





International Astronautical Congress

Final Programme

12 - 16 October 2015 Jerusalem, Israel



Space – The Gateway for Mankind's Future



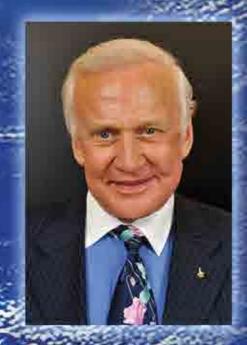






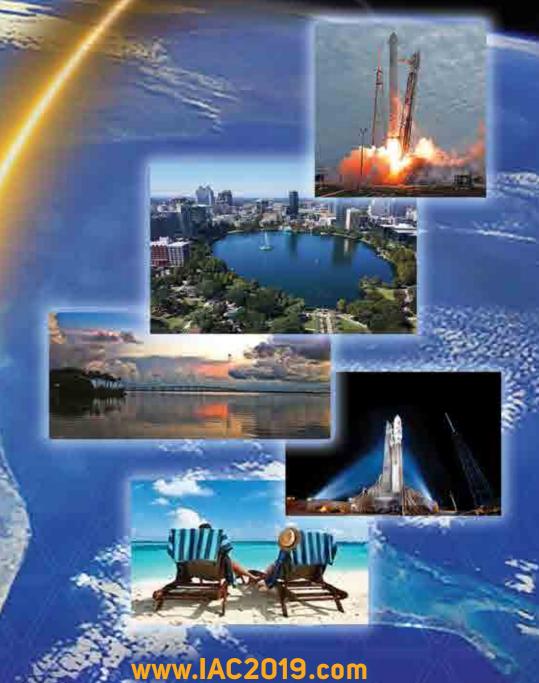
Bridge to the future. Gateway to Space.

Superior Partners. The Best Destination.



"The greatest moments in the history of space, and the exciting and promising systems and programs of the future, are in one place — Florida's space coast. As Honorary Chairman of the 70th IAC Orlando team, I invite you to join us for the 50th Anniversary of Apollo 11, the best of Mercury, Gemini, Apollo, Shuttle and ISS, and to touch our future among the stars. For the 50th anniversary of the first moon landing, and the 70th anniversary of the IAC, we invite you to the world's Gateway to Space, and our Bridge to the Future, in Florida, USA."

Buzz Aldrin, PhD Astronaut, Gemini 12 and Apollo 11 Honorary Chairman, 70th IAC Orlando

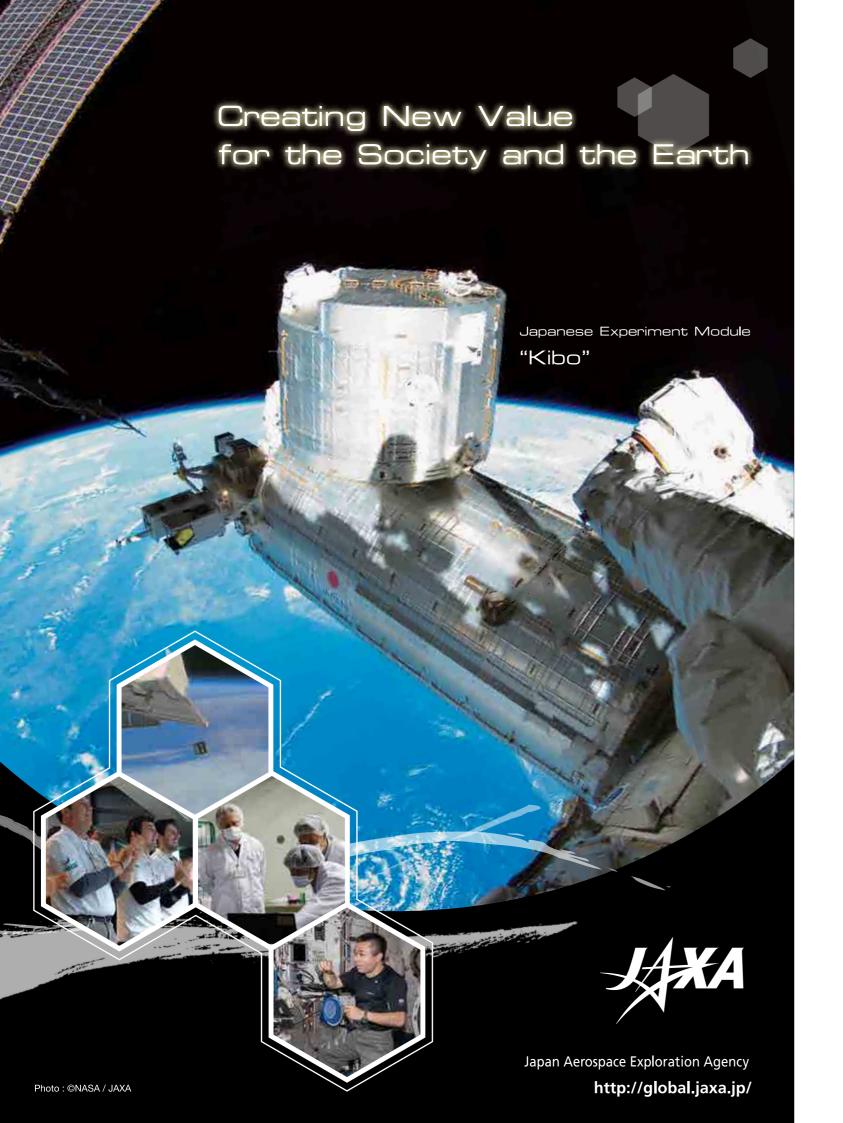




SPACE FLORIDA

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Welcome Messages

1.1 Message from the President of the **International Astronautical Federation**



Welcome to the 66th International Astronautical Congress in Jerusalem!

This is the second time the IAF comes to Jerusalem, a beautiful city – a promise for an inspiring event! Our hosts for this Congress have selected a very fitting theme: Space as the Gateway for Mankind's Future. Space is synonymous of excellence, expertise, technology, development, and communications: all the key elements to prepare a better environment for mankind's lives in the future. A theme is very close to the IAF mission of creating a space-faring world cooperating for the benefit of humanity.

It is with great satisfaction that I introduce to you the result of hard work completed by the integrated teams of the International Programme Committee, the Local Organizing Committee, and the IAF Secretariat.

In this IAC 2015 Final Programme, you will find information about exciting Plenary Events, Global Networking Forum, Exhibitions and all the associated events complementing the needs of the whole space community.

In addition, an extraordinary Technical Programme is ready for you. Thanks to your participation, this year's IAC will be a real

Enjoy your preferred time of the year connecting space people, taking advantage of the exquisite food and discovering all the technical tours and the fun nights!

Kiyoshi Higuchi

President International Astronautical Federation



1.2 Message from the Local Organising Committee



Dear Colleagues and Friends, Welcome to IAC 2015 Jerusalem!

Please accept my warmest welcome and deepest appreciation for hosting all of you here in Jerusalem, an exceptional location for this great IAC 66th congress, and an incredible city to visit.

Jerusalem, symbolizing spiritual significance for multiple religions and cultures for over 3000 years, now provides the one stunning background for IAC 2015 - a conference binding the forefronts of science, technology, and future exploration. I truly hope that the contrast embodied within this holy place,

inspired by the continuum of human history, shall come to stimulate a productive dialogue among us all.

It is well known that every visitor to Jerusalem is touched on many emotional dimensions. I believe that this exclusive "Jerusalem experience" shall uplift each and every attendee on a very personal level, enabling us all to have a successful, fruitful, and uniquely rewarding event.

I am sure that amalgamating the IAC 2015 Congress with domestic and international space Industry and enterprises formulates an extremely rich and unique program and congress, with meaningful exchange between industries, scientists, academia, and

The Ministry of Science, Technology and Space, and the Israel Space Agency sincerely undertake to provide the Congress' participants with an experience full of enjoyment and gratification; including the scientific and academia sessions, social gathering and education events, exceptional tourism, faultless logistics and security arrangement.

Menachem Kidron, LOC Chair & Director General – Israel Space Agency Ministry of Science, Technology & Space



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

Dear Colleagues and Friends,

We are proud to welcome you to the 66th International Astronautical Congress being held in Jerusalem. Israel has hosted the IAC with great success back in 1996, also in Jerusalem. The theme of this year's IAC is "Space - The Gate way for Mankind's Future". The IAC 2015 presents an outstanding opportunity and an example to the mode in which scientists share their knowledge, to promote the development of Space Sciences, which are critical to mankind survival and future. The Significant Achievements in Space Technologies help mankind in almost every aspect in our life. A very comprehensive programme has been prepared by the International Program Committee. The participants will enjoy very rich and diverse technical sessions - highlight lectures, Plenary Sessions and activities such as professional tours, the young professional virtual forum, the Moot court, the International Meeting for Members of Parliaments and professional workshops. Many innovations such as the Interactive Presentations are presented for the first time in an IAC. Besides the professional program, the organizers are offering more activities: Tours to the unique sites of the Holy Land – from the holy places in Jerusalem and Nazareth to the dead sea, the sea of Galilee and more. Outreach activities all over Israel during the IAC will bring space closer to kids and students. Keep yourselves updated about the IAC activities in the 66th IAC Website and through the mobile application. We are pleased to welcome you in Jerusalem and hope you will get the most from this congress. We would like to thank all the authors and speakers in the IAC and also thank the IAF Secretariat, the IPC, and the Local Organizing Committee for their help in preparing this 66th IAC. Welcome to Jerusalem and enjoy the 66th IAC!



Igal Patel Director of the Givatavim Observatory and chairman of the Israeli Astronomical



Sandra Ramirez Professor at Autonomous University of Morelos State

Co-Chairs International Program Committee





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 270 members, including all key space agencies, companies, societies, associations and institutes across across 6 continents and 62 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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Facebook: www.facebook.com/iafastro Twitter: www.twitter.com/iafastro Youtube: www.youtube.com/iafastro

LinkedIn: http://www.linkedin.com/company/international-astronautical-federation?trk=cp_followed_name

international-astronautical-federation Flickr: http://www.flickr.com/photos/iafastro

IAF Member Organisations 2015

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







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

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

Germany

Russian Federation

Japan

Mitsubishi Heavy Industries, Ltd.

Moscow Aviation Institute

MT Aerospace AG

SEMECCEL Cité de l'Espace

SENER Ingenieria y Sistemas, S.A.

France

Spain



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Sergio Arboleda University	Colombia	Thales Alenia Space Italia	Italy
SES	Luxemburg	The Aerospace Corporation	United States
Shaanxi Engineering Laboratory for	China	The Boeing Company	United States
Microsatellites		The British Interplanetary Society	United Kingdom
Shamakhy Astrophysical Observatory	Azerbaijan	The Chinese Aeronautical and	China
SHOAL	Australia	Astronautical Society located in Taipei	
Sierra Nevada Corporation	United States	The Fisher Institute for Air and Space	Israel
Sirius XM Radio	United States	Strategic Studies	
Sitael Spa	Italy	The Johns Hopkins University Applied	United States
Snecma	France	Physics Laboratory	
South African National Space Agency (SANSA)	South Africa	The Korean Society for Aeronautical and Space Sciences	Korea, Republic of
South African Space Association (SASA)	South Africa	The Planetary Society	United States
South Dakota School of Mines and	United States	The Sergei Korolev Space Museum	Ukraine
Technology		TNO	The Netherlands
Space Canada Corporation	Canada	TÜBITAK	Turkey
Space Center Houston	United States	Turkish Aerospace Industries	Turkey
Space Commercial Services Holdings (Pty)	South Africa	U.S. Geological Survey	United States
Ltd		UK Space Agency	United Kingdom
Space Coordination Office, Department	Australia	University of Alabama in Huntsville	United States
of Industry		University of Naples "Federico II"	Italy
Space Enterprise Partnerships Limited	United Kingdom	University of South Australia	Australia
Space Foundation	United States	University of the Western Cape	South Africa
Space Generation Advisory Council (SGAC)	Austria	University of Vigo	Spain
Space Industry Association of Australia	Australia	University POLITEHNICA of Bucharest	Romania
Space Policy Institute, George	United States	- Research Center for Aeronautics and	
Washington University	Officed States	Space University Wuerzburg	Germany
Space Systems/Loral	United States	UNSW Australia	Australia
Space Technology Institute (STI)	Vietnam	Victorian Space Science Education Centre	Australia
SpaceLand	Italy	•	Vietnam
SpaceNed	The Netherlands	Viettal Tashpalagias Joint Stack Company	Vietnam
Spaceteq	South Africa	Viettel Technologies Joint Stock Company Virgin Galactic L.L.C	United States
SSC	Sweden	· ·	United States United States
SSPC "Pryroda"	Ukraine	Vishay Precision Group VITO nv	
Starsem	France		Belgium
State Enterprise Production Association	Ukraine	von Karman Institute for Fluid Dynamics	Belgium
Kyivprylad	Oktobie	WFB - Wirtschaftsförderung Bremen	Germany The Notherlands
State Space Agency of Ukraine (SSAU)	Ukraine	Women in Aerospace Europe (WIA-E)	The Netherlands
Stellenbosch University	South Africa	World Space Week Association	United States
STM (Savunma Teknolojileri Muhenislik	Turkey	Wyle	United States
ve Ticaret A.S.)	- /	X PRIZE Foundation	United States
Surrey Satellite Technology Ltd (SSTL)	United Kingdom	Youth Network for Reform, Inc (YONER -	Liberia

United Kingdom

Sweden

Turkey

Estonia

Italy

Italy

Germany

France

Switzerland

United States

United Kingdom

LIBERIA)

ZARM Fab GmbH

Yuzhnoye State Design Office

Ukraine

Germany

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VP: FINANCIAL MATTERS Jan Kolar Director, Czech Space Office, Czech Republic



PRESIDENT IAA Peter Jankowitsch Former Federal Minister for Foreign Affairs, Ambassado of Austria (retired),



PRESIDENT IISL Tanja Masson-Zwaan International Institute of Space Law, University of Leiden. The Netherlands



EXECUTIVE DIRECTOR Christian Feichtinger International Astronautical Federation. France



SPECIAL ADVISOR TO THE IAF PRESIDENT Karlheinz Kreuzberg Head of Director General's Cabinet, European Space Agency (ESA),



SPECIAL ADVISOR TO THE IAF PRESIDENT Kevin Stube Advisory Board Member, The Planetary Society, USA



VP: EDUCATION, WORKFORCE DEVELOPMENT, AND **GLOBAL CONFERENCES** Andrea Boese

With deep regret the IAF has to announce that Andrea Boese passed away on 29th August 2015

IAF Secretariat

Christian Feichtinger, Executive Director Giulia Maria Berardi, Deputy Executive Director Silvia Antolino, Communications Manager Myriam Morabet, Projects Manager Isabella Marchisio, Projects Manager Valerie Leenhardt, Office Manager

Wang Jia, Projects Manager (Secondment from CSA) Emma Huis, Projects Assistant Evelina Hedman, Projects Assistant Abed Aldaas, Projects Assistant Elena Feichtinger, Projects Manager (Volunteer) Michel Arnaud, Advisor to IPC Co-Chairs (Volunteer)

Surrey Satellite Technology Ltd (SSTL)

Swedish Society for Aeronautics and

Techno System Developments S.R.L.

Teledyne Brown Engineering

Tesat-Spacecom GmbH & Co. KG

Telespazio VEGA UK LTD

Thales Alenia Space France

TAMSAT - The Society of Amateur Satellite

Astronautics

SwissSpace Association

Technologies of Turkey

Tartu Observatory

Telespazio S.p.A.



2.2 The International Academy of Astronautics (IAA)

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 organisation established in 1960 and recognised 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 52 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 organises 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 organizes 13 Symposia. The Academy also continues to enjoy its participation in the COSPAR Assemblies by sponsoring and co-sponsoring symposia. Although the IAA has many connections to these and other similar organisations, it is distinctive as the only international Academy of elected members in the broad area of astronautics and space.



On Monday 15 June 2015, 27 Heads of Space Agencies or delegations gathered in CNES Headquarters, Paris, France.

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VP FINANCE Hiroki Matsuo Japan

11





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. Additionally, prospective membership is open to students and young professionals with a demonstrated interest in space law.

Since 1992, the IISL has organized the annual Manfred Lachs Space Law Moot Court Competition. The competition is based on a hypothetical space law case, and is written by IISL members. Approximately sixty student teams from universities in Africa, the Asia Pacific, Europe, and North America participate. The competition is an important part of the organisation's outreach programme, and is its principal mechanism for engaging future generations of space law experts. The regional champions compete in the World Finals, which take place at the IAC and are judged each year by judges of the International Court of Justice. This unique feature makes the Manfred Lachs Moot Court one of the most prestigious moot court competitions 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. In cooperation with the European Centre for Space Law (ECSL), the IISL organizes an annual space law symposium for the delegates and staff attending the sessions of the UNCOPUOS Legal Subcommittee. 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 these activities during the year.

As one of its main activities, the IISL holds an annual Colloquium at the International Astronautical Congress (IAC). During these Colloquia, the IISL strives to address topics that are of interest to all space actors and invites all IAC attendees to attend and participate in its sessions. The themes of the sessions of this year's Colloquium are:

- E7.1: 7th Nandasiri Jasentuliyana Keynote Lecture on Space Law and Young Scholars Session
- E7.2: The relationship of international humanitarian law and territorial sovereignty with the legal regulation of outer space
- E7.3: The portrayal of Space (Law) in Media and Movies
- E7.4: Legal Issues of Space Traffic Management
- E7.5: Recent Developments in Space Law

During the IAC, the IISL also co-organises annual Scientific-Legal Roundtables with the International Academy of Astronautics (IAA), the 30th of which will be held this year in Jerusalem (E7.6-E3.5 - Universities as Actors in Space), Furthermore, the IISL co-organises a session each year with the IAF (E7.7-B3.8 - Session on the Legal Framework for Collaborative Space Activities).

We hope to see many of you during our 58th Colloquium in Jerusalem and look forward to enriching debates and exchanges!

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)



Menachem Kidron LOC Chair and Director General, Israel Space



Daniel Barok Collaborations, Israel Space Agency



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Ran Ber Senior Deputy Director General . Ministry of Science, Technology &



Nurit Yirmiya Chief scientist, Ministry of Science, Technology & Space



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Pini Shani Deputy Director in the Marketina Administration & Director of the Overseas Department at the Ministry of Tourism



Libi Oz Spokesperson, Israel Space Agency, Ministry of Science, Technology



Ilanit Melchior Tourism Director The Jerusalem Development Authority



Opher Doron VP & General Manager, IAI / MBT Space Division



Ehud Behar Professor of Physics, Technion, Israel



Eval Ben Dor Director: Geography and Human environment Department, Tel Aviv The Remote Sensina Laboratory



Tsvi Piran Schwartzman Chair for Theoretical Physics, The Hebrew University of Jerusalem



Dan G. Blumberg Vice President and Dean for Research and Development, Prof. of Remote Sensina, Ben Gurion University



Eran Ofek Senior researcher at the Weizmann Institute of Science



Chaim Esehd ISA Steering Committee



Haim Rousso Member, National Council for Research & Development



Eyal Halevy Conference Organizer, Co-Managing Director, Paragon Group

Professional Conference Organiser

Eyal Halevy, Conference Organizer, Co-Managing Director, Paragon Group Ofer Gil, Conference Organizer, Co-Managing Director, Paragon Group Nava Alfandari Levy, Registration & Accommodation, Paragon Group Yael Greenstein-Gal, Project Manager, Paragon Group Ben Hoffman, Technical Manager, Paragon Group Matan Madai, Industry Liaison, Paragon Group Hagar Saad, Logistics & Operation, Paragon Group Pamela Levi Vaserman, Registration & Accommodation, Paragon Group

A Message from the Minister of Science, Technology and Space



Welcome to Jerusalem,

the Capital of the Jewish people for more than 3000 years. This is the place to which all Jewish people direct their prayers.

I invite you to explore the wonders of this unique city. You will find it both beautiful and spiritual.

As I am sure all participants in the IAC acknowledge, human activity in space influences every aspect of our lives, functioning as a significant force in the global economy. Transportation, communications,

finance, and other industries rely on satellites, and this new dependence creates distinct challenges for the security and safety of nations.

A national space program allows the State of Israel to maximize the primary resources that our country has in abundance: highly qualified manpower and a drive toward excellence. In order to maintain its advantage in space, the State of Israel will continue to develop centers of knowledge in both the industrial sector and academic institutions while encouraging the innovation and entrepreneurship that are crucial to success in this age of globalization and information.

The development of an independent space program in a small country like Israel required vision and the investment of significant resources. When the Israeli space program was established, it reflected a keen understanding and foresight – the belief that it was possible to create an impressive infrastructure of academic institutions combined with industry that would enable scientific research and technological development.

Today, Israel is recognized as an increasingly important player in international space research and development.

Space is truly a frontier that not only allows for remarkable scientific discovery but also serves as a bridge uniting peoples and nations in our common quest for understanding and building a better future for humanity. We are therefore fully committed to forge ahead in expanding alliances with fellow nations and international business partners who share our vision for progress and development in space study. In so doing, we look forward to continued growth in a way that will benefit the space community

I would like to congratulate the organizing committee for preparing a very interesting and exciting congress this year.

I am looking forward to meeting you in the various sessions, and hope you enjoy your stay. Make sure you take the time to explore Israel, and not just the space above it.

Ofir Akunis

Minister of Science, Technology and Space

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3.1 City Map and Introduction to Jerusalem



Practical information on Jerusalem

Most of Jerusalem's top historical sites are located within the Old City which is one of the oldest cities in the world, with artifacts from Caananite, Babylonian, Persian, Greek, Roman, Christian, and Muslim epochs.

Standing atop the Mount of Olives will give you a bird's-eye view of all four quarters of the Old City: Jewish, Armenian, Christian and Muslim.

The most significant site for Jewish people is the Western Wall (sometimes called the Wailing Wall), which is the last remaining outer wall surrounding the Second Temple built by King Herod in 70 CE.

The Western Wall tunnels is an excavation site well worth visiting. The ancient Roman Cardo ruins and the Hurva synagogue are both a five minutes' walk from the Western Wall. Another ten minutes walking will bring you to the Jaffa Gate and the Tower of David Museum.

Christian tradition dictates that Jerusalem is the place where Jesus was crucified and resurrected. From the Mount of Olives continue to the Garden of Gethsemane and the Church of All Nations, the site where Mary Magdalene is said to have been buried according to the Eastern Orthodox Church. Continue around the Old City to visit the Stations of the Cross along the Via Dolorosa, the Church of the Holy Sepulchre, and the Garden Tomb.

Ein Karem is a pastoral village neighboring Jerusalem where the Church of St. John the Baptist is located. Bethlehem and the Church of Nativity is a ten minute drive from the capital.

After Mecca and Medina, Jerusalem is home to the third holiest site for Sunni Muslims, the Al Aqsa Mosque. Adjacent to Al Aqsa is the Dome of the Rock, which according to tradition, was visited by Muhammad during his Night Journey. Prior to your visit, make sure to check visiting hours.

Combining Business & Pleasure

- Jerusalem has 1,578 public gardens and parks.
- There are 31 wineries in Jerusalem.
- Jerusalem has over 2,000 archeological sites.
- There are more than 70 museums in Jerusalem.
- Jerusalem has over 90 cultural centers that teach art, music, poetry, literature and performance to young people.
- The capital has the largest number of annual festivals in the country.
- The lion is the emblem of the City of Jerusalem.
- There are over 6,000 species of plants in the Jerusalem Botanical Gardens.
- The length of the wall surrounding the Old City is four kilometers and has seven open gates.

3.2 Jerusalem and Area Airports & Ground Transportation To/From **Downtown Jerusalem**

"Tel Aviv"/"Ben Gurion" Airport

Tel Aviv Airport, known locally as Ben Gurion International Airport, is the main hub for almost all international flights arriving to or departing from Israel. Located at the heart of the country, near the Israeli city of Lod, around 40 km from Jerusalem and 15

Most flights arrive to and depart from Terminal 3, which was renovated in 2004 and features extensive duty free shopping, banking and currency exchange services, a post office and dining area.

Ground Transportation To/From Jerusalem

Israel is a small country, and it is therefore easy to get from one place to another in a relatively short time. Public transportation is convenient, and you can get to almost any destination for a reasonable price.

There are a number of convenient ways to travel between Ben Gurion Airport and Jerusalem:

The IAC Jerusalem Express Shuttle

Enjoy the peace of mind of a pre-paid, easy access transfer to your Jerusalem hotel.

Upon landing, receptionists will be standing by to greet and direct you to the departure terminal to Jerusalem. Approximately every 1-2 hours a shuttle will depart Ben Gurion airport taking you directly to your accommodation.

Reserve your seat at the affordable cost of €20 per person, for a one way trip. Once your seat is reserved, you are guaranteed a place on the bus.

Please note that in cases of unexpected delays, you reservation will be transferred to the next time of departure. For reservations and departure times: http://www.iac2015.org/transportation-to-jerusalem/

Shared Taxi Van – "Nesher Tours"

One of the most affordable and popular ways is to take a "sherut" (shared taxi) that leaves from just outside the Arrivals Hall at Ben Gurion airport and will deliver you directly to your destination in Jerusalem. Many taxi drivers wait for the sherut taxi to be full before setting off, so you need to factor that into your journey time.

You can also order one to take you from Jerusalem to the airport, and need to book 24 hours in advance (they will tell you to call back if you try more than 24 hours in advance). However, if your flight is on Saturday night or Sunday, then make sure to book

A single journey should cost approximately 62 NIS (US\$ equivalent accepted).

"Sheruts" run 24/7.

"Nesher Tours" Customer Service and Information: +972-2-625-7227

"Nesher Tours" Website: http://www.neshertours.co.il/

Bus

To catch a bus to Jerusalem from the airport, first head to the three-story bridge on the second floor, near Gate 21 and 23, and take a bus to the Egged station at nearby Airport City. From there it is possible to get to Jerusalem by Egged bus 945 and 947 (every half hour from 5:30am – 9pm), but you will then still need to make your way from the Central Bus Station in Jerusalem to your destination.

To get to the airport from Jerusalem, buses 945 and 947 leave from platform 18 at the Central Bus Station and arrive at El Al junction, where you then need to catch bus 5 in order to get to Terminal 3 departures.

Certainly your cheapest option - the journey will cost about 30 NIS and takes about 1.5 hours in total.

Egged Buses Customer Service and Information: *2800

Egged Buses Website: www.egged.co.il

Jerusalem Central Bus Station Customer Service and Information: +972-3-694-8888

Jerusalem Central Bus Station Address: 228 Jaffa Rd, Jerusalem

Train

To take a train to the airport, you can catch a train from the train station in southern Jerusalem to Tel Aviv Hahagana station, and from there, change to a train going to Tel Aviv Airport (Ben Gurion Airport). It is a time consuming procedure and not

To get to the train station from the centre of Jerusalem, catch bus 18x, which takes approximately 45 minutes from King George Street. Or, you may want to catch a taxi, which will cost around 50 NIS on the meter from town. Those who are driving can enjoy free parking at the train station. Tickets are available at the station at a ticket booth or vending machine.

At the airport, the train station is located on Level S, which is the lowest floor, and can be accessed through the Arrivals Hall via stairs, elevators or escalators. Train tickets are available for purchase from automatic machines on level G.

Israel Railways Customer Service and Information: *5770 Jerusalem Train Station Address: Derech Yitzhak Moda'i, Malha, Jerusalem Ticket Booth Opening Hours:

Sunday - Thursday: 6:00am - 10:00am; 3:15pm - 7:45pm Friday: 8:45am - 2:00pm Saturday eve: closed Website: www.rail.co.il

Private Taxi

A private taxi to or from Jerusalem is another option, and should cost approximately 250 NIS during the week and 300 NIS on Saturday ("Shabbat'). At the airport, it is advised to use a taxi company under the supervision of the Israel Airports Authority, operated by on-site dispatchers, and found at Terminal 3 on the ground level of the multi-level road.

Airport Licensed Taxis

Hadar Lod (all parts of Israel) - Phone: +972-3-971-1103 Amal (to Haifa and North) - Phone: +972-4-866-2324 Taxi 99 (All parts of Israel) - Phone: +972-72-3290731

The car rental companies are located on the first floor of the East Gallery in Tel Aviv Airport's Arrival Hall and are open 24/7. The pick-up and return of the car is at the car rental companies' parking lot on the ground floor of the East Building, which is opposite

Rental Car Collection: After organizing the paperwork, head to the parking lot via the connecting corridor between the terminal and parking lot. Descend to level G and follow signs. If you know in advance you will be picking a car up at the airport, it is advisable to provide your flight number in case of flight delays.

Rental Car Return: Cars should be returned to the parking lot opposite Terminal 2 (internal flights terminal). Rental car companies provide transportation to Terminal 3.



3.3 Registration

Registration Rates

Registration Category	Early (on or Before 15/06/2015)	Regular (on or Before 04/10/2015)	On-Site (from 11/10/2015)	Notes
	Fee in €	Fee in €	Fee in €	
Full-paying Participants	815€	945€	995€	N/A
Full-paying Participants (Members)	680€	805€	900€	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€	445€	495€	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€	360€	410€	Who are no older than 35 years of age at the time of the Congress
Full-time Students and Primary/seconday level Teachers	75€	85€	95€	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€	80€	105€	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, 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

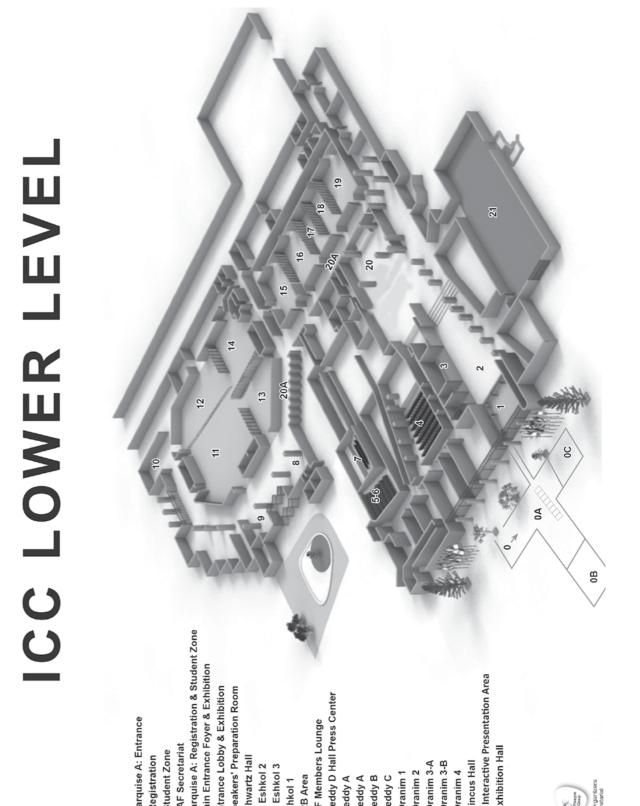
What is covered by the fee?

Registration Includes: Admission to the Exhibit Hall, Plenary Program, 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, 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.

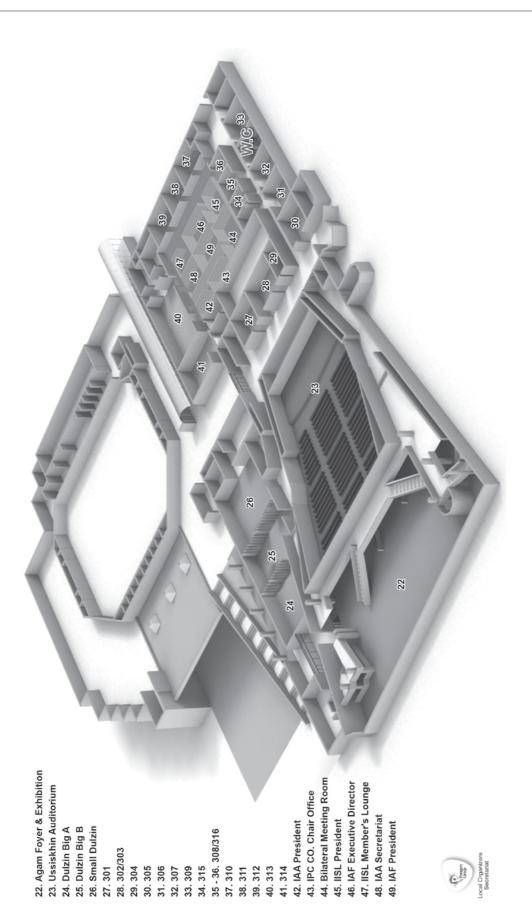
Accredited press will have to upload a valid Press Card or provide any other document proofing their status of "Media".

3.4 Congress Venue Floor Plans

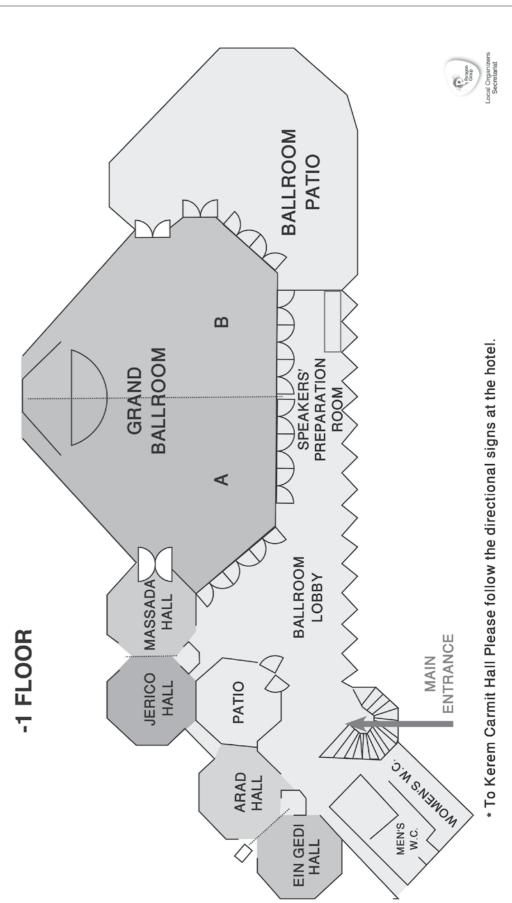


PRACTICAL INFORMATION

ICC MAIN LEVE

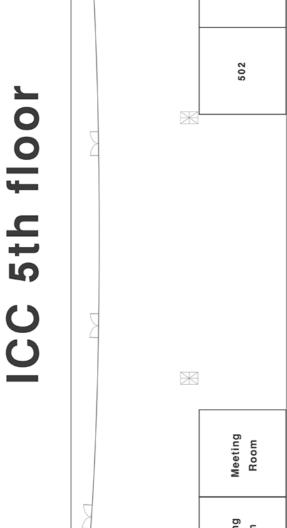


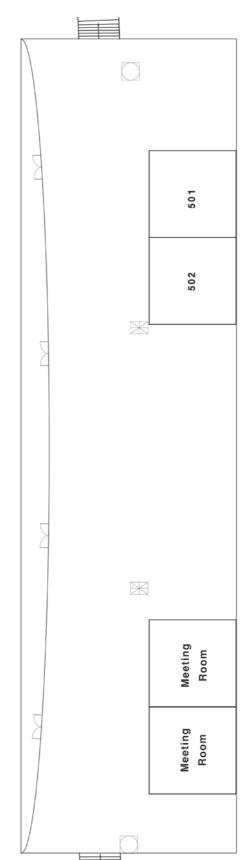
CROWNE PLAZA

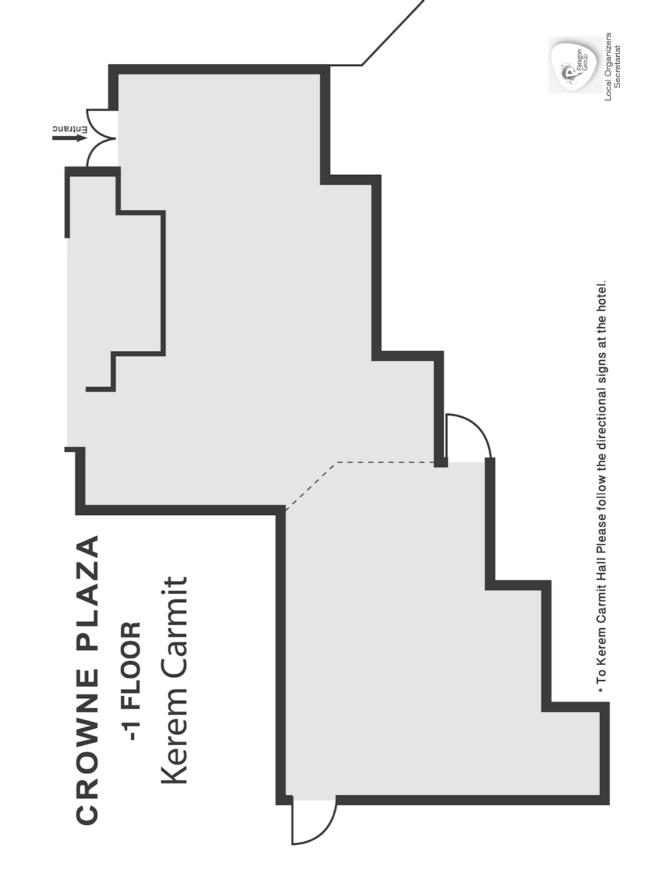


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IAC, 2015 erusalem







International Astronautical Congress





3.5 Office Opening Hours

Registration and Information Desk:

Location: Marguise A

Saturday 10 October, 13:00-18:00 Sunday 11 October, 08:00-18:00

Monday 12 October - Thursday 15 October, 08:00-16:00

Friday 16 October, 08:00-13:00

IAF Secretariat Office

Location: Marquise A

Friday 9 October - Friday 16 October, 08:00-18:00

LOC Secretariat Office

Location: Marguise A

Friday 9 October - Friday 16 October, 08:00-18:00

IAA Secretariat Office:

Location: Hadarim Patio (divided), Level 2

Friday 9 October - Friday 16 October, 08:00-18:00

Exhibition Hall and Internet Café:

Location: All Exhibition Areas, Levels 1 and 2

Friday 16 October, 09:00-15:00

IAF Members' Lounge

Location: Teddy Foyer, Level 1

Sunday 11 October - Friday 16 October, 08:00-18:00

IISL Members' Lounge

Location: Hadarim Patio (divided), Level 2

Saturday 10 October – Friday 16 October, 08:00-18:00

International Press Centre

Location: Teddy D, Level 1

Saturday 10 October, 13:00-20:00

Sunday 11 October - Friday 16 October, 07:30-20:00

Friday 16 October, 07:30-17:00

Speaker's Preparation Rooms

Location 1: Business Center, Level 1, International

Convention Center

Location 2: Ballroom Foyer, Crowne Plaza Hotel

Opening Hours:

Sunday 11 October, 14:00-18:00

Monday 12 October – Thursday 15 October, 08:30-18:00

Friday 16 October, 08:30-15:00

Monday 12 October, 12:30-18:00 Tuesday 13 October - Thursday 15 October, 09:00-18:00

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 Interactive Congress Guide DVD. You can still update your multimedia presentations with the latest developments in the Speaker's Preparation Rooms. 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 or CD-ROMS into the computers in the Technical Session rooms. Therefore, all updates need to be uploaded before the technical session takes place.

The Speaker's Preparation Room is equipped with computers (MS Windows XP – compatible) with CD/DVD drives and USB ports. It will be open during the following hours:

Sunday 11 October 2015, 14:00 – 18:00 Monday 12 October 2015, 08:30 – 18:00 Tuesday 13 October 2015, 08:30 - 18.00 Wednesday 14 October 2015, 08:30 – 18:00 Thursday 15 October 2015, 08:30 – 18:00 Friday 16 October 2015, 08:30 – 15:00

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 Chairs 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 Useful Information

GOOD TO KNOW

NIS, New Israeli Sheqel, 1 € = 5 NIS **Currency:**

Hebrew and Arabic are official languages, English Language:

MEZ +1 (all year round) Time Zone:

3 months with passport (valid for at least 6 months at entry) Entry:

Inhabitants: approximately 800 000 in Jerusalem 600 - 1000m above sea, average 800m Location:

Climate: On average cooler than the rest of the country, with hot and dry summers and cool winters.

Shabbat

What is Shabbat?

Shabbat is the Jewish day of rest. It starts at sundown on Friday and ends at sundown on Saturday evening when the new week begins. Religious Jews do not work during Shabbat and this extends to using electronic equipment, and cooking. They mark the start of the 24 hour period by lighting candles and visiting the synagogue for prayers and to sing traditional liturgical blessings, which is followed by the Shabbat Dinner, a festive family meal. On the Shabbat morning, observant Jews return to the synagogue for a morning service, and again in the evening for the Havdalah service to mark the end of Shabbat and the start of the new

What changes during Shabbat in Jerusalem?

In Jerusalem, Shabbat is a totally unique experience. Starting from Friday afternoon some businesses, shops and restaurants begin to close up, while non-Kosher restaurants remain open, as do a limited number of businesses in the West of the city. Public transportation (buses and light railway) do not run at all in Jerusalem during Shabbat, and services end in the hours leading up to sunset. Shared taxis and private taxis do continue to operate. Whilst most businesses are closed, Shabbat is a great time to explore Jerusalem when the city is much quieter than usual and almost no traffic on the streets. The Old City, of course, is open as usual and it is particularly interesting to see the religious Jews mark the start of Shabbat at the Western Wall on Friday evening. Some of Jerusalem's museums are open on Saturday.

Businesses tend to re-open on Saturday evening from around one hour after the end of Shabbat until extra-late so people can shop and eat before the start of the new week.

Bus services start almost instantly after the end of Shabbat, and the light railway slightly later.

Credit Cards

Credit cards are widely accepted in Israel. Registration for the congress can be by MasterCard, Visa and American Express.

Currency and Money Exchange

The currency in Israel is the New Israel Shekel (NIS). We recommend using the local currency although most expenses in Israel may be paid with major credit cards. Most ATMs accept all major credit cards such as Master Card, Visa, Diners, and American Express.

Weather

The average day time temperature for October in Israel is between 15-25 degrees Celsius. Evenings get cool in Jerusalem and can be chilly. Have a light weight sweater/cardigan available.

Electricity

Electrical equipment in Israel is 220 volt A.C., single phase, 50 cycles. Some appliances may require a plug adapter that can be purchased locally.



Dietary

Food in the hotels and in most restaurants is kosher which means, on a practical level that meat dishes and dairy dishes are not served together.

Tipping

Tipping is widespread and regulated in Israel. An indicative amount is 10% of the total bill. With few exceptions, no service charge is automatically added to restaurant or hotel bills. In most cases it is NOT possible to add a tip to a credit card bill and it should be added in cash.

Health

Israel has a high standard of hygiene and medical care, comparable to any Western standard. Doctors and dentists are highly trained and hospitals are well equipped. In the event of illness, hotel staff can arrange a doctor for you or speak to any member of the organizing committee.

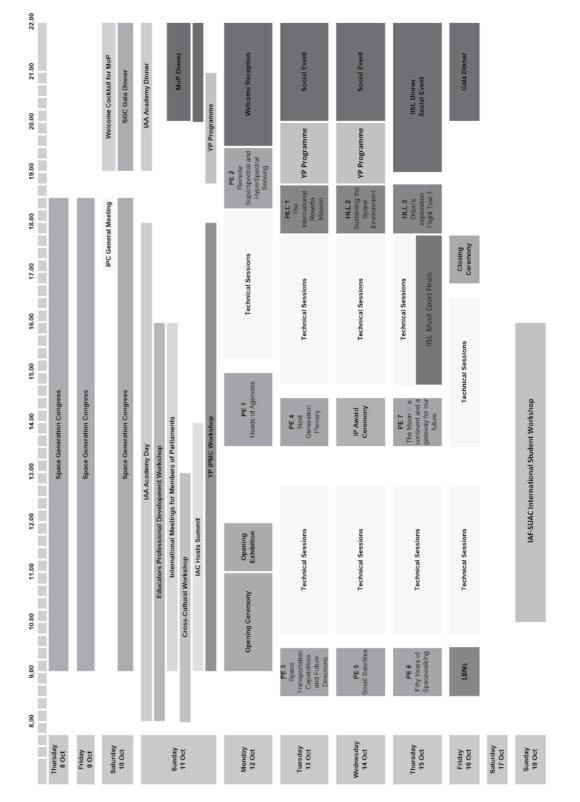
Telephones

The country code for Israel is +972



Conference Programme

4.1 Programme at a Glance



4.2 Day by Day

Pre-Congress Schedule

Thursday 8 October

Space Generation Congress (SGC) (see page 186)

Friday 9 October

Space Generation Congress (SGC) (see page 186)

Saturday 10 October

IPC General Meeting

Space Generation Congress (SGC) Gala Dinner (see page 186)

Sunday 11 October

IAA Academy Day and Academy Dinner (see page 181)

Educators Professional Development Workshop (see page 180)

Cross Cultural Communications and Presentation Workshop (see page 181)

IAC Hosts Summit (see page 183)

IPMC Young Professional Workshop (see page 166)

Young Professionals Networking Events (see page 167)

Main Congress Schedule

Monday, 12 October

09:00 - 11:00 Opening Ceremony

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

11:15 - 12:15 Exhibition Opening

Location: Exhibition Hall, Jerusalem International Convention Center (ICC)

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

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

The Heads of Agencies plenary event will bring together the leaders of major space agencies worldwide. Following the structure of previous years, this year's Heads of Agencies Plenary will begin with an introductory presentation on latest developments, followed by a discussion on specific topics as well as an interactive Q&A session with the audience.

Panellists:



Isaac Ben-Israel Chairman Israel Space Agency (ISA), Israel



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



Xu Dazhe Administrator. China National Space Administration (CNSA), China



Igor Komarov Federal Space Agency (Roscosmos), Russia



A.S. Kiran Kumar Chairman, Indian Space Research Organisation (ISRO),



Naoki Okumura President, Japan Aerospace **Exploration Agency** Japan



Johann-Dietrich Woerner Director General. European Space Agency



MODERATOR Uli Bobinger Journalist **UV Media Production** Germany



CO-MODERATOR Elizabeth Seward Head of Marketing, Earth Observation, Navigation & Science, Airbus Defence and United Kingdom





15:00 - 15:15 Buzz Aldrin Press Conference

Location: Oranim1, Jerusalem International Convention Center (ICC)



Buzz Aldrin Moonwalker, Astronaut, Apollo 11, Gemini 12, USA,

15:00 - 15:15 GNF Opening

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

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.

A special "thank you" has to be addressed to our late colleague and friend, Andrea Boese, without whom the creation and implementation of the GNF would have not been possible. She was heavily involved in the programme coordination and has always supported the initiative of our members to organize diverse and interesting discussions.

We are looking forward to welcoming you in Jerusalem 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. Connect.



Kiyoshi Higuchi IAF President International Astronautical Federation

15:15 -15:45: GNF – Heads of Agency Press Conference

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

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.

Panellists:



Isaac Ben-Israel Chairman, Israel Space Agency (ISA), Israel



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



Xu Dazhe Administrator, China National Space Administration (CNSA), China



Igor Komarov Head Federal Space Agency (Roscosmos), Russia



A.S. Kiran Kumar (invited) Chairman, Indian Space Research Organisation (ISRO), India

MODERATOR

UV Media Production

Uli Bobinger

Journalist

Germany



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



Start time: 15:15

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



Technical Sessions

No	Description	Room
A1.8	Biology in Space	Oranim 3-A
A2.1	Gravity and Fundamental Physics	314
A3.1	Space Exploration Overview	Schwartz Hall
A6.1	Measurements	Eshkol 2
A6.1-YPVF.5	Space Debris Young Professionals Virtual Forum	Kerem Carmit
A7.1	Space-Agencies Long-Term Views	302-303
B1.1	International Cooperation in Earth Observation Missions	Eshkol 3
B2.1	Mobile Satellite Communications and Navigation Technology	Dulzin Big B
B3.1	Governmental Human Spaceflight Programs (Overview)	Ballroom A
B4.2	Small Space Science Missions	Eshkol 1
B6.3	Mission Operations, Validation, Simulation and Training	313
C1.1	Mission Design, Operations & Optimization (1)	Teddy B
C2.1	Space Structures I - Development and Verification (Space Vehicles and Components)	Oranim 1
C3.1	Space-Based Solar Power Architectures / Space & Energy Concepts	Oranim 2
C4.1	Propulsion System (1)	Ballroom B
D1.1	Innovative and Visionary Space Systems Concepts	Oranim 4
D2.1	Launch Vehicles in Service or in Development	Teddy C
D3.1	Strategies & Architectures as the Framework for Future Building Blocks in Space Exploration and Development	312
E1.1	Ignition - Primary Space Education	Oranim 3-B
E4.1	Memoirs & organisational histories	Dulzin Big A



16:30 - 17:15 GNF - NanoSat's Success: Innovative lessons for the entire Space Community

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

Over the past 15 years, nano-satellites have gone from a University curiosity, to highly capable systems with revolutionary potential. Standardization of launch interfaces and growing launch capacity has spurred development of affordable components and sub-systems leveraging rapid advances in the commercial electronics industry. Due to high volume, high yield production, these commercial parts have a proven record in low earth orbit of functioning reliably with smart system-level design principals. For years, the nano-satellite community has borrowed and tailored processes from the traditional aerospace industry. However, recent demonstrations of nano-satellite missions, and the approaches used to develop those spacecraft, have shown dramatic reductions in costs and schedules. This achievement is the result of comprehensive questioning of the traditional approaches relating to parts selection, sub-system and system designs, management approach, risk posture and risk reduction, mission assurance, environmental testing, and satellite operations. The affordability of nano-satellites is allowing for organizations to experiment with different approaches to these challenges in a way this historically risk averse industry never could. The industry as a whole stands to benefit from this experimentation, where large programs may adopt technology and processes originally vetted and proven out by the nano-satellite community.

Organized by:

Tyvak



Panellists:



Mengu Cho Department of Applied Science for Integrated System Engineering Director, Laboratory of Spacecraft Environment Interaction Engineering Kyushu Japan



David Korsmeyer Director of Engineering, NASA Ames **United States**



Giorgio Saccoccia Head of Propulsion and Aerothermodynamics Division. European Space Agency, France

Noam Segal (Invited) CEO, ImageSat International

Israel



Marco Villa President and COO, Tyvak Nan-Satellite Systems Inc. **United States**

Start time: 16:45 **Technical Session**

No	Description	Room
D3.3	Novel Concepts and Technologies to Enable Future Building Blocks in Space	312
	Exploration and Development	

17:30 - 18:15 GNF - China Manned Space Program

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

The report briefly introduces the background of China Manned Space Program since 1992, and the achievements of 11 spaceflight missions, including 6 unmanned missions and 5 manned missions. It also gives a roadmap of building and operating China space station (CSS), the functions, utilizations and assembly schedule of station is also introduced. At last, the report will emphasize the international cooperation based on CSS, with the aim of bring benefits of the CSS to humanity.



China Manned Space Agency (CMSA)



中国载人航天工程办公室

Speaker:



Zhou Jianping Chief Designer of China Manned Space Program, China Manned Space Agency (CMSA) China



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

18:15 - 19:30 Plenary 2: Remote Superspectral And Hyperspectral Sensing From Space (Host Plenary)

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

Panellists:



Pierric Ferrier Project Manager, Centre National d'Etudes Spatiales (CNES), France



Ehud Hayun System Engineer, MBT SPACE, Israel



Arnon Karnieli Researcher, Ben Gurion University, Israel

Iose Moreno

Professor. University of Valencia, Spain



Andreas Mueller Head Land Surface Department. German Aerospace Center (DLR),



Stefano Pignatti Researcher. Institute of Methodologies for **Environmental Analysis** (CNR-IMAA),

Welcome reception 19:30 - 22:00

Tel Aviv University (TAU),

MODERATOR Eyal Ben Dor Head of Remote Sensing

Laboratory.

Location: All Exhibition Areas, Jerusalem International Convention Center (ICC)

20:00 - 22:00 VIP Reception at the IAI Space Center (upon invitation only)

Location: IAI/MBT Space Division, Altalef 3, Yehud



Tuesday, 13 October

Plenary 3: Space Transportation Capabilities and Future Directions to enable Commercial, Scientific, and Human expansion into space

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

This plenary session is dedicated to a comprehensive discussion of the current state and future directions of launch systems. We are in the midst of substantial change in the paradigms of how humans and hardware get to space – from technical, programmatic, and commercial perspectives. In the technical realm, for example, we are now seeing the first-attempts to re-land booster rockets gently for re-use of all or large parts of the hardware. In programmatic areas, we are seeing NASA rely on commercial contracts to deliver crew and cargo, and ESA moving forward with the Ariane-6. While telecommunications satellites for GEO still offer commercial opportunities for launch vehicle companies, one important trend has been in the direction of smaller satellites microsats and nanosats – and hosted payloads, which may influence the direction, size, and frequency of future launches. This plenary will provide a window into how many of the major actors in the Space Transportation arena are adjusting to – or creating - many of these changes which are coming rapidly, and are fundamentally changing our access to LEO and beyond.

Panellists:



John Elbon Vice President and General Manager, Space Exploration, Boeing Defense, Space & Security,

Stéphane Israël

Arianespace.

France

Lin Shen

China

Chairman and CEO.

Deputy Chief Researcher,

China Academy of Launch

Vehicle Technology (CALT),



Tsutomu Fukatsu Director, Management and Integration Department Space Technology Directorate, Japan Aerospace Exploration Agency (JAXA),



Robert Hauser **Business Development** United Launch Alliance (ULA), USA



Yuriv Makarov Director of Strategy Plannina Department. Federal Space Agency (ROSCOSMOS),



Lee Rosen Vice President, Mission and Launch Operations, SpaceX, USA



Gaele Winters Director of Launchers, European Space Agency France



MODERATOR Geir Hovmork Deputy Director, Norwegian Space Center,

09:30 - 10:45 **GNF** – Climate and Earth Observation – Challenges and Possibilities of Satellite Missions

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

The World Climate Research Programme focuses on the following grand challenges:

- Regional Sea-level Change & Coastal Impacts
- Melting Ice & Global Consequences
- Changes in Water Availability
- Clouds, Circulation and Climate Sensitivity
- Understanding and Predicting Weather and Climate Extremes

Following the Global Climate Observing System initiative 50 essential climate variables have been identified which are technically and economically feasible for systematic observation. Earth observation by satellite borne remote sensing instruments represents the most important source of data and a variety of climate missions are worldwide serving this goal already. However, making maximum use of all these systems for climate research still results in further challenges: validation is one key requirement, optimized sampling in space and time another one. The IAC-panel will focus on corresponding questions: What are the still existing major deficiencies and what are present plans for future climate relevant missions.

Keynote presentations by worldwide acknowledged experts will path the way into a panel discussion on this challenging topic.

Organized by:

German Aerospace Center (DLR)



Panellists:



Hartmut Grassl former Director of Max Planck Institute for Meteorology, Germany

Alberto Moreira

Radar Institute,

(DLR),

Germany



Chu Ishida Senior Chief Officer for Satellite Applications, Japan Aerospace **Exploration Agency** (JAXA),



Volker Liebig Director Earth Observation, European Space Agency (ESA/ESRIN), Italy



Piers J. Sellers Deputy Director Science and Exploration Directorate, Goddard Space Flight Centre, National Aeronautics and Space Administration (NASA)

United States



CHAIR Hans-Joerg Dittus Member of the Executive German Aerospace Center

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

No	Description	Room
A1.2	Human Physiology in Space (1)	Oranim 3-A
A2.2	Fluid and Materials Sciences	314
A3.2A	Moon Exploration – Part 1	Schwartz Hall
A6.2	Modelling and Risk Analysis	Eshkol 2
A7.2	Scientific Motivation and Requirements for Future Space Astronomy and Solar System Science Missions	302-303
B1.2	Future Earth Observation Systems	Eshkol 3
B2.2	Joint Session on Dual Use (civil and military) Aspects of Telecommunications and GNSS	Dulzin Big B
B3.2	Commercial Human Spaceflight Programs	Ballroom A
B4.1	16th Workshop on Small Satellite Programmes at the Service of Developing Countries	Eshkol 1
C1.2	Mission Design, Operations & Optimization (2)	Teddy B
C2.2	Space Structures II - Development and Verification (Deployable and Dimensionally Stable Structures)	Oranim 1
C3.2	Wireless Power Transmission Technologies, Experiments and Demonstrations	Oranim 2
C4.2	Propulsion System (2)	Ballroom B
D2.2	Launch Services, Missions, Operations, and Facilities	Teddy C
D4.1	Innovative Concepts and Technologies	312
E1.2	Lift-Off - Secondary Space Education	Oranim 3-B

E2.1

E3.1

E6.1

E7.1

Student Conference - Part 1 Regional cooperation in space: policies, governance and legal tools Case Studies and Prizes in Commercial Space Oranim 4

7th Nandasiri Jasentuliyana Keynote Lecture on Space Law and Young Scholars

Session

Location: Teddy A, Jerusalem International Convention Center (ICC)

10:30 - 11:15 CNES / ISA reception (upon invitation only)

10:45 - 12:00 GNF - New Space Economy - The Dawn of an Era or the Next Economic Bubble?

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

New Space economy is the trend slogan of 2015. Recent developments in the international space community give the impression of drastic changes in the space world today: New players in commercial space activities, new concepts for utilization of space technologies, new private investments in space assets. Last not least the number of countries investing in space keeps increasing year after year. The question is whether there is really something called "new commercial space," or are we re-labeling and tweaking slightly the way we are doing what we have always done. If the answer is yes – and there are hints to follow that impression – then the role of space agencies might has to change as well, especially when governmental space budgets stagnate. In this panel we will discuss with experts from four continents new approaches and new business models in space industry, opportunities for governmental and private newcomers in space as well as necessary answers by established space agencies around the globe.

Organized by:

German Aerospace Center (DLR)



Panellists:



John M. Horack Vice President for Space Systems, Teledyne Brown Engineering, USA





Sias Mostert

CEO Space Commercial
Services,
South Africa

Pete Worden

Breakthrough Prize

Chairman

USA

Foundation.



Yuya Nakamura
President and CEO,
Axelspace Corporation,
Japan

Dulzin Big A



CHAIR

Gerd Gruppe

Member of the
Executive Board,
German Aerospace
Center (DLR),
Germany

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

Location: Ein Gedi Hall and Masada Jericho Hall, Crowne Plaza Hotel

12:15 - 13:00 GNF – ESA Director General Jan Woerner meets the Press

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

As of 1 July 2015 ESA has a new Director General: Jan Woerner. He took up duty at ESA Headquarters in Paris, France.

Prof. Woerner called for the continuation of ESA's ongoing programmes, projects and missions in cooperation with Member States, as well as preparing for ESA's future, among the many important tasks he has to fulfil.

Referring to this future as 'Space 4.0', Prof. Woerner considers that ESA has already started to enter this new phase, in which space has become a day-to-day business and in which interaction with society, the commercialisation of space, resulting new roles for industry and a fostered, cooperative relation with the European Commission all play important roles.

The ESA Council unanimously appointed Prof. Woerner on 18 December 2014 for a period of four years. Previously, he was Chairman of the Executive Board of the German Aerospace Center (DLR), from March 2007 to June 2015.

Organized by:

European Space Agency (ESA)



Speaker:



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



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

12:30 - 13:30 Arianespace VIP Luncheon (Upon invitation only)

Location: Teddy A, Jerusalem International Convention Center (ICC)

13:30 - 14:30 Plenary 4: Next Generation Plenary: International Space Station as the Gateway for Humankind's Future in Space and on Earth

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

This plenary highlights the active work on the International Space Station (ISS) of students and young professionals who were competitively selected through YouTube auditions. These Next Generation panelists will discuss the reasons for performing research in space vs. on Earth and will discuss results and benefits of their research – not only for deep-space exploration but also for improving life on Earth. This plenary examines new research that will take firm hold in 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:



Jean–Dominique Coste ESA Systems Engineer, Airbus Defence & Space, France/Germany



Jason Dunn
Founder, Made In Space,



Norah Patten

Communications and
Outreach Manager with
the Irish Centre for
Composites Research
(IComp),
Ireland



Jun Shimada Payload Engineer, Japan Aerospace Exploration Agency (JAXA)



Julia Stalder University of California in Los Angeles (UCLA) and National Aeronautics and Space Administration (NASA)



Luis Zea University of Colorado, Boulder. Guatemala / United States

MODERATOR Julie Robinson ISS Program Scientist, **National Aeronautics** and Space Administration (NASA). USA



MODERATOR Andrea Bovd Flight Controller for European Space Agency (ESA)

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

No	Description	Room
A1.3	Human Physiology in Space (2)	Oranim 3-A
A2.3	Microgravity Experiments from Sub-Orbital to Orbital Platforms	314
A3.2B	Moon Exploration – Part 2	Schwartz Hall
A4.1	SETI 1: SETI Science and Technology	302-303
A5.2	Human Exploration of Mars	Eshkol 3
A6.4	Mitigation and Standards	Eshkol 2
B2.3	Space-Based Navigation Systems and Services	Dulzin Big B
B3.3	Utilization & Exploitation of Human Spaceflight Systems	Ballroom A
B4.3	Small Satellite Operations	Eshkol 1
C1.3	Orbital Dynamics (1)	Teddy B
C2.3	Space Structures - Dynamics and Microdynamics	Oranim 1
C3.3	Advanced Space Power Technologies and Concepts	Oranim 2
C4.9	Hypersonic and Combined Cycle Propulsion	Ballroom B
D2.3	Upper Stages, Space Transfer, Entry and Landing Systems	Teddy C
D4.2	Contribution of Space Activities to Solving Global Societal Issues	312
E1.3	On Track - Undergraduate Space Education	Oranim 3-B
E2.3-YPVF.4	Student Team Competition	Kerem Carmit
E3.2	International Space Exploration Policies and Programmes	313
E6.2	Public/Private Human Access to Space - Supporting Studies	Oranim 4
E7.2	The relationship of international humanitarian law and territorial sovereignty with the legal regulation of outer space	Dulzin Big A

14:45 - 17:45 GNF – Vega Small Launcher: the best workhorse answer to your LEO needs

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

The workshop aims at describing the current success and the future potential of the VEGA small launcher. VEGA has been developed within the ESA programmatic frame in which Italy has played a leading role being the main financial contributor covering approximately 60% of the overall programme value.

In order to improve the Italian leadership in the programme and enhance the national technical competence at system level, the Italian Space Agency established with AVIO the company ELV (European Launch Vehicle) for the role of the launcher system

Prime Contractor. The VEGA lightweight launcher was designed for launching small satellites into low earth orbit (LEO) mainly for scientific and Earth Observation applications. The maiden flight occurred in February 2012 putting into orbit the Italian Space Agency LARES scientific satellite; since then, other four launches have been successfully carried out for Europe. The second VEGA launch occurred in May 2013 using for the first time the flight programme GNC software (named FPS-A) developed by ELV with the support of other Italian & European companies; this flight carried into LEO orbit the ESA technological satellite named Proba-V which is conducting a global census of Earth's vegetation, the Vietnamese satellite VNREDSAT and a small Estonian research satellite based on CUBEsat concept. The third launch occurred in April 2014: with this flight the "commercial" Earth Observation satellite, named KazEOSat-1 (also known as DZZ-HR), built by Airbus Defence and Space for the Government of the Republic of Kazakistan, was successfully placed into LEO orbit. The fourth launch occurred in February 2015; it was the first quasi equatorial VEGA flight and it carried the ESA IXV Intermediate experimental Vehicle in a sub-orbital flight (at approx. 330 Km height at separation); IXV mission has been conceived by ESA to test technologies (i.e. aerothermodynamics, attitude and control, etc.) and materials for the atmospheric re-entry phase from LEO orbit. The fifth launch occurred in June 2015 bringing into orbit the satellite Sentinel-2A, a European Commission satellite developed for Earth Observation and environmental monitoring purpose in the framework of the Copernicus programme (previously GMES). The sixth VEGA flight is scheduled in November (third flight in 2015): this flight has the goal to place into a slightly elliptical parking orbit the ESA scientific satellite named LISA Pathfinder, the first space observatory for gravitational waves detection that will operate at Lagrange point L1. LISA Pathfinder is part of ESA's "Cosmic Vision" Scientific Program.

VEGA future developments and its evolution – VEGA-C & new SRM P120-C – will also be addressed during the Workshop.

This workshop will be opened by Prof. Battiston, ASI President, with the participation of high representatives of the world space community (Agencies, Research Centers, Industries, Commercial Operators) as potential customers.

Organized by:

Italian Space Agency (ASI)



Panellists:



Roberto Battiston President, Italian Space Agency (ASI). Italy



Paolo Bellomi Vice President Product Development & New Proiect. AVIO, Italy



Head of ESA Launchers Development Department. European Space Agency France

Stefano Bianchi



Mario Cosmo General Director, Italian Aerospace Research Centre (CIRA), Italy

Arturo de Lillis

Öffice,

(ASI),

Head of Launchers and

Space Transportation

Italian Space Agency



Augusto Cramarossa Head of Strategy Perspectives and European Affairs Unit, Italian Space Agency



Emanuela D'Aversa Launchers and Space Transportation Office, Italian Space Agency (ASI), Italy



Louis Laurent Senior Vice President Arianespace, France



Pierluigi Pirrelli CEO. European Launch Vehicle (ELV), Italy

17:45 - 18:45 Highlight Lecture 1: The International Rosetta Mission – First Historical Rendezvous and Landing on a Comet

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

The Rosetta international mission is a cornerstone of the ESA scientific programme which, for the first time in history of spaceflight, achieved a rendezvous with a comet nucleus and delivered a lander module, Philae, onto its surface.

The mission realization required almost 30 years since its initial conception. The interplanetary cruise took more than 10 years. The target, comet 67P Churyumov-Gerasimenko, was reached in August 2014.

The lecture will emphasize on the operational challenges of the long mission, of flying Rosetta at short distances from an active comet nucleus of 2 km radius, and of the delivery and operations the Philae lander. Latest status of both Lander and Orbiter will be presented.

Speakers:



Paolo Ferri
Head, ESA Mission
Operations,
Former Rosetta Flight
Director,
European Space Agency
(ESA)
Germany



Stephan Ulamec Philae Project Manager, German Aerospace Center (DLR) Germany

19:00 - 21:00 Young Professional Networking Event

Location: Room Teddy A, Jerusalem International Convention Center (ICC)

19:00 - 22:00 Evening Reception (upon invitation only)

Hosted by: DLR – German Aerospace Center, Chairwomen Prof. Dr. Pascale Ehrenfreund

Co-hosted by: Embassy of the Federal Republic of Germany Tel Aviv, Ambassador Dr. Clemens von Goetze

Supported by: BDLI – German Aerospace Industries Association

Location: Ballroom A/B, Crowne Plaza, Jerusalem

Wednesday, 14 October

07:00 - 08:30 WIA-Europe Breakfast

Location: Crowne Plaza Hotel, Ballroom A

"A world where we Europeans collaboratively created an aerospace sector with an inclusive representation".

Speakers:



Simonetta di Pippo President, WIA-Europe



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



Kiyoshi Higuchi, President, International Astronautical Federation (IAF)



Claudia Kessler Chair of Board of Directors, WIA-Europe



Inbal Kreiss
Deputy General Manager
of MBT Space Division,
Israel Aerospace
Industries



Dava NewmanDeputy Administrator,
National Aeronautics and
Space Administration
(NASA)



Deganit Paikowsky Senior Researcher, Yuval Neeman Workshop for Science and Security, Tel Aviv University



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

8:30 - 09:30 Plenary 5: Small Satellites – Big Opportunities in the New Age

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

Nano satellites, privately owned satellites constellations, start-ups companies for new launchers, space tourism, are all signs of a revolution coming onto the conservative space industry and space organizations worldwide. The motto of the revolution is; "an affordable space" – space which is available to everyone, any time, and all of the time. The proposed sessions will present elaborately the ways of the start-up nation to an affordable space and space use, in research, technology, "conventional space industry" and SME's

Thanks to rideshares and ISS deployment, small satellites have already demonstrated functionality in space. Now, a new generation of companies are turning to large constellations of inexpensive small satellites into global businesses, thanks to more flexible and affordable launch options that cater specifically to smaller satellites. In this plenary session, CEOs and other senior representatives from companies that are flying or building small satellites (250 kg or less) discuss the technologies, business plans, and mission types that impact their industry sector

The topics to be discussed thus reflect the interdisciplinary nature of the factors to be considered in planning for the future growth of small satellite activities. There will also be an input to the Plenary presenting the main findings from the IAA/IISL Scientific-Legal Roundtable during the Congress, dealing with "Universities in Space". The advent of small satellites, if properly regulated, can greatly contribute to the realisation of one of the cardinal principles of the peaceful uses of outer space as included in article I of the 1967 Outer Space Treaty, namely that space activities must be for the benefit and in the interests of all states



Panellists:





Opher DoronGeneral Manager,
MBT Space,
Israel



Steven FreelandProfessor of International Law,
Australia





Steve Isakowitz
President,
Virgin Galactic,
USA



Mike Safyan, Director of Launch and Regulatory Affairs, Member of the founding team Planet Labs, USA

09:30 - 11:45 GNF - Hybrid- and full Electric Propulsion - what is changing orbital propulsion?

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

The commercial satellite trend in signal throughput, extended coverage, and number of on board channels, is doubling every decade: 3kW in 1990, 7kW in 2000, 14kW in 2010, and in 2015 satellites are at 18-20 kW. Already new platforms with 30 kW are being considered. A main reason for this trend is that satellite total mass and launcher capability is closely linked. The 6 tonne launch mass was the standard in the years of 2000, driven by the Proton and Ariane 5 dual launch capabilities. At the beginning of 2000, satellites based on NiH2 and Silicon cells for the power system were relatively heavy, and therefore started to use Electric Propulsion (EP) for station keeping. Subsequently, the general use of GaAs cells and Li Ion, drastically reduced the satellite launch mass and electric propulsion was little used. However, by the end of 2010 the demand for higher payload power saw the return of EP. Such propulsion systems need significantly less propellant than classical chemical propulsion.

The EP systems have evolved from thermal EP of the 1980's and plasma / ion grid systems of the 1990's. These applications were limited to in-orbit station keeping maneuvers yielding savings of up to a third of the customary chemical propellants. Now, the prospect of 30kW payload power is feasible and EP is being considered by most satellite manufacturers for orbit raising and station keeping.

When considering EP, typical trades include thrust, Isp, available solar array power for orbital transfer as well as the business model parameters and especially time-to-orbit and the "transponder to orbit cost".

Many science and deep space missions are today only possible with EP (Bepi Colombo, Deep Space 1, Hayabusa, etc). Technologies under development at agencies for deep space missions and large systems with up to 200 kW further expands the physical principles and possibilities of EP. The main "propellant" used for EP is Xenon gas, which is very expensive. Therefore and in the case that some of the large all electric satellites will need more than 1 tonne of Xenon propellant on board justifies the need to investigate alternative propellant candidates.

Furthermore, private investment is available for satellite constellations equipped with EP and the current planning is to launch the first set of satellites by the end of the decade.

The experts on stage will discuss the different electric propulsion applications for the next decade relating to market prospective, platform design driving parameters and technologies to be developed.

Organized by:

Airbus Defence and Space



Panellists:



Cosmo Casaregola Procurement of Propulsion Systems, EUTELSAT, France



Hervé Gilibert

Head of Engineering
Space Systems, Airbus
Defence & Space
Chief Technical Officer,
Airbus Safran Launchers
France



Vincent Jacod
Head of Electric
Propulsion Department,
Airbus Defence and
Space,
France



Tsvika Kopelman
Director, Head of
Communication Satellite
Directorate,
MBT Space Division,
Israel Aerospace
Industries (IAI)
Israel



Kristian Pauly
Project Manager of the
Galileo 2nd Generation
activities,
OHB,
Germany

MODERATOR

Claudia Kessler

CEO.

HE Space,

Germany



Giorgio Sacoccia
Head of Propulsion and
Aerothermodynamics
Division,
European Space Agency
(ESA),
France



Mitchell L. R. Walker
Associate Professor of
Aerospace Engineering,
Director of the
High-Power Electric
Propulsion Laboratory,
Georgia Institute of
Technology, United
States



Start time: 09:45 Technical Sessions

No	Description	Room
A1.4	Medical Care for Humans in Space	Oranim 3-A
A2.4	Science Results from Ground Based Research	314
A3.3A	Mars Exploration – missions current and future	Schwartz Hall
A6.3	Hypervelocity Impacts and Protection	Eshkol 2
B1.3	Earth Observation Sensors and Technology	Eshkol 3
B2.4	Near-Earth and Interplanetary Communications	Dulzin Big B
B3.4-B6.5	Flight & Ground Operations of HSF Systems – Joint Session of the Human Spaceflight and Space Operations Symposia	Ballroom A
B4.4	Small Earth Observation Missions	Eshkol 1
C1.4	Orbital Dynamics (2)	Teddy B
C2.4	Advanced Materials and Structures for High Temperature Applications	Oranim 1
C4.3	Propulsion Technology (1)	Ballroom B
D1.2	Enabling Technologies for Space Systems	Oranim 4
D2.4	Future Space Transportation Systems	Teddy C
D3.2	Systems and Infrastructures to Implement Future Building Blocks in Space Exploration and Development	312
D5.1	Safety and quality: "SUCCESS" is the goal	302-303
E1.4	In Orbit - Postgraduate Space Education	Oranim 3-B
E2.2	Student Conference - Part 2	Kerem Carmit
E3.3	The space economy: what are the socio-economic impacts?	313
E5.1	Space Architecture: technical aspects, design, engineering, concepts and mission planning	Oranim 2
E7.3	The portrayal of Space (Law) in Media and Movies	Dulzin Big A

.45

12:00 - 12:30 GNF - There are No Borders in Space: International Cooperation Will Drive the

Location: Teddy A, Jerusalem International Convention Center (ICC)

This event will exceptionally take place in TEDDY A located on the first level of the ICC and not in the

The next space age starts now. We're on the cusp of dramatic change across the industry. With more than 50 nations having current or planned space programs, space has never been a more globally-oriented endeavor. The future will see international partners working together to unlock the power of space to bring connectivity to every corner of the globe, strengthen global security, and push the boundaries of exploration. We must continue to strengthen an already robust set of international partnerships in space, and work collaboratively to realize the full potential of space exploration.

Organized by:

Lockheed Martin Corporation LOCKHEED MARTIN

Distinguished Keynoter:



Marillyn A. Hewson Chairman, President and Chief Executive Officer. Lockheed Martin United States

12:45 - 13:15 Interactive Presentations Award Ceremony

Location: Teddy A, Jerusalem International Convention Center (ICC)

The best IAC Interactive Presentations will be awarded in a dedicated ceremony that will take place on Wednesday 14 October from 12:45 to 13:15 in room Teddy A.

Prizes will be awarded for the following categories:

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

The IP Award Ceremony will be followed by an interactive session and a cocktail reception from 13:15 to 14:45 in the Plasma Screens Area/Oranim Hall at ICC.

The interactive Session will provide delegates with the opportunity to ask questions.

13:15 - 14:15 GNF - Prospects of Human Spaceflight - Russian View

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

The Presentation of Prof. Solntsev will touch upon the following:

- Human spaceflight programs in Low-Earth Orbit (LEO) the ISS, new orbiting stations, commercial space missions in LEO;
- Space missions beyond LEO to the Moon and Mars: new spacecraft and space infrastructure;

- Development of the Asteroids Danger Warning and Prevention System;
 - Russian human spaceflight program and international cooperation.

Organized by:

S.P. Korolev Rocket and Space Corporation Energia



Speaker:



Vladimir L. Solntsev President, S.P. Korolev Rocket and Space Corporation Energia, Russia

14:30 - 15:30 GNF - How to launch a career in space?

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

The panel will offer advice for young professionals looking to enter or advance within the space industry, drawing from the personal experiences of senior leaders in the field. The discussion will focus on creative ways to gain insight and experience, while learning how to identify opportunities for advancement

Specific questions will be posed to each panellist relevant to their background in the space sector. Questions posed to the panellists include:

- In your experience what are the benefits of pursing an entry-level job at a space company vs. a more specialized role in an unrelated field to gain experience that I can later transfer into the space sector?
- Apart from skills related to the job, what characteristics do you think prospective employers look for in candidates?
- How do I find and keep a mentor/mentee relationship and when is it okay to "mentor up"?

Organized by:

Space Generation Advisory Council Airbus Defence and Space





Panellists:



Pascale Ehrenfreund Chair of Executive Board German Aerospace Centre (DLR), Germany

Kevin Stube

United States

The Planetary Society.



ESTEC Staff Association Committee, The Netherlands

Bernard Foing



Elizabeth Seward Head of Marketing, Earth Observation, Navigation & Science, Airbus Defence and Space, United Kingdom



MODERATOR Jillianne Pierce Space Generation Advisory Council; Government Affairs Associate. Space Foundation

International Astronautical Congress



Start time: 13:15 **Interactive Presentations**

Location: Plasma Screens Area

Session	Symposia	Description
A1.IP	SPACE LIFE SCIENCES SYMPOSIUM	Interactive Presentations
A2.IP	MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM	Interactive Presentations
A3.IP	SPACE EXPLORATION SYMPOSIUM	Interactive Presentations
A4.IP	44^{th} SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) — The Next Steps	Interactive Presentations
A5.IP	HUMAN EXPLORATION OF THE SOLAR SYSTEM SYMPOSIUM	Interactive Presentations
A6.IP	SPACE DEBRIS SYMPOSIUM	Interactive Presentations
B1.IP	EARTH OBSERVATION SYMPOSIUM	Interactive Presentations
B2.IP	SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM	Interactive Presentations
B3.IP	HUMAN SPACEFLIGHT SYMPOSIUM	Interactive Presentations
B6.IP	SPACE OPERATIONS SYMPOSIUM	Interactive Presentations
C1.IP	ASTRODYNAMICS SYMPOSIUM	Interactive Presentations
C2.IP	MATERIALS AND STRUCTURES SYMPOSIUM	Interactive Presentations
C3.IP	SPACE POWER SYMPOSIUM	Interactive Presentations
C4.IP	SPACE PROPULSION SYMPOSIUM	Interactive Presentations
D1.IP	SPACE SYSTEMS SYMPOSIUM	Interactive Presentations
D2.IP	SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM	Interactive Presentations
D4.IP	13 th IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE	Interactive Presentations
D5.IP	48 th SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE ACTIVITIES	Interactive Presentations
E1.IP	SPACE EDUCATION AND OUTREACH SYMPOSIUM	Interactive Presentations
E3.IP	28th Symposium on Space Policy, regulations and economics	Interactive Presentations
E5.IP	26th IAA SYMPOSIUM ON SPACE AND SOCIETY	Interactive Presentations
E6.IP	BUSINESS INNOVATION SYMPOSIUM	Interactive Presentations
E7.IP	58 th IISL COLLOQUIUM ON THE LAW OF OUTER SPACE	Interactive Presentations

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

No	Description	Room
A1.5	Radiation Fields, Effects and Risks in Human Space Missions	Oranim 3-A
A2.5	Facilities and Operations of Microgravity Experiments	314
A3.3B	Mars Exploration – Science, Instruments and Technologies	Schwartz Hall
A4.2	SETI 2: SETI and Society	312
A5.1	Human Exploration of the Moon and Cislunar Space	Eshkol 3
A6.9	Modelling and Orbit Dtermination	Eshkol 2
B2.5	Advanced Technologies for Space Communications and Navigation	Dulzin Big B
B3.9-YPVF.2	Human Spaceflight Young Professional Virtual Forum	Kerem Carmit
B4.5	Access to Space for Small Satellite Missions	Eshkol 1
C1.5	Attitude Dynamics (1)	Teddy B
C2.5	Smart Materials and Adaptive Structures	Oranim 1
C4.4	Electric Propulsion	Ballroom B
D1.3	System Engineering - Methods, Processes and Tools (1)	Oranim 4

D2.5	Future Space Transportation Systems Technologies	Teddy C
D6.1	Commercial Space Flight Safety and Emerging Issues	Ballroom A
E1.5	Enabling the Future - Developing the Space Workforce	Oranim 3-B
E3.4	Assuring a Safe, Secure, and Sustainable Space Environment for Space Activities	313
E5.2	Models for Successfully Applying Space Technology Beyond Its Original Intent	Oranim 2
E6.3	New Space and New Science	302-303
E7.4	Legal Issues of Space Traffic Management	Dulzin Big A

15:45 - 17:45 GNF - Rafael's Microsatellites Enhanced Capabilities Utilizing Electric Propulsion Systems

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

Rafael's space activities are focused on Small satellite constellations, Micro-satellites and Nano-satellites, Space Propulsion Solutions, Advanced light Weigh Composite Space Structures, and MEMS Technologies.

Rafael's activities in small satellite systems development are focused on dual use operational applications, based on constellations of nano-satellites or micro-satellites – depending upon the specific application.

The above doing is based on Rafael's proven extensive operational experience in: Intelligence Systems, and Communication Systems, Rafael heritage in space includes Propulsion modules and components that are onboard over 66 satellites including partnership with major Space Agencies that formed the French-Israeli VENUS Multispectral Earth-Observation satellite utilizing electrical Propulsion system, ESA – The European Space Agency and others.

Two main micro-satellites and nano-satellites applications are being developed at the current stage:

- a. Electro-Optic Earth-Observation missions
- b. Communication Relay missions

Rafael's Space Propulsion Solutions are utilizing a vast range of propulsion systems and components including monopropellant based on Hydrazine propellant, Cold Gas and Electrical Propulsion systems.

Due to its vast expertise in system integration, Rafael provides a tailor-made turnkey Propulsion Solution for the specific needs

RAFAEL designs, develops and manufactures Electrical Propulsion Systems (EPS). It provides EP system to Venus satellite and is developing low power systems to accommodate microsatellites. Rafael's EPS are the major building block in the current and future propulsion solution for LEO Satellites and large satellites consolations utilizing Rafael unique technology in the Low Electrical Hall Effect Thrusters - HET and Power Processing Units - PPU's.

Those propulsion technologies are suitable for satellite constellations requiring launcher-to-orbit propulsion, orbit maintenance and de-orbiting using the "All-In-One" concept. This approach can dramatically shorten the Satellite design phases and can be used as cost saving driver for the propulsion and AOCS systems. "All in One Solution" concept means to use the expertise of a propulsion system provider in the early stages of design.

Organized by: Rafael



Panellist



Jacob Herscovitz Chief Systems Engineer for the Space Systems Directorate, Rafael Space Systems



Yaaqov Sharony Small-satellites System Programs Manager, Rafael Space Systems,



Zvika Zuckerman Marketing & Business Development Director. Rafael Space Systems,





17:45 - 18:45 Highlight Lecture 2: Sustaining the Space Environment: The State of Space Situational Awareness, Conjunction Warning and Collision

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

Sustaining a productive near Earth space environment is critical. As the number of satellites in low and geosynchronous Earth orbits increases, collisions become more likely. Avoiding collisions has been a priority for two decades, but there has not been much progress. Space situational awareness has actually declined in the past few years. The quality of orbit data, particularly debris orbits, is neither sufficient nor timely. Fortunately, collisions are not likely, although the consequences might be severe.

This presentation will assess the capabilities of the world's space situational resources. One of the most significant impediments is the diversity of conjunction assessment and collision warning among stakeholders. Each must be able to understand and employ data provided by others. International Standards and best practices provide the environment for collaboration and improvement. Verifiable, measureable, and enforceable guidelines, codes of conduct, treaties, and laws are required. Many proposed and implemented thus far do not satisfy these criteria.

The first segment of this lecture will present all capabilities accessible to international stakeholders. These capabilities are much more than locations and fields of view or fields of regard.

The second segment will examine the capabilities to conduct actionable surveillance. Surveillance is perceiving events that matter, not looking everywhere for anything. We must consider relationships among assets to be protected, threats to those assets, and actions that might mitigate those threats.

The third segment will expose for the non-expert major approaches to conjunction assessment and collision avoidance as well as the uncertainties and estimated effectiveness. Only satellite owners and operators can judge whether to suffer a small, quantified risk or maneuver at the risk of revenue or important data. The tradeoffs will be presented for realistic situations. Finally, the possibility of guidelines, codes of conduct, treaties, and laws to facilitate sustainability will be discussed.

Speaker:



David Finkleman
Ph.D., Aeronautics
and Astronautics,
Massachusetts Institute of
Technology (MIT),

19:00 - 22:00 Lockheed Martin Corporation VIP Reception (upon invitation only)

Location: The Tower of David, Old City of Jerusalem, TBC

19:30 - 22:00 Zarm Dinner (upon invitation only)

Location: Hotel Mount Zion, Jerusalem

Thursday, 15 October

08:30 - 09:30 Plenary 6: Fifty Years of Spacewalking – The Ultimate Human Space Adventure

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

Since the first Spacewalk by Alexey Leonov in 1965, people have left the confines of a spacecraft to walk in space more than 700 times. This ultimate human space experience of turning a human into a spaceship has required numerous technical achievements to overcome the dangers. Spacewalkers have worked for thousands of hours to build spaceships and save missions. Beyond achieving mission objectives, they have had a profound societal impact; millions of images of people in spacesuits can be found in every walk of life today. The spacewalkers will discuss their personal reactions to this adventure, as well as the future role of spacewalking in human exploration.

Panellists



Buzz Aldrin Moonwalker, Astronaut, Apollo 11, Gemini 12, USA



Christer Fuglesang Most European Spacewalking, Sweden



Alexei Leonov First Spacewalker, Russia



Michael Lopez-Alegria Most US Spacewalking, USA

MODERATOR

Soichi Noguchi

President.

Japanese Spacewalker,

Association of Space



Sunita Williams Most Female Spacewalking, USA



ORGANIZER

Andy Turnage

Executive Director,

Association of Space
Explorers,

USA



ORGANIZER

Cristian Bank

Chairman,
IAF Human Spaceflight
Committee,
Germany

Start time: 09:45 Technical Sessions

No	Description	Room
A1.6	Astrobiology and Exploration	Oranim 3-A
A2.6	Microgravity Sciences Onboard the International Space Station and Beyond	314
A3.4	Small Bodies Missions and Technologies	Schwartz Hall
A6.5	Space Debris Removal Technologies	Eshkol 2
B1.4	Earth Observation Data Management Systems	Eshkol 3
B2.6	Advanced Space Communications and Navigation Systems	Dulzin Big B
B3.5	Astronaut Training, Accommodation, and Operations in Space	Ballroom A
B4.6A	Generic Technologies for Small/Micro Platforms	Eshkol 1
C1.6	Attitude Dynamics (2)	Teddy B
C2.6	Space Environmental Effects and Spacecraft Protection	Oranim 1
C4.5	Propulsion Technology (2)	Ballroom B

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D1.4	Space Systems Architectures	Oranim 4
D2.6	Future Space Transportation Systems Verification and In-Flight Experimentation	Teddy C
D4.3	Space Elevator Tether and Space Mineral Resources	312
D5.2	Knowledge management and collaboration in space activities	302-303
D6.3	Enabling safe commercial spaceflight: vehicles and spaceports	Kerem Carmit
E1.6	Calling Planet Earth - Space Outreach to the General Public	Oranim 3-B
E3.5-E7.6	30th IAA/IISL Scientific-Legal Roundtable: Universities as Actors in Space	313
E4.2	Scientific & technical histories	Dulzin Big A
E5.6	Space Societies, Professional Associations and Museums	Oranim 2

10:00 - 11:00 GNF - NASA Ames and Future of Space Exploration, Science, and Aeronautics

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

Pushing the frontiers of aeronautics and space exploration presents multiple challenges. NASA Ames Research Center is at the forefront of tackling these issues, conducting cutting edge research in the fields of air traffic management, entry systems, advanced information technology, intelligent human and robotic systems, astrobiology, aeronautics, space, earth and life sciences and small satellites. Knowledge gained from this research helps ensure the success of NASA's missions, leading us closer to a world that was only imagined as science fiction just decades ago.

Organized by:

IAF Young Professional Programme



Speaker:



Jacob Cohen, Ph.D., Chief Scientist, NASA Ames Research Center USA

11:00 - 13:30 GNF - Visual Impairment and Intracranial Pressure (VIIP) - an Emerging Health Issue in Space

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

Altered vision in the majority of astronauts has recently been discovered after 6-month missions on board the International Space Station. Structural eye changes in combination with widened optic nerve sheaths and posterior globe flattening, suggesting that the condition is associated with increased intracranial pressure. Clinical experience indicates that the VIIP syndrome manifestations may not be reversible, and the possibility of irreversible damage to the brain has not been fully explored. Therefore this emerging condition is considered a novel, substantial obstacle in the deployment of long-term human space missions.

The present session will provide an overview of possible mechanisms that may cause the condition, and demonstrate the research strategy that is currently used to address the VIIP issue. In an integrative manner, evidence will be linked from in-flight data, parabolic flight experiments, and ground-based analog research. Moreover, international partners have united in order to jointly provide evidence and identify suitable countermeasure strategies. This effort is reflected by the speaker list of the event, which involves an international and multi-disciplinary consortium.

Organized by:

German Aerospace Center (DLR) National Space Biomedical Research Institute (NSBRI)





Panellists:



Eric Bershad M.D. Baylor College of Medicine



Dorit Donoviel Baylor College of Medicine, Center for Space Medicine



Killer M.D., Director of the Department of Ophthalmology, Head of Neuroophthalmology Kantonsspital Aarau

Hanspeter Esriel



Benjamin Levine M.D., F.A.C.C., F.A.H.A., F.A.C.S.M. Director, Institute for Exercise and **Environmental Medicine** S. Finley Fwing Ir. Chair for Wellness at Texas Health Presbyterian Dallas Harry S. Moss Heart Chair for Cardiovascular Research Professor of Medicine and Cardiology



Bowman MSc, PhD student, Division Space Physiology Institute of Aerospace Medicine German Aerospace Center

Karina Marshall



Jörn Rittweger M.D. Head of Division Space Physiology, Institute of Aerospace Medicine. German Aerospace Centerr

Plenary 7: The Moon – a continent and a gateway for our future

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

The panel will review discoveries and key results from recent lunar missions, and the plans for upcoming lunar exploration. They will discuss how this serves as a gateway for scientific studies, technical validation and development, the next generation of landers, buildup of facilities in a lunar robotic village, the use of lunar resources, and the Moon as a platform for biological studies and observation of the cosmos, and sustainable human activities. They will address also the social, education, peaceful inspirational and economical values of lunar exploration for humankind. Also technologies, life support systems and human operations can be validated on the Moon, as a gateway to Mars and other solar system destinations.

The panel will discuss possible visions, the main events in the next International Lunar Decade, and roadmaps towards settlements, sustainable international lunar bases and a Moon global village on our 8th continent.

Panellists:



Peter Batenburg Young Lunar Explorers Representative Selected Recipient of the SGAC/ILEWG Competition, The Netherlands



Robert (Bob) Richards Founder & CEO. Moon Express, Inc., USA



William Gerstenmaier Associate Administrator for Human Exploration and Operations, National Aeronautics and Space Administration (NASA)





Oleg Gorshkov Acting Director, TSNIImash. Russia



MODERATOR Bernard Foina Chair ESA/ESTEC Staff Committee, Senior Exploration Officer HSO-I, The Netherlands

International Astronautical Congress

14:30 - 18:30 IISL Moot Court Finals

Location: The Rose and Wilfred P. Cohen Auditorium, The Hebrew University of Jerusalem

start time: 14:45	Technical Sessions

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No	Description	Room
A3.5	Solar System Exploration	Schwartz Hall
A5.3-B3.6	Human and Robotic Partnerships in Exploration - Joint session of the Human Spaceflight and Exploration Symposia	Ballroom A
A6.6	Space Debris Removal Concepts	Eshkol 2
A7.3	Technology Needs for Future Missions, Platforms	314
B1.5	Earth Observation Applications and Economic Benefits	Eshkol 3
B2.8-YPVF.3	Space Communications and Navigation Young Professionals Virtual Forum	Kerem Carmit
B4.6B	Generic Technologies for Nano/Pico Platforms	Eshkol 1
B5.2	Integrated Applications End-to-End Solutions	Dulzin Big B
B6.1	Human Spaceflight Operations	313
C1.7	Guidance, Navigation & Control (1)	Teddy B
C2.7	Space Vehicles – Mechanical/Thermal/Fluidic Systems	Oranim 1
C3.4	Small and Very Small Advanced Space Power Systems	Oranim 3-A
C4.6	New Missions Enabled by New Propulsion Technology and Systems	Ballroom B
D1.5	Training, Achievements, and Lessons Learned in Space Systems	Oranim 4
D2.7	Small Launchers: Concepts and Operations	Teddy C
D4.4	Strategies for Rapid Implementation of Interstellar Missions: Precursors and Beyond	312
D5.4	Cyber-security threats to space missions and countermeasures to address them	302-303
E1.7	New Worlds - Innovative Space Education and Outreach	Oranim 3-B
E4.3	History of Israeli contribution to astronautics	Dulzin Big A
E5.4	Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach	Oranim 2

15:00 - 15:30 GNF - Andrea Boese Memorial

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

"What we have once enjoyed, we can never lose. All that we love deeply becomes part of us." Helen Keller

This GNF event is being held to remember Andrea Boese, an important member of the IAF community who sadly passed away 29 August 2015. Some of her friends/colleagues will say a few words to remember her.

After graduating in Nutrition Sciences in 2000, Andrea Boese worked at the German Aerospace Center (DLR) Institute for Aerospace Medicine. In 2007 she joined the Main Department for Strategy and International Relations at DLR, focusing on space policy, exploration and strategic networks. During her secondment to NASA, she worked at Headquarters in Washington, D.C. and Johnson Space Center (JSC), Houston and received the NASA JSC Director's Innovation Team Award in 2011.

Later she became Head of Diversity and Equal Opportunities and Chief Diversity Officer at DLR before moving to the European Space Agency as Special Advisor to the Director General.

Andrea helped establishing the network Women in Aerospace-Europe (WIA-E) and served as WIA-Europe Director of International Relations. She was an elected member of the International Academy of Astronautics (IAA). Since 2012 Andrea served as IAF Vice-President covering the portfolios Outreach and Space Societies as well as Workforce Development and Global Conferences.

She was an enthusiastic member of the IAF Community bringing new life to all IAF activities, specifically with the younger generation. She was a true visionary and inspired many.

She will be dearly missed.

Speakers:



Pascale Ehrenfreund Chair of Executive Board, German Aerospace Centre (DLR), Germany



Kiyoshi Higuchi IAF President International Astronautical Federation (IAF)



Claudia Kessler CEO, HE Space,



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

16:45 - 17:45 GNF - Bloostar, the shortcut to orbit - Press Conference

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

More microsatellites are being built every day, and many companies are basing their business around constellations of nanosatellites. Flying technical, scientific and commercial payloads using high-altitude balloons to over 30km altitude is our current operational activity. The natural next step is to aim higher. We are now ready to transform the launch industry for small

The objective of Bloostar by zero2infinity is to design and develop a high-altitude balloon assisted launcher (or rockoon – a rocket fired from a balloon). The rockoon concept presents tremendous advantages. The fact that the rocket does not need to travel through the denser parts of the atmosphere saves an important part of the required deltaV. The rocket ignites in close-to-vacuum conditions with tremendous benefits in terms of lower drag, smaller gravity losses and adapted nozzles. The simplicity of the system ensures the lowest cost for a dedicated microsatellite launch. Bloostar is our light, efficient and sustainable launcher.

The benefits of having a high-altitude balloon as a first stage have already been demonstrated. Bloostar presents a novel architecture offering a new value proposition built around proven technologies. Increased balloon payload capabilities together with advanced lightweight materials for the launcher and powerful mission analysis tools make it feasible to step into orbital launches from high-altitude balloons.

During the press conference you will learn more about our concept, timeline and strategy. The new website will be unveiled, together with a video presenting the launcher, its flight cycle and its innovative capabilities in terms of volume of payloads. The key people behind the idea and the company will be present to answer questions.

Organized by:

zero2infinity



AUTHORS' INDEX

International Astronautical Congress 12 - 16 October 2015, Jerusalem, Israel





Dimitris BountolosCOO,
zero2infinity



Guillaume Girard
Advisor and Partner
zero2infinity



José Mariano López Urdiales Founder and CEO, zero2infinity



Michael López-Alegria Senior Advisor, and former NASA Astronaut, National Aeronautics and Space Administration (NASA)

17:45 - 18:45 Highlight Lecture 3: Orion's First Flight Test: Taking Human Spaceflight Beyond LEO for the Future of Human Exploration

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

Orion's first flight test last December took the spacecraft to an altitude of 3600 miles, farther than any human spacecraft has been in 42 years. The nearly flawless flight tested the heat shield, separation systems, launch and entry environments, avionics, and critical re-entry systems. The challenges, problems and successes of this difficult mission, as well as the next steps in taking humans beyond Low Earth Orbit, will be explained by two top Program Managers from NASA and Lockheed Martin, the prime contractor.

Speakers:



William Gerstenmaier
Associate Administrator,
Human Exploration and
Operations Mission
Directorate,
National Aeronautics and
Space Administration
(NASA)



W. Michael Hawes
Vice President and Orion
Program Manager,
Lockheed Martin Space
Systems,
USA

19:00 - 22:00 IAC 2016 Reception by Mexican Space Agency (AEM) (upon invitation only)

Location: Teddy A, Jerusalem International Convention Center (ICC)

19:00 - 22:30 IISL Dinner (upon invitation only)

Location: The Maiersdorf Faculty Club and Conference Center, The Hebrew University of Jerusalem, Mount Scopus, Jerusalem

Friday, 16 October

Location: Ussishkin Auditorium, Jerusalem International Convention Center (ICC)

The exact topic of the LBN will be announced at the congress.

09:30 - 11:30 GNF - Astronauts event

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

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 and Panellists:



Buzz Aldrin (Invited) Apollo 11 Moonwalker United States



Reinhold Ewald German MIR'97 Research Cosmonaut, Germany



Alexei Leonov (Invited) First Spacewalker Russia



Sunita Williams

Most Spacewalking by a Female

United States



MODERATOR

Franco Bonacina

Director General's

Spokesperson and Head
of the Protocol Office
Director General's

Cabinet,

European Space Agency
(ESA)





D1.6	System Engineering - Methods, Processes and Tools (2)	Oranim 4
D2.8-A5.4	Going To and Beyond the Earth-Moon System: Human Missions to Mars, Libration Points and NEO's	Teddy C
D3.4	Space Technology and System Management Practices and Tools	312
D5.3	Prediction and measurements of space weather conditions and impacts on space missions	302-303
E1.8	Open Space: Participatory Space Education and Outreach	Oranim 3-B
E2.4	Educational Pico and Nano Satellites	Kerem Carmit
E5.5	Space Assets and Disaster Management	Oranim 2
E7.5	Recent Developments in Space Law	Dulzin Big A

12:00 - 12:45 GNF - Northern Lights Documentary

Location: Small Dulzin, Jerusalem International Convention Center (ICC)

"The Northern Lights - a Magic Experience" is an award-winning documentary about the Northern lights - nature's most spectacular light phenomena.

The 25 minute documentary takes you on a breathtaking journey through space. By using pedagogic top-quality animations and spectacular solar imagery from NASA satellites it tells the full story of the northern lights from myth to science. The film is packed with interesting historical anecdotes and includes tips about how to take your own stunning aurora photos. This is the most complete story of the Northern lights and includes the some of the world best images and videos of the Northern Lights.

Organized by:

Norwegian Space Center

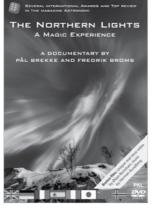


Speaker:



Geir Hovmork Deputy Director, Norwegian Space Center,





No	Description	Room
A6.8	(joint session with Space Security Committee): Policy, Legal, Institutional and Economic Aspects of Space Debris Detection, Mitigation and Removal	Eshkol 2
B2.7	Fixed and Broadcast Communications	Dulzin Big B
B4.7	Space Systems and Architectures Featuring Cross-Platform Compatibility	Eshkol 1
C1.9	Guidance, Navigation & Control (3)	Teddy B
C2.9	Advancements in Materials Applications and Rapid Prototyping	Oranim 1

C4.8 Advanced and Combined Propulsion Systems Ballroom B D1.7 Hosted Payloads - Concepts, Techniques and Challenges, Missions and Oranim 4 **Applications** E1.9 Space Culture Oranim 3-B E7.7-B3.8 Joint IAF-IISL Session on the Legal Framework for Collaborative Space Ballroom A Activities

16:30 - 17:30 Closing Ceremony

Location: Small Dulzin, ICC, Jerusalem International Convention Center (ICC)

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 – Mexico.

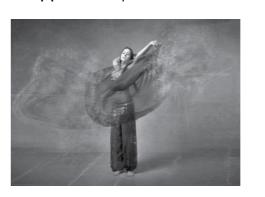
18:00 - 22:00 Gala Dinner

Location: Naura Restaurant, Abu Gosh

The Gala Dinner will be held on the evening of Friday, 16 October. It concludes the Congress and is meant to put a refined – and relaxed – finish to the week that is likely to have been full of meetings, presentations, networking and sightseeing. The Gala Dinner will be an unforgettable night of unique Middle-Eastern culture and cuisine.

The dinner ticket includes complimentary transportation to the venue, dinner and a performance.

Pickup point: "HaAliya" access road to the Jerusalem ICC. Please wait next to the registration marquise.





4.3 Meeting Schedule

Time	Event	Room
	Saturday, 10 October 2015	
08:00 - 17:00	IAA Commission 1	302-303
08:00 - 17:00	IAA Commission 2	312
08:00 - 17:00	IAA Commission 3	313
08:00 - 17:00	IAA Commission 4	314
08:00 - 17:00	IAA Commission 5	Dulzin Big A
08:00 - 17:00	IAA Commission 6	Dulzin Big B
08:00 - 18:00	Lockheed Martin Bilaterals 1	304
08:00 - 18:00	Lockheed Martin Bilaterals 2	309
09:00—17:45	IAA Commission Plenary Session	Ballroom B, Crowne Plaza Hotel
09:30 - 10:30	IAF IPMC Space Agency SubCommittee	310
10:00 - 12:00	IAF Finance Committee	Ein Gedi Hall, Crowne Plaza Hotel
10:00 - 13:30	IAF Space Debris Committee	301
11:00 - 17:00	IAF IPMC Committee Meeting	310
12:30 - 14:00	IAF TAC Committee Meeting	311
14:00 - 17:30	IAF Space Exploration Committee	301
14:00 - 17:00	IAF WD YPP Committee Meeting	311
14:30 - 16:00	IPC Steering Group	307
17:00 – 18:30	IPC General Meeting	Teddy A
17:00 – 18:30	IPC General Meeting	Teddy A
	Sunday, 11 October 2015	
08:00 - 16:00	Educators Professional Development Workshop	312
08:00 - 18:00	IAF IPMC YP Workshop	Oranim 3-B
08:00 - 18:00	IAA Academy Day	Ballroom B, Crowne Plaza Hotel
08:00 - 18:00	IAF IPMC YP Workshop	Oranim 3-B
08:00 - 18:00	NASA Bilaterals	316 - 308
08:00 - 18:00	ESA Bilaterals	315
08:00 - 18:00	Lockheed Martin Bilaterals 1	304
08:00 - 18:00	Lockheed Martin Bilaterals 2	309
08:30 - 13:30	Cross-Cultural Workshop	310
08:30 - 13:30	Cross-Cultural Workshop- Breakout Room	311
09:00 - 12:00	IAF SEOC Committee Meeting	306
09:00 - 13:00	IAC Hosts Summit	Oranim 1
12:30 - 13:30	IAF Global Workforce Sub-committee	306
13:00—17:30	IAF ISEB Opening Day	Teddy C
13:00 - 18:00	JAXA Bilaterals	501
14:00 - 15:30	IAF EO Committee	305
14:00 - 16:00	IAF Space Transportation Committee	301
14:00 - 18:00	IAF Materials and Structure Committee	306
14:00 - 18:00	IAF Astrodynamics Committee	307
14:00 - 18:00	IAF Bureau 1 Meeting	Ein Gedi Hall+Arad Hall

Crowne Plaza Hotel

Time	Event	Room
15:00 - 17:00	IAF Propulsion Committee	310
15:00 - 17:00	IAF Propulsion Committee	310
15:30 - 17:00	IAF GEOSS Committee	305
16:00 - 18:00	IAF Commercial Spaceflight Safety Committee	301
17:00 - 18:00	Press Briefing	Oranim 3-A
18:00 - 19:00	ESL/YSL Meeting	305
19:00 – 21:00	YP Networking Event	Teddy A

Monday, 12 October 2015

	Wioliday, 12 October 2013	
08:00 - 18:00	NASA Bilaterals	316 – 308
08:00 - 18:00	CNSA Bilaterals	Hadarim Patio
08:00 - 18:00	Lockheed Martin Bilaterals 1	304
08:00 - 18:00	Lockheed Martin Bilaterals 2	309
08:00 - 18:00	ESA Bilaterals	315
08:00 - 18:00	JAXA Bilaterals	501
08:00 - 18:00	ISRO Bilaterals	502
09:00 - 11:00	Opening Ceremony	Ussiskhin Auditorium
11:00 - 13:00	IAF Space Systems Committee	310
11:00 - 12:00	CSAC Preparatory	307
11:15 - 12:15	Exhibition Opening and Tour	Agam Foyer
11:30 - 13:00	NASA-ESA meeting	305
12:00 - 13:00	Buzz Aldrin Press Conference	Oranim 1
13:00 – 13:30	Presentation of Astronauts' original space suits and new space education programme	Oranim 1
13:30 - 15:00	Plenary 1: Heads of Agencies	Ussiskhin Auditorium
14:00 - 18:00	IISL Board of Directors	301
15:00 - 15:15	GNF Opening	Small Dulzin
15:00 – 17:00	IAA SETI Permanent Committee	305
15:00 – 17:00	IAF Entrepreneurship Committee	306
15:00 - 18:00	IAF General Assembly	Teddy A
15:15 – 15:45	GNF: Heads of Agency Press Conference	Small Dulzin
16:00 - 17:00	ESA, DLR and OHB Bilateral Meeting	307
16:30 – 17:15	GNF: NanoSat's Success: Innovative lessons for the entire Space Community	Small Dulzin
17:00 - 18:00	IAF Space Economy Committee	306
17:30 - 18:15	GNF: China Manned Space Program	Small Dulzin
18:15 - 19:15	NASA Administrator Charles Bolden Meets US Students	Small Dulzin
18:15 – 19:30	Plenary 2: Remote Superspectral and Hyperspectral Sensing from Space	Ussiskhin Auditorium

08:00 – 18:00 IA	AF CSAC Meeting	
	AF COAC IVICEUITS	307
08:00 – 18:00 IA	AF Nomination Committee Meeting	311
08:00 – 18:00 NA	IASA Bilaterals	316 – 308
08:00 - 18:00 CN	NSA Bilaterals	502
08:00 – 18:00 ES	SA Bilaterals	315
08:00 – 18:00 Lo	ockheed Martin Bilaterals 1	304



Time	Event	Room			
08:00 - 18:00	Lockheed Martin Bilaterals 2	309			
08:00 - 18:00	JAXA Bilaterals	501			
08:30 - 09:30	Plenary 3: Space Transportation Capabilities and Future Directions to enable Commercial, Scientific, and Human expansion into space	Ussiskhin Auditorium			
09:00 – 10:00	CNES Bilaterals	Hadarim Patio			
09:00 – 10:30	IAF Space Societies Committee	306			
09:00 – 13:00	IAF Space Systems Workshop	310			
09:00 – 13:00	IAF Space Operation Committee	301			
09:30—10:45	GNF: Climate and Earth Observation – Challenges and Possibilities of Satellite Missions	Small Dulzin			
09:30 - 11:00	SGAC Executive Council	305			
10:00 – 11:30	ISRO Bilaterals	Hadarim Patio			
10:45—12:00	GNF: New Space Economy – the dawn of a new era or the next economic bubble?	Small Dulzin			
11:00 – 14:15	IISL Moot Court Semi-Finals	Ein Gedi Hall+Arad Hall Crowne Plaza Hotel			
11:00 – 14:15	IISL Moot Court Semi-Finals	Masada Hall+ Jericho Hall Crowne Plaza Hotel			
11:30 – 12:30	CNES Bilaterals	Hadarim Patio			
12:00 – 12:45	Next Generation Plenary Meeting-Lunch	306			
12:15—13:00	GNF: ESA Director General Jan Woerner meets the Press	Small Dulzin			
12:30 - 18:00	ISRO Bilaterals	Hadarim Patio			
12:30 - 14:00	IAF GRULAC meeting	305			
13:00 – 13:45	ISA & NASA Signing Ceremony	Presidential Suit Crowne Plaza Hotel			
13:00 - 14:00	IAF Small Sat Committee	301			
13:00 – 14:30	IAF Space Security Committee	306			
13:30 – 14:30	Plenary 4: Next Generation Plenary: International Space Station as the Gateway for Humankind's Future in Space and on Earth	Ussiskhin Auditorium			
14:00 – 14:45	ISA&CNES Meeting	Presidential Suit Crowne Plaza Hotel			
14:00 - 18:00	ISEB Heads of Education Meeting	305			
14:30 - 16:00	IAF CLIODN Meeting	301			
14:45—17:45	GNF: Vega Small Launcher: the best workhorse answer to your LEO needs	Small Dulzin			
15:00 – 18:00	IAF ACHA Meeting	310			
16:00 – 17:00	Outer Space Treaty Meeting	301			
17:00 – 18:00	IISL-Australia Meeting	301			
17:45 – 18:45	High Light Lecture 1: The International Rosetta Mission – First Historical Rendezvous and Landing on a Comet	Ussiskhin Auditorium			
19:00 – 21:00	YP Networking Event	Teddy A			
	Wednesday, 14 October 2015				
08:00 - 18:00	IAF Nomination Committee Meeting	311			
08:00 - 18:00	IADC Meeting	310			
08:00 – 18:00	NASA Bilaterals	316 – 308			
08:00 – 11:00	CNSA Bilaterals	Hadarim Patio			

Time	Event	Room		
08:00 - 18:00	ESA Bilaterals	315		
08:00 - 18:00	Lockheed Martin Bilaterals 1	304		
08:00 - 18:00	Lockheed Martin Bilaterals 2	309		
08:00 - 18:00	JAXA Bilaterals	501		
08:30 - 09:30	Plenary 5: Small Satellites – Big Opportunities in the New Age	Ussiskhin Auditorium		
09:00 - 10:30	IAF SUAC Meeting	306		
09:00 - 11:30	NASA AA for Human Exploration	Arad Hall, Crowne Plaza Hotel		
09:00 - 11:30	IAF Space Museums Meeting	301		
09:30 - 11:00	SGAC Advisory Board Meeting	305		
09:30—11:45	GNF: Hybrid- and full Electric Propulsion – what is changing orbital propulsion?	Small Dulzin		
09:30 - 12:30	IAF KMTC Meeting	307		
10:30 - 11:30	IAF Industry Relations Committee Meeting	306		
11:00 - 12:00	IAF CSAC Meeting	Ein Gedi Hall, Crowne Plaza Hote		
11:00 - 13:00	IAA Study Group 4.21 Meeting	305		
11:30 - 14:30	WSWA Board Meeting	301		
12:00 – 12:30	GNF: There are No Borders in Space: International Cooperation Will Drive the New Space Age	Teddy A		
12:45 - 13:15	Interactive Presentations Award Ceremony	Teddy A		
12:45 - 14:45	IISL General Assembly	Dulzin Big A		
13:00 - 15:00	IAA Study Group 4.18	307		
13:15-14:15	GNF: Prospects of Human Spaceflight – Russian view	Small Dulzin		
14:00 - 18:00	ISEB Heads of Education Meeting	305		
14:30—15:30	GNF: How to launch a career in space?	Small Dulzin		
15:00 - 17:00	IAF HAC Meeting	301		
15:00 - 17:00	IAA Study Group 3.22	307		
15:45—17:45	GNF: Rafael's Microsatellites Enhanced Capabilities Utilizing Electric Propulsion Systems	Small Dulzin		
16:00 - 18:00	IAF HSF Committee Meeting	306		
17:45 – 18:45	High Light Lecture 2: Sustaining the Space Environment: the State of Space Situational Awareness, Conjunction Warning and Collision	Ussiskhin Auditorium		
19:00 – 21:00	YP Networking Event	Teddy A		
	Thursday 15 October 2015			
00:00 10:00	Thursday, 15 October 2015	244		
08:00 – 18:00	IAF Nomination Committee	311		
08:00 – 18:00	NASA Bilaterals	316 – 308		
08:00 - 18:00	FSA Bilaterals	315		

	Inursday, 15 October 2015	
08:00 - 18:00	IAF Nomination Committee	311
08:00 - 18:00	NASA Bilaterals	316 – 308
08:00 - 18:00	ESA Bilaterals	315
08:00 - 18:00	Lockheed Martin Bilaterals 1	304
08:00 - 18:00	Lockheed Martin Bilaterals 2	309
08:30 - 09:30	Plenary 6: Fifty Years of Spacewalking – The Ultimate Human Space Adventure	Ussiskhin Auditorium
08:30 - 11:30	IAF SEOC Meeting	306
09:00 - 13:00	ROOM Board Meeting	305
10:00—11:00	GNF: NASA Ames and Future of Space Exploration, Science, and Aeronautics	Small Dulzin
11:30—13:30	GNF: Visual Impairment and Intracranial Pressure (VIIP) – an emerging health issue in Space	Small Dulzin

International Astronautical Congress

Time	Event	Room
12:30 - 14:30	IAA History Committee	306
13:00 - 14:30	IAA Acta Astronautica Editorial Board Meeting	307
13:30 – 14:30	Plenary 7: The Moon – a Continent and a Gateway for our Future	Ussiskhin Auditorium
14:00 – 18:00	IAF Bureau Meeting	Ein Gedi Hall+Arad Hall Crowne Plaza Hotel
14:00 - 18:00	i-BEC Meeting	301
14:30 - 16:00	IPC steering Group	307
14:30 - 18:30	IISL Moot Court Finals	Hebrew University
15:00—15:30	GNF: Memorial Event for Andrea Boese	Small Dulzin
15:00 – 17:00	ROOM Board Meeting	305
15:00 - 17:00	IAF APRG meeting	306
16:00 - 18:00	IAF SCAN Meeting	301
16:00 - 18:00	IAA Study Group 3.23	Masada Hall, Crowne Plaza Hotel
16:45—17:45	GNF: Bloostar, the shortcut to orbit – Press Conference	Small Dulzin
17:00 - 19:00	IAF Astrodynamics Technical Committee	307
17:45 – 18:45	High Light Lecture 3: Orion's First Flight Test: Taking Human Spaceflight Beyond LEO for the Future of Human Exploration	Ussiskhin Auditorium

	Friday, 16 October 2015	
08:00 - 18:00	NASA Bilaterals	316 - 308
08:00 - 18:00	ESA Bilaterals	315
08:00 - 18:00	Lockheed Martin Bilaterals 1	304
08:00 - 18:00	Lockheed Martin Bilaterals 2	309
08:30 - 09:30	Late Breaking News	Ussiskhin Auditorium
09:00 - 13:00	ROOM Board Meeting	305
09:30 - 14:00	IAF General Assembly	Teddy A
09:30—11:30	GNF: Astronauts Event	Small Dulzin
12:00—12:45	GNF: The Northern Lights - a Magic Experience	Small Dulzin
15:00 – 16:00	IAF Bureau Meeting	Ein Gedi Hall+Arad Hall Crowne Plaza Hotel
16:30—17:30	Closing Ceremony	Small Dulzin

Technical Programme

5.1 Category Coordinators and Judges of the IP Award Committee



Chairman of the Interactive Presentations Award Committee

Centre National d'Etudes Spatiales (CNES), France

Cat A

SCIENCE AND EXPLORATION



Maria-Antonietta Perino Thales Alenia Space,

Cat B

APPLICATIONS AND OPERATIONS



Otto Koudelka Graz University of Technology (TU Graz), Austria

Cat C

TECHNOLOGY



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

Cat D

INFRASTRUCTURE



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

Cat E

SPACE AND SOCIETY



Chris Welch International Space University (ISU), France





5.2 Symposium Keynote Speakers

Nr.	Session name	Date	Time	Room
B2	SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIL	JM		
	Space Communications and Navigation Young Professionals Virtual Forum KEYNOTE: SPACETECH - A CURRICULUM IN SPACE SYSTEMS AND BUSINESS ENGINEERING Prof. Otto Koudelka, Graz University of Technology (TU Graz), Austria	15-Oct-15	14:45	Kerem Carmit
B4	22 nd IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS			
	Small Spacecraft for Deep-Space Exploration KEYNOTE: AN OVERVIEW OF CUBESATS FOR DEEP SPACE EXPLORATION OF NASA'S JET PROPULSION LABORATORY Dr. Leon Alkalai, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States	16-Oct-15	09:45	Eshkol 1
C1	ASTRODYNAMICS SYMPOSIUM			
	Mission Design, Operations & Optimization (2) 21st JOHN V. BREAKWELL KEYNOTE LECTURE: RELATIVE MOTION Dr. Kyle Alfriend Texas A&M University, United States	13-Oct-15	09:45	Teddy B
C2	MATERIALS AND STRUCTURES SYMPOSIUM			
	Advanced Materials and Structures for High Temperature Applications 5 TH PAOLO SANTINI MEMORIAL LECTURE: INVERSE METHODS IN IDENTIFICATION AND MODELING OF THERMAL PROCESSES IN AEROSPACE MATERIALS AND STRUCTURES: THEORY AND PRACTICE Prof. Oleg Alifanov Moscow Aviation Institute, Russian Federation	14-Oct-15	09:45	Oranim 1
C4	SPACE PROPULSION SYMPOSIUM			
	Electric Propulsion KEYNOTE: RESEARCH PROGRESS IN ROCKET BASED COMBINED CYCLE IN CHINA - AN OVERVIEW Prof. Guoqiang He, Northwestern Polytechnical University, China	14-Oct-15	14:45	Ballroom B

Nr.	Session name	Date	Time	Room
E1	SPACE EDUCATION AND OUTREACH SYMPOSIUM			
	Ignition - Primary Space Education 2015 FRANK J. MALINA ASTRONAUTICS MEDAL RECIPIENT ADDRESS Prof. Boris Pschenichner, Department of Astronomy and Cosmonautics, Russian Federation	12-Oct-15	15:15	Oranim 3-B
E7	58th IISL COLLOQUIUM ON THE LAW OF OUTER SPACE			
	7th Nandasiri Jasentuliyana Keynote Lecture on Space Law and Young Scholars Session KEYNOTE: THE LEGAL EVOLUTION OF A 'USE' OF SPACE: THE CASE OF REMOTE SENSING Prof. Joanne Irene Gabrynowicz, University of Mississippi, United States	13-Oct-15	09:45	Dulzin Big A







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GRAMME

5.3 Technical Sessions by Symposium

Please check the IAC 2015 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			
A1.2	Human Physiology in Space (1)	Tue, 13 Oct	09:45	Oranim 3-A
A1.3	Human Physiology in Space (2)	Tue, 13 Oct	14:45	Oranim 3-A
A1.4	Medical Care for Humans in Space	Wed, 14 Oct	09:45	Oranim 3-A
A1.5	Radiation Fields, Effects and Risks in Human Space Missions	Wed, 14 Oct	14:45	Oranim 3-A
A1.6	Astrobiology and Exploration	Thu, 15 Oct	09:45	Oranim 3-A
A1.7	Life Support, habitats and EVA Systems	Fri, 16 Oct	09:45	Oranim 3-A
A1.8	Biology in Space	Mon, 12 Oct	15:15	Oranim 3-A
A1.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
A2	MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM			
A2.1	Gravity and Fundamental Physics	Mon, 12 Oct	15:15	314
A2.2	Fluid and Materials Sciences	Tue, 13 Oct	09:45	314
A2.3	Microgravity Experiments from Sub-Orbital to Orbital Platforms	Tue, 13 Oct	14:45	314
A2.4	Science Results from Ground Based Research	Wed, 14 Oct	09:45	314
A2.5	Facilities and Operations of Microgravity Experiments	Wed, 14 Oct	14:45	314
A2.6	Microgravity Sciences Onboard the International Space Station and Beyond	Thu, 15 Oct	09:45	314
A2.IP	Interactive Presentations			Plasma Screens Area
А3	SPACE EXPLORATION SYMPOSIUM			
A3.1	Space Exploration Overview	Mon, 12 Oct	15:15	Schwartz Hall
A3.2A	Moon Exploration – Part 1	Tue, 13 Oct	09:45	Schwartz Hall
A3.2B	Moon Exploration – Part 2	Tue, 13 Oct	14:45	Schwartz Hall
A3.2C	Moon Exploration – Part 3	Fri, 16 Oct	09:45	Schwartz Hall
A3.3A	Mars Exploration – missions current and future	Wed, 14 Oct	09:45	Schwartz Hall
A3.3B	Mars Exploration – Science, Instruments and Technologies	Wed, 14 Oct	14:45	Schwartz Hall
A3.4	Small Bodies Missions and Technologies	Thu, 15 Oct	09:45	Schwartz Hall
A3.5	Solar System Exploration	Thu, 15 Oct	14:45	Schwartz Hall
A3.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
A4	44 th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERREST Steps	RIAL INTELLIGE	NCE (SETI)	– The Next
A4.1	SETI 1: SETI Science and Technology	Tue, 13 Oct	14:45	302-303
A4.2	SETI 2: SETI and Society	Wed, 14 Oct	14:45	312
A4.IP	Interactive Presentations	Wed, 14 Oct	13:15	
A5	18th IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE S	OLAR SYSTEM		
A5.1	Human Exploration of the Moon and Cislunar Space	Wed, 14 Oct	14:45	Eshkol 3
A5.2	Human Exploration of Mars	Tue, 13 Oct	14:45	Eshkol 3
A5.3-B3.6	Human and Robotic Partnerships in Exploration - Joint session of the Human Spaceflight and Exploration Symposia	Thu, 15 Oct	14:45	Ballroom A
A5.4-D2.8	Human Missions to Libration points and NEO's	Fri, 16 Oct	09:45	Teddy C

Nr.	Session name	Date	Time	Room
A5.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
A6	13th IAA SYMPOSIUM ON SPACE DEBRIS SYMPOSIUM			
A6.1	Measurements	Mon, 12 Oct	15:15	Eshkol 2
A6.10-YPVF.5	Space Debris Young Professionals Virtual Forum	Mon, 12 Oct	15:15	Kerem Carmit
A6.2	Modelling and Risk Analysis	Tue, 13 Oct	09:45	Eshkol 2
A6.3	Hypervelocity Impacts and Protection	Wed, 14 Oct	09:45	Eshkol 2
A6.4	Mitigation and Standards	Tue, 13 Oct	14:45	Eshkol 2
A6.5	Space Debris Removal Technologies	Thu, 15 Oct	09:45	Eshkol 2
A6.6	Space Debris Removal Concepts	Thu, 15 Oct	14:45	Eshkol 2
A6.7	Operations in Space Debris Environment, Situational Awareness	Fri, 16 Oct	09:45	Eshkol 2
A6.8	(joint session with Space Security Committee): Policy, Legal, Institutional and Economic Aspects of Space Debris Detection, Mitigation and Removal	Fri, 16 Oct	13:30	Eshkol 2
A6.9	Modelling and Orbit Dtermination	Wed, 14 Oct	14:45	Eshkol 2
A6.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
A7	SYMPOSIUM ON TECHNOLOGICAL REQUIREMENTS FOR FUT SOLAR-SYSTEM SCIENCE MISSIONS	TURE SPACE AS	STRONOM	Y AND
A7.1	Space-Agencies Long-Term Views	Mon, 12 Oct	15:15	302-303
A7.2	Scientific Motivation and Requirements for Future Space Astronomy and Solar System Science Missions	Tue, 13 Oct	09:45	302-303
A7.3	Technology Needs for Future Missions, Platforms	Thu, 15 Oct	14:45	314
B1	EARTH OBSERVATION SYMPOSIUM			
B1.1	International Cooperation in Earth Observation Missions	Mon, 12 Oct	15:15	Eshkol 3
B1.2	Future Earth Observation Systems	Tue, 13 Oct	09:45	Eshkol 3
B1.3	Earth Observation Sensors and Technology	Wed, 14 Oct	09:45	Eshkol 3
B1.4	Earth Observation Data Management Systems	Thu, 15 Oct	09:45	Eshkol 3
B1.5	Earth Observation Applications and Economic Benefits	Thu, 15 Oct	14:45	Eshkol 3
B1.6	Water resources management	Fri, 16 Oct	09:45	Eshkol 3
B1.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
B2	SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM			
B2.1	Mobile Satellite Communications and Navigation Technology	Mon, 12 Oct	15:15	Dulzin Big B
B2.2	Joint Session on Dual Use (civil and military) Aspects of Telecommunications and GNSS	Tue, 13 Oct	09:45	Dulzin Big B
B2.3	Space-Based Navigation Systems and Services	Tue, 13 Oct	14:45	Dulzin Big B
B2.4	Near-Earth and Interplanetary Communications	Wed, 14 Oct	09:45	Dulzin Big B
B2.5	Advanced Technologies for Space Communications and Navigation	Wed, 14 Oct	14:45	Dulzin Big B
B2.6	Advanced Space Communications and Navigation Systems	Thu, 15 Oct	09:45	Dulzin Big B
B2.7	Fixed and Broadcast Communications	Fri, 16 Oct	13:30	Dulzin Big B
B2.8-YPVF.3	Space Communications and Navigation Young Professionals Virtual Forum	Thu, 15 Oct	14:45	Kerem Carmit
B2.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
В3	HUMAN SPACEFLIGHT SYMPOSIUM			
B3.1	Governmental Human Spaceflight Programs (Overview)	Mon, 12 Oct	15:15	Ballroom A
B3.2	Commercial Human Spaceflight Programs	Tue, 13 Oct	09:45	Ballroom A
B3.3	Utilization & Exploitation of Human Spaceflight Systems	Tue, 13 Oct	14:45	Ballroom A
B3.4-B6.5	Flight & Ground Operations of HSF Systems – Joint Session of the Human Spaceflight and Space Operations Symposia	Wed, 14 Oct	09:45	Ballroom A









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, 15 Oct	14:45	Ballroom A
B3.7	Advanced Systems, Technologies, and Innovations for Human Spaceflight	Fri, 16 Oct	09:45	Ballroom A
B3.8-E7.7	Joint IAF-IISL Session on the Legal Framework for Collaborative Space Activities	Fri, 16 Oct	13:30	Ballroom A
B3.9-YPVF.2	Human Spaceflight Young Professional Virtual Forum	Wed, 14 Oct	14:45	Kerem Carmit
B3.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
B4	22 nd IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS			
B4.1	16 th Workshop on Small Satellite Programmes at the Service of Developing Countries	Tue, 13 Oct	09:45	Eshkol 1
B4.2	Small Space Science Missions	Mon, 12 Oct	15:15	Eshkol 1
B4.3	Small Satellite Operations	Tue, 13 Oct	14:45	Eshkol 1
B4.4	Small Earth Observation Missions	Wed, 14 Oct	09:45	Eshkol 1
B4.5	Access to Space for Small Satellite Missions	Wed, 14 Oct	14:45	Eshkol 1
B4.6A	Generic Technologies for Small/Micro Platforms	Thu, 15 Oct	09:45	Eshkol 1
B4.6B	Generic Technologies for Nano/Pico Platforms	Thu, 15 Oct	14:45	Eshkol 1
B4.7	Space Systems and Architectures Featuring Cross-Platform Compatibility	Fri, 16 Oct	13:30	Eshkol 1
B4.8	Small Spacecraft for Deep-Space Exploration	Fri, 16 Oct	09:45	Eshkol 1
B5	SYMPOSIUM ON INTEGRATED APPLICATIONS			
B5.1	Tools and Technology in Support of Integrated Applications	Fri, 16 Oct	09:45	Dulzin Big B
B5.2	Integrated Applications End-to-End Solutions	Thu, 15 Oct	14:45	Dulzin Big B
B6	SPACE OPERATIONS SYMPOSIUM			
B6.1	Human Spaceflight Operations	Thu, 15 Oct	14:45	313
B6.2	New Operations Concepts, Advanced Systems and Commercial Space Operations	Fri, 16 Oct	09:45	313
B6.3	Mission Operations, Validation, Simulation and Training	Mon, 12 Oct	15:15	313
B6.5-B3.4	Flight & Ground Operations of HSF Systems – Joint Session of the Human Spaceflight and Space Operations Symposia	Wed, 14 Oct	09:45	Ballroom A
B6.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
C1	ASTRODYNAMICS SYMPOSIUM			
C1.1	Mission Design, Operations & Optimization (1)	Mon, 12 Oct	15:15	Teddy B
C1.2	Mission Design, Operations & Optimization (2)	Tue, 13 Oct	09:45	Teddy B
C1.3	Orbital Dynamics (1)	Tue, 13 Oct	14:45	Teddy B
C1.4	Orbital Dynamics (2)	Wed, 14 Oct	09:45	Teddy B
C1.5	Attitude Dynamics (1)	Wed, 14 Oct	14:45	Teddy B
C1.6	Attitude Dynamics (2)	Thu, 15 Oct	09:45	Teddy B
C1.7	Guidance, Navigation & Control (1)	Thu, 15 Oct	14:45	Teddy B
C1.8	Guidance, Navigation & Control (2)	Fri, 16 Oct	09:45	Teddy B
C1.9	Guidance, Navigation & Control (3)	Fri, 16 Oct	13:30	Teddy B
C1.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
C2	MATERIALS AND STRUCTURES SYMPOSIUM			
C2.1	Space Structures I - Development and Verification (Space Vehicles and Components)	Mon, 12 Oct	15:15	Oranim 1
C2.2	Space Structures II - Development and Verification (Deployable and Dimensionally Stable Structures)	Tue, 13 Oct	09:45	Oranim 1
C2.3	Space Structures - Dynamics and Microdynamics	Tue, 13 Oct	14:45	Oranim 1
C2.4	Advanced Materials and Structures for High Temperature Applications	Wed, 14 Oct	09:45	Oranim 1
C2.5	Smart Materials and Adaptive Structures	Wed, 14 Oct	14:45	Oranim 1

Nr.	Session name	Date	Time	Room
C2.6	Space Environmental Effects and Spacecraft Protection	Thu, 15 Oct	09:45	Oranim 1
C2.7	Space Vehicles – Mechanical/Thermal/Fluidic Systems	Thu, 15 Oct	14:45	Oranim 1
C2.8	Specialised Technologies, Including Nanotechnology	Fri, 16 Oct	09:45	Oranim 1
C2.9	Advancements in Materials Applications and Rapid Prototyping	Fri, 16 Oct	13:30	Oranim 1
C2.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
C3	SPACE POWER SYMPOSIUM			
C3.1	Space-Based Solar Power Architectures / Space & Energy Concepts	Mon, 12 Oct	15:15	Oranim 2
C3.2	Wireless Power Transmission Technologies, Experiments and Demonstrations	Tue, 13 Oct	09:45	Oranim 2
C3.3	Advanced Space Power Technologies and Concepts	Tue, 13 Oct	14:45	Oranim 2
C3.4	Small and Very Small Advanced Space Power Systems	Thu, 15 Oct	14:45	Oranim 3-A
C3.5-C4.7	Joint Session on Nuclear Power and Propulsion	Fri, 16 Oct	09:45	Ballroom B
C3.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
C4	SPACE PROPULSION SYMPOSIUM			
C4.1	Propulsion System (1)	Mon, 12 Oct	15:15	Ballroom B
C4.2	Propulsion System (2)	Tue, 13 Oct	09:45	Ballroom B
C4.3	Propulsion Technology (1)	Wed, 14 Oct	09:45	Ballroom B
C4.4	Electric Propulsion	Wed, 14 Oct	14:45	Ballroom B
C4.5	Propulsion Technology (2)	Thu, 15 Oct	09:45	Ballroom B
C4.6	New Missions Enabled by New Propulsion Technology and Systems	Thu, 15 Oct	14:45	Ballroom B
C4.7-C3.5	Joint Session on Nuclear Propulsion and Power	Fri, 16 Oct	09:45	Ballroom B
C4.8	Advanced and Combined Propulsion Systems	Fri, 16 Oct	13:30	Ballroom B
C4.9	Hypersonic and Combined Cycle Propulsion	Tue, 13 Oct	14:45	Ballroom B
C4.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
D1	SPACE SYSTEMS SYMPOSIUM			
D1.1	Innovative and Visionary Space Systems Concepts	Mon, 12 Oct	15:15	Oranim 4
D1.2	Enabling Technologies for Space Systems	Wed, 14 Oct	09:45	Oranim 4
D1.3	System Engineering - Methods, Processes and Tools (1)	Wed, 14 Oct	14:45	Oranim 4
D1.4	Space Systems Architectures	Thu, 15 Oct	09:45	Oranim 4
D1.5	Training, Achievements, and Lessons Learned in Space Systems	Thu, 15 Oct	14:45	Oranim 4
D1.6	System Engineering - Methods, Processes and Tools (2)	Fri, 16 Oct	09:45	Oranim 4
D1.7	Hosted Payloads - Concepts, Techniques and Challenges, Missions and Applications	Fri, 16 Oct	13:30	Oranim 4
D1.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
D2	SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS S	YMPOSIUM		
D2.1	Launch Vehicles in Service or in Development	Mon, 12 Oct	15:15	Teddy C
D2.2	Launch Services, Missions, Operations, and Facilities	Tue, 13 Oct	09:45	Teddy C
D2.3	Upper Stages, Space Transfer, Entry and Landing Systems	Tue, 13 Oct	14:45	Teddy C
D2.4	Future Space Transportation Systems	Wed, 14 Oct	09:45	Teddy C
D2.5	Future Space Transportation Systems Technologies	Wed, 14 Oct	14:45	Teddy C
D2.6	Future Space Transportation Systems Verification and In-Flight Experimentation	Thu, 15 Oct	09:45	Teddy C
D2.7	Small Launchers: Concepts and Operations	Thu, 15 Oct	14:45	Teddy C
D2.8-A5.4	Going To and Beyond the Earth-Moon System: Human Missions to Mars, Libration Points and NEO's	Fri, 16 Oct	09:45	Teddy C
D2.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area









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Nr.	Session name	Date	Time	Room
D3	13 th IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SI DEVELOPMENT	PACE EXPLORA	TION AND	
D3.1	Strategies & Architectures as the Framework for Future Building Blocks in Space Exploration and Development	Mon, 12 Oct	15:15	312
D3.2	Systems and Infrastructures to Implement Future Building Blocks in Space Exploration and Development	Wed, 14 Oct	09:45	312
D3.3	Novel Concepts and Technologies to Enable Future Building Blocks in Space Exploration and Development	Mon, 12 Oct	16:45	312
D3.4	Space Technology and System Management Practices and Tools	Fri, 16 Oct	09:45	312
D3.IP	Interactive Presentations	Wed, 14 Oct	13:15	
D4	13th IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR TH	E FUTURE		
D4.1	Innovative Concepts and Technologies	Tue, 13 Oct	09:45	312
D4.2	Contribution of Space Activities to Solving Global Societal Issues	Tue, 13 Oct	14:45	312
D4.3	Space Elevator Tether and Space Mineral Resources	Thu, 15 Oct	09:45	312
D4.4	Strategies for Rapid Implementation of Interstellar Missions: Precursors and Beyond	Thu, 15 Oct	14:45	312
D4.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
D5	48th IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLED ACTIVITIES	GE MANAGEM	ENT IN SPA	ACE
D5.1	Safety and quality: "SUCCESS" is the goal	Wed, 14 Oct	09:45	302-303
D5.2	Knowledge management and collaboration in space activities	Thu, 15 Oct	09:45	302-303
D5.3	Prediction and measurements of space weather conditions and impacts on space missions	Fri, 16 Oct	09:45	302-303
D5.4	Cyber-security threats to space missions and countermeasures to address them	Thu, 15 Oct	14:45	302-303
D5.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
D6	SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUE	S		
D6.1	Commercial Space Flight Safety and Emerging Issues	Wed, 14 Oct	14:45	Ballroom A
D6.3	Enabling safe commercial spaceflight: vehicles and spaceports	Thu, 15 Oct	09:45	Kerem Carmit
E1	SPACE EDUCATION AND OUTREACH SYMPOSIUM			
E1.1	Ignition - Primary Space Education	Mon, 12 Oct	15:15	Oranim 3-B
E1.2	Lift-Off - Secondary Space Education	Tue, 13 Oct	09:45	Oranim 3-B
E1.3	On Track - Undergraduate Space Education	Tue, 13 Oct	14:45	Oranim 3-B
E1.4	In Orbit - Postgraduate Space Education	Wed, 14 Oct	09:45	Oranim 3-B
E1.5	Enabling the Future - Developing the Space Workforce	Wed, 14 Oct	14:45	Oranim 3-B
E1.6	Calling Planet Earth - Space Outreach to the General Public	Thu, 15 Oct	09:45	Oranim 3-B
E1.7	New Worlds - Innovative Space Education and Outreach	Thu, 15 Oct	14:45	Oranim 3-B
E1.8	Open Space: Participatory Space Education and Outreach	Fri, 16 Oct	09:45	Oranim 3-B
E1.9	Space Culture	Fri, 16 Oct	13:30	Oranim 3-B
E1.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
E2	45 th STUDENT CONFERENCE			
E2.1	Student Conference - Part 1	Tue, 13 Oct	09:45	Kerem Carmit
E2.2	Student Conference - Part 2	Wed, 14 Oct	09:45	Kerem Carmit
E2.3-YPVF.4	Student Team Competition	Tue, 13 Oct	14:45	Kerem Carmit
E2.4	Educational Pico and Nano Satellites	Fri, 16 Oct	09:45	Kerem Carmit
E3	28th IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND	ECONOMICS		
E3.1	Regional cooperation in space: policies, governance and legal tools	Tue, 13 Oct	09:45	313

Nr.	Session name	Date	Time	Room
E3.3	The space economy: what are the socio-economic impacts?	Wed, 14 Oct	09:45	313
E3.4	Assuring a Safe, Secure, and Sustainable Space Environment for Space Activities	Wed, 14 Oct	14:45	313
E3.5-E7.6	30th IAA/IISL Scientific-Legal Roundtable: Universities as Actors in Space	Thu, 15 Oct	09:45	313
E3.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
E4	49th IAA SYMPOSIUM ON HISTORY OF ASTRONAUTICS			
E4.1	Memoirs & organisational histories	Mon, 12 Oct	15:15	Dulzin Big A
E4.2	Scientific & technical histories	Thu, 15 Oct	09:45	Dulzin Big A
E4.3	History of Israeli contribution to astronautics	Thu, 15 Oct	14:45	Dulzin Big A
E5	26th IAA SYMPOSIUM ON SPACE AND SOCIETY			
E5.1	Space Architecture: technical aspects, design, engineering, concepts and mission planning	Wed, 14 Oct	09:45	Oranim 2
E5.2	Models for Successfully Applying Space Technology Beyond Its Original Intent	Wed, 14 Oct	14:45	Oranim 2
E5.4	Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach	Thu, 15 Oct	14:45	Oranim 2
E5.5	Space Assets and Disaster Management	Fri, 16 Oct	09:45	Oranim 2
E5.6	Space Societies, Professional Associations and Museums	Thu, 15 Oct	09:45	Oranim 2
E5.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
E6	BUSINESS INNOVATION SYMPOSIUM			
E6.1	Case Studies and Prizes in Commercial Space	Tue, 13 Oct	09:45	Oranim 4
E6.2	Public/Private Human Access to Space - Supporting Studies	Tue, 13 Oct	14:45	Oranim 4
E6.3	New Space and New Science	Wed, 14 Oct	14:45	302-303
E6.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
E7	58th IISL COLLOQUIUM ON THE LAW OF OUTER SPACE			
E7.1	7 th Nandasiri Jasentuliyana Keynote Lecture on Space Law and Young Scholars Session	Tue, 13 Oct	09:45	Dulzin Big A
E7.2	The relationship of international humanitarian law and territorial sovereignty with the legal regulation of outer space	Tue, 13 Oct	14:45	Dulzin Big A
E7.3	The portrayal of Space (Law) in Media and Movies	Wed, 14 Oct	09:45	Dulzin Big A
E7.4	Legal Issues of Space Traffic Management	Wed, 14 Oct	14:45	Dulzin Big A
E7.5	Recent Developments in Space Law	Fri, 16 Oct	09:45	Dulzin Big A
E7.6-E3.5	30 th IAA/IISL Scientific-Legal Round Table: Universities as Actors in Space	Thu, 15 Oct	09:45	313
E7.7-B3.8	Joint IAF-IISL Session on the Legal Framework for Collaborative Space Activities	Fri, 16 Oct	13:30	Ballroom A
E7.IP	Interactive Presentations	Wed, 14 Oct	13:15	Plasma Screens Area
YPVF	YOUNG PROFESSIONAL VIRTUAL FORUM			
YPVF.2-B3.9	Human Spaceflight Young Professional Virtual Forum	Wed, 14 Oct	14:45	Kerem Carmit
YPVF.3-B2.8	Space Communications and Navigation Young Professionals Virtual Forum	Thu, 15 Oct	14:45	Kerem Carmit
YPVF.4-E2.3	Student Team Competition	Tue, 13 Oct	14:45	Kerem Carmit
YPVF.5-A6.10	Space Debris Young Professionals Virtual Forum	Fri, 16 Oct	15:15	Kerem Carmit









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;

A1.2. Human Physiology in Space (1)

October 13 2015, 09:45 — Oranim 3-A

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), Germany;

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

IAC-15.A1.2.1

IMPLEMENTATION OF VARIOUS DEGREES OF HEAD DOWN TILT TO STUDY THE ETIOLOGY OF THE VIIP SYNDROME Karina Marshall-Bowman, German Aerospace Center (DLR), Germany

IAC-15.A1.2.2

REDUCED PULSE ARRIVAL TIME (PAT) AND STABLE PRE-EJECTION PERIOD (PEP) ARE ASSOCIATED WITH REDUCED DIASTOLIC BLOOD PRESSURE DURING LONG TERM SPACE FLIGHT

Irina Funtova, Institute for Biomedical Problems, Russian Federation

IAC-15.A1.2.3

LOAD ON THE TIBIA DURING THE SEATED EXECUTION OF ORDINARY CALF RAISES ON THE MULTIFUNCTIONAL DYNAMOMETER FOR APPLICATION IN SPACE

Thomas Angeli, Vienna University of Technology, Austria

IAC-15.A1.2.4

LOWERBODY NEGATIVE PRESSURE COUNTERACTS SIMULATED MICROGRAVITY EFFECTS ON TIBIAL MICROVASCULAR FLOW Jamila Siamwala, University of California, San Diego, United States

IAC-15.A1.2.5

MILAB, A BIOMEDICAL PLATFORM FOR THE ISS Pat Greene, MDA, Canada

IAC-15.A1.2.6

MICROGRAVITY-INDUCED BACK PAIN AND INTERVERTEBRAL DISC HERNIATION: INTERNATIONAL SPACE STATION RESULTS Jojo Sayson, University of California, San Diego, United States

IAC-15.A1.2.7

LOCOMOTOR ACTIVITY EVOKED BY THE SUPPORT ZONES STIMULATION

Inesa Kozlovskaya, State Scientific Center of the Russian Federation
- Institute of Biomedical Problems of the Russian Academy of
Sciences, Russian Federation

IAC-15.A1.2.8

ROLE OF SUPERLONG SPACE FLIGHTS (SF) IN THE DEVELOPMENT OF COUNTERMEASURES

Anatoly I. Grigoriev, Russian Academy of Sciences, Russian
Federation

A1.3. Human Physiology in Space (2)

October 13 2015, 14:45 — Oranim 3-A

Co-Chair(s): Hanns-Christian Gunga , Charité - University Medicine Berlin, Germany; Satoshi Iwase , Aichi Medical University, Japan;

Rapporteur(s): Jeffrey R. Davis , National Aeronautics and Space Administration (NASA)/Johnson Space Center, United States;

AC-15.A1.3.1

EFFECTS OF ARTIFICIAL GRAVITY ON THE CARDIOVASCULAR SYSTEM: COMPUTATIONAL APPROACH

Ana Diaz, Massachusetts Institute of Technology (MIT), United States

IAC-15.A1.3.2

FLAVONOID LUTEOLIN AMELIORATED OXIDATIVE STRESS AND COGNITIVE DYSFUNCTION UNDER SIMULATED MICROGRAVITY Lina Qu, Astronaut Center of China, China

IAC-15.A1.3.3

FURTHER DEVELOPMENT OF THE INFLIGHT EXPERIMENT CARDIOVECTOR

Elena Luchitskaya, Institute for Biomedical Problems, Russian Federation

IAC-15.A1.3.4

PHYSICAL ASSESSMENT USING A NOVEL APPROACH WITH A SELF-PROPELLED TREADMILL FOR XP-ANTACTIK EXPLORERS Andree-Anne Parent, Université du Québec à Montréal, Canada

IAC-15.A1.3.5

THREE-DIMENSIONAL BALLISTOCARDIOGRAPHY IN MICROGRAVITY AT 20 YEARS INTERVAL: A LONGITUDINAL CASE REPORT AND VALIDATION OF THE ESA-B3D PROJECT.

Pierre-François Migeotte, Université Libre de Bruxelles, Belgium

IAC-15.A1.3.6

ULTRASOUND IMAGING RECONSTRUCTION AND ASSESSMENT IN PERIPHERAL SKELETON

Yi-Xian Qin, State University of New York, United States

AC-15.A1.3.7

IN VIVO BONE REMODELING RATES DETERMINATION AND COMPRESSIVE STIFFNESS VARIATIONS BEFORE, DURING 60 DAYS BED REST AND TWO YEARS FOLLOW UP: A MICRO-FE-ANALYSIS FROM HR-PQCT MEASUREMENTS OF THE BERLINER BED REST STUDY-2

Zully Ritter, Charité - University Medicine Berlin, Germany

IAC-15.A1.3.8

RELATIONSHIP OF LOWER LIMB MUSCLE STRENGTH AND SERUM MMP-2 DURING 45 DAYS OF BED REST

Peng Zhang, China Astronaut Research and Training Center, China

A1.4. Medical Care for Humans in Space

October 14 2015, 09:45 — Oranim 3-A

Co-Chair(s): Oleg Orlov , SSC RF-Institute of Biomedical Problems RAS, Russian Federation; Patrik Sundblad , ESA, Sweden;

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

IAC-15.A1.4.1 (withdrawn)

MODULATION OF NASOPHARYNGEAL AND PERIODONTAL MICROBIOTA IN HUMANS EXPOSED TO EXTREME AND ABNORMAL ENVIRONMENTAL CONDITIONS: NEW DEVELOPEMENTS Nataliya Kiryukhina, RF SRC - Institute of Biomedical Problems of the RAS, Russian Federation

IAC-15.A1.4.2 (withdrawn)

CHROMATIC MULTIFOCAL PUPILLOMETER FOR OBJECTIVE NON-INVASIVE DIAGNOSIS OF OPHTHALMIC PATHOLOGIES IN ASTRONAUTS

Ygal Rotenstreich, Sheba Medical Center, Tel Aviv University, Israel

IAC-15.A1.4.3

MAJOR FACTORS OF THE PROPHYLACTIC EFFECTIVENESS OF LOCOMOTION AND RESISTANCE TRAINING IN LONG-DURATION SPACE FLIGHT

Elena Fomina, FSC RF-IMBP, Russian Federation

IAC-15.A1.4.4

EFFECTS OF ISOLATION AND CONFINEMENT WITH OR WITHOUT SLEEP DEPRIVATION ON ATTENTION NETWORK AND OPERATION PERFORMANCE OF COMPLICATED TASK

Bin Wu, China Astronaut Research and Training Center, China

IAC-15.A1.4.5 (withdrawn)

CREW STRUCTURE AND INTERACTION IN LUNAR PALACE 1: A QUALITATIVE ANALYSIS

Wu Ruilin, Beihang University, China

A1.5. Radiation Fields, Effects and Risks in Human Space Missions

October 14 2015, 14:45 — Oranim 3-A

Co-Chair(s): Guenther Reitz , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Lawrence Pinsky , University of Houston, United States; Ronald J. White , Montana Tech of The University of Montana, United States;

Rapporteur(s): Giovanni De Angelis , Skolkovo Institute of Science and Technology, Russian Federation;

IAC-15.A1.5.1

COSMIC RADIATION MEASUREMENTS ON THE FOTON-M4 SATELLITE BY PASSIVE DETECTORS

Andrea Strádi, Hungarian Academy of Sciences, Centre for Energy Research, Hungary

IAC-15.A1.5.2 (withdrawn)

COMPARISON OF DOSE MEASUREMENTS PERFORMED WITH TRITEL TELESCOPES IN THE ISS MODULES COLUMBUS AND ZVEZDA Attila Hirn, MTA Centre for Energy Research, Hungary

IAC-15.A1.5.3

REPORT ON THE ACTIVE RADIATION MEASUREMENTS IN THE ORION MODULE DURING THE EFT-1 MISSION Lawrence Pinsky, University of Houston, United States

IAC-15.A1.5.4 (withdrawn)

UNDER THE BACKGROUND INFLUENCE (UTBI) EXPERIMENT ON-BOARD ISS

Andres Russu, Universidad Alcala de Henares, Spain IAC-15.A1.5.5

INTERPRETATION OF RADIATION-INDUCED CELLULAR PREMATURE SENESCENCE

Jufang Wang, Institute of Modern Physics, Chinese Academy of Sciences, China

IAC-15.A1.5.6

IONIZING RADIATION-INDUCED EMT AND TRANSFORMATION IN A HUMAN BRONCHIAL EPITHELIAL CELL LINE

Jinpeng He, Institute of Modern Physics, Chinese Academy of Sciences, China

IAC-15.A1.5.7 (withdrawn)

RBE OF ENERGETIC IRON IONS FOR THE INDUCTION OF EARLY AND LATE CHROMOSOME ABERRATIONS IN DIFFERENT CELL TYPES Honglu Wu, NASA, United States

IAC-15.A1.5.8

HYDROGEN ACTS AS A NEW CLASS OF RADIOPROTECTIVE AGENT FOR SPACE RADIATION-INDUCED DNA DAMAGE *Qiao Sun, CAST, China*

IAC-15.A1.5.9

REGULATION OF HSP90 GENES ARE DISTURBED BY EXPOSURE TO LOW DOSE IONIZING RADIATION AND SPACEFLIGHT IN ARABIDOPSIS IN ECOTYPE-DEPENDENT MANNER Fei Li, Beijing Space Bio-technology Research Center, China Academy

IAC-15.A1.5.10

of Space Technology (CAST), China

EXTREME SOLAR EVENT OF AD775: POTENTIAL RADIATION EXPOSURE TO CREWS IN DEEP SPACE

Lawrence Townsend, University of Tennessee, United States

IAC-15.A1.5.11

UPDATED MODELS FOR THE LUNAR AND THE MARTIAN RADIATION ENVIRONMENTS

Giovanni De Angelis, Skolkovo Institute of Science and Technology, Russian Federation

IAC-15.A1.5.12

TRITEL SATELLITE VERSION SILICON DETECTOR TELESCOPE DEVELOPMENT FOR THE ESEO SPACECRAFT Balazs Zabori, MTA Centre for Energy Research, Hungary

A1.6. Astrobiology and Exploration

October 15 2015, 09:45 — Oranim 3-A

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

IAC-15.A1.6.1

EXPERIMENT METEORITE ON FOTON-M4 SATELLITE: SPORE-FORMING THERMOPHILIC BACTERIUM SURVIVE ENTRY INTO THE EARTH'S ATMOSPHERE

Alexander Slobodkin, Winogradsky Institute of Microbiology, Russian Academy of Sciences, Russian Federation

IAC-15.A1.6.2

GROWTH OF HALOTOLERANT AND HALOPHILIC BACTERIA IN SULFATES: PROSPECTS FOR LIFE ON EUROPA Sandra Ramirez, , Mexico

IAC-15.A1.6.3

EXPOSURE OF TWO ECOLOGICALLY CONTRASTED MOSS SPECIES TO STRATOSPHERIC CONDITIONS: STRESS TOLERANCE AS A KEY TO SURVIVAL

Agata Kolodziejczyk, Astronomia Nova Society, forScience Foundation, Poland

IAC-15.A1.6.4

STUDYING TARDIGRADES AS A BIOLOGICAL PAYLOAD ONBOARD A 3U NANOSATELLITE IN LOW EARTH ORBIT Ahmad Byagowi, University of Manitoba, Canada

IAC-15.A1.6.5 (withdrawn)

EUROPA PLUME CHASER A NOVEL APPROACH FOR LOW COST EXPLORATION OF THE POTENTIAL PLUME OF EUROPA Jonas Jonsson, SGT Inc. / NASA Ames Research Center, United States

IAC-15.A1.6.6

BIOMETHANATION FOR IN-SITU FUEL GENERATION ON NEAREARTH OBJECTS $\,$

Michael Klas, UNSW Australia, Australia

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IAC-15.A1.6.7 (withdrawn)

MODIFYING THE EARTH SIMILARITY INDEX TO ASSIST THE SEARCH FOR EARTH 2.0

Shambo Bhattacharjee, , France

A1.7. Life Support, habitats and EVA Systems

October 16 2015, 09:45 — Oranim 3-A

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

IAC-15.A1.7.1 (withdrawn)

WATER RECOVERY ON SPACE STATIONS: SYSTEMS AND PROCESSES Leonid Bobe, NIICHIMMASH, Russian Federation

IAC-15.A1.7.2

EXERGY APPROACH TO THE EFFECTIVENESS EVALUATING OF INTEGRATED LIFE - SUPPORT SYSTEMS FOR CREW OF INTERPLANETARY SPACEFLIGHTS

Eduard Kurmazenko, NIICHIMMASH, Russian Federation

IAC-15.A1.7.3

CHARACTERISTICS OF PLANTS MINERAL NUTRITION IN BIO-TECHNICAL LIFE SUPPORT SYSTEM WITH HUMAN WASTES INCLUSION IN MASS EXCHANGE

Natalia Tikhomirova, Institute of Biophysics, Russian Academy of Sciences, Siberian Branch, Russian Federation

IAC-15.A1.7.4

DEVELOPMENT OF NACL CYCLE IN A CLOSED LIFE SUPPORT SYSTEM Sergey Trifonov, Institute of Biophysics, Russian Academy of Sciences, Siberian Branch, Russian Federation

IAC-15.A1.7.5 (withdrawn)

MANNED ROVERS FOR MARS EXPLORATION, MOON AND OTHER PLANETS.

 ${\it Oleg Aleksandrov, AVIASTAR\ Inc\ www.aviastar.us,\ United\ States}$

IAC-15.A1.7.6

EVOLUTION AND PRESENT STATUS OF EXPERIMENTAL MANNED ECOLOGICAL SYSTEMS FOR LONG-TERM HUMAN LIFE SUPPORT – BIOS, DEVELOPED BY THE INSTITUTE OF BIOPHYSICS OF RUSSIAN ACADEMY OF SCIENCES IN KRASNOYARSK (SIBERIA)

Josef Gitelson, Institute of Biophysics, Russian Academy of Sciences,

Josef Gitelson, Institute of Biophysics, Russian Academy of Sciences Siberian Branch, Russian Federation

IAC-15.A1.7.7

PREPARATORY ACTIVITIES FOR A PHOTOBIOREACTOR SPACEFLIGHT EXPERIMENT ENABLING MICROALGAE CULTIVATION FOR SUPPORTING HUMANS IN SPACE

Stefan Belz, University of Stuttgart, Germany

IAC-15.A1.7.8

BIOREGENERATIVE LIFE SUPPORT EXPERIMENTS IN CHINESE LUNAR PALACE 1: RESULTS AND FUTURE PLANS

Hong Liu, School of Biological Science and Medical Engineering, Beihang University; Institute of Environmental Biology and Life Support Technology, Beihang University, China

IAC-15.A1.7.9

SHIFTS OF MICROBIAL COMMUNITIES OF WHEAT (TRITICUM AESTIVUM L.) CULTIVATION IN A CLOSED ARTIFICIAL ECOSYSTEM

Youcai Qin, School of Biological Science and Medical Engineering, Beihang University; Institute of Environmental Biology and Life Support Technology, Beihang University, China

IAC-15.A1.7.10

MODULES-PBR – LESSONS LEARNED Benjamin Harting, OHB System AG-Bremen, Germany

A1.8. Biology in Space

October 12 2015, 15:15 — Oranim 3-A

Co-Chair(s): Marlene Grenon , University of California, San Francisco, United States; Nicole Buckley , Canadian Space Agency, Canada;

Rapporteur(s): Fengyuan Zhuang , Beihang University, China;

IAC-15.A1.8.1

DRUG DISCOVERY AND DEVELOPMENT IN SPACE Luis Zea, University of Colorado Boulder, United States

15.A1.8.2

BION-M1 PROJECT: GENERAL CHARACTERISTICS AND PRELIMINARY RESULTS SYCHEV V.N., ILYIN E.A., YARMANOVA E.N., RAKOV D.V., USHAKOV I.B., ORLOV O.I., GIRGORIEV A.I. INSTITUTE OF BIOMEDICAL PROBLEMS RAS

Vladimir Sychev, State Scientific Center of Russian Federation, Institute of Biomedical Problems, Russian Academy of Sciences, Russian Federation

IAC-15.A1.8.3

MICROBIAL CONTROL OF MANNED SPACECRAFT CABIN IN THE GROUND ASSEMBLY STAGE

Mengmeng Gong, China Academy of Launch Vehicle Technology(CALT), China

IAC-15.A1.8.4 (withdrawn)

MICRORNA EXPRESSION PROFILE AND DNA DAMAGE RESPONSE IN CULTURED HUMAN FIBROBLASTS IN SPACE Honglu Wu, NASA, United States

IAC-15.A1.8.5

GROUND-BASED RESULTS ON THE DEVELOPMENT OF A MICROFLUIDICS-BASED SMALL SATELLITE TO EXAMINE THE EFFECTS OF MICROGRAVITY ON CANDIDA ALBICANS AND CANDIDA GLABRATA.

Jeffrey R. Osborne, University of Toronto Institute for Aerospace Studies, Canada

AC-15.A1.8.6

BENEFITS OF MICROALGAE FOR HUMAN SPACE EXPLORATION Angélique Verrecchia, International Space University (ISU), Portugal

AC-15.A1.8.7

DEVELOPMENT OF SIMULATED MICROGRAVITY MODEL FOR THE GREEN ALGAE, CHLAMYDOMONAS REINHARDTII Kelley Frazier, NASA Ames Research Center, United States

IAC-15.A1.8.8

BIM LAU-PE: CULTIVATING SEEDLINGS IN MICROGRAVITY
MICHEL GARCIA, RUAG Space AG, Switzerland

IAC-15.A1.8.9

ROS SIGNALING AND ANTIOXIDANT RESPONSE OF PLANTS UNDER DEVELOPMENT OF GRAVITY AND OXIDATIVE STRESSES Jadko Sergiy, Institute of Botany by M.G.Kholodny of NASU, Ukraine

IAC-15.A1.8.10

STANDARD SMALL SATELLITE ARCHITECTURE FOR SPACE MICROBIOLOGY

Arnav Saikia, Manipal Institute of Technology, Manipal University, India

IAC-15.A1.8.11 (withdrawn)

"RHIZOGENESIS IN VITRO" AS A NEW MODEL FOR SPACE AND GRAVITATIONAL BIOLOGY.

Iliya Bulavin, Institute of Botany by M.G.Kholodny of NASU, Ukraine

A1.P. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

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;

IAC-15.A1.IP.1

THE ELECTROPHYSIOLOGICAL CHANGES IN THE MYOCARDIUM AND HEART RATE VARIABILITY DURING SPACE FLIGHT (PRELIMINARY DATA)

Vasily Rusanov, IBMP, Russian Federation

IAC-15.A1.IP.2

ANITA2: THE NEXT GENERATION TRACE GAS MONITORING FOR THE ISS

Peter Hofmann, OHB System AG - Munich, Germany

IAC-15.A1.IP.3

INVESTIGATION ON CO2 REMOVING TECHNOLOGY FOR ENVIRONMENT CONTROL AND LIFE SUPPORT SYSTEM IN MANNED SPACE STATION

Hu Wei, The 42nd Institute of the Fourth Academy of CASC, China

IAC-15.A1.IP.4

EXPERIENCE OF PUBLIC RELATIONS ORGANIZATION IN THE SPHERE OF LIFE SCIENCES

Oleg Voloshin, SSC RF Institute for bio-medical problems RAS, Russian Federation

IAC-15.A1.IP.5

THE INFLUENCE OF THE LONG-TERM SPACE FLIGHT FACTORS ON SOME COMPONENTS OF THE HUMAN INNATE IMMUNITY SYSTEM. Sergey Ponomarev, IBMP, Russian Federation

IAC-15.A1.IP.6

EXPERIMENTAL ANALYSIS OF HYDROGENATION(SABATIER) REACTOR OPERATION

Kogan Ioann, NIICHIMMASH, Russian Federation

IAC-15.A1.IP.7

A PERMANENT HALBACH MAGNET FOR WRIST MRI AT THE INTERNATIONAL SPACE STATION

Krzysztof Turek, AGH University of Science and Technology, Krakow, Poland

IAC-15.A1.IP.8

REABHILITATION IN MICROGRAVITY: A NEUROPHYSIOLOGICAL APPROACH

Irene Lia Schlacht, Politecnico di Milano, Italy

IAC-15.A1.IP.9

INDIVIDUAL PRENOSOLOGICAL CONTROL AS NEW DIRECTION IN PERSONALIZATION OF PREVENTIVE MEDICINE IN SPACE AND ON THE EARTH.

 $\label{lem:annacherolation} \textit{Anna Chernikova, SSC RF Institute of bio-medical problems RAS,} \\ \textit{Russian Federation}$

IAC-15.A1.IP.10 (withdrawn)

L-ARGININE ADMINISTRATION AS A POSSIBLE COUNTERMEASURE PREVENTING FUNCTIONAL AND BIOCHEMICAL CONSEQUENCES OF MUSCLE DETRAINING IN MICROGRAVITY

Boris Shenkman, IBMP, Russian Federation

IAC-15.A1.IP.11

LIGHTER, ADAPTIVE THERMAL SUBSYSTEM FOR LIFE SUPPORT DURING MARS EXTRAVEHICULAR ACTIVITY (EVA) PLANETARY EXPLORATION

Nikhil Vadhavkar, Massachusetts Institute of Technology (MIT), United States

IAC-15.A1.IP.12

REARING TENEBRIO MOLITOR L. (COLEPTERA: TENEBRIONIDAE) IN THE "LUNAR PALACE 1" DURING A 105-DAY MULTI-CREW CLOSED INTEGRATIVE BLSS EXPERIMENT

Leyuan Li, School of Biological Science and Medical Engineering, Beihang University; Institute of Environmental Biology and Life Support Technology, Beihang University, China

IAC-15.A1.IP.13

THE RECYCLE OF WATER AND NITROGEN FROM URINE IN LUNAR PALACE 1

Shengda Deng, School of Biological Science and Medical Engineering, Beihang University; Institute of Environmental Biology and Life Support Technology, Beihang University, China

IAC-15.A1.IP.14

DELIVERING OPERATIONALLY-RELEVANT MEDICAL SOLUTIONS FOR SPACEFLIGHT

Dorit Donoviel, Baylor College of Medicine, United States

IAC-15.A1.IP.15

ORGANIC GARDENS IN SPACE: ECOSYSTEM DESIGN FOR ENABLING DEEP SPACE EXPLORATION

Brian Ramos. . United States

IAC-15.A1.IP.16

AUGMENTED REALITY APPLIED TO STUDY THE EFFECTS OF MICROGRAVITY ON VEINS.

Misael Chagas, International Space University (ISU), Brazil

IAC-15.A1.IP.17

PEANUT (ARACHIS HYPOGAEA L.) CULTIVAR SELECTION FOR BIOREGENERATIVE LIFE SUPPORT SYSTEMS (BLSSS) – HYDROPONIC CULTIVATION

Hui Liu, School of Biological Science and Medical Engineering, Beihang University; Institute of Environmental Biology and Life Support Technology, Beihang University, China

IAC-15.A1.IP.18

RELATION BETWEEN SI AND O ELEMENT ABUNDANCES AND PROBABILITIES OF STARS THAT HAVE PLANETS Duygu Durmus, , Turkey

IAC-15.A1.IP.19

SPACE NUTRIENTS DEVELOPMENT IN HYPER GRAVITY FOR SPACE TRAVELERS

Rania Elmaddawi, University of South Florida, United States

IAC-15.A1.IP.20

DESIGN OF A MICROECOSYSTEM TO SUSTAIN FLUORESCENT TARDIGRADES IN SPACE FOR NANOSATELLITE PAYLOAD EXPERIMENT

Morgan Taverner, University of Manitoba, Canada

IAC-15.A1.IP.21

STRUCTURE OF THE CORTICAL CYTOSKELETON OF CARDIOMYOCYTES OF MICE AFTER 30-DAY 2G-CENTRIFUGATION Irina Ogneva, SSC RF Institute of bio-medical problems RAS, Russian Federation

A2. MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM

Coordinator(s): Marcus Dejmek, Canadian Space Agency,

Vice-Coordinator(s): Kenol Jules, National Aeronautics and Space Administration (NASA), United States;

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EXHIBITION





A2.1. Gravity and Fundamental Physics

October 12 2015, 15:15 — 314

Co-Chair(s): Francois Gonzalez , Centre National d'Etudes Spatiales (CNES), France; Joachim Richter, RWTH Aachen,

Rapporteur(s): Qi KANG, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., China;

T-SAGE, THE MICROSCOPE MISSION PAYLOAD READY TO TEST THE EQUIVALENCE PRINCIPLE IN SPACE

Bernard Foulon, Office National d'Etudes et de Recherches Aérospatiales (ONERA), France

IAC-15.A2.1.2

THE DATA ANALYSIS CHALLENGE OF THE MICROSCOPE SPACE

Quentin Baghi, Office National d'Etudes et de Recherches Aérospatiales (ONERA), France

IAC-15.A2.1.3

ANALYSIS OF THE IMPACT OF TEMPORAL DISTURBANCES ON THE SCIENCE SIGNALS OF THE SPACE MISSION MICROSCOPE BY USING WAVELET TRANSFORMATION TOOLS

Hanns Selig, ZARM - University of Bremen, Germany

IAC-15.A2.1.4 (withdrawn)

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

IAC-15.A2.1.5

MINI-LABORATORIES ON-BOARD DEEP SPACE PROBES FOR TESTING THE LOCAL SPACE-TIME STABILITY OF FUNDAMENTAL PHYSICAL CONSTANTS: THE CASE OF G

Ivan Cagnani, University of Bologna, Italy

IAC-15.A2.1.6

NAVIGATION AND SCIENCE WITH GALILEO Claus Lämmerzahl, ZARM - University of Bremen, Germany

IAC-15.A2.1.7

LASER SYSTEMS FOR PRECISION MEASUREMENTS OF FUNDAMENTAL PHYSICS IN SPACE

Vladimir Schkolnik, Humboldt-Universität zu Berlin, Germany

IMPROVEMENT OF THE MEASUREMENT OF FRAME-DRAGGING BY THE FUTURE LARES 2 MISSION.

Ignazio Ciufolini, Università del Salento, Italy

IAC-15.A2.1.9 (withdrawn)

VUV SPECTROSCOPY OF CARBONACEOUS DUST ANALOGUES Lisseth Gavilan, Université Paris sud-11, France

IAC-15.A2.1.10

ASTROD-I ORBIT DESIGN AND MISSION SIMULATION An-Ming Wu, National Space Organization, Taiwan, China

A2.2. Fluid and Materials Sciences

October 13 2015, 09:45 — 314

Co-Chair(s): Nickolay N. Smirnoy . Moscow Lomonosov State University, Russian Federation; Raimondo Fortezza , Telespazio S.p.A., Italy:

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

IAC-15.A2.2.1

STRUCTURE OF FLOW IN ROTATING SPHERICAL SHELL WITH INNER CORE EXCITED BY OSCILLATING FORCE FIELD Stanislav Subbotin, PSHPU, Russian Federation

IAC-15.A2.2.2

OSCILLATORY FLOW AND STEADY STREAMING INSIDE A RAPIDLY ROTATING HORIZONTAL CYLINDER PARTIALLY FILLED WITH LIQUID Denis Polezhaev, , Russian Federation

IAC-15.A2.2.3

INFLUENCE OF TRANSVERSAL VIBRATION ON THE DYNAMICS OF TWO IMMISCIBLE LIQUIDS AT ROTATION Nikolai Kozlov, PSHPU, Russian Federation

IAC-15.A2.2.4

SUPERCOMPUTER MODELING OF PULSE DETONATION ENGINES FED BY ACETYLENE OR HYDROGEN

Nickolay N. Smirnov, Moscow Lomonosov State University, Russian

IAC-15.A2.2.5 (withdrawn)

EXPERIMENTAL INVESTIGATION OF C6F15N FLASHING VAPORIZATION CHARACTERISTIC IN VACUUM Kan Xu, Beijing Aerospace Technology Institute, China

IAC-15.A2.2.6 (withdrawn)

CHARACTERISTICS OF THE SUPERSONIC FLOW DOMINATED BY LARGE-SCALE STREAMWISE VORTICES

Qiancheng Wang, National University of Defense Technology, China

IAC-15.A2.2.7

DIRECT NUMERICAL SIMULATION OF BUBBLE DYNAMIC BEHAVIOR IN ELECTRIC FIELDS UNDER MICROGRAVITY CONDITIONS RONG MA, China Academy of Space Technology (CAST), China

IAC-15.A2.2.8

RESEARCH ON THERMODYNAMIC VENT SYSTEM FOR LONG-TERM ZERO-BOIL-OFF (ZBO) HYDROGEN STORAGE Shaohua Zhang, China Academy of Launch Vehicle

IAC-15.A2.2.9

Technology(CALT), China

INVESTIGATION OF AERODYNAMIC HEATING FOR THE STRUCTURE GAPS

Yanxin Yin, , China

IAC-15.A2.2.10 (withdrawn)

DIRECT NUMERICAL SIMULATION OF MOTION OF RISING BUBBLES UNDER MICROGRAVITY CONDITIONS

Tong Qin, Beijing institute of Astronautical Systems Engineering, Beijing, China

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

October 13 2015, 14:45 - 314

Co-Chair(s): Raffaele Savino , , Italy; Ziad Saghir , Ryerson University, Canada;

IAC-15.A2.3.1

ZERO GRAVITY ROBOTIC MOBILITY EXPERIMENTS WITH ELECTROSTATIC AND GECKO-LIKE ADHESIVES ABOARD NASA'S ZERO GRAVITY AIRPI ANF

Aaron Parness, Caltech/JPL, United States

IAC-15.A2.3.2

PARABOLIC FLIGHT CAMPAIGNS IN EUROPE WITH THE AIRBUS A300 ZERO-G: AN EVALUATION OF THE SCIENTIFIC OUTCOME Vladimir Pletser, European Space Agency (ESA), The Netherlands

IAC-15.A2.3.3 (withdrawn)

PARABOLIC FLIGHT FACILITIES - A LESSON LEARNT ON FREE FLOATING OBJECTS

Riccardo Benvenuto, Politecnico di Milano, Italy

IAC-15.A2.3.4

VALIDATION OF FLEXIBLE BODIES DYNAMICS SIMULATOR IN PARABOLIC FLIGHT

Wojciech Gołebiowski, SKA-Polska, Poland

IAC-15.A2.3.5

ELECTROOXIDATION OF AMMONIA UNDER THE INFLUENCE OF MICROGRAVITY IN PARABOLIC FLIGTHS

Raul Acevedo, University of Puerto Rico, Puerto Rico

IAC-15.A2.3.6

DESIGN AND DROP TOWER TESTING OF A LIQUIDS EXPERIMENT INVESTIGATING THE CHAOTIC DRIPPING REGIME IN LOW GRAVITY

Joshua Brandt, University of New South Wales, Australia

IAC-15.A2.3.7

IMPROVEMENT, EVALUATION AND MEASUREMENT OF THE MICROGRAVITY LEVEL IN RECOVERABLE SATELLITES Jia-wen Qiu, China Academy of Space Technology (CAST), China

IAC-15.A2.3.8

COMMERCIAL SUBORBITAL VEHICLE MICROGRAVITY RESEARCH **EXPERIMENT PAYLOAD STANDARDS**

Angie Bukley, International Space University (ISU), United States

IAC-15.A2.3.9

SPACESHIPTWO: A SUBORBITAL PLATFORM FOR HUMAN SPACEFLIGHT AND SPACE-BASED RESEARCH William Pomerantz, Virgin Galactic L.L.C, United States

A2.4. Science Results from Ground Based Research

October 14 2015, 09:45 — 314

Co-Chair(s): Antonio Viviani, Second University of Naples, SUN, Italy; Valentina Shevtsova, Université Libre de Bruxelles,

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

IAC-15.A2.4.1

STUDY ON SUPERCRITICAL TRANSITION IN BÉNARD-MARANGONI CONVECTION

Qi KANG, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., China

IAC-15.A2.4.2

THE QUANTUM OF ENERGY TRANSPORTED DURING EVAPORATION: INVESTIGATION OF A FUNDAMENTAL CONSTANT Aaron Persad, University of Toronto, Canada

IAC-15.A2.4.3

STUDY ON TRANSITION PROCESS OF BUOYANT -THERMOCAPILLARY CONVECTION IN AN OPEN ANNULAR POOL

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

IAC-15.A2.4.4 (withdrawn)

GROWTH OF CZT CRYSTAL BY THE THM ABOARD THE FOTON-M4 SPACECRAFT.

Alexander Senchenkov, Research and Development Institute for Launch Complexes (NIISK), Russian Federation

IAC-15.A2.4.5

IGNITION OF FUEL SPRAY NUMERICAL SIMULATION Nickolay N. Smirnov, Moscow Lomonosov State University, Russian Federation

IAC-15.A2.4.6

NEAR-LIMIT FLAME SPREAD IN LOW-SPEED OPPOSED AND CONCURRENT FLOWS OVER THICK FUELS

Shuang-Feng Wang, Institute of Mechanics, Chinese Academy of Sciences, China

IAC-15.A2.4.7 (withdrawn)

EXPERIMENT ON HEAT TRANSFER PERFORMANCE OF SPACE SCIENCE EXPERIMENT RACK THERMAL CONTROL SYSTEM Sheng Qiang, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China

IAC-15.A2.4.8

DYNAMIC BALANCE OF A SPACE MANIPULATOR IN THE CAPTURE OF A NON-COOPERATIVE TARGET

Silvio Cocuzza, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-15.A2.4.9 (withdrawn)

LINEAMENT STUDY IN GROUNDWATER EXPLORATION USING SPACE BASED TECHNOLOGY: A CASE STUDY OF OWO LGA, ONDO STATE,

Oluwasegun Onibudo, , Nigeria

IAC-15.A2.4.10

CONTINUOUS BIOREACTOR FOR YEAST CELL CULTIVATION IN SPACE Paolo Dainesi, RUAG Space, Switzerland

IAC-15.A2.4.11

INFLUENCE OF AN INTERFACIAL HEAT RELEASE ON NONLINEAR BUOYANT-THERMOCAPILLARY WAVES UNDER THE ACTION OF AN IMPOSED TEMPERATURE GRADIENT

Antonio Viviani, Seconda Universita' di Napoli, Italy

A2.5. Facilities and Operations of **Microgravity Experiments**

October 14 2015, 14:45 — 314

Co-Chair(s): Marcus Dejmek, Canadian Space Agency, Canada; Rainer Willnecker, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

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

IAC-15.A2.5.1 (withdrawn)

POLIZON-2 FURNACE FOR CRYSTAL GROWTH EXPERIMENTS ABOARD THE FOTON-M4 SPACECRAFT

Alexander Senchenkov, Research and Development Institute for Launch Complexes (NIISK), Russian Federation

IAC-15.A2.5.2

NEW PROGRESS OF MICROGRAVITY ACTIVE VIBRATION ISOLATION SYSTEM IN CHINESE TIANZHOU-1 CARGO SHIP Zongfeng Li, Technology and Engineering Center for Space

IAC-15.A2.5.3

UTILIZATION OF THE BREMEN DROP TOWER FOR PREPARING SPACE MISSIONS

Thorben Könemann, ZARM Fab GmbH, Germany

Utilization, Chinese Academy of Sciences, China

IAC-15.A2.5.4

AERODYNAMIC AND ENGINEERING DESIGN OF A 1.5 SECONDS HIGH QUALITY MICROGRAVITY DROP TOWER FACILITY CURRENTLY UNDER DEVELOPMENT AT BAYLOR UNIVERSITY IN WACO, TEXAS Valentin Belser, Institute of Space Systems, Universität Stuttgart, Germany

IAC-15.A2.5.5

COMPENSATION OF UMBILICAL STIFFNESSES AND DECREASED CROSS-TALK OF MECHANICAL DECOUPLING SYSTEMS THROUGH 3D **ANTISPRINGS**

Andreas Gierse, ZARM - University of Bremen, Germany

IAC-15.A2.5.6

DESIGN AND QUALIFICATION OF A XUHV SYSTEM FOR THE USE ON SOUNDING ROCKET PAYLOAD

Jens Grosse, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR),









IAC-15.A2.5.7

A SOUNDING ROCKET FOR COST EFFECTIVE MEASUREMENTS AND ACCESS TO MICROGRAVITY

Matteo Poli, University of Padova, CISAS - "G. Colombo" Center of Studies and Activities for Space,, Italy

IAC-15.A2.5.8

A COMPETITIVE WAY TO ACCESS MICROGRAVITY: SUBORBITAL

Olympia Natalia Kyriopoulos, Telespazio VEGA Deutschland GmbH,

IAC-15.A2.5.9

DESIGN AND VALIDATION OF A NEW TYPE DEPLOYMENT TO SIMULATE MICROGRAVITY FOR SATELLITE SOLAR ARRAY Yangming Lu, Shanghai Academy of Spaceflight Technology, China

IAC-15.A2.5.10 (withdrawn)

ON OPTIMIZATION OF SOUNDING ROCKETS FOR MICROGRAVITY RESEARCH

Adam Okninski, -, Poland

A2.6. Microgravity Sciences Onboard the **International Space Station and Beyond**

October 15 2015, 09:45 — 314

Co-Chair(s): Bernard Zappoli , Centre National d'Etudes Spatiales (CNES), France; Kenol Jules , National Aeronautics and Space Administration (NASA), United States;

Rapporteur(s): Christoph Puetz , Astrium Space Transportation,

IAC-15.A2.6.1

PLASMA CRYSTAL RESEARCH ON THE INTERNATIONAL SPACE

Peter Hofmann, OHB System AG - Munich, Germany

IAC-15.A2.6.2

RESULTS OF MICROGRAVITY FLUID DYNAMICS CAPTURED WITH THE SPHERES-SLOSH EXPERIMENT

Gabriel Lapilli, Florida Institute of Technology, United States

IAC-15.A2.6.3

DESIGN OF A NANOLAB TO MONITOR THE ELYTRA OF A CHRYSINA BEETLE AT THE INTERNATIONAL SPACE STATION

Andrés Mora Vargas, Central American Association of Aeronautics and Space (ACAE), United States

IAC-15.A2.6.4 (withdrawn)

THERMOLAB - AN INTERNATIONAL MICROGRAVITY LABORATORY FOR THE MEASUREMENT OF THERMOPHYSICAL PROPERTIES OF LIQUID METALLIC MELTS ON PARABOLIC FLIGHTS, TEXUS FLIGHTS AND THE INTERNATIONAL SPACE STATION Hans Fecht, University Ulm, Germany

IAC-15.A2.6.5 (withdrawn)

THE ATOMIZATION OBSERVATION EXPERIMENT IN JEM Hayato Ohkuma, Japan Aerospace Exploration Agency (JAXA),

IAC-15.A2.6.6

ICE CUBES – INTERNATIONAL COMMERCIAL EXPERIMENT CUBES ESTABLISHING A FAST-TRACK, LOW-COST SERVICE FOR SMALL **EXPERIMENTS TO THE ISS**

Tom Hoppenbrouwers, Space Applications Services N.V./S.A.,

IAC-15.A2.6.7 (withdrawn)

BRAZILIAN MICROGRAVITY PROGRAMME: IDENTIFICATION AND ANALYSIS OF OBSERVED FAILURES INTO THE LIFE CYCLE OF MICROGRAVITY EXPERIMENTS AND SUGGESTION OF PROCEDURES TO MINIMIZE THEM.

Flávio de Azevedo Corrêa Jr, Instituto de Aeronáutica e Espaço (IAE), Brazil

IAC-15.A2.6.8

THERMAL EXCHANGE: A PAYLOAD FOR TECHNOLOGICAL EXPERIMENTS ON-BOARD THE INTERNATIONAL SPACE STATION Nicole Viola, Politecnico di Torino, Italy

IAC-15.A2.6.9

A DESIGN OF MICROGRAVITY FREE-FLOATING PLATFORM FOR AUTOMATIC CONTROL TESTS INSIDE THE SPACE STATION Wenbo Dong, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China

A2.P. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Kenol Jules . National Aeronautics and Space Administration (NASA), United States; Marcus Dejmek, Canadian Space Agency, Canada;

IAC-15.A2.IP.1

INERTIAL WAVES AND VIBRATIONAL THERMAL CONVECTION Aleksey Vjatkin, PSHPU, Russian Federation

IAC-15.A2.IP.2

ACCURATE IDENTIFICATION OF THE DYNAMIC PARAMETERS OF A SPACE MANIPULATOR IN MICROGRAVITY EXPERIMENTS Silvio Cocuzza, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-15.A2.IP.3 (withdrawn)

MICROGRAVITY ENVIRONMENT IN JEM Hayato Ohkuma, Japan Aerospace Exploration Agency (JAXA),

IAC-15.A2.IP.4

COULOMB CLUSTERS OF DUST PARTICLES IN CUSP MAGNETIC TRAP UNDER MICROGRAVITY CONDITIONS

Maxim Myasnikov, Joint Institute for High Temperatures of the Russian Academy of Sciences, Russian Federation

IAC-15.A2.IP.5

IMPACT OF SIMULATED MICROGRAVITY ON NANOEMULSION

Danielle Dantuma, University of South Florida, United States

A3. SPACE EXPLORATION SYMPOSIUM

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

A3.1. Space Exploration Overview

October 12 2015, 15:15 — Schwartz Hall

Co-Chair(s): Christian Sallaberger, Canadensys Aerospace Corporation, Canada; Luc Frécon, Thales Alenia Space France,

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

IAC-15.A3.1.1

THE GLOBAL EXPLORATION ROADMAP AND EXPANDING HUMAN/ ROBOTIC MISSION COLLABORATION OPPORTUNITIES Kathy Laurini, National Aeronautics and Space Administration (NASA), United States

IAC-15.A3.1.2

TOWARDS A SCIENTIFIC PERSPECTIVE FOR INTERNATIONAL HUMAN-ROBOTIC SPACE EXPLORATION

François Spiero, Centre National d'Etudes Spatiales (CNES), France

IAC-15.A3.1.3

IRENA, DEMONSTRATING ADVANCED RE-ENTRY TECHNOLOGIES FOR PLANETARY EXPLORATION MISSIONS

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

IAC-15.A3.1.4

NASA'S EVOLVING STRATEGY: FROM MOON-SHOTS TO PIONEERING Jason Hay, The Tauri Group, United States

IAC-15.A3.1.5

POSSIBLE SCENARIO FOR INTERNATIONAL VENUS EXPLORATION MISSION SCHEDULED FOR 2021-2025

Viktor A. Vorontsov, Lavochkin Association, Russian Federation

IAC-15.A3.1.6

ASTEROIDS AND ARTIFICIAL HABITAT — A STAGE OF MANNED SPACE EXPLORATION

Andrei Degermendzhi, Institute of Biophysics, Russian Academy of Sciences, Siberian Branch, Russian Federation

SPACEFLIGHT CLUSTER MISSIONS - SMALLSAT ACCESS BEYOND LEO Philip Brzytwa, Spaceflight Inc., United States

IAC-15.A3.1.8

HIGH-POWER SOLAR ELECTRIC PROPULSION TECHNOLOGY DEVELOPMENT AND SPACE DEMONSTRATION Bryan Smith, NASA Glenn Research Center, United States

IAC-15.A3.1.9

HIGH POWER SOLAR ELECTRIC PROPULSION SPACECRAFT FOR SPACE EXPLORATION

David Murrow, Lockheed Martin (Space Systems Company), United

IAC-15.A3.1.10 (withdrawn)

"INTERNATIONAL COOPERATION MECHANISMS USED BY THE UNITED STATES IN THE PEACEFUL EXPLORATION AND USE OF

Sumara Thompson-King, National Aeronautics and Space Administration (NASA), United States

IAC-15.A3.1.11

ANALYSIS ON THE DEVELOPING TREND OF INTERNATIONAL COOPERATION IN DEEP SPACE EXPLORATION Wenyi CAI, China Academy of Launch Vehicle Technology(CALT),

A3.2A. Moon Exploration - Part 1

October 13 2015, 09:45 — Schwartz Hall

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

Rapporteur(s): Sylvie Espinasse, European Space Agency (ESA), The Netherlands; William H. Siegfried, The Boeing Company, United States:

IAC-15.A3.2A.1

INTRODUCTION TO THE LUNAR SESSION AND ILEWG REPORT Bernard Foing, ESA/ESTEC, The Netherlands

IAC-15.A3.2A.2

AUTOMATED PLANNING TECHNOLOGY FOR THE CHANG'E MISSION WEI GAO, Beijing Aerospace Control Center, China

IAC-15.A3.2A.3

SUMMARY OF THE IN-ORBIT PERFORMANCE OF CHANG'E-3 LUNAR

Zhang He, China Academy of Space Technology (CAST), China

IAC-15.A3.2A.4

ANALOGUES FOR PREPARING ROBOTIC AND HUMAN EXPLORATION ON THE MOON

Tom Hoppenbrouwers, Space Applications Services N.V./S.A., Belaium

IAC-15.A3.2A.5

THE EFFECT OF SLOPE DISTRIBUTION ON THE SURFACE TEMPERATURE OF THE MOON AND OTHER AIRLESS BODIES Lior Rubanenko, Weizmann Institute of Science, Israel

IAC-15.A3.2A.6 (withdrawn)

LUNAR SOIL PARTICLE SIZE DISTRIBUTION CLASSIFIED BY STATION Byung Chul Chang, International Space Exploration Research Institute / Hanyang University, Korea, Republic of

IAC-15.A3.2A.7

UPDATE ON THE GOOGLE LUNAR XPRIZE IN 2015 Nathan Wong, XPRIZE Foundation, United States

IAC-15.A3.2A.8

TEST OF A ROUTING ALGORITHM FOR WIRELESS SENSOR NETWORKS WITH APPLICATION TO PLANETARY EXPLORATION APPLICATIONS

Pedro Rodrigues, Tekever, Portugal

A3.2B. Moon Exploration – Part 2

October 13 2015, 14:45 — Schwartz Hall

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

Rapporteur(s): Sylvie Espinasse, European Space Agency (ESA), The Netherlands; William H. Siegfried, The Boeing Company, United States:

IAC-15.A3.2B.1

REPORT FROM ONGOING US LUNAR MISSIONS David Korsmeyer, National Aeronautics and Space Administration (NASA), United States

IAC-15.A3.2B.2

LUNAR ICY SOIL SAMPLING

Piergiovanni Magnani, Selex ES, Italy IAC-15.A3.2B.3

STRATEGIC KNOWLEDGE GAPS ANALYSIS FOR KOREAN LUNAR **EXPLORATION PROGRAM**

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

IAC-15.A3.2B.4

QUALIFICATION OF A DUAL ROVER ARCHITECTURE INCLUDING DEPLOYABLE CAMERAS FOR EXPLORATION OF A SKYLIGHT ON THE LUNAR SURFACE.

John Walker, Tohoku University, Japan

A NEW TEST FACILITY FOR VISION-BASED HAZARD DETECTION AND AVOIDANCE SYSTEMS FOR PLANETARY LANDING MANEUVERS Paolo Lunghi, Politecnico di Milano, Italy

IAC-15 A3 2R 6

HELIUM ION IMPLANTATION INTO JSC-1A LUNAR REGOLITH SIMULANT FOR A VOLATILES EXTRACTION EXPERIMENT Aaron Olson, University of Wisconsin, United States







ADVANCES IN THE HARDWARE/SOFTWARE CO-DESIGN FOR THE ABSOLUTE AND RELATIVE VISION BASED NAVIGATION SYSTEMS FOR THE LUNAR LANDING SCENARIO

David Gonzalez-Arjona, GMV Aerospace & Defence SAU, Spain

IAC-15.A3.2B.8

COMBUSTION SYNTHESIS OF CONSTRUCTION MATERIALS FROM LUNAR AND MARTIAN REGOLITH MIXED WITH MAGNESIUM Armando Delgado, University of Texas at El Paso, United States

IAC-15.A3.2B.9 (withdrawn)

JAPANESE MOON SURFACE EXPLORATION MISSION
Tatsuaki Hashimoto, Japan Aerospace Exploration Agency (JAXA),

IAC-15.A3.2B.10

STATUS OF INTERNATIONAL LUNAR DECADE Vid Beldavs. University of Latvia. Latvia

IAC-15.A3.2B.11

PANEL DISCUSSION ON FUTURE LUNAR EXPLORATION Bernard Foing, ESA/ESTEC, The Netherlands

A3.2C. Moon Exploration - Part 3

October 16 2015, 09:45 — Schwartz Hall

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

Rapporteur(s): Sylvie Espinasse, European Space Agency (ESA), The Netherlands; William H. Siegfried, The Boeing Company, United States:

IAC-15.A3.2C.1

OPTIMAL THRUST DIRECTION FOR LUNAR SOFT LANDING USING TEP

Mandarapu Mutyalarao, Indian Space Research Organization (ISRO), India

IAC-15.A3.2C.2

POLYGONAL-LIKE PERIODIC ORBIT AND ITS APPLICATION TO A CISLUNAR IN-ORBIT INFRUSTRACTURE Yuying Liang, , China

IAC-15.A3.2C.3

NAVIGATION OF A LUNAR SPACECRAFT AS A SECONDARY PAYLOAD: SPACEIL'S GOOGLE LUNAR X-PRIZE MISSION Adam Michaels, Spacell, Israel

IAC-15.A3.2C.4 (withdrawn)

CONCEPTUAL DESIGN OF A RECONFIGURABLE ROBOT FOR THE EXPLORATION OF LUNAR LAVA TUBE

ZENG Ling-bin, Shanghai Aerospace System Engineering Institute,

IAC-15.A3.2C.5

STUDY ON THE CONCEPTUAL DESIGN OF MANNED LUNAR ROVERS ACCORDING TO DIFFERENT TASK CHARACTERISTICS AND TOPOGRAPHICAL FEATURES Baogui Qiu, , China

IAC-15.A3.2C.6

ANALYSIS OF MANNED LUNAR ROVERS' MISSION REQUIREMENTS AND FUNCTIONAL CHARACTERISTICS IN CHINA Baogui Qiu, China

IAC-15.A3.2C.7

DYNAMICS OF WEAK STABILITY BOUNDARY TRANSFER TRAJECTORIES TO MOON

Pooja Dutt, Indian Space Research Organization (ISRO), India

IAC-15.A3.2C

LUNAR MISSIONS LTD A FEASIBILITY STUDY ON HUMAN SPACE EXPLORATION AT THE LUNAR SOUTH POLE A POSSIBLE LUNAR MISSION THREE

Daphne de Jong, International Space University (ISU), France

IAC-15.A3.2C.9

COMMERCIAL PARTNERSHIP TO ADVANCE INTERNATIONAL EXPLORATION OF THE MOON

Dan Hendrickson, , United States

IAC-15.A3.2C.10

ANALYSIS OF THE SAFETY OF SOFT-LANDING IN TOUCH DOWN PROCESS OF CHANG'E-3 INFLUENCED BY LUNAR TOPOGRAPHY Fei Li, , China

IAC-15.A3.2C.11

A NOVEL MATCHING METHOD OF LARGE DEFORMED IMAGES FOR POSITIONING LUNAR ROVERS WITH LARGE DISTANCE Chuankai Liu, , China

IAC-15.A3.2C.12 (withdrawn)

ASSESSMENT OF THE RADIATION LEVEL IN THE POINT L2 (E-M) USING A LUNARCUBE Lucas Fonseca, , Brazil

IAC-15.A3.2C.13

THE FORMATION AND EVOLUTION OF THE MOON Cui-xiang Zhong, , China

IAC-15.A3.2C.14 (withdrawn)

AUTONOMOUS LUNAR ORBIT RENDEZVOUS GUIDANCE BASED ON A HIGH ORDER PERTURBED STATE TRANSITION MATRIX Jingyang Li, Tsinghua University School of Aerospace, China

IAC-15.A3.2C.15

TWO-SEGMENT LUNAR FREE-RETURN TRAJECTORIES BASED ON THE PSEUDOSTATE THEORY

Jingyang Li, Tsinghua University School of Aerospace, China

IAC-15.A3.2C.16

PLANETARY SURFACE MODELLING AND VISUALISATION FOR ASSISTING ROVER NAVIGATION SYSTEM

Deepak Kumar, Central University of Karnataka, Gulbarga, India

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

October 14 2015, 09:45 — Schwartz Hall

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-15.A3.3A.1

AN OVERVIEW OF THE CURRENT STATUS OF NASA'S 2016 INSIGHT MISSION TO MARS

Ramon P. De Paula, National Aeronautics and Space Administration (NASA), United States

IAC-15.A3.3A.2

EXOMARS 2016 MISSION EDL DEMONSTRATOR MODULE TECHNOLOGIES, SCIENCE OPPORTUNITY AND PLANETARY PROTECTION IMPLEMENTATION

Maurizio Capuano, Thales Alenia Space Italia, Italy

IAC-15.A3.3A.3

JAPAN'S MARS ROVER MISSION FOR EDL DEMONSTRATION AND LIFE SEARCH

Kazuhisa FUJITA, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.A3.3A.5

THE ESA MARS ROBOTIC EXPLORATION PREPARATION PROGRAM: STATUS AND PERSPECTIVES

Denis REBUFFAT, ESA, The Netherlands

IAC-15.A3.3A.6 (withdrawn)

POSSIBLE MARS EXPLORATION ARCHITECTURES FOR THE 2020'S Steve Matousek, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-15.A3.3A.7

THE ROLE OF MARS ANALOGUE ENVIRONMENTS ON EARTH IN THE INTERPRETATION OF DATA FROM THE PAST, PRESENT AND FUTURE MISSIONS

Enrico Flamini, Italian Space Agency (ASI), Italy

IAC-15.A3.3A.8

ASTROBIOLOGY AND GEOCHEMISTRY FROM MARS TERRESTRIAL ANALOGUES: FIELD MEASUREMENTS AND ANALYSIS OF RETURNED SAMPLES

Bernard Foing, ESA/ESTEC, The Netherlands

IAC-15.A3.3A.9

PHOTOGEOLOGICAL STUDY OF MARS FEATURES USING MARS COLOR CAMERA ONBOARD MARS ORBITER MISSION AND OTHER DATA.

Prabhjot Kaur, Space Applications Centre (ISRO), India

IAC-15.A3.3A.10 PHOOTPRINT: PHOBOS SAMPLE RETURN MISSION

Antonella Ferri, Thales Alenia Space Italia, Italy

IAC-15.A3.3A.11

ORBIT DESIGN FOR THE MARTIAN MOON IMPACT MISSION Zhao Li, State Key Laboratory of Astronautic Dynamics, Xi'an Satellite Control Center, China

IAC-15.A3.3A.12

ARMONIA: FEASIBILITY STUDY ON AEROBOTS IN MARTIAN ATMOSPHERE TO ENHANCE SCIENCE RETURN Michèle Lavagna, Politecnico di Milano, Italy

A3.3B. Mars Exploration – Science, Instruments and Technologies

October 14 2015, 14:45 — Schwartz Hall

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-15.A3.3B.1

APPROACH TO MARS SAMPLE RETURN CAPTURE PHASE IN-FLIGHT VALIDATION USING OPPORTUNITY

Celestino Gomez-Cid, GMV Aerospace & Defence SAU, United Kinadom

IAC-15.A3.3B.2

EXOMARS MISSION 2016 PLANETARY PROTECTION IMPLEMENTATION

Diana Margheritis, Thales Alenia Space Italia, Italy

IAC-15.A3.3B.3

WET – A SOIL WETNESS SENSOR FOR MARS Durval Zandonadi Jr., Instituto Nacional de Pesquisas Espaciais

AC-15.A3.3B.4

REMS, TWINS & MEDA: THREE GENERATIONS OF ENVIRONMENTAL INSTRUMENTS ON JPL MARS MISSIONS

Tirso Velasco, CRISA, and Airbus Defence and Space company, Spain

IAC-15.A3.3B.5 (withdrawn)

DEVELOPMENT OF A SEISMOLOGY INSTRUMENT FOR THE INSIGHT MISSION

Gabriel Pont, Centre National d'Etudes Spatiales (CNES), France

IAC-15.A3.3B.6

DRILLING AUTOMATION FOR MARS SAMPLE ACQUISITION

Brian Glass, National Aeronautics and Space Administration (NASA),

United States

IAC-15.A3.3B.7

EXOMARS ENTRY, DESCENT AND LANDING SCIENCE Francesca Ferri, Università degli Studi di Padova, Italy

IAC-15.A3.3B.8

DEVELOPMENT OF A MARSLANDER WITH CRUSHABLE SHOCK ABSORBER BY VIRTUAL AND EXPERIMENTAL TESTING Silvio Schröder, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR). Germany

IAC-15.A3.3B.9

DEVELOPMENT OF THE FLEXIBLE WHEEL FOR THE EXOMARS ROVER Sean Jessen, MDA Space Missions, Canada

IAC-15.A3.3B.10

MOSQUITO, MARS ORIGINAL SYSTEM FOR QUALITATIVE IMAGING AND TACTICAL OPERATIONS: SYSTEM AND ARCHITECTURE ANALYSIS Jordi GARCIA, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France

IAC-15.A3.3B.11

VISION-BASED GUIDANCE, NAVIGATION AND CONTROL SYSTEM FOR PHOBOS SAMPLE RETURN MISSION Jesus Gil-Fernandez, ESA, Spain

IAC-15.A3.3B.12

CONCEPT OF PLANTATION ON MARS

NADEEM ALAM, Department of Aeronautical Engineering, Babu Banarsi Das National Institute of Technology and Management, Lucknow,, India

A3.4. Small Bodies Missions and Technologies

October 15 2015, 09:45 — Schwartz Hall

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-15.A3.4.1 ROSETTA - FOLLOWING A LIVING COMET

Andrea Accomazzo, European Space Agency (ESA), Germany
IAC-15.A3.4.2
ROSETTA LANDER, PHILAE, ON COMET 67P/CHURYUMOV-

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

IAC-15.A3.4.3

ROSETTA PHILAE SAMPLING DRILLING AND DISTRIBUTION SUBSYSTEM: OPERATION AND RESULTS FROM THE FIRST ON-

Pierluigi Di Lizia, Politecnico di Milano, Italy

IAC-15.A3.4.4 (withdrawn)
DAWN AT CERES: THE FIRST EXPLORATION OF THE FIRST DWARF

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







ASTEROID SURFACE EXPLORATION ROVERS DEVELOPED FOR HAYABUSA-2 MISSION

Tetsuo Yoshimitsu, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan

IAC-15.A3.4.6

MASCOT, THE SMALL MOBILE ASTEROID LANDING PACKAGE ON ITS PIGGYBACK JOURNEY TO 1999 JU3: PRE-LAUNCH AND POST-LAUNCH ACTIVITIES

Caroline Lange, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-15.A3.4.7

DEPLOYMENT AND DYNAMICS OF SURFACE PACKAGES FOR SMALL **BODY EXPLORATION**

Daniel Scheeres, University of Colorado, United States

IAC-15.A3.4.8

AIDA: ASTEROID IMPACT & DEFLECTION ASSESSMENT Andy Cheng, The Johns Hopkins University Applied Physics Laboratory, United States

IAC-15.A3.4.9

INDUSTRIAL DESIGN OF ESA ASTEROID IMPACT MISSION Ian Carnelli, European Space Agency (ESA), France

BALLOON OBSERVATION PLATFORM FOR PLANETARY SCIENCE Dewey Adams, The Johns Hopkins University Applied Physics Laboratory, United States

A3.5. Solar System Exploration

October 15 2015, 14:45 — Schwartz Hall

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

Rapporteur(s): William H. Siegfried, The Boeing Company, United States:

IAC-15.A3.5.1

DESTINATION PLUTO: NEW HORIZONS PERFORMANCE DURING THE

Sarah Flanigan, The Johns Hopkins University Applied Physics Laboratory, United States

IAC-15.A3.5.2 (withdrawn)

ADAPTATION OF COMMERCIAL ELECTRIC PROPULSION SPACECRAFT TO SOLAR SYSTEM EXPLORATION MISSIONS

David Oh, Jet Propulsion Laboratory - California Institute of Technology, United States

IAC-15.A3.5.3 (withdrawn)

BEPICOLOMBO - A JOINT ESA/JAXA MISSION TO EXPLORE MERCURY

Joe Zender, European Space Research and Technology Centre, ESA-ESTEC, The Netherlands

IAC-15.A3.5.4

SIMBIO-SYS FOR BEPICOLOMBO: A COMPACT OPTICAL SUITE FOR **MERCURY**

Enrico Flamini, Italian Space Agency (ASI), Italy

IAC-15.A3.5.5

A MISSION FOR PROBING THE INTERIOR STRUCTURE OF VENUS David MIMOUN, ISAE-Supaero University of Toulouse, France

IAC-15.A3.5.6

RADIO SCIENCE INVESTIGATIONS WITH THE JUNO MISSION Marzia Parisi, Weizmann Institute of Science, Israel

IAC-15.A3.5.7 (withdrawn)

AN EXPLORATION OF ICY WORLD HABITABILITY: THE EUROPA

Barry Goldstein, Jet Propulsion Laboratory - California Institute of Technology, United States

IAC-15.A3.5.8

PLANETARY CUBESATS COME OF AGE Brent Sherwood, Caltech/JPL, United States

IAC-15.A3.5.9

LOW POWER LIGHTWEIGHT MICRO-METEOROLOGICAL STATION FOR WIRELESS SENSOR NETWORK BASED SPACE EXPLORATION Francisco Alvarez, Arquimea, Spain

A3.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

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

IAC-15.A3.IP.1

LOW DENSITY SUPERSONIC DECELERATOR USING MAGNETO HYDRODYNAMICS AND DYNAMIC DIFFUSERS Chrishma Sinah-Derewa, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-15.A3.IP.2

CONTROL AND NAVIGATION SYSTEM FOR AN AUTONOMOUS MARS

Kamal Galrani, Indian Institute of Technology, India

IAC-15.A3.IP.3

AN ULTRA STABLE OSCILLATOR FOR THE 3GM INVESTIGATION OF ESA'S "JUICE" MISSION TO THE JOVIAN SYSTEM Aviv Shapira, , Israel

IAC-15.A3.IP.4

ANALYSIS OF THE FLIGHT PATHS TO JUPITER USING THE SEQUENCE OF GRAVITATIONAL MANEUVERS

Mikhail S. Konstantinov, Moscow Aviation Institute, Russian

IAC-15.A3.IP.5

ORBITAL DESIGN BASED ON IMPROVED ANT COLONY ALGORITHM Xun Duan, College of Astronautics, Northwestern Polytechnical University, China

IAC-15.A3.IP.6

SPIN EXCHANGE OPTICAL PUMPED 3HE MAGNETOMETER FOR SPACE EXPLORATION

Shuangai Wan, , China

IAC-15.A3.IP.7

A NOVEL TRAJECTORY OPTIMIZATION METHOD FOR MARS ATMOSPHERIC ENTRY

Zhengshi Yu, School of Aerospace Engineering, Beijing Institute of Technology, China

IAC-15.A3.IP.8

SOME NECESSARY TECHNOLOGIES FOR IN-SITU ASTROBIOLOGY ON

Konstantinos Konstantinidis, Universität der Bundeswehr München,

IAC-15.A3.IP.9 (withdrawn)

JUPITER: MOMENT OF INERTIA. THE SHAPE-ROTATION RELATION. AND THE CONNECTION TO THE JUNO AND JUICE MISSIONS Ravit Helled, Tel Aviv University, Israel

IAC-15.A3.IP.10

TOUCHDOWN SIMULATION, TESTING AND VALIDATION OF A MARSLANDER DEMONSTRATOR Bianca Reinhardt, University of Bremen, Germany

IAC-15.A3.IP.11

RESEARCH ON MARS THREE-ROCKER LOCOMOTION SYSTEM WITH AUTOMOTIVE SUSPENSION

ZENG Ling-bin, Shanghai Aerospace System Engineering Institute,

IAC-15.A3.IP.12

METEOROLOGICAL PREDICTIONS FOR MARS 2020 EXPLORATION **ROVER HIGH-PRIORITY LANDING SITES**

Jorge Pla-García, INTA - Centro de Astrobiologia, Spain

IAC-15.A3.IP.13 (withdrawn)

A STUDY OF THE PARAMETERS INVOLVED IN DESIGNING AN INTERPLANETARY TRAJECTORY USING LAGRANGIAN POINTS

IAC-15.A3.IP.14

ACCURACY OF BEPICOLOMBO'S DETERMINATION OF THE POST-NEWTONIAN PARAMETERS

Anja Schuster, TU Darmstadt, Germany

IAC-15.A3.IP.15

AUTONOMOUS NAVIGATION AND GUIDANCE FOR MISSIONS TO **SMALL PLANETARY BODIES**

IAC-15.A3.IP.16

AUTONOMOUS RADIO-PHYSICAL GRAVIMETER BASED ON FEMTOSECOND LASER

Anatoliy Povrozin, National Science Center "Kharkov Institute of Physics and Technology", Ukraine

IAC-15.A3.IP.17

THE MARS SATELLITE ORBITS

Nikolay Sokolov, Central Research Institute of Machine Building (FSUE/TSNIIMASH). Russian Federation

IAC-15.A3.IP.18

GUIDANCE WITH PATH CONSTRAINTS

Jiateng Long, Beijing Institute of Technology, School of Aerospace Engineering, China

IAC-15.A3.IP.19

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Alessandro Fumagalli, Selex ES, Italy

IAC-15.A3.IP.20

STRATEGY FOR FUTURE CHINA AUTONOMOUS SAFE PLANETARY

Xiuqiang Jiang, Nanjing University of Aeronautics and Astronautics,

IAC-15.A3.IP.21

ROCK DETECTION ON MARS VIA SUPERPIXELS METHOD Xuemina Xiao, Deep Space Exploration Research Center, Harbin Institute of Technology, China

SELECTION OF THE MARTIAN LANDING SITE BASED ON THE ENGINEERING CONSTRAINTS

Jie Dong, China Academy of Space Technology (CAST), China

IAC-15.A3.IP.23

Su Wei, Beijing Institute of Space Long Mach Vehicle, China

IAC-15.A3.IP.24 (withdrawn)

EFFECTIVE USE OF FORCE FEEDBACK IN HEXAPOD WALKING

IAC-15.A3.IP.25

MANNED ROVER FOR MARS EXPLORATION, MOON AND OTHER **PLANETS**

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

IAC-15.A3.IP.26

A NOVEL CPLD-BASED SYSTEM FOR AN AUTONOMOUS MARS

IAC-15.A3.IP.27

DESIGN APPROACH OF LOW GAIN ANTENNA FOR DEEP **EXPLORATION VEHICLES**

Alankar Kotwal, Indian Institute of Technology, India

Chunhui Li, Shanghai Academy of Spaceflight Technology, China

IAC-15.A3.IP.28 (withdrawn)

STATUS OF ESA'S ON-GOING AND PLANNED TECHNOLOGY DEVELOPMENTS FOR A PHOBOS SAMPLE RETURN MISSION Sanjay Vijendran, ESA, The Netherlands

IAC-15.A3.IP.29

ASTEROID DEFLECTION IN LABORATORY - MOMENTUM TRANSFER MEASUREMENT OF LABORATORY HYPERVELOCITY IMPACT EXPERIMENTS ON ASTEROID-LIKE MATERIALS AS A FUNCTION OF TARGET POROSITY AND PROJECTILE SHAPE Jan Hupfer, Fraunhofer EMI, Germany

IAC-15.A3.IP.30

NAVIGATION CHALLENGES OF THE KANARIA ASTEROID MINING MISSION

Graciela González Peytaví, Bundeswehr Univeristy Munich,

IAC-15.A3.IP.31

REDUCING LARGE VIKING I BASED MARTIAN ENTRY, DESCENT AND LANDING RESPONSE SURFACE METHODOLOGY PRODUCED QUADRATIC MODELS

Narcrisha Norman, Howard University, United States

IAC-15.A3.IP.32

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Diana Laufer, Tel Aviv University, Israel

IAC-15.A3.IP.33 (withdrawn)

MODELING AND OPTIMIZATION OF MULTI-STAGE ASTEROID DEFLECTION CAMPAIGNS UNDER EPISTEMIC UNCERTAINTIES. Sung Wook Paek, Massachusetts Institute of Technology (MIT),

IAC-15.A3.IP.34

DESIGN AND DEVELOPMENT OF AN ACTIVE LANDING GEAR SYSTEM FOR LOW-GRAVITY ENVIRONMENTS

IAC-15.A3.IP.35

NEO DEFLECTION WITH B-PLANE UNCERTAINTY Nahum Melamed, The Aerospace Corporation, United States

METIS CORONOGRAPH - A SYSTEM ENGINEERING APPROACH

Cristian Corneliu Chitu, GMV-Romania, Romania

IAC-15.A3.IP.36 Alessandro Gabrielli, Italian Space Agency (ASI), Italy

DEVELOPMENT OF ROCK ANCHORS AND ROCK CLIMBING ROBOTS FOR THE ASTEROID REDIRECT MISSION AND FUTURE ROVERS Aaron Parness, Caltech/JPL, United States

IAC-15.A3.IP.38

INFERING THE DEPTH OF JUPITER AND SATURN'S ATMOSPHERIC DYNAMICS USING THE 2016-2017 GRAVITY MEASUREMENTS BY JUNO AND CASSINI

Eli Galanti, Weizmann Institute of Science, Israel

IAC-15.A3.IP.39

EXPLORATION OF MARTIAN SURFACE USING AN AUTONOMOUS OCTOCOPTER

Kartik Shah, University of Petroleum and Energy Studies, India

ROSHAN THOMAS EAPEN, , India

KANARIA: IDENTIFYING THE CHALLENGES FOR COGNITIVE

Alena Probst, Bundeswehr University Munich, Germany

COMPARATIVE ANALYSIS OF SPACECRAFT INSERTION PROFILES TO

ONBOARD WAYPOINT PLANNING BASED MARS PREDICTIVE ENTRY

IMPLEMENTING PLANETARY PROTECTION REQUIREMENTS ON THE

INNOVATIVE RELAY HAZARD DETECTION AND AVOIDANCE

IAC-15.A3.IP.22

AERODYNAMIC DESIGN AND SIMULATION OF MARS ROTORCRAFT

John Rippetoe, University of South Florida, United States









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Xiuqiang Jiang, Nanjing University of Aeronautics and Astronautics, China

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THE EFFECT OF CO2 ON GAS TRAPPING IN COMETARY ICES Adi Ninio Greenberg, Tel Aviv University, Israel

IAC-15.A3.IP.42

TECHNOLOGY OF INDUSTRIAL DEVELOPMENT OF THE MOON Evgeniy Rodin, Yuzhnoye State Design Office, Ukraine

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MOON HABITAT MODULE: NEW WAYS OF LIVING EXTREME SPACES Elisa Cenini, Politecnico di Milano, Italy

IAC-15.A3.IP.44 (withdrawn)

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Kyun Ho Lee, Sejong University, Korea, Republic of

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APPLICATION ANALYSIS AND DESIGN OF MOON-EARTH COMMUNICATION ANTENNAS OF CHANG'E-3 LUNAR ROVER Chunhui Li, Shanghai Academy of Spaceflight Technology, China

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CHARACTERIZATION, OBSERVATION, MAPPING, AND PROXIMITY APPROACH SENSOR SYSTEM (COMPASS)

Menachem (Manny) Nimelman, MDA Robotics & Automation, Canada

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OVERVIEW OF CHINESE CURRENT EFFORTS FOR MARS PROBE DESIGN

Xiuqiang Jiang, Nanjing University of Aeronautics and Astronautics, China

A4. 44th 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

October 13 2015, 14:45 — 302-303

Co-Chair(s): Douglas Vakoch , SETI Institute and California Institute of Integral Studies, United States;

IAC-15.A4.1.1

ON THE ABUNDANCE OF EXTRA TERRESTRIAL LIFE AFTER KEPLER Amri Wandel, The Hebrew University of Jerusalem, Israel

IAC-15.A4.1.2

REVISITING SETI SEARCHES FOR LARGE SCALE EXTRATERRESTRIAL TECHNOSIGNATURES

Lori Walton, Tigerstar Geoscience, Canada

IAC-15.A4.1.3

SETI TRANSIENT SIGNALS FROM ET SPACESHIPS DETECTED BY THE RELATIVISTIC KLT

Claudio Maccone, International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF), Italy

IAC-15.A4.1.4

PULSAR CLOCKS AS A TIMESTAMPS FOR ACTIVE SETI MESSAGES
Douglas Vakoch, SETI Institute, United States

IAC-15.A4.1.5

ONE EARTH: NEW HORIZONS MESSAGE INITIATIVE Daniela de Paulis, University of Amsterdam, Italy

IAC-15.A4.1.6

ON MODALITIES IN LINGUA COSMICA LOGICA Alexander Ollongren, Leiden University, The Netherlands

C-15.A4.1.7

HUBOTS CHARACTERIZED BY LINGUA COSMICA LOGICA Alexander Ollongren, Leiden University, The Netherlands

A4.2. SETI 2: SETI and Society

October 14 2015, 14:45 — 312

Co-Chair(s): Lori Walton , Tigerstar Geoscience, Canada;

IAC-15.A4.2.1

THE HISTORY OF THE SETI PERMANENT COMMITTEE Lori Walton, Tigerstar Geoscience, Canada

IAC-15.A4.2.2

WHO SPEAKS FOR EARTH?

H. Paul Shuch, The SETI League, Inc., United States

AC-15.A4.2.3

MUSIC AS AN ANALOGUE FOR INTERSTELLAR MESSAGE COMPOSITION

Douglas Vakoch, SETI Institute, United States

IAC-15.A4.2.4

EVO-SETI SCALE TO MEASURE LIFE ON EXOPLANETS
Claudio Maccone, International Academy of Astronautics (IAA) and
Istituto Nazionale di Astrofisica (INAF), Italy

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HUMAN CONCEPTIONS OF THE RISE AND FALL OF CIVILIZATIONS David Dunér, Lund University, Sweden

IAC-15.A4.2.6

METALAW AND THE INTRINSIC VALUE OF EXTRATERRESTRIAL ORGANISMS

Bari Greenfeld, , United States

IAC-15.A4.2.7

COGITO: FROM THE EARTH-CENTRED TO THE COSMOS-WIDE PERSPECTIVE

Daniela de Paulis, University of Amsterdam, Italy

A4.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Claudio Maccone, International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF), Italv:

AC-15.A4.IP.1

PRELIMINARY OSETI ACTIVITIES AT FOAM13 OBSERVATORY (ITALY) Claudio Maccone, International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF), Italy

A5. 18th 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

October 14 2015, 14:45 — Eshkol 3

Co-Chair(s): Michael Raftery , Boeing Defense Space & Security, United States; Nadeem Ghafoor , Canadensys Aerospace Corporation, Canada;

Rapporteur(s): Kathy Laurini , National Aeronautics and Space Administration (NASA), United States; Uwe Apel , Hochschule Bremen, Germany;

IAC-15.A5.1.1

INTERNATIONAL MISSIONS TO LUNAR VICINITY AND SURFACE
- NEAR-TERM MISSION SCENARIO OF THE GLOBAL SPACE
FXPLORATION ROADMAP

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

IAC-15.A5.1.2

ASTEROID REDIRECT MISSION: EARLY HUMAN SPACE FLIGHT IN THE PROVING GROUND

Michele Gates, NASA Headquarters, United States

IAC-15.A5.1.3

THE EUROPEAN SERVICE MODULE CONTRIBUTION TO THE ORION PROGRAM

Massimiliano Bottacini, European Space Agency (ESA), The Netherlands

C-15.A5.1.4

CONCEPTUAL DESIGN OF A HUMAN PLATFORM IN CIS-LUNAR SPACE IN THE YEAR 2020/2025

IAC-15.A5.1.5

SPACE COLONISATION: A NEW APPROACH - ISLAND ZERO Jerry Stone, , United Kingdom

Paul Nizenkov, University of Stuttgart, Germany

IAC-15.A5.1.6

FOSTERING A CIS-LUNAR INFRASTRUCTURE FOR HUMAN EXPLORATION AND SPACE COMMERCE

Ronald Ticker, National Aeronautics and Space Administration (NASA), United States

IAC-15.A5.1.7 (withdrawn)

DEFINING THE TRANSIT HABITAT

Caris Hatfield, National Aeronautics and Space Administration (NASA)/Johnson Space Center, United States

IAC-15.A5.1.8

INTERNATIONAL INDUSTRY CONCEPTS FOR EARLY ASTRONAUT MISSION BEYOND LOW EARTH ORBIT

Josh Hopkins, Lockheed Martin Corporation, United States

IAC-15.A5.1.9 (withdrawn)

MANNED SPACE FLIGHTS BEYOND LEO: DEPENDENCE/ INTERDEPENDENCE

Yury Makushenko, S.P. Korolev Rocket and Space Corporation Energia, Russian Federation

IAC-15.A5.1.10

CONCEPTS FOR EARLY EXPLORATION MISSIONS
Matthew Duggan, The Boeing Company, United States

IAC-15.A5.1.11

ADVANCES IN MODULAR ASSEMBLY IN LOW EARTH ORBIT(MALEO) STRATEGY FOR LUNAR BASE DEVELOPMENT

Madhu Thangavelu, University of Southern California, United States

IAC-15.A5.1.12

A RESEARCH ON EVALUATION SYSTEM FOR SITE SELECTION OF MANNED LUNAR BASE

Chao Chen, Aerospace System Engineering Shanghai, China, China

IAC-15.A5.1.13

A PERSONAL SHIELD FOR CIS-LUNAR RADIATION PROTECTION
David Murrow, Lockheed Martin (Space Systems Company), United
States

A5.2. Human Exploration of Mars

October 13 2015, 14:45 — Eshkol 3

Co-Chair(s): Maria Antonietta Perino , Thales Alenia Space Italia, Italy; Nadeem Ghafoor , Canadensys Aerospace Corporation, Canada;

Rapporteur(s): Norbert Frischauf, Austria;

IAC-15.A5.2.1

A METHOD TO EVALUATE ARCHITECTURAL COMPARISONS FOR A CAMPAIGN TO EXPLORE THE SURFACE OF MARS Eric Ward, Massachusetts Institute of Technology (MIT), United

IAC-15.A5.2.2

PHOBOS: GATEWAY TO MARS

Christopher Moore, National Aeronautics and Space Administration (NASA), United States

IAC-15.A5.2.3

IAA STUDY GROUP 3.16: ALTERNATIVES FOR HUMAN MARS EXPLORATION MISSIONS

Giancarlo Genta, Politecnico di Torino, Italy

IAC-15.A5.2.4

CHEMICAL PROPULSION AND SPLIT OPTION FOR AN AFFORDABLE MANNED MISSION TO MARS

Jean-Marc Salotti, Laboratoire de l'Intégration du Matériau au Système, France

IAC-15.A5.2.5

MARS VISION 2030: A HUMAN EXPLORATION ARCHITECTURE FOR ESTABLISHING A LONG-TERM PRESENCE ON MARS Mark Schaffer, SpaceWorks Enterprises, Inc., United States

IAC-15.A5.2.6

A PROPOSED ARCHITECTURE TO ESTABLISH A PERMANENT HUMAN PRESENCE ON MARS

Buzz Aldrin, Buzz Aldrin Enterprises, LLC & President of the ShareSpace Foundation, United States

IAC-15.A5.2.7 (withdrawn)

ONE-WAY VERSUS RETURN MARS MISSION ARCHITECTURES - A COMPARISON OF LIFECYCLE OPERATING COSTS

 ${\it Sydney\ Do,\ Massachusetts\ Institute\ of\ Technology\ (MIT),\ United\ States}$

AC-15.A5.2.8

TECHNICAL SAFETY ANALYSIS OF A ONE-WAY HUMAN TO MARS MISSION

Joao Lousada, OHB-System AG, Germany

IAC-15.A5.2.9

MARS DESERT RESEARCH STATION: CREW 138

Avid Roman-Gonzalez, , Peru







INDIAN SPACE UNIVERSITY - AN INITIATIVE TO NURTURE "BRAHMANAUTS" FOR FUTURE HUMAN SPACE FLIGHT Chrishma Singh-Derewa, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-15.A5.2.11

A COGNITION-BASED DESIGN APPROACH FOR A COMMUNITY HABITAT ON MARS.

Marianthi Liapi, Aristotle University of Thessaloniki, Greece

IAC-15.A5.2.12

100-PERSON MARS TRANSFER VEHICLE USING TORPOR INDUCING HABITATS

Mark Schaffer, SpaceWorks Enterprises, Inc., United States

A5.3-B3.6. Human and Robotic Partnerships in Exploration - Joint session of the Human **Spaceflight and Exploration Symposia**

October 15 2015, 14:45 — Ballroom A

Co-Chair(s): Christian Sallaberger, Canadensys Aerospace Corporation, Canada; Pierre Jean , Canadian Space Agency,

Rapporteur(s): Mark Hempsell, Hempsell Astronautics Limited, United Kingdom

IAC-15.A5.3-B3.6.1

FACTORS AFFECTING HUMAN PERFORMANCE AS ROVER TELEOPERATORS

Yuval Brodsky, Italian Mars Society, Israel

IAC-15.A5.3-B3.6.2

THE USE OF VARIABLE AUTONOMY ROBOTICS TO IMPROVE CAPABILITY, UTILIZATION, AND FLEXIBILITY IN DEEP SPACE **EXPLORATION MISSIONS FROM CISLUNAR SPACE TO MARS** Richard Rembala, MDA, Robotics and Automation, Canada

IAC-15.A5.3-B3.6.3 (withdrawn)

TIME-OF-FLIGHT CAMERAS FOR ACTIVE SUSPENSION CONTROL AND AUTONOMOUS NAVIGATION ON A SMALL LUNAR ROVER Giancarlo Genta, Politecnico di Torino, Italy

IAC-15.A5.3-B3.6.4 (withdrawn)

SUPERVISED AUTONOMY AS AN OPERATIONS TOOL FOR DEEP SPACE ROBOTICS

Christopher S. Langley, MDA Corporation, Canada

IAC-15.A5.3-B3.6.5

INTUITIVE GESTURE CONTROL FOR THE ISS SPACE STATION REMOTE MANIPULATOR ARM

Sherrie Hall, Massachusetts Institute of Technology (MIT), United States

IAC-15.A5.3-B3.6.6

MOONWALK - PROTOTYPING THE SPACESUIT HUMAN-MACHINE INTERFACES OF THE FUTURE FOR TEST IN WATER IMMERSION PARTIAL GRAVITY SIMULATIONS

Diego Urbina, Space Applications Services N.V./S.A, Belgium

IAC-15.A5.3-B3.6.7

REDUCING EARTH DEPENDENCY FOR HUMAN SPACEFLIGHT THROUGH ROBOTIC SPACE MANUFACTURING Jason Dunn, Made In Space, Inc., United States

IAC-15.A5.3-B3.6.8 (withdrawn)

MULTIMODAL PERCEPTION BASED CALIBRATION METHODS AND DEVICE OF HUMANOID FINGER SENSOR

Chen Meng, Institute of Aerospace System Engineering Shanghai, CASC. China

IAC-15.A5.3-B3.6.9 (withdrawn)

APPLICATION OF ADVANCED ROBOTICS FOR THE EXPLORATION OF OUTER SPACE OBJECTS BY THE EXAMPLE OF ROBOTICS FOR LUNAR RESEARCH. USE OF ANTHROPOMORPHIC ROBOTS FOR THE FURTHER EXPLORATION OF NEAR-EARTH SPACE AND FOR THE TASKS OF LUNAR AND MARS EXP

Vladislav Sychkov, SPA "Android Technics", Russian Federation

A5.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Christian Sallaberger, Canadensys Aerospace Corporation, Canada; Maria Antonietta Perino , Thales Alenia Space Italia, Italy;

IAC-15.A5.IP.1

FOUR IS NOT ENOUGH: MARS MISSION CREW SIZE RECOMMENDATIONS FOLLOWING ACTUAL EMERGENCY EXPERIENCE AT MARS ANALOG SIMULATION. Nick Orenstein, University of Southern California, United States

IAC-15.A5.IP.2

STRUCTURAL MEMBERS PRODUCED FROM UNREFINED LUNAR REGOLITH, A STRUCTURAL ASSESSMENT Stephen Indyk, Rutgers University, United States

IAC-15.A5.IP.3 (withdrawn)

AERODYNAMIC HEATING SIMULATION OF EXOMARS DESCENT MODULE DM-16

Andrey Gorshkov, Central Research Institute of Machine Building (TSNIIMASH), Russian Federation

IAC-15.A5.IP.4

THE REPORT BY NEW PROJECTS OF LOW BUDGET SCIENTIFIC AND COMMERCIAL PILOTED EXPEDITION TO MARS Oleg Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

IAC-15.A5.IP.5

A STUDY ON THE CLIMBING GAIT ON THE SURFACE OF CHINA SPACE STATION OF A FOUR-ARM SPACE ROBOT Liangliang HAN, Institute of Aerospace System Engineering Shanghai, CASC, China

A6. 13th IAA SYMPOSIUM ON SPACE **DEBRIS**

d'Etudes Spatiales (CNES), France; J.-C. Liou, National Aeronautics and Space Administration (NASA), United

A6.1. Measurements

October 12 2015, 15:15 — Eshkol 2

Rapporteur(s): Vladimir Agapov , , Russian Federation;

THE CONJUNCTION ANALYSIS

Igor Molotov, Keldysh Institute of Applied Mathematics, RAS, Russian Federation

IAC-15.A6.1.2

EXTRACTION OF SPIN PERIODS OF SPACE DEBRIS FROM OPTICAL LIGHT CURVES

Esther Linder, Astronomical Institute University of Bern (AIUB), Switzerland

IAC-15.A6.1.3

PHOTOMETRIC CHARACTERIZATION OF GEO OBJECTS FROM THE LOIANO TELESCOPE

Tommaso Cardona, University of Rome "La Sapienza", Italy

IAC-15.A6.1.4

COMPARISON OF THERMAL IR AND VISIBLE SIGNATURES OF GRAVEYARD ORBIT OBJECTS

Mark A. Skinner, Boeing, United States

IAC-15.A6.1.5

ISON SPACE DEBRIS DETECTION PIPELINE: RECENT DEVELOPMENTS Vladimir Kouprianov, Central Astronomical Observatory, RAS. Russian Federation

IAC-15.A6.1.6

A STANDARD PROPOSAL FOR A TELESCOPE COMMANDING AND SCHEDULING DATA EXCHANGE FORMAT

Philipp Maier, European Space Agency (ESA), The Netherlands

IAC-15.A6.1.7

AN IMAGING SYSTEM FOR AUTOMATED CHARACTERISTIC LENGTH MEASUREMENT OF DEBRISAT FRAGMENTS

Matthew Moraguez, University of Florida, United States

IAC-15.A6.1.8

DEVELOPMENT ON IN-SITU SENSORS FOR MICRO-METEOROID AND ORBITAL DEBRIS MEASUREMENT AT JAXA Yukihito Kitazawa, IHI Corporation, Japan

IAC-15.A6.1.9

METHOD FOR ESTIMATING ROLLING PERIOD OF SPACE DEBRIS USING RCS

Wei Niu, State Key Laboratory of Astronautic Dynamics, China

A6.2. Modelling and Risk Analysis

October 13 2015, 09:45 — Eshkol 2

Co-Chair(s): Carmen Pardini , ISTI-CNR, Italy; Marlon Sorge , ,

Rapporteur(s): Sven Kevin Flegel, Fraunhofer Institute for High Frequency Physics and Radar Techniques (FHR), Germany;

IAC-15.A6.2.1

COMPARING LONG-TERM PROJECTIONS OF THE SPACE DEBRIS ENVIRONMENT TO REAL WORLD DATA - LOOKING BACK TO 1990 Jonas Radtke, Technische Universität Braunschweig, Germany

RECENT ENHANCEMENTS TO ADEPT AND SAMPLE DEBRIS **ENVIRONMENT PROJECTIONS**

Alan B. Jenkin, The Aerospace Corporation, United States

IAC-15.A6.2.3

THE METHOD OF PREDICTING SPACE DEBRIS IN LOW-EARTH ORBITS, TAKING INTO ACCOUNT MUTUAL COLLISIONS AND ACTIVE DEBRIS REMOVAL

Igor Usovik, Moscow Aviation Institute (National Research Institute, MAI). Russian Federation

IAC-15.A6.2.4

ANALYSIS OF ASSUMPTIONS IN DEBRIS ENVIRONMENT EVOLUTION MODELS

David Finkleman, SkySentry, LLC, United States

IAC-15.A6.2.5

THE EFFECT OF UNCERTAINTIES ON THE EFFECTIVENESS OF MITIGATION AND REMEDIATION MEASURES Juan Carlos Dolado Perez, Centre National d'Etudes Spatiales (CNES), France

IAC-15.A6.2.6

CHARACTERIZATION OF ABANDONED ROCKET BODY FAMILIES FOR ACTIVE REMOVAL

Carmen Pardini, ISTI-CNR, Italy

IAC-15.A6.2.7

DEVELOPING A TACTICAL ADJUNCT TO ADR TO INSURE A SUSTAINABLE SPACE ENVIRONMENT Darren McKnight, Integrity Applications Incorporated (IAI), United

IAC-15.A6.2.8

IMPACT FRAGMENTATION MODEL DEVELOPMENTS Marlon Sorge, The Aerospace Corporation, United States

IAC-15.A6.2.9

CHARACTERIZATION OF DEBRIS FROM THE DEBRISAT HYPERVELOCITY TEST

Moises Rivero, University of Florida, United States

IAC-15.A6.2.10

ORBIT EVOLUTION OF SPECULAR NON-SPHERICAL SPACE DEBRIS OBJECTS WITH HIGH AREA TO MASS RATIO.

Nikolay Sakva, Federal state unitary enterprise "Central Scientific Research Institute of machine-building" (TsNIIMASH), Russian

IAC-15.A6.2.11

A RISK ASSESSMENT TOOL FOR HIGHLY ENERGETIC BREAK-UP EVENTS DURING THE ATMOSPHERIC RE-ENTRY. Cristina De Persis, Trinity College, Ireland

A6.3. Hypervelocity Impacts and Protection

October 14 2015, 09:45 — Eshkol 2

Co-Chair(s): Frank Schaefer , Fraunhofer - Institut für Kurzzeitdynamik, Ernst-Mach-Institut (EMI), Germany; Norman Fitz-Coy, University of Florida, United States; Rapporteur(s): Alessandro Francesconi, University of Padova -

DII/CISAS, Italy; IAC-15.A6.3.1

A NEW BALLISTIC LIMIT EQUATION FOR THIN TAPE TETHERS Alessandro Francesconi, University of Padova - DII/CISAS, Italy

EXPERIMENTAL AND NUMERICAL INVESTIGATIONS OF STUFFED WHIPPLE SHIELDS PROTECTING CHINESE MANNED SPACECRAFT AGAINST ORBITAL DEBRIS

Li Shan, Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST), China

IAC-15.A6.3.3

PRELIMINARY STUDY ON THE PERFORMANCE OF SHIELDING CONFIGURATION WITH STUFFED LAYER UNDER HYPERVELOCITY

Fa-wei Ke, China Aerodynamics Research and Development Center, China

IAC-15.A6.3.4

SIMPLIFIED S/C VULNERABILITY ASSESSMENTS AT COMPONENT LEVEL IN EARLY DESIGN PHASE AT ESA'S CDF

Scott Kempf, Fraunhofer - Institut für Kurzzeitdynamik, Ernst-Mach-Institut (EMI), Germany

IAC-15.A6.3.5

ELECTRICAL PHENOMENA CAUSED BY HYPERVELOCITY IMPACT Tanaka Koji, ISAS/JAXA, Japan

Coordinator(s): Christophe Bonnal, Centre National

Co-Chair(s): Heather Cowardin, Jacobs Technology, ESCG, United States; Thomas Schildknecht , Astronomical Institute University of Bern (AIUB) / SwissSpace Association, Switzerland;

NEW SUBSYSTEM OF THE ISON OPTICAL NETWORK TO IMPROVE







INTEGRATION OF A DUST ACCELERATOR INTO THE IPG6-B FACILITY FOR MATERIAL IMPACT TESTS

Christoph Montag, Institute of Space Systems, Universität Stuttgart,

IAC-15.A6.3.8

EXPERIMENTAL STUDY FOR LASER-DRIVEN FLYER PLATES UP TO 8

Zizheng GONG, China Academy of Space Technology (CAST), China

IAC-15.A6.3.9

MASS DISTRIBUTION AND DEPENDENCE ON IMPACT PARAMETERS OF SPACECRAFT BREAKUP DEBRIS

SHENGWEI LAN, China Aerodynamics Research and Development Center, China

IAC-15.A6.3.10 (withdrawn)

HYPER VELOCITY IMPACT ANALYSIS OF CUBE SAT AND SUBSEQUENT ORBIT DETERMINATION

Akanksha Dadhich, University of Petroleum and Energy Studies,

A6.4. Mitigation and Standards

October 13 2015, 14:45 — Eshkol 2

Co-Chair(s): Christian Cazaux , Centre National d'Etudes Spatiales (CNES), France; Holger Kraq, European Space Agency (ESA), Germany:

Rapporteur(s): Akira Kato , Japan Aerospace Exploration Agency (JAXA), Japan;

IAC-15.A6.4.1

FAILURE ANALYSIS OF SATELLITE SUBSYSTEMS TO DEFINE SUITABLE **DE-ORBIT DEVICES**

Chiara Palla, Cranfield University, United Kingdom

IAC-15.A6.4.2

6 DOF DRAG AUGMENTATION SAILS DYNAMICS MODELLING TO DRIVE SYSTEM AND DISPOSAL OPERATIONS DESIGN Michèle Lavagna, Politecnico di Milano, Italy

IAC-15.A6.4.3

IMPLEMENTATION OF DEBRIS PREVENTION AND REDUCTION MEASURES BY AN INDEPENDENT PROPULSIVE DECOMMISSIONING DEVICE

Stefano Antonetti, , Italy

IAC-15.A6.4.4

CURRENT PRACTICES IN IMPLEMENTING MITIGATION MEASURES FOR LEO MISSIONS

Holger Krag, European Space Agency (ESA), Germany

IAC-15.A6.4.5

"DESIGN FOR DEMISE" TECHNIQUES TO REDUCE RE-ENTRY CASUALTY RISK

David Riley, Deimos Space UK Ltd, United Kingdom

IAC-15.A6.4.6

IMPROVING THE ACCURACY OF GENERAL PERTURBATIONS METHODS FOR SPACECRAFT LIFETIME ANALYSIS Emma Kerr, University of Strathclyde, United Kinadom

IAC-15.A6.4.7

END-OF-LIFE DISPOSAL FROM HIGHLY ECCENTRIC ORBITS Quirin Funke, European Space Agency (ESA), Germany

IAC-15.A6.4.8

ON THE DISPOSAL OF NAVIGATION SATELLITES Roberto Armellin, University of Southampton, United Kingdom

IAC-15.A6.4.9

ANALYSIS ON LONG TERM ORBITAL EVOLUTION OF GEOSYNCHRONOUS TRANSFER ORBITS Shraddha Gupta, Vikram Sarabhai Space Centre (VSSC), India

IAC-15.A6.4.10

SEARCH FOR THE SHORT-LIFETIME DISPOSAL ORBITS FOR REMOVAL OF THE ROCKET BODIES, PROVIDING THE GSO INSERTION, FROM THE GTO REGIONS

Yury Kolyuka, TSNIIMASH, Russian Federation

IAC-15.A6.4.11

DE-ORBITING AND PASSIVATION OF SINOSAT-3 Jiangong Liu, China Academy of Space Technology (CAST), China

A6.5. Space Debris Removal Technologies

October 15 2015, 09:45 — Eshkol 2

Co-Chair(s): Fabrizio Piergentili , University of Rome "La Sapienza", Italy; M.Y.S. Prasad , Indian Space Research Organization (ISRO), India:

Rapporteur(s): Fabio Santoni , University of Rome "La

IAC-15.A6.5.1

ORBITAL DEBRIS REMOVAL WITH GECKO-LIKE ADHESIVES; TECHNOLOGY DEVELOPMENT AND MISSION DESIGN Aaron Parness, Caltech/JPL, United States

IAC-15.A6.5.2

A BIOMIMETIC APPROACH FOR ACTIVE DEBRIS REMOVAL Xinlong Chen, China Academy of Space Technology (CAST), China

IAC-15.A6.5.3 (withdrawn)

INVESTIGATION OF ELECTROADHESION TECHNOLOGY FOR ON ORBIT ACTIVE SPACE DEBRIS REMOVAL

Braven Leung, University of Illinois at Urbana-Champaign, United

IAC-15.A6.5.4

LAUNCH ADAPTER RING CAPTURE TOOL: CANADIAN ROBOTIC TECHNOLOGY FOR THE AUTONOMOUS CAPTURE OF UNPREPARED AND NON-OPERATIONAL ORBITAL DEBRIS

Richard Rembala, MDA, Robotics and Automation, Canada

IAC-15.A6.5.5

ALGORITHM FOR DETERMINATION OF FORCE TRANSMITTED BY PLUME OF ION THRUSTER TO ORBITAL OBJECT USING PHOTO CAMERA

Anatoliy Alpatov, Institute of Technical Mechanics of the National Academy of Science and State Space Agency of Ukraine, Ukraine

IAC-15.A6.5.6

ON THE SIMULATION OF TETHER-NETS FOR SPACE DEBRIS CAPTURE WITH VORTEX DYNAMICS

Eleonora Botta, McGill University, Canada

IAC-15.A6.5.7

AN ANALYSIS OF CRITICAL DEPLOYMENT PARAMETERS FOR TETHERED-NET CAPTURING FOR SPACE DEBRIS REMOVAL Minghe Shan, Delft University of Technology (TU Delft), The Netherlands

IAC-15.A6.5.8

VALIDATION RESULTS OF SATELLITE MOCK-UP CAPTURING EXPERIMENT USING NETS

Alberto Medina, GMV Aerospace & Defence SAU, Spain

RESULTS AND ROADMAP FOR ON-GROUND BREAD-BOARDING AND TESTING OF KEY GNC TECHNOLOGIES FOR ACTIVE DEBRIS REMOVAL Mariella Graziano, GMV Aerospace & Defence SAU, Spain

A6.6. Space Debris Removal Concepts

October 15 2015, 14:45 — Eshkol 2

Co-Chair(s): Nicolas Bérend , Office National d'Etudes et de Recherches Aérospatiales (ONERA), France; Seishiro Kibe, Japan Aerospace Exploration Agency (JAXA), Japan;

Rapporteur(s): Mark Matney , National Aeronautics and Space Administration (NASA)/Johnson Space Center, United States;

IAC-15.A6.6.1

AGORA: MISSION TO DEMONSTRATE TECHNOLOGIES TO ACTIVELY REMOVE ARIANE ROCKET BODIES Kartik Kumar, Dinamica Srl, Italy

IAC-15.A6.6.2

MISSION DESIGN AND GNC FOR IN-ORBIT DEMONSTRATION OF ACTIVE DEBRIS REMOVAL TECHNOLOGIES WITH CUBESATS Camille Pirat, Ecole Polytechnique Fédérale de Lausanne (EPFL), Swiss Space Center (SSC), Switzerland

AN IN-ORBIT ACTIVE DEBRIS REMOVAL MISSION - REMOVEDEBRIS: PRF-LALINCH LIPDATE

Jason Forshaw, Surrey Space Centre, University of Surrey, United

IAC-15.A6.6.4

PRIVATE SPACE COMPANY SPACE-BASED SOLUTIONS TO THE GROWING THREAT COMING FROM ORBITAL DEBRIS Philippe Moreels, ASTROSCALE PTE. LTD., Rep. Of Singapore

IAC-15.A6.6.5

THE E.DEORBIT MISSION: RESULTS OF ESA'S PHASE A STUDIES FOR AN ACTIVE DEBRIS REMOVAL MISSION

Robin Biesbroek, ESA european space agency, The Netherlands

IAC-15.A6.6.6

OHB CONCEPTS FOR ACTIVE SPACE DEBRIS REMOVAL AND ON-ORBIT SERVICING

Gerrit Hausmann, OHB System AG - Munich, Germany

IAC-15.A6.6.7 (withdrawn)

AVIOSPACE'S DEVELOPMENTS ON ACTIVE DEBRIS REMOVAL **TECHNOLOGIES AND CONCEPTS** Alessandro Chiesa, Aviospace, Italy

Jan Stupl, SGT Inc. / NASA Ames Research Center, United States

IAC-15.A6.6.8

LIGHTFORCE PHOTON-PRESSURE COLLISION AVOIDANCE: EFFICIENCY ANALYSIS IN THE CURRENT DEBRIS ENVIRONMENT AND LONG-TERM SIMULATION PERSPECTIVE

IAC-15.A6.6.9

LASER ABLATION FOR SPACE DEBRIS MITIGATION Alaa Hussein, University of Sussex, United Kingdom

IAC-15.A6.6.10

AN CONCEPTUAL DESIGN FOR A SPACE DEBRIS REMOVAL SPACECRAFT

Xin Qu, Beijing Institute of Electronic System Engineering, China

IAC-15.A6.6.11 (withdrawn)

ACTIVE IN-ORBIT JUNK REMOVERS - AN INDISPENSABLE SERVICE FOR TRUE SPACE DEBRIS MITIGATION

Nevo Taaseh, Effective Space Solutions, Israel

A6.7. Operations in Space Debris **Environment, Situational Awareness**

October 16 2015, 09:45 — Eshkol 2

Co-Chair(s): David Finkleman, International Academy of Astronautics, United States; T.S. Kelso, Center for Space Standards and Innovation, United States;

Rapporteur(s): Juan Carlos Dolado Perez , Centre National d'Etudes Spatiales (CNES), France;

IAC-15.A6.7.1

COLLISION AVOIDANCE: FROM GENERAL GUIDELINES TO INDIVIDUAL REALITIES

Claire FREMEAUX, Centre National d'Etudes Spatiales (CNES),

IAC-15.A6.7.2

TWO MODERN WEB TOOLS HELPING ESA'S DEBRIS OPERATIONAL

Daniel Novak, CGI, Germany

IAC-15.A6.7.3

OPERATIONAL CONSIDERATIONS OF GEO DEBRIS SYNCHRONIZATION DYNAMICS

Paul Anderson, University of Colorado Boulder, United States

A NEW METHOD FOR TIME OF CRITICAL APPROACH CALCULATION Elad Denenberg, TECHNION - Israel Institute of Technology, Israel

CAPABILITIES OF ISON OBSERVATION NETWORK AND THE SPACE DEBRIS DATA CENTER IN SUPPORT SPACE OPERATIONS SAFETY IN GEO REGION

Vladimir Agapov, Keldysh Institute of Applied Mathematics, RAS, Russian Federation

FROM SIMULATION TO REALITY: CATALOGUING CAMPAIGN OF SPACE POPULATION BASED ON OPTICAL OBSERVATIONS Noelia Sanchez Ortiz, Deimos Space S.L., Spain

IAC-15.A6.7.7

ORBITAL DEBRIS HAZARD INSIGHTS FROM SPACECRAFT ANOMALIES **STUDIES**

Darren McKnight, Integrity Applications Incorporated (IAI), United States

IAC-15.A6.7.8

DISSECTING SPACE DEBRIS EVENTS T.S. Kelso, Center for Space Standards and Innovation, United States

ΙΔC-15 Δ6 7 9 PROVIDING ORBITAL INFORMATION FOR OBJECTS IN EARTH ORBITS

AS CHEBYSHEV POLYNOMIALS Vitali Braun, ESOC - European Space Agency, Germany

A6.8. (joint session with Space Security Committee): Policy, Legal, Institutional and **Economic Aspects of Space Debris Detection,** Mitigation and Removal

October 16 2015, 13:30 — Eshkol 2

Co-Chair(s): Brett Biddinaton . Space Industry Association of Australia, Australia; Darren McKnight, Integrity Applications Incorporated (IAI), United States;

Rapporteur(s): Charlotte Mathieu , European Space Agency (ESA), France;

OBJECT DETECTION

Netherlands

(KAIST), Korea, Republic of

NUMERICAL SIMULATION

IAC-15.A6.IP.1

Chunsen Shi, Delft University of Technology (TU Delft), The

HYPERVELOCITY IMPACT SIMULATION OF DESIGNED MICRO

YunHo Kim, Korea Advanced Institute of Science and Technology

STRUCTURE CORE SANDWICH PANEL USING SPH

IAC-15.A6.IP.4 INVESTIGATION INTO DAMAGE OF WOVEN STUFFED SHIELD UNDER HIGH-SPEED NON-METAL PROJECTILE IMPACT

Gongshun Guan, Harbin Institute of Technology, China

IAC-15.A6.IP.5 EXPERIMENT AND CALCULATION OF THE PERFORMANCE OF DEBRIS SHIELD STUFFED WITH GLASS EPOXY PLATE

Xuezhong Wen, China Aerodynamics Research and Development Center, China

IAC-15.A6.IP.6

BALLISTIC LIMIT EQUATION FOR ALUMINUM HONEYCOMB SANDWICH PANELS

MA ZHAOXIA, China Aerodynamics Research and Development Center, China

IAC-15.A6.IP.7

DAMAGE CHARACTERISTICS OF WHIPPLE SHIELD SUBJECTED BY HYPERVELOCITY IMPACT OF SILICATE SIMULACRUM FOR MICRO-**METEOROIDS**

Bin Jia, Harbin Institute of Technology, China

CHASING SPACE DEBRIS, MISSILES & SATELLITES - USING GROUND SYSTEMS. TRACKING & HIGH-RES IMAGING SYSTEMS FOR HIGH PROPER MOTION SPACE OBJECTS. Ido Bareket, , Israel

IAC-15.A6.IP.9 (withdrawn)

EVASIVE MANEUVERS PULSED IN SPACE DEBRIS ENVIRONMENT, SUBJECT TO DISTURBANCES OF ATMOSPHERIC DRAG AND TECHNOLOGICAL PARAMETERS.

Antonio Delson Jesus, Brazilian Space Agency (AEB), Brazil

IAC-15.A6.IP.10 (withdrawn)

EVASIVE MANEUVERS ON A COLLISION COURSE WITH CLOUD OF SPACE DEBRIS

Antonio Delson Jesus, Brazilian Space Agency (AEB), Brazil

IAC-15.A6.IP.11 (withdrawn)

DYNAMICS AND CONTROL OF LARGE DEBRIS IN TETHER DRAG DEORBITING

Liang Sun, Beihang University, China

IAC-15.A6.IP.12

SURREY SPACE CENTRE: A SURVEY OF DEBRIS REMOVAL RESEARCH

Jason Forshaw, Surrey Space Centre, University of Surrey, United

IAC-15.A6.IP.13 (withdrawn)

MACHINE LEARNING APPLIED TO AUTONOMOUS ROBOTIC CAPTURE OF AN UNCOOPERATIVE TUMBLING TARGET Marko Jankovic, German Research Centre for Artificial Intelligence, IAC-15.A6.IP.14

OPTIMAL DIRECTION AND A PROCESS DESIGN OF REMOVING LOW EARTH ORBIT DEBRIS WITH SPACE-BASED LASER Han Wei-hua, Beijing Aerospace Control Center (BACC), China

IAC-15.A6.IP.15

METHODICAL APPROACH TO COMPREHENSIVELY RESOLUTION THE PROBLEM OF ENVIRONMENTAL POLLUTION REDUCTION WHEN SLV WITH LPF LAUNCHES

Valeriy Trushlyakov, Omsk State Technical University, Russian Federation

IAC-15.A6.IP.16

DORBIT SYSTEM BASED ON VACUUM ARC THRUSTER FOR MICRO SATELLITE

Kateryna Aheieva, Laboratory of Spacecraft Environment Interaction Engineering ,Kyushu Institute of Technology, Japan

IAC-15.A6.IP.17 (withdrawn)

RESEARCHE ON THE MEASUREMENT OF RELATIVE POSITION AND POSE BETWEEN TWO NON-COOPERATIVE SPACECRAFTS Yu Liu, Aerospace System Engineering Institute ShangHai, China

IAC-15.A6.IP.18

SYNCHRONIZATION STRATEGY OF ORBITAL PLANE AND PHASING FOR ACTIVE DEBRIS REMOVAL WITH MICRO-THRUSTER Zhang Jinxiu, Harbin Institute of Technology, China

IAC-15.A6.IP.19

AUTOMATIC DETECTION ALGORITHM FOR SPACE DEBRIS Rong-Yu Sun, Purple Mountain Astronomical Observatory, China

IAC-15.A6.IP.20 (withdrawn)

ORBIT PREDICTION PRECISION IMPROVEMENT OF LEO SPACE OBJECTS AND ITS APPLICATION IN COLLISION RISK ESTIMATES Zhongya Cang, China Meteorological Administration, China

IAC-15.A6.IP.21 AN ANALYSIS OF THE APPLICABILITY OF SPACE DEBRIS MITIGATION GUIDELINES TO THE COMMERCIAL SMALL-SATELLITE INDUSTRY

Narayan Prasad Nagendra, Dhruva Space, India

IAC-15.A6.IP.22 TETHER ORBITAL PERTURBATIONS INFLUENCE DETERMINATOR Marcel Becker, TU Braunschweig, Germany

IAC-15.A6.IP.23 MATURING THROW-NETS FOR SPACE DEBRIS CAPTURE WITH VALIDATED SIMULATORS AND ZERO-G TESTING.

Kjetil Wormnes, ESA, The Netherlands

IAC-15.A6.IP.24 (withdrawn) TOWARDS THE GENERATION OF EMPIRICAL THERMAL FLUX

DATASETS FOR THE IMPROVEMENT OF ENGINEERING-LEVEL **DESTRUCTIVE RE-ENTRY SIMULATIONS** Nathan Donaldson, University of Oxford, United Kinadom

IAC-15.A6.IP.25 (withdrawn)

DEORBITING OF NANO SATELLITE USING COLD GAS THRUSTER TO MINIMIZE SPACE DEBRIS. Biltu Mahato. . India

IAC-15.A6.IP.26

NET-BASED SPACE DEBRIS CAPTURE TECHNOLOGY DEVELOPMENT PLAN: TESTING IN RELEVANT ENVIRONMENT Michèle Lavagna, Politecnico di Milano, Italy

IAC-15.A6.IP.27

ENVIRONMENTAL IMPACT OF SPACE DEBRIS REPOSITIONING

IAC-15.A6.IP.28

EQUO: AN EQOATORIAL OBSERVATORY TO IMPROVE THE ITALIAN SPACE SURVEILLANCE CAPABILITY

Fabrizio Piergentili, University of Rome "La Sapienza", Italy

IAC-15.A6.IP.29

A NOVEL RECYCLING CONCEPT FOR SPACE DEBRIS MITIGATION Gioacchino Scire, University of Rome "La Sapienza", Italy

DEBRIS MITIGATION AS AN INSURANCE IMPERATIVE Andrea Harrington, Institute of Air and Space Law, McGill University, United States

International Astronautical Congress

12 - 16 October 2015, Jerusalem, Israel

IAC-15.A6.8.2

IAC-15.A6.8.1

SATELLITE SELF REMOVAL AS MITIGATION TO SPACE DEBRIS Denis Bensoussan, , United Kingdom

IAC-15.A6.8.3

NEEDS OF AN INTERNATIONAL POLICY AND A REGULATION FRAMEWORK FOR OPERATIONAL DEBRIS MITIGATION SYSTEMS Annamaria Nassisi, Thales Alenia Space Italia, Italy

IAC-15.A6.8.4

THE COST-EFFECTIVENESS OF POST-MISSION DISPOSAL **MANEUVERS**

Carsten Wiedemann, Technische Universität Braunschweig, Germany

IAC-15.A6.8.5

COULD INTRODUCTION OF SPACE PAYLOAD MANAGEMENT BE THE NEXT STEP TO SPACE TRAFFIC MANAGEMENT? Serge Plattard, European Space Policy Institute (ESPI), Austria

IAC-15.A6.8.6

CONSIDERATIONS FOR THE LONG-TERM SUSTAINABILITY OF OUTER SPACE ACTIVITIES

IAC-15.A6.8.7

CHINA'S PROMOTION ON SPACE SECURITY AND SAFETY Shengjun Zhang, China Academy of Launch Vehicle Technology(CALT), China

Susumu Yoshitomi, Japan Space Forum, Japan

IAC-15.A6.8.8

ADR ACTIVITIES: FACET OF RESPONSIBLE USE OF OUTER SPACE AND LIMITS OF THEIR LEGALITY

Olga S. Stelmakh, Parliament of Ukraine / DRSH Group Int., Ukraine

A6.9. Modelling and Orbit Determination

October 14 2015, 14:45 — Eshkol 2

Co-Chair(s): Heiner Klinkrad, European Space Agency (ESA), Germany; Moriba Jah, Air Force Research Laboratory (AFRL),

Rapporteur(s): Hugh G. Lewis, University of Southampton, United Kinadom:

IAC-15.A6.9.1

QUANTIFYING REENTRY UNCERTAINTY: STATISTICS, DRIVERS, AND BEST PRACTICES

Joseph Gangestad, The Aerospace Corporation, United States

IAC-15.A6.9.2 (withdrawn)

MODELING RE-ENTRY AERO-THERMODYNAMICS USING A RESPONSE SURFACE MODEL

Piyush Mehta, University of Strathclyde, United Kingdom

IAC-15.A6.9.3

SURVIVABILITY AND DEMISE CRITERIA FOR SUSTAINABLE SPACECRAFT DESIGN

Mirko Trisolini, University of Southampton, United Kingdom

IAC-15.A6.9.4 (withdrawn)

DEBRIS SHAPE CHARACTERIZATION USING BALLISTIC COEFFICIENT **ESTIMATION**

John McVey, Affiliated with The Aerospace Corporation, United

IAC-15.A6.9.5

DETERMINING THE INFLUENCE ON ORBIT PREDICTION BASED ON UNCERTAINTIES IN ATMOSPHERIC MODELS Christopher Kebschull, Technische Universität Braunschweig,

IAC-15.A6.9.7

DYNAMICAL EVOLUTION OF DEFUNCT GEO SATELLITES WITH FLEXIBLE SOLAR ARRAYS SUBJECT TO SOLAR RADIATION PRESSURE AND GRAVITY

Mengping Zhu, China Academy of Space Technology (CAST), China

IAC-15.A6.9.8

ON THE COMPUTATION OF PRELIMINARY ORBITS FOR SPACE **DEBRIS WITH RADAR OBSERVATIONS** Helene Ma, University of Pisa, Italy

IAC-15.A6.9.9

A COVARIANCE ANALYSIS TO OPTIMIZE THE OPTICAL FOLLOW-UP STRATEGIES Emiliano Cordelli, Astronomical Institute University of Bern (AIUB),

IAC-15.A6.9.10

ASSOCIATING OPTICAL MEASUREMENTS AND ESTIMATING ORBITS OF GEOCENTRIC OBJECTS THROUGH POPULATION-BASED META-HEURISTIC METHODS

Michiel Zittersteijn, Astronomical Institute University of Bern (AIUB),

A6.10-YPVF.5. Space Debris Young **Professionals Virtual Forum**

October 12 2015, 15:15 — Kerem Carmit

Co-Chair(s): Charlotte Mathieu, European Space Agency (ESA), France; Kevin Stube, The Planetary Society, United States; Rapporteur(s): Christophe Bonnal , Centre National d'Etudes Spatiales (CNES), France;

IAC-15.A6.10-YPVF.5.1

REMOVAL OF SPACE DEBRIS USING SATELLITE LASER GUN Raunak Raj, University of Petroleum and Energy Studies, India

IAC-15.A6.10-YPVF.5.2 (withdrawn)

A SEMI-SUPERVISED LEARNING BASED SPACE DEBRIS DETERMINATION USING ONLY PUBLICALLY AVAILABLE TWO-LINE ELEMENT SETS

Hang Li, China Academy of Launch Vehicle Technology, China

IAC-15.A6.10-YPVF.5.3 DEPENDABLE DESIGN FOR THE GNC SYSTEM OF THE "CHASER" SPACECRAFT

Fabrizio Stesina, Politecnico di Torino, Italy

IAC-15.A6.10-YPVF.5.4

SPACE DEBRIS REMOVAL Hari Shankar, I.I.A.E.I.T IGNOU, India

IAC-15.A6.10-YPVF.5.5

SPACE DEBRIS

Jaishree Sarojini, Karunya University, India

IAC-15.A6.10-YPVF.5.6

ESA'S CLEAN SPACE INITIATIVE - AN OVERVIEW OF THE SPACE DEBRIS MITIGATION AND REMEDIATION ACTIVITIES Andrew Wolahan, ESTEC, The Netherlands

A6.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Christophe Bonnal , Centre National d'Etudes Spatiales (CNES), France; J.-C. Liou, National Aeronautics and Space Administration (NASA), United States;









IAC-15.A6.IP.30

A.R.T.I.C.A. DEORBITING SYSTEM: THE NEW DESIGN AND PROTOTYPE OF A COMPACT DEORBITING SAIL ON BOARD CUBESAT "URSA MAIOR"

Niccolò Bellini, N.P.C. New Production Concept, Italy

IAC-15.A6.IP.31

DESIGN AND FIRST PROTOTYPE OF AN ALT-AZ MOUNT FOR 1M CLASS TELESCOPE FOR SPACE DEBRIS TRACKING

Davide Rastelli N.P.C. New Production Concept. Italy

IAC-15.A6.IP.32

LEO SPACE DEBRIS REMOVAL TASK ANALYSIS AND DEVELOPMENT PROPOSALS

Xiaoguang Chen, Shanghai Institute of Aerospace Technology, China

IAC-15.A6.IP.33

OHB REMEDIATION ACTIVITIES FOR A CLEANER SPACE – E.DEORBIT AND TENTACLE-BASED CLAMPING MECHANISM Marc Scheper, OHB System AG-Bremen, Germany

IAC-15.A6.IP.34

SPACE DEBRIS REMOVAL USING DE-ORBIT KIT TECHNOLOGY Sourabh Kaushal, Institute of Science and Technology, Klawad, Haryana, INDIA, India

IAC-15.A6.IP.35

PROBABLE APPROACHES TO THE NEAR-EARTH ORBITS CLEAN-UP FROM SPACE DEBRIS WITH DIMENSIONS LESS THAN 10 CENTIMETERS

Vera Mayorova, Bauman Moscow State Technical University, Russian Federation

IAC-15.A6.IP.36

OHB MITIGATION ACTIVITIES FOR A CLEANER SPACE – CLEANSAT, DESIGN-FOR-DEMISE, IN-ORBIT REFUELLING, PROPULSION SUBSYSTEM PASSIVATION

Jan-Christian Meyer, OHB System AG-Bremen, Germany

IAC-15.A6.IP.37 (withdrawn)

ADVANCED VISION BASED TECHNIQUE FOR CLOSE RANGE NAVIGATION IN ON-ORBIT SERVICING

Karthik Ravandoor, University Wuerzburg, Germany

IAC-15.A6.IP.38

OPTIMIZING OBSERVATION SCHEDULING FOR DEBRIS TRACKING FACILITY WITH SHORTEST PATH ALGORITHM

Haowen Cheng, National Astronomical Observatories, Chinese Academy of Sciences, China

IAC-15.A6.IP.39 (withdrawn)

AN APPLICATION OF STAMP (SYSTEMS-THEORETIC ACCIDENT MODELING AND PROCESSES) IN SPACE DEBRIS MITIGATION Eduardo Serrano, National Institute for Space Research - INPE,

IAC-15.A6.IP.40

ON THE USE OF LONG-RANGE RADARS FOR SPACE SITUATIONAL AWARENESS: AN EXPERIMENTAL TEST Marco MOLINA, Selex ES, Italy

IAC-15.A6.IP.41

GENERIC MODEL FOR SPACE DEBRIS MITIGATION FOR THE CUBESAT CONSTELLATION MISSIONS

Pouyan Azari, Luleå Technical University, Germany

IAC-15.A6.IP.42

Daniele Emanuele Chiuri, Institut Supérieur des Sciences Et Techniques (INSSET), France

IAC-15.A6.IP.43

SOFTWARE FOR SPACE-BASED OPTICAL OBSERVATION SYSTEM Jacopo Piattoni, University of Bologna, Italy

IAC-15.A6.IP.44

THE BOUNDARY ANALYSIS OF THE TLES' UNCERTAINTY IN ACTIVE REMOVAL OF CUBESAT-LEVEL SPACE DEBRIS
Li Feng, School of Astronautics, Harbin Institute of Technology,

IAC-15.A6.IP.45

ON THE CAPABILITY OF LASER OBSERVATIONS TO IMPROVE THE ORBIT PREDICTION ACCURACY OF SPACE DEBRIS OBJECTS Harald Wirnsberger, Space Research Institute - Austrian Academy of Sciences, Austria

IAC-15.A6.IP.46

ANALYTIC LIFETIME-ESTIMATION AND TLE VALIDATION OF REENTERING SPACE-OBJECTS

Registric Musiller Corman Air Force, Cormany

Benjamin Mueller, German Air Force, Germany

IAC-15.A6.IP.47 (withdrawn)

THE CONSTRUCTION OF THE CHARACTERISTICS OF SPATIAL DISTRIBUTION OF CATALOGED SPACE DEBRIS OBJECTS Chingiz Akniyazov, School of Astronautics, Beihang University, China

IAC-15.A6.IP.48

A COMPLEX OF NON-ITERATIVE METHODS FOR PLANNING SESSIONS OF OBSERVATIONS OF ORBITAL OBJECTS Tatyana V. Labutkina, Dnepropetrovsk National University named after Oles' Gonchar, Ukraine

IAC-15.A6.IP.49

ADOPTION OF THE MARITIME LAW SALVAGE PRINCIPLE FOR SPACE DEBRIS REMOVAL

OLUSOJI NESTER JOHN, African Regional Center for Space Science and Technology Education in English (ARCSSTE-E), Nigeria

C-15.A6.IP.50

ON THE MOTION OF 12-HOUR SATELLITES IN NEAR CIRCULAR ORBITS

Ming-Jiang Zhang, Purple Mountain Astronomical Observatory, China

A7. SYMPOSIUM ON TECHNOLOGICAL REQUIREMENTS FOR FUTURE SPACE ASTRONOMY AND SOLAR-SYSTEM SCIENCE MISSIONS

Coordinator(s): Jacobus van Zyl , SunSpace, South Africa;

A7.1. Space-Agencies Long-Term Views

October 12 2015, 15:15 — 302-303

Co-Chair(s): Jakob van Zyl , National Aeronautics and Space Administration (NASA), United States;

IAC-15.A7.1.1

THE FUTURE OF SPACE ASTRONOMY: AN UPDATE OF THE COSPAR ROAD MAP

Pietro Ubertini, INAF, Italy

IAC-15.A7.1.2

STRATEGIC MAP FOR EXPLORING THE OCEAN-WORLD ENCELADUS Brent Sherwood, Caltech/JPL, United States

IAC-15.A7.1.3

SUPPORTING THE TECHNOLOGY NEEDS OF THE AUSTRALIAN ASTRONOMY AND SPACE SCIENCE COMMUNITY Naomi Mathers, Advanced Instrumentation and Technology Centre (AITC), Australia

IAC-15.A7.1.4

ATHENA: MISSION AND SPACECRAFT DESIGN FOR A NEXT GENERATION X-RAY TELESCOPE. Ivo Ferreira, ESA, The Netherlands

IAC-15.A7.1.5

ATHENA: TECHNOLOGY DEVELOPMENT PLAN FOR A NEXT GENERATION X-RAY TELESCOPE Eric Wille, ESA, The Netherlands

IAC-15.A7.1.6

SYSTEM ARCHITECTURE FOR A COMPACT, LOW-COST 56-92 GHZ SPACE BASED SOLAR EVENT OBSERVATION INSTRUMENT Flavien Sagouo Minko, University of Pretoria, South Africa

IAC-15.A7.1.7

STUDY OF SMALL PAYLOAD TYPES FOR COMMERCIAL LUNAR PLATFORMS

Dan Hendrickson, , United States

A7.2. Scientific Motivation and Requirements for Future Space Astronomy and Solar System Science Missions

October 13 2015, 09:45 — 302-303

Co-Chair(s): Jakob van Zyl , National Aeronautics and Space Administration (NASA), United States;

IAC-15.A7.2.1

A SURVEY OF ECLIPSING BINARIES WITH THE ULTRAVIOLET TRANSIENT ASTRONOMY SATELLITE (ULTRASAT) Maayane Soumagnac, Weizmann Institute of Science, Israel

IAC-15.A7.2.2

GALEX/PTF SEARCH FOR EARLY ULTRAVIOLET OBSERVATIONS OF SUPERNOVAE IN PREPERATION FOR ULTRASAT - A DEDICATED WIDE-FIELD UV SURVEY

IAC-15.A7.2.3

SURVEYING THE 217.5 NM EXTINCTION FEATURE WITH A SMALL

Avigdor Blasberger, TECHNION - Israel Institute of Technology, Israel

AC-15.A7.2.4

THE ISS-LOBSTER GAMMA-RAY TRANSIENT MONITOR Lee Yacobi, , Israel

Noam Ganot, Weizmann Institute of Science, Israel

IAC-15.A7.2.5

DETECTING TRANSITING PLANETS WITH THE SPACE TELESCOPE GAIA

Shay Zucker, Tel Aviv University, Israel

IAC-15.A7.2.6

NANOSAT WITH MAGNETOMETER PAYLOAD TO COMPLIMENT THE EUROPA CLIPPER MISSION: A CONCEPT STUDY Erinn van Wynsberghe, University of Michigan, United States

IAC-15.A7.2.7

A DEDICATED EARTH-ORBITING SPACECRAFT FOR INVESTIGATING FUNDAMENTAL PHYSICS AND THE SPACE ENVIRONMENT Roberto Peron, INAF-IAPS, Italy

IAC-15.A7.2.8

TESTING GENERAL RELATIVITY IN THE SOLAR SYSTEM Roberto Peron, INAF-IAPS, Italy

A7.3. Technology Needs for Future Missions, Platforms

October 15 2015, 14:45 — 314

Co-Chair(s): Jakob van Zyl , National Aeronautics and Space Administration (NASA), United States;

C-15.A7.3.1

SYSTEM DESIGN CHALLENGES OF HIGH-PRECISION PHOTOMETRY OBSERVATION FOR THE PLATO MISSION

Bastian Burmann, OHB System AG-Bremen, Germany

IAC-15.A7.3.2

AN ASSESSMENT OF CURRENT AND PROPOSED ALTERNATIVES FOR DETECTING SMALL NEAR EARTH OBJECTS (NEO)

Bhavya Lal, Science and Technology Policy Institute, United States

IAC-15.A7.3.3

A HIGH-EFFICIENCY TRANSMISSION-LINE SPECTROMETER FOR FAR-INFRARED AND SUBMILLIMETER SPACE MISSIONS Giuseppe Cataldo, National Aeronautics and Space Administration (NASA)/Goddard Space Flight Center, United States

IAC-15.A7.3.4

A STUDY FOR QUALITY FACTORS OF MULTI-SPACECRAFT FORMATION DETECTION EFFICIENCY Wenlong Niu, CSSAR/CAS, China

IAC-15.A7.3.5

AUTONOMOUS SYSTEMS ADVANCES FOR FUTURE SOLAR SYSTEM SCIENCE MISSION REQUIREMENTS

Dan Hendrickson, , United States

B1. EARTH OBSERVATION SYMPOSIUM

Coordinator(s): John Hussey , Consultant, United States; Pierre Ranzoli , Eumetsat, Germany;

B1.1. International Cooperation in Earth Observation Missions

October 12 2015. 15:15 — Eshkol 3

Co-Chair(s): John Hussey , Consultant, United States; Mukund Rao , Navayuga Spatial Technologies Pvt. Ltd., India; Rapporteur(s): David Brent Smith , National Oceanic and Atmospheric Administration (NOAA), United States;

IAC-15.B1.1.1

2015 ACTIVITIES OF THE CEOS

Yukimitsu Yamamoto, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.B1.1.2

V-GLOBE, A "ONE STEP BEYOND" PROGRAM UNDER WAY IN EUROPE INAUGURATING A NEW INTERNATIONAL COOPERATIVE SCHEME FOR EARTH OBSERVATION.

Jean-pierre ANTIKIDIS, BLUE PLANET, France

IAC-15.B1.1.3 (withdrawn)

THE ROLE OF WORLD METEOROLOGICAL ORGANIZATION IN DEVELOPING A SPACE-BASED ARCHITECTURE FOR CLIMATE MONITORING. WENJIAN ZHANG. WMO SPACE PROGRAMME. WORLD METEOROLOGICAL ORGANIZATION (WMO) Wenjian Zhang, , Switzerland

IAC-15.B1.1.4

SATELLITE FORMATIONS AND CONSTELLATIONS FOR SYNERGETIC MISSIONS: A PARADIGM FOR INTERNATIONAL COOPERATION IN EARTH OBSERVATION

Pierluigi Silvestrin, European Space Agency (ESA), The Netherlands IAC-15.B1.1.5 (withdrawn)

AFFORDABLE LANDSAT SOLUTIONS LEADING TO IMPROVED REVISIT

Robert LeRoy, Lockheed Martin (Space Systems Company), United States

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TAIWAN'S FORMOSAT SATELLITES IN RESPONSES TO ASIA PACIFIC REGIONAL DISASTERS WITH SENTINEL ASIA

Ming-Chih Cheng, National Space Organization, Taiwan, China

IAC-15.B1.1.7

INTERCOMPARISON OF WATER VAPOUR AND TEMPERATURE RETRIEVALS BETWEEN THE CSA'S ACE-FTS AND THE UCAR/NSPO'S COSMIC/FORMOSAT-3 SATELLITES, AND PRESENTATION OF A NEW ALGORITHM FOR RETRIEVING TEMPERATURE.

Kevin Olsen, Univeristy of Toronto, Canada

IAC-15.B1.1.8

THE EVOLUTION OF EARTH OBSERVATION SATELLITES IN EUROPE AND WORLDWIDE AND ITS IMPACT ON THE PERFORMANCE OF **EMERGENCY RESPONSE SERVICES**

Gil DENIS, Airbus Defence and Space - Space Systems, France

IAC-15.B1.1.9 (withdrawn)

THE PROPOSED NISAR INSTRUMENT OVERVIEW: DUAL FREQUENCY (L- AND S-BAND) SAR

Yunjin Kim, Jet Propulsion Laboratory, United States

IAC-15.B1.1.10

UNESCO - CHINA CENTER: UTILIZING EARTH OBSERVATION FOR THE CONSERVATION OF WORLDWIDE NATURAL AND CULTURAL HERITAGE

Eytan Tepper, CHINA UNIVERSITY OF POLITICAL SCIENCE AND LAW,

B1.2. Future Earth Observation Systems

October 13 2015, 09:45 — Eshkol 3

Co-Chair(s): Benoit Boissin, Centre National d'Etudes Spatiales (CNES), France; Gilles Corlay, Sodern, France;

Rapporteur(s): Gunter Schreier, Deutsches Zentrum für Luftund Raumfahrt e.V. (DLR), Germany;

IAC-15.B1.2.1

VENUS - AN INNOVATIVE SATELLITE FOR THE STUDY AND MODELLING OF LAND SURFACE PROCESSES

Pierric Ferrier, Centre National d'Etudes Spatiales (CNES), France

SHALOM - SPACE-BORNE HYPERSPECTRAL APPLICATIVE LAND AND OCEAN MISSION

Elad Sagi, Israel Aerospace Industries. Ltd., Israel

IAC-15.B1.2.3

NEXT GENERATION SPACE BASED COMMERCIAL HYPERSPECTRAL IMAGING ARCHITECTURE

Erik Daehler, The Boeing Company, Phantom Works, United States

IAC-15.B1.2.4

THE INNOVATIVE MICROSATELLITE-BASED CANADIAN WILDLAND FIRE MONITORING SYSTEM

Jean-Francois Hamel, NGC Aerospace Ltd., Canada

IAC-15.B1.2.5

GENERIC NANO SATELLITE CONSTELLATION FOR MONITORING

Neelakandan Pradeesh Kumar, Noorul Islam Centre for Higher Education Noorul Islam University, India

IAC-15.B1.2.6

SPACEBORNE LASER FILAMENTATION: A NEW REMOTE SENSING TOOL FOR ATMOSPHERIC SPECTROSCOPY?

Isabelle Dicaire, European Space Agency (ESA), The Netherlands

GAOFEN-2 MISSION INTRODUCTION AND CHARACTERISTICS Ming Li, China Academy of Space Technology (CAST), China

IAC-15.B1.2.8

TANDEM-L: DESIGN CHALLENGES FOR A LEO SATELLITE WITH A LARGE DEPLOYABLE REFLECTOR

Frank te Hennepe, OHB System AG-Bremen, Germany

IAC-15.B1.2.9 (withdrawn)

AN OVERVIEW OF THE PROPOSED SURFACE WATER AND OCEAN TOPOGRAPHY MISSION

Parag Vaze, Caltech/JPL, United States

IAC-15.B1.2.10

ESA'S EARTH OBSERVATION MISSIONS: OUTLOOK ON CONCEPTS UNDER STUDY

Pierluigi Silvestrin, European Space Agency (ESA), The Netherlands

IAC-15.B1.2.11

UNITED STATES PLANS FOR CONTINUITY OF OPERATIONAL POLAR WEATHER AND ENVIRONMENTAL OBSERVATIONS

Harry A. Cikanek, National Oceanic and Atmospheric Administration (NOAA), United States

B1.3. Earth Observation Sensors and Technology

October 14 2015, 09:45 — Eshkol 3

Co-Chair(s): Andrew Court , TNO, The Netherlands; Ralph Girard, Canadian Space Agency, Canada;

Rapporteur(s): Yean Joo Chong, National University of Singapore, Rep. Of Singapore;

FOCUS ON THE ITALIAN P-BAND AIRBORNE RADAR: CURRENT PERFORMANCE AND FUTURE PERSPECTIVES Claudia Facchinetti, Italian Space Agency (ASI), Italy

IAC-15.B1.3.2 (withdrawn)

CHALLENGES IN SYSTEM DESIGN OF A HIGH-PERFORMANCE VNIR/ SWIR HYPERSPECTRAL IMAGER FOR MINI-SATELLITES Arie Leizer, Elbit Systems, Electro Optics, ELOP Ltd., Israel

IAC-15.B1.3.3

INNOVATIVE IDEAS FOR THE DETECTION OF FIRES FROM A GEOSTATIONARY ORBIT

Shimshon (Steven) Lashansky, Elbit Systems, Electro Optics, ELOP Ltd., Israel

IAC-15.B1.3.4 (withdrawn)

VALIDATION OF THE TET-SATELLITE IMAGING SENSORS Ralf Reulke, Humboldt University of Berlin, Germany

IAC-15.B1.3.5

FLUORESCENCE IMAGING SPECTROMETER (FLORIS): A HIGH ACCURACY INSTRUMENT WITH PROVEN TECHNOLOGIES AND ROBUST DESIGN

Peter Coppo, Selex ES S.p.A, Italy

IAC-15.B1.3.6

CMOS-TDI PERFORMANCES BY MODIFICATION OF CONTROL

Andreas Eckardt, DLR, German Aerospace Center, Germany

THE PRISMA MISSION HYPERSPECTRAL PAYLOAD Marco Meini, Selex ES, Italy

IAC-15.B1.3.8 (withdrawn)

CONCEPT OF JOINT SHORT WAVELENGTH INFRARED AND VISIBLE CAMERA FOR EARTH OBSERVATION IN NANO-SATELLITES Gabby Sarusi, Ben-Gurion University of the Negev, Israel

IAC-15.B1.3.9

GREENHOUSE GASES MEASUREMENT INSTRUMENTS ON GOSAT-2 MASAKATSU NAKAJIMA, JAXA, Japan

IAC-15.B1.3.10 (withdrawn)

COMPACT INFRARED CAMERA(CIRC) FOR EARTH OBSERVATION Haruyoshi Katayama, Japan Aerospace Exploration Agency (JAXA),

B1.4. Earth Observation Data Management Systems

October 15 2015, 09:45 — Eshkol 3

Co-Chair(s): Gunter Schreier, Deutsches Zentrum für Luftund 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-15.B1.4.1

COMPARISON BETWEEN VARIOUS METHODS FOR DETECTING PHASE SPEED OF WAVES IN THE OCEAN USING SATELLITE BORNE ALTIMETER

Yair De-Leon, The Hebrew University of Jerusalem, Israel

IAC-15.B1.4.2

A EARTH OBSEVATION DATA STORAGE MODEL BASED ON GLOBAL **GRID SYSTEM**

Fubiao Xi, China Academy of Launch Vehicle Technology, China

EFFICIENT DATA ANALYSIS OF MODIS SATELLITE IMAGES Marco Schmidt, Bochum University of Applied Sciences, Germany

IAC-15.B1.4.4 A SUB-PIXEL SAR AND OPTICAL IMAGE REGISTRATION METHOD Hanmo Zhang, Shanghai Aerospace Control Technology Institute,

IAC-15.B1.4.5 (withdrawn) SAR SATELLITE DATA REDUCTION USING DYNAMIC 4 PATH - BLOCK GAIN TREE STRUCTURED VECTOR QUANTIZATION Hyeon-Cheol Lee, Korea Aerospace Research Institute (KARI), Korea,

IAC-15.B1.4.6

Republic of

RESEARCH ON THE TECHNOLOGY OF MEASURING INNER SENSING ELEMENTS OF REMOTE SENSING CAMERA WITHOUT RADIATION CALIBRATION

Long Ju, Beijing Institute of Space Mechanics & Electricity, CAST,

IAC-15.B1.4.7

A SIMPLE INDICATOR FOR ESTIMATING THE NOISE LEVEL OF A HYPERSPECTRAL DATA CUBE FOR EARTH OBSERVATION MISSIONS Eyal Ben Dor, TAU Remote Sensing Laboratory, Israel

IAC-15.B1.4.8

SPYMESAT MOBILE APP FOR IMAGING SATELLITE AWARENESS AND

Ella Herz, , United States

B1.5. Earth Observation Applications and Economic Benefits

October 15 2015, 14:45 — Eshkol 3

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, Rep. Of Singapore;

IAC-15.B1.5.1

EO APPLICATIONS AND ECONOMIC IMPACTS FOR UNDERWATER CULTURAL HERITAGE (UCH): FIRST RESULTS FROM THE EU FP7 ITACA PROJECT

Rosario Pavone, SME4SPACE, Belgium

IAC-15.B1.5.2 (withdrawn)

EARTH OBSERVATION COMMODITIZATION AND GROWTH Brigit Kelly, Space Foundation, United States

IAC-15.B1.5.3 (withdrawn)

COSMO-SKYMED® DATA FOR CROP MONITORING Rocchina Guarini, Italian Space Agency (ASI), Italy

IAC-15.B1.5.4 (withdrawn)

IMPLEMENTATION OF ASSISTED SPACE TECHNOLOGY IN THE DEVELOPMENT OF NATIONAL INFRASTRUCTURE IN THAILAND Ravit Sachasiri, Geo-Informatics and Space Technology Development Agency (GISTDA), Thailand

IAC-15.B1.5.5 (withdrawn)

EVALUATING THE RELATIONSHIP BETWEEN FOREST DEGRADATION, RECOVERY, AND CONSERVATION EFFORTS WITH LANDSAT IMAGERY IN SOUTHEASTERN BRAZIL

Megan Ewert, Charles University, Czech Republic

IAC-15.B1.5.6

REMOTE SENSING AND GIS A TOOL TO MAP LAND AREAS FOR FADAMA FARMING IN BASHAR PLATEAU STATE, NIGERIA. Joy Agene, National Centre for Remote Sensing, Jos, Nigeria

IAC-15.B1.5.7

EARTH OBSERVATION FOR DEVELOPMENT - ESA Anna Burzykowska, ESA, Italy

IAC-15.B1.5.8

MONITORING ENVIRONMENTAL EFFECTS OF HYDRAULIC FRACTURING USING REMOTE SENSING: TRACKING FRACKING Angie Bukley, International Space University (ISU), United States

IAC-15.B1.5.9

BEIJING SERIES SMALL EARTH OBSERVATION SATELLITES AND SERVICE

Wei Sun, Twenty First Century Aerospace Technology Co.,Ltd, China

IAC-15.B1.5.9

MULTITEMPORAL COSMO-SKYMED DATA APPLICATIONS: OVERVIEW ON SMALL AND MEDIUM ENTERPRISES OPPORTUNITIES Maria girolamo Daraio, Italian Space Agency (ASI), Italy

IAC-15.B1.5.10

WIDE AREA SURFACE MOVEMENT DETECTION AND MONITORING IN MILLIMETRE PRECISION FROM SPACE. Frank Hensler, Airbus Defence and Space (DS), Germany

DISCOVERING PATTERNS OF CHANGE IN DESERT-FRINGE **ECOSYSTEMS**

Maxim Shoshany, Technion, I.I.T., Israel

IAC-15.B1.5.12

EMERGING CAPABILITIES IN SATELLITE OBSERVATIONS OF THE ATMOSPHERE THAT WILL DECREASE UNCERTAINTY IN QUANTIFYING GLOBAL WARMING

Daniel Rosenfeld, The Hebrew University of Jerusalem, Israel

B1.6. Water resources management

October 16 2015, 09:45 - Eshkol 3

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),







SATELLITE AND MODEL BASED TOOL FOR SHORT TERM PREDICTION OF TRACER TRANSPORT IN EASTERN MEDITERRANEAN SURFACE WATERS

Eyal Heifetz, Tel Aviv University, Israel

IAC-15.B1.6.2

SATELLITE SERVICES FOR WATER PROBLEMS IN JORDAN: SPACEFORMED STUDY RESULTS

Michal Moroz, Blue Dot Solutions, Poland

IAC-15.B1.6.3 (withdrawn)

MEASUREMENT OF SUBSIDENCE AND LEVEE INTEGRITY IN THE SACRAMENTO-SAN JOAOUIN DELTA IN CALIFORNIA

Priyanka Sharma, Jet Propulsion Laboratory - California Institute of Technology, United States

IAC-15.B1.6.4

GLOBAL WATER INITIATIVE

Martin Jüssi, , Estonia

IAC-15.B1.6.5

WATER QUALITY PRODUCTS OF THE SHALOM MISSION Tal Feingersh, Israel Aerospace Industries. Ltd., Israel

IAC-15.B1.6.6

TANK INFORMATION SYSTEM IN KARNATAKA USING EO IMAGES AND GIS INTEGRATION

D K Prabhuraj, KSRSAC, India

IAC-15.B1.6.7

POST-2015 WATER MANAGEMENT: A CRITICAL APPLICATION FOR **FARTH SATELLITES**

Richard Lawford, NASA, Canada

B1.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): John Hussey , Consultant, United States; Pierre Ranzoli . Fumetsat. Germany:

IAC-15.B1.IP.1

RECOGNITION OF SPATIAL IMAGES AND THE ANALYSIS THAT MODULATE LA VARIABILITY THE SOME PEST OF BEAN CROPS IN

Graciela Velasco Herrera, CCADET-UNAM, Mexico

IAC-15.B1.IP.2

SMILE DISTORTION EXTENT ESTIMATION FOR HYPERSPECTRAL DATACUBES

Puneeth Shankar, KSRSAC, India

IAC-15.B1.IP.3 (withdrawn)

COSMO-SKYMED TANDEM-LIKE SAR INTERFEROMETRIC DEM: ANALYSIS AND AVALUATION

Nunzia Lombardi, ASI - Italian Space Agency, Italy

IAC-15.B1.IP.4 (withdrawn)

ANALYSIS OF CNT BASED IR DETECTOR FOR SPACE APPLICATIONS Hitesh Agarwal, Birla Institute of Technology and Science(BITS)-Pilani. India

IAC-15.B1.IP.5 (withdrawn)

LOW COST DESIGN OF PSD BASED 2-AXIS DIGITAL SUN SENSOR FOR **CUBESAT MISSIONS**

Hitesh Agarwal, Birla Institute of Technology and Science(BITS)-Pilani, India

IAC-15.B1.IP.6 (withdrawn)

HIGH ACCURACY MEASUREMENT TECHNOLOGY FOR SATELLITE DEPLOYABLE BAR'S SMALL ANGLE DEFORMATION BASED ON THE LASER DEVICES AND POSITION SENSORS Zhao Hongbo, , China

IAC-15.B1.IP.7

GENESIS – GENERATOR OF SPECTRAL IMAGE SIMULATIONS Yael Efraim, Israel Aerospace Industries. Ltd, Israel

IAC-15.B1.IP.8

RADIATION EFFECTS ON HIGH RESOLUTION DIGITAL INSB IMAGING DETECTOR

Omer Cohen, Semiconductor devices (SCD), Israel

IAC-15.B1.IP.9

WHY THE MICROSTAR ACCELEROMETER CAN IMPROVE THE GRASP

Bernard Foulon, Office National d'Etudes et de Recherches Aérospatiales (ONERA), France

IAC-15.B1.IP.10

KLYSTRON DEVELOPMENT FOR E.O. SENSORS: FEASIBILITY STUDY AND CURRENT DEVELOPMENT Rosario Martorana, Selex ES S.p.A. Italy

IAC-15.B1.IP.11 (withdrawn)

REAL-TIME MEASUREMENT OF LINE OF SIGHT DRIFT IN SPACE CAMERAS BY A BUILT-IN ELECTRO-OPTICAL SYSTEM Arie Leizer, Elbit Systems, Electro Optics, ELOP Ltd., Israel

IAC-15.B1.IP.12 (withdrawn)

OPTICAL POWER CONTROL FILTERS FOR EARTH OBSERVATION

Ariela Donval. . Israel

IAC-15.B1.IP.13

HYPERSPECTRAL IMAGING IN CUBESATS: A POSSIBILITY AND PROMISING TECHNOLOGY FOR DEVELOPING NATIONS Hemant Singh, Birla Institute of Technology and Science(BITS)-

IAC-15.B1.IP.14 (withdrawn)

MINIATURIZED TIME-OF-FLIGHT MASS SPECTROMETER FOR THERMOSPHERE DENSITY AND COMPOSITION MEASUREMENTS Michelle Pyle, Utah State University, United States

IAC-15.B1.IP.15 (withdrawn)

EXPLORING CITIES FROM SPACE: THE USE OF EARTH OBSERVATION DATA AND GIS FOR SPATIAL ANALYSIS OF URBAN GROWTH ON THE ISLAND OF TAIWAN

Polina Lemenkova, Charles University, Czech Republic

TRMM-DERIVED RAINFALL CHARACTERISTICS OVER SALEM Rajasri Sen Jaiswal, Sona College of Technology, India

ΙΔC-15 R1 IP 17

BIOMASS ESTIMATION OF SHRUB USING THE POLARIMETRIC SAR

Jisung Chang, TECHNION - Israel Institute of Technology, Israel

IAC-15.B1.IP.18

SPACE DATA EXPLOITATION AND GIS MODELING AS TOOLS FOR INFRASTRUCTURE MANAGEMENT Isabella Mazza, ESA, Italy

IAC-15.B1.IP.19 (withdrawn)

LINEAMENT STUDY IN GROUNDWATER EXPLORATION USING SPACEBASED TECHNOLOGY: A CASE STUDY OF OWO LGA, ONDO STATE NIGERIA.

OLUWASEGUN ONIBUDO, , Nigeria

IAC-15.B1.IP.20 (withdrawn)

AN ASSESSMENT OF THE RELATIONSHIP BETWEEN LINEAMENT AND GROUNDWATER PRODUCTIVITY IN A PART OF THE BASEMENT COMPLEX, SOUTHWESTERN NIGERIA Ezekiel Yenne, University of Jos, Nigeria

IAC-15.B1.IP.21 (withdrawn)

CHALLENGES AND PROSPECTS OF SATELLITE MAPPING IN RIVERS LIKE BAGMATI Karan Bhatta, , Nepal

IAC-15.B1.IP.22

LASERS IN SPACE: THE NEXT GENERATION OF ATMOSPHERIC REMOTE SENSING

Alex Dinovitser, , Australia

IAC-15.B1.IP.23

OPTIMAL RADAR SYSTEM AND CONFIGURATIONS FOR OBSERVATION OF WEAK CURRENT ON OCEAN SURFACE Ying Yu, Science and Technology on Space Physics Laboratory, China

IAC-15.B1.IP.24

VIRTUAL SATELLITE MISSIONS FOR EARTH OBSERVATION: DEMOCRATIZING ACCESS TO SPACE

Hripsime Matevosyan, Skolkovo Institute of Science and Technology, Russian Federation

IAC-15.B1.IP.25 (withdrawn)

RESEARCH ON BASEBAND DATA PROCESSING TECHNOLOGY FOR HIGH-SPEED REMOTE SENSING SATELLITE

Gao Yue, Space Star Technology Co., Ltd. (SSTC) China Academy of Space Technology (CAST), China

IAC-15.B1.IP.26

REAL-TIME EARTH OBSERVATION SYSTEM BASED ON MICRO-NANO NETWORKS

Zhang Shaowei, Shanghai Institute of Spaceflight Contol Technology,

IAC-15.B1.IP.27

DEVELOPMENT OF A PLUG-N-PLAY MODULAR RECONFIGURABLE SPACE REMOTE SENSING PAYLOAD FOR RESPONSIVE EARTH **OBSERVATION MISSIONS**

Na Yao, Qian Xuesen Laboratory of Space Technology, China

STATE OF THE ART AND PERSPECTIVES OF ORBITAL CONSTELLATION IN RUSSIA TO EMERGENCY MONITORING

Ekaterina Tverdokhlebova, TSNIIMASH, Russian Federation

IAC-15.B1.IP.29 (withdrawn)

RADARSAT CONSTELLATION MISSION (RCM) Guennadi Kroupnik, Canadian Space Agency, Canada

IAC-15.B1.IP.30

PROGRESS IN SPECTROSCOPIC LIDAR FOR FUTURE LASER REMOTE SENSING OF ATMOSPHERIC COMPOSITION Alex Dinovitser, , Australia

IAC-15.B1.IP.31

LITESAT PERFORMANCE OPTIMIZATION GIVEN ATTITUDE CONSTRAINTS AND UNIQUE MISSILE SHAPE STRUCTURE Ofer Salama, Rafael Advanced Defense Systems Ltd., Israel

IAC-15.B1.IP.32

OSCMS: OCEAN SURFACE CURRENT MISSION STUDY RESULTS Robert Ernst, OHB System AG-Bremen, Germany

IAC-15.B1.IP.33

SPACE CLIMATE CHANGE MONITORING OF CONTRAILS AND CIRRUS CLOUD AND ANTHROPOGENIC INITIATIVES FOR THEIR ABATEMENT Harijono Djojodihardjo, , Indonesia

IAC-15.B1.IP.34

THE COSMO-SKYMED CONSTELLATION MONITORING OF THE ITALIAN TERRITORY: THE MAP ITALY PROJECT Patrizia Sacco, Italian Space Agency (ASI), Italy

IAC-15.B1.IP.35

LIGHTNING OBSERVATIONS FROM SPACE CAN PROVIDE EARLY WARNING OF SEVERE WEATHER AROUND THE GLOBE Colin Price, Tel Aviv University, Israel

IAC-15.B1.IP.36

THE FUTURE OF THE COMMERCIAL REMOTE SENSING SECTOR: EXAMINING THE ROLE OF EVOLVING TECHNOLOGY, ECONOMIC, AND STRATEGIC FACTORS

Mariel Borowitz, Georgia Institute of Technology, United States

IAC-15.B1.IP.37

GNSS RADIO OCULTATION: A TOOL FOR CLIMATE INVESTIGATIONS Francesco Vespe, Agenzia Spaziale Italiana (ASI), Italy

IAC-15.B1.IP.39

HIGH RESOLUTION NANO-SATELLITE IMAGERY: LIGHT-WEIGHT AND LOW-COST SYSTEM DESIGN USING MEMBRANE OPTICS Chandra Bollepalli, Indian Institute of Technology, India

IAC-15.B1.IP.39

SEAHAWK; A NANOSATELLITE MISSION FOR SUSTAINED OCEAN OBSERVATION.

John Miller Morrison, University of North Carolina at Wilmington, United States

IAC-15.B1.IP.40

ATTITUDE STEERING TO ACHIEVE NEAR ZERO DOPPLER RESIDUAL FOR SAR BASED IMAGING - A NOVEL APPROACH Ritu Karidhal, ISRO Satellite Centre (ISAC), India

B2. SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM

Coordinator(s): Manfred Wittig , European Space Agency (ESA), retired, The Netherlands; Otto Koudelka, Joanneum Research, Austria;

B2.1. Mobile Satellite Communications and **Navigation Technology**

October 12 2015, 15:15 — Dulzin Big B

Co-Chair(s): Jean-Paul Aguttes , Centre National d'Etudes Spatiales (CNES), France; Robert D. Briskman, Sirius XM Satellite Radio, United States;

Rapporteur(s): Peter Buist , Netherlands Space Society (NVR). The Netherlands:

IAC-15.B2.1.1

COGNITIVE RADIO FOR SATCOM APPLICATIONS: THE SCREEN

Pedro Rodrigues, Tekever, Portugal

IAC-15.B2.1.2

DISASTER MANAGEMENT SCHEME BY MEANS OF NANO SATELLITE AND WIRELESS NAVIGATION SYSTEMS Shajin Nargunam A, , India

IAC-15.B2.1.3

TACTILE SATELLITE NAVIGATION SYSTEM: USING HAPTIC TECHNOLOGY TO ENHANCE THE SENSE OF ORIENTATION AND DIRECTION

Jan Walter Schroeder, Sensovo, Germany

IAC-15.B2.1.4

MOBILE SATELLITE COMMUNICATION SYSTEM BASED ON NEW DIGITAL PHASED ARRAY BEAMFORMING TECHNOLOGY Alexander Kharlan, Yaliny, Russian Federation

IAC-15.B2.1.6

DIFFERENTIAL GPS ATTITUDE DETERMINATION CONCEPT FOR CUBESATS AND DRONES Stefano Torresan, , Italy

THE GPS NAVIGATION AND OCCULTATION EXPERIMENT (NOX) ONBOARD TET-1 – RESULTS AND EXPERIENCE AFTER ONE YEAR IN

Markus Markgraf, DLR (German Aerospace Center), Germany

ON THE COMET.

IAC-15.B2.4.1

Co-Chair(s): Manfred Wittig, European Space Agency (ESA),

Aeronautics and Space Administration (NASA), United States;

Rapporteur(s): Dipak Srinivasan, The Johns Hopkins University

AFTER ROSETTA & MYRIADE, NOW A NEW GENERATION OF RADIO

ROSETTA-PHILAE RF LINK: HOW THE RF LINK BEHAVIOUR HELPS THE

UNDERSTANDING OF THE PHILAE REBOUNDS AND TOUCHDOWNS

Clement Dudal, Centre National d'Etudes Spatiales (CNES), France

retired, The Netherlands; Ramon P. De Paula , National

Applied Physics Laboratory, United States;

Miguel Angel Fernandez, SYRLINKS, France

EQUIPMENT FOR MERLIN & MYRIADE EVOLUTION

ADVANCED PROCESSING AND COMMUNICATIONS PAYLOADS FOR NANOSATELLITE MISSIONS Otto Koudelka, Graz University of Technology (TU Graz), Austria

IAC-15.B2.4.5

IAC-15.B2.4.4

A GAME - CHANGING RADIO COMMUNICATION ARCHITECTURE FOR CUBE/NANO-SATELLITES

Miguel Angel Fernandez, SYRLINKS, France

IAC-15.B2.4.6

S- AND X-BAND ANTENNA DESIGN FOR ESA'S UPCOMING OPS-SAT NANOSATELLITE

Franz Teschl, Graz University of Technology (TU Graz), Austria

LOW-COST SATELLITE COMMUNICATION NETWORK FOR FOUATORIAL REGION

Dmytro Faizullin, Kyushu Institute of Technology, Japan

IAC-15.B2.4.8 (withdrawn)

ANTI-BURST TECHNIQUE BASED ON ADAPTIVE CODE RATE ADJUST OF SATELLITE-TO-GROUND LASER COMMUNICATION Chen Xin, Beijing Institute of Satellite Information Engineering, China Academy of Space Technology (CAST), China

IAC-15.B2.4.9

A METHOD TO IMPROVE TT&C COVERAGE OF THE RELAY ANTENNA BASED ON CHINESE SPACE STATION

Yi Yusheng, Institute of Manned Space System Engineering, China Academy of Space Technology (CAST), China

IAC-15.B2.4.10 (withdrawn)

APPLICATION OF ADAPTIVE CODING MODULATION IN HIGH-SPEED SATELLITE COMMUNICATION

Wang Hongfeng, Mechanical Engineering College, Shijiazhuang,

B2.5. Advanced Technologies for Space **Communications and Navigation**

October 14 2015, 14:45 — Dulzin Big B

Co-Chair(s): Edward W. Ashford, Graz University of Technology (TU Graz), Austria; Elemer Bertenyi , E. Bertenyi & Associates Inc., Canada

Rapporteur(s): Eva Maria Aicher, Tesat-Spacecom GmbH & Co. KG, Germany;

PYTHAGOREAN TREE FRACTAL FOR MULTI-BAND PATCH ANTENNA. Advait Kulkarni, , India

IAC-15.B2.1.7 (withdrawn)

THE POSSIBILITY OF USING THE DIFFERENTIAL CORRECTION MODE FOR NAVIGATION SUPPORT OF UNIVERSITY SATELLITES Igor V. Belokonov, Samara State Aerospace University (SSAU), Russian Federation

International Astronautical Congress

12 - 16 October 2015, Jerusalem, Israel

IAC-15.B2.1.8

AUTONOMOUS NAVIGATION OF LEO AND GEO SATELLITES USING

Vishal Ray, , India

IAC-15.B2.1.9

ICARUS – A NEW GLOBAL OBSERVATION SYSTEM FOR SMALL **OBJECTS (ANIMALS)**

Walter Naumann, Max Planck Institute for Ornithology, Germany

IAC-15.B2.1.10

SYSTEM DESIGN OF AN S-BAND NETWORK OF DISTRIBUTED NANOSATELLITES

Zizung Yoon, Technical University Berlin, Germany

IAC-15.B2.1.11

POWER FLEXIBILITY OPTIMIZATION OF MULTIBEAM COMMUNICATION SATELLITE PAYLOAD

Dong Chen, Institute of Telecommunication Satellite, China Academy of Space Technology, China

IAC-15.B2.1.12

A STUDY OF 4G LTE NETWORK ACCESS BASED ON KA BAND MULTIPLE SPOT BEAM SATELLITE COMMUNICATION SYSTEM Xiaotian ZHENG, Space Star Technology Co., Ltd. (SSTC) China Academy of Space Technology (CAST), China

IAC-15.B2.1.13

STUDY ON SATELLITE MOTION ERROR OF TWSTFT IN GROUND-BASED NAVIGATION SYSTEM

Bilei Zhou, Shanghai Institute of Satellite Engineering, China

IAC-15.B2.1.14

ANALYTIAL PERFORMANCE OF MONOPULSE SPREAD SPECTRUM TRACKING SYSTEM IN MULTIPLE-TARGET SCENARIO Cong Bo, China Satellite Maritime Tracking and Control Department, China

B2.2. . Joint Session on Dual Use (civil and military) Aspects of Telecommunications and **GNSS**

October 13 2015, 09:45 — Dulzin Big B

Co-Chair(s): Eva Maria Aicher . Tesat-Spacecom GmbH & Co. KG, Germany; Rita Lollock , The Aerospace Corporation, United

Rapporteur(s): Stephanie Wan , Space Generation Advisory Council (SGAC), United States;

IAC-15.B2.2.1

GLOBAL INFLUENCE OF THE US SPACE BASED POSITIONING NAVIGATION AND TIMING ADVISORY BOARD Stephanie Wan, Space Generation Advisory Council (SGAC), United

IAC-15.B2.2.2

AN INERTIAL GUIDANCE BASED LOCALIZATION TECHNOLOGY FOR AFROCRAFT DATA LOGGER RECOVERY

Juan Lu, Beijing Institute of Aerospace Systems Engineering, China

B2.3. Space-Based Navigation Systems and Services

October 13 2015, 14:45 — Dulzin Big B

Co-Chair(s): Kristian Pauly, OHB System, Germany; Rita Lollock, The Aerospace Corporation, United States; Rapporteur(s): Norbert Frischauf,, Austria;

IAC-15.B2.3.2

WEAK GNSS SIGNAL NAVIGATION IN LUNAR MISSIONS Norbert Witternigg, Joanneum Research, Austria

IAC-15.B2.3.3

RELATIVE NAVIGATION OF GEO SATELLITES IN FORMATION USING DOUBLE-DIFFERENCE CARRIER PHASE MEASUREMENTS WITH INTEGER AMBIGUITY RESOLUTION Amolika Soni, Indian Institute of Technology, India

IAC-15.B2.3.4

GALILEO FOC - DESIGN, ON-ORBIT OPERATIONS & PERFORMANCE Kristian Pauly, OHB System, Germany

IAC-15.B2.3.5

DESIGNING THE NEXT GENERATION OF GNSS: HOW TO BEST SERVE THE DIVERSE INTERESTS OF MILITARY, CIVILIAN AND PUBCLIC USERS Norbert Frischauf, SpaceTec Partners SPRL, Belgium

IAC-15.B2.3.6

THE ITALIAN APPROACH ON GNSS TRAIN CONTROL AND MANAGEMENT SYSTEMS, CHALLENGES FOR A GLOBAL SERVICE Alberto Tuozzi, ASI - Italian Space Agency, Italy

IAC-15.B2.3.7 (withdrawn)

DESIGN OF GNSS-BASED M2M EARLY WARNING SYSTEM FOR IMPROVEMENT OF REACHABILITY OF INFORMATION Akihiko Nishino, Keio University, Japan

CLOCK SYNCHRONIZATION AND RF SYNTHESIS Harsh Bhate, SRM University, Chennai, India

IAC-15.B2.3.9

COMBINED ATTITUDE-ORBIT APPROACH FOR NAVIGATION AND STATIONKEEPING OF A PRECISION BEAM FORMING CONSTELLATION Akash Ratheesh, SRM University, kattankulathur,chennai, India

IAC-15.B2.3.10 (withdrawn)

SYSTEM DESIGN OF LEO SPACECRAFT POSITION DETERMINATION BASED ON GNSS AND GEO DATA BROADCAST SATELLITE Wang Hongfeng, Mechanical Engineering College, Shijiazhuang,

IAC-15.B2.3.11

ANALYSIS OF SIGNAL AVAILABILITY IN THE GNSS SPACE SERVICE

LiQiang Wang LiQiang Wang, China Academy of Launch Vehicle Technology, China

IΔC-15 R2 3 12

CONFIGURATION KEEPING OPTIMIZATION OF COMPASS CONSTELLATION IGSO SATELLITES

SUN Shouming, State Key Laboratory of Astronautic Dynamics,

IAC-15.B2.3.13

RESULTS FROM THE GNSS FLIGHT EXPERIMENT ON THE CIRCUMLUNAR FREE RETURN TRAJECTORY OF CHINA CE-5T1

Dun Wang, Beijing Institute of Satellite Information Engineering,

B2.4. Near-Earth and Interplanetary Communications

October 14 2015, 09:45 — Dulzin Big B

IAC-15.B2.5.2

ADAPTIVE ANTENNA FOR HIGH BAND COMMUNICATIONS Daniel Rockberger, , Israel

IAC-15.B2.5.3 (withdrawn)

TWTAS AND SSPAS: FUTURE PROSPECTS FOR SATCOM APPLICATIONS Catherine GIrardey, Consultant, United States

IAC-15.B2.5.4

INDUSTRIALISATION APPROACH OF THE POP ATOMIC CLOCK FOR APPLICATION TO GNSS Marina Gioia, Selex ES S.p.A, Italy

IAC-15.B2.5.5

SPACEFIBRE: ADVANCED NETWORK TECHNOLOGY FOR SPACECRAFT **ON-BOARD APPLICATIONS**

Steve Parkes, University of Dundee, United Kingdom

IAC-15.B2.5.6

USING INTERNATIONAL SPACE STATION FOR COGNITIVE SYSTEM RESEARCH AND TECHNOLOGY WITH SPACE-BASED RECONFIGURABLE SOFTWARE DEFINED RADIOS Richard Reinhart, National Aeronautics and Space Administration

IAC-15.B2.5.7

ENABLING INTER-SATELLITE LINK PLATFORM FOR MULTI-SATELLITE MISSIONS

Pedro Rodrigues, Tekever, Portugal

IAC-15.B2.5.8

SOFTWARE DEFINED RADIO IMPLEMENTATION OF A NEGOTIATOR NODE TESTBED FOR FEDERATED SATELLITE SYSTEMS Rustam Akhtyamov, Skolkovo Institute of Science and Technology,

Russian Federation IAC-15.B2.5.9

SMALL PHOTON ENTANGLING QUANTUM SYSTEM (SPEQS) FOR SPACE-BASED QUANTUM KEY DISTRIBUTION (QKD). Tang Zhongkan Xavier, National University of Singapore, Rep. Of Singapore

IAC-15.B2.5.10

VCM-OFDM TECHNIQUE FOR ADVANCED SPACE COMMUNICATIONS SYSTEM WITH HIGH SPECTRAL EFFICIENCY Jionghui Li, National Space Science Center, Chinese Academy of

Sciences, China IAC-15.B2.5.11

A STUDY OF WIFI ACCESS TO HIGH-SPEED RAIL BASED ON KA-BAND SATELLITE COMMUNICATION

Wang Xinrong, Space Star Technology Co., Ltd. (SSTC) China Academy of Space Technology (CAST), China

IAC-15.B2.5.12

OPTICAL FEEDER LINK FROM ANTARCTIC LATITUDES - SYSTEM ARCHITECTURE AND OPERATIONS CONCEPT Florian Sellmaier, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-15.B2.5.13

ADVANCED WI-FI TRANSMISSION TECHNOLOGY INNER SATELLITE COMMUNICATION MODULE: PROBLEM & SOLUTION Tong Yang, China Academy of Space Technology (CAST), China

B2.6. Advanced Space Communications and **Navigation Systems**

October 15 2015, 09:45 — Dulzin Big B

Co-Chair(s): Morio Toyoshima , National Institute of Information and Communications Technology, Japan; Robert Prevaux, Space Systems/Loral, United States;

Rapporteur(s): Amane Miura , National Institute of Information and Communications Technology, Japan;









IAC-15.B2.6.1

RC64 - MANY-CORE COMMUNICATION PROCESSOR FOR SPACE IP ROUTER

Ran Ginosar, , Israel

IAC-15.B2.6.2

A NEW CHAPTER BEGINS FOR EO-MISSIONS - HYBRID OPTICAL/RF PAYLOAD FOR DATA RELAY APPLICATION BECOMES OPERATIONAL Norbert Doerflinger, Tesat-Spacecom GmbH & Co. KG, Germany

IAC-15.B2.6.3

OPTICAL INTERSATELLITE LASER COMMUNICATION LINK FOR LOW-ORBIT COMMUNICATION SATELLITE SYSTEMS Oleg Ivanenko, Yaliny, Russian Federation

IAC-15.B2.6.4

A GAME - CHANGING RADIO COMMUNICATION ARCHITECTURE FOR CUBE/NANO-SATELLITES

Miguel Angel Fernandez, SYRLINKS, France

IAC-15.B2.6.5

AFTER ROSETTA & MYRIADE, NOW A NEW GENERATION OF RADIO **EQUIPMENT FOR MERLIN & MYRIADE EVOLUTION** Miguel Angel Fernandez, SYRLINKS, France

IAC-15.B2.6.6 (withdrawn)

INTEGRATED SATELLITE TERRESTRIAL VHF DATA EXCHANGE SYSTEM

Frank Zeppenfeldt, European Space Agency (ESA), The Netherlands

DYNAMIC BEAM CONTROL BASED ON VISION METETROLOGY OF LARGE DEPLYABLE ANTENNA FOR MOBILE SATELLITE COMMUNICATION

Maki Akioka, National Institute of Information and Communications Technology, Japan

IAC-15.B2.6.8

FORMATION FLYING NAVIGATION EXPLOITING INTER-SATELLITE RADIO LINK STRENGTH MEASUREMENTS

Giovanni B. Palmerini, Universita' di Roma 'La Sapienza', Italy

IAC-15.B2.6.9

PLANETARY SURFACE MODELLING AND VISUALISATION FOR ASSISTING ROVER NAVIGATION SYSTEM

Deepak Kumar, Central University of Karnataka, Gulbarga, India

IAC-15.B2.6.10 (withdrawn)

SATELLITE PAYLOAD STRUCTURE ANALYSIS FOR BROADBAND SATELLITE COMMUNICATION ON HIGH-SPEED TRAINS Naijin Liu, China Academy of Space Technology (CAST), China

SOFTWARE DEFINED ADVANCED FLEXIBLE COMMUNICATIONS AND RELAY GEOSTATIONARY SATELLITE SYSTEM Linghua Guo, China Academy of Space Technology (CAST), China

IAC-15.B2.6.12 (withdrawn)

THE STUDY OF SILICON DRIFT DETECTORS FOR X-RAY PULSAR TIMING AND NAVIGATION Dong Jin, , China

B2.7. Fixed and Broadcast Communications

October 16 2015, 13:30 — Dulzin Big B

Co-Chair(s): Desaraju Venugopal , Devas Multimedia Pvt. Ltd., India; Joe M. Straus, The Aerospace Corporation, United States; Rapporteur(s): K.R. Sridhara Murthi, NIAS, India;

IAC-15.B2.7.1

KEY KA BAND SATELLITE COMMUNICATION SYSTEMS -APPLICATIONS AND CONFIGURATIONS Desaraju Venugopal, Devas Multimedia Pvt. Ltd., India IAC-15.B2.7.2

TRANSMITTER MICRO DISCHARGES IN COMMUNICATIONS AND BROADCAST SATELLITES

Robert D. Briskman, Sirius XM Satellite Radio, United States

IAC-15.B2.7.4 (withdrawn)

NEW ALGORITHM FOR ADAPTIVE RETURN CHANNEL IN VSAT

Rafi Heiman, Gilat Satellite Networks Ltd., Israel

IAC-15.B2.7.5 (withdrawn)

PHASE NOISE SUPPRESSION METHOD BASED ON SOFT INFORMATION DECODING IN SPACE COMMUNICATIONS Gengbo Wang, Space Star Technology co., LTD, China

IAC-15.B2.7.6

CROSS POLARIZATION STUDY AT THE TRMM CHANNELS Rajasri Sen Jaiswal, Sona College of Technology, India

IAC-15.B2.7.7

A STUDY OF ZIGBEE M2M HYBRID ARCHITECTURE BASED ON KA BAND MULTIPLE SPOT BEAM SATELLITE COMMUNICATION SYSTEM Xiaotian ZHENG, Space Star Technology Co., Ltd. (SSTC) China Academy of Space Technology (CAST), China

IAC-15.B2.7.8

THE COMPLEXITY OF SPACE INFORMATION NETWORK Hui Huang, China Academy of Launch Vehicle Technology(CALT),

B2.8-YPVF.3. Space Communications and Navigation Young Professionals Virtual

October 15 2015, 14:45 — Kerem Carmit

Co-Chair(s): Edward W. Ashford , Graz University of Technology (TU Graz), Austria; Kevin Shortt , Canadian Space Society,

IAC-15.B2.8-YPVF.3.1

KEYNOTE: SPACETECH - A CURRICULUM IN SPACE SYSTEMS AND **BUSINESS ENGINEERING**

Otto Koudelka, Graz University of Technology (TU Graz), Austria

IAC-15.B2.8-YPVF.3.1

WHOLE MTO ORBIT ACQUISITION METHOD BASED ON FPGA RESOURCE RESTRICTED PLATFORM

Jia Tian, China Academy of Space Technology (Xi'an), China

IAC-15.B2.8-YPVF.3.2

GPS C/A CODE CROSS CORRELATION MITIGATION TECHNIQUE FOR HEO ORBIT ACQUISITION

Jia Tian, China Academy of Space Technology (Xi'an), China

IAC-15.B2.8-YPVF.3.3

ENERGY EFFICIENCY OF MULTI-HOP SENSOR NETWORK ON THE SURFACE OF SOLAR SYSTEM PLANET Aliz Szeile, , Hungary

IAC-15.B2.8-YPVF.3.4

COMMUNICATION ARCHITECTURE AND INTERNATIONAL POLICY RECOMMENDATIONS ENABLING THE DEVELOPMENT OF GLOBAL **CUBESAT SPACE NETWORKS**

Ozan Kara, Koc University, Turkey

IAC-15.B2.8-YPVF.3.5

ABATING THE EFFECTS OF PESTS AND DISEASES USING GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) Oniosun Temidayo Isaiah, Nigeria

IAC-15.B2.8-YPVF.3.6

SCENIC MODEL CONTROL: A SIMULATION SYSTEM FOR SPACE **COMMUNICATIONS NETWORKS**

Jeff Kraus, NASA Glenn Research Center, USA

IAC-15.B2.8-YPVF.3.7

IMPROVING SPACE COMMUNICATION AND NAVIGATION (SCAN) OPTICAL SATELLITE LINK ASSESSMENT TOOL

Jacky Lee, NASA Glenn Research Center (SCaN Summer Intern), USA

B2.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Manfred Wittig , European Space Agency (ESA), retired, The Netherlands; Otto Koudelka, Joanneum Research,

IAC-15.B2.IP.1

ADAPTIVE TRANSMISSION METHOD FOR COMMUNICATION THROUGH REENTRY PLASMA SHEATH Guolong He, Tsinghua University, China

IAC-15.B2.IP.2

CONCEPTUAL DESIGN OF KOREAN PATHFINDER LUNAR ORBITER COMMUNICATION RF DISTRIBUTION UNIT FOR SCIENCE CUBESATS AND COMMERCIAL COMMUNICATION PAYLOAD FOR SPACE EXPLORATION MISSION

Inkyu Kim, Korea Aerospace Research Institute (KARI), Korea, Republic of

IAC-15.B2.IP.3

PRECISE GLOBAL POSITIONING AND HIGHER ORDER RELATIVISTIC CORRECTIONS

Ignazio Ciufolini, Università del Salento, Italy

IAC-15.B2.IP.4

RESEARCH ON TIME REGISTRATION METHOD OF CELESTIAL INTEGRATED NAVIGATION SYSTEM FOR DEEP SPACE EXPLORATION Heng Zhang, Shanghai Insitute of Satellite Engineering, China

IAC-15.B2.IP.5

THE SPREAD SPECTRUM AND ENCRYPTION METHOD BASED ON CHAOTIC TRUE RANDOM NUMBER SEQUENCE IN TT & C SYSTEM Yongming Nie, , China

IAC-15.B2.IP.6

A MODIFIED PARALLEL CARRIER SYNCHRONIZATION STRUCTURE BASED ON APRX FOR PSK Shen Zhou, , China

IAC-15.B2.IP.7 (withdrawn)

SPACECRAFT VLBI TRACKING USING S/X DUAL-BAND SIGNALS Huan ZHOU, Beijing Institute of Tracking and Telecommunication Technology, China

IAC-15.B2.IP.8 (withdrawn)

SOFTWARE DEFINED NETWORK ARCHITECTURE FOR SATELLITE NETWORKS WITH INTER-SATELLITE LINKS Liye Zhao, DFH Satellite Co. Ltd., China

IAC-15.B2.IP.9

OPPORTUNITIES OF AN OPEN-SOURCE GLOBAL SENSOR NETWORK MONITORING THE RADIO SPECTRUM FOR THE (NEW) SPACE COMMUNITY

Andreas Hornig, University of Stuttgart, Germany

IAC-15.B2.IP.10

USING CROSS-ENTROPY TO ASSESS ACCURACY OF POSITION

JEANNETTE NOUNAGNON, Virginia Tech, United States

IAC-15.B2.IP.11

PRECISE CARRIER PHASE TIME TRANSFER BASED ON BDS REGIONAL NAVIGATION SYSTEM

Hongzheng Cui, 1)Science and technology on aerospace flight dynamics laboratory, Beijing, China;2)Beijing aerospace control center, Beijing, Ching:, Ching

IAC-15.B2.IP.12

WSNOS SYSTEM MULTIUSER DESIGN Hongfeng Du, CASC, China

B3. HUMAN SPACEFLIGHT SYMPOSIUM

Coordinator(s): Cristian Bank , EADS Astrium Space Transportation GmbH, Germany; Martin Zell, European Space Agency (ESA), The Netherlands;

B3.1. Governmental Human Spaceflight **Programs (Overview)**

October 12 2015, 15:15 — Ballroom A

Co-Chair(s): Carlo Mirra , Airbus Defence & Space, The Netherlands; Kevin D. Foley , The Boeing Company, United

Rapporteur(s): Rainer Willnecker, Deutsches Zentrum für Luftund Raumfahrt e.V. (DLR), Germany;

IAC-15.B3.1.1

THE GLOBAL EFFORT TO EXPAND HUMAN PRESENCE INTO THE SOLAR SYSTEM

William H. Gerstenmaier, National Aeronautics and Space Administration (NASA), United States

IAC-15.B3.1.2

ESA'S SPACE EXPLORATION STRATEGY

Thomas Reiter, European Space Agency (ESA), The Netherlands

IAC-15.B3.1.3

JAXA'S INITIATIVE ON HUMAN SPACEFLIGHT PROGRAM FOR **FUTURE SPACE EXPLORATION**

Yoshiyuki Hasegawa, Japan Aerospace Exploration Agency (JAXA),

IAC-15.B3.1.4 (withdrawn)

CANADA AND THE INTERNATIONAL SPACE STATION PROGRAM: **OVERVIEW AND STATUS SINCE IAC 2014** Pierre Jean, Canadian Space Agency, Canada

IAC-15.B3.1.5

TRANSITIONING THE INTERNATIONAL SPACE STATION TO **EXPLORATION: CHALLENGES AND OPPORTUNITIES** Sam Scimemi, National Aeronautics and Space Administration (NASA), United States

IAC-15.B3.1.6

DEVELOPMENT STATUS OF THE "EUROPEAN BUILT" ORION SERVICE

Philippe Deloo, ESA, Netherlands Antilles

B3.2. Commercial Human Spaceflight **Programs**

October 13 2015, 09:45 — Ballroom A

Co-Chair(s): Michael E. Lopez Alegria , Commercial Spaceflight Federation, United States; Michael W. Hawes, Lockheed Martin Corporation, United States; Sergey K. Shaevich , Khrunichev State Research & Production Space Center, Russian Federation;

IAC-15.B3.2.1

"NASA'S FACILITATION OF COMMERCIAL SPACEFLIGHT" Sumara Thompson-King, National Aeronautics and Space Administration (NASA). United States









TRENDS OF THE COMMERCIAL FLIGHTS TO SPACE
Alexander G. Derechin, S.P. Korolev Rocket and Space Corporation
Energia, Russian Federation

IAC-15.B3.2.3

MODERN VISION OF BIOMEDICAL SUPPORT OF SPACE TOURIST FLIGHTS

Oleg Orlov, SSC RF-Institute of Biomedical Problems RAS, Russian Federation

IAC-15.B3.2.4

SPACESHIPTWO: A SUBORBITAL PLATFORM FOR HUMAN SPACEFLIGHT AND SPACE-BASED RESEARCH William Pomerantz, Virgin Galactic L.L.C, United States

IAC-15.B3.2.5

VIABILITY OF THE PRIVATE SUBORBITAL FLIGHT PROJECTS IN RUSSIA: "KOSMOKURS" CASE

Alexey Belyakov, Skolkovo Foundation, Russian Federation

IAC-15.B3.2.6

MANNED LUNAR INFRASTRUCTURE AND COMMERCIALIZATION OF FLIGHTS TO THE MOON

Oleg Saprykin, TSNIIMASH, Russian Federation

IAC-15.B3.2.7

SPACEFLIGHT PATICIPANTS TRAINING FOR SPACEFLIGHT ON RUSSIAN MANNED VEHICLES

Maksim Kharlamov, Gagarin Cosmonaut Training Center, Russian Federation

IAC-15.B3.2.8

HELIUM: A COMMERCIAL EUROPEAN NEAR-SPACE BALLOON-BORNE LABORATORY

Annelie Schoenmaker, zero2infinity, Spain

B3.3. Utilization & Exploitation of Human Spaceflight Systems

October 13 2015, 14:45 — Ballroom A

Co-Chair(s): Kevin D. Foley , The Boeing Company, United States; Maria Stella Lavitola , Thales Alenia Space Italia, Italy; Rapporteur(s): Shannon Ryan , Defence Science and Technology Organisation (DSTO), Australia;

IAC-15.B3.3.1

ESA'S UTILISATION PROGRAMME ON THE ISS Martin Zell, European Space Agency (ESA), The Netherlands

IAC-15.B3.3.2 (withdrawn)

CANADIAN SPACE AGENCY UTILISATION OF THE INTERNATIONAL SPACE STATION IN 2014

Nicole Buckley, Canadian Space Agency, Canada

IAC-15.B3.3.3

RUSSIAN ISS RESEARCH PROGRAM

George Karabadzhak, Central Research Institute for Machine Building (FGUP TSNIIMASH), Russian Federation

IAC-15.B3.3.4

ITALIAN SPACE AGENCY SCIENCE ON THE INTERNATIONAL SPACE STATION: THE FUTURA MISSION

Salvatore Pignataro, Italian Space Agency (ASI), Italy

IAC-15.B3.3.5

EXPANDED BENEFITS FOR HUMANITY FROM THE INTERNATIONAL SPACE STATION

Julie A. Robinson, National Aeronautics and Space Administration (NASA)/Johnson Space Center, United States

IAC-15.B3.3.6

TECHNOLOGY DEVELOPMENT ABOARD RUSSIAN SEGMENT OF THE ISS

Igor V. Sorokin, S.P. Korolev Rocket and Space Corporation Energia, Russian Federation

IAC-15.B3.3.7

INTEGRATION AND IMPLEMENTATION OF THE ESA 'IRISS' MISSION TO THE ISS

Petrus Batenburg, Airbus Defence and Space, The Netherlands

AC-15.B3.3.8

STUDY OF CATASTROPHIC PHENOMENA AND ENVIRONMENTAL PROBLEMS FROM THE RUSSIAN SEGMENT OF THE ISS Olga Yurina, Korolev RSC Energia, Russian Federation

IAC-15.B3.3.9

MINI-EUSO INSIDE ISS TO PREPARE FOR STUDYING ULTRA-HIGH ENERGY PARTICLES FROM THE OUTSIDE Christer Fuglesang, KTH, Sweden

IAC-15.B3.3.10

ORION EFT-1 FLIGHT TEST RESULTS AND EM-1 AND EM-2 STATUS Scott Norris, Lockheed Martin Space Systems Company, United States

IAC-15.B3.3.11

INTERNATIONAL DEEP SPACE INTEROPERABILITY STANDARDS
Matthew Duggan, The Boeing Company, United States

B3.4-B6.5. Flight & Ground Operations of HSF Systems – Joint Session of the Human Spaceflight and Space Operations Symposia

October 14 2015, 09:45 — Ballroom A

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-15.B3.4-B6.5.1

OPERATIONS OF THE EUROPEAN AUTOMATED TRANSFER VEHICLE:
A HISTORY OF TRILATERAL COOPERATION

Mauro Augelli, Centre National d'Etudes Spatiales (CNES), France

IAC-15.B3.4-B6.5.2 (withdrawn)

SPACE-TO-GROUND COMMUNICATION FOR COLUMBUS: A QUANTITATIVE ANALYSIS

Thomas Uhlig, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-15.B3.4-B6.5.3

CONSOLIDATING COLUMBUS OPERATIONS AND LOOKING FOR NEW FRONTIERS

Katja Leuoth, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-15.B3.4-B6.5.4

MOBIPV: AN INNOVATIVE MOBILE PROCEDURE VIEWER FOR THE INTERNATIONAL SPACE STATION.

Antonio Fortunato, , Germany

IAC-15.B3.4-B6.5.5 (withdrawn)

INTEGRATION OF AN EXTERNALLY PROVIDED NEW PLANNING SOFTWARE INTO THE RUNNING COLUMBUS OPERATIONS. Jérôme Campan, DLR, German Aerospace Center, Germany

IAC-15.B3.4-B6.5.6

TOWARDS A DYNAMIC MANAGEMENT OF THE SPACE LINK EXTENSION PROTOCOL SERVICES

Antonio Cassiano Julio Filho, Instituto Nacional de Pesquisas Espaciais (INPE), Brazil

IAC-15.B3.4-B6.5.7

ASI ISS SCIENCE DIRECTORY: ARCHIVING AND DISSEMINATING THE RESULTS OF THE ITALIAN SPACE AGENCY SCIENCE ON THE INTERNATIONAL SPACE STATION

Salvatore Pignataro, Italian Space Agency (ASI), Italy

IAC-15.B3.4-B6.5.8

ON ORBIT CHANGES AND NEW SCENARIOS FOR NODE 2 AND 3 AND CUPOLA: HOW TO BE PREPARED FROM THE DESIGN PHASE Annamaria Piras, Thales Alenia Space Italia, Italy

B3.5. Astronaut Training, Accommodation, and Operations in Space

October 15 2015, 09:45 — Ballroom A

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): Tai Nakamura , Japan Aerospace Exploration Agency (JAXA), Japan;

IAC-15.B3.5.1

THE USE OF VIRTUAL REALITY (VR) IN ASTRONAUT TRAINING AND SPACE SYSTEM DESIGN

Yuval Brodsky, Italian Mars Society, Israel

IAC-15.B3.5.2

NEW APPROACHES TO THE COSMONAUT TRAINING ON THE PROGRAM OF SCIENTIFIC-APPLIED RESEARCH AND EXPERIMENTS ABOARD THE ISS RUSSIAN SEGMENT

Andrey Kuritsin, Gagarin Cosmonaut Training Center, Russian Federation

IAC-15.B3.5.3

UNESCO-42: RAPID DEVELOPMENT OF AN EARTH OBSERVATION SUPPORT SOFTWARE FOR THE INTERNATIONAL SPACE STATION. Olivier Lamborelle, Space Applications Services N.V., Germany

IAC-15.B3.5.4

STRENGTH CAPABILITY OF ASTRONAUTS IN SPACESUIT FROM BOTH BIOMECHANICAL MODELING AND EXPERIMENTAL ASPECTS XD Wang, China Astronaut Research and Training Center, Beijing 100094, China, China

IAC-15.B3.5.5

A PROPOSED PHOTOELASTICITY-BASED ENHANCED VISUAL INSPECTION TOOL FOR ASTRONAUT EVA

Joshua Fogel, University of Southern California, United States

IAC-15.B3.5.6

A RETROSPECTIVE ON THE BLUE DOT MISSION OF ALEXANDER GERST

Johannes Weppler, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-15.B3.5.7

POST-FLIGHT EXPERIMENTAL RESEARCH IN THE INTERESTS OF MANNED FLIGHTS TO DEEP SPACE

Andrey Kuritsin, Gagarin Cosmonaut Training Center, Russian Federation

IAC-15.B3.5.8

DESIGN AND ESTABLISHMENT OF AN ANALOG PLANETARY HABITAT FACILITY TO SERVE AS A BASIS FOR HUMAN MACHINE INTERFACE STUDIES

Chrishma Singh-Derewa, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

B3.7. Advanced Systems, Technologies, and Innovations for Human Spaceflight

October 16 2015, 09:45 — Ballroom A

Co-Chair(s): Lionel Suchet, Centre National d'Etudes Spatiales (CNES), France; Martin Zell, European Space Agency (ESA), The Netherlands:

Rapporteur(s): Gi-Hyuk Choi , Korea Aerospace Research Institute (KARI), Korea, Republic of;

IAC-15.B3.7.1

A CONCEPT STUDY INTO A POST ISS ARCHITECTURE

Mark Hempsell, The British Interplanetary Society, United Kingdom

IAC-15.B3.7.2

SUSTAINABILITY IN HUMAN SPACEFLIGHT Erin Mahoney, Valador, Inc., United States

IAC-15.B3.7.3 (withdrawn)

ADVANCED CREW MEDICAL SYSTEM (ACMS) FOR EXPLORATION MISSIONS BEYOND LEO $\,$

Raffi Kuyumjian, Canadian Space Agency, Canada

IAC-15.B3.7.3

RISKS AND COUNTERMEASURES OF MICROBE CONTROL IN CHINA MANNED SPACE STATION

Chuanfeng Wei, Institute of Manned Space System Engineering, China Academy of Space Technology (CAST), China

IAC-15.B3.7.4
COMBINED ENERGY PRODUCTION AND WASTE MANAGEMENT IN

MANNED SPACECRAFT

Shani Elitzur, Technion – Israel Institute of Technology, Israel
IAC-15.B3.7.5

MANNED SPACE MISSION

Masato Sakurai, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.B3.7.6
RESEARCH ON A DEPLOYMENT MECHANISM CAN BE APPLIED IN RENDEZVOUS AND DOCKING

STUDY OF AIR RE-VITALIZATION FOR A FUTURE LONG DURATION

Lianghao Bai, Institute of Manned Space System Engineering, CAST,

IAC-15.B3.7.7

THE INTERNATIONAL BERTHING DOCKING MECHANISM (IBDM): DEMONSTRATING FULL COMPLIANCE TO THE INTERNATIONAL DOCKING SYSTEM STANDARD (IDSS)

Helder Dittmer, QinetiQ Space nv, Belgium

IAC-15.B3.7.8

ESCAPE TRAJECTORY ANALYSIS OF MANNED VEHICLE WITH SELF-CONTAINED PROPULISION SYSTEM

Shi Yong, Institute of Manned Space System Engineering, China Academy of Space Technology (CAST), China

IAC-15.B3.7.9

ORPHEUS: A NEW CONCEPT OF A MANNED SHORT STAY MISSION TO THE PROXIMITY OF MARS.

Antonio Magariello, International Master SEEDS, Italy

IAC-15.B3.7.9

OVERVIEW OF THRUSTER PLUME EFFECTS AND COUNTERMEASURES ANALYSIS IN CHINA TIANGONG-1 MISSION Zhang Jian, Institute of Manned Space System Engineering, China Academy of Space Technology (CAST), China

IAC-15.B3.7.10

THERMODYNAMIC MODEL OF MARS OXYGEN ISRU EXPERIMENT

Forrest Meyen, Massachusetts Institute of Technology (MIT), United States







DEVELOPMENT OF A MASS ESTIMATION TOOL FOR FUTURE **HUMAN SPACE MISSIONS**

Ralf Boden, University of Tokyo, Japan

IAC-15.B3.7.12 (withdrawn)

EXPLORATION OF THE FUTURE: SPACESUIT DESIGN AND OPTIMIZATION

Keithe Baggett, Zero Point Frontiers Corp., United States

IAC-15.B3.7.13 (withdrawn)

ECONOMIC EVALUATION OF REUSABLE CREW RETURN VEHICLE BASED ON LIFE CYCLE COST

Zhen Huang, Institute of Manned Space System Engineering, CAST,

B3.9-YPVF.2. Human Spaceflight Young **Professional Virtual Forum**

October 14 2015, 14:45 — Kerem Carmit

Co-Chair(s): Cristian Bank, EADS Astrium Space Transportation GmbH, Germany; Guillaume Girard, INSYEN AG, Germany;

IAC-15.B3.9-YPVF.2.1

ENHANCING THE HUMAN-MACHINE INTERFACE USING VISR- AN INTERACTIVE 3D VISUALIZATION/ DESENSITIZATION TRAINING TOOL IN A VARIABLE GRAVITY MODEL

Poonampreet Kaur Josan, University of North Dakota, United States

IAC-15.B3.9-YPVF.2.2

THE SENSITIVITY ANALYSIS FOR SYSTEM DESIGN PARAMETERS EFFECT ON RETURN CAPSULE LANDING ATTITUDE LIU MIN, China Academy of Space Technology (CAST), China

IAC-15.B3.9-YPVF.2.3

TOWARDS AN OPERATIONAL SATELLITE - CANADIAN SPACE AGENCY'S APPROACH TO OVERCOMING CHALLENGES FACED IN THE OPERATIONS OF NEAR EARTH OBJECT SURVEILLANCE SATELLITE. Nimita Wadhwa, Canadian Space Agency, Canada

IAC-15.B3.9-YPVF.2.4

ATMOSPHERIC PROCESSING MODULE FOR FUEL AND WATER PRODUCTION ON MARS: AN ENGINEERING MODEL AND INTRINSIC KINETIC STUDY OF THE SABATIER REACTOR Anne Caraccio, NASA Kennedy Space Center, USA

TECHNIQUES FOR THE USE OF VIDEO OVER DELAY TOLERANT NETWORKS AS A TOOL FOR SAFETY AND SITUATIONAL **AWARENESS**

Jeremy Pierce-Mayer, INSYEN AG, Germany

IAC-15.B3.9-YPVF.2.6

REVIEW OF THE INDIA'S HUMAN SPACE FLIGHT PROGRAM Prashant Kaswekar, University of Stuttgart, Germany

B3.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Cristian Bank, EADS Astrium Space Transportation GmbH, Germany; Martin Zell, European Space Agency (ESA), The Netherlands;

IAC-15.B3.IP.1

EFFECTIVE ANALYSIS OF SPACE STATION SYSTEMS REQUIREMENT FOR EXPLOITING SPACE EXPLORATION IN 2015. THANGAVEL SANJEEVIRAJA, Hindustan University, India

IAC-15.B3.IP.2

FEASIBILITY OF MULTI-TECHNOLOGY INTEGRATION STRATEGY FOR DUST MITIGATION OF PLANETARY SPACESUITS Kavya K. Manyapu, The Boeing Company and University of North Dakota, United States

IAC-15.B3.IP.3

THE REPORT BY NEW PROJECTS OF LOW BUDGET SCIENTIFIC AND COMMERCIAL PILOTED EXPEDITION TO MARS Olea Aleksandrov, AVIASTAR Inc www.aviastar.us, United States

THE GNC SYSTEM IDENTIFICATION OF SKIP ENTRY REENTRY TARGET BASED ON INCOMPLETE INFORMATION

Ma Hong, State Key Laboratory of Astronautic Dynamics (ADL), affiliated to Xi'an Satellite Control Center, China

MISSION PLANNING AND SCHEDULING FOR RENDEZVOUS AND DOCKING OF MANNED SPACECRAFT BASED ON FINIT STATE MACHINE

Sheng Yang, China Academy of Space Technology (CAST), China

IAC-15.B3.IP.6 (withdrawn)

EXPERIMENTAL AND MODELING INVESTIGATION OF CO2 DISSOCIATION IN MARS ENTRY CONDITION Xin Lin, China Academy of Aerospace Aerodynamics(CAAA), China

IAC-15.B3.IP.7

EDR/EML INTEGRATION CAMPAIGN AND LESSONS LEARNT Maurizio Costa, Thales Alenia Space Italia, Italy

IAC-15.B3.IP.8 (withdrawn)

THE INTERNATIONAL REGIME GOVERNING EXPLOITATION OF NATURAL RESOURCES IN OUTER SPACE: POTENTIAL PROCESS OF

Yangzi Tao, Beijing Institute of Technology, China

B4. 22nd 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. 16th Workshop on Small Satellite Programmes at the Service of Developing Countries

October 13 2015, 09:45 — Eshkol 1

Co-Chair(s): Pierre Molette, France; Sias Mostert, Space Commercial Services Holdings (Pty) Ltd, South Africa; Rapporteur(s): Danielle Wood, The John Hopkins University, United States; Sergei Chernikov, United Nations Office at Vienna, Austria:

IAC-15.B4.1.1

SMALLER IS BETTER? Meir Moalem, Israel

IAC-15.B4.1.2

UNIVERSITY PARTNERSHIPS AS A MODEL FOR CAPABILITY BUILDING IN EMERGING SPACE NATIONS Danielle Wood, The John Hopkins University, United States

IAC-15.B4.1.3

DESIGN AND DEVELOPMENT OF A NANO SATELLITE FOR SHIP MONITORING

Shobha Rekh, Karunya University, India

IAC-15.B4.1.4

WATER RESOURCES MONITORING SYSTEMS IN THE NIGER-DELTA BASIN AND THE ROLE OF NIGERSAT-X SATELLITE. Michael Kio, Cranfield University, United Kingdom

IAC-15.B4.1.5

DESIGN CONSIDERATION FOR CONSTELLATION OF SMALL SATELLITES TO TACKLE INSECURITY CHALLENGES IN NIGERIA BLESSING ZINOM, National Space Research and Development Agency (NASRDA), Abuja Nigeria, Nigeria

IAC-15.B4.1.6

EQUATOR-SAR: A CONSTELLATION OF SMALL SATELLITES AT THE SERVICE OF DEVELOPING NATIONS

Abdul Lawal, University of Glasgow, Space Advanced Research Team, United Kingdom

IAC-15.B4.1.7

AEROSPACE TECHNOLOGY IN PERU Avid Roman-Gonzalez, , Peru

IAC-15.B4.1.8

ADVANCES FOR THE FIRST CENTRA-AMERICA SATELLITE: PROVIDING SOLUTIONS TO THE CHALLENGES OF ENVIRONMENTAL MONITORING IN TROPICAL DEVELOPING COUNTRIES Luis Carlos Rosales Alpízar, Costa Rica Institute of Technology (ITCR), Costa Rica

IAC-15.B4.1.9

SCHOOL OF SATELLITES: AN ART AND SOCIAL EXPERIMENT IN MEXICO

Juan Díaz Infante, , Mexico

IAC-15.B4.1.10

LESSONS LEARNED BY THE FIRST BRAZILIAN CUBESAT PLATFORM Eduardo Escobar Burger, National Institute for Space Research -INPF . Brazil

B4.2. Small Space Science Missions

October 12 2015, 15:15 — Eshkol 1

Co-Chair(s): Larry Paxton, The Johns Hopkins University Applied Physics Laboratory, United States; Stamatios Krimigis, The Johns Hopkins University Applied Physics Laboratry, United

IAC-15.B4.2.1

TWINKLE - A BRITISH SPACE MISSION TO EXPLORE FARAWAY WORLDS

Marcell Tessenyi, University College London, United Kingdom

IAC-15.B4.2.2

ULTRASAT – THE ULTRAVIOLET TRANSIENT ASTRONOMY SATELLITE Ilan Sagiv, Weizmann Institute of Science, Israel

IAC-15.B4.2.3

FINDING UNIQUE EXOPLANETS WITH ULTRASAT Aviv Ofir, Weizmann Institute of Science, Israel

IAC-15.B4.2.4 (withdrawn)

A NEW DISTRIBUTED MICROSATELLITE AND NANOSATELLITE SYSTEM FOR PRECISE ATMOSPHERIC DENSITY MEASUREMENT Zhiming Zhao, DFH Satellite Co. Ltd., China

IAC-15.B4.2.5 (withdrawn)

PROBA-3, A FORMATION FLYING SPACECRAFT IMPLEMENTING A GIANT CORONAGRAPH

Joe Zender, European Space Research and Technology Centre, ESA-ESTEC. The Netherlands

IAC-15.B4.2.6

PIC.A.S.S.O: A STATE OF THE ART CUBESAT Kevin Quillien, Clyde Space Ltd., United Kingdom

IAC-15.B4.2.7

DESIGN, MANUFACTURING AND TEST OF THE CUBESAT URSA

Fabrizio Piergentili, University of Rome "La Sapienza", Italy

IAC-15.B4.2.8

LABORATORY PERFORMANCE OF X-RAY DETECTOR ON 2U CUBESAT BEEAGLESAT Emrah Kalemci, , Turkey

IAC-15.B4.2.9 (withdrawn)

A NEW CONCEPT IN DESIGNING THE THERMAL SHIELD FOR A SMALL REENTRY SPACECRAFT

Bianca Szasz, Kyushu Institute of Technology, Japan

IAC-15.B4.2.10

EIGHT YEARS OF GAMMA-RAY ASTROPHYSICS: THE AGILE MISSION Marco Tavani, INAF-IAPS, Italy

IAC-15.B4.2.11 (withdrawn)

SMALL EXPLORER FOR ADVANCED MISSIONS PECULIARITIES Vira Pronenko, Lviv Centre of Institute for Space Research, Ukraine

IAC-15.B4.2.12

SCIENTIFIC PROGRAM AND OPERATION OF SMALL SATELLITES

Ivan Tkachenko, SSAU, Russian Federation

B4.3. Small Satellite Operations

October 13 2015, 14:45 — Eshkol 1

Co-Chair(s): Karen McBride , University of California, Los Angeles, United States; Peter M. Allan, STFC, United Kingdom; Rapporteur(s): Andreas Hornig, University of Stuttgart, Germany; Helen Walker, STFC, United Kingdom;

IAC-15.B4.3.1

LOW COST SUCCESSFUL SPACE OPERATIONS: THE AGILE MISSION Fabio D'Amico, Italian Space Agency (ASI), Italy

IAC-15.B4.3.2

MICROSATELLITES GROUND OPERATIONS AND BEST PRACTICES FROM THE EXPERIENCE OF UNISAT-6 Aitor Conde Rodriguez, G.A.U.S.S. Srl, Italy

IAC-15.B4.3.3

UKUBE-1 PLANNING AND OPERATIONS Helen Walker, STFC, United Kingdom

IAC-15.B4.3.4

MISSION PAST RESULTS AND FUTURE PLANS OF SPACE TETHERED AUTONOMOUS ROBOTIC SATELLITE STARS Masahiro Nohmi, Shizuoka University, Japan

IAC-15.B4.3.5

LESSONS LEARNED FROM IN ORBIT OPERATIONS OF THE UWE-3 PICO-SATELLITE

Alexander Kleinschrodt, University of Würzburg, Germany

IAC-15.B4.3.6

CANX-4 AND CANX-5: PRECISION FORMATION FLIGHT MISSION ACCOMPLISHED

Grant Bonin, Space Flight Laboratory, Canada

IAC-15.B4.3.7 (withdrawn)

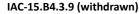
ON-LINE COLLISION HAZARD ASSESSMENT FOR FRACTIONATED SATELLITE CLUSTERS WITH PROXIMITY RELATIVE MOTION WEIWEI YANG, China Satellite Maritime Tracking and Control Department, China

IAC-15.B4.3.8

NANOSATCS: A GROUND CONTROL AND MONITORING SYSTEM FOR BRAZILIAN SCIENTIFIC CUBESAT - NANOSATC-BR1 Marcelo Henrique Essado de Morais, , Brazil







ESEO GROUND SEGMENT SOFTWARE SOLUTIONS:* DESIGN, IMPLEMENTATION AND TESTING

Marco Bosco, University of Bologna, Italy

IAC-15.B4.3.10

RAISIN - RADIO AMATEUR INTERNATIONAL SATELLITE INFORMATION NETWORK

Ramon de la Rosa, Universidad de Valladolid, Spain

IAC-15.B4.3.11

NAVIGATION DEVELOPMENT PROGRAM FOR THE ADDASAT MICROSATELLITE

Dragos Rugescu, Association Dedicated to Development in Astronautics (ADDA), Romania

IAC-15.B4.3.12

AGILE PROCESS FOR EMBEDDED SOFTWARE DEVELOPMENT OF SMALL SATELLITES' ONBOARD COMPUTER

Sendhilkumar Alalasundaram, College of Engineering, Pune, India

IAC-15.B4.3.13

ACTUATION SYSTEM FOR ATTITUDE CONTROL OF TWIN-NANO-SATELLITE STUDSAT-2

Divyanshu Sahay, Nitte Meenakshi Institute of Technology, India

B4.4. Small Earth Observation Missions

October 14 2015, 09:45 — Eshkol 1

Co-Chair(s): Amnon Ginati, European Space Agency (ESA), The Netherlands; Larry Paxton, The Johns Hopkins University Applied Physics Laboratory, United States;

Rapporteur(s): Carsten Tobehn, European Space Agency (ESA), The Netherlands;

IAC-15.B4.4.1

ITALIAN CHALLENGES AND OPPORTUNITIES FOR SMALL SATELLITES; A SCIENTIFIC, TECHNOLOGICAL AND INDUSTRIAL PERSPECTIVE Luigi Ansalone, Agenzia Spaziale Italiana (ASI), Italy IAC-15.B4.4.2

A SATELLITE BASED LOW POWER LOW VOLUME RECEIVER SYSTEM FOR TRACKING OF MIGRATING BIRDS

Rene Fleron, Technical University of Denmark - National Space Institut (DTU Space), Denmark

IAC-15.B4.4.3

EARTH OBSERVATION AND MARINE/AIR TRAFFIC MONITORING WITH A MULTIPLE CUBESAT CONSTELLATION Shufan Wu, Shanghai Engineering Center for Microsatellite, China

IAC-15.B4.4.4

EMSA/ESA SAT-AIS INITIATIVE - FIRST OPERATIONAL RESULTS OF THE DATA PROCESSING CENTER & SERVICES AND NEXT GENERATION PAYLOAD AND MICRO-SATELLITES Carsten Tobehn, European Space Agency (ESA), The Netherlands

CUBETH: NANO-SATELLITE MISSION FOR ORBIT AND ATTITUDE DETERMINATION USING LOW-COST GNSS RECEIVERS Anton Ivanov, Ecole Polytechnique Fédérale de Lausanne (EPFL), Space Engineering Center (eSpace), Switzerland

IAC-15.B4.4.6

DRAG-FREE TECHNOLOGY ON A SMALL SATELLITE Andreas Zoellner, Stanford University, United States

IAC-15.B4.4.7

ENVIRONMENTAL MONITORING EXPERIMENT (EM-EX) ONBOARD RYETUBESAT

Krishna Kumar, Ryerson University, Canada

IAC-15.B4.4.8

EARTH OBSERVATION WITH TIGRISAT: STRUCTURAL AND MISSION

Paolo Teofilatto, University of Rome "La Sapienza", Italy

IAC-15.B4.4.9 (withdrawn)

FLIGHT INSTRUMENT TESTING FOR THE NEMO-HD SATELLITE Simon Grocott, Space Flight Laboratory, Canada

IAC-15.B4.4.10

TOWARDS LONG DURATION VIDEO IMAGING FROM SMALL LEO

Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), United

B4.5. Access to Space for Small Satellite

October 14 2015, 14:45 — Eshkol 1

Co-Chair(s): Alex da Silva Curiel , Surrey Satellite Technology Ltd (SSTL), United Kingdom; Jeffery Emdee , The Aerospace Corporation, United States;

IAC-15.B4.5.1 (withdrawn)

SMALLSAT MARKET AT TURNING POINT IN HISTORY Rachel Villain, Euroconsult, France

IAC-15.B4.5.2

LAUNCHERONE: VIRGIN GALACTIC'S DEDICATED LAUNCH VEHICLE FOR SMALL SATELLITES

William Pomerantz, Virgin Galactic L.L.C, United States

IAC-15.B4.5.3

TECHNICAL EFFECTS OF NASA'S CUBESAT LAUNCH INITIATIVE Emily Nightingale, Science and Technology Policy Institute, United

IAC-15.B4.5.4

JAMSS SMALL SATELLITE LAUNCH SERVICES OVERVIEW Yoshihiko Uemura, Japan Manned Space Systems Corporation

IAC-15.B4.5.5

A REVIEW OF THE NEW GENERATION OF SMALL LAUNCH VEHICLE DEVELOPED BY CALT

Haoliang Yang, Beijing institute of Astronautical Systems Engineering, Beijing, China

IAC-15.B4.5.6

INNOVATIVE LOW-COST APPROACH TO LAUNCHING SMALL SATELLITES TO GEO

David Lackner, , United States

IAC-15.B4.5.7 (withdrawn) THE PIGGYBACK PROGRAM OF 4M/LM-3C

Wei Hu, China Academy of Launch Vehicle Technology(CALT), China

THE INTERNATIONAL SPACE STATION AS LOW-COST HOSTING PLAT-FORM FOR LEO MISSIONS USING THE NANORACKS EXTERNAL **PLATFORM**

Christian Steimle, Airbus Defence and Space, Germany

IAC-15.B4.5.9

UNISAT-6: MISSION RESULTS AND LESSONS LEARNED ABOUT AN INNOVATIVE MULTIPURPOSE MICRO SATELLITE. Marco Truglio, G.A.U.S.S. Srl, Italy

IAC-15.B4.5.10

A STRATEGIC LAUNCH PARTNERSHIPS: SPACE SYSTEMS LORAL AND NASA'S JET PROPULSION LABORATORY

Chrishma Singh-Derewa, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-15.B4.5.11

OPTIMIZATION OF SMALL SATELLITES SEPARATION CONDITIONS ENSURING THEIR UNIFORM DISPERSION AND LIMITATION IN APPROACH FURTHER

Iryna Vorobiova, Yuzhnoye State Design Office, Ukraine

IAC-15.B4.5.12

FIREFLY - A NEW GENERATION OF LOW COST, SMALL LAUNCH VEHICLES DESIGNED TO SERVE THE RAPIDLY GROWING SMALL SATELLITE MARKET

Andrew Bradford, Bradspace, United Kingdom

B4.6A. Generic Technologies for Small/Micro Platforms

October 15 2015, 09:45 — Eshkol 1

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-15.B4.6A.1

AN ACTIVE ATTITUDE CONTROL SYSTEM FOR A DRAG SAIL

Willem Steyn, ESL, Inc., South Africa

IAC-15.B4.6A.2

DESIGN AND DEVELOPMENT OF THE DEORBIT SYSTEM FOR MICROSATELLITES.

Ewelina Ryszawa, Warsaw University of Technology, Poland

IAC-15.B4.6A.3

SMALL SATELLITE FOR BIOMEDICAL RESEARCH BASED ON THE "AIST" SMALL SPACECRAFT PLATFORM Ivan Kaurov, Samara State Aerospace University, Russian Federation

IAC-15.B4.6A.4

RESEARCH ON APPLICATION OF TIME SYNCHRONIZATION IN SMALL

SATELLITE TEST

Cao Lijun, DFH Satellite Co. Ltd., China

IAC-15.B4.6A.5

SINGLE-BOARD ARCHITECTURE: AN INNOVATIVE WAY TOWARDS TABLET SATELLITE Wen Yao, , China

IAC-15.B4.6A.6

GENERIC SPACE MICRO PLATFORM BAUMANETS-2: ON THE VERGE OF THE LAUNCH

Vera Mayorova, Bauman Moscow State Technical University, Russian Federation

IAC-15.B4.6A.7

JAXA SMALL GPS/WHL DEMO BOX: IN-ORBIT DEMONSTRATION EXPERIMENT OF SMALL SATELLITE COMPONENTS USING EXPOSED EXPERIMENT PLATFORM ON JEM

Yoshiyuki Miura, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.B4.6A.8

CONTROL SYSTEM DESIGN FOR MICRO SATELLITE IN-CABIN BASED ON VISUAL NAVIGATION

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

IAC-15.B4.6A.9

A LOW COST HIGH PERFORMANCE GYRO FOR SMALL/MICRO SATELLITES IN LEO

Alberto Torasso, Innalabs Ltd, Ireland

IAC-15.B4.6A.10

SDS-4 ATTITUDE CONTROL SYSTEM: THREE YEARS IN-ORBIT OPERATION RESULTS

Yuta Nakajima, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.B4.6A.11

X50: REDUCING COST AND SCHEDULE WHILE BEING MODULAR AND ADAPTABLE FOR REMOVEDEBRIS

Nimal Navarathinam, Surrey Satellite Technology Ltd (SSTL), United Kingdom

IAC-15.B4.6A.12

AFTER ROSETTA & MYRIADE, NOW A NEW GENERATION OF RADIO **EQUIPMENT FOR MERLIN & MYRIADE EVOLUTION** Miauel Anael Fernandez, SYRLINKS, France

B4.6B. Generic Technologies for Nano/Pico **Platforms**

October 15 2015, 14:45 — Eshkol 1

Co-Chair(s): Nicholas Waltham, Rutherford Appleton Laboratory, United Kingdom; Philip Davies , Deimos Space UK Ltd, United Kingdom;

Rapporteur(s): Joost Elstak, Airbus Defence and Space Netherlands. The Netherlands:

IAC-15.B4.6B.1

HOBBIT - A STANDARD, HIGH RELIABILITY NANO-SATELLITE ELECTRONIC BUS

Raz Itzhaki Tamir, IAI MBT Space, Israel

IAC-15.B4.6B.2 (withdrawn) A SUPERCOMPUTER FOR PICO-SATELLITES

Diego Barrettino, Scuola Universitaria Professionale della Svizzera Italiana, Switzerland

IAC-15.B4.6B.3

INDIVIDUAL FAULT DETECTION AND ISOLATION SYSTEM FOR CUBESATS USING NEURAL NETWORKS AND MULTIMODEL **ALGORITHMS**

Silvana Radu, Institute of Space Science, Romania

IAC-15.B4.6B.4

A NOVEL CONCEPT FOR EARTH REMOTE SENSING USING A BI-STATIC FEMTO-SATELLITE SWARM IN SUN SYNCHRONOUS ORBIT Jianlin Cao, University of Strathclyde, United Kingdom

IAC-15.B4.6B.5

TETHERED ELECTROMAGNETIC CAPTURE: A CUBESAT MISSION

Lorenzo Olivieri, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-15.B4.6B.6

DEVELOPMENT OF A DUAL GIMBAL CONTROL MOMENT GYRO FOR NANO-SATELLITES

Douw Steyn, Stellenbosch University, South Africa

IAC-15.B4.6B.7

INVESTIGATION OF INNOVATIVE THRUST-VECTOR CONTROL TECHNIQUES FOR MICRO PROPULSION SYSTEMS Marsil de Athayde Costa e Silva, Delft University of Technology (TU Delft), The Netherlands

IAC-15.B4.6B.8

AUTONOMOUS NEURO-FUZZY SOLUTION FOR FAULT DETECTION AND ATTITUDE CONTROL OF A 3U CUBESAT Lorenzo Feruglio, Politecnico di Torino, Italy

IAC-15.B4.6B.9

A GAME – CHANGING RADIO COMMUNICATION ARCHITECTURE FOR CUBE/NANO-SATELLITES

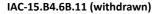
Miguel Angel Fernandez, SYRLINKS, France

IAC-15.B4.6B.10

ENHANCED SMALL SATELLITE COMMUNICATION SYSTEMS FOR REMOTE PLANETARY EXPLORATION RHONDA LYONS, , United States







INVESTIGATING METAL CORE RIGID-FLEX CIRCUIT BOARD ASSEMBLIES FOR CUBESAT STRUCTURAL DESIGN Martin Losekamm, Technische Universität München, Germany

IAC-15.B4.6B.12

HIGH INTEGRITY SOFTWARE FOR CUBESATS AND OTHER SPACE MISSIONS

Carl Brandon, , United States

IAC-15.B4.6B.13

LOW POWER HALL EFFECT THRUSTER FOR MICROSATS Rajendrasing Uttamsing Rajput, National Aerospace University "Kharkiv Aviation Institute".. Ukraine

B4.7. Space Systems and Architectures Featuring Cross-Platform Compatibility

October 16 2015, 13:30 — Eshkol 1

Co-Chair(s): JPeter Holsters, QinetiQ Space nv, Belgium Norbert Lemke, OHB System AG - Munich, Germany Rapporteur(s): Merlin F. Barschke, Technische Universität Berlin, Germany

IAC-15.B4.7.1

ENABLING FLEXIBLE PAYLOAD MANAGEMENT THROUGH MODULARITY

Merlin F. Barschke, Technische Universität Berlin, Germany

IAC-15.B4.7.2

P-400: A STANDARDIZED SMALL SATELLITE BUS FOR DEMANDING MISSIONS

Peter Holsters, QinetiQ Space nv, Belgium

IAC-15.B4.7.3

IAA STUDY ON LEAN SATELLITES DEFINITION AND REQUIREMENTS Mengu Cho, Kyushu Institute of Technology, Japan

IAC-15.B4.7.4

A NEW CONCEPT OF SOFTWARE ARCHITECTURE FOR A FLEXIBLE ATTITUDE DETERMINATION AND CONTROL OF NANOSATELLITES Karsten Gordon, Technische Universität Berlin, Germany

IAC-15.B4.7.5

EURO IOD - A JOINT BRITISH-GERMAN INITIATIVE FOR IN-ORBIT DEMONSTRATION

Norbert M.K. Lemke, OHB System AG - Munich, Germany

IAC-15.B4.7.6

MASS: A MODULAR ASSEMBLY SATELLITE STANDARD FOR 3U **CUBESATS**

Nicholas Velenosi, Concordia University, Canada

IAC-15.B4.7.7

USING CAN PROTOCOL IN NANOSATELLITES Cleber Toss Hoffmann, ITA-CTA, Brazil

IAC-15.B4.7.8 (withdrawn)

DESIGN OF MODULAR SMALL SATELLITE CONSTELLATIONS FOR SCIENCE MISSIONS

Akshata Krishnamurthy, Massachusetts Institute of Technology (MIT), United States

IAC-15.B4.7.9

STANDARDIZING A FAST AND SIMPLE WAY TO REACH AN ORBIT Laura León Pérez, Solar MEMS Technolgies, Spain

B4.8. Small Spacecraft for Deep-Space Exploration

October 16 2015, 09:45 — Eshkol 1

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-15.B4.8.1

KEYNOTE: AN OVERVIEW OF CUBESATS FOR DEEP SPACE **EXPLORATION OF NASA'S JET PROPULSION LABORATORY** Leon Alkalai, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

MANFRED MEMORIAL MOON MISSION (4M): A PRIVATELY FUNDED LOW COST LUNAR FLYBY MISSION

Hubert Anton Moser, LuxSpace Sarl, Luxemburg

IAC-15.B4.8.3

SMALL HOMING VEHICLE FOR LUNAR SOUTH POLE FLYBY Yang Chen, CASIC, China

IAC-15.B4.8.4

AUTONOMOUS NAVIGATION STRATEGY FOR SMALL SATELLITE LOW **ENERGY LUNAR TRANSFER**

Kuldeep Barad, SRM University, Chennai, India

IAC-15.B4.8.5 (withdrawn)

CONCEPTUAL DESIGN OF A LOW COST LUNAR MISSION USING FLIGHT-PROVEN SMALL SATELLITE TECHNOLOGIES Yongjun Moon, Satrec Initiative, Korea, Republic of

IAC-15.B4.8.6

EMERGING SMALL SATELLITE OPERATIONS IN TURKEY: INTERPLANETARY MISSION INFRASTRUCTURE AND BENEFITS IN THE SPACE SECTOR

Cagri Kilic, Istanbul Technical University, Turkey

IAC-15.B4.8.7

COMPREHENSIVE STUDY OF SMALL SATELLITE MOON MISSIONS: ARCHITECTURE DESIGN, ELECTRIC PROPULSION SYSTEM OPTIMIZATION AND COST ANALYSIS Ozan Kara, Koc University, Turkey

IAC-15.B4.8.8 (withdrawn)

CONCEPTUAL STUDY OF RELAY MIMO NAONOSATELLITE CONSTELLATION AROUND L2 FOR THE LUNAR FAR SIDE MISSION Ge Zhu, China Academy of Space Technology, China

PAYLOAD MISSION OF SMALL PROBE DEEP SPACE 'SHINEN2' BENDOUKHA SIDI AHMED, Kyushu Institute of Technology, Japan

IAC-15.B4.8.10

SMALL BODY MASS ESTIMATION FROM SPACECRAFT SWARM FLYBY **DYNAMICS**

William Crowe, UNSW Australia, Australia

IAC-15.B4.8.11

SYSTEM DESIGN FOR DEEP-SPACE CUBESATS - A CASE STUDY FOR ESA ASTEROID IMPACT COPINS CURESATS

Zhou Hao, Cranfield University, United Kingdom

IAC-15.B4.8.12

COST-EFFECTIVE ICY BODIES EXPLORATION USING SMALL SATELLITE

Jonas Jonsson, SGT Inc. / NASA Ames Research Center, 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**

October 16 2015, 09:45 — Dulzin Big B

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 University, United States;

IAC-15.B5.1.1

OVERVIEW AND SYNERGIES IN ESA IAP TRANSPORT & LOGISTICS

Roberta Mugellesi-Dow, European Space Agency (ESA), United

IAC-15.B5.1.2

SPACE FOR PEACEFUL INNOVATION Jeanne Holm, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-15.B5.1.3

ASIS – AUTOMATED SPECTRAL INTERPRETATION SYSTEM Tal Feingersh, Israel Aerospace Industries. Ltd., Israel

IAC-15.B5.1.4

ASIF – AUTOMATED SYSTEM FOR IMAGE FUSION Anat Rockah, Israel Aerospace Industries. Ltd, Israel

"GREEN" SPACE TECHNOLOGY - NAVIGATING THE VALUE CHAIN TO ENHANCED ENVIRONMENTAL QUALITY AND SUSTAINABLE LIVING AGAINST EXTREME CLIMATE RISK Lori Solberg, , Israel

IAC-15.B5.1.6

INTEGRATED PROCESSING AND CONTROL OF MULTIPLE **ENVIRONMENTAL VARIABLES THROUGH INTERNET OF THINGS (IOT)** USING COTS COMPONENTS

Arys Carrasquilla-Batista, Instituto Tecnológico de Costa Rica, Costa

IAC-15.B5.1.7

LANDFILL SITE SELECTION THROUGH THE INTEGRATION OF MULTI-CRITERIA DECISION ANALYSIS WITH GIS: A CASE STUDY OF AKURE, ONDO STATE, NIGERIA.

Olabanji Aladejana, , Nigeria

IAC-15.B5.1.8

DESIGN OF A MECHANICAL CHAMBER FOR BIOLOGICAL PAYLOAD IN A 3U NANOSATELLITE

Matthew Driedger, University of Manitoba, Canada

MONITORING THE GLOBAL ASTEROID IMPACT RISK Clemens Rumpf, University of Southampton, United Kingdom

IAC-15.B5.1.10

THE INTERNATIONAL SPACE UNIVERSITY SPACE STUDIES PROGRAM 2015 PLANETARY DEFENSE PROJECT

Rémi Gourdon, International Space University (ISU), France

B5.2. Integrated Applications End-to-End Solutions

October 15 2015, 14:45 — Dulzin Big B

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-15.B5.2.1

ESA SPACE SOLUTIONS (IAP AND TTP) Frank M Salzgeber, ESA, The Netherlands

INTEGRATED APPLICATIONS FOR THE EXPLOITATION OF SPACE SOLUTIONS TO RESPOND TO LOCAL, NATIONAL AND GLOBAL NEEDS: AN OVERVIEW ON THE ITALIAN PERSPECTIVE FROM THE ASI ACTIVITIES DRIVEN IN THE ARTES APPLICATIONS ENVIRONMENT. Orietta Lanciano, ASI - Italian Space Agency, Italy

IAC-15.B5.2.3

REAL TIME DELIVERY OF "SITUATIONAL AWARENESS PICTURE" FOR RESCUE FORCES

Avi GAL, Gilat Satellite Networks Ltd., Israel

IAC-15.B5.2.4

SPACE AND SECURITY HAND IN HAND - INTEGRATED SPACE APPLICATIONS IN OPERATIONAL SUPPORT OF THE CRISIS MANAGEMENT CENTRE

Jakub Ryzenko, Crisis Informatin Centre, SRC & Warsaw University, Poland

IAC-15.B5.2.5

KARNATAKA-GIS - AN END-TO END GOVERNANCE SOLUTION USING SPACE AND GROUND DATA

Mukund Kadursrinivas Rao, National Institute of Advanced Studies (NIAS), India

IAC-15.B5.2.6

PERSPECTIVES OF SPACE AIS DATA UTILIZATION FOR DIFFERENT **CUSTOMERS IN RUSSIA**

Alexander Romanov, JSC "Russian Space Systems", Russian

IAC-15.B5.2.7 (withdrawn)

GLOBAL FRESHWATER MONITORING FOR REAL-TIME CONTAMINATION DETECTION Benjamin Kraetzig, University of Stuttgart, Germany

IAC-15.B5.2.8

REMOTE SENSING IN SUPPORT OF ENDANGERED SPECIES MANAGEMENT AND ANIMAL MOVEMENT RESEARCH - THE ENV-DATA TOOL PACK

Gil Bohrer, Ohio State University, United States

IAC-15.B5.2.9 (withdrawn)

INTEGRATED SPACE SOLUTIONS FOR RAILWAY SIGNALLING APPLICATIONS (3INSAT)

Michele Castorina, ESA, The Netherlands

IAC-15.B5.2.10

LIFT TO SPACE: SPACE HAS NO LIMIT! José Achache, Switzerland

B6. SPACE OPERATIONS SYMPOSIUM

Coordinator(s): John Auburn, Consultant, Italy; Pierre Jean, Canadian Space Agency, Canada;

B6.1. Human Spaceflight Operations

October 15 2015, 14:45 — 313

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-15.B6.1.1

BASIC PRINCIPLES OF AUTOMATED INTERNATIONAL SPACE STATION RUSSIAN SEGMENT FLIGHT PLANNING SYSTEM

Andrey Belyaev, S.P. Korolev Rocket and Space Corporation Energia, Russian Federation







AN ANALYTICAL SOLUTION FOR YAW MANEUVER OPTIMIZATION ON THE INTERNATIONAL SPACE STATION AND OTHER ORBITING SPACE VEHICLES

Tatiana Dobrinskaya, SGT, United States

IAC-15.B6.1.3

TRANSITIONING ISS DYNAMIC EVENTS FROM PROPULSIVE TO NON-PROPULSIVE CONTROL

Evgeny Menkin, ARES Aerospace, United States

IAC-15.B6.1.4

DIAGNOSIS AND EVA SERVICING OF UNPREPARED ON-ORBIT ROBOTIC HARDWARE

Andrew Masur, MDA Space Missions, Canada

IAC-15.B6.1.5

ERA GROUND CONTROL CONCEPT OF OPERATIONS Fabio Tagliapietra. Terma B.V. The Netherlands

IAC-15.B6.1.6

INPUTS TO AN AMMONIA MODERATE LEAKAGE DETECTION AND REACTION IN COLUMBUS

Paola Parodi, Thales Alenia Space, Italy

IAC-15.B6.1.7

WPA MK II: AN INNOVATIVE PUMP PACKAGE FOR THE INTERNATIONAL SPACE STATION

Nicola di Francescantonio, Thales Alenia Space, Italy

B6.2. New Operations Concepts, Advanced Systems and Commercial Space Operations

October 16 2015, 09:45 — 313

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-15.B6.2.1 (withdrawn)

THE FUTURE OF MISSION OPERATIONS - ON THE PATH TO A SPACE TRAFFIC CONTROL SYSTEM

Trevor Sorensen, University of Hawaii, United States

IAC-15.B6.2.2

LETTING MISSION OPERATORS DO MORE : HOW CAN WE HELP HUMANS DEAL WITH SYSTEM COMPLEXITY ? Guillaume Tanier, CGI, Germany

IAC-15.B6.2.3

VIRTUAL OPERATIONS CENTER FOR SPACE SCIENCE LI Dalin, National Space Science Center, Chinese Academy of Sciences, China

IAC-15.B6.2.4

INTELLIGENT CONTROL SYSTEMS FOR AUTOMATED SPACECRAFT Maxim Matiushin, Central Research Institute of Machine Building (FSUE/TSNIIMASH), Russian Federation

IAC-15.B6.2.5

ADIA: AUTONOMOUS DETECTION, ANALYSIS AND PREDICTION OF ON-ORBIT SPACECRAFT FAILURES

Gerhard Fellinger, University of Würzburg, Germany

IAC-15.B6.2.6

INTRODUCTION OF A NEW SANDBOX INTERPRETER APPROACH FOR ADVANCED SATELLITE OPERATIONS AND SAFE ON-BOARD CODE EXECUTION

Slavi Dombrovski, University of Würzburg, Germany

IAC-15.B6.2.7 (withdrawn)

PERFORMING STATION KEEPING FOR COMSATS AS AN IN-ORBIT SERVICE

Meidad Pariente, SPACECIALIST, Effective Space Solutions, Israel

IAC-15.B6.2.8 (withdrawn)

ON-BOARD AUTONOMY FOR ON-ORBIT GEO SATELLITE PLATFORMS Yuheng Li, Xidian University, China

IAC-15.B6.2.9

MOAPS: MISSION ORIENTED AUTOMATED PLANNING SYSTEM FOR ON-ORBIT SERVICE

Jixiang Cui, Beijing Institute of Tracking and Telecommunication Technology, China

IAC-15.B6.2.10 (withdrawn)

THE EUCLID OPERATIONS CONCEPT AND GROUND SEGMENT DESIGN - STATUS AND CHALLENGES Andreas Rudolph, European Space Agency (ESA), Germany

B6.3. Mission Operations, Validation, Simulation and Training

October 12 2015, 15:15 — 313

Co-Chair(s): Paolo Ferri, European Space Agency (ESA), Germany; Zeina Mounzer, Telespazio Vega Deutschland GmBH, Germany; Rapporteur(s): Thomas Uhlig, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

IAC-15.B6.3.1

MISSION OPERATIONS AND SOH KEEPING OF FORMOSAT-2 IN TEN YEARS

Rock Jeng-Shing Chern, Ryerson University, Canada

IAC-15.B6.3.2

ESA'S BILLION STAR SURVEYOR – FLIGHT OPERATIONS EXPERIENCE FROM GAIA'S FIRST 1.5 YEARS. David Milligan, ESA, Germany

IAC-15.B6.3.3

PHILAE: SCIENCE SCHEDULING AND UNDETERMINED CONTEXT; LESSONS LEARNED

Aurélie Moussi, Centre National d'Etudes Spatiales (CNES), France

AC-15.B6.3.4

THE NEW TREND ANALYSIS PLAN FOR COSMO-SKYMED GROUND AND ILS&OPS SEGMENTS

Luca Fasano, Italian Space Agency (ASI), Italy

IAC-15.B6.3.5

MARS ORBITER MISSION: DESIGN APPROACH TO AUTOMATE THE PLANNING AND SCHEDULING OF PAYLOADS OPERATIONS Naresh Kumar, ISRO Satellite Centre (ISAC),ISRO, India

IAC-15.B6.3.6 (withdrawn)

MISSION OPERATIONS SYSTEMS ENGINEERING DEVELOPMENT AND EXECUTION ON THE SOIL MOISTURE ACTIVE PASSIVE MISSION Luke Walker, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

AC-15.B6.3.7

DEVELOPMENT OF SPHERICAL IMMERSE ENVIRONMENTS SYSTEMS Ido Bareket. . Israel

IAC-15.B6.3.8

REAL-TIME SIMULATION AND TRAINING ENVIRONMENT FOR ROBOTIC SPACE SYSTEMS.

Markus Pietras, , Germany

IAC-15.B6.3.9
AUTOMATIC CONTINGENCY SUPPORT OF GROUND SYSTEM FOR SATELLITE OPERATIONS AND DATA SERVICES

Wang Hongfeng, Mechanical Engineering College, Shijiazhuang,

IAC-15.B6.3.10

MULTI-MISSION ELEMENTS FOR EUMETSAT OPERATIONS chiara maria Cocchiara, Eumetsat, Germany

IAC-15.B6.3.11

ATV-5 DEORBITATION OPERATIONS USING A SHALLOW TRAJECTORY: AN EXAMPLE OF ADAPTIVE OPERATIONS Rémi Lapeyre, CNES, France

IAC-15.B6.3.12

TRANSFERRING PAYLOAD OPERATIONS FROM ONE CENTRE TO ANOTHER: THE FSL CASE Nadia This, BIRA-IASB, Belgium

IAC-15.B6.3.13

SPACE STATION SHORT-TERM MISSION PLANNING UNDER DYNAMIC RESOURCE CONSTRAINTS USING DIFFERENTIAL EVOLUTION Dongyang Qiu, National University of Defense Technology, China

B6.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): John Auburn , Consultant, Italy; Pierre Jean , Canadian Space Agency, Canada;

IAC-15.B6.IP.1

DEEP SPACE IMAGING OPERATION FOR EARTH OBSERVATION INFRARED SENSOR CALIBRATION

Eunghyun Kim, Korea Aerospace Research Institute (KARI), Korea, Republic of

IAC-15.B6.IP.2

A INTELLIGENT SCHEDULE METHOD FOR CHINESE TT&C NETWOR CHEN YANG, Beijing Institute of Tracking and Telecommunication Technology, China

IAC-15.B6.IP.3 (withdrawn)

AN INTERNET WEB SERVER FOR THE ROSETTA LANDER MISSION IN THE COMET 67P/CG EXPLORATION

Joëlle DURAND, Centre National d'Etudes Spatiales (CNES), France

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. Mission Design, Operations & Optimization (1)

October 12 2015, 15:15 — Teddy B

Co-Chair(s): Johannes Schoenmaekers , European Space Operations Centre, Germany; Vincent Martinot , Thales Alenia Space France, France;

Rapporteur(s): Moriba Jah , Air Force Research Laboratory (AFRL), United States;

IAC-15.C1.1.1

PHILAE'S FLIGHT DYNAMICS CHALLENGES: REPORT OF THE LANDING ON A COMET

Elisabet Canalias, CNES, France

IAC-15.C1.1.2

APPLICABILITY OF THE TISSERAND CRITERION FOR OPTIMIZATION OF GRAVITY-ASSIST SEQUENCES FOR LOW-THRUST MISSIONS Volker Maiwald, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-15.C1.1.3

SURVEY OF LOW-THRUST GRAVITY ASSIST TRAJECTORY OPTIMIZATION METHODS, WITH COMPARISONS TO A NOVEL, MULTI-IMPULSE DISCRETIZATION APPROACH Joshua Fogel, University of Southern California, United States

IAC-15.C1.1.4

INITIAL AND FINAL BOUNDARIES TRANSFORMATION WHEN SOLVING OPTIMAL CONTROL PROBLEM WITH AVERAGING TECHNIQUES AND APPLICATION TO LOW THRUST ORBIT TRANSFER Thierry Dargent, Thales Alenia Space France, France

IAC-15.C1.1.5

JOINT OPTIMIZATION OF THE LOW-THRUST TRAJECTORY AND THE MAIN DESIGN PARAMETERS OF ELECTRIC PROPULSION SYSTEM Viacheslav Petukhov, RIAME, Russian Federation

IAC-15.C1.1.6 (withdrawn)

LOW THRUST MINIMUM FUEL OPTIMIZATION TO LIBRATION POINT ORBITS USING VARIABLE SPECIFIC IMPULSE ENGINE Hao Zeng, School of Aerospace Engineering, Beijing Institute of Technology, China

IAC-15.C1.1.7

OPTIMAL CONTROL OF ELECTRIC PROPULSION SPACETAG FOR OPERATION OF THE NEAR LUNAR INFRASTRUCTURE Olga Starinova, Samara State Aerospace University, Russian Federation

IAC-15.C1.1.8 LOW-THRUST TRAJECTORY DESIGN AND OPERATIONS OF PROCYON,

THE FIRST DEEP-SPACE MICRO-SPACECRAFT
Stefano Campagnola, Japan Aerospace Exploration Agency (JAXA),
Japan

IAC-15.C1.1.9

OPTIMAL 3D LUNAR SOFT LANDING TRAJECTORY DESIGN AND PERFORMANCE EVALUATION OF EXPLICIT GUIDANCE LAWS Remesh N, Vikram Sarabhai Space Centre (VSSC), India

IAC-15.C1.1.10

IAC-15.C1.1.11

ASTEROID RETRIEVAL MISSIONS ENABLED BY INVARIANT MANIFOLD DYNAMICS

${\it Joan Pau Sanchez Cuartielles, Cranfield University, United Kingdom}$

TRAJECTORY OPTIONS FOR THE DART MISSION
Justin Atchison, The Johns Hopkins University Applied Physics
Laboratory, United States

C1.2. Mission Design, Operations & Optimization (2)

October 13 2015, 09:45 — Teddy B

Co-Chair(s): Kathleen Howell , Purdue University, United States; Richard Epenoy , Centre National d'Etudes Spatiales (CNES), France:

IAC-15.C1.2.1

21ST JOHN V. BREAKWELL KEYNOTE LECTURE: RELATIVE MOTION Kyle Alfriend, Texas A&M University, United States

IAC-15.C1.2.2

ORBITAL CONTROL OF GEOSTATIONARY SATELLITES –
DEVELOPMENT OF AN AUTOMATED MANEUVERING PLANNING
SYSTEM

Netanel Levi, , Israel

IAC-15.C1.2.3
OPTIMIZATION DESIGN FOR A COMMUNICATION NANOSATELLITE

Danna Linn Barnett, Rafael Advanced Defense Systems Ltd., Israel

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RAPID TRAJECTORY DESIGN IN THE EARTH-MOON EPHEMERIS SYSTEM VIA AN INTERACTIVE CATALOG OF PERIODIC AND QUASI-PERIODIC ORBITS

Davide Guzzetti, Purdue University, United States

IAC-15.C1.2.5 (withdrawn)

OPTIMAL RENDEZVOUS IN CURVILINEAR COORDINATES Juan Luis Gonzalo, Technical University of Madrid (UPM), Spain

SOLAR SAILING WITH INVARIANT MANIFOLDS IN THE EARTH-SUN SYSTEM

Ariadna Farrés, University of Barcelona, Spain

IAC-15.C1.2.7 (withdrawn)

PHASING PROBLEM FOR SUN-EARTH HALO ORBIT TO LUNAR **ENCOUNTER TRANSFERS**

Honaru Chen, Kyushu University, Japan

IAC-15.C1.2.8 (withdrawn)

END-OF-LIFE EXTENSION OF L2 MISSIONS TO NEAR EARTH OBJECTS USING MANIFOLD DYNAMICS.

Daniel Garcia Yarnoz, University of Strathclyde/Advanced Space Concept Laboratory, United Kingdom

IAC-15.C1.2.9

AUTOMATIC PLANNING AND SCHEDULING OF ACTIVE REMOVAL OF NON-OPERATIONAL SATELLITES IN LOW EARTH ORBIT Juan Manuel Romero Martin, University of Strathclyde, United Kingdom

IAC-15.C1.2.10

ORBIT TYPE SELECTION AND ORBIT KEEPING ANALYSES FOR RELAY SATELLITES AROUND THE EARTH-MOON L2 Fenglei Wu, Beijing Aerospace Control Center, China

C1.3. Orbital Dynamics (1)

October 13 2015, 14:45 — Teddy B

Co-Chair(s): Filippo Graziani , G.A.U.S.S. Srl, Italy; Shoji Yoshikawa, Mitsubishi Electric Corporation, Japan;

COUPLED DYNAMICS ANALYSIS AROUND ASTEROIDS BY MEANS OF ACCURATE SHAPE AND PERTURBATIONS MODELING. Andrea Colagrossi, Politecnico di Milano, Italy

IAC-15.C1.3.2

COMPLEXIFIED POTENTIALS AND STEADY ROTATIONS OF MUTUALLY GRAVITATING ASTEROID AND SPACECRAFT

Vasily Nikonov, Moscow Lomonosov State University, Russian

ESCAPE DYNAMICS IN THE SOLAR SYSTEM: APPLICATIONS TO SMALL BODIES MISSION WITH THE RTBP

Maisa Terra, Instituto Tecnológico de Aeronáutica (ITA), Brazil

IAC-15.C1.3.4

CONTROL MOVEMENT OF ELECTRIC PROPULSION SPACECRAFT IN IRREGULAR GRAVITATIONAL FIELD OF ASTEROID Olga Starinova, Samara State Aerospace University, Russian

Federation

IAC-15.C1.3.5 ON THE BOUNDED DYNAMICS OF A PROBE FLYING AROUND A

Daniele Pagnozzi, University of Strathclyde, United Kingdom

IAC-15.C1.3.6

LONG TERM CAPTURE OF ASTEROIDS FOR RESOURCES AND SCIENTIFIC EXPLOITATION USING HYPERBOLIC OBJECTS IN THE SOLAR SYSTEM

Priscilla Sousa Silva, Instituto Tecnológico de Aeronáutica (ITA),

IAC-15.C1.3.7

LOW ENERGY TRANSFER STRATEGY TO EXPLORE A MULTI-BODY

Elbert E.N. Macau, Instituto Nacional de Pesquisas Espaciais (INPE),

IAC-15.C1.3.8

A STUDY ON THE EFFECT OF SOLAR RADIATION PRESSURE ON THE STABILITY REGION NEAR THE EARTH-MOON TRIANGULAR POINTS Marc Jorba-Cuscó, University of Barcelona, Spain

IAC-15.C1.3.9

MERCURY SUN-SYNCHRONOUS ORBITER WITH A SOLAR SAIL Lei Lan, Tsinghua University, China

IAC-15.C1.3.10

PRECISE MODELLING OF SOLAR RADIATION ACCELERATIONS AND DISTURBANCE TORQUES ON MARS ORBITER MISSION (MOM) Motamarri Srikanth, Isac, India

IAC-15.C1.3.11

BALLISTIC SCHEME SELECTION FOR MANEUVERING INSIDE A CONSTELLATION WITH CONTINUOUSLY CHANGING CONFIGURATION

Dmitriy Grishko, Bauman Moscow State Technical University, Russian Federation

C1.4. Orbital Dynamics (2)

October 14 2015, 09:45 — Teddy B

Co-Chair(s): Antonio Prado, INPE, Brazil; Josep J. Masdemont, Universitat Politecnica de Catalunya (UPC), Spain; Rapporteur(s): Gwanghyeok Ju , Korea Aerospace Research Institute (KARI), Korea, Republic of;

IAC-15.C1.4.1 (withdrawn)

AN INVESTIGATION OF 3D PERIODIC ORBITS IN THE VICINITY OF ASTEROIDS WITH POLYHEDRAL MODEL Yanshuo NI, Tsinghua University, China

IAC-15.C1.4.1

INVARIANT MANIFOLD DYNAMICS VIA POLYHEDRAL REPRESENTATION

Mauro Pontani, University of Rome "La Sapienza", Italy

IAC-15.C1.4.2

LIE TRANSFORMATION METHOD APPLIED TO COLLINEAR **EQUILIBRIUM SUBSTITUTES IN ELLIPTIC THREE-BODY PROBLEM** Hao Peng, Beihang University, China

IAC-15.C1.4.3

ON THE ADVANTAGES OF USING A STRICT HIERARCHY TO MODEL ASTRODYNAMICAL PROBLEMS

Diogene Alessandro Dei Tos, Politecnico di Milano, Italy

THE INVESTIGATION OF MOTION IN ONE MODEL OF THE THREE-**BODY PROBLEM**

Alexandr Zlenko, Moscow , Russian Federation

ΙΔC-15 C1 4 5

SEMI-ANALYTICAL PERTURBATIVE APPROACHES TO THIRD BODY RESONANT TRAJECTORIES

Joan Pau Sanchez Cuartielles, Cranfield University, United Kingdom

IAC-15.C1.4.6

INVARIANT MANIFOLD OF RELATIVE MOTION BETWEEN DISPLACED

Wang Wei, College of Astronautics, Northwestern Polytechnical University, China

IAC-15.C1.4.7 (withdrawn)

INTERMEDIARY ORBIT PROPAGATION INCLUDING HIGHER ORDER ZONAL HARMONICS Martin Lara Spain

IAC-15.C1.4.8

GEO SATELLITES TRACKING USING OPTICAL OBSERVATIONS Shai Kaspi, Asher Space Research Institute (ASRI), Israel

IAC-15.C1.4.9

AERO-GRAVITY POWERED MANEUVERS TO CHANGE THE INCLINATION OF A SPACECRAFT

Antonio Prado, National Institute for Space Research - INPE, Brazil

IAC-15.C1.4.10

RELATIVE ORBITAL MOTION OF A CHARGED OBJECT NEAR A SPACEBORNE RADIALLY-DIRECTED ROTATING MAGNETIC DIPOLE Chao Peng, Chinese Academy of Sciences, China

IAC-15.C1.4.11

ORBIT PREDICTIONS OF HIGH ECCENTRICITY SATELLITE ORBITS WITH LUNI-SOLAR EFFECTS USING KS ELEMENTS Harishkumar Sellamuthu, Karunya University, India

C1.5. Attitude Dynamics (1)

October 14 2015, 14:45 — Teddy B

Co-Chair(s): Amalia Ercoli Finzi . Politecnico di Milano. Italy; Michael Yu Ovchinnikov, Keldysh Institute of Applied Mathematics, RAS, Russian Federation;

Rapporteur(s): Hao-Chi Chang, National Space Organization, Taiwan, China:

IAC-15.C1.5.1

NATURAL PERIODIC ORBIT-ATTITUDE BEHAVIORS FOR RIGID BODIES IN THREE-BODY PERIODIC ORBITS

Davide Guzzetti, Purdue University, United States

IAC-15.C1.5.2

ATTITUDE ESTIMATION AND CONTROL DESIGN FOR SINGLE STEERABLE SINGLE WING SATELLITE

Hao-Chi Chang, National Space Organization, Taiwan, China

IAC-15.C1.5.3

AN EFFICIENT MOMENTUM DUMPING METHOD THROUGH AN ALTERNATIVE SUN POINTING STRATEGY FOR SMALL NEAR **EQUATORIAL ORBIT SATELLITE**

Mihindukulasooriya Sheral Crescent Tissera, Nanyang Technological University, Rep. Of Singapore

IAC-15.C1.5.4 (withdrawn)

ROBUST OPTIMAL SUN-POINTING CONTROL OF A LARGE SOLAR POWER SATELLITE

Shunan Wu, Dalian University of Technology, China

IAC-15.C1.5.5

NONLINEAR H-INF VIA MODIFIED RODRIGUES PARAMETERS FOR ATTITUDE CONTROL IN THE REUSE OF RETIRED SPACECRAFT

Xiaoyu Lang, Research Center of Satellite Technology, Harbin Institute of Technology, China

IAC-15.C1.5.6

ATTITUDE DETERMINATION FOR THE UNISAT-6 MICROSATELLITE Simone Battistini, Universidade de Brasília, Brazil

IAC-15.C1.5.7

ON THE ROTATIONAL CUCKER-SMALE MODEL: OPTIMAL FORMATION CONFIGURATION AND ADAPTIVE GAINS DESIGN Fabrizio Paita, Universitat Politecnica de Catalunya (UPC), Spain

IAC-15.C1.5.8

MULTI-PENDULUM MODELING OF PROPELLANT SLOSHING VIA PARAMETER OPTIMIZATION

Dong-yeon Lee, Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of

IAC-15.C1.5.9

COUPLED ATTITUDE-ORBIT DYNAMIC MODELING OF HIGH AREA-TO-MASS SPACECRAFT AND SIGNIFICANCE ANALYSIS OF PERTURBATION FACTORS

Zhongjing Ren, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, Xi'an, China

IAC-15.C1.5.10

DETERMINING HIGH RATE ANGULAR VELOCITY FROM STAR TRACKER MEASUREMENTS Fabio Curti, Sapienza - University of Rome, Italy

ADAPTIVE ATTITUDE CONTROL FOR SPACECRAFT WITH UNKNOWN **DEAD-ZONE OF THRUSTER**

LI DONGBAI, Research Center of Satellite Technology, Harbin Institute of Technology, China

C1.6. Attitude Dynamics (2)

October 15 2015, 09:45 — Teddy B

Co-Chair(s): Paolo Teofilatto , University of Rome "La Sapienza", Italy; Simei Ji , Beijing Institute of Technology, China; Rapporteur(s): YongChun Xie , Beijing Institute of Control Engineering, Ching:

IAC-15.C1.6.1

ABSOLUTE ATTITUDE DETERMINATION SYSTEM FOR A SPHERICAL AIR BEARING TESTRED

David Bamber, Surrey Space Centre, University of Surrey, United Kinadom

IAC-15.C1.6.2 (withdrawn)

ATTITUDE CONTROL OF AN AGGREGATED MODULAR SPACECRAFT WITH MOMENTUM REACTION SPHERE ACTUATORS Chunshi FAN, China Academy of Space Technology (CAST), China

IAC-15.C1.6.3

EQUILIBRIUM CONFIGURATIONS FOR ATTITUDE AND ORBITAL CONTROL BY TETHER SYSTEM.

Denilson Paulo Souza dos Santos, Instituto Nacional de Pesquisas Espaciais - INPE (Brasil) \ Centre for Mechanical and Aerospace Science and Technologies (C-MAST), Portugal, Brazil

IAC-15.C1.6.4

MODELING AND DYNAMICS OF VARIABLE MASS TETHERED SYSTEM WITH CHEMICAL PROPULSION

Liang Sun, Beihang University, China

IAC-15.C1.6.5

ANALYSIS AND EXPERIMENTS FOR A SYSTEM OF TWO SPACECRAFT PAIRED BY MEANS OF A FLEXIBLE LINK

Marco Sabatini, Università di Roma "La Sapienza", Italy

IAC-15.C1.6.6

CHAOTIC BEHAVIOR OF A PASSIVE SATELLITE DURING TOWING BY

Vladimir S. Aslanov, Samara State Aerospace University, Russian **Federation**

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IAC-15.C1.6.7 (withdrawn)

RESEARCH ON NOVEL INTEGRATED RUDDER ACTUATION SYSTEM FOR SPACECRAFT REENTRY AERODYNAMIC CONTROL BASED ON DOUBLE DIGITAL CLOSED CHANNELS OF POWER MANAGEMENT AND LOAD DAMPING

Yuexuan Wang, China Academy of Launch Vehicle Technology, China

IAC-15.C1.6.8

AN ANGULAR MOMENTUM RING STORAGE DEVICE PROTOTYPE FOR CUBESATS BASED ON A LIQUID METAL ACTUATOR Sebastian Grau, Technische Universität Berlin, Germany

IAC-15.C1.6.9

DYNAMIC MODELING AND CONTROL SIMULATION OF THE CABIN TRANSFERRING ASSISTED BY MANIPULATOR FOR THE CHINA SPACE

Dongming Ge, China Academy of Space Technology (CAST), China

IAC-15.C1.6.10

SPACECRAFT ATTITUDE AND TOTAL POWER OPTIMAL CONTROL WITH REDUNDANT DOUBLE-GIMBAL VARIABLE-SPEED CONTROL MOMENT GYROS

Takahiro Sasaki, Osaka Prefecture University, Japan

IAC-15.C1.6.11

LINK LOSS RECOVERY STRATEGY USING SUN SENSOR AND BEACON SIGNAL IN MARS ORBITER MISSION

Ritu Karidhal, ISRO Satellite Centre (ISAC), India

C1.7. Guidance, Navigation and Control (1)

October 15 2015, 14:45 — Teddy B

Co-Chair(s): Igor V. Belokonov , Samara State Aerospace University, Russian Federation; James O'Donnell, National Aeronautics and Space Administration (NASA)/Goddard Space Flight Center, United States;

IAC-15.C1.7.1

MODEL ESTIMATION USING HOVERING SATELLITES ABOUT **ASTEROIDS**

Nicola Baresi, , United States

IAC-15.C1.7.2

ENERGY-BASED AUTONOMOUS CONTROL LAWS FOR BODY-FIXED HOVERING AND ORBITAL MAINTENANCE IN PROXIMITY OF UNIFORMLY ROTATING ASTEROIDS

Andrea Turconi, Surrey Space Centre, University of Surrey, United

IAC-15.C1.7.3

APPLICATION OF OPTICAL NAVIGATION IN CHANG'E-5T1 MISSION Peng Zhang, Beijing Aerospace Control Center, China

IAC-15.C1.7.4

AUTONOMOUS ORBIT NAVIGATION FOR A MISSION TO THE ASTEROID MAIN BELT

Graciela González Peytaví, Bundeswehr Univeristy Munich,

RECOVERY OF LUNAR LIBRATION POINT MISSIONS IN CASE OF CONTINGENCY CORRECTION MANEUVER DELAY Mikhail Ovchinnikov, Keldysh Institute of Applied Mathematics, RAS, Russian Federation

IAC-15.C1.7.6

OPTIMIZATION OF THREE DIMENSIONAL TRAJECTORY USING LEGENDRE PSEUDO-SPECTRAL METHOD FOR LUNAR SOFT LANDING S Mathavarai, ISRO Satellite Centre (ISAC), India

IAC-15.C1.7.7

AUTONOMOUS GUIDANCE AND CONTROL ALGORITHM FOR LUNAR LANDING WITH HAZARD AVOIDANCE Fabio Curti, Sapienza - University of Rome, Italy

IAC-15.C1.7.8

MODEL PREDICTIVE CONTROL FOR RELATIVE GNC DURING PLANETARY SAMPLE CANISTER RENDEZ-VOUS AND CAPTURE PHASE Michèle Lavagna, Politecnico di Milano, Italy

IAC-15.C1.7.9

CONTROL OF A TETHER DEPLOYMENT SYSTEM FOR DELIVERY OF A RE-ENTRY CAPSULE

Vladimir S. Aslanov, Samara State Aerospace University, Russian Federation

IAC-15.C1.7.10

ESTIMATION ERROR LOWER BOUND ANALYSIS FOR MARS ENTRY NAVIGATION

Zhengshi Yu, School of Aerospace Engineering, Beijing Institute of Technology, China

MARS ORBITER MISSION'S JOURNEY TO RED PLANET - PRECISE ORBIT ESTIMATION DURING EARTH AND HELIOCENTRIC PHASE Anatta Sonney, ISRO Satellite Centre (ISAC), ISRO, India

C1.8. Guidance, Navigation & Control (2)

October 16 2015, 09:45 — Teddy B

Co-Chair(s): Bernhard Lübke-Ossenbeck , OHB System AG-Bremen, Germany; Daniel Scheeres, University of Colorado,

Rapporteur(s): Fuyuto Terui , Japan Aerospace Exploration Agency (JAXA), Japan:

IAC-15.C1.8.1

LOW THRUST AUGMENTED SPACECRAFT FORMATION FLYING FOR ON-ORBIT INSPECTION

Callum S. Arnot, University of Strathclyde, United Kingdom

DESIGN OF SLIDING MODE CONTROLLERS FOR FORMATION FLYING ALONG UNSTABLE PERIODIC ORBITS IN CR3BP Hamidreza Nemati, Kyushu University, Japan

IAC-15.C1.8.3

AN INVERSE DYNAMICS APPROACH TO THE GUIDANCE OF SPACECRAFT IN CLOSE PROXIMITY OF TUMBLING DEBRIS Albert Caubet, University of Strathclyde, United Kingdom

IAC-15.C1.8.4

DEVELOPMENT OF SATELLITE CLUSTER FLIGHT ALGORITHMS UNDER THRUSTING ERRORS

Michal Jashinski, Technion - Israel Institute of Technology, Israel

IAC-15.C1.8.5

APPROXIMATE SEMI-ANALYTICAL OPTIMAL RECONFIGURATION CONTROL FOR NONLINEAR RELATIVE MOTION Jing Cao, State Key Laboratory of Astronautic Dynamics, Xi'an Satellite Control Center Weinan TT&C Station, China

IAC-15.C1.8.6

ROBUST MEASUREMENT PLANNING FOR RELATIVE ATTITUDE AND ORBIT ESTIMATION IN SATELLITE FORMATION FLYING Daniel Choukroun, Ben-Gurion University of the Negev, Israel

OPTIMIZED LOW-THRUST RECONFIGURATION MANEUVERS FOR SPACECRAFT FORMATION VIA THE ADAPTED FINITE ELEMENT METHODOLOGY

Yanchao He, School of Astronautics, Beihang University, China

IAC-15.C1.8.8

NONLINEAR LYAPUNOV-BASED COOPERATIVE CONTROL FOR MULTIPLE SATELLITES

Hao Zhang, TECHNION - Israel Institute of Technology, Israel

IAC-15.C1.8.9

OPTIMAL LOW-THRUST SPIRAL TRAJECTORIES USING LYAPUNOV-BASED GUIDANCE

Yang Dalin, Nanjing University of Aeronautics and Astronautics,

IAC-15.C1.8.10

DIFFERENTIAL-DRAG ALGORITHMS FOR SATELLITE CLUSTER FLIGHT IN THE SAMSON MISSION

Ohad Ben-Yaacov, Asher Space Research Institute, Technion, I.I.T.,

IAC-15.C1.8.11

VISUAL TRAJECTORY RECONSTRUCTION OF A CUBESAT AFTER DEPLOYMENT

Jean-Sébastien Ardaens, German Aerospace Center (DLR), Germany

C1.9. Guidance, Navigation & Control (3)

October 16 2015, 13:30 — Teddy B

Co-Chair(s): Arun Misra, McGill University, Canada; Benedicte Escudier , Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France;

IAC-15.C1.9.1

APPLICATION OF GAUSS' VARIATIONAL EQUATIONS TO RELATIVE ORBIT PHASING AND ACQUISITION - A CASE STUDY Josh Newman, Space Flight Laboratory, University of Toronto,

IAC-15.C1.9.2

OPTIMAL STATION KEEPING BY ELECTRIC PROPULSION IN FAILURE

Shuge Zhao, Beijing Institute of Technology, China

IAC-15.C1.9.3 (withdrawn)

SPACECRAFT ATTITUDE CONTROL DESIGN USING PENALTY **FUNCTION**

Manoranjan Sinha, IIT-Kharagpur, India

IAC-15.C1.9.4

DESIGN OF A RECONFIGURABLE SATELLITE CONSTELLATION Ciara McGrath, University of Strathclyde/Advanced Space Concepts Laboratory, United Kingdom

IAC-15.C1.9.5

A MIXED H-INFINITY-GUARDIAN MAPS DESIGN APPROACH FOR THE AUTOMATIC FLIGHT CONTROL SYSTEM OF LAUNCH VEHICLES Adrian-Mihail Stoica, University POLITEHNICA of Bucharest -Research Center for Aeronautics and Space, Romania

IAC-15.C1.9.6 (withdrawn)

ATTITUDE AND POSITION TRACKING OF A SPACECRAFT WITHOUT VELOCITY MEASUREMENT

Haichao Gui. York University. Canada

IAC-15.C1.9.7

FLIGHT RESULT OF THE ATTITUDE DETERMINATION USING SMALL SATELLITE ON-BOARD CMOS CAMERA IMAGE Chisato Sekigawa, , Japan

IAC-15.C1.9.8

THE GEODETIC VLBI EXPERIMENT OF THE CHINESE VLBI NETWORK BEFORE CHINESE CHANG'E5-T1 LUNAR EXPLORATION MISSION Dezhen XU, Beijing Institute of Tracking and Telecommunication Technology, China

IAC-15.C1.9.9

COUPLED ORBIT-ATTITUDE CONTROL OF A HIGH AREA-TO-MASS RATIO SATELLITE

Yafei Zhao, Harbin Institute of Technology, China

IAC-15.C1.9.10

RADIO PULSAR NAVIGATION METHOD BASED ON SYNTHETIC APERTURE AND SPACECRAFT FORMATION TECHNOLOGY Yu Liu, Shanghai Institute of Spaceflight Control Technology, China

IAC-15.C1.9.11

ADAPTIVE FAULT-TOLERANT COULOMBIC SATELLITE ATTITUDE

Manoranjan Sinha, IIT-Kharagpur, India

C1.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Alfred Ng, Canadian Space Agency, Canada; Anna Guerman , Centre for Mechanical and Aerospace Science and Technologies (C-MAST), Portugal;

IAC-15.C1.IP.2

AN IMPROVED SHAPE-BASED METHOD USING FOURIER SERIES FOR LOW-THRUST ORBIT DESIGN

Xuefeng Wang, Northwestern Polytechnical University, China

IAC-15.C1.IP.3

GUIDE STAR CATALOG FOR SATELLITE ATTITUDE ESTIMATION Ivan Kruzhilov, , Russian Federation

IAC-15.C1.IP.4

DYNAMICS OF ORBITS FOR SPACE MISSIONS TAKING INTO ACCOUNT A DISTURBING BODY IN AN ELLIPTICAL-INCLINATED ORBIT: APPLICATIONS TO PLANETARY MOONS Josué Cardoso dos Santos, São Paulo State University - Universidade

Estadual Paulista (UNESP), Brazil IAC-15.C1.IP.5 (withdrawn)

SHORTER ROTATION PATH DESIGN IN UNDER-ACTUATED WHEEL SPACECRAFT

Hwa-Suk Oh, Korea Aerospace University, Korea, Republic of

IAC-15.C1.IP.6 (withdrawn)

MODELING AND DIRECT ADAPTIVE CONTROL OF A MANIPULATOR WITH VARIABLE-SPEED CONTROL MOMENT GYROSCOPES Shiyuan Jia, Beihang University, China

IAC-15.C1.IP.7 (withdrawn)

STUDY ON THE SYSTEM OF A NOVEL SPACE BORNE ULTRA-QUIET PLATFORM OF DOUBLE DRAG-FREE BASED ON THE ELECTROSTATIC

DA FAN, China Academy of Space Technology (CAST), China

A GROUND ATTITUDE ANALYSIS METHOD OF THE LEO SATELLITE EMPLOYING LARGE-SCALE ROTATING INSTRUMENTS Jie Liu, China Academy of Space Technology (CAST), China

CONSTRAINTS HANDLING METHOD IN INDIRECT TRAJECTORY OPTIMIZATION FOR MANNED ASTEROID EXPLORATION Anyi Huang, State Key Laboratory of Astronautic Dynamics (ADL), affiliated to Xi'an Satellite Control Center, Xi'an, China

IAC-15.C1.IP.11

IMPLEMENTATION, TESTS AND CHARACTERIZATION RESULTS FOR CUBESAT ADCS

Stefano Rossi, Swiss Space Center, Switzerland

IAC-15.C1.IP.12

A NOVEL ATTITUDE QUATERNION FILTER FOR THE ESA EUROPEAN STUDENT FARTH ORBITER (ESEO)

Martijn Geers, Technical University Delft, Faculty of Aerospace Engineering. The Netherlands

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International Astronautical Congress 12 - 16 October 2015, Jerusalem, Israel







ATTITUDE STABILIZATION CONTROLLER FOR UNDERATUATED SPACECRAFTS BASED ON HIERARCHICAL ADAPTIVE SLIDING-MODE CONTROL

Li Weiming, Shandong Aerospace Electro-technology Institute,

IAC-15.C1.IP.14

USEFUL ALTERNATIVE PARAMETERIZATION OF AN ORBITAL STATE VECTOR WITH APPLICATION TO FORMATIONS OF LEO SATELLITES Eran Rosenthal, IAI MBT Space, Israel

IAC-15.C1.IP.15

A MONOCULAR-BASED RELATIVE POSITION AND ATTITUDE FILTERING FOR UNKNOWN TARGETS

Liang Song, China Academy of Space Technology (CAST), China

IAC-15.C1.IP.16 (withdrawn)

ANALYTIC PARAMETRISATION OF PERIODIC ORBITS AROUND THE ROTATIONAL EQUILIBRIA OF AN ASTEROID PERTURBED BY SUN **GRAVITY AND RADIATION PRESSURE**

Marta Ceccaroni, University of Roma "Tor Vergata", Italy

IAC-15.C1.IP.17

RELATIVE ORBITAL MOTION ANALYSIS USING DUAL LIE ALGEBRA REPRESENTATIONS

Daniel Condurache, Technical University of Iasi, Romania

IAC-15.C1.IP.18 (withdrawn)

PANGU-4 SIMULATION TOOL FOR THE TESTING OF VISION-BASED NAVIGATION FOR PLANETARY LANDERS

Steve Parkes, University of Dundee, United Kingdom

IAC-15.C1.IP.19

ROBUST CONTROL AND DOUBLE FLEXIBLE VIBRATION ACTIVE SUPPRESSION OF SPACE ROBOT WITH FLEXIBLE-LINK AND FLEXIBLE-JOINT THAT USED IN SPACE STATION

Jie Liana. . China

IAC-15.C1.IP.20

THE HOMOCLINIC AND HETEROCLINIC CONNECTIONS OF PLANAR SYMMETRIC RESONANT ORBITS IN THE RESTRICTED THREE-BODY **EARTH-MOON SYSTEM**

Chao Peng, Chinese Academy of Sciences, China

IAC-15.C1.IP.21

COMPACT FINITE-DIFFERENCE METHOD FOR PLANETARY FLYBY **ORBIT DESIGN**

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

C2. MATERIALS AND STRUCTURES SYMPOSIUM

Coordinator(s): Constantinos P. Stavrinidis , European Space Agency (ESA), The Netherlands; Pavel M. Trivailo, RMIT University, Australia, Australia;

C2.1. Space Structures I - Development and Verification (Space Vehicles and Components)

October 12 2015, 15:15 — Oranim 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-15.C2.1.1

CRONUS – SANDWICH COMMON BULKHEAD TANK DEMONSTRATOR Carina Ludwig, MT Aerospace AG, Germany

IAC-15.C2.1.2

ASSESSMENT ON THE FAILURE OBSERVED IN A LIQUID FUEL TANK IN AN ABORTED MISSION OF A GEOSYNCHRONOUS VEHICLE B Kiran Kumar, Indian Space Research Organization (ISRO), India

IAC-15.C2.1.3

THE EQUIVALENT MECHANICAL MODEL FOR SOLVING SPACECRAFT LARGE AMPLITUDE LIQUID SLOSHING PROBLEM Shiping Xing, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, Xi'an, China

A THEORETICAL STUDY ON THE STRUCTURAL LOADS ON THE IGNITER HARDWARE OF LARGE SOLID BOOSTERS AND PROOF PRESSURE TESTING ADEQUACY

Yezhil Arasu, Vikram Sarabhai Space Centre (VSSC), India

IAC-15.C2.1.5

DESIGN APPROACH ADOPTED FOR ENSURING THE STRUCTURAL INTEGRITY OF A HYDRAULIC LINE ASSEMBLY ALONG THE SOLID ROCKET MOTOR FOR A REUSABLE LAUNCH VEHICLE TECHNOLOGY DEMONSTRATION MISSION

Thomas Kurian, Indian Space Research Organization (ISRO), India

IAC-15.C2.1.6 (withdrawn)

SIZING OF THE SANDWICH DOMINATED STRUCTURE OF THE GOSSAMER-1 BOOM AND SAIL DEPLOYMENT UNIT USING ANSYS SOLIDSHELL ELEMENTS

Johannes Boblenz, Deutsches Zentrum fuer Luft- und Raumfahrt (DLR), Germany

IAC-15.C2.1.7

DESIGN, SIMULATION AND ANALYSIS OF CARBON-FIBER COMPOSITE AND ALUMINUM HONEYCOMB ROCKET FINS USING FLUID-STRUCTURE INTERACTION FOR FLUTTER ANALYSIS Neil Woodcock, Concordia University, Canada

IAC-15.C2.1.8

THERMAL AND MECHANICAL DESIGN AND TEST CAMPAIGN RESULTS OF A SINGLE-PIECE STRUCTURE FOR THE URSA MAIOR NANOSATELLITE

Lorenzo Arena, University of Rome "La Sapienza", Italy

IAC-15.C2.1.9

THERMAL ENVIRONMENT GENERATION AND VERIFICATION FOR ON-GROUND TESTING OF LAUNCH VEHICLE'S FAIRING Lingling CAO, Shanghai Academy of Spaceflight Technology, China

IAC-15.C2.1.10

SPACE QUALIFICATION TESTS PERFORMED BY CIRA ON THE ALTA HALL EFFECT ELECTRIC THRUSTER HT100D

Vincenzo Quaranta, CIRA Italian Aerospace Research Center, Capua,

IAC-15.C2.1.11

OPTIMIZING 3-COMPONENT FORCE SENSOR INSTALLATION FOR SATELLITE FORCE LIMITED VIBRATION TESTING Carmine Salzano. . United States

IAC-15.C2.1.12

CREATING A RANDOM VIBRATION COMPONENT TEST SPECIFICATION FOR STSAT (SCIENCE AND TECHNOLOGY SATELLITE) Talgat Khamitov, JSC «National Company «Kazakhstan Gharysh Sapary», Kazakhstan

C2.2. Space Structures II - Development and **Verification (Deployable and Dimensionally** Stable Structures)

October 13 2015, 09:45 — Oranim 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), Belaium.

IAC-15.C2.2.1

DESIGN AND ANALYSIS OF A COMPOSITE SANDWICH SOLAR ARRAY STRUCTURE FOR THE EU:CROPIS COMPACT SATELLITE WITH AS FEW RELEASE MECHANISMS AS POSSIBLE

Thilo Glaser, German Aerospace Center (DLR), Germany

IAC-15.C2.2.2

DEVELOPMENT OF CALCULATION MODEL OF LARGE-SIZE THERMO-DIMENSIONALLY STABLE STRUCTURE OF COMPOSITE MATERIALS Serhii Kushnirenko, Yuzhnoye State Design Office, Ukraine

IAC-15.C2.2.3 (withdrawn)

DEVELOPMENT OF ELASTIC FORCES MODEL FOR HIGH AREA-TO-MASS RATIO FLEXIBLE SPACECRAFT

Dayu ZHANG, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, Xi'an,, China

IAC-15.C2.2.4

ENVIRONMENTAL TESTING AND ANALYSIS OF A BOOM **DEPLOYMENT MECHANISM FOR GOSSAMER-2** Sebastian Meyer, German Aerospace Center (DLR), Germany

IAC-15.C2.2.5

DEPLOYMENT AND POST GRASPING ISSUES FOR A LIGHT WEIGHT ROBOTIC ARM MOUNTED ON A SMALL SPACE-SERVICES Paolo Gasbarri, Università di Roma "La Sapienza", Italy

MECHANICAL CHARACTERIZATION OF DEPLOYABLE THIN SHELL CFRP-BOOMS FOR THE CUBESAT "DE-ORBIT SAIL" Martin Zander, Deutsches Zentrum fuer Luft- und Raumfahrt (DLR),

IAC-15.C2.2.7

ASTROTUBE MAX: THE DEVELOPMENT AND TESTING OF A LOW MASS EXTENDIBLE CFRP TELESCOPIC BOOM FOR SATELLITE APPLICATIONS.

Mike Lawton, , United Kingdom

IAC-15.C2.2.8

USE OF COMPOSITE MATERIALS BASED ON CYANATE ESTER RESINS FOR MANUFACTURE OF SPACE QUALIFIED STRUCTURES WITH HIGH DIMENTIONAL STABILITY

Gabriel Sznejer, Rafael Advanced Defense Systems Ltd., Israel

IAC-15.C2.2.9

GROUND TESTING OF A 8-METER 4-QUADRANT SCALABLE SOLAR

Xinghua Zhang, Qian Xuesen Laboratory of Space Technology, China

IAC-15.C2.2.10

THERMAL DEFORMATION ON LASER RETRO-REFLECTORS OF LARES SATELLITE

Antonio Paolozzi, University of Rome "La Sapienza", Italy

IAC-15.C2.2.11

MODEL AND ANALYSIS OF BI-HOOP CIRCULAR DEPLOYABLE TRUSS Minger Wu, Tongji University, China

C2.3. Space Structures - Dynamics and Microdynamics

October 13 2015, 14:45 — Oranim 1

Co-Chair(s): Ijar M. Da Fonseca, ITA-DCTA, Brazil; Peter M. Bainum Howard University, United States, Rapporteur(s): Harijono Djojodihardjo, Indonesia;

IAC-15.C2.3.1

VIBRATION CONTROL ANALYSIS AND GENETIC ALGORITHM OPTIMIZATION OF A PIEZOELECTRIC ELEMENTS BONDED STRUCTURE SUBJECT TO IMPACT Harijono Djojodihardjo, , Indonesia

IAC-15.C2.3.2

INNOVATIVE VISCOELASTIC DAMPER SELECTION STRATEGY BASED ON DMA AND MINI-SHAKER TESTS FOR SPACECRAFT APPLICATIONS Benjamin Kawak, Surrey Space Centre - University of Surrey, United Kingdom

IAC-15.C2.3.3

THE STUDY OF POINTING ACCRACY EVALUATION METHOD FOR HIGH PRECISE OBSERVATION SATELLITE

Osamu Takahara, Mitsubishi Electric Corporation, Japan

DEVELOPMENT OF AN EFFICIENT ANALYSER FOR MICRO-VIBRATION DISTURBANCES EMANATING FROM SPINNING ACTUATORS Adelia Drego, Royal Inst. of Technology (KTH), Sweden

IAC-15.C2.3.5

STUDY THE INFLUENCE OF WIND ON THE DYNAMICS OF ANGULAR MOTION THE LANDING VEHICLE WITH AN INFLATABLE BRAKING DEVICE ON THE FINAL PHASE OF TRAJECTORY

Vsevolod Koryanov, Bauman Moscow State Technical University, Russian Federation

IAC-15.C2.3.6

DYNAMIC MODELLING AND CONTROL OF A FLEXIBLE SPACECRAFT WITH FUEL SLOSH Paolo Gasbarri, Università di Roma "La Sapienza", Italy

IAC-15.C2.3.7

ATTITUDE DYNAMICS AND CONTROL OF A SPACECRAFT LIKE A ROBOTIC MANIPULATOR WHEN IMPLEMENTING ON-ORBIT SERVICING

Ijar M. Da Fonseca, ITA-DCTA, Brazil

IAC-15.C2.3.8 (withdrawn)

INFLUENCE ANALYSIS OF THE IMPACTS AND FRICTIONS OF THE JOINTS OF THE VIBRATION ISOLATION PLATFORM FOR CONTROL MOMENT GYROSCOPE

Zixi Guo, Beijing Institute of technology(BIT), China

IAC-15.C2.3.9

DAMPING MEASUREMENT AND DEFORMATION VALIDATION OF FLEXIBLE, HIGH AREA-TO-MASS RATIO DEBRIS MODEL Sittiporn Channumsin, School of Engineering, University of Glasgow, United Kingdom

IAC-15.C2.3.10

THRUST DEGRADATION EFFECT RESEARCH ON NON-IDEAL CONFIGURATION OF SOLAR SAIL BASED ON TIME-VARIANT SOLAR PRESSURE MODEL

Chen Yang, Qian Xuesen Laboratory of Space Technology, China

IAC-15.C2.3.11

HYBRID-TRAJECTORY BASED AUGMENTED ADAPTIVE CONTROL OF FREE-FLOATING FLEXIBLE SPACE MANIPULATOR Xiaoyan Yu, Fuzhou University, China

IAC-15.C2.3.12

METHODS AND MODELS IN DYNAMICS OF STABILIZATION, ORIENTATION AND NAVIGATION SYSTEMS

Lyudmila Kuzmina, Kazan National Research Technical University, Russian Federation

C2.4. Advanced Materials and Structures for **High Temperature Applications**

October 14 2015, 09:45 — Oranim 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 Technology, China;







5TH PAOLO SANTINI MEMORIAL LECTURE: INVERSE METHODS IN IDENTIFICATION AND MODELING OF THERMAL PROCESSES IN AEROSPACE MATERIALS AND STRUCTURES: THEORY AND PRACTICE Oleg Alifanov, Moscow Aviation Institute, Russian Federation

IAC-15.C2.4.2

ROLE OF EFFECTIVE ABLATIVE MATERIALS IN THE HEAT SHIELD OF ROCKETS

Shridutta Banerjee, , India

IAC-15.C2.4.3

PREDICTING METHODS OF HIGH TEMPERATURE PERFORMANCE FOR REUSABLE LAUNCH VEHICLE THERMAL PROTECTION MATERIALS

Ai Bang cheng, , China

IAC-15.C2.4.4

PROPERTIES OF CARBON AND SIC FOAM AS THERMAL INSULATOR FOR SPACE THERMAL PROTECTION SYSTEMS.

Marta Albano, University of Rome "La Sapienza", Italy

IAC-15.C2.4.5

PROPERTIES OF C/C-SIC COMPOSITES USED AS SPACE MATERIALS Kunjie Wang, Xi'an Aerospace Composites Research Institute, China

IAC-15.C2.4.6

THERMO-CHEMICAL ABLATION MECHANISM OF EPDM INTERNAL INSULATOR

Wenli Wang, , China

IAC-15.C2.4.7 (withdrawn)

THERMO-CHEMICAL ABLATION CHARACTERISTICS OF SILICONE RUBBER BASED INSULATOR

Wei Zhang, National University of Defense Technology, China

IAC-15.C2.4.8

UNIVERSITY OF KENTUCKY PLASMA DIAGNOSTIC FACILITIES FOR THE INVESTIGATION OF GAS-SURFACE INTERACTIONS Bradley Butler, University of Kentucky, United States

C2.5. Smart Materials and Adaptive Structures

October 14 2015, 14:45 — Oranim 1

Co-Chair(s): Hiroshi Furuya , Tokyo Institute of Technology, Japan; Pavel M. Trivailo , RMIT University, Australia, Australia; Rapporteur(s): Paolo Gaudenzi , University of Rome "La Sapienza", Italy;

IAC-15.C2.5.1

OPTIMAL PARALLEL/SERIES CONNECTION OF MULTIPLE
PIEZOELECTRIC PATCHES AND INDUCTORS FOR SSDI VIBRATION
SUPPRESSION

Shigeru Shimose, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.C2.5.2

NUMERICAL SIMULATIONS AND EXPERIMENTAL TESTS RESULTS ON A SMART CONTROL SYSTEM FOR MEMBRANE STRUCTURES Laura Bettiol, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-15.C2.5.3

STRUCTURAL HEALTH MONITORING DURING SUBORBITAL SPACE FLIGHT

Andrei Zagrai, New Mexico Tech, United States

IAC-15.C2.5.4

GUIDED WAVE AND ACTIVE SENSOR NETWORK BASED DAMAGE EVALUATION FOR DEEP SPACE PROBES

Xi Lu, Shanghai key laboratory of deep space exploration technology, China

IAC-15.C2.5.5

COMPOSITE STRUCTURE OF A CUBESAT SATELLITE WITH EMBEDDED SENSORS FOR STRUCTURAL MONITORING EXPERIMENT Luca Lampani, University of Rome "La Sapienza", Italy

IAC-15.C2.5.6

COST-EFFECTIVE APERTURE WITH DEFORMABLE MIRROR FOR IMAGING SATELLITES

Brij Agrawal, Naval Postgraduate School, United States

IAC-15.C2.5.7

APPLICATION OF WAVELET PACKET TRANSFORM IN A DAMAGE PATTERN RECOGNITION PROCEDURE FOR COMPOSITE BEAMS AND TRUSS-TYPE ALUMINUM STRUCTURES

Davide Nardi, University of Rome "La Sapienza", Italy

IAC-15.C2.5.8

SPACE ANTENNA STRUCTURE VIBRATION SUPPRESSION VIA A NOVEL ELECTROMAGNET SHUNT DAMPING METHOD Bo Yan, , China

IAC-15.C2.5.9

PSEUDOELASTIC SMA MESH WASHER GEAR WITH MICRO-JITTER ATTENUATION CAPABILITY FOR STEPPER ACTUATED MECHANISM Seong-Cheol Kwon, Chosun University, Korea, Republic of

IAC-15.C2.5.10

SIMULATION ANALYSIS OF MATERIAL AND STRUCTURE
OPTIMIZATION ON PHASE CHANGE THERMAL CONTROL OF
SPACECRAFT ELECTRONIC EQUIPMENT

Ke Jin, Aerospace research institute of materials and processing technology (ARIMPT), China

C2.6. Space Environmental Effects and Spacecraft Protection

October 15 2015, 09:45 — Oranim 1

Co-Chair(s): Giuliano Marino , CIRA Italian Aerospace Research Centre, Italy;

Rapporteur(s): Anatolii Lohvynenko , Yuzhnoye State Design Office, Ukraine;

IAC-15.C2.6.1

SPACE RADIATION HARDNESS ASSURANCE OF A SATELLITE WITH THE USE OF PROTECTIVE MATERIALS SPACE RADIATION HARDNESS ASSURANCE OF A SATELLITE WITH THE USE OF PROTECTIVE MATERIALS

Oleg Dotsenko, Yuzhnoye State Design Office, Ukraine

IAC-15.C2.6.2

HEAT FLUX SENSOR FOR SPACECRAFT CHARGING THERMAL PROTECTION

Aleksey V. Nenarokomov, Moscow Aviation Institute, Russian Federation

IAC-15.C2.6.3

ATOMIC OXYGEN EXPOSURE TESTING OF NOVEL LAYERED POSS THERMOSET NANOCOMPOSITES

Jessica Piness, University of Southern Mississippi, United States

IAC-15.C2.6.4

ROBISAT MISSION: DOUBLE UNIT CUBESAT THERMAL ANALYSIS IN CONTEXT OF QB50 MISSION $\,$

Mugurel Balan, Institute of Space Science, Romania

IAC-15.C2.6.5

TEMPERATURE MONITORING OF THERMAL-VACUUM TESTS WITH OPTICAL FIBER SENSORS.

Claudio Paris, University of Rome "La Sapienza", Italy

IAC-15.C2.6.6

CMOS SENSOR AS IONIZING RADIATION DETECTOR AND THERMOLUMINESCENCE RESPONSE

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

IAC-15.C2.6.7 (withdrawn)

A COST EFFECTIVE APPROACH FOR QUALIFYING COMMERCIAL HARDWARE FOR LOW-EARTH-ORBIT APPLICATIONS Torsten Koehne, OHB System AG-Bremen, Germany

IAC-15.C2.6.8

THE EFFECTS OF SPACE ENVIRONMENT ON THERMO-OPTICAL DEGRADATION OF SOLAR SAIL MATERIAL

Roman Ya. Kezerashvili, New York City College of Technology, The City University of New York, United States

IAC-15.C2.6.9

ACTIVE AND PASSIVE PROTECTION OF LOW EARTH ORBIT SATELLITES FROM SPACE ENVIRONMENTAL EFFECTS Yash Vardhan Gupta, Manipal Institute of Technology, Manipal University, India

IAC-15.C2.6.10

MISSION OPTIMIZATION OF HIGH-SPEED ENTRY FLIGHT TEST FOR DEEP SPACE EXPLORATION VEHICLES

Wenrui Wu, Institute of Manned Space System Engineering, China Academy of Space Technology (CAST), China

IAC-15.C2.6.11

THERMAL EXPANSION PROPERTIES OF CARBON FIBER REINFORCED PEEK UNIDIRECTIONAL PREPREG

Jianping Han, Xi'an Aerospace Composite Materials Institute, China

IAC-15.C2.6.12

GC-MS AND IR SPECTROMETRY ANALYSES FOR COMPONENT IDENTIFICATION OF MATERIALS OUTGASSING CONTAMINATION OF SPACECRAFT

Zi-long Jiao, Beijing Institute of Spacecraft Environment Engineering, China

C2.7. Space Vehicles – Mechanical/Thermal/Fluidic Systems

October 15 2015, 14:45 — Oranim 1

Co-Chair(s): Brij Agrawal , Naval Postgraduate School, United States; Oleg Alifanov , Moscow Aviation Institute, Russian Federation:

Rapporteur(s): Guoliang Mao , Beijing Institute of Aerodynamics, China;

IAC-15.C2.7.1

PERFORMANCE ANALYSIS OF A VAPOR COMPRESSION HEAT PUMP SYSTEM FOR SOLAR POWER SATELLITES

Xiaochen Lu, China Academy of Space Technology (CAST), China

IAC-15.C2.7.2

FURTHER DEVELOPMENTS IN THE 3OMEGA THERMAL CONDUCTIVITY AND DIFFUSIVITY MEASUREMENT SYSTEM Matthew Dalton, Active Space Technologies, Germany

IAC-15.C2.7.3

DEVELOPMENT OF THERMAL CAPACITORS FOR TEMPERATURE REGULATION IN SPACECRAFT

Siddharth Tiwari, Active Space Technologies, Germany

IAC-15.C2.7.4

EXPERIMENTAL STUDY OF THE START-UP HEAT AND MASS TRANSFER PERFORMANCES OF POROUS PLATE WATER SUBLIMATOR COMBINED WITH FLUID LOOP

Yuying WANG, Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology, China

IAC-15.C2.7.5

A STUDY ON MECHANISM AND EXPERIMENT OF PUMP-ASSISTED CAPILLARY PHASE CHANGE LOOP

Xiaoyu Zhang, China Academy of Launch Vehicle Technology(CALT),

IAC-15.C2.7.6

INVERSE THERMAL ANALYSIS FOR REENTRY VEHICLES Sterian Danaila, University POLITEHNICA of Bucharest - Research Center for Aeronautics and Space, Romania

IAC-15.C2.7.7

A LIGHTWEIGHT CARGO CARRIER SPACECRAFT THERMAL CONTROL SYSTEM DESIGN AND VERIFICATION

Fankong Meng, Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology, China

AC-15.C2.7.8

CRYOGENIC TECHNICS IN RUSSIAN SCIENTIFIC SPACE MISSIONS Anton Burdanov, Central Research Institute for Machine Building (FGUP TSNIIMASH), Russian Federation

IAC-15.C2.7.9

A NEW CONCEPT OF VARIABLE RESISTANCE RADIATOR: STRATOSPHERIC FLIGHT TEST & PERFORMANCE ANALYSIS Davide Paganini, University of Padova, Italy

IAC-15.C2.7.10

THERMAL LOADS SIMULATION ARRAY IN A TYPICAL SATELLITE THERMAL CONTROL SURFACE.

Marcio Bueno dos Santos, Instituto Nacional de Pesquisas Espaciais (INPE), Brazil

IAC-15.C2.7.11

ASSESSMENT OF A LOW-COST MULTILAYER INSULATION SYSTEM FOR THERMAL CONTROL OF NANOSATELLITES Riccardo Di Roberto, G.A.U.S.S. Srl, Italy IAC-15.C2.7.12

SOLAR ORBITER HEAT SHIELD THERMAL PERFORMANCE DEMONSTRATED ON STM

Paolo De Filippis, Thales Alenia Space, Italy

C2.8. Specialised Technologies, Including Nanotechnology

October 16 2015, 09:45 — Oranim 1

Co-Chair(s): Mario Marchetti , Associazione Italiana di Aeronautica e Astronautica (AIDAA), Italy; Pierre Rochus , CSL (Centre Spatial de Liège), Belgium;

Rapporteur(s): Bangcheng Ai , China Aerospace Science and Industry Corporation, China;

IAC-15.C2.8.1 (withdrawn)

NANO STRUCTURED TIN OXIDE THIN FILM FOR GAS SENSING APPLICATIONS

Mohamed Basyooni, National Research Institute of Astronomy and Geophysics (NRIAG), Egypt

IAC-15.C2.8.2

THE CHARACTERIZATION ON THE DISPERSIBILITY OF CARBON NANO TUBE IN EPOXY RESIN BY ANALYZING THE VISCOSITY Zhou Fang, China Academy of Launch Vehicle Technology(CALT),

IAC-15.C2.8.3

POROSITY EFFECT ON HEAT TRANSFER IN A NANOCHANNEL: MOLECULAR DYNAMICS SIMULATION Michael Kio, Cranfield University, United Kingdom

IAC-15.C2.8.4

HIGHLY POROUS THERMAL PROTECTION MATERIALS: MODELING AND PREDICTION OF THE METHODICAL EXPERIMENTAL ERRORS Oleg Alifanov, Moscow Aviation Institute, Russian Federation

IAC-15.C2.8.5

FAILURE PREDICTION FOR COMPOSITES MATERIALS BY THE HFGMC MICROMECHANICAL METHOD

Aviad Levi-Sasson, Tel Aviv University, Israel

IAC-15.C2.8.6

EFFECT OF CARBON NANOTUBE COMPOSITES IN AEROSPACE STRUCTURES

Glenn Hrinda, NASA, United States

IAC-15.C2.8.7

SURFACE ENGINEERING FOR METAL PARTS MADE BY ADDITIVE MANUFACTURING

Nicolas Nutal, CRM, Belgium

NANODIAMONDS ARE SPACE TECHNOLOGY BEST FRIENDS Meir Moalem, , Israel

IAC-15.C2.8.9

IAC-15.C2.8.8

THERMAL CHARACTERIZATION OF A MULTIFUNCTIONAL COMPOSITE STRUCTURE IN EARLY DESIGN PHASE BASED ON THE MASCOT LANDER

Ajay Prasad Ragupathy, Delft University of Technology (TU Delft), The Netherlands

IAC-15.C2.8.10

FABRICATION AND CHARACTERIZATION OF PATTERNED CARBON NANOFIBER ARRAYS USING HOLE-MASK COLLOIDAL LITHOGRAPHY TOWARDS BIOSENSING APPLICATIONS

Jendai Robinson, University of Cincinnati, United States

IAC-15.C2.8.11

COMPARISON OF TWO CARBON FIBER REINFORCED POLYMER GRID TYPES WITH RESPECT TO STABILITY, STIFFNESS AND MASS FOR THE USE AS INTERSTAGE STRUCTURE

Heike Lohse-Busch, DLR, German Aerospace Center, Germany

IAC-15.C2.8.12

A NEW TECHNOLOGY FOR PRODUCTION OF HIGH THICKNESS CARBON/ CARBON COMPOSITES FOR LAUNCHERS APPLICATION.

Marta Albano, University of Rome "La Sapienza", Italy

C2.9. Advancements in Materials Applications and Rapid Prototyping

October 16 2015, 13:30 — Oranim 1

Co-Chair(s): Giuliano Marino, CIRA Italian Aerospace Research Centre, Italy; Sylvie Béland, National Research Council, Canada; Rapporteur(s): Luigi Scatteia, Strategy& - Formerly Booz and Company, The Netherlands;

IAC-15.C2.9.1

MANUFACTURING OF LARGE SCALE FRICTION STIR WELDED AND SPIN FORMED DOMES WITH AN OPTIMIZED PROCESS CHAIN Markus Kahnert, MT Aerospace AG, Germany

IAC-15.C2.9.2

SUCCESSFUL DEVELOPMENT AND MONITORING OF CFRP MANUFACTURING TECHNOLOGIES

Birte Hoeck, MT Aerospace AG, Germany

IAC-15.C2.9.3

MATERIALS CHARACTERIZATION OF ADDITIVELY MANUFACTURED COMPONENTS FOR ROCKET PROPULSION

Robert Carter, NASA Glenn Research Center, United States

IAC-15.C2.9.4

RAPID PROTOTYPING OF A COMBINED CHANNEL/PUMP STRUCTURE FOR LIQUID METAL ACTUATORS USED AS ANGULAR MOMENTUM STORAGE DEVICE FOR PICOSATELLITES Sebastian Grau, Technische Universität Berlin, Germany

IAC-15.C2.9.5

INKJET PRINTING TECHNOLOGY FOR NEW SPACE SENSORICS
DEVELOPMENTS AND OPTIMIZATION
Christine Hill, University of Stuttgart, Germany

IAC-15.C2.9.

THERMO-MECHANICAL CHARACTERIZATION OF A CARBON MICRO-FIBRE REINFORCED POLYMER FOR ADDITIVE MANUFACTURING IN SPACE APPLICATIONS

Marianna Lopatriello, , Italy

IAC-15.C2.9.7 (withdrawn)

DESIGN AND OPTIMIZATION OF A VARIABLE STIFFNESS COMPOSITE WING

Yan Zhang, , China

IAC-15.C2.9.8

EMPLOYING RAPID PROTOTYPING TO REDUCE WEIGHT AND OPTIMIZE SELECTED INTRICATE STRUCTURAL COMPONENTS OF A PICOSATELLITE

Aniket Marne, College of Engineering, Pune, India

IAC-15.C2.9.9

DETAILED STRUCTURAL DESIGN AND CORRESPONDING
MANUFACTURING TECHNIQUES OF THE MASCOT LANDING
MODULE FOR THE HAYABUSA-2 MISSION
Michael Lange, DLR (German Aerospace Center), Germany

IAC-15.C2.9.10

STUDY OF THE LOCOMOTION PRINCIPLE OF A NEW DIELECTRIC ELASTOMER ROLLING ROVER

Silvio Cocuzza, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-15.C2.9.11

THERMOPLASTIC-THERMOSET CO-CURED HOMOGENEOUS
NETWORK OF PEEK- ALDERENE POLYMERS AS HIGH PERFORMANCE
MATRIX FOR SPACE APPLICATIONS

Satheesh Chandran, Vikram Sarabhai Space Centre, Thiruvananthapuram-695 022. INDIA. India

IAC-15.C2.9.12 (withdrawn)

ADVANCEMENTS IN MATERIALS APPLICATIONS AND RAPID PROTOTYPING

Filomena Piscitelli, CIRA Italian Aerospace Research Centre, Italy

C2.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Constantinos P. Stavrinidis , European Space Agency (ESA), The Netherlands; Pavel M. Trivailo , RMIT University, Australia, Australia;

IAC-15.C2.IP.1

DYNAMICS ANALYSIS OF FLEXIBLE CONE UNDERGOING SPACE DOCKING

Wei Han, National University of Defense Technology, China

IAC-15.C2.IP.2 (withdrawn)

KA BAND METAL WIRE MESH DEVELOPMENT FOR DEPLOYABLE REFLECTOR

XiaoFei Ma, Xi'an Institute of Space Radio Technology, China

IAC-15.C2.IP.3

A NEW MULTI-LAYER AND GRADED-DENSITY FLEXIBLE ABLATOR Luo Lijuan, , China

AC-15.C2.IP.4

RESEARCH ON THE FREQUENCY CHARACTERIZATION METHOD OF STRUCTURAL DESIGN

Linan SHI, Science and Technology on Space Physics Laboratory, China

IAC-15.C2.IP.5

RESEARCH ON ACTIVE FLUTTER SUPPRESSION USING ROBUSTIC CONTROL METHODOLOGY FOR REUSABLE LAUNCH VEHICLE Junpeng Hui, China Academy of Launch Vehicle Technology, China

IAC-15.C2.IP.6

AERODYNAMIC DESIGN OF A LIFTING RE-ENTRY VEHICLE FOR REAL GAS EFFECT FLIGHT TEST

Bingyan Chen, China Academy of Aerospace Aerodynamics(CAAA), China

IAC-15.C2.IP.7

TRANSFER PATH ANALYSIS OF DYNAMIC LOADING FOR THE SECOND STAGE LIQUID ROCKET ENGINE

Binchao Li, Xi'an Aerospace Propulsion Institute, China

AC-15.C2.IP.8

THE INFLUENCE FACTOR OF THE DISPERSIBILITY OF CARBON NANO TUBE IN EPOXY RESIN

Zhou Fang, China Academy of Launch Vehicle Technology(CALT), China

IAC-15.C2.IP.9 (withdrawn)

EFFECT OF RECTANGULAR NOZZLE WATER-COOLING WALL ON THE TOTAL ENTHALPY LOSS OF HIGH TEMPERATURE AIRFLOW IN ARCHEATED WIND TUNNEL

Jinlong Peng, China Academy of Aerospace Aerodynamics(CAAA), China

IAC-15.C2.IP.10

DYNAMIC PROPERTIES STUDY AND OPTIMIZATION OF ASTRONAUTIC SEPARATION PRODUCTS WITH DIFFERENT EXTENSION AND COMPRESSION STIFFNESS

Shao-wei Feng, China Academy of Launch Vehicle Technology, China

IAC-15.C2.IP.11

STUDIES ON AERO THERMODYNAMICS PERFORMANCE OF THE RUDDER WITH ZERO SWEEPBACK IN ARC HEATED TUNNEL Kao XU, China Academy of Aerospace Aerodynamics(CAAA), China

IAC-15.C2.IP.12

DESIGN AND OPTIMIZATION OF FLAT TYPE LOOP HEAT PIPE WITH MULTIPLE PARALLEL EVAPORATORS

Xiaoyu Zhang, China Academy of Launch Vehicle Technology(CALT),

IAC-15.C2.IP.13

A NEW APPROACH BASED ON METALLOGRAPHIC ANALYSIS AND MICRO HARDNESS TEST ON EVALUATING THE TEMPERATURE OF REUSABLE RAMJET ENGINE

Ren Jiawan, , China

IAC-15.C2.IP.14

STRUCTURAL DESIGN AND TOPOLOGY OPTIMIZATION OF A UNIVERSITY MICRO-SATELLITE

Jing Guo, School of Astronautics, Beihang University, China

IAC-15.C2.IP.15

AN IMMERSED BOUNDARY METHOD FOR COMPRESSIBLE FLOW SIMULATION

YueLong He, China Academy of Aerospace Aerodynamics(CAAA), China

IAC-15.C2.IP.16 (withdrawn)

STUDY ON SATELLITE SEGMENT VIBRATION TEST TECHNOLOGY $\it Hao\ Jiang$, $\it China$

IAC-15.C2.IP.17

STUDY ON THERMAL PROTECTION MATERIALS ABLATION RESULTING IN CHANGES OF FLOW FIELD PARAMETERS IN SUPERSONIC TURBULENT DUCT ON ARC HEATER You-hua Zhang, China Academy of Aerospace Aerodynamics(CAAA),

IAC-15.C2.IP.18

EXPERIMENTAL STUDY OF LOW DENSITY THERMAL INSULATION MATERIALS ON RADIATION HEATING FACILITY WITH VARIABLE PRESSURE

Lian-zhong Chen, China Academy of Aerospace Aerodynamics(CAAA), China

IAC-15.C2.IP.19

THE ESTABLISHMENT OF DYNAMIC MODEL FOR THE SINGLE-PHASE FLUID LOOP SYSTEM

Yanping Gu, , China

IAC-15.C2.IP.20

EXPERIMENTAL INVESTIGATION ON THE DECOMPOSITION RATE OF PHENOLIC RESIN THERMAL PROTECTION MATERIAL Jian-qiang Tu, China Academy of Aerospace Aerodynamics(CAAA),

IAC-15.C2.IP.21 (withdrawn)

CVD METHODS FOR GRAPHENE GENERATION ON STAINLESS STEELS FOR CORROSION RESISTANCE

Michael Eisfelder, Monash University, Australia

IAC-15.C2.IP.22

AERODYNAMIC FORCE AND HEAT FAST PREDICTION FOR HIGH SPEED VEHICLES BASED ON EFFECTIVE NUMERICAL AND ENGINEERING METHODS Rong Wang, , China

IAC-15.C2.IP.23

A STUDY OF COMPRESSIBILITY CORRECTIONS FOR K-OMEGA SST TURBULENCE MODEL IN HYPERSONIC FLOW APPLICATIONS Guo-hao DING, China Aerodynamics Research and Development Center, China

IAC-15.C2.IP.24

EXPERIMENTAL STUDY ON THE THERMAL CONTROL DEVICE USING THE SOLID-LIQUID PHASE CHANGE MATERIAL

Taig Young Kim, Korea Polytechnic University, Korea, Republic of

IAC-15.C2.IP.25

STRUCTURAL ANALYSIS OF A CRITICAL DEVIATION OBSERVED AT AN INTERFACE IN A SOLID ROCKET BOOSTER MOTOR USING STRAIN BASED ACCEPTANCE CRITERIA

Paul Murugan J, Indian Space Research Organization (ISRO), India

IAC-15.C2.IP.26

A STUDY ON THE START-UP, BLOCKING-UP AND OPERATING CHARACTERISTICS OF LOOP HEAT PIPE Dong La, Shanahai Institute of Satellite Engineering, China

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REACTION CONTROL OF FLEXIBLE JOINT SPACE MANIPULATORS
Silvio Cocuzza, CISAS – "G. Colombo" Center of Studies and Activities
for Space, University of Padova, Italy

IAC-15.C2.IP.28

TIME-VARIANT RELIABILITY ANALYSIS OF CABIN'S DOOR CONSIDERING COMPONENT DAMAGE
Lin Ye., China

IAC-15.C2.IP.29

VERIFICATION WITH QUASI-STATIC TESTS OF COMPOSITE STRUCTURES FOR LAUNCHERS, SATELLITE AND RE-ENTRY VEHICLES Davide Santachiara, DTM srl, Italy

IAC-15.C2.IP.30

DESIGN AND VERIFICATION OF HIGH PRESSURE HIGH PURITY GAS DELIVERY SYSTEMS FOR INTERNATIONAL SPACE STATION Davide Santachiara, DTM srl, Italy

IAC-15.C2.IP.31

INVESTIGATION OF CABIN PRESSURE PREDICTION FOR INTAKE AND EXHAUST SYSTEM ON RE-ENTRY VEHICLES

Huiling Zhan, China Academy of Aerospace Aerodynamics(CAAA),

IAC-15.C2.IP.32 (withdrawn)

A RAPID METHOD TO CALCULATE THE VISCOUS FORCE BASED ON LOCAL INVISCID FLOW FIELD PARAMETERS Gong Anlong, , China

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NUMERICAL AND EXPERIMENTAL ACTIVITIES TO ASSESS THE COMPATIBILITY OF THE IXV MOCK-UP CUSTOM AVIONIC SYSTEMS WITH THE SPLASH DOWN SHOCK LOADS.

Vincenzo Quaranta, CIRA Italian Aerospace Research Center, Capua,

IAC-15.C2.IP.34

DESIGNING A STRUCTURE, ANTENNA AND SOLAR PANELS DEPLOYMENT SYSTEM FOR A STUDENT NANO SATELLITE BUS MODULE (NIUSAT MARK-I)

Neelakandan Pradeesh Kumar, Noorul Islam Centre for Higher Education Noorul Islam University, India

IAC-15.C2.IP.35

EPOXY BASED SHAPE MEMORY POLYMERS FOR SPACE APPLICATIONS

Debby Margoy, SOREQ NRC, Israel

IAC-15.C2.IP.36 (withdrawn)

RESEARCH DEVELOPMENT OF THERMAL PROTECTION MATERIAL IN HIGH ENTHALPY THERMAL ENVIRONMENT FOR LUNAR RETURN

HE GAO, China Academy of Aerospace Aerodynamics(CAAA), China

IAC-15.C2.IP.37

CNT-POLYIMIDE NANOCOMPOSITES FOR SPACE APPLICATIONS Nurit Atar, SOREQ NRC, Israel

IAC-15.C2.IP.38

DYNAMIC CHARACTERISTIC ANALYSIS OF A MOMENT CONTROL UNIT WITH VIBRATION ISOLATION CAPABILITY AND ITS

Yao Zhang, Beijing Institute of technology(BIT), China

IAC-15.C2.IP.39

APPLICATION OF RANS/LES IN COMPUTING HYPERSONIC TURBUI FNT BASE HEATING

Lu Zhao, Beihang University, China

IAC-15.C2.IP.40

THE DESIGN AND TESTING OF DEPLOYMENT MECHANISMS AND STRUCTURE OF TWIN NANO-SATELLITE, STUDSAT-2. Nikhilesh K V, NMAMIT NITTE, India

IAC-15.C2.IP.41

REDUCTION OF PROCESSING TIME AND HUMAN FACTOR EFFECTS DURING THE STRENGTH ASSESSMENT OF THE SPACECRAFT

Nikolay Asmolovskiy, Space Structures GmbH, Germany

IAC-15.C2.IP.42 (withdrawn)

RESEARCH ON REPEATABLE LOCKING MECHANISM FOR SPACE SOLAR ARRAY

Lei Jia, China Academy of Launch Vehicle Technology(CALT), China

IAC-15.C2.IP.43

FOLD-DEPLOYMENT CONCEPT AND PROTOTYPE DESIGN FOR AIR-INFLATABLE SOLAR SAIL

ZhengAi Cheng, Qian Xuesen Laboratory of Space Technology, China

IAC-15.C2.IP.44 (withdrawn)

OPTIMIZATION OF THE CABIN THERMAL ENVIRONMENT CONTROL IN A SPACECRAFT ON THE GROUND PREPARATION STAGE BEFORE LAUNCH

Qun Yu, China Academy of Launch Vehicle Technology, China

IAC-15.C2.IP.45

DESIGN ASPECTS OF HEAD END MOUNTED SAFE ARM (HMSA) FOR **IGNITERS OF SOLID ROCKET MOTORS**

Raiesh Mathew. ISRO. India

IAC-15.C2.IP.46

MECHANISM AND KINETIC CHARACTERIZATION OF THE ELECTRON IRRADIATION INDUCED DEGRADATION OF DGEBA/DICY Gang Liu, China Academy of Space Technology (CAST), China

IAC-15.C2.IP.47

DEVELOPMENT AND STUDY OF MICRO-VIBRATION SIMULATION ANALYSIS SYSTEM FOR SMALL SATELLITES

Yanhui Li, DFH Satellite Co., Ltd., China Academy of Space Technology (CAST), China

IAC-15.C2.IP.48

SURFACE FIGURE PRECISION ANALYSIS RESEARCH ON NON-IDEAL THIN FILM SOLAR CELLS OF SPACE SOLAR POWER SATELLITE Chen Yang, Qian Xuesen Laboratory of Space Technology, China

SHAPE OPTIMIZATION OF INSIDE-HOLE IN TRIANGULAR RIBBED

Yiqian Zhou, , China

IAC-15.C2.IP.50

A BOUNDARY ELEMENT METHOD FOR TRANSIENT NONLINEAR RADIATIVE-CONDUCTIVE COUPLED HEAT TRANSFER PROBLEMS Wang Jing, CASC, China

IAC-15.C2.IP.51

ON THE DEVELOPMENT OF ARC TUNNEL TEST TECHNOLOGY FOR CONTROL SURFACE SEAL EVALUATIONS

Zhang Qian, China Academy of Aerospace Aerodynamics(CAAA),

IAC-15.C2.IP.52

NOVEL IDENTIFICATION METHOD OF THE DYNAMIC PARAMETERS OF A SPACE MANIPULATOR

Silvio Cocuzza, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

C3. SPACE POWER SYMPOSIUM

Coordinator(s): Koji Tanaka, ISAS, JAXA, Japan; Leopold Summerer, European Space Agency (ESA), The Netherlands;

C3.1. Space-Based Solar Power Architectures / Space & Energy Concepts

October 12 2015, 15:15 — Oranim 2

Co-Chair(s): John C. Mankins, ARTEMIS Innovation 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;

IAC-15.C3.1.1 (withdrawn)

CONCEPTUAL DESIGN ON THE SANDWICH SOLAR POWER SATELLITE

Nobuyuki Kaya, Kobe University, Japan

IAC-15.C3.1.2

SPACE & ENERGY: OPPORTUNITIES FOR SPACE IN A DISTRIBUTED **ENERGY GRID**

Thijs Versloot, European Space Agency (ESA), The Netherlands

IAC-15.C3.1.3 (withdrawn)

ENERGIZING EARTH'S FUTURE WITH CLEAN BASE LOAD POWER FROM SPACE TO EARTH

Corey Bergsrud, University of North Dakota, United States

IN-ORBIT ASSEMBLY MISSION OF SPACE POWER STATION ZhengAi Cheng, Qian Xuesen Laboratory of Space Technology, China

SPACE BASED SOLAR POWER IS FOR MARS Matthew Dalton, Active Space Technologies, Germany

IAC-15.C3.1.6

SOLAR-POWERED FREE-PISTON STIRLING - LINEAR GENERATOR MODULE CONCEPT FOR A MOON BASE

Egor Loktionov, Bauman Moscow State Technical University, Russian Federation

IAC-15.C3.1.7

THERMAL CONTROL DESIGN AND ANALYSIS RESEARCH ON SANDWICH IN SYMMETRICAL CONCENTRATOR MODULE ARCHITECTURE OF SPACE SOLAR POWER SATELLITE Chen Yang, Qian Xuesen Laboratory of Space Technology, China

IAC-15.C3.1.8

SPACE BASED SOLAR POWER GENERATION AND TRANSMISSION

Sharad Chopra, University of Petroleum and Energy Studies, India

IAC-15.C3.1.9

VARIOUS REFLECTING SURFACE DEFECTS SIMULATION FOR SPACE MIRROR CONCENTRATING SYSTEMS

Victor Leonov, N.E. Bauman Moscow State Technical University, Russia, Russian Federation

IAC-15.C3.1.10

Winning paper of the 4th SPS paper competition: CARBON-NANOTUBE BASED SPACE SOLAR POWER (CASSP)

C3.2. Wireless Power Transmission **Technologies, Experiments and Demonstrations**

October 13 2015, 09:45 — Oranim 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-15.C3.2.1

THE RESULT OF GROUND EXPERIMENT OF MICROWAVE WIRELESS POWER TRANSMISSION

Shoichiro Mihara, Japan Space Systems (J-spacesystems), Japan

IAC-15.C3.2.2 (withdrawn)

REFERENCE DESIGN SATELLITE FOR IN-SPACE POWER BEAMING **DEMONSTRATIONS**

Corey Bergsrud, University of North Dakota, United States

IAC-15.C3.2.3

STATION-KEEPING OF A HIGH ALTITUDE BALLOON WITH ELECTRIC PROPULSION AND WIRELESS POWER TRANSMISSION: A CONCEPT

Erinn van Wynsberghe, University of Michigan, United States

IAC-15.C3.2.4

DIRECTION DETECTION AND POWER TRANSMISSION EXPERIMENT USING C-BAND MICROWAVES TOWARD SPS

Shotaro Katano, The Graduate Universty for Advanced Studies (SOKENDAI), Japan

IAC-15.C3.2.5

MICROWAVE POWER TRANSMISSION DEMONSTRATION SYSTEM TOWARDS SSPS

Yazhou Dong, China Academy of Space Technology (Xi'an), China

IAC-15.C3.2.6

NEW CONCEPT OF SPACE SOLAR POWER SATELLITE BASED ON DIFFRACTIVE OPTICS AND ULTRA-FAST OPTICS

Xun LIU, Beijing Institute of Space Mechanics & Electricity, CAST,

IAC-15.C3.2.7

WIRELESS POWER TRANSFER TECHNOLOGY FOR MANNED SPACE **APPLICATIONS**

Hongjia Wang, (1)Institute of Manned Space System Engineering, China Academy of Space Technology (CAST); China

IAC-15.C3.2.8

CONTACTLESS POWER TRANSFER SYSTEM FOR SPACE CENTRIFUGE Wei Lu, , China

C3.3. Advanced Space Power Technologies and Concepts

October 13 2015, 14:45 — Oranim 2

Co-Chair(s): Carla Sianorini , 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;

THERMOACOUSTIC GENERATORS IN SPACE APPLICATIONS Matthew Dalton, Active Space Technologies, Germany

IAC-15.C3.3.2 (withdrawn)

CONCEPTUAL DESIGN OF HYBRID SYSTEM FOR LONG-TERM SPACE MISSION BY USING MEOH-H2O2

Byeongseob Park, Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of

IAC-15.C3.3.3

EFFICIENCY INCREASE OF STIRLING ENGINE AS AN ELEMENT OF SPACE SOLAR POWER PLANT

Sergey Finogenov, Moscow Aviation Institute (National Research University, MAI), Russian Federation

IAC-15.C3.3.4 (withdrawn)

RFCS CONCEPT FOR ORBIT PHASES AND PLANETARY HABITATS AT HIGH SYNERGETIC INTEGRATION LEVEL Stefan Belz, University of Stuttgart, Germany

IAC-15.C3.3.5

SOLAR POWER GENERATION FOR THE EXOMARS MISSIONS Emanuele Ferrando, Selex Galileo, Italy

IAC-15.C3.3.6

DEVELOPMENT OF SUPER-LIGHTWEIGHT LARGE SCALE POWER GENERATION SYSTEM FOR SOLAR POWER SAIL Naoki Takaura, Tokyo University of Science, Japan

IAC-15.C3.3.7

THE LIFE PREDETERMINATION FOR LEO SATELLITE POWER SUPPLY SYSTEM IN- ORBIT EXPERIMENT Liu Yiwei, , China

IAC-15.C3.3.8

POWER-SUPPLY SYSTEM OF SPACECRAFT ON THE BASE OF ZIRCONIA FUEL CELLS

Oleksandr Vasylyev, Institute for Problems of Materials Science,

IAC-15.C3.3.9

GENERATION OF POWER TO CHARGE THE BATTERIES IN THE SPACECRAFT BY HARNESSING THE ENERGY FROM THE SHOCK WAVES DURING RE-ENTRY. Rohan Kulkarni, , India

C3.4. Small and Very Small Advanced Space **Power Systems**

October 15 2015. 14:45 — Oranim 3-A









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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-15.C3.4.1

SELECTION OF THE ARRAY CONFIGURATION OF SOLAR CELLS AND BATTERIES FOR INCREASING THE EFFICIENCY OF A BOOST CONVERTER ON NANOSATELLITES

Jesus Gonzalez, UNIVERSIDAD SERGIO ARBOLEDA, Colombia

IAC-15.C3.4.2

DESIGN AND IMPLEMENTATION OF ELECTRICAL POWER SYSTEM FOR STUDSAT 2

RANJITH H.G., Nitte Meenakshi Institute of Technology, India

IAC-15.C3.4.3

ROBISAT MISSION: DOUBLE UNIT CUBESAT POWER ESTIMATION IN CONTEXT OF QB50 MISSION

Mugurel Balan, Institute of Space Science, Romania

IAC-15.C3.4.4

OPTIMAL DESIGN OF THE POWER SYSTEM OF A SWARM OF NANOSATELLITES IN THE PROXIMITY OF AN ASTEROID Massimiliano Vasile, University of Strathclyde, United Kingdom

IAC-15.C3.4.5 (withdrawn)

DESIGN & ANALYSIS OF UPESSAT ELECTRIC POWER SYSTEM Surmit Bhui, University of Petroleum and Energy Studies, India

IAC-15.C3.4.6

ARCHITECTURAL DESIGN OF RADIATION-HARDENED SOC SOLUTION FOR NANOSATELLITE POWER MANAGEMENT Teng Wang, Shanghai Institute of Space Power Sources, China

IAC-15.C3.4.7

THE SIMPLE THINGS MATTER MOST FOR MISSION SUCCESS Andrew Strain, Clyde Space Ltd., United Kingdom

IAC-15.C3.4.8

QUALIFICATION TESTS AND PERFORMANCE VALIDATION OF POWER SYSTEM FOR SMALL SATELLITES

Dhaval Waghulde, College of Engineering Pune, India

IAC-15.C3.4.9 (withdrawn)

EFFECT OF ORBITAL PARAMETERS AND FLEXIBLE PANEL CONFIGURATIONS ON POWER SYSTEM IN TWIN NANO-SATELLITE Shiva Abhishek, Siddaganga Institute of Technology, Tumkur, India

C3.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Koji Tanaka , ISAS, JAXA, Japan; Leopold Summerer , European Space Agency (ESA), The Netherlands;

IAC-15.C3.IP.1

THE PROJECTS OF THE LARGE INFORMATION-ENERGETIC SPACE PLATFORMS.

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

IAC 15 C2 ID 2

FEASIBILITY STUDY ON WIRELESS POWER TRANSMISSION FOR SOLAR ARRAY DRIVE ASSEMBLY

Haipeng Jia, Qian Xuesen Laboratory of Space Technology, China Academy of Space Technology (CAST), China

IAC-15.C3.IP.3

A GENERIC FINE-GRAINED ENERGY BUDGET FOR SATELLITE APPLICATIONS

Dhaval Waghulde, College of Engineering Pune, India

IAC-15.C3.IP.4

ANALYSIS ON POWER SYSTEM DESIGN FOR DEEP SPACE PROBE LYU Hongqiang, Shenzhen Aerospace Dongfanghong HIT Satellite. Ltd. China

IAC-15.C3.IP.5 (withdrawn)

POWER SYSTEM FOR TWIN NANO-SATELLITE BASED ON ATTITUDE DETERMINATION AND CONTROL SYSTEM

Shiva Abhishek, Siddaganga Institute of Technology, Tumkur, India

IAC-15.C3.IP.6

COMPARISON OF CCM AND DCM FLYBACK CONVERTERS FOR SATELLITE PAYLOAD POWER SUPPLY

Qingxiao Sun, Beijing Spacecrafts, China Academy of Space Technology (CAST), China, China

IAC-15.C3.IP.7

DESIGN OF HIGH RELIABILITY COMPOUND SWITCH CIRCUIT FOR AEROSPACE APPLICATION

Ru Wang, Beijing Spacecrafts, China Academy of Space Technology (CAST), China

C4. SPACE PROPULSION SYMPOSIUM

Coordinator(s): Giorgio Saccoccia , European Space Agency (ESA), The Netherlands; Helen Webber , Reaction Engines Ltd., United Kingdom; Richard Blott , Space Enterprise Partnerships Limited, United Kingdom; Toru Shimada , Japan Aerospace Exploration Agency (JAXA), Japan;

C4.1. Propulsion System (1)

October 12 2015, 15:15 — Ballroom B

Co-Chair(s): Christophe Bonhomme , Centre National d'Etudes Spatiales (CNES), France; Patrick Danous, Snecma, France; Rapporteur(s): Vanniyaperumal Narayanan, Indian Space Research Organization (ISRO), India;

IAC-15.C4.1.1 (withdrawn)

THE DEVELOPMENT PLAN OF THE FIRST AND THE SECOND STAGE ENGINES FOR THE JAPANESE NEXT FLAGSHIP LAUNCH SYSTEM Shusuke Hori, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.C4.1.2

CREATION OF FAMILY OF LPRE FOR ADVANCED RUSSIAN AND FOREIGN LAUNCH-VEHICLES ON THE BASIS OF RD191 ENGINE Vladimir Sudakov, JSC NPO Energomash, Russian Federation

-15.C4.1.3

ADVANCEMENT AND FUTURE APPLICATION OF SPACE PROPULSION TECHNOLOGY USING HYDROCARBON PROPELLANTS IN CHINA LI Wenlong, Xi'an Aerospace Propulsion Institute, China

IAC-15.C4.1.4

THE FUTURE OF LIQUID PROPULSION: THE FRENCH VIEW Christophe Bonhomme, Centre National d'Etudes Spatiales (CNES), France

IAC-15.C4.1.5 (withdrawn)

RESULTS OF LE-X ENGINE TECHNOLOGY DEMONSTRATION Hideto Kawashima, JAXA, Japan

IAC-15.C4.1.6

VINCI®, THE EUROPEAN REFERENCE FOR ARIANE 6 UPPER STAGE CRYOGENIC ENGINE

Patrick Alliot, Snecma, France

IAC-15.C4.1.7

DEVELOPMENT OF A LM10-MIRA LOX – LNG EXPANDER CYCLE DEMONSTRATOR ENGINE

Rudnykh Mikhail, AVIO S.p.A., Italy

IAC-15.C4.1.8

FIRING TESTS FOR ADVANCED FEATURES AND LONG-LIFE DURABILITY OF THE MAIN ENGINE OF THE REUSABLE SOUNDING ROCKET

Toshiya Kimura, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.C4.1.9

APPLYING A MATURE GREEN PROPULSION SOLUTION TO ENHANCE FUTURE MISSION CAPABILITIES

Elizabeth Driscoll, Aerojet Rocketdyne, United States

IAC-15.C4.1.10

A NOVEL GREEN GEL PROPELLANT BASED PROPULSION SYSTEM Benveniste Natan, Technion – Israel Institute of Technology, Israel

IAC-15.C4.1.11

RESEARCH ON THERMAL DECOMPOSITION OF HYDROGEN PEROXIDE.

Lukasz Mezyk, Warsaw University of Technology, Poland

IAC-15.C4.1.12

DYNAMIC CHARACTERISTICS OF OPEN-TYPE SWIRL INJECTOR WITH PULSATING MANIFOLD PRESSURE

Yunjae Chung, Seoul National University, Korea, Republic of

IAC-15.C4.1.13

A REVIEW OF CHINA'S LOX/KEROSENE STAGE COMBUSTION CYCLE ROCKET ENGINE

Chen Jianhua, Xi'an Aerospace Propulsion Institute, China

IAC-15.C4.1.14

FEATURES OF THE PROPELLANT TANKS PRESSURIZATION SYSTEMS DEVELOPMENT OF THE LV UPPER STAGES

Vadym Khomyak, Yuzhnoye State Design Office, Ukraine

C4.2. Propulsion System (2)

October 13 2015, 09:45 — Ballroom B

Co-Chair(s): Stéphane Henry, Herakles (Safran group), France; Toru Shimada, Japan Aerospace Exploration Agency (JAXA),

Rapporteur(s): M. Badrinayarana Murthy , Indian Space Research Organization (ISRO), India;

IAC-15.C4.2.1

ADVANCED BIOLOGICAL TREATMENT FOR SOLID PROPULSION -

Guillaume Dupouy, Herakles (Safran group), France

IAC-15.C4.2.2

A SCALED-DOWN STATIC TEST METHOD FOR SOLID ROCKET MOTORS.

Olga Motsyk, Delft University of Technology (TU Delft), The Netherlands

IAC-15.C4.2.3

IMPROVEMENT ON THRUST PROFILE FLEXIBILITY BY OXIDIZER-TO-FUEL RATIO FEEDBACK CONTROL IN HYBRID ROCKET Tomoaki Usuki, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan

IAC-15.C4.2.4

HEAT AND MASS TRANSFER ANALYSIS FOR PARAFFIN / NITROUS OXIDE BURNING RATE IN HYBRID PROPULSION Shani Ben-Basat, TECHNION - Israel Institute of Technology, Israel

IAC-15.C4.2.5

PERFORMANCE CALCULATIONS AND BURNING TESTS ON ALTERING-INTENSITY SWIRLING OXIDIZER FLOW TYPE HYBRID ROCKET ENGINES

Kohei Ozawa, Japan Aerospace Exploration Agency (JAXA)/ISAS, Japan

IAC-15.C4.2.6

PRELIMINARY DESIGN OF HYBRID GAS GENERATOR IN STAGED HYBRID ROCKET ENGINE

Dongeun Lee, Konkuk University, Korea, Republic of

IAC-15.C4.2.7

INTEGRATED APPROACH FOR HYBRID ROCKET TECHNOLOGY DEVELOPMENT AND ANALYSIS OF POSSIBLE APPLICATIONS Francesco Barato, University of Padova - DII/CISAS, Italy

IAC-15.C4.2.8

COMBUSTION INSTABILITY IN SARA HYBRID ROCKET MOTOR Artur Bertoldi, University of Brasilia, Brazil

IAC-15.C4.2.9

DESIGN OF A HYBRID PARAFFIN-BASED TECHNOLOGY DEMONSTRATOR

Marco Di Clemente, CIRA Italian Aerospace Research Centre, Italy

IAC-15.C4.2.10 (withdrawn)

BENEFITS OF A HYBRID PROPULSION SYSTEM USING IN SITU PRODUCED OXIDIZER FOR A MARS ASCENT VEHICLE Ashley Karp, Jet Propulsion Laboratory - California Institute of Technology, United States

IAC-15.C4.2.11 COMBUSTION INS

COMBUSTION INSTABILITY SIMULATION AND ANALYSIS OF A SOLID ROCKET MOTOR TESTING DEVICE BASED ON LES METHOD Linqing Zhang, The 41st Institute of the Sixth Academy of Aerospace Science & Industry Corp, China

IAC-15.C4.2.12 ESTIMATION OF FLIGHT SPECIFIC IMPULSE FOR SOLID PROPELLANT

ROCKET MOTORS

Chamarthi Sainadh, ISRO, India

C4.3. Propulsion Technology (1)

October 14 2015, 09:45 — Ballroom B

Co-Chair(s): Angelo Cervone , Delft University of Technology (TU Delft), The Netherlands; Didier Boury, Herakles (Safran group), France;

Rapporteur(s): John Harlow, Aerojet Rocketdyne, United Kingdom;

IAC-15.C4.3.1

JET INDUCER FOR A TURBO PUMP OF A LIQUID ROCKET ENGINE
Wolfgang Kitsche, German Aerospace Center (DLR), Germany

IAC-15.C4.3.2

ENGINE CONTROL SYSTEM FOR THE MAIN ENGINE OF THE REUSABLE SOUNDING ROCKET

Takeshi Kai, Mitsubishi Heavy Industries, Ltd., Japan

IAC-15.C4.3.3

NEW HORIZONS FOR SMA (SHAPE MEMORY ALLOY) IN SPACE PROPULSION APPLICATIONS

OFER LIVNE, Rafael Advanced Defense Systems Ltd., Israel

IAC-15.C4.3.4

IN FLIGHT ACHIEVEMENTS AND FOLLOW-ON FOR COLD GAS MICRO PROPULSION APPLIED TO S/C FINE POINTING AND ATTITUDE CONTROL G.NOCI A.POLLI

AC-15 C4 3 5

OVERVIEW OF NASA'S GREEN PROPELLANT INFUSION MISSION AND NASA GLENN RESEARCH CENTER'S THRUSTER TESTING AND PLUME DIAGNOSTICS

Timothy Smith, NASA, United States

Giovanni Enrico Noci, Selex ES, Italy

IAC-15.C4.3.6

THE ITALIAN LOX/LCH4 ROCKET ENGINE TECHNOLOGY DEMONSTRATOR: ACHIEVEMENTS AND OUTLOOK Pierpaolo de Matteis, , Italy

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RAFAEL PASSIVATION VALVE FOR SATELLITES PROPULSION SYSTEM Michael Zaberchik, Rafael Advanced Defense Systems Ltd., Israel

IAC-15.C4.3.8

COLD GAS PROPULSION SYSTEM FOR THE SAMSON NANO SATELLITES

Michael Zaberchik, Rafael Advanced Defense Systems Ltd., Israel

IAC-15.C4.3.9

ASSESSMENT OF VARIOUS FUEL ADDITIVES FOR RELIABLE HYPERGOLIC IGNITION WITH 98+ HTP Wojciech Florczuk, Institute of Aviation, Poland

IAC-15.C4.3.10

ANALYSIS OF INFRARED SIGNATURE OF SPACECRAFT PROPULSION PIUMF

Jianwei LU, China Academy of Launch Vehicle Technology, China

IAC-15.C4.3.11

NUMERICAL SIMULATION STUDY ON COMBUSTION PERFORMANCE OF LOW THRUST LOX/METHANE ROCKET ENGINE Shen Chibing, National University of Defense Technology, China

IAC-15.C4.3.12 (withdrawn)

PRELIMINARILY MICROEXPLOSION MODEL OF ORGANIC-GELLANT **GEL FUEL DROPLETS**

Zejun Liu, PLA Information Engineering University, China

INFLUENCE OF RETRACTIVE LENGTH OF COAXIAL INJECTOR ON HIGH-FREQUENCY COMBUSTION INSTABILITY FOR STAGED COMBUSTION LOX/KEROSENE ROCKET ENGINE Longfei Li, Xi'an Aerospace Propulsion Institute, China

IAC-15.C4.3.14

DYNAMIC CALCULATION MODEL FOR AN ATTITUDE CONTROL SYSTEM THAT USES TILTING NOZZLES

Teodor-Viorel Chelaru, University POLITEHNICA of Bucharest Research Center for Aeronautics and Space, Romania

C4.4. Electric Propulsion

October 14 2015, 14:45 — Ballroom B

Co-Chair(s): Garri A. Popov, Research Institute of Applied Mechanics and Electrodynamics, Russian Federation; Norbert Puettmann, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

Rapporteur(s): Vanessa Vial, Snecma, France;

IAC-15.C4.4.1

ELECTRIC PROPULSION IN GERMANY: SYSTEM ACTIVITIES, STATUS OF THE HEMP THRUSTER DEVELOPMENT, CHALLENGES COMING UP Norbert Püttmann, DLR, German Aerospace Center, Germany

IAC-15.C4.4.2

5 KW HALL THRUSTER PROPULSION SUBSYSTEM DEVELOPMENT AND QUALIFICATION

Mariano Andrenucci, Sitael Spa, Italy

IAC-15.C4.4.3

EXPERIMENTAL INVESTIGATIONS AND OPTIMIZATION OF CAMILA HALL THRUSTER WITH STRONG LONGITUDINAL MAGNETIC FIELD Maxim Rubanovich, Asher Space Research Institute, Technion, I.I.T.,

IAC-15.C4.4.4

DEVELOPMENT OF A LOW-POWER HIGH PERFORMANCE HALL **EFFECT THRUSTER**

Dan Lev, Rafael Advanced Defense Systems Ltd., Israel

IAC-15.C4.4.5

MICROTHRUSTER DEVELOPMENT AND MEASUREMENT USING A MICROWAVE MICROPLASMA SOURCE

Brittani Searcy, University of Alabama in Huntsville, United States

IAC-15.C4.4.6

MICRO-CATHODE ARC THRUSTER FOR SMALL SATELLITE **PROPULSION**

Michael Keidar, George Washington University, United States

IAC-15.C4.4.7 (withdrawn)

EXPERIMENTAL APPROACHES FOR MICRO-CATHODE ARC THRUSTER

Alexey Shashurin, George Washington University, United States

IAC-15.C4.4.8

INVESTIGATION OF HOLLOW CATHODE DISCHARGE MODES TRANSITION CHARACTERISTICS Zhang Yan, , China

IAC-15.C4.4.9

HIGH THRUST-OVER-POWER ELECTRIC PROPULSION Amnon Fruchtman, , Israel

IAC-15.C4.4.10

ELECTRIC PROPULSION ACTIVITIES IN AIRBUS DS GMBH Nicoletta Wagner, ASTRIUM EADS, Germany

IAC-15.C4.4.11

INTEREST OF STAGED ARCHITECTURES WITH DROP TANKS FOR SPACE VEHICLES USING ELECTRIC PROPULSION Nicolas Bérend, Office National d'Etudes et de Recherches Aérospatiales (ONERA), France

CIRA DEVELOPMENT ACTIVITIES IN ELECTRIC PROPULSION TESTING Vito Salvatore, CIRA Italian Aerospace Research Center, Capua, Italy

IAC-15.C4.4.13 (withdrawn)

FLIGHT TEST OF THE 800 W HET-40 HALL EFFECT ELECTRIC PROPULSION SYSTEM ON SJ-9A SATELLITE Guanrong Hang, Shanghai Institute of Space Propulsion, China

IAC-15.C4.4.14 (withdrawn)

IN-FLIGHT OPERATION OF THE DAWN ION PROPULSION SYSTEM THROUGH THE HIGH ALTITUDE SCIENCE ORBIT AT CERES Charles Garner, California Institute of Technology, United States

IAC-15.C4.4.15

A SYSTEM STUDY ON DRAG COMPENSATION WITH ELECTRIC PROPULSION IN VERY LOW EARTH ORBIT Luigi Ansalone, Agenzia Spaziale Italiana (ASI), Italy

C4.5. Propulsion Technology (2)

October 15 2015, 09:45 - Ballroom B

Co-Chair(s): Max Calabro, The Inner Arch, France; Walter Zinner, European Conference for Aero-Space Sciences (EUCASS),

Rapporteur(s): Davina Di Cara, European Space Agency (ESA), The Netherlands

REUSABLE ROCKET ENGINE AND IT'S TRIBOLOGICAL SUBJECTS Makoto Yoshida, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.C4.5.2

ADVANCED SENSOR TECHNOLOGIES FOR CRYOGENIC LIQUID PROPELLANT FLOW PHENOMENA

Martin Siegl, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

INVESTIGATION OF STRUCTURAL DYNAMICS OF HIGH THRUST LOX/ KEROSENE STAGE COMBUSTION CYCLE ENGINE Fu Ping, Xi'an Aerospace Propulsion Institute, China

IAC-15.C4.5.4

STRUCTURAL DYNAMIC ANALYSIS OF THE LOX/KEROSENE ROCKET ENGINE BASED ON SYNTHETIC TECHNOLOGY FOR SUBSTRUCTURE TEST MODEL

Feiping Du, Xi'an Aerospace Propulsion Institute, China

IAC-15.C4.5.5

SYSTEM FREQUENCY CHARACTERISTICS ANALYSIS FOR A LARGE-THRUST LOX/KEROSENE STAGED COMBUSTION CYCLE ENGINE Du Dahua, College of Aeronautics, Northwestern Polytechnical University, China

IAC-15.C4.5.6

EXPERIMENTAL INVESTIGATION ON DISTRIBUTION CHARACTERISTICS OF MASS FLUX AND MIXTURE RATIO FOR UNLIKE IMPINGING INJECTOR Yong Wang, China

IAC-15.C4.5.7 (withdrawn)

ANALYSIS OF FREQUENCY RESPONSE CHARACTERISTICS OF PRESSURE-COUPLED LIQUID PROPELLANT VAPORIZATION PROCESS Ganesh Paramasivan, Vikram Sarabhai Space Centre, Thiruvananthapuram-695 022, INDIA, India

IAC-15.C4.5.8

ENERGETIC CHARACTERISTICS OF NANOPOROUS SILICON IMPREGNATED WITH DIFFERENT OXIDIZERS Evgenia Golda Kishilev, Technion – Israel Institute of Technology,

IAC-15.C4.5.9

APPLICATION OF MULTIDISCIPLINARY DESIGN OPTIMIZATION METHOD IN LIQUID ROCKET ENGINE DESIGN Jian ZHAO, Xi'an Aerospace Propulsion Institute, China

C4.6. New Missions Enabled by New **Propulsion Technology and Systems**

October 15 2015, 14:45 — Ballroom B

Co-Chair(s): Giorgio Saccoccia, European Space Agency (ESA), The Netherlands; Jerrol Littles, Aerojet Rocketdyne, United

Rapporteur(s): Mariano Andrenucci, Sitael Spa, Italy;

IAC-15.C4.6.1

CONCEPTUAL DESIGN OF SMALL SCALE HYBRID SOUNDING ROCKET AND ATTITUDE CONTROL WITH BANG-BANG METHOD Jeongmoo Huh, Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of

IAC-15.C4.6.2

DEVELOPMENT OF A LOW PRESSURE FREE MOLECULAR MICRO-RESISTOJET FOR CUBESAT APPLICATIONS

Dadui C Guerrieri, Delft University of Technology (TU Delft), The Netherlands

IAC-15.C4.6.3

HELICON TECHNOLOGY FOR LOW EARTH MISSION OF MINI

Francesco Barato, University of Padova - DII/CISAS, Italy

IAC-15.C4.6.4

DESIGN AND MODELLING OF A NEW CONCEPT OF SOLAR THERMAL COMBINED PROPULSION & POWER SYSTEM FOR SMALL SATELLITES: FEASIBILITY AND PERSPECTIVES Jasper Preijde, , The Netherlands

IAC-15.C4.6.5 (withdrawn)

DEVELOPMENT OF A PROPULSION SYSTEM BY USING HYDROGEN PEROXIDE PROPELLANT

Tien-Chuan Kuo, National Space Organization, Taiwan, China

IAC-15.C4.6.6

FEASIBILITY ASSESSMENT OF HAN-BASED THRUSTER USED IN THE MONOPROPELLANT PROPULSION SYSTEM Tianliana Yao. . China

IAC-15.C4.6.7

LOW-THRUST PROPULSION SYSTEMS FOR SMALL SATELLITES Salvo Marcuccio, Università di Pisa, Italy

IAC-15.C4.6.8

RAM-EP SYSTEM CONCEPT FOR VERY LOW EARTH ORBIT MISSIONS Pierpaolo Pergola, Sitael/Alta, Italy

IAC-15.C4.6.9

ELECTRIC PROPULSION TUG FOR MULTI-TARGET ACTIVE SPACE DEBRIS REMOVAL MISSIONS

Pierpaolo Pergola, Sitael/Alta, Italy

IAC-15.C4.6.10

HYBRID ROCKET PROPULSION SYSTEMS FOR OUTER PLANET **EXPLORATION MISSIONS**

Elizabeth Jens, Stanford University, United States

IAC-15.C4.6.11

A GAS CORE NUCLEAR PROPULSION SYSTEM AND ANALYSIS OF MISSION PARAMETERS

Ugur Guven, , United States

RTMSS - A NOVEL SYSTEM FOR SPACE LAUNCH COST-REDUCTION

C3.5-C4.7 Joint Session on Nuclear **Propulsion and Power**

October 16 2015, 09:45 — Ballroom B

Co-Chair(s): Jacques Gigou, European Space Agency (ESA), France; Leopold Summerer, European Space Agency (ESA), The

Rapporteur(s): George Schmidt, National Aeronautics and Space Administration (NASA), United States;

STEP-BY-STEP REALIZATION OF THE INTERNATIONAL NUCLEAR

IAC-15.C4.7-C3.5.2 (withdrawn)

COMBINED NUCLEAR THERMAL AND ELECTRIC PROPULSION FOR

Claudio Bruno, United Technology Research Center (UTRC), United

A COMPARATIVE STUDY BETWEEN NUCLEAR PROPULSION SYSTEMS AND CONVENTIONAL SYSTEMS TO REACH JUPITER'S MOON **EUROPA**

Rohan Kulkarni, , India

IAC-15.C4.7-C3.5.4

NEW GENERATION ROBOTIC PROBES FOR SAMPLE RETURN MISSIONS: THE PHOBOS CASE Pierpaolo Pergola, Sitael/Alta, Italy

IAC-15.C4.7-C3.5.5

RESULTS OF LPS MULTI-PHYSICS MODELING OF A NTR IN A NASA

Roger X. Lenard, LPS, United States

THE NUMERICAL STUDY ON THE FLOW STRUCTURE AND

INTERSTELLAR MISSION TO THE STAR WOLF 359: UTILIZATION OF

IAC-15.C4.6.12 (withdrawn)

Haim Korach, , Israel

IAC-15.C4.7-C3.5.1

POWER AND PROPULSION SYSTEM (INPPS) MISSION Frank Jansen, DLR (German Aerospace Center), Germany

IAC-15.C4.7-C3.5.3

PHASE I SBIR

IAC-15.C4.7-C3.5.6

LOSE MECHANISM WITHIN THE TIP CLEARANCE OF A HELIUM COMPRESSOR CASCADE

Jiang Bin, Harbin Engineering University, China











IAC-15.C4.7-C3.5.7

ON THE NECESSITY OF MODIFICATIONS TO UN PRINCIPLE III Roger X. Lenard, LPS, United States

IAC-15.C4.7-C3.5.8

RESEARCH ON CRITICAL TECHNOLOGIES FOR EARTH-TO-MARS SPACE TRANSPORT VEHICLES BASED ON NUCLEAR-THERMAL PROPULSION

Feng QI, Beijing Institute of Astronautical Systems Engineering, China

IAC-15.C4.7-C3.5.9

REDUCING NEUTRON EMISSION FROM SMALL FUSION ROCKET ENGINES

Samuel Cohen, Princeton Plasma Physics Laboratory, United States

C4.8. Advanced and Combined Propulsion Systems

October 16 2015, 13:30 — Ballroom B

Co-Chair(s): Young min Yoon, KARI, Korea, Republic of; Zvika Zuckerman, Rafael Advanced Defense Systems Ltd., Israel; Rapporteur(s): Constanze Syring, University of Stuttgart, Germany:

IAC-15.C4.8.1

SOLAR WIND ION FOCUSING THRUSTER (SWIFT) PERFORMANCE ANALYSIS

Thomas Gemmer, North Carolina State University, United States

IAC-15.C4.8.2 (withdrawn)

ASSESSMENT OF EFFICIENCY OF SOLAR THERMAL PROPULSION WITH MULTI-STAGED «CONCENTRATOR-SPECTRAL SELECTIVE ABSORBER—THERMAL ENERGY STORAGE» SYSTEM Sergey Finogenov, Moscow Aviation Institute (National Research

University, MAI), Russian Federation

IAC-15.C4.8.3

HELIOGYRO-CONFIGURED SMALL SPACECRAFT SOLAR SAIL Peerawan Wiwattananon, , United States

IAC-15.C4.8.4

HYPERGOLIC GREEN PROPELLANTS BASED ON THE HTP FOR A FUTURE NEXT-GENERATION SATELLITE PLATFORMS Wojciech Florczuk, Institute of Aviation, Poland

IAC-15 CA 8 5

THE DEVELOPMENT OF OXYGEN-HYDROGEN ENGINE THAT USES WATER TO PRODUCE HYDROGEN FUEL

Valery Menshikov, , Russian Federation

IAC-15.C4.8.6

COMBUSTION CHARACTER OF TURBOCHARGED SOLID PROPELLANT RAMJET(TSPR)

Wei Wang, Science and Technology on Combustion, Internal Flow and Thermal-Structure Laboratory, Northwestern Polytechnical University, China

IAC-15.C4.8.7 (withdrawn)

MAGREP PROPULSION (MAGNETIC REPULSION PROPULSION SYSTEM)

Neeraj Jerauld, Student, India

IAC-15.C4.8.8

MODELING AND TESTING OF A NOVEL THRUSTER CONCEPT FOR SEPARATION OF BODIES IN SPACE

Dan Micheals, Technion, I.I.T., Israel

IAC-15.C4.8.9

OVERHAUL APPROACH IN SPACE SHUTTLE PROPULSION; THINKING BEYOND CHEMICAL PROPULSION AN EVOLUTIONARY TREND IN AEROSPACE PROPULSION

Joshua Nyamweno, Samara State Aerospace University (SSAU), Russian Federation

C4.9. Hypersonic and Combined Cycle Propulsion

October 13 2015, 14:45 — Ballroom B

Co-Chair(s): Helen Webber , Reaction Engines Ltd., United Kingdom; Riheng Zheng , Chinese Society of Astronautics (CSA), China; Rapporteur(s): Salvatore Borrelli , CIRA Italian Aerospace Research Centre, Italy;

IAC-15.C4.9.1

NUMERICAL AND EXPERIMENTAL STUDIES OF FLAME STABILIZATION IN A CAVITY STABILIZED RBCC COMBUSTOR LI Wenlong, Xi'an Aerospace Propulsion Institute, China

IAC-15.C4.9.2

THE SUPERSONIC WAVERIDER AERODYNAMIC CONFIGURATION WITH ROCKET BASED COMBINED CYCLE(RBCC)ENGINE AERODYNAMIC/PROPULSION INTEGRATION

Yi Li, China Academy of Launch Vehicle Technology(CALT), China

IAC-15.C4.9.3

EFFECTS OF PRIMARY ROCKET NOZZLE EXPANSION RATIO ON COMBUSTION OSCILLATING CHARACTERISTICS IN A RBCC ENGINE COMBUSTOR

Zhiwei Huang, Northwestern Polytechnical University, NPU, China

IAC-15.C4.9.4

STUDY OF THE THERMAL ADJUSTMENT OF RBCC BASED ON TWO-STAGE INJECTIONS

Ya Jun Wang, College of Astronautics, Northwestern Polytechnical University. China

IAC-15.C4.9.5

A NOVEL TURBO-AIDED ROCKET-AUGMENTED RAMJET COMBINED CYCLE ENGINE CONCEPT

Wenhui Ling, Science and Technology on Scramjet Laboratory, Beijing Power Machinery Research Institute, China

IAC-15.C4.9.7

PRECOOLER DEVELOPMENT AND PERFORMANCE ANALYSIS OF A PRECOOLING AIR TURBO ROCKET ENGINE

Yuan Ma, Xi'an Aerospace Propulsion Institute, China

IAC-15.C4.9.8

INVESTIGATION OF THE PROPELLANT PROHEATING IN AIR TURBO ROCKET ENGINE

Yuan Ma, Xi'an Aerospace Propulsion Institute, China

IAC-15.C4.9.9 (withdrawn)

DETONATION COMBUSTION WAVE STABILIZATION IN SCRAMJETS Ryan Clark, , United States

IAC-15 C4 9 10

NUMERICAL STUDY ON MIXING OF A PASSIVE SCALAR IN SUPERSONIC MIXING LAYERS USING A HYBRID RANS/LES APPROACH

Junhong Feng, Science and Technology on Scramjet Laboratory, National University of Defense Technology, China

IAC-15.C4.9.11

COWL AND CAVITY EFFECTS ON SCRAMJET FUEL MIXING AND COMBUSTION

Won Keun Chang, Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of

IAC-15.C4.9.12

REAL TIME ESTIMATION OF AIR MASS FLOW RATE FOR SCRAMJET INLET BASED ON MULTI-SENSOR FUSION

Chengyi Su, Science and Technology on Scramjet Laboratory, Beijing Power Machinery Research Institute, China

IAC-15.C4.9.13

STUDY ON THE TURBO-PUMP PERFORMANCE OF THE SCRAMJET FUEL FEED SYSTEM

Shen Chibing, National University of Defense Technology, China

IAC-15.C4.9.14

EXPERIMENTAL AND NUMERICAL INVESTIGATION OF FLOW REACTION AND HEAT TRANSFER WITH SUPERCRITICAL HYDROCARBON FUEL

Zhao Yunlong, , China

C4.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Giorgio Saccoccia , European Space Agency (ESA), The Netherlands; Helen Webber , Reaction Engines Ltd., United Kingdom; Richard Blott , Space Enterprise Partnerships Limited, United Kingdom; Toru Shimada , Japan Aerospace Exploration Agency (JAXA), Japan;

IAC-15.C4.IP.1

SPACE GATES: REPURPOSING THE MINI-MAGNETOSPHEREIC PLASMA PROPULSION SYSTEM AS A MASS DRIVER Zachary Riffle, , United States

IAC-15.C4.IP.2

AEROTHERMODYNAMIC EXPERIMENT AND SIMULATION OF SPATIAL EFFECTS IN A DIVERT THRUST CHAMBER IN HYPERSONIC FLOW Jian Li, Beijing Aerospace Propulsion Institute, China

IAC-15.C4.IP.3

THE MICRO THRUST AUTOMATIC MEASUREMENT SYSTEM OF PLASMA THRUSTER

Jing Li, , China

IAC-15.C4.IP.4

DESIGN AND STRUCTURAL CHARACTERISTICS OF GAS GIMBALING APPARATUS IN LOX/KEROSENE ROCKET ENGINE Jian ZHAO, Xi'an Aerospace Propulsion Institute, China

IAC-15.C4.IP.5

GROUND TESTING OF LOW-THRUST SELF-PRESSURIZED HYBRID MOTOR

Olexiy Shynkarenko, University of Brasilia, Brazil

IAC-15.C4.IP.6

QUASI-DIRECT NUMERICAL SIMULATION ON ATOMIZATION AND MIXING CHARACTERISTICS OF A PAIR OF IMPINGING JETS Jianan Li, The 11st Institute of the Sixth Academy of CASC, China

IAC-15.C4.IP.7

FEASIBILITY STUDY ON NON-TOXIC HYPERGOLIC BIPROPELLANT THRUSTER USING HYDROGEN PEROXIDE AS AN OXIDIZER Hongjae Kang, Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of

IAC-15.C4.IP.8

GAS-PHASE NUCLEAR ROCKET ENGINES AND PROPULSIVE MASS FOR THEM.

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

IAC-15.C4.IP.9

FUNDAMENTAL ENERGY PROPULSION SYSTEMS Leon Africa, , South Africa

IAC-15.C4.IP.10 (withdrawn)

NUMERICAL SIMULATION OF GRAIN'S DYNAMIC REGRESSION PROCESS FOR N2O/HTPB HYBRID ROCKET MOTORS Yu Zhao, Shanghai Academy of Spaceflight Technology, China

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IAC-15.C4.IP.11

EXPERIMENTAL SIMULATION INVESTIGATION OF DIAPHRAGM RUPTURE AND WASHING FOR ROCKET ENGINE IN ARC HEATED AIR FLOW

Cheng Meisha, CASC, China

IAC-15.C4.IP.12

IMPROVED METHOD FOR PIV MEASUREMENT ON HIGH TEMPERATURE VITIATED SUPERSONIC FLOW-FIELD Xi Wenxiong, State key laboratory of laser propulsion & application, Equipment Academy of PLA, Beijing, China, China

IAC-15.C4.IP.13 (withdrawn)

RESEARCH ON DISCHARGE PLASMA CHARACTERISTICS OF AN ABLATIVE PULSED PLASMA THRUSTER VIA EMISSION SPECTROMETRY

Lei Yang, China Academy of Launch Vehicle Technology(CALT), China

IAC-15.C4.IP.14

VERIFICATION OF THE VENUS TECHNOLOGICAL MISSION MODULE Jacob Herscovitz, RAFAEL, Israel

IAC-15.C4.IP.15 (withdrawn)

POCKET ROCKET: À RADIO-FREQUENCY ELECTROTHERMAL PLASMA MICRO-THRUSTER

Amelia Greig, Australian National University, Australia

IAC-15.C4.IP.16

FREQUENCY BEHAVIOR OF LIQUID FUELED RAMJET WITH VARIABLE AREA NOZZLE

Qin Yan-ping, Xi'an Aerospace Propulsion Institute, China

IAC-15.C4.IP.17

WALL TEMPERATURE PREDICTION OF REGENERATIVE COOLED ROCKET ENGINE BASED ON A COUPLED HEAT TRANSFER MODEL Guangxu Wang, The 11st Institute of the Sixth Academy of CASC, China

IAC-15.C4.IP.18

SOLAR THERMAL PROPULSION REVIEW
Marc M. Cohen, Astrotecture™, United States

IAC-15.C4.IP.19

ELECTRO-MAGNETIC VACUUM THRUST PRODUCERS (EMVTP) Vladimir Shirin, , Kazakhstan

IAC-15.C4.IP.20

INVESTIGATION OF FLOW INDUCED PRESSURE DIFFERENCE DURING HIGH ALTITUDE SIMULATION

Jianwen Yang, National Key LAB of Science and Technology on LRE,

IAC-15.C4.IP.21

NUMERICAL STUDY FOR SIMULATING LIQUID ROCKET ENGINE EXHAUST PLUME USING MULTI-SPECIES UN-REACTED FLOW MODEL Sunil Kang, Korea Aerospace Research Institute (KARI), Korea, Republic of

IAC-15.C4.IP.22

PARAMETRIC STUDY AND SENSITIVITY ANALYSIS OF HYBRID ROCKET MOTORS WITH DOUBLE-TUBE CONFIGURATION Arnau Pons Lorente, School of Astronautics, Beihang University, China

IAC-15.C4.IP.23 (withdrawn)

DESIGN AND PERFORMANCE EVALUATION OF HYDROGEN PEROXIDE OXIDIZER HYBRID THRUSTER FOR SOUNDING ROCKET SYSTEM

Minwoo Lee, Satrec Initiative, Korea, Republic of

IAC-15.C4.IP.24

ANALYSIS OF SYSTEM DAMPING EFFECT ON TIME-LAG BASED COMBUSTION INSTABILITY MODEL

Guangxu Wang, National Key LAB of Science and Technology on LRE, China

IAC-15.C4.IP.25

ANALYSIS OF A MAGNETO-HYDRO-DYNAMIC (MHD) OBLIQUE DETONATION WAVE ENGINE

Kongqian Sun, Science and Technology on Scramjet Laboratory, Beijing Power Machinery Research Inst, China

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IAC-15.C4.IP.26

LIP'S ELECTRIC PROPULSION DEVELOPMENTS FOR CHINESE SATELLITE PLATFORM

Tianping Zhang, Lanzhou Institute of Physics, China

IAC-15.C4.IP.27

PROPELLANT-LESS PROPULSION SYSTEM USING MICROWAVES Pradeep Mitra, , India

IAC-15.C4.IP.28

THERMAL TEST ON AN ION THRUSTER

XINQUAN QIAO, Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST), China

IAC-15.C4.IP.29

EXPERIMENTAL INVESTIGATION OF INFLUENCING FACTORS FOR RELIABLE STARTUP AND STEADY WORK OF 20W MICROWAVE ELECTROMAL THRUSTER UNDER REALISTIC SPACE CONDITIONS Rohan M Ganapathy, Hindusthan College of Engineering and Technology, India

IAC-15.C4.IP.30 (withdrawn)

INNOVATIVE SPACE PROPULSION TECHNOLOGY USING VACUUM ARC THRUSTERS

Jonathan Lun, DENEL Spaceteq, South Africa

IAC-15.C4.IP.31

INTERSTELLAR MISSION TO BARNARD'S STAR USING ADVANCED NUCLEAR PROPULSION METHODS

Ugur Guven, , United States

IAC-15.C4.IP.32

THEORETICAL MODELING OF THE COMBUSTION OF GEL FUEL DROPLETS

Benveniste Natan, Technion – Israel Institute of Technology, Israel

AC-15.C4.IP.33

SPACE QUALIFICATIONS OF THE MEMS-BASED SOLID PROPELLANT THRUSTER ARRAY FOR ON-ORBIT VERIFICATION USING CUBE SATELLITE

Sung-Hyeon Han, Republic of Korea, Korea, Republic of

IAC-15.C4.IP.34

THREE GRIDDED ION ENGINES FOR FUTURE HIGH POWER ELECTRIC PROPULSION MISSIONS

Stephen Gabriel, University of Southampton, United Kingdom

Stephen Gubrier, G

IAC-15.C4.IP.35
A NOVEL DESIGN OF MEMS BASED MICROPROPULSION SYSTEM FOR A NANOSATELLITE

Jammalamadaka Mani Sai Suryateja, Birla Institute of Technology and Science(BITS)-Pilani, India

IAC-15.C4.IP.36

VALIDATION WITH CFD SIMULATIONS OF A SIMPLIFIED MODEL OF A HYBRID ROCKET MOTOR

Florin Mingireanu, Romanian Space Agency (ROSA), Romania

IAC-15.C4.IP.37

EXPERIMENTAL STUDY OF FLOW SEPARATION IN A SUBSCALE PARABOLIC CONTOUR NOZZLE

Yibai Wang, Beijing University of Aeronautics and Astronautics, China

IAC-15.C4.IP.38

SLIDING MODE CONTROL CONTROL FOR HYPERSONIC FLIGHT VEHICLE WITH TIME DELAY ESTIMATION AND COMPENSATION Xiao Hanshan, China Aerodynamics Research and Development Center, China

IAC-15.C4.IP.39 (withdrawn)

DEVELOPMENT OF A LOW POWER CYLINDRICAL HALL THRUSTER PROPULSION SYSTEM FOR MICROSATELLITES Carl Pigeon, Space Flight Laboratory, University of Toronto, Canada

IAC-15.C4.IP.40 (withdrawn)

PERFORMANCE AND ENVIRONMENTAL TEST RESULTS OF A NOVEL ELECTRIC PROPULSION TECHNOLOGY FOR SMALL SATELLITES Natalya Brikner, , United States

IAC-15.C4.IP.41

"LOW POWER HALL EFFECT THRUSTER ACTIVITIES AT SITAEL" Tommaso Misuri, Sitael Spa, Italy

IAC-15.C4.IP.42

IMPROVED MODELING OF ELECTRIC SAIL (E-SAIL) FORCE GENERATION

Thomas Gemmer, North Carolina State University, United States

IAC-15.C4.IP.43

DEVELOPMENT OF LOW POWER ELECTRIC PROPULSION SYSTEM FOR MICRO-SATELLITES

Gal Alon, Rafael Advanced Defense Systems Ltd., Israel

IAC-15.C4.IP.44

AN OVERVIEW OF HOLLOW CATHODES ACTIVITIES AT SITAEL Riccardo Albertoni, Sitael Spa, Italy

IAC-15.C4.IP.45

PERFORMANCE INCREASE OF LIQUID ROCKET MOTOR THROUGH PUMP MODIFICATION FOR HIGHER INJECTION PRESSURE OPERATION

Florin Mingireanu, Romanian Space Agency (ROSA), Romania

IAC-15.C4.IP.46

"MEPS: PROGRAMME OVERVIEW AND SYSTEM DEVELOPMENT STATUS"

Tommaso Misuri, Sitael Spa, Italy

IAC-15.C4.IP.47

DEVELOPMENT OF A KW-LEVEL PLASMA THRUSTER IN PROJECT SAPERE –STRONG

Fabio Trezzolani, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-15.C4.IP.48

MICROTHRUSTER DEVELOPMENT FOR TRAJECTORY CORRECTION ON UPPER STAGES AND SATELLITES

Florin Mingireanu, Romanian Space Agency (ROSA), Romania

IAC-15.C4.IP.49

TOWARDS GREEN PROPULSION FOR NEXT-GENERATION ROCKETS WITH HAN-BASED MONOPROPELLANTS

JUN LIU, Shanghai Institute of Space Propulsion, China

IAC-15.C4.IP.50 (withdrawn)

CENTRAL BINARY COLLISION OF POWER-LAW MODEL GEL PROPELLANT DROPLETS: EFFECTS OF N AND K ON MAXIMUM DEFORMATION

Zejun Liu, PLA Information Engineering University, China

IAC-15.C4.IP.51

DEVELOPMENT OF A MOVEABLE SLEEVE INJECTOR WITH A FIXED PINTLE FOR A THROTTLEABLE ROCKET COMBUSTOR Min Son, Korea Aerospace University, Korea, Republic of

IAC-15.C4.IP.52 (withdrawn)

A SIMPLE DESIGN FOR ABLATIVE LIQUID-FED PULSED PLASMA THRUSTERS FOR SMALL SATELLITES

William Yeong Liang Ling, University of Tokyo, Japan

IAC-15.C4.IP.53

LOW FREQUENCY COMBUSTION INSTABILITY CHARACTERISTICS OF POLYETHYLENE-N2O BASED HYBRID ROCKET MOTOR Artur Bertoldi, University of Brasilia, Brazil

IAC-15.C4.IP.54

DESIGN OPTIMIZATION OF A RBCC EJECTOR MODE USING ENTROPY ANALYSIS

Yuntao Zheng, Science and Technology on Scramjet Laboratory, Beijing Power Machinery Research Institute, China

IAC-15.C4.IP.55

PROPULSION SYSTEM OF THE LUNAR LANDER BUILT FOR GOOGLE LUNAR X PRIZE

Nakul Kukar, , India

IAC-15.C4.IP.56

SOLID ROCKET MOTOR BURN SIMULATION CONSIDERING COMPLEX 3D PROPELLANT GRAIN GEOMETRIES

Guilherme Mejia, Instituto Tecnológico de Aeronáutica (ITA), Brazil

IAC-15.C4.IP.57

EXPERIMENTAL INSIGHT INTO THE EFFECT OF SOUND INTENSITY ON SMOLDERING COMBUSTION

Vinayak Malhotra, Indian Institute of Technology, India

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

October 12 2015, 15:15 — Oranim 4

Co-Chair(s): Peter Dieleman , National Aerospace Laboratory (NLR), The Netherlands; Reinhold Bertrand , European Space Agency (ESA), Germany;

Rapporteur(s): Tibor Balint , Royal College of Art, United Kingdom;

IAC-15.D1.1.1

RECENT ADVANCES IN THE CONTROL OF ELECTROACTIVE POLYMER ROLLING ROVERS

Silvio Cocuzza, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-15.D1.1.2 (withdrawn)

ADAPTATION OF THE CACM-RL ALGORITHM TO THE ATTITUDE CONTROL SYSTEM OF A SATELLITE

Cecilia Gordillo Pintor, Universidad Alcala de Henares, Spain

IAC-15.D1.1.3

NOVEL CONCEPT FOR REAL-TIME HIGH-ACCURACY ATTITUDE AND POSITION DETERMINATION SYSTEM THROUGH EARTH OBSERVATION SATELLITE PAYLOAD

Ran Qedar, Delft University of Technology (TU Delft), Israel

IAC-15.D1.1.4

NEW TECHNOLOGICAL AND SOCIETAL TRENDS AND THEIR CONSEQUENCES ON INNOVATION IN SPACE SYSTEMS Gil DENIS, Airbus Defence and Space - Space Systems, France

IAC-15.D1.1.5

HIGH PRECISION PENETRATORS FOR EUROPA
Konstantinos Konstantinidis, Universität der Bundeswehr München,
Germany

IAC-15.D1.1.6

VALIDATED SIMULATOR FOR SPACE DEBRIS REMOVAL WITH NETS AND OTHER FLEXIBLE TETHERS APPLICATIONS Wojciech Gołębiowski, SKA-Polska, Poland

IAC-15.D1.1.7

STRUCTURE DESIGN AND MODELLING OF AN ORIGAMI-INSPIRED PNEUMATIC SOLAR TRACKING SYSTEM FOR NPU-PHONESAT Qiao Qiao, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University. China

IAC-15.D1.1.8

A COMPLEX OF SIMULATION MODELS FOR ANALYSIS OF CONCEPTS OF A SATELLITE PACKETS COMMUNICATION NETWORK BASED ON CONSTELLATIONS ON ORBITS OF DIFFERENT HEIGHTS Tatyana V. Labutkina, Dnepropetrovsk National University named after Oles' Gonchar, Ukraine

IAC-15.D1.1.9

PHOTOSYNTHESIS AS A SOURCE OF ENERGY IN SPACE Marco Antonio Cabero Zabalaga, School of Astronautics, Beihang University, China

IAC-15.D1.1.10

MECHANICAL PERFORMANCES ANALYSIS OF THE VARIABLE TOPOLOGY SPACECRAFTS

Xin Ning, Northwestern Polytechnical University, China

D1.2. Enabling Technologies for Space Systems

October 14 2015, 09:45 — Oranim 4

Co-Chair(s): Jean-Paul Aguttes, Centre National d'Etudes Spatiales (CNES), France; Xavier Roser, Thales Alenia Space France: France:

Rapporteur(s): Eiichi Tomita, Japan Aerospace Exploration Agency (JAXA), Japan;

IAC-15.D1.2.1 (withdrawn)

ADVANCED MATERIALS AND MANUFACTURING PROCESSES FOR NEXT GENERATION SPACECRAFT Joao Lousada, OHB-System AG, Germany

IAC-15.D1.2.2

MPBUS DC POWERLINE COMMUNICATION ELIMINATES WIRING IN LAUNCHERS AND SPACECRAFTS

Yair Maryanka, Yamar Electronics Ltd., Israel

IAC-15.D1.2.3

FIBER-OPTICAL SENSING ON-BOARD SPACECRAFT
Norbert M.K. Lemke, OHB System AG - Munich, Germany

IAC-15.D1.2.4

RESEARCH ON THE OPTIMUM SCRUBBING STRATEGY FOR SPACE USED SRAM-BASED FPGA

Fan Zhang, Beijing Microelectronics Technology Institute, China

IAC-15.D1.2.5

THE INNOVATIVE CONCEPT VERIFICATION FOR ON-ORBIT SOFT CAPTURE USING THE SPACE MULTI-ARM SYSTEM Zhenghong Dong, Academy of Equipment, China

IAC-15.D1.2.6

DIELECTRIC ELASTOMER SPACE MANIPULATOR: DESIGN AND TESTING

Francesco Branz, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-15.D1.2.7 LOW-COST PROXIMITY RELATIVE NAVIGATION SENSORS FOR MINIATURE SPACECRAFT AND DRONES

Francesco Sansone, University of Padova - DII, Italy

IAC-15.D1.2.8

SPACEBORNE LARGE-SCALE MEMBRANE PHASED ARRAY

DEFORMATION COMPENSATION FOR BEAMFORMING Bo Yana, Northwestern Polytechnical University, China

IAC-15.D1.2.9
ATTITUDE CONTROL OF SOLAR POWER SATELLITES USING FLUID-RING ACTUATORS

Krishna Kumar, Ryerson University, Canada

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IAC-15.D1.2.10

10 INVESTIGATION OF DIELECTRIC SURFACE EFFECTS AND APPLIED VOLTAGE ON COMMUNICATION WINDOWS IN DC-ELECTRONEGATIVE PULSING FOR REENTRY BLACKOUT ALLEVIATION Siddharth Krishnamoorthy, Student, United States

IAC-15.D1.2.11

TOWARDS A STANDARDIZED GRASPING AND REFUELLING ON-ORBIT SERVICING FOR GEO SPACECRAFT Alberto Medina, GMV Aerospace & Defence SAU, Spain

IAC-15.D1.2.12

INORGANIC AND ORGANIC SOLAR CELLS FUTURE Marco Antonio Cabero Zabalaga, , China

D1.3. System Engineering - Methods, Processes and Tools (1)

October 14 2015, 14:45 — Oranim 4

Co-Chair(s): Dmitry Payson, United Rocket and Space Corporation, Russian Federation; Tibor Balint, Royal College of Art, United Kinadom;

Rapporteur(s): Franck Durand-Carrier, Centre National d'Etudes Spatiales (CNES), France;

IAC-15.D1.3.1

FRENCH INITIATIVES FOR THE IMPROVEMENT OF SPACE MISSIONS DEVELOPMENT

Thibery Cussac, Centre National d'Etudes Spatiales (CNES), France

IAC-15.D1.3.2

STATUS AND ACTUALIZATION METHODOLOGY OF SPACE ACTIVITIES
OF RUSSIA 2013-2020 STATE PROGRAM
Alexander Marchinesey Central Research Institute for Machine

Alexander Mordvintsev, Central Research Institute for Machine Building (FGUP TSNIIMASH), Russian Federation

IAC-15.D1.3.3

INTRODUCING ECO-DESIGN – ENVIRONMENTAL IMPACT ASSESSMENT IN SPACE SYSTEMS AND SYSTEM ENGINEERING Jakob Huesing, Rhea for ESA, The Netherlands

IAC-15.D1.3.4

LOW ENERGY IMAGE PROCESSING ALGORITHM TO STUDY THE AGGREGATION OF TARDIGRADES ON A 3U NANOSATELLITE Ahmad Byagowi, University of Manitoba, Canada

IAC-15.D1.3.5

BE AWARE OF THE SQUAD: LESSONS LEARNT FROM 50 CONCURRENT ENGINEERING STUDIES FOR SPACE SYSTEMS Andy Braukhane, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-15.D1.3.6 (withdrawn)

WHEN CONCURRENT TURNS COLLABORATIVE: ADDING FLEXIBILITY TO THE CONCURRENT ENGINEERING FACILITY Antonio Martelo, German Aerospace Center (DLR), Bremen, Germany

IAC-15.D1.3.7 (withdrawn)

VIRTUAL ENGINEERING FOR DESIGN AND MANUFACTURING OF SPACE PLATFORMS

Zvika Weissman, Siemens, Israel

IAC-15.D1.3.8

TOWARD A NEW SPACECRAFT OPTIMAL DESIGN LIFETIME: EFFECTS OF OBSOLESCENCE, COST OF DURABILITY, AND REDUCED LAUNCH PRICE

Joseph Homer Saleh, Georgia Institute of Technology, United States

IAC-15.D1.3.9 (withdrawn)

LARGE SPACE SYSTEMS RISK, SCHEDULE AND REPORTING COORDINATION

Giancarlo Filippazzo, ESA, Italy

IAC-15.D1.3.10

AUTOMATED RISK AND SUPPORTABILITY MODEL GENERATION FOR REPAIRABLE SYSTEMS

Andrew Owens, Massachusetts Institute of Technology (MIT), United States

IAC-15.D1.3.11

RELIABILITY ANALYSIS OF MULTI-LAUNCH SAMPLE RETURN MISSIONS USING THE SPACE MISSION ARCHITECTURE AND RISK ANALYSIS TOOL (SMART)

Patrick Sipei Wang, University of Stuttgart, Germany

D1.4. Space Systems Architectures

October 15 2015, 09:45 — Oranim 4

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;

AC-15.D1.4.1

CUBESAT CONSTELLATION DESIGN FOR AIR TRAFFIC MONITORING Sreeja Nag, NASA Ames Research Center / BAERI, United States

IAC-15.D1.4.2

NETSAT: A FOUR PICO/NANO-SATELLITE MISSION FOR DEMONSTRATION OF AUTONOMOUS FORMATION FLYING Klaus Schilling, University Wuerzburg, Germany

IAC-15.D1.4.3

COMPARISON OF SOLAR ELECTRIC AND CHEMICAL PROPULSION ARCHITECTURES

Joshua Freeh, NASA Glenn Research Center, United States

IAC-15.D1.4.4

MODULAR ON-ORBIT RENEWABLE & EVOLVABLE SATELLITE (MORESAT): A NOVEL SPACECRAFT ARCHITECTURE

Zhi Yang, DFH Satellite Co. Ltd., China

IAC-15.D1.4.5 (withdrawn)

A WEB-CONTROLLED AUTONOMOUS OPERATIONS AND IMAGE PROCESSING SYSTEM FOR THE HODOYOSHI-1 MISSION Lucas Bremond, Axelspace Corporation, Japan

IAC-15.D1.4.6

NEW CHALLENGES IN THE DESIGN OF COMPONENTS FOR MICRO AND NANO SATELLITES

Stephan Roemer, Astro- und Feinwerktechnik Adlershof GmbH,

IAC-15.D1.4.7

A RADIO-FREQUENCY BASED NAVIGATION METHOD FOR COOPERATIVE ROBOTIC COMMUNITIES IN SURFACE EXPLORATION. Francisco García-de-Quirós, EMXYS (Embedded Instruments and Systems S.L), Spain

IAC-15.D1.4.8 (withdrawn)

A NOVEL SOFTWARE ARCHITECTURE FOR INTELLIGENT TASK AND HEALTH MANAGEMENT ON COMMUNICATION SATELLITE Rui Pan, China Academy of Space Technology (CAST), China

IAC-15.D1.4.9

MISSION CONCEPT AND AUTONOMY CONSIDERATIONS FOR ACTIVE DEBRIS REMOVAL

Susanne Peters, Universität der Bundeswehr München, Germany

IAC-15.D1.4.10

METHODOLOGY OF HIERARCHICAL CONTROL OPTIMIZATION FOR SPACECRAFT ORBIT GROUPS

Maxim Matiushin, Federal state unitary enterprise "Central Scientific Research Institute of machine-building" (TsNIIMASH), Russian Federation

IAC-15.D1.4.11

DESIGN AND IMPLEMENTATION OF SPACECRAFT AVIONICS SOFTWARE ARCHITECTURE BASED ON SPACECRAFT ONBOARD INTERFACE SERVICES AND PACKET UTILIZATION STANDARD Xiongwen He, Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology(CAST), China

IAC-15.D1.4.12

STRUCTURAL HEALTH MONITORING AND METHODS FOR MEASURING THE FUNDAMENTAL FREQUENCY OF SATELLITE LAUNCHER IN FLIGHT

Ilan Weissberg, Israel Aircraft Industries Ltd., Israel

D1.5. Training, Achievements, and Lessons Learned in Space Systems

October 15 2015, 14:45 — Oranim 4

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;

IAC-15.D1.5.1

TECHDEMOSAT-1 — 'ONE YEAR ON' — IN-ORBIT RESULTS, LESSONS LEARNT AND THE FUTURE

Doug Liddle, Surrey Satellite Technology Ltd (SSTL), United Kingdom

IAC-15.D1.5.2

STSAT-2C MISSION ACHIEVEMENTS WITH ON ORBIT VERIFICATIONS Kyungin Kang, Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of

IAC-15.D1.5.3

EMERGENCY COMMUNICATION BY THE WINDS "KIZUNA" IN CASE OF WIDE-AREA DISASTER

Yasuyoshi Hisamoto, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.D1.5.4

BACKUP PLAN FOR REACTION WHEEL FAILURE OF FORMOSAT-2
SATELLITE

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

C-15.D1.5.5

LESSONS LEARNED OF A SYSTEM ENGINEERING APPROACH FOR THE E-ST@R-II CUBESAT ENVIRONMENTAL TEST CAMPAIGN Gerard Obiols-Rabasa, Politecnico di Torino, Italy

IAC-15.D1.5.6

A LOW COST THRUST STAND FOR TESTING OF NANO-SATELLITE PROPULSION SYSTEMS

Quirino Bellini, University of Rome "La Sapienza", Italy

IAC-15.D1.5.7

STUDY ON OPTICAL REMOTE SENSOR ENVIRONMENT SIMULATION TEST OF COMPLEX THERMAL RESISTANCE MEASUREMENT TECHNOLOGY

Li Xiaoke, Beijing Institute of Space Mechanics&Electricity, China

IAC-15.D1.5.8 (withdrawn)

STATISTICAL ANALYSIS OF CUBESATS IN ORBIT FAILURES Gerard Obiols-Rabasa, Politecnico di Torino, Italy

D1.6. System Engineering - Methods, Processes and Tools (2)

October 16 2015, 09:45 — Oranim 4

Co-Chair(s): Geilson Loureiro, National Institute for Space Research - INPE , Brazil; Norbert Frischauf, Austria; Rapporteur(s): Ming Li, China Academy of Space Technology (CAST), China;

IAC-15.D1.6.1

DESIGN DRIVEN APPROACH TO OPTIMIZE THE RESEARCH AND DEVELOPMENT PORTFOLIO OF A TECHNOLOGY ORGANIZATION Tibor Balint, Royal College of Art, United Kingdom

IAC-15.D1.6.2

USER-CENTRED, LOW-COST, CONTINUOUSLY IMPROVED –
EXPERIENCE FROM IMPLEMENTING CONCURRENT ENGINEERING IN
INDUSTRY FOR EARLY PHASE SATELLITE DESIGN
Jan-Christian Meyer, OHB System AG-Bremen, Germany

IAC-15.D1.6.3

EARNED VALUE MANAGEMENT CONSIDERING TECHNICAL READINESS LEVEL FOR NEW LAUNCH VEHICLE DEVELOPMENT Young-In Choi, Korea Aerospace Research Institute (KARI), Korea, Republic of

IAC-15.D1.6.4

A MODEL-BASED SYSTEMS ENGINEERING APPROACH FOR VERIFICATION AND VALIDATION OF COMPLEX LARGE-SCALE SYSTEMS

Giuseppe Cataldo, National Aeronautics and Space Administration (NASA)/Goddard Space Flight Center, United States

IAC-15.D1.6.5

STARSIM: A STAND-ALONE TOOL FOR "IN THE LOOP" VERIFICATION Fabrizio Stesina, Politecnico di Torino, Italy

IAC-15.D1.6.6 (withdrawn)

PREDICTIVE MAINTENANCE FOR FLIGHT SAFETY COMPONENTS PRONE TO SEVERE UNCERTAINTY THROUGH REANALYZING THE CHALLENGER DISASTER: AN INFO-GAP THEORY IMPLEMENTATION Dori Nissenbaum, TECHNION - Israel Institute of Technology, Israel

IAC-15.D1.6.6

REVIEW ON SATELLITE VIRTUAL ASSEMBLY, INTEGRATION AND TESTING

Eduardo Escobar Burger, National Institute for Space Research - INPE , Brazil

IAC-15.D1.6.7

DEVELOPMENT AND EVALUATION OF SYSTEM ENGINEERING SOFTWARE TOOLS FOR THE SPACE STATION DESIGN WORKSHOP Emil Nathanson, University of Stuttgart, Germany

IAC-15.D1.6.9

MANNED SPACECRAFT EMERGENCY SEPARATION DURING ATMOSPHERIC ASCENT Natalia Ovsyannikova, S.P. Korolev Rocket and Space Corporation

IAC-15.D1.6.10

Energia, Russian Federation

DESIGN AND APPLICATION OF VISUAL ANALYSIS TOOL OF AEROSPACE MISSION RESOURCE DATA

Deyun PENG, Beijing Aerospace Control Center, China

IAC-15.D1.6.11

Rui Pan, China Academy of Space Technology (CAST), China

IAC-15.D1.6.12

THERMAL DESIGN OF LARGE-POWER MULTI-MODE SPATIAL ACTIVE SYNTHETIC APERTURE RADAR ANTENNA

Chuanqiang Zhang, China Academy of Space Technology (CAST),

D1.7. Hosted Playloads - Concepts, Techniques and Challenges, Missions and Applications

October 16 2015, 13:30 — Oranim 4

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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;

IAC-15.D1.7.1

HOSTED PAYLOADS IN CAST: LESSONS LEARNED FROM PAST AND SUGGESTIONS FOR FUTURE

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

AC-15.D1.7.2

PIGGYBACK PAYLOAD ON THE JSC RSC "PROGRESS" SPACE VEHICLES Igor V. Belokonov, Samara State Aerospace University (SSAU), Russian Federation

IAC-15.D1.7.3 (withdrawn)

SOLAR PARTICLE ANALYSER EXPERIMENT (SPAX)

Andres Russu, Universidad Alcala de Henares, Spain

IAC-15.D1.7.4

PAYLOADS INTEGRATION PROCESS ON CHINESE SPACE STATION Yanmei Jia, Technology and Engineering Center for Space Utilization, CAS, China

IAC-15.D1.7.5

A DESIGN FRAMEWORK FOR SPACE RESOURCE-SHARING SATELLITE FEDERATIONS

Ignasi Lluch, Skolkovo Institute of Science and Technology, Russian Federation

IAC-15.D1.7.6

RESEARCH ON REUSABLE SPACE EXPERIMENT SATELLITE---REUSESAT

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

IAC-15.D1.7.7

METHODOLOGY FOR ASSEMBLY, INTEGRATION AND VERIFICATION
OF THE AVIONIC SYSTEM OF A TECHNOLOGICAL EXPERIMENT ONBOARD THE INTERNATIONAL SPACE STATION
Nicole Viola, Politecnico di Torino, Italy

IAC-15.D1.7.8

A MODEL-BASED SYSTEMS ENGINEERING APPROACH TO DESIGN GENERIC SYSTEM PLATFORMS AND MANAGE SYSTEM VARIANTS APPLIED TO MASCOT FOLLOW-ON MISSIONS

Caroline Lange, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-15.D1.7.9

NANOSATELLITE MISSION ASSURANCE – A TURNING POINT Zeger de Groot, ISIS - Innovative Solutions In Space BV, The Netherlands

IAC-15.D1.7.10

RELIABILITY GROWTH OF A NANO-SATELLITE THROUGH TESTING Mengu Cho, Kyushu Institute of Technology, Japan

D1.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Jill Prince, National Aeronautics and Space Administration (NASA), United States; Reinhold Bertrand, European Space Agency (ESA), Germany;

IAC-15.D1.IP.1 (withdrawn)

COLORING THE FUTURE - AN INNOVATIVE APPROACH FOR DEALING WITH "DOOMSDAY" NEOS

Meidad Pariente, SPACECIALIST, Effective Space Solutions, Israel

IAC-15.D1.IP.2 (withdrawn)

PLATFORM ROBUSTNESS FOR UNKNOWN SPACE MISSIONS Otavio Luiz Bogossian, Brazilian National Institute for Space Research - INPE, Brazil

IAC-15.D1.IP.3 (withdrawn)

INTEGRATED CONTROL/STRUCTURE DESIGN METHOD FOR FUTURE LARGE FLEXIBLE SPACECRAFT

Jose Alvaro PEREZ GONZALEZ, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, France

IAC-15.D1.IP.4 (withdrawn)

RESEARCH ON THE CONCEPT, MECHANISM AND MODELING OF SPACE SOFT CAPTURE TECHNIQUE IN THE AREA OF ON-ORBIT SERVICING

Fan Yang, Academy of Equipment, China

IAC-15.D1.IP.5 (withdrawn)

ADAPTIVE FAULT TOLERANT SERVO SCHEME FOR LAUNCH VEHICLE CONTROL ACTUATION SYSTEM

Baby Sebastian, Indian Space Research Organization (ISRO), India

IAC-15.D1.IP.6 (withdrawn)

INDIRECT ADAPTIVE FUZZY H-INFINITE CONTROL OF THE FREE-FLOATING SPACE ROBOT SYSTEM WITH FLEXIBLE JOINTS Lijiao Zhang, Fuzhou University, China

IAC-15.D1.IP.7 (withdrawn)

DECENTRALIZED ADAPTIVE NEURAL NETWORK STABILIZATION CONTROL AND VIBRATION SUPPRESSION OF FLEXIBLE ROBOT MANIPULATOR DURING CAPTURE A TARGET Jing Cheng, Fuzhou University, China

IAC-15.D1.IP.8

INVESTIGATION ON DECONTAMINATION DESIGN AND CONTROL SYSTEM FOR SPACECRAFT

Kouan Hao, Aerospace System Engineering Shanghai, China, China

AC-15.D1.IP.9

THE METHODOLOGY OF TIME-EFFICIENT ESTIMATION OF FLYING VEHICLE'S CHARACTERISTICS AT THE STAGE OF DRAFT DESIGN USING THE MULTI-DISCIPLINARY SOFTWARE

Dmitriy Grishko, Bauman Moscow State Technical University, Russian Federation

IAC-15.D1.IP.10

A MULTIFORM DATA SYNCRETIZED DISPLAY SYSTEM BASED ON VIRTOOLS

Jingqi Cai, China Academy of Launch Vehicle Technology(CALT), China

IAC-15.D1.IP.11

REACTIONLESS WORKSPACE OF A MULTI-DEGREES-OF-FREEDOM SPACE MANIPULATOR

Silvio Cocuzza, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-15.D1.IP.12

SPACE MANIPULATOR DESIGN FOR A HIGH PERFORMANCE REACTION CONTROL

Silvio Cocuzza, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-15.D1.IP.13 (withdrawn)

ANALYSIS AND COMPARISON OF DIFFERENT FORMAL METHODS ON THE STATIC BEHAVIOR FOR FAULT-TOLERANT SYSTEMS Zheng WANG, Zhejiang University, China

IAC-15.D1.IP.14 (withdrawn)

FRAGILITY INDEX AS A TECHNICAL PERFORMANCE MEASURE (TPM) DURING A SYSTEM LIFE CYCLE: A CASE STUDY ON ITS APPLICATION TO MONOLITHIC AND FRACTIONATED SPACECRAFT.

Antonio Pugliese, Stevens Institute of Technology, United States

IAC-15.D1.IP.15

VISION-BASED LUNAR VIRTUAL SURFACE GENERATION USING SHAPE-FROM-SHADING METHOD

Yun-young Kim, Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of

IAC-15.D1.IP.16

A PROPOSAL FOR UPDATING THE BRAZILIAN DATA COLLECTING SYSTEM

Geilson Loureiro, Instituto Nacional de Pesquisas Espaciais (INPE), Brazil

IAC-15.D1.IP.17 (withdrawn)

A SYSTEMS ENGINEERING APPROACH FOR ACCOMMODATING DISRUPTIVE SPACE TECHNOLOGIES

Tiago Henrique Matos de Carvalho, Cranfield University, United Kinadom

IAC-15.D1.IP.18

DECOUPLING GROSS MOTION AND VIBRATION OF FREE-FLOATING SPACE ROBOTS IN FREQUENCY AND TIME DOMAIN

Teng Zhang, College of Astronautics, Northwestern Polytechnical University, China

IAC-15.D1.IP.19

MISSION DESIGN "SATELLITE LIBERTAD 2"
Jorge Soliz, Sergio Arboleda University, Colombia

IAC-15.D1.IP.20

OPTIMUM OPEN-LOOP ACTUATOR DESIGN OF HIGH STABILITY POINTING MECHANISMS FOR HIGH PRECISION REMOTE SENSING SATELLITES

Rui Li, Beijing Institute of Control Engineering, China

IAC-15.D1.IP.21

A RELIABLE MULTICORE PROCESSOR DESIGN FOR SPACE APPLICATIONS

Cao Hui, Xi'an Microelectronics Technology Institute, China

IAC-15.D1.IP.22 (withdrawn)

PLATFORM ROBUSTNESS FOR UNKNOWN SPACE MISSIONS Otavio Luiz Bogossian, Brazilian National Institute for Space Research - INPE. Brazil

D2. SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM

Coordinator(s): John M. Horack, Teledyne Brown Engineering, United States; Ulf Palmnäs , GKN Aerospace Engine Systems, Sweden;

Secretary(s): Steve Creech , National Aeronautics and Space Administration (NASA), United States;

D2.1. Launch Vehicles in Service or in Development

October 12 2015, 15:15 — Teddy C

Co-Chair(s): Julio Aprea, European Space Agency (ESA), France; Randolph Kendall, The Aerospace Corporation, United States; Rapporteur(s): Ko Ogasawara, Mitsubishi Heavy Industries, Ltd., Japan;

IAC-15.D2.1.1

THE ABILITY STRIDES OF NEW GENERATION LAUNCH VEHICLES OF CHINA

Zeng Dong, China Academy of Launch Vehicle Technology(CALT), China

IAC-15.D2.1.2

NASA'S SPACE LAUNCH SYSTEM PROGRAM UPDATE Todd May, NASA Marshall Space Flight Center, United States

IAC-15.D2.1.3

SLS-ORION MISSIONS LEADING TO HUMANS ON MARS Don Sauvageau, Orbital ATK, United States

IAC-15.D2.1.4

ARIANE 6 NEW CONCEPT, NEW GOVERNANCE STATUS AND PERSPECTIVES

Guy Pilchen, European Space Agency (ESA), France

IAC-15.D2.1.5

ARIANE 5 ECA ADAPTATION AND ARIANE 5 ES LAUNCHER PREPARATION FOR GALILEO FOC Daniel de Chambure, European Space Agency (ESA), France

IAC-15.D2.1.6

THE STATUS OF EPSILON LAUNCH VEHICLE'S FURTHER DEVELOPMENT

Ryoma Yamashiro, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.D2.1.7

IXV, A LONG WAY FROM THE "CONCEPT MISSION DESIGN" TO VEGA 4TH CONSECUTIVE SUCCESS

Francois Battie, ELV S.p.A., Italy

IAC-15.D2.1.8 PROGRESS ON SKYLON AND SABRE

Philippa Davies, Reaction Engines Ltd., United Kingdom

IAC-15.D2.1.9

TRANSFORMING SPACE ACCESS WITH FLEXIBILITY: STRATOLAUNCH Chuck Beames, Vulcan Aerospace Corp., United States

D2.2. Launch Services, Missions, Operations and Facilities

October 13 2015, 09:45 — Teddy C

Co-Chair(s): Luigi Bussolino , Bussolino and Associates, Italy; Yves Gérard , Astrium Space Transportation, France; Rapporteur(s): Igor V. Belokonov , Samara State Aerospace University (SSAU), Russian Federation;

IAC-15.D2.2.1

THE NEW ARIANE U/S TEST FACILITIES P5.2
Rainer Schürmanns, Deutsches Zentrum für Luft- und Raumfahrt e.V.
(DLR). Germany

IAC-15.D2.2.2 (withdrawn)

THE RESEARCH OF TEST AND LAUNCH CONTROL TECHNOLOGY ON NEW GENERATION LAUNCH VEHICLES
Guo Zhonghai, China Xichang Satellite Launch Center, China

IAC-15.D2.2.3 (withdrawn)

STAKES AND PERSPECTIVES OF THE GUIANA SPACE CENTRE, THE EUROPEAN SPACEPORT

Bernard Chemoul, Centre National d'Etudes Spatiales (CNES), French Guiana

IAC-15.D2.2.4

THE PROBLEMS OF THE RATIONAL USE OF LAUNCH SITES OF THE ONE-TYPE LAUNCH VEHICLES $\,$

Svetlana Pastukhova, Central Research Institute for Machine Building (FGUP TSNIIMASH), Russian Federation

IAC-15.D2.2.5 (withdrawn)

AN UPDATED MODEL FOR EXPENDABLE LAUNCH VEHICLES' COSTS ESTIMATION

Adam Okninski, -, Poland

IAC-15.D2.2.6 (withdrawn)

AN ANALYSIS OF THE LAUNCH INDUSTRY'S CAPABILITY TO MEET FUTURE DEMAND

Sirisha Bandla, Commercial Spaceflight Federation, United States

IAC-15.D2.2.7

THE ROLE OF EUROCKOT LAUNCH SERVICES GMBH IN LAUNCHING SENTINEL SATELLITES

Peter Freeborn, Eurockot Launch Services GmbH, Germany

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APPLICATION OF THE FRENCH SPACE OPERATION ACT FOR THE ARIANE 5 ES GALILEO MISSION AND OPERATIONS Nicolas Verstappen, , France

IAC-15.D2.2.9

IAC-15.D2.2.8

MATHEMATICAL MODELS FOR RISK AND DANGER ZONES IN CASE OF SMALL ORBITAL LAUNCHERS

Teodor-Viorel Chelaru, University POLITEHNICA of Bucharest -Research Center for Aeronautics and Space, Romania

D2.3. Upper Stages, Space Transfer, Entry and Landing Systems

October 13 2015, 14:45 — Teddy C

Co-Chair(s): Christophe Bonnal, Centre National d'Etudes Spatiales (CNES), France; Oliver Kunz, RUAG Space AG,

Rapporteur(s): Oleg Ventskovskiy, Ukraine;

DEVELOPMENT OF ORION EUROPEAN SERVICE MODULE PROPULSION SUBSYSTEM IN FULL SPEED TOWARDS CRITICAL DESIGN REVIEW

Markus Jäger, Astrium Space Transportation, Germany

IAC-15.D2.3.2

DISTINCTIVE FEATURES OF A TECHNICAL LAYOUT OF THE SPACE VEHICLES WITH NUCLEAR POWER PLANTS ONBOARD IN THE PERFORMANCE OF GLOBAL PROBLEMS OF MODERN AGE Mykola M. Slyunyaev, Yuzhnoye State Design Office, Ukraine

ROBOTIC REFUELING SYSTEM FOR SPACE PLATFORM SERVICING Michèle Lavagna, Politecnico di Milano, Italy

IAC-15.D2.3.4

SOLID-PROPELLANT LAUNCHER GUIDANCE WITH LINEAR SEGMENTATION OF THE THRUST VARIATION Abel Nepomuceno, Institute of Aeronautics and Space (IAE), Brazil

IAC-15.D2.3.5

ENSURING OPERATING EFFICIENCY OF ILV SPACE STAGES PROPELLANT FEEDING SYSTEMS IN DIFFERENT OPERATING

Olexandr Kashanov, Yuzhnoye State Design Office, Ukraine

IAC-15.D2.3.6

ATTITUDE CONTROL OF UPPER STAGE WITH A GIMBALED THRUSTER DURING ORBIT TRANSFER

Zhaohui Wang, Beihang University, China

IAC-15.D2.3.7

ATMOSPHERIC RE-ENTRY SYSTEMS WITH FLEXIBLE AND INFLATABLE **TECHNOLOGIES**

Luigi Mascolo, Polytechnic of Turin, Italy

IAC-15.D2.3.8

DOCKING MECHANISM CONCEPTS FOR THE STRONG MISSION Stefano Mauro, Politecnico di Torino, Italy

IAC-15.D2.3.9

DOCKING IMPENDER - PRELIMINARY PERFORMANCE RESULTS Mateusz Józefowicz, Private, Poland

D2.4. Future Space Transportation Systems

October 14 2015, 09:45 — Teddy C

Co-Chair(s): Charles Cockell, Open University, United Kingdom; 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

IAC-15.D2.4.1 (withdrawn)

PANEL DISCUSSION: TRENDS IN FUTURE LAUNCHER SYSTEM

Charles E. Cockrell Jr., National Aeronautics and Space Administration (NASA), United States

IAC-15.D2.4.2 (withdrawn)

MEASURING CRYOGENIC TWO-PHASE FLOW DURING COASTING FLIGHT OF S-310-43 SOUNDING ROCKET FOR UPGRADING H-IIA UPPER STAGES AND FUTURE REUSABLE ROCKETS Hiroaki Kobayashi, Japan Aerospace Exploration Agency (JAXA),

IAC-15.D2.4.3

REUSABLE SPACE TUG CONCEPT AND MISSION Nicole Viola, Politecnico di Torino, Italy

IAC-15.D2.4.4

A FEASIBILITY STUDY ON A SINGLE STAGE TO ORBIT SPACE LAUNCH VEHICLE WITH CONCEPTUAL AIRBREATHING ENGINES Jianxing Zhou, Beijing Aerospace Technology Institute, China

IAC-15.D2.4.5

CONCEPTUAL DESIGN AND OPERATIONS OF A CREWED REUSABLE SPACE TRANSPORTATION SYSTEM

Nicole Viola, Politecnico di Torino, Italy

IAC-15.D2.4.6

OPTIMISATION OF 6DOF ASCENT AND DESCENT TRAJECTORIES FOR LIFTING BODY SPACE ACCESS VEHICLES

Federico Toso, University of Strathclyde, Glasgow, United Kingdom

IAC-15.D2.4.7

LEEM ROCKOON PROJECT: DEVELOPING A HIGH ALTITUDE

Benjamín Uceta Gómez, LEEM - Laboratory for Space and Microgravity Research, Spain

IAC-15.D2.4.8

OCAM-G - A GNSS TECHNOLOGY IN-ORBIT DEMONSTRATION EXPERIMENT FOR FUTURE EUROPEAN LAUNCHER APPLICATION Markus Markgraf, DLR (German Aerospace Center), Germany

D2.5. Future Space Transportation Systems Technologies

October 14 2015, 14:45 — Teddy C

Co-Chair(s): Patrick M. McKenzie, RUAG Space, United States; Svlvain Guédron . ESA - APT. France:

Rapporteur(s): Pier Paolo de Matteis , CIRA Italian Aerospace Research Centre, Italy;

IAC-15.D2.5.1

TECHNOLOGICAL DEMONSTRATOR FOR REUSABLE LAUNCHERS Christophe Bonnal, Centre National d'Etudes Spatiales (CNES), France

IAC-15.D2.5.2

MANUFACTURING OF NEXT GENERATION LAUNCHERS' PAYLOAD FAIRING BY MEANS OF COST EFFICIENT OUT-OF-AUTOCLAVE

Jean-Charles Bonnet, RUAG Space AG, Switzerland

IAC-15.D2.5.3

UPDATE ON RISK REDUCTION ACTIVITIES FOR A LIQUID ADVANCED BOOSTER FOR NASA'S SPACE LAUNCH SYSTEM Andrew Crocker, Dynetics, United States

IAC-15.D2.5.4

TECHNOLOGIES AND VERIFICATIONS FOR REUSABLE SOUNDING ROCKET SYSTEM

Satoshi Nonaka, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.D2.5.5

CRYOFENIX (CRYOGENIC SOUNDING ROCKET EXPERIMENT) RESULTS BIANCHI SEBASTIEN, Air Liquide, France

IAC-15.D2.5.6

COST-EFFECTIVE SOLUTION FOR THRUST VECTOR CONTROL OF MICROSATELLITE LAUNCH VEHICLES

IAC-15.D2.5.7

IODINE PROPULSION ADVANTAGES FOR LOW COST MISSION **APPLICATIONS**

IAC-15.D2.5.8

MULTIDISCIPLINARY DESIGN OPTIMIZATION OF GROUND AND AIR-LAUNCHED HYBRID ROCKETS

Francisco Miranda, Delft University of Technology (TU Delft), The

IAC-15.D2.5.9

THERMAL AND FUNCTIONAL SOLUTIONS AND TECHNOLOGIES FOR FUTURE LAUNCHER CRYOGENIC PROPULSION MODULES BIANCHI SEBASTIEN, Air Liquide, France

IAC-15.D2.5.10

DEVELOPMENT OF NEW AND INNOVATIVE WELDING AND FORMING TECHNOLOGIES AND THEIR APPLICATION IN THE FRAME OF THE ARIANE PROGRAM

Markus Kahnert, MT Aerospace AG, Germany

Verification and In-Flight Experimentation

Administration (NASA), United States; Giorgio Tumino, European Space Agency (ESA), France;

Rapporteur(s): Tetsuo Hiraiwa , Japan Aerospace Exploration Agency (JAXA), Japan;

Giorgio Tumino, European Space Agency (ESA), France

POSTFLIGHT.

Rodrigo Haya Ramos, Deimos Space S.L., Spain

IAC-15.D2.6.3

CMC WINDWARD TPS AND NOSE OF THE IXV VEHICLE: QUALIFICATION, INTEGRATION, AND FLIGHT Thierry Pichon, Herakles, Safran, France

IAC-15.D2.6.4

Giovanni Malucchi, , Italy

A HIGH RELIABILITY COMPUTER FOR AUTONOMOUS MISSIONS, DEMONSTRATED ON THE ESA IXV FLIGHT

THE CHALLENGES OF THE AUTONOMOUS SOFTWARE FOR THE INTERMEDIATE EXPERIMENTAL VEHICLE (IXV) Carlos Flores, G.M.V. Space and Defence, S.A., Spain

IAC-15.D2.6.7

PAVING THE EUROPEAN RE-ENTRY WAY: THE IXV VEHICLE MODEL **IDENTIFICATION SUBSYSTEM**

Juan Antonio Bejar-Romero, GMV Aerospace & Defence SAU, Spain

IAC-15.D2.6.8 (withdrawn)

LESSONS LEARNED FROM THE IXV FLAP CONTROL SYSTEM DEVELOPMENT Guillaume Dedeurwaerder, S.A.B.C.A, Belgium

IAC-15.D2.6.9

IXV RECOVERY OPERATIONS Stefano Bologna, Thales Alenia Space Italia, Italy

IAC-15.D2.6.10

CIRA USV3 AND THE ITALIAN CONTRIBUTION TO EUROPEAN RE-**ENTRY CAPABILITIES AND EXPECTATIONS**

Mario De Stefano Fumo, CIRA Italian Aerospace Research Centre,

D2.7. Small Launchers: Concepts and **Operations**

October 15 2015, 14:45 — Teddy C

Co-Chair(s): Harry A. Cikanek . National Oceanic and Atmospheric Administration (NOAA), United States; Nicolas Bérend, Office National d'Etudes et de Recherches Aérospatiales (ONERA), France;

Rapporteur(s): Emmanuelle David , German Aerospace Center (DLR), Germany:

IAC-15.D2.7.1

LAUNCHERONE: VIRGIN GALACTIC'S DEDICATED LAUNCH VEHICLE FOR SMALL SATELLITES

William Pomerantz, Virgin Galactic L.L.C, United States

IAC-15.D2.7.2

ENABLING A ROBUST, SMALL SATELLITE LAUNCH SYSTEM Steve Cook, Dynetics, United States

IAC-15.D2.7.3

VLM-1 MICROSATELLITE LAUNCHER Josef Ettl, DLR (German Aerospace Center), Germany

IAC-15.D2.7.4

A DETAILED DESIGN OF A EA/LOX LIQUID ROCKET FOR A SUB-ORBITAL FLIGHT

Ryuichiro KANAI, Interstellar Technologies Inc., Japan

DEVELOPMENT OF A FAMILY OF AIR-LAUNCHED SMALLSAT LAUNCH VEHICLES FOR AFFORDABLE AND RESPONSIVE SPACE ACCESS Charles Lauer, Rocketplane Global, Inc., United States

IAC-15.D2.7.6 (withdrawn)

PHOENIX: THE BARRIER SOUND CROSSING EXPERIMENT BY A SOUNDING ROCKET

Alexandre Mesland, Université de Technologie de Compiègne, France

IAC-15.D2.7.7

THE INFINITE STAGING ROCKET – A PROGRESS TO REALIZATION Vitaly Yemets, Oles Honchar Dnipropetrovsk National University,

IAC-15.D2.7.8

BLOOSTAR: A BALLOON-ASSISTED LIGHTWEIGHT LAUNCHER TO ORBIT MICROSATELLITES Annelie Schoenmaker, zero2infinity, Spain

IAC-15.D2.7.9

FEASIBLITY OF A LOW-COST SOUNDING ROCKOON PLATFORM Adam Okninski, -, Poland

Matthias Hecht, DLR (German Aerospace Center), Germany

John Dankanich, NASA Marshall Space Flight Center, United States

Netherlands

D2.6. Future Space Transportation Systems

October 15 2015, 09:45 — Teddy C

Co-Chair(s): David E. Glass, National Aeronautics and Space

THE IXV PROGRAMME: FROM DESIGN TO FLIGHT EXPERIENCE

IAC-15.D2.6.2

MISSION AND FLIGHT MECHANICS OF IXV FROM DESIGN TO

IXV AVIONICS, FROM DESIGN TO MISSION RESULTS

IAC-15.D2.6.5

Frank Preud'homme, QinetiQ Space nv, Belgium IAC-15.D2.6.7









IAC-15.D2.7.10

DESIGN STUDY OF THE SMALL ROCKET LAUNCHER USING AN **ENVIRONMENTAL-FRIENDLY PROPELLANT** Kamil Sobczak, Institute of Aviation, Poland

IAC-15.D2.7.11 (withdrawn)

RUSSIAN CARRIER ROCKET OF SUPERLIGHT CLASS FOR CHEEP ACCESS TO ORBIT: PRINCIPLES DESIGN AND POSSIBLE CREATION BASED ON EXISTING ACHIEVEMENTS

Igor V. Belokonov, Samara State Aerospace University (SSAU), Russian Federation

IAC-15.D2.7.12 (withdrawn)

CONCEPTUAL STUDY OF AN AIR-LAUNCHED ROCKET WITH LIFTING-**BODY CONFIGURATION**

Yi Li, Northwestern Polytechnical University, China

D2.8-A5.4. Going Beyond the Earth-Moon **System: Human Missions to Mars, Libration** Points. and NEO's

October 16 2015, 09:45 — Teddy C

Co-Chair(s): Charles E. Cockrell Jr. , National Aeronautics and Space Administration (NASA), United States; Ernst Messerschmid, University of Stuttgart, Germany; K. Bruce Morris, Teledyne Brown Engineering, United States; Yuguang Yang, China Aerospace Science & Industry Corporation (CASIC),

Rapporteur(s): Gerhard Schwehm, European Space Agency (ESA), Spain; Steve Creech, National Aeronautics and Space Administration (NASA), United States;

IAC-15.D2.8-A5.4.1

NEO DEFLECTION MISSION CAPABILITIES Nahum Melamed, The Aerospace Corporation, United States

IAC-15.D2.8-A5.4.2

NASA'S SPACE LAUNCH SYSTEM MISSION CAPABILITIES FOR **EXPLORATION**

Steve Creech, National Aeronautics and Space Administration (NASA), United States

IAC-15.D2.8-A5.4.3

AN EARTH-MARS CRUISER BASED ON BUZZ ALDRIN CYCLER FOR FUTURE MARTIAN BASE

Yang Chen, CASIC, China

IAC-15.D2.8-A5.4.4

CAMPAIGN-LEVEL DYNAMIC NETWORK MODELLING FOR SPACEFLIGHT LOGISTICS FOR THE FLEXIBLE PATH CONCEPT Koki Ho, University of Illinois at Urbana-Champaign, United States

IAC-15.D2.8-A5.4.6

LIMITING VELOCITIES OF SPACECRAFT MOTION IN EARTH AND MARTIAN ATMOSPHERES

Vladimir Lapygin, Central Research Institute for Machine Building (FGUP TSNIIMASH), Russian Federation

IAC-15.D2.8-A5.4.7 (withdrawn)

MANNED ROVERS FOR MARS EXPLORATION, MOON AND OTHER PLANETS

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

IAC-15.D2.8-A5.4.8

NEXT STEPS IN THE EVOLVABLE PATH TO MARS Joe Cassady, Aerojet Rocketdyne, United States

THE JOURNEY TO MARS: NASA'S EXPLORATION PLANNING AND THE IMPORTANCE OF THE SPACE LAUNCH SYSTEM Kathy Laurini, National Aeronautics and Space Administration

(NASA), United States

D2.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): John M. Horack, Teledyne Brown Engineering, United States; Ulf Palmnäs, GKN Aerospace Engine Systems, Sweden:

IAC-15.D2.IP.1

STANDARDIZATION OF SMALL SATELLITE LAUNCH SERVICES Abhijeet Gahlot, , India

IAC-15.D2.IP.2

DESIGNING AND TESTING PARACHUTE RECOVERY SYSTEM FOR SOUNDING ROCKET

Blazej Marciniak, Institute of Aviation, Poland

IAC-15.D2.IP.3

ON A METHOD OF CONTROLLING THE ANGLE OF ENTRY IN THE **ATMOSPHERE**

Maxim Dzhabarov, , Russian Federation

IAC-15.D2.IP.4 (withdrawn)

THE METHOD FOR CALCULATE ADDED MASS OF PARACHUTE Huang Wei, Beijing Institute of Mechanical & Electrical Engineering,

IAC-15.D2.IP.5

THE APPLICATION OF UPPER STAGES IN SPACE MISSIONS Feng QI, Beijing Institute of Astronautical Systems Engineering,

IAC-15.D2.IP.6

INNOVATIVE LAUNCH VEHICLE TECHNOLOGIES Borvs Kovalov. . Ukraine

IAC-15.D2.IP.7

RING ROCKETS

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

IAC-15.D2.IP.8

THE CHOICE OF CANDIDATE LAUNCHERS FOR OPERATION FROM A NATIONAL SPACEPORT

Gerald Webb, Commercial Space Technologies Ltd., United Kingdom

INTEGRATED AUTOMATED SYSTEM AS ONE OF THE KEY ELEMENTS OF THE VOSTOCHNY COSMODROME OPERATION SYSTEM Alla Serikova, Central Research Institute of Machine Building (FSUE/ TSNIIMASH), Russian Federation

IAC-15.D2.IP.10

A PRACTICAL MODEL OF CMOS INTEGRATED HALL SENSOR Bai Xiaohe. . China

FRAMEWORK DESIGN OF AEROSPACE VEHICLES COMMON MISSION PLANNING SYSTEM FOR PLAN OPTIMIZATION Ziyang Song, Beijing Electro-Mechanical Engineering Institute,

IAC-15.D2.IP.12 (withdrawn)

STUDY ON THE FLOW COEFFICIENT RELATION BETWEEN HELIUM AND NITROGEN OF ORIFICE PLATE USED IN ROCKET PRESSURIZATION SYSTEM

Wang Huilong, Beijing Aerospace Institute of Metrology & Measurement Technology, China

IAC-15.D2.IP.13

RESPONSIVE TEST TECHNOLOGY FOR CHINESE NEXT GENERATION LAUNCH VEHICLE

Zhengyu Song, China Academy of Launch Vehicle Technology, China

IAC-15.D2.IP.14

FAST TERMINAL SLIDING MODE ATTITUDE CONTROL FOR HYPERSONIC FLIGHT VEHICLE WITH DISTURBANCE OBSERVER Jie Liang, , China

IAC-15.D2.IP.15

RENEWABLE ENERGY BASED SPACE COLONY SOURAV KARMAKAR, , India

D3. 13th 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**

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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 States; Horst Rauck, DLR, German Aerospace Center, Germany;

INTERNATIONAL PARTICIPATION IN A REASONABLE AND SAFE STRATEGY FOR HUMANS TO MARS Marc M. Cohen, Astrotecture™, United States

IAC-15.D3.1.2

PARTNERSHIPS AND FUTURE OF NASA Elizabeth Blome, NASA, United States

IAC-15.D3.1.3

BUILDING BLOCK-BASED "IBOSS" APPROACH: FULLY MODULAR SYSTEMS WITH STANDARD INTERFACE TO ENHANCE FUTURE SATELLITES

Martin Kortmann, RWTH Aachen University - Institut fuer Leichtbau, Germany

PROMETHEUS: A NOVEL HUMAN SETTLEMENT DESIGN FOR MARS Shrrirup Nambiar, MANAV RACHNA COLLEGE OF ENGINEERING. FARIDABAD, India

IAC-15.D3.1.5

BUILDING BLOCKS OF A FLEXIBLE ARCHITECTURE FOR OUTER SPACE **EXPLORATION**

Pierpaolo Pergola, Sitael/Alta, Italy

IAC-15.D3.1.6

MARCO POLO: ATMOSPHERIC IN-SITU RESOURCE UTILIZATION FOR MANNED MARTIAN MISSIONS

Trey Poole, NASA, United States

D3.2. Systems and Infrastructures to **Implement Future Building Blocks in Space Exploration and Development**

October 14 2015, 09:45 — 312

Co-Chair(s): Scott Hovland, European Space Agency (ESA), The Netherlands; William H. Siegfried, The Boeing Company, United

Rapporteur(s): Horst Rauck, DLR, German Aerospace Center, Germany; Paivi Jukola, Aalto University, Finland;

IAC-15.D3.2.1

STEPS2 – TECHNOLOGICAL RESEARCH ACTIVITIES FOR EXPLORATION Maria Antonietta Perino, Thales Alenia Space Italia, Italy

IAC-15.D3.2.2

THE RUSSIAN MISSION CONTROL CENTRE, DEVELOPMENT PROSPECTS AND ROLE IN INTERNATIONAL SPACE ACTIVITIES. Maxim Matiushin, Federal state unitary enterprise "Central Scientific Research Institute of machine-building" (TsNIIMASH), Russian Federation

IAC-15.D3.2.3

MODULAR INFRASTRUCTURES AS RESEARCH PLATFORMS FOR LUNAR EXPLORATION

Caroline Lange, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-15.D3.2.4

THE MOTHERSHIP MISSION ARCHITECTURE Sebastian M. Ernst, Deep Space Industries Inc., Germany

IAC-15.D3.2.5

INNOVATIVE ORBITAL SUPPORT SERVICES FOR SUSTAINABLE LUNAR EXPLORATION AND EXPLOITATION Juergen Hill, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR),

Germany

CREATING A UNIVERSAL SPACE INTERFACE STANDARD

Mark Hempsell, The British Interplanetary Society, United Kingdom IAC-15.D3.2.7 (withdrawn)

CONCEPTS AND THEORIES FOR AN ECONOMICALLY ADVANTAGEOUS VENTURE FOR MINING SMALL SOLAR SYSTEM

Kiran Tikare, Universite Paul Sabatier Toulouse III, France

IAC-15.D3.2.8 (withdrawn)

CONCEPTUAL DESIGN AND CONSTRUCTION ON THE MOON BY POLYMERIC LUNAR CONCRETE

Jaeho Lee, International Space Exploration Research Institute / Hanyang University, Korea, Republic of

IAC-15.D3.2.9

ROBOTICS OPERATIONS FROM SMALL SPACEPLANES FOR CUBESATS

Giovanni B. Palmerini, Universita' di Roma 'La Sapienza', Italy

D3.3. Novel Concepts and Technologies for Enable Future Building Blocks in Space **Exploration and Development**

October 12 2015, 16:45 — 312

Co-Chair(s): ALAIN DUPAS,, France; Alain Pradier, European Space Agency (ESA), The Netherlands;

Rapporteur(s): Christopher Moore , National Aeronautics and Space Administration (NASA), United States; Junjiro Onoda, Japan Society for Aeronautics and Space Sciences (JSASS),

IAC-15.D3.3.1 (withdrawn)

THE IMPORTANCE OF SPACE-BORNE AUTOMATIC DEPENDANT SURVEILLANCE-BROADCAST (ADS-B) MONITORING Alex Cushley, Royal Military College, Canada

IAC-15.D3.3.2

ENERGY-EFFICIENT CAPTURE OF A NON-COOPERATIVE SPACECRAFT WITH A SPACE MANIPULATOR

Silvio Cocuzza, CISAS - "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy









HYDRODYNAMIC DESIGN OF A PNEUMATIC SAMPLE ACQUISITION SYSTEM FOR VENUS SURFACE

Siddharth Pandey, University of New South Wales, Australia

IAC-15.D3.3.4

A METHOD TO MEASURE DROP SIZES IN GAS CIRCULATION PIPELINES OF MANNED SPACECRAFT

Xin Wang, China Academy of Launch Vehicle Technology, China

LOW-TEMPERATURE CATALYTIC GASIFICATION ROUTES TO SUSTAINABLE WASTE MANAGEMENT AND FUEL GENERATION IN

Joshua Cmar, Cleveland State University, United States

Samantha Larson, Carleton Univeristy, Canada

IAC-15.D3.3.6

SPACE EXPLORATION

TRAINABLE ANALOG NEURAL NETWORK WITH APPLICATION TO LUNAR IN-SITU RESOURCE UTILIZATION

IAC-15.D3.3.7

SEMI-ANDROGYNOUS MULTIFUNCTIONAL INTERFACE FOR EXPANDABLE SPACE STRUCTURES

Lorenzo Olivieri, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

D3.4. Space Technology and System Management Practices and Tools

October 16 2015, 09:45 — 312

Co-Chair(s): John C. Mankins , ARTEMIS Innovation Management Solutions, LLC, United States; Paivi Jukola , Aalto University, Finland;

Rapporteur(s): Maria Antonietta Perino , Thales Alenia Space Italia. Italy:

IAC-15.D3.4.1

SCIENCE2BUSINESS® - FIRST RESULTS FROM A STRATEGIC INNOVATION PARTNERSHIP BETWEEN GERMAN AEROSPACE CENTER AND AIRBUS DEFENCE & SPACE - SPACE SYSTEMS Nadja Wolf, Airbus DS GmbH, Germany

AC-15.D3.4.2

INFLUENCES AND IMPACT OF FUNDING PARADIGMS IN ADVANCED TECHNOLOGY INFUSION

Suparna Mukherjee, George Washington University, United States

IAC-15.D3.4.3

COMBINING SYSTEM DYNAMICS WITH TRADESPACE EXPLORATION TO EXPLORE FUTURE SPACE ARCHITECTURES

Daniel Hastings, Massachusetts Institute of Technology (MIT), United States

IAC-15.D3.4.4

FUTURE APPLICATIONS AND BENEFITS OF HUMAN SPACE FLIGHT INNOVATIONS

Stefano Ferretti, European Space Agency (ESA), Italy

IAC-15.D3.4.5

STRATEGIES AND CONCEPTS FOR INFORMED INVESTING IN DISRUPTIVE TECHNOLOGIES

Paivi Jukola, Aalto University, Finland

IAC-15.D3.4.6

ANALYZING THE TRADEOFFS AMONG RESOURCE INVESTMENT PROFILES FOR NASA'S SCIENTIFIC INSTRUMENT R&D ECOSYSTEM Alexander Burg, George Washington University, United States

IAC-15.D3.4.7

KINEMATIC MODEL FOR RESOURCE CONSTRAINED PROJECTS SCHEDULING PROBLEM WITH UNDER UNCERTAINTIES – A SPACE SEGMENT SUBSYSTEM CASE STUDY.

Giuliani Garbi, Brazilian Institute for Space Research, Brazil

D4. 13th IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE

Coordinator(s): Giuseppe Reibaldi , International Academy of Astronautics (IAA), France; Horst Rauck , DLR, German Aerospace Center, Germany;

D4.1. Innovative Concepts and Technologies

October 13 2015, 09:45 — 312

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-15.D4.1.1

IMPLEMENTATION OF 3D SCANNING AND 3D PRINTING TECHNOLOGIES IN ASTRONAUTICAL AND SPACE EXPLORATION APPLICATIONS. THE DIGITAL TELEPORTATION REVOLUTION. Nikolai Oreshkin, , United States

IAC-15.D4.1.2

MISSION CONCEPT AND PRELIMINARY SPACECRAFT DESIGN FOR RESOURCE MINING ON MAIN BELT ASTEROIDS Alena Probst, Bundeswehr University Munich, Germany

IAC-15.D4.1.3

ETERNAL MEMORY: LONG-DURATION STORAGE CONCEPTS FOR SPACE

Melissa Guzman, , France

IAC-15.D4.1.4

ELECTRO-CHEMICAL THRUSTERS: A NOVEL DESIGN FOR ADVANCED PROPULSION

Vinayak Malhotra, Indian Institute of Technology, India

IAC-15.D4.1.5

SPACE SETTLEMENT ON SATURN'S MOON: TITAN Abbishek G, , India

IAC-15.D4.1.6

PRELIMINARY RESULTS OF THE SELF DEPLOYABLE HABITAT FOR EXTREME ENVIRONMENTS (SHEE) TESTING CAMPAIGN.

Joshua Nelson, International Space University (ISU), France

IAC-15.D4.1.7 (withdrawn)

A NOVEL MEDICAL TREATMENT MICRO-SATELLITE BASED ON AUTONOMOUS ADSORPTION TECHNOLOGY Zonggao Mu, China Academy of Space Technology (CAST), China

IAC-15.D4.1.8 (withdrawn)

NEAR EARTH ASTEROIDS CAPTURE TO LUNAR ORBIT BASED ON THE RESONANT GRAVITY ASSISTS THEORY

Changchun Bao, Tsinghua University School of Aerospace, China

IAC-15.D4.1.9

SPACEPLAN 2020: IDENTIFICATION AND ASSESSMENT OF KEY SPACE TECHNOLOGIES TOWARDS 2020

Jason Forshaw, Surrey Space Centre, University of Surrey, United Kingdom

IAC-15.D4.1.10

TOWARDS THE DEVELOPMENT OF A NEW ROLLING ROVER ACTUATED BY MEANS OF ELECTROACTIVE POLYMERS Silvio Cocuzza, CISAS – "G. Colombo" Center of Studies and Activities for Space, University of Padova, Italy

IAC-15.D4.1.11

CLEANSAT: TECHNOLOGY DEVELOPMENT FOR THE EVOLUTION OF IFO PLATFORMS

Andrew Wolahan, ESTEC, European Space Agency, The Netherlands

IAC-15.D4.1.12

EFFECTIVE METHODOLOGIES TO DERIVE STRATEGIC DECISIONS FROM ESA TECHNOLOGY ROADMAPS Sara Cresto Aleina, Politecnico di Torino, Italy

D4.2. Contribution of Space Activities to Solving Global Societal Issues

October 13 2015, 14:45 — 312

Co-Chair(s): Giuseppe Reibaldi , International Academy of Astronautics (IAA), France; John C. Mankins , ARTEMIS Innovation Management Solutions, LLC, United States;

IAC-15.D4.2.1

INCORPORATING BENEFIT ASSESSMENT IN PROGRAMMATIC DECISION-MAKING

Gerhard Thiele, European Space Agency (ESA), The Netherlands

IAC-15.D4.2.2 (withdrawn)

GLOBAL TRENDS IN SPACE

Bhavya Lal, Science and Technology Policy Institute, United States

IAC-15.D4.2.3

COMMERCIALIZATION OF POST-EDUCATIONAL PROJECTS — CHALLENGES AND OPPORTUNITIES FOR SPACE INDUSTRY Maciej Urbanowicz, Sonda Association, SSBV Polska Sp. z o.o., Poland

IAC-15.D4.2.4 (withdrawn)

CORPORATE SOCIAL RESPONSIBILITY – A STRATEGY TO MITIGATE GLOBAL SOCIETAL ISSUES

Michelle Mendes, World Space Week Association, United States

IAC-15.D4.2.5 (withdrawn)

REMOTE SENSING AS A FOUNDATION FOR HUMAN RIGHTS ASSISTANCE

Jillianne Pierce, Space Foundation, United States

IAC-15.D4.2.6

SPACE ICT ASSETS AS A CRITICAL ELEMENT IN GLOBAL SOCIETAL ISSUES

Meir Moalem, , Israel

IAC-15.D4.2.7

STRATEGIC MANAGEMENT OF RESOURCES AND TECHNOLOGIES FOR A SMART AND GREEN SPACE CAMPUS Isabella Mazza, ESA, Italy

IAC-15.D4.2.8

THE SPIRITUAL IMPERATIVE OF SPACE EXPLORATION & THE CALL FOR GLOBAL ACTION

Michael Potter, International Institute of Space Commerce, United States

IAC-15.D4.2.9

A GREATER WORLD IS POSSIBLE! EXPANDING CIVILIZATION INTO SPACE IS THE MORAL ISSUE OF OUR TIME!

Adriano Autino, Space Renaissance International, Italy

D4.3. Space Elevator Tether and Space Mineral Resources

October 15 2015, 09:45 — 312

Co-Chair(s): Arun Misra , McGill University, Canada; Roger X. Lenard, LPS, United States;

Rapporteur(s): Susan McKenna-Lawlor , Space Technology (Ireland) Ltd., Ireland;

IAC-15.D4.3.

DEFLECTION OF A BINARY ASTEROID SYSTEM USING TETHERS Flaviane Venditti, McGill Univeristy, Canada

IAC-15.D4.3.2

DYNAMICS OF SPACE ELEVATOR ON ASTEROID
Alexander Burov, Dorodnitsyn Computing Center, Russian Academy
of Sciences, Russian Federation

IAC-15.D4.3.3

SPACE ELEVATOR. ALTERNATIVE DESIGN SOLUTIONS. Vadym Pasko, Yuzhnoye State Design Office, Ukraine

IAC-15.D4.3.4

REDIRECTION OF TUMBLING ASTEROIDS BY MEANS OF TETHERS Nahum Melamed, The Aerospace Corporation, United States

IAC-15.D4.3.5

SPACE POWER - A KEY RESOURCES FOR SPACE RESOURCES Roger X. Lenard, LPS, United States

IAC-15.D4.3.6 (withdrawn)

PROGRESS TOWARDS A LUNAR SELF-REPLICATING MACHINE – THE 3D-PRINTABLE ELECTRIC MOTOR IS THE KEY

Alex Ellery, Space Exploration and Engineering Group, Carleton

IAC-15.D4.3.7 (withdrawn)

ASTEROID CAPTURING TECHNIQUE USING RINGED ION THRUSTER ASSEMBLY

Rohan Kulkarni, , India

Univeristy, Canada

IAC-15.D4.3.8 (withdrawn)

A TECHNO-ECONOMIC LEGAL ANALYSIS: DEVELOPMENTS IN U.S. TECHNOLOGY, LAW AND POLICY GOVERNING SPACE RESOURCE COMMERCIAL EXPLOITATION

Michael Mineiro, Science and Technology Policy Institute, United States

IAC-15.D4.3.9

TRAJECTORY OPPORTUNITIES TO ARJUNA TYPE ASTEROIDS FOR ASTEROID MINING MISSIONS

Scott Dorrington, UNSW Australia, Australia

IAC-15.D4.3.10

ASTRONOMICAL PROSPECTING: A NECESSARY PRECURSOR TO ASTROID MINING

Martin Elvis, Harvard-Smithsonian Center for Astrophysics (CfA), United States

IAC-15.D4.3.11

ASTEROID MINING USING A SOLAR POWERED ROVER Sharad Chopra, University of Petroleum and Energy Studies, India

IAC-15.D4.3.12

ASTEROID MINING: A EUROPEAN VENTURE

Mansoor Shar, International Space University (ISU), France

IAC-15.D4.3.13

REALITY AND CLARITY IN UNDERSTANDING THE PROHIBITION ON NATIONAL APPROPRIATION IN ARTICLE II OF THE OUTER SPACE TREATY

Christopher Johnson, Secure World Foundation, United States

IAC-15.D4.3.14

ASTEROID CAPTURING TECHNIQUE USING MAGNETIC WAVE GENERATOR AND ION THRUSTERS.

Abbishek G, India

D4.4. Strategies for Rapid Implementation of Interstellar Missions: Precursors and Beyond

October 15 2015, 14:45 — 312

Co-Chair(s): Giancarlo Genta , Politecnico di Torino, Italy; Mae Jemison , 100 Year Starship, United States;

Rapporteur(s): Louis Friedman , The Planetary Society, United States:

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IAC-15.D4.4.1

ENABLING INTERSTELLAR PROBE: SPACE LAUNCH SYSTEM (SLS)

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

IAC-15.D4.4.2

OVERVIEW OF THE KECK INSTITUTE FOR SPACE STUDIES (KISS) WORKSHOPS ON THE SCIENCE AND ENABLING TECHNOLOGIES FOR THE EXPLORATION OF THE INTERSTELLAR MEDIUM (ISM) Leon Alkalai, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-15.D4.4.3

A NOVEL MISSION CONCEPT FOR NEAR TERM EXPLORATION OF THE INTERSTELLAR MEDIUM (ISM)

NITIN ARORA, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-15.D4.4.4

ON BOARD VIRTUAL SOC: AN ENABLING DESIGN FOR SCIENCE OPERATIONS ON DEEP SPACE MISSIONS

Lawrence Brown, The Johns Hopkins University Applied Physics Laboratory, United States

IAC-15.D4.4.5

SPACESHIP TRITON, THE GLOBAL PROJECT TO CONQUER THE SOLAR **SYSTEM**

Joachim ACHLEITNER, , Austria

IAC-15.D4.4.6 (withdrawn)

ENABLING CLEAN SPACE USING CUBESAT TECHNOLOGIES FOR ACTIVE SPACE DEBRIS REMOVAL

Ajay Prasad Ragupathy, Delft University of Technology (TU Delft), The Netherlands

IAC-15.D4.4.7

INTERDISCIPLINARY ROADMAP FOR ENABLING AN INTERSTELLAR WORLDSHIP MISSION

Brian Ramos, , United States

IAC-15.D4.4.8 (withdrawn)

SATELLITE FOR UNDERSTANDING BLACK-HOLE Naman Vaidya, India

D4.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Giuseppe Reibaldi , International Academy of Astronautics (IAA), France; Horst Rauck, DLR, German Aerospace Center, Germany;

IAC-15.D4.IP.1

LESSONS LEARNED ABOUT THE SOLAR GRAVITY LENS AT THE KISS-ISM 2014-2015 WORKSHOPS

Claudio Maccone, International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF), Italy

D5. 48th IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE

Coordinator(s): Jeanne Holm, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States; Roberta Mugellesi-Dow, European Space

D5.1. Safety and quality: "SUCCESS" is the

October 14 2015, 09:45 - 302-303

Co-Chair(s): Alexander S. Filatyev , Central Aero-HydroDynamic Institute, Russian Federation; Pierre Molette, , France; Rapporteur(s): Manola Romero , Office National d'Etudes et de Recherches Aérospatiales (ONERA), France;

IAC-15.D5.1.1

THEORETICAL KNOWLEDGE AND ADEQUATE METHODICAL APPROACHES - THE ANALYTICAL BASE TO ENSURE THE RELIABILITY AND SAFETY OF THE COMPLEX TECHNICAL SYSTEMS Jaor Barmin, Federal State Unitary Enterprise "CENTER for OPERATION of SPACE GROUND-BASED INFRASTRUCTURE" (TSENKI),

IAC-15.D5.1.2

MATHEMATICAL MODELS OF THE SAFETY ASSESSMENT OF GROUND FACILITIES IN CASE OF FAILURE OF THE LAUNCH VEHICLE EQUIPPED WITH ON-BOARD AUTOMATIC EMERGENCY ENGINE SHUTDOWN

Eduard Gladkiy, Yuzhnoye State Design Office, Ukraine

IAC-15.D5.1.3

OPTIMIZATION OF FLIGHT SAFETY SYSTEM ALGORITHM CONSIDERING REDUCTION OF PROBABILITY OF FALSE FLIGHT TERMINATION COMMAND INITIATION AND FULFILLMENT OF SAFETY REQUIREMENTS

Vadym Demchenko, Yuzhnoye State Design Office, Ukraine

SPACE SYSTEMS AS CRITICAL INFRASTRUCTURE: AN APPROACH TO DEMONSTRATE RELIABILITY, RESILIENCE, AND SECURITY Patrick Gavigan, Government of Canada, Canada

IAC-15.D5.1.5

QUALITY ASSURANCE - BENEFITS AND IMPACT ON PROJECT SCHEDULE Andrei Cacovean, Active Space Technologies, Germany

IAC-15.D5.1.6 (withdrawn)

SUGGESTED ASPECTS FOR IMPLEMENTATION OF RISK MANAGEMENT IN THE FEI'S MICROGRAVITY PROJECTS. Flávio de Azevedo Corrêa Jr, Instituto de Aeronáutica e Espaço (IAE),

IAC-15.D5.1.7

QUALITY ISSUES IN COMPLEX PRODUCTS EVEN CONSIDERING THE APPLICATION OF QUALITY TOOLS INITIATIVES DURING PROGRAM DEVELOPMENT

Cosimo Bertelli, Instituto Nacional de Pesquisas Espaciais (INPE), Brazil

IAC-15.D5.1.8

MANAGEMENT SYSTEM OF SUPPLIERS LOW VOLUME INDUSTRY QUALITY READINESS LEVEL - QRL

Jorge Nascimento, Instituto Nacional de Pesquisas Espaciais (INPE),

IAC-15.D5.1.9

CRITICAL ANALYSIS OF QUALITY AND SAFETY REQUIREMENTS APPLIED DURING THE SAC-D/AQUARIUS SATELLITE ENVIRONMENTAL CAMPAIGN TESTS AT INPE/LIT (BRAZIL) Andreia F. S. Genaro, National Institute for Space Research - INPE,

IAC-15.D5.1.10

THIRD PARTY INDEPENDENT VERIFICATION & VALIDATION TECHNOLOGY OF FIELD PROGRAMMABLE GATE ARRAY IN AEROSPACE MISSIONS

Dan Wu, China Academy of Aerospace Systems Science and Engineering, China

D5.2. Knowledge Management and **Collaboration in Space Activities**

October 15 2015, 09:45 - 302-303

(CNES), France; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;

Rapporteur(s): Jeanne Holm , National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States; Patrick Hambloch , University of Alabama in Huntsville, United States:

IAC-15.D5.2.1

DEVELOPMENT OF QUALITY AND KNOWLEDGE MANAGEMENT SYSTEM FOR THE FIRST SATELLITE MISSION IN AN EDUCATIONAL INSTITUTION BASED ON ECSS STANDARDS

IAC-15.D5.2.2

IDENTIFYING CRITICAL KNOWLEDGE AT NASA: A FOUR-PART FRAMEWORK

Edward J. Hoffman, National Aeronautics and Space Administration (NASA), United States

IAC-15.D5.2.3

DEVELOPMENT OF KNOWLEDGE MANAGEMENT UNDER THE **TECHNOLOGY TRANSFER**

Sultan Assipov, , Kazakhstan

IAC-15.D5.2.4

MARS MISSION WITH GAMIFICATION TECHNIQUE & SELF-KNOWLEDGE MANAGEMENT INTANGIBLE OUTCOMES FOR YOUNG **PROFESSIONALS**

Ozan Kara, Koc University, Turkey

IAC-15.D5.2.5

KNOWLEDGE MANAGEMENT SOLUTION FOR THE LEAVING EXPERT

Uwe Knodt, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

PROJECTS

Siegmar Pallaschke, Consultant, Germany

IAC-15.D5.2.7

CONTENT AND MAKING OF THIS WORLD-WIDE ACCEPTED STANDARD

Ruediger Suess, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-15.D5.2.8

KNOWLEDGE BASE

Sciences, China

THE USE OF CONTINUOUS IMPROVEMENT IN THE AEROSPACE

Federico Perazzo, , Argentina

IAC-15.D5.2.10 (withdrawn)

PROPOSED A MODEL ---- ONTOLOGY-BASED KNOWLEDGE MANAGEMENT (ORKM) FOR SATELLITE

D5.3. Prediction and measurement of space weather conditions and impacts on space missions

October 16 2015, 09:45 - 302-303

Co-Chair(s): Jean-Francois Roussel . Office National d'Etudes et de Recherches Aérospatiales (ONERA), France; Mengu Cho, Kyushu Institute of Technology, Japan;

IAC-15.D5.3.1

ORBITAL DATA ANALYSIS OF ELECTRON-EMITTING FILM FOR SPACECRAFT MITIGATION ONBOARD A SMALL SATELLITE Atomu Tanaka, Kyushu Institue of Technology, Japan

IAC-15.D5.3.2

REAL TIME FAULT TOLERANT DESIGN OF RF CMOS PHASE LOCKED LOOP DESIGN FOR RADIATION ENVIRONMENT Varsha Prasad, Nitte Meenakshi Institute of Technology, India

IAC-15.D5.3.3

DEVELOPMENT OF AN ELECTROSTATIC DUST REPEALING DEVICE FOR LUNAR MISSIONS

Nima Gharib, McGill University, Canada

IAC-15.D5.3.4 (withdrawn)

ANALYSIS AND PREDICTION OF END-OF-LIFE PERFORMANCE OF GAAS SOLAR CELL IN INTENSE SPACE RADIATION ENVIRONMENTS Xin Gao, Science and Technology on Vacuum Technology and Physics Laboratory, Lanzhou Institute of Physics, China

IAC-15.D5.3.5

DEVELOPMENT OF MISSION PAYLOADS FOR ARC EVENT GENERATOR AND INVESTIGATION SATELLITE HORYU-IV Hiroshi Fukuda, Kyushu Institue of Technology, Japan

IAC-15.D5.3.6

A RADIATION BELTS DISTURBANCE STUDY IN THE SPACE WEATHER POINT OF VIEW S. ROCHEL, D. BOSCHER, R. BENACQUISTA, J. F. ROUSSEL

Sandrine Rochel, ONERA, France

IAC-15.D5.3.7

REM-RED SOUNDING ROCKET EXPERIMENT TO MEASURE THE COSMIC RADIATION

Balazs Zabori, MTA Centre for Energy Research, Hungary

RISK ANALYSIS AND MITIGATION OF GEOSTATIONARY COMMUNICATIONS SATELLITES AFFECTED BY SPACE WEATHER Hui Xu, Beijing Aerospace Control Center, China

IAC-15.D5.3.9

A NEW APPROACH TO PREDICTION AND ESTIMATE OF HSS-ASSOCIATED ENHANCEMENTS OF "KILLER" ELECTRON FLUX AT GEOSYNCHRONOUS ORBIT

Alexander Potapov, Institute of Solar-Terrestrial Physics of Siberian Branch of Russian Academy of Science, Russian Federation

D5.3. Cyber-Security Threats To Space Missions And Countermeasures To Address

October 15 2015, 14:45 — 302-303

Co-Chair(s): Deganit Paikowsky, Tel Aviv University, Israel; Stefano Zatti, ESA, Italy;

IAC-15.D5.4.1

CYBER HARDENING & CYBER EARLY WARNING AS BUILDING BLOCKS IN SATELLITE CYBER WORTHINESS

Nitzan Barkav, Israel Aerospace Industries, Ltd. Israel

MANAGEMENT IN SPACE ACTIVITIES

Agency (ESA), United Kingdom;

Mart Vihmand, Tallinn University of Technology, Estonia

KNOWLEDGE MANAGEMENT INFRASTRUCTURE: NASA'S

THE EXPERT IS LEAVING - THE KNOWLEDGE IS LOST? DLR'S

IAC-15.D5.2.6

THE ROLE OF A KNOWLEDGE MANAGEMENT OFFICER WITHIN

"GUIDANCE FOR PROJECT PORTFOLIO MANAGEMENT" - THE

DOCUMENT MANAGEMENT DURING ESTABLISHING SPACE

Song Guo, National Space Science Center, Chinese Academy of

IAC-15.D5.2.9 (withdrawn)

Miao Su, National Space Science Center (NSSC), China









IAC-15.D5.4.2

INTERNATIONAL COOPERATION IN RESPONDING TO CYBERSECURITY THREATS TO SPACE MISSIONS: TOWARDS A TYPOLOGY OF COUNTERMEASURES

Deborah Housen-Couriel, Tel Aviv University, Israel

IAC-15.D5.4.3

PRELIMINARY REFLECTIONS ABOUT THE ESTABLISHMENT OF A CYBER-SECURITY POLICY FOR A SUSTAINABLE, SECURE AND SAFE SPACE ENVIRONMENT

Luca del Monte, European Space Agency (ESA), France

IAC-15.D5.4.4

CYBERATTACK OF SPACE SYSTEMS - INSTRUMENTS OF DENIABLE

Ram Levi, Tel Aviv University, Israel

IAC-15.D5.4.5 (withdrawn)

SATELLITE SECURITY THREATS AND CYBER RISK MANAGEMENT STRATEGIES

Denis Bensoussan, , United Kingdom

IAC-15.D5.4.6 (withdrawn)

THE CYBER THREAT TO SPACE SYSTEMS Travis Cottom, , United States

IAC-15.D5.4.7

A NOVEL SPACE NETWORK DOS SUPPRESSION APPROACH WITH CREDIBLE PROBABILISTIC PACKET MARKING

Dona Yan, Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology(CAST), China

D5.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Jeanne Holm , National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kinadom.

IAC-15.D5.IP.1

CALCULATION OF THE NUMBER OF REDUNDANT ACTUATORS FOR **TOLERATING ACTUATOR FAULTS** Inseok Yang, , Korea, Republic of

IAC-15.D5.IP.2

SUPPORT OF THE SPACE PROJECT MANAGEMENT IN THE CZECH REPUBLIC

Michal Kunes, Czech Space Office, Czech Republic

IAC-15.D5.IP.3

CREATING A RISK-AWARE CULTURE AS A MAJOR DRIVER FOR SYSTEM VERIFICATION

Jaqueline Vaz Maiolino, Orbital Engenharia S.A., Brazil

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**

October 14 2015, 14:45 — Ballroom A

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-15.D6.1.1

ASKING THE ORACLE: THE VALIDITY OF INFORMED CONSENT UNDER EUROPEAN LAW

Michail Chatzipanagiotis, , Greece

IAC-15.D6.1.2

PRESENT SITUATION AND DEVELOPMENT TREND OF CHINESE COMMERCIAL SPACE TOURISM

Wen Xu, China Academy of Launch Vehicle Technology, China

FAA SAFETY APPROVALS IN COMMERCIAL SPACE TRANSPORTATION George Nield, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States

IAC-15.D6.1.4

SAFETY AND CERTIFICATION OF SWISS SPACE SYSTEMS PROJECTS Jean-Bruno MARCIACQ, Swiss Space Systems (S3), Switzerland

IAC-15.D6.1.5

A COMPARATIVE ANALYSIS OF NATIONAL LAWS GOVERNING LAUNCH SAFETY

PAUL DEMPSEY, McGill University, Canada

IAC-15.D6.1.6

FUTURE EARTH ORBIT FLYING MANAGEMENT SYSTEM FOR COMMERCIAL SPACE MMISSIONS Tao Wang, China Academy of Launch Vehicle Technology, China

IAC-15.D6.1.7 (withdrawn)

DUAL FREQUENCY ADS-B PROTOTYPE FLIGHT EXPERIMENTS FOR **ENHANCED SAFETY**

Nickolas Demidovich, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States

IAC-15.D6.1.8 (withdrawn)

UPDATES TO THE FAA PUBLIC RISK CRITERIA AND EVALUATION FOR MISSIONS LIKE ORION'S FIRST ENTRY FLIGHT TEST Paul Wilde, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States

IAC-15.D6.1.9

DEVELOPMENT OF COMMERCIAL SUBORBITAL SPACE TOURISM: A REVIEW OF CURRENT STATUS AND DISCUSSION ON FUTURE PROSPECTS AFTER SPACESHIPTWO CRASH

Eva Yi-Wei Chang, University of Science & Technology, Taiwan,

IAC-15.D6.1.10

CONJUNCTION DETECTION AND SERIES CLUSTERING OF TELEMETRY DATA FROM SPACECRAFT IN ORBIT

Shaolin Hu, State Key Laboratory of Astronautic Dynamics, China

D6.3. Enabling safe commercial spaceflight: vehicles and spaceports

October 15 2015, 09:45 — Kerem Carmit

Co-Chair(s): Christophe Chayaanac . 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-15.D6.3.1

APPROACHES TO DEVELOPMENT OF COMMERCIAL SPACEPORT AND ASSOCIATED GROUND SEGMENT DRIVEN BY SPECIFIC SPACEPLANE VEHICLE AND MISSION OPERATION REQUIREMENTS Francesco Santoro, Altec S.p.A., Italy

IAC-15.D6.3.2

INTEGRATION OF SUBORBITAL SPACEFLIGHT AT A COMMERCIAL AIRPORT IN FRANCE

Jérôme Crevatin .. France

IAC-15.D6.3.3

THE RECENT STATUS OF SPACEPORTS AS THE ANCHOR FOR SPACE ACTIVITIES IN JAPAN

Misuzu Onuki, Space Frontier Foundation, Japan

IAC-15.D6.3.4

DEVELOPMENT OF INTERNATIONAL URBAN SPACEPORTS Charles Lauer, Rocketplane Global, Inc., United States

IAC-15.D6.3.6

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-15.D6.3.7

THE IXV GROUND SEGMENT AS AN INITIAL APPROACH TO THE SUPPORT OF COMMERCIAL SUBORBITAL MISSIONS Francesco Santoro, Altec S.p.A., Italy

E1. SPACE EDUCATION AND OUTREACH SYMPOSIUM

Coordinator(s): Chris Welch , International Space University (ISU), France; Naomi Mathers, Advanced Instrumentation and Technology Centre (AITC), Australia;

E1.1. Ignition - Primary Space Education

October 12 2015, 15:15 — Oranim 3-B

Co-Chair(s): Christopher Vasko , Space Generation Advisory Council (SGAC), The Netherlands; Gulnara T. Omarova, Astrophysical Institute, Kazakhstan;

Rapporteur(s): Michael Pakakis , Victorian Space Science Education Centre, Australia;

2015 Frank J. Malina Astronautics Medal Recipient Address, Prof. Boris Pschenichner, Department of Astronomy and Cosmonautics, Russian Federation

IAC-15.E1.1.1

SCHOOL-WIDE APPLICATIONS OF ESA EDUCATIONAL MATERIALS -LESSONS LEARNED AND FUTURE FOLLOW-UPS

Oded Avraham, Israeli Astronomical Association, United States

IAC-15.E1.1.2

USING SMALL SOLAR OBSERVATORIES FOR MULTIDISCIPLINARY **EDUCATION**

Igal Patel, Cosmos Telescopes, Israel

IAC-15.E1.1.3 (withdrawn)

HUMAN ORRERY FOR ASTRONOMY EDUCATION AND OUTREACH Kishor Acharya, Space Generation Advisory Council (SGAC), Nepal

IAC-15.F1.1.4

A SOPHISTICATED WEB BASED PLATFORM AIMED FOR SPACE OUTREACH PROGRAM.

Ido Bareket, , Israel

IAC-15.E1.1.5

TO IGNITE THE PASSION IN CHILDREN'S HEARTS -ROLE AND EFFECT OF SPACE EDUCATION, ISSUES AND CONSIDERATION-Ayami Kojima, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.E1.1.6

SCHOOL-WIDE SPACE ADVOCACY

Oded Avraham, Israeli Astronomical Association, United States

IAC-15.E1.1.7 (withdrawn)

EDUCATORS AND INDUSTRY - HOW INDUSTRY CAN SUPERCHARGE EDUCATION AT THE PRIMARY AND INTERMEDIATE LEVEL Michelle Mendes, World Space Week Association, United States

E1.2. Lift-Off - Secondary Space Education

October 13 2015, 09:45 - Oranim 3-B

Co-Chair(s): Lisa Antoniadis , Space Center EPFL, Switzerland; Michael Pakakis, Victorian Space Science Education Centre,

Rapporteur(s): Lisa La Bonte, United Nations Association-UAE/ AYVF, United Arab Emirates;

IAC-15.E1.2.1

ASTRO PI: LAUNCH YOUR CODE INTO SPACE Nimal Navarathinam, Surrey Satellite Technology Ltd (SSTL), United

IAC-15.E1.2.2

EXPERIENCING SPACE BY EXPLORING THE EARTH — EASY-TO-USE IMAGE PROCESSING TOOLS IN SCHOOL LESSONS Andreas Rienow, University of Bonn, Germany

IAC-15.E1.2.3

TELEM BAMOT - ENCOURAGING YOUNG GIRLS TO LEARN **TECHNOLOGICAL STUDIES** Asia Katz, Rafael Advanced Defense Systems Ltd., Israel

IAC-15.E1.2.4

FACTORS INFLUENCING SPACE EDUCATION FEMALE PIPELINE: AN INTERNATIONAL COMPARATIVE STUDY. OWUSU ANSAH BOAKYE, , United States

IAC-15.F1.2.5

FROM PEER LEARNING TO SELF LEARNING: COMPETITION TEAMS. Jaime Cernuda, , Spain

IAC-15.E1.2.6

BUILDING SELF-TAUGHT SCIENTISTS: STUDENTS FROM A TRADITIONALLY LOW ACADEMICALLY PERFORMING REGION EXCEL THROUGH SELF TEACHING MEDIUMS SUCH AS WIKIPEDIA AND HANDS ON LEARNING

Tara RuthAnn Sprinkle, , United States

IAC-15.E1.2.7

DREAM TO SPACE - SPACE MISSION DEVELOPMENT AS AN "ENABLER" FOR KIDS INTO THE FIELS OF MATH, SCIENCE, ENGINEERING AND TECHNOLOGY (STEM) - A COLLABORATION BETWEEN IAI - MBT SPACE, TAASIEDA AND RABIN HIGH SCHOOL IN AZUR, ISRAEL.

Elad Sagi, Israel Aerospace Industries. Ltd., Israel

NORDIC ESERO TEACHER TRAINING COURSES AND RESOURCES Jøran Grande, NAROM - Norwegian Centre for Space-Related Education, Norway

IAC-15.E1.2.9

SPACE EDUCATION PROGRAM USING ALOS-2 EARTH OBSERVATION

Tohru Takahashi, , Japan







SPACE AND SCIENCE EDUCATION: MOTIVATING LESSONS OF PHYSICS WITH EARTH OBSERVATION SATELLITES Gil DENIS, Planete Sciences, France

E1.3. On Track - Undergraduate Space Education

October 13 2015, 14:45 — Oranim 3-B

Co-Chair(s): David Cook, University of Alabama in Huntsville, United States; Lisa Antoniadis, Space Center EPFL, Switzerland; Rapporteur(s): Michal Kunes, Czech Space Office, Czech

IAC-15.E1.3.1

PASSING THE BATON: ACHIEVING LONG TERM GROWTH AND SUSTAINABILITY IN UNDERGRADUATE SPACE EDUCATION AND **OUTREACH ORGANIZATIONS**

Ethan Hopping, University of Alabama in Huntsville, United States

IAC-15.E1.3.2

STANFORD STUDENT SPACE INITIATIVE: UNIVERSITIES AND SPACE DEVELOPMENT

Paul Warren, , United States

IAC-15.E1.3.3

AEROSPACE ENGINEERING EDUCATION IN UNIVERSITIES USING CUBESATS

Simei Ji, Beijing Institute of Technology, China

IAC-15.E1.3.4

INVESTIGATION OF USING UNIVERSITY MULTIDISCIPLINARY CAPSTONE DESIGN COURSES TO TEACH SPACE SYSTEMS ENGINEERING, FUNDAMENTAL SPACE SCIENCE, AND HUMAN **FACTORS**

Aaron Persad, Astronauts for Hire, Canada

IAC-15.E1.3.5

ASTRONOMY RESEARCH ACTIVITIES AND CHALLENGES IN NEPAL Suman Gautam, Pokhara Astronomical Society, Nepal

IAC-15.E1.3.6

PROJECT BASED AEROSPACE ENGINEERING GRADUATION AT UNDERGRADUATE LEVEL FOR SUCCESS IN ASTRONAUTICS Ugur Guven, , United States

IAC-15.E1.3.7

SPACE RESEARCH EDUCATION ACTIVITIES IN THE SPACE DOSIMETRY GROUP OF THE MTA CENTRE FOR ENERGY RESEARCH Balazs Zabori, MTA Centre for Energy Research, Hungary

IAC-15.E1.3.8

ELEONORA, A 3U CUBESAT FOR THE CANADIAN SATELLITE DESIGN CHALLENGE

Constance Fodé, Ecole Polytechnique de Montreal, Canada

BOLIVIA, FROM WHAT WE KNOW TO WHAT WE HAVE Rene Horacio Michel Valencia, Agencia Boliviana Espacial, Bolivia

IAC-15.E1.3.10

ENABLING NEAR-SPACE RESEARCH WITH THE 2015 BALLOONSAT WORKSHOP

Mark Becnel, RadioBro Corporation, United States

IAC-15.E1.3.11

THE EDUCATIONAL ASPECTS OF POLISH STUDENT SATELLITE PW-

Inna Uwarowa, Students Space Association, Poland

IAC-15.E1.3.12 (withdrawn)

DESIGN AND FABRICATION OF MOBILE ARM SUPPORT SYSTEM FOR INDIVIDUALS WITH CEREBRAL PALSY GUIDED BY THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA) SYSTEMS ENGINEERING HANDBOOK

Stephanie Shelton, University of Alabama in Huntsville, United

E1.4. In Orbit - Postgraduate Space Education

October 14 2015, 09:45 — Oranim 3-B

Co-Chair(s): Angela Diaz Phillips , , United States; Franco Bernelli-Zazzera, Politecnico di Milano, Italy; Rapporteur(s): Maria Victoria Alonsoperez , IEETECH, Uruguay;

IAC-15.E1.4.1

ROBOTIC PLANETARY EXPLORATION MISSION SIMULATION AT ISU

Ewan Reid, Mission Control Space Services Inc., Canada

MARS TREATYMAKING WORKSHOP RESULTS AND INSIGHTS FROM ISU SSP15

Jessica Reinert, National Aeronautics and Space Administration (NASA), United States

IAC-15.E1.4.3

WORKFORCE MANAGEMENT IN SMALL STUDENT RUN SATELLITE

Divya Dihuliya, Tallinn University of Technology , Estonia

IAC-15.E1.4.4

A NEW MUITI-DISCIPLINARY SPACE STUDIES PROGRAMME FOR AFRICA AT THE UNIVERSITY OF CAPE TOWN Peter Martinez, University of Cape Town, South Africa

SOUTHERN HEMISPHERE SPACE STUDIES PROGRAM - BUILDING CAPACITY IN THE GLOBAL SOUTH

Michael Davis, Space Industry Association of Australia, Australia

IAC-15.E1.4.6 (withdrawn)

DEVELOPMENT OF A SMALL-SCALE, LOW COST, TURN-KEY SOLUTION HELICON PLASMA SOURCE FOR THE ENHANCEMENT OF PLASMA PHYSICS RESEARCH IN DEVELOPING COUNTRIES Esteban Echeverria, Ad Astra Rocket Company, Costa Rica

DELICACY RISK MANAGEMENT OF SATELLITE PROJECT Lei Zhao, DFH Satellite CO.,LTD, China

IAC-15.E1.4.8 (withdrawn)

14 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

E1.5. Enabling the Future - Developing the **Space Workforce**

October 14 2015, 14:45 — Oranim 3-B

Co-Chair(s): Bettina Boehm , European Space Agency (ESA), France; Edward J. Hoffman , National Aeronautics and Space Administration (NASA), United States;

Rapporteur(s): Amalio Monzon, Airbus Group, United Kingdom;

TRAINING THE NEXT GENERATION OF SPACE DOCTORS Jeffrey Sutton, Center for Space Medicine, Baylor College of Medicine, United States

IAC-15.E1.5.2

AN ACADEMIC APPROACH TO DEVELOPING TOMORROW'S SPACE PROFESSIONAL

Michael McGrath, University of Colorado, United States

IAC-15.F1.5.3

ENCOURAGING LEGAL AWARENESS IN STEM GRADUATES: LESSONS LEARNED FROM SPACE GENERATION CONGRESS 2014 Adam Vigneron, Space Generation Advisory Council (SGAC), Canada

IAC-15.E1.5.4

INTERDISCIPLINARY SPACE BUSINESS, POLICY, GOVERNANCE, REGULATORY AND SUSTAINABILITY PRINCIPLE TRAINING AS A KEY DRIVER IN ADDRESSING CHALLENGES OF FUTURE SPACE WORKFORCE DEVELOPMENT

IAC-15.E1.5.5

STEM AND THE HUMANITIES: HOW THE BIFURCATION OF DISCIPLINES IS HARMING THE WORKFORCE

IAC-15.E1.5.6

HUMAN RESOURCE PROGRAMS FOR SPACE TECHNOLOGY AND APPLICATION IN VIETNAM

Anh Tuan Pham, Vietnam Academy of Science and Technology,

PROMOTE SPACE WORKFORCE DEVELOPMENT IN DEVELOPING SOCIETIES

Marlene MacLeish, , United States

IAC-15.E1.5.8

WORKFORCE IN AFRICA: THE CHALLENGES, OPPORTUNITIES AND APPROACHES

Lulekwa Makapela, , South Africa

IAC-15.E1.5.9

LATIN AMERICA: STORIES, CHALLENGES, OPPORTUNITIES AND FUTURE PERSPECTIVES

Adriana Chavarría Flores, Central American Association of Aeronautics and Space (ACAE), Costa Rica

IAC-15.E1.5.11

HOW DO YOUNG PROFESSIONALS ENTER AND GROW INTO THE SPACE SECTOR?

Ozan Kara, Koc University, Turkey

IAC-15.E1.5.12 (withdrawn)

SPACE STRATEGY FOR IRELAND

James Harpur, International Space University(ISU), Ireland

to the General Public

October 15 2015, 09:45 — Oranim 3-B

Co-Chair(s): Carol Christian , STScI, United States; Carolyn Knowles, National Aeronautics and Space Administration

Rapporteur(s): Frank Friedlaender, Lockheed Martin Space Systems Company, United States;

IAC-15.E1.6.1

PUBLIC OUTREACH ACTIVITIES OF AN ISS MISSION CONTROL CENTER DURING AN ASTRONAUT MISSION OF NATIONAL INTEREST Thomas Uhlig, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany

IAC-15.E1.6.2

ADVOCATING SCIENCE AND SPACE - THE STORY OF ISRAEL'S ONLY DEDICATED WEBSITE, OPERATEING FROM 1997 TO DATE Avi Blizovsky, , Israel

IAC-15.E1.6.3 (withdrawn)

CORPORATE SOCIAL RESPONSIBILITY - AN EFFECTIVE MEANS OF SPACE OUTREACH TO ALL

Michelle Mendes, World Space Week Association, United States

IAC-15.E1.6.4

THE EUROPEAN ROVER CHALLENGE AS A MOTIVATOR AND INTEGRATOR FOR YOUNG ROBOTICS TEAMS ON THEIR PATHS TO CONDUCT RESEARCH AND COMMERCIALIZE TECHNOLOGICAL SOLUTIONS.

Lukasz Wilczynski, European Space Foundation, Poland

IAC-15.E1.6.5

THE IMPORTANCE OF OFFERING SPACE EDUCATION IN AN INFORMAL MUSEUM ENVIRONMENT

Yariv Noyman, Israel National Museum of Science, Technology, and Space (Madatech), Israel

IAC-15.E1.6.6

"THE SPACESHIP" - LIVE AND INTERACTIVE SPACE NEWS IN HEBREW

Yoav Landsman, , Israel

IAC-15.E1.6.7

CELEBRATING THE WORLD SPACE WEEK, WAY TO REACH A **BROADER AUDIENCE**

Mario Arreola, Agencia Espacial Mexicana (AEM), Mexico

EFFECTIVE AND SUSTAINABLE OUTREACH OF SPACE SCIENCE AND TECHNOLOGY: MIDDLE EAST AND CENTRAL AMERICA CASES Burak Yaglioglu, Space Generation Advisory Council (SGAC), Turkey

INCREASING IMPACT OF ASTRONAUT VISITS TO SCHOOLS BY EARLY PREPARATION, EXEMPLIFIED BY "COMMUNITY DAYS" OF THE ASE PLANETARY CONGRESS INSPIRED BY SPACE

IAC-15.E1.6.10

SPACE AND THE SOCIETY, NIGERIA. OMONZOKPIA EJALE, NASRDA, Nigeria

Christer Fuglesang, KTH, Sweden

E1.7. New Worlds - Innovative Space **Education and Outreach**

October 15 2015, 14:45 — Oranim 3-B

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;

SPACE OUTREACH PROGRAMS USING A DIGITAL PLANETARIUM Ido Bareket, , Israel

IAC-15.E1.7.2

ROSETTA AND PHILAE: CAPTIVATING THE HEARTS AND MINDS OF A **GLOBAL AUDIENCE**

Sebastian Davis Marcu, Design & Data GmbH, Germany

FROM EARTH TO SPACE: INNOVATIONS LEADING TO NOVEL SPACE EDUCATION TECHNIQUES TO INSPIRE THE NEXT GENERATION Norah Patten. . Ireland

IAC-15.F1.7.4

ORGANIZATIONAL PRINCIPLES AND METHODOLOGY OF USING SPACE REMOTE SENSING DATA IN INNOVATIVE EDUCATION Vera Mayorova, Bauman Moscow State Technical University, Russian Federation

Kim Ellis, International Space University (ISU), Australia

Kathryn Robison, The University of Alabama, United States

IAC-15.E1.5.7 (withdrawn) CREATING A WAY FORWARD: INTERNATIONAL COOPERATION TO

THE NEED FOR THE DEVELOPMENT OF THE SKILLED SPACE

THE ROLE OF WOMEN IN SPACE SCIENCE AND TECHNOLOGY IN

MAIN CIRCUMSTANCES FOR THE NEXT GENERATION WORKFORCE:

E1.6. Calling Planet Earth - Space Outreach

(NASA), United States:

IAC-15.E1.7.5

SPACEIL EDUCATIONAL MISSION - INSPIRING, MODELING, CONNECTING

Ayelet Weizman, SpaceIL, Israel

IAC-15.E1.7.6 (withdrawn)

AN INTERDISCIPLINARY APPROACH FOR TEACHING AND LEARNING SPACE LAW

Ram S. Jakhu, McGill Univeristy, Canada

IAC-15.E1.7.7 (withdrawn)

OPERATION OF KIBO HIVISION EARTHVEW Susumu Yoshitomi, Japan Space Forum, Japan

IAC-15.E1.7.8

THE INTERNATIONAL SPACE CENTER IN ASHDOD (ISRAEL) Igal Patel, Cosmos Telescopes, Israel

IAC-15.E1.7.9

CURRENT RESULTS OF SPACE EXPERIMENT "SHADOW-BEACON" ON INTERNATIONAL SPACE STATION: SCIENTIFIC AND EDUCATIONAL

Valentin Strashinskiy, Central Research Institute for Machine Building (FGUP TSNIIMASH), Russian Federation

IAC-15.E1.7.10

SPACE CLEAN UP- AN OUTREACH PROGRAM FOR SPACE DEBRIS AWARENESS BY EUROAVIA TOULOUSE

Aishwarya Balaji, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, France

IAC-15.E1.7.11

VISION 2040: EVOLVING THE SUCCESSFUL INTERNATIONAL SPACE UNIVERSITY DECADES INTO THE FUTURE

Gary Martin, NASA Ames Research Center, United States

IAC-15.E1.7.12 (withdrawn)

EIGHT YEARS OF THE GERMAN-SWEDISH STUDENT PROGRAMME **REXUS/BEXUS - OVERVIEW AND OUTLOOK -**

Maria Roth, German Aerospace Center (DLR), Germany

THE 2015 BALLOONSAT WORKSHOP: OUTREACH THROUGH FLIGHT Nathanial Long, RadioBro Corporation, United States

E1.8. Open Space: Participatory Space **Education and Outreach**

October 16 2015, 09:45 — Oranim 3-B

Co-Chair(s): Jessica Culler, The Planetary Society, United States; Lisa La Bonte, United Nations Association-UAE / AYVF, United Arab Emirates:

Rapporteur(s): Carol Carnett , International Space University (ISU), United States;

IAC-15.E1.8.1

TOWARD A PEOPLE'S SPACE PROGRAM: A PARTICIPATORY TECHNOLOGY ASSESSMENT OF NASA'S ASTEROID INITIATIVE Amv Kaminski, NASA, United States

IAC-15.E1.8.2 (withdrawn)

AFRICA2MOON - HARNESSING THE INSPIRATIONAL POWER OF SPACE EXPLORATION FOR AFRICA'S DEVELOPMENT Peter Martinez, University of Cape Town, South Africa

IAC-15.E1.8.3

REMOTE SENSING, SPACE, AND GEO-PHYSICS IN SCIENTIFIC EDUCATION AND AS AN OUTREACH TRIGGER AT BGU Shimrit Maman, , Israel

IAC-15.E1.8.4

EDUCATION AND OUTREACH USING THE FALCON TELESCOPE

Kimberlee Gresham, Universities Space Research Association, United States

IAC-15.E1.8.5

CONCEPT FOR A WEB-PLATFORM "WAY TO SPACE: SHARE YOUR SUCCESS SPACE STORY. INSPIRE THE OTHERS" Olga S. Stelmakh, Parliament of Ukraine / DRSH Group Int., Ukraine

IAC-15.F1.8.6

OPENING SPACE WITH OPEN EDUCATION, OPEN SOURCE, AND

Jeanne Holm, National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States

IAC-15.E1.8.7

PROMOTION OF SATELLITE TECHNOLOGY AND AEROSPACE ENGINEERING THROUGH AN INTERNATIONALLY DESIGNED TABLETOP WIND TUNNEL

Setshedi Rhyme, Cape Peninsula University of Technology, South

IAC-15.E1.8.8

DEEP SPACE ROBOTIC IMAGING SYSTEMS [R.I.S] FOR STUDENT Ido Bareket, Israel

E1.9. Space Culture

October 16 2015, 13:30 — Oranim 3-B

Co-Chair(s): Jessica Culler, The Planetary Society, United States; Nelly Ben Hayoun, Royal Holloway, University of London, United Kingdom;

Rapporteur(s): R. Timmermans , , The Netherlands:

IAC-15.E1.9.1

PROJECT ADRIFT: THE PROCESS BEHIND AN EXPERIENTIAL ARTS PROJECT ABOUT SPACE JUNK.

Cath Le Couteur, , United Kingdom

IAC-15.E1.9.2

ROSETTA, PHILAE: WHY SUCH A MEDIA SUCCESS? Jacques Arnould, Centre National d'Etudes Spatiales (CNES), France

IAC-15.E1.9.3

SPACE PROGRAMME DEVELOPMENT IN ETHIOPIA: CHALLENGES AND ACCOMPLISHMENT

Beza Tesfaye, Space Generation Advisory Council (SGAC), Ethiopia

SCIENTIFIC DOMESTICITY - TRANSFORMING PROSAIC DOMESTICITY AND SPACE EDUCATION THROUGH THE WONDER OF SPECULATIVE SCIENCE.

Luke Lupton, , United Kingdom

IAC-15.E1.9.5

ESTABLISHING INDEPENDENT AEROSPACE RESEARCH PROGRAMS IN A DEVELOPING COUNTRY: DITSÖ PROGRAM AND THE COSTA RICA

Luis Monge, Central American Association of Aeronautics and Space (ACAE), Costa Rica

IAC-15.E1.9.6

ANALYSIS OF SPACE SOCIAL EVENT ATTENDANCE AND MAXIMIZING **EFFECTIVENESS**

Ryan L. Kobrick, Yuri's Night, United States

IAC-15.E1.9.7

THE MINOVITCH METHOD AIMS, IN CONVERSATION AND COLLABORATION WITH SCIENTISTS AND ENGINEERS. TO EXPLORE AND EXTEND THE WAYS IN WHICH WE ARE CAPABLE OF DEPARTING FROM EARTH, THE SOLAR SYSTEM AND BEYOND. Sascha Pohflepp, , Germany

IAC-15.E1.9.8

THE PUBLIC PICKED OPTION X, NOW WHAT? BOLSTERING NASA'S DECISION-MAKING PROCESSES BY APPROPRIATELY SOLICITING

Ademir Vrolijk, George Washington University, United States

IAC-15.E1.9.9 (withdrawn)

THE NEW FRONTIER OF EDUCATION AND PERSONAL WISDOM -HOW TO STUDY DIRECTLY WITH NASA LEGENDS, ROCK STARS AND AWARD WINNING ENTREPRENEURS

Dragos Bratasanu, Romanian Space Agency (ROSA), Romania

IAC-15.E1.9.10

DOWN TO EARTH: A FRAMEWORK FOR EMPHATHISING WITH SCIENTIFIC DATA AND INVISIBLE THREATS.

Pangiotis Tigas, , United Kingdom

IAC-15.E1.9.11

PUBLIC CHOICE AND ASTROBIOLOGY; A CASE STUDY: THE LIFE, THE SEA AND THE SPACE VIKING; A DIGITAL APP AND OPEN DEBATE TO BIOLOGICAL SELECTION AND SPATIAL COLONIZATION. Nelly Ben Hayoun, Royal Holloway, University of London, United Kinadom

E1.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Chris Welch , International Space University (ISU), France; Naomi Mathers , Advanced Instrumentation and Technology Centre (AITC), Australia;

IAC-15.E1.IP.1

THE YOUTH FOR SPACE CHALLENGE - ODYSSEUS II PROJECT Jaroslav Urbar, Czech Space Office, Czech Republic

STATUS QUO AND FUTURE PERSPECTIVES OF UNISEC-GLOBAL Rei Kawashima, UNISEC-Global, Japan

IAC-15.E1.IP.3

EU SPACE AWARENESS: INSPIRING EVERYONE WITH OUR WONDERFUL COSMOS

Pedro Russo, Leiden University, The Netherlands

IAC-15.E1.IP.4

SPACE IN MY SCHOOL

Ivo Jokin, Municipal educenter, Bulgaria

IAC-15.E1.IP.5

THE PROMOTION OF SPACE EDUCATION, RESEARCH AND TECHNOLOGY THROUGH VARIOUS GROUPS. Judith Ananzo Awasak, , Nigeria

IAC-15.E1.IP.6 (withdrawn)

THE MERCURY TRANSIT IN 2016

Joe Zender, European Space Research and Technology Centre, ESA-ESTEC. The Netherlands

IAC-15.E1.IP.7

HUMAN POWER AND SPACE INNOVATION BY DR ANA B. HELLER -VP IN EDUCATION AND OUTREACH AT SPACECIALIST Ana B. Heller, International Space Center, Israel, Israel

UTILIZING NON-TRADITIONAL METHODS TO STIMULATE THE SPACE INDUSTRY

Kendra Toole, Orbital Sciences Corporation, United States

IAC-15.E1.IP.9 (withdrawn)

OBSERVING THE INFLUENCE OF PROFESSIONAL DEVELOPMENT THROUGH THE UNIVERSITY OF ARIZONA ASTRONOMY CLUB Allison McGraw, University of Arizona, United States

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

October 13 2015, 09:45 — Kerem Carmit

Co-Chair(s): Benedicte Escudier . Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France; Rachid Amekrane, Airbus DS GmbH, Germany;

Rapporteur(s): Jeong-Won Lee , Korea Aerospace Research Institute (KARI), Korea, Republic of;

IAC-15.E2.1.1 (withdrawn)

HYPER VELOCITY IMPACT ANALYSIS OF CUBE SAT AND SUBSEQUENT ORBIT DETERMINATION

Japneet Singh, University of Petroleum and Energy Studies, India

IAC-15.E2.1.2

ANALYSIS OF INTEGRATED THERMAL SUBSYSTEMS FOR COMPOSITE PRIMARY SPACECRAFT STRUCTURES

Ajay Prasad Ragupathy, Delft University of Technology (TU Delft), The Netherlands

IAC-15.E2.1.3

FROM THE STAKEHOLDERS ANALYSIS TO THE MISSION CONCEPT SELECTION. AN AGILE SYSTEM ENGINEERING APPROACH FOR THE DESIGN OF A SUBORBITAL TOURISTIC OR SCIENTIFIC MISSION. Roberta Fusaro, Politecnico di Torino, Italy

IAC-15.E2.1.4

PRECISE DETERMINATION OF STATIC MARGINS FOR UNGUIDED SOUNDING ROCKETS

Dawid Cieśliński, Warsaw University of Technology and Institute of Aviation, Poland

COOPERATIVE CONTROL METHODOLOGY FOR THE SUCCESSFUL DEMONSTRATION OF THE FORMATION FLIGHT FOR IITHSSP Subhash Babu Kanagala, Indian Institute of Technology, India

A NOVEL DRAG COEFFICIENT MODELING FOR NANO SATELLITES Ori Levy, TECHNION - Israel Institute of Technology, Israel

IAC-15.E2.1.7 (withdrawn)

WAYS TO ENSURE THE SAFETY OF THE CREW OF THE SPACECRAFT AT THE LAUNCH SITE DURING THE LAUNCH Grigori Biziukin, Moscow, Russian Federation

IAC-15.E2.1.8

DEVELOPMENT OF A LOW-THRUST MULTI-OBJECTIVE TRAJECTORY OPTIMIZATION TOOL FOR CLEANSPACE ONE

Marco Gomez, Delft University of Technology (TU Delft), The

IAC-15.E2.1.9

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-15.E2.1.10 MARS IN INDIGENOUS AUSTRALIA Rose Tasker, , Australia









IAC-15.E2.1.11 (withdrawn)

COMBINED LAUNCH SYSTEMA MODIFICATION TO THE ROCKOON LAUNCHING CONCEPT FOR A NEW APPLICATION TO REDUCE THE LAUNCH COSTS FOR MICRO (CUBE) SATELLITES AND DEBRIS' HUNTING PROBES.

Hamed Ahmed, Cairo University, Egypt

E2.2. Student Conference – Part 2

October 14 2015, 09:45 — Kerem Carmit

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;

IAC-15.E2.2.1

QUANTIFYING MULTIDISCIPLINARY UNCERTAINTY IN SATELLITE SYSTEM DESIGN WITH ACTIVE SUBSPACES

Xingzhi Hu, National University of Defense Technology, China

IAC-15.E2.2.2

EXPERIMENTAL INVESTIGATION OF MULTIPLE CATALYST IGNITION OF HYDROGEN PEROXIDE HYBRID ROCKET MOTOR Sheng Zhao, Beihang University (BUAA), China

IAC-15.E2.2.3

INTEGRATION AND TESTING OF VACUUM ARC THRUSTERS FOR THE PICO SATELLITE UWE-4 $\,$

Alexander Kramer, University of Würzburg, Germany

IAC-15.E2.2.4

3-DOF GAS BEARING SIMULATOR FOR SMALL SATELLITE TESTS WITH AUTOMATED MASS DISPLACEMENT CONTROL TO ELIMINATE DISTURBANCE TORQUES

Alexander Schultze, Dresden University of Technology (DUT) / Technische Universität Dresden, Germany

IAC-15.E2.2.5

VISION-BASED AUTONOMOUS CHARACTERIZATION AND NAVIGATION FOR ASTEROIDS

Mehregan Dor, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, France

IAC-15.E2.2.6

MAGNETIC NAVIGATION FOR NON COLLABORATIVE SATELLITE RENDEZVOUS

Clément Masson, SUPAERO- Ecole Nationale Supérieure de l'Aéronautique et de l'Espace, France

IAC-15.E2.2.7

TRAJECTORY DESIGN FOR PLANETARY POLE-SITTER MISSIONS Mike Walmsley, University of Edinburgh, United Kingdom

IAC-15.E2.2.8

DEVELOPMENT OF A LOW-COST, LOW-MICRO-VIBRATION CMG FOR SMALL AGILE SATELLITE APPLICATIONS

Benjamin Kawak, Surrey Space Centre - University of Surrey, United Kinadom

E2.3-YPVF.4. Student Team Competition

October 13 2015, 14:45 — Kerem Carmit

Co-Chair(s): Carolyn Knowles , National Aeronautics and Space Administration (NASA), United States; Naomi Mathers, Advanced Instrumentation and Technology Centre (AITC), Australia:

IAC-15.E2.3-YPVF.4.1

"LOOK APP", A FREE IOS APPLICATION FOR SPACE EVENTS
Alice Pellegrino, , Italy

IAC-15.E2.3-YPVF.4.2

ORPHEUS - ORBITAL RECONNAISSANCE AND PHOBOS EXPLORATION BY HUMANS: A FEASIBILITY STUDY OF A SHORT STAY MISSION TO THE PROXIMITY OF MARS.

Crescenzio Ruben Xavier Amendola, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, France

IAC-15.E2.3-YPVF.4.3

TECHNICAL CHALLENGES OF THE DEBRIS DEORBIT DEMONSTRATOR AND ENVISAT OBSERVATION SATELLITE (D3EOS) MISSION Serina T. Latzko, University of Stuttgart, Germany

IAC-15.E2.3-YPVF.4.4

FIELD TESTING OF TRACKING SATELLITE SIGNALS USING LOW COST RADIO EQUIPMENT AS AN EVALUATION FOR THE DISTRIBUTED GROUND STATION NETWORK

Kristian Buhaug Solbakken, Norwegian University of Science and Technology, Norway

IAC-15.E2.3-YPVF.4.5 (withdrawn)

NOVEL IMPLICATIONS OF SMALL SATELLITE TECHNOLOGY - A COMPREHENSIVE STUDY.

Ajay Prasad Ragupathy, Delft University of Technology (TU Delft), The Netherlands

IAC-15.E2.3-YPVF.4.6

DESIGN OF A ROCKET-POWERED TRANSONIC RESEARCH VEHICLE Olga Motsyk, Delft University of Technology (TU Delft), The Netherlands

IAC-15.E2.3-YPVF.4.7

THE DESIGN AND ORGANIZATIONAL APPROACH TO A STUDENT-BUILT PARAFFIN-NITROUS OXIDE HYBRID SOUNDING ROCKET Jeremy Chan-Hao Wang, University of Toronto Aerospace Team (UTAT), Canada

IAC-15.E2.3-YPVF.4.8 (withdrawn)

TRAJECTORY DESIGN OF THE TIME CAPSULE TO MARS STUDENT MISSION

Jonathan Aziz, University of Colorado Boulder, United States

IAC-15.E2.3-YPVF.4.9

PREDICTION AND IMPROVEMENT IN FATIGUE LIFE OF LEO 1U PICO-SATELLITE USING FEA TOOL TO MAXIMIZE THE MISSION'S PREDICTED LIFE

Aniket Marne, College of Engineering, Pune, India

IAC-15.E2.3-YPVF.4.10

STRAIN-RIGIDISED WIDEBAND CONICAL HELIX ANTENNA FOR CUBESAT DEPLOYMENT

 ${\it Bryan Tester, University of Strathclyde, United Kingdom}$

IAC-15.E2.3-YPVF.4.11

FLEXIBLE ELECTROMAGNETIC LEASH DOCKING SYSTEM (FELDS) EXPERIMENT FROM DESIGN TO MICROGRAVITY TESTING Davide Petrillo, University of Padova - DII, Italy

E2.4. Educational Pico and Nano Satellites

October 16 2015, 09:45 — Kerem Carmit

Co-Chair(s): Lisa Antoniadis , Space Center EPFL, Switzerland; Xiaozhou Yu , Northwestern Polytechnical University, China; Rapporteur(s): Franco Bernelli-Zazzera , Politecnico di Milano, Italy;

IAC-15.E2.4.1 (withdrawn)

CUBESAT VERIFICATION CAMPAIGN: EXPERIENCE FROM THE «FLY YOUR SATELLITE!» PROGRAMME

Piero Galeone, European Space Agency (ESA), The Netherlands

IAC-15.E2.4.2

DEVELOPMENT AND APPLICATION TENDENCY OF CUBESATS IN THE NEAR FUTURE

Simei Ji, Beijing Institute of Technology, China

IAC-15.E2.4.3

PROJECT MANAGEMENT AND IMPLEMENTATION OF HARDWARE AND SOFTWARE INTERFACES BETWEEN SUBSYSTEMS OF SWAYAM STUDENT SATELLITE INITIATIVE

Nikhil Sambhus, College of Engineering Pune, India

IAC-15.E2.4.

CUBETH ADCS DESIGN, IMPLEMENTATION AND VALIDATION TESTS Stefano Rossi, Swiss Space Center, Switzerland

IAC-15.E2.4.5

CURRENT STATUS OF BMSTU-SAIL SPACE EXPERIMENT
Vera Mayorova, Bauman Moscow State Technical University,
Russian Federation

IAC-15.E2.4.6

DESIGN, DEVELOPMENT AND IN-ORBIT PERFORMANCE AND VALIDATION OF THE THERMAL SUBSYSTEM OF SRMSAT NANOSATELLITE

Vishal Latha Balakumar, Delft University of Technology (TU Delft), The Netherlands

IAC-15.E2.4.7

DESIGN AND DEVELOPMENT OF SEPARATION MECHANISM FOR TWIN NANO SATELLITE - STUDSAT-2

Sandesh Rathnavarma Hegde, Nitte Meenakshi Institute of Technology, India

IAC-15.E2.4.8

EMBEDDED RTOS IMPLEMENTATION FOR TWIN NANO- SATELLITE STUDSAT2

Kamal Lamichhane, Student, India

IAC-15.E2.4.9

A PRISTINE, VERSATILE AND COST-EFFECTIVE STANDARDIZED STRUCTURAL SYSTEM FOR CUBESATS Aniket Marne, College of Engineering, Pune, India

IAC-15.E2.4.10

DESIGN & IMPLEMENTATION OF A CUSTOM TRANSCEIVER TO ESTABLISH DIGITAL COMMUNICATION WITH SATELLITES IN HAM BAND

Pritesh Chhajed, College of Engineering Pune, India

E3. 28th 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

October 13 2015, 09:45 — 313

Co-Chair(s): Ciro Arevalo Yepes , , Colombia; Elisabeth Back Impallomeni , University of Padova, Italy;

Rapporteur(s): Laura Delgado Lopez , Secure World Foundation, United States;

IAC-15.E3.1

THE ESA CONVENTION: 50 YEARS OF SUCCESSFUL REGIONAL COOPERATION IN SPACE

Ulrike M. Bohlmann, ESA, France

IAC-15.E3.1.2

CENTRAL AMERICAN COOPERATION AND SPACE DEVELOPMENT: ACHIEVEMENTS AND CHALLENGES

Carlos Alvarado, Central American Association of Aeronautics and Space (ACAE), Costa Rica

IAC-15.E3.1.3

TACKLING EUROPEAN REGIONAL AND INTERREGIONAL NEEDS BY SPACE-BASED APPLICATIONS

Piero Messina, European Space Agency (ESA), France

IAC-15.E3.1.4

HOW AND WHAT COOPERATION COULD PREVENT CONFLICT IN SPACE

Lini ZHOU, National University of Defense Technology, China

IAC-15.E3.1.5

REGIONAL EFFORTS TO ADVANCE SPACE SUSTAINABILITY: SPOTLIGHT ON LATIN AMERICA

Laura Delgado Lopez, Secure World Foundation, United States

IAC-15.E3.1.6 (withdrawn)

PROMOTING INTERNATIONAL SPACE COOPERATION UNDER THE SILK ROAD ECONOMIC BELT SCHEME: A CONSTRAINT-CHOICE ANALYSIS

Peng Wang, Xi'an Jiaotong University School of Law, China

AC-15.E3.1.7

THE ROLE OF SPACE IN SUPPORT OF THE COMMON OBJECTIVES OF THE EUROPEAN NORDIC COUNTRIES

Christina Giannopapa, European Space Agency (ESA), France

IAC-15.E3.1.8

RUSSIA- BELARUS SPACE COOPERATION MECHANISMS AND COMMERCIAL SPIN-OFFS EXAMPLES Yuri Makarov, Roscosmos, Russian Federation

IAC-15.E3.1.9

POLICY ANALYSIS - SPACE PROGRAMMES OF JAPAN AND INDIA Yuichiro Nagai, University of Tokyo, Japan

IAC-15.E3.1.10

EU AND ESA: STILL A LONG WAY TO ESTABLISH ANY APPROPRIATE RELATIONS?

Maria-del-Carmen Muñoz-Rodriguez, University of Jaen, Spain

IAC-15.E3.1.11

GEOGRAPHICAL AREAS OF INTERNATIONAL COOPERATION IN HORIZON 2020, A PRELIMINARY ANALYSIS Silvia Ciccarelli, Italian Space Agency (ASI), Italy

IAC-15.E3.1.12 (withdrawn)

UKRAINE COOPERATION IN SPACE: REGIONAL PERSPECTIVES AND EXPECTATIONS

Yevgeniy Zakharchuk, Western Scientific Center of National Academy of Sciences of Ukraine, Ukraine

IAC-15.E3.1.13

COPERNICUS – EUROPE'S EYE ON EARTH

Agnieszka Lukaszczyk, European Commission, Belgium

E3.2.International Space Exploration Policies and Programmes

October 13 2015, 14:45 — 313

Co-Chair(s): Nicolas Peter , European Space Agency (ESA), France; Pascale Ehrenfreund , Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

IAC-15.E3.2.1

IAA COSMIC STUDY: DYNAMICS OF SPACE EXPLORATION, A FINAL LIPDATE

Serge Plattard, European Space Policy Institute (ESPI), Austria

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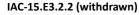
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INTERNATIONAL MECHANISMS FOR COOPERATION IN THE PEACEFUL EXPLORATION AND USE OF OUTER SPACE Amber Charlesworth, U.S. Department of State, United States

IAC-15.F3.2.3

Mukund Kadursrinivas Rao, National Institute of Advanced Studies (NIAS), India

MULTIDISCIPLINARY EVALUATION OF NEXT STEPS FOR HUMAN SPACE EXPLORATION: TECHNICAL AND STRATEGIC ANALYSIS OF **OPTIONS**

IAC-15.E3.2.5

THE UNITED NATIONS HUMAN SPACE TECHNOLOGY INITIATIVE 2014 - 2015

Takanori Miyoshi, United Nations Office for Outer Space Affairs,

IAC-15.E3.2.6

2035 THE POLITICS OF SPACE MINING - AN ACCOUNT OF A SIMULATION GAME

Deganit Paikowsky, Tel Aviv University, Israel

IAC-15.E3.2.7 (withdrawn)

NATURAL RESOURCES IN OUTER SPACE: POTENTIAL PROCESS OF **FORMULATION**

IAC-15.E3.2.8 (withdrawn)

THE DOMESTIC POLITICAL IMPACT OF CHINA'S SPACE PROGRAM Michael Sheehan, University of Wales, Swansea, United Kingdom

ISSUES OF RUSSIAN NATIONAL SPACE PROGRAM: AN OVERVIEW Dmitry Payson, United Rocket and Space Corporation, Russian Federation

STRATEGY IS BEING TRANSLATED INTO CONCRETE PROGRAMMES

AN INTEGRATED POLICY FRAMEWORK FOR A CAPABILITIES-DRIVEN APPROACH TO HUMAN SPACEFLIGHT

Nikolai Joseph, Space Policy Institute, George Washington University, United States

IAC-15.E3.2.12

PROBLEMS OF REGULATION OF PROPERTY RIGHTS IN SPACE, MOON AND OTHER CELESTIAL BODIES

IAC-15.E3.2.13 (withdrawn)

PREDICTING THE TRAJECTORIES OF CIVIL SPACE PROGRAMS Emily Sylak-Glassman, Science and Technology Policy Institute, **United States**

IAC-15.E3.2.14

PROGRAM: CONSIDERING LESSONS LEARNED FROM PAST PUBLIC TO PRIVATE FUNCTION TRANSFERS

Zachary Hester, Space Policy Institute, George Washington University, United States

E3.3. The space economy: what are the socio-economic impacts?

October 14 2015, 09:45 — 313

Co-Chair(s): Claire Jolly, Organisation for Economic Cooperation and Development (OECD), France; Joan Harvey, Canadian Space Agency, Canada:

Rapporteur(s): Luigi Scatteia, Strategy& - Formerly Booz and Company, The Netherlands;

IAC-15.E3.3.1 (withdrawn)

THE BRAZILIAN SPACE PROGRAM PUBLIC PROCUREMENT AS AN INSTRUMENT OF INDUSTRIAL DEVELOPMENT Monica Elizabeth Oliveira, Instituto Nacional de Pesauisas Espaciais

IAC-15.E3.3.2

A SOCIO-ECONOMIC IMPACT ASSESSMENT OF THE EUROPEAN LAUNCHER SECTOR

Luca del Monte, European Space Agency (ESA), France

IAC-15.E3.3.3

2025 ECONOMIC STATUS OF CHINA'S LAUNCH VEHICLE INDUSTRY: A SCENARIO ANALYSIS

Xiaoxiao Li, Central University of Finance and Economics, China

IAC-15.E3.3.4

PRIVATISING SPACE MISSIONS - THE CRITICAL ROUTE TO BOOST INDIAN SPACE ECONOMY

Mukund Kadursrinivas Rao, National Institute of Advanced Studies

IAC-15.F3.3.5

THE IMPACT OF JAXA'S PROCUREMENT SYSTEM TRANSITION ON

Takahiro Ueda, Japan Aerospace Exploration Agency (JAXA), Japan

ECONOMIC EVALUATION OF BENEFITS OF THE KNOWLEDGE DERIVING FROM SPACE EXPLORATION THE CASE OF HIGH HENERGY ASTROPHYSICS MISSIONS IN WHICH ITALY IS INVOLVED Simona di Ciaccio, Italian Space Agency (ASI), Italy

IAC-15.E3.3.7

HOW LARGE IS THE AFRICAN SPACE MARKET AND WHAT ARE **GROWTH OPPORTUNITIES?**

Carla Sharpe, SKA South Africa, South Africa

SATELLITES FOR SOCIETY: REPORTING ON THE OPERATIONAL USES OF SATELLITE-BASED SERVICES AMONG PUBLIC ADMINISTRATIONS IN EUROPE

Grazia Maria Fiore, EURISY, France

IAC-15.E3.3.9

FROM ASI DISTRETTO VIRTUALE PORTAL: 20 COMMENTED CASES OF "SPINOFFS" FROM SPACE TO NON SPACE BUSINESS LINES Giacomo Primo Sciortino, Italian Space Agency (ASI), Italy

IAC-15.E3.3.10 (withdrawn)

STUDY TO ASSESS THE SOCIAL AND ECONOMIC BENEFITS OF SMALL SATELLITES TO THE SOCIETY

Ajay Prasad Ragupathy, Delft University of Technology (TU Delft), The Netherlands

E3.4. Assuring a Safe, Secure and Sustainable **Space Environment for Space Activities**

October 14 2015. 14:45 - 313

IAC-15.E3.4.1

STATUS UPDATE ON THE DEVELOPMENT OF UN COPUOS **GUIDELINES FOR SPACE SUSTAINABILITY** Peter Martinez, University of Cape Town, South Africa

IAC-15.F3.4.2

SELF-DEFENSE IN SPACE: PERSPECTIVES, ANALOGIES, AND

Victoria Samson, Secure World Foundation, United States

MULTI LATERAL INITIATIVES FOR LONG TERM SUSTAINABILITY OF OUTER SPACE ACTIVITIES

V. Gopala Krishnan, Indian Space Research Organization (ISRO),

IAC-15.E3.4.4

BEYOND THE SPACE COMMONS: AN ALTERNATIVE FRAMEWORK FOR ASSESSING SPACE DEBRIS GOVERNANCE AND SUSTAINABILITY

Aurélie Trur, Graduate Institute for Policy Studies GRIPS Tokyo,

IAC-15.E3.4.5

ACTIVE DEBRIS REMOVAL: LEGAL OBSTACLES AND POLICY **ALTERNATIVES**

Jinyuan SU, Xi'an Jiaotong University School of Law, China

IAC-15.E3.4.6

INTERNATIONAL SPACECRAFT DESIGN POLICIES FOR ORBITAL SERVICING

Aureliano Rivolta, Politecnico di Milano, Italy

IAC-15.E3.4.7 (withdrawn)

KNOWLEDGE BASE FOR INFORMED SPACE SECURITY POLICY Anna Jaikaran, Project Ploughshares, Canada

IAC-15.E3.4.8 (withdrawn)

DEVELOPING CRITERIA FOR SUSTAINABILITY IN THE ORBITAL ENVIRONMENT

Nathanael McIntyre, Arizona State University, United States

IAC-15.E3.4.9

THE ACADEMIC DEVELOPMENT OF SPACE ACTIVITIES RESEARCH IN

Hongbo Li, China Academy of Launch Vehicle Technology, China

IAC-15.E3.4.10 (withdrawn)

CORPORATE SOCIAL RESPONSIBILITY - A STRATEGY FOR SUSTAINABLE COMMERCIAL SPACE

Michelle Mendes, World Space Week Association, United States

IAC-15.E3.4.11

LOOKING AT THE GOVERNANCE SCHEME FOR THE FUTURE GLOBAL NAVIGATION SATELLITE SYSTEMS (GNSS)

Serge Plattard, European Space Policy Institute (ESPI), Austria

E3.5-E7.6. 30th IAA/IISL Scientific-Legal **Roundtable: Universities as Actors in Space**

October 15 2015, 09:45 — 313

Co-Chair(s): Kai-Uwe Schrogl, European Space Agency (ESA), France; Willem (Herman) Steyn, Stellenbosch University, South

Rapporteur(s): Marc Haese, DLR, German Aerospace Center, Germany; Nicola Rohner-Willsch, Deutsches Zentrum für Luftund Raumfahrt e.V. (DLR), Germany;

IAC-15.E3.5-E7.6.1

UNIVERSITIES AS A STIMULUS FOR CHANGE IN THE ECONOMICS OF

Sir Martin Sweeting, Surrey Space Centre, University of Surrey, United Kingdom

IAC-15.E3.5-E7.6.2

A UNIVERSITY IN SPACE - A CASE STUDY Klaus Schilling, University Wuerzburg, Germany

IAC-15.E3.5-E7.6.3

THE ROLE OF UNIVERSITIES IN THE DEVELOPMENT OF SPACE CAPACITIES IN EMERGENT COUNTRIES: THE COLOMBIAN CASE Camilo Guzman Gomez, UNIVERSIDAD SERGIO ARBOLEDA,

IAC-15.E3.5-E7.6.4

LESSONS LEARNED FROM A SATELLITE PROJECT - OBSTACLES AND ACCEL FRATORS

Matteo Emanuelli, Institut Supérieur des Sciences Et Techniques (INSSET), France

IAC-15.E3.5-E7.6.5

FLIGHT OPPORTUNITIES FOR UNIVERSITY PAYLOADS Abe Bonnema, ISIS - Innovative Solutions In Space B.V., The Netherlands

IAC-15.E3.5-E7.6.6 (withdrawn)

WHERE NO HUMAN HAS GONE BEFORE: THE ROLE OF UNIVERSITIES IN INCREASING PARTICIPATION BY WOMEN IN SPACE-RELATED CAREERS AND ACTIVITIES.

Juliana Scavuzzi, Brazilian Association of Air and Space Law, Canada

IAC-15.E3.5-E7.6.7

REGULATORY ISSUES FOR UNIVERSITIES AS ACTORS IN SPACE Otto Gudiño Ramirez de Arellano, Ramirez de Arellano y Abogados, S.C. Law Firm, Mexico

IAC-15.E3.5-E7.6.8

FREQUENCY MANAGEMENT REQUIREMENTS FOR UNIVERSITIES Yvon HENRI, ITU, Switzerland

E3.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Bernhard Schmidt-Tedd . Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Jacques Masson, European Space Agency (ESA), The Netherlands;

IAC-15.E3.IP.1

INTRODUCTION OF PROPERTY RIGHTS IN OUTER SPACE: THE IMPERATIVENESS OF NEW TAXES? Khafavat Olatinwo. . Niaeria

IAC-15.E3.IP.2

ASTEROID MINING POLICY: FUNDAMENTAL GOALS AND POLICY CHOICES

Alanna Krolikowski, Harvard University, United States

IAC-15.E3.IP.3 (withdrawn)

IAC-15.E3.IP.4 (withdrawn)

NUCLEAR POWERED SPACECRAFT SAFETY Joao Lousada, OHB-System AG, Germany

THE IMPORTANCE OF ASSESSING THE WIDER ECONOMIC BENEFITS OF SPACE ACTIVITIES IN EUROPE, IN THE UPSTREAM AND IN

SERVICES Luigi Scatteia, Strategy& - Formerly Booz and Company, The Netherlands

IAC-15.E3.IP.5

STUDY ON THE CURRENT STATUS OF THE SPACE SECTOR IN KOREA Jung Ho Park, Korea Aerospace Research Institute (KARI), Korea,

IAC-15.E3.IP.6

MODELLING SUSTAINABLE PUBLIC INVESTMENT INTO SPACE SCIENCES AND DEVELOPING THE SPACE READINESS INDEX Carla Sharpe, SKA South Africa, South Africa

INDIAN SPACE POLICY - "NATIONAL" ECO-SYSTEM FOR FUTURE

IAC-15.E3.2.4

Mariel Borowitz, Georgia Institute of Technology, United States

THE INTERNATIONAL REGIME GOVERNING EXPLOITATION OF

Yangzi Tao, Beijing Institute of Technology, China

STRUCTURAL REFORM AND INDUSTRIAL POLICY DEVELOPMENT

FROM STRATEGY TO PROGRAMMES: HOW ESA'S EXPLORATION Valérie Zinck-Dasmien, ESA, The Netherlands

Milan Mijovic, Space Generation Advisory Council (SGAC), Serbia

KEY POLICIES TO SUCCESS OF NASA'S COMMERCIAL CREW

Co-Chair(s): Chen Shenyan , Beihang University, China; Ray Williamson, Secure World Foundation, United States; Rapporteur(s): Charlotte Mathieu, European Space Agency (ESA), France:

IAC-15.E3.IP.7



AND USA: ALLIES OR COMPETITORS? Veronica La Regina, Italian Space Agency (ASI), Italy

IAC-15.E3.IP.12

ANALYSIS OF THE COMMERCIAL SATELLITE INDUSTRY

ACTUALIZING SCIENTIFIC-TECHNICAL COOPERATION OF SPACE INDUSTRY, NATIONAL ACADEMY OF SCIENCES OF UKRAINE AND INTERNATIONAL ACADEMY OF ASTRONAUTICS FOR IMPLEMENTING PROSPECTIVE INTERNATIONAL SPACE PROJECTS AND SOLVING GLOBAL SPACE PROBLEMS

A COMPARATIVE OVERVIEW OF SPACE AFFAIRS FROM EU, JAPAN

A.V. Novikov, Yuzhnoye State Design Office, Ukraine

IAC-15.E3.IP.13 (withdrawn)

THE EVOLUTION OF SPACE POLICY OF INDONESIA. AND ITS IMPLEMENTATION ON INTERNATIONAL COOPERATION Happy Rumiris Simanungkalit, LAPAN, National Institute of Aeronautics and Space, Indonesia, Indonesia

AFRICAN REGIONAL COOPERATION: A RISK ANALYSIS Leehandi De Witt, Space Commercial Services, South Africa

IAC-15.E3.IP.15 (withdrawn)

SPACE COOPERATION IN EUROPE: LOOKING UP, LOOKING AHEAD! Vera Pinto Gomes, , Belgium

IAC-15.E3.IP.16

HOW CURRENT POLICY AFFECTS FUTURE COLONIZATION EFFORTS Zachary Riffle, , United States

IAC-15.E3.IP.17

SPACE PROGRAM OF TURKEY AND INTERNATIONAL COOPERATION OPPORTUNITIES FOR DISASTER MANAGEMENT AND FOR SPACE **EXPLORATION**

Ugur Guven, , United States

CROWFUNDED SPACE EXPLORATION MISSIONS Abigail Calzada Diaz, Birkbeck College London, United Kingdom

E4. 49th 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; Tal Inbar , The Fisher Institute for Air and Space Strategic Studies, Israel;

E4.1. Memoirs and Organisational Histories

October 12 2015, 15:15 — Dulzin Big A

Co-Chair(s): Marsha Freeman, 21st Century Science & Technology, United States; Niklas Reinke, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Rapporteur(s): Hervé Moulin , Institut Français d'Histoire de l'Espace, France; Theo Pirard, Space Information Center,

IAC-15.E4.1.1 (withdrawn)

THE EVOLVING ROLE OF THE SCIENCE COMMUNITY IN NASA'S SPACE SCIENCE PROGRAM Jason Callahan, Georgia Institute of Technology, United States

IAC-15.F4.1.2

THE MISHIN DIARIES, A NEW SIGNIFICANT PRIMARY SOURCE OF SPACE HISTORY INFORMATION Dmitry Payson, , Russian Federation

SPACE IN FRENCH GUIANA, 50 YEARS OF HISTORY Antoine ARVEILLER, ESTACA, French Guiana

COSMONAUT PHAM THUAN AND VIETNAM'S ROAD TO SPACE Philippe Cosyn, , Belgium

IAC-15.E4.1.5

REMINISCENCES ON PARTICIPATION IN THE JCIC SESSIONS ON THE PROVISION OF CONVERTED LAUNCH VEHICLE COMMERCIALISATION Oleg A. Sokolov, The British Interplanetary Society, United Kingdom

IAC-15.E4.1.6 (withdrawn)

INTERNATIONAL INTERESTS AND TOP-DOWN APPROACHES TO TRANSPARENCY & CONFIDENCE-BUILDING MEASURES IN OUTER SPACE WITHIN THE FRAMEWORK OF UNITED NATIONS Mia Brown, Space Policy Institute, George Washington University, United States

E4.2. Scientific and Technical Histories

October 15 2015, 09:45 — Dulzin Biq A

Co-Chair(s): Christophe Rothmund, Airbus Safran Launchers, France; Kerrie Dougherty, Australia;

Rapporteur(s): Paivi Jukola, Aalto University, Finland; William Jones, United States;

IAC-15.E4.2.1

50TH ANNIVERSARY OF THE 1ST SPACE WALK BY SOVIET COSMONAUT ALEXEI LEONOV

Olga Zhdanovich, European Space Agency (ESA), The Netherlands

IAC-15.F4.2.2

THE INVENTION AND DIFFUSION OF NEUTRAL BUOYANCY

Michael Neufeld, Smithsonian Institution, United States

PROJECT GEMINI - AN ENGINEERING AND MANAGERIAL ASSESSMENT: WHAT YESTERDAY TEACHES ABOUT TOMORROW Benjamin Davis, Dulles University, United States

ENGINES FOR FIRST SPACE LAUNCH-VEHICLE Vladimir Sudakov, JSC NPO Energomash, Russian Federation

IAC-15.E4.2.5

BMW ROCKET ENGINES

Christophe Rothmund, Airbus Safran Launchers, France

IAC-15.E4.2.6

NEW OBSERVATIONS ON REACTION-PROPELLED MANNED AIRCRAFT CONCEPTS. CA. 1670-1900: PART II (1870-1900) Frank H. Winter, National Air and Space Museum, United States

IAC-15.E4.2.7

SOUTH AMERICAN SPACE ERA Bruno Sarli, The Graduate University for Advanced Studies (Sokendai), Japan

IAC-15.E4.2.8

UPS AND DOWNS OF SPACE TOURISM DEVELOPMENT IN 60 YEARS FROM MOON REGISTER TO SPACESHIPTWO CRASH Eva Yi-Wei Chang, University of Science & Technology, Taiwan,

E4.3. History of Israeli contribution to astronautics

October 15 2015, 14:45 — Dulzin Big A

Co-Chair(s): Otfrid Liepack , National Aeronautics and Space Administration (NASA)/Jet Propulsion Laboratory, United States; Tal Inbar, The Fisher Institute for Air and Space Strategic Studies, Israel.

Rapporteur(s): Charles Lundquist , University of Alabama in Huntsville, United States; John Harlow, Aerojet Rocketdyne, United Kingdom;

IAC-15.E4.3.1

THE ORIGINS OF HUMAN SPACEFLIGHT IN ISRAEL: THE ACCOUNT OF PROPHET FILIAH

Suki Dauda Sule, National Space Research and Development Agency (NASRDA), Nigeria

IAC-15.E4.3.2

FROM BEN-GURION TO BEGIN- PERSPECTIVES OF THE FINAL

Deganit Paikowsky, Tel Aviv University, Israel

IAC-15.E4.3.3 (withdrawn)

DR. DAVID V. ZAITSCHEK (1904-1990): AN ISRAELI VISIONARY ASTRONOMICAL OUTREACH PIONEER

Oded Avraham, Israeli Astronomical Association, United States

STUDENT ROCKETS OF THE TECHNION IN THE 1960'S AND 1970'S Tal Inbar, The Fisher Institute for Air and Space Strategic Studies,

IAC-15.E4.3.5

FROM MONOBLOC TO JERICHO, HOW FRANCE PUT ISRAEL INTO

Philippe Juna, Association Aéronautique & Astronautique de France (3AF), France

IAC-15.E4.3.6

YONATAN MASS, THE FATHER OF ISRAELI REMOTE SENSING SATELLITES

Tal Inbar, The Fisher Institute for Air and Space Strategic Studies, Israel

IAC-15.E4.3.7

YITZHAK MAYO - ISRAELI ASTRONAUT CANDIDATE Hannes Mayer, Karl Franzens Universität Graz, Austria

IAC-15.F4.3.8

ABY HAR-EVEN, A "ONE MAN SPACE AGENCY" FOR THE STATE OF

Tal Inbar, The Fisher Institute for Air and Space Strategic Studies,

E5. 26th 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 planning

October 14 2015, 09:45 — Oranim 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-15.E5.1.1

FIRST MARS HABITATS: REVIEW OF ARCHITECTURAL CONCEPTS Marc M. Cohen, Astrotecture™, United States

IAC-15.F5.1.2

FABRICATION AND SELF-ASSEMBLY PROCESSES ON THE MARS Konstantinos-Alketas Oungrinis, Technical University of Crete,

IAC-15.E5.1.3

Greece

WHAT WE DON'T KNOW CAN KILL US Marc M. Cohen, Astrotecture™, United States

IAC-15.E5.1.4

PERFORMANCE-BASED FRAMEWORK FOR THE DESIGN OF LUNAR **STRUCTURES**

Haym Benaroya, Rutgers University, United States

IAC-15.E5.1.5

ENHANCED MONTE CARLO SIMULATIONS OF THE SPACE RADIATION ENVIRONMENT USING GEANT4 IN A HIGH PERFORMANCE COMPUTING ENVIRONMENT FOR THE INTERNATIONAL SPACE STATION AND APOLLO MISSIONS

Matthew Lund, University of Utah, United States

IAC-15.E5.1.6

USING A HUMAN-CENTRIC DESIGN PROCESS FOR THE IMPLEMENTATION OF ADVANCED COMPUTER-BASED TOOLS IN SPACE PROGRAMS

Jackelynne Silva-Martinez, Georgia Institute of Technology, Embry-Riddle Aeronautical University, United States

IAC-15.E5.1.7 (withdrawn)

AN ENVIRONMENT OF MULTI-SENSORIAL AND TRANSPARENT TECHNOLOGIES ENABLING POSITIVE AND CREATIVE INTERACTIONS IN DEEP SPACE MISSIONS

Ludwig Pasenau, LLA-CREATIS laboratory / CRISO research platform,

E5.2. Models for Successfully Applying Space **Technology Beyond Its Original Intent**

October 14 2015, 14:45 — Oranim 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 States; Rapporteur(s): Anna Barbara Imhof, Liquifer Systems Group (LSG), Austria:





IAC-15.E5.2.1

SOCIETAL TREASURES STEMMING FROM SPACE PROGRAMS AUTHOR: MS. NONA MINNIFIELD CHEEKS NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA) GODDARD SPACE FLIGHT CENTER UNITED STATES NONA.K.CHEEKS@NASA.GOV Nona Minnifield Cheeks, National Aeronautics and Space Administration (NASA)/Goddard Space Flight Center, United States

EXOHAB1 DEVELOPMENT: SPIN-IN/OUT FROM SPACE HABITAT TO DISASTER MANAGEMENT FACILITY

Irene Lia Schlacht, Politecnico di Milano, Italy

IAC-15.E5.2.3

BUSINESS INCUBATION FOR FOSTERING INNOVATION IN SPACE COMMERCE: AN INDIAN PERSPECTIVE Prateep Basu, , India

IAC-15.E5.2.4 (withdrawn)

PUBLIC PRIVATE PARTNERSHIPS: LESSONS FROM EUROPE AND AN ASSESSMENT OF APPLICABILITY IN AN EMERGING SPACE MARKET. chiara maria Cocchiara, Eumetsat, Germany

IAC-15.E5.2.6

FROM SPACE TO UNDERWATER: AIRBUS D&S AND DEEP SEA ROBOTIC EXPLORATION

Detlef Wilde, Airbus DS GmbH, Germany

IAC-15.E5.2.7

SPACE TECHNOLOGIES IMPACT ON SOCIETY - THE PEACE FACTOR Meir Moalem, , Israel

IAC-15.E5.2.8

STUDY ON THE RELATIONSHIP BETWEEN AEROSPACE SCI-TECH JOURNALS AND THE INNOVATIVE VALUE PROPOSITION FOR AEROSPACE INDUSTRY USING BIG DATA ANALYTICS Yi Lu, Shanghai Academy of Spaceflight Technology, China

E5.4. Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach

October 15 2015, 14:45 — Oranim 2

Co-Chair(s): Daniela de Paulis, Rietveld Academy/ASCA -University of Amsterdam, The Netherlands; Richard Clar, Art Technologies, United States;

Rapporteur(s): Nahum Romero , Equilibrio. Medio ambiente y responsabilidad social, United Kingdom;

IAC-15.E5.4.1

HOW TO DESIGN AND FLY YOUR HUMANLY SPACE OBJECT? Tibor Balint, Royal College of Art, United Kingdom

IAC-15.E5.4.2

ULISES 1, AN ART MISSION TO SPACE Juan Díaz Infante, , Mexico

IAC-15.E5.4.3

THE VISIT - A MULTIDISCIPLINARY FILM-BASED ENQUIRY INTO HUMANITY'S FIRST ENCOUNTER WITH INTELLIGENT LIFE FROM

Chris Welch, International Space University (ISU), France

THE MATTERS OF GRAVITY (LA GRAVEDAD DE LOS ASUNTOS) Nahum Mantra, Laboratorio Arte Alameda. Mexico

IAC-15.E5.4.5

ASTROARTS: THE CULTURAL PROGRAMME OF ASTRONOMERS WITHOUT BORDERS

Daniela de Paulis, University of Amsterdam, Italy

IAC-15.E5.4.6

COSMOS AND ART IN OUR LIVES: DEVELOPING INTO A LOCAL

Yuri Tanaka, Tokyo National University of Fine Arts and Music, Japan

IAC-15.E5.4.7

'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, , Ireland

IAC-15.E5.4.8

'LES TEMPS FANTÔMES' - TIME CAPSULE PROJECT FOR ASTRONAUTS Ludwig Pasenau, LLA-CREATIS laboratory / CRISO research platform,

IAC-15.E5.4.9

ECOLOGIES OF SPACE Ralo Mayer, , Austria

IAC-15.E5.4.10

BE HOLDING EARTH - CONCEPT FOR FOSTERING GLOBAL PLANETARY AWARENESS Tobias Kestel, Austria

E5.5. Space Assets and Disaster Management

October 16 2015, 09:45 — Oranim 2

Co-Chair(s): Geoffrey Languedoc, Canadian Aeronautics & Space Institute (CASI), Canada; Peter Swan , SouthWest Analytic Network, United States;

Rapporteur(s): Natasha Jackson, Faculty of Engineering, Carleton University, Canada:

IAC-15.E5.5.1

ENHANCING VALUE OF SPACE-BORNE SYSTEMS FOR DISASTER RISK REDUCTION RESEARCH AND DISASTER RISK MANAGEMENT Maudood Khan, , United States

SPACE SHEPHERD: USING SPACE ASSETS TO MONITOR, TRACK, AND SEARCH-AND-RESCUE ILLEGAL IMMIGRANTS IN THE MEDITERRANEAN SEA

Francesco Topputo, Politecnico di Milano, Italy

IAC-15.E5.5.3

REMOTE SENSING AND MARITIME POLLUTION: INTEGRATED PARTNERSHIP OF OIL COMPANIES AND LOCAL AUTHORITIES.THE CASE STUDY OF NIGER DELTA.

Carlo Golda, University of Genova, Italy

IAC-15.E5.5.4 (withdrawn)

INFORMATION DISSEMINATION IN SUPPORT OF DISASTERS, FOLLOW UP OF THE CRAZY IDEA

Ghislain RUY, 1RG, Luxembura

IAC-15.E5.5.5

"GREEN" SPACE TECHNOLOGY - NAVIGATING THE VALUE CHAIN TO ENHANCED ENVIRONMENTAL QUALITY AND SUSTAINABLE LIVING AGAINST EXTREME CLIMATE RISK Lori Solberg, , Israel

IAC-15.E5.5.6

YOUNG PROFESSIONALS AND STUDENTS INVOLVEMENT IN DISASTER RISK REDUCTION USING SPACE TECHNOLOGY APPROACHES Meshack Ndiritu, Space Generation Advisory Council (SGAC),

IAC-15.E5.5.7

SAME PAGE PREPARING TO DEFEND OUR HOME - EARTH HAREL BEN-AMI ISA DELEGATE FOR SMPAG SUBCOMMITTEE, COPUOS,

Harel Ben-Ami, Israel Space Agency, Israel

IAC-15.E5.5.8

SPACE ASSETS FOR MITIGATING AND MANAGING IMPACT DISASTERS

James Burke, The Planetary Society, United States

IAC-15.E5.5.9

SPACE-BASED TECHNOLOGY APPLICATIONS FOR DISASTER MANAGEMENT IN ASIAN DEVELOPMENT BANK PROJECTS Yusuke Muraki, Japan Aerospace Exploration Agency (JAXA), Japan

IAC-15.E5.5.10

SATELLITE IMAGES AND THEIR IMPACT ON THE DEVELOPMENT OF

Jillianne Pierce, Space Foundation, United States

IAC-15.E5.5.11

THE PARADIGM SHIFT FROM SATELLITE TO ALTERNATIVE METHODS OF EARTH OBSERVATION DURING EMERGENCY DISASTER MANAGEMENT

Sinead O'Sullivan, Space Generation Advisory Council (SGAC), United States

E5.6. Space Societies, Professional Associations and Museums

October 15 2015, 09:45 — Oranim 2

Co-Chair(s): Scott Hatton, The British Interplanetary Society, United Kingdom;

IAC-15.E5.6.1

SPACE EXHIBITION AT A GRAND SCALE - A SPACE EDUCATION EXTRAVAGANZA: LESSONS FROM THE "SPACE MANIA" EXHIBITION Tal Inbar, The Fisher Institute for Air and Space Strategic Studies,

IAC-15.E5.6.2 (withdrawn)

UNIFYING MEASURES IN A DIVERSE WORLD Michelle Mendes, World Space Week Association, United States

INITIATIVES FROM SPACE MUSEUMS AND SCIENCE CENTERS HELPING TACKLE CURRENT CHALLENGES OF THE SPACE SECTOR. Ines Prieto, SEMECCEL Cité de l'Espace, France

IAC-15.E5.6.4

SPACE GENERATION: ENGAGING THE NEXT GENERATION IN THE ASIA-PACIFIC AND SOUTH AMERICAN REGIONS Bruno Sarli, The Graduate University for Advanced Studies (Sokendai), Japan

IAC-15.E5.6.5

SPACE EXPO, EUROPE'S FIRST PERMANENT SPACE EXPOSITION Rob van den Berg, , The Netherlands

E5.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Geoffrey Languedoc , Canadian Aeronautics & Space Institute (CASI), Canada; Olga Bannova, University of Houston, United States:

IAC-15.E5.IP.1

THE CONVERGENCE AND INDUSTRY-ACADEMY-INSTITUTE COOPERATION OF SPACE TECHNOLOGY IN KOREA Jong-Bum Kim, Korea Aerospace Research Institute (KARI), Korea, Republic of

8 NEW MAP INVENTIONS SHOW THAT MAPS CAN STILL BE USED TO PRESENT NEW IDEAS LIKE BEYOND UNIVERSE, BETWEEN UNIVERSE, NEW ATOMS, NEW CHEMICAL ELEMENTS, ARGUABLE PRESIDENTS, AND IMAGINARY ANIMALS

James Struck, NASA, United States

ΙΔC-15 F5 IP 3

BASIC ELEMENTS IN THE MULTI VERSE Velliangiri Gounder, Private, India

IAC-15.E5.IP.4 (withdrawn)

THE FINAL FRONTIER: ALL THE WORLDS A STAGE John Duggan, , United States

IAC-15.E5.IP.5

THE GEOGRAPHIC INFORMATION SYSTEM AS A TOOL FOR DECISION MAKING IN THE PLANNING AND DEVELOPMENT AND SUPPORT TO LOCAL DISASTER PREVENTION

Javier Alfredo Valdiviezo Ortiz, Universidad del Azuay, Ecuador

IAC-15.E5.IP.6

EXPLORE AND SPREAD THE RECIPE FOR THE SUCCESS OF CHINA'S AEROSPACE INDUSTRY

Huifeng Xue, China Academy of Aerospace Systems Science and

IAC-15.E5.IP.7

THE POSITION OF SPACE WEATHER IN AFRICA-EDUCATION AND

ABUBAKAR BABAGANA, SEABED INTERNATIONAL, Nigeria

E6. BUSINESS INNOVATION SYMPOSIUM

Coordinator(s): Ken Davidian, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States;

E6.1. Case Studies and Prizes in Commercial

October 13 2015, 09:45 — Oranim 4

Co-Chair(s): Aude de Clercq, European Space Agency (ESA), The

IAC-15.E6.1.1

EFFECT OF SPACE LAUNCH DELAYS AND FAILURES ON STOCK MARKET RETURNS OF COMMERCIAL PAYLOAD OPERATORS Daniil Abramov, University of Michigan, United States

IAC-15.E6.1.2

INDICATIONS OF GROWTH IN SPACE BUSINESS AND INVESTMENT

Misuzu Onuki, Space Frontier Foundation, Japan

IAC-15.E6.1.3

PAPER TITLE: EXAMINING ECONOMIC MODELS FOR REMOTE SENSING SATELLITE DATA

Prof. Mariel Borowitz, Georgia Institute of Technology, United States

IAC-15.E6.1.4

THE FUTURE OF SPACE TECHNOLOGY BUSINESSES FROM A SILICON VALLEY PERSPECTIVE Ms. Nicole Jordan, United States

IAC-15.E6.1.5

OUTER FRONTIERS OF BANKING: FINANCING SPACE EXPLORERS, AND SAFEGUARDING TERRESTRIAL FINANCE Bruce Cahan, Stanford University, United States

IAC-15.E6.1.6

START-UP GRANTS FOR SMALL SCALE TECHNOLOGY COMPANIES IN **DEVELOPING COUNTRIES**

Michael Kio, Cranfield University, United Kingdom





IAC-15.E6.1.7

STARTUPWEEKEND SPACE: KICKSTARTING NEW SPACE VENTURES IN 60 HOURS

Magni Johannsson, German Aerospace Center (DLR), Germany

IAC-15.E6.1.8

START-UP SPACE: INTERIM RESULTS Carissa Christensen, The Tauri Group, United States

IAC-15.E6.1.9

DUAL-USE TECHNOLOGIES OR "REVERSE SPIN-OFFS" AS A FRAMEWORK FOR SPACE DEVELOPMENT Prof. Haym Benaroya, Rutgers University, United States

IAC-15.E6.1.10

CAN A MEGA-SPACE FUND MOVE HUMANITY CLOSER TO **BECOMING A MULTIPLANETARY SPECIES?**

Michael Potter, International Institute of Space Commerce, United

IAC-15.E6.1.11 (withdrawn)

HYBRID BUSINESS MODELS FOR START-UPS: A EUROPEAN WAY OF NEWSPACE?

Stefan Schmidt, Space Generation Advisory Council (SGAC), The

IAC-15.E6.1.12 (withdrawn)

MAJOR TRENDS DRIVING RECORD LEVELS OF PRIVATE INVESTMENT IN SPACE VENTURES

Chad Anderson, Space Angels Network, United States

IAC-15.E6.1.13 (withdrawn)

NEW SPACE: RISKS AND OPPORTUNITIES IN THE CURRENT CYCLE OF SPACE ENTREPREUNERSHIP

Maxime PUTEAUX, Euroconsult, France

E6.2. Public/Private Human Access to Space -**Supporting Studies**

October 13 2015, 14:45 — Oranim 4

Co-Chair(s): Ken Davidian , Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United

IAC-15.E6.2.1

STOP THE MADNESS! WHY "COMMERCIAL" SPACE DOESN'T EXIST Ken Davidian, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States

IAC-15.F6.2.2

PAPER TITLE: ANALYSIS ON THE SITUATION AND PROSPECTS OF SOCIAL CAPITAL INVESTMENT ON CHINA CIVIL SPACE INFRASTRUCTURE

Ms. Jialing Jiang, China Academy of Launch Vehicle Technology, China

IAC-15.E6.2.3

PUBLIC PRIVATE PARTNERSHIPS AND THE DEVELOPMENT OF SPACE LAUNCH SYSTEMS IN THE UNITED STATES Dr. Eligar Sadeh, United States

IAC-15.E6.2.4

FROM AVIATION TOURISM TO SUBORBITAL SPACE TOURISM: A STUDY OF TAIWAN'S INFRASTRUCTURES

Eva Yi-Wei Chang, University of Science & Technology, Taiwan, China

IAC-15.E6.2.5

EVALUATING THE POTENTIAL FOR COMMERCIAL SPACE INDUSTRY GROWTH: AN ENTREPRENEURIAL ENVIRONMENT ANALYSIS OF

Charlotte Kiana, Cornell University, United States

IAC-15.E6.2.6

EVALUATION OF THE POTENTIAL FOR COMMERCIAL SPACE INDUSTRY GROWTH: AN ENTREPRENEURIAL ENVIRONMENT ANALYSIS OF RUSSIA

Praskovia Milova, Politecnico di Milano, Italy

IAC-15.E6.2.7

EIC/SGAC \$PACE IS BUSINESS COMPETITION WINNER Ken Davidian, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States

IAC-15.E6.2.8

SPACE SERVICES FOR COMMERCIAL USE Mr. Ravil Nurgalievich Akhmetov, JSC SRC Progress, Russian

IAC-15.E6.2.9

LICENSING AS A TOOL TO ENCOURAGE TECHNOLOGY TRANSFER FROM SPACE

Paola Belingheri, Italy

IAC-15.E6.2.11 (withdrawn)

STRUCTURE ANALYSIS OF INDIAN AERONAUTICS AND SPACE INDUSTRY CLUSTERS

Shashank Khurana, Peking University, China

IAC-15.E6.2.12 (withdrawn)

THE STRUCTURE OF THE EUROPEAN SPACE INDUSTRY – CURRENT AND HISTORICAL ANALYSIS OF INDUSTRY CLUSTERS IN THE BENELUX

Charlotte Kiang, Cornell University, United States

IAC-15.E6.2.10 (withdrawn)

COLLABORATIVE ENVIRONMENTS FOR IDEATION AND VENTURE CREATION IN THE SPACE SECTOR Nuno Loureiro, Portugal

E6.3. New Space and New Science

October 14 2015, 14:45 — 302-303

Co-Chair(s): Farnaz Ghadaki, Canadian Space Commerce Association, Canada; Luigi Scatteia, Strategy& - Formerly Booz and Company, The Netherlands;

Rapporteur(s): Daniel Faber, SHOAL, Australia;

IAC-15.E6.3.1

NEW SPACE: CHRIS HADFIELD'S LEADERSHIP TRANSFORMATION & REBRANDING OF SPACE

AZAM SHAGHAGHI, Space Tourism Society Canada, Canada

IAC-15.E6.3.2

NOVEL BUSINESS PARADIGMS FOR EARTH OBSERVATION BY SPACE CAPITALISING ON THE CLOUD REVOLUTION Jean-pierre ANTIKIDIS, BLUE PLANET, France

IAC-15.E6.3.3

PUBLIC-PRIVATE PARTNERSHIPS TO DEVELOP NEW APPLICATIONS FROM SPACE RESOURCE UTILISATION Dr. Silvia Ciccarelli Italian Space Agency (ASI), Italy

IAC-15.E6.3.4 (withdrawn)

TWINKLE - A BRITISH SPACE MISSION TO EXPLORE FARAWAY WORLDS

Marcell Tessenyi, University College London, United Kingdom

IAC-15.E6.3.5

THE ASTEROID MINING BUSINESS AND POLICY: FUNDAMENTAL GOALS AND CHOICES

Martin Elvis, Harvard-Smithsonian Center for Astrophysics (CfA), **United States**

"IBOSS - MODULAR BUILDING BLOCK APPROACH TOWARDS MORE FLEXIBLE AND EFFICIENT FUTURE IN-ORBIT INFRASTRUCTURE" Joerg Kreisel, JOERG KREISEL International Consultant (JKIC),

IAC-15.E6.3.7

A SUSTAINABLE COMMERCIAL MICROGRAVITY PROGRAM TOWARDS SPACE MANUFACTURING Ioana Cozmuta, NASA Ames Research Center, United States

IAC-15.E6.3.8

SPACE SOLUTIONS: BOOSTING INNOVATION FROM SPACE Frank Salzgeber, European Space Agency (ESA), The Netherlands

IAC-15.E6.3.9

INDUSTRIAL APPROACH AND STRATEGY FOR NANOSATELLITES MASS PRODUCTION

Davide Rastelli, N.P.C. New Production Concept, Italy

IAC-15.E6.3.10

MECHANISMS LINKING GOVERNMENT OVERSIGHT TO WORK PERFORMED BY ENGINEERS

Samantha Marquart, George Washington University, United States

IAC-15.E6.3.11 (withdrawn)

MOBILE APPLICATION CONCEPT USING COPERNICUS SENTINEL EARTH OBSERVATION DATA AND SAP HANA CLOUD PLATFORM TO ADDRESS BARK BETTLES INFESTATION IN THE WORLD'S FOREST: A **BUSINESS CASE**

Aidan O'Toole, Ireland

E6.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Ken Davidian , Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States:

IAC-15.E6.IP.1

EXAMINING ECONOMIC MODELS FOR REMOTE SENSING SATELLITE

Mariel Borowitz, Georgia Institute of Technology, United States

IAC-15.E6.IP.2

THE FUTURE OF SPACE TECHNOLOGY BUSINESSES FROM A SILICON VALLEY PERSPECTIVE

 ${\it Nicole\ Jordan,\ ,\ United\ States}$

IAC-15.E6.IP.3

PUBLIC-PRIVATE PARTNERSHIPS TO DEVELOP NEW APPLICATIONS FROM SPACE RESOURCE UTILISATION: THE CASE OF GREEN AIR EXPERIMENTS ON BOARD THE ISS

Silvia Ciccarelli, Italian Space Agency (ASI), Italy

IAC-15.E6.IP.4 (withdrawn)

DEFINITION AND ANALYSIS OF THE INTERNATIONAL COMMERCIAL SPACEFLIGHT INDUSTRY, 2006-2014

Carissa Christensen, The Tauri Group, United States

IAC-15.E6.IP.5

DUAL-USE TECHNOLOGIES OR "REVERSE SPIN-OFFS" AS A FRAMEWORK FOR SPACE DEVELOPMENT Haym Benaroya, Rutgers University, United States

ANALYSIS ON THE SITUATION AND PROSPECTS OF SOCIAL CAPITAL INVESTMENT ON CHINA CIVIL SPACE INFRASTRUCTURE Jialing Jiang, China Academy of Launch Vehicle Technology, China

IAC-15.E6.IP.7

PUBLIC PRIVATE PARTNERSHIPS AND THE DEVELOPMENT OF SPACE LAUNCH SYSTEMS IN THE UNITED STATES Eligar Sadeh, , United States

E7. 58th IISL COLLOQUIUM ON THE LAW **OF OUTER SPACE**

Coordinator(s): Lesley Jane Smith , Leuphana University of Lüneburg/Weber-Steinhaus & Smith, Germany; Mahulena Hofmann, University of Luxembourg, Luxemburg;

Publication officer(s): Rafael Moro-Aguilar, Orbspace,

E7.1. 7th Nandasiri Jasentuliyana Keynote **Lecture on Space Law and Young Scholars**

October 13 2015, 09:45 — Dulzin Big A

Co-Chair(s): Orna Ben Naftali , The Haim Striks School of Law, Israel; Tanja Masson-Zwaan , International Institute of Air and Space Law, Leiden University, The Netherlands;

Rapporteur(s): Neta Palkovitz, ISIS- Innovative Solutions In Space B.V., The Netherlands:

IAC-15.E7.1.1

KEYNOTE: THE LEGAL EVOLUTION OF A 'USE' OF SPACE: THE CASE OF REMOTE SENSING Joanne Irene Gabrynowicz, University of Mississippi, United States

LESSONS DRAWN FORM JURISDICTION AND CONTROL CONCEPTS

APPLIED TO INACTIVE SPACE OBJECTS

IAC-15.E7.1.2 (withdrawn)

Jean-Marie de POULPIQUET, University of Toulouse I, France IAC-15.F7.1.3

PRESENT AND FUTURE PERSPECTIVES Rishiraj Baruah, International Institute of Air and Space Law, Leiden

SUSTAINABLE SPACE EXPLORATION AND USE: SPACE MINING IN

University, India IAC-15.E7.1.4

THE INTERNATIONAL REGIME GOVERNING EXPLOITATION OF NATURAL RESOURCES IN OUTER SPACE: POTENTIAL PROCESS OF **FORMULATION**

Yangzi Tao, Beijing Institute of Technology, China

IAC-15.E7.1.5

THE EFFECTS OF THE FRAGMENTATION OF INTERNATIONAL LAW ON AFROSPACE REGULATION Charles Stotler, , Switzerland

IAC-15 F7 1 6

RIGHT OF WAY FOR ON-ORBIT SPACE TRAFFIC MANAGEMENT Nathan Johnson, University of Nebraska, College of Law, United

THE LEGAL IMPLICATIONS OF ERRONEOUS GNSS SIGNAL, RESULTING FROM HARMFUL INTERFERENCE Simona Spassova, University of Luxembourg, Luxemburg

IAC-15.E7.1.8

EARTH OBSERVATION DATA IN EUROPE: LEGISLATIVE ACTS TOWARDS THE CREATION OF A POLICY FOR THEIR PRODUCTION AND DISSEMINATION Amalia Dimopoulou, , Greece

IAC-15.F7.1.9

THE INTELLECTUAL PROPERTY RIGHTS REGIMES FOR THE DEVELOPMENT PHASES OF GALILEO AND COPERNICUS Caroline Thro, , France

IAC-15.E7.1.10

DOMESTIC PATENT LAW AND SPACE ACTIVITIES: ISSUES OF **ENFORCEABILITY**

Brendan Cohen, Cleary Gottlieb Steen & Hamilton LLP, United









IAC-15.E7.1.11

NASA'S TRANSACTIONAL APPROACH TO COMMERCIAL SPACE SYSTEMS ACTIVITIES: A NOVEL WAY FORWARD Brian Stanford, NASA, United States

IAC-15.E7.1.12

THE IMPACT OF NATIONAL SPACE LEGISLATION ON PRIVATE SPACE UNDERTAKINGS: A REGULATORY COMPETITION BETWEEN STATES Dimitri Linden, Interdisciplinary Centre for Space Studies (Catholic University of Leuven), Belgium

IAC-15.E7.1.13

IDENTIFYING ELEMENTS OF LEX MERCATORIA IN THE SPACE

Anja Nakarada Pecujlic, University of Vienna, Austria

E7.2. The relationship of international humanitarian law and territorial sovereignty with the legal regulation of outer space

October 13 2015, 14:45 — Dulzin Big A

Co-Chair(s): Steven Freeland, University of Western Sydney, Australia; Ulrike M. Bohlmann , ESA, France; Rapporteur(s): Simona Spassova, University of Luxembourg,

IAC-15.E7.2.1

THE APPLICABILITY OF THE UNITED NATIONS SPACE TREATIES DURING ARMED CONFLICT

Steven Freeland, University of Western Sydney, Australia

IAC-15.E7.2.2 (withdrawn)

ON THE APPLICABILITY OF INTERNATIONAL HUMANITARIAN LAW IN OUTER SPACE

Bin Li, Beijing Normal University, China

PRACTICAL APPLICATION OF JUS IN BELLO AND JUS AD BELLUM TO THE LEGAL REGULATION OF OUTER SPACE ENVIRONMENT OLUSOJI NESTER JOHN. African Regional Center for Space Science and Technology Education in English (ARCSSTE-E), Nigeria

IAC-15.E7.2.4

AVOIDING LEGAL BLACK HOLES: INTERNATIONAL HUMANITARIAN LAW APPLIED TO CONFLICTS IN OUTER SPACE Cassandra Steer, Institute of Air and Space Law, McGill University,

IAC-15.E7.2.5

SPACE LAW AND THE JUS AD BELLUM: RELEVANCE OF THE NOTIONS OF AGGRESSION AND SELFDEFENCE IN OUTER SPACE Julien Mariez, Centre National d'Etudes Spatiales (CNES), France

IAC-15.E7.2.6

THE DEVELOPMENT OF SPACE WEAPONS IN THE FRAMEWORK OF INTERNATIONAL HUMANITARIAN LAW

Guillermo Duberti, Independent Researcher, Argentina

IAC-15.E7.2.7

THE SCOPE OF APPLYING THE PRINCIPLE OF THE MILITARY OBJECTIVE TO A SPACE OBJECT IN ARMED CONFLICT Yuri Takaya-Umehara, Kobe University, Japan

IAC-15.E7.2.8

EXTENDING THE INTERNATIONAL LAW PRINCIPLE OF GOOD NEIGHBORLINESS TO OUTER SPACE FADAHUNSI-BANJO MOTOLANI

MOTOLANI FADAHUNSI-BANJO, National Space Research and Development Agency (NASRDA), Nigeria

IAC-15.E7.2.9

ENVIRONMENTAL PROTECTION AS A LIMITATION TO THE USE OF FORCE IN OUTER SPACE

Peter Stubbe, German Aerospace Center (DLR), Germany

IAC-15.E7.2.10

HUMANITARIAN LAW IMPLEMENTED: SPACE COMMUNICATION IN THE SERVICE OF INTERNATIONAL HUMANITARIAN LAW Mahulena Hofmann, University of Luxembourg, Luxemburg

IAC-15.E7.2.11

A LINE TO BE CROSSED: HARMFUL INTERFERENCE AS A BREACH OF SPACE AND GENERAL INTERNATIONAL LAW Ksenia Shestakova, , Russian Federation

IAC-15.E7.2.12

THE APPLICABILITY OF THE RIGHT TO SELF-DEFENCE TO THE AREA OF EXPLORATION AND EXPLOITATION OF OUTER SPACE Olga Volynskaya, Federal Space Agency (ROSCOSMOS), Russian

IAC-15.E7.2.13

CYBERSECURITY IN THE SPACE AGE Michael Potter, International Institute of Space Commerce, United States

E7.3. The portrayal of Space (Law) in Media and Movies

October 14 2015, 09:45 — Dulzin Big A

Co-Chair(s): Melissa K. Force , MK Force Consulting, United States; Steven Mirmina, Georgetown University Law Center,

Rapporteur(s): Michael Chatzipanagiotis,, Greece;

IAC-15.E7.3.1

SPACE LAW AND THE MEDIA: SCIENCE FICTION MOVIES ON THE

Rafael Moro Aguilar, Orbspace Engineering, Spain

WHERE LAW MEETS CINEMA: JAMES CAMERON'S AVATAR AS FOOD FOR THOUGHT ABOUT THE ANTHROPOCENTRIC NATURE OF SPACE

George Kyriakopoulos, National and Kapodistrian University Of

IAC-15.E7.3.3 (withdrawn)

SAVING THE EARTH FROM A DEEP IMPACT: STATE RESPONSIBILITY AND LIABILITY FOR DAMAGES CAUSED IN PLANETARY DEFENSE Jinyuan SU, Xi'an Jiaotong University School of Law, China

IAC-15.E7.3.4

THE HARD OR SOFT LAW OF "GRAVITY"

Larry Martinez, International Institute of Space Law (IISL), United

IAC-15.E7.3.5 BUGS BUNNY AND PUFFY DUCK VS. MARVIN THE MARTIAN - A

PERSPECTIVE FROM (EARTHLY) INTERNATIONAL SPACE LAW -Annette Froehlich, European Space Policy Institute (ESPI), Austria

IAC-15.E7.3.6 (withdrawn)

SPACE ACTIVITIES AND THE MEDIA: FROM SCIENCE FICTION TO SCIENTIFIC REALITY?

Sylvia Ospina, S. Ospina & Associates - Consultants, United States

IAC-15.E7.3.7

THE MEANING OF LIFE AND CLOSE ENCOUNTERS OF THE COMMERCIAL KIND

George Anthony Long, , United States

IAC-15.E7.3.8

THE ISSUES OF THE PROTECTION OF THE SPACE ENVIRONMENT IN

Camilo Guzman Gomez, UNIVERSIDAD SERGIO ARBOLEDA, Colombia

IAC-15.E7.3.9

AVATAR FILM: PERSPECTIVES FROM SPACE LAW Alvaro Fabricio Dos Santos, Advocacy General of the Union - AGU,

IAC-15.E7.3.10 (withdrawn)

REIMAGINING ICARUS: ASSESSING RISK, VALUE AND UNCERTAINTY IN SPACE THROUGH FICTION AND FILM

Sara Langston, Unit for the History and Philosophy of Science, University of Sydney, United States

E7.4. Legal Issues of Space Traffic Management

October 14 2015, 14:45 — Dulzin Big A

Co-Chair(s): Olga Volynskaya, Federal Space Agency (ROSCOSMOS), Russian Federation; Jana Robinson, Czech

Rapporteur(s): Deepika Jeyakodi, Leiden University, The

IAC-15.E7.4.1

UPDATE ON THE SECOND IAA STUDY ON SPACE TRAFFIC MANAGEMENT

Jana Robinson, The Prague Security Studies Institute, Czech Republic

IAC-15.E7.4.2

SPACE TRAFFIC MANAGEMENT: A CHALLENGE OF COSMIC PROPORTIONS?

Frans von der Dunk, University of Nebraska-Lincoln, The Netherlands

IAC-15.E7.4.3 SPACE TRAFFIC MANAGEMENT REGIME NEEDS AND

ORGANIZATIONAL OPTIONS James Rendleman, , United States

IAC-15.E7.4.4

SPACE TRAFFIC MANAGEMENT AND THE UNITED STATES DATA SHARING ENVIRONMENT

PJ Blount, LL.M. in Air and Space Law, United States

THE CURRENT PRACTICE OF THE EUROPEAN SPACE AGENCY IN REGISTERING ITS SPACE OBJECTS LAUNCHED INTO EARTH ORBIT OR

Alexander Soucek, ESA/ESRIN, Italy

IAC-15.E7.4.6

LOOKING INTO THE FUTURE: THE CASE FOR AN INTEGRATED AFROSPACE TRAFFIC MANAGEMENT Michail Chatzipanagiotis, , Greece

IAC-15.E7.4.7 (withdrawn)

THE CASCADE EFFECT: SPACE DEBRIS' IN-ORBIT COLLISIONS AND INTERNATIONAL LIABILITY

OLAVO DE OLIVEIRA BITTENCOURT NETO, Catholic University of Santos, Brazil

IAC-15.E7.4.8 (withdrawn)

THE CIVILIAN AND MILITARY COOOPERATION IN THE REGULATION OF AIRSPACE: A MODEL FOR NATIONAL SPACE LAW Phetole Sekhula, SACSA, South Africa

IAC-15.E7.4.9

AN ECONOMIC ANALYSIS OF THE LEGAL LIABILITIES OF GNSS Hatsuru Morita, Tohoku University, Japan

IAC-15.E7.4.10

THE IMPACT ON GROWTH MARKETS IN THE DOWNSTREAM SECTOR: THE PARAMETERS FOR CONNECTIVITY AND SERVICES IN OUTER

Lesley Jane Smith, Leuphana University of Lüneburg/Weber-Steinhaus & Smith, Germany

IAC-15.E7.4.11

LEGAL REGULATION OF RADIO-FREQUENCY SPECTRUM Elina Morozova, INTERSPUTNIK International Organization of Space Communications, Russian Federation

IAC-15.E7.4.12

THE LIABILITY OF A CIVIL GNSS OPERATOR UNDER THE DOMESTIC LAW: CASE STUDIES

Makiko Shimizu, Tohoku University, Japan

APPLICATION OF THE FRENCH SPACE OPERATION ACT FOR THE ARIANE 5 ES GALILEO MISSION AND OPERATIONS Nicolas Verstappen, , France

E7.5. Recent Developments in Space Law

October 16 2015, 09:45 — Dulzin Big A

Co-Chair(s): Martha Mejia-Kaiser, Independent Researcher, Germany; K R Sridhara Murthi, NIAS, Bengalore; Rapporteur(s): Andreas Loukakis, University of Luxembourg,

THE CONTROVERSIAL RULES OF INTERNATIONAL LAW GOVERNING NATURAL RESOURCES OF THE MOON AND OTHER CELESTIAL BODIES Maureen Williams, Chair, ILA Space Law Committee, UK & UBA, Conicet, Buenos Aires, Argentina

IAC-15.E7.5.2

HOW SIMPLE TERMS MISLEAD US: THE PITFALLS OF THINKING ABOUT OUTER SPACE AS A COMMONS

Henry Hertzfeld, Space Policy Institute, George Washington University, United States

IAC-15.E7.5.3 (withdrawn)

GOING ROGUE OR TAKING THE LEAD: THE BIGELOW LETTER AND ITS IMPLICATIONS ON U.S. SPACE POLICY AND INTERNATIONAL LAW John Duggan, , United States

IAC-15.E7.5.4

WHO OWNS THE NATURAL RESOURCES ON THE ASTEROIDS Guoyu Wang, , China

IAC-15.E7.5.5

HYPOTHETICAL "EXPLORATION AND USE OF OUTER SPACE ACT OF

Dennis Burnett, National Security and Export Compliance Consulting, **United States**

LEGAL IMPLICATIONS ON AUTONOMOUS ORBIT SATELLITE SERVICING, ACTIVE DEBRIS REMOVAL AND ASTEROID RETRIEVAL

Ana Cristina van Oijhuizen Galhego Rosa, Brazilian Association of Air and Space Law, The Netherlands

IAC-15.E7.5.7

FALLEN PROMETHEUS--DID HE MAKE A SOUND? A REVIEW OF US LEGAL & REGULATORY RESPONSE (OR LACK THEREOF) TO THE VIRGIN GALACTIC ACCIDENT.

Maria-Vittoria "Giugi" Carminati, International Institute of Space Law (IISL), United States

IAC-15.E7.5.8

NATIONAL SPACE LEGISLATION FOR DEVELOPING COUNTRIES -LESSONS FROM EUROPE

KUMAR ABHIJEET, Institute of Air and Space Law, University of Cologne, Germany











SPAIN: TOWARDS A NATIONAL SPACE LEGISLATION AND A SPANISH SPACE AGENCY?

Maria-del-Carmen Muñoz-Rodriguez, University of Jaen, Spain

IAC-15.E7.5.10

THE LATEST SPACE BASIC PLAN IN JAPAN -ITS FEATURES AND

Yasuaki Hashimoto, The National Institute for Defense Studies,

IAC-15.E7.5.11

SMALL BUT ON THE RADAR- THE REGULATORY EVOLUTION OF SMALL SATELLITES IN THE NETHERLANDS

Neta Palkovitz, ISIS- Innovative Solutions In Space B.V., The

IAC-15.E7.5.12

LEGAL ISSUES IN CHINA'S FUTURE PARTICIPATION IN THE SPACE PROTOCOL TO THE CAPE TOWN CONVENTION

Yun Zhao, The University of Hong Kong, Hong Kong

IAC-15.E7.5.13

EUROPEAN EARTH OBSERVATION DATA POLICY - MEETING VARIOUS GOALS BY MULTIPLE AND DIVERSE ACTORS: A HERCULEAN TASK?

Irmgard Marboe, University of Vienna, Austria

IAC-15.E7.5.14

INTERNATIONAL LEGAL ISSUES ON CONSTRUCTION AND OPERATION OF SPACE SOLAR POWER STATION Shouping Li, Beijing Institute of Technology, China

IAC-15.E7.5.15

EARTH IN DANGER AND SPACE LAW José Monserrat-Filho, Brazilian Space Agency (AEB), Brazil

E7.7-B3.8. Joint IAF/IISL Session on the Legal Framework for Cooperative Space Activities

October 16 2015, 13:30 — Ballroom A

Co-Chair(s): Bernhard Schmidt-Tedd , Deutsches Zentrum für Luftund Raumfahrt e.V. (DLR), Germany; Cristian Bank, EADS Astrium Space Transportation GmbH, Germany;

Rapporteur(s): Olga S. Stelmakh , Parliament of Ukraine / DRSH Group Int., Ukraine;

IAC-15.E7.7-B3.8.1

IDENTIFYING COMMON LEGAL ISSUES IN INTERNATIONAL COOPERATIVE MECHANISMS

Setsuko Aoki, Keio University, Japan

IAC-15.E7.7-B3.8.2 (withdrawn)

SUSTAINABILITY OF COOPERATION IN OUTER SPACE ACTIVITIES THROUGH ENDURING LEGAL FRAMEWORK

V. Gopala Krishnan, Indian Space Research Organization (ISRO),

IAC-15.E7.7-B3.8.3

"INTERNATIONAL COOPERATION MECHANISMS USED BY THE UNITED STATES IN THE PEACEFUL EXPLORATION AND USE OF **OUTER SPACE**"

Sumara Thompson-King, National Aeronautics and Space Administration (NASA), United States

IAC-15.E7.7-B3.8.4

CHINA'S EXPORT CONTROL RULES AS APPLIED TO COOPERATIVE SPACE ACTIVITIES

Eytan Tepper, CHINA UNIVERSITY OF POLITICAL SCIENCE AND LAW,

IMPACT OF INTERNATIONAL CODE OF CONDUCT FOR OUTER SPACE ACTIVITIES AND EU CONTRIBUTION TO COLLABORATIVE PROJECTS -DEVISING A NEW APPROACH FOR SPACE LAW IN EUROPE Anita Rinner, , Austria

IAC-15.E7.7-B3.8.6

GLOBAL SPACE GOVERNANCE FOR ENSURING RESPONSIBLE USE OF OUTER SPACE, ITS SUSTAINABILITY AND ENVIRONMENTAL SECURITY: LEGAL PERSPECTIVE

Olga S. Stelmakh, Parliament of Ukraine / DRSH Group Int., Ukraine

IAC-15.E7.7-B3.8.7 (withdrawn)

LEGAL ASPECTS OF COMMERCIAL SPACE ACTIVITIES PROVIDED BY AEROSPACE LAUNCH SYSTEMS IN MULTIJURISDICTIONAL CONTEXT Ntorina ANTONI, Swiss Space Systems (S3), Switzerland

IAC-15.E7.7-B3.8.8 (withdrawn)

THE DEVELOPMENT OF SPACE TECHNOLOGY AND INTERNATIONAL COOPERATION IN RELATION TO THE EXPLORATION OF THE MOON. 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-15.E7.7-B3.8.9 (withdrawn)

USE OF MULTILATERAL AGREEMENT TO DEVELOP SPACE RESOURCE RIGHTS REGIME

Sagi Kfir, Deep Space Industries Inc., United States

IAC-15.E7.7-B3.8.10 (withdrawn)

INTERNATIONAL MECHANISMS FOR COOPERATION IN THE PEACEFUL EXPLORATION AND USE OF OUTER SPACE Amber Charlesworth, U.S. Department of State, United States

E7.IP. Interactive Presentations

October 14 2015, 13:15 — Plasma Screens Area

Coordinator(s): Lesley Jane Smith , Leuphana University of Lüneburg/Weber-Steinhaus & Smith, Germany; Mahulena Hofmann , University of Luxembourg, Luxemburg;

IAC-15.E7.IP.1

RECENT DEVELOPMENTS IN OUTER SPACE AND THE MOON AGREEMENT: PROMOTING A SAFER ENVIRONMENT FOR BOTH PRIVATE AND PUBLIC EXPLOITATION OF NATURAL OUTER SPACE **RESOURCES**

Juliana Scavuzzi, Brazilian Association of Air and Space Law,

IAC-15.E7.IP.2 (withdrawn)

THE ENVIRONMENTAL ASPECTS OF SPACE MINING FROM A LEGAL

Rada Popova, Institute of Air and Space Law, University of Cologne,

IAC-15.E7.IP.3 (withdrawn)

EXTRATERRESTRIAL LAW AND ORDER

Albert Medina, Berkshire Hathaway HomeServices Florida Realty. United States

IAC-15.E7.IP.4

CHINA'S SPACE STATION PROJECT AND INTERNATIONAL COOPERATION: FEASIBILITY AND LEGAL ASPECTS Jie Long, The University of Hong Kong, Hong Kong

IAC-15.E7.IP.5

ASSISTANCE BY THE LAUNCHING AUTHORITY - REQUIREMENT OR ENTITLEMENT?

Hannes Mayer, Karl Franzens Universität Graz, Austria

IAC-15.E7.IP.6

POLICY CONSIDERATIONS FOR NEW HUMAN SPACE EXPLORATION STRATEGIES: THE SPACE GENERATION PERSPECTIVE Chantelle Dubois, Space Generation Advisory Council (SGAC),

IAC-15.E7.IP.7 (withdrawn)

THE INTERPRETATION OF THE OUTER SPACE TREATY AND THE **ACTIVITIES OF PRIVATE COMPANIES IN OUTER SPACE** Sarah Moens, Ghent University, Belgium

IAC-15.E7.IP.8

EU REGULATORY FRAMEWORK ON EARTH OBSERVATION – ARE WE THERE YET? Konstantina Liperi, , Cyprus

IAC-15.E7.IP.9

MINING OUTER SPACE: OVERCOMING LEGAL BARRIERS TO A WELL-PROMISING FUTURE Maria Manoli, , Canada

IAC-15.E7.IP.10 (withdrawn)

NON-PHYSICAL DISRUPTION OF SATELLITES OR ITS FUNCTIONS: A THREAT TO SOVEREIGNTY AND TERRITORIAL INTEGRITY OF A

Bayar Goswami, , India

IAC-15.E7.IP.11

INSURING COMMERCIAL SPACEFLIGHT: CONFRONTING CHALLENGES AND CHARTING THE SCHEME Zhuoyan Lu, University of Lapland, Finland

IAC-15.E7.IP.12

"HARMFUL INTERFERENCE" IN OUTER SPACE UNDER IHL. Yu Fu, CHINA UNIVERSITY OF POLITICAL SCIENCE AND LAW, China

IAC-15.E7.IP.13 (withdrawn)

SPACE ODDITY: AN ANALYSIS OF MAJOR TOM'S ODYSSEY IN OUTER SPACE. AND THE IMPLICATIONS OF THE DISAPPEARANCE OF ASTRONAUTS IN OUTER SPACE. Juan Pablo Vargas Pallini, , Colombia

IAC-15.E7.IP.14 (withdrawn)

ARE OPERATORS PROTECTED FORM UNAUTHOSRISED CYBER ACTIVITIES UNDER THE EXISTING SPACE LAW? Iulia-Diana Galeriu, , Romania

IAC-15.E7.IP.15

GNSS AND HARMFUL INTERFERENCE: RESPONSIBILITY AND LIABILITY UNDER INTERNATIONAL SPACE LAW Radhika Yadav, National Law School of India University, India

IAC-15.E7.IP.16

SPACE LAW PRINCIPLES IN ACTION. CASE STUDY OF HUMAN EXPLORATION IN OUTER SPACE IN MASS EFFECT, THE TRILOGY OF **ROLE-PLAYING VIDEO GAMES**

Kamil Dobrowolski, Jagiellonian University, Poland

IAC-15.E7.IP.18

COMPETITION LAW AND ITS RELEVANCE TO THE SUCCESS OF COMMERCIAL SPACE EXPLOITATION

Benjamyn Scott, International Institute of Air and Space Law, Leiden University, United Kinadom

IAC-15.E7.IP.19

THE INTERACTION OF THE LAW OF ARMED CONFLICT WITH OUTER

Shripad Jagdale, Space Generation Advisory Council (SGAC), India

BEYOND LIABILITY CONVENTION AND REGISTRATION AGREEMENT. HOW TO REGULATE SPACE ACTIVITIES OF NON-MEMBER STATES. Ping-Yu Lin, , The Netherlands

IAC-15.F7.IP.21

3D PRINTING IN SPACE LEGAL IMPLICATIONS Deepika Jeyakodi, Leiden University, The Netherlands

IAC-15.E7.IP.22

SOFT LAW IN OUTER SPACE:MECHANISM AND RECENT PRACTICE Jingjing Nie, , China

IAC-15.E7.IP.23

TOWARD A NEW NORM OF INTERNATIONAL LAW: SATELLITE IMAGERY AND ITS INFLUENCE ON THE EVOLUTION OF THE RESPONSIBILITY TO PROTECT DOCTRINE Jillianne Pierce, Space Foundation, United States

IAC-15.E7.IP.24

INTERNATIONAL CODE OF CONDUCT FOR OUTER SPACE ACTIVITIES: ANALYSIS FROM AN INSTITUTIONAL PERSPECTIVE Anastasia Voronina, University of Nebraska, College of Law, United

IAC-15.E7.IP.25

INTERNET FROM THE SKY: LEGAL CHALLENGES Dimitrios Stratigentas, The Netherlands





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 2015 IPMC Young Professionals Workshop

Date: Sunday 11 October 2015

Time: 09:00 - 18:00 Venue: Oranim 3-B, ICC



In connection with the IAC, the IAF's International Project Management Committee (IPMC), the Young Professionals Programme organizes an annual workshop for young professionals in the international space community to discuss topics of mutual interest with a view toward nurturing and empowering the next-generation workforce.

The delegates for this workshop are Young professionals who are typically defined as being age 35 and under and having at least one to two years of work experience in the aerospace field. They will be asked to take part in virtual collaborative sessions with other participants to discuss one of the workshop topics as well as to be physically present at the day of the workshop and attend the IAC. A diversity of backgrounds (e.g., engineering, management, science, policy, etc.) is encouraged in order to produce thoughtful and well-rounded observations and recommendations that will be incorporated into a report for the IPMC and IAF Member Organisations.

The topics for the this year's workshop have been generated by the Workshop Organising Committee in coordination with the IPMC and focus on the theme "Career Development Factors for Young Professionals." The topics to be discussed by the YP in the 2015 workshop are:

Topic 1: Young Professionals Mentoring Program Business Plan

Topic 2: Aerospace Sector Decision Factors for Young Professionals

Topic 3: Rapid engagement and accelerated learning for Young Professionals

A report summarizing the discussions and conclusions of the 2015 workshop participants will be prepared and distributed to interested IAF member organizations. Reports from previous IPMC Young Professionals workshop are available on the IAF website.

This workshop is sponsored by JAXA and Boeing.





6.1.2 2015 Young Professionals Programme

Sunday, 11 October

Welcome Reception 19:00 - 21:00

- Room Teddy A, ICC

Speakers include:

- IAF President, Kiyoshi Higuchi
- Director General ISA, Menachem Kidron, (invited)
- Chair Israeli Astronomical Association, Dr. Ygal Pat-El (invited)

Cocktails and light appetizers will be served.

Tuesday, 13 October

Next Generation Plenary: International Space Station as the Gateway for 13:30 - 14:30 Humankind's Future in Space and on Earth

- Ussishkin Auditorium, ICC

19:00 - 21:00 25 Years of Discovery and Inspiration from The Hubble Space Telescope

- Room Teddy A, ICC

Speakers include:

- Charlie Bolden, NASA Administrator and Astronaut
- Dava Newman, NASA Deputy Administrator
- Carol Christian, Space Telescope Science Institute Hubble Outreach Project Scientist
- James Crocker, Vice President and General Manager, Civil Space, Lockheed Martin

Cocktails and light appetizers will be served.

Wednesday, 14 October

E1.5. Enabling the Future - Developing the Space Workforce 14:45

- Room Oranim 3-B, ICC

Workforce Development- Young Professional Programme Committee, 19:00 - 21:00

> International Space University, and Space Generation Advisory Council **Networking Event**

- Room Teddy A, ICC

Meet the three organizations and network with peers from around the world.

Cocktails and light appetizers will be served.

Thursday, 15 October

Q&A with Dr. Jacob Cohen, Chief Scientist, NASA Ames Research Center 10:00 - 11:00

- Global Networking Forum, Location: Small Dulzin, ICC

Title: NASA Ames and Future of Space Exploration, Science, and Aeronautics





6.1.3 Global Professionals Virtual Forums

Venue: All in room Karem Carnit, Crowne Plaza Hotel

V2-B3.9 Human Spaceflight: Wednesday

Date and Time: Wednesday, 14th October at 14:45

V3-B2.8 Space Communications and Navigation (SCAN)

International Astronautical Congress

12 - 16 October 2015, Jerusalem, Israel

Date and Time: Thursday, 15th October at 14:45

V4-E2.3 Student Team Competition

Date and Time: Tuesday, 13th October at 14:45

V5-A6.10 Space Debris

Date and Time: Monday, 12th October at 15:15

















6.1.4 Additional YP events

GNF Event: SGAC: How to launch a career in space?
 Wednesday 14 October, 14:30 – 15:30, Small Dulzin Room, ICC



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

Dear Students,

I extend you a most sincere welcome to the 66th International Astronautical Congress (IAC) in Jerusalem, Israel. The International Space Education Board (ISEB) has carefully constructed a unique programme where you will have the opportunity to meet and learn from the world's leading experts in space development, senior managers, distinguished specialists, young professionals and peers from around the world.

Education plays a vital role in our society's growth and development. In particular, education in science and engineering equips future citizens with the skills and competences, which today's society needs in order to remain competitive and innovative. The successes for the next 50 years are dependent on our collective capacity, and that of the space industry, to recruit new, motivated, talented, and well prepared professionals. We are therefore fully committed to inspire, educate, attract, and support you - the next generation of space scientists and engineers.

In a group effort, the ISEB members work together to develop a global educational and outreach programme related to space. Through the implementation of joint initiatives, we aim at increasing students' science, technology, engineering, and maths achievements, helping the scientific and technical workforce of the future become stronger. This year, the ISEB is sponsoring more than 30 outstanding students to attend the Congress. During your time at the IAC, I strongly encourage you not only to visit but also extensively utilize the International Student Zone (ISZ). Throughout the week, the ISZ will house the majority of the students' activities and will provide you access to a plethora of unique resources for your professional and personal growth.

The activities of this week are dedicated to helping you to connect, network and build privileged relationships within the space community. Please take this extraordinary opportunity to push boundaries, expand your vision, explore your potential, and make new contacts and friends. I am convinced that the bonds built here will help you develop future robust and durable collaborations.

On behalf of the ISEB, together with the International Astronautical Federation (IAF) and the IAC Local Organizing Committee assisting us to bring a quality program to this year's participants, I wish each of you a fruitful conference and a memorable experience in Jerusalem.

Sincerely,

lugo Marée

Head of the Education and Knowledge Management Office European Space Agency Chair, International Space Education Board



International Space Education Board (ISEB) Student Programme

Sunday, 11 October: SEOC Professional Development Workshop – ICC, Room 312

08:15	VSSEC staff + ISEB students (Michiel Zittersteijn and Christoph Montag, ESA)	Registration		
08:30		Overview of day and brief intro to teaching pedagogy	In this session Ian Christie will give participants an intro to the nine classroom techniques for which there is real evidence that student outcomes are improved by teachers who use these techniques.	
09:00 am		Workshop A: More than Rocket Science	Investigates the effective use of outreach programs in primary schools to deliver science lessons to students in years 5 & 6 simultaneously with teacher professional learning. Two activities: Radiation in Space & The States of Matter. Resources from VSSEC, ESA, NASA TBD	

10:55		Morning Tea	
11:05	VSSEC staff + ISEB students (Michiel Zittersteijn and Christoph Montag, ESA)	Workshop B: Robotic Mission to Mars	An Online Scenario Based Educational Program for years 9 & 10 using the VSSEC Mars Rover. (The teachers can drive the Rover on the VSSEC Mars yard from Jerusalem. They have roles as engineers or scientists.) Resources from VSSEC, ESA, NASA TBD
13:00		Lunch	
14:00	ISEB students go to Meet & Greet	An introduction to the Space Generation Advisory Council	A short presentation and discussion with a representative of the SGAC covering their relevance to final year high school students and activities of the SGAC which may be of interest to teachers in general.
14:20	VSSEC staff	Afternoon Session: The use of interactive platforms in the classroom	One speaker from the Israeli Space Agency (ISA) will give a workshop on the use of interactive platforms in the classroom - computer games, apps, virtual reality etc. The idea is to use tools the kids perceive as fun and leisure-related activities in the service of space education.
15:40		Final Session	This session will be a discussion by the teachers
16:00		Finish	

Sunday, 11 October: Orientation Day – ICC, Room Teddy C

14:30 – 15:15	Student Orientation with ISEB HoEs (All ISEB Partners)	
	14:30 - 14:35	Welcome by ISEB Chair (ESA)
	14:35 - 15:05	ISEB HoEs Remarks (All ISEB Partners)
		During this session the ISEB Heads of Education (HoE) will be asked to address the students in preparation for the week ahead. JAXA will prepare the remarks which will be coordinated amongst the HoEs.
	15:05 – 15:15	Time for Questions
15:15 – 17:45	Lead by Carol Ca	wareness and Communication in an International Forum (ICC, room Teddy C) rnett and Scott Madry culture, the IAC culture, and strategies for communication and

17:45 – 19:00 Icebreaker and Reception (ICC, room Teddy C)

networking

Monday, 12 October: Commencement Day – ICC, ISZ

09:00 - 11:00	IAC Opening Ceremony
11:00 - 12:00	Opening Exhibition
13:30 - 15:00	Plenary 1: Heads of Agencies
16:00 - 17:30	Heads of ISEB Agencies Q&A Session at the International Student Zone [Open to All Students] at ISZ
18:15 - 19:30	Plenary 2: Remote Superspectral and Hyperspectral Sensing from Space
19:30 – 22:00	IAC Welcome Reception

IAC 2015 erusalem



Tuesday, 13 October: ICC, ISZ

08:30 - 09:30	Plenary 3: Space Transportation Capabilities and Future Directions
09:45 – 12:45	Technical Sessions
12:30 – 13:30	Lunchtime Session [Open to All Students] at ISZ Coordinated Activity Between Agencies (AEM, ESA, JAXA, VSSEC)
13:30 - 14:30	Plenary 4: Next Generation Plenary
14:45 - 17:45	Technical Sessions
17:45-18:45	Highlight Lecture 1: The International Rosetta Mission

Wednesday, 14 October: ICC, ISZ

08:30 – 09:30 Plenary 5: Small Satellites

	,
09:45 - 12:45	Technical Sessions
12:30 – 13:30	Lunchtime Session: Panel on Space Exploration [Open to All Students] at ISZ Coordinated Activity Between Agencies
13:30 – 14:30	JAXA Student Presentations at ISZ
14:45 - 17:45	Technical Sessions
17:45-18:45	Highlight Lecture 2: Sustaining the Space Environment

Thursday, 15 October: ICC, ISZ

08:30 - 09:30	Plenary 6: Fifty Years of Spacewalking
09:45 - 12:45	Technical Sessions
12:30 – 13:30	Lunchtime Session [Open to All Students] at ISZ Coordinated Activity Between Agencies (KARI, NASA, SANSA)
13:30 - 14:30	Plenary 7: The Moon – a continent and a gateway for our future
14:45 – 17:45	Technical Sessions
17:00 – 17:45	Outreach Activity Training session [mandatory for all ISEB Students] at ISZ
17:45 – 18:45	Highlight Lecture 3: Orion's exploration Flight Test-1

Friday, 16 October: ISEB Outreach Day – ICC, ISZ

9:30 -12:00	Outreach Activity – 40 Local Students [mandatory for all ISEB students]
09:45 - 12:45	Technical Sessions
13:30 – 16:30	Technical Sessions
16:30 - 17:30	Closing Ceremony















6.2.3 IAF-SUAC International Student Workshop

18 October 2015 - Israel Institute of Technology- Technion, Asher Institute

This workshop is organized in cooperation with the Technion, Asher Institute, the International Astronautical Federation and the Israel Space Agency – Space Universities Administrative Committee (IAF-SUAC) in conjunction with the International Astronautical Congress (IAC) 12-16 October 2015 in International Convention Center (ICC), Jerusalem, Israel.

10 students will present their research in front of peers and senior space experts on the following topics:

- Spacecraft Formation Flying
- Astrodynamics
- International cooperation
- Small satellites
- Distributed Space Missions for Earth System Monitoring

The best presentation will be awarded a prize.

The workshop is sponsored by Technion – Asher Institute, International Astronautical Federation and Israel Space Agency.









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 six winners will be awarded their prizes during the Closing Ceremony of the 66th IAC on 16 October. They will also be invited to the gala dinner as guests of honor of the IAF President, Mr. Kiyoshi Higuchi.



Christopher Vasko

Even before considering to embark on the road that ultimately led to working on a PhD in applied physics, I was a big space enthusiast – from the works of literature to scientific documentaries, space exerted a strong fascination. Born into a large family with many languages, I was soon able to read the classics in their original language and naturally choose for more science classes in high school. The realisation that space fascinates everybody regardless of age, cultural or educational background came slowly working in volunteer associations, organizing public outreach events on astronomy and physics. Towards the end of my master course in physics I had the chance to work in a small SME on an ion engine, preparing to graduate from

university, giving me an appreciation of just how hard it is to do anything in space. Space requires a high level of cooperation – not just between engineers and researchers, but involving many areas beyond and in between. I thus volunteered as intern for the European Space Policy Institute and for the Space Generation Advisory Council. I believe that all engineers and scientists should explore similar experiences – public communication and interdisciplinary cooperation are key for many aspects of space. The IAF has played a key role in giving me the opportunity to expand my own international network. This is facilitated by the work of several IAF committees focussed on working with the next generation of STEM YPs. I decided to join SEOC and the WD-YPP committees of the IAF to allow others to make the same experiences. I am very grateful for the mentoring I received over the years, especially as Next Generation Panellist in Toronto.



Ryan L. Kobrick

My name is Dr. Ryan L. Kobrick and I have the 'space bug'. As I have explored our planet, all of my efforts have been to catalyze space technology development, with a personal passion for human spaceflight. During the day, I am the Project Manager for Research and Development at Space Florida managing competitions, grants, and educational programs. During the night, I am the Chairman and President of Yuri's Night, the World Space Party, helping connect people across the globe April 12th to celebrate and honour the past, present, and future of human spaceflight. My path from a chronic academic (Bachelors, two Master's, PhD focused on Bioastronautics and lunar dust, and Postdoc) into the commercial space industry has taken me to

"Mars" in Utah four times, to the High Canadian Arctic for a four-month Mars simulation, to eight IAC events around the world, and allowed me to help fly payloads to the International Space Station. Being a Canadian-American dual citizen has opened opportunities in both of my countries and given me a unique perspective on international cooperation. As an engineer who believes that the universal language is mathematics, I know that our future will involve more 'cross-ocean' partnerships as we sail towards the stars for all of humanity out of necessity to evolve. Or as my SEDS friends would say, "Space or Die". I am proud to serve on the IAF Workforce Development/Young Professionals Program Committee (since 2010) and the IAF Space Education and Outreach Committee (inducted 2015), to help keep our successor 'Next Gen' members prepared. I have been in two Young Professionals Plenaries (2009 Moderator, 2010 Panelist) and had thirteen IAC papers with another on the way. Each experience has strengthened my international connections and taught me more about our diverse cultures, which is what brings us together.



Liz Seward

I currently work for Airbus Defence and Space in the Business Development team of the Earth Observation, Navigation and Science department, as Head of the Marketing and Communications team. It is a transnational role, with responsibilities and team members in France, Germany and the UK. I started my career as a thermal engineer, working on the meteorological MetOp satellites for EUMETSAT, and creating a thermal model of Mercury when the design of the ESA BepiColombo mission included a lander. After two years I transferred to the future programmes team as a mission systems engineer where I worked on the early design of the ExoMars rover. After a short placement with the BBC, I moved into the area of marketing and

communications for my division of Earth Observation, Navigation & Science. As a graduate I became a STEM ambassador, and then took over the site coordinator role for all STEM activities for several years. As a qualified Mars rover driver I have been to outreach and publicity events with our 1st rover prototype Bridget to promote the UK space industry to the general public. One aspect of my marketing role for Airbus Defence and Space is to raise enthusiasm for science and Earth observation space programmes amongst emerging nations globally - engaging senior government and industry representatives on a regular basis. So far I have represented Airbus space activities at high level conferences and receptions in Europe, USA, China, Azerbaijan and Kazakhstan. My involvement with the IAF started when I attended an IAC, and the young professionals programme was invaluable at helping me make contacts with other young professionals and provided access to senior members of the space industry. I am now a vice-chair of the Workforce Development and Young Professionals programme and a member of the Entrepreneurship and Investment Committee. Through these positions I hope I can help to build a stronger space industry.

Yu Xiaozhou



Prof.Yu Xiaozhou got his doctor degree in 2006 in Northwestern Polytechnical University (NPU) and then he stayed in NPU as a lecture. In 2009, he became an associate professor. Now he is the vice director of Shaanxi Engineering Laboratory for Microsatellites(SELM), NPU. Prof.Yu Xiaozhou leads a research team that is mainly of students and young professionals to make their own CubeSats. He is the project manager of two CubeSats projects that is a 12U CubeSat 'star of AoXiang 'and 2U CubeSat 'Aoxiang-1'. The two CubeSats will be launched in 2016. Prof. Yu Xiaozhou has mentored many undergraduate students and graduate students. He have given lectures and written lots of high quality articles of the CubeSats. He is also the one of the main

organizer of A national graduate students Future Flight Vehicle Competition(FFVC). As the only one flight vehicle competition supported by Ministry of Education of the People's Republic of China, there will be thousands of students join the competition. In 2013, he have also hold an Aoxiang Cup Competition in Shaanxi province. Over 100 teams have joined the competition For his work. Prof Yu Xiaozhou has got a first teaching achievement award of 'He Hongsen' in 2014,a teaching achievement award in Shaanxi Province and four teaching achievement awards in NPU. Also, In 2014, two of his master students got the special prize from Shaanxi Province government for participating the AoXiang-1 Cubesat research. Prof.Yu Xiaozhou play an important role in the international CubeSats project QB50 that is funded by EU frame7 . NPU is Asia coordinator of the project and he is the key person and consortium committee member. Prof.Yu Xiaozhou is the Space University Administrative Committee (SUAC) member of IAF. He help SELM became the formal member of IAF .In 2015,he invited IAF as the main organizer of FFVC. In 2013, he invited IAF as the main organizer of QB50 Asia Workshop and funded the IAF-IPMC Young Professionals Workshop2013.



Lulu Makapela

Project and Contract Manager: Council for Scientific and Industrial Research (CSIR)

Lulu Makapela has been professional in the field of aerospace for a period of over 10 years. Currently, Makapela works for the Council for Scientific and Industrial Research (CSIR) as Project and Contract Manager for the Aerospace and Composite Initiatives. With strong background and expertise in areas demanding strong project management, legal, policy and space treaty implementation focus in broader areas , particularly highly complex areas such as telecommunications, aerospace and space, earth observations and science. Ms Makapela has previously worked as Project Manager of the National Earth

Observations and Space Secretariat, an initiative of the Department of Science and Technology previously hosted at the CSIR, and Deputy Director of the Advanced Manufacturing Unit of the Department of Trade and Industry. She has also previously worked at the legal, international and Director-General's office of the Department of Communications, as well as at the Scorpion Legal Protection and the National Prosecuting Authority during in the beginning of her career. As a young professional in space, Makapela has shown her commitment and dedication to contribute in space science and tecnology and international cooperation in different ways. In 2013, she was appointed to serve as a Member of the South african Council for Space affairs (SACSA), a space regulatory body responsible for the regulation of space activities and serves as the Chair of the committee responsible to review the national space legislation. With a passion to attract the Africa youth to consider undertaking space science and legal related careers , she serves as a Member of the Inernational Institute of Space Law(IISL) and is the Africa Regional Co-ordinator for the Manfred Lachs Space Law Moot Court competition which is held annually on the Africa Continent. She is also the Co-Chair of the Africa Leadership youth Forum, which aims to promote space science among African young profffesionals and students. In 2012, Makapela served as the Member of the organising team for the IAF IPMC organising team, which seek to look at ways to better develop and empower the next generation.



Guillaume Girard

Guillaume Girard has been involved in the space industry for more than 10 years. With 2 masters in space engineering and project management, he started his career as a satellite propulsion engineer for Thales Alenia Space, and then moved internally to the Operations department to prepare and operate the launches and early orbit operation phases of geostationary satellites. Guillaume moved forward to Munich, Germany to operate the International Space Station (ISS) Columbus module from the German Space Operations Center (GSOC). He worked as a spaceflight controller for the past 8 years and supported consecutively the ground segment, the payloads operations and the astronaut planning till March 2015. Guillaume was also instrumental in

preparing for and executing the first software transition on board the ISS Columbus module, requiring delicate coordination between the Ground segment and the flight systems. He has published 2 papers at the IAC and at Space OPS after this European premiere to explain the difficulties in synchronizing operation aboard the ISS and the ground segment during such a transition. Certified ISS controller, ESA and NASA affiliate, he has been working under the leadership of INSYEN AG, one of the prime private providers of the Columbus Control center. Recently graduated from his MBA. Guillaume has now moved up to the Business development layer in order to grow INSYEN's operational and systems engineering expertise into innovative space and aeronautic programs. Since 2010, Guillaume has engaged with the IAF aboard the Workforce Development – Young Professional Program committee (WD-YPP), and helped to develop the Young Professional Virtual Forums (YPVF) sessions at the IACs. These technical sessions offer to those young professionals who can't travel to IACs the possibility to present their selected paper or simply attend presentations they would not see if they were not broadcasted online. Proving to be a success, these technical sessions are now part of a dedicated IAC symposium that Guillaume co-chairs. Active member of the IAF, Guillaume also joined in 2012 the Human Spaceflight committee thanks to his achievements in human space operations. Eventually, Guillaume became a partner of Zero2Infinity, a Spanish based company aiming at purveying manned travels to nearspace and improving commercial space access to nano/micro-satellites.

International Astronautical Congress

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 66th International Astronautical Congress and have the opportunity to extend their network, gain knowledge and meet all the relevant people in space industry.



Hripsime Matevosyan

I am a PhD student in the field of Space Systems Engineering and Systems Architecture in Skolkovo Institute of Science and Technology in the Strategic Innovation Research Group (SIRG) led by professor Alessandro Golkar. My Bachelor's degree is in Informatics and Applied Mathematics from Yerevan State University (YSU) and Master's degree is in Control and Applied Mathematics from Moscow Institute of Physics and Technology (MIPT). I started my professional career as a software developer during my studies in YSU in a mobile development company. After being awarded a scholarship from Institute for System Programming of Russian Academy of

Sciences (ISP RAS), I started working in the YSU laboratory for Systems Programming and later was invited to work in ISP RAS in Moscow. As a member of the open source software community, I was attracted to the research at SIRG by the idea of resource sharing in space. My research focuses on Virtual Satellite Missions (VSM): missions constructed by combinations of space assets already orbiting the Earth, VSMs are poised to open the boundaries to broader circles and raise the awareness of the vast applications of space assets. The space sector was always considered a private, closed playground of big players worldwide. The paradigm is shifting. Regardless of any political, religious or other affiliation, humankind is united in its wish to push the boundaries and discover new things. As Carl Sagan said "Somewhere something incredible is waiting to be known", and that is what important.



Kingsley O. Ukaegbu

Kingsley Ogochukwu Ukaegbu was born on 11th September 1990 in Imo State, Nigeria. He studied Environmental Technology at the Federal University of Technology, Owerri, Nigeria. He specializes in the use of Geographic Information System (GIS) and Remote Sensing techniques in Environmental Monitoring and Management, especially in Pollution Control. He had his early formal education in Imo State, Nigeria. He enrolled into Federal University of Technology, Owerri, Nigeria and graduated in October 2014, as one of the best graduating students, from the School of Environmental Science and Technology. He pioneered and facilitated

the FUTO Geospatial Club, to educate undergraduates and other stakeholders on the role and benefits of space technology in Nigeria. He is a member of the NEMA-Emergency Management Vanguard and the Nigerian Environmental Society. Mr. Kingsley is currently participating, since May 2015, in the one year National Youth Service Corps (NYSC), a compulsory scheme for graduates in Nigeria. He was intern at National Space Research and Development Agency (NASRDA) Abuja, Nigeria, as part of the rigorous requirements for Bachelor's Degree in the University. During the training, Kingsley excelled in image processing, image interpretation and analysis, geospatial intelligence and among other space applications areas of GIS and Remote Sensing. He has served as a GIS and Remote Sensing freelance and tutorial-teacher in various High Schools and undergraduates in Federal University of Technology, Owerri, Nigeria. He has keen interest in skills development on space technology, encouraging the younger generations to have a role in understanding this technology, which holds the ace for sustainable and future development of our country. Thus, he has started collaborative community development service in space technology applications. Kingsley has also volunteered to contribute and coordinate the space education and outreach programs for local teachers in many High Schools in Akwa Ibom State, Nigeria, where he is currently serving Nigeria as a Corps Member.



Luis Zea

Dr. Luis Zea has been involved as an aerospace engineer in multiple experiments conducted onboard the U.S. Space Shuttle and the International Space Station (ISS). As a researcher, he has focused on using the space environment to find solutions to problems on Earth. For example, from the "Antibiotic Effectiveness in Space (AES-1)" experiment conducted on ISS, he is investigating bacterial resistance to antibiotics, a problem that kills around 100,000 people every year. He is also supporting his alma mater, Universidad del Valle de Guatemala, in the design and development of a satellite for monitoring contamination in the country's lakes. Luis has

been granted several awards, including the AIAA Orville and Wilbur Wright Award, CASIS Student Investigator Spaceflight Award, the University of Colorado's Aerospace Graduate Student Service Award, and the DAAD Research Fellowship for Doctoral Candidates and Young Scientists, which funded his work at the German Aerospace Center (DLR) for half a year. Luis has seen first-hand the benefits that space based research and assets can have for people on Earth and therefore is passionate about the democratization of access to space. He is a strong believer that international collaboration on space exploration can be an endeavor that one day unites humanity.



Norah Patten

Dr. Norah Patten is the Communications and Outreach Manager with the Irish Centre for Composites Research (IComp). Norah is Adjunct Faculty at the International Space University and Co-Chair of the Space Humanities Department for the Space Studies Program (SSP) 2015. She is also a Space Generation Advisory Council National Contact Point in Ireland and contributes to the Astronomy Ireland magazine. Norah coordinated 'The Only Way is Up' initiative at IComp in which, through a partnership with Nanoracks, the first experiment designed by Irish secondary school students was sent to the International Space Station in July

2014. She graduated with a 1st class honours degree in Aeronautical Engineering and in 2011 received her PhD from the University of Limerick. She was Emerging Chair of the Space Management and Business Department at SSP12 and Chair in 2013. Norah has interned at the Boeing Company in Seattle, Washington, USA and Bell Labs Alcatel Lucent in Dublin; she has featured on national television and other media including national radio and newspapers; and is a regular speaker at public events. Norah's mission is to inspire the next generation of engineers and astronauts. Ireland is a country without a Space Agency or Space Strategy and Norah's perspective is that international cooperation in space activities is a fundamental need for the benefit of all humankind. Space is one of the few platforms that can draw humanity closer, and it should be leveraged and promoted for all the good it brings to life on Earth.



Rene Michel

Rene Horacio Michel Valencia has a degree in Electronic engineering, he loves technology as a way to simplify hard job and task; He is convinced that education is a the path that one has to shape in order to have better generations after us. He got interested in research and education while being a student at the university and has worked with the UWC, WHY Bolivia, among other institutions. After this, he was part of a one year technology transfer in a program in China by CAST/GWIC, as part of the TKSAT-1 project of the Bolivian Space Agency. While being in China he realized that TOT (Transfer of Technology) is not a business that

implies only buying a satellite but being able to create technology in our home, he started a program with some colleagues which had as a result an Aerospace seminar in Bolivia (2014). Now he is taking the idea to a next level, working along a university (EMI) in Bolivia, is leading an Aerospace Research Program which as product will have drones and mini-satellite subsystem designed and built in Bolivia. His statement is "We do not need big economical budgets, but huge human budgets, we need students dreaming of creating technology by human for the world, for then will have a world for all beings" International cooperation is crucial for his path, because we learn from other experiences by giving a hand to those in need.



Siddharth Pandey

Siddharth Pandey is a PhD student at University of New South Wales at Canberra, Australia. His work is on Understanding Thermal Convection on Martian Surface to aid Design of a Mars bound Rover. Previously, he was an Education Associate at NASA Ames Research Center. He worked with the Space Sciences Division investigating Fluidized Granular Flows in reduced gravity to aid design of Pneumatic Sample Acquisition Systems. He also worked with the Space Biosciences Division to design and develop Microgravity Bioscience Payload for research conducted on board the International Space Station. His work on two successful

spaceflight experiments was honoured when his team received the NASA Spaceflight Awareness Team Award in May 2014. He holds a Master's degree in Space Systems Engineering from Delft University of Technology, the Netherlands and a Bachelor's Degree in Aerospace Engineering from Amity University, India. As a Researcher with the Blue Marble Space Institute of Science and Mars Society Australia, Siddharth is helping coordinate joint Astrobiological field research and workshops in India with support from relevant research groups within US, Australia, New Zealand and India. His goal is to promote scientific collaboration between groups in India and elsewhere and also increase planetary science and Off-Earth surface exploration research exposure among Indian university students. On a personal level, he maintains links with students and staff at his previous educational institutions and helps mentor students with career and research relevant advice. He is also a Canberra Student Ambassador with the ACT Government, Australia.



Suman Gautam

Suman Gautam is a founder project Coordinator at Pokhara Astronomical Society (PAS). In this role, he serves as an advisor to science community and represents the science to community through Research, Education and Advocacy. In addition, he serves as a vice- chair for the Hands on Universe Nepal chapter and Board Member on Nepal Astronomical Society (NASO), where he involved in renewing scientific education at high school being deeply involved in the Galileo Teachers Training Program and the Hands- on Universe consortium. He received M.Sc. Physics from Tribhuvan University, Prithvi Narayan Campus, Pokhara. He has been involved

as a freelance teacher of physics and Mathematics for high school students and gives talks about astronomy and space science in school, college and public. He has reached thousands of students and public conducting night sky observation in different places of Nepal. His research interests include the application of space science in exploring the management of natural resources through remote sensing, where he attends numerous workshops, on the application of Space Science to Agriculture. Disaster management and land use, Suman's primary interest is on Global Navigation and satellite application. His view on challenges of developing Nations in falling to adopt the integration of space science and technology in their economics can be solved by regional and international involvement.



Beza Tesfave

My name is Beza Tesfaye born and raised in Addis Ababa, Ethiopia. I have BSc. in Global Studies and International Relation and Advance Diploma on Commuter Science. Currently I'm a post graduate student of computer Science at HiLCoE School of Computer Science and Technology in Addis Ababa. I have great passion for space science, Astronomy and space technologies. I am active member of Ethiopian Space Science Society (ESSS) since 2004, its establishment. I actively participate in space science outreach events and education programs. From 2006- 2010 I have worked as education and outreach coordinator, organize events like

World Space Week, Yuri's Night World Space Party, Stargazing nights and community outreach activities. I have served as National Point of Contact of Ethiopia for two terms (2010-2014) for Space Generation Advisory Council (SGAC) and now I am Regional Coordinator for Africa until 2016. In 2013 I was a part of SGC2013 organizing team and part of SGAC Earth Observation working group also in 2013 I have received SGAC Young Leadership Award that enabled me to attend 12th SGC in Beijing China. During my work at SGAC I have had opportunities to meet with young professionals, student around the world and influential people in space sector that motivate me to go out in the world and explore more knowledge and opportunities, also in turn to contribute my part. I believe international cooperation is the only way in using space knowledge to the fullest of its potential.



Gabriel Lapilli

Native of Argentina, graduated as a Mechanical Engineer from the National Technological University in Cordoba. Finished a MS in Aerospace Engineering and is currently a PhD candidate in Mechanical Engineering at Florida Tech. Participates in multiple aerospace-related projects including Slosh, a fluid dynamics experiment on the International Space Station that earned him a Top Engineering Development award from the American Astronautical Society. Working in the Aerospace Systems And Propulsion (ASAP) and the Mechatronics and Dynamics Systems laboratories at Florida Tech, merges fluid dynamics with control systems.

Propellant behavior and spacecraft control are his main areas of study, with a dissertation topic centered on controlling flexible rockets using fiber optic systems. A new chapter in space exploration is being written with immense international cooperation. Today's young professionals will be the leaders that push boundaries in the coming years.

Jesus Gonzalez

Jesús González-Llorente received his B.S. degree in Electronics Engineering from the Universidad Nacional de Colombia in 2003. He also received a graduate diploma in Software Engineering from District University Francisco Jose de Caldas in 2005 and his M.S. degree in Electrical Engineering from the University of Puerto Rico at Mayaguez in 2009. During his master studies, emphasizing in control systems, he studied techniques for improving the efficiency of photovoltaic systems. In 2010, he worked as research intern for Cornell University in the Arecibo Observatory, the world's largest and most sensitive radiotelescope located in Arecibo, Puerto

Rico. In summer 2013, he was a visiting scholar in University of Arkansas, Fayetteville, USA. He is currently a faculty member of the Universidad Sergio Arboleda in Bogotá, Colombia where he is also the team leader of the Electrical Power System for Libertad 2 nanosatellite, and he encourages undergraduate students to take part in the satellite project. He have been Principal Investigator of a research project funded by Colciencias, the Colombian Administrative Department of Science, Technology and innovation, for analyzing of collected solar energy and its efficient use on 3U Cubesat nanosatellites. His current research activities include the design of electrical power systems for nanosatellites and modeling and control of low power dc-dc converters.



Laura Leon Pérez

Laura León Pérez received the double degree in the Aerospace Engineering Master Degree from the University of Seville and the Space Engineering Master of Science from the Politecnico di Milano in April of 2013. She collaborated in the Aerospace Engineering and Fluid Mechanics Department in the University of Seville during 2010 where she developed a wing model for experimentation in the wind tunnel. From 2012 to 2013, she was employed in the Von Karman Institute of Belgium as Space Engineering Researcher for experimental investigation of the aluminum nano-powders oxidation to understand and control this phenomena. Then, she

moved to the company Solar MEMS Technologies where she is currently working as Space Specialist Consultant and Mission Manager of the service Test In Space. She started coordinating the first Andalusian satellite mission, Cepheus, according to the ECSS and CubeSat specifications, where she also managed the platform design, payloads interfaces and integration procedures. After this experience, she became the Mission Manager of the Multi-Payload Satellite Program and she is in charge of the quality management of the projects and products related with Space applications. Her expectations, regarding to the professional area, are to go on learning about space systems and quality in order to grow towards the space science expertise and to reach her ambition of becoming a successful Space professional involved in innovation and challenging missions.



Sultan Assipov

My name is Sultan Assipov. I am 28 years old and for the last 5 years, I work in the space industry. I went through some internships in Airbus DS and SSTL, where I was a specialist for the electronics of optical payload. Today I'm a systems engineer for the SKTB project that aims to start the manufacturing of space components in Kazakhstan, and it is a very ambitious project. In addition, I'm a second year Masters student in Nazarbayev University for the Engineering Management program, so for the last year I'm more interested in managerial aspect of space industry than for the engineering one, but still I get excited when the high tech space

technologies are involved. I'm really happy to be here, and to present my Country and the Company. My company, "Ghalam" is very young and it is important for us to become an honorable member of the world space community. International cooperation in Space is natural because there is no borders up there, and humanity should be united for the sake of better future. I really hope to make my space network here, and my LinkedIn account is ready for many new connections.



Dalin Li

I have been working in National Space Science Center (NSSC), the Chinese Academy of Sciences, for more than six years. My work mainly focus on space mission analysis and satellite operations. I have taken charge of several projects in these fields, including (1) the YH mission, which is the Chinese first Mars explore mission and out of control after launching unfortunately, (2) the software development on visualization, simulation, and analysis for more than ten earth observe satellites, (3) the software development for the Concurrent Design and Simulation Center (CDSC) at NSSC, which is used for China's space science mission design and

simulation, like the Concurrent Design Facility (CDF) in ESA. I've earned fertile experience from these projects. And now my mainly work is related with the Strategic Pioneer Program on Space Science (SPPSS), which is the most important program on space science in China. The fundamental research related to this program during the "Twelfth Five-Year Plan" period focus on the properties of black hole, physical laws under extreme conditions, the nature of dark matter, kinetic theory of matter and fundamental laws governing life in space, influence of the Sun on the Earth space weather, and the analysis of non-locality of quantum mechanics. A project I'm in charge of is development of the scheduling and planning system for the operation center built for SPPSS. Another project I'm in charging of is the study on space science mission analysis techniques, which is also supported by SPPSS.



Milan Mijovic

Milan Mijovic has graduated from Law school, University Union, Belgrade, where he obtained BA and MA degree in law. He is currently enrolled at Ph.D. Studies at Law School, University Union in Belgrade. His doctoral Thesis shall question problems relating to property rights in Space, Moon and other celestial bodies, which shall be the first Space law related Thesis in Serbia. His plans are to introduce more detailed regulations regarding property rights outside the Earth, in order to establish an organized and legal system. Milan began researching Space law in 2012, when he participared in a competition organized by his Law School for

best essay with a topic from Transportation law. After he won first prize for his essay with a topic: "Legal Aspects of Space Traffic", and following the publication of his work in Legal journal of his Law school, Milan became asserted to pursue a carrer in Space law. Since 2013, Milan is an active member of an internation organization called Space Generation Advisory Council, being a National Point of Contact for Serbia. During the years, Milan provided the best efforts of introducing Space law to Serbia, especially to Universities, Legal experts and general comunity.

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 66th International Astronautical Congress (IAC).





Justin Atchison is a young professional who received his PhD in Aerospace Engineering at Cornell University in 2010. Dr. Atchison served as a graduate exchange researcher at JAXA in 2008 and now works at the Johns Hopkins University Applied Physics Laboratory as a mission design and navigation engineer. He is the Mission Design Lead for the Double Asteroid Redirection Test (DART), which aims to test and characterize asteroid impact mitigation techniques, making our local solar system more accessible and secure.



Sarah Hefter Flanigan is a member of the Senior Professional Staff at the Johns Hopkins University Applied Physics Laboratory and holds degrees in Aerospace Engineering from both Virginia Tech and Cornell University. She was the Lead Guidance and Control Engineer on the MESSENGER mission whose spacecraft was the first to orbit Mercury. She is also the Deputy Lead Guidance and Control Engineer on the New Horizons mission whose spacecraft will fly by Pluto on July 14, 2015. She plans to share a paper on the much-anticipated New Horizons mission at the IAC.



Raphael Perrino is an M.A. student in International Science and Technology Policy with an emphasis in Space Policy at George Washington University, and plans to graduate in August 2015. He holds an M.S. in Technical and Scientific Communication from James Madison University and is an Eagle Scout. Mr. Perrino is an Aerospace Analyst at The Tauri Group and has worked on the GAO 2015 NASA Quicklook, FY16 NASA Budget Request, and Start-Up Space study. He has authored and co-authored several papers on Space Policy, including one on NASA's Commercial Crew Program that he has submitted to this year's IAC.



Jillianne Pierce. In her position as Government Affairs Associate for the Space Foundation, Jillianne regularly interfaces with the Administration, Congress, and various federal and international departments and agencies to educate key decision-makers on issues of importance in the space policy arena. A member of the Florida bar, Jillianne earned a J.D. from the University of Miami and a B.A. from the University of Central Florida. Her IAC presentation will focus on how commercial imaging satellites can provide evidence of human rights abuses, and how such image-gathering influences the evolution of the "Responsibility to Protect" doctrine.



Julia Stalder is a young professional who plans to complete her M.S. in Mechanical Engineering at UCLA in June of 2016. She currently works at the California Institute of Technology's NASA Jet Propulsion Laboratory, where she has had the opportunity to work as a mechanical engineer on the Surface Water and Ocean Topography program for CNES and the ISS instrument RapidScat. Julia is a recent recipient of the NASA Early Career Achievement Honor Award. She is also the only applicant who is a panelist at the Next Generation Plenary.



Paul Warren is a student and young professional at Stanford majoring in Computer Science. He has helped organize and has participated in numerous space and zero gravity experiments, and is now the co-president of the Stanford Space Initiative (SSI). SSI will send the first university-built rocket to space, launch two satellites, send a weather balloon across the United States, and has generated enough interest in space for Stanford to create a new Aerospace and Aeronautics program within the next three years. Warren continues to use his experience and contacts within the space industry to help fellow students develop space related careers.



Associated Events

7.1 IAF/ISEB Educators Professional Development Workshop

Sunday, 11 October 2015 Date:

08:00 - 16:00 Time: Room 312, ICC

Using the Science of Teaching in Teaching Science

lan Christie, Outreach Co-Ordinator and Curriculum Designer, Victorian Space Science Education Centre (VSSEC), Melbourne, Australia, will introduce participants to the nine classroom techniques for which there is real evidence that student outcomes are improved by teachers who use these techniques.

A Creative Approach to Science Lessons and Teacher Professional Development

VSSEC will showcase the effective use of outreach programs in primary schools to deliver science lessons to students simultaneously with teacher professional learning.

Fully Immersive Scenario Based Learning: A Robotic Mission to Mars.

An online, scenario based, educational program for years 9 & 10. Participants will take control of the VSSEC Mars Rover in Melbourne using their Mission Control website.

Interactive Platforms in the Classroom

Raz Tamir from the Israeli Space Agency (ISA) will give a workshop on the use of online tools that students perceive as fun, leisurerelated activities in the service of space education.

Presenters:

Philip Spencer, Director, VSSEC Ian Christie, Outreach Co-ordinator and Curriculum Designer, VSSEC Raz Tamir, ISA Student Assistants: Michiel Zittersteijn (ESA) Christoph Montag (ESA) Conor MacDonald (VSSEC) Blake Edwards (VSSEC)





7.2 Cross-Cultural Communications and Presentation Workshop

Date: Sunday, 11 October 2015

8:30 - 13:30 Time: Venue: Room 310, ICC

The Cross-Cultural 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.

7.3 Academy Day

Date: Sunday, 11 October 2015

Time: 09:00 - 17:45

Crowne Plaza Jerusalem Hotel, Ball Room B

THE INTERNATIONAL ACADEMY OF ASTRONAUTICS (IAA) - IAA PLENARY SESSION - OPEN MEETING

	IAA Plenary Session - Open Meeting
	Crowne Plaza Jerusalem Hotel, Ball Room B
09:00	Welcome Address, Madhavan Nair, President International Academy of Astronautics
09:10	Laurels for Team Achievements Introduction, Charles Elachi, USA (TBC)
09:15	Laurels for Team Achievement Lecture: Philae team, which conducted the first-ever trajectory development for a ballistic comet landing, the first on-comet operations, and the first cometary in-situ science collection. International cooperation was essential for the success of this remarkable mission.
10:15	The future of ESA and its programs, Johann-Dietrich Woerner, Director General ESA
10:45	IAA Summit on Climate Change and Disaster Management, Jean-Yves Le Gall, President CNES, France, IAA



11:15	Round Table of Heads of Space Agencies on Climate Change and Disaster Management: Prof. Isaac Ben
	Israel, ISA, Dr. Jean-Yves Le Gall, CNES, Dr. Johann-Dietrich Woerner, ESA, Dr. Seidu Oneilo Mohammed,
	NASRDA, Nigeria, Dr. Gerrit Nieuwpoort, NSO, Dr. Marius Ioan Piso, ROSA, Romania, Dr. Francisco Mendieta-
	Jimenez, MSA, Dr.Madhavan Nair: Moderator.

12:15 IAA Luncheon (Crowne Plaza Hotel Ballroom A In advance registration required)

IAA Restricted Session

Crowne Plaza Jerusalem Hotel, Ball Room B

13:30 General Meeting of the Academy (Meeting access restricted to IAA members and Corresponding Members)

	IAA Plenary Session - Open Meeting
	Crowne Plaza Jerusalem Hotel, Ball Room B
14:40	Welcome Address, Anatoly Perminov, Vice-President Scientific Activities
14:45	SG 4.16 The Applications of Micro-Satellites and Cube-Sats to Planetary Science and Exploration Missions, Alkalai/Graziani/Bousquet/Laufer
15:15	SG 2.13 Space Life Sciences, Physiology and Medicine in the Exploration Era: The IAA Virtual Institute of Space Life Sciences, Physiology and Medicine, <i>Rupert Gerzer</i>
15:45	SG 1.11 Comparative Climatology - Studying Planetary Climate to Understand our Planet, Ramachandran/ Ocampo
16:15	SG 2.8 e-Learning, education content sharing; Technical and legal issues in space Life sciences, <i>Kourtidou/Horneck/Bamidis</i>
16:45	SG 4.21 Distributed, Networked, Smart, Cooperating Small Satellite Formations, <i>Igor Belokonov/ Klaus Schilling</i>
17:15	SG 4.17 Space Systems for Biomedical Research, Cappelletti/Graziani/Massimiani
17:45	Adjourn Plenary Session
18:30 - 22:00	Reception and Dinner, Induction Ceremony of Newly Elected IAA members, Ballroom AB (In advance registration required, restricted to IAA members and Corresponding Members and their quests)

7.4 IAC Hosts Summit

Sunday 11 October 2015 Date:

09:00 - 13:00 Time:

International Convention Center, Jerusalem – Room: Oranim 1

Time:	Programme
Opening	Welcome Address by IAF President Kiyoshi Higuchi
09:00 - 09:10	Opening Address by CSAC Chairman and Moderator of the Summit, Philippe Willekens
Session 1:	Experience from previous IAC Hosts The Secretary General of IAC2009 Local Organising Committee will share successful practices and challenges involved in hosting the World's Premier Global Space event
09:10 - 09:50	Presentation by Amb. Heung-sik Choi, President, Korea Institute of Convention Design Discussion, Q&A
Session 2:	Why hosting an IAC? The benefits of hosting an IAC are legion. This session will present the most important motivations from an LOC perspective.
09:50 - 10:15	Presentation by Menachem Kidron, Director, Israel Space Agency (ISA) Discussion, Q&A
10:15 - 10:30	Coffee break
Session 3:	IAC Innovation It is our delegates' needs and expectations that dictate the direction of IAC. What is new at IAC2015? What will the IAC of tomorrow be?
10:30 - 10:40 10:40 - 11:40	Presentation by Myriam Morabet, Projects Manager, International Astronautical Federation (IAF) Roundtable Discussion: IAC - What are your Expectations for the Future? Moderator: Philippe Willekens, CSAC Chairman Invited Participants: Michel Arnaud, Special Advisor to IPC Co-Chairs, IAF
	 Carissa Bailey, Conferences & Events Associate, SpaceX (tentative) Tanja Masson-Zwaan, President, International Institute of Air and Space Law (IISL) Sandra Ramirez, IPC Co-Chair for IAC2016, President of the Mexican Society of Astrobiology and Professor at Universidad Autónoma del Estado de Morelos Oshrat Slama, Director of Marketing Communications, Space IL (tentative) Kevin Stube, Chair of IAF Workforce Development/Young Professionals Committee and member of the Advisory Board of the Planetary Society
Session 4:	IAC Sponsorship Sponsorship in the context of an IAC is increasingly an important source of income for IAF and LOC. How can you build a successful sponsorship program? To secure sponsorship you need to understand what sponsors are looking for and offer benefits and value that meet their needs.
11:40 - 11:50	Presentation by Christian Feichtinger, Executive Director, International Astronautical Federation (IAF)



11:50 - 12:50 Roundtable Discussion: Why is Sponsorship so Important for an IAC?

Moderator: Philippe Willekens, CSAC Chairman

Invited Participants:

- Steve Eisenhart, Senior Vice-President Strategic & International Affairs, Space Foundation
- Guillaume Girard, Business Development Manager, INSYEN AG
- Megan Scheidt, Managing Director, Technical Activities Division, American Institute of Aeronautics and Astronautics (AIAA)
- Mary L. Snitch, Senior Manager, Industry and University Relations, Lockheed Martin Corporation
- Zvika Zuckerman, Director, Marketing & Business Development, Space Systems Directorate, Rafael Advanced Defense System Ltd. (tentative)

12:50 - 13:00 Closing remarks by CSAC Chairman and Moderator of the Summit,

Philippe Willekens

13:00 - 14:00 Hosts Summit Lunch - sponsored by Space Foundation (Room Oranim 2, ICC)



7.5 IISL Manfred Lachs Space Law Moot Court Competition

Thursday, 15 October 2015 Date:

Venue: The Hebrew University, Jerusalem, Israel

24th MANFRED LACHS SPACE LAW MOOT COURT COMPETITION ORGANIZED BY THE INTERNATIONAL INSTITUTE OF SPACE LAW (IISL)





The Manfred Lachs Space Law Moot Court Competition is organized annually by the International Institute of Space Law (IISL). Preliminary regional competitions are organized between April and June. The winning teams of the preliminaries meet in the World Finals held in conjunction with the annual IISL Colloquium, and traditionally have been judged by Judges of the International Court of Justice.

This year, for the 24th competition, four teams, from Africa, Asia Pacific, Europe and North America, will compete in the World Finals. These events will take place in Beijing during the IAC. The name of the 2015 Moot Problem is "Case Concerning Planetary Defense" (SPIDR v. URA). The Moot Problem presents issues relating to the response to a threat to the Earth posed by the risk of collision with a Near Earth Object (NEO). The problem also addresses the utilization of natural resources of the celestial object, and liability for damages occasioned by the NEO.



The semi-finals will be held on Tuesday, 13 October in a closed session. The Final Round will be held in the afternoon of Thursday, 15 October 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: Thursday 8 October). 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: Dr. Martha Mejía-Kaiser, lachsmootchair2@iislweb.org Melissa K. Force, Esq. melissakforce@aol.com Les Tennen, Esq. lachsmootchair1@iislweb.org

Internet sites:

Lachs Space Law Moot Court: http://www.iislweb.org/lachsmoot/ Facebook: Lachs Moot Court: http://www.facebook.com/spacemoot Twitter: Lachs Moot Court: http://twitter.com/SpaceLawMoot

IISL: www.iislweb.org

7.6 14th Space Generation Congress (SGC)

Date: 8 – 10 October 2015

Venue: Bloomfield Science Museum, Sderot HaMuze'onim, 91904 Jerusalem, Israel (1.3km from IAC venue)

Website: www.spacegeneration.org

THE GLOBAL SPACE CONGRESS FOR UNIVERSITY STUDENTS AND YOUNG PROFESSIONALS INTERESTED IN TODAY'S KEY SPACE ISSUES



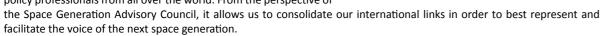
The Space Generation Congress (SGC) is the annual meeting of the Space Generation Advisory Council (SGAC) held in conjunction with the International Astronautical Congress. SGC gathers a select group of top university students and young professionals from various areas of the international sector – government, 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



- **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 2015 Programme – See SGC website for detailed schedule, speakers, and sessions

Thursday, 8 October

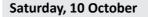
09:00 - 18:00 SGC Sessions

20:00 SGC Opening Dinner

Friday, 9 October

09:00 – 18:00 SGC Sessions

20:00 SGC International Night



09:00 - 14:00 SGC Sessions

14:00 - 16:00 SGC Final Presentations **16:30 - 17:30** SGAC/WSW Panel

17:30 - 18:30 SGAC/WSW Tweet-Up Reception
20:00 SGC 2015 Gala Reception and 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, 10 October

20:00 SGC 2015 Closing Reception and Dinner (advanced booking required)

Address: Beit Belgium (Belgium House) Giv'at Ram Campus, Hebrew University of Jerusalem (1.8km from IAC Venue).

Wrapping up three days of SGAC's 14th Space Generation Congress, the annual SGC Closing Gala Dinner honors 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 2015.

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 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

Jan Svoboda SGC 2015 Congress Manager jan.svoboda@spacegeneration.org

International Astronautical Congress

SGAC at the IAC

Sunday, 11 October 2015, 11:00 - SGAC Space Operations Workshop (advance registration required)

Learn how to carry space operations for big satellites as well as for cubesats from three points of view: Agency, Commercial operator and Small company. EUMETSAT will be representing the Agency point of view, Telespazio Vega the commercial point of view and, Gauss srl, the small company point of view. The SGAC Space Operations Workshop is open to students and Young

Sunday, 11 October 2015, 17:30 - SGAC Educational Outreach Event

SGAC will partner with Bob Richards (co-founder of ISU) to conduct a space outreach event. The event will take place in one of Israeli's best high schools, IASA, and will include several presentations on different aspects of space.

Tuesday, 13 October 2015, 7:30- SGAC Alumni Breakfast (advance registration required)

As the network of SGAC members around the world increase, the SGAC Alumni Breakfast is an opportunity to build connections and network with SGAC alumni. Reconnect with fellow SGAC Alumni and learn about current SGAC events and projects.

Tuesday, 13 October 2015, 16:00 - SGAC Booth Reception

Join SGAC and Space Foundation for drinks at our Booth (Booth #5) and get acquainted with fellow SGAC members, IAC delegates, speakers and panelists.

Wednesday, 14 October 2015, 13:30 - GNF Panel Discussion - "How to Launch Your Career in Space"

The panel will offer advice for young professionals looking to enter or advance within the space industry, drawing from the personal experiences of senior leaders in the field. The discussion will focus on creative ways to gain insight and experience, while learning how to measure your own self-worth while learning to identify opportunities for advancement.

Wednesday, 14 October 2015, 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 2015 delegates, registered IAC 2015 Young Professionals, and invited guests. Collect your invitation at the SGAC or ISU Booth.

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 2015 Young Space Leaders Scholarship

The Space Generation Advisory Council (SGAC) provides opportunities for the next generation of space professionals, enabling them to have their input and ideas heard on an international platform. SGAC is proud to recognise exceptional students and Young Professionals though the annual SGAC Young Space Leaders Scholarship allowing the recipients to participate in the Space Generation Congress and International Astronautical Congress.



Bruno Sarli

After graduating in Aeronautics in Brazil and Space Engineering in Europe, Bruno moved to Japan where he has been working in Astrodynamics for the Japanese Aerospace Exploration Agency (JAXA). During this time, he worked in different missions with the latest launched last year. Bruno has been with SGAC since 2012 when he was elected NPoC Brazil. After his term, he took the role of Regional Coordinator in South America and together with the South American team organized the first South American Space Generation Congress held in Buenos Aires, Argentina.



Giampietro Tonoli

Giampietro Tonoli is a Master Student in Industrial Engineering at the Technical University of Brunswick, Germany. During his Master studies he worked at the German Aerospace Center (DLR) as a student assistant in the DLR School Lab Braunschweig, where he helped inspiring and motivating teenagers to get involved in science and engineering. He earned a Bachelor of Science in Aerospace Engineering at the Politecnico di Milano, Italy in 2013. Giampietro joined SGAC in 2014 after participating at the SpaceUp in Bremen, Germany. His interests in space are the international project management, lean processes and science application. Giampietro is currently writing his Master Thesis, with a focus on helping in the development of an experiment for the ISS. Giampietro has many years of international experience due to volunteer activities and student jobs abroad.



Henry Ibitolu

Henry was born and raised in Nigeria. He is currently a Geospatial Data Analyst at Onidex Geospatial Solutions, a company he co-founded while he was an undergraduate. He is currently also a Science Teacher at a Community School, where he initiated a Space Club and hopes to construct an Amateur Telescope to help inspire the students. He earned his Bachelor of Technology degree in Meteorology at the Federal University of Technology, Akure, Nigeria in December 2014. Henry completed his Internship at the Nigerian National Space Research and Development Agency, where he was exposed to issues relating to application of Space-based technology for humanity. He has participated at the Inaugural Astronomy Summer School for West African Students, where he gained more insights in Space Science. Since he was a child, Henry has been amazed by the stars, astronauts and everything related to space. It is since then that he knew he wanted to become a space scientist and be involved in research that would touch the lives of others, especially those under-privileged in society.



Sirisha Bandla

Sirisha Bandla currently works at Virgin Galactic in the DC operations office on Government Affairs and Business Development. Previously, Sirisha served as the Associate Director for the Commercial Spaceflight Federation, an industry association of commercial spaceflight companies. At CSF, Sirisha works on various policies with the aim to promote the commercial space industry and make commercial human spaceflight a reality. Before CSF, she worked as an aerospace engineer designing components for advanced aircraft at L-3 Communications in Greenville, Texas. While at Purdue University, Sirisha lead a team in the NASA-supported Reduced Gravity Student Flight Opportunities Program in which she flew onboard the ZERO-G aircraft and managed a group of engineers who designed, fabricated, and flew a microgravity science payload. She has a Bachelors of Science degree in aeronautical/astronautical engineering from Purdue, and holds a Masters of Business Administration from the George Washington University. Sirisha has been active in SGAC since 2013, attending her first Space Generation Congress in 2014 in Toronto, Sirisha was the Fusion Forum manager for the 2015 Space Generation Fusion Forum in Colorado Springs.



Kyle Acierno

Kyle Acierno was born in the Canadian Rocky Mountains and began exploring at a young age. His interest in space stems from his passion to discover the undiscovered and preserve and extended consciousness. Kyle graduated with a BA in International Security from Simon Fraser University and received a M.Sci of Space Studies from the International Space University in 2015. His thesis focused on the exploitation of lunar resources and soon after graduation he was hired by Ispace technologies and Team Hakuto, a front runners in the Google Lunar X Prize, to direct global business development activities.

International Astronautical Congress



IAF Awards 2015

8.1 The 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. Jha



Allan D. Emil (1898 - 1976)



2015 Awardee Virendra Jha

Dr. Jha has over 42 years of experience in the Canadian Space Program ranging from in-depth engineering work to senior management positions in both the Private and the Public Sectors. Dr. Jha began his space career in 1972 when he joined the Aerospace group of RCA Limited Montreal, which later became Spar Aerospace Limited. In 1988, he became the Director of Engineering at Spar Aerospace Limited. In 1991 Dr. Jha joined the Canadian Space Agency as Director of the Space Mechanics Group. In 1996 he was promoted to the position of Director General, Space Technologies Branch of the CSA. From 2003 till 2008, he was the Vice-President responsible for Science, Technology and Programs at the Canadian Space Agency. As Vice President, Dr. Jha provided strategic direction, vision and leadership to all core technical sectors of the Agency. From November 2005 until February 2006, Dr. Jha also served as the Acting President of the Canadian Space Agency. He was Chief Engineering Adviser at the Canadian Space Agency until his retirement in 2014. Dr. Jha received his B. Tech. degree in Mechanical Engineering from the Indian Institute of Technology Delhi India, his Master's degree in Mechanical engineering from McMaster University, Hamilton, Canada, and his Ph.D. degree in Mechanical Engineering from Concordia University, Montreal, Canada and the C.Dir. (Chartered Director) Degree from McMaster University, Hamilton, Canada.

Dr. Jha's technical contributions in Canadian Space Program as well as in International Space activities have been significant. His initiatives in forging international partnerships led to CSA's cooperation with India in the form of Astrosat, with NASA on Cloudsat. with Argentina on SAC-D and SAOCOM project. His leadership and commitment to the profession is reflected by his recognition and active participation in many groups, committees and advisory boards. Some of his specific awards are: Queen's Jubilee Medal recipient in 2002 (this Medal is given to a few selected Canadians who have made a significant contributions to Canada), honorary member of the "Golden Key - International Honorary Society" since 2001 (this society promotes academic excellence amongst universities in North America); recipient of the Canadian Aeronautics and Space Institute (CASI)'s "Alouette Award" for 1999 (this award is given each year to one person who has made a very significant contribution to the Canadian Space Program), appointed full member of the International Academy of Astronautics(IAA) in 2004, and the recipient of the Professional Man of the Year award in 2004 from the Indo Canadian Chamber of Commerce. Some of the specific committee memberships are; Co-Chair of "International Program Committee" (IPC) in 2003-2004 and in 2013-2014, Vice President of International Astronautical Federation (IAF) from 2004 to 2008, Canadian representative on the Independent Assessment Panel for the International Space Station (1994-1999). Canadian delegate to the European Space Agency Council (1996-2006), Canadian representative for the Committee for Earth Observing Satellites (CEOS) (1997-2006), Canadian representative for Group on Earth Observation (GEO) (2003-2007). Dr. Jha has published and presented more than twenty papers on space related subjects. Dr. Jha has also served as a Board member for five technology related non for profit organizations

8.2 The 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 2015 Malina Medal is Prof. Boris Pschenichner.



Frank J. Malina (1912 - 1981)



2015 Awardee **Boris Pschenichner**

Boris Pschenichner began his space and astronomical education activity since 1955, when he was a teacher of astronomy in Moscow secondary school. Since 1958, when everybody was extremely interested in space due to launch of first satellites orbiting Earth, B. Pshenichner started working is Moscow Planetarium, where classes for astronomical education were organized. In 1962 B. Pshenichner was invited to just opened "Moscow Palace of Pioneers" (today named "Moscow State Palace of Child and Youth Creativity") with task to organize the first in USSR Department of Astronomy and Cosmonautics for schoolchildren. Since that time he was the head of the Department for more than 40 years. In that Department he organized courses for Astronomy, Astrophysics, Space biology and medicine, Crew of young cosmonauts, and even Rocket constructing. Since the very beginning of the Department activity he established a very productive cooperation with scientists, researchers and teachers of colleges and universities, scientific and industrial organizations. Lot of his students became astronomy teachers, space researchers, and engineers after they spent their school years at the Pshenichner classes at the "Pioneer Palace". From 1996 to 2003 B. Pshenichner took part in creation of the concept of the Russian National Program for Space Education. From 2004 till 2013 B. Pshenichner was the head of Open scientific-educational program "Space experiment", which was founded by Lomonosov Moscow State University, Space Corporation Energia and the Pioneer Palace. In framework of that program 13 projects proposed by schoolchildren have been realized onboard the International Space Station and Earth-orbiting satellites. Up to now Boris Pshenichner is working as a consultant of the Department of Astronomy and Cosmonautics for schoolchildren.

8.3 IAF Hall of Fame



2015 Awardee Hans E.W. Hoffmann

With an aeronautical engineering degree (University of Aachen, 1961) and masters (University of Wichita, Kansas, 1962), Hans Hoffmann began his career in 1961, as project manager of the "Third Stage" European ELDO-I Launcher at Weser Flugzeugbau GmbH /ERNO Raumfahrttechnik GmbH in Bremen, Germany. In 1969, he became vice-president of the European Launcher Development Organisation (ELDO), in Paris, responsible for the development of a new launcher, "EUROPA-III", and for negotiations with NASA of the European contribution to the Post Apollo Programme. Four years later, Hoffmann returned to Bremen, as Managing Director and "Spacelab" Project Director at ERNO Raumfahrttechnik GmbH/MBB-ERNO. In 1985, he created and became managing director of Intospace, an umbrella organisation of 90 European microgravity user organisations. Between 1989 to 1990, Hoffmann was managing director of Dornier International; marketing director of DASA, Munich, responsible for all international marketing and sales of aerospace products; and president of DASA(MBB) MSG in Bremen, in charge of UAV development, mine-hunting technology and simulator development. As President of STN-Systemtechnik Nord GmbH in Bremen between 1990-1994. Hoffmann was responsible for the German/French development of the UAV "KZO Brevel" target location - a \$200M contract. This UAV is now produced by the German DOD. He also managed the German torpedo developments and was prime contractor for 10 German fast Minesweepers and 12 German Minehunters. Between 1994 and 2000, he was president of STN Atlas Elektronik GmbH in Bremen, a 5,200-employees merger of STN-Systemtechnik Nord GmbH and the former KRUPP-ATLAS ELEKTRONIK GmbH. In 1997, he also joined the Supervisory Board of STN Atlas Elektronik and became a full-time



consultant for the company. After retirement in 2000, Hoffmann has held various consultant positions. He was much involved in ORBCOMM LLC, United States, initially as CEO and President, later as consultant and member of the Board of Directors, resigning from his duties in 2012. Hoffmann's other roles and functions included: membership and vice-presidency of the Senate Committee of the German Aerospace Centre (DLR) (1988-2000); chairmanship of the CALS Committee of the German Industry Association (1990-2000); and fellowship and membership of the American Institute for Aeronautics and Astronautics and the American Astronautical Society. He was IAF Vice-President from 1992 to 1996 and has served as the Federation's Honorary Secretary since 2009. Hoffmann received several awards including the IAF Allan D. Emil Memorial Award (1986), the Engineering Science Award by the International Academy of Astronautics (1993) and the Ordre National du Merit by French President for German/French cooperation (1997). He was named "Man of the Year" by Aviation Week for the creation of Intospace in 1987.



2015 Awardee Paolo Ferri

Paolo Ferri studied theoretical physics at the University of Pavia, Italy. He joined the European Space Agency in 1984, as visiting scientist in support of science operations for the EXOSAT X-ray astronomy satellite at the European Space Operations Centre (ESOC). He moved to the mission operations field in 1986, to work on the operations preparation of EURECA, the first ESA unmanned microgravity platform, which he supported throughout its flight operations until the retrieval from orbit by Space Shuttle Atlantis in 1993. He then was assigned to the CLUSTER mission, a fleet of four satellites for magnetosphere research, in his first assignment as Spacecraft Operations Manager. After the launcher failure in June 1996, exploded 37 seconds after lift-off, he started the preparation of the operations of the follow on mission., which was successfully launched in summer 2000. In November 1996 he was nominated Spacecraft Operations Manager for the Rosetta mission, the first historical mission to rendezvous with and land on a comet nucleus. ESA had at that time very limited experience and no infrastructure for the operations of interplanetary missions. Together with a small group of engineers, Dr. Ferri specified all the elements of the ground infrastructure required for this type of operations. As operations responsible, he designed the operations concept and selected and built up the flight control team which had to accompany Rosetta on its 10 years journey to the comet. Thanks to the foundation work of the Rosetta team, within less than a decade ESOC had a fully functional and operationally validated infrastructure of hardware and software tools for the operations of interplanetary missions, and a group of engineers and technicians with a unique in-flight experience operating interplanetary missions, very successfully operating the three ESA missions, Rosetta, Mars Express and Venus Express. After the launch of Rosetta in March 2004 Dr. Ferri continued to lead the flight operations until August 2006, when he was nominated head of the newly created Solar and Planetary Mission Operations Division, in charge of ground segment management, mission operations preparation and execution for all ESA solar and planetary science missions (at that time Rosetta, Mars Express, Venus Express, Ulysses, Smart-1 and Cluster in flight, BepiColombo in preparation). During his period as head of the Solar and Planetary Division more missions were approved for future launch, ExoMars and Solar Orbiter, and the preparation activities on the ground segment side were assigned to the Division's responsibility. In the meantime he continued to support critical operations activities as Flight Director, e.g. for the launch (2005) and arrival at Venus (2006) of Venus Express, for the Rosetta Mars Swing-by (2007) and for the launch (2009) of the GOCE gravity mission of the Earth Observation programme. Since 2013 he is head of ESA's Mission operations Department, in charge of mission operations preparation and execution for all ESA unmanned missions (currently 9 missions – 14 satellites – in flight and other 20 in preparation, mainly interplanetary, astronomy and Earth observation missions). The Department is also responsible for operation ESOC's ground facilities, including the worldwide ground stations network. Dr. Ferri is member of the Space Operations Committee of the International Astronautical Congress and has been supporting numerous IAC activities since 1999, initially as paper author, session chair, committee member and lecturer to students and young professionals. He devoted throughout his career constant attention to education and training in the field of operations. He developed several lectures on ground segment and mission operations, which are given regularly as part of various ESA internal and external training courses. His lectures on interplanetary mission operations have recently been included in a book on spacecraft operations. He also regularly supports specialist conferences like SpaceOps, and published numerous articles on specialised journals. His passion for space is combined with his interest in education and outreach. Thanks to the popularity of the Rosetta mission, which has been the project of his life and on which he has worked for the past 20 years, he has been lecturing to a large number of Universities, schools and general public audiences, bringing the subjects of space exploration and operations closer to a large audience of enthusiastic people of all ages. For the historical achievement of the Rosetta mission Dr. Ferri has been granted various awards, among which the Sir Arthur Clarke Award and the Galileo Medal of the City of Padova.

8.4 IISL Awards 2015

8.4.1 IISL Lifetime Achievement Award



Marcia S. Smith

In recognition of her four decades of outstanding services to the international community of nations and the International Institute of Space Law, to which she has made invaluable contributions as a director and as Vice President, played notable roles in the promotion of research and discourse on policy and legal aspects throughout her distinguished professional career, making significant contributions to the development of literary resources and rendering immense service to academies and policy making bodies at national and international level in the fields of space and astronautics.

8.4.2 IISL Distinguished Service Award



Prof. Dr. Sergio Marchisio

In recognition of his outstanding and dedicated services to the International Institute of Space Law and to the international legal community, his distinguished leadership in the development of international space law and institutions such as the European Centre for Space Law; his stewardship in organisation of Manfred Lachs Space Law Moot Court Competitions in Europe; his exceptional contributions to academics and space law literature, and his leading role for advancing international space law in the United Nations and other intergovernmental bodies.

8.4.3 IISL Award of Appreciation





Dr. Martin Stanford & Dr. Bernhard Schmidt-Tedd

In recognition of their initiative, drive and organization of the Berlin conference of States and their valuable contributions towards the drafting and successful negotiations of the Space Protocol of the UNIDROIT Cape Town Convention, which after a long duration resulted in a binding new instrument of space law.

8.4.4 IISL Certificate of Gratitude



Japan Aerospace Exploration Agency (JAXA)

In recognition of its nurturing an exemplary spirit of international cooperation in promoting the capacity for space law among students in the Asia Pacific Region, its longstanding support to the organisation of the Manfred Lachs Space Law Moot Court Competition by financing the winning team of the Asia Pacific Regional to attend the World Finals, and its contribution to the organisation of the 2013 Asia Pacific Regional Round in Tokyo.

8.4.5 Diederiks-Verschoor Award for Best Paper by a Young Author

To be announced



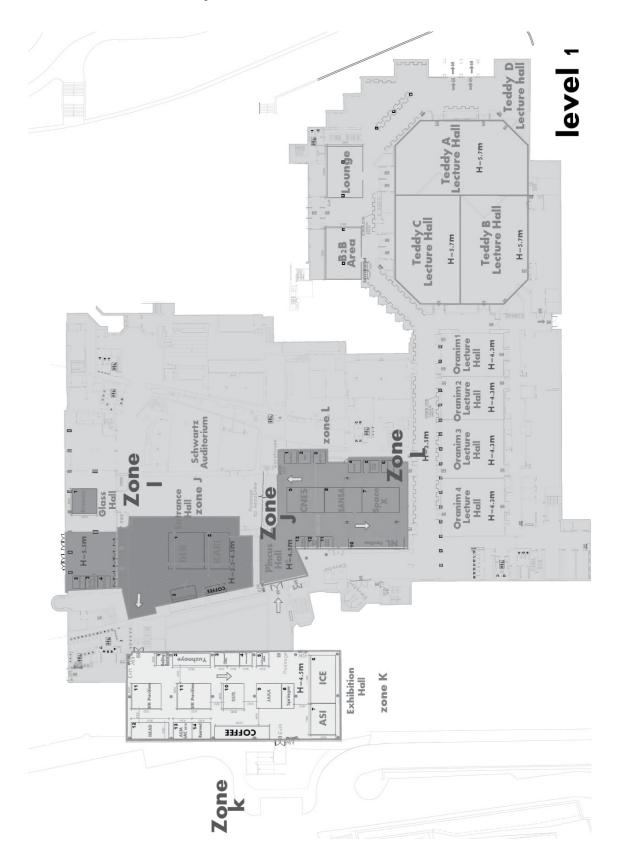


Exhibition

9.1 General Information

Stand Set-up: Delive	ery of Exhibits and Stand Construction		
	 Thursday, October 8 Friday, October 9 Saturday, October 10 Sunday, October 11 	12:00 - 20:00 07:00 - 18:00 08:00 - 18:00 08:00 - 18:00	
Ribbon-cutting cere	mony and VIP Exhibition Tour:		
	Monday, October 12	11:15 - 12:00	
Exhibition Hours:			
	 Monday, October 12 Tuesday, October 13 Wednesday, October 14 Thursday, October 15 Friday, October 16 	12:00 - 18:00 09:00 - 18:00 09:00 - 18:00 09:00 - 18:00 09:00 - 14:00	
Stand Dismantling:			
	• Friday, October 16 –	14:00 - 22:00	
	 Saturday, October 17 – 	08:00 - 18:00	

9.2 Exhibition Area Layout

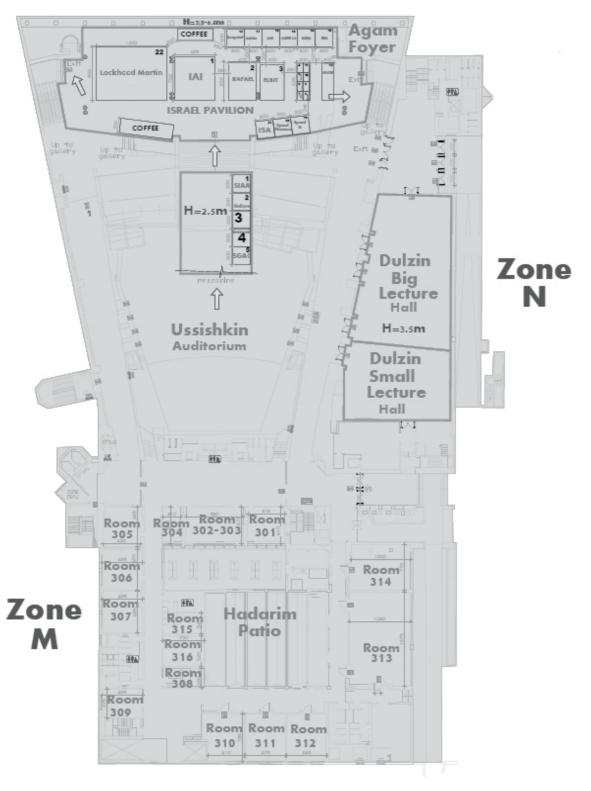






9.3 Exhibitors in alphabetical order

Exhibitors	Booth	Exhibitors	Booth	
AEM - IAC 2016	K - 13	Ayecka Communication Systems, Ltd.	N - 5	
ALM - IAC 2010 AIAA	I - 4	CMI Electronic Industries Trading Ltd	N - 16	
		_	N - 10	
Airbus Defence and Space APSCO	Sponsor L - 3	Elbit Systems Electro-Optics - Elop Ltd.	N - 3	
	L-3 K-7	HSL - Herzliya Science Laboratory	N - 13	
ASI-Italian Space Agency Astro- und Feinwerkzechnik Adlershof GmbH	K-7 I-3	IAI- Israel Aerospace Industries	N - 18	
	1 - 3 K - 4	ImageSat International		
Astroscale PTE. LTD.	K - 4 L - 6	ISERD - The Israel-Europe R&D Directorate	N - 14	
Austrospace	L-6 K-1	Israel Space Agency New Rocket Ltd.	N - 21 N - 8	
Beijing Sunwise Space Technology Ltd.				
Blue Dot Solutions Sp. z o.o.	L - 12	NSLComm Ltd	N - 7	
Boeing Space Expolration	Sponsor	Orbit CS	N - 15	
Bremen Invest Pavilion	I-1	Rafael Advanced Defense Systems Ltd.	N - 2	
Airbus Defence and Space GmbH	I - 1	Ramon Chips, Ltd.	N - 4	
AVIABELT Bremen e. V.	I - 1	Space IL	N - 19	
Bremen Invest	I - 1	Space Pharma R&D	N - 20	
Center of Applied Space Technology and	I - 1	Teva Pharmaceutical Industries Ltd	Sponso	
Microgravity (ZARM)		ISU - International Space University	L - 2	
DSI Informationstechnik GmbH	I-1	JAXA - Japan Aerospace Exploration Agency	K - 9	
Enterprise Europe Network Bremen	I-1	KARI - Korea Aerospace Research Institute	J - 2	
Eurockot Launch Services GmbH	I-1	Kongsberg Seatex AS	I - 2	
HE Space Operations GmbH	I-1	Lockheed Martin	N - 22	
OHB SE - European Space Company	I-1	Romanian Space Agency	L - 4	
Robotics Innovation Center, DFKI GmbH	I-1	South African Pavilion	L - 8	
China HEAD Aerospace Technology Co.	K - 12	CubeSpace	L - 8	
CNES	L - 9	Denel Spaceteq	L - 8	
Czech Space Office	K - 5	F'SATI - French South African Institute of	L - 8	
DLR - German Aerospace Center	J - 1	Technology		
Excalibur Almaz Limited	L - 5	NewSpace Systems	L - 8	
Fraunhofer Space Alliance	J - 3	SCS Aerospace Group	L - 8	
GomSpace Aps	L - 11	The South African Council for Space Affairs	L - 8	
ICE - Italian Trade Agency Pavilion	K - 6	The South African National Space Agency -	L - 8	
CBL Electronics S.r.l.	K - 6	SANSA		
D-Orbit S.r.l.	K - 6	SGAC	M - 3	
DTM Technologies S.r.l.	K - 6	SIAA - Space Industry Association	M - 1	
G.A.U.S.S.	K - 6	Skolkovo Institute of Science and Technology	M - 2	
ICE-Italian Trade Agency	K - 6	Space X	L - 7	
Merletti Aerospace	K - 6	Space Foundation	Sponso	
Planetek Italia S.r.l.	K - 6	Springer	K - 8	
Sitael S.p.A.	K - 6	SSL	Sponso	
Space Engineering S.p.A.	K - 6	Surrey Satellite Technology	K - 10	
Techno System Developments S.r.l.	K - 6	SYRILNKS	L - 1	
Technosprings Italia S.r.l.	K - 6	The NL Pavilion - The Netherlands	L - 10	
Telematic Solutions S.r.l.	K - 6	ATG Europe	L - 10	
Israel Pavilion	N	Airbus Defence and Space Netherlands B.V.	L - 10	
Acktar, Ltd.	N - 17	Hyperion Technologies B.V.	L - 10	
Arazim Ltd.	N - 12	ISIS	L - 10	



level 2





International Astronautical Congress

Exhibitors	Booth	Exhibitors	Booth
Moog Bradford	L - 10	Semelab	K - 11
NLR - Netherlands Aerospace Centre	L - 10	Seradata	K - 11
NSO	L - 10	STAR-Dundee	K - 11
SpaceNed	L - 10	The British Interplanetary Society (BIS)	K - 11
TNO	L - 10	The UK Space Agency	K - 11
TU Delft Space Institute	L - 10	Universal Space Interface Standard (USIS)	K - 11
Utwente	L - 10	The Robert A. and Virginia Heinlein Prize Trust	L-5
THE UK PAVILION	K - 11	Tyvak Nano-Satellite Systems, Inc	Sponsor
Clyde Space	K - 11	Yuzhnoye State Design Office	K - 2
QinetiQ Space nv	K - 11	Zodiac Aerospace / Ormic Components Ltd.	L - 13
RAL Space	K - 11		

9.4 Exhibitor and Sponsor List

Booth: I - 1	BREMEN INVEST PAVILION			
BOOth. 1 - 1				
	Participating Organisations			
I - 1	Airbus Defence and Space GmbH			
AIRBUS DEFENCE & SPACE	On-site contact: Ludger Fröbel, Space Technology Innovation (TSOEI), Head of Technology Partnerships & Fundraising			
	Contact for Follow up: Siegfried Monser	Tel: Email: Web:	+49(0)421 539 5815, Siegfried.monser@airbus.com www.airbusdefenceandspace.com	
		the second largest space company worldwide. It employs 14 billion per year. The company develops and engineers ommercial markets.		
I - 1	AVIABELT Bremen e. V.			
AVIABELT BREMEN N 53.07 E 8.78	Contact person: Mona Ellermann	Tel: Email: Web:	mona.ellermann@aviabelt.de www.aviabelt.de	
	AVIABELT Bremen e. V. is a network of dedicated companies and application-oriented research institutes in the metropolitan region of Bremen-Oldenburg. The network is organised as an association based in Bremen.			
	metropolitan region of Bremen-Oldenburg. The net	twork is orgai	nised as an association based in Bremen.	
I - 1	metropolitan region of Bremen-Oldenburg. The net Bremen Invest	twork is orgai	nised as an association based in Bremen.	
I - 1 Bremeninvest		Tel: Email: Web:	nised as an association based in Bremen. gerber@bremen-invest.com	

our head office you will find Bremen Invest offices in Atlanta, Izmir and Shanghai.

to find growth opportunities in Bremen, Germany and throughout Europe. If you are a company looking for business expansion in Germany, let Bremen Invest help. Bremen is the Key to Germany, and the rest of Europe. In addition to

Center of Applied Space Technology and Microgravity (ZARM)

ZARM

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Contact person: Dr.-Ing. Thorben Mobile: +49 (0)175 227 9376

Könemann Email: thorben.koenemann@zarm.uni-bremen.de,

Web:

The Center of Applied Space Technology and Microgravity is a research institute at the University of Bremen focusing on the scientific investigation of phenomena under the condition of weightlessness and questions related to space technology. Its main laboratory is the Bremen Drop Tower.

DSI Informationstechnik GmbH



Contact person: Elias Hashem

Email: hashem@dsi-it.de

Web:

DSI Informationstechnik GmbH has been developing airborne and space-based designs since 1997 and currently employs 45 engineers for electronics and software development as well as project management and product assurance. The fields of activity are dedicated to the engineering and development of solutions for computers, information technologies, control systems and advanced communication systems

Enterprise Europe Network Bremen



On-site contact: Dr. Barbara Cembella Email: barbara.cembella@wfb-bremen.de **Contact for Follow up:** Ellen Horstmann Email: ellen.horstmann@wfb-bremen.de

Web:

Enterprise Europe Network is supporting small and medium companies in seizing their business opportunities in Europe and beyond. Bremeninvest is host organization to the Enterprise Europe Network contact point Bremen, facilitating trade promotion and innovation activities of enterprises from Bremen. During IAC, Enterprise Europe Network Bremen serves as a co-organizer for the IAC 2015 B2B Matchmaking Event.

Eurockot Launch Services GmbH



On-site contact: Peter Freeborn Mobile: +49 (0)171 443 95 23

Email:

Eurockot Launch Services GmbH is the Bremen, Germany, based joint venture of Airbus Safran Launches and Khrunichev Space Center and performs launches of climate research, remote sensing and science satellites into Low Earth Orbits (LEO) for institutional and commercial satellite operators.

HE Space Operations GmbH



Contact person: Claudia Kessler Tel:

Email: ckessler@hespace.com

fritz.merkle@ohb.de

Web:

At HE Space, we are passionate about space and passionate about people! We specialize in personnel recruitment with an exclusive focus on the space sector. This makes us one of a kind, since no other engineering services company combines the exclusive focus on space with the international network, which we have built over 30 years.

OHB SE - European Space Company



On-site contact: Dr. Fritz Merkle,

Executive Board Member

Contact for Follow up: Martin Stade

martin.stade@ohb.de Email:

Web:

Email:

Family managed and domiciled in Bremen, OHB SE (ISIN: DE0005936124, Prime Standard) is Germany's first listed space company. It employs some 2,200 employees generating total revenues of approximately € 800 million per year. Two business units offer international customers sophisticated space systems and satellite constellations.



Robotics Innovation Center, DFKI GmbH

Contact person: Swantie Schmidt

Tel: Email:

Swantje.Schmidt@dfki.de

Web: www.dfki.de/robotics

The Robotics Innovation Center (RIC), headed by Prof. Dr. Frank Kirchner, is a research department of the German Research Center for Artificial Intelligence (DFKI GmbH).

The scope of Space Robotics – one of several main application areas of the RIC – deals with the development of intelligent robots for complex extraterrestrial exploration.

Booth: I - 2



KONGSBERG

Kongsberg Seatex AS

Contact person: Stig Erik Christiansen

+47 73 54 55 00

Stig.erik.christiansen@km.kongsberg.com Email: Web: http://www.km.kongsberg.com/seatex

Kongsherg Seatex AS is a leading international marine electronics manufacturer specializing in the development and production of precision positioning and motion sensing systems. We provide quality products and solutions for safe navigation and operations at sea in the commercial offshore, maritime, hydrographics and defence industries, also including AIS payload solutions

Booth: I - 3



Astro- und Feinwerkzechnik Adlershof GmbH

+49 163 7977302 On-site contact: Stephan Roemer Tel: Email: s.roemer@astrofein.com

Email: s.scheiding@astrofein.com Dr. Sebastian Scheidina

Email: sales@astrofein.com Web: 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 & mechanism and scientific & optical payloads. Additional to that we offer ground support equipment and AOCS test beds.

Booth: I - 4



American Institute of Aeronautics and Astronautics (AIAA)

+1.571-242-4584 Tel: Contact person: Megan Scheidt, Managing Director, Products and Email: megans@aiaa.org **Programs** 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.

Booth: J - 1



DLR - German Aerospace Center

Contact person: Tel: +49 2203 601 2116 +49 2203 601 3249 Fax: contact-dlr@dlr.de Email: www.DLR.de Web:

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.

Booth: **J - 2**

KARI - Korea Aerospace Research Institute



Contact person for follow-up: +82-10-8816-1017 Tel: Mr. Eui-Chan Kim Email: eckim@kari.re.kr www.kari.re.kr Web:

KARI is contribution to the sound development of the national economy improving the quality of people's lives through the development of aerospace technology, and realizing the dream of sky and space of the Republic Korea.

Booth: J - 3



Fraunhofer Space Alliance

On-site and follow-up contact person: Tel: +49 2251 18-308 Thomas Loosen Fax: +49 2251 18-337

- Marketing & PR Email: Thomas.loosen@int.fraunhofer.de

Bringing together 15 Fraunhofer-Institutes, the Fraunhofer Space Alliance conducts applied research in the field of industrial space technology. Fraunhofer acts as systems provider, developing a wide range of top-quality components, integrating them into an overall system and delivering that system to the customer

Booth: K - 1 Beijing Sunwise Space Technology Ltd.



On-site contact: Mrs. Wang Hong Mobile: +86-10-13681269557 Contact for Follow up: Ms. Shi Siyan Mobile: +86-10-15201216872 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.

Booth: K - 2

Yuzhnoye State Design Office



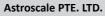
Tel: 38.0562.386403 Fmail: yuzhnoye.sdo@gmail.com

Web: http://www.yuzhnoye.com/en/home/

Yuzhnoye SDO is a well-known and famous scientific and design organization for development of space rocketry. It creates

rocket complexes, launch vehicles, spacecraft of various purposes and rocket engines. It provides commercial services of spacecraft injection. Yuzhnoye SDO develops new materials and promising technologies.

Booth: K - 4





On-site and follow-up contact person: Tel:

Yasu Yamazaki

+65 8309 9612 Email: y.yamazaki@astroscale.com

Web: www.astroscale.com

ASTROSCALE is a Singapore-based private space company that was founded in 2013 with the objective of developing innovative solutions against the growing number of space debris. The company's mission is to actively contribute to the sustainable use of the space environment by crafting scalable and cost effective on-orbit technologies, and to safely remove the most threatening pieces of debris. It is also incubating technologies to collect essential data of small-size debris that cannot be tracked using existing technologies. With its global headquarter in Singapore and a brand new engineering lab in Tokyo, the company is actively preparing for its first capabilities demonstration planned for 2016.

Booth: K - 5

Czech Space Office



Contact person: Michal Kunes

Tel: +420 603 557 753 Email: kunes@czechspace.cz Web: www.czechspace.cz

Czech Space Office (CSO) is a private non-profit organization that, since its inception in 2003, has been seeking to develop space activities in the Czech Republic. CSO provides consultations and networking, promotes Czech space organizations, publishes analysis and organizes seminars. CSO also cooperates with XCOR Aerospace and offers flights with Lynx

Booth: K - 6

ITALIAN TRADE AGENCY

ICE - ITALIAN TRADE AGENCY PAVILION

Contact person: Massimiliano Guido -Tel: +972 03 6918130 +972 03 6962812 Trade Commissioner Fax: telaviv@ice.it Email:

Web: www.italtrade.com/countries/asia/israel

ICE-Italian Trade Agency is the Governmental organization entrusted with the promotion of trade, business opportunities and industrial cooperation between Italian and foreign companies, as well as research centers and universities. Headquartered in Rome, it operates through over 70 branch offices worldwide. It supports the internationalization of Italian firms, ensuring their presence and consolidation in foreign markets. Its activities are financed by the Italian Ministry for Economic Development and encompass services such as information on business opportunities, advice on marketing planning, promotion, multilateral cooperation and training, within the framework of the Ministry of Foreign Affairs and International Cooperation and its Diplomatic Missions.

Following an agreement signed with A.I.A.D. (Italian Industries Federation for Aerospace, Defense and Security), a dedicated Desk is now active at the Headquarters in Rome, as focal point for aerospace companies.

In addition to its participation at IAC 2015 in Jerusalem, the Italian Trade Agency will be present with Italian aerospace enterprises, at the following shows:

- AEROMART (Munich, Germany, 03/11 05/11 2015)
- EXPODEFENSA (Bogotà. Colombia, 30/11 02/12 2015)
- FIDAE (Santiago, Chile, 29/03 03/04 2016)
- AAD AFRICA AEROSPACE AND DEFENSE (Centurion, Johannesburg, South Africa, 14/09 18/09 2016)

Tel:

IAC 2016- International Astronautical Congress (Guadalaiara, Mexico, 26/09 -30/09 - 2016)

For more information visit www.italtrade.com or email to tecnologia@ice.it https://www.facebook.com/pages/ICE-Tel-Aviv/435413449898395

Participating Organisations

K - 6 CBL Electronics S.r.l.



Contact person: Fabrizio Lazzari -**Managing Director**

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+39 075 8989408

CBL Electronics offers customized technological solutions for leading companies in aerospace, avionics and defense, granting valid and continuous assistance from design to manufacturing. Our team is highly specialized in test systems development, semiconductors testing and Hardware - Software design. Intuition, innovation and reliability are the reference values in our work.

K - 6



D-Orbit S.r.l.

Contact person: Stefano Antonetti -

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D-Orbit's vision is to become the industry leader in innovative satellite platforms and space debris mitigation solutions. Our mission is to prevent the increasing concentration of uncontrolled objects in space, promoting a sustainable and profitable future for the space industry by providing a clean and safe environment for the future space missions. D-Orbit is a European and U.S. based space technology company, with a mission to prevent the systematic increase in concentration of uncontrolled space objects, promoting a sustainable and profitable future for the Space Industry. Our innovative D3 technology enables operators to quickly and safely dispose of end-of-mission satellites and launcher stages.

K - 6



DTM Technologies S.r.l.

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Technical Director

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DTM since 1994 offers competitive "turnkey" solutions in the design (CAD, structural, thermal, CFD) manufacture and testing of mechanical systems for ISS, satellites, launchers and Space vehicles. DTM is specialised in the design and qualification of composite mechanical systems and is also involved in the automotive and biomedical fields. Facilities include CAD and FEM software, autoclave, tools, acquisition devices, testing equipments for static and dynamic tests, thermal vacuum chamber, ISO5 clean room. DTM quality management system is EN 9100 (AS 9100) certified.

Contact person: Dr. Marta Massimiani –

Administration

G.A.U.S.S.

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Email: www.gaussteam.com

G.A.U.S.S. activities include design, realization and integration of microsatellites, subsystems and payloads and all the ground segment operations. The main project of the Company is called UniSat which led to the launch of 8 satellites. Recently, UniSat became a platform, thus letting G.A.U.S.S. being a small satellites launch provider.

Tel:

Fax:

K - 6

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Merletti Aerospace

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Merletti Aerospace. Manufacturing and assembly of components and sub-assy for aerospace industry and verticalized management of customer orders. Design and manufacturing of tools for machining of mechanical parts.

K - 6



Planetek Italia S.r.l.

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Planetek Italia is an Italian SME with a sound experience in the design and implementation of Software for Space and Ground Systems for Earth Observation and Space Exploration missions. Planetek Italia develops software for on board payload data processing, Instrument EGSE, ground segment radar and optical data processors.



Sitael S.p.A.

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Sitael is able to cover all the processes needed for the design, development and production of Small Satellites for Earth observation, science and telecommunications, advanced propulsion systems for station keeping, orbit raising and planetary exploration, innovative payloads, platform and payload avionics from equipment down to complex component

Web:

K - 6

Space Engineering S.p.A.



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Space Engineering is a leading Italian Space Industry with outstanding expertise in R&D, engineering, simulation, prototyping, integration, testing, small-scale production for Space & Ground segments. Space Engineering is part of Airbus Defence and Space, Space Systems Programs, division ENS.

Web:

A reliable partner for space agencies, satellite operators and principal industries, proven over 25 years of experience, contributing to several major national and international programs.





Techno System Developments S.r.l.

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Techno System Developments is a private SME developing on board and ground electronic equipment for space with specific focus on real time processing and small platform applications. The main products are Electronics for Optical Payloads and Video Systems, Spacecraft Avionics, Control and Data Management Systems for Scientific Payloads & Instruments, EGSE & SCOE. TSD long track record includes flight proven applications for Satellites, Capsules, ISS, Sounding

Mobile:

Web:

K - 6

Technosprings Italia S.r.l.

CTO

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Technosprings is specialized in the production of high quality springs, microsprings, release systems (pin-pullers) and findings according to drawings or samples; springs made with stainless steel, carbon steel, titanium, Inconel, and shape memory. Wire diameter from 0,06 to 20 mm Production of Shape Memory Alloys springs, pin-pullers and actuatorsfor aerospace applications. Organization and certification in according to AS/EN 9100 specifications

Tel:

K - 6

Telematic Solutions S.r.l.



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Telematic Solutions is an Italian company specialized in EPC (Engineering, Procurement and Construction) projects, $maintenance \ and \ exploitation \ services \ within \ the \ space \ sector, \ specifically \ in \ the \ ground \ segment \ and \ telemetry \ domains.$ The company has a continued and valued presence in major European space programs, and in many other projects in low current & security, fluids, TT&C at the Guyana Space Center (CSG) where the company has a permanent work force through Telematic Solutions Guyane.

Booth: K - 7



ASI-Italian Space Agency

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The Italian Space Agency was founded in 1988. Its purpose was to coordinate all of Italy's efforts and investments in the space sector that had begun in the 1960s. Within over twenty years' time, ASI became one of the most significant players in the world in space science, satellite technologies and the development of mobile systems for exploring the Universe. Today, ASI has a key role at the European level where Italy is the third contributor country to the European Space Agency. It also is involved at the international level. For example, ASI has a close working relationship with NASA, which has led to its participation in many of the most interesting scientific missions of recent years. One of the most fascinating projects has been the construction and activities of the International Space Station where Italian astronauts are by now at home.



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Springer

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JAXA - Japan Aerospace Exploration Agency



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Department

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.

Booth: K - 10

Surrey Satellite Technology



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Surrey Satellite Technology Limited was formed in 1985 as a spin-off University company. Its innovative approach to satellite engineering has resulted in worldwide success and to date the company has launched 47 satellites. Based in Guildford, UK, SSTL employs 500 staff and is an independent company within the Airbus Group.

Booth: **K - 11**

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THE UK PAVILION

Participating Organisations



The British Interplanetary Society (BIS)

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The British Interplanetary Society (BIS) is Britain's leading think tank on space development. Founded in 1933, the world's longest established organisation devoted solely to supporting and promoting the exploration and use of space for the benefit of humanity, by connecting people to create, education and inspire, and advance knowledge in all aspects of astronautics.

K - 11

STAR-Dundee

STAR-Dundee

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STAR-Dundee is a leading supplier of spacecraft on-board data-handling technology, delivering a comprehensive range of SpaceWire and SpaceFibre test and development equipment, chip designs and IP cores to the international aerospace industry. SpaceWire is the de facto standard for spacecraft on-board data handling applications; SpaceFibre is a new, multi-Gbits/s technology.

K - 11

Seradata



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Seradata produces SpaceTrak3, a newly-released version of the renowned online satellite and launch database which is available via annual subscription. SpaceTrak3 is used by space agencies, manufacturers, operators and insurers worldwide, Seradata, with Commercial Space Technologies, also publishes the World Launch Review which is available as an annual printed volume

K - 11

The UK Space Agency



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The UK Space Agency is at the heart of UK efforts to explore and exploit space, space-based applications and technology

and support our academic and industrial communities. We lead the UK's civil space programme to win sustainable economic growth, secure new scientific knowledge and provide benefits to all citizens.

International Astronautical Congress

K - 11 Semelab

Electronics

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Founded in 1974 Semelab is a 100% subsidiary company of TTe PLC.

Semelab undertake full design of semiconductors manufacture and environmental test operating via our class 10,000 and

Semelab having operated in the Space market for over 25 years is now regarded as one of Europe's leading semiconductor manufacturers.

K - 11



Clyde Space

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Celebrating our 10th anniversary Clyde Space stands as a world-leader in the CubeSat sector, with expertise ranging from bespoke & Off-The-Shelf subsystems for SmallSats and CubeSats, to complete Nanosatellite mission design and spacecraft integration: throughout 2015 and 2016 over thirty CubeSats will be constructed at our headquarters in Glasgow, UK.

K - 11



Universal Space Interface Standard (USIS)

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The USIS Association is an organisation develop and control a Universal Space Interface Standard (USIS) that can undertake all the system to system connection roles for both human and robotic spacecraft. The Association is planned to be owned by corporate bodies who would be stakeholders in the standard.

K - 11



RAL Space

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RAL Space, is based at the Science and Technology Facilities Council's Rutherford Appleton Laboratory. RAL Space work alongside the UK Space Agency and undertake world-leading space research and technology development, provide space test and ground-based facilities, design and build instruments, analyse and process data and operate ground-station facilities.

K - 11

QinetiQ Space Frank Preud'homme

QinetiQ Space nv

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QINETIQ Space, the leading provider of Small space Systems, has more than 30 years of space record in developing complex space systems. We provide advanced small satellites, scientific instruments and facilities for microgravity research. advanced subsystems such as on-board computers, docking system, electrical propulsion and ground operations.

Booth: **K - 12**



China HEAD Aerospace Technology Co.

Contact person: Roger Hsu

cooperation between China and worldwide

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Web: http://www.cgwic.com/ China HEAD Aerospace Technology Co. (HEAD) is the leading space company engaged in promote the international

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.

Booth: K - 13

AEM - IAC 2016

MEXICAN SPACE AGENCY

AEM Contact person:

Tel: Email:

Web:

www.aem.gob.mx

The Mexican Space Agency (AEM) is a public decentralized organism, with legal personality, own budget, with technical and management autonomy in order to fulfill its attributions, objectives and goals. It is sectored and coordinated by the Ministry of Communications and Transports (SCT).

To transform Mexico into a country with scientific activities and technological developments of international-class, both focused in the attention of social needs; articulating industrialization programs, advanced technologies and services that contribute to increase the country competitiveness. Additional information about AEM can be obtained by visiting the company website at www.aem.gob.mx

Booth: L - 1

Syrilnks



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Web: http://www.syrlinks.com/

Syrlinks is an advanced and cost-effective Radio-communication manufacturer, for small Satellites (Mini. Micro, Cube/ Nano) with 20 years experience. Syrlinks offers High Data Rate transmitters, TT&C and ISL transponders, GNSS receivers, OCXO, focused on reliability, low consumption, andminiaturization.

A pioneer in qualified active COTS use, more than 50 Flight Models that have cumulated more than 190 years in orbit, with 100% reliability. Some well-known missions and platforms: Rosetta, Deep- Impact, Myriade series (CNES-French Space Agency), Proba-V (ESA-European Space Agency).

Our portfolio is mainly focused on 3 product lines:

- Mini Satellite (ESA Class 3, NASA Level II), for missions lasting 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.

Micro & Cube/Nanosatellite product line are mainly based on mastery of COTS, and stressing tests on Qualified Models.

Booth: **L - 2**



ISU - International Space University

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> Web: 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 nine-week Space Studies Program at different host institutions. Since its founding, more than 4,000 students from over 100 countries have completed ISU programs. www.isunet.edu

Booth: L - 3 APSCO



On-site and follow-up contact:

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Legal Affairs

The Asia-Pacific Space Cooperation Organization (APSCO), as a Regional Organization for inter-governmental cooperation aims to enhance the multilateral cooperation in space science, space technology, and its applications; benefits to sustainable development and economic aspects of Member States with peaceful uses of outer space.

Booth: L-4

Romanian Space Agency



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Established in 1991, the Romanian Space Agency (ROSA) coordinates Romania's national and international space activities and represents the Government in international space cooperation programmes. ROSA coordinates the National Space Program and its implementation through space research and applications programs. The Agency supports Romania's participation to ESA programmes, as ESA's 19th Member State

International Astronautical Congress



Booth: L - 5

The Robert A. and Virginia Heinlein Prize Trust

http://www.heinleinprize.com

The Heinlein Prize® honors the memory of Robert A. Heinlein™, renowned American author. The purpose of the Heinlein Prize is to encourage and reward progress in commercial space activities that advances Robert and his wife Virginia's dream of humanity's future in space. Efforts include: the Heinlein Prize for Accomplishments in Commercial Space Activities, the Microgravity Research Competition, the Heinlein Commercial Space Activity Prize, the "Flight Into the Future" international contests, the Have Space Suit — Will Travel educational program, and the online Heinlein Archives.

L - 5

Excalibur Almaz Limited

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Email: anat@excaliburalmaz.com http://excaliburalmaz.com / heinleinprize. Web:

Excalibur Almaz Limited (EA) is an international commercial space transportation company based in the Isle of Man. Its goal is the affordable and reliable transportation of humans and cargo to Low Earth Orbit, libration point, the Moon and

EXCALIBUR·ALMAZ

Booth: L - 6 Austrospace



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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

Booth: **L - 7**

SPACEX

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carissa.bailey@spacex.com Email: Web: www.spacex.com

SpaceX designs, manufactures, and launches the world's most advanced rockets and spacecraft. The company was founded in 2002 by Elon Musk to revolutionize space transportation, with the ultimate goal of enabling people to live on other planets. Today, SpaceX is advancing the boundaries of space technology through its Falcon launch vehicles and Dragon spacecraft.

Booth: L - 8

SOUTH AFRICAN PAVILION

Space X

Participating Organisations

L - 8



CubeSpace

Tel: Contact person:

Email: Web:

CubeSpace is a South African venture that provides nano-satellite components and services to the international market. Our area of focus is the attitude determination and control subsystem (ADCS) of a satellite. Our mission is to provide modular ADCS components with class-leading performance that integrate seamlessly into any CubeSat. We provide a personalised service through which we customise solutions to fit our clients' specific ADCS needs.

Denel Spaceteg



Contact person: Tel: Fmail:

Web:

Spaceteq, a business unit in Denel Dynamics since July 2013 is using the intellectual property from DST, the ex-Sunspace people, and the heritage from work previously done by Houwteq, as a solid foundation on which to develop new generation satellites for the South African National Space Agency, SANSA and International Clients.

1 - 8

1 - 8

F'SATI - French South African Institute of Technology

F'SATI

Contact person: Email: VanZyll@cput.ac.za

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F'SATI (French South African Institute of Technology) is a French South African graduate institute for teaching, research and development, located in South Africa, that contributes to the creation of knowledge and transfer of technology in South Africa.

L - 8

NewSpace Systems



Tel: Contact person: Email:

Web:

A South African company, NewSpace Systems specialises in the development and supply of small satellite components. Current components on offer include: Reaction Wheel, Fine Sun Sensor, Torque Rods, GPS Receiver, and a Magnetometer. Currently under development is a Stellar Gyro and a Patch Antenna. Additionally, NewSpace is also the African representative for the wider SSBV product offering.

L - 8

SCS Aerospace Group



leehandi@scs-space.com Contact person: Email: http://scshgroup.com/ Web:

AEROSPACE GROUP Founded and directed by experienced space professionals, SCS Aerospace Group is a South African entity that comprises of eight subsidiary companies. The satellite engineering function supports the development and manufacturing of high performance satellites and ground stations, with functions including processing chains and data distribution systems. The applications team consists of regulatory, geospatial, telecoms and socioeconomic development specialists to offer our clients a complete service package in support of satellite programmes and other ICT infrastructure. Underlying all of this, the Space Engineering Academy provides training that spans space engineering (missions, satellites, payloads and components) to commercial GIS-applications and technological applications for social development.

1 - 8

The South African Council for Space Affairs



Contact person: Tel: Email: Web:

The Space Affairs Act No 84 of 1993 provides the legal framework for matters pertaining to outer space in South Africa. The South African Council for Space Affairs is established under the authority of the Minister of Trade and Industry to exercise regulatory functions and advise the Minister on all space-related matters.

The South African National Space Agency - SANSA



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The South African National Space Agency provides for the promotion and use of space and cooperation in space- related activities, foster research in space science, advance scientific engineering through human capital and support the creation of an environment conducive to industrial development in space technologies within the framework of national government policy. The intent is to converge and optimise resources and maximise the benefits of space services and applications to society.

CNES



Booth: **L - 9**

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As a Public establishment, the 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.

Etablissement public, le CNES propose aux pouvoirs publics la politique spatiale de la France et la met en oeuvre, dans cinq grands domaines stratégiques : Ariane, les Sciences, l'Observation, les Télécommunications et la Défense.

Booth: **L - 10**

THE NL PAVILION - THE NETHERLANDS

Participating Organisations

L - 10



@ AIRBUS

ATG Europe

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ATG Projects provides high-end mechanical engineering services to high-tech industries. We are involved in R&D programs focusing on composites and their application in the aerospace industry. By combining a research level expertise with a down-to-earth problem solving approach, we offer innovative solutions to complex issues on time, within budget.

L - 10

Airbus Defence and Space Netherlands B.V.

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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

I - 10



Hyperion Technologies B.V.

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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 component lifetime and gives satellite builders an increased level of confidence in their mission.

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 (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.

L - 10



ISIS - Innovative Solutions In Space BV

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www.isilaunch.com www.cubesatshop.com

ISIS - Innovative Solutions In Space is a 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 turn-key solutions to a broad range of customers.

Moog Bradford

MOOG BRADFORD

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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 ranks top positions (first or second) within the European supplier field.

L - 10

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NLR - Netherlands Aerospace Centre

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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

L - 10



NSO

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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.

L - 10



SpaceNed

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SpaceNed is the Association of Space companies in The Netherlands, rebranded from 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.

L - 10 TNO



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TNO has been active in the field of advanced space instruments for over 50 years, developing instruments for earth observation (optical, radar) 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

L - 10

TU Delft Space Institute



TU DELFT

INSTITUTE

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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 demonstrating them in Space. The institute has three focal themes: Sensing from Space, Distributed Space Systems and Space Robotics.

University of Twente

L - 10

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The University of Twente is a young and enterprising university that prepares young people for the future. We accomplish this through innovative, attractive and future-focused education and through fulfilling a global function in technological and social research. 3300 researchers and professionals work on pioneering research, relevant innovations and inspiring education for more than 9000 students.

Booth: **L - 11** GomSpace Aps

On-site and follow-up contact person:

Tel: +45 23280689 **G** MSPACE Annette Marquart Email: annette@gomspace.com

Web: www.gomspace.com

At GomSpace, we provide an extensive portfolio of off the shelf subsystems and software components for nanosatellites, and we provide turnkey nanosatellite projects to customers.

We export space hardware to customers in more than 45 countries and our customers range from technical universities, ambitious science groups, national space agencies, and commercial businesses, to military and national authorities.

Booth: **L - 12** Blue Dot Solutions Sp. z o.o. (Space Sector Poland)

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Web: www.spacesector.pl

The booth presents several leading Polish companies (i.e. Blue Dot Solutions and SpaceForest) active in space and spacerelated 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. 100 entities.

Booth: **L - 13** Zodiac Aerospace / Ormic Components Ltd.

ZODIAC AEROSPACE

+33630482523 **Contact person:** Alexandre Thily Tel:

Email: alexandre.thily@zodiacaerospace.com

Web: www.zodiacaerospace.com

Zodiac Data Systems a high technology company that designs, manufactures and supplies a broad range of products and solutions for airborne & ground telemetry, mission video and flight test recorders, satellite command control, data

collection from observation satellites and products and solutions for satellite communications QoS monitoring.

L - 13 Ormic Components Ltd.



Contact person: Ofer Kleiner +972-54-5239114 oferk@ormic.co.il Email: +972-54-5239105 Contact person: Alexandre Thily Tel:

Email: ronm@ormic.co.il Tel: +972-3-7657371 Web: www.ormic.co.il

Established in 1997 in Tel-Aviv, Israel, Ormic offers End-to-End Inovative solutions utilizing advanced technologies &

- Ground Systems for Space: TT&C, Remote Sensing, Monitoring
- · Airborne & Ground Telemetry Solutions
- · Mission Critical Data: Recorders, Acquisition modules
- · Antennas, Radomes & Reflectors
- · High Power Amplifiers
- RF to Fiber-Optic Links • Thermal Management Solutions for Payloads & Electronic Systems
- Radar Frond-End
- RF & Microwave Components and Sub-Systems: Frequency Converters, Filters, Switches, Attenuators.



homeland defense. With 60 years of experience IAI exports its products to over 90 countries and has over 30 subsidiaries

IAI's Defense and Commercial Products & Services: services include: the development, manufacture, overhaul, upgrading, repair and maintenance of aircraft and aerospace equipment, electronic systems, avionics suites, advanced radars, tactical

weaponry and law enforcement systems, training and simulation systems, network and situational awareness systems.



+972-4-879-4444 Contact person: Email: intl-mkt@rafael.co.il Web: http://www.rafael.co.il/

RAFAEL – Advanced Defense Systems Ltd. is a member of the IAF (International Astronautical Federation).

Rafael develops and manufactures advanced defense systems for the Israeli Defense Forces and the defense establishment. as well as international customers around the world. The company offers its customers a diversified array of innovative solutions at the leading edge of global technology.

Composite Space Structures, and MEMS Technologies.

Booth: M - 1

SIAA - Space Industry Association

On-site and follow-up contact person: Brett Biddington - Chief Executive for IAC 2017

Mobile: +61 401 890 368 Email: bbidding@tpg.com.au

http://www.spaceindustry.com.au Web:

http://www.iac2017.org/



SPACE INDUSTRY ASSOCIATION

The Space Industry Association of Australia (SIAA) is a peak body representing companies, governments, research institutes and universities. We are committed to a unified national space program that benefits the economy and enhances international partnerships. The SIAA will host the 68th IAC in Adelaide South Australia from 25--29 September

Booth: M - 2

Skolkovo Institute of Science and Technology



Contact person: Tatyana Boldyreva Email: T.Boldyreva@skoltech.ru

Web: http://www.skoltech.ru/en

We offer an MIT-designed hands-on experience in brand-new facilities with world-class professors — all in English, just outside of Moscow, with plentiful international exchange opportunities — all leading toward one goal: preparing our students and graduates to impact the world through scientific discovery and technological innovation.

Applications to join our growing community as an MSc student are being accepted for the following interdisciplinary programs:

- Biomedical Science and Technology
- Information Science and Technology
- Energy Science and Technology
- Space Science and Technology
- Product Design and Advanced Manufacturing

Booth: M - 3



+972-52-8718099 On-site contact person: Tel:

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Rathnasabapathy

SGAC

The Space Generation Advisory Council is a global non-governmental, non-profit organization and network which aims to represent university students and young space professionals to the United Nations, space agencies, industry, and

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ISRAEL PAVILION

Participating Organisations

IAI- Israel Aerospace Industries

Contact person:



Tel: +972 (3) 9358295 Email: corpmkg@iai.co.il Web: www.iai.co.il

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

Rafael's space activities are focused on Space Propulsion Solutions, Micro-Satellite Systems, Advanced light Weigh

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Elbit Systems

Elbit Systems Electro-Optics - Elop Ltd.

Contact person: Ilan Porat – Head of

Space directorate Email: ilan.porat@elbitsystems.com

Web:

Tel:

Elbit Systems - ISTAR Division (Formally Elop) is a globally recognized leader in development and production of complex space borne electro-optic observation systems. Elbit Systems invests heavily in advanced research, concentrating on space telescopes and space cameras, in different wavelengths, for military, government and civilian space applications. Elbit Systems' products high resolution in the compact, cost effective packages.

For three decades, Elbit Systems - ISTAR Division has been engaged in the development, manufacture and testing of advanced EO systems for a variety of space applications including:

- Research space telescopes
- Space cameras, including EROS A, EROS B, MSC, Neptune, Jupiter, Venus and Ofeq Cameras
- Hyperspectral systems

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RAMONChips ®

Ramon Chips, Ltd.

Tel: +972-72-221-6876 Contact person: Email: info@ramon-chips.com

http://www.ramon-chips.com/ Web:

0549993813

Ramon Chips makes radiation-hardened high-performance computers for satellites and spacecrafts: An image compression asic, a dual core microprocessor with spacewire and other interfaces (marketed globally by Cobham Gaisler) and a 64-core DSP providing 40 GFLOPS, 76GMAC/sec and 120 Gbit/sec over 12 SpaceFibre links.

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Ayecka Communication Systems, Ltd.

On-site and follow-up contact person:

+972 546 760 632 Tel: Baruch Kagan - CTO Email: baruchk@ayecka.com Web: www.ayecka.com

Addressing the consumer market Ayecka Communication Systems Ltd. is leading the next generation of satellite communication. The Smart LNB - The most cost effective platform for Interactive TV, M2M and IoT applications.

The CG-VSAT - The first consumer grade VSAT with cost reaching 99\$ per terminal (including antenna!). Based on the RCS2 standard, the CG-VSAT offers DTH operators a clear path to triple play of TV, Internet and Voice.

Ayecka's RFModem® is the technology behind the revolution, integrating the feed, filters, LNB, BUC and digital parts into a single low cost platform. Ayecka offers its RFModem® as a platform for implementing applications. Ayecka's RFModem® is also offered in combination with flat antenna for low profile installations and SOTM applications.

Ayecka offers a full range of solutions for IP over DVB-S2. IP receiver (SR1), Modulator and encapsulator (ST1), SCPC and Managed SCPC modem (SM1), all supporting GSE encapsulation, AUPC, ACM, Pre-Distortion and more.

Ayecka is your partner for Satcom - HW, SW, RF and system design and implementation. Ayecka's experience and proved capabilities is offered in design services as well as in professional services.

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NSLComm Ltd

On-Site contact person: Daniel 972-52-5095666 Tel: Email: daniel@nslcomm.com Web: www.nslcomm.com

NLSComm Ltd, will revolutionize satellite telecommunications by increasing bandwidth by a factor of ten and more and introducing real time Antenna shaping.

NSLComm provides satellite manufacturers with unprecedented expandable Antennas for satellite telecommunications. NSLComm can provide light weight expandable antennas with optimization that are compact when stowed in the satellite. benefits include high bandwidth for faster internet, HDTV and in-flight adaptive connectivity.

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New Rocket Ltd.

Contact person: Moti Email: info@newrocket.co.il Web: http://www.newrocket.co.il/

New Rocket is developing advanced, environmentally friendly ("Green Propulsion"), rocket engines based on innovative gel-propellant technology. New Rocket gel-propellant rocket engines are combining the best of both solid and liquid rockets - they are safe and simple to use while featuring high performance and controllability.

New Rocket is aiming high - To become a world leader in Green Propulsion rocket systems for the Space and Aviation

Arazim Ltd.

arozim

Tel: +972-8-9230555 Contact person: Mr Sason Noama – CEO

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arazim Ltd is leading provider of advanced sensors for static & dynamic analysis as well as sub-systems for attitude, navigation and control applications. Arazim Ltd. Will exhibit at it's booth Ultra-Miniature Hi-Performance MEMS-Based Navigation Systems, advanced MEMS-Based Sun-Sensors, miniature Star-Tracker, TEST-In-Space Multi-Payload Satellite service, Accelerometers & Pressure sensors for dynamic analysis and more, all from leading US&EU companies.

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HSL - Herzliya Science Laboratory - Hoopoe project



On-Site contact person: Sharon Mishaal Tel: 972-52-8382900 Web: www.h-space-lab.org

The DUCHIFAT NanoSatellite Series – Herzliya Science Center

DUCHIFAT 1 is the first Israeli nanosatellite and the first European satellite developed by high school students. It was successfully launched into space aboard the "Dnepr" on June 19, 2014. DUCHIFAT 2 (Hoopoe) - a QB50 nanosatellite for in-situ measurements in the lower thermosphere, is being designed and built by Israeli high school students from Ofakim, Yeruham, Ofra, Hura (Bedouin community) and Herzliya.

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Israel-Europe R&D Directorate

ISERD - The Israel-Europe R&D Directorate

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ISERD - the Israel-Europe R&D Directorate promotes the participation of Israeli entities in R&D ventures within the European Research Area. ISERD is operated through the Office of the Chief Scientist of the Ministry of Economy, and is Israel's official contact point (NCP) with the EU, for all the activities of the Framework Programs.

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Orbit CS

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ORBIT is a leading global provider of technology based Mission Critical integrated communication solutions. We develop, integrate and install end-to-end turnkey communication solutions and services for land, sea, air and space applications. Based on a customer-centric approach, we offer integrated turnkey solutions for defense, government and commercial

Email:

Founded in 1950, The Company boasts an international sales and customer support network that includes the United States, Europe and the Far East in addition to its international technical service centers located around the world. ORBIT's end-to-end solutions are installed at leading Navies, major Air Forces, government and private organizations and used by airborne integrators, space agencies and earth observation imagery and connectivity providers world-wide.

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CMI Electronic Industries Trading Ltd

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> http://www.cmi-industries.co.il/page_14843 Web:

C.M.I

JIC INDLISTRIE

International Astronautical Congress 12 - 16 October 2015, Jerusalem, Israel

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Acktai Advanced oatings Acktar, Ltd.

Tel: +972-8-6814213, ext.0 Contact person: Fax: +972-8-6810198 Email: ackinfo@acktar.com

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Acktar is word leader in manufacturing of Super Black Materials and Coatings for UV, Visible and Infrared Wavelength. Acktar Fractal Black TM and Magic Black TM are used in key space programs of ESA & NASA. Fully comply with REACH and RoHS. Can be provided on all metals, composite materials, glass and polymers.

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ImageSat International

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ImageSat International N.V. is the owner and operator of the EROS A and EROS B very high resolution imaging satellites, whose global coverage provides high-quality imaging services, satisfying national defense, homeland security, emergency services and national development needs, as well as a wide range of civilian applications worldwide.

The national security sector is able to obtain Earth imagery from ImageSat's EROS constellation of satellites with maximum autonomy, secrecy and flexibility. Through tailored service packages, ImageSat enables customers to directly access the satellites, allowing real-time data download and direct tasking, as well as access to processing systems and services to utilize the acquired data.

The civilian sector enjoys flexibility in obtaining high-resolution satellite imagery in small quantities or in packages to suit their project requirements.

For certain scenarios and applications, ImageSat offers direct data download with the "MiniTer" light ground receiving station with a very small (1.5 meter) antenna

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On-site contact persons: Nili Dotan -

Space IL

Head of HR & Operation

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Email:

SpaceIL is a nonprofit organization working to land the first Israeli spacecraft on the Moon. Our mission is part of the international competition Google Lunar XPRIZE: A modern Moon race. SpaceIL is committed to using the potential prize money to promote science education in Israel and recreate a new "Apollo Effect".

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SPACEPHARMA

Space Pharma R&D

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SpacePharma provides simple and valuable, end-to-end solutions for microgravity research. Our Nano-labs can be remote-controlled by users everywhere, and can be mounted on multiple microgravity platforms, including simulators, parabolic-flights, and our state-of-the-art Nano-satellites. This year, SpacePharma will launch the first-ever commercial Nano-satellite for microgravity research... the first of many

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Israel Space Agency

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Israel Space Agency – ISA is affiliated with the Ministry of Science Technology and Space, State of Israel. ISA is activity engaged in promoting Israel scientific and technological capabilities, for usage of space for peaceful purposes.

Empowering Israel's space industries aptitude is ISA major objective, agenda, and strategy; consisting mainly on R&D support via international partnerships and cooperation with space agencies and international organizations, through bilateral and multilateral agreements. In recent years, Israel Space Agency- ISA is diligently expanding its existing and new international cooperation

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Lockheed Martin

LOCKHEED MARTIN

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+1 303-916-9963 Web: www.lockheedmartin.com

Lockheed Martin is a global security and aerospace company principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. Our display will feature the Orion deep space exploration vehicle with highlights from its first orbital test flight. We will also highlight work being done on human and robotic space exploration missions, as well as our dedication to employing the latest advancements in technology to solve our customers' biggest challenges.

Sponsors

Airbus Defence and Space



On-site contact: Inka Beil / Hartwig

www.airbusdefenceandspace.com

Ellerbrock

Airbus Defence and Space is one of the three divisions of the Airbus Group.

It is Europe's number one defence and space company, the second largest space business worldwide, and within the top ten defence enterprises globally.

It employs some 38,600 employees generating revenues of approximately €13 billion per year.

Boeing Space Expolration



Web: www.boeing.com

Boeing is a leading provider of human spaceflight and space exploration systems and services. Boeing leverages five decades of human spaceflight experience to provide reliable access to Low Earth Orbit, full utilization of the International Space Station, robust development of the Space Launch System, and an international cislunar exploration platform.

Teva Pharmaceutical Industries Ltd



http://www.tevapharm.com/

Teva is a leading global pharmaceutical company that delivers high-quality, patient-centric solutions to millions of patients every day. Headquartered in Israel, Teva is the world's largest generic medicines producer, with a wide range of products in nearly every therapeutic area. Teva also has a world-leading position in innovative treatments, focused on the central nervous system and respiratory conditions. Teva draws upon Israel's culture of innovation to help fuel its R&D activities. In the past decade, Teva has invested NIS 15 billion in its R&D and technological innovation efforts in Israel, and grants millions each year in awards and scholarships to promote innovation and excellence in science across all ages.

Space Foundation



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The Space Foundation is a full-time space advocacy organization with a core competency in large-scale conferences. Our goals align closely with those of the IAF and we are intimately engaged with the international space community and are accomplished at providing the kind of top quality conference events it requires.

PROCESS HOMINUMOUS

SSL



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SSL is a leading provider of commercial satellites with broad expertise to support satellite operators and innovative space related missions. As a Silicon Valley innovator for more than 50 years, SSL's advanced product line also includes state-of-the-art small satellites, and sophisticated robotics and automation solutions for remote operations. For more information, visit www.sslmda.com.

Tyvak Nano-Satellite Systems, Inc



On-site contact person: Marco Villa Follow-up contact person: Emily Krasch Tel: (949) 302 8810

Email: emily.krasch@tyvak.com **Web:** www.terranorbital.com

Terran Orbital is a leading provider of nanosatellite and microsatellite vehicles, services, and solutions. Terran Orbital invests in leading-edge solutions for customers focused on achieving world-class space-based research, observation and communications at a fraction of the cost of traditional spacecraft developers. Through their Tyvak and Tyvak International brands, based in the U.S. and Europe, Terran Orbital partners with customers to produce advanced mission solutions with industry leading turn-times and price-points.

10 Social Events

10.1 Social Events

Pickup point: "HaAliya" access road to the Jerusalem ICC. Please wait next to the registration marquise

Enchanting Tastes and Smells at the "MACHANE YEHUDA" Market

Date: October 14, 2015 (Wednesday)

Time: Pick up time: 17:30

Cost: €65 pp

The "Machane Yehuda" Tour draws from the abundance of the market, allowing participants a taste of the lively atmosphere. The tour winds through the colourful streets of the market and through its history, as the story of the neighbourhood and its famed marketplace unfolds up until its modern incarnation. During the tour, you will have the chance to stop and taste some of the offerings of the most interesting stands of the market, Speak with the merchants and hear some of the fascinating and fun stories about the history of the "Machane Yehuda" community.

The tour will also include a short excursion to the nearby "Nachlaot" neighbourhood, to tell the story of the neighbourhood's furnace and its water pits.

The tour stops for explanations and tastings at some of the following types of purveyors:

Spices, Israeli olive oil, Jerusalem-style tahini and halva, Health drinks and natural healing products, Bakeries, Chocolates and sweets stands.

A breathtaking adventure at The Tower of David Museum

Date: October 15, 2015 (Thursday)

e: Pick up time: 18:30

Cost: €45 pp

The Tower of David Museum of the History of Jerusalem is located in the medieval citadel known as the Tower of David, near the Jaffa Gate, the historic entrance to the Old City.

The walls of the Citadel serve as a stage for a nigh time show which is a celebration of sight and sound. Amidst the archaeological remains in the Citadel's courtyard and to the sound of original music, the story of Jerusalem unfolds through giant breathtaking, virtual reality images. The stones of the walls and structures fade into the scenes and the screened images envelop the viewers and whisk them off to a one-of-a-kind multi-sensory experience.

A rich cultural experience at The Israel Museum

Date: October 13, 2015 (Tuesday)

Time: Pick up time: 18:30

Cost: €65 pp

The Israel Museum is the country's largest cultural institution, comprising several wings and large collections of art, archaeological findings and Judaica. One of the major highlights of the museum—and one of the city's more recognizable landmarks—is the distinctly shaped Shrine of the Book, which houses many ancient manuscripts including the Dead Sea Scrolls. Nearby, lending historical context to some of these priceless manuscripts, is a definitive grand model of the Second Temple and surrounding Jerusalem neighbourhoods circa 2000 years ago. The tour in the Israel Museum includes The Shrine of the Book, the Second Temple Model and The Archaeology Gallery.



In the Archaeology Wing, visitors can take stock of the many cultures which called the Land of Israel home over the centuries. The objects are organized chronologically, through seven different "chapters" beginning with prehistoric finds.

10.2 **Gala Dinner**

Gala Dinner, Friday 16 October from 18:00 - 22:00

International Astronautical Congress

12 - 16 October 2015, Jerusalem, Israel

Location: Naura Restaurant, Abu Ghosh

Pickup point: "HaAliya" access road to the Jerusalem International Convention Center (ICC). Please wait next to the registration

The Gala Dinner will be held on the evening of Friday, 16 October. It concludes the Congress and is meant to put a refined – and relaxed - finish to the week that is likely to have been full of meetings, presentations, networking and sightseeing. The Gala Dinner will be an unforgettable night of unique Middle-Eastern culture and cuisine in the historical village of Abu Gosh.

On the way up to Jerusalem, among turns and bends of the hilly scenery, lies the village of Abu Gosh. It is a Christian-Arab village built on a mountainside, rich in history that dates back 6,000 years. Abu Gosh is synonymous with Middle-Eastern cuisine, a wonderful, delightful mixture served in a variety of ways and with spicy garnishing. In fact, in recent years Abu Gosh has become a "hot spot" for visitors from Israel and around the world looking to experience authentic Arabic food. Entering the village of Abu Gosh you will immediately become engulfed by the richness of smells and colors.

Arabic culture, culinary traditions, hospitality, and generosity will surround you throughout the night, with much sharing and a great deal of warmth over the dinner table - which the Middle East is famous for. And to top it all off, unique and delicious desserts will be served accompanied by an enchanting display of belly dancing.

Share one last meal in Israel with old friends and new, reflect on the success of the Congress and look ahead to 2016 in Guadalajara ... the Gala Dinner is an event everyone should plan to attend! The dinner ticket includes complimentary transportation to the venue, dinner and a performance.

Cost: €80 pp

Tickets available online at www.iac2015.org and on site at the Registration Desk. Seats are limited.



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CA = Co-author

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Ali-Fadiora, Lami	CA	IAC-15.E7.2.3
Ali-Fadiora, Lami	CA	IAC-15.A6.IP.49
Alifanov, Oleg	CA	IAC-15.E4.1.2
Alifanov, Oleg	CA	IAC-15.C2.4.1 IAC-15.C2.4.4
Alifanov, Oleg Alifanov, Oleg	CA	IAC-15.C2.4.4
Alifanov, Oleg Alifanov, Oleg	A	IAC-15.C2.8.4
Alkalai, Leon	CA	IAC-15.B4.2.2
Alkalai, Leon	CA	IAC-15.B4.5.6
Alkalai, Leon	CA	IAC-15.B4.5.10
Alkalai, Leon	CA	IAC-15.D4.4.2
Alkalai, Leon	CA	IAC-15.D4.4.3
Alkalai, Leon	A	IAC-15.B4.8.1
Allan, Peter M.	CA	IAC-15.B4.3.3
Allen, Andrew	CA	IAC-15.A5.3-B3.6.4
Alles, Jeffrey W.	CA	IAC-15.E1.9.6
Alliot, Patrick	A	IAC-15.E1.9.0
Almeida Prado, Antonio Fernando	CA	IAC-15.C1.IP.4
Alon, Gal	A	IAC-15.C4.IP.43
Alon, Gany	CA	IAC-15.C4.8.8
Alonso, Alonso	CA	IAC-15.B4.3.10
Alpatov, Anatoliy	A	IAC-15.A6.5.5
Alvarado, Carlos	CA	IAC-15.B4.1.8
Alvarado, Carlos	A	IAC-15.E3.1.2
Alvarez, Francisco	CA	IAC-15.A3.2A.8
Alvarez, Francisco	A	IAC-15.A3.5.9
Amalraj, M	CA	IAC-15.B1.IP.16
Ambrosio, Ana Maria	CA	IAC-15.B3.4-B6.5.6
Amendola, Crescenzio Ruben Xavier	A	IAC-15.E2.3-YPVF.4.
Amendola, Crescenzio Ruben Xavier	CA	IAC-15.E5.1.7
Amendola, Crescenzio Ruben Xavier	CA	IAC-15.B3.7.9
Amiguet, Jerome	CA	IAC-15.C1.IP.11
Amiguet, Jerome	CA	IAC-15.E2.4.4
Amin, Dheeraj	CA	IAC-15.E2.4.7
Amrani, Ofer	CA	IAC-15.D1.2.2
Anderson, Chad	Α	IAC-15.E6.1.3
Anderson, Paul	Α	IAC-15.A6.7.3
Andrade de Almeida, Fabio	CA	IAC-15.D2.7.3
Andreev-Andrievskiy, Alexander	CA	IAC-15.A1.IP.10
Andrenucci, Mariano	CA	IAC-15.D3.1.5
Andrenucci, Mariano	CA	IAC-15.C4.IP.41
Andrenucci, Mariano	CA	IAC-15.C4.IP.46
Andrenucci, Mariano	Α	IAC-15.C4.4.2
Andrenucci, Mariano	CA	IAC-15.C4.6.3
Andrenucci, Mariano	CA	IAC-15.C4.6.7
Andrenucci, Mariano	CA	IAC-15.C4.6.8
Andrenucci, Mariano	CA	IAC-15.C4.6.9
Andrenucci, Mariano	CA	IAC-15.C4.7-C3.5.4
Andreussi, Tommaso	CA	IAC-15.C4.6.3
Andrews, John	CA	IAC-15.A3.4.10
Andrey, Netelev	CA	IAC-15.C2.6.2
Andreychuk, Peter	CA	IAC-15.A1.7.1
Andrianov, Artem	CA	IAC-15.C4.2.8
Andrianov, Artem	CA	IAC-15.C4.IP.5
Andrianov, Artem	CA	IAC-15.C4.IP.53
Angeletti, Federica	CA	IAC-15.B4.2.7
Angeletti, Federica	CA	IAC-15.C2.1.8
Angeli, Thomas	Α	IAC-15.A1.2.3
Angelini, Roberto	CA	IAC-15.D2.6.2
Anifowose, Yekini	CA	IAC-15.B1.IP.19
Anifowose, Yekini Biodun	CA	IAC-15.B1.IP.20
Animashaun, Sola	CA	IAC-15.E3.IP.1
Allillasiladii, Joia		

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IAC-15.B4.3.1

IAC-15.B2.3.6

IAC-15.B1.3.1 IAC-15.B4.4.1

IAC-15.C1.5.10

IAC-15.C4.4.15

IAC-15.C1.7.7

IAC-15.A6.2.6

IAC-15.B1.1.2

IAC-15.E6.3.2

IAC-15.D1.2.6

IAC-15.A3.1.6

IAC-15.A6.4.3 IAC-15.D6.1.4

IAC-15.D1.1.9

IAC-15.D1.2.12

IAC-15.E4.2.7

IAC-15.A1.5.2

IAC-15.A1.5.12

IAC-15.D5.3.7

IAC-15.D6.1.4 IAC-15.C4.IP.43

IAC-15.C4.4.4 IAC-15.E6.2.8

IAC-15.E1.2.5 IAC-15.C2.1.2

IAC-15.C2.1.4 IAC-15.C2.IP.45

IAC-15.A1.IP.19

IAC-15.B2.3.5 IAC-15.C1.8.11

IAC-15.B4.2.7

IAC-15.C2.1.8

IAC-15.A6.IP.28

IAC-15.D1.5.6

IAC-15.B4.2.10

IAC-15.B4.3.1 IAC-15.C4.1.7

IAC-15.E3.IP.18 IAC-15.A6.4.8

IAC-15.B4.3.6

IAC-15.E6.1.8

IAC-15.E3.IP.7

IAC-15.A1.IP.15

IAC-15.C2.4.8

IAC-15.B6.1.4

IAC-15.C1.8.1

IAC-15.E1.9.2

IAC-15.D4.4.3

IAC-15.C2.1.8

IAC-15.E1.6.7

IAC-15.A3.IP.43

IAC-15.C1.4.11

IAC-15.E4.1.3

IAC-15.B1.6.6

IAC-15.B4.8.6

IAC-15.B4.2.8

IAC-15.C1.6.6

IAC-15.C1.6.6

IAC-15.C1.7.9

IAC-15.A3.5.6 IAC-15.C2.IP.41

IAC-15.D5.2.3

IAC-15.C1.3.3

IAC-15.A7.3.1

IAC-15.C2.IP.37

IAC-15.C1.1.11

IAC-15.B5.1.9

IAC-15.A5.3-B3.6.5

IAC-15.E7.7-B3.8.7

IAC-15.E7.7-B3.8.1







Beckmann, Sabrina



IAC-15.A1.6.6

Annoni, Giovanni

Ansalone, Luigi Ansalone, Luigi

Ansalone, Luigi

Ansalone, Luigi Ansalone, Luigi

Ansalone, Luigi

Anselmo, Luciano

Antonello, Andrea Antonenko, Sergey

Antonetti, Stefano

Antonio Cabero Zabalaga, Marco

Antonio Cabero Zabalaga, Marco

Antonio Cabero Zabalaga, Marco

ANTONI. Ntorina ANTONI, Ntorina

Aoki, Setsuko

Apathy, Istvan

Apathy, Istvan

Apathy, Istvan

Appel, Leonid Appel, Leonid

Aprea, Julio Aranguren, Rodrigo

Arasu, Yezhil Arasu, Yezhil

Arasu, Yezhil

Arena, Lorenzo

Arena, Lorenzo

Arena. Lorenzo

Arena. Lorenzo Argan, Andrea

Argan, Andrea

Armellin, Roberto

Armstrong, Kirsten

Armstrong, Kirsten

Armstrong, Rachel

Arnold, Christian

Arnoldi, Charles

Arnot, Callum S.

ARORA, NITIN

Arras, Melissa

Arreola, Mario

Artusi, Matteo

AS, Rajshekhar

ARVEILLER, Antoine

Aslan, Alim Rustem

Aslan, Alim Rüstem

Aslanov, Evgeniy V.

Aslanov, Vladimir S. Aslanov, Vladimir S.

Asmolovskiy, Nikolay

Assad, Christopher

Asmar, Sami W.

Assipov, Sultan

Assis, Sheila

Javier

Atar, Nurit Atchison, Justin

Atkinson, Peter

Arumanayagam Jeevi, Anugraha

Atapuerca Rodríguez de Dios, Francisco

Arnould, Jacques

Armitage, Scott

Arione, Luigi Arkless Gray, Kate

Araujo dos Santos, Marlise

Ardaens, Jean-Sébastien

Arbesser-Rastburg, Bertram

APOSTOLO, Davide

ANTIKIDIS, Jean-pierre ANTIKIDIS, Jean-pierre

12 - 16 October 2015, Jerusalem, Israel CA IAC-15.A3.2A.6 Ann, Ki yong Ann, Ki yong CA IAC-15.D3.2.8 CA IAC-15.B4.2.10 Annoni, Giovanni

TICS · IAA · IN TEL
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PCADEMY OA

Augelli, Mauro	A	IAC-15.B3.4-B6.5.1
Auster, Hans-Ulrich	CA	IAC-15.A3.4.6
Austin, Julian	CA	IAC-15.D1.3.3
Autino, Adriano	Α	IAC-15.D4.2.9
AVANZI, Thomas	CA	IAC-15.D6.1.4
AVANZI, Thomas	CA	IAC-15.E7.7-B3.8.7
Aviely, Peleg	CA	IAC-15.B2.6.1
Avilés Rodrigálvarez, Marcos	CA	IAC-15.A3.2B.7
Avilés Rodrigálvarez, Marcos	CA	IAC-15.A3.3B.11
Avraham, Oded	Α	IAC-15.E1.1.1
Avraham, Oded	Α	IAC-15.E1.1.6
Avraham, Oded	Α	IAC-15.E4.3.3
Awasak, Judith Ananzo	Α	IAC-15.E1.IP.5
Axthelm, Robert	CA	IAC-15.A6.6.3
Ayllon, Natanael	CA	IAC-15.B1.IP.10
Ayre, Mark	CA	IAC-15.A7.1.4
Ayre, Mark	CA	IAC-15.A7.1.5
Azari, Abigail	CA	IAC-15.A7.3.2
Azari, Pouyan	Α	IAC-15.A6.IP.41
Aziz, Jonathan	Α	IAC-15.E2.3-YPVF.4.8
Aziz, Sarmad	CA	IAC-15.B6.1.5

Azarı, Abigaii	CA	IAC-15.A7.3.2
Azari, Pouyan	Α	IAC-15.A6.IP.41
Aziz, Jonathan	Α	IAC-15.E2.3-YPVF.4.8
Aziz, Sarmad	CA	IAC-15.B6.1.5
В		
Name	Role	Paper
BABAGANA, ABUBAKAR	A	IAC-15.E5.IP.7
Bacsardi, Laszlo	CA	IAC-15.E7.IP.6
Bacsardi, Laszlo	CA	IAC-15.B2.8-YPVF.3.3
Baessler, Kai	CA	IAC-15.B4.8.2
Baevsky, Roman	CA	IAC-15.A1.2.2
Baevsky, Roman	CA	IAC-15.A1.3.3
Baevsky, Roman	CA	IAC-15.A1.3.5
Baevsky, Roman	CA	IAC-15.A1.IP.1
Baevsky, Roman	CA	IAC-15.A1.IP.9
Baggett, Keithe	A	IAC-15.B3.7.12
Baghi, Quentin	A	IAC-15.A2.1.2
Bai, Lianghao	A	IAC-15.B3.7.6
Bai, Yanqiang	CA	IAC-15.A1.4.4
Bai, Zhifu	CA	IAC-15.D6.1.2
Bais, Lokeshsingh	CA	IAC-15.E2.4.10
Baj, Girish	CA	IAC-15.E2.4.10
Bakambu, Joseph Nsasi	CA	IAC-15.A3.IP.46
Baker, John	CA	IAC-15.A3.5.8
Bakirov, Rashid	CA	IAC-15.B2.1.3
Baklanov, Evgeniy	CA	IAC-15.D3.2.2
Balabanov, Vladimir	CA	IAC-15.C4.4.3
Balaji, Aishwarya	A	IAC-15.E1.7.10
Balakrishnan, Asha	A	IAC-15.B4.5.3
Balan, Mugurel	A	IAC-15.C2.6.4
Balan, Mugurel	CA	IAC-15.B4.6B.3
Balan, Mugurel	A	IAC-15.C3.4.3
Balint, Tibor	A	IAC-15.E5.4.1
Balint, Tibor	A	IAC-15.D1.6.1
Balogh, Barnabás	CA	IAC-15.D5.3.7
Balomenaki, Christina	CA	IAC-15.A5.2.11
Balucani, Marco	CA	IAC-15.B4.2.7
Bamber, David	CA	IAC-15.D4.1.9
Bamber, David	A	IAC-15.C1.6.1
Banda, Francesco	CA	IAC-15.E5.5.2
Bandini, Flavio	CA	IAC-15.A5.1.8
Bandla, Sirisha	A	IAC-15.D2.2.6
Bando, Mai	CA	IAC-15.C1.8.2
Banerdt, William Bruce	CA	IAC-15.A3.3A.1
Banerjee, Shridutta	A	IAC-15.C2.4.2
Bang cheng, Ai	A	IAC-15.C2.4.3
Bangert, Philip	CA	IAC-15.D1.4.2
Bangert, Philip	CA	IAC-15.B6.2.6
Bannova, Olga	CA	IAC-15.A5.2.11
Bannova, Olga	CA	IAC-15.E5.1.2
Bao, Changchun	A	IAC-15.D4.1.8
Bao, Tong	CA	IAC-15.C2.4.7
Baogui, Qiu	CA	IAC-15.A3.IP.11
Baogui, Qiu	CA	IAC-15.A3.2C.4

Dauyiii, Hexi	CA	IAC-13.A3.2C.14	Decilei, iviai k
Baoyin, Hexi	CA	IAC-15.A3.2C.15	Becnel, Mark
Baoying, Luo	CA	IAC-15.D2.IP.12	Becucci, Simone
Bar-Nun, Akiva	CA	IAC-15.A3.IP.32	Bedington, Robert
Bar-Nun, Akiva	CA	IAC-15.A3.IP.41	Behar, Ehud
Barad, Kuldeep	Α	IAC-15.B2.3.9	Behar, Ehud
Barad, Kuldeep	Α	IAC-15.B4.8.4	
*			Behar, Ehud
Baranov, Andrey	CA	IAC-15.C1.3.11	Beitia, Jose
BARANOV, Dimitri	CA	IAC-15.A6.IP.15	Bejar-Romero, Juan Antonio
Baranov, levgen	CA	IAC-15.A3.IP.16	Belakovskiy, Mark
			*
Barash, Yefim	CA	IAC-15.A3.IP.3	Belakovskiy, Mark
Barato, Francesco	A	IAC-15.C4.2.7	Beldavs, Vid
Barato, Francesco	Α	IAC-15.C4.6.3	Beliaev, Mikhail
	CA	IAC-15.A2.3.6	Belikov, Vladimir
Barber, Tracie			
Barcinski, Tomasz	CA	IAC-15.A3.IP.34	Belikov, Vladimir
Bareket, Ido	Α	IAC-15.B6.3.7	Belingheri, Paola
Bareket, Ido	Α	IAC-15.E1.1.4	Belkin, Michael
			· · · · · · · · · · · · · · · · · · ·
Bareket, Ido	Α	IAC-15.A6.IP.8	Bell, Jonathan
Bareket, Ido	A	IAC-15.E1.7.1	Bell, Robert
Bareket, Ido	Α	IAC-15.E1.8.8	Bellini, Niccolò
Baresi, Nicola	CA	IAC-15.A3.4.7	Bellini, Niccolò
Baresi, Nicola	Α	IAC-15.C1.7.1	Bellini, Niccolò
Barinov, Alexander	CA	IAC-15.D1.1.8	Bellini, Niccolò
Barkay, Nitzan	Α	IAC-15.D5.4.1	Bellini, Quirino
Barmin, Igor	Α	IAC-15.D5.1.1	Bellomi, Paolo
Barmin, Igor	CA	IAC-15.D5.1.1	Bellomo, Alessandro
Baroni, Marco	CA	IAC-15.B1.2.2	Bellomo, Alessandro
Barraclough, Simon	CA	IAC-15.A6.6.3	Belloni, Federico
Barrentine, Emily	CA	IAC-15.A7.3.3	Belloni, Federico
Barrera, Sebastiano	CA	IAC-15.A5.3-B3.6.3	Belokonov, Igor V.
Barrettino, Diego	Α	IAC-15.B4.6B.2	Belokonov, Igor V.
Barrios, Ricardo	CA	IAC-15.B2.5.12	Belokonov, Igor V.
Barschke, Merlin F.	A	IAC-15.B4.7.1	Belov, Anton
Barschke, Merlin F.	CA	IAC-15.B4.7.4	Belser, Valentin
Barthol, Peter	CA	IAC-15.A3.IP.36	Belyaev, Andrey
Bartkowiak, Bartosz	CA	IAC-15.D2.7.10	Belyaev, Mikhail Yu.
Bartolini, Alana	CA	IAC-15.E7.IP.6	Belyakov, Alexey
	CA		
Barton, Andrew		IAC-15.A3.2A.7	Belz, Stefan
Bartsev, Sergey	CA	IAC-15.A3.1.6	Belz, Stefan
Baruah, Rishiraj	A	IAC-15.E7.1.3	Ben Dor, Eyal
Bas, Mustafa Erdem	CA	IAC-15.B4.2.8	Ben Hayoun, Nelly
Basile, Francesco	CA	IAC-15.B2.6.8	Ben-Ami, Harel
Basu, Prateep	A	IAC-15.E5.2.3	Ben-Basat, Shani
Basyooni, Mohamed	Α	IAC-15.C2.8.1	Ben-Haim, Yakov
•	Α	IAC-15.B3.3.7	Ben-Yaacov, Ohad
Batenburg, Petrus			
Battagliere, Maria Libera	CA	IAC-15.B1.IP.34	Benaroya, Haym
Battagliere, Maria Libera	CA	IAC-15.B1.5.9	Benaroya, Haym
Battat, Jonathan	CA	IAC-15.E3.2.4	Benassai, Mario
Battie, Francois	Α	IAC-15.D2.1.7	Benedetto, Catia
Battipede, Manuela	CA	IAC-15.D2.3.7	Benedictus, Rinze
Battista, Francesco	CA	IAC-15.C4.3.6	Benkhoff, Johannes
Battista, Francesco	CA	IAC-15.C4.4.12	Benner, Daniel
Battista, Umberto	CA	IAC-15.D1.1.6	Benoist, Olivier
Battista, Umberto	CA	IAC-15.A2.3.4	Bensoussan, Denis
Battista, Umberto	CA	IAC-15.A6.IP.23	Bensoussan, Denis
Battistelli, Enrico		IAC-15.B1.3.5	Benvenuto, Riccardo
	CA		
Battistini, Simone	Α	IAC-15.C1.5.6	Benvenuto, Riccardo
Battler, Melissa M.	CA	IAC-15.E1.4.1	Benvenuto, Riccardo
Battocchio, Luciano	CA	IAC-15.D2.3.7	Berchenko, Yakir
Baturkin, Volodymyr		IAC-15.A3.4.6	
Bauer, Waldemar	CA		Berendeeva, Tatiana
	CA	IAC-15.C4.7-C3.5.1	Bergamasco, Federico
Baumann, Wolfgang	CA	IAC-15.C4.7-C3.5.1	Bergamasco, Federico
Baumann, Wolfgang	CA CA	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7	Bergamasco, Federico Bergamini, Elisabetta
Baur, Oliver	CA CA	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay
Baur, Oliver Bausch, Lars	CA CA	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael
Baur, Oliver	CA CA	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay
Baur, Oliver Bausch, Lars Bavdaz, Marcos	CA CA CA CA	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean
Baur, Oliver Bausch, Lars Bavdaz, Marcos Bavdaz, Marcos	CA CA CA CA CA	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4 IAC-15.A7.1.5	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean Bergsrud, Corey
Baur, Oliver Bausch, Lars Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos	CA CA CA CA CA CA	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4 IAC-15.A7.1.5 IAC-15.A7.1.5	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean Bergsrud, Corey Bergsrud, Corey
Baur, Oliver Bausch, Lars Bavdaz, Marcos Bavdaz, Marcos	CA CA CA CA CA	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4 IAC-15.A7.1.5	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean Bergsrud, Corey
Baur, Oliver Bausch, Lars Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos Bawden, Gerald	CA CA CA CA CA CA CA	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4 IAC-15.A7.1.5 IAC-15.A3.IP.28 IAC-15.B1.6.3	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean Bergsrud, Corey Bergsrud, Corey Bergé, Joël
Baur, Oliver Bausch, Lars Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos Bawden, Gerald Baxter, Sarah	CA	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4 IAC-15.A7.1.5 IAC-15.A3.IP.28 IAC-15.B1.6.3 IAC-15.E5.4.7	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean Bergsrud, Corey Bergsrud, Corey Bergé, Joël Bernaciak, Robert
Baur, Oliver Bausch, Lars Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos Bavdar, Gerald Baxter, Sarah Bayle, Olivier	CA C	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4 IAC-15.A7.1.5 IAC-15.A3.IP.28 IAC-15.B1.6.3 IAC-15.E5.4.7 IAC-15.A3.3A.2	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean Bergsrud, Corey Bergsrud, Corey Bergé, Joël Bernaciak, Robert Bernal, Cesar
Baur, Oliver Bausch, Lars Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos Bawden, Gerald Baxter, Sarah	CA	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4 IAC-15.A7.1.5 IAC-15.A3.IP.28 IAC-15.B1.6.3 IAC-15.E5.4.7	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean Bergsrud, Corey Bergsrud, Corey Bergé, Joël Bernaciak, Robert
Baur, Oliver Bausch, Lars Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos Bavdar, Gerald Baxter, Sarah Bayle, Olivier	CA C	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4 IAC-15.A7.1.5 IAC-15.A3.IP.28 IAC-15.B1.6.3 IAC-15.E5.4.7 IAC-15.A3.3A.2	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean Bergsrud, Corey Bergsrud, Corey Bergé, Joël Bernaciak, Robert Bernal, Cesar
Baur, Oliver Bausch, Lars Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos Bawden, Gerald Baxter, Sarah Bayle, Olivier Beames, Chuck Bebout, Brad	CA C	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4 IAC-15.A7.1.5 IAC-15.A3.IP.28 IAC-15.B1.6.3 IAC-15.E5.A7. IAC-15.E3.A7. IAC-15.A3.IP.28 IAC-15.E3.A7. IAC-15.E3.A7. IAC-15.E3.A3.A2 IAC-15.D2.1.9 IAC-15.D2.1.9	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean Bergsrud, Corey Bergsrud, Corey Bergé, Joël Bernaciak, Robert Bernal, Cesar Bernasconi, Pietro Bernelli-Zazzera, Franco
Baur, Oliver Bausch, Lars Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos Bawden, Gerald Baxter, Sarah Bayle, Olivier Beames, Chuck Bebout, Brad Beck, James	CA C	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4 IAC-15.A7.1.5 IAC-15.A3.IP.28 IAC-15.B1.6.3 IAC-15.E5.4.7 IAC-15.A3.A2 IAC-15.A3.B2.B	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean Bergsrud, Corey Bergsrud, Corey Bergé, Joël Bernaciak, Robert Bernal, Cesar Bernasconi, Pietro Bernelli-Zazzera, Franco Bersenev, Evgenii
Baur, Oliver Bausch, Lars Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos Bavdaz, Marcos Bawden, Gerald Baxter, Sarah Bayle, Olivier Beames, Chuck Bebout, Brad	CA C	IAC-15.C4.7-C3.5.1 IAC-15.A1.3.7 IAC-15.A6.IP.45 IAC-15.B2.IP.9 IAC-15.A7.1.4 IAC-15.A7.1.5 IAC-15.A3.IP.28 IAC-15.B1.6.3 IAC-15.E5.A7. IAC-15.E3.A7. IAC-15.A3.IP.28 IAC-15.E3.A7. IAC-15.E3.A7. IAC-15.E3.A3.A2 IAC-15.D2.1.9 IAC-15.D2.1.9	Bergamasco, Federico Bergamini, Elisabetta Berger, Jay Berger, Michael Bergman, Dean Bergsrud, Corey Bergsrud, Corey Bergé, Joël Bernaciak, Robert Bernal, Cesar Bernasconi, Pietro Bernelli-Zazzera, Franco

IAC-15.C1.4.1

IAC-15.A3.2C.14

CA

CA

Baoyin, Hexi

Baoyin, Hexi

Beckmann, Sabrina	CA	IAC-15.A1.6.6
Becnel, Mark	A	IAC-15.E1.3.10
Becnel, Mark	CA	IAC-15.E1.7.13
Becucci, Simone	CA	IAC-15.C1.5.10
Bedington, Robert	CA	IAC-15.B2.5.9
	CA	
Behar, Ehud		IAC-15.A7.2.4
Behar, Ehud	CA	IAC-15.C1.4.8
Behar, Ehud	CA	IAC-15.C4.4.3
Beitia, Jose	CA	IAC-15.B4.6A.9
Bejar-Romero, Juan Antonio	A	IAC-15.D2.6.7
Belakovskiy, Mark	CA	IAC-15.B3.2.3
Belakovskiy, Mark	CA	IAC-15.A1.IP.4
Beldavs, Vid	A	IAC-15.A3.2B.10
Beliaev, Mikhail	CA	IAC-15.B2.1.9
Belikov, Vladimir	CA	IAC-15.D1.1.8
Belikov, Vladimir	CA	IAC-15.A6.IP.48
Belingheri, Paola	A	IAC-15.E6.2.9
Belkin, Michael	CA	IAC-15.A1.4.2
Bell, Jonathan	CA	IAC-15.E1.2.1
Bell, Robert	CA	IAC-15.E1.5.3
Bellini, Niccolò	CA	IAC-15.E1.3.8
Bellini, Niccolò	A	IAC-15.A6.IP.30
Bellini, Niccolò	CA	IAC-15.A6.IP.31
Bellini, Niccolò	CA	IAC-15.E6.3.9
Bellini, Quirino	A	IAC-15.D1.5.6
Bellomi, Paolo	A	IAC-15.C4.1.7
Bellomo, Alessandro	CA	IAC-15.D6.3.1
Bellomo, Alessandro	CA	IAC-15.D6.3.7
Belloni, Federico	CA	IAC-15.B4.4.5
Belloni, Federico	CA	IAC-15.A6.6.2
Belokonov, Igor V.	A	IAC-15.B2.1.7
Belokonov, Igor V.	A	IAC-15.D2.7.11
Belokonov, Igor V.	CA	IAC-15.D1.7.2
Belov, Anton	CA	IAC-15.D3.2.2
Belser, Valentin	A	IAC-15.A2.5.4
Belyaev, Andrey	A	IAC-15.B6.1.1
Belyaev, Mikhail Yu.	CA	IAC-15.B3.3.8
Belyakov, Alexey	Α	IAC-15.B3.2.5
Belz, Stefan	A	IAC-15.C3.3.4
•		
Belz, Stefan	A	IAC-15.A1.7.7
Ben Dor, Eyal	A	IAC-15.B1.4.7
Ben Hayoun, Nelly	A	IAC-15.E1.9.11
Ben-Ami, Harel	A	IAC-15.E5.5.7
Ben-Basat, Shani	A	IAC-15.C4.2.4
Ben-Haim, Yakov	CA	IAC-15.D1.6.6
Ben-Yaacov, Ohad	Α	IAC-15.C1.8.10
Benaroya, Haym	A	IAC-15.E5.1.4
Benaroya, Haym	A	IAC-15.E6.IP.5
Benassai, Mario	CA	IAC-15.A1.IP.8
Benedetto, Catia	CA	IAC-15.B1.IP.37
Benedictus, Rinze	CA	IAC-15.A6.IP.2
Benkhoff, Johannes	CA	IAC-15.E1.IP.6
Benner, Daniel	CA	IAC-15.A1.4.2
Benoist, Olivier	CA	IAC-15.D1.2.11
Bensoussan, Denis	A	IAC-15.D5.4.5
Bensoussan, Denis	A	IAC-15.A6.8.2
Benvenuto, Riccardo	Α	IAC-15.A2.3.3
Benvenuto, Riccardo	CA	IAC-15.A6.IP.26
Benvenuto, Riccardo	CA	IAC-15.A6.5.8
Berchenko, Yakir	CA	IAC-15.A1.4.2
Berendeeva, Tatiana	CA	IAC-15.A1.IP.5
Bergamasco, Federico	CA	IAC-15.E7.1.9
Bergamini, Elisabetta	CA	IAC-15.E3.3.9
Berger, Jay	CA	IAC-15.A5.2.9
		IAC-15.A3.2.9
Berger, Michael	CA	
Bergman, Dean	CA	IAC-15.A3.3B.6
Bergsrud, Corey	A	IAC-15.C3.1.3
Bergsrud, Corey	Α	IAC-15.C3.2.2
Bergé, Joël	CA	IAC-15.A2.1.2
Bernaciak, Robert	CA	IAC-15.C3.2.2
Bernal, Cesar	CA	IAC-15.A6.6.3
Bernasconi, Pietro	CA	IAC-15.A3.4.10
Bernelli-Zazzera, Franco	CA	IAC-15.A3.4.3
	CA	IAC-15.A1.IP.1
Bersenev, Evgenii	C/ t	# 10 IS# 1IH1II









Bertolotto, Delfina

Bertrand, Pierre

Bertrand, Pierre

Betelin, Vladimir Betelin, Vladimir

Betti. Barbara

Bettiol. Laura

Bettiol, Laura

Bettiol, Laura

Bhan, Rakesh

Bhate, Harsh

Bhatta, Karan

Bhide, Ojas

Bhui, Surmit

Bi, Lei

Bian, Wei

Bhattarai, Suresh

Biamonti, Davide

Bianchi, Stefano

Biard, Arnaud

Biard, Arnaud

Biele, Jens

Biele, Jens Bielicki, Damian M.

Biesbroek, Robin

Biggs, James Billig, Gerhard

Billot, Carole

Binnig, Marco

Birkeland, Roger

Birkeland, Roger

Birkeland, Roger Bissonnette, Vincent

Biziukin, Grigori

Blanco, Gonzalo

Blancquaert, Thierry

Blessed Nayagam, P.V Samuel

Blasberger, Avigdor

Blanco, Juanjo

Blazic, Saso

Blizovsky, Avi

Blome, Elizabeth

Bobade, Pradip

Bobade, Pradip

Boblenz, Johannes

Bobrovskyi, Sergei

Boccia, Gennaro

Boccia, Valentina Boden, Ralf

Boggiatto, Dario

Bogomolov, Valery

Boehm, Kirk Boehringer, Felix

Bobe, Leonid

Blumberg, Dan Gabriel

BOAKYE, OWUSU ANSAH

Block, Ulfert

Blount, PJ

Bo, Cong

Bin, Jiang

Bin, Li Bingxin, Yang

Bibring, Jean-Pierre

Bibring, Jean-Pierre

Biebricher, Alexander

Bidaux-Sokolowski, Ambroise

Bevilacqua, Marco

Bewick, Charlotte

Beyermann, Ulrich

Bharadwaj, B. Kapil

Bhattacharjee, Shambo

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Bertelli, Cosimo	A	IAC-15.D5.1.7	Bogoss	
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Bertoldi, Artur	A	IAC-15.C4.2.8	Bogoss	
Bertoldi, Artur	CA	IAC-15.C4.IP.5	Bohlm	
Bertoldi, Artur	A	IAC-15.C4.IP.53	Bohrer	

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IAC-15.B3.3.4

IAC-15.A5.2.8

IAC-15.E3.IP.3

IAC-15.A2.2.4

IAC-15.A2.4.5

IAC-15.B4.2.7

IAC-15.A6.3.1

IAC-15.A6.IP.21

IAC-15.C2.5.2

IAC-15.B1.2.8

IAC-15.B2.IP.9

IAC-15.B1.1.9

IAC-15.C2.6.9

IAC-15.B2.3.8

IAC-15.B1.IP.21

IAC-15.A1.6.7

IAC-15.E1.1.3

IAC-15.E2.4.9

IAC-15.C3.4.5

IAC-15.A1.3.2

IAC-15.A6.7.2

IAC-15.D5.2.8

IAC-15.D2.1.4

IAC-15.D2.2.8

IAC-15.E7.4.13

IAC-15.B6.3.3

IAC-15.A3.4.6

IAC-15.E1.2.8

IAC-15.A3.4.2

IAC-15.A3.4.6

IAC-15.E3.IP.18

IAC-15.A6.6.5

IAC-15.C1.8.3

IAC-15.D6.3.7

IAC-15.A6.6.5

IAC-15.C4.IP.16

IAC-15.C3.2.6

IAC-15.A1.7.7

IAC-15.B2.IP.9

IAC-15.E2.2.5

IAC-15.E2.1.7

IAC-15.D2.6.2

IAC-15.D1.7.3

IAC-15.A3.3A.2

IAC-15.A7.2.3

IAC-15.B4.4.9

IAC-15.B2.1.2

IAC-15.E1.6.2

IAC-15.E6.2.8

IAC-15.D3.1.2

IAC-15.E7.4.4

IAC-15.E1.8.3 IAC-15.B2.1.14

IAC-15.E1.2.4

IAC-15.E2.4.9

IAC-15.C2.9.8

IAC-15.A1.7.1 IAC-15.C2.1.6

IAC-15.B2.5.12

IAC-15.A1.IP.8

IAC-15.E1.4.2

IAC-15.B3.7.11

IAC-15.A2.5.4

IAC-15.D3.2.1

IAC-15.B3.2.3

IAC-15.E2.3-YPVF.4.3

Bretschneider, Jens

IAC-15.C4.7-C3.5.6

IAC-15.E2.3-YPVF.4.4

IAC-15.B2.8-YPVF.3.4

IAC-15.A3.3B.11

IAC-15.A3.3A.12

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255 ssian, Otavio Luiz A IAC-15.D1.IP.2

Bogossian, Otavio Luiz Bohlmann, Ulrike M. Bohrer, Gil Boissinot, Valentine Boldrini, Franco Bolker, Asaf Bolker, Asaf Bollepalli, Chandra	A A CA CA	IAC-15.D1.IP.22 IAC-15.E3.1.1 IAC-15.B5.2.8 IAC-15.B2.1.1 IAC-15.C1.5.10
Bohrer, Gil Boissinot, Valentine Boldrini, Franco Bolker, Asaf Bolker, Asaf	A CA CA	IAC-15.B5.2.8 IAC-15.B2.1.1
Boissinot, Valentine Boldrini, Franco Bolker, Asaf Bolker, Asaf	CA CA	IAC-15.B2.1.1
Boldrini, Franco Bolker, Asaf Bolker, Asaf	CA	
Bolker, Asaf Bolker, Asaf		IAC-15 C1 5 10
Bolker, Asaf	CA	IAC 13.C1.3.10
	CA	IAC-15.C2.IP.35
Bollepalli, Chandra	CA	IAC-15.C2.IP.37
	Α	IAC-15.B1.IP.39
Bologna, Stefano	A	IAC-15.D2.6.9
Bombardelli, Claudio	CA	IAC-15.C1.2.5
Bondre, Mugdha	CA	IAC-15.E2.4.3
Bonerba, Michele	CA	IAC-15.B1.2.8
Bonerba, Michele	CA	IAC-15.B1.IP.32
Bonerba, Michele	CA	IAC-15.D1.6.2
Bonetti, Davide Bonfanti, Alice	CA	IAC-15.D2.6.2 IAC-15.A6.4.2
Bonhomme, Christophe	A	IAC-15.C4.1.4
Bonin, Grant	A	IAC-15.B4.3.6
Bonin, Grant	CA	IAC-15.C4.IP.39
Bonin, Grant	CA	IAC-15.C1.9.1
Bonnal, Christophe	A	IAC-15.D2.5.1
Bonnema, Abe	A	IAC-15.E3.5-E7.6.5
Bonnet, Jean-Charles	A	IAC-15.D2.5.2
Boominathan, Subramanian	CA	IAC-15.C1.7.11
Boone, Chris	CA	IAC-15.B1.1.7
Boratkar, Adheesh	CA	IAC-15.C2.6.9
Borgeaud, Maurice	CA	IAC-15.B1.2.10
Borgs, Belinda	CA	IAC-15.A3.4.6
Borisov, Kirill	CA	IAC-15.B5.2.6
Borowitz, Mariel	Α	IAC-15.E3.2.4
Borowitz, Mariel	Α	IAC-15.B1.IP.36
Borowitz, Mariel	Α	IAC-15.E6.IP.1
Borriello, Ciro	CA	IAC-15.E3.4.6
Bosanac, Natasha	CA	IAC-15.C1.2.4
Bosco, Marco	Α	IAC-15.B4.3.9
Bosi, Franco	CA	IAC-15.C4.IP.47
Boswell, Rod	CA	IAC-15.C4.IP.15
Botta, Eleonora	Α	IAC-15.A6.5.6
Bottacini, Massimiliano	Α	IAC-15.A5.1.3
Boulanger, Damien	CA	IAC-15.A2.1.1
Bousquet, Pierre W.	A	IAC-15.A3.1.3
Bowman, Portia	CA	IAC-15.E2.3-YPVF.4.2
Bowman, Portia	CA	IAC-15.B3.7.9
Boyd, Andrea	CA	IAC-15.B3.4-B6.5.4
Bracali Cioci, Davide Brack, Daniel	CA	IAC-15.A6.9.8 IAC-15.E5.5.8
Bradford, Andrew	A	
		IAC-15.B4.5.12 IAC-15.A5.2.5
Bradford, John Bradford, John	CA	IAC-15.A5.2.12
Braithwaite, Timothy	CA	IAC-15.B3.1.4
Branco, Joao	CA	IAC-15.B3.1.4
Brandon, Carl	A	IAC-15.B4.6B.12
Brandt, Joshua	A	IAC-15.A2.3.6
Branz, Francesco	CA	IAC-15.E2.3-YPVF.4.11
Branz, Francesco	A	IAC-15.D1.2.6
Branz, Francesco	CA	IAC-15.D1.2.7
Branz, Francesco	CA	IAC-15.C2.5.2
Branz, Francesco	CA	IAC-15.B4.6B.5
Branz, Francesco	CA	IAC-15.C2.7.9
Bratasanu, Dragos	Α	IAC-15.E1.9.9
Bratlie, Terje	CA	IAC-15.E2.3-YPVF.4.4
Braukhane, Andy	Α	IAC-15.D1.3.5
Braun, Benjamin	CA	IAC-15.C2.IP.41
Braun, Vitali	CA	IAC-15.A6.9.5
Braun, Vitali	Α	IAC-15.A6.7.9
Brauner, Christian	CA	IAC-15.A3.IP.10
Brauner, Christian	CA	IAC-15.A3.3B.8
Bredin, Andrew	CA	IAC-15.A1.IP.20
Bredin, Andrew	CA	IAC-15.A1.6.4
Bredin, Andrew	CA	IAC-15.B5.1.8
	CA	IAC-15.A2.1.3
Bremer, Stefanie		IAC 1E D1 4 E
Bremond, Lucas	Α	IAC-15.D1.4.5
	CA CA	IAC-15.D1.4.3 IAC-15.A2.5.7 IAC-15.A1.7.7

Breuninger, Jakob	CA	IAC-15.A2.5.4
Briess, Klaus	CA	IAC-15.B2.1.10
Brieß, Klaus	CA	IAC-15.C1.6.8
Brieß, Klaus	CA	
,		IAC-15.C2.9.4
Brikner, Natalya	A	IAC-15.C4.IP.40
Brinkman, Phillip	CA	IAC-15.D6.1.3
Brinkman, Phillip	CA	IAC-15.D6.1.8
Briskman, Robert D.	Α	IAC-15.B2.7.2
· · · · · · · · · · · · · · · · · · ·	CA	
Brito, André		IAC-15.D1.2.11
Brito, André	CA	IAC-15.A6.IP.33
Brito, André	CA	IAC-15.A6.IP.36
Brito, André	CA	IAC-15.A6.6.6
-	CA	IAC-15.E2.3-YPVF.4.2
Brocksopp, Samuel		
Brocksopp, Samuel	CA	IAC-15.B3.7.9
Brodsky, Yuval	A	IAC-15.B3.5.1
Brodsky, Yuval	Α	IAC-15.A5.3-B3.6.1
Broekhuizen, Lisa Karina	CA	IAC-15.E6.3.3
Brotzu, Andrea	CA	IAC-15.C2.9.6
Brown, Ari	CA	IAC-15.A7.3.3
Brown, Lawrence	Α	IAC-15.D4.4.4
Brown, Melrose	CA	IAC-15.A6.9.2
Brown, Mia	A	IAC-15.E4.1.6
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Brown, Mia	CA	IAC-15.E3.2.14
Brownbill, Emily	CA	IAC-15.D1.5.1
Brunner, Melanie	CA	IAC-15.B2.8-YPVF.3.4
Bruno, Claudio	A	IAC-15.C4.7-C3.5.2
Bryant, Robert	CA	IAC-15.C4.8.3
Brzytwa, Philip	A	IAC-15.A3.1.7
Bu, Huijiao	CA	IAC-15.B6.3.13
Bucci, Lorenzo	CA	IAC-15.D2.3.3
Buchman, Sasha	CA	IAC-15.B4.4.6
Buchwald, Robert	CA	IAC-15.A3.IP.10
Buchwald, Robert	CA	IAC-15.A3.3B.8
Buckley, Nicole	Α	IAC-15.B3.3.2
Buckley, Nicole	CA	IAC-15.B3.3.5
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Budnik, Sergey	CA	IAC-15.C2.4.4
Budnik, Sergey	CA	IAC-15.C2.6.2
Bueno dos Santos, Marcio	Α	IAC-15.C2.7.10
Buffenoir, François	CA	IAC-15.D2.6.3
Bugnet, Olivier	CA	IAC-15.D2.1.4
Bugrova, Anna	CA	IAC-15.A1.IP.10
Bukley, Angie	A	IAC-15.A2.3.8
Bukley, Angie	Α	IAC-15.B1.5.8
Bulavin, Iliya	A	IAC-15.A1.8.11
Bulgarelli, Andrea	CA	IAC-15.B4.2.10
Bulgarelli, Andrea	CA	IAC-15.B4.3.1
Buonomo, Marco	CA	IAC-15.E2.3-YPVF.4.11
Burdanov, Anton	A	IAC-15.C2.7.8
Burg, Alexander	A	IAC-15.D3.4.6
Burger, Eduardo Escobar	A	IAC-15.B4.1.10
Burger, Eduardo Escobar	Α	IAC-15.D1.6.6
Burger, Eduardo Escobar	CA	IAC-15.B4.7.7
Burger, Winfried	CA	IAC-15.A1.7.7
Burgett, Taylor	CA	IAC-15.E1.5.11
Burke, James	A	IAC-15.E5.5.8
Burmann, Bastian	CA	IAC-15.B1.2.8
Burmann, Bastian	A	IAC-15.A7.3.1
Burmeister, Soenke	CA	IAC-15.A1.5.2
Burnett, Dennis	A	IAC-15.E7.5.5
Burov, Alexander	CA	IAC-15.C1.3.2
Burov, Alexander	CA	IAC-15.C1.6.3
Burov, Alexander	CA	IAC-15.D4.3.2
Burri, Gaëtan	CA	IAC-15.C1.IP.11
Burri, Gaëtan	CA	IAC-15.E2.4.4
Burzykowska, Anna	A	IAC-15.B1.5.7
•		
Busch, Stephan	CA	IAC-15.D1.4.2
Bushra, Nayab	CA	IAC-15.C3.3.1
Bussey, Ben	Α	IAC-15.A3.1.2
Butler, Bradley	A	IAC-15.C2.4.8
Byagowi, Ahmad	CA	IAC-15.A1.IP.20
Byagowi, Ahmad	A	IAC-15.D1.3.4
Byagowi, Ahmad	A	IAC-15.A1.6.4
Byagowi, Ahmad	CA	IAC-15.B5.1.8
Byer, Robert	CA	IAC-15.B4.4.6
Byers, Anthony	CA	IAC-15.B3.1.6

IAC-15.A2.5.4

Breuninger, Jakob

Byun, Yung-Hwan	CA	IAC-15.C4.2.6
Bérend, Nicolas	Α	IAC-15.C4.4.11
Böhle, Martin	CA	IAC-15.C4.3.1
Böhnhardt, Hermann	CA	IAC-15.B6.3.3
Büskens, Christof	CA	IAC-15.A3.IP.15

Böhnhardt, Hermann	CA	IAC-15.B6.3.3
Büskens, Christof	CA	IAC-15.A3.IP.15
С		
Name	Role	Paper
C, Rajeev	CA	IAC-15.C4.IP.55
C Guerrieri, Dadui	CA	IAC-15.B4.6B.7
C Guerrieri, Dadui	Α	IAC-15.C4.6.2
C.Sandoval Goes, Luiz	CA	IAC-15.C2.3.7
Cabas, Ramiro	CA	IAC-15.A3.2A.8
Cabon, Betty	CA	IAC-15.C2.3.2
Cabrera, Carlos	CA	IAC-15.A2.3.5
Cacovean, Andrei	Α	IAC-15.D5.1.5
Cagnani, Ivan	A	IAC-15.A2.1.5
Cahan, Bruce	Α	IAC-15.E6.1.5
Cai, Jingqi	Α	IAC-15.D1.IP.10
CAI, Qiong	CA	IAC-15.C2.1.9
CAI, Wenyi	A	IAC-15.A3.1.11
CAI, Wenyi	CA	IAC-15.E6.IP.6
Calderoni, Carlo	CA	IAC-15.C2.IP.29
Calderoni, Carlo	CA	IAC-15.C2.IP.30
Callahan, Jason	A	IAC-15.E4.1.1
Callens, Natacha	CA	IAC-15.E1.7.12
Calvo-Alvarado, Julio	A	IAC-15.B4.1.8
Calvo-Obando, Ana Julieta	Α	IAC-15.B4.1.8
Calzada Diaz, Abigail	Α	IAC-15.E3.IP.18
Cambioni, Saverio	CA	IAC-15.E2.3-YPVF.4.
Cambioni, Saverio	CA	IAC-15.A6.IP.28
Camisassa, Marco	CA	IAC-15.A2.6.8
Camisassa, Marco	CA	IAC-15.D1.7.7
Campagnola, Stefano	A	IAC-15.C1.1.8
Campan, Jérôme	A	IAC-15.B3.4-B6.5.5
Campanelli, Vincenzo	CA	IAC-15.C1.7.8
Canalias, Elisabet	A	IAC-15.C1.1.1
Canas Ferreira, Joao	CA	IAC-15.B2.1.1
Cang, Zhongya	A	IAC-15.A6.IP.20
Cantwell, Brian	CA	IAC-15.C4.6.10
Canu, Claudio	CA	IAC-15.A6.IP.28
Cao, Caixia	CA	IAC-15.B4.4.3
Cao, Jianlin	A	IAC-15.B4.6B.4
Cao, Jing	A	IAC-15.C1.8.5
CAO, Lingling		IAC-15.C2.1.9
Cao, QiPeng	CA	IAC-15.C2.IP.47
Cao, Xibin	CA	IAC-15.A6.IP.18
Cao, Xibin	CA	IAC-15.A6.IP.44
Cao, Xibin	CA	IAC-15.C1.5.5
Cao, Yan	CA	IAC-15.A6.3.8
Cao, Yingjian	CA	IAC-15.C1.6.7
Capitaine, Thierry	CA	IAC-15.E3.5-E7.6.4
Cappolicti, Marco	CA	IAC-15.B3.7.7
Cappelletti, Chantal	CA	IAC-15.B4.3.2
Cappelletti, Chantal Cappelletti, Chantal	CA CA	IAC-15.B4.5.9 IAC-15.C1.5.6
Capponi, Luigi Caprara, Agnese	CA	IAC-15.B2.3.2
	CA	IAC-15.E2.3-YPVF.4.
Capuano, Maurizio Carapellese, Stefano	A	IAC-15.A3.3A.2
		IAC-15.C4.1.7
Carbognani, Franco	CA	IAC-15.B3.5.1
Carbognani, Franco	CA	IAC-15.A5.3-B3.6.1
Carbone, Davide	CA	IAC-15.E2.3-YPVF.4.
Cardona, Tommaso	A CA	IAC-15.A6.1.3
Cardona, Tommaso	CA	IAC-15.B4.2.7
Cardona, Tommaso	CA	IAC-15.A6.IP.28
Cardone, Mauro	CA	IAC-15.B6.3.4
Cardoso dos Santos, Josué	A CA	IAC-15.C1.IP.4
Cardoso dos Santos, Josué	CA	IAC-15.E4.2.7
Carl Feldman, Gene	CA	IAC-15.B1.IP.39
Carmen, Christina Carmen, Christina L.	CA CA	IAC-15.E1.8.7 IAC-15.E1.3.12
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Carnelli, Ian	Α	IAC-15.A3.4.9
Carnicero Domínguez, Bernardo	CA	IAC-15.B1.1.4
Carpanelli, Elena	CA	IAC-15.E7.1.10
Carpenter, James	CA	IAC-15.A3.2B.2
Carpenter, Kalind	CA	IAC-15.A2.3.1
Carrasco, Jose Antonio	CA	IAC-15.D1.4.7
Carrasquilla-Batista, Arys	A	IAC-15.B4.1.8
Carrasquilla-Batista, Arys	Α	IAC-15.B5.1.6
Carrera, Albano	CA	IAC-15.B4.3.10
Carrie, Christian	CA	IAC-15.B3.9-YPVF.2.3
Carron, Andrea	CA	IAC-15.D1.2.6
Carron, Andrea	CA	IAC-15.C2.5.2
Carta, Riccardo	CA	IAC-15.A2.3.3
Carter, Robert	A	IAC-15.C2.9.3
Carvajal-Godínez, Johan	CA	IAC-15.B4.1.8
Carvalho, Jean Paulo dos Santos	CA	IAC-15.C1.IP.4
Casler, James	CA	IAC-15.C3.1.3
Cassady, Joe	A	IAC-15.D2.8-A5.4.8
Cassese, Ferdinando	CA	IAC-15.E6.IP.3
Cassi, Carlo	CA	IAC-15.A3.3B.2
Cassiano Julio Filho, Antonio	A	IAC-15.B3.4-B6.5.6
Castejon Garcia, Ezio	CA	IAC-15.C2.7.10
Castiglione, Luigi	CA	IAC-15.A2.6.6
Castillo, Julie	CA	IAC-15.A3.5.8
Castillo Argañarás, Luis Fernando	A	IAC-15.E7.7-B3.8.8
Castorina, Michele	Α	IAC-15.B5.2.9
CASTRO, Jean-Paul	CA	IAC-15.E1.2.10
Castronuovo, Marco M.	CA	IAC-15.A3.IP.36
Cataldo, Giuseppe	A	IAC-15.A7.3.3
Cataldo, Giuseppe	Α	IAC-15.D1.6.4
Catallo, Claudio	CA	IAC-15.B1.2.2
Cau, Cristian	CA	IAC-15.E2.3-YPVF.4.1
Caubet, Albert	Α	IAC-15.C1.8.3
Cavenago, Francesco	CA	IAC-15.D2.3.3
Cavinato, Alessandro	CA	IAC-15.E2.3-YPVF.4.11
Cawthorne, Andrew	CA	IAC-15.B4.4.10
Ccrébassol, Philippe	CA	IAC-15.B1.2.1
Ceccarelli, Francesco	CA	IAC-15.C4.3.6
Ceccaroni, Marta	Α	IAC-15.C1.IP.16
Celine, Loisel	CA	IAC-15.B2.4.1
Celine, Loisel	CA	IAC-15.B2.4.2
Celine, Loisel	CA	IAC-15.B2.6.5
Celine, Loisel	CA	IAC-15.B4.6A.12
Cenini, Elisa	Α	IAC-15.A3.IP.43
Ceppi, Giulio	CA	IAC-15.A3.IP.43
Ceppi, Giulio	CA	IAC-15.E5.2.2
Cercós Pita, Lorenzo	CA	IAC-15.A3.2B.7
Cercós Pita, Lorenzo	CA	IAC-15.A6.5.8
Cerini, Corinna	CA	IAC-15.E2.3-YPVF.4.1
Ceriotti, Matteo	CA	IAC-15.B4.1.6
Ceriotti, Matteo	CA	IAC-15.C2.3.9
Cernuda, Jaime	Α	IAC-15.E1.2.5
Cernusco, Alberto	CA	IAC-15.D2.3.8
Cerone, Marco	CA	IAC-15.B4.2.10
Cerone, Marco	CA	IAC-15.B4.3.1
Cervone, Angelo	CA	IAC-15.C4.2.2
Cervone, Angelo	CA	IAC-15.B4.6B.7
Cervone, Angelo	CA	IAC-15.C4.6.2
Cervone, Angelo	CA	IAC-15.C4.6.4
Cesare, Stefano	CA	IAC-15.A3.IP.36
Cesaretti, Giovanni	CA	IAC-15.C4.4.2
Cetin, Ediz	CA	IAC-15.A2.3.6
Chabot, Thomas	CA	IAC-15.A6.6.3
Chacon-Rodriguez, Alfonso	CA	IAC-15.B5.1.6
Chagas, Milton	CA	IAC-15.D3.4.7
Chagas, Misael	A	IAC-15.A1.IP.16
Chagas Junior, Milton	CA	IAC-15.D5.1.6
Chagas Junior, Milton	CA	IAC-15.A2.6.7
Chaieb, Sofiane	CA	IAC-15.C3.2.2
Chalotra, Deeksha	CA	IAC-15.D4.1.4
Chandran, Satheesh	A	IAC-15.C2.9.11
Chandrasekara, Rakhitha	A	IAC-15.62.5.11
Chandrasekhar, M.G.	CA	IAC-15.B2.7.1
·	A	IAC-15.B2.7.1
Chang, Byung Chul		

Chang, Chih-Hung	CA	IAC-15.E6.2.4
Chang, Cuiyan	CA	IAC-15.D1.2.8
Chang, Douglas	CA	IAC-15.A1.2.6
Chang, Eva Yi-Wei	Α	IAC-15.E6.2.4
Chang, Eva Yi-Wei	A	IAC-15.D6.1.9
Chang, Eva Yi-Wei	A	IAC-15.E4.2.8 IAC-15.B1.1.6
Chang, Guey-Shin Chang, Guey-Shin	CA CA	IAC-15.B1.1.6
Chang, Hao-Chi	A	IAC-15.C1.5.2
Chang, Hao-Chi	CA	IAC-15.D1.5.4
Chang, Jisung	Α	IAC-15.B1.IP.17
Chang, Won Keun	Α	IAC-15.C4.9.11
Chanik, Abadi	CA	IAC-15.C1.6.1
Changing Augustin	CA	IAC-15.C2.3.9 IAC-15.D1.3.3
Chanoine, Augustin Chapin, Peter	CA	IAC-15.B1.5.5
Chappell, Laurie	CA	IAC-15.B4.5.6
Charania, A. C.	CA	IAC-15.B3.2.4
Charania, A. C.	CA	IAC-15.A2.3.9
Charania, A. C.	CA	IAC-15.B4.5.2
Charania, A. C.	CA	IAC-15.D2.7.1
Charlebois, Denis	CA	IAC-15.B3.3.2
Charles, Christine	CA	IAC-15.C4.IP.15
Charles, John Charlesworth, Amber	CA A	IAC-15.E4.2.2 IAC-15.E3.2.2
Charlesworth, Amber	A	IAC-15.E3.2.2 IAC-15.E7.7-B3.8.10
Chatwin, Chris	CA	IAC-15.A6.6.9
Chatzipanagiotis, Michail	A	IAC-15.D6.1.1
Chatzipanagiotis, Michail	Α	IAC-15.E7.4.6
Chaudhari, Gitesh	CA	IAC-15.E2.4.9
Chaumette, Francois	CA	IAC-15.A6.6.3
Chavarría Flores, Adriana	A	IAC-15.E1.5.9
Chavarría Flores, Adriana	CA	IAC-15.E1.6.8
Charanasa Jaan	CA	IAC-15.B4.1.8
Cheganças, Jean Chelaru, Adrian	CA CA	IAC-15.D1.3.1 IAC-15.D2.2.9
Chelaru, Adrian	CA	IAC-15.C4.3.14
Chelaru, Teodor-Viorel	A	IAC-15.D2.2.9
Chelaru, Teodor-Viorel	Α	IAC-15.C4.3.14
Chemoul, Bernard	Α	IAC-15.D2.2.3
Chen, Anhong	CA	IAC-15.B1.IP.23
Chen, Bingyan	A	IAC-15.C2.IP.6
Chen, Bowen	CA CA	IAC-15.E3.3.3
Chen, Bowen Chen, Changya	CA	IAC-15.D1.4.11 IAC-15.C2.IP.49
Chen, Chao	A	IAC-15.A5.1.12
Chen, Dong	Α	IAC-15.B2.1.11
Chen, Dong	CA	IAC-15.B2.6.10
Chen, Erhu	CA	IAC-15.B2.6.11
Chen, Hai-qun	CA	IAC-15.C2.IP.17
Chen, Hai-qun	CA	IAC-15.C2.IP.18
Chen, Hai-qun	CA	IAC-15.C2.IP.20
Chen, Hailong Chen, Han	CA CA	IAC-15.A1.3.2 IAC-15.C2.IP.26
Chen, Hongru	CA	IAC-15.C2.IP.20
Chen, Hongru	A	IAC-15.C1.2.7
Chen, Jiangping	CA	IAC-15.C2.7.7
Chen, Jianhua	CA	IAC-15.C4.5.4
Chen, Junjie	CA	IAC-15.C1.6.7
Chen, Li	CA	IAC-15.C2.3.11
Chen, Li	CA	IAC-15.C1.IP.19
Chen, Li	CA	IAC-15.D1.IP.6
Chen, Lian-zhong	CA CA	IAC-15.D1.IP.7 IAC-15.C2.IP.9
Chen, Lian-zhong	CA	IAC-15.C2.IP.11
Chen, Lian-zhong	CA	IAC-15.C2.IP.17
Chen, Lian-zhong	Α	IAC-15.C2.IP.18
Chen, Lian-zhong	CA	IAC-15.C2.IP.20
Chen, Lian-zhong	A	IAC-15.C2.IP.36
Chen, Lianzhong	CA	IAC-15.B3.IP.6
Chen, Lianzhong	CA	IAC-15.C4.IP.11
Chen, Lingsong	CA	IAC-15.E1.3.3
Chen, Lingsong Chen, Lv	CA CA	IAC-15.E2.4.2 IAC-15.C3.3.7
Chen, Meir	CA	IAC-15.C3.3.7
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Chen, Ping	CA	IAC-15.A6.IP.5
Chen, Shuhua	CA	IAC-15.C2.6.11
Chen, Siyuan	CA	IAC-15.C2.4.3
Chen, Wen	CA	IAC-15.B4.4.3
Chen, Xianfeng	CA	IAC-15.D1.6.10
Chen, Xiang Chen, Xiangxian	CA CA	IAC-15.D1.6.10 IAC-15.D1.IP.13
Chen, Xiao	CA	IAC-15.B2.IP.4
Chen, Xiaofei	CA	IAC-15.C2.IP.10
Chen, Xiaoguang	A	IAC-15.A6.IP.32
Chen, Xiaoping	CA	IAC-15.A1.3.8
Chen, Xiaoqian	CA	IAC-15.C2.IP.1
Chen, Xiaoqian	CA	IAC-15.B4.6A.5
Chen, Xiaoyan	CA	IAC-15.A6.4.11
Chen, Xinlong	CA	IAC-15.A6.9.7
Chen, Xinlong	Α	IAC-15.A6.5.2
Chen, Yang	Α	IAC-15.B4.8.3
Chen, Yang	Α	IAC-15.D2.8-A5.4.3
Chen, Yonggang	CA	IAC-15.C3.IP.6
Chen, Zhi-ming	CA	IAC-15.C2.IP.17
Chen, Zhi-ming	CA	IAC-15.C2.IP.18
Cheng, Andy	CA	IAC-15.C1.1.11
Cheng, Andy	Α	IAC-15.A3.4.8
Cheng, Andy	CA	IAC-15.A3.4.10
Cheng, Guosheng	CA	IAC-15.A6.IP.20
Cheng, Haowen	Α	IAC-15.A6.IP.38
Cheng, Jing	A	IAC-15.D1.IP.7
Cheng, Mei	CA	IAC-15.C2.5.4
Cheng, Ming-Chih	A	IAC-15.B1.1.6
Cheng, Tan	CA	IAC-15.A1.3.8
Cheng, ZhengAi	A	IAC-15.C3.1.4
Cheng, ZhengAi	CA	IAC-15.C2.2.9
Cheng, ZhengAi	CA	IAC-15.C3.2.5
Cheng, ZhengAi	CA	IAC-15.C2.3.10
Cheng, ZhengAi	A CA	IAC-15.C2.IP.43
Cheng, ZhengAi Cheng, ZhengAi	CA	IAC-15.C3.IP.2 IAC-15.C1.6.2
Cherciu, Claudiu	CA	IAC-15.C1.6.2
Cherciu, Claudiu	CA	IAC-15.E2.0.4
Cherciu, Claudiu	CA	IAC-15.C3.4.3
Cherepanov, Valery	A	IAC-15.C2.8.4
Cherian, Rex	CA	IAC-15.E7.IP.19
Chern, Rock Jeng-Shing	Α	IAC-15.B6.3.1
Chern, Rock Jeng-Shing	CA	IAC-15.E6.2.4
Chern, Rock Jeng-Shing	CA	IAC-15.D6.1.9
Chern, Rock Jeng-Shing	CA	IAC-15.E4.2.8
Chernikova, Anna	CA	IAC-15.A1.IP.1
Chernikova, Anna	Α	IAC-15.A1.IP.9
Chernov, Victor	CA	IAC-15.E1.6.6
Chhajed, Pritesh	CA	IAC-15.E2.4.3
Chhajed, Pritesh	Α	IAC-15.E2.4.10
CHIAN, Wen-Lung	CA	IAC-15.C1.5.2
CHIARELLI, Cosimo	CA	IAC-15.A3.1.3
Chiariotti, Federico	CA	IAC-15.E2.3-YPVF.4.11
Chiba, Takehisa	CA	IAC-15.B1.1.6
Chibel, Ron	CA	IAC-15.A1.4.2
Chibing, Shen	CA	IAC-15.C4.9.10
Chibing, Shen	A	IAC-15.C4.9.13
Chibing, Shen	A	IAC-15.C4.3.11
Chiesa, Alessandro	A	IAC-15.A6.6.7
Chinick, Tom	CA	IAC-15.D2.2.6
Chinick, Tom Chinner, John	CA CA	IAC-15.E3.2.11 IAC-15.E1.2.1
Chintamani, Keshav	CA	IAC-15.E1.2.1 IAC-15.A5.3-B3.6.6
Chiovini, Andrea	CA	IAC-15.A5.3-B3.0.0
Chirtu, Cris	CA	IAC-15.A6.IP.28
Chitu, Cristian Corneliu	A	IAC-15.A3.IP.34
Chiuri, Daniele Emanuele	A	IAC-15.A6.IP.42
Chiuri, Daniele Emanuele	CA	IAC-15.E3.5-E7.6.4
Chizhukhin, Vladimir	CA	IAC-15.E3.3-E7.0.4
STREET WINDS TO A TOWN THE TOWN TO A	CA	IAC-15.B4.1.2
Cho, Mengu	CA	IAC-15.E1 IP 2
Cho, Mengu Cho, Mengu	CA CA	IAC-15.E1.IP.2 IAC-15.D5.3.1
Cho, Mengu	CA CA CA	IAC-15.E1.IP.2 IAC-15.D5.3.1 IAC-15.D5.3.5

Cho, Mengu	Α	IAC-15.D1.7.10
CHO, YEON	CA	IAC-15.C2.IP.24
Choi, ChungHyeon	CA	IAC-15.A6.IP.1
Choi, Seok Weon	CA	IAC-15.B6.IP.1
Choi, Young-In	Α	IAC-15.D1.6.3
Chopinet, Jjean-noël	CA	IAC-15.C4.1.4
Chopra, Sharad	Α	IAC-15.C3.1.8
Chopra, Sharad	CA	IAC-15.D4.1.5
Chopra, Sharad	CA	IAC-15.C3.3.9
Chopra, Sharad	CA	IAC-15.D4.3.7
Chopra, Sharad	A	IAC-15.D4.3.11
Chopra, Sharad	CA	IAC-15.D4.3.14
Chopra, Sharad	CA	IAC-15.C4.7-C3.5.3
Chougule, Onkar	CA	IAC-15.E2.4.3
Choukroun, Daniel	CA	IAC-15.C1.IP.12
Choukroun, Daniel	A	IAC-15.C1.8.6
Christensen, Carissa	A	IAC-15.E6.1.8
Christensen, Carissa	CA	IAC-15.E3.IP.7
Christensen, Carissa	A	IAC-15.E6.IP.4
		IAC-15.E0.IP.4
Christophe, Bruno Christophe, Bruno	CA	
	CA	IAC-15.B1.IP.9
Christopher, Palma	CA	IAC-15.E1.8.4
Christoulakis, Marios	CA	IAC-15.A5.2.11
Christoulakis, Marios	CA	IAC-15.E5.1.2
Chuan, Ma	CA	IAC-15.C1.4.6
Chun, Francis	CA	IAC-15.E1.8.4
Chung, Yunjae	A	IAC-15.C4.1.12
Chvanov, Vladimir	CA	IAC-15.C4.1.2
Chvanov, Vladimir	CA	IAC-15.E4.2.4
Ciarambino, Marco	CA	IAC-15.A3.2B.5
Ciaramicoli, Mario	CA	IAC-15.B6.1.4
Ciccarelli, Silvia	A	IAC-15.E3.1.11
Ciccarelli, Silvia	A	IAC-15.E6.IP.3
Ciccarelli, Silvia	CA	IAC-15.B1.5.1
Cichocki, Filippo	CA	IAC-15.A6.5.5
Cieśliński, Dawid	A	IAC-15.E2.1.4
Cieśliński, Dawid	CA	IAC-15.D2.7.10
Cikanek, Harry A.	A	IAC-15.B1.2.11
Cilliers, Pierre	CA	IAC-15.A7.1.6
Cimmino, Nicola	CA	IAC-15.E1.7.10
Cipriani, Federico	CA	IAC-15.C2.7.9
Cisbani, Andrea	CA	IAC-15.B1.2.2
Ciufolini, Ignazio	A	IAC-15.A2.1.8
Ciufolini, Ignazio	CA	IAC-15.C2.2.10
Ciufolini, Ignazio	A	IAC-15.B2.IP.3
Ciufolini, Ignazio	CA	IAC-15.C2.6.5
Claasen, Friedhelm	CA	IAC-15.B2.1.9
Clark, Craig	CA	IAC-15.B4.2.6
Clark, Craig	CA	IAC-15.B1.IP.39
Clark, Craig	CA	IAC-15.C3.4.7
Clark, Ryan	A	IAC-15.C4.9.9
Clark, Vanessa	CA	IAC-15.E6.1.7
Clark, Vanessa	CA	IAC-15.E6.2.10
Clark, Vanessa	CA	IAC-15.E3.IP.3
Clark, Vanessa	CA	IAC-15.D1.3.6
Cleave, Mary	CA	IAC-15.B1.IP.39
Clemens, Joachim	CA	IAC-15.A3.IP.15
Clemens, Joachim	CA	IAC-15.C1.7.4
Clement, Ryan David	CA	IAC-15.E1.7.11
Clemente, Carmine	CA	IAC-15.B4.6B.4
Clementini, Gisella	CA	IAC-15.A7.2.5
Clervoy, Jean-Francois	CA	IAC-15.A2.3.2
Clifford, Andrew	CA	IAC-15.B4.6A.9
Close, Sigrid	CA	IAC-15.D1.2.10
Cmar, Joshua	A	IAC-15.D3.3.5
Cocchiara, chiara maria	A	IAC-15.B6.3.10
Cocchiara, chiara maria	A	IAC-15.E5.2.4
Cocco, Francesco	CA	IAC-15.C2.7.9
Cockrell Jr., Charles E.	A	IAC-15.D2.4.1
Cocuzza, Silvio	A	IAC-15.D1.1.1
Cocuzza, Silvio	A	IAC-15.D3.3.2
Cocuzza, Silvio	A	IAC-15.D4.1.10
Cocuzza, Silvio	A	IAC-15.A2.4.8
Cocuzza, Silvio	Α Α	IAC-15.A2.IP.2
Cocuzza, Silvio	A	IAC-15.C2.IP.27









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Cocuzza, Silvio	Α	IAC-15.C2.IP.52
Cocuzza, Silvio	A	IAC-15.D1.IP.11
Cocuzza, Silvio	A	IAC-15.D1.IP.12
Cocuzza, Silvio	A	IAC-15.C2.9.10
Cohen, Brendan Cohen, Dan	CA	IAC-15.E7.1.10 IAC-15.B5.2.7
Cohen, Luchino	CA	IAC-15.B3.2.7
Cohen, Marc M.	A	IAC-15.D3.1.1
Cohen, Marc M.	A	IAC-15.E5.1.1
Cohen, Marc M.	А	IAC-15.E5.1.3
Cohen, Marc M.	Α	IAC-15.C4.IP.18
Cohen, Noam	CA	IAC-15.B1.IP.7
Cohen, Omer	CA	IAC-15.B1.3.3
Cohen, Omer	A	IAC-15.B1.IP.8
Cohen, Samuel	A	IAC-15.C4.7-C3.5.9
Coker, Adesina	CA	IAC-15.E7.2.3
Colograssi Andrea	CA A	IAC-15.A6.IP.49 IAC-15.C1.3.1
Colagrossi, Andrea Colagrossi, Andrea	CA	IAC-15.A3.3A.12
Coletta, Alessandro	CA	IAC-15.B1.IP.34
Coletta, Alessandro	CA	IAC-15.B1.5.9
Collette, Jean-Paul	CA	IAC-15.C2.8.7
Colley, Dan	CA	IAC-15.E5.4.7
Colligan, Philip	CA	IAC-15.E1.2.1
Colmenarejo, Pablo	CA	IAC-15.A3.3B.1
Colomba, Mauro	CA	IAC-15.A3.IP.19
Colombatti, Giacomo	CA	IAC-15.A3.3B.7
Colombo, Camilla	CA	IAC-15.C1.4.5
Colombo, Camilla	CA	IAC-15.A6.9.3
Comito, Vincenzo	CA	IAC-15.A5.3-B3.6.3
Compadre, Marcos Comtois, Alain-Steve	CA CA	IAC-15.C3.4.7 IAC-15.A1.3.4
Comtois, Jean-Marc	CA	IAC-15.B3.7.3
Conde Reis, Alain	CA	IAC-15.D2.4.8
Conde Rodriguez, Aitor	A	IAC-15.B4.3.2
Conde Rodriguez, Aitor	CA	IAC-15.B4.5.9
Condurache, Daniel	Α	IAC-15.C1.IP.17
Cong, Huang	CA	IAC-15.B2.4.9
Conroy, Lorraine	CA	IAC-15.E5.4.7
Constantinescu, Cristian-Emil	CA	IAC-15.C1.9.5
Cook, Steve	A	IAC-15.D2.7.2
Cooper, Bonnie	CA	IAC-15.A3.2A.6
Cooper, Ken	CA A	IAC-15.C2.9.3
Coppo, Peter Coppotelli, Giuliano	CA	IAC-15.B1.3.5 IAC-15.C2.1.8
Cordelli, Emiliano	A	IAC-15.A6.9.9
Cordova, Sergio	CA	IAC-15.A3.2B.8
Cordova Lopez, Alejandro	CA	IAC-15.E3.IP.18
Corpino, Sabrina	CA	IAC-15.A2.6.8
Corpino, Sabrina	CA	IAC-15.B4.6B.8
Corpino, Sabrina	CA	IAC-15.D1.5.5
Corpino, Sabrina	CA	IAC-15.D1.5.8
Corpino, Sabrina	CA	IAC-15.D1.6.5
Correnti, Andrea	CA	IAC-15.D1.IP.11
Corrêa Jr, Flávio de Azevedo	A	IAC-15.D5.1.6
Corrêa Jr, Flávio de Azevedo Costa, Maurizio	A	IAC-15.A2.6.7
Costa, Maurizio Costantini, Fabiano	CA	IAC-15.B3.IP.7 IAC-15.B1.IP.18
COSTEA, Dragos	CA	IAC-15.B1.IP.16
Cosyn, Philippe	A	IAC-15.E4.1.4
Cosyn, Philippe	CA	IAC-15.E4.2.6
Cotronei, Vittorio	CA	IAC-15.B3.3.4
Cotti, Joe	CA	IAC-15.B5.1.4
Cottom, Travis	Α	IAC-15.D5.4.6
Couairon, Arnaud	CA	IAC-15.B1.2.6
Coulon, Didier	CA	IAC-15.D2.1.4
Council, Sherman	CA	IAC-15.D6.1.3
Courtney, Daniel	CA	IAC-15.A6.6.2
COURTOIS, Michel	CA	IAC-15.B1.1.2
COURTOIS, Michel	CA	IAC-15.E6.3.2
Cowardin, Heather	CA	IAC-15.A6.1.7
Cowardin, Heather Coxhill, Ian	CA CA	IAC-15.A6.2.9 IAC-15.D1.2.11
Cozmuta, Ioana	A	IAC-15.D1.2.11
Cozzoni, Barbara	CA	IAC-15.A3.4.2
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rahay, Jean	CA	IAC-15.C2.8.7
ramarossa, Augusto	CA	IAC-15.E3.3.6
rawley Derkaczew, Joanna	CA	IAC-15.E5.4.7
reech, Steve	Α	IAC-15.D2.8-A5.4.2
resto Aleina, Sara	Α	IAC-15.D4.1.12
resto Aleina, Sara	CA	IAC-15.D2.4.3
revatin, Jérôme	Α	IAC-15.D6.3.2
rippa, Roberto	CA	IAC-15.A4.IP.1
risconio, Marino	CA	IAC-15.B3.3.4
rist, Kevin	CA	IAC-15.B1.5.8
ristoforetti, Samantha	CA	IAC-15.B3.5.3
rocker, Andrew	Α	IAC-15.D2.5.3
rocker, Andy	CA	IAC-15.D2.7.2
rosnier, Michael	CA	IAC-15.A3.2A.8
rosnier, Michael	CA	IAC-15.A3.5.9
ross, Matthew	CA	IAC-15.A5.3-B3.6.1
rowe, William	A	IAC-15.B4.8.10
rumbly, Chris	CA	IAC-15.D2.8-A5.4.2
rusa, Jason	CA	IAC-15.B3.7.2
	CA	IAC-15.B3.7.2
ruz, Imanol	A	
ruz-Zaragoza, Epifanio		IAC-15.C2.6.6
soke, Antal	CA	IAC-15.A1.5.2
soke, Antal	CA	IAC-15.A1.5.12
soke, Antal	CA	IAC-15.D5.3.7
uccato, Davide	CA	IAC-15.D3.3.2
uccato, Davide	CA	IAC-15.D4.1.10
uccato, Davide	CA	IAC-15.A2.4.8
uccato, Davide	CA	IAC-15.C2.9.10
ugliari, Giovanni	CA	IAC-15.A1.IP.8
ui, Hongzheng	A	IAC-15.B2.IP.11
ui, Hutao	CA	IAC-15.A3.IP.21
ui, Jixiang	A	IAC-15.B6.2.9
ui, Pingyuan	CA	IAC-15.A3.IP.7
ui, Pingyuan	CA	IAC-15.A3.IP.18
ui, Pingyuan	CA	IAC-15.C1.7.10
ui, Shuangxing	CA	IAC-15.A6.IP.38
ullinan, Mick	CA	IAC-15.E5.4.7
urianò, Federico	CA	IAC-15.B4.2.7
urianò, Federico	CA	IAC-15.C2.1.8
urti, Fabio	Α	IAC-15.C1.5.10
urti, Fabio	Α	IAC-15.C1.7.7
urtis, Jeremy	CA	IAC-15.E1.2.1
ushley, Alex	Α	IAC-15.D3.3.1
ussac, Thibery	Α	IAC-15.D1.3.1
utler, Grant	CA	IAC-15.B4.4.6
utts, James A.	CA	IAC-15.A3.5.5
yr, Philippe	CA	IAC-15.E6.1.7
yr, Philippe	CA	IAC-15.E6.2.10
zeluschke, Alexandra	CA	IAC-15.D3.2.3

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Name	Role	Paper
D'Aliesio, Giovanni	CA	IAC-15.B1.IP.32
D'Alvano, Elena	CA	IAC-15.E3.3.6
D'Ambrosio, Domenic	CA	IAC-15.D2.3.7
D'Amico, Fabio	CA	IAC-15.B4.2.10
D'Amico, Fabio	Α	IAC-15.B4.3.1
D'Ottavio, Andrea	CA	IAC-15.E2.3-YPVF.4.2
D'Ottavio, Andrea	CA	IAC-15.B3.7.9
D'yachkov, Lev	CA	IAC-15.A2.IP.4
da Costa, Rodrigo	CA	IAC-15.A5.1.8
Da Fonseca, Ijar M.	Α	IAC-15.C2.3.7
da Silva Curiel, Alex	Α	IAC-15.B4.4.10
da Silva Curiel, Alex	CA	IAC-15.D1.5.1
da Silva Pais Cabral, Francisco	CA	IAC-15.A3.3B.11
Dabak, Shubhankar	CA	IAC-15.C2.6.9
Dachwald, Bernd	CA	IAC-15.A3.IP.8
Dadhich, Akanksha	CA	IAC-15.E2.1.1
Dadhich, Akanksha	Α	IAC-15.A6.3.10
Daehler, Erik	Α	IAC-15.B1.2.3
Dafnis, Athanasios	CA	IAC-15.D3.1.3
Dahua, Du	Α	IAC-15.C4.5.5
DAINESI, PAOLO	CA	IAC-15.A1.8.8
Dainesi, Paolo	CA	IAC-15.A2.4.10

Daiying, Deng	CA	IAC-15.C2.4.3
Dakshayani, B.P.	CA	IAC-15.C1.7.11
DalBello, Richard	CA	IAC-15.B3.2.4
DalBello, Richard	CA	IAC-15.A2.3.9
DalBello, Richard	CA	IAC-15.B4.5.2
DalBello, Richard	CA	IAC-15.D2.7.1
	A	
Dalin, LI		IAC-15.B6.2.3
Dalin, Yang	A	IAC-15.C1.8.9
Dalla Vecchia, Riccardo	CA	IAC-15.C2.7.9
Dalton, Matthew	Α	IAC-15.C3.1.5
Dalton, Matthew	Α	IAC-15.C3.3.1
Dalton, Matthew	Α	IAC-15.C2.7.2
Dalton, Matthew	CA	IAC-15.C2.7.3
Damonte, Giulia	CA	IAC-15.C3.3.5
Danaila, Sterian	A	IAC-15.C2.7.6
Danciu, Adrian	CA	IAC-15.D2.2.9
Danciu, Adrian	CA	IAC-15.A3.2B.7
Danciu, Adrian	CA	IAC-15.C4.3.14
Daniel, Lihi	CA	IAC-15.E1.2.7
Daniel, Polsgrove	CA	IAC-15.E1.8.4
Danielson, Rick	CA	IAC-15.B1.IP.32
Dankanich, John	A	IAC-15.D2.5.7
	CA	
Dannenberg, Kristine		IAC-15.E1.7.12
Danous, Patrick	CA	IAC-15.C4.1.4
Danous, Patrick	CA	IAC-15.C4.1.6
Dantuma, Danielle	CA	IAC-15.A1.IP.19
Dantuma, Danielle	Α	IAC-15.A2.IP.5
Daoqiong, Huang	CA	IAC-15.C2.IP.7
Daraio, Maria girolamo	CA	IAC-15.B1.IP.34
Daraio, Maria girolamo	A	IAC-15.B1.5.9
Dargent, Thierry	A	IAC-15.C1.1.4
Darnopykh, Valeriy V.	CA	IAC-15.A6.2.3
Dash, Sanket	CA	IAC-15.E1.7.10
Daurskikh, Anna	CA	IAC-15.D5.1.5
Davidian, Ken	Α	IAC-15.E6.2.1
Davidian, Ken	Α	IAC-15.E6.2.7
Davies, Philippa	Α	IAC-15.D2.1.8
Davis, April	CA	IAC-15.A3.3B.6
•		
Davis, Benjamin	A	IAC-15.E4.2.3
Davis, Michael	CA	IAC-15.E1.4.2
Davis, Michael	Α	IAC-15.E1.4.5
Dağdeviren, Ece Gülfem	CA	IAC-15.E1.6.8
De Angelis, Giovanni	Α	IAC-15.A1.5.11
De Angelis, Iole	CA	IAC-15.E5.5.8
de Athayde Costa e Silva, Marsil	A	IAC-15.B4.6B.7
•	CA	IAC-15.C4.6.2
de Athayde Costa e Silva, Marsil		
De Biasi, Adam	CA	IAC-15.E2.3-YPVF.4.7
de Boissezon, Hélène	CA	IAC-15.B1.1.8
De Carlo, Paola	CA	IAC-15.C4.IP.47
De Cesaris, Andrea	CA	IAC-15.C2.2.5
De Cesaris, Andrea	CA	IAC-15.D3.2.9
de Chambure, Daniel	A	IAC-15.D2.1.5
de Clercq, Aude	CA	IAC-15.E6.3.8
*	CA	
De Cuyper, Steven		IAC-15.D2.6.5
De Filippis, Paolo	A	IAC-15.C2.7.12
de Groot, Zeger	Α	IAC-15.D1.7.9
De Jesus Simoes, Hugo Filipe	CA	IAC-15.E1.7.11
de Jong, Daphne	Α	IAC-15.A3.2C.8
De Korver, Valérie	CA	IAC-15.C4.1.6
de la Puente, Ale	CA	IAC-15.E5.4.4
de la Rosa, Ramon	A	IAC-15.B4.3.10
de Lafontaine, Jean	CA	IAC-15.B1.2.4
De Leon, Pablo	CA	IAC-15.B3.IP.2
De Leon, Pablo	CA	IAC-15.B3.9-YPVF.2.1
De Luca, Damiano	CA	IAC-15.B6.3.4
De Luca, Giuseppe Francesco	CA	IAC-15.B6.3.4
de Matteis, Pierpaolo	Α	IAC-15.C4.3.6
De Mey, Stefaan	CA	IAC-15.E3.3.8
de Olazabal, Borja	CA	IAC-15.E1.2.5
de Oliveira, Rafaela	CA	IAC-15.A1.IP.19
de Oliveira, Élcio Jeronimo	CA	IAC-15.C2.3.7
DE OLIVEIRA BITTENCOURT NETO, OLAVO	Α	IAC-15.E7.4.7
De Paula, Ramon P.	Α	IAC-15.A3.3A.1
de Paulis, Daniela	Α	IAC-15.A4.1.5
		IAC-15.A4.2.7
de Paulis, Daniela	A	IAC 15 55 4 5
de Paulis, Daniela de Paulis, Daniela	Α	IAC-15.E5.4.5
de Paulis, Daniela de Paulis, Daniela De Persis, Cristina	A A	IAC-15.A6.2.11
de Paulis, Daniela de Paulis, Daniela	Α	

De Rose, Leonardo	CA	IAC-15.C4.3.6
De Smet, Stijn	CA	IAC-15.E2.3-YPVF.4.
De Stefano Fumo, Mario	A	IAC-15.D2.6.10
De Vita, Francesco	CA	IAC-15.D2.4.5
De Vita, Francesco	CA	IAC-15.D6.3.1
de Weck, Olivier	CA	IAC-15.A5.2.1
de Weck, Olivier	CA	IAC-15.A5.2.7
de Weck, Olivier	CA	IAC-15.A3.IP.33
de Weck, Olivier	CA	IAC-15.D1.3.10
de Weck, Olivier	CA	IAC-15.D2.8-A5.4.4
de Wet, Wouter	CA	IAC-15.A1.5.10
De Winne, Frank	CA	IAC-15.B3.3.1
De Witt, Leehandi	A	IAC-15.E3.IP.14
De-Leon, Yair	A	IAC-15.B1.4.1
Debei, Stefano	CA	IAC-15.A3.5.4
DeBra, Daniel	CA	IAC-15.B4.4.6
Dedeurwaerder, Guillaume	A	IAC-15.D2.6.8
Dedieu, Gerard	CA	IAC-15.B1.2.1
Dedus, Fedor	CA	IAC-15.B1.IP.28
Degermendzhi, Andrei	Α	IAC-15.A3.1.6
Degermendzhi, Nadezhda	CA	IAC-15.A3.1.6
Dehaene, Thomas	CA	IAC-15.B2.4.5
Dehaene, Thomas	CA	IAC-15.B2.6.4
Dehaene, Thomas	CA	IAC-15.B4.6B.9
Dei Tos, Diogene Alessandro	Α	IAC-15.C1.4.3
Deiml, Michael	CA	IAC-15.E7.IP.6
DEI Bianco, Alberto	CA	IAC-15.D2.4.5
DEl Bianco, Alberto	CA	IAC-15.D6.3.1
Del Mastro, Antonio	CA	IAC-15.B3.5.1
Del Mastro, Antonio	CA	IAC-15.A5.3-B3.6.1
del Monte, Luca	Α	IAC-15.E3.3.2
del Monte, Luca	A	IAC-15.D5.4.3
Del Rio Bellisco, Aaron	CA	IAC-15.C3.4.4
Deleuze, Muriel	CA	IAC-15.A3.4.6
Delfini, Andrea	CA	IAC-15.C2.4.4
Delfini, Andrea	CA	IAC-15.C2.8.12
Delgado, Armando	A	IAC-15.A3.2B.8
Delgado Lopez, Laura	A	IAC-15.E3.1.5
Delière, Quentin	CA	IAC-15.A1.3.5
Della-Rose, Devin	CA	IAC-15.E1.8.4
Deloo, Philippe	A	IAC-15.B3.1.6
DeMattia, Brianne	CA	IAC-15.D3.3.5
Demchenko, Vadym	A	IAC-15.D5.1.3
Deme, Sandor	CA	IAC-15.A1.5.2
Deme, Sándor	CA	IAC-15.A1.5.12
Demidov, Ivan	CA	IAC-15.B2.6.3
Demidovich, Nickolas	A	IAC-15.D6.1.7
DEMPSEY, PAUL	A	IAC-15.D6.1.7
Denenberg, Elad	A	IAC-15.A6.7.4
Deng, Shengda	A	IAC-15.A1.IP.13
Deng, Weihua	CA	IAC-15.C2.IP.47
DENIS, Gil	A	IAC-15.B1.1.8
DENIS, Gil	A	IAC-15.D1.1.4
DENIS, Gil	A	IAC-15.E1.2.10
Dentis, Matteo	CA	IAC-15.D2.4.3
Depenbrock, Brett	CA	IAC-15.D1.6.1
Derechin, Alexander G.	Α	IAC-15.B3.2.2
Derechin, Alexander G.	CA	IAC-15.A5.1.9
Deremaux, Carole	CA	IAC-15.D2.1.4
Desai, Shardul	CA	IAC-15.E2.4.10
Desai, Vishal	CA	IAC-15.E2.4.10
Deshapriya, Prasanna	CA	IAC-15.D3.2.7
Desinov, Lev	CA	IAC-15.B3.3.8
Desole, Elisa	Α	IAC-15.A3.IP.43
DESPRAZ, Jérémie	CA	IAC-15.D6.1.4
Desroches, Prescilia	CA	IAC-15.E1.3.8
Detrell Domingo, Gisela	CA	IAC-15.A1.7.7
Deverel, Steven	CA	IAC-15.B1.6.3
Dextre, Roberto	CA	IAC-15.C4.4.5
Di Cara, Davina	CA	IAC-15.C4.IP.46
Di Carlo, Marilena	CA	IAC-15.C1.2.9
di Ciaccio, Simona	A	IAC-15.E3.3.6
		IAC-15.E3.3.6
Di Clemente, Marco	Α Λ	
di Francescantonio, Nicola	A CA	IAC-15.B6.1.7
Di Lazzaro, Massimo	CA	IAC-15.A6.8.3
Di Lizia, Pierluigi	A	IAC-15.A3.4.3
Di Maggio, Lorenzo	CA	IAC-15.A6.IP.26
Di Marco, Nicola	CA	IAC-15.C2.IP.29
Di Pentino, Frank	CA	IAC-15.A6.2.7









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Di Pentino, Frank CA IAC-15.A6.7.3 Di Roberto, Riccardo A IAC-15.C2.7.1 Di Tana, Valerio CA IAC-15.A2.6.8 Di-Costanzo, Romain CA IAC-15.A6.2.5 Dian-fu, Liu CA IAC-15.A3.IP.1 Diaz, Alejandro CA IAC-15.B6.3.1 Diaz, Ana A IAC-15.E6.3.8 Dicaire, Isabelle A IAC-15.B1.2.6 DiCorcia, James D. CA IAC-15.B1.2.6 Diedrich, André CA IAC-15.A1.2.2 Diekmann, Andreas CA IAC-15.A1.2.2 Diekmann, Andreas CA IAC-15.B6.2.5 Dihuliya, Divya A IAC-15.B6.2.5 Dihuliya, Divya CA IAC-15.B6.2.5 Dimuliya, Divya CA IAC-15.C2.IP.3 Dimopoulou, Amalia CA IAC-15.C2.IP.3 Dimopoulou, Amalia A IAC-15.C2.IP.3 DING, Guo-hao A IAC-15.C2.IP.3 DING, Liangliang CA IAC-15.A3.IP.1 DING, Liangliang CA	1 1 1 3 3 1 4 5 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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Golkar, Alessandro Golkar, Alessandro Golkar, Alessandro Golkar, Alessandro Gomes, Vivian Gomez, Gerard Gomez, Marco Gomez-Cid, Celestino Gomez-Herrero, Raul Gong, Jianglei Gong, Jianglei GONG, Jie GONG, Jie GONG, Jie GONG, Jie Gong, Mengmeng Gong, Shengping GONG, Zizheng	CA CA CA CA A A CA CA CA CA CA CA CA CA	IAC-15.A3.5.7 IAC-15.B1.IP.24 IAC-15.B1.IP.24 IAC-15.B2.5.8 IAC-15.D1.7.5 IAC-15.C1.4.9 IAC-15.C1.5.7 IAC-15.E2.1.8 IAC-15.D1.7.3 IAC-15.D1.7.3 IAC-15.D1.4.8 IAC-15.D1.6.11 IAC-15.C1.2.10 IAC-15.C1.2.10 IAC-15.C1.3.9 IAC-15.A6.3.2 IAC-15.A6.3.2 IAC-15.A6.3.2 IAC-15.A6.5.2 IAC-15.C2.6.12 IAC-15.C2.6.12 IAC-15.D1.IP.19 IAC-15.C3.4.1
Golkar, Alessandro Golkar, Alessandro Golkar, Alessandro Golkar, Alessandro Gomes, Vivian Gomez, Gerard Gomez, Marco Gomez-Cid, Celestino Gomez-Herrero, Raul Gong, Jianglei Gong, Jianglei GONG, Jie GONG, Jie GONG, Jie Gong, Mengmeng Gong, Shengping GONG, Zizheng	CA CA CA CA A A CA CA CA CA CA CA CA CA	IAC-15.A3.5.7 IAC-15.B1.IP.24 IAC-15.B1.IP.24 IAC-15.B2.5.8 IAC-15.D1.7.5 IAC-15.C1.4.9 IAC-15.C1.5.7 IAC-15.E2.1.8 IAC-15.A3.3B.1 IAC-15.D1.7.3 IAC-15.D1.7.3 IAC-15.D1.6.11 IAC-15.C1.2.10 IAC-15.C1.2.10 IAC-15.C1.3.9 IAC-15.A1.8.3 IAC-15.A1.8.3 IAC-15.A1.8.3 IAC-15.A1.8.3 IAC-15.C1.3.9 IAC-15.A1.8.3

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González, Iván González Peytaví, Graciela	CA	IAC-15.A6.5.8
González Peytavi, Graciela González Peytaví, Graciela	CA CA	IAC-15.D4.1.2 IAC-15.A3.IP.15
González Peytaví, Graciela	A	IAC-15.A3.IP.30
González Peytaví, Graciela	A	IAC-15.C1.7.4
Gopala Krishnan, V.	Α	IAC-15.E3.4.3
Gopala Krishnan, V.	Α	IAC-15.E7.7-B3.8.2
Gopinath, N.S.	CA	IAC-15.C1.7.11
Gordillo Pintor, Cecilia	A	IAC-15.D1.1.2
Gordon, Karsten	CA	IAC-15.B4.7.1
Gordon, Karsten	A	IAC-15.B4.7.4
Gorshkov, Andrey	A	IAC-15.A5.IP.3
Gorshkov, Andrey Goswami, Bayar	CA A	IAC-15.D2.8-A5.4.6 IAC-15.E7.IP.10
Goto, Masayuki	CA	IAC-15.A2.IP.3
Gounder, Velliangiri	A	IAC-15.E5.IP.3
Gourdon, Rémi	CA	IAC-15.E1.4.2
Gourinat, Yves	CA	IAC-15.E7.1.2
Gouzman, Irina	CA	IAC-15.C2.IP.35
Gouzman, Irina	CA	IAC-15.C2.IP.37
Gołębiowski, Wojciech	A	IAC-15.D1.1.6
Gołębiowski, Wojciech	A	IAC-15.A2.3.4
Gołębiowski, Wojciech	CA	IAC-15.A6.IP.23
Gracia, Oscar	CA	IAC-15.B3.7.7
Gradini, Raffaele	CA	IAC-15.C2.1.8
Grande, Jøran Gransden, Derek	A CA	IAC-15.E1.2.8 IAC-15.A6.IP.2
Grau, Sebastian	A	IAC-15.A6.IP.2
Grau, Sebastian	A	IAC-15.C1.0.8
GRAUBY, Emilie	CA	IAC-15.E4.1.3
Graw, Valerie	CA	IAC-15.E1.2.2
Graziani, Filippo	CA	IAC-15.B4.3.2
Graziani, Filippo	CA	IAC-15.B4.5.9
Graziani, Filippo	CA	IAC-15.C1.5.6
Graziani, Filippo	CA	IAC-15.C2.7.11
Graziani, Filippo	CA	IAC-15.B4.7.3
Graziano, Mariella	A	IAC-15.A6.5.9
Graziola, Giancarlo	CA	IAC-15.E3.3.6
Green, Adam	A	IAC-15.A3.2C.3
Greene, Pat Greenfeld, Bari	A	IAC-15.A1.2.5 IAC-15.A4.2.6
Gregory, Steve	CA	IAC-15.A6.1.4
Gregucci, Stefan	CA	IAC-15.C4.6.7
Greig, Amelia	Α	IAC-15.C4.IP.15
Gresham, Kimberlee	CA	IAC-15.E1.8.4
Gridchina, Tatiana	CA	IAC-15.A6.4.10
Grigoriev, Anatoly I.	Α	IAC-15.A1.2.8
Grimm, Christian	CA	IAC-15.A3.4.6
Grinstein, Dan	CA	IAC-15.C4.IP.32
Grishko, Dmitriy	A	IAC-15.C1.3.11
Grishko, Dmitriy	CA	IAC-15.A6.IP.35
Grishko, Dmitriy	A	IAC-15.D1.IP.9
Grishko, Dmitriy	CA	IAC-15.B4.6A.6
Grishko, Dmitriy Grocott, Simon	CA A	IAC-15.E1.7.4 IAC-15.B4.4.9
Groenewald, Ben	CA	IAC-15.E1.8.7
Gronchi, Giovanni Federico	CA	IAC-15.A6.9.8
Gross, Jeremy	CA	IAC-15.A6.7.2
Grosse, Jens	CA	IAC-15.A2.1.4
Grosse, Jens	Α	IAC-15.A2.5.6
Grossman, Eitan	CA	IAC-15.C2.IP.35
Grossman, Eitan	CA	IAC-15.C2.IP.37
Grothe, Dieter	CA	IAC-15.D2.5.6
Grott, Matthias	CA	IAC-15.A3.4.6
Grundmann, Jan Thimo	CA	IAC-15.A3.4.6
Gruntman, Mike	CA	IAC-15.D4.4.1
Gu, Ming	CA	IAC-15.D1.4.11
Gu, Ming Gu, Yanfeng	CA CA	IAC-15.D5.4.7 IAC-15.B6.2.3
Gu, Yanping	A	IAC-15.B0.2.3
Guan, Fu-Ling	CA	IAC-15.C2.2.11
Guan, Gongshun	A	IAC-15.A6.IP.4
GUAN, HUI	CA	IAC-15.B1.2.7
Guan, Xin	CA	IAC-15.C2.3.8
Guarini, Rocchina	Α	IAC-15.B1.5.3

Guay, Alexandre	CA	IAC-15.E1.3.8
Gudiño Ramirez de Arellano, Otto	A	IAC-15.E3.5-E7.6.7
Guerman, Anna Guerman, Anna	CA CA	IAC-15.C1.6.3 IAC-15.D4.3.2
Gui, Haichao	A	IAC-15.D4.3.2
Guidi, John	CA	IAC-15.B3.7.2
Guidi, John	CA	IAC-15.D2.8-A5.4.9
Guidotti, Giuseppe	CA	IAC-15.C2.IP.33
Guidotti, Giuseppe	CA	IAC-15.D2.6.10
Guijarro, Nuria	CA	IAC-15.A6.7.6
Guillois, Gwenael	CA	IAC-15.B2.4.1
Guillois, Gwenael	CA	IAC-15.B2.4.5
Guillois, Gwenael	CA	IAC-15.B2.6.4
Guillois, Gwenael Guillois, Gwenael	CA CA	IAC-15.B2.6.5 IAC-15.B4.6A.12
Guillois, Gwenael	CA	IAC-15.B4.6B.9
Guillon, Herve	CA	IAC-15.B2.4.1
Guillon, Herve	CA	IAC-15.B2.6.5
Guillon, Herve	CA	IAC-15.B4.6A.12
Guined, Jamie	CA	IAC-15.A5.2.9
Guixing, Cao	CA	IAC-15.B2.6.11
Gulino, Marco	CA	IAC-15.E2.4.1
Gump, David	CA	IAC-15.D3.2.4
Gunnarsen, Gudmund Guo, Chaoyong	CA CA	IAC-15.E2.3-YPVF.4.4
Guo, Lian	CA	IAC-15.D1.IP.20
Guo, Jifeng	CA	IAC-15.C3.1.4
Guo, Jing	A	IAC-15.C2.IP.14
Guo, Linghua	Α	IAC-15.B2.6.11
Guo, Mei	CA	IAC-15.E1.3.3
Guo, Mei	CA	IAC-15.E2.4.2
Guo, Song	A	IAC-15.D5.2.8
Guo, Yanping	CA	IAC-15.A3.5.1
Guo, Zixi	A	IAC-15.C2.3.8
Gupta, Megha Gupta, Megha	A CA	IAC-15.A3.IP.2 IAC-15.A3.IP.26
Gupta, Nayanee	CA	IAC-15.E3.2.13
Gupta, Shraddha	A	IAC-15.A6.4.9
Gupta, Yash Vardhan	Α	IAC-15.C2.6.9
Gurfil, Pini	CA	IAC-15.C4.4.3
Gurfil, Pini	CA	IAC-15.A6.7.4
Gurfil, Pini	CA	IAC-15.B6.2.7
Gurfil, Pini	CA	IAC-15.C1.8.4
Gurfil, Pini	CA	IAC-15.C1.8.8
Gurfil, Pini Gurfil, Pini	CA CA	IAC-15.C1.8.10 IAC-15.C1.9.9
Gurgel Veras, Carlos Alberto	CA	IAC-15.C1.3.3
Gurgel Veras, Carlos Alberto	CA	IAC-15.C4.IP.53
Gurtovoy, Andrey A.	Α	IAC-15.C4.1.7
Gustetic, Jennifer	CA	IAC-15.E1.8.1
Guston, David	CA	IAC-15.E1.8.1
Gut, Zbigniew	CA	IAC-15.C4.1.11
Guthrie, Paul	CA	IAC-15.E6.1.8
Gutierrez, Hector	CA	IAC-15.A2.6.2
Gutman, Vera Gutsmiedl, Johannes	CA	IAC-15.E1.7.11
Guven, Ugur	CA CA	IAC-15.B4.6B.11 IAC-15.C3.1.8
Guven, Ugur	CA	IAC-15.C5.1.8
Guven, Ugur	CA	IAC-15.C3.3.9
Guven, Ugur	A	IAC-15.E1.3.6
Guven, Ugur	CA	IAC-15.A6.3.10
Guven, Ugur	CA	IAC-15.A3.IP.39
Guven, Ugur	Α	IAC-15.C4.IP.31
Guven, Ugur	Α	IAC-15.E3.IP.17
Guven, Ugur	CA	IAC-15.D4.3.7
Guven, Ugur	CA	IAC-15.D4.3.11
Guven, Ugur	CA	IAC-15.D4.3.14
Guven, Ugur	CA	IAC-15.C3.4.5
Guven, Ugur Guven, Ugur	CA	IAC-15.C4.6.11 IAC-15.C4.7-C3.5.3
Guzman, Melissa	A	IAC-15.D4.1.3
Guzman, Melissa	CA	IAC-15.B1.6.4
Guzman Gomez, Camilo	A	IAC-15.E7.3.8
Guzman Gomez, Camilo	Α	IAC-15.E3.5-E7.6.3
Guzzetti, Davide	Α	IAC-15.C1.2.4

Guzzetti, Davide	A	IAC-15.C1.5.1
Guédron, Sylvain	CA	IAC-15.D2.1.4
Gyovai, Agnes	CA	IAC-15.A1.5.12
Gyovai, Agnes	CA	IAC-15.D5.3.7
Gásquez García, Oriol	CA	IAC-15.E1.7.11
ómez Plaza, Mariano	CA	IAC-15.D1.1.2
Górski, Jedrzej	CA	IAC-15.A1.6.3

Gómez Plaza, Mariano	CA	IAC-15.D1.1.2
Górski, Jędrzej	CA	IAC-15.A1.6.3
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Name	Role	Paper
Name	Role	Paper
H.G., RANJITH	A	IAC-15.C3.4.2
Haagmans, Roger	CA	IAC-15.B1.1.4
Haapala, Amanda	CA	IAC-15.C1.2.4
Haarmann, Richard	CA	IAC-15.A6.6.5
Haarmann, Richard	CA	IAC-15.A6.6.6
Habibi, Avihay	CA CA	IAC-15.C4.1.10
Habshee, jafar ali Hack, Kurt	CA	IAC-15.A3.IP.1 IAC-15.D1.4.3
Hacker, Jacob	CA	IAC-15.E3.IP.10
Hacker, Jacob	CA	IAC-15.E1.5.3
Hackmann, Eva	CA	IAC-15.A2.1.6
Hadad, Arza	CA	IAC-15.C4.IP.32
Hager, Monika	CA	IAC-15.A6.1.2
Hagolle, Olivier	CA	IAC-15.B1.2.1
Haj-Ali, Rami	CA	IAC-15.C2.8.5
Hajjar, Randall	CA	IAC-15.E1.3.12
Hajyahia, Soad	CA	IAC-15.A1.4.2
Hall, Ashley	CA	IAC-15.E5.4.1
Hall, Sherrie	Α	IAC-15.A5.3-B3.6.5
Halle, Winfried	CA	IAC-15.C1.8.11
Halsband, Arie	CA	IAC-15.A6.6.11
Hamada, Ahmed	CA	IAC-15.E3.IP.3
Hamel, Jean-Francois	A	IAC-15.B1.2.4
Hammond, Jennifer	CA	IAC-15.B3.3.11
Hampf, Daniel	CA	IAC-15.A6.IP.3
Han, Jianping	A	IAC-15.C2.6.11
HAN, Liangliang	A	IAC-15.A5.IP.5
HAN, Liangliang	CA	IAC-15.A5.3-B3.6.8
Han, Sung-Hyeon	Α Α	IAC-15.C4.IP.33
Han, Wei HAN, Weihua	Α	IAC-15.C2.IP.1
Han, Xiaodong	CA CA	IAC-15.C1.2.10 IAC-15.D1.4.8
Han, Xiaodong	CA	IAC-15.D1.4.8
Hanada, Toshiya	CA	IAC-15.A6.1.8
Hanada, Toshiya	CA	IAC-15.C1.2.7
Hanein, Yael	CA	IAC-15.C2.IP.37
Hang, Guanrong	A	IAC-15.C4.4.13
Hansen, Kim Toft	CA	IAC-15.B2.4.5
Hansen, Kim Toft	CA	IAC-15.B2.6.4
Hansen, Kim Toft	CA	IAC-15.B4.6B.9
Hanshan, Xiao	Α	IAC-15.C4.IP.38
Hanshan, Xiao	CA	IAC-15.D2.IP.14
Hanson, Andrew	CA	IAC-15.E1.2.1
Hao, Kouan	A	IAC-15.D1.IP.8
Hao, Zhou	A	IAC-15.B4.8.11
Haohai, Xu	CA	IAC-15.C4.1.13
Hardegree-Ullman, Kevin	CA	IAC-15.E1.IP.9
Hargens, Alan	CA	IAC-15.A1.2.6
Harpur, James	A	IAC-15.E1.5.12
Harrington, Andrea	A	IAC-15.A6.8.1
Harrison, Fiona	CA	IAC-15.B4.2.2
Harting, Benjamin	Α	IAC-15.A1.7.10
Hartstein, Heinz	CA	IAC-15.A1.7.7
Hasegawa, Sunao	CA	IAC-15.A6.1.8
Hasegawa, Yoshiyuki	Α Α	IAC-15.B3.1.3
Hashimoto, Tatsuaki	Α	IAC-15.A3.2B.9
Hashimoto, Tomoyuki	CA	IAC-15.C4.1.8
Hashimoto, Tomoyuki Hashimoto, Tomoyuki	CA CA	IAC-15.C4.3.2 IAC-15.C4.5.1
Hashimoto, Yasuaki	A	IAC-15.C4.5.1
Hastings, Daniel	A	IAC-15.E7.5.10
וועסנוווקס, שמוווכו	A	IAC-13.03.4.3









Hatfield, Caris	A	IAC-15.A5.1.7
Hatton, Jason	CA	IAC-15.B3.3.1
Haumont, Etienne	CA CA	IAC-15.B6.3.12
Hauschild, André Hauschild, André	CA	IAC-15.B2.1.6 IAC-15.D2.4.8
Hausmann, Gerrit	CA	IAC-15.A6.6.5
Hausmann, Gerrit	A	IAC-15.A6.6.6
Hausmann, Gerrit	CA	IAC-15.B4.7.5
Hautesserres, Denis	CA	IAC-15.C1.4.7
Hay, Jason	A	IAC-15.A3.1.4
Haya Ramos, Rodrigo	Α	IAC-15.D2.6.2
Hazan, Davide	CA	IAC-15.C3.3.5
Hazan, Davide	CA	IAC-15.B2.5.4
Hazan, Davide Nissim	CA	IAC-15.A3.2B.2
Hazan, Davide Nissim	CA	IAC-15.C4.3.4
Hazan, Davide Nissim	CA	IAC-15.B1.IP.10
He, Baocheng	CA	IAC-15.C4.9.12
He, Fanbo	CA	IAC-15.C3.IP.2
He, Guolong	A	IAC-15.B2.IP.1
He, Guoqiang	CA	IAC-15.C4.9.3
He, Guoqiang	CA	IAC-15.C4.9.4
He, Jiali	CA	IAC-15.C4.IP.2
He, Jian	CA	IAC-15.A1.3.8
He, Jinpeng	CA A	IAC-15.A1.5.5
He, Jinpeng He, Jiyu	A CA	IAC-15.A1.5.6 IAC-15.C2.4.6
He, Kuai	CA	IAC-15.C4.IP.10
He, Xiongwen	A	IAC-15.D1.4.11
He, Xiongwen	CA	IAC-15.D5.4.7
He, Yanchao	CA	IAC-15.D2.3.6
He, Yanchao	A	IAC-15.C1.8.7
He, Yang	CA	IAC-15.C1.6.2
He, YueLong	A	IAC-15.C2.IP.15
He, Yufeng	CA	IAC-15.D1.7.4
He, Zhang	Α	IAC-15.A3.2A.3
He, Zhang	CA	IAC-15.A3.2C.10
He, Zhen	CA	IAC-15.C4.IP.50
Heber, Bernd	CA	IAC-15.D1.7.3
Hecht, Matthias	Α	IAC-15.D2.5.6
Hecht, Matthias	CA	IAC-15.D2.7.3
Hecht, Michael	CA	IAC-15.B3.7.10
Hecht, Yosy	CA	IAC-15.B5.2.3
Hegde, Sandesh Rathnavarma	CA	IAC-15.B4.3.13
Hegde, Sandesh Rathnavarma	CA	IAC-15.A6.IP.25
Hegde, Sandesh Rathnavarma	CA	IAC-15.C2.IP.40
Hegde, Sandesh Rathnavarma	A CA	IAC-15.E2.4.7
Hegels, Johannes Hegels, Johannes	CA	IAC-15.D2.5.10 IAC-15.C2.9.1
Heges, Johannes	CA	IAC-15.C2.3.1
Heifetz, Eyal	A	IAC-15.B1.6.1
Heilbronn, Lawrence	CA	IAC-15.A1.5.10
Heiman, Rafi	A	IAC-15.B2.7.4
Hein, Andreas	CA	IAC-15.D4.1.3
Hein, Andreas	CA	IAC-15.B3.7.11
Heineman, William	CA	IAC-15.C2.8.10
Heinemann, Sascha	CA	IAC-15.E1.2.2
Heinrich, Georg	CA	IAC-15.D2.5.10
Heinrich, Georg	CA	IAC-15.C2.9.1
Helisch, Harald	CA	IAC-15.A1.7.7
Helled, Ravit	Α	IAC-15.A3.IP.9
Heller, Ana B.	Α	IAC-15.E1.IP.7
Hempsell, Mark	CA	IAC-15.D2.1.8
Hempsell, Mark	A	IAC-15.D3.2.6
Hempsell, Mark	A	IAC-15.B3.7.1
Henderson, Clare	CA	IAC-15.E5.4.7
Hendrickson, Dan	Α Α	IAC-15.A7.1.7
Hendrickson, Dan	A	IAC-15.A7.3.5
Hendrickson, Dan	A	IAC-15.A3.2C.9
HengNian, Li	CA	IAC-15.B2.3.12
HengNian, Li	CA	IAC-15.A3.3A.11
HengNian, Li Henn, Norbert	CA	IAC-15.C1.IP.9
rienii. Norbeit	CA	IAC-15.A1.IP.2
	_ C A	
Henn, Norbert HENRI, Yvon	CA A	IAC-15.A1.7.7 IAC-15.E3.5-E7.6.8

Hensler, Frank	Α	IAC-15.B1.5.10
Henze, Chris	CA	IAC-15.B1.5.10
Herdrich, Georg	CA	IAC-15.A6.3.6
Herdrich, Georg	CA	IAC-15.A2.5.4
Hernández Jiménez, Marcela	CA	IAC-15.A2.6.3
Herrmann, Nicole	CA	IAC-15.A3.1.4
Herrmann, Nicole	CA	IAC-15.B3.7.2
Herrmann, Sven	CA	IAC-15.A2.1.6
Herscovitz, Jacob	CA	IAC-15.B1.2.1
Herscovitz, Jacob	CA	IAC-15.E2.1.6
Herscovitz, Jacob	A	IAC-15.C4.IP.14
Herscovitz, Jacob	CA	IAC-15.C4.IP.46
Hertzfeld, Henry	CA	IAC-15.E3.2.1
Hertzfeld, Henry Herz, Ella	A	IAC-15.E7.5.2 IAC-15.B1.4.8
Hester, Zachary	A	IAC-15.E3.2.14
Hibbitts, Karl	CA	IAC-15.A3.4.10
Hilbert, Stefan	CA	IAC-15.B1.3.6
Hill, Christine	A	IAC-15.C2.9.5
Hill, Jordan	CA	IAC-15.B4.4.7
Hill, Juergen	CA	IAC-15.A3.1.1
Hill, Juergen	CA	IAC-15.A3.1.2
Hill, Juergen	Α	IAC-15.D3.2.5
Hill, Juergen	CA	IAC-15.A5.1.1
Hill, Matthew	CA	IAC-15.D4.4.4
Hillebrandt, Martin	CA	IAC-15.C2.2.6
Hillman, Yael	CA	IAC-15.E1.6.6
Hillstrom, Elizabeth	CA	IAC-15.E1.3.2
Hiltz, Mike	CA	IAC-15.A1.2.5
Himeno, Takehiro HIRABAYASHI, TAKESHI	CA CA	IAC-15.D2.4.2 IAC-15.B1.3.9
Hirn, Attila	CA	IAC-15.E1.3.7
Hirn, Attila	A	IAC-15.E1.5.7
Hirn, Attila	CA	IAC-15.A1.5.12
Hirn, Attila	CA	IAC-15.D5.3.7
Hirsh, Itay	CA	IAC-15.B1.IP.8
Hisamoto, Yasuyoshi	Α	IAC-15.D1.5.3
Ho, Koki	Α	IAC-15.D2.8-A5.4.4
Ho, Ngoc-Diep	CA	IAC-15.A5.3-B3.6.6
Ho, Tra-Mi	CA	IAC-15.A3.4.6
Ho, Tra-Mi	CA	IAC-15.D1.7.8
Hobbs, Stephen	CA	IAC-15.B4.8.11
Hodgkin, Simon	CA	IAC-15.A7.2.5
Hoeck, Birte	A	IAC-15.C2.9.2
Hoerth, Tobias Hoffman, Edward J.	CA	IAC-15.A3.IP.29
Hoffman, Jeffrey	CA	IAC-15.D5.2.2 IAC-15.A5.3-B3.6.5
Hoffman, Jeffrey	CA	IAC-15.B3.7.10
Hoffman, Jeffrey	CA	IAC-15.D2.8-A5.4.4
Hoffman, Tom	CA	IAC-15.A3.3A.1
Hofmann, Mahulena	A	IAC-15.E7.2.10
Hofmann, Peter	A	IAC-15.A1.IP.2
Hofmann, Peter	Α	IAC-15.A2.6.1
Hokamoto, Shinji	CA	IAC-15.C1.8.2
Hollenstein, Christine	CA	IAC-15.B4.4.5
Holm, Jeanne	Α	IAC-15.B5.1.2
Holm, Jeanne	Α	IAC-15.E1.8.6
Holmes, Alan	CA	IAC-15.B1.IP.39
Holmes, Chris	CA	IAC-15.E1.2.1
Holsters, Peter	Α	IAC-15.B4.7.2
Homeister, Maren	CA	IAC-15.A7.3.1
Honnes Dave	CA	IAC-15.C3.2.1
Honess, Dave	CA CA	IAC-15.E1.2.1 IAC-15.D2.IP.5
Hong, Gang Hong, Gang	CA	IAC-15.D2.IP.5
Hong, Ma	A	IAC-15.C4.7-C3.5.8
Hong, Tengteng	CA	IAC-15.D6.1.10
Hong, Wenhu	CA	IAC-15.A2.2.9
Hongbo, Zhao	A	IAC-15.B1.IP.6
Hongfeng, Wang	Α	IAC-15.B6.3.9
Hongfeng, Wang	Α	IAC-15.B2.3.10
Hongfeng, Wang	Α	IAC-15.B2.4.10
Hongqiang, LYU	Α	IAC-15.C3.IP.4
Hongyu, Liu	CA	IAC-15.B1.2.7
Honne, Atle	CA	IAC-15.A1.IP.2

Hooda, Sushant	CA	IAC-15.D3.1.4
Hopkins, Josh	CA	IAC-15.D2.1.3
Hopkins, Josh Hoppenbrouwers, Tom	A	IAC-15.A5.1.8 IAC-15.A3.2A.4
Hoppenbrouwers, Tom	A	IAC-15.A2.6.6
Hoppenbrouwers, Tom	CA	IAC-15.A5.3-B3.6.6
Hopping, Ethan	A	IAC-15.E1.3.1
Hori, Shusuke Hornbostel, Klaus	A CA	IAC-15.C4.1.1 IAC-15.A3.2B.7
Horneck, Gerda	CA	IAC-15.A3.2B.7
Hornig, Andreas	CA	IAC-15.E2.3-YPVF.4.3
Hornig, Andreas	CA	IAC-15.E2.3-YPVF.4.4
Hornig, Andreas	A	IAC-15.B2.IP.9
Hornig, Andreas	CA	IAC-15.B2.8-YPVF.3.4
Horth, Richard Horwath, Lance	CA CA	IAC-15.B6.1.4 IAC-15.E1.2.1
Hoschka, Alexander	CA	IAC-15.D2.5.10
Hosford, Steven	CA	IAC-15.B1.1.8
Hou, Jinli	CA	IAC-15.C4.IP.54
Hou, Xinbin	CA	IAC-15.C3.1.4
Hou, Xinbin Hou, Xinbin	CA CA	IAC-15.C3.1.7 IAC-15.C2.3.10
Hou, Xinbin Hou, Xinbin	CA	IAC-15.C2.3.10
Hou, Xinbin	CA	IAC-15.C3.IP.2
Hou, Yanze	CA	IAC-15.C2.6.10
Hou, Yanze	CA	IAC-15.B3.7.8
Hou, Yong-Gang	CA	IAC-15.A6.IP.50
Hou, Yuzhuo Housen-Couriel, Deborah	CA A	IAC-15.B6.2.9 IAC-15.D5.4.2
Howard, Madison	CA	IAC-15.D5.4.2
Howe, A. Scott	CA	IAC-15.B3.5.8
Howell, Kathleen	CA	IAC-15.C1.2.4
Howell, Kathleen	CA	IAC-15.C1.5.1
Howells, Kate	CA	IAC-15.E7.IP.6
Hoyt, Johana Hozawa, Sachiko	CA CA	IAC-15.A5.2.9 IAC-15.D1.5.3
Hrbud, Ivana	CA	IAC-15.D1.3.3
Hrinda, Glenn	A	IAC-15.C2.8.6
Hu, Jinhua	CA	IAC-15.C4.IP.17
Hu, Mingliang	CA	IAC-15.C2.IP.26
Hu, Shaolin	A	IAC-15.D6.1.10
Hu, Wei Hu, Xingzhi	A	IAC-15.B4.5.7 IAC-15.E2.2.1
Hu, Yongli	CA	IAC-15.B1.4.6
Hu, Zhenyu	CA	IAC-15.A3.2C.5
Hu, Zhenyu	CA	IAC-15.A3.2C.6
Huan, Yuxiang	CA	IAC-15.C3.4.6
Huang, Anyi HUANG, HAI	A CA	IAC-15.C1.IP.9 IAC-15.D1.IP.13
Huang, Hai	CA	IAC-15.D1.IP.13
	CA	IAC-15.A6.10-
Huang, Hui		YPVF.5.2
Huang, Hui	A	IAC-15.B2.7.8
luang, Jianming luang, Jie	CA CA	IAC-15.A6.IP.17 IAC-15.A6.3.3
Huang, Jie	CA	IAC-15.A6.3.9
luang, Jie	CA	IAC-15.A6.IP.5
Huang, Jie	CA	IAC-15.A6.IP.6
Huang, Jun	CA	IAC-15.A3.2C.10
Huang, Qingyang Huang, Xiaoqi	CA	IAC-15.A1.3.8
luang, Xiaoqi luang, Xiaoqi	CA CA	IAC-15.C2.2.9 IAC-15.C2.IP.43
Huang, Xuexiang	CA	IAC-15.B6.2.9
luang, Yuping	CA	IAC-15.C4.IP.13
Huang, Zhen	CA	IAC-15.C2.6.10
luang, Zhen	A	IAC-15.B3.7.13
Huang, Zhiwei	A CA	IAC-15.C4.9.3
Hubault, Armelle Hubbard, G. Scott	CA CA	IAC-15.A3.4.1 IAC-15.C4.6.10
Hubert, DIEZ	CA	IAC-15.C4.0.10
Huertas, Irene	CA	IAC-15.A3.3B.11
Huesing, Jakob	Α	IAC-15.D1.3.3
Hufenbach, Bernhard	CA	IAC-15.A3.1.1
Hufenbach, Bernhard	CA	IAC-15.D4.2.1

Huh, Jeongmoo	A	IAC-15.C4.6.1
Hui, Cao	Α	IAC-15.D1.IP.21
Hui, Junpeng	A	IAC-15.C2.IP.5
Huilong, Wang	Α	IAC-15.D2.IP.12
Hunter, Jorge James	CA	IAC-15.E1.2.5
Hupfer, Jan	A	IAC-15.A3.IP.29
Hurni, Andreas	CA	IAC-15.D1.2.3
Hurtado, Miguel	CA	IAC-15.A6.7.6
Hurtony, Tamas	CA	IAC-15.A1.5.12
Hurtony, Tamas	CA	IAC-15.D5.3.7
Hussein, Alaa	CA	IAC-15.A6.IP.42
Hussein, Alaa	Α	IAC-15.A6.6.9
Huszak, Arpad	CA	IAC-15.B2.8-YPVF.3.3
Huy, Le Xuan	CA	IAC-15.E1.5.6
Huyhn, Thomas	CA	IAC-15.A6.1.7
Huyhn, Thomas	CA	IAC-15.A6.2.9
Huynh, Phuong-Anh	CA	IAC-15.B1.IP.9
Hwang, Kyu	CA	IAC-15.D2.1.9
HYAKUSOKU, YASUTOSHI	CA	IAC-15.B1.3.9
Hyde, Truell	CA	IAC-15.A6.3.6
Hyde, Truell	CA	IAC-15.A2.5.4
Höeckelmann, Mathias	CA	IAC-15.A5.3-B3.6.6
Hühne, Christian	CA	IAC-15.C2.1.6
Hühne, Christian	CA	IAC-15.C2.2.1
Hühne, Christian	CA	IAC-15.C2.2.4
Hühne, Christian	CA	IAC-15.C2.2.6
Hühne, Christian	CA	IAC-15.C2.9.9

Name	Role	Paper
Ianelli, Samantha	CA	IAC-15.C4.4.15
Ibitolu, Henry	Α	IAC-15.E2.1.9
Ibitolu, Henry	CA	IAC-15.E3.IP.18
less, Luciano	CA	IAC-15.A3.5.6
Iha, Koshun	CA	IAC-15.C4.IP.56
Illmer, Norbert	CA	IAC-15.B3.4-B6.5.2
Ilyin, Viacheslav	CA	IAC-15.A1.4.1
llyin, Vyacheslav	CA	IAC-15.A1.6.1
Imai, Shigeru	CA	IAC-15.B4.5.4
Imhof, Anna Barbara	CA	IAC-15.A3.2A.4
Immediata, Sandro	CA	IAC-15.A6.IP.40
Imoto, Takayuki	CA	IAC-15.D2.1.6
Inada, Benjamin	CA	IAC-15.B3.9-YPVF.2.2
INAGAWA, Takahiro	CA	IAC-15.D2.7.4
Inbar, Tal	CA	IAC-15.E1.6.2
Inbar, Tal	Α	IAC-15.E5.6.1
Inbar, Tal	CA	IAC-15.E4.3.3
Inbar, Tal	Α	IAC-15.E4.3.4
Inbar, Tal	Α	IAC-15.E4.3.6
Inbar, Tal	Α	IAC-15.E4.3.8
Indyk, Stephen	Α	IAC-15.A5.IP.2
Innocenti, Luisa	CA	IAC-15.D4.1.11
Innocenti, Luisa	CA	IAC-15.D1.3.3
Inoue, Koichi	CA	IAC-15.B4.6A.7
Ioann, Kogan	A	IAC-15.A1.IP.6
Ioannides, Rigas T.	CA	IAC-15.B2.3.2
Ionov, Victor	CA	IAC-15.A1.6.1
Iranmanesh, Mohammad	CA	IAC-15.E5.4.8
Ireland, Peter	CA	IAC-15.A6.IP.24
Irimies. David	CA	IAC-15.B2.5.6
Isaeva, Olga	CA	IAC-15.A1.IP.9
Isakowitz, Steve	CA	IAC-15.B3.2.4
Isakowitz, Steve	CA	IAC-15.A2.3.9
Isakowitz, Steve	CA	IAC-15.B4.5.2
Isakowitz, Steve	CA	IAC-15.D2.7.1
Ishigami, Genya	CA	IAC-15.A3.3A.3
Ishijima, Yoshiyuki	CA	IAC-15.B1.3.9
Islas, Genaro	CA	IAC-15.D1.4.2
Islas, Maria	CA	IAC-15.C2.IP.30
Issler, Jean-Luc	CA	IAC-15.B2.4.5
Issler, Jean-Luc	CA	IAC-15.B2.6.4









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Issler, Jean-Luc	CA	IAC-15.B4.6B.9
Istasse, Eric	CA	IAC-15.B3.3.1
Isvoranu, Dragos	CA	IAC-15.C2.7.6
Ito, Takashi	CA	IAC-15.C4.1.8
Ito, Takashi	CA	IAC-15.C4.3.2
Ito, Takashi	CA	IAC-15.D2.5.4
Ito, Yuichi	CA	IAC-15.A2.6.5
Itzhaki Tamir, Raz	Α	IAC-15.B4.6B.1
Ivaldi, Marco	CA	IAC-15.A1.IP.8
Ivanenko, Oleg	Α	IAC-15.B2.6.3
Ivanov, Anton	Α	IAC-15.B4.4.5
Ivanov, Anton	CA	IAC-15.C1.IP.11
Ivanov, Anton	CA	IAC-15.E2.4.4
Ivanov, Gennady	CA	IAC-15.A1.IP.1
Ivanova, Olga	CA	IAC-15.A1.5.2
lvchenko, Nickolay	CA	IAC-15.B4.2.11
house Adia sour	C A	1AC 15 DE 2.1

stasse, Eric	CA	IAC-15.B3.3.1
svoranu, Dragos	CA	IAC-15.C2.7.6
to, Takashi	CA	IAC-15.C4.1.8
to, Takashi	CA	IAC-15.C4.3.2
to, Takashi	CA	IAC-15.D2.5.4
to, Yuichi	CA	IAC-15.A2.6.5
tzhaki Tamir, Raz	Α	IAC-15.B4.6B.1
valdi, Marco	CA	IAC-15.A1.IP.8
vanenko, Oleg	Α	IAC-15.B2.6.3
vanov, Anton	Α	IAC-15.B4.4.5
vanov, Anton	CA	IAC-15.C1.IP.11
vanov, Anton	CA	IAC-15.E2.4.4
vanov, Gennady	CA	IAC-15.A1.IP.1
vanova, Olga	CA	IAC-15.A1.5.2
vchenko, Nickolay	CA	IAC-15.B4.2.11
wata, Minoru	CA	IAC-15.D5.3.1

Name	Role	Paper
l, Jayaprakash	CA	IAC-15.C2.1.4
l, Jayaprakash	CA	IAC-15.C2.1.5
I, Jayaprakash	CA	IAC-15.C4.2.12
I, Paul Murugan	CA	IAC-15.C2.1.5
I, Paul Murugan	Α	IAC-15.C2.IP.25
Jacimovic, Aleksandar	CA	IAC-15.E1.7.11
lackman, Coralie	CA	IAC-15.A3.5.1
lackson, Libby	CA	IAC-15.E1.2.1
ladwani, Gunjan	CA	IAC-15.E7.IP.10
lagdale, Shripad	Α	IAC-15.E7.IP.19
laikaran, Anna	Α	IAC-15.E3.4.7
laiswal, Sunakshi	CA	IAC-15.B2.7.6
Jakhotia, Prerana	CA	IAC-15.E2.4.3
Jakhu, Ram S.	CA	IAC-15.E7.2.1
Jakhu, Ram S.	A	IAC-15.E1.7.6
lames Raj, Xavier	CA	IAC-15.E1.7.6
JANARDHANAN NAIR, J JAYAPRAKASH	CA	IAC-15.C2.1.2
Janardhanan Nair, Jayaprakash	CA	IAC-15.C2.IP.25
Jankovic, Marko	A	IAC-15.A6.IP.13
Jankovic, Marko	CA	IAC-15.A6.6.1
Janowski, Mikolaj	CA	IAC-15.B1.6.2
lansen, Frank	A	IAC-15.C4.7-C3.5.
Jashinski, Michal	A	IAC-15.C1.8.4
lason, Susan	Α	IAC-15.B4.2.1
lason, Susan	CA	IAC-15.E6.3.4
laumann, Ralf	CA	IAC-15.A3.4.6
laworska, Karolina	CA	IAC-15.B1.6.2
layachandran, T	CA	IAC-15.C2.IP.45
Jayaprakash, J	CA	IAC-15.C2.IP.45
layaraman, M	CA	IAC-15.C4.IP.55
lean, Pierre	Α	IAC-15.B3.1.4
Jehn, Rüdiger	CA	IAC-15.A3.IP.14
lenkin, Alan B.	Α	IAC-15.A6.2.2
lens, Elizabeth	Α	IAC-15.C4.6.10
leon, Jae-Sung	CA	IAC-15.B4.8.5
leon, Moon-Jin	CA	IAC-15.B6.IP.1
leon, Su-Hyeon	CA	IAC-15.C2.5.9
Jerauld, Neeraj	A	IAC-15.C4.8.7
Jessen, Sean	A	IAC-15.A3.3B.9
lesus, Antonio Delson	A	IAC-15.A6.IP.9
Jesus, Antonio Delson	A	IAC-15.A6.IP.10
leyakodi, Deepika	A	IAC-15.E7.IP.21
Iha, Anik Kumar	CA	IAC-15.B4.3.13
li, Simei	A	IAC-15.E1.3.3
	A	IAC-15.E1.5.5
li, Simei		
lia, Bin	A	IAC-15.A6.IP.7
lia, Haipeng	A	IAC-15.C3.IP.2
lia, Hong	CA	IAC-15.C1.IP.8
lia, Lei	A	IAC-15.C2.IP.42
lia, Min	CA	IAC-15.C1.7.3
lia, Nannan	CA	IAC-15.A1.7.9
lia, Shiyuan	Α	IAC-15.C1.IP.6
lia, Yanmei	Α	IAC-15.D1.7.4
lia, Yinghong	CA	IAC-15.C1.IP.6
lian, Peng	CA	IAC-15.C3.3.7
lian, Zhang	Α	IAC-15.B3.7.9

Jianbing, Rao	CA	IAC-15.B4.8.3
Jiang, Ben-zheng	CA	IAC-15.C2.4.7
Jiang, Bo	CA	IAC-15.D5.3.8
Jiang, Hai Jiang, Hao	CA A	IAC-15.A6.IP.38 IAC-15.C2.IP.16
Jiang, Jialing	A	IAC-15.E6.IP.6
Jiang, Lixiang	CA	IAC-15.C2.6.12
Jiang, Xiuqiang	Α	IAC-15.A3.IP.20
Jiang, Xiuqiang	Α	IAC-15.A3.IP.40
Jiang, Xiuqiang	Α	IAC-15.A3.IP.47
Jiang, Yu	CA	IAC-15.C1.4.1
Jianguo, Huang	CA	IAC-15.C2.6.12
Jianhua, Chen	CA	IAC-15.C4.1.13
Jianhua, Chen Jianhua, Chen	CA	IAC-15.C4.3.13 IAC-15.C4.IP.4
Jianhua, Chen	CA	IAC-15.C4.5.3
Jianhua, Chen	CA	IAC-15.C4.5.9
Jianjun, Luo	CA	IAC-15.C1.4.6
Jianping, Yuan	CA	IAC-15.C2.1.3
Jiao, Zi-long	Α	IAC-15.C2.6.12
Jiawan, Ren	Α	IAC-15.C2.IP.13
Jie, Xiao	CA	IAC-15.A3.IP.11
Jie, Xiao	CA	IAC-15.A3.2C.4
Jimenez, Diego	CA	IAC-15.E4.2.7
Jimenez Brenes, Mariano	CA	IAC-15.A2.6.3
Jiming, Shao Jin, Dong	CA A	IAC-15.A3.2C.4 IAC-15.B2.6.12
Jin, Dong Jin, Ke	A	IAC-15.B2.6.12
Jin, Lei	CA	IAC-15.C2.3.10
Jin, Seong-Bo	CA	IAC-15.D1.6.3
Jin, Xuesong	CA	IAC-15.C1.9.2
Jin, Yongqiang	CA	IAC-15.A6.IP.17
Jin, Yongqiang	CA	IAC-15.A6.IP.32
Jing, Wang	Α	IAC-15.C2.IP.50
Jing, Xiaolu	CA	IAC-15.A1.4.4
Jinxiu, Zhang	A	IAC-15.A6.IP.18
Jinxiu, Zhang	Α	IAC-15.A6.IP.44
Jinxiu, Zhang	CA	IAC-15.C1.5.5
Joffre, Eric	CA	IAC-15.A6.6.3
Johannsson, Magni	A CA	IAC-15.E6.1.7
Johannsson, Magni JOHN, OLUSOJI NESTER	CA A	IAC-15.E6.2.10 IAC-15.E7.2.3
JOHN, OLUSOJI NESTER	A	IAC-15.A6.IP.49
John-Olorioke, Victoria Morenike	CA	IAC-15.E7.2.3
John-Olorioke, Victoria Morenike	CA	IAC-15.A6.IP.49
Johnson, Christopher	CA	IAC-15.E1.4.2
Johnson, Christopher	CA	IAC-15.E1.5.3
Johnson, Christopher	A	IAC-15.D4.3.13
Johnson, Christopher	CA	IAC-15.E7.5.2
Johnson, Holly	CA	IAC-15.A5.3-B3.6.2
Johnson, Lindley	CA	IAC-15.A5.1.2
Johnson, Michael	CA	IAC-15.B4.5.8
Johnson, Nathan Johnson-Green, Perry	CA	IAC-15.E7.1.6 IAC-15.B3.1.4
Johnson-Green, Perry	CA	IAC-15.B3.1.4
		IAC-15.B5.5.2
Johri, Raghav	CA	YPVF.5.1
Johri, Raghav	CA	IAC-15.A3.IP.39
Jokin, Ivo	Α	IAC-15.E1.IP.4
Jones, Cathleen	CA	IAC-15.B1.6.3
Jones, Loren	CA	IAC-15.C4.2.10
Jones, Ross	CA	IAC-15.A3.5.8
Jones, Zachary	CA	IAC-15.C2.9.3
Jonsson, Jonas	Α	IAC-15.A1.6.5
Jonsson, Jonas	CA	IAC-15.A6.6.8
Jonsson, Jonas	CA	IAC-15.B4.8.12
Jorba, Angel Jorba, Angel	CA	IAC-15.C1.2.6 IAC-15.C1.3.8
Jorba, Angel Jorba-Cuscó, Marc	A	IAC-15.C1.3.8
Jordan, Nicole	A	IAC-15.E6.IP.2
Jorgenson, Corinne M.	CA	IAC-15.E7.4.1
Josan, Poonampreet Kaur	CA	IAC-15.A5.2.10
Josan, Poonampreet Kaur	A	IAC-15.B3.9-YPVF.2.1
Josan, Poonampreet Kaur	CA	IAC-15.B3.5.8
Joseph, Nikolai	Α	IAC-15.E3.2.11
Joshi, Abhishek	CA	IAC-15.B4.3.12
Joss, Marcel	CA	IAC-15.B4.4.5
Ju, Gwanghyeok	Α	IAC-15.A3.2B.3
	Α	IAC-15.B1.4.6

Juckenhoefel, Oliver	CA	IAC-15.B3.1.6
Juillerat, Robert	CA	IAC-15.B6.1.3
Jukna, Vytautas	CA	IAC-15.B1.2.6
Jukola, Paivi	A	IAC-15.D3.4.5
Jung, Philippe	A	IAC-15.E4.3.5
Junjiro, Onoda	CA	IAC-15.C2.5.1
Jurado, Eric	CA	IAC-15.A3.4.2
Just, Tim	CA	IAC-15.D1.5.1
Jäger, Markus	A	IAC-15.D2.3.1
Józefowicz, Mateusz	A	IAC-15.D2.3.9
Jüssi, Martin	A	IAC-15.B1.6.4

Name	Role	Paper
K, Narayanan	CA	IAC-15.B2.7.1
K, SUNDARAMOORTHY	CA	IAC-15.D1.IP.5
K, Sunitha	CA	IAC-15.C2.9.11
K V, Nikhilesh	Α	IAC-15.C2.IP.40
K V, Nikhilesh	CA	IAC-15.E2.4.7
K Zachariah, Sam	CA	IAC-15.D1.IP.5
Kabanza, Froduald	CA	IAC-15.A5.3-B3.6.4
Kaczmarczik, Ulrich	CA	IAC-15.A2.5.3
Kadhem, Haval	CA	IAC-15.B4.6A.11
Kadhem, Haval	CA	IAC-15.A6.6.3
Kadzhaev, Vadim	CA	IAC-15.D5.1.1
Kadzhaev, Vadim	CA	IAC-15.D5.1.1
Kafri, Avia	CA	IAC-15.B1.2.2
Kahnert, Markus	CA	IAC-15.C2.1.1
Kahnert, Markus	A	IAC-15.D2.5.10
Kahnert, Markus	A	IAC-15.C2.9.1
Kai, Takeshi	CA	IAC-15.C4.1.8
Kai, Takeshi	A	IAC-15.C4.3.2
Kaku, Kazuya	CA	IAC-15.B1.1.6
Kalacheva, Galina	CA	IAC-15.A1.7.3
Kalamkarov, Gregory	CA	IAC-15.A1.IP.10
Kalemci, Emrah	A	IAC-15.B4.2.8
Kaliski, Michael	CA	IAC-15.B2.7.2
Kalouche, Simon	CA	IAC-15.A2.3.1
Kalter-Leibovici, Ofra	CA	IAC-15.A1.4.2
Kamaletdinova, Guzel	CA	IAC-15.A5.2.8
Kamari, Yossi	CA	IAC-15.B1.3.3
Kamble, Saranga	CA	IAC-15.E2.4.9
Kamble, Saranga	CA	IAC-15.C2.9.8
Kaminski, Amy	A	IAC-15.E1.8.1
Kanagala, Subhash Babu	A	IAC-15.E2.1.5
KANAI, Ryuichiro	A	IAC-15.D2.7.4
Kanawka, Krzysztof	CA	IAC-15.B1.6.2
Kandala, Shanti Swaroop	A	IAC-15.E2.1.5
Kandala, Shanti Swaroop	A	IAC-15.B1.IP.39
Kandepi, Radhika	CA	IAC-15.C1.3.10
Kang, Eun Su	CA	IAC-15.B1.4.5
Kang, Hongjae	Α	IAC-15.C4.IP.7
Kang, Kyungin	A	IAC-15.D1.5.2
KANG, Qi	A	IAC-15.A2.4.1
KANG, Qi	CA	IAC-15.A2.4.3
Kang, Sunil	A	IAC-15.C4.IP.21
Kania, Maciej	CA	IAC-15.B4.6A.2
Kantsiper, Brian	CA	IAC-15.C1.1.11
Kanzler, Ronny	CA	IAC-15.A6.4.7
Kapgate, Nitin	CA	IAC-15.C3.IP.3
Kapgate, Nitin	CA	IAC-15.C3.4.8
Kapulkin, Alexander	CA	IAC-15.C4.4.3
Kapulkin, Alexander	CA	IAC-15.C4.4.4
Kara, Ozan	Α Α	IAC-15.E1.5.11
Kara, Ozan	Α	IAC-15.D5.2.4
Kara, Ozan	Α	IAC-15.B2.8-YPVF.3.4
Kara, Ozan	CA	IAC-15.B4.8.6
Kara, Ozan	Α	IAC-15.B4.8.7
Karabadzhak, George	Α	IAC-15.B3.3.3
Karabadzhak, Georgy	CA	IAC-15.B3.3.5
Karabeyoglu, A.	CA	IAC-15.B4.8.7
Karatekin, Özgür Karavaev, Dmitry	CA CA	IAC-15.A3.3B.7 IAC-15.B3.3.8

Karchaev, Kharun	CA	IAC-15.A3.1.5
Karelin, Alexander	CA	IAC-15.B1.IP.28
Karidhal, Ritu	CA	IAC-15.C1.3.10
Karidhal, Ritu Karidhal, Ritu	A	IAC-15.B1.IP.40
Karidhal, Ritu	CA	IAC-15.C1.6.11 IAC-15.C1.7.6
Karidhal, Ritu	CA	IAC-15.C1.7.11
Karl, Alexander	CA	IAC-15.B6.3.12
KARMAKAR, SOURAV	A	IAC-15.D2.IP.15
Karni, Boaz	CA	IAC-15.E1.6.6
Karp, Ashley	A	IAC-15.C4.2.10
Karras, Jaakko	CA	IAC-15.A2.3.1
Kashanov, Olexandr Kaspi, Shai	A	IAC-15.D2.3.5 IAC-15.C1.4.8
Kaspi, Yohai	CA	IAC-15.A3.IP.38
Kaspi, Yohai	CA	IAC-15.A3.5.6
Kaspranskiy, Rustem	CA	IAC-15.B3.5.7
Katano, Shotaro	A	IAC-15.C3.2.4
Katayama, Haruyoshi	A	IAC-15.B1.3.10
Katke, Tanvi	CA	IAC-15.E2.3-YPVF.4.9
Katke, Tanvi Katke, Tanvi	CA CA	IAC-15.E2.4.9 IAC-15.C2.9.8
Kato, Hideki	CA	IAC-15.C3.3.6
Katz, Asia	A	IAC-15.E1.2.3
Kaur, Prabhjot	Α	IAC-15.A3.3A.9
Kaurov, Ivan	A	IAC-15.B4.6A.3
Kaushal, Sourabh	A	IAC-15.A6.IP.34
Kawabata, Yosuke	CA	IAC-15.C1.1.8
Kawaguchi, Junichiro Kawak, Benjamin	CA A	IAC-15.B3.7.11 IAC-15.C2.3.2
Kawak, Benjamin	CA	IAC-15.C2.3.2
Kawakatsu, Yasuhiro	CA	IAC-15.C1.1.8
Kawakatsu, Yasuhiro	CA	IAC-15.C1.2.7
Kawashima, Hideto	Α	IAC-15.C4.1.5
Kawashima, Rei	A	IAC-15.E1.IP.2
Kay, Ritchie	CA	IAC-15.A3.4.1
Kaya, Nobuyuki	A	IAC-15.C3.1.1
Kayal, Hakan KAYIHAN, Hasan Aziz	CA CA	IAC-15.B6.2.5 IAC-15.E1.6.8
Ke, Fa-wei	A	IAC-15.E1.6.8
Ke, Zhang	CA	IAC-15.D1.5.7
Kearn, Joel	CA	IAC-15.B3.1.6
Kebschull, Christopher	A	IAC-15.A6.9.5
Kedem, Micha	CA	IAC-15.C4.IP.14
Keidar, Michael	A	IAC-15.C4.4.6
Keidar, Michael	CA	IAC-15.C4.4.7 IAC-15.A6.1.4
Kelecy, Thomas Kelly, Brigit	CA A	IAC-15.A6.1.4 IAC-15.B1.5.2
Kelso, T.S.	A	IAC-15.B1.5.2
Kempf, Scott	A	IAC-15.A6.3.4
Kennedy, Samuel	CA	IAC-15.E2.3-YPVF.4.2
Kennedy, Samuel	CA	IAC-15.B3.7.9
Keppler, Jochen	CA	IAC-15.A1.7.7
Kern, Peter	CA	IAC-15.A1.7.7
Kerolle, Mclee Kerr, Emma	A	IAC-15.B2.7.3 IAC-15.A6.4.6
Kerrigan, Mary	CA	IAC-15.A6.4.6
Kessler, Helmut	CA	IAC-15.E6.1.10
Kessler, Jason	CA	IAC-15.E1.8.1
Kestel, Tobias	Α	IAC-15.E5.4.10
Kezerashvili, Roman Ya.	A	IAC-15.C2.6.8
Kfir, Sagi	CA	IAC-15.D3.2.4
Kfir, Sagi	A	IAC-15.E7.7-B3.8.9
Khadse, Mayuresh Khadse, Mayuresh	CA CA	IAC-15.C3.IP.3 IAC-15.C3.4.8
Khamitov, Talgat	A	IAC-15.C3.4.8
Khan, Arifur	CA	IAC-15.D5.3.1
Khan, Maudood	A	IAC-15.E5.5.1
Kharlamov, Maksim	Α	IAC-15.B3.2.7
Kharlamov, Maksim	CA	IAC-15.B3.5.7
Kharlan, Alexander	A	IAC-15.B2.1.4
Kharlan, Alexander	CA	IAC-15.B2.6.3
Khartov, Victor V.	CA	IAC-15.A3.1.5
Khetawat, Vatsala Khomyak, Vadym	CA	IAC-15.A2.3.8









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AUTHORS

Khor, Michael	CA	IAC-15.B4.7.6	Kobayashi, Masanor
Khoroshylov, Serhii	CA	IAC-15.A6.5.5	Kobayashi, Ryoka
Khurana, Shashank	A	IAC-15.E6.2.2	Kobayashi, Takashi
Kiang, Charlotte	CA	IAC-15.E6.1.1	Kobayashi, Teiu
Kiang, Charlotte	A	IAC-15.E6.2.3	Koblick, Darin
Kiang, Charlotte	Α	IAC-15.E6.2.5	Kobrick, Ryan L.
Kicman, Pawel	CA CA	IAC-15.A3.3B.11 IAC-15.B3.7.10	Koch, Helmut
Kidd, Richard Kikuchi, Masao	CA		Koch, Olivier Kochetkov, Alexey
Kilic, Cagri	A	IAC-15.A2.6.5 IAC-15.B4.8.6	Kochetkov, Alexey
Kilic, Cagri	CA	IAC-15.B4.8.7	Kodeki, Kazuhide
Kim, Byoung-Soo	CA	IAC-15.B4.8.7	Koehler, Brenna
Kim, Chun Gon	CA	IAC-15.A6.IP.1	Koehne, Jessica
Kim, Daryl	CA	IAC-15.A6.1.4	Koehne, Torsten
Kim, Eunghyun	A	IAC-15.B6.IP.1	Kogan, Alexander
Kim, Eunjeong	CA	IAC-15.E3.IP.5	Kogut, Lior
Kim, Hyeon Ah	CA	IAC-15.A3.IP.44	Kohtake, Naohiko
Kim, Inkyu	A	IAC-15.B2.IP.2	Koizumi, Hiroyuki
Kim, Jong-Bum	Α	IAC-15.E5.IP.1	Koji, Tanaka
Kim, Tae Su	CA	IAC-15.C2.IP.24	Koji, Tanaka
Kim, Taegyu	CA	IAC-15.C4.IP.33	Koji, Tanaka
Kim, Taig Young	Α	IAC-15.C2.IP.24	Kojima, Ayami
Kim, Yun-young	Α	IAC-15.D1.IP.15	Kolar, Jan
Kim, YunHo	Α	IAC-15.A6.IP.1	Kolesnikov, Nikolai
Kim, Yunjin	Α	IAC-15.B1.1.9	Kolodziejczyk, Agata
Kimoto, Yugo	CA	IAC-15.A6.1.8	Kolomentsev, Alexar
Kimura, Toshiya	Α	IAC-15.C4.1.8	Kolomentsev, Alexar
Kimura, Toshiya	CA	IAC-15.C4.3.2	Kolot, Irina
Kimura, Toshiya	CA	IAC-15.C4.5.1	Kolot, Irina
Kindracki, Jan	CA	IAC-15.D2.IP.2	Kolyuka, Yury
King, Dan	CA	IAC-15.B4.5.6	Komarek, Tomas A.
Kingston, Jennifer	CA	IAC-15.A6.4.1	Konorev, Anatoly
Kingston, Jennifer	CA	IAC-15.D1.IP.17	Konstantinidis, Kons
Kingston, Jenny	CA	IAC-15.B4.8.11	Konstantinidis, Kons
KINHAL, KIRAN	CA	IAC-15.C3.4.2	Konstantinov, Mikha
Kinkaid, Nathan	CA	IAC-15.D4.3.9	Koo, Jay
Kinkaid, Nathan	CA	IAC-15.B4.8.10	Koo, Jaye
Kinyua, Meshack	CA	IAC-15.E5.5.11	Korach, Haim
Kio, Michael	A	IAC-15.B4.1.4	Korczynska, Audrey
Kio, Michael	A	IAC-15.E6.1.6	Kornienko, Andrei
Kio, Michael	A	IAC-15.C2.8.3	Kornienko, Youlia
Kirchhartz, Rainer Kirchner, Frank	CA CA	IAC-15.D2.7.3 IAC-15.A6.IP.13	Kornienko, Youlia Kornienko, Youlia
Kirchner, Frank	CA	IAC-15.A6.6.1	Korobkov, Alexander
Kirchner, Georg	CA	IAC-15.A6.IP.45	Korobkov, Alexander
Kirilin, Alexander	CA	IAC-15.A0.IF.45	Korovin, Maksim
Kirilin, Alexander Nikolaevich	CA	IAC-15.B4.2.12	Korsmeyer, David
Kirk, Daniel	CA	IAC-15.A2.6.2	Kortmann, Martin
Kiryukhina, Nataliya	A	IAC-15.A1.4.1	Koryanov, Vsevolod
Kishilev, Evgenia Golda	A	IAC-15.C4.5.8	Koschny, Detlef
Kita, Nagahisa	CA	IAC-15.E7.4.12	Kosenko, Ivan
Kitagawa, Koki	CA	IAC-15.C4.2.5	Kosenkov, Ivan
Kitamura, Hitoshi	CA	IAC-15.C2.3.3	Koshikawa, Naokiyo
Kitazawa, Yukihito	Α	IAC-15.A6.1.8	Kothawala, Alimurta
Kitov, Vladimir	CA	IAC-15.A1.2.7	Kothawala, Alimurta
Kitsche, Wolfgang	Α	IAC-15.C4.3.1	Kothawala, Alimurta
Kiyoshi, Kinefuchi	CA	IAC-15.D2.4.2	Kothia, Dishant
Klaper, Martin	CA	IAC-15.B4.4.5	Kothia, Dishant
Klas, Michael	A	IAC-15.A1.6.6	Kothia, Dishant
Kleespies, Joe	CA	IAC-15.A6.2.9	Kothia, Dishant
Klein, Volker	CA	IAC-15.A1.IP.2	Koti, Veeresha
Kleinschrodt, Alexander	Α	IAC-15.B4.3.5	Koti, Veeresha
Kleinschrodt, Alexander	CA	IAC-15.D1.4.2	KOTIAN, NIKIL
Klesh, Andrew	CA	IAC-15.A3.5.8	Kotsur, Oleg
Klettke, Micah	CA	IAC-15.D4.4.7	Kotwal, Alankar
Klinkrad, Heiner	CA	IAC-15.A6.7.9	Kotwal, Alankar
Klipstein, Philip	CA	IAC-15.B1.3.3	Kou, Peng
Knapmeyer, Martin	CA	IAC-15.D3.2.3	Koudelka, Otto
Knauer, Katrina	CA	IAC-15.C2.6.3	Koudelka, Otto
Kneisel, Kieran	CA	IAC-15.B6.1.4	Koudelka, Otto
		IAC-15.D2.5.10	Koudelka, Otto
Knerr, David	CA		
Knerr, David	CA	IAC-15.C2.9.1	Koudelka, Otto

Kobayashi, Masanori	CA	IAC-15.A6.1.8
Kobayashi, Ryoka	CA	IAC-15.A2.6.5
Kobayashi, Takashi	CA	IAC-15.C2.3.3
Kobayashi, Teiu	CA	IAC-15.C4.1.1
Koblick, Darin Kobrick, Ryan L.	CA A	IAC-15.C1.1.3 IAC-15.E1.9.6
Koch, Helmut	CA	IAC-15.C2.4.8
Koch, Olivier	CA	IAC-15.B2.3.4
Kochetkov, Alexey	CA	IAC-15.A1.7.1
Kochetkov, Alexey	CA	IAC-15.A1.7.2
Kodeki, Kazuhide	CA	IAC-15.C2.3.3
Koehler, Brenna	CA	IAC-15.A1.8.5
Koehne, Jessica Koehne, Torsten	CA A	IAC-15.C2.8.10 IAC-15.C2.6.7
Kogan, Alexander	CA	IAC-15.C1.4.8
Kogut, Lior	CA	IAC-15.C4.3.3
Kohtake, Naohiko	CA	IAC-15.B2.3.7
Koizumi, Hiroyuki	CA	IAC-15.C4.IP.52
Koji, Tanaka	CA	IAC-15.C3.2.4
Koji, Tanaka	CA	IAC-15.C3.3.6
Koji, Tanaka	A	IAC-15.A6.3.5
Kojima, Ayami Kolar, Jan	CA CA	IAC-15.E1.1.5 IAC-15.E1.IP.1
Kolesnikov, Nikolai	CA	IAC-15.A2.4.4
Kolodziejczyk, Agata	A	IAC-15.A1.6.3
Kolomentsev, Alexander I.	CA	IAC-15.C3.3.3
Kolomentsev, Alexander I.	CA	IAC-15.C4.8.2
Kolot, Irina	CA	IAC-15.D1.4.10
Kolot, Irina	CA	IAC-15.B6.2.4
Kolyuka, Yury Komarek, Tomas A.	CA	IAC-15.A6.4.10 IAC-15.A3.3A.6
Konorev, Anatoly	CA	IAC-15.A5.5A.0
Konstantinidis, Konstantinos	A	IAC-15.D1.1.5
Konstantinidis, Konstantinos	Α	IAC-15.A3.IP.8
Konstantinov, Mikhail S.	Α	IAC-15.A3.IP.4
Koo, Jay	CA	IAC-15.A2.2.4
Koo, Jaye	CA	IAC-15.C4.IP.51
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Korczynska, Audrey Kornienko, Andrei	CA	IAC-15.E1.IP.3 IAC-15.C1.6.1
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Kornienko, Youlia	CA	IAC-15.D1.4.10
Kornienko, Youlia	CA	IAC-15.B6.2.4
Korobkov, Alexander	CA	IAC-15.A1.7.1
Korobkov, Alexander	CA	IAC-15.A1.7.2
Korovin, Maksim	CA A	IAC-15.B4.6A.3 IAC-15.A3.2B.1
Korsmeyer, David Kortmann, Martin	A	IAC-15.A3.2B.1
Koryanov, Vsevolod	A	IAC-15.C2.3.5
Koschny, Detlef	CA	IAC-15.A6.1.6
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Kosenkov, Ivan	CA	IAC-15.B3.2.5
Koshikawa, Naokiyo	CA	IAC-15.D1.5.3
Kothawala, Alimurtaza	CA	IAC-15.E2.3-YPVF.4.9
Kothawala, Alimurtaza Kothawala, Alimurtaza	CA CA	IAC-15.E2.4.9 IAC-15.C2.9.8
Kothia, Dishant	CA	IAC-15.C2.9.8
Kothia, Dishant	CA	IAC-15.C3.3.9
Kothia, Dishant	CA	IAC-15.D4.3.14
Kothia, Dishant	CA	IAC-15.C4.7-C3.5.3
Koti, Veeresha	CA	IAC-15.C2.IP.40
Koti, Veeresha	CA	IAC-15.E2.4.7
KOTIAN, NIKIL Kotsur, Oleg	CA CA	IAC-15.B4.3.13 IAC-15.E2.4.5
Kotwal, Alankar	A	IAC-15.E2.4.5
Kotwal, Alankar	A	IAC-15.A3.IP.26
Kou, Peng	CA	IAC-15.A6.1.9
Koudelka, Otto	CA	IAC-15.B2.3.5
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Koudelka, Otto	A	IAC-15.B2.4.4
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Koudelka, Otto	CA	IAC-15.B4.6B.9
Kouprianov, Vladimir	Α	IAC-15.A6.1.5

Kovalov, Borys	A	IAC-15.D2.IP.6
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Koyama, Shohei	CA	IAC-15.C3.3.6
Kozlov, Nikolai	CA	IAC-15.A2.2.1
Kozlov, Nikolai	A	IAC-15.A2.2.3
Kozlov, Victor	CA	IAC-15.A2.2.1
Kozlov, Victor	CA	IAC-15.A2.2.2
Kozlov, Victor	CA	IAC-15.A2.IP.1
Kozlovskaya, Inesa	A	IAC-15.A1.2.7
Kozlovskaya, Inesa	CA	IAC-15.A1.2.8
KOZUKA, SOUICHIROU	CA	IAC-15.E7.4.12
Kraetzig, Benjamin	A	IAC-15.B5.2.7
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Krag, Holger	CA	IAC-15.A6.4.7
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Kramer, Alexander	CA	IAC-15.D1.4.2
Kreisel, Joerg	CA	IAC-15.D3.1.3
Kreisel, Joerg	Α	IAC-15.E6.3.6
Kremic, Tibor	CA	IAC-15.A3.4.10
Krenn, Rainer	CA	IAC-15.D1.2.11
Krikalev, Sergey	CA	IAC-15.B3.2.6
Krimigis, Stamatios	CA	IAC-15.D4.4.1
Krishnamoorthy, Siddharth	Α	IAC-15.D1.2.10
Krishnamurthy, Akshata	Α	IAC-15.B4.7.8
Krishnaswamy, Marappa	CA	IAC-15.B4.1.3
Krisko, Paula	CA	IAC-15.A6.1.7
Krisko, Paula H.	CA	IAC-15.A6.2.9
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Kroupnik, Guennadi	A	IAC-15.B1.IP.29
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Krutzik, Markus	CA	IAC-15.A2.1.7
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Kryuchkov, Boris	CA	IAC-15.B3.5.2
Kryuchkov, Boris	CA	IAC-15.B3.5.7
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KS, Mohanavelu	CA	IAC-15.B2.7.1
Kubacki, Slawomir	CA	IAC-15.E2.1.4
Kublik, Dominik	CA	IAC-15.D2.7.10
Kubota, Takashi	CA	IAC-15.A3.4.5
Kudenko, Yurii A.	CA	IAC-15.A1.7.4
Kudentsov, Vladimir	CA	IAC-15.A6.IP.15
Kudirka, Audra	CA	IAC-15.C4.2.10
Kudrin, Oleg	CA	IAC-15.C3.3.3
Kuehnel, Carl	CA	IAC-15.B4.5.8
Kueppers, Michael	CA	IAC-15.A3.4.9
Kugler, Franz	CA	IAC-15.D2.4.8
Kuhenuri, Nader	CA	IAC-15.D1.2.3
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Kukoba, Tatyana Kulkarni, Advait	CA	IAC-15.A1.4.3
Kulkarni, Advait	A CA	IAC-15.B2.5.1
Kulkarni, Ashish	CA	IAC-15.E2.4.10
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Kulkarni, Rohan	CA	IAC-15.D4.1.5
Kulkarni, Rohan	A	IAC-15.C3.3.9
Kulkarni, Rohan	A	IAC-15.D4.3.7
Kulkarni, Rohan	CA	IAC-15.D4.3.11
Kulkarni, Rohan	CA	IAC-15.D4.3.14
Kulkarni, Rohan	A	IAC-15.C4.7-C3.
Kulkarni, Shreyas	CA	IAC-15.E2.4.3
Kulkarni, Shrinivas	CA	IAC-15.B4.2.2
Kulkarni, Shrinivas	CA	IAC-15.A7.2.1
Kullack, Karsten	CA	IAC-15.A2.6.6
Kumar, Abhijeet	CA	IAC-15.E7.IP.6
Kumar, B Kiran	A	IAC-15.C2.1.2
Kumar, B Kiran	CA	IAC-15.C2.1.4
Kumar, Deepak	Α	IAC-15.B2.6.9
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Kumar, Kartik	CA	IAC-15.A6.IP.21
Kumar, Kartik	Α	IAC-15.A6.6.1
Kumar, Krishna	CA	IAC-15.B6.3.1
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Kumar, Naresh	Α	IAC-15.B6.3.5
Kumar, Neelakandan Pradeesh	Α	IAC-15.B1.2.5
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Kumar G, Dinesh	CA	IAC-15.C4.8.7
KUMAR V, KRISHNA	CA	IAC-15.B4.3.13
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Kunihiro, Funakoshi	CA	IAC-15.A6.1.8
Kuo, Tien-Chuan	Α	IAC-15.C4.6.5
Kupke, Michael	CA	IAC-15.C2.9.2
Kurian, Thomas	CA	IAC-15.C2.1.2
Kurian, Thomas	CA	IAC-15.C2.1.4
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Kuritsin, Andrey	Α	IAC-15.B3.5.2
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Kurmazenko, Eduard	Α	IAC-15.A1.7.2
Kurochkin, Dmitriy	CA	IAC-15.C1.1.7
Kurosu, Akihide	CA	IAC-15.C4.1.1
Kushnarev, Alexander	CA	IAC-15.A3.IP.16
Kushnirenko, Anatolii	CA	IAC-15.A2.4.5
Kushnirenko, Serhii	Α	IAC-15.C2.2.2
Kuss, Petra	CA	IAC-15.E1.6.1
Kuyumjian, Raffi	Α	IAC-15.B3.7.3
Kuzmina, Lyudmila	Α	IAC-15.C2.3.12
Kuznetsov, Alexey	CA	IAC-15.B5.2.6
Kwon, Sejin	CA	IAC-15.C4.IP.7
Kwon, Sejin	CA	IAC-15.C4.6.1
Kwon, Seong-Cheol	Α	IAC-15.C2.5.9
Kyriakopoulos, George	Α	IAC-15.E7.3.2
Kyriopoulos, Olympia Natalia	Α	IAC-15.A2.5.8
Könemann, Thorben	Α	IAC-15.A2.5.3
Küchemann, Oliver	CA	IAC-15.A3.4.2
Kühn. Sebastian	CA	IAC-15.B2.IP.9

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La Neve, Alessandro	CA	IAC-15.D5.1.6
La Regina, Veronica	Α	IAC-15.E3.IP.11
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Labiole, Eric	CA	IAC-15.C2.8.7
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Lacava, Pedro	CA	IAC-15.B4.1.10
Lacava, Pedro	CA	IAC-15.B4.7.7
Lackner, David	A	IAC-15.B4.5.6
Lad, Rupesh	CA	IAC-15.E2.4.10
Laemmerzahl, Claus	CA	IAC-15.A2.5.3
Lafabrie, Philippe	CA	IAC-15.B2.4.5
Lafabrie, Philippe	CA	IAC-15.B2.6.4
Lafabrie, Philippe	CA	IAC-15.B4.6B.9
Laird, Ryan	CA	IAC-15.E1.7.2
Lal, Bhavya	Α	IAC-15.D4.2.2
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Lal, Bhavya	Α	IAC-15.A7.3.2
Lalonde, Mathieu	CA	IAC-15.E1.3.8
Lamarca, Vito	CA	IAC-15.B4.2.7
Lambeta, Michael	CA	IAC-15.A1.IP.20
Lambeta, Michael	CA	IAC-15.D1.3.4
Lambeta, Michael	CA	IAC-15.A1.6.4
Lambeta, Michael	CA	IAC-15.B5.1.8
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Lamichhane, Kamal	CA	IAC-15.B4.3.13
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Lamichhane, Kamal	Α	IAC-15.E2.4.8
Lampani, Luca	Α	IAC-15.C2.5.5
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LAN, SHENGWEI	Α	IAC-15.A6.3.9
LAN, SHENGWEI	CA	IAC-15.A6.IP.6
Lanciano, Orietta	Α	IAC-15.B5.2.2
Landsman, Keren	CA	IAC-15.E1.6.6







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ang, Xiaoyu	CA	IAC-15.A6.IP.44
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ange, Caroline	A	IAC-15.D3.2.3
ange, Caroline	A	IAC-15.D1.7.8
ange, Christian	CA	IAC-15.A5.1.1
ange, Michael	CA	IAC-15.A3.4.6
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ange, Patrick anger, Martin	CA CA	IAC-15.A3.IP.15 IAC-15.B4.6B.11
angley, Chris	CA	IAC-15.B4.0B.11
angley, Christopher S.	A	IAC-15.A5.3-B3.6.4
angston, Sara	Α	IAC-15.E7.3.10
apeyre, Rémi	Α	IAC-15.B6.3.11
apid, Ofer	CA	IAC-15.B4.2.2
apid, Ofer	CA	IAC-15.B4.5.6
apilli, Gabriel	A	IAC-15.A2.6.2
.apygin, Vladimir	Α Α	IAC-15.D2.8-A5.4.6
ara, Martin	CA CA	IAC-15.C1.4.7 IAC-15.D1.1.8
arin, Vladimir O. arin, Vladimir O.	CA	IAC-15.D1.1.8
arina, Irina	CA	IAC-15.A0.IP.46
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aroche, Norbert	CA	IAC-15.A1.IP.21
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arranaga, Jonan	CA	IAC-15.A3.3A.5
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ashansky, Shimshon (Steven) atha Balakumar, Vishal	A	IAC-15.B1.3.3
atzko, Serina T.	A	IAC-15.E2.4.6 IAC-15.E2.3-YPVF.4.3
.au, Stephen	CA	IAC-15.E2.5-1PVF.4.5
audet, Philippe	CA	IAC-15.A3.3B.5
auer, Charles	Α	IAC-15.D6.3.4
auer, Charles	Α	IAC-15.D6.3.6
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aufer, Diana	A	IAC-15.A3.IP.32
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aurini, Kathy	A	IAC-15.D2.8-A5.4.9
avagna, Michèle	CA	IAC-15.A2.3.3
avagna, Michèle	CA	IAC-15.A3.2B.5
avagna, Michèle	Α	IAC-15.A6.4.2
avagna, Michèle	CA	IAC-15.C1.3.1
avagna, Michèle	A A	IAC-15.D2.3.3
avagna, Michèle	CA	IAC-15.A3.3A.12
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.avagna, Michèle	CA	IAC-15.A6.5.8
avagna, Michèle	A	IAC-15.A0.5.8
awal, Abdul	Α	IAC-15.B4.1.6
awford, Richard	Α	IAC-15.B1.6.7
awton, Mike	Α	IAC-15.C2.2.7
.axmikantha, B P	CA	IAC-15.B1.IP.2
ay, Gary	CA	IAC-15.B4.6A.11
e Couteur, Cath	A CA	IAC-15.E1.9.1
ebat, Vincent ebat, Vincent	CA CA	IAC-15.A2.1.1 IAC-15.B1.IP.9
eber, Tatjana	CA	IAC-15.B1.IP.9
ecuyot, Arnaud	CA	IAC-15.B1.IP.32
ee, Changjin	CA	IAC-15.C4.2.6
ee, Dong-yeon	A	IAC-15.C1.5.8
ee, Dongeun	Α	IAC-15.C4.2.6
ee, Eunkwang	CA	IAC-15.C4.IP.7
.ee, Hyeon-Cheol	A	IAC-15.B1.4.5
ee, Jaeho	CA	IAC-15.A3.2A.6
.ee, Jaeho	A	IAC-15.D3.2.8

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Lee, Tai Sik	CA	IAC-15.A3.3B.0
Lee, Tai Sik	CA	IAC-15.D3.2.8
Lehahn, Yoav	CA	IAC-15.B1.6.1
Lehmann, Tanja	CA	IAC-15.A1.IP.8
Lehnert, Christopher	CA	IAC-15.E3.1.7
Lei, Chen	CA	IAC-15.B6.3.13
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Lei, Yuan	CA	IAC-15.C4.3.11
Leizer, Arie	CA A	IAC-15.B1.2.2 IAC-15.B1.3.2
Leizer, Arie Leizer, Arie	A	IAC-15.B1.3.2
Lejeune, Laurent	CA	IAC-15.B1.IF.11
LEKEUX, Anne	CA	IAC-15.C4.1.6
Lelong, Patrick	CA	IAC-15.D1.3.1
Lemenkova, Polina	A	IAC-15.B1.IP.15
Lemke, Norbert M.K.	A	IAC-15.D1.2.3
Lemke, Norbert M.K.	A	IAC-15.B4.7.5
Lemmens, Stijn	CA	IAC-15.A6.4.7
Lempert, David	CA	IAC-15.A6.IP.15
Lenard, Roger X.	A	IAC-15.D4.3.5
Lenard, Roger X.	A	IAC-15.C4.7-C3.5.5
Lenard, Roger X.	Α	IAC-15.C4.7-C3.5.7
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Leonov, Victor Leonov, Victor	CA	IAC-15.C5.1.9
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Leonov, Victor	CA	IAC-15.E1.7.4
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Letor, Romain	CA	IAC-15.A6.4.7
Leung, Braven	A	IAC-15.A6.5.3
Leung, Thomas Siu Hong	CA	IAC-15.E2.3-YPVF.4.7
Leuoth, Katja	Α	IAC-15.B3.4-B6.5.3
Lev, Dan Lev, Dan	CA A	IAC-15.C4.IP.43
Levenhagen, Jens	CA	IAC-15.C1.6.1
Levi, Netanel	A	IAC-15.C1.2.2
Levi, Ram	A	IAC-15.D5.4.4
Levi-Sasson, Aviad	Α	IAC-15.C2.8.5
Levin, David	CA	IAC-15.A1.IP.20
Levin, David	CA	IAC-15.D1.3.4
Levin, David	CA	IAC-15.A1.6.4
Levit, Creon	CA	IAC-15.A6.6.8
Levochkin, Petr	CA	IAC-15.C4.1.2
Levrino, Luca	CA	IAC-15.D4.1.12
Levy, Benny	CA	IAC-15.A3.IP.3
Levy, Ori	A CA	IAC-15.E2.1.6
Lewis, Hugh G. Lewis, Hugh G.	CA CA	IAC-15.A6.9.3 IAC-15.B5.1.9
Lewis, John	CA	IAC-15.B5.1.9
Lewis, Joseph	CA	IAC-15.D3.2.4
Lewis, Mark	CA	IAC-15.A7.3.2
Lewis, Stephen	CA	IAC-15.A3.3B.7
Leyland, Pénélope	CA	IAC-15.A6.4.5
León Pérez, Laura	Α	IAC-15.B4.7.9
LI, Baomin	CA	IAC-15.B2.7.7
Li, Baoming	CA	IAC-15.B2.5.11
Li, Bin	A	IAC-15.E7.2.2
Li, Binchao	A	IAC-15.C2.IP.7
LI, BOWEN	CA	IAC-15.C1.5.5 IAC-15.E1.4.7
Li Changiun		IAC-13.E1.4./
Li, Changjun	CA	
Li, Chun	CA	IAC-15.D4.1.7
Li, Chun Li, Chunhui	CA A	IAC-15.D4.1.7 IAC-15.A3.IP.27
Li, Chun	CA	IAC-15.D4.1.7

Li, Dongha
Li, Dun
Li, Fei
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Li, Feng
Li, Guangxi
LI, Haitao
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Li, Juqian
Li, Lan
Li, Lei
Li, Leyuan
Li, Longfei
Li, Meng
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LI, Ping Li, Rui
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Li, Shoupin Li, Shuang
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Li, Tinghe
LI, Wei
Li, Xiaojun
Li, Xiaoxiao Li, Xie
Li, Yan
Li, Yandong
Li, Yanhui
Li, Yanlong
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Li, Yanning
Li, Ye Li, Yi
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Li, Yinghui
Li, Yuan
Li, Yuheng Li, Yun-pen
Li, Tull-per

Li, Zhao	Α	IAC-15.A3.3A.11
Li, Zhengjun	CA	IAC-15.C3.2.5
Li, Zhi	CA	IAC-15.A6.9.7
Li, Zhi	CA	IAC-15.A6.5.2
Li, Zhihui	CA	IAC-15.C2.IP.15
Li, Zongfeng	A CA	IAC-15.A2.5.2 IAC-15.C1.5.2
Lian, Yu-Yung	CA	
Liang, Chen	CA	IAC-15.C2.4.3
Liang, Jie	A CA	IAC-15.C1.IP.19
Liang, Jie	CA	IAC-15.C4.IP.38
Liang, Jie	A	IAC-15.D2.IP.14
Liang, Junlong	CA	IAC-15.C4.IP.16
Liang, Tang	CA	IAC-15.C2.3.8
Liang, Wei	CA	IAC-15.C4.IP.2
Liang, Weiguang	CA	IAC-15.C1.2.10
Liang, Yang	CA	IAC-15.D1.IP.21
Liang, Yuying	Α	
Liao, Xiang	CA	IAC-15.A6.IP.4
Liapi, Marianthi	A	IAC-15.A5.2.11
Liapi, Marianthi	CA	IAC-15.E5.1.2
Liberati, Francesco	CA	IAC-15.A3.2A.8
Liberati, Francesco	CA	IAC-15.A3.5.9
Liddle, Doug	Α	IAC-15.B4.2.1
Liddle, Doug	CA	IAC-15.E1.2.1
Liddle, Doug	CA	IAC-15.E6.3.4
Liddle, Doug	Α	IAC-15.D1.5.1
Liddle, Doug	CA	IAC-15.B4.7.5
Lijuan, Luo	A	IAC-15.C2.IP.3
Lijun, Cao	Α	IAC-15.B4.6A.4
LIM, Cheolwoo	CA	IAC-15.D1.5.2
Limper, Ulrich	CA	IAC-15.A1.3.5
Lin, Chen-Tsung	CA	IAC-15.C1.5.2
Lin, Guo-sheng	CA	IAC-15.C2.IP.18
LIN, JIANG	CA	IAC-15.A6.IP.5
LIN, Mo	CA	IAC-15.B2.1.12
Lin, Ping-Yu	A	IAC-15.E7.IP.20
Lin, Qingguo	CA	IAC-15.C4.6.6
Lin, Shin-Fa	CA	IAC-15.B6.3.1
Lin, Shin-Fa	CA	IAC-15.D1.5.4
Lin, Xin	A	IAC-15.B3.IP.6
Linden, Dimitri	A	IAC-15.E7.1.12
Linder, Esther	A	IAC-15.A6.1.2
Linder, Martin	CA	IAC-15.A7.1.4
Linder, Martin	CA	IAC-15.A7.1.5
Lindner, Gerhard	CA	IAC-15.C4.5.2
Ling, Wenhui	A	IAC-15.C4.9.5
Ling, William Yeong Liang	CA	IAC-15.C4.IP.52
Ling Euk Jin, Alexander	CA	IAC-15.B2.5.9
Ling-bin, ZENG	A	IAC-15.A3.IP.11
Ling-bin, ZENG	A	IAC-15.A3.2C.4
Ling-bin, ZENG	CA	IAC-15.A3.2C.5
Ling-bin, ZENG	CA	IAC-15.A3.2C.6
Linn Barnett, Danna	A	IAC-15.C1.2.3
Linn Barnett, Danna	CA	IAC-15.E1.2.3
Linn Barnett, Danna	CA	IAC-15.C4.IP.14
Lino, Carlos	CA	IAC-15.A6.IP.39
Linton, Greg	CA	IAC-15.A1.6.4
Lionaki, Eleni	CA	IAC-15.A5.2.11
Lionaki, Eleni	CA	IAC-15.E5.1.2
Liorzou, Françoise	CA	IAC-15.A2.1.1
Liorzou, Françoise	CA	IAC-15.B1.IP.9
Liou, JC.	CA	IAC-15.A6.1.7
Liou, JC.	CA	IAC-15.A6.2.9
Lipa, John	CA	IAC-15.B4.4.6
Liperi, Konstantina	Α	IAC-15.E7.IP.8
Lipkin, Yiftah	CA	IAC-15.D5.4.1
Lips, Tobias	CA	IAC-15.A6.4.5
Lips, Tobias	CA	IAC-15.A6.4.7
Liqiang, Hou	CA	IAC-15.B3.IP.4
LiQiang Wang, LiQiang Wang	Α	IAC-15.B2.3.11
Lisowski, Jakub	CA	IAC-15.A3.3B.11
List, Meike	CA	IAC-15.A2.1.3
List, Meike	CA	IAC-15.A2.1.6
Liszkowski, Piotr	CA	IAC-15.A1.IP.7
Litefti, Karim	CA	IAC-15.B6.3.12

CA IAC-15.B2.6.11







Makapela, Lulekwa Makarov, Yuri



IAC-15.E1.5.8

IAC-15.E3.1.8

Liu, Bo

Liu, Chuan	LIU, BO	L CA	IAC-15.B2.b.11
Liu, Chuankai Liu, Chuankai A A IAC-15.C4.6.6 Liu, Guanghui CA IAC-15.A3.2C.11 Liu, Gang A IAC-15.C2.1P46 Liu, Guanghui CA IAC-15.A3.1P.12 Liu, Hong CA IAC-15.A3.1P.12 Liu, Hong CA IAC-15.A3.1P.13 Liu, Hong CA IAC-15.A3.1P.17 Liu, Hong CA IAC-15.A3.1P.17 Liu, Hong CA IAC-15.A3.1P.17 Liu, Hong CA IAC-15.A3.1P.17 Liu, Jiahe CA IAC-15.A3.1P.17 Liu, Jiahe CA IAC-15.A5.1P.17 Liu, Jiangong CA IAC-15.A5.1P.17 Liu, Jiangong CA IAC-15.A5.1P.17 Liu, Jiangong CA IAC-15.C4.1P.23 Liu, Jiangong CA IAC-15.C4.1P.26 Liu, Jiangong CA IAC-15.C4.1P.29 Liu, Jiangong CA IAC-15.C4.6.6 Liu, Jiangong CA IAC-15.C4.6 Liu, Jiangong CA IAC-15.C4.6 Liu, Jiangong CA IAC-15.C4.6 Liu, J	Liu, Chang	CA	IAC-15.C2.7.4
Liu, Chuankai Liu, Gang A IAC-15.A3.2C.11 Liu, Gang A IAC-15.A3.2C.11 Liu, Guanghui CA IAC-15.A1.IP.17 Liu, Hong CA IAC-15.A1.IP.17 Liu, Hong CA IAC-15.A1.IP.17 Liu, Hong CA IAC-15.A1.IP.13 Liu, Hong CA IAC-15.A1.IP.13 Liu, Hong CA IAC-15.A1.IP.17 Liu, Hongiu CA IAC-15.A1.IP.17 Liu, Hongiu CA IAC-15.A1.IP.17 Liu, Jianbai CA IAC-15.A1.IP.17 Liu, Jianbai CA IAC-15.A6.IP.17 Liu, Jiangong CA IAC-15.A6.IP.11 Liu, Jiangong CA IAC-15.A6.A.11 Liu, Jiangong CA IAC-1		CA	
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Liu, Hongju CA IAC-15.A1.7.9 Liu, Hongju CA IAC-15.A1.8.1 Liu, Hui A IAC-15.A1.IP.17 Liu, Jiahe CA IAC-15.A6.IP.4 LIU, Jian-xia CA IAC-15.C2.IP.23 Liu, Jiangong CA IAC-15.B2.1.11 Liu, Jiangong CA IAC-15.B2.1.11 Liu, Jiangong CA IAC-15.B2.1.11 Liu, Jiangong CA IAC-15.B2.6.11 Liu, Jiangong CA IAC-15.B2.6.10 Liu, Jiangong CA IAC-15.B2.6.10 Liu, Jiangong CA IAC-15.B2.6.11 Liu, Jiangong CA IAC-15.B2.6.11 Liu, Jiangong CA IAC-15.B2.6.11 Liu, Jiangong CA IAC-15.B2.6.11 Liu, Jiaqi CA IAC-15.A6.8.7 Liu, Jie A IAC-15.C1.IP.8 Liu, Jie A IAC-15.C1.IP.8 Liu, Jie CA IAC-15.C1.IP.8 Liu, Jie CA IAC-15.C1.IP.8 Liu, Jie CA IAC-15.C1.IP.8 Liu, Jun CA IAC-15.C4.IP.49 Liu, Jun CA IAC-15.C4.IP.49 Liu, Naijin CA IAC-15.B2.6.10 Liu, Naijin CA IAC-15.B2.6.10 Liu, Ning CA IAC-15.B2.6.10 Liu, Ning CA IAC-15.B2.1.11 Liu, Ning CA IAC-15.B2.6.10 Liu, Jie IAC-15.B2.6.10 Liu, Jie IAC-15.B2.6.10 Liu, Ning CA IAC-15.B2.6.10 Liu, Sen CA IAC-15.A6.3.3 Liu, Sen CA IAC-15.A6.3.9 Liu, Sen CA IAC-15.A6.3.9 Liu, Sen CA IAC-15.A6.3.9 Liu, Sen CA IAC-15.A6.1P.5 Liu, Sen CA IAC-15.B.6.3.9 Liu, Varin CA IAC-15.B.1.6 Liu, Vin CA IAC-15.B.2.19 Liu, Liu, Zin CA IAC-15.B.3.1 Liu, Vin CA IAC-15.B.3.1 Liu, Vin CA IAC-15.B.3.3 Liu, Sen CA IAC-15.B.3.3 Liu, Sen CA IAC-15.B.3.3 Liu, Sen CA IAC-15	Liu, Hong	CA	
Liu, Hongju Liu, Hol Liu, Hol Liu, Hol Liu, Jiane CA Liu, Jianeng CA Liu, Jiane CA Liu, Ca Liu, Naijiin CA Liu, Naijiin CA Liu, Ca Liu, Pei-Jiane CA Liu, Pei-Jiane CA Liu, Pei-Jiane CA Liu, Ciane CA Liu, Sen CA Liu, Ca Liu, Sen CA Liu, Ca Liu, Sen CA Liu, Sen CA Liu, Sen CA Liu, Sen CA Liu, Ca Liu, Sen CA L	Liu, Hong	Α	IAC-15.A1.7.8
Liu, Hui Liu, Jiahe Liu, Jian-xia Liu, Jian-xia Liu, Jiangong CA IAC-15.62.1P.23 Liu, Jiangong A IAC-15.62.1P.23 Liu, Jiangong A IAC-15.62.1P.25 Liu, Jiangong CA IAC-15.82.6.10 Liu, Jiangong CA IAC-15.82.6.10 Liu, Jiangong CA IAC-15.82.6.10 Liu, Jiangong CA IAC-15.82.6.10 Liu, Jiangong CA IAC-15.82.6.11 Liu, Jiangong CA IAC-15.82.6.11 Liu, Jiangong CA IAC-15.64.8.7 Liu, Jie A IAC-15.64.8.7 Liu, Jie A IAC-15.64.1P.8 Liu, Jie CA IAC-15.64.1P.8 Liu, Jie CA IAC-15.64.1P.8 Liu, Jie CA IAC-15.64.1P.8 Liu, Jun CA IAC-15.64.1P.8 Liu, Jun CA IAC-15.64.1P.8 Liu, Jun CA IAC-15.64.6 Liu, Min CA IAC-15.64.15.0 Liu, Naijin CA IAC-15.82.6.10 Liu, Naijin CA IAC-15.82.6.10 Liu, Ning CA IAC-15.82.6.10 Liu, Pei-Jing CA IAC-15.64.94 Liu, Qiang CA IAC-15.64.94 Liu, Qiang CA IAC-15.64.8 Liu, Sen CA IAC-15.64.11 Liu, Xin CA IAC-15.64.8 Liu, Weiwei CA IAC-15.64.8 Liu, Weiwei CA IAC-15.64.8 Liu, Weiwei CA IAC-15.64.8 Liu, Wang CA IAC-15.64.8 Liu, Vang CA IAC-15	Liu, Hong	CA	IAC-15.A1.7.9
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Liu, Zhanyi CA IAC-15.C4.IP.17 Liu, Zhanyi CA IAC-15.C4.IP.20 Liu, Zhanyi CA IAC-15.C4.IP.24 Liu, Zhou CA IAC-15.C2.IP.31 Liu, Zili CA IAC-15.C2.29 Liuzzi, Daniele A IAC-15.C4.1.7 LIVNE, OFER A IAC-15.C4.3.3 Lizarraga Cubillos, Juan CA IAC-15.82.6.6 Lluch, Ignasi CA IAC-15.82.5.8 Lluch, Ignasi A IAC-15.D1.7.5 Lobov, Sergey D. A IAC-15.C4.1.7 Locci, Ivan CA IAC-15.C2.9.3 Lock, Robert CA IAC-15.A3.3A.6 Lock, Robert CA IAC-15.D1.3.11 Lodiot, Sylvain CA IAC-15.A3.4.1	Liu, Zejun	A	IAC-15.C4.IP.50
Liu, Zhanyi CA IAC-15.C4.IP.17 Liu, Zhanyi CA IAC-15.C4.IP.20 Liu, Zhanyi CA IAC-15.C4.IP.24 Liu, Zhou CA IAC-15.C2.IP.31 Liu, Zili CA IAC-15.C2.29 Liuzzi, Daniele A IAC-15.C4.1.7 LIVNE, OFER A IAC-15.C4.3.3 Lizarraga Cubillos, Juan CA IAC-15.82.6.6 Lluch, Ignasi CA IAC-15.82.5.8 Lluch, Ignasi A IAC-15.D1.7.5 Lobov, Sergey D. A IAC-15.C4.1.7 Locci, Ivan CA IAC-15.C2.9.3 Lock, Robert CA IAC-15.A3.3A.6 Lock, Robert CA IAC-15.D1.3.11 Lodiot, Sylvain CA IAC-15.A3.4.1	LIU, Zhanguo	CA	IAC-15.C4.3.13
Liu, Zhanyi CA IAC-15.C4.IP.20 Liu, Zhanyi CA IAC-15.C4.IP.24 Liu, Zhou CA IAC-15.C2.IP.31 Liu, Zili CA IAC-15.C2.29 Liuzzi, Daniele A IAC-15.C4.1.7 LIVNE, OFER A IAC-15.C4.3.3 Lizarraga Cubillos, Juan CA IAC-15.B2.6.6 Lluch, Ignasi CA IAC-15.B2.5.8 Lluch, Ignasi A IAC-15.D1.7.5 Loboy, Sergey D. A IAC-15.C4.1.7 Locci, Ivan CA IAC-15.C2.9.3 Lock, Robert CA IAC-15.A3.3A.6 Lock, Robert CA IAC-15.D1.3.11 Lodiot, Sylvain CA IAC-15.A3.4.1	Liu. Zhanvi	CA	
Liu, Zhanyi CA IAC-15.C4.IP.24 Liu, Zhou CA IAC-15.C2.IP.31 Liu, Zili CA IAC-15.C2.2.9 Liuzzi, Daniele A IAC-15.C4.1.7 LIVNE, OFER A IAC-15.C4.3.3 Lizarraga Cubillos, Juan CA IAC-15.B2.6.6 Lluch, Ignasi CA IAC-15.B2.5.8 Lluch, Ignasi A IAC-15.D1.7.5 Loboy, Sergey D. A IAC-15.C4.1.7 Locci, Ivan CA IAC-15.C2.9.3 Lock, Robert CA IAC-15.A3.3A.6 Lock, Robert CA IAC-15.D1.3.11 Lodiot, Sylvain CA IAC-15.A3.4.1	*		
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Lobov, Sergey D. A IAC-15.C4.1.7 Locci, Ivan CA IAC-15.C2.9.3 Lock, Robert CA IAC-15.A3.3A.6 Lock, Robert CA IAC-15.D1.3.11 Lodiot, Sylvain CA IAC-15.A3.4.1	Lluch, Ignasi	Α	IAC-15.D1.7.5
Locci, Ivan CA IAC-15.C2.9.3 Lock, Robert CA IAC-15.A3.3A.6 Lock, Robert CA IAC-15.D1.3.11 Lodiot, Sylvain CA IAC-15.A3.4.1		Α	
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Lock, Robert CA IAC-15.D1.3.11 Lodiot, Sylvain CA IAC-15.A3.4.1			
Lodiot, Sylvain CA IAC-15.A3.4.1			
Lognonne, Philippe CA IAC-15.A3.3B.5			
	Lognonne, Philippe	LA	IAC-15.A3.3B.5

Logsdon, John	CA	IAC-15.E3.2.1
Lohse-Busch, Heike	A	IAC-15.C2.8.11
Loizzo, Rosa	CA	IAC-15.B6.3.4
Loktionov, Egor Lombardi, Nunzia	A	IAC-15.C3.1.6 IAC-15.B1.IP.3
Lombardi, Riccardo	CA	IAC-15.E5.5.2
Lommatsch, Valentina	CA	IAC-15.A3.4.2
Lomonosova, Yulia	CA	IAC-15.A1.IP.10
Lonchakov, Yuri	CA	IAC-15.B3.5.2
Lonchakov, Yuri	CA	IAC-15.B3.5.7
Long, George Anthony	A	IAC-15.E7.3.7
Long, Jiateng	CA A	IAC-15.A3.IP.18 IAC-15.E7.IP.4
Long, Jie Long, Nathanial	A	IAC-15.E1.7.13
Longo, Francesco	CA	IAC-15.B1.3.1
Longo, Francesco	CA	IAC-15.B1.3.7
Longo, Francesco	CA	IAC-15.B4.4.1
Longuski, James	CA	IAC-15.A5.2.6
Looney, Erin	CA	IAC-15.E1.3.12
Lopatriello, Marianna	A	IAC-15.C2.9.6
Lopez-Dekker, Paco	CA	IAC-15.B1.IP.32
Lopukhov, Dmitry Lorenzini, Enrico C.	CA CA	IAC-15.B2.1.7 IAC-15.A7.2.7
Lorenzini, Enrico C.	CA	IAC-15.A6.3.1
Lorenzini, Enrico C.	CA	IAC-15.B4.6B.5
Lorusso, Rino	CA	IAC-15.B1.IP.3
Losekamm, Martin	A	IAC-15.E3.IP.10
Losekamm, Martin	CA	IAC-15.E1.5.3
Losekamm, Martin	A	IAC-15.B4.6B.11
Lotz, Jeffrey	CA	IAC-15.A1.2.6
Louaas, Eric	CA	IAC-15.C4.1.4
Loughman, Joshua Loukakis, Andreas	CA CA	IAC-15.A5.2.8 IAC-15.E7.1.7
Loureiro, Geilson	CA	IAC-15.B4.1.10
Loureiro, Geilson	CA	IAC-15.D5.1.7
Loureiro, Geilson	CA	IAC-15.D5.1.9
Loureiro, Geilson	Α	IAC-15.D1.IP.16
Loureiro, Geilson	CA	IAC-15.D3.4.7
Loureiro, Geilson	CA	IAC-15.B4.7.7
Loureiro, Nuno	CA	IAC-15.E6.1.7
Loureiro, Nuno	A	IAC-15.E6.2.10
Lousada, Joao Lousada, Joao	CA A	IAC-15.E6.1.7 IAC-15.A5.2.8
Lousada, Joao	CA	IAC-15.A3.2.8
Lousada, Joao	A	IAC-15.D1.2.1
Lousada, Joao	Α	IAC-15.E3.IP.3
Low, Kay-Soon	CA	IAC-15.C1.5.3
Loyan, Andriy	CA	IAC-15.B4.6B.13
Lozano, Paulo	CA	IAC-15.C4.IP.40
LU, Jianwei	A	IAC-15.C4.3.10
Lu, Jinying	CA	IAC-15.A1.5.9
Lu, Juan	CA	IAC-15.B2.2.2
Lu, Shan Lu, Wei	A	IAC-15.B1.4.4 IAC-15.C3.2.8
Lu, Wu	CA	IAC-15.C3.2.8
Lu, Xi	A	IAC-15.C2.5.4
Lu, Xiaochen	CA	IAC-15.A2.2.7
Lu, Xiaochen	A	IAC-15.C2.7.1
Lu, Yangming	A	IAC-15.A2.5.9
Lu, Yi	A	IAC-15.E5.2.8
Lu, Zhuoyan	A	IAC-15.E7.IP.11
Lucas Phimbasson Maria	CA CA	IAC-15.C1.7.1
Lucas-Rhimbassen, Maria Luchitskaya, Elena	CA	IAC-15.E1.7.11 IAC-15.A1.2.2
Luchitskaya, Elena	A	IAC-15.A1.3.3
Luchitskaya, Elena	CA	IAC-15.A1.3.5
Ludmila, Kolomentseva	CA	IAC-15.C3.3.3
Ludmila, Kolomentseva	CA	IAC-15.C4.8.2
Ludwig, Carina	A	IAC-15.C2.1.1
Luetke, Wolfram	CA	IAC-15.B2.6.2
Lukashevich, Sergey	CA	IAC-15.D1.1.8
Lukaszczyk, Agnieszka	CA	IAC-15.E3.1.13
Lukauskaite, Ieva Lun, Jonathan	CA A	IAC-15.E5.1.7 IAC-15.C4.IP.30
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Lundsgaard, Thorbjørn Waal	Α	IAC-15.E3.IP.9
Lunghi, Paolo	Α	IAC-15.A3.2B.5
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Luo, Chunqin	CA	IAC-15.C4.9.5
LUO, Jianjun	CA	IAC-15.C2.2.3
Luo, Xiaotao	CA	IAC-15.A3.2C.4
Luo, Ya-Zhong	CA	IAC-15.B6.3.13
Luo, Zhengping	CA	IAC-15.C2.5.10
Lupisella, Mark	CA	IAC-15.E3.2.1
Lupo, Stefano	CA	IAC-15.E5.5.3
Lupton, Luke	A	IAC-15.E1.9.4
Lv, Ke	CA	IAC-15.A1.3.2
LV, Wei	CA	IAC-15.C2.7.4
Lykos, Georgios	CA	IAC-15.A5.2.11
LYONS, RHONDA	Α	IAC-15.B4.6B.10
Lyons, Tom	CA	IAC-15.E1.2.1
Lysova, Natalya	CA	IAC-15.A1.4.3
Lyubchenko, Feodor	CA	IAC-15.B1.IP.28
László, Könözsy	CA	IAC-15.C2.8.3
Lämmerzahl, Claus	Α	IAC-15.A2.1.6
Lüdtke, Daniel	CA	IAC-15.D1.IP.13

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Mains, Deanna Maiwald, Volker Maiwald, Volker

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A	IAC-15.C4.IP.29
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CA	IAC-15.C3.4.2
CA	IAC-15.C2.IP.15
	IAC-15.A6.9.8
	IAC-15.A2.2.7
CA	IAC-15.C2.7.1
CA	IAC-15.A3.IP.5
A	IAC-15.C2.IP.2
CA	IAC-15.C1.IP.15
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	IAC-15.C4.9.8
	IAC-15.C1.3.7
A	IAC-15.A4.1.3
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	IAC-15.D4.IP.1
	IAC-15.A4.2.4
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	IAC-15.E3.2.1
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	IAC-15.E1.4.1
	IAC-15.E1.7.11
	IAC-15.A2.5.7
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	IAC-15.E2.3-YPVF.4.2
	IAC-15.B3.7.9
	IAC-15.D2.4.3
	IAC-15.B1.2.2
	IAC-15.B1.2.2
	IAC-15.A3.2B.2
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	IAC-15.A1.4.2 IAC-15.C3.IP.5
	IAC-15.C3.4.9 IAC-15.A6.IP.25
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	IAC-15.A3.4.2
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CA	IAC-15.E6.1.9
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Makarov, Yuri	Α	IAC-15.E3.1.8
Makarov, Yuri	CA	IAC-15.E3.2.9
Makarov, Yuriy	CA	IAC-15.A6.IP.15
Makarova, Daria	CA	IAC-15.E3.1.8
Makushenko, Yury	CA	IAC-15.A5.1.8
Makushenko, Yury	A	IAC-15.A5.1.9
Malhotra, Vinayak	Α	IAC-15.D4.1.4
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Mallikarjuna, Vaibhav	CA	IAC-15.E3.IP.3
Mallikarjuna, Vaibhav	CA	IAC-15.B4.6B.13
Malucchi, Giovanni	A	IAC-15.D2.6.4
Malwadkar, Omkar	CA	IAC-15.C3.IP.3
Malwadkar, Omkar	CA	IAC-15.C3.4.8
Malyshev, Veniamin V.	CA	IAC-15.A6.2.3
Maman, Shimrit	Α	IAC-15.E1.8.3
Mammarella, Marco	CA	IAC-15.A3.2B.7
Mammarella, Martina	CA	IAC-15.A2.6.8
Mammarella, Martina	CA	IAC-15.D1.7.7
Mancuso, Salvatore	CA	IAC-15.D2.6.2
Manefield, Mike	CA	IAC-15.A1.6.6
Manente, Marco Manente, Marco	CA	IAC-15.C4.IP.47 IAC-15.C4.6.3
Mani Sai Suryateja, Jammalamadaka	A CA	IAC-15.C4.IP.35 IAC-15.A3.IP.3
Mann, Rony	CA	
Mannel, Benjamin	CA	IAC-15.B4.4.5
Mannel, Thurid		IAC-15.B3.4-B6.5.2
Manoli, Maria	Α	IAC-15.E7.IP.9
Mantellato, Riccardo	CA	IAC-15.E2.3-YPVF.4.1
Mantellato, Riccardo	CA	IAC-15.B4.6B.5
Mantra, Nahum	A	IAC-15.E5.4.4
Manyapu, Kavya K.	A	IAC-15.B3.IP.2
Mao, Chengli	CA	IAC-15.C4.IP.10
Marboe, Irmgard	CA	IAC-15.E6.1.5
Marboe, Irmgard	Α	IAC-15.E7.5.13
Marchesi, Andrea	CA	IAC-15.E5.5.2
Marchetti, Mario	CA	IAC-15.C2.4.4
Marchetti, Mario	CA	IAC-15.C2.8.12
MARCIACQ, Jean-Bruno	Α	IAC-15.D6.1.4
Marcil, Isabelle	CA	IAC-15.B3.3.2
Marciniak, Blazej	A	IAC-15.D2.IP.2
Marciniak, Blazej	CA	IAC-15.D2.7.10
Marcon, Marco	CA	IAC-15.A6.5.8
Marcu, Sebastian Davis	CA	IAC-15.E6.1.7
Marcu, Sebastian Davis	A	IAC-15.E1.7.2
Marcuccio, Salvo	Α	IAC-15.C4.6.7
Margaronis, Konstantinos	CA	IAC-15.D4.1.9
Margheritis, Diana	CA	IAC-15.A3.3A.2
Margheritis, Diana	CA	IAC-15.A3.IP.19
Margheritis, Diana	A	IAC-15.A3.3B.2
Margoy, Debby	A	IAC-15.C2.IP.35
Mariano, Jose	CA	IAC-15.B3.2.8
Mariano, Jose	CA	IAC-15.D2.7.8
Mariez, Julien	A	IAC-15.E7.2.5
Marisaldi, Martino	CA	IAC-15.B4.3.1
Markgraf, Markus	A	IAC-15.B2.1.6
Markgraf, Markus	A	IAC-15.D2.4.8
Markov, Alexander	CA	IAC-15.B3.3.6
Marne, Aniket	A	IAC-15.E2.3-YPVF.4.9
Marne, Aniket	CA	IAC-15.E2.4.3
Marne, Aniket	A	IAC-15.E2.4.9
Marne, Aniket	A	IAC-15.C2.9.8
Marnin, David	CA	IAC-15.C4.6.12
Marquart, Samantha	A	IAC-15.E6.3.10
	CA	IAC-15.C4.2.1
Marraud, Christine	CA	IAC-15.A2.6.2
Marsell, Brandon		IAC-15.B4.4.9
Marsell, Brandon Marsetič, Aleš	CA	
Marsell, Brandon Marsetič, Aleš Marshall, Ross	CA	IAC-15.B4.2.6
Marsell, Brandon Marsetič, Aleš Marshall, Ross Marshall-Bowman, Karina	CA A	IAC-15.B4.2.6 IAC-15.A1.2.1
Marsell, Brandon Marsetič, Aleš Marshall, Ross Marshall-Bowman, Karina Martelo, Antonio	CA A CA	IAC-15.B4.2.6 IAC-15.A1.2.1 IAC-15.D1.3.5
Marsell, Brandon Marsetič, Aleš Marshall, Ross Marshall-Bowman, Karina Martelo, Antonio Martelo, Antonio	CA A CA A	IAC-15.B4.2.6 IAC-15.A1.2.1 IAC-15.D1.3.5 IAC-15.D1.3.6
Marsell, Brandon Marsetič, Aleš Marshall, Ross Marshall-Bowman, Karina Martelo, Antonio Martelo, Antonio Martin, Annie	CA A CA A CA	IAC-15.B4.2.6 IAC-15.A1.2.1 IAC-15.D1.3.5 IAC-15.D1.3.6 IAC-15.B3.7.3
Marsell, Brandon Marsetič, Aleš Marshall, Ross Marshall-Bowman, Karina Martelo, Antonio Martelo, Antonio	CA A CA A	IAC-15.B4.2.6 IAC-15.A1.2.1 IAC-15.D1.3.5 IAC-15.D1.3.6









WELCOME

ORGA

SERS

PRAC

PROGRAM

PROGRAMME

PROFESSIONALS EVENTS

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Martin-Salvador, Manuel	CA	IAC-15.B2.1.3
Martinez, Ignacio	CA	IAC-15.E1.2.5
Martinez, Larry	A	IAC-15.E7.3.4
Martinez, Peter	A	IAC-15.E1.4.4
Martinez, Peter	A	IAC-15.E3.4.1
Martinez, Peter	A CA	IAC-15.E1.8.2
Martinez, Roland Martinez, Santa	CA	IAC-15.A5.1.1 IAC-15.E1.IP.6
Martinez, Victor	CA	IAC-15.E1.IP.0
Martinez Oliveira, David	CA	IAC-15.B3.4-B6.5.4
Martinez-Gonzalez, Xavier	CA	IAC-15.A5.3-B3.6.6
Martinot, Vincent	CA	IAC-15.A6.9.10
Martirosyan, Arutyun	CA	IAC-15.C3.1.6
Martorana, Rosario	Α	IAC-15.B1.IP.10
Martucci, Giovanni	CA	IAC-15.D6.3.1
Martucci, Giovanni	CA	IAC-15.D6.3.7
Martynov, Maxim	CA	IAC-15.A3.1.5
Maryanka, Yair	Α	IAC-15.D1.2.2
Marée, Hugo	CA	IAC-15.E2.4.1
Masali, Melchiorre	CA	IAC-15.A1.IP.8
Mascetti, Gabriele	CA	IAC-15.B3.3.4
Mascetti, Gabriele	CA	IAC-15.E6.IP.3
Mascolo, Luigi	Α	IAC-15.D2.3.7
Masdemont, Josep J.	CA	IAC-15.C1.5.7
Maslov, Dmitry	CA	IAC-15.D2.IP.9
Massari, Mauro	CA	IAC-15.E5.5.2
Masse, Christian	CA	IAC-15.C2.8.7
Masse, Robert	CA	IAC-15.C4.1.9
Massimiani, Chiara	CA	IAC-15.A6.IP.12
Massobrio, Federico	CA	IAC-15.D2.4.5
Massoli, Patrizio	CA	IAC-15.E6.IP.3
Masson, Clément	Α	IAC-15.E2.2.6
Masson, Jacques	CA	IAC-15.E3.2.1
Masson, Louis	CA	IAC-15.B4.4.5
Masson-Zwaan, Tanja	CA	IAC-15.E3.2.1
Masson-Zwaan, Tanja	CA	IAC-15.E7.5.11
Massotti, Luca	CA	IAC-15.B1.1.4
Masur, Andrew	A	IAC-15.B6.1.4
Mater, Daniel	CA	IAC-15.E1.7.11
Matevosyan, Hripsime	A	IAC-15.B1.IP.24
Mathavaraj, S	A	IAC-15.C1.7.6
Mathers, Naomi	A	IAC-15.A7.1.3
MATHEW, DONA	CA	IAC-15.C2.9.11
Mathew, Rajesh	A	IAC-15.C2.IP.45
Mathis, Heinz	CA	IAC-15.B4.4.5
Matiushin, Maxim	A	IAC-15.D3.2.2
Matiushin, Maxim	A	IAC-15.A3.IP.17
Matiushin, Maxim	A	IAC-15.D1.4.10
Matiushin, Maxim	A	IAC-15.B6.2.4
Matko, Drago	CA	IAC-15.B4.4.9
Matos de Carvalho, Tiago Henrique Matousek, Steve	A	IAC-15.D1.IP.17
Matsumoto, Haruhisa	CA	IAC-15.A3.3A.6 IAC-15.A6.1.8
Matsumoto, Satoshi	CA	IAC-15.A0.1.8
Matthias, Carsten	CA	IAC-15.A1.7.7
Mattingly, Richard	CA	IAC-15.A3.3A.6
Matvienko, Sergei	CA	IAC-15.C3.3.8
Matvienko, Sergey	CA	IAC-15.A3.IP.16
Matyszewski, Jan	CA	IAC-15.A2.5.10
Matyszewski, Jan	CA	IAC-15.D2.7.10
Matzenmiller, Anton	CA	IAC-15.C2.8.5
Maurer, Matthias	CA	IAC-15.A3.2A.4
Mauro, David	CA	IAC-15.A1.6.5
Mauro, David	CA	IAC-15.B4.8.12
Mauro, Stefano	A	IAC-15.D2.3.8
Maximova, Maria	CA	IAC-15.A1.IP.21
May, Todd	A	IAC-15.D2.1.2
Mayer, Hannes	Α	IAC-15.E7.IP.5
Mayer, Hannes	Α	IAC-15.E4.3.7
Mayer, Ralo		
	Α	IAC-15.E5.4.9
Mayer, Tobias	A A	IAC-15.E5.4.9 IAC-15.E2.3-YPVF.4.3
Mayer, Tobias Mayorova, Vera		
	Α	IAC-15.E2.3-YPVF.4.3

Mayorova, Vera	Α	IAC-15.E1.7.4
Mayorova, Vera	Α	IAC-15.E2.4.5
Mazza, Isabella	Α	IAC-15.D4.2.7
Mazza, Isabella	Α	IAC-15.B1.IP.18
Mazzoleni, Andre	CA	IAC-15.C4.IP.42
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Mazzucchelli, Chiara McCarthy, Justin	CA CA	IAC-15.A4.IP.1 IAC-15.E6.1.10
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McGirl, Natalie	CA	IAC-15.A1.5.10
McGrath, Ciara	Α	IAC-15.C1.9.4
McGrath, Michael	Α	IAC-15.E1.5.2
McGraw, Allison	Α	IAC-15.E1.IP.9
McGuire, Melissa	CA	IAC-15.D1.4.3
McInnes, Colin R. McInnes, Colin R.	CA CA	IAC-15.B4.6B.4 IAC-15.C1.8.1
McIntyre, Nathanael	A	IAC-15.E3.4.8
McKay, Chris	CA	IAC-15.A3.3B.6
McKnight, Darren	Α	IAC-15.A6.2.7
McKnight, Darren	CA	IAC-15.A6.7.3
McKnight, Darren	Α	IAC-15.A6.7.7
McNutt, Jr., Ralph L.	Α	IAC-15.D4.4.1
McNutt, Jr., Ralph L.	CA	IAC-15.D4.4.4
McSweeney, Clair	CA CA	IAC-15.E5.4.7
McVey, John	A	IAC-15.A6.2.2 IAC-15.A6.9.4
McVey, John Medeiros, Milene	CA	IAC-15.A6.9.4
Medel, Juan Ramon	CA	IAC-15.E3.4.6
Medina, Albert	Α	IAC-15.E7.IP.3
Medina, Alberto	Α	IAC-15.D1.2.11
Medina, Alberto	CA	IAC-15.A6.IP.23
Medina, Alberto	A	IAC-15.A6.5.8
Megret, Aimé	CA	IAC-15.B1.2.1
Mehta, Piyush	Α	IAC-15.A6.9.2
Meini, Marco Meisha, Cheng	A	IAC-15.B1.3.7 IAC-15.C4.IP.11
Mejia, Guilherme	A	IAC-15.C4.IP.56
Melamed, Nahum	A	IAC-15.A3.IP.35
Melamed, Nahum	Α	IAC-15.D4.3.4
Melamed, Nahum	A	IAC-15.D2.8-A5.4.1
Melazzi, Davide	CA	IAC-15.C4.IP.47
Mellab, Karim	CA	IAC-15.A3.4.9
Mellerowicz, Bolek Melotti, Ezio	CA CA	IAC-15.A3.3B.6 IAC-15.B3.5.1
Melotti, Ezio	CA	IAC-15.B5.3-B3.6.1
Mendes, Michelle	A	IAC-15.E1.1.7
Mendes, Michelle	Α	IAC-15.D4.2.4
Mendes, Michelle	Α	IAC-15.E3.4.10
Mendes, Michelle	A	IAC-15.E1.6.3
Mendes, Michelle	A	IAC-15.E5.6.2
Mendes, Ricardo	CA	IAC-15.B2.5.7
Meng, Bai	CA	IAC-15.B6.2.3
Meng, Chen Meng, Chen	CA A	IAC-15.A5.IP.5 IAC-15.A5.3-B3.6.8
Meng, Fankong	CA	IAC-15.A3.3-B3.0.8
Meng, Fankong	A	IAC-15.A2.2.5
Meng, Guang	CA	IAC-15.C2.5.4
Meng, Henghui	CA	IAC-15.D1.6.12
Meng, Linzhi	CA	IAC-15.A3.IP.22
Meng, Wei	CA	IAC-15.B2.IP.8
Meng, Xin	CA	IAC-15.B6.2.3
Menkin, Evgeny	Α Α	IAC-15.B6.1.3
Menshikov, Valery	A CA	IAC-15.C4.8.5 IAC-15.E6.3.3
Mensink, Wendy Mensink, Wendy	CA	IAC-15.E0.3.3
Menz, Gunter	CA	IAC-15.E1.7.11
Merino, Mario	CA	IAC-15.A6.5.5
Merkle, Fritz	CA	IAC-15.A2.1.6
Mermut, Ozzy	CA	IAC-15.A1.2.5
Merz, Klaus	CA	IAC-15.A6.4.7
Mesland, Alexandre	A	IAC-15.D2.7.6
Mesnager, Jean-Michel	CA	IAC-15.D1.3.1
Messerschmid, Ernst	CA	IAC-15.A5.1.4
Messerschmid, Ernst Messidoro, Andrea	CA	IAC-15.D1.6.7 IAC-15.D2.3.7
ivicasiuulu, Alluled	CA	IAC-13.UZ.3./

Messidoro, Piero	CA	IAC-15.D3.2.1
Messina, Piero	Α	IAC-15.E3.1.3
Mestreau-Garreau, Agnes	CA	IAC-15.B4.2.5
METRIS, Gilles	CA	IAC-15.A2.1.2
Metuki, Ofer	CA	IAC-15.E1.6.6
Meuws, David	CA	IAC-15.B3.7.7
Meyen, Forrest	A	IAC-15.B3.7.10
Meyer, Jan-Christian	CA	IAC-15.D4.1.11
Meyer, Jan-Christian	CA	IAC-15.A6.4.5
Meyer, Jan-Christian	CA	IAC-15.A6.IP.33
Meyer, Jan-Christian	Α	IAC-15.A6.IP.36
Meyer, Jan-Christian	Α	IAC-15.D1.6.2
Meyer, Michael	CA	IAC-15.C2.9.3
Meyer, Sebastian	Α	IAC-15.C2.2.4
Meyyappan, Meyya	CA	IAC-15.C2.8.10
Mezyk, Lukasz	Α	IAC-15.C4.1.11
MIAO, Jianyin	CA	IAC-15.C2.7.4
Michaels, Adam	A	IAC-15.A3.2C.3
Michalczyk, Rafał	CA	IAC-15.D1.1.6
Micheals, Dan	A	IAC-15.C4.8.8
	CA	
Michel, Alice		IAC-15.B6.3.12
Michel, Patrick	CA	IAC-15.E3.2.1
Michel, Patrick	CA	IAC-15.A3.4.8
Michel Valencia, Rene Horacio	A	IAC-15.E1.3.9
Micheletti Cremasco, Margherita	CA	IAC-15.A1.IP.8
Mierheim, Olaf	CA	IAC-15.C2.2.1
Mierheim, Olaf	CA	IAC-15.A3.4.6
Mierheim, Olaf	CA	IAC-15.C2.8.11
Mierheim, Olaf	CA	IAC-15.C2.9.9
Migeotte, Pierre-François	A	IAC-15.A1.3.5
Miguel González Pérez, José	CA	IAC-15.E1.2.8
Mihalache, Nicolae	CA	IAC-15.A5.3-B3.6.6
Mihara, Shoichiro	Α	IAC-15.C3.2.1
Mijovic, Milan	Α	IAC-15.E3.2.12
Mikhail, Rudnykh	Α	IAC-15.C4.1.7
Milen, David	CA	IAC-15.A3.5.9
Milillo, Giovanni	CA	IAC-15.B1.IP.3
Milián, Carles	CA	IAC-15.B1.2.6
Miller, Sharon	CA	IAC-15.C2.6.3
Miller Morrison, John	A	IAC-15.E2.0.3
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Milligan, David	CA	IAC-15.B6.3.2
Milner, Cas	CA	IAC-15.E6.1.10
Milosevic, Stevan		IAC-15.E2.3-YPVF.4
Milova, Praskovia	A	IAC-15.E6.2.6
MIMOUN, David	A	IAC-15.A3.5.5
MIN, LIU	A	IAC-15.B3.9-YPVF.2
Mineiro, Michael	CA	IAC-15.D4.2.2
Mineiro, Michael	A	IAC-15.D4.3.8
Minesugi, Kenji	CA	IAC-15.C2.5.1
Minghao, YIN	CA	IAC-15.A3.2A.2
Mingireanu, Florin	A	IAC-15.C4.IP.36
Mingireanu, Florin	A	IAC-15.C4.IP.45
Mingireanu, Florin	A	IAC-15.C4.IP.48
Minisci, Edmondo	CA	IAC-15.D2.4.6
Minisci, Edmondo	CA	IAC-15.A6.9.2
Minnifield Cheeks, Nona	Α	IAC-15.E5.2.1
Minster, Olivier	CA	IAC-15.B3.3.1
Miranda, Francisco	Α	IAC-15.D2.5.8
Miranda, Ricardo	CA	IAC-15.A1.6.2
MIRER, Sergey	CA	IAC-15.C1.5.2
Mirra, Carlo	CA	IAC-15.B3.3.7
Mirzaeian Tafti, Mohammad Sadegh	CA	IAC-15.B5.1.8
Mishra, Rashi	CA	IAC-15.E1.3.6
Mishra, Rashi	CA	IAC-15.C4.6.11
Mishra, Utkarsh Ranjan	CA	IAC-15.C1.9.3
	CA	
Misra, Arun		IAC-15.A6.5.6
Misra, Arun	CA	IAC-15.D4.3.1
Misra, Tapan	CA	IAC-15.B1.1.9
Mistry, Dipen	CA	IAC-15.A6.4.8
Misuri, Tomaso	CA	IAC-15.C4.IP.43
Misuri, Tommaso	CA	IAC-15.C2.1.10
Misuri, Tommaso	Α	IAC-15.C4.IP.41
Misuri, Tommaso	Α	IAC-15.C4.IP.46
Misuri, Tommaso	CA	IAC-15.C4.4.2
Mitchell, Clementine	CA	IAC-15.A5.3-B3.6.5

Mitra, Pradeep	Α	IAC-15.C4.IP.27
Mittal, Prakul Miura, Amane	CA CA	IAC-15.C2.1.7 IAC-15.B2.6.7
Miura, Yoshiyuki	A	IAC-15.B2.6.7
Miyakawa, Takehiro	CA	IAC-15.B1.3.9
Miyake, Masazumi	CA	IAC-15.B3.1.3
Miyamoto, Hirdy	CA	IAC-15.A3.3A.3
Miyashita, Naoki	CA	IAC-15.C2.3.3
Miyoshi, Takanori	Α	IAC-15.E3.2.5
Moalem, Meir	Α	IAC-15.B4.1.1
Moalem, Meir	Α	IAC-15.D4.2.6
Moalem, Meir	Α	IAC-15.E5.2.7
Moalem, Meir	Α	IAC-15.C2.8.8
Moder, Jeffrey	CA	IAC-15.A2.6.2
Mody, Amin Ali	CA	IAC-15.B4.8.4
Moens, Sarah	A	IAC-15.E7.IP.7
Mohanty, Susmita	CA	IAC-15.A3.2A.4
MOHRE MARUTHI, Yashodhar Rao	CA	IAC-15.E1.7.10
Mohtar, Tharek	CA	IAC-15.D2.3.8
Moiseev, Ivan	CA	IAC-15.E4.1.2
MOLINA, Marco	CA	IAC-15.A3.2B.2
MOLINA, Marco	CA	IAC-15.B1.3.7
MOLINA, Marco	A	IAC-15.A6.IP.40
MOLINA, Marco	CA	IAC-15.B2.5.4
Moll, Florian	CA	IAC-15.B2.5.12 IAC-15.A6.1.1
Molotov, Igor Monge, Luis	A	IAC-15.A6.1.1 IAC-15.E1.9.5
	CA	
Monserrat Filho, José	A	IAC-15.E7.3.9
Monserrat-Filho, José Montabone, Mauro	CA	IAC-15.E7.5.15 IAC-15.A3.IP.36
Montag, Christoph	A	IAC-15.A6.3.6
Montenbruck, Oliver	CA	IAC-15.B2.1.6
Montenbruck, Oliver	CA	IAC-15.B2.1.0
Montfort, Bruno	CA	IAC-15.B1.1.8
Monti, Francesco Maria	CA	IAC-15.A6.6.11
Montoya Lorenzana, Lilia	CA	IAC-15.A0.0.11
Moon, Sangman	CA	IAC-15.B2.IP.2
Moon, Yongjun	A	IAC-15.B4.8.5
Moore, Christopher	A	IAC-15.A5.2.2
Moore, Christopher	CA	IAC-15.B3.7.2
Mora, Christophe	CA	IAC-15.A2.3.2
Mora Boluda, Adrian	CA	IAC-15.E2.3-YPVF.4.2
Mora Boluda, Adrian	CA	IAC-15.B3.7.9
Mora Vargas, Andrés	Α	IAC-15.A2.6.3
Mora Vargas, Andrés	CA	IAC-15.E1.9.5
Moraguez, Matthew	CA	IAC-15.A6.1.7
Mordvintsev, Alexander	Α	IAC-15.D1.3.2
Morea, Giuseppe Danilo	CA	IAC-15.A3.IP.36
Moreau, Didier	CA	IAC-15.B6.3.12
Moreels, Philippe	Α	IAC-15.A6.6.4
Moreno, José Miguel	CA	IAC-15.B4.7.9
Moreno, Luis	CA	IAC-15.A3.5.9
Morenz, Karen	CA	IAC-15.A1.8.5
Morgan, Sarah	CA	IAC-15.C2.6.3
Mori, Osamu	CA	IAC-15.C3.3.6
Morishita, Hiroyuki	CA	IAC-15.B4.6A.7
Morita, Hatsuru	Α	IAC-15.E7.4.9
Morita, Yasuhiro	CA	IAC-15.D2.1.6
Moro Aguilar, Rafael	Α	IAC-15.E7.3.1
Moroz, Michal	A	IAC-15.B1.6.2
Morozova, Elina	A	IAC-15.E7.4.11
Morzhukhina, Alena	CA	IAC-15.C2.8.4
Moseley, Samuel Harvey	CA	IAC-15.A7.3.3
Moseley, Samuel Harvey	CA	IAC-15.D1.6.4
Moser, Hubert Anton	A	IAC-15.B4.8.2
Mostert, Sias	CA	IAC-15.E3.3.7
Motsyk, Olga	Α	IAC-15.C4.2.2
Motsyk, Olga	A	IAC-15.E2.3-YPVF.4.0
Motyka, Oldřich	CA	IAC-15.A1.6.3
Motzigemba, Matthias	CA	IAC-15.B2.6.2
Mou, Yongqiang	CA	IAC-15.A6.3.8
	CA	IAC-15.C1.2.2
Mouchnino, Avner Moussa, Hanna Moussi, Aurélie	CA A	IAC-15.A1.5.10 IAC-15.B6.3.3









Mozzetti, Chiara	CA	IAC-15.B2.3.2
Mozzillo, Raffaele	CA	IAC-15.B4.6B.8
Mozzillo, Raffaele	CA	IAC-15.D1.5.5
Mu, Zhongcheng	CA	IAC-15.B4.4.3
Mu, Zonggao	Α	IAC-15.D4.1.7
Mueller, Benjamin	Α	IAC-15.A6.IP.46
Mugellesi-Dow, Roberta	CA	IAC-15.D5.2.6
Mugellesi-Dow, Roberta	Α	IAC-15.B5.1.1
Muggianu, Alessio Antioco	CA	IAC-15.A2.6.8
Muggianu, Alessio Antioco	CA	IAC-15.D1.7.7
Mugnuolo, Raffaele	CA	IAC-15.A3.5.4
Muir, Jesse	CA	IAC-15.A1.3.6
Muirhead, Brian	CA	IAC-15.A5.1.2
Mukhamedzhanov, Ruslan	CA	IAC-15.A2.5.1
Mukherjee, Bijoy K.	CA	IAC-15.C1.9.11
Mukherjee, Sumana	CA	IAC-15.C3.4.5
Mukherjee, Suparna	Α	IAC-15.D3.4.2
Mukherji, Raja	CA	IAC-15.A3.IP.46
Mulder, Edwin	CA	IAC-15.A1.2.1
Mullin, Nikolay	CA	IAC-15.B4.4.5
Mundinger, Martin	Α	IAC-15.E2.3-YPVF.4
Munin, Evgeniy	CA	IAC-15.D1.IP.9
Munk, Michelle	CA	IAC-15.A3.1.3
Mura, Francesco	CA	IAC-15.A3.3A.10
Murakami, Keiji	CA	IAC-15.A2.IP.3
Murakami, Yusuke	CA	IAC-15.E5.6.4
Muraki, Yusuke	Α	IAC-15.E5.5.9
Murashko, Anastasia	CA	IAC-15.A5.1.9
Murcia, Jhonathan	CA	IAC-15.C1.4.9
Murdy, Markus	CA	IAC-15.E1.3.1
Muresan, Tudor	CA	IAC-15.A3.IP.34
Murphy, Thomas	CA	IAC-15.A1.8.6
Murrow, David	Α	IAC-15.A3.1.9
Murrow, David	CA	IAC-15.A5.1.13
Murtazin, Rafail	CA	IAC-15.A5.1.9
Murthi, K.R. Sridhara	CA	IAC-15.E3.1.9
Murthi K. R., Sridhara	CA	IAC-15.E3.2.3
Murthi K. R., Sridhara	CA	IAC-15.E3.3.4
Musilova, Michaela	CA	IAC-15.E1.7.11
Muszytowski, Sebastian	CA	IAC-15.B2.IP.9
Muthulingam, Dhack	CA	IAC-15.C4.2.10
Muthuswamy, Loganathan	CA	IAC-15.B2.3.8
Muthuswamy, Loganathan	CA	IAC-15.B2.3.9
Muthuswamy, Loganathan	CA	IAC-15.B4.8.4
Mutyalarao, Mandarapu	A	IAC-15.A3.2C.1
Muñoz-Rodriguez, Maria-del-Carmen	A	IAC-15.E3.1.10
Muñoz-Rodriguez, Maria-del-Carmen	A	IAC-15.E7.5.9
Myasnikov, Maxim	A	IAC-15.A2.IP.4
Myekhonoshyn, Yury	CA	IAC-15.A2.IF.4
Mylonaki, Dionysia	A	IAC-15.E1.9.10
Möckel, Marek	CA	IAC-15.L1.9.10
Möstl, Stefan	CA	IAC-15.A0.8.4
wiosti, stelali	CA	INC-13.M1.3.3

Augellesi-Dow, Roberta	Α	IAC-15.B5.1.1
Λuggianu, Alessio Antioco	CA	IAC-15.A2.6.8
Auggianu, Alessio Antioco	CA	IAC-15.D1.7.7
Augnuolo, Raffaele	CA	IAC-15.A3.5.4
Nuir, Jesse	CA	IAC-15.A1.3.6
Auirhead, Brian	CA	IAC-15.A5.1.2
Aukhamedzhanov, Ruslan	CA	IAC-15.A2.5.1
Nukherjee, Bijoy K.	CA	IAC-15.C1.9.11
Aukherjee, Sumana	CA	IAC-15.C3.4.5
Aukherjee, Suparna	Α	IAC-15.D3.4.2
Aukherji, Raja	CA	IAC-15.A3.IP.46
Aulder, Edwin	CA	IAC-15.A1.2.1
Aullin, Nikolay	CA	IAC-15.B4.4.5
Mundinger, Martin	Α	IAC-15.E2.3-YPVF.4.3
Aunin, Evgeniy	CA	IAC-15.D1.IP.9
Munk, Michelle	CA	IAC-15.A3.1.3
Aura, Francesco	CA	IAC-15.A3.3A.10
Лurakami, Keiji	CA	IAC-15.A2.IP.3
Aurakami, Yusuke	CA	IAC-15.E5.6.4
Лuraki, Yusuke	Α	IAC-15.E5.5.9
Aurashko, Anastasia	CA	IAC-15.A5.1.9
Aurcia, Jhonathan	CA	IAC-15.C1.4.9
Лurdy, Markus	CA	IAC-15.E1.3.1
Auresan, Tudor	CA	IAC-15.A3.IP.34
Aurphy, Thomas	CA	IAC-15.A1.8.6
Aurrow, David	Α	IAC-15.A3.1.9
Aurrow, David	CA	IAC-15.A5.1.13
Aurtazin, Rafail	CA	IAC-15.A5.1.9
Лurthi, K.R. Sridhara	CA	IAC-15.E3.1.9
Лurthi K. R., Sridhara	CA	IAC-15.E3.2.3
Лurthi K. R., Sridhara	CA	IAC-15.E3.3.4
Ausilova, Michaela	CA	IAC-15.E1.7.11
Auszytowski, Sebastian	CA	IAC-15.B2.IP.9
Authulingam, Dhack	CA	IAC-15.C4.2.10
Authuswamy, Loganathan	CA	IAC-15.B2.3.8
Authuswamy, Loganathan	CA	IAC-15.B2.3.9
Authuswamy, Loganathan	CA	IAC-15.B4.8.4
Autyalarao, Mandarapu	Α	IAC-15.A3.2C.1
Auñoz-Rodriguez, Maria-del-Carmen	Α	IAC-15.E3.1.10
/luñoz-Rodriguez, Maria-del-Carmen	Α	IAC-15.E7.5.9
Ayasnikov, Maxim	Α	IAC-15.A2.IP.4
Nyekhonoshyn, Yury	CA	IAC-15.D2.7.11
Aylonaki, Dionysia	Α	IAC-15.E1.9.10
Лöckel, Marek	CA	IAC-15.A6.8.4
Nöstl, Stefan	CA	IAC-15.A1.3.5

Name	Role	Paper
N, Remesh	Α	IAC-15.C1.1.9
Nadalini, Riccardo	CA	IAC-15.C3.3.1
Nadalini, Riccardo	CA	IAC-15.C2.7.2
Nadalini, Riccardo	CA	IAC-15.C2.7.3
Nader, Nourhane	CA	IAC-15.A6.IP.42
Nadler, Ron	CA	IAC-15.B1.2.2
Nadler, Ron	Α	IAC-15.B1.3.2
Nadler, Ron	CA	IAC-15.B1.6.5
Nag, Sreeja	Α	IAC-15.D1.4.1
Nagai, Yuichiro	Α	IAC-15.E3.1.9
Nagendra, Narayan Prasad	Α	IAC-15.A6.IP.21
Nagendra, Narayan Prasad	CA	IAC-15.E5.2.4
Naik, Kartik	CA	IAC-15.B2.3.9
Naik, Pranjal	CA	IAC-15.E2.4.9
NAIR, C P REGHUNADHAN	CA	IAC-15.C2.9.11
Nair, Praveen	CA	IAC-15.E1.7.11
Nakagami, Hidetoshi	CA	IAC-15.A2.6.5
Nakagawa, Keizo	CA	IAC-15.C2.3.3

Nakajima, Madoka	CA	IAC-15.B2.3.7
NAKAJIMA, MASAKATSU	A	IAC-15.B1.3.9
Nakajima, Yuta	A	IAC-15.B4.6A.10
Nakajima, Yuta	CA	IAC-15.C1.9.7
Nakamura, Maki	CA CA	IAC-15.A6.1.8 IAC-15.C3.2.1
Nakamura, Shuji Nakamura, Yasuhiro	CA	IAC-15.C3.2.1
Nakamura, Yasuhiro	CA	IAC-15.A2.6.5
Nakarada Pecujlic, Anja	A	IAC-15.E7.1.13
Nakasuka, Shinichi	CA	IAC-15.C1.1.8
Nakath, David	CA	IAC-15.A3.IP.15
Nakath, David	CA	IAC-15.C1.7.4
Nakazono, Barry	CA	IAC-15.C4.2.10
Naldi, Stefano	CA	IAC-15.E1.3.8
Naldi, Stefano	CA	IAC-15.A6.IP.30
Naldi, Stefano	CA	IAC-15.A6.IP.31
Naldi, Stefano	CA	IAC-15.E6.3.9
Nambiar, Shrrirup	CA CA	IAC-15.D3.1.4 IAC-15.B4.8.4
NAMDEO, SAKSHI NAN, Xiangyi	CA	IAC-15.C4.9.7
NAN, Xiangyi	CA	IAC-15.C4.9.8
Nanri, Hideaki	CA	IAC-15.C4.1.1
Naor, Roy	CA	IAC-15.E1.7.11
Napier, Sean	CA	IAC-15.E2.3-YPVF.4.8
Nardi, Davide	Α	IAC-15.C2.5.7
Nargunam A, Shajin	Α	IAC-15.B2.1.2
Naruo, Yoshihiro	CA	IAC-15.C4.1.8
Naruo, Yoshihiro	CA	IAC-15.C4.3.2
Nascetti, Augusto	CA	IAC-15.C2.7.11
Nascimento, Jorge	A	IAC-15.D5.1.8
Nasimok, Kevin	CA	IAC-15.B6.1.4
Nasseri, Seyed Ali	CA	IAC-15.A5.2.8
Nasseri, Seyed Ali	CA	IAC-15.A6.IP.21
Nasseri, Seyed Ali	CA CA	IAC-15.A6.IP.42 IAC-15.E3.IP.3
Nasseri, Seyed Ali Nasseri, Seyed Ali	CA	IAC-15.E7.IP.6
Nasseri, Seyed Ali	CA	IAC-15.E3.4.6
Nassisi, Annamaria	A	IAC-15.A6.8.3
Nasuti, Francesco	CA	IAC-15.B4.2.7
Natan, Benveniste	A	IAC-15.C4.1.10
Natan, Benveniste	Α	IAC-15.C4.IP.32
Nathanson, Emil	CA	IAC-15.A5.1.4
Nathanson, Emil	A	IAC-15.D1.6.7
Naumann, Walter	A	IAC-15.B2.1.9
Navarathinam, Nimal	A	IAC-15.E1.2.1
Navarathinam, Nimal	A	IAC-15.B4.6A.11
Navarathinam, Nimal	CA	IAC-15.A6.6.3
NAYAK, PRAKASHA	CA	IAC-15.B4.3.13
Ndiritu, Meshack NEBULONI, STEFANO	CA	IAC-15.E5.5.6 IAC-15.A1.8.8
NEBULONI, STEFANO	CA	IAC-15.A1.8.8
Negri, Barbara	CA	IAC-15.A2.4.10
Nelson, Bron	CA	IAC-15.B4.5.1
Nelson, Joshua	A	IAC-15.D4.1.6
Nemati, Hamidreza	A	IAC-15.C1.8.2
Nemirovskaya, Tatiana	CA	IAC-15.A1.IP.10
Nenarokomov, Aleksey V.	CA	IAC-15.C2.4.4
Nenarokomov, Aleksey V.	Α	IAC-15.C2.6.2
Nepomuceno, Abel	Α	IAC-15.D2.3.4
Nerchenko, Valentina	CA	IAC-15.A2.4.5
Neri, Gianluca	CA	IAC-15.B3.3.4
Neri, Gianluca	CA	IAC-15.B3.4-B6.5.7
Nerovny, Nikolay	CA	IAC-15.B4.6A.6
Nerovny, Nikolay	CA	IAC-15.E2.4.5
Nesterenko, Sergey Yu. Neufeld, Michael	CA A	IAC-15.B4.6B.13
	CA	IAC-15.E4.2.2
Newman, Dava Newman, Josh	CA	IAC-15.A1.IP.11 IAC-15.B4.3.6
Newman, Josh	A	IAC-15.B4.3.6
Ngo-Anh, Thu Jennifer	CA	IAC-15.C1.9.1
Ni, Wei-Tou	CA	IAC-15.A2.1.10
NI, Yanshuo	A	IAC-15.C1.4.1
Nicosia, Agostino	CA	IAC-15.B1.IP.10
Nie, Jingjing	A	IAC-15.E7.IP.22
Nie, Liping	CA	IAC-15.D4.1.7

Nie, Yongming	Α	IAC-15.B2.IP.5
Niedner, Malcolm	CA	IAC-15.D1.6.4
Nield, George	Α	IAC-15.D6.1.3
Nielsen, Jens Frederik Dalsgaard	CA	IAC-15.E1.2.8
Niessner, Holger	CA	IAC-15.A6.IP.41
Nieto Illescas, Alberto	CA	IAC-15.D2.4.7
Nightingale, Emily	CA	IAC-15.B4.5.3
Nikilvenkatesh, R	CA	IAC-15.B1.IP.16
Nikitin, Evgenie	CA	IAC-15.B1.IP.28
Nikitin, Valeriy	CA	IAC-15.A2.2.4
Nikitin, Valeriy	CA	IAC-15.A2.4.5
Nikolaev, Igor	CA	IAC-15.A1.5.2
Nikonov, Vasily	A	IAC-15.C1.3.2
Nikonov, Vasily	CA	IAC-15.D4.3.2
Nikzad, Shouleh	CA	IAC-15.B4.2.2
Nilchiani, Roshanak	CA	IAC-15.D1.IP.14
Nilsen, Erik	CA	IAC-15.A3.3A.6
Nimelman, Menachem (Manny)	A	IAC-15.A3.IP.46
Ning, Xin	A	IAC-15.D1.1.10
Ning, Xin	CA	IAC-15.D1.IP.18
Ninio Greenberg, Adi	A	IAC-15.A3.IP.41
Nir, Aharon	A	IAC-15.B1.3.2
Nir, Aharon	CA	IAC-15.B1.3.3
Nirchio, Francesco	CA	IAC-15.B1.IP.3
Nishino, Akihiko	A	IAC-15.B2.3.7
Nissenbaum, Dori Nistico', Enrico Andrea	CA	IAC-15.D1.6.6 IAC-15.A3.3B.2
Niu, Jinchao	CA	IAC-15.A6.3.8
Niu, Kenichi	CA	IAC-15.C4.3.2
Niu, Wei	A	IAC-15.C4.5.2
Niu, Wenlong	A	IAC-15.A7.3.4
Nizenkov, Paul	A	IAC-15.A5.1.4
Nizenkov, Paul	CA	IAC-15.D1.6.7
Noack, Daniel	CA	IAC-15.C1.6.8
Noack, Daniel	CA	IAC-15.C2.9.4
Noci, Giovanni Enrico	Α	IAC-15.C4.3.4
Noghanian, Sima	CA	IAC-15.C3.1.3
Noghanian, Sima	CA	IAC-15.C3.2.2
Nogueira, Tiago	CA	IAC-15.D1.4.2
Nohmi, Masahiro	Α	IAC-15.B4.3.4
Nojiri, Yuta	CA	IAC-15.D1.4.5
Nomen, Jaime	CA	IAC-15.A6.7.6
Nonaka, Satoshi	CA	IAC-15.D2.4.2
Nonaka, Satoshi	A	IAC-15.D2.5.4
Norman, Narcrisha	A	IAC-15.A3.IP.31
Noroozian, Omid	CA	IAC-15.A7.3.3
Norris, Pat	CA	IAC-15.E1.2.1
Norris, Scott	A	IAC-15.B3.3.10
Nosella, Carole	CA	IAC-15.E5.4.8
Notesco, Gila	CA	IAC-15.B1.4.7
NOUNAGNON, JEANNETTE	A	IAC-15.B2.IP.10
Nov, Valentin	CA	IAC-15.C4.3.3
Novak, Daniel	CA	IAC-15.A6.7.2 IAC-15.B6.2.2
Novak, Daniel Novikov, A.V.	A	IAC-15.B0.2.2
Novikov, Valery	CA	IAC-15.L3.IF.12
Nowakowski, Paweł	CA	IAC-15.A2.3.1
Noyman, Yariv	A	IAC-15.D2.7.10
Noël, Jean-Marc	CA	IAC-15.E1.0.5
Ntzoufras, Sotirios	CA	IAC-15.D5.3.1
Ntzoufras, Sotirios	CA	IAC-15.A5.2.11
Nunes de Oliveira, Elisa Magno	CA	IAC-15.A2.IP.5
Nutal, Nicolas	A	IAC-15.C2.8.7
Nyamweno, Joshua	A	IAC-15.C4.8.9
Náczi, Ferenc	CA	IAC-15.D5.3.7
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Name	Role	Paper
O'Donovan, Victoria	CA	IAC-15.D1.5.1
O'Malley, Terence	CA	IAC-15.A3.4.10
O'Neill, Stephanie	CA	IAC-15.E5.4.7
O'Sullivan, Sinead	CA	IAC-15.E5.5.6
O'Sullivan, Sinead	Α	IAC-15.E5.5.11

O'Toole, Aidan	CA	IAC-15.E6.3.3
Obase, Kimihito	CA	IAC-15.C4.1.8
Obase, Kimihito	CA	IAC-15.C4.3.2
Obeid, Alee	CA	IAC-15.B4.4.8
Oberman, Bernice	CA	IAC-15.A1.4.2
Obertaxer, Günther	CA	IAC-15.B2.3.2
Obiols-Rabasa, Gerard	A	IAC-15.D1.5.5
Obiols-Rabasa, Gerard	A	IAC-15.D1.5.8
Oddi, Guido	CA	IAC-15.A3.2A.8
Oddi, Guido	CA	IAC-15.A3.5.9
Ofek, Eran	CA	IAC-15.B4.2.2
Ofek, Eran	CA	IAC-15.A7.2.1
Ofir, Aviv	A	IAC-15.B4.2.3
Ogasawara, Ko	CA	IAC-15.A5.1.8
Ogawa, Hiroyuki	CA	IAC-15.C4.1.8
Ogawa, Hiroyuki	CA	IAC-15.C4.3.2
Ogawa, Hiroyuki	CA	IAC-15.D2.5.4
Ogawa, Yasuo	CA	IAC-15.D1.5.3
Ogilvie, Andrew	CA	IAC-15.A5.3-B3.6.4
Ogneva, Irina	A	IAC-15.A1.IP.21
Ogongo, Joan	CA	IAC-15.E7.2.3
Ogongo, Joan	CA	IAC-15.A6.IP.49
Ogunmodimu, Olugbenga	CA	IAC-15.A6.IP.21
Ogura, Satoshi	CA	IAC-15.C1.1.8
Oh, David	Α	IAC-15.A3.5.2
Oh, Hwa-Suk	Α	IAC-15.C1.IP.5
Oh, Hwayoung	CA	IAC-15.C4.IP.21
Oh, Hyun-Ung	CA	IAC-15.C4.IP.33
Oh, Hyun-Ung	CA	IAC-15.C2.5.9
Ohki, Masato	CA	IAC-15.E1.2.9
Ohkuma, Hayato	Α	IAC-15.A2.IP.3
Ohkuma, Hayato	Α	IAC-15.A2.6.5
Ohmura, Hiroaki	CA	IAC-15.C4.1.8
Okada, Mitsunobu	CA	IAC-15.A6.6.4
Okita, Koichi	CA	IAC-15.C4.1.1
Okninski, Adam	A	IAC-15.D2.2.5
Okninski, Adam	A	IAC-15.A2.5.10
Okninski, Adam	A	IAC-15.A2.5.10
Okninski, Adam	CA	IAC-15.D2.7.10
•		
Okudaira, Osamu	CA	IAC-15.A6.1.8
Olakunle, Oladosu	Α	IAC-15.E1.4.8
Olaseeni, Olaposi Adedolapo	CA CA	IAC-15.E7.2.3 IAC-15.A6.IP.49
Olaseeni, Olaposi Adedolapo		
Olateru-Olagbegi, Ololade	CA	IAC-15.E7.2.3
Olateru-Olagbegi, Ololade	CA	IAC-15.A6.IP.49
Olatinwo, Khafayat	A	IAC-15.E3.IP.1
Oliveira, André	CA	IAC-15.B2.1.1
Oliveira, André	CA	IAC-15.A3.2A.8
Oliveira, André	CA	IAC-15.B2.5.7
Oliveira, André	CA	IAC-15.A3.5.9
Oliveira, Monica Elizabeth	A	IAC-15.E3.3.1
Olivieri, Lorenzo	CA	IAC-15.B2.1.5
Olivieri, Lorenzo	Α	IAC-15.D3.3.7
Olivieri, Lorenzo	CA	IAC-15.E2.3-YPVF.4.1
Olivieri, Lorenzo	CA	IAC-15.D1.2.7
Olivieri, Lorenzo	A	IAC-15.B4.6B.5
Olivieri, Lorenzo	CA	IAC-15.C2.7.9
Ollongren, Alexander	Α	IAC-15.A4.1.6
Ollongren, Alexander	Α	IAC-15.A4.1.7
Olsen, John	CA	IAC-15.D4.3.9
Olsen, John	CA	IAC-15.B4.8.10
Olsen, Kevin	A	IAC-15.B1.1.7
Olson, Aaron	Α	IAC-15.A3.2B.6
Onibudo, Oluwasegun	Α	IAC-15.A2.4.9
ONIBUDO, OLUWASEGUN	Α	IAC-15.B1.IP.19
Onishchenko, Ivan	CA	IAC-15.A3.IP.16
Ono, Masahiro	CA	IAC-15.D1.3.11
Onuki, Misuzu	A	IAC-15.E6.1.2
Onuki, Misuzu	A	IAC-15.D6.3.3
Opiela, John	CA	IAC-15.D6.3.3
Opiela, John	CA	IAC-15.A6.2.9
Orenstein, Nick	A	IAC-15.A6.2.9
Oreshkin, Nikolai		IAC-15.A5.IP.1
	A CA	
Orikasa, Teruaki	CA	IAC-15.B2.6.7
Orlov, Oleg	A	IAC-15.B3.2.3



CA

CA

Pang, Shi-wei

Panicucci, Paolo

Payson, Dmitry

Pantoja, Andres Felipe



IAC-15.A2.3.7

IAC-15.B4.2.7





Orlov, Oleg CA IAC-15.A1.IP.4 Orr, Nathan CA IAC-15.B4.4.9 Orr, Nathan CA IAC-15.C4.IP.39 IAC-15.E1.7.8 Orshan, Orna Marie Ortega, Cristina CA IAC-15.A3.IP.34 Ortega, David CA IAC-15.B4.3.10 IAC-15.E2.3-YPVF.4.6 Ortega, Manuel Ortiz Gómez, Natalia CA IAC-15.A6.6.1 IAC-15.A2.3.6 Osborne, Barnaby CA IAC-15.A1.8.5 IAC-15.E7.3.6 Osborne, Jeffrey R. Ospina, Sylvia CA Oswald, Michael IAC-15.A6.6.5 Othman, Mazlan CA IAC-15.E3.2.1 Ou, Dongbin CA IAC-15.B3.IP.6 CA IAC-15.C2.IP.9 Ou, Dongbin IAC-15.C2.IP.36 Ou, Dongbin A CA Ouellet, Alain IAC-15.A3.1.1 Oungrinis, Konstantinos-Alketas CA IAC-15.A5.2.11 Oungrinis, Konstantinos-Alketas IAC-15.E5.1.2 Ovchinnikov, Mikhail IAC-15.C1.5.2 Ovchinnikov, Mikhail IAC-15.C1.7.5 Ovsyannikova, Natalia IAC-15.D1.6.9 Owen, William IAC-15.A3.5.1 Owens, Andrew IAC-15.A5.2.7 Owens, Andrew IAC-15.D1.3.10 Ozaki, Naoya CA IAC-15.C1.1.8 Ozawa, Kohei IAC-15.C4.2.5 Ozawa, Yuichiro CA IAC-15.C3.2.1 Oštir, Krištof CA IAC-15.B4.4.9

P		

CA	IAC-15.E2.4.10
CA	IAC-15.E2.3-YPVF.4.1
CA	IAC-15.A6.6.2
Α	IAC-15.B1.IP.4
Α	IAC-15.B1.IP.5
Α	IAC-15.A3.IP.33
Α	IAC-15.C2.7.9
CA	IAC-15.B4.8.10
Α	IAC-15.C1.3.5
CA	IAC-15.C2.9.6
CA	IAC-15.B3.7.7
Α	IAC-15.E3.2.6
Α	IAC-15.E4.3.2
Α	IAC-15.C1.5.7
CA	IAC-15.D2.7.10
CA	IAC-15.B1.4.1
CA	IAC-15.C4.1.4
CA	IAC-15.D2.7.8
CA	IAC-15.E7.1.3
CA	IAC-15.C2.6.9
Α	IAC-15.E7.5.11
Α	IAC-15.A6.4.1
Α	IAC-15.D5.2.6
CA	IAC-15.E1.3.12
CA	IAC-15.D4.1.9
CA	IAC-15.C1.7.2
CA	IAC-15.B2.3.2
Α	IAC-15.D3.2.9
Α	IAC-15.B2.6.8
CA	IAC-15.C1.6.5
CA	IAC-15.A2.IP.5
CA	IAC-15.A4.IP.1
CA	IAC-15.A3.5.4
CA	IAC-15.C2.8.7
A	IAC-15.D1.4.8
Α	IAC-15.D1.6.11
CA	IAC-15.A6.10- YPVF.5.1
Α	IAC-15.D3.3.3
CA	IAC-15.E1.3.8
CA	IAC-15.E1.7.11
	CA CA A A A CA CA A A CA CA CA CA CA CA

anicucci, Paolo	CA	IAC-15.B4.2.7
antoja, Andres Felipe	CA	IAC-15.E7.IP.13
aolozzi, Antonio	CA	IAC-15.A2.1.8
aolozzi, Antonio	A	IAC-15.C2.2.10
aolozzi, Antonio	CA	IAC-15.B4.4.8
aolozzi, Antonio	CA	IAC-15.B2.IP.3
aolozzi, Antonio	CA	IAC-15.C2.6.5
aolozzi, Antonio	CA	IAC-15.C2.7.11
apadopoulos, Evangelos	CA	IAC-15.D1.2.11
aramasivan, Ganesh	A	IAC-15.C4.5.7
araskevas, Iosif S.	CA	IAC-15.D1.2.11
arazynski, Scott	CA	IAC-15.A1.2.6
arbat, Sarwesh Narayan	CA	IAC-15.E2.4.6
ardini, Carmen	A	IAC-15.A6.2.6 IAC-15.A1.3.4
arent, Andree-Anne ariente, Meidad	A	IAC-15.A1.5.4
ariente, Meidad	CA	IAC-15.A6.6.11
ariente, Meidad	A	IAC-15.B6.2.7
arigini, Cristina	CA	IAC-15.A6.4.5
aris, Claudio	CA	IAC-15.A2.1.8
aris, Claudio	CA	IAC-15.C2.2.10
aris, Claudio	CA	IAC-15.B4.4.8
aris, Claudio	CA	IAC-15.B2.IP.3
aris, Claudio	A	IAC-15.C2.6.5
aris, Claudio	CA	IAC-15.C2.7.11
aris, Claudio	CA	IAC-15.C2.9.6
arisi, Marzia	A	IAC-15.A3.5.6
arisse, Maurizio	CA	IAC-15.C2.2.10
ark, Byeongseob	A	IAC-15.C3.3.2
ark, Chul	CA	IAC-15.C4.6.1
ark, Gisu	CA	IAC-15.C4.9.11
ark, Ji Hyun	CA	IAC-15.E1.5.11
ark, Jung Ho	A	IAC-15.E3.IP.5
ark, Min A	CA	IAC-15.A3.IP.44
arkes, Steve	A	IAC-15.C1.IP.18
arkes, Steve	A	IAC-15.B2.5.5
armitano, Luca	CA	IAC-15.E6.IP.3
arness, Aaron	A	IAC-15.A2.3.1
arness, Aaron	A	IAC-15.A3.IP.37
arness, Aaron	A	IAC-15.A6.5.1
arodi, Paola	A	IAC-15.B6.1.6
arrish, Joe	CA	IAC-15.A3.3A.6
asco, Xavier	CA	IAC-15.B1.1.8
asenau, Ludwig	A	IAC-15.E5.1.7
asenau, Ludwig	A	IAC-15.E5.4.8
asko, Vadym	A	IAC-15.D4.3.3
assarelli, Gianluca	CA	IAC-15.A3.3A.2
astor Moreno, Daniel	CA	IAC-15.D2.4.7
astore, R.	CA	IAC-15.C2.8.12
astorelli, Stefano	CA	IAC-15.D2.3.8
astukhova, Svetlana	A	IAC-15.D2.2.4
astukhova, Svetlana	CA	IAC-15.D2.IP.9
atankar, Kunal	CA	IAC-15.A6.1.7
atankar, Kunal atel, Igal	CA	IAC-15.A6.2.9
· •	A CA	IAC-15.E1.1.2
atel, Igal atel, Igal	CA A	IAC-15.E5.6.1 IAC-15.E1.7.8
atel, Igal	CA	IAC-15.E4.3.3
atel, Shivang	CA	IAC-15.B4.4.7
aterakis, lason	CA	IAC-15.E5.1.2
athak, Yashwant	CA	IAC-15.A1.IP.19
athak, Yashwant	CA	IAC-15.A1.IP.19
atten, Norah	CA	IAC-15.E1.5.12
atten, Norah	A	IAC-15.E1.7.3
atzelt, Aicke	CA	IAC-15.C2.1.1
auline, Faure	CA	IAC-15.D1.7.10
auly, Kristian	A	IAC-15.B2.3.4
avarin, Daniele	CA	IAC-15.C4.IP.47
avarin, Daniele	CA	IAC-15.C4.6.3
avel, Novikov	CA	IAC-15.A6.4.10
avlis, Erricos C.	CA	IAC-15.A2.1.8
avone, Rosario	A	IAC-15.B1.5.1
ayson, Dmitry	Α	IAC-15.E4.1.2
ayson, Dmitry	CA	IAC-15.E3.1.8

Payson, Dmitry	A CA	IAC-15.E3.2.9
Paz, Amir Pazmandi, Tamas	CA CA	IAC-15.D5.4.1 IAC-15.E1.3.7
Pazmandi, Tamas	CA	IAC-15.E1.3.7
Pazmandi, Tamas	CA	IAC-15.A1.5.2
Pazmandi, Tamas	CA	IAC-15.A1.5.12
Pazmandi, Tamas	CA	IAC-15.D5.3.7
Pearson, Thomas	CA	IAC-15.E1.7.11
Pedersen, Jakob Fromm	CA	IAC-15.C2.2.1
Pedrini, Daniela	CA	IAC-15.C4.IP.41
Pei, Guo	CA	IAC-15.B2.4.9
Peljhan, Marko	CA	IAC-15.B4.4.9
Pellacani, Andrea	CA	IAC-15.A3.3B.1
Pellegrini, Andrea Pellegrini, Rocco C.	CA A	IAC-15.C2.IP.30 IAC-15.C4.1.7
Pellegrino, Alice	CA	IAC-15.C4.1.7
Pellegrino, Alice	CA	IAC-15.C2.1.8
Pellegrino, Alice	A	IAC-15.E2.3-YPVF.4.1
Pellon-Bailon, Jose-Luis	CA	IAC-15.A3.4.1
Peng, Chao	Α	IAC-15.C1.4.10
Peng, Chao	Α	IAC-15.C1.IP.20
PENG, Deyun	Α	IAC-15.D1.6.10
Peng, Hao	Α	IAC-15.C1.4.2
Peng, Jinlong	Α	IAC-15.C2.IP.9
Peng, Xiaodong	CA	IAC-15.B6.2.3
Penson, James	CA	IAC-15.B4.4.10
Perazzo, Federico	A	IAC-15.D5.2.9
Pereira, Mateus Oliveira	CA	IAC-15.B4.1.10
Pereira, Mateus Oliveira	A	IAC-15.B4.7.7
PEREZ GONZALEZ, Jose Alvaro	A	IAC-15.D1.IP.3 IAC-15.D3.1.5
Pergola, Pierpaolo	CA	IAC-15.D3.1.5
Pergola, Pierpaolo Pergola, Pierpaolo	A	IAC-15.C4.6.8
Pergola, Pierpaolo	A	IAC-15.C4.6.9
Pergola, Pierpaolo	A	IAC-15.C4.7-C3.5.4
Pericherla, Ravi Teja Varma	CA	IAC-15.A1.8.10
Perino, Maria Antonietta	CA	IAC-15.A3.3A.10
Perino, Maria Antonietta	Α	IAC-15.D3.2.1
Perino, Maria Antonietta	CA	IAC-15.A5.1.8
Peris Martí, Izan	CA	IAC-15.E6.1.7
Peris Martí, Izan	CA	IAC-15.E6.2.10
Peris Martí, Izan	CA	IAC-15.E1.7.11
Perlick, Volker	CA	IAC-15.A2.1.6
Perna, Louis	CA A	IAC-15.C4.IP.40 IAC-15.A7.2.7
Peron, Roberto Peron, Roberto	A	IAC-15.A7.2.7
Perondi, Leonel Fernando	CA	IAC-15.A7.2.8
Perondi, Leonel Fernando	CA	IAC-15.E3.3.1
Perondi, Leonel Fernando	CA	IAC-15.A2.6.7
Peroni, Moreno	CA	IAC-15.A6.4.1
Perren, Matthew	CA	IAC-15.D1.1.4
Perrino, Raphael	CA	IAC-15.E3.2.14
Persad, Aaron	A	IAC-15.E1.3.4
Persad, Aaron	A	IAC-15.A2.4.2
Pesce, Vincenzo	CA	IAC-15.A3.3A.12
Peshin, Esti	CA	IAC-15.D5.4.1
Pessana, Mario	CA	IAC-15.C4.IP.47
Pessoa, Luis	CA	IAC-15.B2.1.1
Petelin, Oleg	CA	IAC-15.E2.3-YPVF.4.7
Peter, Nicolas Peters, Achim	CA CA	IAC-15.E3.2.1 IAC-15.A2.1.7
Peters, Susanne	A	IAC-15.A2.1.7
Peters, Thomas Vincent	CA	IAC-15.A6.5.9
Peterson, Glenn	CA	IAC-15.A6.2.2
Peterson, Glenn	CA	IAC-15.D4.3.4
Petitot, Stephane	CA	IAC-15.C4.1.4
Petkovic, Mike	CA	IAC-15.A7.1.3
Petrillo, Davide	Α	IAC-15.E2.3-YPVF.4.11
Petrov, Oleg	CA	IAC-15.A2.IP.4
Petrucci, Roberto	CA	IAC-15.A6.IP.40
	Α	IAC-15.C1.1.5
Petukhov, Viacheslav		
Petukhov, Viacheslav	CA	IAC-15.A3.IP.4
*	CA CA	IAC-15.A3.IP.4 IAC-15.A2.5.7 IAC-15.E1.2.5

Pham, Anh Tuan Phelan, Ronan	CA	IAC-15.E1.5.6 IAC-15.E5.4.7
Phinney, Sterl	CA	IAC-15.E5.4.7
Phylippov, Yuriy	CA	IAC-15.A2.2.4
Phylippov, Yuriy	CA	IAC-15.A2.4.5
Piana, Alessandro	CA	IAC-15.B2.5.4
Piattoni, Jacopo	A	IAC-15.A6.IP.43
Piccione, Matteo	CA	IAC-15.C2.1.8
Pichkhadze, Konstantin M.	CA	IAC-15.A3.1.5
Pichon, Thierry	Α	IAC-15.D2.6.3
Pierce, Jillianne	A	IAC-15.D4.2.5
Pierce, Jillianne	A	IAC-15.E7.IP.23
Pierce, Jillianne	A	IAC-15.E5.5.10
Piergentili, Fabrizio	CA	IAC-15.A6.1.3
Piergentili, Fabrizio	A	IAC-15.B4.2.7
Piergentili, Fabrizio	A	IAC-15.A6.IP.28
Piergentili, Fabrizio Piergentili, Fabrizio	CA CA	IAC-15.A6.IP.29 IAC-15.A6.IP.43
Pieroux, Didier	CA	IAC-15.B4.2.6
Pieters, Lode	CA	IAC-15.B6.3.12
Pietrabissa, Antonio	CA	IAC-15.A3.2A.8
Pietrabissa, Antonio	CA	IAC-15.A3.5.9
Pietras, Markus	A	IAC-15.B6.3.8
Pietropaolo, Andrea	CA	IAC-15.B1.2.2
Pigeon, Carl	CA	IAC-15.E2.3-YPVF.4.
Pigeon, Carl	A	IAC-15.C4.IP.39
Pignataro, Salvatore	Α	IAC-15.B3.3.4
Pignataro, Salvatore	CA	IAC-15.B3.3.5
Pignataro, Salvatore	Α	IAC-15.B3.4-B6.5.7
Pignataro, Salvatore	CA	IAC-15.E6.IP.3
Pilchen, Guy	A	IAC-15.D2.1.4
Pinaya, Benjamin	CA	IAC-15.B2.IP.9
Piness, Jessica	A	IAC-15.C2.6.3
Ping, Fu	CA	IAC-15.C4.1.13
Ping, Fu	CA	IAC-15.C4.IP.4
Ping, Fu	Α	IAC-15.C4.5.3
Ping, Fu	CA	IAC-15.C4.5.9
Ping, Sun	CA	IAC-15.C1.8.9
Ping, Tang	CA	IAC-15.A5.IP.5
Pinsky, Lawrence Pinto Gomes, Vera	A	IAC-15.A1.5.3 IAC-15.E3.IP.15
PINUMALLA, KIRAN	CA	IAC-15.C4.2.12
Piperno, Osvaldo	CA	IAC-15.B1.5.9
Piras, Annamaria	A	IAC-15.B3.4-B6.5.8
Pirat, Camille	Α	IAC-15.A6.6.2
Pirtle, Zachary	CA	IAC-15.E1.8.1
Piscitelli, Filomena	Α	IAC-15.C2.9.12
Pisculli, Andrea	CA	IAC-15.C2.3.6
Pisseloup, Aurelien	CA	IAC-15.A3.1.3
Pittori, Carlotta	CA	IAC-15.B4.2.10
Pittori, Carlotta	CA	IAC-15.B4.3.1
Pizzigalli, Luisa	CA	IAC-15.A1.IP.8
Piña López, Yair Israel	CA	IAC-15.C2.6.6
Pla-García, Jorge	A	IAC-15.A3.IP.12
Plathottam, Siby Jose	CA	IAC-15.C3.1.3
Platt, Don	CA	IAC-15.B4.6B.10
Plattard, Serge	A	IAC-15.E3.2.1
Plattard, Serge	A	IAC-15.E3.4.11
Plattard, Serge	A	IAC-15.A6.8.5
Pletser, Vladimir	A	IAC-15.A2.3.2
Plevne, Olcay	CA	IAC-15.A1.IP.18
Podhajsky, Sandra Podwalski, Ken	CA CA	IAC-15.A1.7.10 IAC-15.B3.1.4
Pohflepp, Sascha	A	IAC-15.B3.1.4
Polansky, John	CA	IAC-15.B4.1.2
Polansky, John	CA	IAC-15.B2.4.7
Polezhaev, Denis	A	IAC-15.B2.4.7
Poli, Matteo	A	IAC-15.A2.5.7
Polk, Jay	CA	IAC-15.A3.5.2
Pollak, Keren	CA	IAC-15.B1.6.5
Polli, Aldo	CA	IAC-15.C4.3.4
Pollini, Alexandre	CA	IAC-15.A6.6.3
Pomerantz, William	Α	IAC-15.B3.2.4
Pomerantz, William	Α	IAC-15.A2.3.9
	Α	IAC-15.B4.5.2





Rekhate, Vaibhav



CA IAC-15.B4.3.12

Praz. Christophe

Prazot, Shemi

Preijde, Jasper

Pretto, Isacco Preud'homme, Frank

Price, Colin

Priel, Aviv

Prieto, Ines

Preud'homme, Frank

Prieto Mateo, Manuel

Prieto-Llanos, Tomas

Primakov, Pavel

Prisk, G. Kim

Probst, Alena

Probst, Alena

Probst, Alena

Probst, Alena

Procopio, Dorico

Pronenko, Vira

Provin, Laurie Przybilski, Olaf

Przyszlak, Marta

Pugliese, Antonio Puimege, Koen

Puntambekar, Priyank

Puntambekar, Priyank

PUTEAUX, Maxime

Punch, Orla

Punzi, Claudio

Puppe, Frank Purohit, Privank

Putzer, Philipp

Pvle. Michelle

Pálfalvi, József K.

IAC-15.D2.7.1 Pomerantz, William CA IAC-15.E3.IP.18 Pomeroy, Caleb IAC-15.A1.IP.5 Ponomarev, Sergey IAC-15.C4.IP.22 Pons Lorente, Arnau CA IAC-15.E1.7.11 Pons Lorente, Arnau Pont, Gabriel IAC-15.A3.3B.5 Pontani, Mauro IAC-15.C1.4.1 CA Pontijas Fuentes, Irene IAC-15.A6.4.5 CA IAC-15.D2.6.2 Pontijas Fuentes, Irene CA IAC-15.C2.3.7 Pontuschka, Maurício IAC-15.D3.1.6 Poole, Trey CA IAC-15.E2.4.5 Popov, Alexander CA Popova, Anfisa IAC-15.A1.IP.10 IAC-15.E7.IP.2 Popova, Rada Α CA Porta, Roberto IAC-15.A3.4.1 Portelli, Claudio CA IAC-15.A6.IP.28 CA Porter, Jamie IAC-15.A1.5.10 Portigliotti, Stefano CA IAC-15.A3.3A.2 Potapov, Alexander IAC-15.D5.3.9 Potchter, Danielle CA IAC-15.E1.7.11 Potter, Michael IAC-15.E6.1.10 Potter, Michael IAC-15.D4.2.8 Potter, Michael IAC-15.E7.2.13 POUFFARY, Benoit CA IAC-15.D2.1.4 Poveda, Jorge IAC-15.E1.2.5 Povrozin, Anatoliy IAC-15.A3.IP.16 Powell, Andy IAC-15.E1.2.1 Prabhune, Bhagyashree IAC-15.E2.3-YPVF.4.9 Prabhune, Bhagyashree IAC-15.E2.4.9 Prabhune, Bhagyashree CA IAC-15.C2.9.8 Prabhuraj, D K CA IAC-15.B5.2.5 Prabhuraj, D K IAC-15.B1.6.6 CA IAC-15.D1.3.1 Pradels, Gregory IAC-15.C1.4.9 Prado, Antonio Prakash, Arunima CA IAC-15.B4.8.4 CA IAC-15.B4.4.9 Pranaiava, Freddy PRASAD, DURGA CA IAC-15.B4.3.13 Prasad, Sandhya IAC-15.D5.3.2 CA Prasad, Varsha IAC-15.D5.3.2 CA Prasad Nagendra, Narayan IAC-15.E5.2.3 CA IAC-15.B4.5.3 Pratt, Lucas

IAC-15.B1.2.6

IAC-15.A3.IP.3

IAC-15.C4.6.4

IAC-15.D1.IP.12

IAC-15.D2.6.5

IAC-15.B4.7.2

IAC-15.B1.IP.35

IAC-15.E2.1.6

IAC-15.E5.6.3

IAC-15.D1.7.3

IAC-15.A3.1.5

IAC-15.A1.3.5

IAC-15.D4.1.2

IAC-15.A3.IP.15

IAC-15.A3.IP.30

IAC-15.C1.7.4

IAC-15.C1.5.10

IAC-15.B4.2.11 IAC-15.E5.5.1

IAC-15.A6.3.6

IAC-15.B2.IP.9 IAC-15.D1.IP.14

IAC-15.D2.6.5

IAC-15.E1.7.11

IAC-15.B2.3.9

IAC-15.B4.8.4

IAC-15.B6.2.5

IAC-15.A1.8.5

IAC-15.E6.1.4

IAC-15.D1.2.3

IAC-15.B1.IP.14

IAC-15.A1.5.1

IAC-15.A3.3A.12

IAC-15.A3.3B.11

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Püttmann, Norbert	A	IAC-15.C4.4.1
Pützfeld, Dirk	CA	IAC-15.A2.1.6
Q		
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Name	Role	Paper
Name Qedar, Ran	Role A	Paper IAC-15.D1.1.3
	11010	<u> </u>
Qedar, Ran	A	IAC-15.D1.1.3
Qedar, Ran QI, Feng	A A	IAC-15.D1.1.3 IAC-15.D2.IP.5

Name	Role	Paper
Qedar, Ran	A	IAC-15.D1.1.3
QI, Feng	Α	IAC-15.D2.IP.5
QI, Feng	Α	IAC-15.C4.7-C3.5.8
Qi, Lei	CA	IAC-15.C4.9.12
Qi, Wenwen	CA	IAC-15.B1.IP.27
Qi, ZHONG	CA	IAC-15.C2.7.4
Qian, Bin	CA	IAC-15.C3.4.6
Qian, Zhang	Α	IAC-15.C2.IP.51
Qiang, Sheng	Α	IAC-15.A2.4.7
Qiao, Qiao	Α	IAC-15.D1.1.7
Qiao, Qiao	CA	IAC-15.C1.4.6
Qiao, Qiao	CA	IAC-15.C1.5.9
QIAO, XINQUAN	Α	IAC-15.C4.IP.28
Qin, Fei	CA	IAC-15.C4.9.3
Qin, Haibo	CA	IAC-15.A1.4.4
Qin, Tong	Α	IAC-15.A2.2.10
Qin, Tong	CA	IAC-15.B4.5.5
Qin, XiaoWei	CA	IAC-15.D2.IP.11
Qin, Yajie	CA	IAC-15.C3.4.6
Qin, Yi-Xian	Α	IAC-15.A1.3.6
Qin, Youcai	Α	IAC-15.A1.7.9
Qing, Hengxin	CA	IAC-15.C2.7.7
Qingjun, Zhang	CA	IAC-15.C1.IP.8
Qiu, Baogui	Α	IAC-15.A3.2C.5
Qiu, Baogui	Α	IAC-15.A3.2C.6
Qiu, Dongyang	A	IAC-15.B6.3.13
Qiu, Jia-wen	Α	IAC-15.A2.3.7
Qiu, Jia-wen	CA	IAC-15.A3.IP.22
Qiu, Jia-wen	CA	IAC-15.C2.7.4
Qiu, Jia-wen	CA	IAC-15.A3.2C.10
Qiu, Jia-wen	CA	IAC-15.D1.6.12
Qiu, Xin	CA	IAC-15.C4.6.6
QU, Li-peng	CA	IAC-15.C2.IP.23
Qu, Lina	Α	IAC-15.A1.3.2
Qu, Qiang	CA	IAC-15.A2.2.9
Qu, Xin	Α	IAC-15.A6.6.10
Quantius, Dominik	CA	IAC-15.D1.3.5
Quaranta, Alessandro	CA	IAC-15.A5.3-B3.6.3
Quaranta, Vincenzo	Α	IAC-15.C2.1.10
Quaranta, Vincenzo	Α	IAC-15.C2.IP.33
Quero, Jose M.	CA	IAC-15.B4.7.9
Quillien, Kevin	Α	IAC-15.B4.2.6

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Name	Role	Paper
Rabaioli, Massimo	CA	IAC-15.D6.3.7
Rabinovich, Leonid	CA	IAC-15.C4.3.3
Rachkin, Dmitry	CA	IAC-15.E2.4.5
Rachuy, Carsten	CA	IAC-15.A3.IP.15
Radice, Gianmarco	CA	IAC-15.B4.1.6
Radice, Gianmarco	CA	IAC-15.C2.3.9
Radice, Gianmarco	CA	IAC-15.C1.5.4
Radice, Gianmarco	CA	IAC-15.D1.4.7
Radtke, Jonas	Α	IAC-15.A6.2.1
Radtke, Jonas	CA	IAC-15.A6.8.4
Radu, Silvana	CA	IAC-15.C2.6.4
Radu, Silvana	Α	IAC-15.B4.6B.3
Radu, Silvana	CA	IAC-15.C3.4.3
Raghavan, Jeenu	CA	IAC-15.C4.2.12
Ragupathy, Ajay Prasad	A	IAC-15.E2.1.2
Ragupathy, Ajay Prasad	A	IAC-15.E2.3-YPVF.4.5
Ragupathy, Ajay Prasad	A	IAC-15.E3.3.10
Ragupathy, Ajay Prasad	A	IAC-15.D4.4.6
Ragupathy, Ajay Prasad	Α	IAC-15.C2.8.9
Ragupathy, Ajay Prasad	CA	IAC-15.E2.4.6
Rai, Amelia	CA	IAC-15.B3.3.5

Raj, Baldev	CA	IAC-15.E3.2.3
Raj, Pavan	CA	IAC-15.E2.3-YPVF.4.6 IAC-15.A6.10-
Raj, Raunak	Α	YPVF.5.1
Raj, Raunak	CA	IAC-15.A3.IP.39
Rajput, Rajendrasing	CA CA	IAC-15.A5.2.8 IAC-15.E3.IP.3
Rajput, Rajendrasing Rajput, Rajendrasing Uttamsing	A	IAC-15.B4.6B.13
Ramalingam, Pandiyan	CA	IAC-15.C1.7.6
Ramanan, R V	CA	IAC-15.C1.1.9
Ramirez, Sandra	A	IAC-15.A1.6.2
Ramos, Brian Ramos, Brian	A	IAC-15.A1.IP.15 IAC-15.D4.4.7
Ramraj, Santhanakrishnan	CA	IAC-15.B3.IP.1
Randolph, Thomas	CA	IAC-15.A3.5.2
Ranera, Franck	CA	IAC-15.B1.1.8
Rao, Mukund Kadursrinivas Rao, Mukund Kadursrinivas	CA A	IAC-15.E3.1.9 IAC-15.E3.2.3
Rao, Mukund Kadursrinivas	A	IAC-15.E3.3.4
Rao, Mukund Kadursrinivas	Α	IAC-15.B5.2.5
Rao, Mukund Kadursrinivas	CA	IAC-15.B1.6.6
Rao, Muralidhara Rao, Muralidhara	CA CA	IAC-15.C2.IP.40 IAC-15.E2.4.7
RAO, V LAKSHMANA	CA	IAC-15.E2.4.7
Raposo, Ana	A	IAC-15.E3.IP.8
Rarata, Grzegorz	Α	IAC-15.C4.3.9
Rarata, Grzegorz	CA	IAC-15.D2.7.10
Rarata, Grzegorz Rasappu, Nichsan	CA	IAC-15.C4.8.4 IAC-15.E2.3-YPVF.4.6
Rasel, Ernst Maria	CA	IAC-15.A2.1.4
Rast, Malte	CA	IAC-15.E6.3.6
Rastelli, Davide	CA	IAC-15.E1.3.8
Rastelli, Davide	CA	IAC-15.A6.IP.30
Rastelli, Davide Rastelli, Davide	A	IAC-15.A6.IP.31 IAC-15.E6.3.9
Ratcliffe, Andrew	CA	IAC-15.A6.6.3
Ratheesh, Akash	Α	IAC-15.B2.3.9
Rathi, Umang	CA	IAC-15.E5.2.3
Rathnasabapathy, Minoo	CA	IAC-15.E5.6.4
Rathod, Abhijit Rathod, Abhijit	CA CA	IAC-15.E2.3-YPVF.4.9 IAC-15.E2.4.9
Rathod, Abhijit	CA	IAC-15.C2.9.8
Ratti, John	CA	IAC-15.A6.5.4
Raval, Siddharth	CA	IAC-15.A6.IP.42
Ravandoor, Karthik Raviprasad, Srikanth	CA	IAC-15.A6.IP.37 IAC-15.A5.2.10
Raviprasad, Srikanth	CA	IAC-15.A3.IP.1
Ray, Vishal	A	IAC-15.B2.1.8
Rayman, Marc D.	Α	IAC-15.A3.4.4
Reali, Marco	CA	IAC-15.A6.IP.40
REBOLLAR, BLANCA REBUFFAT, Denis	CA A	IAC-15.E1.6.7 IAC-15.A3.3A.5
Rebuffat, Denis	CA	IAC-15.A3.IP.28
Rebuffat, Denis	CA	IAC-15.A3.3B.11
Recanatesi, Luca	CA	IAC-15.C2.IP.29
Reddy, Ashok Reddy, Rachana	CA	IAC-15.B1.6.6
Reed, Cheryl	CA CA	IAC-15.E5.2.3 IAC-15.E3.2.1
Reed, Cheryl L.B.	CA	IAC-15.A3.4.8
Reeve, James	CA	IAC-15.B4.6B.10
Reeves, Stephen	CA	IAC-15.D3.3.5
Regan, Amanda Regnet, Martin	CA CA	IAC-15.B1.1.4 IAC-15.C2.9.2
Reh, Kim	CA	IAC-15.C2.9.2
Reid, Ewan	A	IAC-15.E1.4.1
Reiley, Keith	CA	IAC-15.A5.1.10
Reill, Josef	CA	IAC-15.A3.4.6
Reiner, David Reinert, Jessica	CA A	IAC-15.C4.3.3 IAC-15.E1.4.2
Reinhardt, Bianca	A	IAC-15.L1.4.2
Reinhardt, Bianca	CA	IAC-15.A3.3B.8
Reinhart, Richard	A	IAC-15.B2.5.6
Reiter, Thomas	CA	IAC-15.B3.1.2
Reitz, Guenther Rekh, Shobha	A	IAC-15.A1.5.2 IAC-15.B4.1.3

Reknate, vaibnav	CA	IAC-15.B4.3.12
Rekhate, Vaibhav	CA	IAC-15.E2.4.10
Rekleitis, Giorgos	CA	IAC-15.D1.2.11
Rembala, Richard	Α	IAC-15.A6.5.4
Rembala, Richard	A	IAC-15.A5.3-B3.6.2
Ren, Chong	CA	IAC-15.A2.2.9
Ren, Weijia	CA	IAC-15.C2.5.8
REN, Zhibin	CA	IAC-15.C2.IP.4
Ren, Zhongjing	Α	IAC-15.C1.5.9
Rendina, Matteo	CA	IAC-15.D2.5.2
Rendleman, James	A	IAC-15.E7.4.3
Renno, Nilton	CA	IAC-15.A3.3B.3
Renotte, Etienne	CA	IAC-15.B4.2.5
Resta, Pier Domenico	CA	IAC-15.D2.1.4
Retat, Ingo	CA	IAC-15.A6.IP.22
Retat, Ingo	CA	IAC-15.A6.6.3
Reulke, Ralf	A	IAC-15.B1.3.4
Reulke, Ralf	CA	IAC-15.B1.3.6
Reuter, James	CA	IAC-15.A5.1.2
Reveles, Juan	CA	IAC-15.C2.2.7
Revelin, Bruno	CA	IAC-15.A6.2.5
Rey, Daniel	CA	IAC-15.E1.5.3
Rey, Ignacio	CA	IAC-15.E2.3-YPVF.4.2
Rey, Ignacio	CA	IAC-15.B3.7.9
Rhyme, Setshedi	Α	IAC-15.E1.8.7
Ricciardi, Sara Cristin	CA	IAC-15.A4.IP.1
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Richard, Muriel	CA	IAC-15.A6.6.2
RICHARD, Yves	CA	IAC-15.B2.4.1
RICHARD, Yves	CA	IAC-15.B2.4.5
RICHARD, Yves	CA	IAC-15.B2.6.4
RICHARD, Yves	CA	IAC-15.B2.6.5
RICHARD, Yves	CA	IAC-15.B4.6A.12
RICHARD, Yves	CA	IAC-15.B4.6B.9
RICHIELLO, CAMILLO	CA	IAC-15.D2.6.10
Richter, Martin	CA	IAC-15.A6.IP.12
Ridzuan, Norul Zakaria	CA	IAC-15.D6.3.1
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Riede, Wolfgang	CA	IAC-15.A6.IP.3
Rienow, Andreas	A	IAC-15.E1.2.2
Rievers, Benny	CA	IAC-15.A2.1.3
Rievers, Benny	CA	IAC-15.A2.1.6
Riffle, Zachary	Α	IAC-15.C4.IP.1
Riffle, Zachary	A	IAC-15.E3.IP.16
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Rigby, Graham	CA	IAC-15.B5.1.8
Rigo, Olivier	CA	IAC-15.C2.8.7
Riley, David	Α	IAC-15.A6.4.5
Rinaldo, Rita	CA	IAC-15.B5.1.1
Rinalducci, Antonio	CA	IAC-15.A6.4.2
Rinner, Anita	A	IAC-15.E7.7-B3.8.5
Rios, Joseph	CA	IAC-15.D1.4.1
Rippetoe, John	Α	IAC-15.A3.IP.24
Ris, Dmitry	CA	IAC-15.D1.4.2
Risi, Ben	CA	IAC-15.B4.3.6
Rispoli, Francesco	CA	IAC-15.B2.3.6
Ritter, Zully	Α	IAC-15.A1.3.7
Rittweger, Jörn	CA	IAC-15.A1.2.1
Riva, Stefano	CA	IAC-15.C3.3.5
Rivera, Cayetano	CA	IAC-15.A3.5.9
Rivera, Moises		
•	A	IAC-15.A6.2.9
Riviere, Christophe	CA	IAC-15.A1.2.5
Rivolta, Aureliano	CA	IAC-15.D2.3.3
Rivolta, Aureliano	Α	IAC-15.E3.4.6
Rizzi, Francesco	CA	IAC-15.A3.IP.19
Rmili, Badr	CA	IAC-15.D2.4.8
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Roberts, Christopher	CA	IAC-15.E3.5-E7.6.6
Roberts, Mark	CA	IAC-15.C1.7.2
Roberts, Peter	CA	IAC-15.B4.8.11
Robinson, Jana	Α	IAC-15.E7.4.1
Robinson, Jendai		
· · · · · · · · · · · · · · · · · · ·	A	IAC-15.C2.8.10
Robinson, Julie A.	Α	IAC-15.B3.3.5
Robinson, Kimberly	CA	IAC-15.D2.8-A5.4.2
Robison, Kathryn	Α	IAC-15.E1.5.5
Rocco, Jose	CA	IAC-15.C4.IP.56
Rocha Rodrigues de Oliveira, Marta	CA	IAC-15.E1.7.11
Rochel, Sandrine	CA	IAC-15.D5.3.6 IAC-15.C2.8.7









Rockah, Anat	Α	IAC-15.B5.1.4
,	A	
Rockberger, Daniel		IAC-15.B2.5.2
Rockberger, Daniel	CA	IAC-15.B4.6B.1
Rockberger, Daniel	CA	IAC-15.B4.6B.10
Rococo, Jean-François	CA	IAC-15.D4.4.7
Rodenas Bosque, Antonio	CA	IAC-15.E1.7.11
Rodin, Evgeniy	A	IAC-15.A3.IP.42
Rodič, Tomaž	CA	IAC-15.B4.4.9
Rodrigues, Manuel	CA	IAC-15.A2.1.1
Rodrigues, Manuel	CA	IAC-15.A2.1.2
Rodrigues, Pedro	Α	IAC-15.B2.1.1
Rodrigues, Pedro	Α	IAC-15.A3.2A.8
Rodrigues, Pedro	Α	IAC-15.B2.5.7
Rodrigues, Pedro	CA	IAC-15.A3.5.9
Rodriguez, Filippo	CA	IAC-15.B2.3.2
Rodriguez Amaya, Laura	CA	IAC-15.E1.2.4
Rodriguez Halcón, Manuel	CA	IAC-15.B4.7.9
Rodriguez Pupo, Eya Caridad	CA	IAC-15.A1.6.2
Rodriguez Reina, Andres	CA	IAC-15.D2.4.7
Rodriguez-Pacheco, Javier	CA	IAC-15.D1.7.3
Rodríguez López, Nuria	CA	IAC-15.A6.IP.23
Rodríguez López, Nuria	CA	IAC-15.A6.5.8
Rodríguez Mitre, Alberto	CA	IAC-15.D2.7.9
Roedel, Henning	CA	IAC-15.E6.1.5
Roelof, Edmond	CA	IAC-15.D4.4.1
Roemer, Stephan	Α	IAC-15.D1.4.6
Roemer, Stephan	CA	IAC-15.B4.7.5
Roeser, Hans-Peter	CA	IAC-15.A6.3.6
Rogers, Gabe	CA	IAC-15.A3.5.1
Rojas Quesada, Mariela	CA	IAC-15.A2.6.3
Rokicka, Karolina	CA	IAC-15.D2.7.10
Roldugin, Dmitriy	CA	IAC-15.C1.5.2
Roman-Gonzalez, Avid	Α	IAC-15.B4.1.7
Roman-Gonzalez, Avid	Α	IAC-15.A5.2.9
Roman-Gonzalez, Avid	CA	IAC-15.E4.2.7
Romano, Patrick	CA	IAC-15.B2.4.5
Romano, Patrick	CA	IAC-15.B2.6.4
Romano, Patrick	CA	IAC-15.B4.6B.9
Romanov, Alexander	A	IAC-15.B5.2.6
Romanov, Alexey	CA	IAC-15.B5.2.6
Romberg, Oliver	CA	IAC-15.D1.3.5
Romero Martin, Juan Manuel	A	IAC-15.C1.2.9
Domero Martin, Juan Manuel	CA	IAC 15.01.2.5

Rodenas Bosque, Antonio	CA	IAC-15.E1.7.11
Rodin, Evgeniy	Α	IAC-15.A3.IP.42
Rodič, Tomaž	CA	IAC-15.B4.4.9
Rodrigues, Manuel	CA	IAC-15.A2.1.1
Rodrigues, Manuel	CA	IAC-15.A2.1.2
Rodrigues, Pedro	A	IAC-15.B2.1.1
Rodrigues, Pedro Rodrigues, Pedro	A	IAC-15.A3.2A.8 IAC-15.B2.5.7
Rodrigues, Pedro	CA	IAC-15.B2.5.7
Rodriguez, Filippo	CA	IAC-15.B2.3.2
Rodriguez Amaya, Laura	CA	IAC-15.E1.2.4
Rodriguez Halcón, Manuel	CA	IAC-15.B4.7.9
Rodriguez Pupo, Eya Caridad	CA	IAC-15.A1.6.2
Rodriguez Reina, Andres	CA	IAC-15.D2.4.7
Rodriguez-Pacheco, Javier	CA	IAC-15.D1.7.3
Rodríguez López, Nuria	CA	IAC-15.A6.IP.23
Rodríguez López, Nuria	CA	IAC-15.A6.5.8
Rodríguez Mitre, Alberto	CA	IAC-15.D2.7.9
Roedel, Henning	CA	IAC-15.E6.1.5
Roelof, Edmond	CA	IAC-15.D4.4.1
Roemer, Stephan	A	IAC-15.D1.4.6
Roemer, Stephan Roeser, Hans-Peter	CA CA	IAC-15.B4.7.5 IAC-15.A6.3.6
Rogers, Gabe	CA	IAC-15.A6.3.5.1
Rojas Quesada, Mariela	CA	IAC-15.A3.5.1
Rokicka, Karolina	CA	IAC-15.D2.7.10
Roldugin, Dmitriy	CA	IAC-15.C1.5.2
Roman-Gonzalez, Avid	Α	IAC-15.B4.1.7
Roman-Gonzalez, Avid	Α	IAC-15.A5.2.9
Roman-Gonzalez, Avid	CA	IAC-15.E4.2.7
Romano, Patrick	CA	IAC-15.B2.4.5
Romano, Patrick	CA	IAC-15.B2.6.4
Romano, Patrick	CA	IAC-15.B4.6B.9
Romanov, Alexander	A	IAC-15.B5.2.6
Romanov, Alexey	CA	IAC-15.B5.2.6
Romberg, Oliver	CA	IAC-15.D1.3.5
Romero Martin, Juan Manuel Romero Martin, Juan Manuel	CA	IAC-15.C1.2.9 IAC-15.A6.6.1
Ron, Shelly	CA	IAC-15.E1.2.7
Rondao, Duarte	CA	IAC-15.C1.IP.12
Rong, Yi	CA	IAC-15.A2.2.10
Rosales Alpízar, Luis Carlos	Α	IAC-15.B4.1.8
Rosen, Paul	CA	IAC-15.B1.1.9
Rosenband, Valery	CA	IAC-15.B3.7.4
Rosenbaum, Alex	CA	IAC-15.E2.3-YPVF.4.2
Rosenbaum, Alex	CA	
		IAC-15.B3.7.9
Rosenfeld, Daniel	Α	IAC-15.B1.5.12
Rosenfeld, Daniel Rosenthal, Eran	A A	IAC-15.B1.5.12 IAC-15.C1.IP.14
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca	A A CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro	A A CA CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio	A A CA CA CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano	A A CA CA CA CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B4.4.5
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano	A A CA CA CA CA A	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B4.4.5 IAC-15.C1.IP.11
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano	A A CA CA CA CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B4.4.5
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano	A A CA CA CA CA A A	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B4.4.5 IAC-15.C1.IP.11 IAC-15.E2.4.4
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela	A A CA CA CA CA A A CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B4.4.5 IAC-15.C1.IP.11 IAC-15.E2.4.4 IAC-15.C4.6.8
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob	A A CA CA CA CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B1.3.5 IAC-15.C1.IP.11 IAC-15.C2.IP.11 IAC-15.C2.A4 IAC-15.C3.B2.3
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob Roth, Maria	A A CA CA CA CA A A CA CA A A CA CA A A CA A A CA A A CA A A A CA A	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B1.3.5 IAC-15.C1.IP.11 IAC-15.C2.4.4 IAC-15.C3.2.3 IAC-15.A1.4.2 IAC-15.A1.4.2 IAC-15.A2.6.2 IAC-15.A2.6.2
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob Roth, Maria Roth, Niels	A A CA CA CA A A CA CA A CA CA A CA CA C	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B4.4.5 IAC-15.C1.IP.11 IAC-15.C2.4.4 IAC-15.C3.2.3 IAC-15.A6.1.2 IAC-15.A6.8
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob Roth, Maria Roth, Niels Rothacher, Markus	A A CA CA CA A A CA CA A CA CA CA CA CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B4.4.5 IAC-15.C1.IP.11 IAC-15.C2.4.4 IAC-15.C3.2.3 IAC-15.A1.4.2 IAC-15.A1.4.2 IAC-15.B3.2.3 IAC-15.B3.2.6 IAC-15.B3.2.6 IAC-15.B3.2.6
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob Roth, Maria Roth, Niels Rothacher, Markus Rothery, David	A A CA CA CA A A CA CA A CA CA CA CA CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B4.4.5 IAC-15.C1.IP.11 IAC-15.E2.4.4 IAC-15.C3.23 IAC-15.A1.4.2 IAC-15.A1.4.2 IAC-15.E1.7.12 IAC-15.B4.3.6 IAC-15.B4.3.6 IAC-15.B4.4.5 IAC-15.B4.4.5
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob Roth, Maria Roth, Niels Rothacher, Markus Rothery, David Rothmund, Christophe	A A CA CA CA A A CA CA A CA CA CA CA CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B1.3.5 IAC-15.C1.IP.11 IAC-15.C2.4.4 IAC-15.C3.IP.11 IAC-15.C3.2.3 IAC-15.A1.4.2 IAC-15.A1.4.2 IAC-15.A1.4.2 IAC-15.B1.3.6
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob Roth, Maria Roth, Niels Rothacher, Markus Rothery, David Rothmund, Christophe Rotteveel, Jeroen	A A CA CA A CA CA A CA CA CA CA CA CA CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B4.4.5 IAC-15.E2.4.4 IAC-15.C1.IP.11 IAC-15.C4.6.8 IAC-15.D3.2.3 IAC-15.A1.4.2 IAC-15.A2.6.2 IAC-15.B4.3.6 IAC-15.E2.4.6 IAC-15.E2.4.6 IAC-15.E2.7.12 IAC-15.E2.7.12 IAC-15.E2.7.12 IAC-15.E2.7.12 IAC-15.E2.7.12 IAC-15.E3.6.2
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob Roth, Maria Roth, Niels Rothacher, Markus Rothery, David Rothmund, Christophe Rotteveel, Jeroen Rougier, Alessandro	A A CA CA A CA CA CA CA CA CA CA CA CA C	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B4.4.5 IAC-15.C1.IP.11 IAC-15.C2.4.4 IAC-15.C3.2.3 IAC-15.A1.4.2 IAC-15.A1.4.2 IAC-15.A1.4.2 IAC-15.B4.3.6 IAC-15.B4.4.5 IAC-15.B4.3.6 IAC-15.B4.3.6 IAC-15.B4.3.6 IAC-15.B4.4.5 IAC-15.B4.3.6
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob Roth, Maria Roth, Niels Rothacher, Markus Rothery, David Rothmund, Christophe Rotteveel, Jeroen Rougier, Alessandro Rozenbaum, Dani	A A CA CA A CA CA CA CA CA CA CA CA CA C	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B4.4.5 IAC-15.C1.IP.11 IAC-15.C2.4.4 IAC-15.C3.2.3 IAC-15.A6.1.3 IAC-15.C4.6.8 IAC-15.C3.2.3 IAC-15.A1.4.2 IAC-15.A2.6.2 IAC-15.A2.6.2 IAC-15.B4.4.5 IAC-15.B4.7.12 IAC-15.B4.5 IAC-15.B4.7.12 IAC-15.B4.7.12 IAC-15.B4.7.13 IAC-1
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob Roth, Maria Roth, Niels Rothacher, Markus Rothery, David Rothmund, Christophe Rotteveel, Jeroen Rougier, Alessandro Rozenbaum, Dani RUAN, Ningjuan	A A CA CA A CA CA CA CA CA CA CA CA CA C	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B1.3.5 IAC-15.E1.IP.11 IAC-15.C1.IP.11 IAC-15.C1.IP.11 IAC-15.C2.4.4 IAC-15.C3.2.3 IAC-15.A1.4.2 IAC-15.A2.6.2 IAC-15.A2.6.2 IAC-15.E1.IP.6 IAC-15.E1.IP.6 IAC-15.E1.IP.6 IAC-15.E4.2.5 IAC-15.B4.3.6 IAC-15.E1.IP.6 IAC-15.E3.2.6 IAC-15.E3.2.6
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob Roth, Maria Roth, Niels Rothacher, Markus Rothery, David Rothmund, Christophe Rotteveel, Jeroen Rougier, Alessandro Rozenbaum, Dani RUAN, Ningjuan Rubanenko, Lior	A A CA CA A CA CA CA CA CA A CA CA CA CA	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B1.3.5 IAC-15.E1.IP.11 IAC-15.C1.IP.11 IAC-15.C2.4.4 IAC-15.C3.2.3 IAC-15.A1.4.2 IAC-15.A1.4.2 IAC-15.A1.4.2 IAC-15.E1.IP.6
Rosenfeld, Daniel Rosenthal, Eran Rossettini, Luca Rossi, Alessandro Rossi, Maurizio Rossi, Stefano Rossi, Stefano Rossi, Stefano Rossodivita, Angela Rosta, Roland Rotenstreich, Ygal Roth, Jacob Roth, Maria Roth, Niels Rothacher, Markus Rothery, David Rothmund, Christophe Rotteveel, Jeroen Rougier, Alessandro Rozenbaum, Dani RUAN, Ningjuan	A A CA CA A CA CA CA CA CA CA CA CA CA C	IAC-15.B1.5.12 IAC-15.C1.IP.14 IAC-15.A6.4.3 IAC-15.A6.1.3 IAC-15.B1.3.5 IAC-15.B1.3.5 IAC-15.E1.IP.11 IAC-15.C1.IP.11 IAC-15.C1.IP.11 IAC-15.C2.4.4 IAC-15.C3.2.3 IAC-15.A1.4.2 IAC-15.A2.6.2 IAC-15.A2.6.2 IAC-15.E1.IP.6 IAC-15.E1.IP.6 IAC-15.E1.IP.6 IAC-15.E4.2.5 IAC-15.B4.3.6 IAC-15.E1.IP.6 IAC-15.E3.2.6 IAC-15.E3.2.6

Rubanovych, Maxim	CA	IAC-15.C4.4.4
Rubini, Giulio	CA	IAC-15.C2.8.12
Ruchenkov, Vasily	CA	IAC-15.B2.1.4
Rudolph, Andreas	Α	IAC-15.B6.2.10
Rudolph, Martin	CA	IAC-15.A3.IP.8
Rudy, Richard	CA	IAC-15.A6.1.4
Ruel, Stephane	CA	IAC-15.E1.4.1
Ruess, Florian	CA	IAC-15.C2.IP.41
Rufini, Sergio	CA	IAC-15.D5.1.5
Rufolo, Giuseppe Carmine	CA	IAC-15.D2.6.10
Rugescu, Dragos	Α	IAC-15.B4.3.11
Ruilin, Wu	Α	IAC-15.A1.4.5
Rumpf, Clemens	Α	IAC-15.B5.1.9
Rusanov, Vasily	Α	IAC-15.A1.IP.1
Russell, Ray	CA	IAC-15.A6.1.4
Russo, Enrico	CA	IAC-15.B5.2.2
Russo, Gennaro	CA	IAC-15.A6.6.11
Russo, Pedro	Α	IAC-15.E1.IP.3
Russu, Andres	Α	IAC-15.A1.5.4
Russu, Andres	Α	IAC-15.D1.7.3
RUY, Ghislain	Α	IAC-15.B4.8.2
RUY, Ghislain	Α	IAC-15.E5.5.4
Ryan, Shannon	CA	IAC-15.E3.IP.3
Rybaczyk, Agnieszka	CA	IAC-15.B1.6.2
Rybus, Tomasz	CA	IAC-15.A3.IP.34
Rysin, Kirill	CA	IAC-15.A2.IP.1
Ryszawa, Ewelina	Α	IAC-15.B4.6A.2
Ryzenko, Jakub	Α	IAC-15.B5.2.4
Ryzhakova, Larisa	CA	IAC-15.D5.3.9
Röser, Hans-Peter	CA	IAC-15.A2.5.4
Rühl, Steffen	CA	IAC-15.D3.1.3

S		
S, Sandya	CA	IAC-15.B4.3.13
S, Sandya	CA	IAC-15.A6.IP.25
S, Sandya	CA	IAC-15.C2.IP.40
S, Sandya	CA	IAC-15.C3.4.2
S, Sandya	CA	IAC-15.E2.4.7
S, Sandya	CA	IAC-15.E2.4.8
Saab, Bechara	CA	IAC-15.A5.2.9
Saadeh, Tamer	CA	IAC-15.A5.3-B3.6.3
Sabath, Dieter	CA	IAC-15.B3.4-B6.5.3
Sabatini, Marco	CA	IAC-15.C2.2.5
Sabatini, Marco	CA	IAC-15.C1.3.5
Sabatini, Marco	CA	IAC-15.C2.3.6
Sabatini, Marco	CA	IAC-15.D3.2.9
Sabatini, Marco	CA	IAC-15.B2.6.8
Sabatini, Marco	Α	IAC-15.C1.6.5
Sabatini, Paolo	CA	IAC-15.B4.2.10
Sabatini, Paolo	CA	IAC-15.B4.3.1
Sabbatinelli, Beatrice	CA	IAC-15.D1.2.11
Sabirov, Rustam	CA	IAC-15.A2.IP.1
Saburov, Peter	CA	IAC-15.B3.5.2
Sabzalian, Mehdi	CA	IAC-15.B4.7.6
Sacco, Patrizia	Α	IAC-15.B1.IP.34
Sacco, Patrizia	CA	IAC-15.B1.5.9
Saccoccia, Giorgio	CA	IAC-15.D4.1.12
Saccoccia, Giorgio	CA	IAC-15.E3.2.1
Sachasiri, Ravit	Α	IAC-15.B1.5.4
Sadeh, Eligar	Α	IAC-15.E6.IP.7
Sagi, Elad	Α	IAC-15.B1.2.2
Sagi, Elad	A	IAC-15.E1.2.7
Sagi, Elad	CA	IAC-15.B1.6.5
Sagiv, Ilan	Α	IAC-15.B4.2.2
Sagiv, Ilan	CA	IAC-15.A7.2.1
Sagiv, Ilan	CA	IAC-15.B4.5.6
Sagle, Laura	CA	IAC-15.C2.8.10
Sagouo Minko, Flavien	Α	IAC-15.A7.1.6
Saharov, Valeriy	CA	IAC-15.A6.2.3
Sahay, Divyanshu	Α	IAC-15.B4.3.13
Sahay, Divyanshu	CA	IAC-15.E2.4.7
Saikia, Arnav	Α	IAC-15.A1.8.10

Saikia, Sarag	CA	IAC-15.A5.2.6
Sainadh, Chamarthi	A	IAC-15.C4.2.12
Saito, Eri	CA	IAC-15.C3.2.4
Saito, Takashi Sakai, Wataru	CA CA	IAC-15.C3.2.1 IAC-15.C4.3.2
Sakthiharjith, M	CA	IAC-15.C4.5.2
Sakurai, Akira	CA	IAC-15.A6.1.8
Sakurai, Masato	Α	IAC-15.B3.7.5
Sakurai, Ryu	CA	IAC-15.E5.4.6
Sakva, Nikolay	Α	IAC-15.A6.2.10
Salado, Alejandro	CA	IAC-15.D1.IP.14
Salama, Ofer	CA	IAC-15.C1.2.3
Salama, Ofer	A	IAC-15.B1.IP.31
Salatti, Mario	CA	IAC-15.A3.4.2
Salcedo, Corinne Saleh, Joseph Homer	CA A	IAC-15.D1.3.1 IAC-15.D1.3.8
Salgado, Henrique	CA	IAC-15.B1.3.8
Salmin, Vadim	CA	IAC-15.B4.2.12
Salmon, Thierry	CA	IAC-15.A6.6.3
Salotti, Jean Marc	CA	IAC-15.A5.2.3
Salotti, Jean-Marc	Α	IAC-15.A5.2.4
Salt, Dave	CA	IAC-15.A6.4.7
Salvatore, Vito	CA	IAC-15.C2.1.10
Salvatore, Vito	CA	IAC-15.C4.3.6
Salvatore, Vito	CA	IAC-15.C2.IP.33
Salvatore, Vito	A	IAC-15.C4.4.12
Salvi, Samuele	CA	IAC-15.A2.3.3
Salvi, Samuele Salvoldi, Manuel	CA CA	IAC-15.A6.IP.26 IAC-15.C1.IP.12
Salvoldi, Manuel	CA	IAC-15.C1.IP.12
Salzano, Carmine	A	IAC-15.C2.1.11
Salzgeber, Frank	Α	IAC-15.E6.3.8
Salzgeber, Frank M	Α	IAC-15.B5.2.1
Sambhus, Nikhil	CA	IAC-15.B4.3.12
Sambhus, Nikhil	Α	IAC-15.E2.4.3
Sampson, Robin	CA	IAC-15.C3.4.7
Samson, Victoria	CA	IAC-15.E3.1.5
Samson, Victoria	Α	IAC-15.E3.4.2
Samuel, A.	CA	IAC-15.B5.1.4
Sanchez, Luis	CA	IAC-15.E1.2.5
Sanchez, Sebastian	CA	IAC-15.D1.7.3
Sanchez Ayala, Lizbeth Sanchez Cuartielles, Joan Pau	CA A	IAC-15.A1.6.2 IAC-15.C1.1.10
Sanchez Cuartielles, Joan Pau	CA	IAC-15.C1.2.8
Sanchez Cuartielles, Joan Pau	A	IAC-15.C1.4.5
Sanchez Ortiz, Noelia	Α	IAC-15.A6.7.6
Sanchez Prieto, Sebastian	CA	IAC-15.D1.1.2
Sanchez-Ramirez, Carlos	CA	IAC-15.E2.3-YPVF.4.6
Sandeep, BGSK	CA	IAC-15.B2.3.8
SANJEEVIRAJA, THANGAVEL	Α	IAC-15.B3.IP.1
Sano, Hiroaki	CA	IAC-15.E1.2.9
Sansone, Francesco	CA	IAC-15.D3.3.7
Sansone, Francesco	CA	IAC-15.E2.3-YPVF.4.11
Sansone, Francesco	A	IAC-15.D1.2.7
Sansone, Francesco	CA	IAC-15.B4.6B.5
Sansone, Francesco Santachiara, Davide	CA A	IAC-15.C2.7.9 IAC-15.C2.IP.29
Santachiara, Davide	A	IAC-15.C2.IP.29
Santana, Saymon	CA	IAC-15.C2.IF.30
Santoni, Fabio	CA	IAC-15.A6.1.3
Santoni, Fabio	CA	IAC-15.B4.2.7
Santoni, Fabio	CA	IAC-15.A6.IP.28
Santoni, Fabio	CA	IAC-15.A6.IP.29
Santoro, Francesco	CA	IAC-15.D2.4.5
Santoro, Francesco	Α	IAC-15.D6.3.1
Santoro, Francesco	A	IAC-15.D6.3.7
Santos, Denilson Paulo Souza dos	A	IAC-15.C1.6.3
Santos, Marlise	CA	IAC-15.A2.IP.5
Santome, Osamu	CA	IAC-15.C2.3.7
Saprykin, Oleg Saprykin, Oleg	CA	IAC-15.B3.2.6 IAC-15.A5.3-B3.6.9
Sarae, Wataru	CA	IAC-15.A5.3-B3.6.9
Saraf, Shailendhar	CA	IAC-15.B4.4.6
Sardesai, Nikita	CA	IAC-15.E3.IP.10
Sardesai, Nikita	CA	IAC-15.E1.5.3

Sarli, Bruno	CA	IAC-15.C1.1.8
Sarli, Bruno	A	IAC-15.E4.2.7
Sarli, Bruno	A	IAC-15.E5.6.4
Sarris, Emmanuel	CA	IAC-15.D4.1.9
Sarti, Francesco	CA	IAC-15.B1.IP.18
Sarty, Gordon	CA	IAC-15.A1.IP.7
Sarusi, Gabby	A	IAC-15.B1.3.8
Saruwatari, Hideki	CA	IAC-15.A2.6.5
Sasaki, Kenji	CA	IAC-15.C3.2.1
Sasaki, Takahiro	A	IAC-15.C1.6.10
Sasaki, Takuro	CA	IAC-15.C3.2.1
Satak, Neha	CA	IAC-15.D3.2.7
Sato, Masaki	CA	IAC-15.C4.1.8
Sato, Masaki	CA	IAC-15.C4.3.2
Sato, Masaki	CA	IAC-15.C4.5.1
Sato, Masao	CA	IAC-15.C3.2.1
Sato, Naoki	CA	IAC-15.A5.1.1
Sato, Tetsuya	CA	IAC-15.D2.4.2
Satoh, Masaki	CA	IAC-15.B2.6.7
Satoh, Takehiko	CA	IAC-15.A3.3A.3
Saunders, Chris	A	IAC-15.B4.2.1
Saunders, Chris	CA	IAC-15.E6.3.4
Saunders, Chris	CA	IAC-15.B4.7.5
Sause, Markus	CA	IAC-15.C2.9.2
Sauvageau, Don	A	IAC-15.D2.1.3
Savin, Sergey	CA	IAC-15.A2.IP.4
Savini, Giorgio	A	IAC-15.B4.2.1
Savini, Giorgio	CA	IAC-15.E6.3.4
Savinkina, Alexandra	CA	IAC-15.A1.4.3
Savio, Giuseppe	CA	IAC-15.A4.IP.1
Savoia, Matteo	CA	IAC-15.A3.2B.2
Sayson, Jojo	A	IAC-15.A1.2.6
Sazonova, Tatiana	CA	IAC-15.D2.8-A5.4.6
Scatteia, Luigi	CA	IAC-15.E3.3.2
Scatteia, Luigi	Α	IAC-15.E3.IP.4
Scavuzzi, Juliana	Α	IAC-15.E7.IP.1
Scavuzzi, Juliana	Α	IAC-15.E3.5-E7.6.6
Schaffer, Mark	Α	IAC-15.A5.2.5
Schaffer, Mark	Α	IAC-15.A5.2.12
Schallhorn, Paul	CA	IAC-15.A2.6.2
Scharnagl, Julian	CA	IAC-15.D1.4.2
Scharringhausen, Marco	CA	IAC-15.A2.5.6
Schattel, Anne	CA	IAC-15.A3.IP.15
Schaub, Hanspeter	CA	IAC-15.A6.7.3
Scheeres, Daniel	Α	IAC-15.A3.4.7
Scheeres, Daniel	CA	IAC-15.C1.7.1
Scheper, Marc	А	IAC-15.A6.IP.33
Scheper, Marc	CA	IAC-15.A6.IP.36
Scheper, Marc	CA	IAC-15.A6.6.6
Schervan, Thomas A.	CA	IAC-15.D3.1.3
Schildknecht, Thomas	CA	IAC-15.A6.1.2
Schildknecht, Thomas	CA	IAC-15.A6.9.9
Schildknecht, Thomas	CA	IAC-15.A6.9.10
Schill, Kerstin	CA	IAC-15.A3.IP.15
Schill, Kerstin	CA	IAC-15.C1.7.4
Schilling, Klaus	CA	IAC-15.B4.3.5
Schilling, Klaus	CA	IAC-15.D1.4.2
Schilling, Klaus	A	IAC-15.E3.5-E7.6.2
Schindler, Trent	CA	IAC-15.E3.2.11
Schkolnik, Vladimir	CA	IAC-15.A2.1.4
Schkolnik, Vladimir	A	IAC-15.A2.1.4
Schlacht, Irene Lia	A	IAC-15.A2.1.7
Schlacht, Irene Lia	CA	
Schlacht, Irene Lia		IAC-15.A3.IP.43
Schlagman, Zohar	A CA	IAC-15.E5.2.2
, , , , , , , , , , , , , , , , , , ,	CA	IAC-15.C4.1.10
Schlegel, Hans	CA	IAC-15.A1.3.5
Schliesser, Liron	CA	IAC-15.C1.2.2
Schmidt, Gregory K.	Α	IAC-15.A3.1.2
Schmidt, Hauke	CA	IAC-15.D3.1.3
Schmidt, Katrin	CA	IAC-15.C4.5.2
	CA	IAC-15.B4.3.5
Schmidt, Marco		
Schmidt, Marco	A	IAC-15.B1.4.3
Schmidt, Marco Schmidt, Marco Schmidt, Stefan Schoenenberg, Andreas	A A CA	IAC-15.B1.4.3 IAC-15.E6.1.9 IAC-15.B5.1.1









IAC-15.D2.7.8 Schoenmaker, Annelie IAC-15.B2.1.3 Schroeder, Jan Walter CA IAC-15.A3.3A.5 Schroeven-Deceuninck, Hilde IAC-15.A3.IP.28 Schroeven-Deceuninck, Hilde CA CA IAC-15.E3.1.3 Schrogl, Kai-Uwe Schrogl, Kai-Uwe CA IAC-15.E7.4.1 Schröder, Silvio CA IAC-15.A3.IP.10 Schröder, Silvio IAC-15.A3.3B.8 Schröer, Martin CA IAC-15.A5.3-B3.6.6 CA IAC-15.A3.IP.36 Schuehle, Udo Schullerer, Günther CA IAC-15.C2.9.2 CA IAC-15.E1.2.2 Schultz, Johannes Schultze, Alexander IAC-15.E2.2.4 CA IAC-15.B2.IP.9 Schupikov, Michael Schuster, Anja IAC-15.A3.IP.14 Schwarting, Verena IAC-15.A3.IP.15 CA Schwarzenbarth, Klaus IAC-15.B4.8.2 Schwendner, Jakob CA IAC-15.A5.3-B3.6.6 Schwinning, Marius IAC-15.E2.3-YPVF.4.3 Schäfer, Frank CA IAC-15.A3.IP.29 Schönherr, Tony IAC-15.C4.IP.52 Schönhuber, Michael $\mathsf{C}\mathsf{A}$ IAC-15.B2.3.2 Schürmanns, Rainer IAC-15.D2.2.1 Scimemi, Sam IAC-15.B3.1.5 Sciortino, Giacomo Primo IAC-15.E3.3.9 Scire, Gioacchino CA IAC-15.B4.2.7 Scire, Gioacchino IAC-15.A6.IP.28 Scire, Gioacchino IAC-15.A6.IP.29 IAC-15.E7.IP.18 Scott, Benjamyn Scoubeau, Mehdi IAC-15.E5.4.8 Searcy, Brittani IAC-15.C4.4.5 Sebastian, Baby IAC-15.D1.IP.5 SEBASTIEN, BIANCHI IAC-15.D2.5.5 SEBASTIEN, BIANCHI IAC-15.D2.5.9 Sebastien, Rouquette CA IAC-15.A2.3.2 IAC-15.A2.1.4 Seidel, Stephan Seidel, Stephan CA IAC-15.A2.5.6 IAC-15.C2.3.3 Seiichi, Shimizu CA CA IAC-15.A6.1.3 Seitzer, Patrick IAC-15.E7.4.8 Sekhula, Phetole CA IAC-15.B4.6A.7 Sekigawa, Chisato IAC-15.C1.9.7 Sekigawa, Chisato CA Sela, Alejandro IAC-15.B6.3.12 Selezneva, Irina CA IAC-15.A3.IP.17 IAC-15.D1.4.10 Selezneva, Irina CA CA Selg. Fabian IAC-15.E1.2.2 Selig, Hanns IAC-15.A2.1.3 CA Selig, Hanns IAC-15.A2.5.5 Selinas, Paris IAC-15.E1.9.10 Sellamuthu, Harishkumar IAC-15.C1.4.11 Sellmaier, Florian IAC-15.B2.5.12 Selmo, Antonio IAC-15.C4.IP.47 Selvan Nambi, Subash Chandran CA IAC-15.B1.2.5 Selvan Nambi, Subash Chandran IAC-15.C2.IP.34 Semenov, Vadim CA IAC-15.C4.1.2 Semenov, Yury IAC-15.A1.2.7 Semionov, Semion CA IAC-15.E1.7.11 Sen Jaiswal, Rajasri IAC-15.B1.IP.16 Sen Jaiswal, Rajasri IAC-15.B2.7.6 Senchenkov, Alexander IAC-15.A2.4.4 Senchenkov, Alexander IAC-15.A2.5.1 Senick, Paul IAC-15.C2.9.3 CA IAC-15.B6.IP.1 Seo, DooChur IAC-15.C2.IP.24 Seo, Jeong Ki CA Seo, Min-guk CA IAC-15.D1.IP.15 Sera, Akio CA IAC-15.A2.6.5 Sergey, Romanov CA IAC-15.A1.7.1 IAC-15.A1.8.9 Sergiy, Jadko Serikova, Alla IAC-15.D2.IP.9 IAC-15.E4.3.5 CA Serra, Jean-Jacques Serra, Piero Gilberto CA IAC-15.A6.IP.40 IAC-15.A6.IP.39 Serrano, Eduardo CA IAC-15.B4.2.5 Servaye, Jean-Sebastien Seurig, Roland CA IAC-15.A2.6.1 CA IAC-15.A3.IP.34 Seweryn, Karol

Sgamba, Giuseppe	CA	IAC-15.A6.IP.40
Sgambati, Antonella	CA	IAC-15.C2.6.7
Shafirovich, Evgeny	CA	IAC-15.A3.2B.8
SHAGHAGHI, AZAM	A	IAC-15.E6.3.1
Shah, Kartik	CA	IAC-15.A6.10- YPVF.5.1
Shah, Kartik	CA	IAC-15.E1.3.6
Shah, Kartik	A	IAC-15.A3.IP.39
Shah, Kartik	CA	IAC-15.C4.IP.31
Shah, Kartik	CA	IAC-15.C4.6.11
Shah, Nirav	CA	IAC-15.C1.1.3
Shan, Li	A	IAC-15.A6.3.2
Shan, Minghe	A	IAC-15.A6.5.7
Shan, Wenjie Shan, Wenjie	CA CA	IAC-15.A3.1.11 IAC-15.E6.IP.6
Shankar, Puneeth	A	IAC-15.B1.IP.2
Shaowei, Zhang	A	IAC-15.B1.IP.26
Shapira, Aviv	Α	IAC-15.A3.IP.3
Shar, Mansoor	Α	IAC-15.D4.3.12
Sharanowski, Barbara	CA	IAC-15.A1.IP.20
Sharanowski, Barbara	CA	IAC-15.D1.3.4
Sharanowski, Barbara	CA	IAC-15.A1.6.4
Sharf, Inna	CA	IAC-15.A6.5.6
Sharma, Priyanka Sharma, Ram Krishan	A CA	IAC-15.B1.6.3 IAC-15.C1.4.11
Sharma, Tushar	CA	IAC-15.C1.4.11
Sharma Priyadarshini, Maitreyee	CA	IAC-15.A5.2.10
Sharma Priyadarshini, Maitreyee	CA	IAC-15.A3.IP.1
Sharpe, Carla	Α	IAC-15.E3.3.7
Sharpe, Carla	Α	IAC-15.E3.IP.6
Sharpe, Carla	A	IAC-15.E1.8.2
Shashurin, Alexey	CA	IAC-15.C4.4.7
Shatrov, Yakov	CA	IAC-15.A6.IP.15
Shavit, Nadav	CA	IAC-15.B1.3.3
Shaw, Niamh Shaw, Niamh	CA A	IAC-15.E1.7.11 IAC-15.E5.4.7
Shcherbina, Maxim	CA	IAC-15.C3.1.6
SHE, Wenxue	CA	IAC-15.D2.4.4
Sheehan, J.P.	CA	IAC-15.C3.2.3
Sheehan, Michael	Α	IAC-15.E3.2.8
Sheese, Patrick	CA	IAC-15.B1.1.7
Sheik, Shahnawaz	CA	IAC-15.E2.4.7
Shelton, Stephanie	A	IAC-15.E1.3.12
Shen, Feifei	CA CA	IAC-15.A7.3.4 IAC-15.D1.6.10
Shen, Jingsong Shengyong, Hao	CA	IAC-15.B1.0.10
Shenkman, Boris	A	IAC-15.A1.IP.10
Shenyang, Li	CA	IAC-15.B2.4.8
Sher, Ifat	CA	IAC-15.A1.4.2
Sherriff, Abigail	CA	IAC-15.D4.4.7
Sherwood, Brent	Α	IAC-15.A7.1.2
Sherwood, Brent	A	IAC-15.A3.5.8
Shestakova, Ksenia	A	IAC-15.E7.2.11
Shi, Chunsen	Α Α	IAC-15.A6.IP.2
SHI, Linan	A CA	IAC-15.C2.IP.4 IAC-15.B2.8-YPVF.3.1
Shi, Pingyan Shi, Pingyan	CA	IAC-15.B2.8-YPVF.3.1
Shi, Sihan	A	IAC-15.B2.8-1PVF.5.2
Shi, Xiaobo	CA	IAC-15.C4.IP.17
Shi, Xiaobo	CA	IAC-15.C4.IP.20
Shi, Xiaobo	CA	IAC-15.C4.IP.24
Shi, Yong	CA	IAC-15.C1.5.9
Shi, Yue	CA	IAC-15.B1.IP.27
Shields, Madi	CA	IAC-15.E5.5.11
Shigueva, Tatiana	CA	IAC-15.A1.2.7
Shimada, Toru Shimada, Toru	CA CA	IAC-15.C4.2.3 IAC-15.C4.2.5
Shimizu, Keisuke	A	IAC-15.C4.2.5
Shimizu, Makiko	A	IAC-15.E7.4.12
Shimizu, Tatsuo	CA	IAC-15.D5.3.5
Shimomura, Takashi	CA	IAC-15.C1.6.10
Shimose, Shigeru	A	IAC-15.C2.5.1
Shimoyama, Hajime	CA	IAC-15.E5.4.6
Shin, Yoon Sub	CA	IAC-15.C2.IP.24
Shiomi, Kei	CA	IAC-15.B1.3.9

Shirasawa, Yoji	CA	IAC-15.C3.3.6
Shirin, Vladimir	CA	IAC-15.C4.IP.19
Shirobokov, Maksim	CA	IAC-15.C1.7.5
Shiroyama, Hideaki	CA	IAC-15.E3.1.9
Shiryaev, Alexander Shishko, Robert	CA CA	IAC-15.C1.4.8
Shittu, Adegoke	CA	IAC-15.D2.8-A5.4.4 IAC-15.E2.1.9
Shivakumar, Gautam	CA	IAC-15.E2.1.9
Shlomo, Amir	CA	IAC-15.D5.4.1
Shlomovich, Baruch	CA	IAC-15.B1.IP.8
Shmatov, Gennady	CA	IAC-15.A1.5.2
Shmoelof, Zohar	CA	IAC-15.B1.3.3
Shojaee, Shila	CA	IAC-15.A6.IP.21
Shornikov, Andrey	CA	IAC-15.C1.3.4
Shortt, Brian	CA	IAC-15.A7.1.5
Shoshany, Maxim	CA	IAC-15.B1.IP.17
Shoshany, Maxim	A	IAC-15.B1.5.11
Shotwell, Robert	CA	IAC-15.A3.3A.6
Shoufang, Chen	CA	IAC-15.C4.1.13
Shouming, SUN	A CA	IAC-15.B2.3.12 IAC-15.C2.IP.15
Shuai, Liu Shuch, H. Paul	A	IAC-15.C2.IP.15
Shurshakov, Vyacheslav	CA	IAC-15.A4.2.2
Shuvalova, Darya	CA	IAC-15.A1.3.2
Shynkarenko, Olexiy	CA	IAC-15.C4.2.8
Shynkarenko, Olexiy	A	IAC-15.C4.IP.5
Shynkarenko, Olexiy	CA	IAC-15.C4.IP.53
Siamwala, Jamila	Α	IAC-15.A1.2.4
SIDI AHMED, BENDOUKHA	Α	IAC-15.B4.8.9
Sidlo, Katarzyna	CA	IAC-15.B1.6.2
Sieg, Detlef	CA	IAC-15.A6.4.7
Siegl, Martin	A	IAC-15.C4.5.2
Siemes, Christian	CA	IAC-15.B1.1.4
Signorile, Stefano	CA	IAC-15.B1.2.2
Signorile, Stefano	CA	IAC-15.B1.6.5
Silha, Jiri	CA	IAC-15.A6.1.2
Sills, Liam Silva-Martinez, Jackelynne	CA A	IAC-15.B4.4.10
Silveira Fachel, Flávia Nathiely	CA	IAC-15.E5.1.6 IAC-15.A1.IP.19
Silvestrin, Pierluigi	A	IAC-15.B1.1.4
Silvestrin, Pierluigi	A	IAC-15.B1.2.10
Simanungkalit, Happy Rumiris	Α	IAC-15.E3.IP.13
Simeone, Vittoria	CA	IAC-15.A6.IP.40
Simonov, Mikhail	CA	IAC-15.E3.1.8
Simonov, Mikhail	CA	IAC-15.E3.2.9
Simons, Ed	CA	IAC-15.A6.IP.12
Sinapius, Michael	CA	IAC-15.C2.2.6
Sindelar, Maria	CA	IAC-15.B6.1.4
Sindoni, Giampiero	CA	IAC-15.A2.1.8
Sindoni, Giampiero	CA	IAC-15.B2.IP.3
Sindoni, Giampiero	CA	IAC-15.C2.6.5
Singare, Sumit	CA	IAC-15.E2.4.9
Singh, Abhishek Kumar	CA	IAC-15.C1.7.11
Singh, Divye Singh, Hemant	CA A	IAC-15.A3.IP.1 IAC-15.B1.IP.5
Singh, Hemant	A	IAC-15.B1.IP.13
Singh, Japneet	A	IAC-15.E2.1.1
Singh, Japneet	A	IAC-15.A6.3.10
Singh, Netra	CA	IAC-15.C1.9.3
Singh-Derewa, Chrishma	Α	IAC-15.A5.2.10
Singh-Derewa, Chrishma	Α	IAC-15.A3.IP.1
Singh-Derewa, Chrishma	CA	IAC-15.B3.9-YPVF.2.1
Singh-Derewa, Chrishma	Α	IAC-15.B4.5.10
Singh-Derewa, Chrishma	Α	IAC-15.B3.5.8
Sinha, Manoranjan	Α	IAC-15.C1.9.3
Sinha, Manoranjan	A	IAC-15.C1.9.11
Sinogas, Pedro	CA	IAC-15.B2.1.1
Sinogas, Pedro	CA	IAC-15.A3.2A.8
Sinogas, Pedro	CA	IAC-15.B2.5.7
Sinogas, Pedro	CA	IAC-15.A3.5.9
Sinyak, Juriy	CA	IAC-15.A1.7.1
Sisman, Gunperi Sittenfeld, David	CA CA	IAC-15.B2.IP.9 IAC-15.E1.8.1
Sivolap, Valeriy	CA	IAC-15.E1.8.1
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Skinner, Mark A.	Α	IAC-15.A6.1.4
Sleegers, Martinus	CA	IAC-15.E1.7.11
Slenzka, Klaus	CA	IAC-15.A1.7.10
Sloan, John	CA	IAC-15.D6.1.3
Slobodkin, Alexander	A	IAC-15.A1.6.1
Slyunyaev, Mykola M.	A	IAC-15.D2.3.2
Smirnov, Nickolay N.	A	IAC-15.A2.2.4
Smirnov, Nickolay N.	A	IAC-15.A2.4.5
Smith, Bryan	A	IAC-15.A3.1.8
Smith, Bryan	CA	IAC-15.D1.4.3
Smith, Garett	CA	IAC-15.D6.3.2
Smith, Lesley Jane	A	IAC-15.E7.4.10
Smith, Lesley Jane	CA	IAC-15.E7.7-B3.8.5
Smith, Niall	CA	IAC-15.E5.4.7
Smith, Phil	CA	IAC-15.E3.IP.7
Smith, Roger	CA	IAC-15.B4.2.2
Smith, Russell	CA	IAC-15.A2.3.1
Smith, Sonya	CA	IAC-15.A3.IP.31
Smith, Thomas	CA	IAC-15.B2.8-YPVF.3.
Smith, Timothy	Α	IAC-15.C4.3.5
Smith, Whitney	CA	IAC-15.A1.5.10
Smyth, Mark	CA	IAC-15.E1.3.8
Snelgrove, Kailah	CA	IAC-15.D1.3.8
Snyder, John Steven	CA	IAC-15.A3.5.2
Soares, Tiago	CA	IAC-15.D4.1.11
Soares, Tiago	CA	IAC-15.D1.3.3
Sobczak, Kamil	Α	IAC-15.D2.7.10
Sobiecki, Mateusz	CA	IAC-15.B4.6A.2
Sohl, Frank	CA	IAC-15.D3.2.3
Sokhin, Igor G.	CA	IAC-15.B3.5.2
Sokolov, Nikolay	CA	IAC-15.D3.2.2
Sokolov, Nikolay	Α	IAC-15.A3.IP.17
Sokolov, Nikolay	CA	IAC-15.D1.4.10
Sokolov, Nikolay	CA	IAC-15.B6.2.4
Sokolov, Oleg A.	Α	IAC-15.E4.1.5
Sokolov, Oleg A.	CA	IAC-15.D2.IP.8
Solanki, Sami	CA	IAC-15.A3.IP.36
Solaz, Ruben	CA	IAC-15.B2.3.4
Solbakken, Kristian Buhaug	A	IAC-15.E2.3-YPVF.4.
Solberg, Lori	A	IAC-15.B5.1.5
Solberg, Lori	A	IAC-15.E5.5.5
Solis Ocampo, Jennifer	CA	IAC-15.A2.6.3
Soliz, Jorge	A	IAC-15.D1.IP.19
Solway, Nick	CA	IAC-15.D1.2.11
Solyga, Malgorzata	CA	IAC-15.C2.7.2
Somanath, S	CA	IAC-15.C2.IP.45
Somanath, Sri S.	CA	IAC-15.C2.1.2
Somanath, Sri S.	CA	IAC-15.C2.1.4
Somanath, Sri S.	CA	IAC-15.C2.1.5
,	CA	
Son, Min		IAC-15.A2.2.4
Son, Min	A	IAC-15.C4.IP.51
Song, Chunlin	CA	IAC-15.C3.1.4
Song, Jian	CA	IAC-15.C1.IP.7
Song, Jian	CA	IAC-15.C1.6.2
Song, Liang	A	IAC-15.C1.IP.15
Song, Zhengyu	Α	IAC-15.D2.IP.13
Song, Zhi-bing	CA	IAC-15.C2.4.7
Song, Ziyang	A	IAC-15.D2.IP.11
Songerwala, Abdulhussain	CA	IAC-15.B4.3.12
Songerwala, Abdulhussain	CA	IAC-15.E2.4.10
Soni, Amolika	Α	IAC-15.B2.3.3
Soni, Pramod Kumar	CA	IAC-15.C1.7.11
Sonkusare, Rohan	CA	IAC-15.A1.8.10
Sonney, Anatta	Α	IAC-15.C1.7.11
Soraghan, John	CA	IAC-15.B4.6B.4
Sorensen, Trevor	Α	IAC-15.B6.2.1
Sorge, Marlon	CA	IAC-15.A6.1.7
Sorge, Marlon	CA	IAC-15.A6.2.2
Sorge, Marlon	Α	IAC-15.A6.2.8
Sorge, Marlon	CA	IAC-15.A6.2.9
Sorice Genaro, Andreia Fatima	CA	IAC-15.E1.7.11
Sorkhabi, Elburz	CA	IAC-15.E1.7.11
Sorli, Massimo	CA	IAC-15.D2.3.8
Sorokin, Igor V.	A	IAC-15.B3.3.6









Sors Raurell, Daniel	CA	IAC-15.D2.4.7
Sors Raurell, Daniel	CA	IAC-15.D2.7.9
Sotudeh, Jordan	CA	IAC-15.E3.2.11
Soualle, Francis	CA	IAC-15.B2.3.2
Soucek, Alexander	CA	IAC-15.E7.4.1
Soucek, Alexander	A	IAC-15.E7.4.5
Soumagnac, Maayane	CA	IAC-15.B4.2.2
Soumagnac, Maayane	Α	IAC-15.A7.2.1
Sousa, Bruno	CA	IAC-15.A6.4.7
Sousa Ribeiro, Rafael	CA	IAC-15.A6.IP.9
Sousa Ribeiro, Rafael	CA	IAC-15.A6.IP.10
Sousa Silva, Priscilla	Α	IAC-15.C1.3.6
Southworth, Richard	CA	IAC-15.A6.4.7
· · · · · · · · · · · · · · · · · · ·	CA	IAC-15.A3.5.8
Spangelo, Sara		
Spassova, Simona	Α	IAC-15.E7.1.7
Spatola, Antonino	CA	IAC-15.B1.IP.10
Spiero, François	Α	IAC-15.A3.1.2
Spiller, Dario	CA	IAC-15.C1.5.10
Spinetti, Andrea	CA	IAC-15.A6.IP.28
Spores, Ronald	CA	IAC-15.C4.1.9
Sposito, Antonio	CA	IAC-15.B5.2.2
Sprinkle, Tara RuthAnn	A	IAC-15.E1.2.6
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Sree Vatsava seelan, R	CA	IAC-15.B1.IP.16
Sreedhara Panicker, Somanath	CA	IAC-15.C2.IP.25
Srikanth, Motamarri	Α	IAC-15.C1.3.10
Srinivas, Abhishek	CA	IAC-15.A3.IP.15
Srinivasan, Raghuram	CA	IAC-15.E2.4.6
Srivastava, Priyanka	CA	IAC-15.A5.2.10
Srivastava, Priyanka	CA	IAC-15.B3.9-YPVF.2.1
Srivastava, Priyanka	CA	IAC-15.B3.5.8
St-Amour, Amélie	CA	IAC-15.B1.2.4
Stamminger, Andreas	CA	IAC-15.A2.1.4
Stander, Tinus	CA	IAC-15.A7.1.6
Stanford, Brian	Α	IAC-15.E7.1.11
Staples, Rob	CA	IAC-15.B4.6A.11
Starein, Marcel	CA	IAC-15.C1.IP.11
Starein, Marcel	CA	IAC-15.E2.4.4
Starinova, Olga	A	IAC-15.C1.1.7
Starinova, Olga	Α	IAC-15.C1.3.4
Steer, Cassandra	Α	IAC-15.E7.2.4
Steeves, Geoff	CA	IAC-15.E1.7.3
Steeves, Geoffrey	CA	IAC-15.E1.4.1
Stefanescu, Raluca M.	CA	IAC-15.A3.IP.34
Stefanescu, Raluca M.	CA	IAC-15.A6.5.8
Steimle, Christian	A	IAC-15.B4.5.8
	CA	
Steinacher, Armin	-	IAC-15.D2.5.10
Steinberg, Alan	CA	IAC-15.E1.9.6
Stelmakh, Olga S.	Α	IAC-15.E1.8.5
Stelmakh, Olga S.	Α	IAC-15.A6.8.8
Stelmakh, Olga S.	Α	IAC-15.E7.7-B3.8.6
Stern, Avinoam	CA	IAC-15.A3.IP.3
·		IAC-15.A6.10-
Stesina, Fabrizio	A	YPVF.5.3
Carrier Fabricia	CA	
Stesina, Fabrizio	CA	IAC-15.A2.6.8
Stesina, Fabrizio	CA	IAC-15.B4.6B.8
Stesina, Fabrizio	Α	IAC-15.D1.6.5
Stesina, Fabrizio	CA	IAC-15.D1.7.7
Stettner, Armin		
Steuer, Casey	CA	IAC-15.A2.6.1
·	CA	IAC-15.A7.2.6
Stevens, John	CA CA	IAC-15.A7.2.6 IAC-15.D1.6.1
Stevens, John Stevenson, Thomas	CA CA CA	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3
Stevens, John Stevenson, Thomas Stewart, David	CA CA CA	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20
Stevens, John Stevenson, Thomas Stewart, David Stewart, David	CA CA CA CA	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.A1.6.4
Stevens, John Stevenson, Thomas Stewart, David	CA CA CA	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20
Stevens, John Stevenson, Thomas Stewart, David Stewart, David Steyn, Douw	CA CA CA CA	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.A1.6.4 IAC-15.B4.6B.6
Stevens, John Stevenson, Thomas Stewart, David Stewart, David Steyn, Douw Steyn, Willem	CA CA CA CA CA A	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.A1.6.4 IAC-15.B4.6B.6 IAC-15.B4.6A.1
Stevens, John Stevenson, Thomas Stewart, David Stewart, David Steyn, Douw Steyn, Willem Steyn, Willem	CA CA CA CA CA CA CA CA CA A CA	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.A1.6.4 IAC-15.B4.6B.6 IAC-15.B4.6A.1 IAC-15.A6.6.3
Stevens, John Stevenson, Thomas Stewart, David Stewart, David Steyn, Douw Steyn, Willem Steyn, Willem Steyn, Willem Steyn, Willem (Herman)	CA CA CA CA A A CA CA CA	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.B4.68.6 IAC-15.B4.68.6 IAC-15.B4.6A.1 IAC-15.B4.6B.6
Stevens, John Stevenson, Thomas Stewart, David Stewart, David Steyn, Douw Steyn, Willem Steyn, Willem Steyn, Willem Steyn, Willem (Herman)	CA C	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.A1.6.4 IAC-15.B4.6B.6 IAC-15.B4.6A.1 IAC-15.B4.66.3 IAC-15.B4.6B.6 IAC-15.A6.6.3
Stevens, John Stevenson, Thomas Stewart, David Stewart, David Steyn, Douw Steyn, Willem Steyn, Willem Steyn, Willem Steyn, Willem (Herman) Stich, Steve	CA C	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.A1.6.4 IAC-15.B4.6B.6 IAC-15.B4.6A.1 IAC-15.A6.6.3 IAC-15.B4.6B.6 IAC-15.A5.1.2
Stevens, John Stevenson, Thomas Stewart, David Stewart, David Steyn, Douw Steyn, Willem Steyn, Willem Steyn, Willem Steyn, Willem (Herman) Stich, Steve Stich, Steve Stirling, Leia	CA C	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.A1.6.4 IAC-15.B4.6B.6 IAC-15.B4.6A.1 IAC-15.A6.6.3 IAC-15.B4.6B.6 IAC-15.B4.6B.6 IAC-15.B4.6B.6 IAC-15.B4.6B.6 IAC-15.B4.6B.6 IAC-15.A5.1.2 IAC-15.A5.1.6
Stevens, John Stevenson, Thomas Stewart, David Stewart, David Steyn, Douw Steyn, Willem Steyn, Willem Steyn, Willem Steyn, Willem (Herman) Stich, Steve	CA C	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.A1.6.4 IAC-15.B4.6B.6 IAC-15.B4.6A.1 IAC-15.A6.6.3 IAC-15.B4.6B.6 IAC-15.A5.1.2
Stevens, John Stevenson, Thomas Stewart, David Stewart, David Steyn, Douw Steyn, Willem Steyn, Willem Steyn, Willem Steyn, Willem (Herman) Stich, Steve Stich, Steve Stirling, Leia	CA C	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.A1.6.4 IAC-15.B4.6B.6 IAC-15.B4.6A.1 IAC-15.A6.6.3 IAC-15.B4.6B.6 IAC-15.B4.6B.6 IAC-15.B4.6B.6 IAC-15.B4.6B.6 IAC-15.B4.6B.6 IAC-15.A5.1.2 IAC-15.A5.1.6
Stevens, John Stevenson, Thomas Stewart, David Stewart, David Steyn, Douw Steyn, Willem Steyn, Willem Steyn, Willem Steyn, Willem (Herman) Stich, Steve Stich, Steve Stirling, Leia STOIA-DIESKA, Marius Stoica, Adrian-Mihail	CA C	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.A1.6.4 IAC-15.B4.6B.6 IAC-15.B4.6A.1 IAC-15.B4.6A.1 IAC-15.A6.6.3 IAC-15.B4.6B.6 IAC-15.A5.1.2 IAC-15.A5.1.6 IAC-15.A5.1.6 IAC-15.A5.1.6 IAC-15.A5.1.8 IAC-15.A5.1.8
Stevens, John Stevenson, Thomas Stewart, David Stewart, David Steyn, Douw Steyn, Willem Steyn, Willem Steyn, Willem (Herman) Stich, Steve Stich, Steve Stirling, Leia STOIA-DJESKA, Marius	CA C	IAC-15.A7.2.6 IAC-15.D1.6.1 IAC-15.A7.3.3 IAC-15.A1.IP.20 IAC-15.A1.6.4 IAC-15.B4.6B.6 IAC-15.B4.6A.1 IAC-15.B4.6B.6 IAC-15.B4.6B.6 IAC-15.A5.1.2 IAC-15.A5.1.2

IAC-15.A6.IP.22

Stoll, Enrico

Stoll, Enrico	CA	IAC-15.A6.9.5
Stoll, Enrico	CA	IAC-15.A6.8.4
Stone, Edward C.	CA	IAC-15.D4.4.2
Stone, Jerry	A	IAC-15.A5.1.5
Stotler, Charles Stott, Chris	CA	IAC-15.E7.1.5 IAC-15.E6.1.10
Strain, Andrew	A	IAC-15.C3.4.7
Strange, Nathan	CA	IAC-15.D4.4.3
Strappaveccia, Sandro	CA	IAC-15.A6.IP.40
Strashinskiy, Valentin	A	IAC-15.E1.7.9
Stratigentas, Dimitrios	Α	IAC-15.B2.7.3
Stratilatov, Nikolai	CA	IAC-15.B5.2.6
Straubel, Marco	CA	IAC-15.C2.1.6
Straubel, Marco	CA	IAC-15.C2.2.4
Straus, Ulrich	CA	IAC-15.B2.1.3
Strenge, Joachim H.	CA	IAC-15.E2.3-YPVF.4.2
Strenge, Joachim H.	CA	IAC-15.B3.7.9
Strieder, Cristiano	CA	IAC-15.B4.3.8
Strippoli, Luigi	CA	IAC-15.A3.3B.1
Strong, Kimberly	CA	IAC-15.B1.1.7
Struck, James	A	IAC-15.E5.IP.2
Strádi, Andrea	A	IAC-15.A1.5.1
Stubbe, Peter	CA	IAC-15.E7.2.9
Stuffler, Timo	CA	IAC-15.A1.IP.2
Stuffler, Timo Stupl, Jan	CA	IAC-15.B4.7.5 IAC-15.A1.6.5
Stupl, Jan	A	IAC-15.A1.6.5
Stupl, Jan	CA	IAC-15.A6.0.8
Styger, Erich	CA	IAC-15.B4.4.5
Su, Chengyi	A	IAC-15.C4.9.12
SU, Jinyuan	CA	IAC-15.E3.1.6
SU, Jinyuan	A	IAC-15.E7.3.3
SU, Jinyuan	Α	IAC-15.E3.4.5
Su, Miao	Α	IAC-15.D5.2.10
Suatoni, Matteo	CA	IAC-15.D1.2.11
Suatoni, Matteo	CA	IAC-15.A3.3B.11
Subbotin, Stanislav	Α	IAC-15.A2.2.1
Subramani, Prasanth	CA	IAC-15.B2.3.8
Sudakov, Vladimir	Α	IAC-15.C4.1.2
Sudakov, Vladimir	Α	IAC-15.E4.2.4
Suess, Ruediger	Α	IAC-15.D5.2.7
Sugimori, Daizo	CA	IAC-15.D2.4.2
Sugimoto, Yoshihide	CA	IAC-15.C1.1.8
Sule, Suki Dauda	A	IAC-15.E4.3.1
Sullivan, Patrick	CA	IAC-15.B3.7.3
Summerer, Leopold	CA	IAC-15.C3.1.2
Summerer, Leopold	CA CA	IAC-15.B1.2.6 IAC-15.C1.IP.2
Sun, Chong		
Sun, Fang Sun, Fengju	CA CA	IAC-15.A1.5.6 IAC-15.D2.IP.12
SUN, JI	A	IAC-15.D2.IP.12
Sun, Ji-peng	CA	IAC-15.64.2.4
Sun, Kongqian	A	IAC-15.C2.0.12
Sun, Liang	A	IAC-15.A6.IP.11
Sun, Liang	A	IAC-15.C1.6.4
Sun, Qiao	A	IAC-15.A1.5.8
Sun, Qingxiao	Α	IAC-15.C3.IP.6
Sun, Qingxiao	CA	IAC-15.C3.IP.7
Sun, Rong-Yu	A	IAC-15.A6.IP.19
Sun, Rong-Yu	CA	IAC-15.A6.IP.50
Sun, Shijun	CA	IAC-15.B1.4.6
Sun, Wei	A	IAC-15.B1.5.9
Sun, Xiangyu	CA	IAC-15.C2.4.6
Sun, Xiaosong	CA	IAC-15.B1.IP.23
Sun, Xingliang	CA	IAC-15.E2.2.2
Sun, Xingliang	CA	IAC-15.C2.IP.39
Sun, Zezhou	CA	IAC-15.A3.2A.3
_ ,	CA	IAC-15.A2.6.6
		IAC-15.D2.7.10
Surdo, Leonardo Surmacz, Pawel	CA	
Surmacz, Pawel Suto, Hiroshi	CA	IAC-15.B1.3.9
Surmacz, Pawel Suto, Hiroshi Sutton, Jeffrey	CA CA	IAC-15.A1.IP.14
Surmacz, Pawel Suto, Hiroshi Sutton, Jeffrey Sutton, Jeffrey	CA CA CA	IAC-15.A1.IP.14 IAC-15.E1.5.1
Surmacz, Pawel Suto, Hiroshi Sutton, Jeffrey	CA CA	IAC-15.A1.IP.14

Svoboda, Jan	CA	IAC-15.E6.2.6
Sweeney, Paul	CA	IAC-15.B4.6A.9
Sweeting, Martin	CA	IAC-15.B4.4.10
Sweeting, Martin	CA	IAC-15.B4.6A.11
Sweeting, Martin	CA	IAC-15.D1.5.1
Sweeting, Sir Martin	Α	IAC-15.E3.5-E7.6.1
Swinney, Rob	CA	IAC-15.A1.6.7
Sychev, Vladimir	Α	IAC-15.A1.8.2
Sychkov, Vladislav	Α	IAC-15.A5.3-B3.6.9
Sylak-Glassaman, Emily	CA	IAC-15.D4.2.2
Sylak-Glassman, Emily	Α	IAC-15.E3.2.13
Sylvestre, Bruno	CA	IAC-15.E1.4.1
Szabó, Julianna	CA	IAC-15.A1.5.1
Szajnfarber, Zoe	CA	IAC-15.E6.3.10
Szajnfarber, Zoe	CA	IAC-15.D3.4.2
Szajnfarber, Zoe	CA	IAC-15.D3.4.6
Szajnfarber, Zoe	CA	IAC-15.E1.9.8
Szanto, Peter	CA	IAC-15.A1.5.2
Szasz, Bianca	Α	IAC-15.B4.2.9
Szegedi, Péter	CA	IAC-15.D5.3.7
Szeile, Aliz	Α	IAC-15.B2.8-YPVF.3.3
Sznejer, Gabriel	Α	IAC-15.C2.2.8
Söllner, Gerd	CA	IAC-15.B3.4-B6.5.3

	Rol
chandran	CA
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ni	CA
, Nevo	A
, Nevo	CA
ietra, Fabio	Α
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Name	Role	Paper
T, Jayachandran	CA	IAC-15.C2.1.5
T, Jayachandran	CA	IAC-15.C2.IP.25
T N, Bidul	CA	IAC-15.C1.9.11
T S, Rani	CA	IAC-15.D2.IP.15
Taaseh, Nevo	A	IAC-15.A6.6.11
Taaseh, Nevo	CA	IAC-15.B6.2.7
Tagliapietra, Fabio	Α	IAC-15.B6.1.5
Tahk, Min-jea	CA	IAC-15.D1.IP.15
Tahk, Min-jea	CA	IAC-15.C1.5.8
Tai, Hu	CA	IAC-15.D5.2.8
Taillebot, Virginie	CA	IAC-15.A5.3-B3.6.6
Taing, Stefan	CA	IAC-15.B2.1.1
Taiti, Alessio	CA	IAC-15.B1.3.5
Takada, Satoshi	CA	IAC-15.C4.1.8
Takada, Satoshi	CA	IAC-15.C4.3.2
Takada, Satoshi	CA	IAC-15.C4.5.1
Takahara, Osamu	A	IAC-15.C2.3.3
Takahashi, Masato	CA	IAC-15.E1.2.9
Takahashi, Masato	CA	IAC-15.C2.3.3
Takahashi, Ryo	CA	IAC-15.E5.4.6
Takahashi, Tohru	A	IAC-15.E1.2.9
Takarada, Naoki	A	IAC-15.E3.3.5
Takaura, Naoki	A	IAC-15.C3.3.6
Takaya-Umehara, Yuri	A	IAC-15.E7.2.7
TAMIR, RAZ	CA	IAC-15.B2.5.2
TAMIR, RAZ	CA	IAC-15.B4.6B.10
Tan, Tian	CA	IAC-15.C1.8.7
Tan, Yonghua	CA	IAC-15.C1.8.7
Tan, Yonghua	CA	IAC-15.C4.F.4
, ,	CA	IAC-15.C4.5.4
Tan, Yonghua Tanaka, Atomu	A	IAC-15.C4.5.9
Tanaka, Makoto	CA	IAC-15.D5.3.1
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Tanaka, Naohiro	CA	IAC-15.C3.2.1
Tanaka, Tetsuo	CA	IAC-15.B3.1.3
Tanaka, Yuri	A	IAC-15.E5.4.6
Tang, Geshi	A	IAC-15.B4.2.4
Tang, Haibin	CA	IAC-15.C4.IP.13
TANG, Ping	CA	IAC-15.A5.3-B3.6.8
Tang, Saili	CA	IAC-15.A3.1.11
Tanier, Guillaume	A	IAC-15.B6.2.2
Tanimoto, Rebekah	CA	IAC-15.C4.2.10
Taniwaki, Kohei	CA	IAC-15.D1.7.10
Tank, Jens	CA	IAC-15.A1.2.2
Tank, Jens	CA	IAC-15.A1.3.3
Tank, Jens	CA	IAC-15.A1.3.5
Tantardini, Marco	CA	IAC-15.D2.8-A5.4.8
Tao, Jia	CA	IAC-15.B2.IP.8

Tao, Ting	CA	IAC-15.A3.IP.20
Tao, Ting	CA	IAC-15.A3.IP.40
Tao, Ting	CA A	IAC-15.A3.IP.47
Tao, Yangzi Tao, Yangzi	A	IAC-15.E7.1.4 IAC-15.E3.2.7
Tao, Yangzi	A	IAC-15.E3.2.7
Tao, Yangzi	CA	IAC-15.E7.5.4
Tao, Ying	CA	IAC-15.B2.6.10
Tarantini, Vincent	CA	IAC-15.C4.IP.39
Tardivel, Simon	CA	IAC-15.A3.4.7
Tasaki, Kazuyuki	CA	IAC-15.B3.3.5
Tasker, Rose	A CA	IAC-15.E2.1.10 IAC-15.B3.2.3
Tatiana, Agaptseva Tavani, Marco	A	IAC-15.B3.2.3 IAC-15.B4.2.10
Tavani, Marco	CA	IAC-15.B4.2.10
Taverner, Morgan	A	IAC-15.A1.IP.20
Taverner, Morgan	CA	IAC-15.A1.6.4
te Hennepe, Frank	Α	IAC-15.B1.2.8
Team, FOKUS	CA	IAC-15.A2.1.7
Team, QUANTUS	CA	IAC-15.A2.1.4
Team, QUANTUS	CA	IAC-15.A2.1.7
Team, QUANTUS Tebaldini, Stefano	CA CA	IAC-15.A2.5.6 IAC-15.E5.5.2
Teichmann, Marek	CA	IAC-15.E5.5.2
Tekriwal, Peeyush	CA	IAC-15.A0.3.0
Temidayo Isaiah, Oniosun	A	IAC-15.B2.8-YPVF.3.5
Tempesta, Patrizio	CA	IAC-15.B4.2.10
Tempesta, Patrizio	CA	IAC-15.B1.2.2
Tempesta, Patrizio	CA	IAC-15.B4.3.1
Tene, Noam	A	IAC-15.A3.2C.3
Tenenbaum, Stepan	CA	IAC-15.E2.4.5
TENG, PAN Tennyson Jonathan	CA A	IAC-15.B1.2.7
Tennyson, Jonathan Tennyson, Jonathan	CA	IAC-15.B4.2.1 IAC-15.E6.3.4
Teofilatto, Paolo	A	IAC-15.E0.5.4
Teofilatto, Paolo	CA	IAC-15.C1.4.1
Teplyakov, Vadim	CA	IAC-15.B2.1.4
Teplyakov, Vadim	CA	IAC-15.B2.6.3
Tepper, Eytan	Α	IAC-15.B1.1.10
Tepper, Eytan	A	IAC-15.E7.7-B3.8.4
Terada, Takuma	CA	IAC-15.B4.5.4
Terra Maisa	CA ^	IAC-15.A3.IP.36
Terra, Maisa Terra, Maisa	CA	IAC-15.C1.3.3 IAC-15.C1.3.6
Terrenoire, Philippe	CA	IAC-15.C1.3.0
Teschl, Franz	A	IAC-15.B1.3.1
Tesfaye, Beza	Α	IAC-15.E1.9.3
Tesmer, Volker	CA	IAC-15.B1.IP.32
Tessenyi, Marcell	Α	IAC-15.B4.2.1
Tessenyi, Marcell	A	IAC-15.E6.3.4
Tessier, Isabelle	CA	IAC-15.D2.5.10
Tester, Bryan	Α	IAC-15.E2.3-YPVF.4.10
Tfilin, S. Thakurdesai, Shantanu	CA	IAC-15.B5.1.4
Thakurdesai, Shantanu Thakurdesai, Shantanu	CA CA	IAC-15.C3.IP.3 IAC-15.C3.4.8
Thangavelu, Madhu	A	IAC-15.C3.4.8
Thangavelu, Madhu	CA	IAC-15.B3.5.5
Thangavelu, Madhu	A	IAC-15.B5.1.10
Thein, Min	CA	IAC-15.A3.IP.4
Thiele, Gerhard	Α	IAC-15.D4.2.1
Thies, Manuel	CA	IAC-15.A3.IP.8
This, Nadia	Α	IAC-15.B6.3.12
Thomas, Hubertus	CA	IAC-15.A2.6.1
Thomas Jayachandran, Aurthur Vimal- achandran	CA	IAC-15.E2.3-YPVF.4.2
Thomas Jayachandran, Aurthur Vimal- achandran	CA	IAC-15.B3.7.9
Thompson-King, Sumara	A	IAC-15.A3.1.10
Thompson-King, Sumara	A	IAC-15.B3.2.1
Thompson-King, Sumara	Α	IAC-15.E7.7-B3.8.3
Thotumugath, Kannan	CA	IAC-15.B4.3.13
Thotumugath, Kannan Thro, Caroline	CA A	IAC-15.E2.4.8 IAC-15.E7.1.9
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Tian, Jia	CA	IAC-15.D1.4.11









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Tian, Jia	Α	IAC-15.B2.8-YPVF.3.2
Tibert, Gunnar	CA	IAC-15.C2.3.4
Ticker, Ronald	A	IAC-15.A5.1.6
Tidhar, Gil	CA	IAC-15.B1.2.2
Tidhar, Gil	CA	IAC-15.B1.IP.7
Tigas, Pangiotis Tikare, Kiran	A	IAC-15.E1.9.10 IAC-15.D3.2.7
Tikhomirov, Alexander A.	CA	IAC-15.D3.2.7
Tikhomirov, Alexander A.	CA	IAC-15.A1.7.4
Tikhomirova, Natalia	Α	IAC-15.A1.7.3
Tikle, Atharva	CA	IAC-15.A1.8.10
Tiliacos, Eutimio	CA	IAC-15.B1.5.1
Tillie, Charles	CA	IAC-15.D3.3.5
Timmermans, Remco	CA	IAC-15.B1.5.8
Timmermans, Remco	CA	IAC-15.E1.9.6
Timmusk, Mari	CA	IAC-15.E2.3-YPVF.4.7
Tinetti, Giovanna	CA	IAC-15.B4.2.1
Tinetti, Giovanna Tinsley, Tim	CA	IAC-15.E6.3.4 IAC-15.E1.2.1
Tippets, Roger	CA	IAC-15.E1.8.4
Tiseo, Barbara	CA	IAC-15.C2.1.10
Tissera, Mihindukulasooriya Sheral Cres-		
cent	Α	IAC-15.C1.5.3
Titov, Dmitry M.	CA	IAC-15.C2.4.4
Tiwari, Pratik	CA	IAC-15.C4.IP.57
Tiwari, Siddharth	CA	IAC-15.C2.7.2
Tiwari, Siddharth	A	IAC-15.C2.7.3
Tkachenko, Ivan	Α	IAC-15.B4.2.12
Tkachenko, Ivan	CA	IAC-15.B4.6A.3
Tkachenko, Sergey	CA CA	IAC-15.B4.2.12 IAC-15.C1.5.2
Tkachev, Stepan Tlustos, Reinhard	CA	IAC-15.C1.5.2
Tobehn, Carsten	A	IAC-15.B4.4.4
Todd, Jessica	CA	IAC-15.E7.IP.6
Tokudome, Shinichiro	CA	IAC-15.D2.1.6
Tomassini, Angelo	CA	IAC-15.D1.2.11
Tomblin, David	CA	IAC-15.E1.8.1
Tomiki, Atsushi	CA	IAC-15.A3.4.5
Tomilovskaya, Elena	CA	IAC-15.A1.2.7
Toole, Kendra	Α	IAC-15.E1.IP.8
Toon, Geoff	CA	IAC-15.B1.1.7
Topaz, Jeremy	CA CA	IAC-15.B4.2.2
Topputo, Francesco Topputo, Francesco	CA	IAC-15.C1.4.3 IAC-15.A6.6.1
Topputo, Francesco	A	IAC-15.E5.5.2
Torasso, Alberto	A	IAC-15.B4.6A.9
Torre, Francesco	CA	IAC-15.C1.7.7
Torresan, Stefano	Α	IAC-15.B2.1.5
Tortora, Paolo	CA	IAC-15.B4.3.9
Tosi Furtado, André	CA	IAC-15.E3.3.1
Toso, Federico	Α	IAC-15.D2.4.6
Toson, Elena	CA	IAC-15.A6.4.3
Toss Hoffmann, Cleber	CA	IAC-15.B4.1.10
Toss Hoffmann, Cleber	Α	IAC-15.B4.7.7
Touboul, Pierre Touboul, Pierre	CA CA	IAC-15.A2.1.1
Tovani, David	CA	IAC-15.A2.1.2 IAC-15.C4.IP.40
Townsend, Lawrence	A	IAC-15.C4.IP.40
Toyoda, Kazuhiro	CA	IAC-15.D5.3.1
Toyoda, Kazuhiro	CA	IAC-15.D5.3.5
Toyoshima, Morio	CA	IAC-15.B2.6.7
Trabasso, Luíz Gonzaga	CA	IAC-15.D3.4.7
Traistman, Eitan	CA	IAC-15.B5.1.3
Tran Thi, Chiara	CA	IAC-15.C2.6.7
Trevisi, Filippo	CA	IAC-15.A2.5.7
Trezzolani, Fabio	A	IAC-15.C4.IP.47
Trezzolani, Fabio	CA	IAC-15.C4.6.3
Trisolini Mirko	Α	IAC-15.A1.7.4
Trisolini, Mirko Trofimov, Sergey	CA	IAC-15.A6.9.3 IAC-15.C1.7.5
Troll, Oliver	CA	IAC-15.E6.1.7
Troyas, Philippe	CA	IAC-15.D4.1.9
Truglio, Marco	CA	IAC-15.B4.3.2
	A	IAC-15.B4.5.9
Truglio, Marco		

Trusculescu, Marius Florin	CA	IAC-15.C2.6.4
Trusculescu, Marius Florin	CA	IAC-15.B4.6B.3
Trusculescu, Marius Florin	CA	IAC-15.C3.4.3
Trushlyakov, Valeriy	A	IAC-15.A6.IP.15
Tsafnat, Naomi	CA	IAC-15.A2.3.6
Tsafnat, Naomi	CA	IAC-15.A1.6.6
Tsakyridis, Georgios	CA	IAC-15.D3.2.3
Tseng, Kun-Chang	CA	IAC-15.C4.6.5
Tsodikovich, Daniel	CA	IAC-15.B5.1.4
Tsuji, Hiroyuki	CA	IAC-15.B2.6.7
Tsuruda, Yoshihiro	CA	IAC-15.D5.3.1
Tsybulska, Maryna	CA	IAC-15.A1.IP.20
Tsybulska, Maryna	CA	IAC-15.D1.3.4
Tsybulska, Maryna	CA	IAC-15.A1.6.4
Tsybulska, Maryna	CA	IAC-15.B5.1.8
Tsygankov, Alexander	CA	IAC-15.A1.7.2
Tsygankov, Alexandr	CA	IAC-15.A1.7.1
Tu, Jian-qiang	CA	IAC-15.C2.IP.9
Tu, Jian-qiang	CA	IAC-15.C2.IP.17
Tu, Jian-giang	Α	IAC-15.C2.IP.20
Tulin, Andrey	CA	IAC-15.B5.2.6
Tumino, Giorgio	A	IAC-15.D2.6.1
Tuozzi, Alberto	Α	IAC-15.B2.3.6
Turconi, Andrea	CA	IAC-15.D4.1.9
Turconi, Andrea	CA	IAC-15.A6.IP.42
Turconi, Andrea	Α	IAC-15.C1.7.2
Turek, Krzysztof	Α	IAC-15.A1.IP.7
Turner, Andy	CA	IAC-15.A6.5.4
Turner, Nathan	CA	IAC-15.B3.5.5
Tverdokhlebova, Ekaterina	Α	IAC-15.B1.IP.28
Typa, Adrian	CA	IAC-15.E2.3-YPVF.4.7
Tzschichholz, Tristan	CA	IAC-15.D1.4.2

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Name	Role	Paper
U-Yen, Kongpop	CA	IAC-15.A7.3.3
Ubertini, Pietro	A	IAC-15.A7.1.1
Uceta Gómez, Benjamín	A	IAC-15.D2.4.7
Uchitomi, Motoko	CA	IAC-15.E3.1.9
Ueda, Takahiro	A	IAC-15.E3.3.5
Uemura, Yoshihiko	A	IAC-15.B4.5.4
Ugolini, Filippo	CA	IAC-15.E6.IP.3
Uhlig, Thomas	A	IAC-15.B3.4-B6.5.2
Uhlig, Thomas	A	IAC-15.E1.6.1
Ukaegbu, Kingsley	CA	IAC-15.E1.5.11
Ulamec, Stephan	CA	IAC-15.B6.3.3
Ulamec, Stephan	CA	IAC-15.E3.2.1
Ulamec, Stephan	Α	IAC-15.A3.4.2
Ulamec, Stephan	CA	IAC-15.A3.4.6
Ulamec, Stephan	CA	IAC-15.A3.4.8
Uludağ, Mehmet Şevket	CA	IAC-15.B4.2.8
Umemura, Akira	CA	IAC-15.A2.6.5
Umemura, Yutaka	CA	IAC-15.D2.4.2
Umesh, Raksha	CA	IAC-15.C3.4.2
Ummer, Nabil	CA	IAC-15.C4.8.7
Urbanek, Jakub	CA	IAC-15.A3.4.1
Urbanowicz, Maciej	A	IAC-15.D4.2.3
Urbar, Jaroslav	Α	IAC-15.E1.IP.1
Urbas. Ana	CA	IAC-15.B4.4.9
Urbina, Diego	A	IAC-15.A5.3-B3.6.6
Urbina, Diego A.	CA	IAC-15.A3.2A.4
Ureña Ramírez, Viridiana	CA	IAC-15.A1.IP.20
Ureña Ramírez, Viridiana	CA	IAC-15.D1.3.4
Ureña Ramírez, Viridiana	CA	IAC-15.A1.6.4
Ureña Ramírez, Viridiana	CA	IAC-15.B5.1.8
Urquhart, Jimmy	CA	IAC-15.A5.2.9
Ushakova, Sofya	CA	IAC-15.A1.7.3
Usovik, Igor	A	IAC-15.A6.2.3
Usui, Toshio	CA	IAC-15.A0.2.3
Usuki, Tomoaki	A	IAC-15.E1.2.9
Uttamchandani, Deepak	CA	IAC-15.64.2.5
Uwarowa, Inna	A	IAC-15.E1.3.11

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/, Kesava Raju	CA	IAC-15.C1.3.10
/, Kesavaraju	CA	IAC-15.C1.6.11
V S, Neela	CA	IAC-15.B1.IP.16
Vadhavkar, Nikhil	A	IAC-15.A1.IP.11
Vaidya, Naman	A	IAC-15.D4.4.8
Valore Davides	CA	IAC-15.B4.3.12
Vakoch, Douglas	A	IAC-15.A4.1.4 IAC-15.A4.2.3
Vakoch, Douglas Valceschini, Raphael	CA	IAC-15.A4.2.3
Valceschini, Raphael	CA	IAC-15.E2.4.4
Valdatta, Marcello	CA	IAC-15.E1.3.8
Valdatta, Marcello	CA	IAC-15.A6.IP.30
Valdatta, Marcello	CA	IAC-15.A6.IP.31
Valdatta, Marcello	CA	IAC-15.E6.3.9
Valdiviezo Ortiz, Javier Alfredo	Α	IAC-15.E5.IP.5
van de Borne, Philippe	CA	IAC-15.A1.3.5
van den Berg, Rob	Α	IAC-15.E5.6.5
van der Veen, Egbert Jan	CA	IAC-15.D1.2.1
van Dorenmalen, Kim	CA	IAC-15.E6.2.3
Van Hoof, Denis	CA	IAC-15.B6.3.12
Van Hove, Bart	CA	IAC-15.A3.3B.7
Van Lierde, Boris	CA	IAC-15.A5.3-B3.6.6
van Oijhuizen Galhego Rosa, Ana Cristina van Oijhuizen Galhego Rosa, Ana Cristina	CA CA	IAC-15.E6.3.3 IAC-15.E7.5.6
	CA	IAC-15.E7.5.0
van Schie, Bart Van wal, Stefaan	CA	IAC-15.B4.8.2
van Wyk, Peter	CA	IAC-15.A3.4.7
van Wynsberghe, Erinn	A	IAC-15.A7.2.6
van Wynsberghe, Erinn	A	IAC-15.C3.2.3
Vananti, Alessandro	CA	IAC-15.A6.9.9
Vananti, Alessandro	CA	IAC-15.A6.9.10
Vanhumbeeck, Jean-Francois	CA	IAC-15.C2.8.7
Vanreusel, Joost	CA	IAC-15.E2.4.1
Varacalli, Giancarlo	CA	IAC-15.B1.3.7
Varacalli, Giancarlo Natale	CA	IAC-15.B1.2.2
Vargas Cuentas, Natalia	CA	IAC-15.B4.1.7
Vargas Pallini, Juan Pablo	Α	IAC-15.E7.IP.13
Vasaikar, Nidhi Sandeep	CA	IAC-15.D4.1.4
Vasile, Massimiliano	CA	IAC-15.C1.2.9
Vasile, Massimiliano	CA CA	IAC-15.A6.9.2
Vasile, Massimiliano Vasile, Massimiliano	A	IAC-15.A6.6.1 IAC-15.C3.4.4
Vasiliev, Mikhail	CA	IAC-15.C3.4.4
Vasilyev, Andrey	CA	IAC-15.A3.IP.16
VASSAUX, Didier	CA	IAC-15.D1.3.1
Vasylyev, Oleksandr	A	IAC-15.C3.3.8
Vaudo Scarpetta, Ersilia	CA	IAC-15.E3.1.3
Vaudo Scarpetta, Ersilia	CA	IAC-15.E3.1.7
Vaughan, David	CA	IAC-15.C4.2.10
Vaz, Celio Costa	CA	IAC-15.D5.IP.3
Vaz Maiolino, Jaqueline	Α	IAC-15.D5.IP.3
Vaze, Parag	Α	IAC-15.B1.2.9
Vazquez Mato, Javier	CA	IAC-15.A6.IP.33
Vekinis, Giorgios	CA	IAC-15.A3.1.3
Velasco, Tirso	A	IAC-15.A3.3B.4
Velasco Herrera, Graciela	A	IAC-15.B1.IP.1
/elenosi, Nicholas	A	IAC-15.B4.7.6
Velichko, Vladimir	CA	IAC-15.A1.7.3
Venditti, Flaviane	A	IAC-15.D4.3.1
/ENKATAPATHI, Abhijith Janardhan /entskovsky, Oleg	CA CA	IAC-15.E1.7.10
Ventskovsky, Oleg	CA	IAC-15.D2.3.2 IAC-15.E3.2.1
Venugopal, Desaraju	A	IAC-15.E3.2.1 IAC-15.B2.7.1
Verker, Ronen	CA	IAC-15.B2.7.1
Verkhovskii, Igor	CA	IAC-15.B3.2.2
Vernillo, Paolo	CA	IAC-15.C2.IP.33
Vernon, Steven	CA	IAC-15.D4.4.1
Verrecchia, Angélique	A	IAC-15.A1.8.6
Versloot, Thijs	Α	IAC-15.C3.1.2
Verstappen, Nicolas	Α	IAC-15.D2.2.8
Verstappen, Nicolas	Α	IAC-15.E7.4.13
Vespe, Francesco	Α	IAC-15.B1.IP.37

Viana, Tatiana	CA	IAC-15.E7.IP.1
Vicente, Juan Carlos	CA	IAC-15.B4.3.10
Vick, Charles	CA	IAC-15.E4.1.2
Vico, Laurence	CA	IAC-15.A1.IP.21
Vidal, Christian	CA	IAC-15.D1.2.11
Vieille, Bruno	CA	IAC-15.C4.1.6
Vieira Neto, Ernesto	CA	IAC-15.A6.IP.9
Vieira Neto, Ernesto	CA	IAC-15.A6.IP.10
Vigilante, Domenico	CA	IAC-15.A6.IP.40
Vigneron, Adam	CA	IAC-15.E3.IP.10
Vigneron, Adam	Α	IAC-15.E1.5.3
Vihmand, Mart	Α	IAC-15.E1.4.3
Vihmand, Mart	Α	IAC-15.D5.2.1
Vijendran, Sanjay	CA	IAC-15.A3.3A.5
Vijendran, Sanjay	Α	IAC-15.A3.IP.28
Vikhlyantsev, Ivan	CA	IAC-15.A1.IP.10
Vilchinskaya, Nataly	CA	IAC-15.A1.IP.10
Vilhena de Moraes, Rodolpho	CA	IAC-15.C1.IP.4
Villa, Alberto	CA	IAC-15.A4.IP.1
Villadei, Walter	CA	IAC-15.A6.IP.40
Villain, Rachel	Α	IAC-15.B4.5.1
Vilona, Veronica	CA	IAC-15.B4.2.7
Viola, Nicole	CA	IAC-15.D4.1.12
Viola, Nicole	Α	IAC-15.D2.4.3
Viola, Nicole	Α	IAC-15.D2.4.5
Viola, Nicole	Α	IAC-15.A2.6.8
Viola, Nicole	CA	IAC-15.D6.3.1
Viola, Nicole	A	IAC-15.D1.7.7
Viquerat, Andrew	CA	IAC-15.A6.IP.12
Viscio, Maria Antonietta	CA	IAC-15.D2.4.3
Visentin, Gianfranco	CA	IAC-15.D1.2.11
Visentin, Gianfranco	CA	IAC-15.A3.IP.34
Vitiello, Pasquale	CA	IAC-15.C2.IP.33
Viviani, Antonio	A	IAC-15.A2.4.11
Vjatkin, Aleksey	A	IAC-15.A2.IP.1
Vladimirova, Tanya	CA	IAC-15.A3.2A.8
Vladimirova, Tanya	CA	IAC-15.A3.5.9
Voecks, Gerald	CA	IAC-15.C4.2.10
Voirin, Thomas	CA	IAC-15.A3.3A.5
Voirin, Thomas	CA	IAC-15.A3.IP.28
Voirin, Thomas	CA	IAC-15.A3.3B.11
	A	IAC-15.A3.3B.11
Voloshin, Oleg Volpini, Fabrizio	CA	IAC-15.A1.IP.4
Volpp, Hans-Jürgen	CA	IAC-15.C2.8.12
Volynskaya, Olga	A	IAC-15.A6.4.7
, , , , ,	CA	IAC-15.E7.2.12
von der Dunk, Frans		
von der Dunk, Frans	A	IAC-15.E7.4.2
von Kampen, Peter	CA	IAC-15.A2.5.3
Vora, Amar	Α	IAC-15.B4.2.1
Vora, Amar	CA	IAC-15.E6.3.4
Vorobiova, Iryna	A	IAC-15.B4.5.11
Voronina, Anastasia	A	IAC-15.E7.IP.24
Vorontsov, Viktor A.	A	IAC-15.A3.1.5
VR, Lalithambika	CA	IAC-15.C1.1.9
Vrancken, Davy	CA	IAC-15.B4.7.2
Vrolijk, Ademir	A	IAC-15.E1.9.8

Name	Role	Paper
Wadhwa, Nimita	Α	IAC-15.B3.9-YPVF.2.3
Waghulde, Dhaval	Α	IAC-15.C3.IP.3
Waghulde, Dhaval	Α	IAC-15.C3.4.8
Waghulde, Dhaval	CA	IAC-15.E2.4.3
Wagner, Nicoletta	Α	IAC-15.C4.4.10
Wagner, Paul	Α	IAC-15.A6.IP.3
Waizman, Gennady	CA	IAC-15.B5.1.4
Waldvogel, Barak	CA	IAC-15.C4.IP.46
Walker, Andrew	CA	IAC-15.A6.9.2
Walker, Helen	Α	IAC-15.B4.3.3
Walker, John	Α	IAC-15.A3.2B.4
Walker, Kaley	CA	IAC-15.B1.1.7
Walker, Luke	Α	IAC-15.B6.3.6
Walker, Roger	CA	IAC-15.B4.2.6









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AUTHORS

Walker, Roger	CA	IAC-15.B2.4.5
Walker, Roger	CA	IAC-15.B2.6.4
Walker, Roger Walker, Roger	CA CA	IAC-15.A6.6.2 IAC-15.B4.6B.9
Walker, Scott	CA	IAC-15.A6.6.1
Walmsley, Mike	CA	IAC-15.E2.2.7
Walther, Stephan	CA	IAC-15.A5.1.8
Walton, Lori	Α	IAC-15.A4.1.2
Walton, Lori	Α	IAC-15.A4.2.1
Wan, Shuangai	A	IAC-15.A3.IP.6
Wan, Stephanie	A	IAC-15.B2.2.1
WANG Paofong	A CA	IAC-15.A4.1.1 IAC-15.A3.2C.11
WANG, Baofeng Wang, Bing	CA	IAC-15.A5.2C.11
Wang, Caijian	CA	IAC-15.A1.5.0
Wang, Chao	CA	IAC-15.A2.2.7
Wang, Chao	CA	IAC-15.C2.7.1
WANG, DAPENG	CA	IAC-15.C4.IP.28
WANG, DAPENG	CA	IAC-15.D5.4.7
Wang, Daqing	CA	IAC-15.B2.8-YPVF.3.1
Wang, Daqing	CA	IAC-15.B2.8-YPVF.3.2
Wang, Dewei	CA	IAC-15.C2.7.7
Wang, Dongxia	CA	IAC-15.A6.9.7
Wang, Dun	Α	IAC-15.B2.3.13
Wang, Gengbo	A	IAC-15.B2.7.5
Wang, Guangxu	A	IAC-15.C4.IP.17
Wang, Guangxu	CA	IAC-15.C4.IP.17
Wang, Guangxu	A	IAC-15.C4.IP.24
<u> </u>		
WANG, Guo-hui	CA	IAC-15.D2.IP.5
WANG, Guo-hui	CA	IAC-15.C4.7-C3.5.8
Wang, Guoyu	CA	IAC-15.E7.1.4
Wang, Guoyu	CA	IAC-15.E3.2.7
Wang, Guoyu	CA	IAC-15.B3.IP.8
Wang, Guoyu	A	IAC-15.E7.5.4
Wang, Haidong	CA	IAC-15.C2.1.9
Wang, Haoping	CA	IAC-15.C4.IP.10
Wang, Heng	CA	IAC-15.A6.6.10
Wang, Hong	CA	IAC-15.D2.IP.11
Wang, Hong-Bo	CA	IAC-15.A6.IP.50
Wang, Hongjia	Α	IAC-15.C3.2.7
Wang, Hui	CA	IAC-15.C2.2.9
Wang, Jeremy Chan-Hao	Α	IAC-15.E2.3-YPVF.4.7
Wang, Jeremy Chan-Hao	CA	IAC-15.E3.4.6
Wang, Jing	CA	IAC-15.A2.2.9
WANG, JUE	CA	IAC-15.C4.IP.28
Wang, Jufang	A	IAC-15.A1.5.5
Wang, Jufang	CA	IAC-15.A1.5.6
Wang, Junquan	CA	IAC-15.B1.IP.23
Wang, Ke	CA	IAC-15.C2.5.8
Wang, Kunjie	A	IAC-15.C2.4.5
Wang, Lei	CA	IAC-15.C2.1.9
Wang, Li	CA	IAC-15.C3.1.7
Wang, Li	CA	IAC-15.C2.2.9
Wang, Li	CA	IAC-15.C2.3.10
Wang, Li	CA	IAC-15.C2.IP.48
Wang, Li	CA	IAC-15.C3.IP.2
Wang, Lu	CA	IAC-15.C2.7.4
Wang, Mei	CA	IAC-15.C4.5.6
Wang, Meng	CA	IAC-15.B2.3.13
Wang, Minjuan	CA	IAC-15.A1.IP.12
Wang, Minjuan	CA	IAC-15.A1.IP.17
Wang, Patrick Sipei	A	IAC-15.D1.3.11
Wang, Peng	A	IAC-15.E3.1.6
		IAC-15.E3.1.6
Wang, Qiancheng	Α Α	
Wang, Rong	Α	IAC-15.C2.IP.22
Wang, Ru	CA	IAC-15.C3.IP.6
Wang, Ru	A	IAC-15.C3.IP.7
Wang, Saijin	CA	IAC-15.D5.3.8

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Nang, Shaofei	CA	IAC-15.A3.1.11
NANG, Shu	CA	IAC-15.E3.1.4
Nang, Shuang-Feng	A	IAC-15.A2.4.6
Nang, Tao	A	IAC-15.D6.1.6
Nang, Teng	CA	IAC-15.C3.4.6 IAC-15.B2.8-YPVF.3.1
Vang, Wei Vang, Wei	CA	IAC-15.B2.8-YPVF.3.2
Vang, Wei	A	IAC-15.C4.8.6
Vang, Wenli	A	IAC-15.C2.4.6
Vang, XD	A	IAC-15.B3.5.4
Vang, Xin	A	IAC-15.D3.3.4
Vang, Xin	CA	IAC-15.D1.IP.8
Vang, Xinfeng	CA	IAC-15.D6.1.10
Vang, Xinrong	CA	IAC-15.B2.7.7
Vang, Xinzhe	CA	IAC-15.B3.IP.5
Vang, Xuefeng	A	IAC-15.C1.IP.2
Vang, Xuemei	CA	IAC-15.D2.IP.5
Vang, Xuemei	CA	IAC-15.C4.7-C3.5.8
Vang, Ya	CA	IAC-15.A1.4.5
Vang, Ya Jun	CA	IAC-15.C4.9.3
Vang, Ya Jun	A	IAC-15.C4.9.4
Vang, Yao	CA	IAC-15.C3.IP.6
Vang, Yi	A	IAC-15.D2.IP.11
Vang, Yibai	A	IAC-15.C4.IP.37
Vang, Yong	A	IAC-15.C4.IP.57
Vang, Youping	CA	IAC-15.D1.IP.20
Vang, Yue	CA	IAC-15.C2.IP.10
Vang, Yue	CA	IAC-15.C2.IP.42
Vang, Yuexuan	A	IAC-15.C1.6.7
VANG, Yuying	A	IAC-15.C2.7.4
Vang, Zhaohui	A	IAC-15.D2.3.6
Vang, Zhaonui Vang, Zhaowei	CA	IAC-15.A2.2.9
VANG, Zheng	A	IAC-15.A2.2.9
Vang, Ziyong	CA	IAC-15.D1.IP.15
Vanjuan, Yan	CA	IAC-15.C3.3.7
Vard, Eric	A	IAC-15.C5.3.7
Vard, Nick	CA	IAC-15.E1.3.12
Varren, Paul	A	IAC-15.E1.3.2
Varshavsky, Abraham	CA	IAC-15.C4.4.4
Vashiya, Masahito	CA	IAC-15.B4.6A.7
Vatson, lan	CA	IAC-15.C2.3.9
Vatts, Simon	CA	IAC-15.B2.1.1
Vaxman, Eli	CA	IAC-15.B4.2.2
Vaxman, Eli	CA	IAC-15.B4.2.2
Vebb, Gerald	A	IAC-15.A7.2.1
Vebb, Ryan	CA	IAC-15.D2.IP.8
vebb, куап Veber-Steinhaus, Luise	CA	IAC-15.A5.2.1 IAC-15.E1.5.11
Vedler, Armin	CA	IAC-15.E1.5.11
Veeden, Brian	CA	IAC-15.D3.2.3
Veeden, Brian Veeden, Brian	CA	
Veems, Jon		IAC-15.E7.5.2 IAC-15.B3.3.1
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Vei, Baoxi		IAC-15.C4.9.5
Vei, Chuanfeng	CA	IAC-15.A2.2.7
Vei, Chuanfeng	CA	IAC-15.C3.2.7
Vei, Chuanfeng	CA	IAC-15.B2.4.9
Vei, Chuanfeng	CA	IAC-15.B3.9-YPVF.2.2
Vei, Chuanfeng	CA	IAC-15.C2.6.10
Vei, Chuanfeng	CA	IAC-15.C2.7.1
Vei, Chuanfeng	CA	IAC-15.C2.7.7
Vei, Chuanfeng	A	IAC-15.B3.7.3
Vei, Chuanfeng	CA	IAC-15.B3.7.8
Vei, Chuanfeng	CA	IAC-15.B3.7.9
Vei, Hu	A	IAC-15.A1.IP.3
Vei, Huang	A	IAC-15.D2.IP.4
Vei, Su	A	IAC-15.A3.IP.23

Wei, Wang	Α	IAC-15.C1.4.6
Wei, Xianggeng	CA	IAC-15.C4.9.3
Wei, Xianggeng	CA	IAC-15.C4.9.4
Wei, Xiangquan	CA	IAC-15.A6.IP.17
Wei, Zong	CA	IAC-15.A3.IP.11
Wei-hua, Han	Α	IAC-15.A6.IP.14
Weichen, Wang	CA	IAC-15.B3.7.9
Weifen, Huang	CA	IAC-15.A1.4.4
Weihs, Hendrik	CA	IAC-15.A3.1.3
Weiland, Stefan	CA	IAC-15.C2.1.1
Weiming, Li	Α	IAC-15.C1.IP.13
Weise, Jana	CA	IAC-15.D3.1.3
Weise, Jana	CA	IAC-15.E6.3.6
Weiss, Peter	CA	IAC-15.A3.2A.4
Weiss, Peter	CA	IAC-15.A5.3-B3.6.6
Weiss, Yaniv	CA	IAC-15.C1.4.8
Weissberg, Ilan	Α	IAC-15.D1.4.12
Weissman, Zvika	Α	IAC-15.D1.3.7
Weixing, Zhou	CA	IAC-15.C4.9.14
Weizman, Ayelet	А	IAC-15.E1.7.5
Welch, Chris	CA	IAC-15.D4.1.3
Welch, Chris	CA	IAC-15.A2.3.6
Welch, Chris	CA	IAC-15.A1.IP.15
Welch, Chris	CA	IAC-15.A1.6.7
Welch, Chris	CA	IAC-15.D4.4.7
Welch, Chris	Α	IAC-15.E5.4.3
Welch, Chris	CA	IAC-15.A3.2C.8
Weltman, Jonathan	А	IAC-15.E1.8.2
Wen, Mo	CA	IAC-15.A3.IP.27
Wen, Mo	CA	IAC-15.A3.IP.45
Wen, Xuezhong	CA	IAC-15.A6.3.3
Wen, Xuezhong	A	IAC-15.A6.IP.5
Wen-miao, Yang	CA	IAC-15.A3.IP.11
Weng, Shui-Lin	CA	IAC-15.C1.5.2
Wenli, Zhong	CA	IAC-15.C4.IP.12
Wenlong, LI	A	IAC-15.C4.1.3
Wenlong, LI	A	IAC-15.C4.9.1
Wenlong, LI	CA	IAC-15.C4.9.7
Wenlong, LI	CA	IAC-15.C4.9.8
Wenxiong, Xi	A	IAC-15.C4.IP.12
Wenzel, Peter	CA	IAC-15.C2.1.1
Weppler, Johannes	CA	IAC-15.E1.2.2
Weppler, Johannes	A	IAC-15.B3.5.6
Wessling, Francis	CA	IAC-15.B3.3.0
Westall, Frances	CA	IAC-15.E1.3.1
Whitesides, George	CA	IAC-15.B3.2.4
Whitesides, George	CA	IAC-15.B3.2.4
Whitesides, George	CA	IAC-15.B4.5.2
Whitesides, George	CA	IAC-15.D2.7.1
Whyard, Steve	CA	IAC-15.D2.7.1
Whyard, Steve		IAC-15.A1.IP.20
Whyard, Steve	CA CA	IAC-15.D1.3.4
· · · · · · · · · · · · · · · · · · ·		IAC-15.A1.6.4
Wiedemann, Carsten	Α	
Wiedemann, Josef Wiedemann, Josef	CA	IAC-15.D2.5.6
Wiesendanger, Reto	CA CA	IAC-15.D2.7.3 IAC-15.B4.4.5
<u> </u>		
Wiesendanger, Reto	CA	IAC-15.A6.6.2
Wieser, Matthias	CA	IAC-15.A6.IP.33
Wieser, Matthias	CA	IAC-15.A6.6.6
Wieser, Matthias	CA	IAC-15.B4.7.5
Wiggins, Jeffrey	CA	IAC-15.C2.6.3
Wikelski, Martin	CA	IAC-15.B2.1.9
Wilczynski, Lukasz	Α	IAC-15.E1.6.4
Wild, Elisabeth	CA	IAC-15.D2.5.10
Wild, Elisabeth	CA	IAC-15.C2.9.1

Wilde Paul	Α Α	IAC-15.E5.2.6
Willo Frie	Α	IAC-15.D6.1.8
Wille, Eric	CA	IAC-15.A7.1.4
Wille, Eric	A	IAC-15.A7.1.5 IAC-15.B4.4.5
Willi, Daniel Williams, Bobby	CA CA	IAC-15.B4.4.5
Williams, James	A	IAC-15.A3.3.1
Williams, James	CA	IAC-15.E6.3.4
Williams, James	CA	IAC-15.B4.6A.11
Williams, Maureen	A	IAC-15.E7.5.1
Wilson, Simon	CA	IAC-15.A6.2.11
Wiltsie, Nicholas	CA	IAC-15.A2.3.1
Wimmer-Schweingruber, Robert	CA	IAC-15.D4.4.1
Wimmer-Schweingruber, Robert	CA	IAC-15.D1.7.3
Winter, Frank H.	Α	IAC-15.E4.2.6
Winter, Michael	CA	IAC-15.C2.4.8
Winter, Othon	CA	IAC-15.C1.3.7
Wirnsberger, Harald	Α	IAC-15.A6.IP.45
Withers, Paul	CA	IAC-15.A3.3B.7
Witte, François	CA	IAC-15.D1.3.3
Witte, Lars	CA	IAC-15.D3.2.3
Witternigg, Norbert	Α	IAC-15.B2.3.2
Wittig, Manfred	CA	IAC-15.B2.3.5
Wittig, Manfred	A	IAC-15.B2.4.3
Wittig, Manfred Wiwattananon, Peerawan	CA CA	IAC-15.B2.4.4 IAC-15.C4.8.3
Wolahan, Andrew	A	IAC-15.D4.1.11
Wolanski, Piotr	CA	IAC-15.C4.1.11
Wolanski, Piotr	CA	IAC-15.E2.1.4
Wolanski, Piotr	CA	IAC-15.E1.3.11
Wolanski, Piotr	CA	IAC-15.D2.IP.2
Wolanski, Piotr Wolanski, Piotr	CA CA	IAC-15.B4.6A.2 IAC-15.D2.7.10
Wolf, Michael	CA	IAC-15.A5.3-B3.6.5
Wolf, Nadja	A	IAC-15.D3.4.1
Wolff, Marina	CA	IAC-15.C2.9.2
Wolff, Mikael	CA	IAC-15.B3.4-B6.5.4
Wollack, Edward J.	CA	IAC-15.A7.3.3
Wollstadt, Steffen Wong, Nathan	CA A	IAC-15.B1.IP.32 IAC-15.A3.2A.7
Wood, Danielle	A	IAC-15.B4.1.2
Woodcock, Neil	Α	IAC-15.C2.1.7
Woods, David	CA	IAC-15.E4.1.2
Wormnes, Kjetil	CA	IAC-15.D1.1.6
Wormnes, Kjetil	CA	IAC-15.A2.3.4
Wormnes, Kjetil Wormnes, Kjetil	CA	IAC-15.A6.IP.23 IAC-15.A6.5.8
Worms, Jean-Claude	A	IAC-15.A3.1.2
Worthington, Richard	CA	IAC-15.E1.8.1
Wortman, Kristin	CA	IAC-15.D4.4.4
Wu, An-Ming	A	IAC-15.A2.1.10
Wu, An Ming	Α Α	IAC-15.C1.IP.21
Wu, An-Ming Wu, Baolin	CA	IAC-15.D1.5.4 IAC-15.C1.5.11
Wu, Baoyuan	CA	IAC-15.C4.IP.16
Wu, Bin	A	IAC-15.A1.4.4
Wu, Bin	CA	IAC-15.B6.2.9
Wu, Dan	A	IAC-15.D5.1.10
WU, Di	CA	IAC-15.A2.4.1
Wu, Fenglei WU, Fenglei	CA	IAC-15.C1.2.10 IAC-15.C1.7.3
WU, Fenglei	CA	IAC-15.D1.6.10
WU, Fenglei	CA	IAC-15.D5.3.8
Wu, Haiyan	CA	IAC-15.B6.2.3
Wu, Honglu	Α	IAC-15.A1.8.4
Wu, Honglu	A	IAC-15.A1.5.7
Wu, Hongwei	CA	IAC-15.C2.IP.4
Wu, Jianjun WU, Jie	CA CA	IAC-15.C4.IP.50 IAC-15.C2.IP.23
Wu, Minger	A	IAC-15.C2.2.11
Wu, Shufan	A	IAC-15.B4.4.3
Wu, Shufan Wu, Shunan	A	IAC-15.B4.4.3 IAC-15.C1.5.4









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IAC-15.C2.6.10	
IAC-15.B3.7.13	
IAC-15.C4.9.13	
IAC-15.E7.5.4	
IAC-15.A3.2A.3	
IAC-15.A3.2C.10	
IAC-15.A2.2.10	
IAC-15.C1.5.4	
IAC-15.A3.5.8	
IAC-15.A3.IP.15	

Wu, Wenrui Wu, Wenrui

Wu, Xianyu Wu, Xiaodan Wu, Xue Ying Wu, Xueying
Wu, Yansen
Wu, Zhigang

Wyatt, E. Jay Wöbbekind, Mitja

Name	Role	Paper
Xavier, Tang Zhongkan	Α	IAC-15.B2.5.9
Xi, Fubiao	Α	IAC-15.B1.4.2
Xiang, Cheng	CA	IAC-15.D2.IP.12
Xianwen, NING	CA	IAC-15.C2.7.4
Xiao, Jie	CA	IAC-15.A3.2C.6
Xiao, Xie	CA	IAC-15.A3.2C.5
Xiao, Xueming	Α	IAC-15.A3.IP.21
Xiao, Yongxuan	CA	IAC-15.B2.1.11
Xiao, Zhen	CA	IAC-15.B1.IP.23
Xiao-tao, Luo	CA	IAC-15.A3.IP.11
Xiaochun, Li	CA	IAC-15.D1.5.7
Xiaofeng, Guo	CA	IAC-15.C3.IP.6
Xiaoguang, Luo	CA	IAC-15.C2.4.3
Xiaohe, Bai	Α	IAC-15.D2.IP.10
Xiaoke, Li	Α	IAC-15.D1.5.7
Xiaole, Li	CA	IAC-15.C2.IP.42
Xie, Beizhen	CA	IAC-15.A1.IP.12
Xie, Beizhen	CA	IAC-15.A1.IP.13
Xie, Beizhen	CA	IAC-15.A1.IP.17
Xie, YongChun	CA	IAC-15.C1.IP.15
Xie, YongChun	CA	IAC-15.A6.9.7
Xie, YongChun	CA	IAC-15.C1.6.9
Xin, Chen	Α	IAC-15.B2.4.8
Xin, Qi	CA	IAC-15.B2.4.9
Xing, Shiping	A	IAC-15.C2.1.3
Xing, Shiping	CA	IAC-15.C1.IP.2
Xing, Yitong	CA	IAC-15.C1.5.3
Xinrong, Wang	A	IAC-15.B2.5.11
Xiong, Weiming	CA	IAC-15.B2.5.10
Xiuyun, Cao	CA	IAC-15.E1.7.11
Xu, Bo	CA	IAC-15.C1.8.9
XU, Dezhen	CA	IAC-15.B2.IP.7
XU, Dezhen	A	IAC-15.C1.9.8
XU, GUOWU	CA	IAC-15.C2.IP.31
Xu, Hui	A	IAC-15.D5.3.8
Xu, Kan	A	IAC-15.A2.2.5
XU, Kao	A	IAC-15.C2.IP.11
Xu, Kunbo	CA	IAC-15.A6.3.8
Xu, Liang	CA	IAC-15.C2.5.4
Xu, Ming	CA	IAC-15.D2.3.6
Xu, Ming	CA	IAC-15.A3.2C.2
Xu, Ming	CA	IAC-15.A3.2C.2
	CA	
Xu, Qian	CA	IAC-15.C2.IP.10
Xu, Qin	CA	IAC-15.B4.8.11
Xu, Shijie		IAC-15.C1.4.2
Xu, Shijie	CA	IAC-15.C1.IP.6
Xu, Shijie	CA	IAC-15.A3.2C.2
Xu, Wen	Α	IAC-15.D6.1.2
Xu, Wenfu	CA	IAC-15.D4.1.7
Xu, Xiaojing	CA	IAC-15.A2.2.9
Xu, Yiwei	CA	IAC-15.C2.2.11
Xu, Yongsheng	CA	IAC-15.D4.1.7
Xue, Bingsen	CA	IAC-15.A6.IP.20
Xue, Huifeng	A	IAC-15.E5.IP.6
Xue, Shuyan	CA	IAC-15.C2.7.4
Xue-song, Ma	CA	IAC-15.C4.9.14
Xuefu, Chen	CA	IAC-15.C4.9.13

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Name	Role	Paper
Y Pla Trevas, Juliana	CA	IAC-15.E3.5-E7.6.6
Yabusaki, Daisuke	CA	IAC-15.D2.4.2
Yacobi, Lee	A	IAC-15.A7.2.4
Yadav, Radhika	A	IAC-15.E7.IP.15
YAGISHITA, Tsuyoshi	CA	IAC-15.C4.1.8
YAGISHITA, Tsuyoshi	CA	IAC-15.C4.3.2
Yaglioglu, Burak	CA	IAC-15.E1.6.8
Yahata, Tadayoshi	CA	IAC-15.E5.5.9
Yajima, Saho	CA	IAC-15.E1.7.11
Yam, Chit Hong Yamada, Tetsuya	CA CA	IAC-15.C1.1.8 IAC-15.A3.1.3
Yamagishi, Akihiko	CA	IAC-15.A3.1.3
Yamamoto, Shinichi	CA	IAC-15.B2.6.7
Yamamoto, Yukimitsu	A	IAC-15.B1.1.1
Yamashiro, Ryoma	Α	IAC-15.D2.1.6
Yamashiro, Ryoma	CA	IAC-15.E1.5.11
Yan, Bo	Α	IAC-15.C2.5.8
Yan, Dong	CA	IAC-15.D1.4.11
Yan, Dong	A	IAC-15.D5.4.7
Yan, Jun	CA	IAC-15.A6.3.2
Yan, Zhang	A	IAC-15.C4.4.8
Yan-ping, Qin	A	IAC-15.C4.IP.16
Yang, Bo	A	IAC-15.D1.2.8
Yang, Chen	A	IAC-15.C3.1.7
Yang, Chen	CA	IAC-15.C2.2.9
Yang, Chen	A	IAC-15.C2.3.10
YANG, CHEN	A	IAC-15.B6.IP.2
Yang, Chen	A CA	IAC-15.C2.IP.48 IAC-15.C2.4.7
Yang, Dong Yang, Dong	CA	IAC-15.C2.4.7
Yang, Eric Jing-Bo	CA	IAC-15.E2.3-YPVF.4.7
Yang, Fan	CA	IAC-15.D1.2.5
Yang, Fan	A	IAC-15.D1.IP.4
Yang, Guanglie	CA	IAC-15.C1.6.4
Yang, Haifeng	CA	IAC-15.B3.7.13
Yang, Haoliang	A	IAC-15.B4.5.5
Yang, Hong	CA	IAC-15.B2.4.9
YANG, Hongwei	CA	IAC-15.D4.1.8
Yang, Inseok	A	IAC-15.D5.IP.1
YANG, Jian	CA	IAC-15.A5.IP.5
Yang, Jianwen	CA	IAC-15.C4.IP.17
Yang, Jianwen	A	IAC-15.C4.IP.20
Yang, Jianwen	CA	IAC-15.C4.IP.24
Yang, Lei	CA	IAC-15.C4.IP.13
Yang, Lingxuan	CA	IAC-15.A6.4.11
Yang, Sheng	A	IAC-15.B3.IP.5
Yang, Shengsheng Yang, Tong	CA A	IAC-15.C3.3.7 IAC-15.B2.5.13
Yang, Wang	CA	IAC-15.B2.5.13
Yang, Weidong	CA	IAC-15.B2.4.9
YANG, WEIWEI	A	IAC-15.C4.3.7
Yang, Xinfeng	CA	IAC-15.C2.IP.47
Yang, Yuguang	CA	IAC-15.B4.8.3
Yang, Yuguang	CA	IAC-15.D2.8-A5.4.3
Yang, Zhen	CA	IAC-15.A7.3.4
Yang, Zhi	CA	IAC-15.C3.3.7
Yang, Zhi	CA	IAC-15.E1.4.7
Yang, Zhi	CA	IAC-15.C2.IP.47
Yang, Zhi	A	IAC-15.D1.4.4
Yang Yang, Fan	CA	IAC-15.A6.6.8
Yaniv, Yoram	CA	IAC-15.B1.2.1
Yanji, Hong	CA	IAC-15.C4.IP.12
Yao, Na	CA	IAC-15.C3.1.7
Yao, Na	CA	IAC-15.C2.2.9
Yao, Na	CA	IAC-15.D4.1.7
Yao, Na	A	IAC-15.B1.IP.27
Yao, Na	CA	IAC-15.C2.IP.48
Yao, Na	CA	IAC-15.C1.6.2
Yao, Shiqiang	CA	IAC-15.C4.IP.2
Yao, Tianliang Yao, Wei	CA	IAC-15.C4.6.6
Yao, Wei	LA	IAC-15.A2.2.7

ao, Wen	A	IAC-15.B4.6A.5
ao, Xigang	CA	IAC-15.E1.7.11
asaka, Tetsuo axing, Cai	CA CA	IAC-15.A6.1.8 IAC-15.B2.6.11
e, Caiyong	CA	IAC-15.B2.0.11
e, Lin	A	IAC-15.C2.IP.28
e, Zhongyuan	CA	IAC-15.C4.IP.54
emets, Taras	CA	IAC-15.D2.7.7
emets, Vitaly	Α	IAC-15.D2.7.7
enne, Ezekiel	Α	IAC-15.B1.IP.20
esil, Ali	CA	IAC-15.A1.7.7
i, Xia	CA	IAC-15.B2.4.9
in, Mingwei	CA	IAC-15.A3.2C.14
in, Mingwei	CA	IAC-15.A3.2C.15
in, Yanxin	A	IAC-15.A2.2.9
in, Yuchen	CA	IAC-15.C2.5.10
ingChun, Liu INGCHUN, ZHANG	CA CA	IAC-15.B2.IP.6 IAC-15.D4.1.7
INGCHUN, ZHANG	CA	IAC-15.D4.1.7
iwei, Liu	A	IAC-15.C1.3.11
iyong, Huang	CA	IAC-15.C2.IP.1
okota, Rikio	CA	IAC-15.C3.3.6
ong, Sang Soon	CA	IAC-15.B1.4.5
ong, Shi	CA	IAC-15.B3.IP.5
ong, Shi	CA	IAC-15.B3.7.8
ong, Shi	CA	IAC-15.B3.7.9
ongkang, Zhang	CA	IAC-15.A2.6.9
ongkang, Zhang	Α	IAC-15.B4.6A.8
ongliang, Xiong	CA	IAC-15.C4.2.11
ongqiang, Yang	CA	IAC-15.C4.1.13
oo, Bernard	CA	IAC-15.A6.2.2
oon, Youngbin	CA	IAC-15.C4.1.12
oon, Zizung	A	IAC-15.B2.1.10
oshida, Makoto	Α Α	IAC-15.C4.5.1
oshimitsu, Tetsuo	A	IAC-15.A3.4.5 IAC-15.E1.7.7
oshitomi, Susumu oshitomi, Susumu	A	IAC-15.E1.7.7
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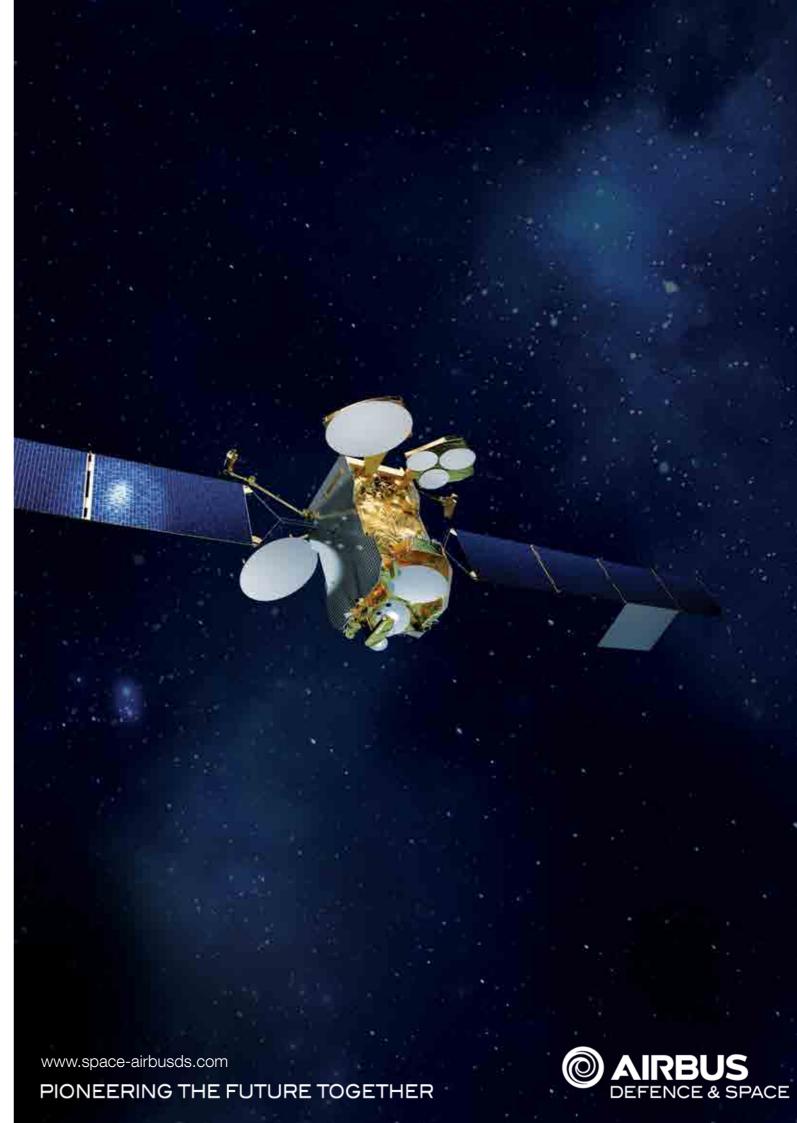
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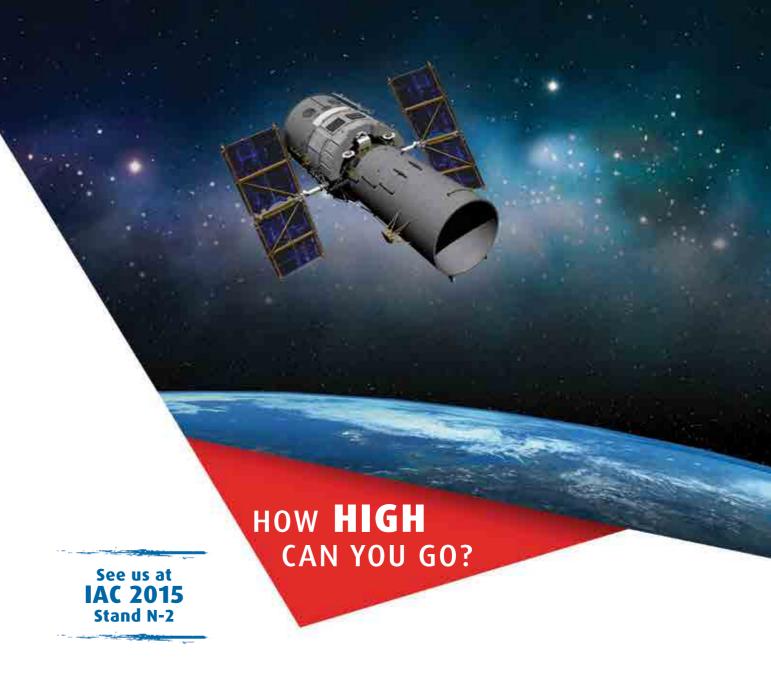
















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