA	IAC-16.A5.2.11
/iola, Nicole	CA	IAC-16.E1.4.9
Viola, Nicole	CA	IAC-16.A5.1.9
Viola, Nicole	CA	IAC-16.D2.4.8
/iola, Nicole	CA	IAC-16.D2.5.9
/iola, Nicole	CA	IAC-16.D6.3.1
/iola, Nicole	CA	IAC-16.A3.2C.5
/iru laan	CA	IAC-16.E1.9.3
/iru, Jaan /isagie, Lourens	CA CA	IAC-16.B4.7.9 IAC-16.D1.3.3
/isagie, Lourens	CA	IAC-16.D1.3.3

Visintin, Monica	CA	IAC-16.D1.4.8
Visscher, Peter	Α	IAC-16.A3.2B.7
Visscher, Peter	CA	IAC-16.E1.4.7
Viviani, Antonio	CA	IAC-16.A2.4.1
Viñas Tió, Meritxell	CA	IAC-16.E2.3-GTS.4.7
Vjatkin, Aleksey	CA	IAC-16.A2.4.8
Vlasova, Natalia	CA	IAC-16.B4.2.12
Vlcek, Tomas	CA	IAC-16.C2.7.2
Vogel, Michael	CA	IAC-16.E1.5.6
Vogel, Michael	CA	IAC-16.E5.5.6
Vogel, Stefan	CA	IAC-16.E1.5.6
Vogel, Stefan	CA	IAC-16.E5.5.6
Voigt, Niklas	CA	IAC-16.D2.4.1
Voillat, Régis	CA	IAC-16.A6.5.2
Voli, Khadar	CA	IAC-16.C4.IP.7
Vollmuller, Bert-Johan	CA	IAC-16.B1.3.6
Volynskaya, Olga	CA	IAC-16.E7.2.16
von der Dunk, Frans	CA	IAC-16.E7.5.9
von der Dunk, Frans	Α	IAC-16.E7.6-E3.5.5
von Kampen, Peter	CA	IAC-16.A2.5.5
von Keiser, Philip	CA	IAC-16.B4.7.7
Von-Malm, Holger	CA	IAC-16.B1.4.1
Vora, Amar	CA	IAC-16.B4.2.5
Vora, Amar	CA	IAC-16.B1.2.11
Vorontsov, Viktor A.	CA	IAC-16.A3.1.5
Voropaev, Viktor	CA	IAC-16.A6.IP.21
Voynova, Olga	CA	IAC-16.D6.2-D2.9.4
Vricella, Antonio	CA	IAC-16.A6.1.6
Vricella, Antonio	CA	IAC-16.C2.6.3
Vricella, Antonio	CA	IAC-16.C2.8.2
Vricella, Antonio	CA	IAC-16.C2.8.6
Vu Trong, Thu	CA	IAC-16.B4.4.12
Vyshnav, Pradyumna Nanda	CA	IAC-16.B3.6-A5.3.4
Vázquez, Brigette	CA	IAC-16.E2.4.9
Vázquez García, Kevin Fernando	CA	IAC-16.D5.3.9
Vázquez Herrera, Josué Jesús	CA	IAC-16.A1.IP.14
Vázquez-Núñez, Bismarck Iván	CA	IAC-16.A1.IP.44

Name	Role	Paper
Wachche, Sadanand	CA	IAC-16.E2.3-GTS.4.5
Waclavicek, Rene	CA	IAC-16.E5.1.7
Wada, Yutaka	CA	IAC-16.E1.IP.30
Waghela, Rajmohan	CA	IAC-16.A3.5.5
Waghulde, Dhaval	CA	IAC-16.C3.4.1
Waghulde, Dhaval	CA	IAC-16.C4.6.7
Wagner, Nicoletta	CA	IAC-16.C4.4.3
Wagner, Nicoletta	CA	IAC-16.C4.4.4
Waite, J. Hunter	CA	IAC-16.A1.5.8
Wakabayashi, Sachiko	CA	IAC-16.A3.2A.2
Wakabayashi, Sachiko	CA	IAC-16.A3.2B.5
Wakita, Masashi	CA	IAC-16.C4.2.12
Wald, Samuel	CA	IAC-16.A1.6.3
Walker, Helen	CA	IAC-16.B4.3.13
Walker, John	CA	IAC-16.A3.2A.10
Walker, Mitchell	CA	IAC-16.C4.IP.30
Walker, Mitchell	CA	IAC-16.C4.IP.48
Walker, Scott	CA	IAC-16.C1.6.13
Wallburg, Andrew	CA	IAC-16.E4.1.2
Waltemathe, Michael	CA	IAC-16.E1.9.5
Waltemathe, Michael	CA	IAC-16.E5.1.10
Walter, Nicolas	CA	IAC-16.A1.5.1
Walter, Nicolas	CA	IAC-16.A1.5.2
Walter, Nicolas	CA	IAC-16.A1.5.9
Walter, Ulrich	CA	IAC-16.B4.1.12
Walter, Ulrich	CA	IAC-16.C1.9.13
Walton, Lori	CA	IAC-16.A4.IP.2
Walton, Lori	CA	IAC-16.A4.2.3
Wan, Yumin	CA	IAC-16.A1.3.4
Wang, Beibei	CA	IAC-16.C3.3.7
Wang, Bendong	CA	IAC-16.C3.3.5
Wang, Changhuan	CA	IAC-16.A3.5.6
Wang, Chu	CA	IAC-16.C4.5.3
Wang, Daging	CA	IAC-16.B2.8-GTS.3.1









Wang, Dongyang

Wang, Fei

Wang, Fei

Wang, Guoyu Wang, Guoyu

Wang, Guoyu

Wang, Hongfei

WANG, Jia

Wang, Jiao

Wang, Jilian

Wang, Jue

Wang, Lei WANG, LEI

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Wang, Lin-Jie

Wang, Liping

WANG, LIWEI

Wang, Luyuan

Wang, Meng

Wang, Min

Wang, Min

Wang, Mingming

Wang, Mingming

Wang, Moge

Wang, Peng

Wang, Peng

Wang, Qing

Wang, Quanwu

Wang, Rendong

Wang, Shengnan

Wang, Shuquan

WANG, Wei

Wang, Wenjie

Wang, Xiaohui

Wang, Xiaohui

Wang, Xiaowei

Wang, Xinglai Wang, Xinsheng

Wang, Yeqiang Wang, Ying

Wang, Yong

Wang, Yong

Wang, Youyi

WANG, YUren Wang, Zhao

Wang, Zhaowei

Wanjara, Priti

Watahiki, Masahito

Watanabe, Akihito

Watanabe, Sei-ichiro

Watanabe, Shigeto Waterman, Gideon

Waters, Deborah Watkinson, Emily Jane

Watt, Mark

Watanabe, Akiko

Wang, Yuanguang

Wang, Yuanguang Wang, Yue

Wang, Xin

Wang, Wei

Wang, Xian

Wang, Shaofei

Wang, Li

Wang, Jufang

Wang, Kunsheng

Wang, Kunsheng

Wang, Jeremy Chan-Hao Wang, Jeremy Chan-Hao

Wang, Jeremy Chan-Hao

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Wang, Dongxia	CA	IAC-16.B2.8-GTS.3.2	Wat
Wang, Dongxia	CA	IAC-16.B2.8-GTS.3.4	
vvalig, Doligala	CA	IAC-10.B2.8-G13.3.4	Wat

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IAC-16.A1.5.7

IAC-16.B3.2.4

IAC-16.A1.7.3

IAC-16.E7.IP.14

IAC-16.E3.4.2 IAC-16.E7.4.4

IAC-16.C4.IP.36

IAC-16.C4.IP.37

IAC-16.E3.4.11

IAC-16.A2.2.3

IAC-16.B2.2.5

IAC-16.E7.4.3

IAC-16.D1.2.8

IAC-16.A2.4.3

IAC-16.D5.1.7

IAC-16.E1.5.7 IAC-16.D2.IP.12

IAC-16.B2.6.5

IAC-16.C3.3.7

IAC-16.D2.6.12

IAC-16.A1.IP.33

IAC-16.C2.8.11

IAC-16.D2.6.12

IAC-16.D1.4.11

IAC-16.C4.4.6

IAC-16.B2.1.2

IAC-16.C4.4.2

IAC-16.C1.IP.6

IAC-16.C1.9.13

IAC-16.C4.IP.33

IAC-16.D5.3.3

IAC-16.D5.3.4

IAC-16.C4.9.13

IAC-16.C2.2.11

IAC-16.A6.IP.11

IAC-16.A6.8.10

IAC-16.C2.1.3

IAC-16.C1.IP.14

IAC-16.B3.1.7

IAC-16.A6.6.9

IAC-16.C2.5.3

IAC-16.D1.IP.16

IAC-16.A6.IP.27

IAC-16.D2.IP.8

IAC-16.B2.1.9

IAC-16.E1.4.6

IAC-16.D5.1.9

IAC-16.B2.1.9

IAC-16.C1.IP.10

IAC-16.C4.5.3

IAC-16.C2.3.11

IAC-16.C4.9.5

IAC-16.E5.1.9

IAC-16.C1.2.5

IAC-16.A2.2.5

IAC-16.B1.IP.29

IAC-16.C2.7.5

IAC-16.C2.9.1

IAC-16.D4.3.10

IAC-16.C2.2.8

IAC-16.E7.1.13

IAC-16.A3.4.5

IAC-16.A3.5.1

IAC-16.A1.4.7

IAC-16.B3.7.8

IAC-16.C1.9.5

IAC-16.C3.5-C4.7.1

IAC-16.D2.8-A5.4.7

IAC-16.B2.8-GTS.3.1

IAC-16.B3.4-B6.5.7



Watts, Simon	CA	IAC-16.B2.6.9
Watts, Trevor	CA	IAC-16.B4.7.5
Webb, Alan	CA	IAC-16.D2.7.11
Webb, Alan	CA	IAC-16.A6.5.3
Webb, Gerald	CA	IAC-16.D2.6.5
Webber, Helen	CA	IAC-16.C4.9.2
Weeden, Brian	CA	IAC-16.A6.8.3
Weeks, Edythe	CA	IAC-16.A1.IP.25
Weeks, Edythe	CA	IAC-16.D3.IP.2
Weeks, Edythe	CA	IAC-16.C3.2.9
Weeks, Edythe	CA	IAC-16.E6.3.4
Weeks, Edythe	CA	IAC-16.B5.2.12
Weerts, Guillaume	CA	IAC-16.B3.4-B6.5.4
Wei, Baoxi	CA	IAC-16.C4.9.4
Wei, Baoxi	CA	IAC-16.C4.9.15
Wei, Chuanfeng	CA	IAC-16.B3.1.7
WEI, Feng	CA	IAC-16.C4.9.3
WEI, Kunlong	CA	IAC-16.C2.4.7
WEI, Kunlong	CA	IAC-16.C2.4.9
Wei, Shaojuan	CA	IAC-16.C4.IP.5
Wei, Xianggeng	CA	IAC-16.C4.9.4
Wei, Zhao	CA	IAC-16.B2.8-GTS.3.4
Weig, Florian	CA	IAC-16.C4.5.5
Weigand, Alexander	CA	IAC-16.B4.6B.8
Weihs, Hendrik	CA	IAC-16.A3.3B.1
Weihua, Ma	CA	IAC-16.B2.3.6
Weiland, Stefan	CA	IAC-16.C2.7.7
Weis, Stefan	CA	IAC-16.C4.4.3
Weise, Dennis	CA	IAC-16.B1.IP.27
Weiss, Bernd Michael	CA	IAC-16.E6.IP.1
Weiss, Bernd Michael	CA	IAC-16.E1.8.6
Weiss, Bernd Michael	CA	IAC-16.E1.5.2
Weiss, Peter	CA	IAC-16.D4.1.7
Weiss, Sascha	CA	IAC-16.B4.4.5
Weisser, Constantin	CA	IAC-16.E2.3-GTS.4.7
Weizman, Ayelet	CA	IAC-16.E1.IP.24
Wekerle, Timo	A	IAC-16.B4.5.12
Welch, Chris	CA	IAC-16.B6.2.2
Welch, Chris	CA	IAC-16.D4.1.10
	CA	IAC-16.E6.1.1
Welch, Chris Welch, Chris	CA	IAC-16.E6.1.1
Welch, Chris	CA	IAC-16.E6.1.2
Welch, Chris	CA	IAC-16.D2.3.12
	CA	IAC-16.C4.8.7
Welch, Chris Wen, Shenghui	CA	IAC-16.C4.8.7
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Wen, Xuezhong	CA	IAC-16.A6.3.2
Wenbo, Miao	CA	IAC-16.A3.IP.28
Wendrich, Thijs	CA	IAC-16.A2.3.2
Weng, Jingnong	CA	IAC-16.E1.4.6
Weng, Jingnong	A	IAC-16.E1.4.12
Weps, Benjamin	CA	IAC-16.A2.5.2
Werni, Alfred	CA	IAC-16.B5.2.7
Werthimer, Dan	CA	IAC-16.A4.1.3
Werthimer, Dan	CA	IAC-16.A4.1.4
West, Gates	CA	IAC-16.A3.2A.7
Westall, Frances	CA	IAC-16.A1.5.2
Wheeler, Raymond	CA	IAC-16.E2.2.2
Whidborne, James	CA	IAC-16.C1.2.4
Whitehead, Shaun	CA	IAC-16.E1.8.5
Whitehead, Shaun	CA	IAC-16.E1.9.12
Wiedemann, Carsten	CA	IAC-16.A6.2.9
Windows Cons	CA	IAC-16.C1.2.11
wiedermann, Georg	CA	
Wiedermann, Georg Wilde, Detlef	CA	IAC-16.A6.6.1

williams, bobby	CA	IAC-10.A3.2A.7
Williams, Hugo	CA	IAC-16.E1.4.9
Williams, Hugo	CA	IAC-16.C3.5-C4.7.1
Williams, James	CA	IAC-16.B4.2.5
Williams, Phillip	CA	IAC-16.D3.1.5
Williams-Byrd, Julie	CA	IAC-16.D3.1.5
Williams-Byrd, Julie	CA	IAC-16.D3.4.9
•	CA	
Willnecker, Rainer		IAC-16.A2.6.5
Wilson, Grant	CA	IAC-16.A4.1.9
Wilson, James	CA	IAC-16.A4.1.6
Wilson, Krystal	CA	IAC-16.E5.4.4
Wilson, Simon	CA	IAC-16.A6.IP.26
Wilson, Thomas	CA	IAC-16.B4.2.2
Wilson, Zak	CA	IAC-16.A5.2.9
Wilson, Zak	CA	IAC-16.E1.1.5
Wimmer-Schweingruber, Robert	CA	IAC-16.D4.1.9
Winkler, Stefan	CA	IAC-16.C1.2.11
Winter, Frank H.	CA	IAC-16.E4.2
Winter, Othon	CA	IAC-16.C1.7.11
Wirtz, Marius	CA	IAC-16.A3.5.2
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Wisse, Menko	CA	IAC-16.D2.4.2
Witasse, Olivier	A	IAC-16.A7.2.4
Witt, Johannes	CA	IAC-16.A2.6.1
Witt, Johannes	CA	IAC-16.B3.7.6
Wittig, Alexander	CA	IAC-16.C1.IP.4
Wittig, Manfred	CA	IAC-16.B2.5.1
Wittig, Manfred	CA	IAC-16.B2.7.1
Wittmann, Philipp	CA	IAC-16.A3.3B.5
Wiwattananon, Peerawan	CA	IAC-16.C4.8.6
Wognsen, Erik Ramsgaard	CA	IAC-16.B4.3.11
Wohrer, Paul	CA	IAC-16.D3.1.6
Wolanski, Piotr	CA	IAC-16.C4.IP.28
Wolanski, Piotr	CA	IAC-16.A2.5.3
Wolf, Peter	CA	IAC-16.A2.1.5
Wolff, Mikael	CA	IAC-16.B3.5.4
•	CA	
Wolff, Mikael		IAC-16.B6.1.2
Wolfson, Nancy C.	CA	IAC-16.C3.2.9
Wolfson, Nancy C.	CA	IAC-16.B5.2.12
Woltran, Markus	CA	IAC-16.D4.1.1
Woltran, Markus	CA	IAC-16.E3.4.1
Wong, Lauren	CA	IAC-16.B4.5.11
Wong, Nathan	CA	IAC-16.A3.2A.1
Wood, Danielle	CA	IAC-16.E6.1.7
Woods, Mark	CA	IAC-16.A3.3B.8
Woods, Michael	CA	IAC-16.D4.5.10
Worden, Pete	CA	IAC-16.A4.1.3
Worden, S. Pete	CA	IAC-16.A4.2.2
Worms, Jean-Claude	CA	IAC-16.A5.1.3
Wren, Paul	CA	IAC-16.A3.2A.7
Wright, Reuben	CA	IAC-16.A5.2A.7
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Wright, Shelley	CA	IAC-16.A4.1.1
Wu, An-Ming	CA	IAC-16.A2.1.6
Wu, An-Ming	CA	IAC-16.C1.6.6
Wu, An-Ming		110 10 D
	CA	IAC-16.D2.8-A5.4.10
Wu, Baoyuan	CA	IAC-16.C4.IP.20
Wu, Baoyuan Wu, Chongyang		
	CA	IAC-16.C4.IP.20
Wu, Chongyang	CA CA	IAC-16.C4.IP.20 IAC-16.A1.6.8
Wu, Chongyang WU, Di	CA CA	IAC-16.C4.IP.20 IAC-16.A1.6.8 IAC-16.A2.4.4
Wu, Chongyang WU, Di WU, Guofu	CA CA CA	IAC-16.C4.IP.20 IAC-16.A1.6.8 IAC-16.A2.4.4 IAC-16.B4.6A.2
Wu, Chongyang WU, Di WU, Guofu Wu, Jianjun Wu, Jianjun	CA CA CA CA CA	IAC-16.C4.IP.20 IAC-16.A1.6.8 IAC-16.A2.4.4 IAC-16.B4.6A.2 IAC-16.C4.IP.14 IAC-16.C4.IP.15
Wu, Chongyang WU, Di WU, Guofu Wu, Jianjun Wu, Jianjun Wu, Jianjun	CA CA CA CA CA CA CA CA	IAC-16.C4.IP.20 IAC-16.A1.6.8 IAC-16.A2.4.4 IAC-16.B4.6A.2 IAC-16.C4.IP.14 IAC-16.C4.IP.15 IAC-16.C4.IP.39
Wu, Chongyang WU, Di WU, Guofu Wu, Jianjun Wu, Jianjun Wu, Jianjun Wu, Jianjun Wu, QingJun	CA	IAC-16.C4.IP.20 IAC-16.A1.6.8 IAC-16.A2.4.4 IAC-16.B4.6A.2 IAC-16.C4.IP.14 IAC-16.C4.IP.15 IAC-16.C4.IP.39 IAC-16.D2.2.9
Wu, Chongyang WU, Di WU, Guofu Wu, Jianjun Wu, Jianjun Wu, Jianjun	CA CA CA CA CA CA CA CA	IAC-16.C4.IP.20 IAC-16.A1.6.8 IAC-16.A2.4.4 IAC-16.B4.6A.2 IAC-16.C4.IP.14 IAC-16.C4.IP.15 IAC-16.C4.IP.39

CA

CA

Willemsen, Philip

Williams, Bobby

IAC-16.B1.3.1

IAC-16.A3.2A.7

Wu, Shiyun	CA	IAC-16.A1.6.8
Wu, Shuai	CA	IAC-16.E2.3-GTS.4.1
Wu, Shufan	CA	IAC-16.D2.7.8
Wu, Shufan	CA	IAC-16.B4.4.11
Wu, Shufan	CA	IAC-16.B5.2.9
Wu, Shufan	CA	IAC-16.C3.4.2
Wu, Shufan	CA	IAC-16.E1.7.11
Wu, Shufan	CA	IAC-16.D1.7.7
Wu, Shunan	A	IAC-16.C1.6.11
Wu, Xiangbin	CA	IAC-16.A6.IP.11
Wu, Xiaodan	CA	IAC-16.E7.7-B3.8.1
Wu, Yeong-Wei	A	IAC-16.C1.8.7
WU, Yingchuan	CA	IAC-16.C4.9.3
Wu, Zhigang	CA	IAC-16.C1.6.11
Wuerl, Melissa	CA	IAC-16.D2.2.12
Wuethrich, Beny	CA	IAC-16.C2.7.1
Wygachiewicz, Marcin	CA	IAC-16.E1.5.13

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Name	Role	Paper
Xia, JiangNing	CA	IAC-16.C2.3.2
Xia, Renwei	CA	IAC-16.D1.IP.16
Xia, Renwei	CA	IAC-16.D2.8-A5.4.7
Xia, Weiqiang	CA	IAC-16.A1.5.7
XIANG, Junhua	CA	IAC-16.B4.6A.2
Xiao, Denghong	CA	IAC-16.C2.4.8
Xiao, Denghong	CA	IAC-16.C2.5.11
Xiao, Liping	CA	IAC-16.A6.IP.22
Xiao, Liping	CA	IAC-16.D2.3.10
Xiao, Yuzhi	CA	IAC-16.D2.8-A5.4.4
Xiao Su, YI	Α	IAC-16.E1.4.12
Xiaowei, Wang	CA	IAC-16.D2.5.2
Xie, Gengxin	CA	IAC-16.C2.IP.4
Xie, Yong Chun	CA	IAC-16.C1.8.6
Xin, Jie	CA	IAC-16.B2.8-GTS.3.2
Xin, Jie	CA	IAC-16.B2.8-GTS.3.4
Xin, Liu	CA	IAC-16.C2.IP.9
Xin, Liu	CA	IAC-16.C2.9.9
Xin-gang, Liang	CA	IAC-16.C2.9.9
Xing, Yunyan	CA	IAC-16.A6.IP.36
Xing, Zhuoyi	CA	IAC-16.A3.IP.31
Xinrong, Wang	CA	IAC-16.B2.7.2
Xiong, Hui	CA	IAC-16.C2.IP.4
Xiong, Jianghui	CA	IAC-16.A1.3.4
Xiong, Jun	CA	IAC-16.C1.1.6
Xiyun, Hou	CA	IAC-16.B2.4.12
Xiyun, Hou	CA	IAC-16.C1.6.9
Xu, Chunlai	CA	IAC-16.D5.1.3
Xu, Eryi	CA	IAC-16.A3.1.10
Xu, Hongjie	CA	IAC-16.A1.3.4
Xu, Kang	CA	IAC-16.E1.5.7
Xu, Kunbo	CA	IAC-16.A6.3.4
Xu, Ming	CA	IAC-16.C1.IP.7
Xu, Ming	CA	IAC-16.C1.1.7
Xu, Ming	CA	IAC-16.C1.2.9
Xu, Ming	CA	IAC-16.C1.4.7
Xu, Qin	CA	IAC-16.D1.3.2
Xu, Qin	CA	IAC-16.B4.5.9
Xu, Shijie	CA	IAC-16.C1.1.7
Xu, Shijie	CA	IAC-16.C1.2.9
Xu, Shijie	CA	IAC-16.C1.6.4
XU, Tuanwei	CA	IAC-16.C2.4.7
XU, WEI	CA	IAC-16.D2.6.12
Xu, Yiting	CA	IAC-16.D5.IP.4
Xu, Zhi	CA	IAC-16.A1.3.4
Xue, Ming	CA	IAC-16.B2.6.12









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ANISERS

FORMATIC

ROGRAMME

OGRAMME

PROFESSIONALS

PROGRAMME: & EVENTS

TECHNICAL

AUTHORS

Υ		
Name	Role	Paper
Ya-di, Li	CA	IAC-16.C2.4.6
Yadav, Shrikanth	CA	IAC-16.E2.4.7
Yaghi, Ahmad	CA	IAC-16.B1.IP.7
Yaglioglu, Burak	CA	IAC-16.E1.5.8
Yam, Chit Hong	CA	IAC-16.B4.8.1
Yamada, Manabu	CA	IAC-16.A3.5.1
Yamada, Tetsuya	CA	IAC-16.A3.3B.1
Yamada, Yasuyuki	CA CA	IAC-16.C4.2.7
Yamagiwa, Yoshiki Yamagiwa, Yoshiki	CA	IAC-16.D4.3.2 IAC-16.D4.3.9
Yamagiwa, Yoshiki	CA	IAC-16.D4.3.10
Yamaguchi, Kohei	CA	IAC-16.A3.IP.19
Yamaguchi, Soichiro	CA	IAC-16.C4.2.7
Yamaguchi, Takao	CA	IAC-16.E3.2.13
Yamaguchi, Tomohiro	CA	IAC-16.A3.4.4
Yamaguchi, Tomohiro	CA	IAC-16.B4.8.1
Yamakawa, Hiroshi	CA	IAC-16.A3.IP.19
Yamamoto, Chuya	CA	IAC-16.D4.3.10
Yamamoto, Naoji	CA	IAC-16.C4.4.9
Yamamoto, Shinichi	CA	IAC-16.B2.7.11
Yamamoto, Takayuki	CA	IAC-16.C1.5.5
Yamamoto, Takayuki	CA	IAC-16.D2.4.5
Yamamoto, Takayuki	CA	IAC-16.D2.5.4
Yamamoto, Yukio	CA	IAC-16.A3.5.1
Yamanaka, Riyo	CA	IAC-16.E3.2.13
Yamasaki, Tsubasa	Α	IAC-16.D4.3.15
Yamashiro, Ryoma	CA	IAC-16.C2.1.2
Yamashiro, Ryoma	CA	IAC-16.D2.1.11
Yamashiro, Ryoma	CA	IAC-16.D2.4.5
Yamashita, Masato	CA	IAC-16.C4.2.11
Yamazaki, Atsushi	CA	IAC-16.A3.5.1
Yamazaki, Masahiko	CA	IAC-16.E1.3.3
Yan, Biao	CA	IAC-16.C2.2.13
Yan, Biao	CA	IAC-16.C2.9.8
Yan, Dong	CA	IAC-16.D1.4.11
Yan, Fei	CA	IAC-16.C2.1.6
Yan, Shen	CA	IAC-16.B4.6A.11
Yan, Song	CA	IAC-16.C4.IP.29
Yan, Song	CA	IAC-16.C4.IP.46
Yan, Song	CA	IAC-16.C4.1.5
Yan, Song	CA	IAC-16.C4.5.2
Yan, Xiaojun	CA	IAC-16.C2.5.3
Yan, Xiu-Tian	CA	IAC-16.C1.IP.3
Yan, Xiu-Tian	CA	IAC-16.C2.IP.14
Yan, Xiu-Tian	CA	IAC-16.D3.IP.1
Yan, Xiu-Tian	CA	IAC-16.D1.1.2
Yan, Xiu-Tian	CA	IAC-16.B3.7.11
Yan, Yushen	CA	IAC-16.B2.3.6
Yanagi, Takao	CA	IAC-16.E1.IP.30
Yanagida, Kanta	CA	IAC-16.B4.8.1
Yanagisawa, Keisuke	CA	IAC-16.A6.5.4
Yanez, Carlos	CA	IAC-16.A6.9.7
Yang, Dawei	CA	IAC-16.C4.9.3
Yang, Fan	CA	IAC-16.D1.2.8
Yang, Fuquan	CA	IAC-16.C4.4.6
Yang, Hui	CA	IAC-16.D5.1.9
Yang, Leping	CA	IAC-16.B6.2.3
Yang, Leping	CA	IAC-16.C1.1.6
Yang, Liang	CA	IAC-16.C2.IP.11
Yang, Liang	CA CA	IAC-16.D4.1.4
Yang, Liang Yang Liang	CA	IAC-16.D3.3.8 IAC-16.C2.6.4
Yang, Liang	CA	IAC-16.C2.6.4
Yang, Liang Yang, Liang	CA	
Yang, Lihong	CA	IAC-16.C2.8.10 IAC-16.C2.1.12
	CA	IAC-16.C2.1.12
Yang, Lingxiao Yang, Minggi	CA	IAC-16.B2.2.10
Yang, Mingqi Yang, Qiuhao	CA	IAC-16.B2.2.10
Yang, Qiuhao Yang, Qiuhao	CA	IAC-16.D5.IP.4
Yang, Qiunao Yang, Quanjie	CA	IAC-16.D5.2.11
rang, Quanne	CA	IAC-10.C4.3.2
Yang, Shuangjin	CA	IAC-16.D5.1.3

Yang, Wei	CA	IAC-16.C2.IP.12
Yang, Wei	CA	IAC-16.C2.9.11
Yang, Weidong Yang, Xu	CA CA	IAC-16.C4.5.3 IAC-16.A6.IP.11
Yang, Xuehui	CA	IAC-16.D5.1.3
Yang, Ya	CA	IAC-16.D2.6.8
Yang, Yang	CA	IAC-16.A2.5.9
Yang, Zhitao	CA	IAC-16.A6.IP.11
Yanming, Wei	CA	IAC-16.B4.6A.11
Yanova, Olga	CA	IAC-16.D5.1.5
Yao, Na Yao, Nie	CA CA	IAC-16.B1.IP.26 IAC-16.C4.IP.39
Yao, Shun	CA	IAC-16.D2.3.10
Yao, Zhengping	CA	IAC-16.C2.7.4
Yashin, Ivan	CA	IAC-16.B4.2.12
Yasukochi, Hiroyuki	CA	IAC-16.C4.2.12
Yatsu, Yoichi	CA	IAC-16.C1.8.9
Yazdani, Shabnam	CA	IAC-16.C1.1.8
Yazdani, Shabnam	CA	IAC-16.B2.6.10
Ye, Lin Ye, Yin	CA CA	IAC-16.C2.5.6
Ye, Xin Ye, Zhuang	CA	IAC-16.D1.2.8 IAC-16.A2.3.4
Ye, Zhuang	CA	IAC-16.A2.5.4
Yechen, Zhang	CA	IAC-16.D2.IP.12
Yemets, Taras	CA	IAC-16.D2.IP.9
Yemets, Vitaly	CA	IAC-16.D2.IP.9
Yesil, Ali	CA	IAC-16.E2.3-GTS.4.7
Yevdokymov, Dmytro	CA	IAC-16.A2.2.7
Yi, Hang	CA	IAC-16.A1.5.7
Yi, Liang	CA	IAC-16.E3.IP.4
YILMAZ, Özgün	Α Α	IAC-16.A6.IP.18
Yin, Tuyuan Yin, Yating	CA	IAC-16.A3.IP.12 IAC-16.C1.IP.10
Yisi, Liu	CA	IAC-16.A6.IP.39
Yoder, Christopher	CA	IAC-16.A3.5.5
Yokoi, Toshiki	CA	IAC-16.C4.2.12
Yonemoto, Koichi	CA	IAC-16.D2.6.1
Yong, Sang Soon	CA	IAC-16.B1.4.9
Yong, Yuan	CA	IAC-16.D2.8-A5.4.5
Yongkang, Zhang	CA	IAC-16.A2.5.9
Yongqiang, Tao	CA CA	IAC-16.C2.4.11
Yoshida, Norimasa Yoshihama, Shun	CA	IAC-16.C2.3.10 IAC-16.C4.2.7
Yoshikawa, Makoto	CA	IAC-16.A3.IP.1
Yoshikawa, Makoto	CA	IAC-16.A3.4.5
Yoshikawa, Makoto	CA	IAC-16.E1.6.6
Yoshitomi, Susumu	CA	IAC-16.E1.6.8
Yoshitomi, Susumu	CA	IAC-16.A6.8.2
You, Chuan	CA	IAC-16.B1.IP.29
You, Rui	CA	IAC-16.D1.2.9
Young, Josh	CA	IAC-16.C2.8.4
Young, Laurence R. Yousefpour, Ali	CA CA	IAC-16.A1.2.7 IAC-16.C2.8.7
YU, Anyuan	CA	IAC-16.C4.9.3
Yu, Chunxu	CA	IAC-16.A2.3.4
Yu, Chunxu	CA	IAC-16.B4.6A.6
Yu, Daren	CA	IAC-16.C4.9.6
Yu, Fangchun	CA	IAC-16.D5.1.9
Yu, Fei	CA	IAC-16.C2.8.10
Yu, Jijun	CA	IAC-16.A3.IP.28
Yu, Minfang	CA	IAC-16.D1.4.11
Yu, Nanjia Yu, Nanjia	CA CA	IAC-16.C4.IP.9 IAC-16.C4.IP.10
ru, Nanjia Yu, Nanjia	CA	IAC-16.C4.IP.10
Yu, Qingni	CA	IAC-16.A1.3.4
Yu, Qingni	CA	IAC-16.A1.6.8
Yu, Shengxian	CA	IAC-16.A6.IP.16
Yu, Xiaoyan	CA	IAC-16.C2.5.9
Yu, Xiaozhou	CA	IAC-16.B4.6A.4
Yu, Xiaozhou	CA	IAC-16.B4.6A.11
Yu, Xiaozhou	CA	IAC-16.E2.4.5
Yu, XinXin	CA	IAC-16.C1.8.6
Yu, Yang	CA CA	IAC-16.D1.3.11 IAC-16.B4.7.10
Yu, Yang		

Yu, Zhengshi	CA	IAC-16 C1 3 6
Yu, Zhi	CA	IAC-16.D2.8-A5.4.4
Yuan, Jianping	CA	IAC-16.A6.5.5
Yuan, Jianping	CA	IAC-16.C1.9.13
Yuan, Shuai	CA	IAC-16.A2.3.4
Yuan, Shuai	CA	IAC-16.B4.6A.6
Yuan, Yanhong	CA	IAC-16.A1.3.4
Yuan, Yuan	CA	IAC-16.B3.2.4
Yudintsev, Vadim V.	CA	IAC-16.C1.IP.13
Yudintsev, Vadim V.	CA	IAC-16.C1.8.11
Yue, Shilei	CA	IAC-16.B2.5.7
Yue, Xiaokui	CA	IAC-16.D1.1.6
Yufu, Cui	CA	IAC-16.C2.3.3
Yuguo, Cheng	CA	IAC-16.C4.IP.45
Yulin, Zhang	CA	IAC-16.D2.8-A5.4.8
Yulin, Zhang	CA	IAC-16.D2.8-A5.4.11
Yun, Hu	CA	IAC-16.D5.1.11
Yun, Min	CA	IAC-16.A4.1.9
Yun, Weidong	CA	IAC-16.A6.IP.29
Yurong, Huo	CA	IAC-16.B1.4.10
Yuxiong, Xue	CA	IAC-16.C2.6.11

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Name	Role	Paper
Zabeau, Josué	Α	IAC-16.A1.IP.29
Zabeau, Josué	CA	IAC-16.C4.6.8
Zabel, Paul	CA	IAC-16.E5.1.7
Zabel, Paul	CA	IAC-16.D3.3.2
Zaidi, Yaseen	Α	IAC-16.D1.6.6
Zainal Abidin, Muhamad Latiff	CA	IAC-16.C3.2.6
Zaitseva, Angela	CA	IAC-16.E5.4.10
Zampatti, Alessio	CA	IAC-16.E2.3-GTS.4.
Zampatti, Alessio	CA	IAC-16.B1.6.5
Zampatti, Alessio	CA	IAC-16.B5.1.1
Zanella, Pietro	CA	IAC-16.C3.IP.1
Zapata Gaitan, Victor Omar	Α	IAC-16.B2.5.5
Zarama, Juan	CA	IAC-16.D1.4.5
Zaretskiy, Boris	CA	IAC-16.A1.IP.35
Zatti, Stefano	CA	IAC-16.D5.4.3
Zavoli, Alessandro	CA	IAC-16.A7.3.5
Zaytseva, Olga	CA	IAC-16.A3.2A.4
Zea, Luis	CA	IAC-16.A1.IP.22
Zee, Robert E.	CA	IAC-16.B4.2.6
Zeidler, Stefan	CA	IAC-16.D4.1.10
Zelenka, Jiri	CA	IAC-16.C2.7.2
Zelenkova, Marketa	CA	IAC-16.C2.7.2
Zelenyi, Lev M.	CA	IAC-16.A3.1.8
Zell, Daniel	CA	IAC-16.D2.3.7
Zelle, Hein	CA	IAC-16.B1.3.6
Zeng, Dong	CA	IAC-16.D2.1.5
Zeng, Dong	CA	IAC-16.D5.2.11
ZENG, Guogiang	CA	IAC-16.B4.6A.2
ZENG, Ling-bin	CA	IAC-16.D1.2.4
ZENG, Ling-bin	CA	IAC-16.B3.4-B6.5.8
Zenou, Emmanuel	CA	IAC-16.E1.4.9
Zhai, Huijuan	CA	IAC-16.A1.5.7
Zhai, Zaiteng	CA	IAC-16.C2.7.4
Zhai, Zhengan	CA	IAC-16.D1.4.9
Zhai, Zhengan	CA	IAC-16.B2.8-GTS.3.
Zhai, Zhengan	CA	IAC-16.B2.7.4
Zhan, Huiling	CA	IAC-16.C2.IP.15
Zhan, Panpan	CA	IAC-16.D1.4.11
Zhang, Changfang	CA	IAC-16.A6.IP.36
Zhang, Changwu	CA	IAC-16.D2.7.8
Zhang, Chenxi	CA	IAC-16.C4.9.11
ZHANG, Chu	CA	IAC-16.A2.4.4
Zhang, Cong	CA	IAC-16.D5.1.9
Zhang, Daixian	CA	IAC-16.C4.IP.15
Zhang, Daixian	A	IAC-16.D2.IP.5
Zhang, Guofeng	CA	IAC-16.D5.1.9
Zhang, Guoleng Zhang, Haiguang	CA	IAC-16.C2.2.13
Zhang, Hang	CA	IAC-16.C2.2.13
Zhang, Hanmo	CA	IAC-16.C4.3.10

7hang Hanmo	CA	IAC-16 R1 ID 20
Zhang, Hanmo Zhang, Hao	CA CA	IAC-16.B1.IP.30 IAC-16.D1.IP.16
Zhang, Hongwen	CA	IAC-16.B2.2.5
Zhang, Hongwen	CA	IAC-16.B2.3.6
Zhang, Hongwen	CA	IAC-16.C1.4.7
Zhang, Hongwen	CA	IAC-16.A6.5.5
Zhang, Hongwen	CA	IAC-16.C1.7.5
Zhang, Hongwen	CA	IAC-16.B2.7.12
Zhang, Hua Zhang, Jia	CA CA	IAC-16.C4.IP.15 IAC-16.A6.IP.11
Zhang, Jianjun	CA	IAC-16.B2.6.12
Zhang, Jin	CA	IAC-16.B3.4-B6.5.6
Zhang, Jingfa	CA	IAC-16.B1.IP.23
Zhang, Jingfa	CA	IAC-16.B1.IP.24
Zhang, Jingjing	CA	IAC-16.B5.2.9
Zhang, Jingrui	CA	IAC-16.B3.6-A5.3.10
Zhang, Jingrui	CA CA	IAC-16.C1.8.12
Zhang, Jinjiang Zhang, Kangping	CA	IAC-16.A2.3.4 IAC-16.C4.IP.18
Zhang, Kangping Zhang, Lei	CA	IAC-16.B2.6.12
Zhang, Liangchang	CA	IAC-16.A1.3.4
Zhang, Liangchang	CA	IAC-16.A1.6.8
Zhang, Lihua	CA	IAC-16.A3.IP.39
Zhang, Lisha	CA	IAC-16.C2.1.8
Zhang, Long	CA	IAC-16.D1.2.9
Zhang, Long	CA	IAC-16.D2.7.8
Zhang, Longlong	CA	IAC-16.C3.3.5
Zhang, Meng Zhang, Mengying	CA CA	IAC-16.A2.3.4 IAC-16.B4.5.9
Zhang, Mengying Zhang, Pinliang	CA	IAC-16.B4.5.9
Zhang, Ruonan	CA	IAC-16.B2.2.5
Zhang, Shaohua	CA	IAC-16.C2.IP.9
Zhang, Shengjun	CA	IAC-16.B2.5.8
Zhang, Tianping	CA	IAC-16.C4.IP.21
Zhang, Wei	CA	IAC-16.C2.2.6
Zhang, Wei	CA	IAC-16.B2.7.2
Zhang, Wen	CA	IAC-16.D5.2.11
Zhang, Wenbin	CA	IAC-16.A3.1.10
Zhang, Xiang	CA	IAC-16.C2.IP.12
ZHANG, XIANG Zhang, Xiang	CA CA	IAC-16.C2.4.10 IAC-16.C2.9.11
Zhang, Xiaosai	CA	IAC-16.D5.1.10
ZHANG, Xiaoxiang	CA	IAC-16.A6.IP.16
Zhang, Xiaoyong	CA	IAC-16.C2.5.3
Zhang, Xiaoyu	CA	IAC-16.C2.IP.9
Zhang, Xuan	CA	IAC-16.B5.2.9
Zhang, Xuan	A	IAC-16.D1.7.7
Zhang, Xubin	CA	IAC-16.D2.IP.15
Zhang, Xubin	CA	IAC-16.D5.IP.1
Zhang, Xubin Zhang, Xudong	CA CA	IAC-16.E1.IP.31
Zhang, Xudong Zhang, Xuejun	CA	IAC-16.C3.3.7 IAC-16.C2.9.10
Zhang, Xuemin	CA	IAC-16.B4.2.11
Zhang, Yang	CA	IAC-16.C4.IP.49
Zhang, Yao	CA	IAC-16.C2.3.11
Zhang, Yao	CA	IAC-16.B3.6-A5.3.10
Zhang, Yasheng	CA	IAC-16.A3.IP.11
Zhang, Yasheng	CA	IAC-16.B1.IP.9
Zhang, Yechi	CA	IAC-16.D1.2.9
Zhang, Yu	CA	IAC-16.C4.IP.14
Zhang, Yu	CA	IAC-16.C4.IP.15
Zhang, Yuan-wen Zhang, Yuanyun	CA CA	IAC-16.B6.2.3
Zhang, Yuanxun Zhang, Yunjie	CA	IAC-16.C2.IP.4 IAC-16.B2.1.7
Zhang, Yuzhu	CA	IAC-16.B2.1.7
	CA	IAC-16.B2.7.12
ZHANG, ZhaoFei		IAC-16.E3.2.4
	CA	
Zhang, Zhenjun	CA CA	IAC-16.E3.4.4
Zhang, Zhenjun Zhang, Zhenjun		IAC-16.E3.4.4 IAC-16.C3.3.5
Zhang, Zhenjun Zhang, Zhenjun Zhang, Zhenyu	CA	
Zhang, Zhenjun Zhang, Zhenjun Zhang, Zhenyu Zhang, Zhixue Zhang, Zhixue	CA CA CA	IAC-16.C3.3.5 IAC-16.B2.8-GTS.3.2 IAC-16.B2.8-GTS.3.4
Zhang, Zhenjun Zhang, Zhenjun Zhang, Zhenyu Zhang, Zhixue Zhang, Zhixue Zhao, Bo	CA CA CA CA	IAC-16.C3.3.5 IAC-16.B2.8-GTS.3.2 IAC-16.B2.8-GTS.3.4 IAC-16.C4.IP.9
ZHANG, ZhaoFei Zhang, Zhenjun Zhang, Zhenjun Zhang, Zhenyu Zhang, Zhixue Zhang, Zhixue Zhao, Bo Zhao, Bo Zhao, Bo	CA CA CA	IAC-16.C3.3.5 IAC-16.B2.8-GTS.3.2 IAC-16.B2.8-GTS.3.4





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ZHAO, Jian	А	IAC-16.C4.IP.46
Zhao, Jianwen	CA	IAC-16.D2.8-A5.4.7
Zhao, Lu	CA	IAC-16.A1.3.4
Zhao, Na	CA	IAC-16.B2.8-GTS.3.2
Zhao, Na	CA	IAC-16.B2.8-GTS.3.4
Zhao, Qingjun Zhao, Suping	CA CA	IAC-16.C4.9.8 IAC-16.A6.IP.7
Zhao, Suping Zhao, Suping	CA	IAC-16.A6.5.5
Zhao, Tiancheng	CA	IAC-16.B4.4.11
Zhao, Wei	CA	IAC-16.C4.9.8
Zhao, Wei	CA	IAC-16.B2.8-GTS.3.2
Zhao, Xin	CA	IAC-16.C2.1.8
Zhao, Yide	CA	IAC-16.C4.4.6
Zhao, Yun	CA	IAC-16.E7.6-E3.5.3
Zhao, Zhao	CA	IAC-16.A6.IP.36
Zhao, Zhiping Zhaohui, Gao	CA CA	IAC-16.D2.4.9 IAC-16.D2.5.2
Zhaokui, Wang	CA	IAC-16.D2.8-A5.4.8
Zhaokui, Wang	CA	IAC-16.D2.8-A5.4.11
Zhdanovich, Olga	CA	IAC-16.E1.7.9
Zhen, Huaping	CA	IAC-16.D2.5.10
Zheng, Gangtie	CA	IAC-16.C2.2.11
Zheng, Hongfei	CA	IAC-16.C2.1.7
Zheng, Shigui	CA	IAC-16.C2.1.8
Zheng, Wanping	CA	IAC-16.D3.4.2
Zheng, Wei	CA	IAC-16.D1.2.11
Zheng, Wei ZHENG, Xiaotian	CA CA	IAC-16.D1.3.2 IAC-16.B2.1.7
ZHENG, Xiaotian	CA	IAC-16.B2.7.2
Zheng, Xinhua	CA	IAC-16.D1.IP.15
ZHENG, ZHIHUI	CA	IAC-16.A6.IP.22
Zheng, Zixuan	CA	IAC-16.B4.3.9
Zhenwei, Feng	CA	IAC-16.C2.3.3
Zhong, Guohui	CA	IAC-16.A1.IP.24
Zhong, Rui	CA	IAC-16.C1.1.10
Zhong, Rui	CA	IAC-16.C1.2.9
Zhong, Rui	CA CA	IAC-16.C1.6.4
Zhou, Chaoyang Zhou, Jie	CA	IAC-16.C2.6.8 IAC-16.D4.1.4
Zhou, Jun	CA	IAC-16.B4.6A.4
Zhou, Jun	CA	IAC-16.A6.6.9
Zhou, Jun	CA	IAC-16.E2.4.5
Zhou, Kai	CA	IAC-16.C4.9.3
Zhou, Lihang	CA	IAC-16.B1.IP.18
ZHOU, Lini	CA	IAC-16.E3.IP.12
Zhou, Peiyuan Zhou, Weijiang	CA CA	IAC-16.B2.4.11 IAC-16.C2.IP.15
Zhou, Weijiang Zhou, Wenmei	CA	IAC-16.C2.IP.15
Zhou, Xiaohong	CA	IAC-16.C2.4.8
Zhou, Xiaohong	CA	IAC-16.C2.5.11
Zhou, Xinshun	Α	IAC-16.C3.3.7
Zhou, Zhebo	CA	IAC-16.C2.9.8
Zhou, Zhicheng	CA	IAC-16.B2.1.2
Zhou, Zhicheng	CA	IAC-16.C4.4.2
Zhou, Zhixuan Zhou, Zhixuan	CA	IAC-16.A6.IP.15
Zhu, Frances	CA CA	IAC-16.A6.3.1 IAC-16.C1.9.4
ZHU, Guogiang	CA	IAC-16.C4.9.12
Zhu, Jianbing	CA	IAC-16.D1.4.11
Zhu, Jingrong	CA	IAC-16.A1.3.4
Zhu, Lidong	CA	IAC-16.B2.2.3
Zhu, Linyu	CA	IAC-16.B4.6A.8
ZHU, Qichao	CA	IAC-16.E3.IP.12
Zhu, Rui	CA	IAC-16.B5.2.9
Zhu, Shengying	CA	IAC-16.C1.3.6
Zhu, Xiaozhou ZHU, Xiongfeng	CA CA	IAC-16.E2.3-GTS.4.1 IAC-16.C3.3.9
Zhu, Yanwei	CA	IAC-16.C3.3.9
Zhu, Yanwei	CA	IAC-16.C1.1.6
Zhu, Zhanxia	CA	IAC-16.A6.IP.7
Zhu, Zhanxia	CA	IAC-16.B2.3.6
Zhu, Zhanxia	CA	IAC-16.A6.5.5
Zhu, Zhanxia	CA	IAC-16.B2.7.12
Zimmerman, Brittany	CA	IAC-16.E2.2.2
Zittersteijn, Michiel	CA	IAC-16.A6.9.5

Zlatsin, Yuri	CA	IAC-16.A1.4.7
Zmijanovic, Vladeta	CA	IAC-16.C4.3.6
Zorzano Mier, Maria-Paz	CA	IAC-16.A3.3B.5
Zou, Guangping	CA	IAC-16.C2.1.12
Zou, Yuanjie	CA	IAC-16.C2.1.8
Zuanetti, Andrea	Α	IAC-16.B4.7.8
Zuiani, Federico	CA	IAC-16.C1.9.5
Zuppardi, Gennaro	CA	IAC-16.A3.3A.6
Zurbuchen, Thomas H.	Α	IAC-16.B4.2.1
Zurbuchen, Thomas H.	CA	IAC-16.D4.1.9
Zurdo Santos, Pablo	CA	IAC-16.E6.3.11
Zárate, Luis	CA	IAC-16.D2.7.4
Závodský, Ondrej	CA	IAC-16.B1.3.9
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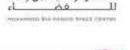


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The **United Arab Emirates** is one of the world's fastest growing business and tourism destinations. This is hardly surprising, given the geographic, economic and cultural factors that make the UAE a unique and strategic location between East and West. Over the years, endless sun, sand and sea have also attracted many visitors, who find themselves enthralled by our unbeatable shopping, superb resorts, fine dining, extraordinary events and cultural traditions — all in a safe and welcoming environment.

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The main aims of the UAE Space Agency are:

- To organise, regulate and support the space sector in the UAE and to enhance its position. and encourage the development and use of space science and technology.
- The establishment of international partnerships in the space sector and to enhance the role of the state and its position in the space sector.
- Contribute to the diversification of the national economy through the space sector.
- Raise awareness of the importance of the space technologies, enhance national capabilities and encourage peaceful application of space research.



