71st IAC 2020
The CyberSpace Edition

ORGANIZED AND HOSTED BY:

FINAL PROGRAMME

71st International Astronautical Congress

– The CyberSpace Edition

12-14 October 2020

IAF Connecting @ll Space People

SUPPORTED BY:

SGAC

www.iac2020.org

DLR at the IAC CyberSpace Edition

12 October 2020:
Join our GNF Panel 'Science for Future – Earth Observation Technologies in the Age of Climate Change'

Visit us at the exhibition:
We present the current and future projects and goals of German spaceflight – around the clock on all three days

Get in touch
with the scientists at our virtual stand

About DLR

DLR is the Federal Republic of Germany's research centre for aeronautics and space. We conduct research and development activities in the fields of aeronautics, space, energy, transport, security and digitalisation. The DLR Space Administration plans and implements the national space programme on behalf of the federal government. Two DLR project management agencies oversee funding programmes and support knowledge transfer.

Climate, mobility and technology are changing globally. DLR uses the expertise of its 55 research institutes and facilities to develop solutions to these challenges. Our 9000 employees share a mission – to explore Earth and space and develop technologies for a sustainable future. In doing so, DLR contributes to strengthening Germany's position as a prime location for research and industry.

Image: NASA/A. Fujii

DLR Deutsches Zentrum für Luft- und Raumfahrt
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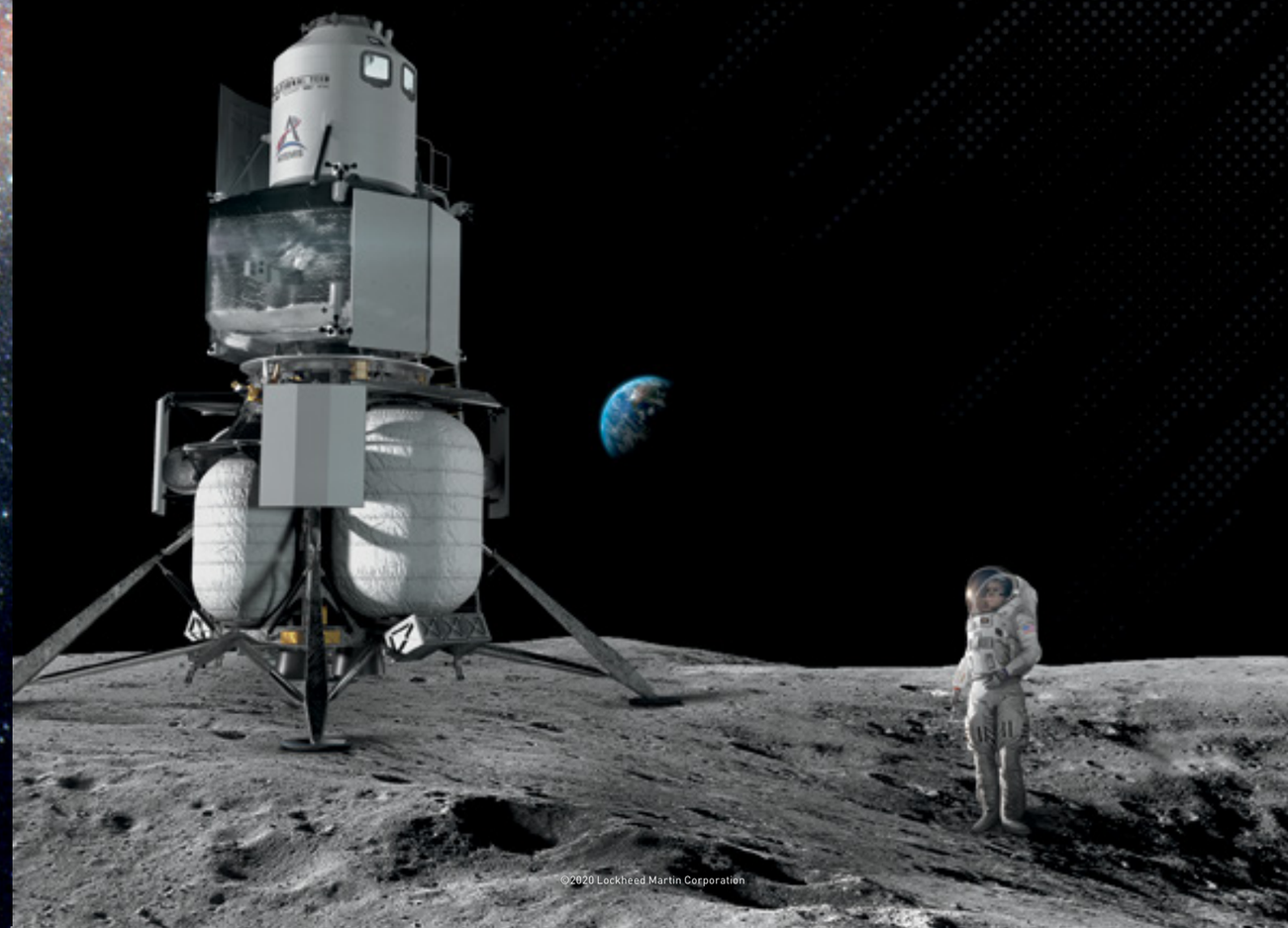

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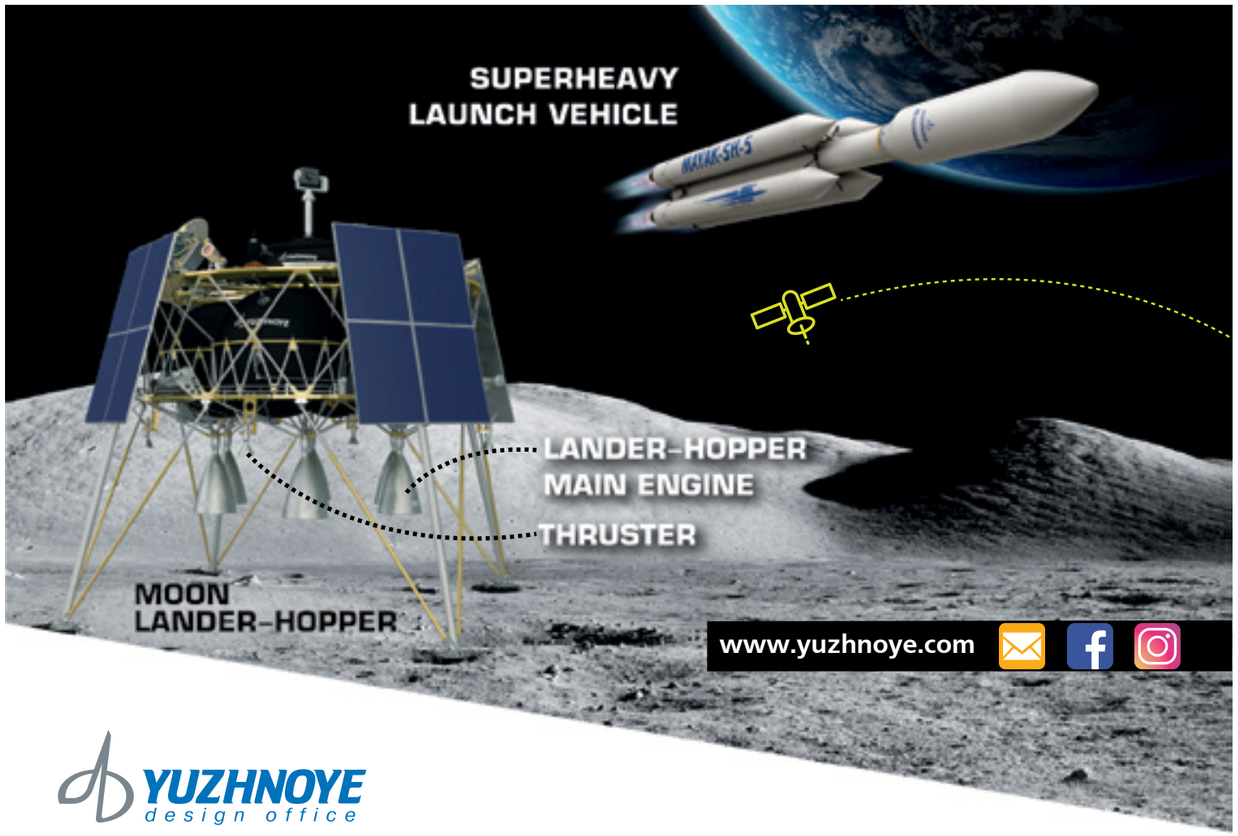

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CONNECTING EARTH AND SPACE

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Sustainable exploration and discovery require reliable and highly flexible space infrastructure. Maxar has decades of experience in providing spacecraft, high-power electric propulsion, communication systems and robotics.

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TO RETURN AMERICA
TO THE MOON
TO STAY

HUMAN LANDING SYSTEM
NATIONAL TEAM

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DRAPER

CHANGING OUR WORLD BY LOOKING BEYOND IT.

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After fifty years of searching for answers in the depths of space, we know a thing or two about the value our technology can bring. We're passionate about leading innovations – from flexible payloads, fully reconfigurable satellites and series production satellites, to human spaceflight missions. And we're dedicated to exploring new territories: climate change monitoring, connecting passengers in aircraft wherever they are flying, or the next big thing nobody's even thought of yet. Through our people and products we're enabling humankind to take its next strides. Both here and beyond the stars.

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Asi

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SPACE ECONOMY
SPACE OPPORTUNITY

According to current estimates, the downstream space sector is already expressing an economic potential 4-5 times greater than the upstream one, as it is destined to grow further over the next decade.

Italy is one of the few countries in the world that has a complete product chain in the space sector, an important factor for strengthening the downstream sector.

The Italian space industry is made up of approximately 250 companies with total revenues of approximately 1.6 billion euro. Approximately 6,000 people work in the Italian space sector.

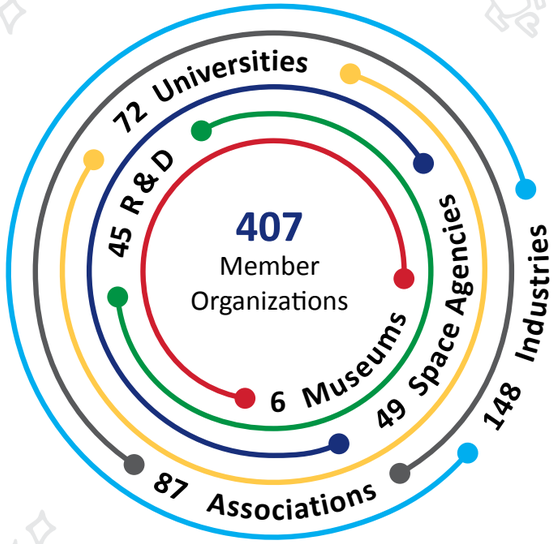
INTERNATIONAL ASTRONAUTICAL FEDERATION

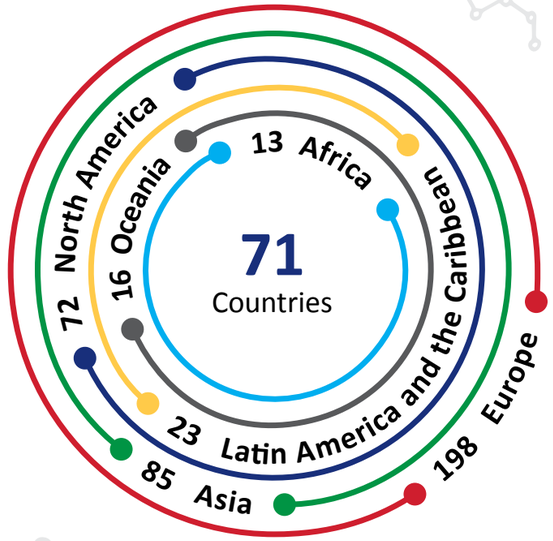
Connecting @ll Space People

Become an IAF Member

- ✔ Download the Application Form on www.iafastro.org
- ✔ Participate in the IAF Committees in charge of defining the the IAC Technical Programme
- ✔ Propose to host a Plenary Event during the IAC
- ✔ Propose a Global Networking Forum (GNF) Event to showcase your organization's latest achievements or to discuss the most interesting topics about Space
- ✔ Participate and vote in the General Assembly and nominate IAF Officers
- ✔ Host one of our events!

Join the IAF, the world leading space advocacy body!





Join Us

1

Download the **Application Form** on our website (www.iafastro.org) or request it to the Secretariat.

2

Complete the Application Form and attach the **requested documents.**

3

Send everything to our Secretariat. (info@iafastro.org)

4

We will review your application and ask in case of missing information.

5

Once reviewed, your application will be recommended by the **IAF General Counsel**.

6

Final approval by the General Assembly during the IAC.

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INTERNATIONAL ASTRONAUTICAL FEDERATION

- Founded in 1951 to promote dialogue and cooperation in a world divided by the Cold War
- Currently the world leading space advocacy body
- Established to encourage **cooperation**, share knowledge, promote **international development** and ...
- ***Connecting @ll Space People***

IAF ANNUAL EVENTS

THE INTERNATIONAL ASTRONAUTICAL FEDERATION CONGRESS (IAC)

- IAC 2017 – Adelaide
- IAC 2018 – Bremen
- IAC 2019 – Washington, D.C.
- IAC 2020 – The CyberSpace Edition
- IAC 2021 – Dubai
- IAC 2022 – Paris
- IAC 2023 – Baku

THE IAF SPRING MEETINGS

- Paris

THE GLOBAL SERIES CONFERENCES

- GLEX 2017 – Beijing
- GLEC 2019 – Marrakech
- GLAC 2018 – Montevideo
- GLEX 2021 – St. Petersburg
- GLOC 2022 – Oslo

THE INTERNATIONAL SPACE FORUM AT MINISTERIAL LEVEL

- ISF 2016 – Trento
- ISF 2018 – Buenos Aires
- ISF 2017 – Nairobi
- ISF 2019 – Reggio Calabria
- ISF 2021 – Kuala Lumpur

Be part of the conversation @iafastro

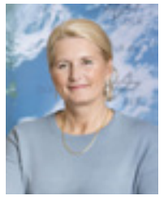
1. WELCOME MESSAGE

On behalf of the International Astronautical Federation (IAF) I would like to welcome you to the 71st International Astronautical Congress – The CyberSpace Edition. This CyberSpace IAC 2020 is unique in several aspects.

First, the conference is held online in a virtual format as a **CyberSpace Edition** for the very first time. As witnessed by the world, since its first edition in 1950, the IAC has been THE place for all space people to come together and discuss about the latest developments in space. Since the beginning of this year we find ourselves in an exceptional situation worldwide due to COVID-19 pandemic. The IAF is determined more than ever to play its unifying role for the space community. The IAC 2020 – The CyberSpace Edition is allowing us to come together in these challenging times, even if physical meetings are near-impossible.

Secondly, for the first time in its 71 years of existence, the IAC will be offered without registration fee, free of charge for a global community. This is opening the doors of the most important congress of the space community to new communities and stakeholders that would normally not have the means and/or time to physically travel to an IAC. And for this, I would like to thank all our sponsors and donors to make it possible.

Last but not least, this year the theme of the congress is *"IAF Connecting @ll Space People"* because this is what the world needs right now. During the IAF Spring Meetings in March 2020, the IAF has connected all its volunteers from all over the world working at impossible hours to allow the IAF to keep connecting all space people. We would like to thank all these volunteers for their incredible work as well as all applicants and we deeply regret that many interesting and well-written papers were not accepted due to the limit of the space. The IAF and the whole space community have shown the world once again, that for space there are no boundaries and that the more we connect, the better we overcome all threats as one planet Earth. We will owe the success of this #CYBERSPACEIAC2020 to all of us, the space people.



Pascale Ehrenfreund
President,
International Astronautical Federation (IAF),
France

2. ORGANIZER AND HOST

2.1 International Astronautical Federation (IAF)

Founded in 1951, the International Astronautical Federation is the world's leading space advocacy body. The IAF has more than 407 members from 71 countries, including all leading space agencies, companies, societies, associations and institutes worldwide.

Following its theme – *"A space-faring world cooperating for the benefit of humanity"* and its motto *"Connecting @ll Space People"* - the Federation advances knowledge about space and fosters the development and application of space assets by advancing global cooperation.

As organizer of the annual International Astronautical Congress (IAC), and other meetings on specific subjects, the IAF actively encourages the development of space for peaceful purposes and supports the dissemination of scientific and technical information related to space.

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Connecting @ll Space People

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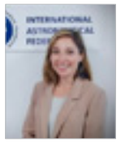

Carina Viehboeck
Projects Assistant

Elena Feichtinger
Projects Manager and Special Advisor (Volunteer)

Martin Feichtinger
Administrative & Project Support

3. IAC PARTNER ORGANIZATIONS

3.1 International Academy of Astronautics (IAA)

The International Academy of Astronautics is a community of leading experts committed to expanding the frontiers of space. To foster the development of astronautics, the Academy undertakes a number of activities, including the recognition of outstanding contributors through elections and awards. The IAA is a unique independent non-governmental organization established in 1960 and recognized by the United Nations in 1996. With 1177 elected members and corresponding members from 91 nations, the International Academy of Astronautics 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 more than 72 studies to date and is engaged in the preparation of 42 others. The Academy also publishes four book series and the journal Acta Astronautica ranked 1st in the space area in the world. The Academy organizes about 25 conferences and regional meetings per year. In addition, the Academy activity also includes, in cooperation with the IAF and the IISL, the traditional contribution to the IAC, where the Academy organizes 13 symposia. The IAA is the only International Academy of elected members in the broad area of astronautics and space.

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3.2 The International Institute of Space Law (IISL)

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

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

The IISL is an officially recognized observer at sessions of the United Nations Committee on the Peaceful Uses of Outer Space, and its Scientific & Technical and Legal Subcommittees. Further information regarding the IISL can be found at www.iislweb.org.

International Institute of Space Law
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WELCOME MESSAGE
ORGANIZER & HOST
IAC PARTNER ORGANIZATIONS
PLATFORM / PRACTICAL INFORMATION
CONGRESS SCHEDULE
DAILY PROGRAMME
TECHNICAL PRESENTATIONS
IAF AWARDS
SPONSORS & EXHIBITION
IAF MEMBERS

3.3 The Space Generation Advisory Council (SGAC)

The Space Generation Advisory Council in Support of the United Nations Programme on Space Applications is a global nongovernmental, non-profit (US 501(c)3) organization and network which aims to represent university students and young space professionals ages 18-35 to the United Nations, space agencies, industry, and academia. Headquartered in Vienna, Austria, the SGAC network of members, volunteers and alumni has grown to more than 15000 members representing more than 150 countries.

SGAC was conceived at UNISPACE III in 1999, as part of the Vienna Declaration, "To create a council to support the United Nations Committee on the Peaceful Uses of Outer Space, through raising awareness and exchange of fresh ideas by youth. The vision is to employ the creativity in advancing humanity through peaceful uses of space". SGAC holds Permanent Observer status at the United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS) and regularly takes part in the annual meeting, as well as its Legal and Scientific and Technical Subcommittees. SGAC holds consultative status at the United Nations Economic and Social Council (UN ECOSOC), contributing to discussions on the role of space in achieving the UN Sustainable Development Goals.

As a volunteer-run organisation, SGAC believes in empowering its members and providing them with opportunities for professional development through roles in the SGAC teams.

Further information regarding SGAC can be found at www.spacegeneration.org

Space Generation Advisory Council

% European Space Policy Institute
Schwarzenbergplatz 6
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W: www.spacegeneration.org
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4. PRACTICAL INFORMATION

How do I connect to the platform?

In order to connect to the event you need to register at https://iac2020.vfairs.com/. Here you will be able to access the IAC 2020 virtual platform.

How do I join a live session?

In order to join one of the live streams please go to the "Live Sessions" in the platform and enter by clicking on the screen. Here all the sessions will be provided in a list. Each day consists of one continuous stream so you can simply stay on to follow all the streams of the day.

How can I interact during the sessions?

We strongly encourage all participants to engage and interact through our Slido platform. You can access the Slido either through www.slido.com by entering the hashtag IAC2020 or by using the IAF app under "Ask a Question".

Is there an official hashtag for the event on social media?

Yes please tag your post with #CyberSpaceIAC2020

Are there Technical Presentations?

Yes, more than 1300 Technical Presentations have been prepared in the form of a video lecture this year. You will be able to access all the video lectures and the corresponding manuscripts through the "Technical Gallery" on the IAC 2020 platform. By simply clicking on the screen you will be able to see all uploaded Technical Presentations divided by Symposium.

Can you connect with an Author?

Should you wish to get in touch with an author, please note that the contact details are available on the first page of the author's manuscript.

Will there be an IAC proceedings?

Yes all the IAC papers will be collected in the IAC 2020 proceedings which will be shared with all delegates after the congress.

I have Technical Problems who can I contact?

In case you experience any technical issues at the IAC 2020 platform please reach out to tech@vfairs.com who will be able to provide you with technical assistance.

How do I access to the Digital Congress Bag?

In order to access the Digital Congress Bag please click on the following link. You will be able to visit our congress bag and take advantage of all the exciting inserts!

Is there an Exhibition?

Yes there is a virtual IAC exhibition with 34 Exhibitors. Please go to the Exhibit Hall on the platform and you find all of them there. You will be able to chat with the exhibitors, watch videos and view publications.

Is there an app?

Yes there is an app! You find it on the app store under the name iafastro. The app is a great tool to easy find information about the event and receive important notifications.

How can I provide my comments and feedback on the event?

After the IAC 2020 event, a questionnaire will be sent out to all IAC participants. Here you can rate the different events and provide any comments you might have both good and bad. We always appreciate to receive the delegates' valuable feedback. During the event there is also a Social Wall on the IAF app, where you can leave comments and feedbacks or any thoughts you would like to share.

If you have any other questions please reach out to the IAF Secretariat at info@iafastro.org

5. CONGRESS SCHEDULE

TUESDAY 6 OCTOBER

TIMES ZONES					EVENT	EVENT	EVENT	EVENT
Sydney	Beijing	**Paris Time**	Washington	Los Angeles				
21:00	18:00	**12:00**	06:00	03:00	IPC Steering Group *12:00 – 13:30*			IAF Administrative Committees
22:00	19:00	**13:00**	07:00	04:00			IAF Space Transportation Committee *12:45 – 13:45*	
23:00	20:00	**14:00**	08:00	05:00		IAF Technical Activities Committee (TAC) *14:00 – 15:30*		IAF Committee for Liaison with International Organizations and Developing Nations (CLIODN) *14:00 – 15:30*

TUESDAY 6 OCTOBER

Sydney	Beijing	**Paris Time**	Washington	Los Angeles
00:00	21:00	**15:00**	09:00	06:00
01:00	22:00	**16:00**	10:00	07:00
02:00	23:00	**17:00**	11:00	08:00
03:00	00:00	**18:00**	12:00	09:00

IAF Space Astronomy Technical Committee
15:45 – 17:15

IAF Space Education and Outreach Committee (SEOC)
15:30 – 17:30

IAF Space Economy Committee
16:00 – 17:00

IAF Finance Committee
16:00 - 18:00

IAF GRULAC
17:30 - 18:00

IAF Space Museums and Science Centres Committee
15:00 - 16:30

IAF Space Societies Committee
16:30 - 18:00

WEDNESDAY 7 OCTOBER

TIMES ZONES					EVENT	EVENT	EVENT	EVENT	EVENT
Sydney	Beijing	**Paris Time**	Washington	Los Angeles					
21:00	18:00	**12:00**	06:00	03:00	IAF Space Habitats Committee *12:00 – 13:30*				
22:00	19:00	**13:00**	07:00	04:00	IAF Earth Observations Committee *13:30 – 15:00*	IAF Space Propulsion Technical Committee *13:45 – 15:30*	Knowledge Management for Space Organizations Technical Committee (KMTC) *13:15 - 14:45*	IAF Space Commu-nications and Navigation Committee *13:15 - 14:45*	
23:00	20:00	**14:00**	08:00	05:00					IAF Committee on Developing Countries and Emerging Communities (ACDCEC) *14:00 - 16:00*	IAF Honours and Awards Committee (HAC) *14:00 - 15:30*

WEDNESDAY 7 OCTOBER

Sydney	Beijing	**Paris Time**	Washington	Los Angeles
00:00	21:00	**15:00**	09:00	06:00
01:00	22:00	**16:00**	10:00	07:00
02:00	23:00	**17:00**	11:00	08:00
03:00	00:00	**18:00**	12:00	09:00

IAF Earth Observations Committee
15:00 – 16:30

IAF Subcommittee on the Global Earth Observation System of Systems (GEOSS)
16:30 – 18:00

IAF Committee on Integrated Applications
17:00 – 18:00

IAF Human Spaceflight Committee
15:00 – 16:45

IAF Entrepreneurship and Investment Committee (EIC)
16:30 – 18:00

IAF Industry Relations Committee
16:00 – 17:30

IAF Workforce Development-Young Professionals Programme Committee (WD-YPP)
16:00 - 17:30

THURSDAY 8 OCTOBER

TIMES ZONES					EVENT	EVENT	EVENT	EVENT	EVENT
Sydney	Beijing	**Paris Time**	Washington	Los Angeles					
21:00	18:00	**12:00**	06:00	03:00					
22:00	19:00	**13:00**	07:00	04:00		IAF Space Life Sciences Committee *13:00 - 14:00*		IAF Space Universities Administrative Committee (SUAC) *13:30 - 15:00*	
23:00	20:00	**14:00**	08:00	05:00	GLEX 2021 IPC Meeting *14:00 - 15:30*				

THURSDAY 8 OCTOBER

Sydney	Beijing	Paris Time	Washington	Los Angeles					
00:00	21:00	**15:00**	09:00	06:00					
						IAF Committee on Space Security *15:30 – 16:30*	IAF Enterprise Risk Management Committee (ERMC) *15:30 – 17:00*	IAF Next Generation Coordination Committee (NGCC) *15:30 – 17:00*	
01:00	22:00	**16:00**	10:00	07:00	IAF Committee for the Cultural Utilisation of Space (ITACCUS) *16:00 –17:00*				IAF New Communities Meeting *16:00 – 17:30*
						IAF Committee on Near Earth Objects (NEO) *16:30 – 18:00*			
02:00	23:00	**17:00**	11:00	08:00	IAF Global Workforce Development Subcommittee *17:00 – 18:00*				
03:00	00:00	**18:00**	12:00	09:00					

FRIDAY 9 OCTOBER

TIMES ZONES					EVENT	EVENT	EVENT	EVENT	EVENT
Sydney	Beijing	**Paris Time**	Washington	Los Angeles					
21:00	18:00	**12:00**	06:00	03:00					IAF Bureau *12:00 - 14:00*
22:00	19:00	**13:00**	07:00	04:00			IAF Materials and Structures Committee *13:00 - 14:30*		
						IAF Commercial Spaceflight Safety Committee *13:30 - 15:00*			
23:00	20:00	**14:00**	08:00	05:00	IAA Space Debris Committee *14:00 - 15:30*				

FRIDAY 9 OCTOBER

Sydney	Beijing	Paris Time	Washington	Los Angeles					
00:00	21:00	**15:00**	09:00	06:00		IAF Space Systems Committee *15:00 - 16:30*			
					IAF Technical Committee on Space Traffic Management *15:30 - 17:00*				
01:00	22:00	**16:00**	10:00	07:00			IAF Space Exploration Committee *16:00 - 17:30*		
02:00	23:00	**17:00**	11:00	08:00				IAF/IAA/IISL Administrative Committee on History Activities (ACHA) *17:00 -18:00*	
03:00	00:00	**18:00**	12:00	09:00					

SATURDAY 10 OCTOBER

TIMES ZONES					EVENT	EVENT
Sydney	Beijing	**Paris Time**	Washington	Los Angeles		
00:00	21:00	**15:00**	09:00	06:00	**The Next-Gen Summit** *15:00 - 19:00*	
01:00	22:00	**16:00**	10:00	07:00		
02:00	23:00	**17:00**	11:00	08:00		
03:00	00:00	**18:00**	12:00	09:00		
04:00	01:00	**19:00**	13:00	10:00		

SUNDAY 11 OCTOBER

TIMES ZONES					EVENT	EVENT
Sydney	Beijing	**Paris Time**	Washington	Los Angeles		
20:00	17:00	**11:00**	05:00	02:00		**IPMC Workshop Online Technical Gallery** (accessible 24 hours)
21:00	18:00	**12:00**	06:00	03:00		
22:00	19:00	**13:00**	07:00	04:00	**IPMC Young Professionals Workshop** *15:30 – 18:30*	
23:00	20:00	**14:00**	08:00	05:00		

SUNDAY 11 OCTOBER

Sydney	Beijing	**Paris Time**	Washington	Los Angeles
00:00	21:00	**15:00**	09:00	06:00
01:00	22:00	**16:00**	10:00	07:00
02:00	23:00	**17:00**	11:00	08:00
03:00	00:00	**18:00**	12:00	09:00
04:00	01:00	**19:00**	13:00	10:00

MONDAY 12 OCTOBER | OPENING/AGENCY DAY

TIMES ZONES					LIVE SESSIONS	TECHNICAL SESSIONS	VIRTUAL EXHIBITION
Sydney	Beijing	**Paris Time**	Washington	Los Angeles			
22:00	19:00	**13:00**	07:00	04:00			
					Introduction | *13:50 – 14:00*		
23:00	20:00	**14:00**	08:00	05:00	Opening Ceremony *14:00 – 14:30*		
					DLR Promotional Announcement | *14:30 – 14:35*		
					Lockheed Martin Promotional Announcement | *14:35 – 14:40*		
					PE (Heads of Agencies) *14:40 – 15:30*	Technical Presentations Online Gallery (accessible 24 hours from Monday 12 October, 14:40 Paris Time to Wednesday 14 October, 16:30 Paris Time)	Virtual Exhibition (accessible 24 hours from Monday 12 October, 14:40 Paris Time to Wednesday 14 October, 16:30 Paris Time)
00:00	21:00	**15:00**	09:00	06:00			
					Press Conference with Heads of Agencies *15:30 – 15:50*		
					ESA Promotional Announcement | *15:50 – 16:00*		

MONDAY 12 OCTOBER | OPENING/AGENCY DAY

Sydney	Beijing	**Paris Time**	Washington	Los Angeles	
01:00	22:00	**16:00**	10:00	07:00	**SpS – State and Response of the Global Space Sector During COVID-19** *16:00 – 16:40*
02:00	23:00	**17:00**	11:00	08:00	**IAF GNF - DLR Panel: Science for Future – Earth Observation Technologies in the Age of Climate Change** *16:40 – 17:20*
					Thales Alenia Space Promotional Announcement | *17:20 – 17:30*
					HLL (IAF World Space Award) – The Chang'e 4 Mission *17:30 – 18:00*
03:00	00:00	**18:00**	12:00	09:00	**Northrop Grumman Promotional Announcement** | *18:00 – 18:05*
					ESA Promotional Announcement | *18:05 - 18:10*
					NASA Session NASA: Exploring as One (Streamed in parallel by NASA TV) *18:10 – 18:50*
					Recap Session | *18:50 - 19:00*
04:00	01:00	**19:00**	13:00	10:00	
05:00	02:00	**20:00**	14:00	11:00	

Tuesday 13 October | INDUSTRY DAY

Times Zones					LIVE SESSIONS	TECHNICAL SESSIONS	VIRTUAL EXHIBITION
Sydney	Beijing	**Paris Time**	Washington	Los Angeles			
21:00	18:00	**12:00**	06:00	03:00		**Technical Presentations Online Gallery** (accessible 24 hours from Monday 12 October, 14:40 Paris Time to Wednesday 14 October, 16:30 Paris Time)	**Virtual Exhibition** (accessible 24 hours from Monday 12 October, 14:40 Paris Time to Wednesday 14 October, 16:30 Paris Time)
22:00	19:00	**13:00**	07:00	04:00			
					Introduction | *13:30 - 13:40*		
					IAF Excellence in Industry Award Ceremony *13:40 – 14:00*		
23:00	20:00	**14:00**	08:00	05:00	IAF GNF – ISS Commercialization and Future Industry Innovation in Low Earth Orbit *14:00 – 14:40*		
					Arianespace Promotional Announcement | *14:40 – 14:50*		
					PE - Small and Medium Sized Companies – Strategies for Survival and Recovery in the Age of COVID-19 *14:50 – 15:30*		

Tuesday 13 October | INDUSTRY DAY

Sydney	Beijing	Paris Time	Washington	Los Angeles	
00:00	21:00	**15:00**	09:00	06:00	Lockheed Martin Promotional Announcement | *15:30 – 15:35* Blue Origin Promotional Announcement | *15:35 - 15:40* IAF GNF – The Artemis Mission *15:40 – 16:20*
01:00	22:00	**16:00**	10:00	07:00	IAF GNF – Orion, The Foundation for Crewed Exploration of Deep Space *16:20 – 17:00*
02:00	23:00	**17:00**	11:00	08:00	Networking Session - Inspiration and Innovation: Public/Private Partnerships as a catalyst for the Next Generation *17:00 – 17:40* Thales Alenia Space Promotional Announcement | *17:40 - 17:50* HLL - MEV 1: The World's First

Tuesday 13 October | INDUSTRY DAY

Sydney	Beijing	Paris Time	Washington	Los Angeles	
03:00	00:00	**18:00**	12:00	09:00	**Commercial On-Orbit Servicing Mission** HLL *17:50 – 18:20*
					DLR Promotional Announcement | *18:20 - 18:25*
					Blue Origin Promotional Announcement | *18:25 - 18:30*
					NASA Session International Participation in the Artemis Programme (Streamed in parallel on NASA TV) *18:30 – 19:10*
04:00	01:00	**19:00**	13:00	10:00	**Recap Session** | *19:10 - 19:20*
05:00	02:00	**20:00**	14:00	11:00	

Wednesday 13 October | DIVERSITY/OUTREACH DAY

Times Zones					LIVE SESSIONS	TECHNICAL SESSIONS	VIRTUAL EXHIBITION
Sydney	Beijing	**Paris Time**	Washington	Los Angeles			
21:00	18:00	**12:00**	06:00	03:00		**Technical Presentations Online Gallery** (accessible 24 hours from Monday 12 October, 14:40 Paris Time to Wednesday 14 October, 16:30 Paris Time)	**Virtual Exhibition** (accessible 24 hours from Monday 12 October, 14:40 Paris Time to Wednesday 14 October, 16:30 Paris Time)
					Introduction | *12:50 – 13:00*		
22:00	19:00	**13:00**	07:00	04:00	**CGTN TV / IAF Session – New Era in Commercial Space** (Streamed in parallel on CGTN TV) *13:00 – 13:40*		
					IAF Excellence in 3G Diversity Award Ceremony *13:40 – 14:00*		
23:00	20:00	**14:00**	08:00	05:00	**SpS – Unleashing the Potential of Artificial Intelligence (AI) and Machine Learning (ML) into Space** *14:00 - 14:40*		
					DLR Promotional Announcement | *14:40 –14:45*		
					Northrop Grumman Promotional Announcement | *14:45 –14:50*		
					PE – Early 2020s – Launch of Worldwide Missions to Mars *14:50 – 15:30*		

Wednesday 13 October | DIVERSITY/OUTREACH DAY

Sydney	Beijing	**Paris Time**	Washington	Los Angeles
00:00	21:00	**15:00**	09:00	06:00
01:00	22:00	**16:00**	10:00	07:00
02:00	23:00	**17:00**	11:00	08:00
03:00	00:00	**18:00**	12:00	09:00

ESA Promotional Announcement | *15:30 – 15:35*

IAF Promotional Announcement | *15:35 – 15:40*

IAF GNF - IAF/ASE Astronauts Panel
15:40 – 16:20

Dragonfly Aerospace Promotional Announcement | *16:20 – 16:25*

IAF Promotional Announcement | *16:25 – 16:30*

IAF GNF – Europe on and Around the Moon and Mars: A Discussion between ESA and NASA Leaders with European Young Professionals and Europe's Space Exploration Contributions and Ambitions
16:30 –17:10

Promotional Announcement | *17:10 - 17:20*

IAF Launchpad Mentorship Programme Announcement
17:20 – 17:30

Closing Ceremony
17:30 – 18:00

Thursday 15 October

Times Zones					EVENT
Sydney	Beijing	**Paris Time**	Washington	Los Angeles	
23:00	20:00	**14:00**	08:00	05:00	
00:00	21:00	**15:00**	09:00	06:00	IAF General Assembly *15:00 - 17:00*
01:00	22:00	**16:00**	10:00	07:00	
02:00	23:00	**17:00**	11:00	08:00	

6. DAILY PROGRAMME

6.1 Pre-Congress

Saturday 10 October

15:00 - 19:00 CEST **The Next-Gen Summit**

For this year's IAC, the Space Generation Advisory Council (SGAC), the International Space Education Board (ISEB), and the IAF Space Education and Outreach (SEOC) and IAF Workforce Development / Young Professionals Programme (WD-YPP) Committees joined forces to bring to you a great pre-IAC's session dedicated to the Next Generation of space leaders! Part of the IAC 2020 - Cyberspace Edition programme, and sponsored by Blue Origin, the **NextGen Summit** will assemble a mix of **fun** and **engaging** online talks, activities and **cosmic content**! Meet International Industry leaders, discover Blue Origin's plans to go forward to the moon, and get to know the organisations that help students and young professionals thrive in the space sector.

Join our Live Stream on Saturday 10 October at 1:00 PM UTC to celebrate the NextGen!

Sunday 11 October

15:30 – 18:30 CEST **IPMC Young Professionals Workshop**

The International Project/Programme Management Committee (IPMC) Young Professionals Workshop seeks to gather input from young professionals in the international space community to gain the knowledge they need to better develop and empower the next-generation workforce. The Young Professionals Workshop culminates in a one-day event where delegates present their results to the IPMC and a wider audience.

On **Sunday 11 October 2020** the final event of the 2020 edition of the **IPMC Young Professionals Workshop** will be held, focused on **Space Project Management in the world of global lockdown, remote work and mobile technology**. We welcome attendees from the entire IAF community to partake in dynamic discussion around this topic. This will be a **virtual (online) event**.

To account for different time zones and allow for the widest attendance possible, there will be **two repeating sessions**, at **9 AM CEST** and at **5 PM CEST**.

During the final event, each team will be given 30 minutes to pitch their recommendations and engage in a lively panel discussion. In addition, there will be some time allocated for the audience to ask questions and share their thoughts.Join us to find out about the impact of Space Project Management in the world of global lockdown and what the Young Professionals' recommendations are to prepare, empower and develop the next generation workforce.

Click here for a detailed agenda of the event and registration info.

The five Young Professionals Teams have been investigating the following Themes:

Team Leaders and Topics

Topic 1
Ghanim ALOTAIBI

How do fragmented, remote, delocalized and virtual teams affect the way space projects are managed?

Topic 2
Antje STAMM

Which are the key leadership and planning aspects of PM in a time of crisis?

Topic 3
Adriana ANDREEVA-MORI

The relation between space and society, in particular by investigating the role of space programs and the space community at large in shaping the societal impacts of forced social isolation and economic lockdown.

Topic 4A
Clement GOUJON

How do we ensure that the knowledge collected and generated during the execution of a project will be available for the future projects, and how the crisis we are living can teach us how to handle the projects in general?

Topic 4B
Takeshi SHOJI

What is the impact of the current international crisis for the future of space projects, and how can project managers shape this impact into successful progress, ensuring acceptable risk and pioneering a new way toward?

Sponsored by:

LOCKHEED MARTIN

6.2 Day-by-day

Monday 12 October

13:50 – 14:00 CEST Introduction

Christian FEICHTINGER
Executive Director,
International Astronautical Federation (IAF),
France

14:00 – 14:30 CEST Opening Ceremony

This year's Opening Ceremony will be a special event with many connections from all over the world and an out-of-Earth experience. There will also be an official announcement of a new IAF digital tool collecting +70 years of space knowledge and the winners of the IAF World Space Award. Join us in launching the first ever CyberSpace Edition of the IAC.

MASTER OF CEREMONY

Pascale EHRENFREUND
President,
International Astronautical Federation (IAF),
France

14:30 – 14:35 CEST DLR Promotional Announcement: DLR At a Glance

DLR

DLR is the Federal Republic of Germany's research centre for aeronautics and space. We conduct research and development activities in the fields of aeronautics, space, energy, transport, security and digitalisation. The DLR Space Administration plans and implements the national space programme on behalf of the federal government. Two DLR project management agencies oversee funding programmes and support knowledge transfer.

Climate, mobility and technology are changing globally. DLR uses the expertise of its 55 research institutes and facilities to develop solutions to these challenges. Our 9000 employees share a mission – to explore Earth and space and develop technologies for a sustainable future. In doing so, DLR contributes to strengthening Germany's position as a prime location for research and industry.

14:35 – 14:40 CEST Lockheed Martin Promotional Announcement: National Team for a National Priority

LOCKHEED MARTIN

14:40 – 15:30 CEST Plenary – HEADS OF AGENCIES

PE

The IAF this year again is organizing its flagship plenary with the leaders of the world major space agencies. Participating Heads of Agencies will present and discuss how their respective agencies are reacting to a changing space environment and will take stock of the past year's accomplishments. The event will be divided into 2 main sections. In the first part, the Heads of Agencies will be presented with a series of questions by the moderators, engaging them into a lively discussion. The Plenary will conclude with an interactive session with the audience.

Speakers:

Jim BRIDENSTINE
Administrator,
National Aeronautics and Space Administration (NASA),
United States

Lisa CAMPBELL
President,
Canadian Space Agency (CSA),
Canada

Dmitry ROGOZIN
Director General,
State Space Corporation ROSCOSMOS,
Russian Federation

K. SIVAN
Chairman,
Indian Space Research Organisation (ISRO),
India

Jan WOERNER
Director General,
European Space Agency (ESA),
France

Hiroshi YAMAKAWA
President,
Japan Aerospace Exploration Agency (JAXA),
Japan

Kejian ZHANG
Administrator,
China National Space Administration (CNSA),
China

MODERATOR
Pascale EHRENFREUND
President,
International Astronautical Federation (IAF),
France

MODERATOR
Jean-Yves LE GALL
Past President & Honorary Ambassador,
International Astronautical Federation (IAF),
France

15:30 – 15:50 CEST Press Conference with Heads of Agencies

The Heads of Agencies press conference will give the audience the opportunity to hear firsthand all the most important and timely questions asked by space journalists.

Speakers:

Jim BRIDENSTINE
Administrator,
National Aeronautics and Space Administration (NASA),
United States

Lisa CAMPBELL
President,
Canadian Space Agency (CSA),
Canada

Dmitry ROGOZIN
Director General,
State Space Corporation ROSCOSMOS,
Russian Federation

K. SIVAN
Chairman,
Indian Space Research Organisation (ISRO),
India

Jan WOERNER
Director General,
European Space Agency (ESA),
France

Hiroshi YAMAKAWA
President,
Japan Aerospace Exploration Agency (JAXA),
Japan

Kejian ZHANG
Administrator,
China National Space Administration (CNSA),
China

MODERATOR
Christian FEICHTINGER
Executive Director,
International Astronautical Federation (IAF),
France

15:50 – 16:00 CEST European Space Agency (ESA) Promotional Announcement : ESA Director General - Space and the New Normal

esa

16:00 – 16:40 CEST SpS – STATE AND RESPONSE OF THE GLOBAL SPACE SECTOR DURING COVID-19

SpS

We are in the midst of an unprecedented COVID-19 crisis that has shook our world. Never before have we experienced a "lockdown" that has brought the whole world to a standstill and affected our livelihoods. Global leaders are challenged in the midst of the crisis because of a lack of preparedness and appropriate information to inform decision making. Economies around the world have been hit hard and we are thrown into the midst of an unprecedent financial recession. Jobs have been lost and funding has been cut across many industrial sectors, and the space sector has certainly not been spared.

Experts agree that the pandemic will be with us for a while yet and that our collective success will be determined on how we respond in delicately balancing our emphasis between public health & safety and economic recovery. Coincidently, governments around the world are battling to counterbalance social and economic policies and the critical factors that sits at the nexus of these decisions are (i) timely access to empirical data and (ii) leveraging our scientific and engineering prowess to provide impactful solutions on the ground. In this regard, it is important to remember that a significant part of the global space sector is premised on leveraging the benefits of space products and services for sustainable socio-economic-environmental development.

This Session will focus on understanding the effects the pandemic has had on various segments of the global space sector, and in addition how the sector has assisted governments and key decision makers in responding to this pandemic. The discussion will also lead into how we can better prepare for future such pandemics through the lessons we have learnt during COVID-19 and our role in defining and responding to the "new normal".

Speakers:

Bruce CHESLEY
Former Senior Director of Strategy,
Space and Missile Systems,
The Boeing Company,
VP: Financial Matters and Industry Relations,
International Astronautical Federation (IAF),
United States

Juan DE DALMAU
President,
International Space University (ISU),
France

Simonetta DI PIPPO
Director,
United Nations Office for Outer Space Affairs (UNOOSA),
Austria

Pascale EHRENFREUND
Research Professor,
Space Policy Institute,
The Washington University,
President,
International Astronautical Federation (IAF),
France

Davide PETRILLO
Executive Director,
Space Generation Advisory Council (SGAC),
Austria

MODERATOR
Valanathan MUNSAM
CEO,
South African National Space Agency (SANSA),
VP: Developing Countries And Emerging Nations,
International Astronautical Federation (IAF)
South Africa

16:40 – 17:20 CEST IAF GNF – DLR PANEL: SCIENCE FOR FUTURE – EARTH OBSERVATION TECHNOLOGIES IN THE AGE OF CLIMATE CHANGE

As we have seen time and time again over the recent years, climate change is quickly shaping up to be one of the most significant global challenges facing humanity today. In order to address the variety of disasters which are becoming more common by the year – such as floods, droughts, and wild fires – as well as their underlying causes, new technological developments for climate change monitoring and mitigation are constantly being developed, particularly in the space sector.

This panel highlights some of the new technological developments and approaches in climate change monitoring and mitigation using earth observation. Three young professionals will present their work in this area and delve into topics including innovative sensor development, remote sensing data utilization, and the use of citizen science in monitoring our planet. The opening remarks and broader context will be provided by members of the DLR Executive Board Prof. Hansjörg Dittus and Dr. Walther Pelzer.

Speakers:

Paola BELINGHERI
Co-Founder,
IceKing App,
Austria

Pooja PANDEY
Customer Success Engineer,
Planet,
Germany

Mathieu QUATREVALET
Lidar Research Scientist,
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR),
Germany

MODERATOR
Hans-Joerg DITTUS
Member of the Executive Board,
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR),
Germany

MODERATOR
Walther PELZER
Member of the Executive Board,
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR),
Germany

17:20 – 17:30 CEST Thales Alenia Space Promotional Announcement: Moon to Mars

17:30 – 18:00 CEST Highlight Lecture (IAF World Space Award) – THE CHANG'E 4 MISSION

HLL

The IAF World Space Award Highlight Lecture will feature Dr. Yu Dengyun, the Deputy Designer-in-Chief of China's Lunar Exploration Program and one of the Chang'e 4 Mission Leaders. Dr. Yu Dengyun will talk about the successful Chang'e-4 mission and their achievement to soft land on the far side of the moon for the first time in history of humankind and successfully sustain relay communication between the far side of the moon and the Earth.

Speaker:

Dengyun YU
Deputy Director of the Science and Technology Committee,
China Aerospace Science and Technology Corporation,
China

INTRODUCTION
Pascale EHRENFREUND
President,
International Astronautical Federation (IAF),
France

18:00 – 18:05 CEST Northrop Grumman Promotional Announcement: Northrop Grumman: Defining Possible in Space

Northrop Grumman solves the toughest problems in space, aeronautics, defense and cyberspace to meet the ever-evolving needs of our customers worldwide. Our 90,000 employees define possible every day using science, technology and engineering to create and deliver advanced systems, products and services."

18:05 – 18:10 CEST European Space Agency (ESA) Promotional Announcement: ESA, Space4Climate

18:10 – 18:50 CEST **NASA Session – NASA: Exploring as One (Streamed in parallel at NASA TV)**

The Associate Administrator for Human Exploration and Operations and Science Mission Directorate Associate Administrator will conduct a dynamic dialogue on how NASA is using ISS and Artemis to explore as one with commercial and international partners. Their conversation will outline NASA's plans for exploration, demonstrating that robotic and human exploration go hand-in-hand with commercial and international partnerships.

Speakers:

Kathryn L. LUEDERS
Associate Administrator for the Human Exploration Operations Mission Directorate,
National Aeronautics and Space Administration (NASA),
United States

Thomas ZURBUCHEN
Associate Administrator for the Science Mission Directorate,
National Aeronautics and Space Administration (NASA),
United States

18:50 - 19:00 CEST **Recap Session**

This first Recap Session will offer attendees a quick overview of the main highlights of the opening day of the IAC 2020 The CyberSpace Event. In representation of the day's speakers, Jean-Yves Le Gall and Valanathan Munsami, will exchange their views and impressions on the Agency Day and share their hints on what to bring home from the various sessions.

Speakers:

Pascale EHRENFREUND
President,
International Astronautical Federation (IAF),
France

Valanathan MUNSAMI
VP: Developing Countries And Emerging Nations,
International Astronautical Federation (IAF),
South Africa

MODERATOR
Christian FEICHTINGER
Executive Director,
International Astronautical Federation (IAF),
France

Tuesday 13 October

13:30 – 13:40 CEST **Introduction**

Christian FEICHTINGER
Executive Director,
International Astronautical Federation (IAF),
France

13:40 – 14:00 CEST **IAF Excellence in Industry Award Ceremony**

The IAF Excellence in Industry Award recognizes an industry organization for outstanding and sustainable advancements in space, showing the merits of leadership in developing and executing landmark commercial and civil space missions and for being a role model for cooperation in the global space industry workforce.

This year, this prestigious award has been awarded to Airbus Defence and Space for its excellent achievements over the years, and in particular in 2019, for managing to deliver world-beating space technology to customers around the world: from the 2400 spacecraft equipment, to the 18 satellites successfully placed in orbit.

To receive the award on behalf of Airbus Defence and Space, Dr. Jean-Marc Nasr, Head of Space Systems within Airbus Defence and Space and President of Airbus Defence and Space SAS, will be part of the ceremony and give a keynote presentation.

WELCOME
Pascale EHRENFREUND
President,
International Astronautical Federation (IAF),
France

INTRODUCTION
Bruce CHESLEY
Former Senior Director of Strategy,
Space and Missile Systems,
The Boeing Company,
VP: Financial Matters and Industry Relations,
International Astronautical Federation (IAF),
United States

KEYNOTE PRESENTATION:

Jean-Marc NASR
Head of Space Systems,
Airbus Defence and Space,
President,
Airbus Defence and Space SAS,
France

14:00 – 14:40 CEST — IAF GNF – ISS COMMERCIALIZATION AND FUTURE INDUSTRY INNOVATION IN LOW EARTH ORBIT

The session will be a conversation between Industry Leaders on how the International Space Station enables commercialization, access to space, and the future of Low orbit. Each speaker will be allotted ~5 minutes for opening remarks/presentation followed by directed moderator questions. The last 15 minutes will be dedicated to audience/moderated Q&A.

Speakers:

Andreas HAMMER
SVP Space Exploration,
Airbus Defence and Space GmbH,
Germany

Masatoshi NAGASAKI
Co-Founder & CEO,
SpaceBD Inc.,
Japan

Michael SUFFREDINI
President & CEO,
Axiom Space, LLC,
United States

MODERATOR
Lena DE WINNE
Head of Administration,
ASGARDIA,
Austria

14:40 – 14:50 CEST — Arianespace Promotional Announcement: Arianespace, 40 Years of Delivering the Future

14:50 – 15:30 CEST — Plenary – SMALL AND MEDIUM SIZED COMPANIES – STRATEGIES FOR SURVIVAL AND RECOVERY IN THE AGE OF COVID-19

COVID-19 is causing severe disruption to the global economy and has caused significant long-term damage in the aerospace industry. The virus' impact has not been uniform in either its impact on the various industry sectors or on companies of varying size. New start-ups and other small and medium sized enterprises will likely be disproportionately influenced by the pandemic.

This panel will examine a broad range of issues, including:

- A practical assessment of the financial strategies and practices of SMEs, with particular focus on key start-ups, that are allowing companies to weather the economic storm
- A review of some of the companies that were unable to survive the economic disruption along with an analysis of the structural weaknesses that may have contributed to their demise
- A review of both successful and unsuccessful strategies and market supports deployed by governments during the pandemic
- An assessment of the current marketplace and the identification of key opportunities for growth and expansion

The panel will include company CEO's, leading financial advisers and global economists.

Speakers:

Oren MILSTEIN
CEO,
Stemrad,
Israel

Rafał MODRZEWSKI
CEO,
ICEYE,
Finland

Nobu OKADA
Founder & CEO,
ASTROSCALE,
Japan

Lynette TAN
CEO,
Singapore Space and Technology Limited (SSTL),
Singapore

MODERATOR
Michael SHEETZ
Space Reporter,
CNBC,
United States

15:30 – 15:35 CEST — Lockheed Martin Promotional Announcement: Orion Exploration Class Spaceship Technology

15:35 - 15:40 CEST — Blue Origin Promotional Announcement Blue Origin-Led HLS National Team's Mission to the Moon

15:40 – 16:20 CEST — IAF GNF – THE ARTEMIS MISSION

NASA's Artemis program is a collaboration with commercial and international partners with the goal of crewed missions to the Moon to expand the exploration of the lunar surface. Artemis will drive innovation in new technologies encompassing several key elements for a sustainable architecture from heavy launch to crewed spacecraft to an orbiting outpost to lunar landers. This GNF will engage select leaders from government and industry who are shaping the elements to return humans to the Moon.

Speakers:

Walter CUGNO
Vice President Exploration and Science Domain,
Thales Alenia Space Italia,
Italy

Kathryn L. LUEDERS
Associate Administrator for the Human Exploration Operations Mission Directorate,
Mission Directorate, National Aeronautics and Space Administration (NASA),
United States

Brent SHERWOOD
Vice President Advanced Development Programs,
Blue Origin,
United States

MODERATOR

Mika OCHIAI

Associate Senior Administrator Integration and Management Office Space Exploration Center,
Japan Aerospace Exploration Agency (JAXA), Japan

16:20 – 17:00 CEST GNF – ORION, THE FOUNDATION FOR CREWED EXPLORATION OF DEEP SPACE

Orion is the centerpiece of the Artemis program, given its critical crew-centered mission and how Orion's technology and systems will be leveraged across the many elements of Artemis. The Orion system, including the European Service Module, has been developed by NASA and ESA, along with their international industry partners to safely take humans to the extremes of deep space. Key system elements and technologies are also being used across the other lunar exploration elements including the Gateway and the National Team's HLS Ascent Element to maximum safety and leverage agency investments. This GNF will focus on the key technologies, partnerships and deep space crew safety elements behind the Orion system.

Speakers:

Shelby HOPKINS

HLS Systems Engineer – Environmental Control and Life Support Systems Integration,
Lockheed Martin Corporation, United States

Didier RADOLA

ESM ORION Programme Manager,
Airbus Defence and Space, Germany

Kirk SHIREMAN

Vice President,
Lunar Exploration Campaigns,
Lockheed Martin Corporation, United States

Kerry TIMMONS

Orion Senior Manager for Systems Integration,
Lockheed Martin Corporation, United States

17:00 – 17:40 CEST NEXT GENERATION NETWORKING SESSION – Inspiration and Innovation: Public/ Private Partnerships as a Catalyst for the Next Generation

This year's IAC's NextGen Networking Session will bring together the best and brightest of students and young professionals dealing with Public/Private Partnerships (PPPs). Such partnerships are characterized by government organizations, private companies, and non-governmental organizations sharing cost, risk, and benefits of success. From cooperative research to inspiring ventures as NASA's Commercial Crew program, PPPs are vital to enable new endeavors and power an ever exciting space industry and economy - and this session is an opportunity for students and YPs that want to be a thriving part of it.

Are you considering the next step in your professional growth? Are you looking for mentorship? Do you want to meet and hear from like-minded people, kickstarting a dialogue in our sector? You'll network with the right space folks here!

This session will showcase how the next gen is working to ensure that space is both sustainable and attainable through effective PPPs. By interacting with other attendees, you'll give and get plenty of enriching bits and tips to help you position yourself as a bridge between governmental and private actors' needs and ambitions.

Come to share your ideas and mingle with space professionals. Leave with fresh perspectives, new contacts, and plenty of inspiration to shape the sector and make it flourish!

WELCOME REMARKS

Joe LANDON

Vice President,
Advanced Programs Development,
Lockheed Martin Corporation
United States

Panelists:

Ghanim ALOTAIBI

Mechanical Engineer,
Kuwait University, Kuwait

Julie Ann BANATAO

Satellite Engineer,
Stamina4Space, Philippines

Elizabeth BARRIOS

PhD Candidate and Graduate Research Assistant,
University of Central Florida, United States

Joshua INGERSOLL

Spacecraft Systems Engineer,
The Aerospace Corporation, United States

Tobias NIEDERWIESER

Research Associate, BioServe Space Technologies,
University of Colorado Boulder, United States

MODERATOR

Mariam NASEEM

Space Consultant,
Euroconsult, Canada

17:40 – 17:50 CEST Thales Alenia Space Promotional Announcement: Orbital Infrastructures

17:50 – 18:20 CEST Highlight Lecture – MEV 1: THE WORLD'S FIRST COMMERCIAL ON-ORBIT SERVICING MISSION

With a successful docking on February 25, 2020, MEV-1 achieved history when it successfully docked with the Intelsat IS-901 satellite near GEO orbit to begin a 5 year life extension service. This historic achievement is the culmination of more than 10 years of business, technical, and regulatory developments. This lecture will review this history, illustrate the climactic event of the first commercial docking between two satellites, and explore what it means for the future.

Speakers:

Joseph D. ANDERSON

Vice President,
Business Development and Operations,
Space Logistics LLC,
United States

MODERATOR

Brian WEEDEN

Director of Program Planning,
Secure World Foundation,
United States

18:20 – 18:25 CEST **DLR Promotional Announcement: GESTRA - Experimental Space Monitoring Radar**

GESTRA (German Experimental Space Surveillance and Tracking Radar) is an experimental space monitoring radar. The sensor is being developed and built by the Fraunhofer Institute for High Frequency Physics and Radar Techniques FHR and financed by DLR with funds from the German Federal Ministry for Economic Affairs and Energy (BMWi). The space monitoring system is scheduled to start delivering data in 2020.

18:25 - 18:30 CEST **Blue Origin Promotional Announcement Blue Origin-Led HLS National Team's Mission to the Moon**

18:30 – 19:10 CEST **NASA Session – INTERNATIONAL PARTICIPATION IN THE ARTEMIS PROGRAM (Streamed in parallel at NASA TV)**

Discussion on shared principles for a safe, peaceful, and prosperous future, for agencies cooperating on the Artemis Program.

19:10 – 19:20 CEST **Recap Session**

After a day full of events and content, our second Recap Session will provide a useful guide to identify the thread that connects all the sessions. Once again, this will be possible thanks to the participation and dialogue between two of the main designers of the IAF Industry Day, Bruce Chesley and Clay Mowry, together with the IAF President, Pascal Ehrenfreund.

Speakers:

Bruce CHESLEY
VP: Financial Matters and Industry Relations,
International Astronautical Federation (IAF),
United States

Pascale EHRENFREUND
President,
International Astronautical Federation (IAF),
France

Clayton MOWRY
Special Advisor to the IAF President (IAC Evolution),
International Astronautical Federation (IAF),
United States

MODERATOR
Christian FEICHTINGER
Executive Director,
International Astronautical Federation (IAF),
France

Wednesday 14 October

12:50 – 13:00 CEST **Introduction**

Christian FEICHTINGER
Executive Director,
International Astronautical Federation (IAF),
France

13:00 – 13:40 CEST **CGTN TV / IAF Session: New Era in Commercial Space (CGTN TV)**

This chapter of the China Global Television Network (CGTN) Dialogue will be organized with the support of the IAF and will focus on the topic of the New Era in Commercial Space. The lively discussion will see the participation of a diverse panel of speakers from different space sectors and from varied regions worldwide.

Victoria Alonsoperez
Founder and CEO of Chipsafer,
International Astronautical United Nations Young Leader for the SDGs,
Singapore

Pascale EHRENFREUND
President,
International Astronautical Federation (IAF),
France

Le LIU
Deputy Director,
Commercial Aerospace Division, China Volant Industry Co., Ltd,
China

Dmitry LOSKUTOV
Director General,
Glavkosmos,
Russian Federation

Clayton MOWRY
VP, Global Sales, Marketing & Customer Experience,
Blue Origin; Special Advisor to the IAF President,
International Astronautical Federation (IAF),
United States

S. SOMANATH
Director,
Indian Space Research Organisation (ISRO),
India

Kevin XU
General Manager,
Global Marketing and Services, Landspace,
China

MODERATOR
Yue ZOU
CGTN Anchor for Dialogue,
China Global Television Network (CGTN),
China

13:40 – 14:00 CEST **IAF IDEA "3G" Diversity Award Ceremony**

The IAF Excellence in "3G" Diversity Award recognizes IAF member organizations (industry, government, academia) worldwide for outstanding contributions to the fostering of "3G" (Geography, Generation, Gender) Diversity within the space sector. This year, the award recipient is the European Space Agency, for their commitment to create a modern and inclusive working environment and striving to enhance the innovative perspectives brought in by a diverse pool of talents.

Under the leadership of the Director General Jan Wörner, ESA has committed to raise the values of Diversity & Inclusiveness high on the Agency's corporate agenda. The appointment of a Chief Diversity Officer and the continued, strong support of all, including Directors and managers, have contributed to implementing relevant actions and achieving important results that will be further pursued and enhanced to ensure that ESA can move even faster in this direction. The presentation by Ersilia Vaudo, Chief Diversity Officer, ESA will provide an overview on ESA's initiatives in pursuing greater diversity in STEM (Science, Technology, Engineering, Mathematics), as well as in the space sector in particular, including by fostering the attractiveness of space careers. The talk will discuss the challenges that ESA, as an international organization, faces in combining the different aspects of diversity as well as the opportunities that the current demographic configuration will offer to inject young and diverse energies into the work of the Agency. The presentation will also touch upon other key areas of focus for ESA's D&I agenda, as well as the initiatives with other organizations to join forces on D&I common objectives and make ESA D&I values visible to the outside world.

WELCOME

Pascale EHRENFREUND
President,
International Astronautical Federation (IAF),
France

Speakers:

Deganit PAIKOWSKY
Lecturer,
Department of International Relations, Hebrew University of Jerusalem,
VP:Diversity Initiatives and New Space Economy,
International Astronautical Federation (IAF),
Israel

Mary SNITCH
Lead, External Engagements,
Lockheed Martin Corporation,
VP:Communications, Publications and Global Conferences,
International Astronautical Federation (IAF),
United States

KEYNOTE PRESENTATION:

Ersilia VAUDO SCARPETTA
Chief Diversity Officer,
European Space Agency (ESA),
France

14:00 – 14:40 CEST SpS – UNLEASHING THE POTENTIAL OF ARTIFICIAL INTELLIGENCE (AI) & MACHINE LEARNING (ML) INTO SPACE

Powered by ICE Cubes Service in collaboration with IBM Space Tech Division

Are you interested in the democratization and commercialization of Artificial Intelligence coupled with Space and how they might potentially be leading to a series of paradigm shifts? Join us for a special session on the topic of AI-ML in/for Space and a discussion about the impact of Industry & Space 4.0 on society. Given the interdisciplinary 'nature' of the topic, participants with diverse background and work experience are welcome (Science & Academia, Industry, Agencies, etc.).

The dynamics of the space sector are rapidly changing, pushed by NewSpace initiatives riding exponential technologies. This time, terrestrial technologies are pushing/accelerating space technologies. In the context of "Industry 4.0/Space 4.0", machines pave the road while humans follow. Becoming increasingly autonomous in space will require advanced Artificial Intelligence and stronger Human-Machine partnerships. A robust Space Economy will involve enhanced autonomy, adaptability and reliability, while decreasing the dependence on Earth resources and on-ground decisions-making processes. This evolution can be achieved by harnessing the full potential of the unfolding Fourth Industrial Revolution (AI, ML, IoT, Big Data, cloud computing, advanced robotics, etc.).

With the ICE Cubes Service mission of making space a part of everyday value chains and business (in orbit and on ground), it is believed that the adoption of AI-ML techniques in space can result in important steps forward for various applications, such as AI-assisted medical care and robotic assistants to support crew activities, Big Science Data processing, STE(A)M initiatives, and many more. Thus, ICE Cubes' AI-Box can be seen as a stepping-stone and in-orbit testbed for new concepts, solutions and services that will, in turn, support and improve a variety of applications, activities and industries on Earth.

Speakers:

Naeem ALTAF
IBM Distinguished Engineer,
CTO Space Tech,
IBM,
United States

Matthias BINIOK
Leader Space Tech Division DACH, Lead AI Architect,
IBM,
Germany

William CARBONE
Business Development Aerospace & Defense,
IBM Academy of Technology Member,
Slovakia

Nicolas CLÉMENCIN
ICE Cubes Payload System Engineer,
ICE Cubes,
Space Applications Services NV,
Belgium

Andrei SAPERA
Marketing & Business Analyst, ICE Cubes Business Development Team,
ICE Cubes,
Space Applications Services NV,
Belgium

MODERATOR

Hilde STENUIT
Scientist Team Lead & Business Development Team,
ICE Cubes,
Space Applications Services NV,
Belgium

14:40 – 14:45 CEST DLR Promotional Announcement: The World in Transition

Earth is in a constant state of change, and humans often trigger or contribute toward these changes to a significant degree. These include increasing urbanisation, expanding land use for agriculture, the loss of biodiversity, and changes in air quality. Change is also clearly perceptible in the melting of glaciers and the resulting rise in sea level

As such, monitoring global change and looking for measures that can mitigate these effects are becoming increasingly pressing concerns. DLR's space research and technology has the unique benefit of extending across all of the necessary infrastructure and areas of research. Earth observation from space is the only technology that makes it possible to perform this kind of monitoring globally, with a high level of spatial and temporal resolution and accuracy, and do so independently of political constraints.

Objective tracking of change processes helps for example to understand the global spatial distribution and evolution of human settlements and to assure sustainable development. DLR's World Settlement Footprint (WSF) gives an overview into urban structures. Precise monitoring of global change is also needed in order to issue timely warnings or provide an appropriate response to disasters such as oil spills, forest fires, and floods.

14:45 – 14:50 CEST Northrop Grumman Promotional Announcement: Northrop Grumman: Defining Possible in Space

Northrop Grumman solves the toughest problems in space, aeronautics, defense and cyberspace to meet the ever-evolving needs of our customers worldwide. Our 90,000 employees define possible every day using science, technology and engineering to create and deliver advanced systems, products and services

14:50 – 15:30 CEST Plenary – EARLY 2020s – LAUNCH OF WORLDWIDE MISSIONS TO MARS

The first decade of the 2020s will be an exciting time in the exploration of our solar system. Four international spacecraft will be launched, all with Mars as their destination. This plenary is comprised of scientists who will discuss these missions. Proposed panelists are from NASA, ESA, UAE, and China. Discussions will focus around the scientific objectives of the spacecraft and current mission statuses. The plenary will also examine how these robotic missions can help prepare for both Mars sample return and human exploration of Mars.

Speakers:

INTRODUCTION

Thomas ZURBUCHEN
Associate Administrator for the Science Mission Directorate,
National Aeronautics and Space Administration (NASA),
United States

Yan GENG
Director of Deep Space Exploration Department of Lunar Exploration and Space Engineering Center,
China National Space Administration (CNSA),
China

Lori GLAZE
Director of Science Mission Directorate's Planetary Science Division,
National Aeronautics and Space Administration (NASA),
United States

Albert HALDEMANN
Mars Exploration Group Chief Engineer,
European Space Agency (ESA),
The Netherlands

Omran SHARAF
Emirates Mars Mission (Hope Probe) Project Director,
Mohammed Bin Rashid Space Centre (MBRSC),
United Arab Emirates

MODERATOR

Lisa MAY
Chief Technologist for Commercial and Civil Space Advanced Programs,
Lockheed Martin Corporation,
United States

15:30 – 15:35 CEST ESA Promotional Announcement: ESA, ExploreFarther

15:35 – 15:40 CEST IAF Promotional Announcement

15:40 – 16:20 CEST IAF GNF – IAF/ASE Astronauts Panel

Speakers:

Richard ARNOLD
NASA Astronaut,
National Aeronautics and Space Administration (NASA),
United States

Cady COLEMAN
Former NASA Astronaut,
National Aeronautics and Space Administration (NASA),
United States

Pedro DUQUE
European Astronaut and Minister for Science and Innovation,
Government of Spain,
Spain

Sergey KRIKALEV
Executive Director for Piloted Spaceflights,
State Space Corporation ROSCOSMOS,
Russian Fedratiion

Michael LOPEZ-ALEGRIA
Former NASA Astronaut & Vice President of Business Development,
Axiom Space Inc.,
United States

MODERATOR

Reinhold EWALD
European Astronaut and Professor of Astronautics,
University of Stuttgart,
Germany

16:20 – 16:25 CEST Dragonfly Aerospace Promotional Announcement Introduction of Dragonfly Aerospace

16:20 – 16:30 CEST IAF Promotional Announcement

16:30 – 17:10 CEST IAF GNF – Europe on and around the Moon and Mars: A discussion between ESA and NASA leaders with European young professionals on Europe's space exploration contributions and ambitions

The event about European contributions to and ambitions for human and robotic exploration will be hosted by ESA Director General, Jan Wörner. NASA Administrator, Jim Bridenstine, is invited as a featured guest to highlight the importance of international cooperation in space exploration and to jointly engage with the young professionals across Europe along with DG Wörner Our long-term cooperation in science and exploration and our joint successes on the International Space Station and in countless other projects have built a solid foundation for future cooperation. The Artemis Programme, Gateway and Mars Sample Return will be the next step in exploration and we are going together. The discussion will be moderated by a young ESA communications professional very familiar with IAC, she will invite young professionals to exchange views with the two leaders. These young engineers are involved in critical elements of the various exploration programs and will interact from different industrial sites around Europe.

Speakers:

Jan WOERNER
Director General,
European Space Agency (ESA),
France

Jim BRIDENSTINE
Administrator,
National Aeronautics and Space Administration (NASA),
United States

Abbie HUTTY
Senior Spacecraft Structures Engineer,
Aiburs Defence and Space,
United Kingdom

Giada MEOGROSSI
Program Manager Platform Equipment & Subsystem Business Area,
Leonardo,
Italy

Nelly OFFORD
Head of the Exploration business Development,
Surrey Satellite Technology Ltd,
United Kingdom

David PARKER
Director of Human and Robotic Exploration,
European Space Agency (ESA),
France

Liz SEWARD
Senior Strategist, Space Systems,
Airbus Defence and Space SA,
United Kingdom

Eleonora ZEMINIANI
Aerospace Engineer,
Thales Alenia Space Italia,
Italy

MODERATOR
Ruth McAvinia
Editor for the European Space Agency,
ATG - Europe,
The Netherlands

17:10 – 17:20 CEST IAF Promotional Announcement

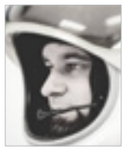
17:20 – 17:30 CEST IAF Launchpad Mentorship Programme Announcement

The IAF launches a new initiative focused on mentorship and career development, pairing early- to mid-career professionals with experienced senior professionals in the space industry. The Mentorship Programme aims to facilitate career development and leadership capabilities of the mentee, and provide a platform for enhanced communication between the various generations represented within the IAF.

Join us to meet the mentors for the inaugural IAF Mentorship Programme whose diversity of talent, expertise and knowledge of the space sector represent authoritative voices that span the breadth of industry, academia and governments. Mentees for the 2020/2021 IAF Mentorship Programme will be selected through a competitive and open application process. Details on the application process will be presented in the session.

Speakers:

Elizabeth BARRIOS
PhD Candidate and Graduate Research Assistant,
University of Central Florida,
Coordinator,
IAF Launchpad Mentorship Programme,
International Astronautical Federation (IAF),
United States



Ryan L. KOBRICK
Integrated Product Team Lead,
Paragon Space Development Corporation (PSDC),
Coordinator,
IAF Launchpad Mentorship Programme,
International Astronautical Federation (IAF),
United States

Minoo RATHNASABAPATHY
Research Engineer,
Massachusetts Institute of Technology Media Lab,
VP: Education and Workforce Development,
International Astronautical Federation (IAF),
United States

17:30 – 18:00 CEST Closing Ceremony

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, proper salutations to the outgoing IAF Vice-Presidents and at the end of the ceremony, the official invitation to the IAC 2021 in Dubai, United Arab Emirates.

MASTER OF CEREMONY

Christian FEICHTINGER
Executive Director,
International Astronautical Federation (IAF),
France

Speakers:

Pascale EHRENFREUND
President,
International Astronautical Federation (IAF),
France

Seishiro KIBE
Senior Advisor, International Relations and Research Dept,
Japan Aerospace Exploration Agency (JAXA)
VP: Honours and Awards,
International Astronautical Federation (IAF),
Japan

7. TECHNICAL PRESENTATIONS

The IAC 2020 will offer a world-class Technical Programme spanning all areas of space and their intersections with other fields of critical importance to our future.

The Virtual Technical Presentations Gallery will host an impressive number of over 1300 fascinating video lectures and remarkable manuscripts, categorized into playlists devoted to 32 Symposia. The Technical Programme will also feature a mix of inspiring Keynotes by internationally renowned experts covering all the latest trends in space. All the materials will be accessible free-of-charge through the IAC 2020 online platform to the congress participants.

The Virtual Technical Presentations Gallery will be available to view from Monday 12 October 14:40 (CEST) to Wednesday 14 October 16:30 (CEST).

7.1 Keynote Speakers

Keynotes

	SPECIAL KEYNOTE
	Leon ALKALAI *JPL Fellow, Manager,* Office of Strategic Planning NASA's Jet Propulsion Laboratory, California Institute of Technology (CIT), United States **KEYNOTE: NASA's Jet Propulsion Laboratory (JPL) Response to the Covid Pandemic: Ventilators, Respirators and More**

A6.2	A6. 18th IAA SYMPOSIUM ON SPACE DEBRIS
	Session: 2 – Modeling and Risk Analysis ***Darren McKnight*** *Technical Director,* Integrity Applications, Inc. (IAI), United States **KEYNOTE: Identifying the 50 Statistically Most Concerning Derelict Objects in LEO**

B3.1	B3. IAF HUMAN SPACEFLIGHT SYMPOSIUM
	Session: 1 – Governmental Human Spaceflight Programmes (Overview) ***Kathryn L. LUEDERS*** *Associate Administrator for the Human Exploration Operations Mission Directorate,* National Aeronautics and Space Administration (NASA), United States **KEYNOTE: Innovative Partnerships in Human Space Exploration**

B4.1	B4. 27th IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS
	Session: 1 – 21st Workshop on Small Satellite Programmes at the Service of Developing Countries ***Mengu CHO*** *Professor, Director of Space Laboratory,* Kyushu Institute of Technology, Japan **KEYNOTE: Survey on Nano-satellite Capacity Building Needs Around the World**

B4.8	B4. 27th IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS

Session: Small Spacecraft for Deep-Space Exploration

Angelo CERVONE
Professor,
Delft University of Technology,
The Netherlands

KEYNOTE: Consolidated Phase A Design of the LUMIO Spacecraft: a CubeSat for Observing and Characterizing Micro-Meteoroid Impacts on the Lunar Far Side

B4.9-GTS.5	B.4 27th IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS

Session: 9-GTS.5 – Small Satellite Missions Global Technical Session

Laurent JAFFART
Head of Strategy, Corporate and New Business Development,
Airbus Defence and Space,
The Netherlands

KEYNOTE: Constellations : The Satellite Serial Production Challenge

C.3.1	C.3 IAF SPACE POWER SYMPOSIUM

Session: 1 – Solar Power Satellite

John C. MANKINS
President,
Artemis Innovation Management Solutions, LLC,
United States

KEYNOTE: New Concepts and Markets for Space Solar Power

C4.1	C4. IAF SPACE PROPULSION SYMPOSIUM

Session: 1 – Liquid Propulsion (1)

Hui CHEN
Vice Chief Engineer,
Xi'an Aerospace Propulsion Institute,
China

KEYNOTE: Research and Development of 500 Ton-Thrust-Class LOX/Kerosene Rocket Engine

C4.7	C4. IAF SPACE PROPULSION SYMPOSIUM

Session: 7 – Hypersonic Air-breathing and Combined Cycle Propulsion, and Hypersonic Vehicle

Simon FEAST
Future SABRE Studies Lead,
Reaction Engines Ltd.,
United Kingdom

KEYNOTE: The Synergetic Air-Breathing Rocket Engine (SABRE) – Development Status Update

E6.5	E6. IAF BUSINESS INNOVATION SYMPOSIUM

Session: 5 – Entrepreneurship Around the World

Laura HUANG
Associate Professor,
Harvard Business School,
United States

KEYNOTE: Business Strategy in the Emerging Commercial Space Industry Segments

E7.1	E7. IISL COLLOQUIUM ON THE LAW OF OUTER SPACE

Session 1: IISL Young Scholars Session and Dr. Jasentuliyana Keynote Lecture

Stephan HOBE
Head of Institute of Air- and Space-Law,
University of Cologne,
Germany

KEYNOTE: A New Format for Space Law?

E9.1-A6.8	E9. SYMPOSIUM ON SPACE SECURITY

Session: 1-A6.8 – Policy, Legal, Institutional and Economic Aspects of Space Debris Detection, Mitigation and Removal

Timothy MACLAY
President,
Celestial Insight, Inc.,
United States

KEYNOTE: Progressive Leadership in Space Safety Requires a New Approach to Setting Debris Mitigation Standards

E9.2-D5.4	E9. SYMPOSIUM ON SPACE SECURITY

Session: 2-D5.4 – Cyber-security threats to space missions and countermeasures to address them

Emiliano CASALICCHIO
Professor,
Sapienza University of Rome,
Italy

KEYNOTE: Crises: Cybersecurity for Small-satellite Ecosystem – State-of-the-art and Open Challenge

7.2 TECHNICAL PRESENTATIONS BY TOPIC

A1. IAA/IAF SPACE LIFE SCIENCES SYMPOSIUM

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

Co-Chair: *Prof. Nick Kanas, University of California, San Francisco (UCSF), United States ; Prof. Gro M. Sandal, University of Bergen, Norway*

Rapporteur: *Dr. Vadim Gushin, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Russian Federation*

Keywords describing the session best: 1. Human Factors 2. Psychosocial Factors 3. Interpersonal Factors 4. Cognitive Factors 5. Cultural Factors

IAC-20.A1.1.1
INTERPLANETARY MISSIONS: PSYCHOLOGICAL SUPPORT OF INTERNATIONAL CREWS
Mrs. Elena Feichtinger, Paris, France, International Astronautical Federation (IAF)

IAC-20.A1.1.2
TOWARDS TELEOPERATION PERFORMANCE AND PSYCHOPHYSIOLOGICAL STATE ASSESSMENT IN THE SIRIUS-19 ANALOG CAMPAIGN
Mr. Diogo Mimoso, Toulouse, France, ISAE-Supaero University of Toulouse

IAC-20.A1.1.3
FEATURES OF COMMUNICATION OF A CREW OF MIXED NATIONAL AND GENDER COMPOSITION WITH THE CONTROL CENTER UNDER COMMUNICATION DELAY IN SIRIUS-18/19
Dr. Vadim Gushin, Moscow, Russian Federation, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS)

IAC-20.A1.1.4
PERSONAL GROWTH AFTER A 90-DAY HEAD-DOWN TILT BED REST
Ms. Yu Lei, Beijing, China, Beihang University

IAC-20.A1.1.5
THE IMPACT OF NETWORK ACUITY ON INFORMATION SHARING UNDER COMMUNICATION DELAYS IN SPACE MULTITEAM SYSTEMS
Mr. Kyosuke Tanaka, Evanston, United States, Northwestern University

IAC-20.A1.1.7
DEVELOPMENT OF THE HUMAN FACTORS SUBSYSTEM FOR THE RXEVA MODEL FOR PRESCRIBING SURFACE EVA OPERATIONS
Ms. Lea Smart Miller, Daytona Beach, United States, Embry-Riddle Aeronautical University

IAC-20.A1.1.8
NEW APPROACH TO COMMUNICATIVE PATTERNS EFFECTIVENESS ASSESSMENT IN SPACE FLIGHT
Dr. Anna Yusupova, Moscow, Russian Federation, Institute for Biomedical Problems

IAC-20.A1.1.9
BEHAVIOURAL SCIENCE FOR FACILITATING ORGANISATIONAL CHANGE AND IMPROVE THE MENTAL HEALTH OF AN ISS FLIGHT CONTROLLER TEAM
Mr. Karoly Schlosser, London, United Kingdom

IAC-20.A1.1.10
PREPARING FOR THE SOCIO-BEHAVIOURAL CHALLENGES OF A POPULOUS, SEMI-INDEPENDENT SETTLEMENT ON MARS THROUGH A NEW GENERATION OF MULTI-TEAM, EMPOWERMENT-ORIENTED MARS ANALOGUE MISSIONS.
Dr. Alexandros Lordos, Nicosia, Cyprus, University of Cyprus

A1.2. Human Physiology in Space

Co-Chair: *Prof. Inesa Kozlovskaya, State Scientific Center of the Russian Federation - Institute of Biomedical Problems of the Russian Academy of Sciences, Russian Federation ; Dr. Jens Jordan, Institute of Aerospace Medicine (DLR), Germany ;*

Rapporteur: *Prof. Elena Fomina, State Scientific Center of Russian Federation, Institute of Biomedical Problems, Russian Academy of Sciences, Russian Federation ; Dr. Alain Maillet, MEDES - IMPS, France ;*

Keywords describing the session best: 1. Space Physiology 2. Physiological Countermeasures

IAC-20.A1.2.3
RECOVERY OF MUSCLE STRENGTH AFTER LONG AND SUPER-LONG SPACE FLIGHTS
Dr. Elena Fomina, Moscow, Russian Federation, FSC RF-IMBP

IAC-20.A1.2.9
EFFECTS OF SIMULATED MICROGRAVITY IN ARTERIAL STIFFNESS AND EFFECTIVENESS OF REACTIVE SLEDGE JUMPS AS A COUNTERMEASURE
Dr. Chrysoula Kourtidou-Papadeli, Thessaloniki, Greece, Greek Aerospace Medical Association

IAC-20.A1.2.10
COMPARISON OF THE SHORT-TERM ACUTE CARDIOVASCULAR RESPONSE BETWEEN HEAD-DOWN (-6 DEGREES) AND HORIZONTAL BED REST
Ms. Sarah Solbiati, Milano, Italy, Consiglio Nazionale delle Ricerche (CNR)

A1.3. Medical Care for Humans in Space

Co-Chair: *Prof. Satoshi Iwase, Aichi Medical University, Japan ; Prof. Oleg Orlov, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Russian Federation ;*

Rapporteur: *Mr. Ulrich Kuebler, Airbus DS GmbH, Germany ; Prof. Hasan Birol Cotuk, Turkey ;*

Keywords describing the session best: 1. Health Care 2. Commercial Flight 3. Medical Applications

IAC-20.A1.3.3
A SPACECRAFT-COMPATIBLE COMBINED ARTIFICIAL GRAVITY AND EXERCISE (CAGE) SYSTEM TO SUSTAIN ASTRONAUT HEALTH IN THE NEXT GENERATION OF LONG-TERM SPACEFLIGHTS
Ms. Donya Naz Divsalar, Coquitlam, Canada, Simon Fraser University

IAC-20.A1.3.9
COLONIZING MARS: PHYSIOLOGICAL AND SURGICAL CHALLENGES.
Dr. Rawan Alshammari, Kuwait, Kuwait

IAC-20.A1.3.11
DESIGN SOLUTIONS FOR MEDICAL CHALLENGES ON SURFACE EVA
Dr. Shawna Pandya, Sherwood Park, Canada

IAC-20.A1.3.12
TOWARDS A PERMANENT MEDICAL CAPABILITY ON THE MOON AND BEYOND
Dr. Shawna Pandya, Sherwood Park, Canada

IAC-20.A1.3.13
A VR-BASED SYSTEM FOR IMAGING, ASSESSMENT, TRAINING AND JUST-IN-TIME GUIDANCE FOR DEEP EXPLORATION-CLASS MISSIONS
Dr. Shawna Pandya, Sherwood Park, Canada

IAC-20.A1.3.14
A REVIEW OF SPACE SURGERY - WHAT WE HAVE ACHIEVED, CURRENT CHALLENGES AND FUTURE PROSPECTS
Dr. SIDDHARTH RAJPUT, North Sydney, Australia, Australasian Society of Aerospace Medicine

IAC-20.A1.3.15
EXPERIENCE AND LESSONS LEARNED FROM THE CORONAVIRUS PROBLEM IN JAPAN AND APPLICATION TO SPACE TRAVEL
Mr. Taichi Yamazaki, Kamakura, Japan, ASTRAX, Inc.

IAC-20.A1.3.18
MEDCOACH - MEDICAL AUTONOMY FOR DEEP SPACE MISSIONS
Mr. Alan Higginson, Ottawa, Canada, ADGA Group

IAC-20.A1.3.19
PHYTOCHEMICALS: CONTRAMEASURE AGAINST OXIDATIVE STRESS IN SPACE RADIATION AND MICROGRAVITY EXPOSURE. PROPOSAL.
Prof. LUISA GARCIA ROJAS VAZQUEZ, morelia, Mexico

IAC-20.A1.3.23
STUDY ON ON-ORBIT MICROORGANISM MONITORING TECHNOLOGY OF SPACE STATION
Dr. PEI HAN, Beijing, China, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences

A1.4. Medicine in Space and Extreme Environments

Co-Chair: *Prof. Oleg Orlov, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Russian Federation ; Prof. Hanns-Christian Gunga, Charité Universitätsmedizin Berlin, Germany ;*

Rapporteur: *Dr. Jeffrey R. Davis, Exploring 4 Solutions, United*

Keywords describing the session best: 1. Extreme Environments 2. Confinement 3. Isolation 4. Exploration simulation 5. Medical Innovation

IAC-20.A1.4.2
A WHOLISTIC APPROACH TO ASSESSMENT OF ADAPTATION AND RESILIENCE DURING SPACEFLIGHT
Mrs. Anastasiia Prysyazhnyuk, Oshawa, Canada, Ontario Tech University

IAC-20.A1.4.5
SPACE MEDICINE FOR AUSTERE I.C.E (ISOLATED, CONFINED, ENVIRONMENTS: TRAINING ANALOG ASTRONAUTS MARS MEDICS TEAMS IN HIGH-FIDELITY ANALOG MISSIONS IN NEPAL, HIMALAYAS - A CASE STUDY FOR FUTURE PLANETARY SURFACE EXPEDITIONS
Dr. Maria Harney, Van Nuys, United States, Mars Academy USA

IAC-20.A1.4.8
LIFETOUCH: A PORTABLE LIGHTWEIGHT VITAL SIGN MONITOR FOR AUSTERE ENVIRONMENTS
Dr. Shawna Pandya, Sherwood Park, Canada

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

Co-Chair: *Dr. Guenther Reitz, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ; Prof. Lawrence Pinsky, University of Houston, United States ;*

Rapporteur: *Prof. Premkumar Saganti, Prairie View A&M University, United States ;*

Keywords describing the session best: 1. Radiation 2. Dosimetry 3. Cancer risk

IAC-20.A1.5.4
IDENTIFICATION OF NOVEL BIOMARKERS IN SERUM FOR HEAVY ION RADIATION: PROTEINS, MIRNAS AND TRNA-DERIVED FRAGMENTS
Dr. Wenjun Wei, Lanzhou, China, Institute of Modern Physics, Chinese Academy of Sciences

IAC-20.A1.5.7
VAN ALLEN RADIATION BELT IMPACT ON HELA CELLS
Ms. Shreya Choudhary, Bengaluru, India, R.V.College of Engineering

IAC-20.A1.5.9
CHARGE AND MARE RADIATION PROTECTIVE EQUIPMENT EVALUATIONS UPDATES
Dr. Oren Milstein, Tel Aviv, Israel, StemRad

A1.6. Astrobiology and Exploration

Co-Chair: Dr. Petra Rettberg, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ; Mr. Nicolas Walter, European Science Foundation (ESF), France ;

Rapporteur: Dr. Stefan Leuko, DLR (German Aerospace Center), Germany ;

Keywords describing the session best: 1. Astrobiology 2. Planetary Protection 3. Life Signatures 4. Exploration 5. Robotic

IAC-20.A1.6.2
ASTROBIO CUBESAT:ENABLING TECHNOLOGIES FOR ASTROBIOLOGY RESEARCH IN SPACE
Mr. Lorenzo Iannascoli, Roma, Italy, Sapienza University of Rome

IAC-20.A1.6.4
CHARACTERIZATION OF GALDIERIA SULPHURARIA'S UNDER ATMOSPHERIC RADIATION EXPOSURE
Ms. Altea Renata Maria Nemolato, Caserta, Italy, Università degli Studi della Campania "Luigi Vanvitelli"

IAC-20.A1.6.7
MOLECULAR COMPLEXITY AS AN AGNOSTIC WAY TO DISTINGUISH LIFE VERSUS NON-LIFE
Ms. Hikaru Furukawa, Tempe, AZ, United States, Arizona State University

IAC-20.A1.6.9
AN INTERNATIONAL PERSPECTIVE ON PLANETARY PROTECTION POLICIES
Ms. Cara Cavanaugh, Washington, United States, IDA Science and Technology Policy Institute

IAC-20.A1.6.10
PLANETARY PROTECTION IN THE NEW SPACE ERA: LAW AND POLICY CHALLENGES
Dr. Thomas Cheney, Northampton, United Kingdom, Open University

A1.7. Life Support, habitats and EVA Systems

Co-Chair: *Dr. Klaus Slenzka, Blue Horizon s.à r.l., Germany ; Mr. Khalid Badri, Mohammed Bin Rashid Space Centre (MBRSC), United Arab Emirates ;*

Rapporteur: *Prof.Dr. Hong Liu, Beihang University, China ;*

Keywords describing the session best: 1. Space Suit 2. Regenerative Life Support 3. Exploration atmospheres 4. Planetary habitats

IAC-20.A1.7.1
A NEW WATER MANAGEMENT SYSTEM FOR ISS URINE AND CONDENSATE
Ms. Ilaria Locantore, Torino, Italy, Thales Alenia Space Italia

IAC-20.A1.7.3
GENERAL PRINCIPLES OF CONSTRUCTING SPACE GREENHOUSES FOR HABITABLE BASES
Mr. Hennadii Osinovyi, Dnepr, Ukraine, Yuzhnoye State Design Office

IAC-20.A1.7.4
DESIGN OF HYGIENE MODULE USING CLOSED GREY WATER CYCLE FOR LUNARES RESEARCH STATION – MAIN ASSUMPTIONS AND APPLICATIONS
Ms. Agata Mintus, Wrocław, Poland, Space is More

IAC-20.A1.7.5
BIOLOGICAL REQUIREMENTS FOR A SUSTAINABLE SETTLEMENT ON EARTH'S MOON
Mr. John C. Mankins, SANTA MARIA, United States, ARTEMIS Innovation Management Solutions, LLC

IAC-20.A1.7.6
ASSESSMENT OF THE GROWTH AND QUALITY OF MICRO-ALGAE IN MICROGRAVITY CONDITIONS
Ms. DEEPIKA S K, Bangalore, India, Ramaiah Institute of Technology

IAC-20.A1.7.7
ALGAE CULTIVATION FOR SUSTAINABLE LIFE SUPPORT IN SPACE AND CLIMATE CHANGE: DEVELOPMENT OF A COMMERCIAL BIOREACTOR FOR OPTIMAL ALGAE GROWTH USING ARTIFICIAL INTELLIGENCE
Mr. Jinseong Lee, Austin, United States, Hypergiant - AI Space Solutions

IAC-20.A1.7.9
D-MARS HABITAT PROTOTYPE 2.0
Mr. ALON SHIKAR, TEL AVIV, Israel, D-MARS

IAC-20.A1.7.10
DESIGN OF SENSORY INFORMATION NETWORK FOR ENVIRONMENTAL CONTROL AND LIFE SUPPORT SYSTEM SELF-AWARENESS
Mr. Samuel Eshima, Boulder, United States, University of Colorado Boulder

IAC-20.A1.7.16
COCONUTS AND KETOSIS – THE (ALMOST) ALL-IN-ONE SOLUTION FOR SPACE EXPLORATION AND PLANETARY SETTLEMENT?
Mr. Joachim Reinhold, Bremen, Germany

IAC-20.A1.7.17
DESIGNING KANGAROO-INSPIRED SOFT EXOSKELETON TO ASSIST HUMAN MOVEMENT ON THE LUNAR SURFACE
Dr. Jing Fang, Xi'an, China, National Key Laboratory of Aerospace Flight Dynamics,Northwestern Polytechnical University,NPU

A1.8. Biology in Space

Co-Chair: *Dr. Didier Chaput, Centre National d'Etudes Spatiales (CNES), France ; Prof. Fengyuan Zhuang, Beihang University, China*

Rapporteur: *Dr. Jancy McPhee, The Aerospace Corporation, United States ;*

Keywords describing the session best: 1. Microbiology 2. Plant Physiology 3. Molecular Cell Physiology 4. Suborbital Flight 5. Re-entry Satellites

IAC-20.A1.8.2
MICROGRAVITY INCREASES THE SENSITIVITY OF A CLINICAL KLEBSIELLA PNEUMONIAE ISOLATE TO PIPERACILLIN THROUGH DECREASING THE EXPRESSION OF FOX-TYPE BETA-LACTAMASES
Dr. Chongzhen WANG, Guilin, China, Guilin Medical University

IAC-20.A1.8.4
IN VITRO MUSCLE STEM CELL CULTURE AND DIFFERENTIATION SYSTEM IN SPACE
Dr. Ping Hu, Shanghai, China

IAC-20.A1.8.5
ENDOPLASMIC RETICULUM STRESS INDUCES VASCULAR ENDOTHELIAL INFLAMMATION AND APOPTOSIS DURING MICROGRAVITY SIMULATION
Prof. Ran Zhang, Beijing, China, Chinese PLA General Hospital

IAC-20.A1.8.8
CELL FUSION IN SPACE: PLASMA MEMBRANE FUSION IN HUMAN FIBROBLASTS DURING SHORT TERM MICROGRAVITY
Mr. Aditya Jayaprakash, Bangalore, India, Ramaiah Institute of Technology

A1.VP. Virtual Presentations - IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM

Co-Chair: *Dr. Didier Chaput, Centre National d'Etudes Spatiales (CNES), France ; Dr. Klaus Slenzka, Blue Horizon s.à r.l., Germany ;*

IAC-20.A1.VP.3
AN AUTONOMOUS PLANT GROWING MODULE FOR A CUBESAT
Dr. Christophe Marcel Trouillefou, Montréal, Canada, Ecole Polytechnique de Montreal

IAC-20.A1.VP.6
FEATURES OF ADVANCED EVA SPACESUIT GLOVES DESIGN
Mrs. Guzel Kamaletdinova, Moscow, Russian Federation, Moscow Aviation Institute (National Research Institute, MAI)

IAC-20.A1.VP.12
IMPLEMENTATION OF THE HUMAN LIFE CYCLE ON MARS.
Mr. Manish Kumar, Jhajjar, India, University of Petroleum and Energy Studies

IAC-20.A1.VP.13
PLANETARY EXPLORATION TEXTILES (PEXTEX) - MATERIALS SELECTION FOR SURFACE EVA SUIT DEVELOPMENT
Mr. Mohamed Makthoum Peer Mohamed, Marseille, France, COMEX SA

IAC-20.A1.VP.14
SEMI-PERMANENT EXTRATERRESTRIAL OUTPOST: EARTH BENEFITS
Ms. Chelsea Bahenduzi, Pierrefonds, Canada, Concordia University

IAC-20.A1.VP.15
THERMAL DISTILLATION SYSTEM FOR DEEP SPACE MISSIONS: RATIONALE FOR THE CHOICE
Mr. Andrii Solomakha, Kyiv, Ukraine, Kyiv Politechnic Institute (NTUU "KPI")

IAC-20.A1.VP.18
CORRELATION ANALYSIS OF SLEEP QUALITY, MOOD AND TELEOPERATION PERFORMANCE IN THE MDRS206 ANALOG MISSION
Mr. Eric Gil Calle, Toulouse, France, ISAE-Supaero University of Toulouse

IAC-20.A1.VP.20
THE BIOMECHANICAL AND ELECTROMYOGRAPHIC CHARACTERISTICS OF WALKING DURING LONG-TERM SPACE FLIGHTS IN ACTIVE AND PASSIVE MODES OF TREADMILL
Dr. Alina Saveko, Moscow, Russian Federation, State Scientific Center of the Russian Federation - Institute of Biomedical Problems of the Russian Academy of Sciences

IAC-20.A1.VP.22
PHARMACEUTICAL DEVELOPMENT FOR SPACEFLIGHT GUT BIOME MAINTENANCE
Ms. Fiona McAllister, Illkirch-Graffenstaden, France, International Space University (ISU)

IAC-20.A1.VP.23
LUNAR GREENHOUSE CULTIVATION ACTIVITIES THROUGH VIRTUAL REALITY SIMULATION: V-GELM PROJECT
Mr. Riccardo Restivo Alessi, Rome, Italy, Sapienza University of Rome

A2. IAF MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM

A2.1. Gravity and Fundamental Physics

Co-Chair: *Dr. Hanns Selig, GERADTS GMBH, Germany ; Prof. Antonio Viviani, Università degli Studi della Campania "Luigi Vanvitelli", Italy ;*

Rapporteur: *Prof. Qi Kang, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., China ;*

IAC-20.A2.1.2
LARES 2: STATUS OF THE MISSION
Prof. Ignazio Ciufolini, Lecce, Italy, Università del Salento

IAC-20.A2.1.7
MATHEMATICAL MODELING OF TWO GRAVITATING CLOUDS COLLISION
Prof. Boris Rybakin, Moscow, Russian Federation, Scientific research Institute for System Studies, Russian Academy of Sciences (RAS)

IAC-20.A2.1.8
SUPERMASSIVE BLACK HOLES IN GALAXIES AND SIMILARITIES TO CALCULATIONS OF GRAVITATIONAL LAGRANGE POINTS
Mr. Dylan J. Slocki, Hauppauge, United States, University at Buffalo

A2.2. Fluid and Materials Sciences

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

Rapporteur: *Mr. Thomas Driebe, DLR (German Aerospace Center), Germany ;*

IAC-20.A2.2.1
ADVANCED NUMERICAL SIMULATION OF MAGNETIC LIQUID SLOSHING IN MICROGRAVITY
Mr. Álvaro Romero-Calvo, Boulder, United States, Colorado Center for Astrodynamics Research, University of Colorado

IAC-20.A2.2.2
ASSESSMENT OF FERROFLUID INTERACTION WITH SECONDARY LIQUIDS
Ms. Laura Breitenbücher, Filderstadt, Germany

IAC-20.A2.2.3
MICROGRAVITY INVESTIGATION OF CAPILLARY-DRIVEN IMBIBITION INTO AN INHOMOGENEOUS POROUS MEDIUM.
Ms. Evgeniya Kolenkina(Skryleva), Moscow, Russian Federation, Moscow Lomonosov State University

IAC-20.A2.2.4
CONTACTLESS TRANSPORTATION OF DROPLET IN MID-AIR BY ACOUSTIC LEVITATION
Mr. Toshiki Suda, Tskuba-city, Ibaraki-prefecture, Japan, University of Tsukuba

IAC-20.A2.2.6
MATERIAL COMBUSTION IN HYBRID SYSTEMS NUMERICAL MODELING
Mr. Lyuben Stamov, Moscow, Russian Federation, Scientific Research Institute for System Analysis, Russian Academy of Sciences (RAS)

IAC-20.A2.2.8
ROCKET ENGINE IN OUTER SPACE THREE-DIMENSIONAL NUMERICAL SIMULATION
Ms. Elena Mikhalchenko, Moscow, Russian Federation, Scientific Research Institute for System Analysis, Russian Academy of Sciences (RAS)

IAC-20.A2.2.11
DYNAMICS OF CORE - SHELL DROPLET FOR INTERFACIAL TENSION MEASUREMENT \\ BY USING ELECTROSTATIC LEVITATION
Mr. Shoma Kato, Tsukuba-city, Ibaraki-pref, Japan, University of Tsukuba

IAC-20.A2.2.12
EXPERIMENTAL INVESTIGATION OF ACTIVE THERMODYNAMIC VENT SYSTEM WITH LIQUID NITROGEN
Mr. Shaohua Zhang, Beijing, China, China Academy of Launch Vehicle Technology(CALT)

IAC-20.A2.2.16
MATERIAL SCIENCE: STRESS INTENSITY COEFFICIENTS FOR ELLIPTIC AND ROUND CRACKS
Ms. Anastasia Shamina, Moscow, Russian Federation, Scientific Research Institute for System Analysis, Russian Academy of Sciences (RAS)

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

Co-Chair: *Prof. Raffaele Savino, University of Naples "Federico II", Italy ; Prof. Rainer Willnecker, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

IAC-20.A2.3.1
DEVELOPMENT OF "EMU" OPENSOURCE HIGH ALTITUDE BALLOON FOR MICROGRAVITY EXPERIMENTATION
Mr. James Dingley, Perth, Australia, University of Western Australia (UWA)

IAC-20.A2.3.3
OPPORTUNITIES FOR MICROGRAVITY AND HYPERGRAVITY EXPERIMENTS UNDER THE UNITED NATIONS ACCESS TO SPACE FOR ALL INITIATIVE: ACHIEVEMENTS IN 2019-2020
Mr. Aimin NIU, Vienna, Austria, United Nations Office for Outer Space Affairs

IAC-20.A2.3.4
LEVERAGING MICROGRAVITY TO INVESTIGATE EARTH- AND SPACE-BASED CENTRIFUGAL CASTING OF WAX
Dr. Javier Stober, Clearwater, United States, Massachusetts Institute of Technology (MIT)

IAC-20.A2.3.5
REORIENTATION OF FUEL COMPONENTS TO ENSURE RESTARTING OF THE MAIN ENGINE: CALCULATION METHODS, NUMERICAL SIMULATION AND EXPERIMENTAL TESTING
Mr. Ihor Siedykh, Dnepropetrovsk, Ukraine, Yuzhnoye State Design Office

IAC-20.A2.3.8
THE EFFECT OF THERMOCAPILLARY CONVECTION ON PCM MELTING IN MICROGRAVITY: RESULTS AND EXPECTATIONS
Mr. Pablo Salgado Sanchez, Madrid, Spain, Universidad Politécnica de Madrid

A2.4. Science Results from Ground Based Research

Co-Chair: *Prof. Valentina Shevtsova, Université Libre de Bruxelles, Belgium ; Prof. Antonio Viviani, Università degli Studi della Campania "Luigi Vanvitelli", Italy ;*

Rapporteur: *Prof. Nickolay N. Smirnov, Moscow Lomonosov State University, Russian Federation ;*

IAC-20.A2.4.1
SINGLE BUBBLE SONOLUMINESCENCE IN MICROGRAVITY
Mr. James Hurrell, Buckingham, United Kingdom, International Space University (ISU)

IAC-20.A2.4.4
COMBUSTION OF A TWO-PHASE FUEL DROPLET CONTAINING CARBON PARTICLES IN WEIGHTLESSNESS
Prof. Nickolay N. Smirnov, Moscow, Russian Federation, Moscow Lomonosov State University

IAC-20.A2.4.5
IMBIBITION DIRECTED ULTRAFAST ASSEMBLY OF COLLOIDAL CRYSTALS
Dr. Weibin Li, Beijing, China, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences.

IAC-20.A2.4.7
DESIGN OF AN ICE CUBE INFRASTRUCTURE CAPABLE OF PERFORMING METAL EXTRACTION FROM A SUBSTRATE THROUGH BIOMINING IN MICROGRAVITY CONDITIONS, USING BACTERIA OF THE GENUS BACILLUS
Ms. Graciela Lopez Campos, San Jose, Costa Rica, Universidad de Costa Rica

IAC-20.A2.4.12
GROUND-BASED EXPERIMENTAL FACILITY FOR ORBITAL AERODYNAMICS RESEARCH: DESIGN, CONSTRUCTION AND CHARACTERISATION.
Dr. Vitor Toshiyuki Abrao Oiko, Manchester, United Kingdom, The University of Manchester

IAC-20.A2.4.13
SCATTERING MECHANISM OF SURFACE MATERIAL BY THRUSTING NEAR ASTEROID
Ms. Maiko Yamakawa, Kyoto, Japan, The Graduate Universty for Advanced Studies (SOKENDAI)

A2.5. Facilities and Operations of Microgravity Experiments

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

Rapporteur: *Dr. Satoshi Matsumoto, Japan Aerospace Exploration Agency (JAXA), Japan ;*

IAC-20.A2.5.3
UPDATE ON THE GRAVITOWER BREMEN PRO
Mr. Andreas Gierse, Bremen, Germany, ZARM University of Bremen

IAC-20.A2.5.9
AUTONOMOUS DEPLOYMENT OF SOLAR PANELS: NANOSATELLITE MODULES TESTED IN MICROGRAVITY ENVIRONMENT.
Mr. Akram Abdellatif, Weßling, Germany, German Aerospace Centre (DLR)

IAC-20.A2.5.10
REAL AND SIMULATED MICROGRAVITY PLATFORMS: THEIR INDIVIDUAL CAPACITIES, BENEFITS AND LIMITATIONS
Mrs. Funmilola Adebisi Oluwafemi, Abuja, Nigeria, National Space Research and Development Agency (NASRDA), Abuja

A2.6. Life and Microgravity Sciences on board ISS and beyond (Part I)

Co-Chair: *Prof. Stefan Van Vaerenbergh, Université Libre de Bruxelles, Belgium ; Mrs. Angelika Diefenbach, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

IAC-20.A2.6.1
MISSION BEYOND: THE ITALIAN SPACE AGENCY EXPERIMENTS OVERVIEW
Dr. Gabriele Mascetti, Rome, Italy, Italian Space Agency (ASI)

IAC-20.A2.6.9
GRAVITYGAMES 2.0
Mr. Gautham Viswaroopan, Colorado Springs, United States, Students for the Exploration and Development of Space

A2.7. Life and Microgravity Sciences on board ISS and beyond (Part II)

Co-Chair: *Mrs. Angelika Diefenbach, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ; Dr. Cora Thiel, University of Zurich, Switzerland ; Dr. Peter Graef, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ; Dr. Satoshi Matsumoto, Japan Aerospace Exploration Agency (JAXA), Japan ;*

IAC-20.A2.7.4
STUDENTS IN SPACE RESEARCH. THE INVOLVEMENT OF HIGH SCHOOL STUDENTS IN THE XENOGRISS EXPERIMENT
Prof. STEFANO CARTOCCI, FIRENZE, Italy, ITIS Antonio Meucci

IAC-20.A2.7.6
PRIMARY CILIA OF OSTEOBLASTS ARE CRITICAL TARGET OF MICROGRAVITY
Dr. Jufang Wang, Lanzhou, China, Institute of Modern Physics, Chinese Academy of Sciences

IAC-20.A2.7.8
MICROGRAVITY EFFECTS ON HEART VALVES BEHAVIOUR: THE HVBM EXPERIMENT ON ISS
Ms. Anisia Lauditi, San Salvo, Italy, Politecnico di Milano

IAC-20.A2.7.10
EXPERIMENTAL INVESTIGATION ON THE EFFECT OF MICROGRAVITY AND IMMUNOTHERAPY IN MELANOMA CELLS: MARGE EXPERIMENT
Ms. Eleonora Vestito, Bracciano, Italy, Sapienza University of Rome

IAC-20.A2.7.11
IN-ORBIT AUTONOMOUS LABORATORY FOR MICROGREENS CULTIVATION ON A NANO-SATELLITE: GREENCUBE MISSION
Mr. Federico Curianò, Rome, Italy, Sapienza University of Rome

A2.VP. Virtual Presentations - IAF MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM

Co-Chair: *Mr. Gabriel Pont, Centre National d'Etudes Spatiales (CNES), France ; Prof. Qi Kang, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., China ;*

IAC-20.A2.VP.2
THE PERWAVES COMBUSTION EXPERIMENT ON THE ESA MAXUS-9 AND TEXUS-56 SOUNDING ROCKETS
Mr. Jan Palecka, Montreal, Canada, McGill University
Mrs. Amanda Solaniuk, Siemiatycze, Poland, Wroclaw University of Science and Technology

IAC-20.A2.VP.5
REVIEW OF MICRO-GRAVITY SIMULATION EXPERIMENTAL SYSTEM OF SPACE MANIPULATOR AND PRELIMINARY ASSUMPTION OF NEW EXPERIMENTAL SYSTEM
Mr. Yuanbin Wang, Fuzhou, China, Fuzhou University

IAC-20.A2.VP.6
EFFECTS OF SIMULATED MICROGRAVITY ON MAMMALIAN FERTILIZATION AND EMBRYONIC STEM CELLS
Ms. Anisha Saha, Bangalore, India, R V College of Engineering, Bengaluru

A3. SPACE EXPLORATION SYMPOSIUM

A3.1. Space Exploration Overview

Co-Chair: *Dr. Christian Sallaberger, Canadensys Aerospace Corporation, Canada ; Mrs. Kathy Laurini, United States ;*

Rapporteur: *Mr. Keyur Patel, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States ; Dr. Norbert Frischauf, TU Graz, Austria ;*

IAC-20.A3.1.1
NASA'S PATH FROM LOW-EARTH ORBIT TO THE MOON AND ON TO MARS
Mr. Marshall Smith, Hampton, VA, United States, National Aeronautics and Space Administration (NASA)/Langley Research Center

IAC-20.A3.1.3 (non-confirmed)
FORESIGHT-DRIVEN ASSESSMENT AND MANAGEMENT OF TECHNOLOGY AREAS, CRITICAL ISSUES, AND OPPORTUNITY PATHWAYS FOR THE ESTABLISHMENT OF A HABITABLE SETTLEMENT ON MARS BY 2117: TOWARDS AN ACTION ROADMAP.
Dr. Khaled Al Hashmi, Abu Dhabi, United Arab Emirates, UAE Space Agency

IAC-20.A3.1.4
GLOBAL PROSPECTS FOR SPACE EXPLORATION: A STRATEGIC AND ECONOMIC ASSESSMENT
Mr. Simon Seminari, Paris, France, Euroconsult

IAC-20.A3.1.9
ADVANCING SPACE EXPLORATION THROUGH CROWDFUNDING SPACE PROJECTS
Dr. Bruce Betts, Pasadena, United States, The Planetary Society

IAC-20.A3.1.10
USC 2019 ARTEMIS PROJECT: MAXIMUM IMPACT MOON MISSION(-MAXIM) TRIBUTE TO APOLLO
Mr. Madhu Thangavelu, ROLLING HILLS ESTATES, United States, University of Southern California

A3.2A. Moon Exploration – Part 1

Co-Chair: *Prof. Bernard Foing, ESA/ESTEC, ILEWG & VU Amsterdam, The Netherlands ; Dr. David Korsmeyer, National Aeronautics and Space Administration (NASA), Ames Research Center, United States ;*

Rapporteur: *Mr. Pierre-Alexis Joumel, Airbus Defence and Space, Germany ; Dr. Nadeem Ghafoor, Canadensys Aerospace Corporation, Canada ;*

IAC-20.A3.2A.1 (non-confirmed)
VIPER: PATHFINDING IN-SITU RESOURCE UTILIZATION
Mr. Daniel Andrews, Moutain View, United States, National Aeronautics and Space Administration (NASA)

IAC-20.A3.2A.2
INTERNATIONAL COOPERATION OF THE CHANG'E-4 MISSION AS A CONTRIBUTION TO THE SUSTAINABLE DEVELOPMENT OF SPACE SCIENCE AND TECHNOLOGY
Mr. Zhe Zhang, Beijing, China, China National Space Administration (CNSA)

IAC-20.A3.2A.3
ILEWG REPORT TO IAF: SCIENCE, TECHNOLOGY, EUROMOONMARS, MOONBASE, MOONVILLAGE, MOONMARS SYNERGIES
Prof. Bernard Foing, Noordwijk, The Netherlands, ESA/ESTEC, ILEWG & VU Amsterdam

IAC-20.A3.2A.4
AMARIS: MITIGATING DUST ACCUMULATION USING ELECTROSTATIC FORCES AND A LITHIUM ION NANOFOIL SHIELD WITH APPLICATIONS TO LUNAR MISSIONS
Ms. Christina Cross, Palm Beach Gardens, United States, BLUECUBE Aerospace

IAC-20.A3.2A.5 (non-confirmed)
ATTITUDE CONTROL SUB-MODE DESIGN FOR SUN POINTING AND TARGET POINTING OF THE KOREA PATHFINDER LUNAR ORBITER
Dr. Jae-wook Kwon, Daejeon, Korea, Republic of, Korea Aerospace Research Institute (KARI)

IAC-20.A3.2A.7
DESIGN METHOD OF PRECISE LANDING SITE SELECTION AND EVALUATION FOR CHANG'E-4 MISSION AND IN-ORBIT VERIFICATION
Ms. Yang Zhao, Beijing, China

IAC-20.A3.2A.8
DEMOCRATIZING ACCESS TO THE MOON FOR SMALL SATELLITE OPERATORS
Mr. Richard French, HUNTINGTON BEACH, United States, Rocket Lab

IAC-20.A3.2A.11
DEVELOPMENT OF CUBESAT MOON LANDER OMOTENASHI
Prof. Tatsuaki Hashimoto, Sagamihara, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.A3.2A.12 (non-confirmed)
SUBSURFACE THERMAL ANALYSIS OF LUNAR SKYLIGHTS
Mr. Zihao Yuan, Beijing, China, University of Chinese Academy of Sciences

A3.2B. Moon Exploration – Part 2

Co-Chair: *Prof. Bernard Foing, ESA/ESTEC, ILEWG & VU Amsterdam, The Netherlands ; Dr. David Korsmeyer, National Aeronautics and Space Administration (NASA), Ames Research Center, United States ;*

Rapporteur: *Mr. Pierre-Alexis Joumel, Airbus Defence and Space, Germany ; Dr. Nadeem Ghafoor, Canadensys Aerospace Corporation, Canada ;*

IAC-20.A3.2B.3
BUILDING A PIECE OF THE MOON: CONSTRUCTION OF TWO INDOOR LUNAR ANALOGUE ENVIRONMENTS.
Mr. Philippe Ludivig, Luxembourg, Luxembourg , ispace, Inc

IAC-20.A3.2B.4
GENERATION-II LUNAR ENTRY APPROACH PLATFORM FOR RESEARCH ON GROUND: A NOVEL CONCEPT FOR LOW COST, HIGH LONGEVITY AUTONOMOUS OPERATIONS ON THE MOON.
Mr. Michael Smat, Los Angeles, United States, University of Southern California

IAC-20.A3.2B.6
ILOA 5 MOON MISSION UPDATE OCT 2020: MOON LANDINGS ON THE HORIZON
Mr. Steve Durst, Kamuela, United States, International Lunar Observatory Association (ILOA)

IAC-20.A3.2B.7
IMPACT OF THE LUNAR GATEWAY LOCATION ON THE HUMAN LANDING SYSTEM IN CASE OF PERMANENT BASE AT THE LUNAR SOUTH POLE
Mr. Kir Latyshev, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.A3.2B.8
PREDICTING THE OUTCOME OF LUMIO LUNAR CUBESAT
Dr. Francesco Topputo, Milan, Italy, Politecnico di Milano

IAC-20.A3.2B.9
PROGRESS OF LUNAR POLAR EXPLORATION MISSION
Mr. Takeshi Hoshino, Chofu, Tokyo, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.A3.2B.14
CONVERTING AN INDUSTRIAL AUTONOMOUS ROBOT SYSTEM INTO A LUNAR ROVER
Mr. Silver Lätt, Tallinn, Estonia, Milrem Robotics

IAC-20.A3.2B.16
INTERNATIONAL MOONBASE ALLIANCE ANALOG SPACE MISSIONS AT HI-SEAS - PREPARING FOR THE HUMAN EXPLORATION OF THE MOON & MARS
Dr. Michaela Musilova, Kailua-Kona, Hawaii, United States, International MoonBase Alliance

IAC-20.A3.2B.17
PROJECT TRAILER: TANDEM OF ROVER AND ASSOCIATED WAIN FOR LUNAR EXTENDED ROAMING
Dr. Anna Barbara Imhof, Vienna, Austria, Liquifer Systems Group (LSG)

IAC-20.A3.2B.20
CABLECAT: AN AUTONOMOUS SYSTEM TO DEVELOP POWER AND DATA INFRASTRUCTURE ON THE MOON
Mr. Andrew Barth, Cincinnati, United States, University of Cincinnati

IAC-20.A3.2B.25
TERRAIN BASED ANALYSIS, DESIGN, ASSESSMENT AND PLANNING TOOLBOX (TERRAIN-ADAPT) FOR A PLANETARY ROVER MISSION
Ms. Niti Madhugiri, Nagpur, India

A3.2C. Moon Exploration – Part 3

Co-Chair: *Prof. Bernard Foing, ESA/ESTEC, ILEWG & VU Amsterdam, The Netherlands ; Dr. David Korsmeyer, National Aeronautics and Space Administration (NASA), Ames Research Center, United States ;*

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

IAC-20.A3.2C.2
A KANGAROO-INSPIRED LUNAR HOPPING ROBOT WITH THE RIGID-FLEXIBLE COUPLING MECHANISM
Dr. Yufei Guo, Xi'an, China, Northwestern Polytechnical University;National Key Laboratory of Aerospace Flight Dynamics

IAC-20.A3.2C.3
AUTONOMOUS SOIL ASSESSMENT SYSTEM: CONTEXTUALIZING ROCKS, ANOMALIES AND TERRAINS IN EXPLORATORY ROBOTIC SCIENCE (ASAS-CRATERS)
Mr. Kaizad Raimalwala, Ottawa, Canada, Mission Control Space Services Inc.

IAC-20.A3.2C.7
EXPLOITING THE LUNAR ENVIRONMENT AS TESTBED FOR FUTURE TITAN EXPLORATIONS
Mr. Vincenzo Chiaramida, Torino, Italy, Politecnico di Torino

IAC-20.A3.2C.8 (non-confirmed)
LUNAR LIFE SCIENCES PAYLOAD ASSESSMENT
Dr. Fathi Karouia, Moffett Field, United States, National Aeronautics and Space Administration (NASA), Ames Research Center / UCSF

IAC-20.A3.2C.10
NEUTRON DETECTOR FOR SURFACE MAPPING OF LUNAR WATER
Dr. Robert Filgas, Prague, Czech Republic, Czech Technical University In Prague (CTU)

IAC-20.A3.2C.12
NOVEL FLUID-DRIVEN ARTIFICIAL MUSCLES FOR USE IN LUNAR ENVIRONMENT
Dr. Wang Mingchao, xi'an, China, Northwestern Polytechnical University;National Key Laboratory of Aerospace Flight Dynamics

IAC-20.A3.2C.14
MOON GALLERY - THE BEST VISIONS FOR THE FUTURE MOON CULTURE
Ms. Elizaveta Glukhova, Den Haag, The Netherlands, ILEWG ExoHab Team

IAC-20.A3.2C.16
THE IMPORTANCE OF QUALITATIVE PRIVATE ASTRONAUT TRAINING
Mrs. Nancy Vermeulen, Hove, Belgium, Space Training Academy

IAC-20.A3.2C.18
ALL FOR ONE AND ONE FOR ALL: RECOMMENDATIONS FOR SUSTAINABLE INTERNATIONAL LUNAR BASE UTILISATION AND EXPLORATION APPROACHES
Mr. Matej Poliacek, Bratislava, Slovak Republic

IAC-20.A3.2C.20
SPACEFARING FUTURE OF THE MIDDLE EAST: THE ROLE OF MOON MISSIONS
Mr. Burak Yaglioglu, Ankara, Turkey, TUBITAK Uzay, Space Technologies Research Institute

IAC-20.A3.2C.23
EXPERIMENTAL VALIDATION OF SYNTHETIC TRAINING SET FOR DEEP LEARNING VISION-BASED NAVIGATION SYSTEMS FOR LUNAR LANDING
Mr. Stefano Silvestrini, Milano, Italy, Politecnico di Milano

IAC-20.A3.2C.24
HYDROSPHERE LUNAR SURFACE SIMULATOR
Mr. Mohamed Makthoum Peer Mohamed, Marseille, France, COMEX SA

IAC-20.A3.2C.25
OXYGEN EXTRACTION FROM LUNAR SOIL OXIDES: ON GROUND EXPERIMENTS AND NUMERICAL MODELLING FOR THERMAL REDUCTION PROCESSES
Prof. Michèle Lavagna, Milan, Italy, Politecnico di Milano

IAC-20.A3.2C.29
MAXIMISING "RISK VERSUS REWARD" IN LUNAR EXPLORATION MISSION PLANNING
Mr. Nick Gollins, Leiden, The Netherlands, European Space Agency (ESA-ESTEC)

IAC-20.A3.2C.30
LUNAR EXPLORATION THROUGH CHIPSATS
Ms. Yuktee Gupta, Mumbai, India, Indian Institute of Technology, Bombay

IAC-20.A3.2C.31
TERRESTRIAL, SPACE AND LUNAR HUMAN ISOLATION: COMPARISON OF PROXEMICS DIMENSION AND OTHER ISOLATION STRESSOR FROM CORONAVIRUS TO SPACE.
Dr. Irene Lia Schlacht, Milano, Italy

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

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

Rapporteur: *Ms. Cheryl Reed, Northrop Grumman Innovation Systems, United States ; Mrs. Amalia Ercoli Finzi, Politecnico di Milano, Italy ;*

IAC-20.A3.3A.9
MODELING A MARS LOX/LH2 ARCHITECTURE WITH CRYO-MANAGEMENT, ISRU, AND FUEL CELLS
Mr. Kir Latyshev, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.A3.3A.10
ANALYSIS OF MARS AEROCAPTURE WITH A DEPLOYABLE DRAG DEVICE
Mr. Giorgio Isoletta, Naples, Italy, Università degli Studi di Napoli "Federico II"

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

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

Rapporteur: *Ms. Cheryl Reed, Northrop Grumman Innovation Systems, United States ; Mrs. Amalia Ercoli Finzi, Politecnico di Milano, Italy ;*

IAC-20.A3.3B.1
OVERVIEW OF MARS RESEARCH AT THE NATIONAL SPACE SCIENCE AND TECHNOLOGY CENTER, AL AIN, UAE
Dr. Roland Young, Al Ain, United Arab Emirates, United Arab Emirates University (UAEU)

IAC-20.A3.3B.3
SUPERCAM ON ITS WAY TO MARS
Mr. Gabriel Pont, Toulouse, France, Centre National d'Etudes Spatiales (CNES)

IAC-20.A3.3B.5
USING PLAN REPAIR METHOD TO COPE WITH PLAN FAILURES IN CHINESE ORBITING MARS MISSION
Mr. Chao Chen, Beijing, China, Beijing Institute of Technology, School of Aerospace Engineering

IAC-20.A3.3B.11
A CHILEAN ROBOTIC SOLUTION FOR SPACE MINING IN MARS
Ms. Alexandra Suarez, Santiago, Chile

IAC-20.A3.3B.12
USING OBJECT BASED IMAGE ANALYSIS (OBIA) FOR MAPPING AND CHARACTERIZATION OF MARTIAN NORTHERN POLE DUNES
Mr. Ahmad Jalil, Al Ain, United Arab Emirates, The National Space Science and Technology Center (NSSTC)

A3.4A. Small Bodies Missions and Technologies (Part 1)

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

Rapporteur: *Dr. Norbert Frischauf, TU Graz, Austria ; Dr. Marc D. Rayman, NASA Jet Propulsion Laboratory, United States ;*

IAC-20.A3.4A.2
SMALLSAT MISSION TO DIDYMOS: ENHANCED GNC DESIGN FOR THE LICIA SCIENCE RETURN MAXIMISATION
Mr. Andrea Capannolo, Milano, Italy, Politecnico di Milano

IAC-20.A3.4A.5
SCIENCE OPPORTUNITIES IN THE DIDYMOS BINARY: THE ROLE OF POST-IMPACT EJECTA LONG-TERM DYNAMICS IN THE PROXIMITY OPERATIONS DEFINITION
Mr. Giovanni Zanotti, Bergamo, Italy, Politecnico di Milano

IAC-20.A3.4A.8
TRAJECTORY ANALYSIS AND DESIGN FOR AN EUROPEAN FAST KINETIC DEFLECTION MISSION
Mr. Pablo Hermosin, Tres Cantos, Spain, Deimos Space SLU

IAC-20.A3.4A.9
SPACECRAFT TRAJECTORY SIMULATION FOR AUTONOMOUS LANDING ON SMALL PLANETARY BODIES
Ms. Larissa Balestrero Machado, Munich, Germany, Universität der Bundeswehr München

A3.4B. Small Bodies Missions and Technologies (Part 2)

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

Rapporteur: *Dr. Marc D. Rayman, NASA Jet Propulsion Laboratory, United States ; Dr. Norbert Frischauf, TU Graz, Austria ;*

IAC-20.A3.4B.1
SYSTEM DEFINITION OF MARTIAN MOONS EXPLORATION (MMX)
Dr. Yasuhiro Kawakatsu, Sagamihara, Kanagawa, Japan, Japan Aerospace Exploration Agency (JAXA), ISAS

IAC-20.A3.4B.2
THE ROVER FOR THE JAXA MMX MISSION: A STATUS
Mr. Gabriel Pont, Toulouse, France, Centre National d'Etudes Spatiales (CNES)

IAC-20.A3.4B.3
COMET INTERCEPTOR: AN ESA MISSION TO A DYNAMICALLY NEW SOLAR SYSTEM OBJECT
Dr. Joan Pau Sanchez Cuartielles, Milton Keynes, United Kingdom, Cranfield University

IAC-20.A3.4B.4
DEVELOPING AUTONOMOUS IMAGE CAPTURING SYSTEMS FOR MAXIMUM SCIENCE YIELD FOR HIGH FLY-BY VELOCITY SMALL SOLAR SYSTEM BODY EXPLORATION
Dr. Mihkel Pajusalu, Tartu, Estonia, University of Tartu

IAC-20.A3.4B.5
THE PHILOSOPHY OF DESIGN AND OPERATION OF SPACE PROBES FOR UNKNOWN ASTEROIDS INCLUDING HAYABUSA AND HAYABUSA2.
Mr. Tetsuya Masuda, Fuchu, Tokyo, Japan, NEC Corporation Space Systems Div.

IAC-20.A3.4B.6
OVERVIEW OF THE RESULTS OF THE OSIRIS REX LASER ALTIMETER AT ASTEROID BENNU.
Dr. Cameron Dickinson, Brampton, Canada, MDA

IAC-20.A3.4B.7
JANUS: A NASA SIMPLEX MISSION TO EXPLORE TWO NEO BINARY ASTEROIDS
Prof. Daniel Scheeres, Boulder, United States, Colorado Center for Astrodynamics Research, University of Colorado

IAC-20.A3.4B.9
APOPHIS EXPRESS, A UNIQUE OPPORTUNITY FOR VISITING APOPHIS IN 2029
Mr. Jean-Yves Prado, La Rochelle, France, PLATINEO

A3.5. Solar System Exploration

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

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

IAC-20.A3.5.1
METHODS FOR RECONSTRUCTION OF SOLAR CORONA BASED ON COMPRESSIVE SENSING OF TOMOGRAPHY IMAGES.
Mrs. DANIELE DIAS, Brasília, Brazil, Universidade de Brasília

IAC-20.A3.5.3
INVESTIGATION OF VARIOUS LANDER'S CONFIGURATIONS POSSIBILITIES CAPABLE OF MANEUVERING DESCENT TO THE VENUS SURFACE
Mrs. Anastasia Kosenkova, Moscow, Russian Federation, Bauman Moscow State Technical University

IAC-20.A3.5.4
PRELIMINARY MISSION DESIGN TO VENUS: EXPLORATION OUR SISTER PLANET USING ATMOSPHERIC GLIDER AND CUBESAT CONSTELLATION - AN ENGINEERING APPROACH
Mr. Adhithiyan Neduncheran, L'Aquila, Italy, University of L'Aquila

IAC-20.A3.5.5
BUOYANCY PROPELLED AIRCRAFT FOR VENUS EXPLORATION
Mr. Andrew Sabovik, Perrysburg, United States, The Ohio State University College of Engineering

IAC-20.A3.5.8
EUROPA RECONNAISSANCE ORBITER- A COMPREHENSIVE SPACECRAFT INSTRUMENTATION STUDY FOR EXPLORATION OF JUPITER'S ICY MOON EUROPA
Mr. Anand Kumar Singh, Kiruna, Sweden, Department of Space Engineering, Lulea University of Technology

IAC-20.A3.5.10
A MICRO/NANO SATELLITE MISSION IDEA CONTEST FOR DEEP SPACE SCIENCE AND EXPLORATION
Ms. Rei Kawashima, Tokyo, Japan, UNISEC-Global

IAC-20.A3.5.11
CONCEPTUAL DESIGN OF TECHNOLOGIES FOR A TITAN EXPLORATION MISSION
Mr. Aitor Estarlich, Torino, Spain, Politecnico di Torino

IAC-20.A3.5.12
SYSTEM ENGINEERING STUDY OF A FLOATING PROBE FOR TITAN MARE EXPLORATION
Mr. Mazoyer Victor, Lyon, France, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace

IAC-20.A3.5.13
EXPLORATION OF ENCELADUS THROUGH CONSTELLATION OF CUBESATS
Mr. Vipul Mani, Madhepura, India, TU Berlin

IAC-20.A3.5.15
FOSSIL - FINDING OUR COSMIC ROOTS
Prof. Mihaly Horanyi, Boulder, United States, University of Colorado Boulder

IAC-20.A3.5.17
PRELIMINARY DESIGN OF A MULTISPECTRAL IMAGING SYSTEM FOR THE CHEMICAL CHARACTERIZATION OF ENCELADUS LANDING SITE (MIMESIS)
Mr. Swarnajyoti Mukherjee, Milano, Italy, Politecnico di Milano

A3.VP. Virtual Presentations - IAF SPACE EXPLORATION SYMPOSIUM

Co-Chair: *Dr. Christian Sallaberger, Canadensys Aerospace Corporation, Canada ; Prof. Bernard Foing, ESA/ESTEC, ILEWG & VU Amsterdam, The Netherlands ;*

IAC-20.A3.VP.1
SPACE RADIATION CHALLENGES POSED TO SMALL /NANO SATELLITE SYSTEMS AND LONG DURATION SPACE HUMAN MISSIONS
Ms. Irene Schneider, Florida, United States

IAC-20.A3.VP.2
A REVIEW ON THE APPLICATION AND KEY PROBLEMS OF SEVERAL BIONIC ROBOT TECHNOLOGIES IN THE CONSTRUCTION OF LUNAR BASE
Mr. Hao Zhou, Xi'an, China, Northwestern Polytechnical University;National Key Laboratory of Aerospace Flight Dynamics

IAC-20.A3.VP.3
A NOVEL TOOL FOR FACILITATING MINERAL HARDNESS ASSESSMENT ON LUNAR SURFACE EVA
Dr. Shawna Pandya, Sherwood Park, Canada

IAC-20.A3.VP.4
BIO POLYMERS FOR IN SITU SPACE SUIT TEXTILE PRODUCTION AND REPAIRMENT
Ms. Stella Stylianou, The Hague, The Netherlands, VU Amsterdam, ILEWG

IAC-20.A3.VP.5
DESIGN, DEVELOP AND INTEGRATING DEXTEROUS ROBOTIC MANIPULATORS WITH ADVANCED AI SATELLITE FOR ON-ORBIT SERVICING, DEBRIS REMOVAL AND MONITORING SERVICES
Dr. SANDhYA RAO, NEW DELHI, India

IAC-20.A3.VP.7
EMMIHS-2, THE SECOND EUROMOONMARS IMA HI-SEAS 2019 CAMPAIGN: SIMULATED MOONBASE OUTLOOK AND OUTCOMES – AN ENGINEERING PERSPECTIVE
Mrs. Ana Paula Castro de Paula Nunes, Brasilia, Brazil, ESA/ESTEC, ILEWG & VU Amsterdam

IAC-20.A3.VP.10
LUNAR-FLASHES
Mr. Mohmmad Talafha, Sharjah, United Arab Emirates, Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST)

IAC-20.A3.VP.11
SAMPLE - SEMI-AUTONOMOUS MODULAR PLANT AND OTHER LIFE-SUSTAINING EXPERIMENT
Ms. Joanna Majsak, Lublin, Poland, Students Space Association, Warsaw University of Technology

IAC-20.A3.VP.12
DESIGNING OF AN INTERMEDIATE LUNAR BASE FOR MARS AND DEEP SPACE MISSIONS
Mr. Navjeet Singroha, Jind, India, University of Petroleum and Energy Studies

IAC-20.A3.VP.15
THERMAL EXPANSION INFLUENCE ON THE SPACE MASS SPECTROMETER BASED ON CERAMIC KINGDON TRAP
Ms. Anastasiia Fursova, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.A3.VP.17
LUNAR WATER HARVESTING: WATER ADSORPTION ON JSC-1 LUNAR SIMULANT, ZETA ADSORPTION ISOTHERM APPROACH
Mr. Nagarajan Narayanaswamy, Toronto, Canada, University of Toronto

IAC-20.A3.VP.19
MANNED ROVERS AND MOBILE BASES ON OTHER PLANETS.
Mr. Oleg Aleksandrov, San Francisco, United States, Private individual www.oleg.space

IAC-20.A3.VP.20
RESEARCH ON OBSTACLE AVOIDANCE PATH PLANNING OF SINGLE-ARM SPACE ROBOT USING Q_LEARNING REINFORCEMENT LEARNING APPROACH
Mr. Yi nong Ou yang, Xi'an, China, College of Astronautics, Northwestern Polytechnical University (NPU)

IAC-20.A3.VP.30
IMPACTOR TARGETING MANEUVER SYSTEM FOR 2016HO3 PROBE
Ms. Yuan ZHONG, Beijing, China, School of Aerospace, Tsinghua University, Beijing

IAC-20.A3.VP.31
PLANET CENTROID EXTRACTION ALGORITHM FOR APPROACH PHASE WITH SUB-PIXEL ACCURACY BASED ON DSP
Mr. He Jia, Beijing, China, School of Aerospace Engineering, Beijing Institute of Technology

IAC-20.A3.VP.32
LONG-TERM MOBILE AND STATIONARY INHABITED STATIONS ON THE SURFACE OF VENUS.
Mr. Oleg Aleksandrov, San Francisco, United States, Private individual www.oleg.space

IAC-20.A3.VP.33
SCIENTIFIC AND SPORTS EXPEDITION TO MARS AND ITS SATELLITES.
Mr. Oleg Aleksandrov, San Francisco, United States, Private individual www.oleg.space)

IAC-20.A3.VP.35
MOTION PLANNING FOR QUADRUPED ROBOT WALKING ON LUNAR ROUGH TERRAIN
Dr. Xiaoyu Chu, Beijing, China, Beijing Institute of Control Engineering(BICE), China Academy of Space Technology(CAST)

A4. 49TH IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – THE NEXT STEPS

A4.1. SETI 1: SETI Science and Technology

Co-Chair: *Dr. Andrea Melis, INAF - Istituto Nazionale di AstroFisica, Italy ; Prof. Michael Albert Garrett, University of Manchester, United Kingdom ;*

Rapporteur: *Dr. Daniel Price, U.C. Berkeley, United States ;*

IAC-20.A4.1.1
THE BREAKTHROUGH LISTEN SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE: OVERVIEW
Dr. Steve Croft, Berkeley, United States, University California Berkeley

IAC-20.A4.1.3
ON THE SEARCH FOR ARTIFICIALLY DISPERSED SIGNALS TOWARDS THE GALACTIC CENTER AND NEARBY STARS WITH THE BREAKTHROUGH LISTEN PROGRAM
Dr. Vishal Gajjar, Berkeley, United States, University of California, Berkeley

IAC-20.A4.1.4
COMMENSAL SETI SURVEY STRATEGIES FOR MEERKAT
Dr. Daniel Czech, Berkeley, United States, University of California, Berkeley

IAC-20.A4.1.5
WHAT IS THE EARTH'S TECHNOSIGNATURE ?
Ms. Julia DeMarines, Oakland, United States, University of California, Berkeley

IAC-20.A4.1.8
BIOSIGNATURE DETECTION IN EXOPLANETS BY USING DEEP LEARNING MODELS ON ABSORPTION LINE SPECTRAL DATA
Mr. Niranjan Dindodi Ramesh, Bengaluru, India, R V College of Engineering, Bengaluru

IAC-20.A4.1.9
THE VASCO PROJECT: 100 RED TRANSIENTS AND THEIR FOLLOW UP
Dr. Beatriz Villarroel, Stockholm, Sweden

IAC-20.A4.1.10
A PERUVIAN PROJECT ABOUT ASTROBIOLOGY AND OPTICAL SETI
Prof. Teófilo Vargas, Lima, Peru, Universidad Nacional Mayor de San Marcos

IAC-20.A4.1.11
COSMOLOGICAL KLT FOR EINSTEIN-DE SITTER UNIVERSE WITH SETI APPLICATIONS
Dr. Nicolò Antonietti, san Maurizio canavese, Italy, INAF - IRA

A4.2. SETI 2: SETI and Society

Co-Chair: *Dr. Nelly Ben Hayoun, The British Interplanetary Society, United Kingdom ; Dr. Paolo Musso, University of Insubria, Italy ;*

Rapporteur: *Ms. Julia DeMarines, University of California, Berkeley, United States ;*

IAC-20.A4.2.1
THE DUTY UNDER THE SPACE LAW TREATY REGIME TO DISCLOSE OR REPORT AN ENCOUNTER WITH AN EXTRA TERRESTRIAL INTELLIGENCE
Mr. George Anthony Long, Fountain Hills, Arizona, United States

IAC-20.A4.2.2
PROTOCOLS TO BE IMPLEMENTED IN EXTRATERRESTRIAL CONTACT AND SETI SECURITY PROTOCOLS
Dr. Ugur Guven, Palm Beach Gardens, United States, UN CSSTEAP

IAC-20.A4.2.6
A COMPREHENSIVE VIEW OF SETI: TECHNICAL, LEGAL, AND OUTREACH CONSIDERATIONS
Ms. Mirandah Ackley, Illkirch-Graffenstaden, France, International Space University (ISU)

IAC-20.A4.2.7
THE INCOSMICON RESEARCH CENTER AND ITS ACTIVITIES IN THE FIELD OF SETI, BIG HISTORY AND INTERCULTURALITY
Dr. Paolo Musso, Torino, Italy, University of Insubria

IAC-20.A4.2.8
SEARCH FOR EXTRATERRESTRIAL LIFE AND INTELLIGENCE – A STUDY ON NON-WATER BASED LIFE
Mr. Aditya Balasubramaniam, Bangalore, India, Ramaiah Institute of Technology

IAC-20.A4.2.10
LIFE EVOLUTION STATISTICS (EVO-SETI) COLLECTED IN A NEW BOOK
Dr. Claudio Maccone, Turin, Italy, International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF)

IAC-20.A4.2.11
SCIENCE FICTION TO SCIENCE: KLT TO COMMUNICATE WITH STARSHOT AND TAU ZERO
Dr. Claudio Maccone, Turin, Italy, International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF)

IAC-20.A4.2.12
SETI SEARCH: PLAUSIBILITY OF A SETI PROBE AND SEARCH PARAMETERS FOR AN INTERSTELLAR SETI SEARCH
Dr. Ugur Guven, Palm Beach Gardens, United States, UN CSSTEAP

A4.VP. Virtual Presentations - 49th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The Next Steps

Co-Chair: *Dr. Claudio Maccone, International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF), Italy;*

IAC-20.A4.VP.1
NASA SHOULD INSTALL AN L-BAND RECEIVER ABOARD THE LUNAR GATEWAY (LOP/G) FOR SETI SEARCHES
Dr. Claudio Maccone, Turin, Italy, International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF)

IAC-20.A4.VP.2
SEARCHING FOR, AND LOCALISING, FAST RADIO BURSTS
Dr. Wael Farah, Hat Creek, United States, SETI Institute

IAC-20.A4.VP.3
WHAT ETI CAN DO? EXTREME WAYS OF SAYING 'HELLO'
Mr. Pauli Laine, Jyväskylä, Finland

IAC-20.A4.VP.5
QUANTUM CONSCIOUSNESS, INTELLIGENCE, AND EXOSAPIENS: A NOVEL APPROACH TO THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE
Ms. Sahba El-Shawa, Amman, Jordan, International Space University (ISU)

A5. 23RD IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM

A5.1. Human Exploration of the Moon and Cislunar Space

Co-Chair: *Dr. Nadeem Ghafoor, Canadensys Aerospace Corporation, Canada ; Mr. Michael Raftery, Boeing Defense Space & Security, United States ;*

Rapporteur: *Mr. Marc Haese, DLR, German Aerospace Center, Germany ;*

IAC-20.A5.1.5
LUNAR LAVA TUBE EXPLORATION: FINDING THE SETTLEMENTS FOR FUTURE SMALL-SIZE CREW MISSION
Prof.Dr. Chongfeng ZHANG, Shanghai, China, Shanghai Academy of Spaceflight Technology (SAST), China Aerospace and Technology Corporation (CASC)

IAC-20.A5.1.6
LUNAR AGRICULTURE: FARMING FOR THE FUTURE
Mr. Oscar Rosas, San Nicolas de los Garza, Mexico, International Space University

IAC-20.A5.1.7
GREEN MOON PROJECT: ENCAPSULATED AND PRESSURISED HABITAT FOR PLANT ON SPACE.
Mr. Jose Maria Ortega-Hernandez, Wrexham, United Kingdom

IAC-20.A5.1.9
UTILIZATION OF NUCLEAR POWER FOR LUNAR OUTPOSTS: NUCLEAR POWER GENERATION USING HELIUM COOLED REACTOR FOR MOON HABITATS
Dr. Ugur Guven, Palm Beach Gardens, United States, UN CSSTEAP

IAC-20.A5.1.10
AARAMBH,THE FUTURISTIC LUNAR SURFACE VEHICLE
Mr. SHREYANSH SHARMA, BENGALURU, India, R.V.College of Engineering

IAC-20.A5.1.13
HABITAT, SPACE SYSTEMS AND EARTH ANALOGS SOLUTIONS DESIGN FOR HUMAN AND ROBOTIC EXPLORATIONS OF THE MOON
Mr. Marco Romero, Toulouse, France, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace

IAC-20.A5.1.15
EXTIMACY - EXPRESSIVE BIOFEEDBACK FOR PERSONAL WELLBEING AND INTERCULTURAL COLLABORATION IN HUMAN SPACE FLIGHT
Ms. Kristin Neidlinger, San Francisco, United States, SENSOREE Therapeutic Biomedia

A5.2. Human Exploration of Mars

Co-Chair: *Dr. Maria Antonietta Perino, Thales Alenia Space Italia, Italy ; Mrs. Kathy Laurini, United States ;*

Rapporteur: *Dr. Norbert Frischauf, TU Graz, Austria ;*

IAC-20.A5.2.1
GATEWAY HABITAT EXTENSIBILITY TO THE LUNAR SURFACE AND MARS
Mr. Travis Moseman, Houston, United States, The Boeing Company

IAC-20.A5.2.8
ASTROLAND: AN INNOVATIVE PERMANENT ANALOG HABITAT TO EXPLORE THE CAPABILITIES OF SUBSURFACE HABITABILITY AND OPERATIONS IN MARS
Mr. Iñigo Muñoz Elorza, Sanatnder, Spain, Astroland Agency

IAC-20.A5.2.9
SUSTAINABILITY OF AN ARTIFICIAL MARTIAN ATMOSPHERE
Dr. Ilias Fernini, Sharjah, United Arab Emirates, Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST)

IAC-20.A5.2.10
THE GLOBAL ANALOGUE MISSION
Dr. Ilaria Cinelli, Vienna, Austria, Space Generation Advisory Council (SGAC)

A5.3-B3.6. Human and Robotic Partnerships in Exploration - Joint session of the IAF Human Spaceflight and IAF Exploration Symposia

Co-Chair: *Dr. Christian Sallaberger, Canadensys Aerospace Corporation, Canada ; Mr. Mark Hempsell, The British Interplanetary Society, United Kingdom ;*

Rapporteur: *Dr. Juergen Schlutz, European Space Agency (ESA), Germany ;*

IAC-20.A5.3-B3.6.1
JAXA'S IVR ACTIVITY – APPLYING ROBOTICS AND AUTOMATION TECHNOLOGY FOR SAFE AND EFFICIENT MANNED SPACE ACTIVITIES
Mr. Seiko Piotr Yamaguchi, Tsukuba, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.A5.3-B3.6.3
DESIGN OF A MODULAR UTILITY VEHICLE FOR TELEOPERATED AND MANNED LUNAR SOUTH POLE EXPLORATION
Mr. Vittorio Netti, Bari, Italy, Sasakawa International Center for Space Architecture

IAC-20.A5.3-B3.6.9
DESIGN AND VALIDATION OF A FLEXIBLE EXOSKELETON FOR MANNED DEEP SPACE EXPLORATION
Mr. Zhe Zhao, Beijing, China, CALT,CASC

A5.4-D2.8. Space Transportation Solutions for Deep Space Missions

Co-Chair: *Mr. K. Bruce Morris, RUAG Space, United States ; Mr. Josef Wiedemann, MT Aerospace AG, Germany ;*

Rapporteur: *Dr. Gerhard Schwehm, ESA (retired), The Netherlands;*

IAC-20.A5.4-D2.8.1
A GATEWAY SUPPLY MISSION SCENARIO AND FLIGHT PLAN WITH UPGRADED H3 AND HTV-X
Dr. Shoyo Hyodo, Nagoya city, Japan, Mitsubishi Heavy Industries, Ltd.

IAC-20.A5.4-D2.8.3
ASSESSMENT OF ON-ORBIT CRYOGENIC REFUELING: OPTIMAL DEPORT ORBITS, LAUNCH VEHICLE MASS SAVINGS, AND DEEP SPACE MISSION OPPORTUNITIES
Mr. Justin Clark, Milford, United States, The Ohio State University College of Engineering

IAC-20.A5.4-D2.8.4
OPTIMAL SPACECRAFT TRAJECTORIES UNDER UNCERTAINTIES
Mr. Deepak Gaur, Noida, India, Amity School of Engineering

IAC-20.A5.4-D2.8.6
KNOWLEDGE AND TECHNOLOGY BUILDING BLOCKS FOR SPACE ACCESS ARCHITECTURES
Mr. Arun Subramanian Venkataraman, Chennai, India

IAC-20.A5.4-D2.8.9
NUCLEAR THERMAL PROPULSION (NTP) POST-BURN TRANSIENT: COOL-DOWN PROPELLANT CONSUMPTION AND ITS EFFECT ON TOTAL DELTA-V
Mr. Jack Plank, Columbus, United States, The Ohio State University College of Engineering

A5.VP. Virtual Presentations - 23rd IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM

Co-Chair: *Dr. Christian Sallaberger, Canadensys Aerospace Corporation, Canada ; Dr. Maria Antonietta Perino, Thales Alenia Space Italia, Italy ;*

IAC-20.A5.VP
MANNED ROVERS AND MOBILE BASES ON OTHER PLANETS.
Mr. Oleg Aleksandrov, San Francisco, United States, Private individual www.oleg.space

IAC-20.A5.VP
ALGORITHM FOR SELECTION OF N NUMBER OF INDIVIDUALS FROM A GIVEN DATABASE FOR SPACE MISSIONS ON THE BASIS OF PREDEFINED PARAMETERS
Mr. Vikrant Sharma, Jind, India, University of Petroleum and Energy Studies

IAC-20.A5.VP
SOLVING THE RADIATION PROBLEM ON A TRIP TO MARS USING ELECTROMAGNETS
Ms. Alexandra Martha Walser, Wilen b. Wollerau, Switzerland

A6. 18TH IAA SYMPOSIUM ON SPACE DEBRIS

A6.1. Space Debris Detection, Tracking and Characterization

Co-Chair: *Prof. Thomas Schildknecht, Astronomical Institute University of Bern (AIUB) / SwissSpace Association, Switzerland ; Dr. Mark A. Skinner, The Aerospace Corporation, United States ;*

Rapporteur: *Mr. Vladimir Agapov, Russian Academy of Sciences, Russian Federation ;*

IAC-20.A6.1.1
INVESTIGATION OF THE RADAR PARAMETER SUBSPACE FOR DIFFERENT BEAM-PARK SIMULATIONS WITH THE TIRA SYSTEM
Mr. Matteo Budoni, Wachtberg, Germany, Fraunhofer FHR

IAC-20.A6.1.2
RESEARCH ON SPACE DEBRIS OBSERVATION WITH MULTI TELESCOPES IN ANTARCTICA
Mr. Gongqiang Li, Beijing, China, National Astronomical Observatories, Chinese Academy of Sciences

IAC-20.A6.1.6
CORRELATION BETWEEN LIGHT CURVE OBSERVATIONS AND LABORATORY EXPERIMENTS USING A DEBRIS SCALE MODEL IN AN OPTICAL SIMULATOR
Dr. Toshifumi Yanagisawa, Chofu, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.A6.1.7
BISTATIC OPTICAL MEASUREMENTS FOR DYNAMIC CHARACTERIZATION OF LEO OBJECTS
Mr. Lorenzo Mariani, roma, Italy, Sapienza University of Rome

IAC-20.A6.1.10
DIRECT MEASUREMENTS OF HYPERVELOCITY IMPACT FLUXES ON THE TANPOPO AL FRAMES IN 2015-2018 DEMAND CURRENT MICROPARTICULATE ENVIRONMENT MODELS IN LEO
Ms. Erika Minakami, Koganei-shi, Tokyo, Japan, Hosei University

A6.2. Modelling and Risk Analysis

Co-Chair: Dr. Carmen Pardini, ISTI-CNR, Italy ; Mr. Daniel Oltrogge, Analytical Graphics, Inc., United States ;

Rapporteur: Mr. Marlon Sorge, The Aerospace Corporation, United States ;

IAC-20.A6.2.1
KEYNOTE: IDENTIFYING THE 50 STATISTICALLY MOST CONCERNING DERELICT OBJECTS IN LEO
Dr. Darren McKnight, Chantilly, VA, United States, Integrity Applications Incorporated (IAI)

IAC-20.A6.2.2
ASSESSING DEBRIS REMOVAL SERVICES FOR LARGE CONSTELLATIONS
Ms. Harriet Brettle, Harwell, United Kingdom, Astroscale Ltd

IAC-20.A6.2.3
RISK ASSESSMENT OF RECENT HIGH-INTEREST CONJUNCTIONS
Dr. Salvatore Alfano, Colorado Springs, United States, Analytical Graphics, Inc.

IAC-20.A6.2.4
IMPROVING CA SERVICES: A POST-ANALYSIS OF THE S3TOC DATA, PRODUCTS AND OPERATIONS.
Mrs. Cristina Perez Hernandez, Madrid, Spain, Centro Para el Desarrollo Tecnologico Industrial (CDTI)

IAC-20.A6.2.6
IMPROVEMENTS AND UPDATES IN MASTER-8
Dr. Carsten Wiedemann, Braunschweig, Germany, TU Braunschweig, Institute of Space Systems

IAC-20.A6.2.9
DEVELOPMENT OF A FIRST PRINCIPLES APPROACH TO QUANTIFY AND ASSESS IN-ORBIT RISK
Mr. Toby Harris, Swindon, United Kingdom, UK Space Agency

IAC-20.A6.2.12
AN EVIDENCE-BASED MACHINE LEARNING APPROACH TO AUTONOMOUS COLLISIONS RISK ASSESSMENT AND COLLISION AVOIDANCE EXECUTION
Mr. Luis Sanchez, Glasgow, United Kingdom, Univeristy of Strathclyde

IAC-20.A6.2.15
RISK ANALYSIS FROM GEOSYNCHRONOUS SATELLITES' DEBRIS AFTER COLLISION
Dr. Haitao Zhang, Beijing, China, Space Engineering University (Beijing)

A6.3. Impact-Induced Mission Effects and Risk Assessments

Co-Chair: *Dr. Emma Kerr, Deimos Space UK Ltd, United Kingdom ; Prof. Zizheng Gong, Beijing Institute of Spacecraft Environment Engineering, China Academy of Space Technology (CAST), China ;*

Rapporteur: *Mr. Jean-Claude Traineau, Office National d'Etudes et de Recherches Aérospatiales (ONERA), France ;*

IAC-20.A6.3.3
MODELING OF DEBRIS PARTICLES IMPACT ON SPACE STRUCTURES
Prof. Nickolay N. Smirnov, Moscow, Russian Federation, Moscow Lomonosov State University

IAC-20.A6.3.5
NUMERICAL STUDY OF WHIPPLE SHIELD PROTECTIVE CAPABILITY AT IMPACT VELOCITY ABOVE 7.5KM/S
Dr. Yixiao Li, Beijing, China, China Aerospace Science and Industry Corporation (CASIC)

IAC-20.A6.3.6
SPACE DEBIRS RISK ASSESSMENT AND PROTECTION SCHEME DESIGN BASED ON SPACE STATION
Mrs. LIU MIN, Beijing, China, China Academy of Space Technology (CAST)

A6.4. Mitigation - Tools, Techniques and Challenges

Co-Chair: *Dr. Satomi Kawamoto, Japan Aerospace Exploration Agency (JAXA), Japan ; Mr. Pierre Omaly, CNES, France ;*

Rapporteur: *Dr. Holger Krag, European Space Agency (ESA), Germany ;*

IAC-20.A6.4.3
ADDRESSING SPACE DEBRIS MITIGATION IN SATELLITE MISSION DESIGN
Dr. Vitali Braun, Darmstadt, Germany, IMS Space Consultancy

IAC-20.A6.4.4
DEVELOPMENT ROADMAP OF A DEORBIT KIT BASED ON ELECTRODYNAMIC TETHER TECHNOLOGY
Mr. Lorenzo Tarabini-Castellani, Tres Cantos, Spain, SENER

IAC-20.A6.4.5
EVALUATING THE SHORT AND MEDIUM TERM IMPACT OF SPACE ACTIVITIES IN LOW EARTH ORBIT
Dr. Carmen Pardini, Pisa, Italy, ISTI-CNR

IAC-20.A6.4.6
ASSESSMENT OF TIME SPENT IN THE LEO, GEO, AND SEMI-SYNCHRONOUS ZONES BY SPACECRAFT ON LONG-TERM REENTERING DISPOSAL ORBITS
Mr. Alan B. Jenkin, Los Angeles, CA, United States, The Aerospace Corporation

IAC-20.A6.4.8
SPACE DEBRIS MITIGATION USING PHOTONIC LASER THRUST
Ms. Bhavana K, Bengaluru, India, R V College of Engineering, Bengaluru

A6.5. Post Mission Disposal and Space Debris Removal (1)

Co-Chair: *Prof. Balbir Singh, Manipal Institute of Technology, Manipal Academy of Higher Education, India ; Mr. Laurent Francillout, CNES, France ;*

Rapporteur: *Prof. Roberto Opromolla, University of Naples "Federico II", Italy ;*

IAC-20.A6.5.2
AIRBUS ACTIVE DEBRIS REMOVAL SERVICE
Mr. Alexander Hall, Stevenage, United Kingdom, Airbus Defence and Space Ltd

IAC-20.A6.5.3
DEBRIS COLLISION MITIGATION FROM THE GROUND USING LASER GUIDE STAR ADAPTIVE OPTICS AT MOUNT STROMLO OBSERVATORY: RESULTS FROM THE FIRST ARTIFICIAL STAR EVER CREATED IN AUSTRALIAN SKIES
Dr. Noelia Martinez Rey, ACT, Australia, Australian National University (ANU)

IAC-20.A6.5.5
SIMULATION AND LABORATORY TESTING OF THE 3U CUBESAT CONTROL IN THE PROXIMITY OF SPACE DEBRIS
Dr. Danil Ivanov, Moscow, Russian Federation, Keldysh Institute of Applied Mathematics, RAS

IAC-20.A6.5.6
DEORBITING OF ELECTRODYNAMIC TETHERED SYSTEMS CONSIDERING TETHER LONGITUDINAL ELASTICITY AND AERODYNAMIC FORCES
Dr. Nima Assadian, Tehran, Iran, Sharif University of Technology

IAC-20.A6.5.8
SPACE DEBRIS REMOVAL USING DRAG FORCE INTENSIFIER APPLYING CHARGED MEMBRANE: SYSTEM DESIGN AND FEASIBILITY STUDIES
Dr. Takanobu MURANAKA, Nagoya, Japan, Chukyo University

IAC-20.A6.5.9
A SPACE DEBRIS REMOVAL STRATEGY USING A COLLISION WITH SMALL RELATIVE VELOCITY
Prof. Noboru TAKEICHI, Hino, Tokyo, Japan, Tokyo Metropolitan University

IAC-20.A6.5.12
ESTIMATION OF ANGULAR MOMENTUM USING ARTIFICIAL MARKERS FOR THE CAPTURE OF NON-COOPERATIVE SPACE DEBRIS TARGETS
Mr. Tetsuya Kusumoto, TokyotoBunkyoku, Japan, The University of TOKYO, Graduate school

IAC-20.A6.5.13
TEST OF TETHERED DEORBITING OF SPACE DEBRIS
Dr. Lorenzo Olivieri, Padova, Italy, CISAS "G. Colombo" - University of Padova

A6.6. Post Mission Disposal and Space Debris Removal (2)

Co-Chair: *Mr. John Auburn, Astroscale Ltd, United Kingdom ; Mr. Nicolas Bérend, ONERA - The French Aerospace Lab, France ;*

Rapporteur: *Dr. Carsten Wiedemann, TU Braunschweig, Institute of Space Systems, Germany ;*

IAC-20.A6.6.2
ANALYSIS OF THE SPACE DEBRIS OBJECTS NOZZLE CAPTURE DYNAMIC PROCESSED BY A TELESCOPIC ROBOTIC ARM
Dr. Vera Mayorova, Moscow, Russian Federation, Bauman Moscow State Technical University

IAC-20.A6.6.3
AN ALTERNATIVE SPACE DEBRIS REMEDIATION OPTION: BRINGING MASSIVE DERELICTS BACK TO LIFE USING NANO-TUGS
Dr. Darren McKnight, Chantilly, VA, United States, Integrity Applications Incorporated (IAI)

IAC-20.A6.6.4
SIMULATED IMPACT OF TRANSIENT AEROSHELL DEPLOYMENT ON COUPLED AERO-ATTITUDE DYNAMICS OF A NANOSATELLITE FOR FAST PASSIVE DISPOSAL IN LEO
Mr. Maximilien Berthet, Tokyo, Japan, University of Tokyo

IAC-20.A6.6.6
CAPTURE AND STABILIZATION STRATEGY FOR LARGE TUMBLING GEO DEBRIS REMOVAL USING SPACE ROBOTIC MANIPULATOR SYSTEM
Dr. Xinglong Wang, Beijing, China, China Academy of Space Technology (CAST)

IAC-20.A6.6.7
MOMENTUM BASED CLASSIFICATION FOR ROBOTIC ACTIVE DEBRIS REMOVAL
Mr. Shubham Vyas, Bremen, Germany, German Research Centre for Artificial Intelligence

IAC-20.A6.6.8
INFLUENCE OF SPACE DEBRIS ATTITUDE MOTION ON ION BEAM ASSISTED REMOVAL MISSION COSTS
Prof. Vladimir S. Aslanov, Moscow, Russian Federation, Moscow Aviation Institute

IAC-20.A6.6.9
DRAG AUGMENTATION SYSTEMS FOR SPACE DEBRIS MITIGATION
Ms. Zaria Serfontein, Milton Keynes, United Kingdom, Cranfield University

IAC-20.A6.6.10
A BACKSTEPPING SLIDING MODE FAULT-TOLERANT CONTROL FOR FREE FLOATING SPACE MANIPULATOR ON REACTION NULL-SPACE
Mr. Tianyu Gao, Fuzhou, China, Fuzhou University

IAC-20.A6.6.12
ATTITUDE CONTROL ALGORITHM FOR SATELLITES WITH PARTIALLY KNOWN INERTIAL PROPERTIES
Mr. Amila Gilimalage, Nagareyama City, Japan, Tokyo University of Science

A6.7. Operations in Space Debris Environment, Situational Awareness

Co-Chair: *Dr. Noelia Sanchez Ortiz, Deimos Space S.L., Spain ; Dr. T.S. Kelso, United States ;*

Rapporteur: *Mr. Vincent Martinot, Thales Alenia Space France, France ;*

IAC-20.A6.7.4
A DEEP LEARNING APPROACH TO SPACE WEATHER PROXY FORECASTING FOR ORBITAL PREDICTION
Ms. Emma Stevenson, Madrid, Spain, Universidad Politécnica de Madrid

IAC-20.A6.7.6
ALARM FATIGUE AS AN OPERATIONAL SAFETY CONCERN FOR SPACE TRAFFIC CONTROLLERS
Ms. Jaclyn Wiley, Venice, United States

IAC-20.A6.7.7
AUTOMATED OPERATIONS FOR THE MAINTENANCE OF A SPACE OBJECT DATABASE
Mr. Benedikt Reihs, Bern, Switzerland, Astronomical Institute University of Bern (AIUB)

IAC-20.A6.7.8
SPACE SITUATIONAL AWARENESS TASKING FOR MULTIPLE NARROW FIELD OF VIEW SENSORS AGAINST MANEUVERING LEO OBJECTS: A DEEP REINFORCEMENT LEARNING APPROACH
Mr. Daniel Jang, Cambridge, United States, Massachusetts Institute of Technology (MIT)

IAC-20.A6.7.9
CUBESAT CONFUSION: AVOIDING "DEAD ON ARRIVAL"
Dr. Mark A. Skinner, Arlington, United States

A6.8-E9.1. Policy, Legal, Institutional and Economic Aspects of Space Debris Detection, Mitigation and Removal

Co-Chair: *Prof. Serge Plattard, University College London (UCL), United Kingdom ; Mr. Alexander Soucek, European Space Agency (ESA), The Netherlands ; Ms. Samantha Le May, RMIT University (Royal Melbourne Institute of Technology), Australia ;*

Coordinator: *Mr. Christophe Bonnal, Centre National d'Etudes Spatiales (CNES), France ;*

Rapporteur: *Prof. David B. Spencer, The Pennsylvania State University, United States ;*

IAC-20.A6.8-E9.1.1
KEYNOTE: PROGRESSIVE LEADERSHIP IN SPACE SAFETY REQUIRES A NEW APPROACH TO SETTING DEBRIS MITIGATION STANDARDS
Dr. Timothy Maclay, Lincoln, United States

IAC-20.A6.8-E9.1.2
ENVIRONMENTAL MEANS FOR PROTECTION NEAR-EARTH SPACE FROM DEBRIS
Ms. Anna Hurova, Kyiv, Ukraine, International Institute of Space Law (IISL)

IAC-20.A6.8E9.1.4
APPLYING LESSONS LEARNED FROM DECOMMISSIONING IN NON-SPACE SECTORS TO ACTIVE DEBRIS REMOVAL
Ms. Harriet Brettle, Harwell, United Kingdom, Astroscale Ltd

IAC-20.A6.8-E9.1.5
NETWORK ANALYSIS OF THE EVOLVING LANDSCAPE FOR SPACE SITUATIONAL AWARENESS
Prof. Mariel Borowitz, Atlanta, GA, United States, Georgia Institute of Technology

IAC-20.A6.8-E9.1.6
SPACE SUSTAINABILITY RATING: DESIGNING A COMPOSITE INDICATOR TO INCENTIVIZE SATELLITE OPERATORS TO PURSUE LONG-TERM SUSTAINABILITY OF THE SPACE ENVIRONMENT
Dr. Minoo Rathnasabapathy, Cambridge, United States, Massachusetts Institute of Technology (MIT)

IAC-20.A6.8-E9.1.8
RECENT DEVELOPMENTS IN THE IMPLEMENTATION OF EUROPEAN SPACE SURVEILLANCE & TRACKING (EU SST) – SECURITY AND DATA POLICY
Mr. Marc Becker, Bonn, Germany, DLR (German Aerospace Center)

IAC-20.E9.1-A6.8.9
PEACEFUL (AB)USE OF OUTER SPACE: INTERNATIONAL LEGAL TOOLS TO CURB KINETIC ANTI-SATELLITE WEAPON TESTS
Mr. Tomas Marozas, Vilnius, Lithuania

IAC-20.A6.8-E9.1.10
POTENTIAL EXPORT CONTROL CHALLENGES AND CONSTRAINTS FOR EMERGING SPACE DEBRIS DETECTION AND REMOVAL TECHNOLOGIES – THE CASE OF ON-ORBIT COLLISION
Mrs. Alice Riviere, Taufkirchen, Germany, Airbus Defence & Space

IAC-20.A6.8-E9.1.13
FINDING A VIABLE ECONOMIC SOLUTION TO SPACE DEBRIS REMOVAL
Mr. Kevin Barry, Rockville, United States, George Mason University

A6.9. Orbit Determination and Propagation

Co-Chair: *Prof.Dr. Heiner Klinkrad, European Space Agency (ESA), Germany ; Mr. Juan Carlos Dolado Perez, Centre National d'Etudes Spatiales (CNES), France ;*

Rapporteur: *Prof. Fabio Santoni, Sapienza University of Rome, Italy ;*

IAC-20.A6.9.3
METRIC FOR OBJECT ASSOCIATION IN THE KEPLERIAN ORBITS SPACE.
Dr. Alessandro Vananti, Bern, Switzerland, Astronomical Institute University of Bern (AIUB)

IAC-20.A6.9.4
TRACK-TO-TRACK ASSOCIATION FOR SPACE OBJECT CATALOGUING WITH OPTICAL SURVEY DATA
Mr. Alejandro Pastor-Rodríguez, Tres Cantos, Madrid, Spain, GMV Aerospace & Defence SAU

IAC-20.A6.9.6
SHOOTING METHOD TO ALLOW FOR PERTURBATIONS IN THE OPTIMIZED BOUNDARY VALUE INITIAL ORBIT DETERMINATION
Ms. Harleen Kaur Mann, Bern, Switzerland, Astronomical Institute University of Bern (AIUB)

IAC-20.A6.9.7
KALMAN FILTERS AND BATCH FILTERS FOR ORBIT DETERMINATION WITH TIRA
Mr. Claudio Carloni, Wachtberg, Germany, Fraunhofer FHR

IAC-20.A6.9.8
INVESTIGATION AND PREDICTION OF TWO-LINE ELEMENT ERRORS FOR OBJECTS IN THE IONOSPHERE
Mr. Romain Lucken, Paris, France

A6.10-B6.5. Joint Space Operations/ Space Debris Session

Co-Chair: *Dr. Darren McKnight, Integrity Applications Incorporated (IAI), United States ; Ms. Helen Tung, NewSpace2060, Australia ; Mr. John Auburn, Astroscale Ltd, United Kingdom ;*

Rapporteur: *Dr. Norman Fitz-Coy, University of Florida, United States ; Dr. A. Anilkumar, Indian Space Research Organization (ISRO), United States ; Mr. Andreas Ohndorf, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

IAC-20.A6.10-B6.5.1
OPTIMIZATION AND STANDARDIZATION OF LIGHT EMITTING DIODES (LEDS) PATTERNS FOR IMPROVED SATELLITE TRACKING AND MONITORABILITY
Mr. Paolo Marzioli, Rome, Italy, Sapienza University of Rome

IAC-20.A6.10-B6.5.3
GLOBALLY-OPTIMAL WHOLE BODY MOTION PLANNING UNDER NON-HOLONOMIC CONSTRAINTS USING DYNAMIC PROGRAMMING
Mr. Federico Salvioli, Torino, Italy, Altec S.p.A.

IAC-20.A6.10-B6.5.4
ENABLING GENERAL ORBITAL TRANSPARENCY BY OPEN-SOURCE ORBIT-DETERMINATION OF CUBESATS AND OTHER SOURCES
Mr. Andreas Hornig, Stuttgart, Germany, University of Stuttgart

IAC-20.A6.10-B6.5.6
COLLISION AVOIDANCE ALGORITHMS FOR SPACE TRAFFIC MANAGEMENT APPLICATIONS
Dr. Juan Luis Gonzalo, Milan, Italy, Politecnico di Milano

IAC-20.A6.10-B6.5.7
ENABLING WORLDWIDE AND TRANSPARENT SPACE TRAFFIC MANAGEMENT THROUGH DECENTRALIZED AND TRUSTWORTHY SPACE DOMAIN AWARENESS
Mr. Waqar Zaidi, Columbia, United States, Harris Corporation

IAC-20.A6.10-B6.5.8
CAPTURING METHOD OF TUMBLING SPACE DEBRIS BASED ON ASSEMBLED MULTIPLE MICRO-SATELLITES
Mr. Siyang Meng, Xi'an, China, Northwestern Polytechnical University, NPU

A6.VP. Virtual Presentations - 18th IAA SYMPOSIUM ON SPACE DEBRIS

Co-Chair: *Mr. Christophe Bonnal, Centre National d'Etudes Spatiales (CNES), France ; Dr. Darren McKnight, Integrity Applications Incorporated (IAI), United States ; Prof. Tetsuo Yasaka, Institute for Q-shu Pioneer of Space, Inc. (iQPS), Japan ; Mr. Marko Jankovic, German Research Centre for Artificial Intelligence, Germany ;*

IAC-20.A6.VP.1
A UNIFIED FRAMEWORK FOR HIGH PRECISION AND SPEED IDENTIFICATION AND TRACKING OF SPACE DEBRIS
Mr. Jiangtao Wei, Xi'an, China, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, Xi'an

IAC-20.A6.VP.6
THE ITALIAN BIRALET RADAR SYSTEM TO PERFORM RANGE AND RANGE RATE MEASUREMENTS IN THE EUSST EUROPEAN SPACE SURVEILLANCE AND TRACKING PROGRAM.
Dr. Tonino Pisanu, Selargius (CA), Italy, National Institute for Astrophysics

IAC-20.A6.VP.8
ORBITAL FLIPS DUE TO SOLAR RADIATION PRESSURE FOR ORBITAL DEBRIS IN NEAR-CIRCULAR INCLINED ORBITS
Prof. Eduard Kuznetsov, Yekaterinburg, Russian Federation, Ural Federal University

IAC-20.A6.VP.9
END-OF-LIFE FOR SATELLITE SWARMS
Mr. Calum Turner, Ilkirch-Graffenstaden, France, ISAE-Supaero University of Toulouse

IAC-20.A6.VP.11
EXPLORATION OF AN INNOVATIVE RANGING METHOD FOR BI-STATIC RADAR, APPLIED IN LEO SPACE DEBRIS SURVEYING AND TRACKING
Dr. Germano Bianchi, Medicina, Italy, INAF - IRA

IAC-20.A6.VP.12
HIGH REPETITION RATE OF 1 KHZ SPACE DEBRIS LASER RANGING IN NEAR INFRARED WAVELENGTH OF 1064NM
Prof. Zhongping Zhang, Shanghai, China, Shanghai Astronomical Observatory, Chinese Academy of Sciences

IAC-20.A6.VP.13
TOWARD AUTOMATED COLLISION AVOIDANCE: PREDICTING THE RISK OF SATELLITE COLLISIONS USING MACHINE LEARNING-POWERED TECHNIQUES
Mr. Michal Myller, Gliwice, Poland, KP Labs

IAC-20.A6.VP.14
PRELIMINARY MISSION ANALYSIS OF ACTIVE DEBRIS REMOVAL SERVICE FOR LARGE CONSTELLATIONS
Ms. Simeng Huang, MILANO, Italy, Politecnico di Milano

IAC-20.A6.VP.15
PARAMETER CHOICES FOR STABLE DEBRIS-TETHER-TUG SYSTEMS
Ms. Keying Yang, Beijing, China, Beijing Institute of Technology (BIT)

IAC-20.A6.VP.16
A PATH PLANNING METHOD OF MULTI-MICRO SATELLITES FOR PROXIMITY MANUVER TO SPACE NON-COOPERATIVE TARGETS
Ms. Jinfeng Song, Xi'an, China, College of Astronautics, Northwestern Polytechnical University (NPU)

IAC-20.A6.VP.17
STUDY OF LIGHT ROBOT ARM FOR SPACE DEBRIS CAPTURE WITH BUFFER FUNCTION
Dr. Shin-Ichiro Nishida, Tottori, Japan, Tottori University

IAC-20.A6.VP.19
AN EFFICIENT STRATEGY FOR DEFUNCT SATELLITES DETUMBLING USING ELECTROMAGNETIC FIELD FORMED BY MULTI-SATELLITES CAGING
Dr. Chong Sun, Xi'an, China, Northwestern Polytechnical University

A7. IAF SYMPOSIUM ON FUTURE SPACE ASTRONOMY AND SPACE PHYSICS MISSIONS

A7.1. Space Agency Strategies and Plans

Co-Chair: *Dr. Eric Wille, ESA, The Netherlands ; Prof. Pietro Ubertini, INAF, Italy ;*

Rapporteur: *Mrs. Maria Cristina Falvella, Italian Space Agency (ASI), Italy ;*

Keywords describing the session best: 1. Astronomy 2. Exoplanets 3. Space Physics 4. Fundamental Physics 5. Science Roadmaps

IAC-20.A7.1.1
THE HIGH ENERGY ASTROPHYSICS GROUP IN THE LIGHT OF SHARJAH-SAT-1 AND FUTURE PROJECTS
Dr. Antonios Manousakis, Sharjah, United Arab Emirates, Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST)

IAC-20.A7.1.8
ENABLING AMBITIOUS SPACE SCIENCE MISSIONS THANKS TO 10K-20K CRYOCOOLING
Mr. Pascal Barbier, Sassenage, France, Air Liquide

IAC-20.A7.1.9
EXPLORATORY METHODS AND TECHNIQUES FOR SPACE TECHNOLOGY DEVELOPMENT AND SPACE MISSION CONCEPT DEVELOPMENT
Ms. Lizbeth B. De La Torre, Altadena, United States, Jet Propulsion Laboratory - California Institute of Technology

A7.2. Science Goals and Drivers for Future Exoplanet, Space Astronomy and Space Physics

Co-Chair: *Prof. Pietro Ubertini, INAF, Italy ; Mrs. Maria Cristina Falvella, Italian Space Agency (ASI), Italy ;*

Rapporteur: *Dr. Eric Wille, ESA, The Netherlands ;*

Keywords describing the session best: 1. Astronomy 2. Exoplanets 3. Space Physics 4. Fundamental Physics

IAC-20.A7.2.1
THE QUEST FOR EARTH-LIKE PLANETS: PLATO MISSION PERFORMANCE STATUS AT COMPLETION OF THE PRELIMINARY DESIGN PHASE
Ms. Salma Fahmy, Noordwijk, The Netherlands, European Space Agency (ESA)

IAC-20.A7.2.2
PLATO: A SATELLITE DESIGNED TO FIND THE SECOND EARTH. SPACECRAFT STATUS AFTER PDR.
Dr. Antonio Garcia, Bremen, Germany, OHB System AG

IAC-20.A7.2.4
OVERVIEW AND STATUS OF EXCLAIM, THE EXPERIMENT FOR CRYOGENIC LARGE-APERTURE INTENSITY MAPPING
Dr. Giuseppe Cataldo, Greenbelt, United States, National Aeronautics and Space Administration (NASA), Goddard Space Flight Center

IAC-20.A7.2.6
AN OVERVIEW OF THE ASO-S MISSION AND THE DESIGN OF SPACECRAFT
Dr. Dan Zhao, Shanghai, China, Innovation Academy for Microsatellites of CAS

IAC-20.A7.2.10
DETECTION OF JOVIAN RADIO EMISSION AT 20.1 MHZ WITH A DECAMETRIC RADIO ARRAY
Dr. Ilias Fernini, Sharjah, United Arab Emirates, Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST)

IAC-20.A7.2.11
APPLICATIONS AND POTENTIALS OF INTELLIGENT SWARMS (APIS) FOR MAGNETOSPHERIC STUDIES
Dr. Raj Thilak Rajan, Delft, The Netherlands, Delft Institute Of Technology (TU Delft)

A7.3. Technology Needs for Future Missions, Systems, and Instruments

Co-Chair: *Dr. Eric Wille, ESA, The Netherlands ; Mrs. Maria Cristina Falvella, Italian Space Agency (ASI), Italy ;*

Rapporteur: *Prof. Pietro Ubertini, INAF, Italy ;*

Keywords describing the session best: 1. Astronomy 2. Exoplanets 3. Space Physics 4. Fundamental Physics

IAC-20.A7.3.1
OBSERVING AT 1.4 GHZ WITH THE SHARJAH NEW 40-M RADIO INTERFEROMETER
Ms. Asmaa Alhameed, Sharjah, United Arab Emirates, Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST)

IAC-20.A7.3.3
AN OPTIMIZATION ALGORITHM OF BASELINE DENSITY DISTRIBUTION FOR AN ULTRA-LONG WAVE ASTRONOMICAL OBSERVATION ARRAY
Ms. Jingwei Yang, BeiJing, China, Beihang University (BUAA)

IAC-20.A7.3.4
TESSERACT: A NANOSATELLITE-SCALE, HIGH-STABILITY FLUXGATE MAGNETOMETER FOR CONSTELLATION CISSIONS
Mr. Kenton Greene, Iowa City, Iowa, United States, University of Iowa

IAC-20.A7.3.5
DEVELOPMENT OF A PENETRATING PARTICLE ANALYZER FOR HIGH-ENERGY RADIATION MEASUREMENTS IN DEEP SPACE AND INTERPLANETARY MISSIONS
Dr. Benedikt Bergmann, Prague, Czech Republic, Czech Technical University In Prague (CTU)

IAC-20.A7.3.7
WAVELENGTH CALIBRATION OF THE FULL-SUN ULTRAVIOLET ROCKET SPECTROGRAPH (FURST)
Mr. Nicolas Donders, Huntsville, United States, University of Alabama in Huntsville

IAC-20.A7.3.8
STRATOSPHERIC BALLOONS AS A COMPLEMENT TO THE NEXT GENERATION OF ASTRONOMY MISSIONS
Mr. Philipp Maier, Stuttgart, Germany, Institute of Space Systems, University of Stuttgart

IAC-20.A7.3.10
THE DRAG FREE CONTROL STRATEGY DESIGN OF "TAIJI-1"——THE FIRST EXPERIMENTAL VERIFICATION SATELLITE FOR CHINESE SPACE-BASED GRAVITATIONAL WAVE DETECTION
Dr. Jianfeng Deng, Shanghai, China, Innovation Academy for Microsatellites of CAS

IAC-20.A7.3.11
EXTENDED OBSERVER AND OUTPUT FEEDBACK CONTROL FOR THE PRELIMINARY DESIGN OF TIANQIN TWO-TEST-MASSES DRAG-FREE AND ATTITUDE SYSTEM
Mr. Hao Liwei, Harbin, China, Research Center of Satellite Technology, Harbin Institute of Technology

IAC-20.A7.3.12
QUANTUM COMPUTING AND LIGO
Mr. Archit Srivastava, Bokaro Steel City, India, R.V.College of Engineering

B1. IAF EARTH OBSERVATION SYMPOSIUM

B1.1. International Cooperation in Earth Observation Missions

Co-Chair: *Dr. Mukund Kadursrinivas Rao, National Institute of Advanced Studies (NIAS), India ; Mr. José Gavira Izquierdo, European Space Agency (ESA), The Netherlands ;*

Rapporteur: *Mr. James Graf, Jet Propulsion Laboratory, United States ;*

IAC-20.B1.1.3
SPACE4CLIMATE ACTION: A UNOOSA PROJECT TO ENABLE INTERNATIONAL COOPERATION FOR CLIMATE CHANGE THROUGH EARTH OBSERVATION
Ms. Simonetta Di Pippo, Vienna, Austria, United Nations Office for Outer Space Affairs

IAC-20.B1.1.4
AMERIGEO: ADVANCING EARTH OBSERVATIONS AND GEO-SPATIAL INITIATIVES IN THE AMERICAS
Mr. Albert DeGarmo, Silver Spring, United States, NOAA

IAC-20.B1.1.7
TOWARDS UNDERSTANDING EARTH OBSERVATION LANDSCAPE IN AFRICA, PROVIDING INFORMATION TO SUPPORT COLLABORATION, COORDINATION AND PARTNERSHIP
Ms. Naledzani Mudau, Pretoria, South Africa, South African National Space Agency (SANSA)

IAC-20.B1.1.8
INTERNATIONAL COOPERATION IN THE FIELD OF MARITIME SPATIAL PLANNING PROTOCOLS: SPECIAL ATTENTION TO TROPICAL REGIONS.
Mr. Jordi Sandalinas, Barcelona, Spain

IAC-20.B1.1.10
TOOLS TO ENABLE UN MEMBER STATES AT NATIONAL AND LOCAL LEVEL TO USE EARTH OBSERVATIONS TO HELP DELIVER THE UN SDG
Dr. Argyro Kavvada, Washington, United States, NASA

B1.2. Future Earth Observation Systems

Co-Chair: *Dr. Timo Stuffler, OHB System AG, Germany ; Mr. Alain Gleyzes, CNES, France ;*

Rapporteur: *Mr. Gunter Schreier, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

Keywords describing the session best: 1. Earth Observation technology 2. innovative technology concepts 3. future EO systems and programs

IAC-20.B1.2.5
THE HYPERSPECTRAL PRISMA MISSION OPERATIONAL PHASE: FIRST RESULTS
Dr. Rocchina Guarini, Matera, Italy, Italian Space Agency (ASI)

IAC-20.B1.2.6
THE DESIGN AND DEVELOPMENT OF THE 813 SATELLITE FOR EARTH OBSERVATION
Mr. Alexandros Tsoupos, Abu Dhabi, United Arab Emirates, United Arab Emirates University (UAEU)

IAC-20.B1.2.10
ADDING A FURTHER DIMENSION TO SMALL SATELLITE EO CONSTELLATIONS
Mr. Alex da Silva Curiel, Guildford, Surrey, United Kingdom, Surrey Satellite Technology Ltd (SSTL)

IAC-20.B1.2.13
THE SPACE SYSTEM FOR INTEGRATED MONITORING OF EMERGENCY SITUATIONS ON THE BASIS OF THE "GRAVISAT" SPACECRAFT.
Dr. Sergiy Matviyenko, Kiev, Ukraine, JSC "RPC "KURS"

B1.3. Earth Observation Sensors and Technology

Co-Chair: *Dr. Andrew Court, TNO, The Netherlands ; Mr. Roland Le Goff, SODERN, France ;*

Rapporteur: *Ms. Kate Becker, National Oceanic and Atmospheric Administration (NOAA), United States ;*

Keywords describing the session best: 1. Future instrument systems 2. Calibration of space systems

IAC-20.B1.3.10
INNOVATIVE SYNTHETIC APERTURE RADAR FOR THE SMALL SATELLITES
Ms. Oksana Grigorieva, Moscow, Russian Federation, JSC Glavkosmos

IAC-20.B1.3.11
SPACE QUALIFYING RAAD CUBESAT FOR THE STUDY OF TERRESTRIAL GAMMA-RAY FLASHES AND OTHER SHORT TIMESCALE PHENOMENA
Ms. Lolowa Alkindi, Abu Dhabi, United Arab Emirates, N/A

IAC-20.B1.3.12
LASER COOLING. A CREDIBLE ALTERNATIVE FOR FOR MINIATURE CRYOCOOLING ? STATUS ON CURRENT DEVELOPMENTS.
Mr. Yannick Juanico, SASSENAGE, France, Air Liquide

IAC-20.B1.3.13
MWIR / LWIR MULTISPECTRAL FILTER ARRAYS
Mr. David Harrison, Westford, United States

IAC-20.B1.3.14
DESIGN AND IMPLEMENTATION OF AN INTELLIGENT REMOTE SENSING PAYLOAD FOR CUBESAT APPLICATION
Prof. Jyh-Ching Juang, Tainan, Taiwan, China, National Cheng Kung University

IAC-20.B1.3.15
EARTH OBSERVATION PAYLOAD FOR SMALL SATELLITES
Dr. Ayman Ahmed, Cairo, Egypt, Egyptian Space Agency (EgSA)

B1.4. Earth Observation Data Management Systems

Co-Chair: *Mr. Gunter Schreier, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ; Mr. James Graf, Jet Propulsion Laboratory, United States ;*

Rapporteur: *Dr. Annamaria Nassisi, Thales Alenia Space Italia, Italy ;*

Keywords describing the session best: 1. Data Management & Processing 2. Big data, Cloud Processing 3. Web based exploitation platforms 4. Machine learning & artificial intelligence

IAC-20.B1.4.1
INTERACTIVE MODEL FOR ASSESSING MANGROVE HEALTH, ECOSYSTEM SERVICES, POLICY CONSEQUENCES, AND SATELLITE DESIGN IN RIO DE JANEIRO USING EARTH OBSERVATION DATA
Mr. Jack Reid, Cambridge, MA, United States, Massachusetts Institute of Technology (MIT)

IAC-20.B1.4.2
AUTOMATED REMOTE SENSING FOREST INVENTORY USING SATELLITE IMAGERY
Mr. Abduragim SHTANCHAEV, Moscow, Russian Federation, Skoltech Space Center

IAC-20.B1.4.5
LEVEL 2 AUTOMATIC PROCESSOR IN THE PRISMA HYPERSPECTRAL MISSION
Mr. Leonardo Amoruso, Bari, Italy, Planetek Italia

IAC-20.B1.4.6
LEOPARD: A NEW CHAPTER IN ON-BOARD DEEP LEARNING-POWERED ANALYSIS OF HYPERSPECTRAL IMAGERY
Dr. Jakub Nalepa, Gliwice, Poland, KP Labs

IAC-20.B1.4.7
DEEP LEARNING AND AI FOR SHIP DETECTION IN SYNTHETIC APERTURE RADAR - THE AMARI PLATFORM
Mr. Alan Higginson, Ottawa, Canada, ADGA Group

IAC-20.B1.4.10
CONVOLUTIONAL NEURAL NETWORK FOR AUTOMATED IMAGE PROCESSING OF EARTH OBSERVATION MICROSATELLITE IMAGES
Ms. Julie Ann Banatao, Sendai, Japan, Tohoku University

IAC-20.B1.4.11
MACHINE LEARNING ALGORITHMS ENVIRONMENT FOR LAND COVER/LAND USE CLASSIFICATION
Mr. Rustam Rustamov, Baku, Azerbaijan

IAC-20.B1.4.12
LARGE AREA COVERAGE USING ADAPTIVE AND ROBUST MULTI-AGENT SYSTEM
Mr. Timothée Jammot, Toulouse, France, IRT Saint Exupéry

B1.5. Earth Observation Applications, Societal Challenges and Economic Benefits

Co-Chair: *Dr. Masami Onoda, Japan Aerospace Exploration Agency (JAXA), Japan ; Dr. Na Yao, Qian Xuesen Laboratory of Space Technology, China Academy of Space Technology (CAST), China ;*

Rapporteur: *Dr. Wolfgang Rathgeber, European Space Agency (ESA), France ; Dr. Annamaria Nassisi, Thales Alenia Space Italia, Italy ;*

IAC-20.B1.5.1
A NEW IMPROVED MACHINE LEARNING BASED ALGORITHM FOR HOTSPOTS DETECTION
Mr. Alessandro Urru, Elma, Italy, Nurjana Technologies

IAC-20.B1.5.3
SEMANTIC SEGMENTATION OF ROADS IN HIGH-RESOLUTION SATELLITE IMAGERY
Ms. Mina Al-saad, Dubai, United Arab Emirates, University of Dubai

IAC-20.B1.5.6
A GRID-SQUARE STATISTICAL APPROACH IN DATA ORGANIZATION FOR URBAN GROWTH IMPACT ASSESSMENT ON IN-AND-OUTDOOR THERMAL CONDITION IN MANILA CITY, PHILIPPINES
Mr. Mark Angelo Purio, Fukuoka, Japan, Laboratory of Spacecraft Environment Interaction Engineering , Kyushu Institute of Technology

IAC-20.B1.5.7
NEW COMMERCIAL APPROACH TO MONITORING CONSTRUCTION FACILITIES BY USING VALUE-ADDED SERVICES BASED ON EARTH OBSERVATION DATA
Ms. Oksana Grigorieva, Moscow, Russian Federation, JSC Glavkosmos

IAC-20.B1.5.12
A SYSTEM-LEVEL ENGINEERING APPROACH TO DEFINE THE SOCIAL VALUE RATING OF EARTH REMOTE SENSING MISSIONS THROUGH SUSTAINABLE DEVELOPMENT GOALS
Mr. Marcello Agostino Scalera, Modena, Italy, Politecnico di Milano

IAC-20.B1.5.13
USING SATELLITE DATA TO HELP ERADICATE DISEASE: POLIO VIRUS IN NIGERIA
Prof. Mariel Borowitz, Atlanta, GA, United States, Georgia Institute of Technology

IAC-20.B1.5.14
REMOTE SENSING APPLIED TO THE STUDY OF THE TRIATOMINES DISPERSION DYNAMICS, CASE STUDY: INDIGENOUS COMMUNITIES OF PARAGUAYAN CHACO
Mr. Adolfo Jara, Kitakyushu, Japan, Kyushu Institute of Technology

IAC-20.B1.5.15
USING EARTH OBSERVATION DATA TO INFORM COMMUNITY MANAGEMENT OF INVASIVE PLANTS AND TRADITIONAL FISHING PRACTICES ON LAKE NOKOUE IN BENIN
Ms. Ufuoma Ovienmhada, CAMBRIDGE, United States, Massachusetts Institute of Technology (MIT)

IAC-20.B1.5.16
AIR POLLUTION IN NEW DELHI, INDIA : SOURCE DETECTION AND PREDICTION OF SEASONAL VARIATIONS IN POLLUTANT CONCENTRATIONS USING MACHINE LEARNING
Mr. Sujay Hebbar, Bangalore, India, R.V.College of Engineering

IAC-20.B1.5.18
REMOTE SENSING APPLICATIONS FOR DELINEATING PALAEOCHANNELS CLOSE TO ARCHAEOLOGICAL SITES
Dr. Marwa Chendeb EL RAI, Dubai, United Arab Emirates, University of Dubai

B1.6. 20th Anniversary of the Disaster Charter: History, Status and Future of this Powerful and Productive International Cooperation

Co-Chair: *Mr. Harry A. Cikanek, National Oceanic and Atmospheric Administration (NOAA), United States ; Ms. Elizabeth Seward, Airbus Defence and Space Ltd, United Kingdom ;*

Rapporteur: *Dr. Brent Smith, National Oceanic and Atmospheric Administration (NOAA), United States ;*

Keywords describing the session best: 1. 20th Anniversary of the Disaster Charter 2. Satellite remote sensing for disasters 3. Case studies from Disaster Charter activation 4. Future developments for satellite based disaster monitoring 5. Emergency management support from satellites

IAC-20.B1.6.11
COMMERCIAL SPACE AND THE DISASTER CHARTER: A CLASH OF VALUES
Mr. Brendan Lord, Sydney, Australia

B1.VP. Virtual Presentations - IAF EARTH OBSERVATION SYMPOSIUM

Co-Chair: *Dr. Andrew Court, TNO, The Netherlands ; Mr. Harry A. Cikanek, National Oceanic and Atmospheric Administration (NOAA), United States ;*

IAC-20.B1.VP.8
RAPID COMPUTATION OF THE TOTAL BAND RADIANCE BY USING THE SPECTRALLY INTEGRATED VOIGT FUNCTION
Dr. Sanjar Abrarov, Toronto, ON, Canada, York University

IAC-20.B1.VP.9
RESEARCH ON DEMONSTRATION AND VERIFICATION OF SKY, AIR AND SPACE COLLABORATIVE REMOTE SENSING SYSTEM FOR COMPREHENSIVE APPLICATION
Ms. An Lili, Beijing, China, CASC

IAC-20.B1.VP.16
MEASUREMENT OF AEROSOLS FORMED BY COSMIC RAYS AND ITS EFFECTS ON CLOUD FORMATION
Mr. Neelabh Menaria, UDAIPUR, India, Ramaiah Institute of Technology

B2. IAF SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM

B2.1. Advances in Space-based Communication Systems and Services, Part 1

Co-Chair: *Mr. Robert D. Briskman, Sirius XM Radio, United States ; Dr. Laszlo Bacsardi, Hungarian Astronautical Society (MANT), Hungary ;*

Rapporteur: *Mr. Desaraju Venugopal, Devas Multimedia Pvt. Ltd., India ;*

IAC-20.B2.1.3
A METHOD FOR CALCULATING THE PROBABILITY DISTRIBUTION OF INTERFERENCE INVOLVING MEGA-CONSTELLATIONS
Mr. Ziqiao Lin, beijing, China, Tsinghua University

IAC-20.B2.1.4
A CONSERVATIVE APPROACH TO ROUTING OPTIMIZATION IN TELECOM MEGACONSTELLATIONS
Mr. Alexander Kharlan, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.B2.1.5
KEEPING THE SKY DARK AND QUIET: RECOMMENDATIONS FOR NON-INTERFERENCE WITH ASTRONOMY
Ms. Nathalie RICARD, Vienna, Austria, United Nations Office for Outer Space Affairs

IAC-20.B2.1.8
CAPACITY ANALYSIS AND EVALUATINON FOR HIGH THROUGHPUT SATELLITE SYSTEMS
Dr. Yingnan Zhang, Xi'an, China, China Aerospace Science and Technology Corporation (CASC)

IAC-20.B2.1.10
DESIGN OF COST EFFECTIVE AND POWER EFFICIENT COMMUNICATION SYSTEM FOR EXPERIMENTAL SOUNDING ROCKETS
Ms. KRITHI D SHETTY, UDUPI, India, R.V.College of Engineering

IAC-20.B2.1.11
PAGING IOT DEVICES IN 5G-ENABLED NON-TERRESTRIAL NETWORKS
Ms. Federica Rinaldi, Reggio Calabria, Italy, University Mediterranea of Reggio Calabria

IAC-20.B2.1.12
HYBRID SATELLITE-5G NETWORK DEPLOYMENT IN SUB-SAHARAN AFRICA: CHALLENGES AND PROSPECTS
Dr. Umar Sani Abdullahi, FCT Abuja, Nigeria, National Space Research and Development Agency (NASRDA), Abuja

IAC-20.B2.1.13
A FAST FAULT RECOVERY METHOD FOR FORMATION NETWORKS OF MICRO-NANO SATELLITES BASED ON MAXIMUM LIFETIME
Ms. YaLan Xu, ChengDu, China, University of Electronic Science and Technology of China (UESTC)

B2.2. Advances in Space-based Communication Systems and Services, Part 2

Co-Chair: *Dr. Morio Toyoshima, National Institute of Information and Communications Technology (NICT), Japan ; Prof. Otto Koudelka, Joanneum Research, Austria ;*

Rapporteur: *Mr. Dunay Badirkhanov, Azercosmos, Azerbaijan ;*

IAC-20.B2.2.2
KEY TECHNOLOGY FOR NEW GENERATION QUANTUM SATELLITE IN CHINA
Ms. Xuan Zhang, Shanghai, China, Innovation Academy for Microsatellites of CAS

IAC-20.B2.2.8
AUTONOMOUS ARTIFICIAL INTELLIGENCE-AIDED GROUND POINTING SYSTEM FOR OPTICAL COMMUNICATION IN LOW EARTH ORBIT NANO-SATELLITES
Mr. Riccardo Masiero, Verona, Italy, Politecnico di Milano

IAC-20.B2.2.9
THE SYSTEM DESIGN OF THE SATELLITE COMMUNICATIONS BASED ON ANALYZING RF IMPAIRMENTS AND QOS CONSTRAINTS
Dr. Elham Hosseini, Tehran, Iran

IAC-20.B2.2.11
ON THE DESIGN OF A MODULAR PLUG-AND-PLAY SATELLITE COMMUNICATION SYSTEM
Ms. Mariam Al Darmaki, Dubai, United Arab Emirates, Mohammed Bin Rashid Space Centre (MBRSC)

IAC-20.B2.2.13
RULEMAP: PROTOCOL-INDEPENDENT PACKET CLASSIFICATION FOR SOFTWARE-DEFINED SATELLITE NETWORK
Mr. Hao Wu, Beijing, China, Tsinghua University, Beijing

B2.3. Advances in Space-based Communication Systems and Services, Part 3

Co-Chair: *Mr. Dipak Srinivasan, The John Hopkins University Applied Physics Laboratory, United States ; Dr. Ramon P. De Paula, National Aeronautics and Space Administration (NASA), United States ;*

Rapporteur: *Dr. Sara AlMaeeni, Mohammed Bin Rashid Space Centre (MBRSC), United Arab Emirates ;*

IAC-20.B2.3.5
ANALYTICAL TECHNIQUES FOR ASSESSING GATEWAY AND OTHER SPACECRAFT ANTENNA LINE-OF-SIGHT FOR THE ARTEMIS PROGRAM
Mr. William Kennedy, Houston, United States, Booz Allen Hamilton

IAC-20.B2.3.6
LEO TO LUNAR AND BEYOND: EXTENDING THE REACH OF SSC'S GROUND SEGMENT AS-A-SERVICE
Mr. Samuel Peterson, Horsham, PA, United States, Swedish Space Corporation

IAC-20.B2.3.8
DEEP SPACE SMALL SATELLITE COMMUNICATION SYSTEM AND ANTENNA DESIGN
Mr. Mayank Mayank, Berlin, Germany, TU Berlin

IAC-20.B2.3.11
SALSAT: A NANOSATELLITE TO ANALYZE THE GLOBAL VHF, UHF AND S BAND SPECTRUM UTILIZATION - READY FOR LAUNCH!
Mr. Jens Großhans, Berlin, Germany, Technische Universität Berlin

IAC-20.B2.3.12
TOWARDS A HIGHLY ADAPTIVE SOFTWARE-DEFINED RADIO TRANSMITTER FOR SMALL SATELLITE PLATFORMS
Mrs. Susann Pätschke, Stuttgart, Germany, Institute of Space Systems, University of Stuttgart

B2.4. Advances in Space-based Communication Technologies, Part 1

Co-Chair: *Dr. Amane Miura, National Institute of Information and Communications Technology (NICT), Japan ; Dr. Debra Emmons, The Aerospace Corporation, United States ;*

Rapporteur: *Dr. Nader Alagha, ESA, The Netherlands ;*

IAC-20.B2.4.1
OPTICAL COMMUNICATIONS FOR SMALL SATELLITES: A REVIEW OF POINTING STRATEGIES & REQUIREMENTS OPTIMIZATION
Dr. Desire Muhire, El Jadida, Morocco, Chouaib Doukkali University

IAC-20.B2.4.3
TIP-TILT SPATIAL STABILIZATION FOR GROUND-TO-SPACE LASER LINKS
Dr. David Gozzard, Crawley, Australia, University of Western Australia (UWA)

IAC-20.B2.4.4
POINT-TO-POINT STABILISED OPTICAL FREQUENCY TRANSFER WITH ACTIVE OPTICS
Mr. Benjamin Dix-Matthews, Crawley, Australia, The University of Western Australia

IAC-20.B2.4.5
VALIDATION OF OPTICAL COMMUNICATION TERMINAL CAPABILITIES: BUILDING SCANSAT CUBESAT
Mrs. Daria Stepanova, Berlin, Germany, German Orbital Systems GmbH

IAC-20.B2.4.7
GAN HPA WITH INTEGRATED SUPPLY MODULATOR FOR SMALLSATS
Dr. Aaron Pereira, Adelaide, Australia, University of Adelaide

IAC-20.B2.4.8
A SURVEY ON SATELLITE DIGITAL TRANSPARENT PROCESSOR
Dr. Yingnan Zhang, Xi'an, China, China Aerospace Science and Technology Corporation (CASC)

IAC-20.B2.4.11
TESTING AND IMPLEMENTATION OF A RECONFIGURABLE DATA-RATE COMMUNICATION SUBSYSTEM IN SMALL SATELLITE USING SDR
Mr. Yasir ABBAS, Kitakyushu, Japan, Kyushu Institute of Technology

IAC-20.B2.4.12
ADVANCED COMMUNICATIONS SOLUTIONS FOR THE NEXT GENERATION OF EARTH OBSERVATION SATELLITES
Prof. Otto Koudelka, Graz, Austria, Graz University of Technology (TU Graz)

IAC-20.B2.4.13
DEMONSTRATION OF A SPACEFIBRE OVER PASSIVE OPTICAL NETWORK
Dr. Huasong Zeng, beijing, China, Beihang University

B2.5. Advances in Space-based Communication Technologies, Part 2

Co-Chair: *Mr. K.R. Sridhara Murthi, NIAS, India ; Mr. Elemer Bertenyi, Canadian Aeronautics and Space Institute, Canada ;*

Rapporteur: *Dr. Enrique Pacheco Cabrera, Incomspace, Mexico ;*

IAC-20.B2.5.1
NEXT GENERATION PHASED ARRAY ANTENNAS FOR SATELLITE COMMUNICATIONS
Dr. Okan Yurduseven, Belfast, United Kingdom, The Queen's University of Belfast

IAC-20.B2.5.3
INVESTIGATION OF C-BAND ANTENNA FOR NANOSATELLITE CONSTELLATIONS BASED ON INTER-SATELLITE LINK CALCULATIONS
Mr. ABDALLA ELSHIWI, Elshourk, Egypt, Egyptian Space Agency (EgSA)

IAC-20.B2.5.4
OPTIMIZATION OF SATELLITE COMMUNICATION LINK BY DIGITAL BEAMFORMING IN GROUND STATIONS
Mr. Usman Shehryar, Lahore, Pakistan, Pakistan Space and Upper Atmosphere Research Commission

IAC-20.B2.5.5
USE OF SHAPE MEMORY ALLOYS TO REALIZE A CUSTOMIZABLE MULTI-BAND ANTENNA FOR COMMUNICATION.
Mr. Archit Srivastava, Bokaro Steel City, India, R.V.College of Engineering

IAC-20.B2.5.6
DUAL-POLARIZED SAR ANTENNA ARRAY MOUNTED ON A SMALL SATELLITE
Dr. Maha Maged, Cairo, Egypt, Egyptian Space Agency (EgSA)

IAC-20.B2.5.7
SEQBO - A MINIATURIZED SYSTEM FOR QUANTUM KEY DISTRIBUTION
Mr. Alessandro Balossino, Torino, Italy, Argotec

IAC-20.B2.5.10
DEVELOPMENT OF A HIGH-DIRECTIVITY RECONFIGURABLE ANTENNA FOR SMALL SATELLITE COMMUNICATION APPLICATION
Dr. Mei Jiang, Shanghai, China, China Aerospace Science and Technology Corporation (CASC)

IAC-20.B2.5.12
THERMAL DESIGN OF DEVELOPABLE RADIAL-RIB ANTENNA WITH HIGH REFLECTOR PRECISION
Mr. Yang Zhang, beijing, China, Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST)

B2.6. Advances in Space-based Navigation Systems, Services, and Applications

Co-Chair: Dr. Kristian Pauly, OHB System, Germany ; Prof. Giovanni B. Palmerini, Sapienza University of Rome, Italy ;

Rapporteur: Dr. Norbert Frischauf, TU Graz, Austria ;

IAC-20.B2.6.8
THE FUTURE OF LOCATION BASED SERVICES: A PATENT LANDSCAPE OF EMERGING TRENDS, TECHNOLOGIES AND STAKEHOLDERS
Mr. Arun Subramanian Venkataraman, Chennai, India

IAC-20.B2.6.9
ULTRA-HIGH REPETITION RATE OF 100KHZ SATELLITE LASER RANGING AND APPLICATION
Dr. Mingliang Long, Shanghai, China, Shanghai Astronomical Observatory, Chinese Academy of Sciences

IAC-20.B2.6.11
DENOISING OF SCINTILLATED GNSS SIGNAL BASED ON CEEMD-MFDFA METHOD
Dr. Wasiu Akande Ahmed, Ile-Ife, Nigeria, African Regional Center for Space Science and Technology Education in English (ARCSSTE-E)

IAC-20.B2.6.13
COMPATIBILITY AND INTEROPERABILITY AMONG MULTI- GNSS
Dr. Shreya Sarkar, Illkirch- Graffenstaden, France, International Space University (ISU)

B2.7. dvances in Space-based Navigation Technologies

Co-Chair: *Dr. Joe M. Straus, The Aerospace Corporation, United States ; Dr. Peter Buist, European GNSS Agency (GSA), The Netherlands ;*

Rapporteur: *Mr. Attila MATAS, [unlisted], Switzerland ;*

IAC-20.B2.7.1
CALIBRATION AND VALIDATION OF THE EGNOS GEO-3 GROUND STATIONS WITH THE ECVF
Mr. Stefan van der Linden, Delft, The Netherlands, S[&]T

IAC-20.B2.7.2
COHERENT OPTICAL DOPPLER ORBITOGRAPHY
Dr. Sascha Schediwy, Perth, Australia, The University of Western Australia

IAC-20.B2.7.3
MULTI-SENSOR FUSION FOR AUTONOMOUS DEEP SPACE NAVIGATION
Ms. Shiyan Deng, Chengdu, China, University of Electronic Science and Technology of China (UESTC)

IAC-20.B2.7.4
MULTIPATH DETECTION AND LOCATION METHODOLOGY FOR GROUND BASED AUGMENTATION SYSTEMS
Mrs. Petra Pisova, Darmstadt, Germany, Telespazio VEGA Deutschland GmbH

IAC-20.B2.7.6
ROBUST ATTITUDES CONTROLLER DESIGN FOR LEO SATELLITE WITH ORBITAL PERTURBATIONS
Dr. Raja Munusamy, DEHRADUN, India, University of Petroleum and Energy Studies

IAC-20.B2.7.10
RECOMMENDED SATELLITE NETWORK BASED AUTONOMOUS NAVIGATION FOR MARTIAN LANDER
Mr. Deepak Gaur, Noida, India, Amity School of Engineering

IAC-20.B2.7.11
IMPLEMENTATION AND VALIDATION OF MURRELL'S VERSION KALMAN FILTER FOR ATTITUDE ESTIMATION
Mr. Gaurav Sharma, Ghaziabad, India, Birla Institute of Technology and Science(BITS)

IAC-20.B2.7.12
ENHANCED MULTI-SENSOR DATA FUSION METHOD USING RECURRENT NEURAL NETWORK
Ms. Jing He, chengdu, China, University of Electronic Science and Technology of China (UESTC)

B2.8-GTS.3. Space Communications and Navigation Global Technical Session

Co-Chair: *Mr. Kevin Shortt, Germany ; Ms. Stephanie Wan, Space Generation Advisory Council (SGAC), United States ;*

Rapporteur: *Dr. Eric Wille, ESA, The Netherlands ;*

IAC-20.B2.8-GTS.3.1
LINK ANALYSIS OF A CUBESAT BASED QUANTUM KEY DISTRIBUTION PLATFORM
Mr. Dominik Jakab, Vác, Hungary, Budapest University of Technology and Economics

IAC-20.B2.8-GTS.3.3
A FUTURE CARRINGTON EVENT: IMPACT ON INTERNATIONAL TELECOMMUNICATIONS
Mr. Avner Bendheim, Strasbourg, France, International Space University (ISU)

IAC-20.B2.8-GTS.3.4
CLASSIFICATION METHOD OF 5G SATELLITE NETWORK COMPUTING TASKS BASED ON EDGE DATA OFFLOADING
Dr. Chengjun Guo, chengdu, China, University of Electronic Science and Technology of China (UESTC)

IAC-20.B2.8-GTS.3.5
SIMULATED EFFECTS ON SBAS SIGNALS CAUSED BY A TRAVELING WAVE TUBE AMPLIFIER
Mr. Stefan van der Linden, Delft, The Netherlands, S[&]T

IAC-20.B2.8-GTS.3.7
DESIGN AND IMPLEMENTATION OF SINGLE FREQUENCY RTK POSITIONING FRAMEWORK
Ms. Salma Zainab Farooq, Islmamabad, Pakistan, Institute of Space Technology (IST)

IAC-20.B2.8-GTS.3.8
GNSS PERFORMANCE MONITORING USING PUBLICLY AVAILABLE DATA AND TOOLS
Dr. Peter Buist, Noordwijk, The Netherlands, European GNSS Agency (GSA)

IAC-20.B2.8-GTS.3.10
A GNSS/INS INTEGRATED NAVIGATION METHOD BASED ON DEEP LEARNING
Dr. Chengjun Guo, chengdu, China, University of Electronic Science and Technology of China (UESTC)

B2.VP. Virtual Presentations - IAF SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM

Co-Chair: *Dr. Manfred Wittig, European Space Agency (ESA), The Netherlands ; Ms. Rita Lollock, The Aerospace Corporation, United States ;*

IAC-20.B2.VP.2
A FEASIBILITY ANALYSIS OF NATIONAL LEO CONSTELLATIONS AS A SOLUTION TO PROVIDE BROADBAND ACCESS IN DEVELOPING COUNTRIES.
Mr. Alan Mattos, La Paz, Bolivia, Agencia Boliviana Espacial

IAC-20.B2.VP.3
DEVELOPMENT OF DVB-S2 SMALL SATELLITE TRANSMITTER: AN USE CASE FOR REAL-TIME VIDEO
Mr. Diego Hurtado de Mendoza, Vigo, Spain

IAC-20.B2.VP.5
THE HIGH PRECISE AND LOW TIME DELAY ACQUISITION METHOD OF GPS L1 SIGNAL FOR HEO ORBIT
Mr. Jia Tian, Xi'an, China, China Academy of Space Technology (Xi'an)

B3. IAF HUMAN SPACEFLIGHT SYMPOSIUM

B3.1. Governmental Human Spaceflight Programs (Overview)

Co-Chair: *Mr. Sam Scimemi, National Aeronautics and Space Administration (NASA), United States ; Dr. Juergen Schlutz, European Space Agency (ESA), Germany ;*

Rapporteur: *Prof. Rainer Willnecker, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

Keywords describing the session best: 1. Human Spaceflight 2. Governemental Programmes 3. Agencies 4. Exploration

IAC-20.B3.1.1
KEYNOTE: INNOVATIVE PARTNERSHIPS IN HUMAN SPACE EXPLORATION
Mrs. Kathy Lueders, United States, National Aeronautics and Space Administration (NASA), Ames Research Center

IAC-20.B3.1.3
UAE ASTRONAUTS PROGRAMME ZAYED AMBITION MISSION ONE TO THE INTERNATIONAL SPACE STATION
Ms. Fatma Al Sayah, Dubai, United Arab Emirates, Mohammed Bin Rashid Space Centre (MBRSC)

IAC-20.B3.1.8
HOW NEW SPACE AGENCIES ARE SUPPORTING HSF
Mr. Anthony Murfett, Canberra, Australia, Australian Space Agency

IAC-20.B3.1.11
NASA'S HUMAN LUNAR LANDING STRATEGY
Dr. Lisa Watson-Morgan, MSFC, United States, NASA

B3.2. Commercial Human Spaceflight Programmes

Co-Chair: *Dr. Sergey K. Shaevich, Khrunichev State Research & Production Space Center, Russian Federation ; Dr. Michael W. Hawes, Lockheed Martin Corporation, United States ; Mr. Michael E. Lopez Alegria, MLA Space, LLC, United States ;*

Rapporteur: *Mr. Gene Rice, RWI - Rice Wigbels Int'l, United States ;*

Keywords describing the session best: 1. Human spaceflight 2. Commercial 3. Capsules 4. Launchers 5. Space Station

IAC-20.B3.2.4
IMPACT OF AMERICAN DEPENDENCE FOR HUMAN LAUNCH CAPABILITIES TO THE INTERNATIONAL SPACE STATION ON THE WORKING RELATIONSHIP BETWEEN NASA AND ROSCOSMOS
Ms. Natalia Glazkova, Domodedovo, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.B3.2.6
DEVELOPMENT OF THE INTERNATIONAL SPACE STATION AS COMMERCIAL INVESTMENT IN ORBITAL RESEARCH
Ms. Oksana Grigorieva, Moscow, Russian Federation, JSC Glavkosmos

IAC-20.B3.2.9
WHAT WOMEN NEED FOR SPACE TRAVEL
Mrs. Taiko Kawakami, Bunkyo-ku, Tokyo, Japan, ASTRAX, Inc.

IAC-20.B3.2.10
CREATING A NEW BUSINESS OF SPACE FLIGHT ATTENDANT SERVICE & SFA ACADEMY
Ms. Kirihara Yuko, Tokyo, Japan, ASTRAX IMAGINE, Inc.

IAC-20.B3.2.11
ADVANCED SPACE SERVICE ACCESS APPLICATION TOOL: ASTRAX UNIVERSAL USER INTERFACE (U2U)
Mr. Taichi Yamazaki, Kamakura, Japan, ASTRAX, Inc.

IAC-20.B3.2.12
ASTRAX SPACE SERVICE CATALOGUE SYSTEM FOR SPACE TOURISM
Mr. Taichi Yamazaki, Kamakura, Japan, ASTRAX, Inc.

IAC-20.B3.2.13
ZEROG-NAUT AND MISSION COMMANDER TO SUPPORT COMMERCIAL SPACE MISSIONS AND CUSTOMER ACTIVITIES INSIDE CABIN
Mr. Taichi Yamazaki, Kamakura, Japan, ASTRAX, Inc.

B3.3. Utilization & Exploitation of Human Spaceflight Systems

Co-Chair: *Mr. Cristian Bank, EUMETSAT, Germany ; Ms. Eleanor Morgan, United States ;*

Keywords describing the session best: 1. Human Spaceflight 2. Space Station 3. Utilization 4. Exploitation 5. Payloads

IAC-20.B3.3.2
THE ISS UTILIZATION STRATEGY OF THE ITALIAN SPACE AGENCY
Dr. Gabriele Mascetti, Rome, Italy, Italian Space Agency (ASI)

IAC-20.B3.3.7
JAXA NEW KIBO UTILIZATION STRATEGY TOWARD MAINTAINING SUSTAINABLE LOW EARTH ORBIT UTILIZATION OPPORTUNITIES AND FUTURE PROSPECTS
Ms. Kaoruko SAKAMOTO, Tsukuba-shi, Ibaraki-ken,, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.B3.3.8
SPACE HERO - PATHWAYS TO SUSTAINABLE PRIVATE ASTRONAUT EXPERIENCES
Mr. Christopher Hearsey, SILVER SPRING, United States

IAC-20.B3.3.12
PREPARING FOR HUMAN MISSIONS TO MARS: THE ROLE OF ISS AND ARTEMIS AS ANALOGS FOR RESEARCH AND TECHNOLOGY TESTING
Dr. Julie A. Robinson, Washington, DC, United States, National Aeronautics and Space Administration (NASA)

B3.4-B6.4. Flight & Ground Operations of HSF Systems - Joint Session of the IAF Human Spaceflight and IAF Space Operations Symposia)

Co-Chair: *Dr. Dieter Sabath, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ; Dr. Annamaria Piras, Thales Alenia Space Italia, Italy ;*

Rapporteur: *Mr. Thomas A.E. Andersen, Danish Aerospace Company ApS, Denmark ;*

Keywords describing the session best: 1. Humans Spaceflight 2. Operations 3. Flight Operations 4. Ground Operations 5. Space Station

IAC-20.B3.4-B6.4.1
THE MISSION PLANNING TECHNIQUE AND SOFTWARE DEVELOPMENT FOR SPACE STATION OPERATION
Mr. Jiacheng Zhang, Changsha, China, National University of Defense Technology

IAC-20.B3.4-B6.4.2
ADVANCES IN AUTOMATIC MISSION PLAN GENERATOR LANGUAGE
Mr. Salvador Daniel Escobedo Casillas, Zapopan, Mexico, University of Guadalajara

IAC-20.B3.4-B6.4.3
COLUMBUS ARCHITECTURAL CONSIDERATIONS FOR ON-ORBIT NETWORK SERVICES
Mr. Stefan Petschelt, Bremen, Germany, Airbus DS GmbH

IAC-20.B3.4-B6.4.4
SYSTEM UPGRADES PREPARE COLUMBUS FOR A NEW DECADE
Mr. Alexander Stölzle, Wessling, Germany, DLR (German Aerospace Center)

IAC-20.B3.4-B6.4.5
COLUMBUS CREW TERMINAL
Mr. Stefan Petschelt, Bremen, Germany, Airbus DS GmbH

IAC-20.B3.4-B6.4.6
INNOVATIVE SOLUTIONS FOR DESIGNING A TRAINING SIMULATOR FOR VISUAL INSTRUMENTAL OBSERVATIONS FROM THE ISS
Dr. Andrey Kuritsin, Star City, Russian Federation, Gagarin Cosmonaut Training Center

IAC-20.B3.4-B6.4.10
NUMERICAL ANALYSIS OF THE VENTILATION IN A MOON HABITAT LABORATORY MODULE
Ms. Maria von Einem, Bremen, Germany, ZARM University of Bremen

B3.5. Astronaut Training, Accommodation, and Operations in Space

Co-Chair: *Dr. Igor V. Sorokin, S.P. Korolev Rocket and Space Corporation Energia, Russian Federation ; Mr. Alan T. DeLuna, ATDL Inc., United States ;*

Rapporteur: *Dr. Keiji Murakami, Japan Aerospace Exploration Agency (JAXA), Japan ;*
Keywords describing the session best: 1. Astronaut 2. Training 3. Accommodation 4. Operations 5. Humans Spaceflight

IAC-20.B3.5.4
ASTRONAUT ON-BOARD TRAINING (OBT) CHALLENGES, ADVANTAGES AND PERSPECTIVES FOR FUTURE HUMAN MISSIONS
Mr. Tom Hoppenbrouwers, Cologne, Germany, European Astronaut Centre

IAC-20.B3.5.6
CLASSIFICATION OF ANALOGUE MISSIONS: A REFERENCE FOR MISSION DESIGN AND IMPLEMENTATION
Dr. Ilaria Cinelli, Vienna, Austria, Space Generation Advisory Council (SGAC)

IAC-20.B3.5.8
EEG-BASED NEUROFEEDBACK FOR CREW PERFORMANCE TRAINING IN EXPLORATION-CLASS MISSIONS
Mr. Brett Bennett, Bloomington, United States, Association of Spaceflight Professionals, Inc.

B3.6-A5.3. Human and Robotic Partnerships in Exploration - Joint session of the Human Spaceflight and Exploration Symposia

Co-Chair: *Dr. Christian Sallaberger, Canadensys Aerospace Corporation, Canada ; Mr. Mark Hempsell, The British Interplanetary Society, United Kingdom ;*

Rapporteur: *Dr. Juergen Schlutz, European Space Agency (ESA), Germany ;*

IAC-20. B3.6.1-A5.3
JAXA'S IVR ACTIVITY – APPLYING ROBOTICS AND AUTOMATION TECHNOLOGY FOR SAFE AND EFFICIENT MANNED SPACE ACTIVITIES
Mr. Seiko Piotr Yamaguchi, Tsukuba, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20. B3.6.3-A5.3
DESIGN OF A MODULAR UTILITY VEHICLE FOR TELEOPERATED AND MANNED LUNAR SOUTH POLE EXPLORATION
Mr. Vittorio Netti, Bari, Italy, Sasakawa International Center for Space Architecture

IAC-20. B3.6.9-A5.3
DESIGN AND VALIDATION OF A FLEXIBLE EXOSKELETON FOR MANNED DEEP SPACE EXPLORATION
Mr. Zhe Zhao, Beijing, China, CALT,CASC

B3.7. Advanced Systems, Technologies, and Innovations for Human Spaceflight

Co-Chair: *Dr. Michele Gates, NASA Headquarters, United States ; Mr. Sebastien Barde, Centre National d'Etudes Spatiales (CNES), France ;*

Rapporteur: *Dr. Gi-Hyuk Choi, Korea Aerospace Research Institute (KARI), Korea, Republic of ;*

Keywords describing the session best: 1. advanced system 2. technology human spaceflight 3. innovation human spaceflight 4. advance crewed mission 5. future human mission

IAC-20.B3.7.2
HARNESSING ARTIFICIAL INTELLIGENCE TO SUPPORT ASTRONAUT MEDICAL CARE WITH AUTOMATED AND INTERPRETABLE DIAGNOSIS FOR CARDIAC ABNORMALITIES IN SPACE
Ms. Eleni Antoniadou, Moffet Field, United States, Frontier Development Lab (NASA-FDL)

IAC-20.B3.7.6
AUGMENTED TOOLKIT FOR LUNAR ASTRONAUTS AND SCIENTISTS (ATLAS)
Ms. Riley Schnee, Purcellville, United States, University of Michigan, Ann Arbor

IAC-20.B3.7.7
CONCEPTUAL DESIGN OF A MEDICAL GRADE OXYGEN DELIVERY SYSTEM FOR SPACE MISSION AND ITS MARKET ANALYSIS
Ms. Tasmia Tahmid, Strasbourg, France, International Space University (ISU)

IAC-20.B3.7.9
DEVELOPMENT OF CRYOGENIC AIR PURIFICATION FOR DEEP SPACE APPLICATION
Mr. Pascal Barbier, Sassenage, France, Air Liquide

IAC-20.B3.7.11
INVESTIGATIONS OF LONG-DURATION CREWED SPACE MISSIONS SOLID WASTE MANAGEMENT USING WASTE FOR ENERGY AND VOLUME RECOVERY (WEVR) EXPERIMENTS
Mr. Samuel Anih, Cape Town, South Africa, University of Cape Town

IAC-20.B3.7.12
COLUMBUS FLEXIBLE THERMAL CONTROL HUB
Mr. Stefan Petschelt, Bremen, Germany, Airbus DS GmbH

IAC-20.B3.7.13
CONFIGURATION DESIGN ASPECTS OF ATMOSPHERIC CREW ESCAPE SYSTEM FOR MANNED FLIGHT
Mr. SHAFEEQ AHMED, TRIVANDRUM, India, Vikram Sarabhai Space Centre, ISRO, Thiruvananthapuram

IAC-20.B3.7.14
PROMISING MANNED SPACECRAFT WITH FLEXIBLE INFLATABLE SHELL
Ms. Dzhamilya Ramazanova, Moscow, Russian Federation, Moscow Aviation Institute (National Research Institute, MAI)

IAC-20.B3.7.16
TEST COVERAGE ANALYSIS METHOD FOR LARGE HUMAN SPACECRAFT
Mrs. LIU MIN, Beijing, China, China Academy of Space Technology (CAST)

IAC-20.B3.7.17
"SPACE SCOOTER": SPACE MOBILITY SYSTEM USING IN SPACE HOTELS AND SPACE STATIONS
Mr. Taichi Yamazaki, Kamakura, Japan, ASTRAX, Inc.

B3.8. Human Space & Exploration

Co-Chair: *Mr. Dan King, MDA Corporation, Canada ;*

IAC-20.B3.8.2
IMPLICATIONS AND BENEFITS OF A ROBUST LUNAR GATEWAY
Ms. Amber Rist, Houston, United States, The Boeing Company

IAC-20.B3.8.3
ZERO-G SPACE ROBOTICS FACILITY FOR DESIGN, DEVELOPMENT AND VALIDATION OF ROBOTIC SYSTEMS & MISSION OPERATIONS
Mr. Michael Hiltz, Brampton, Canada, MDA Space Missions

IAC-20.B3.8.7
ARCHITECTURE AND CONSIDERATIONS FOR HUMAN LUNAR EXPLORATION AND SUSTAINABLE LUNAR SOCIETY
Mr. Shigeru Imai, Tsukuba, Japan, Japan Manned Space Systems Corporation

IAC-20.B3.8.8
OVERVIEW OF ACTIVITIES CONDUCTED DURING THE ARES-III AND LEARN ANALOG MISSIONS IN THE LUNARES HABITAT
Mr. Matej Poliacek, Bratislava, Slovak Republic

IAC-20.B3.8.9
ENHANCING HUMAN SYSTEMS INTEGRATION WHILE EXPLORING UNDERWATER, IN A CAVE, 90 METERS BELOW SURFACE.
Mr. Karoly Schlosser, London, United Kingdom

IAC-20.B3.8.11
SYSTEMS ENGINEERING AND DEVELOPMENT OF TRANSPORT AND LOGISTICS ARCHITECTURE IN THE VICINITY OF MARS TO SUPPLY THE FUTURE COLONY
Mr. Joshit Mohanty, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

B3.9-GTS.2. Human Spaceflight Global Technical Session

Co-Chair: *Mr. Guillaume Girard, Zero2infinity, Spain ; Ms. Andrea Jaime, OHB System AG - Munich, Germany ;*

Keywords describing the session best: 1. Human Spaceflight 2. Global

IAC-20.B3.9-GTS.2.1
AN ANALYSIS OF THE SPACE TOURISM MARKET IN THE UNITED ARAB EMIRATES AND THE KINGDOM OF SAUDI ARABIA AND ITS POTENTIAL FOR DEVELOPMENT OF ZERO GRAVITY AND SUB-ORBITAL COMMERCIAL SPACEFLIGHTS
Mr. Amer Khan, Dubai, United Arab Emirates

IAC-20.B3.9-GTS.2.3
INSIGHTS FROM THE ANALOG ASTRONAUTS SELECTION AND TEAM BUILDING
Ms. Neta Parnas, Haifa, Israel, DMARS - Desert Mars Analog Ramon Station

IAC-20.B3.9-GTS.2.4
LESSONS LEARNT WHILE I WAS TRAINING AS AN ASTRONAUT.
Dr. Ilaria Cinelli, Vienna, Austria, Space Generation Advisory Council (SGAC)

IAC-20.B3.9-GTS.2.5
TYPES OF ASTRONAUTS: HOW CAN I HIRE THE ONE I NEED?
Dr. Ilaria Cinelli, Vienna, Austria, Space Generation Advisory Council (SGAC)

IAC-20.B3.9-GTS.2.6
FROM TEKTITE TO ARTEMIS: 50TH ANNIVERSARY WOMEN UNDERSEA MISSION
Dr. Sarah Jane Pell, Melbourne, Australia, Monash University

B3.VP. Virtual Presentations - IAF HUMAN SPACEFLIGHT SYMPOSIUM

Co-Chair: *Mr. Peter Batenburg, Netherlands Space Society (NVR), The Netherlands ;*

Keywords describing the session best: 1. Human Spaceflight 2. Interactive

IAC-20.B3.VP.1
USING SURVIVAL ANALYSIS AND ACCLIMATION TRAINING TO DEVELOP A TOLERABILITY METRIC FOR CENTRIFUGE DESIGN AND SPACEFLIGHT ARTIFICIAL GRAVITY IMPLEMENTATION
Ms. Kathrine Bretl, Boulder, United States, University of Colorado Boulder

IAC-20.B3.VP.6
FANTASTIC TEAMS AND WHERE TO FIND THEM: TEAM PROCESSES IN ISOLATED, CONFINED AND EXTREME TEAMS THROUGH IMOI FRAMEWORK
Mr. Andres Käosaar, Tartu, Estonia, University of Tartu

IAC-20.B3.VP.10
MANNED ROVERS AND MOBILE BASES ON OTHER PLANETS.
Mr. Oleg Aleksandrov, San Francisco, United States, Private individual www.oleg.space

IAC-20.B3.VP.12
USING IN-SITU RESOURCES FOR TITAN'S HABITABILITY
Mr. Thibault Lemattre, Toulouse, France, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace

B4. 27TH IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS

B4.1. 21st Workshop on Small Satellite Programmes at the Service of Developing Countries

Co-Chair: *Dr. Sias Mostert, Space Commercial Services Holdings (Pty) Ltd, South Africa ; Mr. Aimin NIU, United Nations Office for Outer Space Affairs, Austria ;*

Rapporteur: *Prof. Danielle Wood, Massachusetts Institute of Technology (MIT), United States ; Mr. Pierre Molette, France ;*

IAC-20.B4.1.1
KEYNOTE: SURVEY ON NANO-SATELLITE CAPACITY BUILDING NEEDS AROUND THE WORLD
Prof. MENGU CHO, Kitakyushu-shi, Japan, Kyushu Institute of Technology

IAC-20.B4.1.2
OPPORTUNITIES FOR CUBESAT DEPLOYMENT UNDER THE UNITED NATIONS ACCESS TO SPACE FOR ALL INITIATIVE: ACHIEVEMENTS IN 2019-2020
Mr. Jorge Del Rio Vera, Wien, Austria, United Nations Office for Outer Space Affairs

IAC-20.B4.1.3
THE ROLE OF SMALL SATELLITES IN THE SPACE POSTURE OF EMERGING SPACE NATIONS IN AFRICA
Dr. Annette Froehlich, LL.M., MAS, Vienna, Austria, European Space Policy Institute (ESPI)German Aerospace Center (DLR)

IAC-20.B4.1.4
DEVELOPING AN EARTH OBSERVATION CUBESAT CONSTELLATION TO ADDRESS THE SUSTAINABLE DEVELOPMENT GOALS IN AFRICA
Mr. Iliass TANOUTI, Strasbourg, France, International Space University

IAC-20.B4.1.6
NARSSCUBE: LEAN SATELLITE APPROACH FOR FAST AND ECONOMIC MISSION
Dr. Ayman Ahmed, Cairo, Egypt, Egyptian Space Agency (EgSA)

IAC-20.B4.1.8
FROM 1KUNS-PF TO WILDTRACKCUBE-SIMBA: STRENGTHENING THE COOPERATION BETWEEN ITALY AND KENYA IN NANO-SATELLITE MANUFACTURING AND OPERATIONS
Mr. Lorenzo Frezza, Rome, Italy, Sapienza University of Rome

IAC-20.B4.1.9
OVERVIEW OF SMALL SATELLITE IN LATIN AMERICAN AND THE CARIBBEAN
Mr. Leonardo Souza, Brasilia, Brazil, Universidade de Brasilia

IAC-20.B4.1.11
DEVELOPING THAILAND SPACE MANUFACTURING CAPABILITY AND ENHANCING COMPETITIVENESS BY USING THE THEOS-2 SMALLSAT MISSION
Mr. ATIPAT WATTANUNTACHAI, Bangkok, Thailand, Geo-Informatics and Space Technology Development Agency (GISTDA)

IAC-20.B4.1.13
ORGANIC GROWTH MODEL OF SMALL SATELLITE DEVELOPMENT IN INDONESIA
Mr. Wahyudi Hasbi, Bogor, Indonesia, Indonesian National Institute of Aeronautics and Space (LAPAN)

IAC-20.B4.1.14
KAZSTSAT: A TECHNOLOGY DEMONSTATION MISSION EXPORTING COMMERCIAL EARTH OBSERVATION SERVICES
Dr. Vladimir Ten, Astana, Kazakhstan, Ghalam LLP

B4.2. Small Space Science Missions

***Co-Chair**: Dr. Larry Paxton, The John Hopkins University Applied Physics Laboratory, United States ; Mr. Norbert M.K. Lemke, OHB System AG - Munich, Germany ;*

***Rapporteur:** Ms. Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom ; Dr. Oana van der Togt, TNO, The Netherlands ;*

IAC-20.B4.2.1
IONOSPHERE MEASUREMENT: POINT-TO-POINT TOTAL ELECTRON CONTENT ESTIMATION USING UHF INTER-SATELLITE RANGING FOR CUBESAT CONSTELLATION
Ms. Hoda Awny Elmegharbel, Kitakyushu, Japan, Kyushu Institute of Technology

IAC-20.B4.2.5
INVESTIGATION OF NOVEL DRAG-REDUCING AND ATOMIC OXYGEN RESISTANT MATERIALS IN VERY LOW EARTH ORBIT USING SOAR (SATELLITE FOR ORBITAL AERODYNAMICS RESEARCH)
Dr. Nicholas H. Crisp, Manchester, United Kingdom, The University of Manchester

IAC-20.B4.2.7
HORYU-VI: INTERNATIONAL CUBESAT MISSION TO INVESTIGATE LUNAR HORIZON GLOW
Prof. Mengu Cho, Kitakyushu, Japan

IAC-20.B4.2.9
YAREELO – GROUP OF NANOSATELLITES FOR SPACE WEATHER MONITORING
Ms. Valeriia Melnikova, Tula, Russian Federation, Bauman Moscow State Technical University

B4.3. Small Satellite Operations

***Co-Chair:** Mr. Andreas Hornig, University of Stuttgart, Germany ; Dr. Peter M. Allan, STFC, United Kingdom ; Mr. Stephan Roemer, Antwerp Space, Belgium ;*

***Rapporteur:** Ms. Lynette Tan, Singapore Space and Technology Association (SSTA), Singapore, Republic of ;*

IAC-20.B4.3.1
GOAL-ORIENTED ONBOARD AUTONOMOUS OPERATIONS: AN OPS-SAT EXPERIMENT
Mr. Ricardo Silva, Darmstadt, Germany, VisionSpace Technologies

IAC-20.B4.3.4
CENTRALIZED VERSUS DISTRIBUTED FLIGHT SOFTWARE ARCHITECTURE OPERATIONAL DIFFERENCES ON TWO IDENTICAL NANOSATELLITES IN-ORBIT
Mr. Rainer Diaz de Cerio Goenaga, Lizarra-Estella (Navarra), Spain, Aistech Space

IAC-20.B4.3.5
GROUND STATION NETWORK FOR THE TIM NANOSATELLITE EARTH OBSERVATION CONSTELLATION
Mr. Alexander Kleinschrodt, Wuerzburg, Germany, Zentrum für Telematik

IAC-20.B4.3.6
AUTONOMOUS MISSION PLANNING FOR OLFAR: A SATELLITE SWARM IN LUNAR ORBIT FOR RADIO ASTRONOMY
Dr. Sung-Hoon Mok, Delft, The Netherlands, Delft University of Technology (TU Delft)

IAC-20.B4.3.7
INITIAL OPERATION OF THE 100KG SMALL SAR SATELLITE IZANAGI
Dr. Masahiko Uetsuhara, Fukuoka, Japan, Institute for Q-shu Pioneer of Space, Inc. (iQPS)

IAC-20.B4.3.9
PERFORMANCE AND LIFETIME EVALUATION OF A SMALL SATELLITE FORMATION WITH LIMITED CONTROL AND NAVIGATION CAPABILITIES
Dr. Marco Sabatini, Rome, Italy, Sapienza University of Rome

IAC-20.B4.3.12
NEPALISAT-1:BEGINNING OF THE SPACE ERA IN NEPAL
Mr. Roshan Pandey, Lalitpur, Nepal, Nepal Academy of Science and Technology (NAST)

B4.4. Small Earth Observation Missions

***Co-Chair:** Mr. Carsten Tobehn, European Space Agency (ESA), The Netherlands ; Dr. Larry Paxton, The John Hopkins University Applied Physics Laboratory, United States ;*

***Rapporteur:** Dr. Werner R. Balogh, World Meteorological Organization (WMO), Switzerland ; Mr. Marco Gomez Jenkins, Imperial College London, United Kingdom ;*

IAC-20.B4.4.1
OUTLINE OF THE HYDROGNSS GNSS-REFLECTOMETRY SCOUT MISSION
Dr. Martin J. Unwin, Guildford, Surrey, United Kingdom, Surrey Satellite Technology Ltd (SSTL)

IAC-20.B4.4.2
PRETTY – A CUBESAT MISSION FOR PASSIVE REFLECTOMETRY AND DOSIMETRY
Mr. Andreas Johann Hörmer, Graz, Austria, Graz University of Technology (TU Graz)

IAC-20.B4.4.4
ALTICUBE: A KA-BAND ALTIMETER CUBESAT CONSTELLATION FOR OCEAN MONITORING
Dr. Jian Guo, Delft, The Netherlands, Delft University of Technology (TU Delft)

IAC-20.B4.4.5
CHALLENGES OF THE SAR-ENABLED MICROSATELLITE CONCEPT INFANTE
Mr. José Pedro Ferreira, Lisbon, Portugal, Tekever

IAC-20.B4.4.7
WÜRZBURG AGRICULTURE SPACE PROJECT-WASP -- A SMALL SATELLITE CONSTELLATION FOR SMART AGRICULTURE
Mr. Tobias Kaiser, Gerbrunn, Germany, Julius Maximilians Universität Würzburg

B4.5. Access to Space for Small Satellite Missions

***Co-Chair:** Mr. Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), United Kingdom ; Mr. Philip Davies, Deimos Space UK Ltd, United Kingdom ;*

***Rapporteur:** Dr. Jeffery Emdee, The Aerospace Corporation, United States ; Mr. Carlos Niederstrasser, Northrop Grumman Corporation, United States ;*

IAC-20.B4.5.2
FEASIBILITY STUDY OF LAUNCHING ROCKETS FROM UAE: CASE STUDY ON SMALL SATELLITE LAUNCHER
Mr. Abdulla Alshehhi, Abu Dhabi, United Arab Emirates, UAE Space Agency

IIAC-20.B4.5.9
AN ELECTROMAGNETIC SEPARATION SYSTEM FOR A SPHERICAL SATELLITE
Mr. Yunhan He, beijing, China, Tsinghua University School of Aerospace

IAC-20.B4.5.10
THE STANDARDIZED MODULAR ASSEMBLY DESIGN FOR CUBESAT DEPLOYER
Mr. Jiaolong Zhang, Xi'an Shaanxi, China, Northwestern Polytechnical University

IAC-20.B4.5.13
DESIGN OF A 98U CUBESAT DEPLOYER OPTIMIZED FOR DEDICATED RIDESHARE MISSIONS: REDUCING THE COSTS OF LAUNCHING A CUBESAT BY 4X
Mr. Geffen Avraham, San Francisco, United States

B4.5A-C4.8. Joint Session between IAA and IAF for Small Satellite Propulsion Systems

***Co-Chair:** Dr. Arnau Pons Lorente, Space Generation Advisory Council (SGAC), United States ; Dr. Jeffery Emdee, The Aerospace Corporation, United States ;*

***Rapporteur:** Dr. Elena Toson, T4i, Italy ; Dr. Elizabeth Jens, Jet Propulsion Laboratory - California Institute of Technology, United States ;*

Keywords describing the session best: 1. Small 2. Satellite 3. Propulsion 4. Chemical 5. Electrical

IAC-20. B4.5A-C4.8.1
DESIGN OF CUBESAT PROPULSION SYSTEM USING HYDROGEN PEROXIDE MONOPROPELLANT THRUSTER
Mr. Seungho Lee, Daejeon, Korea, Republic of, Korea Advanced Institute of Science and Technology (KAIST)

IAC-20. B4.5A-C4.8.2
MIMPS-G: MODULAR IMPULSIVE GREEN-MONOPROPELLANT PROPULSION SYSTEM FOR MICRO/NANO SATELLITES HIGH-THRUST DEMANDING ORBITAL MANEUVERS.
Mr. Ahmed E. S. NOSSEIR, DELFT, The Netherlands, Delft University of Technology (TU Delft)

IAC-20. B4.5A-C4.8.3
TEST CAMPAIGN OF A CUBESAT EQUIPPED WITH AN HELICON PLASMA THRUSTER
Dr. Fabrizio Stesina, Torino, Italy, Politecnico di Torino

IAC-20. B4.5A-C4.8.8
DEVELOPMENT OF A SIX-DIRECTIONAL PLASMA PROPULSION MODULE FOR SMALL SATELLITES
Mr. Andrei Shumeiko, Moscow, Russian Federation, Bauman Moscow State Technical University

IAC-20. B4.5A-C4.8.11
FLOW REGIME CHARACTERIZATION OF A MEMS-BASED VAPORIZING LIQUID MICROTHRUSTER
Mr. Donato Fontanarosa, Lecce, Italy, Università del Salento

IAC-20. B4.5A-C4.8.12
SULFUR-FUELED SURFACE ARC THRUSTER FOR PROPELLING NANOSATELLITES
Mr. Senior Shimhanda, Kitakyushu, Japan, Kyushu Institute of Technology

B4.6A. Generic Technologies for Small/Micro Platforms

***Co-Chair:** Mr. Philip Davies, Deimos Space UK Ltd, United Kingdom ; Mr. Joost Elstak, Airbus Defence and Space Netherlands, The Netherlands ;*

***Rapporteur:** Dr. Jian Guo, Delft University of Technology (TU Delft), The Netherlands ; Mr. Thomas Terzibaschian, DLR, German Aerospace Center, Germany ;*

IAC-20.B4.6A.1
DEVELOPING AND IN-ORBIT TEST OF THE ULTRA-LIGHTWEIGHT & HIGH RESOLUTION MICROSATELLITE JILIN-1GF03A FOR COMMERCIAL SERVICE
Dr. Maosheng Chen, changchun, China, Chang Guang Satellite Technology Co., Ltd.

IAC-20.B4.6A.2
HIGH TORQUE WHEELS FOR AGILE SATELLITE MANEUVERS - IN ORBIT EXPERIENCES AND FUTURE STEPS WITH RECUPERATION OF ENERGY
Mr. Thomas Terzibaschian, Berlin, Germany, DLR, German Aerospace Center

IAC-20.B4.6A.3
UPDATE ON THE DEVELOPMENT OF FERRAC THE MECHANIC-FREE ATTITUDE CONTROL SYSTEM
Mr. Felix Schäfer, Stuttgart, Germany, Institute of Space Systems, Universität Stuttgart

IAC-20.B4.6A.5
TOWARDS IN-ORBIT DEMONSTRATION OF A COMPACT OPTICAL COMMUNICATIONS TERMINAL FOR SMALL SATELLITES
Dr. Francesco Sansone, Padova, Italy

IAC-20.B4.6A.9
MODULAR CDHS HARDWARE DEVELOPMENT
Ms. Shamma Aleissaee, ALAIN, United Arab Emirates, The National Space Science and Technology Center (NSSTC)

IAC-20.B4.6A.10
SERVICED SMALL SATELLITES CONSTELLATION BASED ON OPEN MODULAR ARCHITECTURE
Dr. Vladimir Zelentsov, Moscow, Russian Federation, Bauman Moscow State Technical University

IAC-20.B4.6A.11
STRUCTURAL DESIGN METHODOLOGY OF SPACEBORNE ELECTRONICS FOR IMPLEMENTING LIGHTWEIGHT AND LOW-COST SMALL SATELLITE APPLICATIONS
Mr. Tae-Yong Park, Gwangju, Korea, Republic of, Chosun University

IAC-20.B4.6A.12
HSDR-X – DESIGN CHOICES IN MAXIMISING DATA RETURN FROM SMALL SATELLITE MISSIONS
Mr. David Cooke, Guildford, United Kingdom, Surrey Satellite Technology Ltd (SSTL)

B4.6B. Generic Technologies for Nano/Pico Platforms

***Chairman:** Mr. Andy Vick, RAL Space, United Kingdom ;*

***Co-Chair:** Mr. Zeger de Groot, Innovative Solutions in Space BV, The Netherlands ;*

***Rapporteur:** Dr. Martin von der Ohe, Technische Universität Berlin, Germany ; Dr. Eugene D Kim, Satrec Initiative, Korea, Republic of ;*

IAC-20.B4.6B.1
FORESAIL 1 PLATFORM DESIGN FOR PARTICLE TELESCOPE AND PLASMA BRAKE EXPERIMENT
Dr. Muhammad Rizwan Mughal, Espoo, Finland, Aalto University

IAC-20.B4.6B.5
CUBESAT ELECTRICAL INTERFACE STANDARDIZATION TO ACHIEVE FASTER DELIVERY AND MISSION SUCCESS
Prof. MENGU CHO, Kitakyushu-shi, Japan, Kyushu Institute of Technology

IAC-20.B4.6B.7
C6 STARS: A SCALABLE 256-ELEMENT PHASED ARRAY FOR NANO SPACECRAFTS
Mr. Tayo Shonibare, Toronto, Canada, C6 Launch Systems

IAC-20.B4.6B.8
SALSAT: READY FOR LAUNCH - OVERVIEW OF THE FINAL FLIGHT CONFIGURATION, MISSION CONCEPT AND FIRST FLIGHT RESULTS
Mr. Jens Großhans, Berlin, Germany, Technische Universität Berlin

IAC-20.B4.6B.9
AN INNOVATIVE PASSIVE SOLAR ARRAY DEPLOYMENT MECHANISM FOR CUBESATS
Mr. Mohammad Motazedi, Berlin, Germany, TU Berlin

IAC-20.B4.6B.10
WIPTHERM: HYBRID POWER HARVESTING SYSTEM FOR A 3U CUBESAT
Prof. Fernando Aguado Agelet, Vigo, Spain, University of Vigo

IAC-20.B4.6B.11
STANDARDIZED MODULAR ASSEMBLY TECHNOLOGY FOR CUBESAT
Mr. Jiaolong Zhang, Xi'an Shaanxi, China, Northwestern Polytechnical University

B4.7. Constellations and Distributed Systems

Co-Chair: *Dr. Rainer Sandau, International Academy of Astronautics (IAA), Germany ; Prof. Michele Grassi, University of Naples "Federico II", Italy ;*

Rapporteur: *Dr. Jaime Esper, National Aeronautics and Space Administration (NASA), United States ; Mr. Aaron Rogers, Maxar Technologies, United States ;*

IAC-20.B4.7.3
LUNAR ORBIT SATELLITES FORMATION FLYING COLLABORATIVE EXPLORATION
Prof. Li Deng, Beijing, China, National Space Science Center, Chinese Academy of Sciences

IAC-20.B4.7.4
NANOSATELLITES TRIANGLE FORMATION FLYING FOR TERRESTRIAL GAMMA-RAY FLASHES AND TRANSIENT LUMINOUS EVENTS STUDY
Prof. Mikhail Ovchinnikov, Moscow, Russian Federation, Keldysh Institute of Applied Mathematics, RAS

IAC-20.B4.7.5
HIGHLY DISTRIBUTED CHIPSATS TO PROVIDE IN-SITU MEASUREMENTS OF THE MAGNETIC FIELD FOR SPACE WEATHER MONITORING
Ms. Sehaz Dayal, Illkirch-Graffenstaden, France, International Space University (ISU)

IAC-20.B4.7.7
PRECURSOR OF A FORMATION FLYING SYNTHETIC APERTURE RADAR (FF-SAR) BY A CLUSTER OF CUBESATS
Dr. Alfredo Renga, Napoli, Italy, University of Naples "Federico II"

IAC-20.B4.7.8
MISSION ANALYSIS OF INDONESIA LOW EARTH MICRO SATELLITE CONSTELLATION
Mrs. Ery Fitrianingsih, Bogor, Indonesia, Indonesian National Institute of Aeronautics and Space (LAPAN)

IAC-20.B4.7.10
NETSAT - A FORMATION OF FOUR 3U-SATELLITES USING ELECTRIC PROPULSION
Mr. Roland Haber, Wuerzburg, Germany, Zentrum für Telematik

IAC-20.B4.7.15
BENEFITS OF INTERSATELLITE CONNECTIVITY FOR BACKHAUL NETWORKS BASED ON SMALL SATELLITES
Mr. Andrea Vettor, Padova, Italy

B4.8. Small Spacecraft for Deep-Space Exploration

Co-Chair: *Dr. Leon Alkalai, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States ; Prof. Rene Laufer, Luleå Technical University, Sweden ;*

Rapporteur: *Ms. Amanda Stiles, Rocket Lab, United States ; Dr. Jaime Esper, National Aeronautics and Space Administration (NASA), United States ;*

IAC-20.B4.8.1
KEYNOTE: CONSOLIDATED PHASE A DESIGN OF THE LUMIO SPACECRAFT: A CUBESAT FOR OBSERVING AND CHARACTERIZING MICRO-METEOROID IMPACTS ON THE LUNAR FAR SIDE
Dr. Angelo Cervone, Delft, The Netherlands, Delft University of Technology (TU Delft)

IAC-20.B4.8.3
ENABLING LOW-COST CHALLENGING MISSIONS WITH SMALL SPACECRAFT BY USING HIGH-ENERGY PULSED PLASMA THRUSTERS: INITIAL LOW-THRUST TRAJECTORY SIMULATIONS
Prof. Giancarlo Santilli, Brasilia - DF, Brazil, University of Brasilia

IAC-20.B4.8.5
NEXT GENERATION OF MASCOT NANO-LANDERS FOR THE MULTIPLE NEO RENDEZVOUS MISSION: A SELF- TRANSFERRING LANDER FOR THE 'SOUSVEILLANCE' OF NEOS FOR SPACE EXPLORATION, PLANETARY DEFENCE OR RESOURCE UTILISATION
Ms. Suditi Chand, Bremen, Germany, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Institute of Space Systems

IAC-20.B4.8.6
THE MILO SPACE SCIENCE INSTITUTE: ENABLING NEW, SCIENCE-FOCUSED DEEP SPACE SMALLSAT MISSIONS
Mrs. Laura Champion, McLean, VA, United States, Lockheed Martin (Space Systems Company)

IAC-20.B4.8.7
SMALL SATELLITE BISTATIC SAR 3D CHARTING OF AN ASTEROID
Mr. Pedro Costa, Porto, Portugal, University of Porto, Faculty of Engineering

IAC-20.B4.8.8
AUTONOMOUS NAVIGATION STRATEGY ON THE LICIACUBE MICRO-SATELLITE FOR CLOSE PROXIMITY FLY-BY OF THE DIDYMOON ASTEROID
Mr. Emilio Fazzoletto, Turin, Italy, Argotec

IAC-20.B4.8.10
ZERO-SUM STOCHASTIC DIFFERENTIAL GAME BASED CONTROL FOR LANDING ON IRREGULAR SHAPED ASTEROID
Dr. Jiateng Long, Beijing, China, Beijing Institute of Technology, School of Aerospace Engineering

IAC-20.B4.8.11
HIGH-EFFICIENCY TRAJECTORY OPTIMIZATION METHOD FOR SMALL SPACECRAFT OF ASTEROIDS BASED ON MACHINE LEARNING
Ms. Taiyang Liu, Beijing, China, Beijing Institute of Technology

B4.9-GTS.5. Small Satellite Missions Global Technical Session

Co-Chair: *Dr. Matthias Hetscher, DLR (German Aerospace Center), Germany ; Mr. Norbert M.K. Lemke, OHB System AG - Munich, Germany ;*

Rapporteur: *Mr. Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), United Kingdom ;*

IAC-20.B4.9-GTS.5.1
KEYNOTE: CONSTELLATIONS : THE SATELLITE SERIAL PRODUCTION CHALLENGE
Mr. Laurent Jaffart, Taufkirchen, Germany, Airbus Defence and Space

IAC-20.B4.9-GTS.5.2
SYSTEM MODEL VERIFICATION USING IN-FLIGHT KAZSTSAT DATA
Ms. Madina Kalel, Astana, Kazakhstan, Ghalam LLP

IAC-20.B4.9-GTS.5.4
AALTO-1 CUBESAT: THREE YEARS IN ORBIT
Dr. Muhammad Rizwan Mughal, Espoo, Finland, Aalto University

IAC-20.B4.9-GTS.5.7
CABAÑAS: FIRST HONDURAN ACADEMIC GROUND STATION FOR SMALL SATELLITE MISSIONS
Prof.Dr. Javier Mejuto, Tegucigalpa, Honduras, National Autonomous University of Honduras (UNAH)

IAC-20.B4.9-GTS.5.10
FAULT ISOLATION OF REACTION WHEELS ONBOARD 3-AXIS CONTROLLED IN-ORBIT SATELLITE USING MACHINE LEARNING TECHNIQUES
Dr. Afshin Rahimi, Windsor, Canada, University of Windsor

B4.VP. Virtual Presentations: 27th IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS

Co-Chair: *Dr. Danil Ivanov, Keldysh Institute of Applied Mathematics, RAS, Russian Federation ; Prof. Balbir Singh, Manipal Institute of Technology, Manipal Academy of Higher Education, India ; Mr. Andreas Hornig, University of Stuttgart, Germany ; Prof. Klaus Schilling, Zentrum für Telematik, Germany ;*

Rapporteur: Dr. Jian Guo, Delft University of Technology (TU Delft), The Netherlands ;

IAC-20.B4.VP.5
SATELLITE-ON-A-RIGID-FLEX PRINTED CIRCUIT BOARD WITH ATTITUDE CONTROL ABILITY
Mr. Haoran Gong, Beijing, China, Tsinghua University

IAC-20.B4.VP.10
THE FACSAT-1: A DRIVER PROJECT TO PROMOTE SPIN-OFF INITIATIVES IN COLOMBIA
Mrs. Sonia Rincon, cali, Colombia, Colombian Air Force - Officers Academy

IAC-20.B4.VP.11
DEVELOPMENT AND QUALIFICATION OF A LED-BASED PAYLOAD FOR A CUBESAT PLATFORM: LEDSAT MISSION
Mr. Paolo Marzioli, Rome, Italy, Sapienza University of Rome

IAC-20.B4.VP.12
A PATH TO COTS DEPLOYABLE STRUCTURES, PAVING THE WAY TO ADVANCED NEWSPACE NANOSAT MISSIONS
Dr. Thomas Sinn, Gilching, Germany, Deployables Cubed GmbH

IAC-20.B4.VP.16
APPSAT: A CASE STUDY IN SOFTWARE DEFINED MICROSATELLITE DESIGN BASED ON CONSUMER ELECTRONICS DEVELOPMENT EXPERIENCE
Mrs. Luan Xiaona, yantai, China, Shandong Aerospace Electro-technology Institute

IAC-20.B4.VP.20
OPTICAL OBSERVATION OF NEAR EARTH OBJECT BY A MICRO SATELITE FROM LOW EARTH ORBIT
Prof. Keiichi Hirako, Yokohama, Japan, Keio University

IAC-20.B4.VP.21
APPLICATIONS OF CUBESAT WITH ULTRAVIOLET CAMERA TO TECHNOLOGY VALIDATION OF OPTICAL MODULE SPACECRAFT AND SCIENTIFIC RESEARCH ON STARS AND EXOPLANETS
Dr. Suquan Ding, Beijing, China, Beijing Space Quest Ltd.

IAC-20.B4.VP.23
EARTHQUAKE DETECTION AND DISASTER FORECASTING WITH UNIVERSITY CUBESATS
Dr. Ugur Guven, Palm Beach Gardens, United States, UN CSSTEAP

IAC-20.B4.VP.26
DEMONSTRATION OF THE PROPELLANT-LESS CONSTELLATION WITH JOINTED CUBESATS SEPARATION BY CENTRIFUGAL FORCE IN THE MAGNARO MISSION
Mr. HOANG XUAN TRUONG AN, Nagoya, Japan, Nagoya University

IAC-20.B4.VP.27
IN-SPACE ROBOTIC ASSEMBLY AND SERVICING OF HIGH-VALUE INFRASTRUCTURE
Prof.Dr. CHAKRAVARTHINI M. SAAJ, LINCOLN, United Kingdom

IAC-20.B4.VP.29
FAINT TARGET PROCESSING (FTP) PIPELINE FOR SMALL ASTEROID PROBERS
Ms. Xiaoxuan Lu, Beijing, China, Beijing Institute of Technology

B5. IAF SYMPOSIUM ON INTEGRATED APPLICATIONS

B5.1. Tools and Technology in Support of Integrated Applications

Co-Chair: *Dr. Larry Paxton, The John Hopkins University Applied Physics Laboratory, United States ; Ms. Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom ; Mr. Boris Penne, OHB System AG, Germany ;*

Rapporteur: *Mrs. Beatrice Barresi, European Space Agency (ESA), United Kingdom ;*

Keywords describing the session best: 1. Integration 2. Data Fusion 3. Data distribution 4. New technologies

IAC-20.B5.1.2
DEEP LEARNING DEVELOPMENT PLATFORM FOR AEROSPACE APPLICATIONS
Dr. Yuanhong Mao, Xi'an, China, Xi'an Microelectronics Technology Institute, CASC

IAC-20.B5.1.3
APPLYING GEOGRAPHIC INFORMATION SYSTEMS FOR MONITORING OF BLOOM DYNAMICS FROM SPACE
Mr. Mostafa Elfouly, Munich, Germany

IAC-20.B5.1.7
EDGE COMPUTING AND ITS APPLICATIONS IN SATELLITES
Mr. Archit Latkar, Banglore, India, Ramaiah Institute of Technology

IAC-20.B5.1.11
MULTIPURPOSE INTEGRATED QUADCOPTER (M-IQ)
Mr. Basavaraj Kallakutagar, mundargi, India, Indian Space Research Organization (ISRO)

IAC-20.B5.1.13
CHALLENGES OF NLP FOR SPACE INDUSTRY: THE CASE OF COMMONSENSE REASONING
Dr. Akram Tayyebi, Tehran, Iran

B5.2. Integrated Applications End-to-End Solutions

Co-Chair: *Mr. Boris Penne, OHB System AG, Germany ; Ms. Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom ;*

Rapporteur: *Dr. Stefano Ferretti, European Space Agency (ESA), Italy ; Mrs. Beatrice Barresi, European Space Agency (ESA), United Kingdom ;*

Keywords describing the session best: 1. business case 2. case studies 3. mock up solutions

IAC-20.B5.2.1
PREDICTING WHAT WE BREATHE: MACHINE LEARNING, SMART CITIES, AND SPACE DATA
Prof. Jeanne Holm, Sierra Madre, CA, United States

IAC-20.B5.2.2
ESA SPACE SOLUTIONS: SOCIO-ECONOMIC IMPACT ANALYSIS OF NEWSPACE - ABSTRACT
Mr. Elias Montanari, Harwell-Didcot, United Kingdom, European Space Agency (ESA)

IAC-20.B5.2.3
THE ESA BUSINESS APPLICATIONS AMBASSADOR PLATFORM FOR ITALY: A CLOSER LOOK TO THE NATIONAL SPACE ACTIVITIES AND THE WAY FORWARD OF THE ITALIAN AND EUROPEAN BUSINESS APPLICATIONS ECOSYSTEM
Mrs. Eleonora Lombardi, Rome, Italy, Fondazione E. Amaldi

IAC-20.B5.2.8
GPS SUPPORTED ASSESSMENT INTEGRATED WITH GIS SERVICE AREA NETWORK ANALYSIS OF HEALTHCARE INSTITUTIONS OF BASONA WERANA WEREDA IN COMPARISON WITH DEBRE BERHAN TOWN, ETHIOPIA
Mr. Wondwossen Mindahun, Addis Ababa, Ethiopia, Ethiopian Space Science and Technology Institute (ESSTI)

IAC-20.B5.2.12
A BUSINESS CASE ANALYSIS FOR SATELLITE BACKHAUL IN 5G/6G MOBILE NETWORKS
Mr. Alexander Kharlan, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

B5.3. Satellite Commercial Applications

Co-Chair: *Dr. John M. Horack, The Ohio State University College of Engineering, United States ; Dr. Dengyun Yu, China Aerospace Science and Technology Corporation (CASC), China ;*

Rapporteur: *Mr. Samuel Malloy, The Ohio State University, United States ;*

IAC-20.B5.3.1
HIGHLY EFFICIENT SATELLITE IMAGERY DENOISING TECHNIQUE USING DEEP CONVOLUTIONAL NEURAL NETWORK
Dr. Alavikunhu Panthakkan, Dubai, United Arab Emirates, University of Dubai

IAC-20.B5.3.2
SPACE TECHNOLOGY AND SMART CITIES
Ms. Yuwei MA, Illkirch-Graffenstaden, France, International Space University (ISU)

IAC-20.B5.3.3
DEVELOPMENT OF USER INTERFACE SYSTEM FOR MBRSC
Mr. Mohammad Haneef, Dubai, United Arab Emirates, University of Dubai

IAC-20.B5.3.4
DEVELOPMENT OF ANALYSIS PORTAL FOR MBRSC
Ms. Navneet Kaur, Dubai, United Arab Emirates, University of Dubai

IAC-20.B5.3.5
VISUALIZATION OF MBRSC SATELLITE DATA USING KEPLER
Mr. Firas Abou Naaj, Dubai, United Arab Emirates, University of Dubai

B6. IAF SPACE OPERATIONS SYMPOSIUM

B6.1. Ground Operations - Systems and Solutions

Co-Chair: *Mr. Sean Burns, EUMETSAT, Germany ; Mr. Thierry Levoir, CNES, France ;*

Rapporteur: *Mr. Akos Hegyi, Airbus Defence & Space, Germany ; Mr. Keyur Patel, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States ;*

Keywords describing the session best: • Ground Operations • Systems and Solutions • Phase A-E

IAC-20.B6.1.2
A PROPOSAL AN INNOVATIVE FRAMEWORK FOR THE CONCEPTION OF THE GROUND SEGMENT OF SPACE SYSTEMS.
Mr. Antonio Cassiano Julio Filho, Sao Jose dos Campos, Brazil, Instituto Nacional de Pesquisas Espaciais (INPE)

IAC-20.B6.1.4
A DESIGN ARCHITECTURE FOR AN AUTONOMOUS PRE-LAUNCH PROCEDURE CONTROL SYSTEM
Mr. Tausif Sharif, Toronto, Canada, C6 Launch Systems

IAC-20.B6.1.5
MARKET PERSPECTIVES OF GROUND SEGMENT AS A SERVICE
Mrs. Elisa CARCAILLON, DEUIL LA BARRE, France, PricewaterhouseCoopers Advisory

IAC-20.B6.1.6
CHALLENGES AND OPPORTUNITIES IN THE DEFINITION OF A SOFTWARE REFERENCE ARCHITECTURE: COMPARISON OF PACKET UTILIZATION STANDARD AND MISSION OPERATIONS
Mr. Lorenzo Maria Gagliardini, Perugia, Italy, Politecnico di Torino

IAC-20.B6.1.7
MISSION CONTROL FACILITY FOR ELSA-D. A STATE-OF-THE ART MIXED CONCEPT CONTROL AND AUTOMATION SYSTEM FOR SMALLSATS
Mr. Riaz Shafi, Harwell, United Kingdom, RHEATECH Ltd

IAC-20.B6.1.10
LESSONS LEARNED DURING THE COMMISSIONING AND OPERATION OF THE GLOBAL DISTRIBUTED GROUND STATION NETWORK (DGSN) FOR THE AGILE TRACKING OF CUBESATS UNDER INTERNET-OF-THINGS (URBAN AND RURAL) CONDITIONS
Mr. Andreas Hornig, Stuttgart, Germany, University of Stuttgart

B6.2. New Space Operations Concepts and Advanced Systems

Co-Chair: *Mr. Mario Cardano, Thales Alenia Space France, Italy ; Mr. Thomas Kuch, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

Rapporteur: *Mr. Bobby Watkins, NASA MSFC, United States ;*

Keywords describing the session best: • Space Operations Concept • Advanced Systems • Systems and tools

IAC-20.B6.2.2
OPERATIONAL IMPLICATIONS OF ENDOWING HYBRID RADAR-OPTICAL SATELLITE SYSTEMS WITH AI BASED IMAGE ANALYSIS CAPABILITIES
Dr. Daniel Novak, Toulouse, France, Airbus Defence & Space

IAC-20.B6.2.5
PROBA-3 MISSION – COMMISSIONING AND OPERATING SAFELY THE FIRST EVER HIGH-ACCURACY AND HIGHLY AUTONOMOUS FORMATION FLYING MISSION
Mr. Daniel Serrano, Tres Cantos, Spain, SENER Ingenieria y Sistemas, S.A.

IAC-20.B6.2.7
PREDICTIVE MAINTENANCE AS ENHANCEMENT OF FAULT DETECTION, ISOLATION AND RECOVERY STRATEGIES OF SPACECRAFT
Ms. Maren Hülsmann, Neubiberg, Germany, Bundeswehr Univeristy Munich

IAC-20.B6.2.8
REVOLUTIONIZING SPACE TRAFFIC MANAGEMENT
Ms. Claire Wilhelm, Arlington, United States, Defense Advanced Research Projects Agency (DARPA)

IAC-20.B6.2.9
‚THE NEW ‚GREEN' NEAR-SPACE ECONOMY'
Mr. Guido Schwartz, Bremen, Germany, Foundation for Space Development South Africa

IAC-20.B6.2.10
FLEXIBLE EXECUTION OF TEMPORAL PLANS WITH UNCERTAINTY FOR AUTONOMOUS SPACECRAFT
Ms. Zhaoyu Li, Beijing, China, Beijing Institute of Technology

B6.3. Mission Operations, Validation, Simulation and Training

Co-Chair: *Mr. Andreas Rudolph, European Space Agency (ESA), Germany ; Mrs. Zeina Mounzer, Telespazio VEGA Deutschland GmbH, Germany ;*

Rapporteur: *Mr. Borre Pedersen, Kongsberg Satellite Services AS, Norway ;*

Keywords describing the session best: • Mission Operations • Verification & Validation • Simulation • Test and Training

IAC-20.B6.3.5
OHRC IMAGING OPERATIONS FOR CHARACTERIZATION OF CHANDRAYAAN-2 LANDING SITE
Mrs. Vijayasree Paled, Bangalore, India, ISRO Satellite Centre (ISAC),ISRO

IAC-20.B6.3.6
DANCE: INTEGRATION AND AVIONICS TESTING OF 5 DOF EXPERIMENTAL FACILITY FOR RELATIVE GNC
Mr. Stefano Silvestrini, Milano, Italy, Politecnico di Milano

IAC-20.B6.3.7
DEVELOPMENT OF GUIDANCE, NAVIGATION, AND CONTROL STRATEGY FOR THE AUTOMATED DOCKING OPERATION ON HTV-X
Mr. Yuki Tomita, Tsukuba, Ibaraki, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.B6.3.12
A NOVAL DEISGN OF FUEL VALVE DISASSEMBLY IN ROBOTIC SATELLITE MAINTENANCE
Mr. Jack Graham, Glasgow, United Kingdom, University of Strathclyde

IAC-20.B6.3.13
ALTITUDE MAINTENANCE OF A 500KM LOW-EARTH ORBIT SATELLITE
Ms. Ayesha Sharafi, Dubai, United Arab Emirates, Mohammed Bin Rashid Space Centre (MBRSC)

B6.4-B3.4. Flight & Ground Operations of HSF Systems - Joint Session of the IAF Human Spaceflight and IAF Space Operations Symposia)

Co-Chair: *Dr. Dieter Sabath, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ; Dr. Annamaria Piras, Thales Alenia Space Italia, Italy ;*

Rapporteur: *Mr. Thomas A.E. Andersen, Danish Aerospace Company ApS, Denmark ;*

Keywords describing the session best: 1. Humans Spaceflight 2. Operations 3. Flight Operations 4. Ground Operations 5. Space Station

IAC-20.B3.4-B6.4.1
THE MISSION PLANNING TECHNIQUE AND SOFTWARE DEVELOPMENT FOR SPACE STATION OPERATION
Mr. Jiacheng Zhang, Changsha, China, National University of Defense Technology

IAC-20.B3.4-B6.4.2
ADVANCES IN AUTOMATIC MISSION PLAN GENERATOR LANGUAGE
Mr. Salvador Daniel Escobedo Casillas, Zapopan, Mexico, University of Guadalajara

IAC-20.B3.4-B6.4.3
COLUMBUS ARCHITECTURAL CONSIDERATIONS FOR ON-ORBIT NETWORK SERVICES
Mr. Stefan Petschelt, Bremen, Germany, Airbus DS GmbH

IAC-20.B3.4-B6.4.4
SYSTEM UPGRADES PREPARE COLUMBUS FOR A NEW DECADE
Mr. Alexander Stölzle, Wessling, Germany, DLR (German Aerospace Center)

IAC-20.B3.4-B6.4.5
COLUMBUS CREW TERMINAL
Mr. Stefan Petschelt, Bremen, Germany, Airbus DS GmbH

IAC-20.B3.4-B6.4.6
INNOVATIVE SOLUTIONS FOR DESIGNING A TRAINING SIMULATOR FOR VISUAL INSTRUMENTAL OBSERVATIONS FROM THE ISS
Dr. Andrey Kuritsin, Star City, Russian Federation, Gagarin Cosmonaut Training Center

IAC-20.B3.4-B6.4.10
NUMERICAL ANALYSIS OF THE VENTILATION IN A MOON HABITAT LABORATORY MODULE
Ms. Maria von Einem, Bremen, Germany, ZARM University of Bremen

B6.5-A6.10. Joint Space Operations/ Space Debris Session

Co-Chair: *Dr. Darren McKnight, Integrity Applications Incorporated (IAI), United States ; Ms. Helen Tung, NewSpace2060, Australia ; Mr. John Auburn, Astroscale Ltd, United Kingdom ;*

Rapporteur: *Dr. Norman Fitz-Coy, University of Florida, United States ; Dr. A. Anilkumar, Indian Space Research Organization (ISRO), United States ; Mr. Andreas Ohndorf, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

IAC-20.B6.5-A6.10-B6.5.1
OPTIMIZATION AND STANDARDIZATION OF LIGHT EMITTING DIODES (LEDS) PATTERNS FOR IMPROVED SATELLITE TRACKING AND MONITORABILITY
Mr. Paolo Marzioli, Rome, Italy, Sapienza University of Rome

IAC-20.B6.5-A6.10.3
GLOBALLY-OPTIMAL WHOLE BODY MOTION PLANNING UNDER NON-HOLONOMIC CONSTRAINTS USING DYNAMIC PROGRAMMING
Mr. Federico Salvioli, Torino, Italy, Altec S.p.A.

IAC-20.B6.5-A6.10.4
ENABLING GENERAL ORBITAL TRANSPARENCY BY OPEN-SOURCE ORBIT-DETERMINATION OF CUBESATS AND OTHER SOURCES
Mr. Andreas Hornig, Stuttgart, Germany, University of Stuttgart

IAC-20.B6.5-A6.10.6
COLLISION AVOIDANCE ALGORITHMS FOR SPACE TRAFFIC MANAGEMENT APPLICATIONS
Dr. Juan Luis Gonzalo, Milan, Italy, Politecnico di Milano

IAC-20.B6.5-A6.10.7
ENABLING WORLDWIDE AND TRANSPARENT SPACE TRAFFIC MANAGEMENT THROUGH DECENTRALIZED AND TRUSTWORTHY SPACE DOMAIN AWARENESS
Mr. Waqar Zaidi, Columbia, United States, Harris Corporation

IAC-20.B6.5-A6.10.8
CAPTURING METHOD OF TUMBLING SPACE DEBRIS BASED ON ASSEMBLED MULTIPLE MICRO-SATELLITES
Mr. Siyang Meng, Xi'an, China, Northwestern Polytechnical University, NPU

B6.VP. Virtual Presentations - IAF SPACE OPERATIONS SYMPOSIUM

Co-Chair: *Mr. John Auburn, Astroscale Ltd, United Kingdom ; Dr. Otfrid G. Liepack, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States ;*

IAC-20.B6.VP.4
HOUSEKEEPING TELEMETRY ANALYSIS FOR SPACECRAFT HEALTH MONITORING AND PREDICTIVE DIAGNOSIS USING MACHINE LEARNING
Mr. Petr Mukhachev, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.B6.VP.5
MANUAL ROVER OPERATIONS IN THE ERA OF AUTONOMOUS SYSTEMS
Dr. Mohammed Alzaabi, Dubai, United Arab Emirates, Mohammed Bin Rashid Space Centre (MBRSC)

IAC-20.B6.VP.6
SAASST GROUND STATION: SATELLITE TRACKING AND CONTROL FOR HIGH DATA RATES
Ms. Tarifa AlKaabi, Sharjah, United Arab Emirates, Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST)

IAC-20.B6.VP.8
MISSION TRAJECTORY DESIGN TO VENUS FOR THE DEPLOYMENT OF VENUSIAN ATMOSPHERIC GLIDER & CUBESAT CONSTELLATIONS FOR RESEARCH PURPOSES
Mr. Rohan Chandra, Gandhinagar, India, University of Petroleum and Energy Studies

IAC-20.B6.VP.9
KNOWLEDGE GRAPH BASED SATELLITE COMPONENT DETECTION METHOD FOR ON-ORBIT REFUELING
Mrs. Ao Chen, Beijing, China, Beijing Institute of Control Engineering, China Academy of Space Technology (CAST)

C1. IAF ASTRODYNAMICS SYMPOSIUM

C1.1. Guidance, Navigation and Control (1)

Co-Chair: *Dr. Moriba Jah, The University of Texas at Austin, United States ; Prof.Dr. Jean de Lafontaine, NGC Aerospace Ltd., Canada ;*

Rapporteur: *Mr. Juan Carlos Bastante, OHB System AG-Bremen, Germany ;*

Keywords describing the session best: 1. Guidance, navigation and control 2. Earth-orbiting and interplanetary spacecraft 3. Formation flying 4. Rendezvous and docking

IAC-20.C1.1.4
ANALYSIS ON SELF-ORGANIZING CONTROL MECHANISM FOR MEGA CONSTELLATIONS
Dr. Yun Xu, Beijing, China, School of Aerospace, Tsinghua University, Beijing

IAC-20.C1.1.5
AUTONOMOUS ON-ORBIT INSPECTION OF COMPLEX SPACE STRUCTURES IN DEEP SPACE ENVIRONMENT
Mrs. Sepideh Faghihi, Oakville, Canada, Ryerson University

IAC-20.C1.1.7
RELATIVE POSITION AND RELATIVE ATTITUDE ESTIMATION USING A CAMERA FOR RENDEZVOUS AND DOCKING EXPERIMENT
Dr. Ravi Kumar L, Bangalore, India, ISRO Satellite Centre (ISAC),ISRO

IAC-20.C1.1.9
SATELLITE FORMATION CONTROL BASED ON EVENT-TRIGGERED OPTIMAL REGULATION OF TWO-LAYER PERFORMANCE OUTPUTS
Mr. Hironori Yamaguchi, Nagoya, Aichi, Japan, Nagoya University

IAC-20.C1.1.10
ANALYSIS OF MANOEUVRING STRATEGIES AND RELATIVE NAVIGATION FOR MULTI-STEP RENDEZVOUS TOWARD UNCOOPERATIVE TARGETS
Ms. Alessia Nocerino, Napoli, Italy, University of Naples "Federico II"

IAC-20.C1.1.11
FORMATION CONTROL USING DIFFERENTIAL ATMOSPHERIC DRAG CONSIDERING ATTITUDE CONSTRAINTS
Mr. Takehiro Yasuda, Fukuoka, Japan, Kyushu University

IAC-20.C1.1.12
THRUST EXPENDITURE FEASIBILITY ANALYSIS FOR RENDEZVOUS OPERATIONS IN CIS-LUNAR SPACE
Ms. Giordana Bucchioni, Pisa, Italy, University of Pisa

IAC-20.C1.1.13
DECENTRALIZED ELECTROMAGNETIC CONTROL OF CHIPSATS SWARM USING MAGNETORQUERS
Dr. Danil Ivanov, Moscow, Russian Federation, Keldysh Institute of Applied Mathematics, RAS

IAC-20.C1.1.14
HIGH PRESISION RENDEZOUS DOCKING NAVIGATION GUIDANCE AND CONTROL DEMONSTARTION USING 13 DEGRESS OF FREEDOM ROBOTIC ARM ON TRACKING SYSTEM
Dr. Ravi Kumar L, Bangalore, India, ISRO Satellite Centre (ISAC),ISRO

IAC-20.C1.1.16 (non-confirmed)
DECENTRALIZED COORDINATED CONTROL OF FORMATION FLYING SPACECRAFT COMPOSED OF A REACTION CONTROL SYSTEM
Dr. Willer Gomes dos Santos, São José dos Campos, Brazil, Aeronautic Institute of Technology (ITA)

C1.2. Guidance, Navigation and Control (2)

Co-Chair: *Prof. Yong Chun Xie, Beijing Institute of Control Engineering, China Academy of Space Technology (CAST), China ; Dr. Anton de Ruiter, Ryerson University, Canada ;*

Keywords describing the session best: 1. Guidance, navigation and control 2. Earth-orbiting and interplanetary spacecraft 3. Formation flying 4. Rendezvous and docking

IAC-20.C1.2.1
ARTIFICIAL INTELLIGENCE TECHNIQUES IN AUTONOMOUS VISION-BASED NAVIGATION SYSTEM FOR LUNAR LANDING
Mr. Stefano Silvestrini, Milano, Italy, Politecnico di Milano

IAC-20.C1.2.2
SLAM-BASED AUTONOMOUS ORBITAL NAVIGATION OF DISTRIBUTED SPACECRAFT FOR SMALL CELESTIAL BODY MISSIONS
Mr. Kawsihen Elankumaran, Sydney, Australia, University of New South Wales

IAC-20.C1.2.5
BEZIER-BASED SEQUENTIAL CONVEX PROGRAMMING METHOD FOR LAUNCH ASCENT GUIDANCE
Ms. Mengxin Zhao, Xi'an City, China, College of Astronautics, Northwestern Polytechnical University (NPU)

IAC-20.C1.2.8
SELF-TUNING TRAJECTORY CONTROL OF SMALL BODY LANDING MISSION BASED ON RISK PREDICTION
Mr. Dongyue Zhao, Beijing, China, Beijing Institute of Technology (BIT)

IAC-20.C1.2.10
END-OF-LIFE EARTH RE-ENTRY FOR INCLINED GEOSYNCHRONOUS ORBITS
Mr. Qian Xiao, Beijing, China, Beijing Institute of Technology, School of Aerospace Engineering

IAC-20.C1.2.12
REAL-TIME OPTICAL NAVIGATION BY PERSPECTIVE PROJECTION ESTIMATION USING SHAPE MODEL FOR FAR-DISTANT SMALL BODY EXPLORATIONS
Mr. Genki Ohira, Sagamihara-shi, Kanagawa, Japan, The Graduate Universty for Advanced Studies[SOKENDAI]

IAC-20.C1.2.13
REAL-TIME OPTIMAL ENTRY GUIDANCE BASED ON DEEP REINFORCEMENT LEARNING
Dr. Lin Cheng, Beijing, China, Beihang University (BUAA)

IAC-20.C1.2.14
NEW METHOD FOR INTERPLANETARY SPACECRAFT PASSIVE NAVIGATION
Dr. Vasiliy Sazonov, Moscow, Russian Federation, Moscow State University

C1.3. Guidance, Navigation & Control (3)

Co-Chair: *Dr. Miguel Bello Mora, Deimos Space SLU, Spain ; Prof. Igor V. Belokonov, Samara National Research University (Samara University), Russian Federation ;*

Keywords describing the session best: 1. Guidance, navigation and control 2. Earth-orbiting and interplanetary spacecraft 3. Formation flying 4. Rendezvous and docking

IAC-20.C1.3.1
MARS SAMPLE RETURN: ERO NAVIGATION AND GUIDANCE DURING THE INBOUND LEG
Mr. Pablo Hermosin, Tres Cantos, Spain, Deimos Space SLU

IAC-20.C1.3.3
A SPARSE NONLINEAR MODEL PREDICTIVE CONTROL FOR AUTONOMOUS SPACE MISSIONS
Mr. Michele Pagone, Torino, Italy, Politecnico di Torino

IAC-20.C1.3.5
IMPROVING SATELLITE ON-BOARD ORBIT ESTIMATION WITH ARTIFICIAL NEURAL NETWORKS
Mr. Sergiu-Ştefan Mihai, Bucharest, Romania, Romanian InSpace Engineering SRL

IAC-20.C1.3.6
NONLINEAR MODELLING AND DRAG-FREE CONTROLLER DESIGN FOR SPACE-BASED GRAVITATIONAL WAVE DETECTOR
Mr. Haojun Ma, Beijing, China, University of Chinese Academy of Sciences

IAC-20.C1.3.9
FINITE-TIME REACHABILITY OF THRUST-LESS RENDEZVOUS MISSION UNDER INPUT CONSTRAINTS
Mr. Mohamed Shouman, Fukuoka, Japan, Kyushu University

IAC-20.C1.3.12
LOW-THRUST NONLINEAR ORBIT CONTROL USING NONSINGULAR EQUINOCTIAL ELEMENTS
Dr. Mauro Pontani, Rome, Italy, Sapienza University of Rome

IAC-20.C1.3.13
SYSTEM REQUIREMENTS ANALYSIS FOR JAXA'S CONTRIBUTION TO COMET INTERCEPTOR MISSION: AUTONOMOUS NAVIGATION, GUIDANCE AND ATTITUDE CONTROL FOR A HYPERBOLIC COMET FLY-BY
Mr. Pablo Machuca, Cranfield, United Kingdom, Cranfield University

IAC-20.C1.3.14
FORMATION FLYING L-BAND APERTURE SYNTHESIS: DESIGN CHALLENGES AND INNOVATIVE FORMATION ARCHITECTURE CONCEPT
Ms. Francesca Scala, Milano, Italy, Politecnico di Milano

IAC-20.C1.3.15
3U CUBESAT AERODYNAMIC DESIGN AIMED TO INCREASE ATTITUDE STABILITY AND ORBITAL LIFETIME
Prof. Vladimir S. Aslanov, Samara, Russian Federation, Samara National Research University (Samara University)

IAC-20.C1.3.16
METHODOLOGY OF IN-FLIGHT PARAMETER IDENTIFICATION FOR THE NANOSATELLITE ANGULAR MOTION MATHEMATICAL MODEL UNDER A PRIORI UNCERTAINTY
Prof. Igor V. Belokonov, Samara, Russian Federation, Samara National Research University (Samara University)

C1.4. Mission Design, Operations & Optimization (1)

Co-Chair: *Dr. Richard Epenoy, Centre National d'Etudes Spatiales (CNES), France ; Prof. Massimiliano Vasile, University of Strathclyde, United Kingdom ;*

Rapporteur: *Prof. Yury Razoumny, Peoples's Friendship University of Russia, Russian Federation ;*

Keywords describing the session best: 1. Design, operations and optimization 2. Earth-orbiting missions 3. Interplanetary missions

IAC-20.C1.4.1
CLOSING THE LOOP BETWEEN MISSION DESIGN AND NAVIGATION ANALYSIS
Mr. Cristian Greco, Glasgow, United Kingdom, University of Strathclyde

IAC-20.C1.4.2
ON THE USE OF A* SEARCH FOR ACTIVE DEBRIS REMOVAL MISSION PLANNING
Mr. Lorenzo Federici, Rome, Italy, Sapienza University of Rome

IAC-20.C1.4.5
A MULTI-LAYER TEMPORAL NETWORK MODEL OF THE SPACE ENVIRONMENT
Mr. Giacomo Acciarini, Glasgow, United Kingdom, University of Strathclyde

IAC-20.C1.4.6
CYCLER ORBIT DESIGN USING LOW-THRUST IN THE SUN-EARTH-MOON SYSTEM
Mr. Miyahara Keitaro, Fukuoka, Japan, Kyushu University

IAC-20.C1.4.8
LOW-THRUST TRAJECTORY OPTIMIZATION FOR CUBESAT LUNAR MISSION: HORYU-VI
Dr. Omer Burak Iskender, SINGAPORE, Singapore, Republic of, Nanyang Technological University

IAC-20.C1.4.12
A NEW APPROACH TO LOW-THRUST PERTURBED TRAJECTORY OPTIMIZATION BASED ON THE USE OF COMPLEX DUAL NUMBERS
Dr. Viacheslav Petukhov, Moscow, Russian Federation, RIAME

IAC-20.C1.4.13
LOW-THRUST MICROSPACECRAFT DELIVERY TO A LUNAR ORBIT AFTER

THE LAUNCH TO GTO OR MEO
Prof. Mikhail Ovchinnikov, Moscow, Russian Federation, Keldysh Institute of Applied Mathematics, RAS

IAC-20.C1.4.16
A LOW-COST EARTH-MOON-MARS MISSION USING A MICROSATELLITE PLATFORM
Prof. Filippo Graziani, Rome, Italy, G.A.U.S.S. Srl

C1.5. Mission Design, Operations & Optimization (2)

Co-Chair: *Prof. Stéphanie Lizy-Destrez, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France ; Prof. Michèle Lavagna, Politecnico di Milano, Italy ;*

Keywords describing the session best: 1. Design, operations and optimization 2. Earth-orbiting missions 3. Interplanetary missions

IAC-20.C1.5.1
SYNTHESIS OF THE OPTIMAL CONTROL OF SPACECRAFT WITH AIR-BREATHING ELECTRIC PROPULSION IN ORBITS WITH ULTRA-LOW PERIGEE IN VIEW OF DEPENDENCE OF THE ENGINE EFFICIENCY ON ANGLE OF ATTACK
Dr. Olga Yanova, Zhukovsky, Russian Federation, Moscow Aviation Institute

IAC-20.C1.5.3
EFFICIENT SEARCH OF OPTIMAL FLOWER CONSTELLATIONS
Prof. Martin Avendano, Zaragoza, Spain, Universidad de Zaragoza

IAC-20.C1.5.4
SPACE TRAJECTORY OPTIMIZATION OF COMPLEX COMBINATORIAL SEARCH USING CONTINUOUS PROBABILISTIC MAPPING
Prof. Liqiang Hou, Shanghai, China, Shanghai Jiaotong University

IAC-20.C1.5.5
FEASIBILITY STUDY OF SUN OCCULTATION MISSIONS USING NATURAL BODIES
Mr. Nicolò Bernardini, Guildford, United Kingdom, Surrey Space Centre - University of Surrey

IAC-20.C1.5.6
EXTENDED MISSION OPTIONS FOR THE LUNAR ICECUBE LOW-THRUST SPACECRAFT BY LEVERAGING THE DYNAMICAL ENVIRONMENT
Ms. Bonnie Prado Pino, West Lafayette, United States, Purdue University

IAC-20.C1.5.7
ESA F-CLASS COMET-I: TRAJECTORY DESIGN TO INTERCEPT A YET-TO-BE-DISCOVERED COMET
Dr. Joan Pau Sanchez Cuartielles, Milton Keynes, United Kingdom, Cranfield University

IAC-20.C1.5.11
EFFECTIVE TRAJECTORY OPTIMIZATION METHOD FOR KINETIC IMPACTOR FOR ASTEROID DEFLECTION MISSIONS
Dr. Kohei Yamaguchi, Nagoya, Japan, Nagoya University

IAC-20.C1.5.12
TISSERAND GRAPH EXPLORATION WITH ANT COLONY OPTIMIZATION FOR PRELIMINARY MULTIPLE GRAVITY ASSIST TRAJECTORY DESIGN
Mr. Andrea Bellome, Cranfield, United Kingdom, Cranfield University, UK

IAC-20.C1.5.13
TARGET SELECTION FOR M-ARGO INTERPLANETARY CUBESAT
Mr. Vittorio Franzese, Milano, Italy, Politecnico di Milano

C1.6. Orbital Dynamics (1)

Co-Chair: *Al Cangahuala, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States ; Dr. Antonio Prado, National Institute for Space Research - INPE , Brazil ;*

Rapporteur: *Dr. Feng-Tai Hwang, National Space Organization, Taipei ;*

Keywords describing the session best: 1. orbital mechanics 2. orbit determination 3. Lagrangian points

IAC-20.C1.6.2
LEVERAGING MANIFOLDS OF TORI ASSOCIATED WITH QUASI-SATELLITE ORBITS TO DESIGN LOW-FUEL MARS-PHOBOS TRANSFERS
Dr. Marc Jorba-Cuscó, Toulouse, France, Centre National d'Etudes Spatiales (CNES)

IAC-20.C1.6.3
A HIGH-ORDER TARGET POINT APPROACH TO THE STATIONKEEPING OF NEAR RECTILINEAR HALO ORBITS
Mr. XIAOYU FU, Guildford, United Kingdom, Surrey Space Centre, University of Surrey

IAC-20.C1.6.4
CISLUNAR TRANSFER DESIGN EXPLOITING PERIODIC AND QUASI-PERIODIC ORBITAL STRUCTURES IN THE FOUR-BODY PROBLEM
Mr. Brian McCarthy, West Lafayette, United States, Purdue University

IAC-20.C1.6.5
ORBITAL ANOMALY RECONSTRUCTION USING DEEP SYMBOLIC REGRESSION
Mr. Matteo Manzi, Glasgow, United Kingdom, University of Strathclyde

IAC-20.C1.6.6
MINIMUM COST RELATIVE DYNAMICS IN CISLUNAR ENVIRONMENT
Mr. Andrea Capannolo, Milano, Italy, Politecnico di Milano

IAC-20.C1.6.7
SURFACE TRAJECTORIES OF PARTICLES ON THE PRIMARY OF THE SPHERE-RESTRICTED FULL 2-BODY PROBLEM
Dr. Yu Jiang, Xi'an, China, State Key Laboratory of Astronautic Dynamics

IAC-20.C1.6.8
TRANSFERS AROUND PHOBOS USING INVARIANT MANIFOLDS OF UNSTABLE QUASI-SATELLITE ORBITS
Mr. Nishanth Pushparaj, Sagamihara, Japan, The Graduate University for Advanced Studies

IAC-20.C1.6.10
MODELLING THE BREAK-UP AND RE-ENTRY PROPAGATION OF METEORITES THROUGH A CONTINUUM APPROACH
Mr. Simone Limonta, cisano Bergamasco, Italy, Politecnico di Milano

IAC-20.C1.6.11
AN ANALYTIC METHOD OF THE DENSITY EVOLUTION OF LARGE CONSTELLATIONS AND COLLISION PROBABILITY EVALUATION
Ms. Yidan Gao, Beijing, China, School of Aerospace Engineering, Beijing Institute of Technology

IAC-20.C1.6.14
ATMOSPHERE IMPACT ASSESSMENT ON THE TRAJECTORY CONTROL PROBLEM FOR A DESCENT MODULE RETURNING FROM THE MOON
Prof. Vyacheslav V. Ivashkin, Moscow, Russian Federation, Keldysh Institute of Applied Mathematics, RAS

IAC-20.C1.6.15
COMPLEX ORBIT DYNAMICS OF DECOMMISSIONED GEOSTATIONARY SATELLITES
Mr. Simone Proietti, Rome, Italy, Sapienza University of Rome

C1.7. Orbital Dynamics (2)

Co-Chair: *Prof. Xiaoqian Chen, National Innovation Institute of Defense Technology, Chinese Academy of Military Science, China ; Prof. Gerard Gomez, University of Barcelona, Spain ;*

Keywords describing the session best: 1. orbital mechanics 2. orbit determination 3. Lagrangian points

IAC-20.C1.7.2
PRACTICAL STABLE REGION OF ORBITAL MOTION IN THE VICINITY OF ASTEROID 2016 HO3-CANDIDATE TARGET OF CHINA'S ASTEROID EXPLORATION MISSION
Dr. Feng Jinglang, Glasgow, United Kingdom, University of Strathclyde

IAC-20.C1.7.3
ANALYSIS OF TECHNOLOGIES FOR ORBIT INSERTION AT SATURN
Ms. Aaliya Khan, Abu Dhabi, United Arab Emirates, Khalifa University of Science and Technology (KUST)

IAC-20.C1.7.4
ASTEROID RESOURCE EXPLOITATION ON THE LUNAR DISTANT RETROGRADE ORBIT
Dr. Irina Kovalenko, Toulouse, France, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace

IAC-20.C1.7.6
TRAJECTORY DESIGN TO MARS FROM EARTH-MOON SYSTEM WITH THREE-DIMENSIONAL TRANSIT ORBITS
Mr. Wataru Noma, Fukuoka, Japan, Kyushu University

IAC-20.C1.7.7
NATURAL FORMATIONS AT THE TRIANGULAR LIBRATION POINTS BASED ON STROBOSCOPIC MAPPING
Mr. Xingji He, Beijing, China, Beihang University

IAC-20.C1.7.8
THE TRANSFERS BETWEEN NEAR RECTILINEAR HALO ORBITS AND DISTANT RETROGRADE ORBITS IN THE EARTH-MOON SYSTEM
Prof. Yue Wang, Beijing, China, Beihang University

IAC-20.C1.7.10
FAST AND ACCURATE ESTIMATION OF FUEL-OPTIMAL TRAJECTORIES TO NEAR-EARTH ASTEROIDS
Mr. Luigi Mascolo, Torino, Italy, Politecnico di Torino

IAC-20.C1.7.12
ARTIFICIAL NEURAL NETWORKS BASED JOVIAN-MOON THREE-BODY FLYBY MODEL
Dr. Hongwei Yang, Nanjing, China, Nanjing University of Aeronautics and Astronautics

IAC-20.C1.7.13
SMALL SATELLITES CO-ORBITING AROUND A LAGRANGE POINT 1 SPACE STATION
Mr. Chamal Perera, Sydney, Australia, The University of Sydney

IAC-20.C1.7.14
LOCATION AND STABILITY OF DISTANT RETROGRADE ORBITS AROUND THE MOON
Prof. Othon Winter, Guaratinguetá, Brazil, UNESP - São Paulo Sate University

IAC-20.C1.7.15
FORCE AND DISTURBANCE MODELS AFFECTING LUNAR MISSIONS TO NEAR RECTILINEAR HALO ORBITS
Mrs. Elisa Carli, Toulouse, France, ISAE-Supaero University of Toulouse

IAC-20.C1.7.16
VALIDATION OF DSST C/C++ AGAINST ORIGINAL FORTRAN VERSIONS: MEAN ELEMENT AND SHORT-PERIOD MOTION MODELS, PARTIAL DERIVATIVES
Prof. Juan F. San-Juan, Logroño, Spain, Universidad de La Rioja

C1.8. Attitude Dynamics (1)

Co-Chair: *Dr. Shinji Hokamoto, Kyushu University, Japan ; Prof. Giovanni B. Palmerini, Sapienza University of Rome, Italy ;*

Keywords describing the session best: 1. Attitude dynamics and control 2. Novel attitude sensors and actuators 3. Multiple bodies 4. Tether systems 5. In-orbit assembly

IAC-20.C1.8.1
RAO-BLACKWELLIZED PARTICLE FILTER FOR THE CBERS-4 ATTITUDE AND GYROS BIAS ESTIMATION
Prof.Dr. William Silva, Brasilia, DF, Brazil, University of Brasilia

IAC-20.C1.8.2
ADAPTIVE TORQUE EQUILIBRIUM ATTITUDE GUIDANCE FOR RAPID DEORBIT OF SPACE DEBRIS BY AERODYNAMIC DRAG CONSIDERING MODEL UNCERTAINTY
Dr. Takahiro Sasaki, Tsukuba, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.C1.8.4
ATTITUDE DYNAMICS AND CONTROL OF SPACE OBJECT DURING CONTACTLESS TRANSPORTATION BY ION BEAM
Prof. Vladimir S. Aslanov, Moscow, Russian Federation, Moscow Aviation Institute

IAC-20.C1.8.5
FUZZY LOGIC ATTITUDE CONTROLLER IMPLEMENTATION ON BOARD OPS-SAT
Mr. Karl Stephan Olfe García, Pozuelo de Alarcón, Spain, E-USOC, Universidad Politécnica de Madrid

IAC-20.C1.8.6
FROM MAGNETIC TO AERODYNAMIC PASSIVE STABILIZATION: CASE OF TRANSIENT ATTITUDE MOTION OF TNS-0#2 NANOSATELLITE
Dr. Danil Ivanov, Moscow, Russian Federation, Keldysh Institute of Applied Mathematics, RAS

IAC-20.C1.8.8
INITIAL STUDY ON ATTITUDE CONTROL OF TRANSFORMABLE SPACECRAFT AROUND UNSTABLE EQUILIBRIUM POINT USING SOLAR RADIATION PRESSURE
Mr. Yudai Kimishima, Sagamihara, Kanagawa, Japan, Aoyama Gakuin University

IAC-20.C1.8.9
CMG BASED STEERING FOR ENHANCING AGILITY OF HIGH THROUGHPUT SATELLITES
Mr. ASHOK KUMAR K, BANGALORE, India, ISRO Satellite Centre (ISAC),ISRO

IAC-20.C1.8.12
ATTITUDE DETERMINATION AND CONTROL SYSTEM FOR THE FIRST SAR SATELLITE IN A CONSTELLATION OF IQPS
Dr. Dmytro Faizullin, Fukuoka, Japan, Institute for Q-shu Pioneer of Space, Inc. (iQPS)

IAC-20.C1.8.13
DRAG-BASED ORBIT PHASING THROUGH ATTITUDE AND ARTICULATION CONTROL
Mr. Robert Magner, Toronto, Canada, Space Flight Laboratory, University of Toronto

IAC-20.C1.8.14
REAL-TIME MAGNETOMETER CALIBRATION USING A THREE-AXIS HELMHOLTZ COIL
Dr. Amir Labibian, Tehran, Iran, Satellite Research Institute, Iranian Space Research Center

C1.9. Attitude Dynamics (2)

***Co-Chair**: Prof. Gianmarco Radice, Singapore, Republic of ; Dr. Toshio Kamiya, NEC Corporation, Japan ;*

Keywords describing the session best: 1. Attitude dynamics and control 2. Novel attitude sensors and actuators 3. Multiple bodies 4. Tether systems 5. In-orbit assembly

IAC-20.C1.9.1
ATTITUDE CONTROL OF SATELLITES WITH VARIABLE SHAPE FUNCTION UTILIZING ATMOSPHERIC DRAG TORQUE AND MAGNETIC TORQUE
Mrs. Kiyona Miyamoto, Meguro-ku, Japan, Tokyo Institute of Technology

IAC-20.C1.9.2
THREE-DIMENSIONAL ATTITUDE CONTROL OF SPACECRAFT BY THREE THRUSTERS
Mr. Yusei Sasaki, Fukuoka, Japan, Kyushu University

IAC-20.C1.9.5
THE LISA DFACS: PRELIMINARY MODEL PREDICTIVE CONTROL DESIGN FOR THE TEST MASS RELEASE PHASE
Dr. Simone Vidano, Torino, Italy, Politecnico di Torino

IAC-20.C1.9.7
ATTITUDE CONTROL ALGORITHMS AIDED BY MULTIPOINT STATISTICS AND DISTRIBUTED MEASUREMENTS PROCESSING IN A SWARM OF CUBESATS
Mr. Anton Afanasev, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.C1.9.8
AUTONOMOUS SPACECRAFT ATTITUDE CONTROL USING DEEP REINFORCEMENT LEARNING
Mr. Jacob Elkins, Tuscaloosa, AL, United States, The University of Alabama

IAC-20.C1.9.9
AN ENERGY-BASED APPROACH TO SATELLITE ATTITUDE CONTROL IN PRESENCE OF DISTURBANCES FOR A CUBESAT MISSION
Dr. Adolfo Chaves Jiménez, Cartago, Costa Rica, Instituto Tecnológico de Costa Rica (TEC)

IAC-20.C1.9.10
IMAGING-BASED ATTITUDE DETERMINATION ALGORITHM FOR SMALL SATELLITES: DESIGN AND THE PRELIMINARY RESULTS
Mr. Mehmet Burak Güzel, Çankaya/ANKARA, Turkey, Middle East Technical University

IIAC-20.C1.9.14
PROBLEMS OF DEVELOPMENT OF AN EXPERIMENTAL PLATFORM "THE ANGULAR ORIENTATION AND STABILIZATION STAND"
Mr. Bohdan Bukaiev, Dnipro, Ukraine, Oles Honchar Dnipropetrovsk National University

C1.VP. Virtual Presentations - IAF ASTRODYNAMICS SYMPOSIUM

***Co-Chair:** Prof. Anna Guerman, Centre for Mechanical and Aerospace Science and Technologies (C-MAST), Portugal ; Prof. Daniel Scheeres, Colorado Center for Astrodynamics Research, University of Colorado, United States ;*

IAC-20.C1.VP.1
ATTITUDE CONTROL AND DETERMINATION ACCURACY STUDY OF SMALL SATELLITE WITH LIMITED SET OF SENSORS
Dr. Danil Ivanov, Moscow, Russian Federation, Keldysh Institute of Applied Mathematics, RAS

IAC-20.C1.VP
CAPABILITY ANALYSIS FOR MANIPULATOR-ACTUATED INTEGRATED TRANSLATIONAL AND ROTATIONAL CONTROL STRATEGY OF SPACECRAFT
Dr. Feng Zhang, Beijing, China, China Academy of Launch Vehicle Technology(CALT)

IAC-20.C1.VP
J2-PERTURBED LOW-ENERGY ORBITS AROUND ENCELADUS
Mr. Adham Alkhaja, Abu Dhabi, United Arab Emirates, Khalifa University of Science and Technology (KUST)

IAC-20.C1.VP
DEVELOPMENT OF AN UNSCENTED KALMAN FILTER FOR THE VALIDATION OF THE EUROPEAN SPACE AGENCY CANDIDATE MISSION ASTEROID IMPACT MISSION'S OPTICAL NAVIGATION STRATEGY UP TO HARDWARE IN THE LOOP
Mr. Aurelio Kaluthantrige, Roma, France, International Space University

IAC-20.C1.VP
ORBITAL STABILITY ANALYSIS AROUND THE PRIMARY OF A BINARY ASTEROID SYSTEM
Prof. Yue Wang, Beijing, China, Beihang University

IAC-20.C1.VP
CHANDRAYAAN-2: ORBIT MANEUVER OPERATIONS
Mr. KOTA MALLESH BABU, BANGALORE, India, ISTRAC/ISRO

IAC-20.C1.VP
REGULARIZED ANALYTICAL ORBIT THEORY WITH SOLAR RADIATION PRESSURE
Dr. Harishkumar Sellamuthu, Chennai, India, AgniKul Cosmos

IAC-20.C1.VP
FULL - BODY RELATIVE SPACECRAFT MOTION. A MINIMAL PARAMETERIZATION USING CAYLEY-LIKE TRANSFORM
Prof. Daniel Condurache, Iasi, Romania, Technical University of Iasi

IAC-20.C1.VP
GEOSYNCHRONOUS LONGITUDE MEASUREMENTS FOR SATELLITE MANEUVER DETECTION
Mr. Thomas Roberts, Cambridge, MA, United States, Massachusetts Institute of Technology (MIT)

C2. IAF MATERIALS AND STRUCTURES SYMPOSIUM

C2.1. Space Structures I - Development and Verification (Space Vehicles and Components)

***Co-Chair:** Mr. Alwin Eisenmann, IABG Industrieanlagen - Betriebsgesellschaft mbH, Germany ; Dr. Andreas Rittweger, DLR (German Aerospace Center), Germany ;*

***Rapporteur:** Dr. Jochen Albus, ArianeGroup, Germany ;*

IAC-20.C2.1.1
ANALYZING QUASI-STATIC AND DYNAMIC RESPONSES OF A 3U CUBESAT STRUCTURE DURING LAUNCHING
Ms. Ruqayya Alhammadi, Sharjah, United Arab Emirates, Khalifa University of Science and Technology (KUST)

IAC-20.C2.1.2
ENGINEERING CHALLENGES IN CONFIGURING A MODULAR CRYOGENIC UPPER STAGE
Mr. Sunil M, Trivandrum, India, Liquid Propulsion System centre

IAC-20.C2.1.5
NUMERICAL AND EXPERIMENTAL STUDY FOR THE BURST PRESSURE EVALUATION OF POLYIMIDE PIPELINES USED IN CRYOGENIC ROCKET STAGES FOR OPTIMAL DESIGN
Mr. Vivek S, Ottappalam, India, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO)

IAC-20.C2.1.8
DYNAMIC RESPONSE AND BEHAVIOR SIMULATION OF A THERMAL BOOT EMPLOYED IN A HEAVY LIFT LAUNCH VEHICLE
Mr. Mohit Agarwal, Thiruvananthapuram, India, Indian Space Research Organization (ISRO)

IAC-20.C2.1.10
TEMPERATURE ESTIMATE OF LARES 2 SATELLITE
Dr. Claudio Paris, Rome, Italy, Centro Fermi - Museo Storico della Fisica e Centro Studi e Ricerche "Enrico Fermi"

IAC-20.C2.1.11
THERMAL ANALYSIS OF HYBRID SYSTEM COMBINED WITH THIN FILM AND BULK STRUCTURE FOR SOLAR POWER SATELLITE
Mr. Takaya Nakamura, Tokyo, Japan, Tokyo University of Science

IAC-20.C2.1.14
IMPACT FORCE CALCULATION USING NON-SMOOTH DEM AND CONSIDERATION OF LANDING CONTACT SURFACE SHAPE OF LANDING LEG FOR SMALL MARS LANDER
Ms. Shiori Matsumoto, Sagamihara, Kanagawa, Japan, Aoyama Gakuin University

C2.2. Space Structures II - Development and Verification (Deployable and Dimensionally Stable Structures)

***Co-Chair:** Prof. Paolo Gasbarri, Sapienza University of Rome, Italy ; Dr. Oliver Kunz, RUAG Space, Switzerland ;*

***Rapporteur:** Mr. Aicke Patzelt, MT Aerospace AG, Germany ; Mr. Thomas Sinn, Deployables Cubed GmbH, Germany ;*

IAC-20.C2.2.4
EFFECTS OF STRUCTURAL PROPERTIES FOR SELF-DELPLOYABLE CONNECTED-CONVEX BOOMS ON STORAGE AND DEPLOYMENT CHARACTERISTICS
Mr. Akira Yoshida, Yokohama, Japan, Tokyo Institute of Technology

IAC-20.C2.2.5
NUMERICAL SIMULATIONS AND EXPERIMENTAL TESTS FOR THE DEPLOYMENT OF A THIN-WALLED BISTABLE COMPOSITE BOOM
Dr. Marco Sabatini, Rome, Italy, Sapienza University of Rome

IAC-20.C2.2.8
ADVANCED SIMULATION ANT TESTING OF COMPOSITE TRAC LONGERONS
Prof. Erasmo Carrera, Turin, Italy, Politecnico di Torino

IAC-20.C2.2.10
MODELING AND ANALYSIS OF CONTACT-IMPACT DYNAMICS OF A SPACE FLEXIBLE NET WITH AN INFLATABLE BOOM
Mr. Hao Chen, Xi'an, China, College of Astronautics, Northwestern Polytechnical University (NPU)

IAC-20.C2.2.11
SHADOW THERMAL CYCLING AND ITS EFFECT ON SOLAR ARRAY PREDICTED EOL TIME
Dr. Sergey Pushko, Moscow, Russian Federation, VNIIEM Corporation JSC

IAC-20.C2.2.12
A NOVEL LATTICE SANDWICH CYLINDER SUBJECTED UNIAXIAL COMPRESSION AND ITS EXPERIMENTAL AND NUMERICAL ANALYSIS
Dr. Ji Bin, Shanghai, China, Aerospace System Engineering Shanghai, China

IAC-20.C2.2.13
REMOTE-SENSING SATELLITE:THE DEVELOPMENT OF COUPLE RING TYPE THERMO-REFOCUSING MECHANISM
Mr. Wei Chuan Wu, Hsinchu, Taipei, National Space Organization

C2.3. Space Structures - Dynamics and Microdynamics

***Co-Chair:** Prof. Ijar Da Fonseca, ITA-DCTA, Brazil ; Prof. Harijono Djojodihardjo, Indonesia ;*

***Rapporteur:** Prof. Paolo Gasbarri, Sapienza University of Rome, Italy ;*

IAC-20.C2.3.1
DEEP LEARNING FOR LOCAL DAMAGE IDENTIFICATION IN LARGE SPACE STRUCTURES VIA SENSOR-MEASURED TIME RESPONSES
Mr. Paolo Iannelli, Rome, Italy, Sapienza University of Rome

IAC-20.C2.3.9
THE STABILITY OF THIN-WALLED AXIAL SYMMETRIC STRUCTURES MADE UP TWO COAXIAL SHELLS CONTAINING LIQUID UNDER THE MULTIFACTOR STATIC LOADING
Ms. SongYi Park, Moscow, Russian Federation, Moscow Aviation Institute (National Research University, MAI)

IAC-20.C2.3.12
MODELING, SATURATION ROBUST FUZZY SLIDING CONTROL AND VIBRATION SUPPRESSION OF FREE-FLOATING SPACE ROBOT WITH FLEXIBLE-JOINTS AND FLEXIBLE-LINK
Dr. Limin Xie, Fuzhou, China, Fujian Agriculture and Forestry University

IAC-20.C2.3.13
ESTIMATION OF DYNAMIC STRESSES IN CONNECTING LEADS OF SMC ON PCB FOR LAUNCH LOADS
Mr. Jiwan Kumar Pandit, Bangalore, India, Indian Space Research Organization (ISRO)

C2.4. Advanced Materials and Structures for High Temperature Applications

***Co-Chair:** Mr. Marc Lacoste, ArianeGroup, France ; Dr. David E. Glass, National Aeronautics and Space Administration (NASA), United States ;*

***Rapporteur:** Dr. Zijun Hu, China Academy of Launch Vehicle Technology (CALT), China ;*

IAC-20.C2.4.1
IRENE TECHNOLOGY FOR THERMAL PROTECTION SYSTEMS
Dr. Francesco Punzo, Naples, Italy, ALI S.c.a.r.l.

IAC-20.C2.4.2
HEXAFLY-INT HYPERSONIC VEHICLE THERMAL PROTECTION SYSTEM DESIGN
Dr. ROBERTO SCIGLIANO, Capua, Italy, CIRA Italian Aerospace Research Centre

IAC-20.C2.4.4
STRUCTURAL DESIGN AND ANALYSIS OF AN AEROSHELL FOR A HUMAN CREW ENTRY VEHICLE IN MARTIAN ATMOSPHERE
Mr. Rohan Chandra, Gandhinagar, India, University of Petroleum and Energy Studies

IAC-20.C2.4.6
AERO-THERMO-DYNAMIC CHARACTERIZATION OF LARGE-SCALE NEAR-ZERO ABLATION THERMAL PROTECTION SYSTEMS IN ULTRA-HIGH-TEMPERATURE CERAMIC MATRIX COMPOSITES
Mr. Stefano Mungiguerra, Napoli, Italy, Università degli Studi di Napoli "Federico II"

C2.5. Advancements in Materials Applications and Rapid Prototyping

Co-Chair: *Dr. Giuliano Marino, CIRA Italian Aerospace Research Centre, Italy ; Dr. Behnam Ashrafi, National Research Council, Canada ;*

Rapporteur: *Mr. James Tucker, Southern Research Institute, United States ;*

IAC-20.C2.5.1
DESIGN & PERFORMANCE ANALYSIS OF A 3D PRINTED MODEL ROCKET
Mr. Rishab Kumar Agrawal, Bargarh, India, National Space Society

IAC-20.C2.5.3
ADDITIVE LAYER MANUFACTURING OF POLYMERIC NANOSAT: AN HOLISTIC APPROACH
Ms. Marianna Rinaldi, Roma, Italy, University of Rome Tor Vergata

IAC-20.C2.5.11
3D PRINTED POLYETHYLENE-BASED COMPOSITES FILLED WITH MARTIAN REGOLITH SIMULANT USING FUSED FILAMENT FABRICATION
Ms. Federica Zaccardi, Rome, Italy, Sapienza University of Rome

IAC-20.C2.5.12
DETERMINATION OF THE OPTIMAL CAPILLARY STRUCTURE AND MATHEMATICAL MODEL OF THE HEAT PIPE MADE USING ADDITIVE TECHNOLOGY FOR FURTHER USAGE FOR THE SPACECRAFT DESIGN
Mr. Nikolay Mullin, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.C2.5.13
THERMO-MECHANICAL DESIGN AND ANALYSIS OF A MULTISPECTRAL IMAGING PAYLOAD USING PHASE CHANGE MATERIAL
Ms. Laura Geismayr, Garching, Germany, Technische Universität München

IAC-20.C2.5.14
INNOVATIVE 3D PRINTED SOFT MAGNETS FOR SATELLITE ELECTRIC MOTORS
Ms. Marianna Rinaldi, Roma, Italy, University of Rome Tor Vergata

C2.6. Space Environmental Effects and Spacecraft Protection

Co-Chair: *Dr. Antonio Del Vecchio, CIRA Italian Aerospace Research Centre, Italy ; Mr. Anatolii Lohvynenko, Yuzhnoye State Design Office, Ukraine ;*

Rapporteur: *Prof. Kyeum-rae Cho, Pusan National University, Korea, Republic of ;*

IAC-20.C2.6.2
TOTAL IONIZING DOSE (TID) TESTING OF DC-DC CONVERTERS IRRADIATED WITH CO-60 SOURCE
Mr. Muhammad Hammad Riaz, Lahore, Pakistan, Pakistan Space and Upper Atmosphere Research Commission

IAC-20.C2.6.4
DISCHARGE PHENOMENA OF HIGH-POWER RADIATION ANTENNAS
Mr. Soki Akutsu, Kawasaki, Japan, Tokyo University of Science

IAC-20.C2.6.6
EXPERIMENTAL VALIDATION OF A THEORETICAL MODEL FOR THE STUDY OF ATOMIC OXYGEN DEGRADATION OF SPACE SYSTEMS
Dr. Andrea Delfini, Roma, Italy, Sapienza University of Rome

IAC-20.C2.6.9
FABRICATION AND CHARACTERIZATION OF LAYERED UHMWPE COATINGS ON AEROSPACE-GRADE EPOXY RESIN FOR SPACE RADIATION SHIELDING
Dr. Susanna Laurenzi, Rome, Italy, Sapienza University of Rome

IAC-20.C2.6.11
EFFECTS OF LONG-TERM EXPOSURE TO THE LOW-EARTH ORBIT ENVIRONMENT ON DRAG AUGMENTATION SYSTEMS
Ms. Zaria Serfontein, Milton Keynes, United Kingdom, Cranfield University

IAC-20.C2.6.12
DISCOVERER - DEVELOPING TECHNOLOGIES TO ENABLE COMMERCIAL SATELLITE OPERATIONS IN VERY LOW EARTH ORBITS
Dr. Peter Roberts, Manchester, United Kingdom, The University of Manchester

IAC-20.C2.6.13
PROTECTION AGAINST MICROMETEOROID IMPACTS IN GEO SATELLITES USING ALUMINIUM-BASED SELF-HEALING MATERIAL AIDED BY ACCESSIBLE THERMAL ENERGY
Mr. Sanjay A, Bangalore Urban District, India, R V College of Engineering, Bengaluru

C2.7. Space Vehicles – Mechanical/Thermal/ Fluidic Systems

Co-Chair: *Prof. Oleg Alifanov, Moscow Aviation Institute, Russian Federation ; Dr. Brij Agrawal, Naval Postgraduate School, United States ;*

Rapporteur: *Prof. Guoliang Mao, Beijing Institute of Aerodynamics, China ;*

IAC-20.C2.7.5
DIAGNOSTICS OF DEFECTS OF THERMAL PROTECTIONS INFLATABLE RE-ENTRY VEHICLES
Prof. Oleg Alifanov, Moscow, Russian Federation, Moscow Aviation Institute

IAC-20.C2.7.9
ATTITUDE CONTROL SYSTEM OF A MICROSATELLITE BASED ON THE INVERSE PROBLEMS TECHNIQUE AND THE KALMAN FILTER
Mr. Evgeny Chebakov, Miscow, Russian Federation, Moscow Aviation Institute (National Research Institute, MAI)

IAC-20.C2.7.12
DEVELOPMENT OF A THERMAL DESIGN MODEL FOR A SMALL SPACECRAFT WITH INTEGRATED HEAT PIPES
Mr. Nikolay Mullin, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.C2.7.13
MONITORING AND ANALYSIS OF THE STRESSED-DEFORMED CONDITION OF THE SHELLS, IN THE PROCESS OF THEIR MANUFACTURE DURING 3D PRINTING AND WELDING WORKS
Mr. Valerii Satokin, Dnepr, Ukraine

IAC-20.C2.7.15
COOLING CHANNEL AT THE LEADING EDGE OF SUPERSONIC VEHICLE DESIGN BASED ON WORKING FLUID CONVECTION
Mr. Xuanbo Wei, Xi'an, China, Northwestern Polytechnical University

IAC-20.C2.7.16
SHARJAHSAT-1 THERMAL ANALYSIS FOR ORBIT-LAUNCH SELECTION
Mr. Ibrahim Alsabt, Dubai, United Arab Emirates, Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST)

C2.8. Specialized Technologies, Including Nanotechnologyy

Co-Chair: *Prof. Mario Marchetti, Sapienza University of Rome, Italy ; Prof. Pierre Rochus, CSL (Centre Spatial de Liège), Belgium ;*

Rapporteur: *Dr. Bangcheng Ai, China Aerospace Science and Industry Corporation, China ;*

IAC-20.C2.8.6
THERMAL ANALYSIS OF ADVANCED PLATE STRUCTURES BASED ON CERAMIC COATING ON CARBON/CARBON SUBSTRATES FOR AEROSPACE RE-ENTRY RE-USABLE SYSTEMS.
Dr. Andrea Delfini, Roma, Italy, Sapienza University of Rome

IAC-20.C2.8.10
NANOMATERIALS IN SPACE: TECHNOLOGY INNOVATION & ECONOMIC TRENDS
Ms. Tanya Scalia, Rome, Italy, Italian Space Agency (ASI)

IAC-20.C2.8.11
THERMAL CONTROL DESIGN OF HIGH-POWER SMALL SATELLITE ORBITING MARS
Mr. Abdulla Alshehhi, Abu Dhabi, United Arab Emirates, UAE Space Agency

IAC-20.C2.8.12
SPIDER-SILK COMPOSITE MATERIAL FOR AEROSPACE APPLICATION
Mr. Mayank Mayank, Berlin, Germany, TU Berlin

C2.9. Smart Materials and Adaptive Structuresg

Co-Chair: *Prof. Pavel Trivailo, RMIT University (Royal Melbourne Institute of Technology), Australia ; Prof. Hiroshi Furuya, Tokyo Institute of Technology, Japan ;*

Rapporteur: *Prof. Paolo Gaudenzi, Sapienza University of Rome, Italy ; Prof. Élcio Jeronimo de Oliveira, Luleå University of Technology, Sweden ;*

IAC-20.C2.9.2
TOWARDS 100-METRE CLASS MONOLITHIC SPACE STRUCTURES: METHODS TO ENSURE SAIL FLATNESS FOR EXTREMELY LARGE SOLAR SAILS
Dr. Ahmed Kiyoshi Sugihara El Maghraby, Sagamihara City, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.C2.9.3
SHAPE CONTROL OF SOLAR SAIL USING SELECTIVE OPERATION OF MEMBRANE MOUNTING SMA WIRES
Mr. Hideyuki Takahashi, sagamihara, Japan, Tokai University

IAC-20.C2.9.4
INFLUENCE OF CARBON NANOTUBE ACTUATOR BY SPACE ENVIRONMENTAL FACTORS
Mr. Naoki Sekiya, Tokyo, Japan, Hosei University

IAC-20.C2.9.5
SMART MANUFACTURING IN THE FRAMEWORK OF SPACE INDUSTRY. AN INDUSTRY 4.0 APPROACH TO LARGE SCALE PRODUCTION OF SATELLITE CONSTELLATIONS
Prof. Paolo Gaudenzi, Rome, Italy, Sapienza University of Rome

IAC-20.C2.9.7
CONTROL-ORIENTED MODELLING OF AN ACTIVE SUPPRESSION SYSTEM FOR LARGE SPACE SMART STRUCTURES
Ms. Federica Angeletti, Rome, Italy, Sapienza University of Rome

IAC-20.C2.9.11
SOLAR SAIL DEPLOYMENT AND STORAGE MECHANISM USING SHAPE MEMORY ALLOYS AND ORIGAMI INSPIRED STRUCTURES
Ms. Stephanie Rocha, Chaparral, United States, International Space University (ISU)

IAC-20.C2.9.13
CUBESAT MAGNETIC ATLAS AND IN-ORBIT COMPENSATION OF RESIDUAL MAGNETIC DIPOLE
Ms. Anastasiia Annenkova, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.C2.9.14
AN EXPERIMENTAL STUDY OF SMA BASED LINEAR ACTUATOR FOR CONTROLLING THE OPEN AND CLOSE OPERATION OF LIGHT SOLAR SAIL PROTOTYPE
Mr. SOURAV KARMAKAR, Hyderabad, India

C2.VP. Virtual Presentations - IAF MATERIALS AND STRUCTURES SYMPOSIUM

Co-Chair: *Prof. Paolo Gasbarri, Sapienza University of Rome, Italy ; Dr. Andreas Rittweger, DLR (German Aerospace Center), Germany;*

IAC-20.C2.VP.3
BUFFER AND COMPLIANT REINFORCEMENT LEARNING CONTROL OF SPACE ROBOT CAPTURE SPACECRAFT WITH COMPLIANT MECHANISM
Dr. Haiping Ai, Fuzhou, China, Fuzhou University

IAC-20.C2.VP.5
FINITE ELEMENT ANALYSIS AND VIBRATION TESTING OF THE MYSAT-2 CUBESAT
Ms. Muneera Al-Shaibah, Abu Dhabi, United Arab Emirates, Khalifa University of Science and Technology (KUST)

IAC-20.C2.VP.8
ANISOTROPIC HEAT-SHIELDING MATERIALS: PROSPECTS FOR APLICATION IN THE RE-ENTRY MODULE HEAT SHIELD
Dr. Victor Leonov, Moscow, Russian Federation, Bauman Moscow State Technical University

IAC-20.C2.VP.11
AERODYNAMIC HEATING REDUCTION WITH JET ARRAYS OVER THE SHARP EDGE OF A HYPERSONIC VEHICLE
Dr. Xiaoyan Li, Beijing, China, CASC

IAC-20.C2.VP.12
3D PRINTED COMPOSITE ASSESSMENT BY HYPERSPECTRAL ANALYSIS
Dr. Giorgio Antonino Licciardi, Rome, Italy, Fondazione E. Amaldi

IAC-20.C2.VP.13
3D PRINTED COPPER – GRAPHENE OXIDE COMPOSITES
Dr. Diego Corona, Rome, Italy, Fondazione E. Amaldi

IAC-20.C2.VP.16
TARDIGRADE MECH: BORON NITRIDE NANOTUBE COMPOSITES FOR SPACE RADIATION PROTECTION
Ms. Arielle Ainabe, Oakville, Canada

IAC-20.C2.VP.17
CARBON FIBER REINFORCED PLASTICS WITH ALUMINUM HONEYCOMB CORE DESIGN METHODOLOGY FOR SPACE AND SURFACE MINING APPLICATIONS
Mr. Patrick Severson, Whitefish Bay, United States, University of Wisconsin–Milwaukee

IAC-20.C2.VP.20
LOW COST FILAMENT-WINDING TECHNOLOGY FOR SMALL AEROSPACE LABORATORIES AND STARTUPS
Mrs. Erika Tomita, Brasilia, Brazil, University of Brasilia

IAC-20.C2.VP.21
MULTI-OBJECTIVE OPTIMIZATION OF A SMALL LAUNCH VEHICLE AERODYNAMIC PAYLOAD FAIRING FOR MINIMUM DRAG AND MASS
Mr. Scott Lindsay, Toronto, Canada, C6 Launch Systems

IAC-20.C2.VP.23
AN ANALYTICAL APPROACH FOR LARGE SIZE OPTIMISED REINFORCED HOLE IN COMPOSITE CIRCULAR CYLINDRICAL SHELLS
Mr. Pradeep Mohan, Thiruvananthapuram, India

IAC-20.C2.VP.25
DESIGN, DEVELOPMENT AND QUALIFICATION TESTING OF A HIGH PRESSURE GAS BOTTLE FOR A CRYOGENIC ROCKET STAGE.
Mr. Jayesh P, Trivandrum, India, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO)

C3. IAF SPACE POWER SYMPOSIUM

C3.1. Solar Power Satellite

Co-Chair: *Mr. John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States ; Dr. Ming Li, China Academy of Space Technology (CAST), China ;*

Rapporteur: *Dr. Leopold Summerer, European Space Agency (ESA), The Netherlands ; Dr. Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan ;*

IAC-20.C3.1.1
KEYNOTE: NEW CONCEPTS AND MARKETS FOR SPACE SOLAR POWER
Mr. John C. Mankins, SANTA MARIA, United States, ARTEMIS Innovation Management Solutions, LLC

IAC-20.C3.1.4
DEMONSTRATING SPACE SOLAR POWER IN ORBIT: SPS-ALPHA LEO PROTOTYPE DEMONSTRATION MISSION DESIGN
Ms. Sarah Blyde, Auckland, New Zealand, International Space University (ISU)

IAC-20.C3.1.5
A PROCESS-BASED LIFE CYCLE SUSTAINABILITY ASSESSMENT OF THE SPACE-BASED SOLAR POWER CONCEPT
Dr. Andrew Ross Wilson, Glasgow, United Kingdom, University of Strathclyde

IAC-20.C3.1.6
SPACE SOLAR POWER CUBESAT TECH DEMO MISSION – AN OVERVIEW
Dr. Thomas Sinn, Gilching, Germany, Deployables Cubed GmbH

IAC-20.C3.1.11
SPACE SOLAR POWER STUDENT COMPETITION: PLACEHOLDER_1
Mr. Daichi Ota, Sagamihara, Japan, Tokyo University of Science

C3.2. Wireless Power Transmission Technologies and Application

Co-Chair: *Prof. Nobuyuki Kaya, Kobe University, Japan ; Dr. Ming Li, China Academy of Space Technology (CAST), China ;*

Rapporteur: *Prof. Massimiliano Vasile, University of Strathclyde, United Kingdom ; Haroon B. Oqab, Space Canada Corporation, Canada ;*

IAC-20.C3.2.3
EFFICIENCY EQUATIONS FOR LONG-DISTANCE WIRELESS POWER TRANSFER USING PHASED ARRAY ANTENNAS
Mrs. Abigail Finnell, Indianapolis, United States, Indiana University-Purdue University Indianapolis

IAC-20.C3.2.4
DEVELOPMENT OF A LASER POWER BEAMING DEMONSTRATION FOR CLPS LANDERS
Mr. Ross Centers, Los Angeles, United States, Colorado School of Mines

IAC-20.C3.2.5
BOOTSTRAPPING LUNAR EXPLORATION TO SETTLEMENT: POWER AND ANCILLARY SERVICES BEAMING INFRASTRUCTURE
Mr. Gary Barnhard, Cabin John, United States, XISP-Inc

IAC-20.C3.2.6
AN ANALYSIS OF POWER BEAMING RECEPTION IN LECTENNA DEVICES
Mr. Elias Wilcoski, Alexandria, United States, Naval Research Laboratory

IAC-20.C3.2.7
MULTI-FUNCTIONAL RECTENNA FOR A LUNAR ROVER
Prof. Peter Schubert, Indianapolis, United States, Indiana University-Purdue University Indianapolis

IAC-20.C3.2.9
AN INNOVATIVE CONCEPT OF MIRROR SATELLITE TO USE SOLAR ENERGY EFFICIENTLY
Mr. T Ananda Mukesh, Madurai, India, Ramaiah Institute of Technology

C3.3. Advanced Space Power Technologies

Co-Chair: *Mr. Matthew Perren, Airbus Defence & Space, United Kingdom ; Mr. Gary Pearce Bamhard, Xtraordinary Innovative Space Partnerships, Inc., United States ;*

Rapporteur: *Mr. Lee Mason, National Aeronautics and Space Administration (NASA), Glenn Research Center, United States ; Dr. Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan ;*

IAC-20.C3.3.4
ULTRA LOW POWER HIGH VOLTAGE ENERGY STARVED FLYBACK CONVERTER FOR SPACE APPLICATIONS
Mr. VISHAL KUMAR MEENA, Thiruvananthapuram, India, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO)

IAC-20.C3.3.6
EVALUATION OF THE BATTERY DEGRADATION FACTORS FOR NANO-SATELLITES AT LEO
Dr. Vaclav Knap, Aalborg East, Denmark, GomSpace Aps

IAC-20.C3.3.7
STATE-OF-CHARGE ESTIMATION AND PARAMETRIC IDENTIFICATION OF A GEOESTATIONARY SATELLITE LITHIUM-ION BATTERY CELLS DURING ITS OPERATION
Mr. Rafael Benevides, Brasília, Brazil, Comando de Operações Aeroespaciais

IAC-20.C3.3.8
ONE STEP AWAY FROM THE RELIABLE BATTERIES FOR SMALL SPACECRAFTS WITH SOLID-STATE-CERAMIC BATTERIES
Mr. LAKHDAR LIMAM, Kitakyushu, Japan, Kyushu Institute of Technology

IAC-20.C3.3.9
ADVANCED HYBRID ENERGY STORAGE SYSTEM FOR SMALL SPACECRAFTS IN DEEP SPACE
Mr. Valerio Giuliani, Benevento, Italy, SAB AEROSPACE SRL

C3.4. Space Power System for Ambitious Missions

Co-Chair: *Prof. Massimiliano Vasile, University of Strathclyde, United Kingdom ; Mr. Shoichiro Mihara, Japan Space Systems, Japan ;*

Rapporteur: *Dr. Xinbin Hou, CAST, China ; Dr. Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan ;*

IAC-20.C3.4.2
COMPARATIVE ANALYSIS OF SOLAR POWER SATELLITE SYSTEMS TO SUPPORT A MOON BASE
Mr. Drew Gillespie, Glasgow, United Kingdom, University of Strathclyde / Mechanical and Aerospace Engineering

IAC-20.C3.4.3
A RESILIENCE ENGINEERING APPROACH TO THE DESIGN OF FUTURE MOON BASE POWER SYSTEMS
Mr. Gianluca Filippi, Glasgow, United Kingdom, University of Strathclyde

IAC-20.C3.4.4
DEVELOPMENT OF AN ENGINEERING MODEL OF THE ELECTRICAL POWER SUBSYSTEM FOR A MEXICAN NANOSATELLITE.
Mr. David Daniel Castelán Castillo, Mexico City, Mexico, High Technology Unit (UAT) Faculty of Engineering - UNAM

IAC-20.C3.4.5
DESIGN AND IMPLEMENTATION OF THE SOFTWARE ARCHITECTURE AND CONTROL FOR THE ELECTRICAL POWER SUBSYSTEM OF A 3U HYPERSPECTRAL IMAGING CUBESAT
Mr. Parth Kharade, Thane, India, Birla Institute of Technology and Science(BITS)

IAC-20.C3.4.6
LONG DURATION SOLID-STATE HYDROGEN STORAGE FROM ISRU MATERIALS
Prof. Peter Schubert, Indianapolis, United States, Indiana University-Purdue University Indianapolis

IAC-20.C3.4.9
SELF FOLDABLE LUNAR LANDER SOLAR PANEL: DESIGN CONCEPT
Ms. Aloisia Russo, Tiggiano, Italy, Politecnico di Milano

IAC-20.C3.4.10
MONOGRAIN LAYER SOLAR CELL FOR FUTURE LUNAR OUTPOST
Ms. Katriin Kristmann, Tallinn, Estonia, Tallinn University of Technology
ORBITAL SUPERCOMPUTER AS A NEW SOLAR POWER SATELLITE CONSUMER
Dr. Georgy Shcheglov, Moscow, Russian Federation, Bauman Moscow State Technical University

IAC-20.C3.4.13
SPACE SOLAR POWER SATELLITE FOR INTERPLANETARY MISSION
Mr. Aditya Baraskar, Fukuoka, Japan, Kyushu University

C3.5-C4.10. Joint Session on Advanced and Nuclear Power and Propulsion Systems

Co-Chair: *Dr. Yen-Sen Chen, American Institute of Aeronautics and Astronautics (AIAA), United States ; Dr. Leopold Summerer, ESA - European Space Agency, The Netherlands ;*

Rapporteur: *Dr. Vito Salvatore, CIRA Italian Aerospace Research Center, Capua, Italy ; Prof. Changjin Lee, Konkuk University, Korea, Republic of ;*

Keywords describing the session best: 1. Nuclear 2. Propulsion 3. Power 4. Advanced 5. Systems

IAC-20.C3.5-C4.10.1
DEVELOPING A CHARGING SUBSYSTEM FOR THE PUFF ENGINE
Mr. Nathan Schilling, Madison, United States, University of Alabama in Huntsville

IAC-20.C3.5-C4.10.2
TRAJECTORY DESIGN FOR A TITAN MISSION USING THE DIRECT FUSION DRIVE
Mr. Marco Gajeri, Pavarolo, Italy, Politecnico di Torino

IAC-20.C3.5-C4.10.3
NUCLEAR THERMAL ROCKET WITH FISSILE AND REACTION FUEL FROM LUNAR ISRU
Prof. Peter Schubert, Indianapolis, United States, Indiana University-Purdue University Indianapolis

IAC-20.C3.5-C4.10.4
DEVELOPMENT OF POWER PROCESSING TECHNOLOGIES FOR MAGNETO-PLASMA-DYNAMIC THRUSTERS
Mr. Dongdong Ye, Beijing, China, Beijing Institute of Control Engineering, Beijing, 100080, P.R. China

IAC-20.C3.5-C4.10.5
BASELOAD FISSION REACTOR FOR LUNAR OPERATIONS
Prof. Peter Schubert, Indianapolis, United States, Indiana University-Purdue University Indianapolis

IAC-20.C3.5-C4.10.7
UTILIZATION OF GASEOUS CORE SUPER CRITICAL NUCLEAR REACTORS FOR SPACE POWER AND SPACE PROPULSION FOR DEEP SPACE MISSIONS
Dr. Ugur Guven, Palm Beach Gardens, United States, UN CSSTEAP

IAC-20.C3.5-C4.10.8
ADVANCED NUCLEAR PROPULSION METHODS FOR DEEP SPACE MISSIONS
Dr. Ugur Guven, Palm Beach Gardens, United States, UN CSSTEAP

IAC-20.C3.5-C4.10.12
STRUCTURAL INTEGRITY OF NUCLEAR FUEL RODS DURING EARTH-TO-ORBIT LAUNCH
Mr. Michael Joyce, Columbus, United States, The Ohio State University College of Engineering

IAC-20.C3.5-C4.10.13
IN-SITU PRODUCTION OF REAGENTS FOR LIQUID FLUORIDE THORIUM REACTOR ON MARS SURFACE
Ms. Diana Pawlicki, Piotrków Trybunalski, Poland, University of Lodz

C3.VP. Virtual Presentations - IAF SPACE POWER SYMPOSIUM

Co-Chair: *Dr. Ming Li, China Academy of Space Technology (CAST), China ; Dr. Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan ;*

IAC-20.C3.VP.6
ELECTRICAL POWER SYSTEM FOR SRMSAT-3: AN AUTONOMOUS RENDEZVOUS AND DOCKING MISSION
Mr. Hilton Deva Durairaj, Chennai, India, SRM Institute of Science and Technology

IAC-20.C3.VP.7
LUNAR INTELLIGENT ORBITING NANOSATELLITE SWARM AS DISTRESS POWER DELIVERY SYSTEM FOR INTERSOLAR MISSIONS
Mr. Chesler Thomas, Dehradun, India, University of Petroleum and Energy Studies

IAC-20.C3.VP.8
A NEW POWER SYSTEM FOR DEEP SPACE MISSION
Mr. Meng Xu, Beijing, China, Beihang University

IAC-20.C3.VP.9
ADVANCED HIGH ENERGY MATERIALS FOR FUTURISTIC LIQUID PROPELLANT ROCKET ENGINES PROPELLED SPACE MISSIONS
Mr. Vinayak Malhotra, chennai, India, SRM University Chennai

IAC-20.C3.VP.10
STABILITY ANALYSIS OF HIGH TEMPERATURE SUPERCONDUCTING ENERGY STORAGE MAGNET BASED ON MULTI-PHYSICAL FIELDS COUPLING
Mr. Zheng Chen, Beijing, China, China Academy of Aerospace Aerodynamics (CAAA)

C4. IAF SPACE PROPULSION SYMPOSIUM

C4.1. Liquid Propulsion (1)

Co-Chair: *Mr. Christophe Bonhomme, Centre National d'Etudes Spatiales (CNES), France ; Mr. Patrick Danous, ArianeGroup, France ;*

Rapporteur: *Mr. Ozan Kara, Space Generation Advisory Council (SGAC), Turkey ; Mr. Akira Ogawara, Mitsubishi Heavy Industries, Ltd., Japan ;*

Keywords describing the session best: 1. Propulsion 2. Chemical 3. Liquid

IAC-20.C4.1.2
ANALYSIS FOR DESIGN OPTIMIZATION OF HIGH THRUST LIQUID ENGINE HOT TEST FACILITY
Mr. Abhishek Sharma, THIRUVANANTHAPURAM, India, Indian Space Research Organization (ISRO)

IAC-20.C4.1.8
DEVELOPMENT OF 58N BI-PROPELLANT THRUSTER FOR CHANDRAYAAN-2 VIKRAM MISSION
Mr. PRAKASH MN, Thiruvananthapuram, India, LPSC, ISRO

IAC-20.C4.1.9
LCH4 SUPPLY SCHEME FOR ENGINE TEST FACILITIES AND LAUNCH PADS
Mr. Yannick Juanico, SASSENAGE, France, Air Liquide

IAC-20.C4.1.10
MODULAR ENGINE CONCEPT – AN ECONOMICAL AND VERSATILE SOLUTION TO FUTURE PROPULSION SYSTEM
Mr. Akira Ogawara, Komaki, Japan, Mitsubishi Heavy Industries, Ltd.

IAC-20.C4.1.11
ORION EUROPEAN SERVICE MODULE PROPULSION SUBSYSTEM AFTER QUALIFICATION TESTING PRIOR ESM-2 DELIVERY AND ESM-3 INTEGRATION
Mr. Markus Jaeger, Bremen, Germany, Airbus Defence & Space, Space Systems

IAC-20.C4.1.13
DEVELOPING A ROADMAP FOR THE POST-PROCESSING OF ADDITIVELY MANUFACTURED AEROSPIKE ENGINES
Mr. Maximilian Buchholz, Dresden, Germany, Dresden University of Technology (DUT) / Technische Universität Dresden

C4.2. Liquid Propulsion (2)

Co-Chair: *Dr. Angelo Cervone, Delft University of Technology (TU Delft), The Netherlands ; Mr. Didier Boury, ArianeGroup SAS, France ;*

Rapporteur: *Prof. Changjin Lee, Konkuk University, Korea, Republic of ; Mr. Martin Velander, GKN Aerospace Engine Systems, Sweden ;*

Keywords describing the session best: 1. Liquid Propulsion 2. Technology 3. Science 4. Components

IAC-20.C4.2.2
DESIGN & DEVELOPMENT OF PROPELLANT INTAKE DEVICE FOR CRYO UPPER STAGE LOX TANK
Mr. Aamir Yusuf, Trivandrum, India, Liquid Propulsion System centre

IAC-20.C4.2.6
HEAT TRANSFER AND PYROLYSIS CHARACTERISTICS OF METHANE IN ROCKET NOZZLE COOLING CHANNELS
Mr. Jules Heldens, Stockholm, Sweden, KTH Royal Institute of Technology

IAC-20.C4.2.7
NUMERICAL INVESTIGATION OF SUBCRITICAL COMBUSTION IN CRYOGENIC ROCKET ENGINE
Mr. Abhishek Sharma, THIRUVANANTHAPURAM, India, Indian Space Research Organization (ISRO)

IAC-20.C4.2.8
PHOTOGRAPHIC INVESTIGATION OF IMPINGING COMBUSTION FOR THE HYDROGEN PEROXIDE AND AMINE-BASED HYPERGOLIC PROPELLANT
Mr. Kyu-Seop Kim, Daejeon, Korea, Republic of, Korea Advanced Institute of Science and Technology (KAIST)

IAC-20.C4.2.9
DESIGN AND DEVELOPMENT OF A LARGE STROKE AND HIGH CYCLIC LIFE SOLENOID VALVE FOR BI-PROPELLANT SPACECRAFT THRUSTERS
Mr. Venkata Sunil Sai Nukala, Trivandrum, India, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO)

IAC-20.C4.2.12
HYDRAULIC MODEL 3 TEST CAMPAIGN FOR VERIFICATION OF THE BANG-BANG PRESSURIZATION SYSTEM OF THE ORION EUROPEAN SERVICE MODULE
Mr. Markus Jaeger, Bremen, Germany, Airbus Defence & Space, Space Systems

IAC-20.C4.2.13
EFFECT OF FLOATING RING SEAL CLEARANCE ON THE PERFORMANCE OF CENTRIFUGAL PUMP USED IN LIQUID ROCKET ENGINE
Mr. Kiran Rajendran, Thiruvananthapuramm, India, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO)

IAC-20.C4.2.15
EFFICIENCY OF HIGH-TEMPERATURE GENERATOR PRESSURIZATION SYSTEMS OF LIQUID METHANE LV TANKS
Mr. Roman Petrenko, Dnepr, Ukraine, Yuzhnoye State Design Office

C4.3. Solid and Hybrid Propulsion (1)

Co-Chair: *Mr. Stéphane Henry, ArianeGroup, France ; Dr. Toru Shimada, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan ;*

Rapporteur: *Dr. Yen-Sen Chen, National Space Organization, Taiwan, China ; Dr. Mario Kobald, HyImpulse Technologies GmbH, Germany ;*

Keywords describing the session best: 1. Propulsion 2. Chemical 3. Solid 4. Hybrid

IAC-20.C4.3.1
PERFORMANCE EVALUATION OF SRM FLEX SEAL REALIZED THROUGH ALTERNATE MOULDING PROCESS
Mr. Ahemedulkabeer M S, Trivandrum, India, Vikram Sarabhai Space Centre, ISRO, Thiruvananthapuram

IAC-20.C4.3.2
MODELING AND SIMULATING DISTRIBUTED COMBUSTION IN SRM
Ms. Anne Elisa Leal Caselato, Brasilia, Brazil, Universidade de Brasilia

IAC-20.C4.3.4
DEVIANT ABLATION MECHANISM OF NOZZLE THROAT IN SOLID ROCKET MOTORS UNDER ACCELERATION CONDITIONS
Prof. Weiping Tian, Xi,an, China, The 4th Academy, China Aerospace Science and Technology Corporation (CASC)

IAC-20.C4.3.6
TISPACE HYBRID ROCKET LAUNCH VEHICLE DESIGN FOR SPACE MISSIONS
Dr. Yen-Sen Chen, Satatoga, CA, United States, American Institute of Aeronautics and Astronautics (AIAA)

IAC-20.C4.3.7
EXPERIMENTAL AND NUMERICAL INVESTIGATION OF A PARAFFIN-BASED HYBRID ROCKET ENGINE TO BRAKE A 24U MICROSATELLITE IN A MARS ORBIT
Mr. Caio Henrique Franco Levi Domingos, Rome, Italy, Sapienza University of Rome

IAC-20.C4.3.10
EXPERIMENTAL STUDY OF A MG/N2O POWDERED METAL FUEL ROCKET ENGINE
Dr. Liya Huang, changsha, China, National University of Defense Technology

IAC-20.C4.3.11
VARIATIONS AND CONTROL OF THRUST AND MIXTURE RATIO IN HYBRID ROCKET MOTORS
Dr. Francesco Barato, Padova (PD), Italy, University of Padova - DII/CISAS

IAC-20.C4.3.13
IMPACT ASSESSMENT OF PROPELLANT ENTRAPMENT IN LOOSE FLAP CAVITY ON BALLISTIC PERFORMANCE AND VALIDATION THROUGH HOT TEST OF SOLID ROCKET BOOSTER
Mr. Arun Raj, TRIVANDRUM, India, Vikram Sarabhai Space Centre (VSSC)
INVESTIGATION OF A DUAL-FUEL HYBRID ROCKET ENGINE FOR MISSILE AND ROCKET APPLICATIONS
Mr. Maurício Gontijo, Águas Claras, Brazil, University of Brasilia

C4.4. Solid and Hybrid Propulsion (2)

Co-Chair: *Mr. Jerome Breteau, European Space Agency (ESA), France ; Mr. Jean-Claude Traineau, Office National d'Etudes et de Recherches Aérospatiales (ONERA), France ;*

Rapporteur: *Dr. Arif Karabeyoglu, Koc University, Turkey ; Mr. Ozan Kara, Space Generation Advisory Council (SGAC), Turkey ;*

Keywords describing the session best: 1. Solid and Hybrid Propulsion 2. Chemical 3. Sciences 4. Technologies

IAC-20.C4.4.2
ENERGETIC HYBRID ROCKET PROPELLANTS FOR UPPER STAGE PROPULSION
Mr. Vinayak Malhotra, chennai, India, SRM University Chennai

IAC-20.C4.4.3
PERFORMANCE EVALUATION OF MODIFIED LOOSE FLAP VENTING SCHEME INTRODUCED FOR THE PROPELLANT PROCESSING OF UPPER STAGE SRM THROUGH HOT TEST
Mr. Shubham Maurya, THIRUVANANTHAPURAM, India, Vikram Sarabhai Space Centre, ISRO, Thiruvananthapuram

IAC-20.C4.4.5
DEVELOPMENT OF A THRUST CONTROL SYSTEM FOR ROCKET ENGINES
Dr. Olexiy Shynkarenko, Brasilia, Brazil, University of Brasilia

IAC-20.C4.4.6
EXPERIMENTAL AND NUMERICAL STUDY ON FEASIBILITY OF 5KN THRUST LEVEL HYBRID ROCKET MOTOR USING THE LOW-MELTING-POINT THERMOPLASTIC FUEL
Dr. Yo Kawabata, Fukuoka, Japan

IAC-20.C4.4.7
NUMERICAL AND EXPERIMENTAL RESEARCH ON ABLATION PERFORMANCE OF A CARBON/CARBON COMPOSTIES SOLID ROCKET MOTOR NOZZLE INSERT
Dr. Lin Sun, Xi'an, China, Science and Technology on Combustion, Internal Flow and Thermal-Structure Laboratory, Northwestern Polytechnical University

IAC-20.C4.4.11
STUDY ON THERMOACOUSTIC OSCILLATION CHARACTERISTICS OF CARBON NANOTUBES
Mr. Yu Liao, xi'an, China, Northwestern Polytechnical University

IAC-20.C4.4.13
EXPERIMENTAL INVESTIGATION OF A FLOW-ORIENTED THROTTLEABLE INJECTOR DESIGNED FOR THROTTLEABLE HYBRID ROCKET MOTOR
Mr. Zeng Zhao, Beijing, China, School of Astronautics, Beihang University

C4.5. Electric Propulsion (1)

Co-Chair: *Prof. Garri A. Popov, Research Institute of Applied Mechanics and Electrodynamics (RIAME), MAI, Russian Federation ; Prof. Mariano Andrenucci, Sitael Spa, Italy ;*

Rapporteur: *Dr. Vanessa Vial, Safran Aircraft Engines, France ; Mrs. Nicoletta Wagner, European Space Agency (ESA), France ;*

Keywords describing the session best: 1. Electric Propulsion 2. Thruster 3. Systems 4. Applications 5. Technology

IAC-20.C4.5.2
THE DESIGN AND PERFORMANCE OF THE LIPS-100 THRUSTER
Mr. Jing HU, Lanzhou, China, Beijing University of Aeronautics and Astronautics (BUAA)

IAC-20.C4.5.5
DEVELOPMENT STATUS OF THE XENON PROPULSION SUBSYSTEM FOR THE ITAL-GOVSATCOM PLATFORM
Dr. Tommaso Andreussi, Pisa, Italy, Sitael Spa

IAC-20.C4.5.7
LABORATORY TESTS OF 10.5 KW HALL THRUSTER AND 42 KW CLUSTER
Mr. Andrey Shashkov, Moscow, Russian Federation, Keldysh Research Center

IAC-20.C4.5.9
DEVELOPMENT OF HOLLOW CATHODES AT SITAEL
Dr. Alena Kitaeva, pisa, Italy, Sitael Spa

IAC-20.C4.5.11
INDUCTIVE PLASMA THRUSTER: DESIGN, SET-UP, AND FIRST IGNITION.
Mr. Francesco Romano, Stuttgart, Germany, Institute of Space Systems, University of Stuttgart

IAC-20.C4.5.12
HIPATIA: A PROJECT FOR THE DEVELOPMENT OF THE HELICON PLASMA THRUSTER AND ITS ASSOCIATED TECHNOLOGIES TO INTERMEDIATE-HIGH TRLS
Mrs. Mercedes Ruiz, Tres Cantos, Spain, SENER

IAC-20.C4.5.17
REGULUS ELECTRIC PROPULSION SYSTEM INTEGRATION IN UNISAT-7 MICROSATELLITE AND IN A 6 UNIT CUBESAT FOR IOD AND TESTS
Dr. Nicolas Bellomo, Padova, Italy, T4i

C4.6. Electric Propulsion (2)

Co-Chair: *Dr. Alexander Lovtsov, SSC Keldysh Research Centre, Russian Federation ; Dr. Angelo Cervone, Delft University of Technology (TU Delft), The Netherlands ;*

Rapporteur: *Ms. Elizabeth Driscoll, Spaceflight, United States ; Dr. Vanessa Vial, Safran Aircraft Engines, France ;*

Keywords describing the session best: 1. Electric Propulsion 2. Science 3. Physics 4. Modelling

IAC-20.C4.6.2
ESTIMATION OF CERAMIC LINER EROSION IN STATIONARY PLASMA THRUSTERS USING DEEP NEURAL NETWORKS
Ms. Sridevi Bhat, Thiruvananthapuram, India, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO)

IAC-20.C4.6.6
MSVC: CIRA NEW SPACE SIMULATOR DEDICATED TO ELECTRIC PROPULSION
Dr. Francesco Battista, Capua, Italy, CIRA Italian Aerospace Research Centre

IAC-20.C4.6.7
DEVELOPMENT OF MINIATURE LATCH VALVE FOR ELECTRIC PROPULSION SYSTEM APPLICATION
Mrs. SAVITRY KUMARI, BANGALORE, India, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO)

IAC-20.C4.6.8
SPACECRAFT WITH AIR-BREATHING ELECTRIC PROPULSION AS THE FUTURE ULTRA-SPEED AIRCRAFT
Prof. Alexander S. Filatyev, Zhukovsky, Russian Federation, Central AeroHydrodynamic Institute (TsAGI)

IAC-20.C4.6.9
AN EMDRIVE THRUSTER FOR CUBESATS
Mr. Roger Shawyer, Emsworth, United Kingdom, Satellite Propulsion Research Ltd

IAC-20.C4.6.10
MAGNETOHYDRODYNAMIC SIMULATION OF MAGNETIC NOZZLE OF VASIMR® CONCEPT
Mr. Prashumn Prashumn, Thiruvananthapuram, India, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO)

IAC-20.C4.6.12
ENABLING LOW-COST CHALLENGING MISSIONS WITH SMALL SPACECRAFT BY USING HIGH-ENERGY PULSED PLASMA THRUSTERS: PRELIMINARY PRO-PULSION SYSTEM DESIGN
Prof. Paolo Gessini, Gama, DF, Brazil, Universidade de Brasília

C4.7. Hypersonic Air-breathing and Combined Cycle Propulsion, and Hypersonic Vehicle

Co-Chair: *Dr. Riheng Zheng, China Aerospace Science & Industry Corporation (CASIC), China ; Dr. Yen-Sen Chen, American Institute of Aeronautics and Astronautics (AIAA), United States ;*

Rapporteur: *Mr. Simon Feast, Reaction Engines Ltd., United Kingdom ; Mr. Jean-Claude Traineau, Office National d'Etudes et de Recherches Aérospatiales (ONERA), France ;*

Keywords describing the session best: 1. Propulsion 2. Hypersonic 3. Combined cycle 4. precooled 5. air turbo rocket

IAC-20.C4.7.1
KEYNOTE: THE SYNERGETIC AIR-BREATHING ROCKET ENGINE (SABRE) - DEVELOPMENT STATUS UPDATE
Mr. Simon Feast, Abingdon, United Kingdom, Reaction Engines Ltd.

IAC-20.C4.7.3
THREE-DIMENSIONAL NUMERICAL SIMULATION OF ROTATING DETONATION ENGINE
Ms. Elena Mikhalchenko, Moscow, Russian Federation, Scientific Research Institute for System Analysis, Russian Academy of Sciences (RAS)

NUMERICAL STUDY OF JAXA'S EXPERIMENTAL VEHICLE FOR HYPERSONIC FLIGHT
Dr. Susumu Hasegawa, Kakuda, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.C4.7.6
NAVIER-STOKES COMPUTATION OF HEAT TRANSFER AND AERO-HEATING MODELING FOR HYPERSONIC WAVERIDER VEHICLES
Mr. Nitish Kamal, Kharagpur, India

IAC-20.C4.7.7
SINGLE AND MULTIPLE RETRO-JET EXPERIMENTS IN A HYPERSONIC FLOW
Dr. Sungmin Lee, Daejeon, Korea, Republic of, Korea Aerospace Research Institute (KARI)

IAC-20.C4.7.8
EXPERIMENTAL STUDIES ON THE EFFICACY OF CAVITY WITH POROUS UPPER SURFACE IN CONTROLLING THE SHOCK/BOUNDARY-LAYER INTERACTIONS IN A HYPERSONIC INTAKE
Mr. Tamal Jana, Kharagpur, India, Indian Institute of Technology Kharagpur

IAC-20.C4.7.10
INVESTIGATION ON SUPERSONIC COMBUSTION WITH MACH 10 FREEFLOW IN SHOCK TUNNEL
Mr. Liyin Wu, Mianyang, China, China Aerodynamics Research and Development Center (CARDC)

IAC-20.C4.7.11
LES OF AXIS SYMMETRIC AFT WALL ANGLE CAVITY IN SCRAMJETS
Mr. Naresh Relangi, rome, Italy, Scuola di Ingegneria Aerospaziale "La Sapienza"

IAC-20.C4.7.13
NUMERICAL ANALYSIS ON RBCC INLETS OF DIFFERENT TYPES IN EJECTOR MODE
Dr. Lei Shi, Xi'an, China, Northwestern Polytechnical University NPU

IAC-20.C4.7.15
INVESTIGATION ON HEAT RELEASE MATCHING AND PERFORMANCE OF VARIABLE GEOMETRY RBCC ENGINE IN RAMJET MODE
Dr. Jinying YE, XI'AN, China, Northwestern Polytechnical University

IAC-20.C4.7.16
NUMERICAL SIMULATION RESEARCH FOR THE EFFECTS OF TRAILING EDGE STRUCTURE ON THE SUPERSONIC MIXING LAYER
Prof. Shen Chibing, Changsha, China, National University of Defense Technology

IAC-20.C4.7.17
AERODYNAMIC STUDY OF LARGE-SPACE INTEGRATED MORPHING AIRCRAFTS
Dr. Dun Li, Beijing, China, China Academy of Aerospace Aerodynamics (CAAA)

C4.8-B4.5A. Joint Session between IAA and IAF for Small Satellite Propulsion Systems

Co-Chair: *Dr. Arnau Pons Lorente, Space Generation Advisory Council (SGAC), United States ; Dr. Jeffery Emdee, The Aerospace Corporation, United States ;*

Rapporteur: *Dr. Elena Toson, T4i, Italy ; Dr. Elizabeth Jens, Jet Propulsion Laboratory - California Institute of Technology, United States ;*

Keywords describing the session best: 1. Small 2. Satellite 3. Propulsion 4. Chemical 5. Electrical

IAC-20.C4.8-B4.5A.1
DESIGN OF CUBESAT PROPULSION SYSTEM USING HYDROGEN PEROXIDE MONOPROPELLANT THRUSTER
Mr. Seungho Lee, Daejeon, Korea, Republic of, Korea Advanced Institute of Science and Technology (KAIST)

IAC-20.C4.8-B4.5A.2
MIMPS-G: MODULAR IMPULSIVE GREEN-MONOPROPELLANT PROPULSION SYSTEM FOR MICRO/NANO SATELLITES HIGH-THRUST DEMANDING ORBITAL MANEUVERS.
Mr. Ahmed E. S. NOSSEIR, DELFT, The Netherlands, Delft University of Technology (TU Delft)

IAC-20.C4.8-B4.5A.3
TEST CAMPAIGN OF A CUBESAT EQUIPPED WITH AN HELICON PLASMA THRUSTER
Dr. Fabrizio Stesina, Torino, Italy, Politecnico di Torino

IAC-20.C4.8-B4.5A.8
DEVELOPMENT OF A SIX-DIRECTIONAL PLASMA PROPULSION MODULE FOR SMALL SATELLITES
Mr. Andrei Shumeiko, Moscow, Russian Federation, Bauman Moscow State Technical University

IAC-20.C4.8-B4.5A.11
FLOW REGIME CHARACTERIZATION OF A MEMS-BASED VAPORIZING LIQUID MICROTHRUSTER
Mr. Donato Fontanarosa, Lecce, Italy, Università del Salento

IAC-20.C4.8-B4.5A.12
SULFUR-FUELED SURFACE ARC THRUSTER FOR PROPELLING NANOSATELLITES
Mr. Senior Shimhanda, Kitakyushu, Japan, Kyushu Institute of Technology

C4.9. New Missions Enabled by New Propulsion Technology and Systems

Co-Chair: *Mr. Giorgio Saccoccia, Italian Space Agency (ASI), Italy ; Prof. Sabrina Corpino, Politecnico di Torino, Italy ; Dr. Elena Toson, T4i, Italy ;*

Rapporteur: *Ms. Elizabeth Driscoll, Spaceflight, United States ; Dr. Salvatore Borrelli, CIRA Italian Aerospace Research Centre, Italy ;*

Keywords describing the session best: 1. Propulsion 2. Missions 3. Concepts 4. Advanced 5. Integration

IAC-20.C4.9.2
INTEGRATED OPTIMIZATION OF TRAJECTORIES AND LAYOUT PARAMETERS OF SPACECRAFT WITH AIR-BREATHING ELECTRIC PROPULSION
Mr. Alexander Golikov, Zhukovsky, Russian Federation, Central AeroHydrodynamic Institute (TsAGI)

IAC-20.C4.9.3
SITAEL'S ACTIVITIES ON THE DEVELOPMENT OF AIR BREATHING TECHNOLOGY
Dr. Tommaso Andreussi, Pisa, Italy, Sitael Spa

IAC-20.C4.9.4
A HIGH INCLINATION SOLAR MISSION ENABLED BY NEAR-TERM SOLAR SAIL PROPULSION
Mr. Les Johnson, Huntsville, AL, United States, National Aeronautics and Space Administration (NASA), Marshall Space Flight Center

IAC-20.C4.9.7
EXPLORATION OF TRANS-NEPTUNIAN OBJECTS USING THE DIRECT FUSION DRIVE
Mr. Paolo Aime, Margarita (CN), Italy, Politecnico di Torino

IAC-20.C4.9.8
GREEN PROPELLANTS: BIO-PRODUCTS AND WATER AS FUEL FOR CUBESAT PROPULSION.
Ms. Priyanshi Chaturvedi, ABU ROAD, India, R V College of Engineering, Bengaluru

C4.10-C3.5. Joint Session on Advanced and Nuclear Power and Propulsion Systems

Co-Chair: *Dr. Yen-Sen Chen, American Institute of Aeronautics and Astronautics (AIAA), United States ; Dr. Leopold Summerer, ESA - European Space Agency, The Netherlands ;*

Rapporteur: *Dr. Vito Salvatore, CIRA Italian Aerospace Research Center, Capua, Italy ; Prof. Changjin Lee, Konkuk University, Korea, Republic of ;*

Keywords describing the session best: 1. Nuclear 2. Propulsion 3. Power 4. Advanced 5. Systems

IAC-20.C4.10-C3.5.1
DEVELOPING A CHARGING SUBSYSTEM FOR THE PUFF ENGINE
Mr. Nathan Schilling, Madison, United States, University of Alabama in Huntsville

IAC-20.C4.10-C3.5.2
TRAJECTORY DESIGN FOR A TITAN MISSION USING THE DIRECT FUSION DRIVE
Mr. Marco Gajeri, Pavarolo, Italy, Politecnico di Torino

IAC-20.C4.10-C3.5.3
NUCLEAR THERMAL ROCKET WITH FISSILE AND REACTION FUEL FROM LUNAR ISRU
Prof. Peter Schubert, Indianapolis, United States, Indiana University-Purdue University Indianapolis

IAC-20.C4.10-C3.5.4
DEVELOPMENT OF POWER PROCESSING TECHNOLOGIES FOR MAGNETO-PLASMA-DYNAMIC THRUSTERS
Mr. Dongdong Ye, Beijing, China, Beijing Institute of Control Engineering, Beijing, 100080, P.R. China

IAC-20.C4.10-C3.5.5
BASELOAD FISSION REACTOR FOR LUNAR OPERATIONS
Prof. Peter Schubert, Indianapolis, United States, Indiana University-Purdue University Indianapolis

IAC-20.C4.10-C3.5.7
UTILIZATION OF GASEOUS CORE SUPER CRITICAL NUCLEAR REACTORS FOR SPACE POWER AND SPACE PROPULSION FOR DEEP SPACE MISSIONS
Dr. Ugur Guven, Palm Beach Gardens, United States, UN CSSTEAP

IAC-20.C4.10-C3.5.8
ADVANCED NUCLEAR PROPULSION METHODS FOR DEEP SPACE MISSIONS
Dr. Ugur Guven, Palm Beach Gardens, United States, UN CSSTEAP

IAC-20.C4.10-C3.5.12
STRUCTURAL INTEGRITY OF NUCLEAR FUEL RODS DURING EARTH-TO-ORBIT LAUNCH
Mr. Michael Joyce, Columbus, United States, The Ohio State University College of Engineering

IAC-20.C4.10-C3.5.13
IN-SITU PRODUCTION OF REAGENTS FOR LIQUID FLUORIDE THORIUM REACTOR ON MARS SURFACE
Ms. Diana Pawlicki, Piotrków Trybunalski, Poland, University of Lodz

C4.VP. Virtual Presentations - IAF SPACE PROPULSION SYMPOSIUM

Co-Chair: *Dr. Elizabeth Jens, Jet Propulsion Laboratory - California Institute of Technology, United States ; Dr. Vanessa Vial, Safran Aircraft Engines, France ; Dr. Yen-Sen Chen, American Institute of Aeronautics and Astronautics (AIAA), United States ; Dr. Mario Kobald, German Aerospace Center (DLR), Germany ;*

Keywords describing the session best: 1. Propulsion 2. Interactive 3. Presentation

IAC-20.C4.VP.1
DESIGN OF A GAS FILLED BELLOW POGO SUPPRESSION DEVICE FOR LAUNCH VEHICLES.
Mr. SUNNY MITRA, Valiamala, India, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO)

IAC-20.C4.VP.2
RESEARCH AND APPLICATION ON THE INNOVATIVE DESIGN SYSTEM OF LOX KEROSENE ENGINE WHICH IS AVAILABLE TO ADDITIVE MANUFACTURING TECHNOLOGY
Mr. WANG Chunmin, Xi'an, China, Northwestern Polytechnical University, NPU

IAC-20.C4.VP.6
A WAY TO INCREASE ROCKET EFFICIENCY: THE AEROSPIKE ENGINE
Mr. Baptiste Laulan--Souilhac, Lacapelle Marival, France, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace

IAC-20.C4.VP.8
EFFECT OF BLADE CONFIGURATION ON PERFORMANCE OF A HIGH SPEED AXIAL FLOW PUMP INDUCER
Mr. AJI M ABRAHAM, TRIVANDRUM, India, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO)

IAC-20.C4.VP.11
INFLUENCE OF INLET AIR TEMPERATURE FOR DILUTION MIXING IN TURBINE-BASED AIR-BREATHING PROPULSION SYSTEM
Mr. Wei Dai, Beijing, China, Beijing institute of Astronautical Systems Engineering, Beijing

IAC-20.C4.VP.13
EXPERIMENTAL STUDIES ON THE EFFICACY OF TABS AS SUPERSONIC JET CONTROL
Mr. THILLAIKUMAR T, kharagpur, India, Indian Institute of Technology Kharagpur

IAC-20.C4.VP.14
A TECHNOLOGY FOR IMPROVING REGENERATIVE COOLING IN ADVANCED CRYOGENIC ROCKET ENGINES FOR SPACE TRANSPORTATION
Mr. AP Baiju, Trivandrum, India, LPSC, ISRO

IAC-20.C4.VP.15
ASSESSMENT AND DESIGN OF THE ACTIVE AIR INTAKE FOR VLEO OPERATION
Mr. Anatolii Papulov, Odintsovo, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.C4.VP.16
MEMS THRUSTER WITH AN ALTERNATIVE ADN BASED MONOPROPELLANT
Mr. Ju Won Kim, Daejeon, Korea, Republic of, Korea Advanced Institute of Science and Technology (KAIST)

IAC-20.C4.VP.19
MINIMUM CATALYST BED LENGTH FOR HIGH TEST HYDROGEN PEROXIDE THRUSTERS
Mr. Sangwoo Jung, Daejeon, Korea, Republic of, Korea Advanced Institute of Science and Technology (KAIST)

IAC-20.C4.VP.22
DESIGN AND TEST OF NON-UNIFORM SPRAY SWIRL INJECTORS AND ITS APPLICATIONS IN INJECTION PLATE DESIGN
Mr. Alexandre Costa Goulart, Santo André, Brazil, Universidade Federal do ABC - UFABC

IAC-20.C4.VP.23
LITERATURE STUDIES AND EXPERIMENTAL CHARACTERIZATION OF MULTIPLE SOLID PROPELLANT REGRESSION RATES USING CRAWFORD BOMB METHOD AND ROCKET DESIGN ANALYSIS
Mr. Jesús Manuel Muñoz Tejeda, Rivas-Vaciamadrid, Spain, Imperial College London

IAC-20.C4.VP.24
PREDICTION OF THERMOACOUSTIC INSTABILITIES BY THE LINEARIZED NAVIER-STOKES EQUATIONS INCORPORATED WITH THE NONLINEAR N-TAU MODEL
Mr. Yuanzhe LIU, Xi 'an, China, Northwestern Polytechnical University

IAC-20.C4.VP.25
FISSION FRAGMENT ROCKET: FUEL PRODUCTION AND STRUCTURAL CONSIDERATIONS
Mr. Pauli Laine, Jyväskylä, Finland

IAC-20.C4.VP.29
MUTATION OF PERMANENT MAGNET HALL THRUSTER: CENTRAL CATHODE CONFIGURATION
Ms. Shritu Badoniya, Dehradun, India, University of Petroleum and Energy Studies

IAC-20.C4.VP.30
DESIGN AND SIMULATION OF AN ARTICULATED ON-BOARD CUBESAT PROPULSION SYSTEM
Ms. Sneha Gayen, Chennai, India, SRM Institute of Science and Technology

D1. IAF SPACE SYSTEMS SYMPOSIUM

D1.1. Innovative and Visionary Space Systems

Co-Chair: *Dr. Tibor Balint, Art Center College of Design, United States ; Mr. Peter Dieleman, Netherlands Aerospace Centre (NLR), The Netherlands ;*

Rapporteur: *Dr. Camillo Richiello, CIRA Italian Aerospace Research Centre, Italy ;*

IAC-20.D1.1.1
ADVANCED EUROPEAN RE-ENTRY SYSTEM BASED ON INFLATABLE HEAT SHIELDS: TECHNOLOGY ROADMAP AND TECHNICAL CHALLENGES (EFESTO PROJECT)
Mr. Giuseppe Governale, Torino, Italy, Politecnico di Torino

IAC-20.D1.1.2
A PRAGMATIC APPROACH TO ARTIFICIAL GRAVITY: TESTBED FOR GRAVITY SIMULATION PLATFORM ON-ORBIT.
Mr. Albert Rajkumar, HOUSTON, United States, University of Houston

IAC-20.D1.1.4
STMF - SATELLITE THERMAL MANAGEMENT WITH FERROFLUIDS
Mr. Thomas Imhuelse, Bremen, Germany, ZARM, University of Bremen

IAC-20.D1.1.6
WHAT'S NEXT AFTER INDUSTRY DISRUPTION BY CUBESATS? – INDUSTRY DISRUPTION BY OPEN SOURCE.
Mrs. Anita Bernie, Farnborough, United Kingdom, KISPE Space Systems Limited

IAC-20.D1.1.8
SPACE HOSPITAL: HOW FUTURE SPACE-BASED MEDICAL INFRASTRUCTURES COULD REVOLUTIONIZE TOMORROW'S HEALTH CARE SYSTEM
Mr. Paolo Marzioli, Rome, Italy, Sapienza University of Rome

IAC-20.D1.1.9
DESIGN AND DEVELOPMENT OF ATTITUDE CONTROLLED SYSTEMS USING ADAPTIVE NEURAL NETWORKS
Dr. Raja Munusamy, DEHRADUN, India, University of Petroleum and Energy Studies

IAC-20.D1.1.10
PHASE-A DESIGN OF A TRIBOELECTRIC SENSOR FOR SPACE APPLICATIONS
Mr. Francesco Ventre, Francolise, Italy, Politecnico di Milano

IAC-20.D1.1.11
CUTTING EDGE SOLUTION FOR EFFECTIVE AND SAFE MISSIONS-NEUROARCHITECTURE SYSTEM OF VINCI POWER NAP® -REVOLUTION IN FAST STRESS REDUCTION, REGENERATING BODY & MIND WHICH CAN HELP YOU, PILOTS, ASTRONAUTS:BEFORE,DURING AND AFTER SPACE TRAVELS
Ms. Magdalena Filcek, Wroclaw, Poland

D1.2. Space Systems Architectures

Co-Chair: *Mr. Franck Durand-Carrier, Centre National d'Etudes Spatiales (CNES), France ; Mr. Matteo Emanuelli, Airbus Defence and Space, Germany ;*

Rapporteur: *Ms. Jill Prince, National Aeronautics and Space Administration (NASA), United States ;*

IAC-20.D1.2.1
THE RECYCLER: AN INNOVATIVE APPROACH TO ON-ORBIT SERVICING AND REPURPOSING
Mr. Paolo Guardabasso, Toulouse, France, ISAE-Supaero University of Toulouse

IAC-20.D1.2.4
AI-EXPRESS IN-ORBIT SMART SERVICES FOR SMALL SATELLITES
Mr. Leonardo Amoruso, Bari, Italy, Planetek Italia

IAC-20.D1.2.5
EO-ALERT: A NOVEL ARCHITECTURE FOR THE NEXT GENERATION OF EARTH OBSERVATION SATELLITES SUPPORTING RAPID CIVIL ALERTS
Dr. Murray Kerr, Tres Cantos, Spain, Deimos Space S.L.

IAC-20.D1.2.6
SYSTEMS ARCHITECTURE STUDY OF SATELLITE CONSTELLATIONS FOR INTERNET OF THINGS CONNECTIVITY
Ms. Ksenia Osipova, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.D1.2.8
TRANSFORMABLE SPACECRAFT: FEASIBILITY STUDY AND CONCEPTUAL DESIGN
Dr. Yoshiki Sugawara, Sagamigara, Japan, Aoyama Gakuin University

D1.3. Technologies to Enable Space Systems

Co-Chair: *Mr. Steven Arnold, The John Hopkins University Applied Physics Laboratory, United States ; Mr. Xavier Roser, Thales Alenia Space France, France ;*

Rapporteur: *Mr. Eiichi Tomita, Japan Aerospace Exploration Agency (JAXA), Japan ;*

IAC-20.D1.3.3
DIRECT ROBOTIC EXTRUSION OF PHOTOPOLYMERS FOR IN-SPACE APPLICATIONS
Mr. Michael Kringer, Munich, Germany, Munich University of Applied Sciences

IAC-20.D1.3.4
EMBEDDED GRAPHENE-SILICON OXYCARBIDE POROUS CERAMICS FOR THERMOELECTRIC APPLICATIONS
Ms. Elizabeth Barrios, Winter Park, United States, University of Central Florida (UCF)

IAC-20.D1.3.5
MAGNETIC BUOYANCY-BASED WATER ELECTROLYSIS IN ZERO-GRAVITY
Mr. Álvaro Romero-Calvo, Boulder, United States, Colorado Center for Astrodynamics Research, University of Colorado

IAC-20.D1.3.7
ON-BOARD LOW LATENCY PROCESSING OF EARTH OBSERVATION PRODUCTS IN A MULTI-BOARD SCHEME USING MULTI-CORE AND FPGA-BASED ARCHITECTURE
Mr. Antonio Latorre, Tres Cantos, Spain, Deimos Space SLU

IAC-20.D1.3.9
A DETERMINISTIC AND HIGH PERFORMANCE PARALLEL DATA PROCESSING APPROACH TO INCREASE GUIDANCE NAVIGATION AND CONTROL ROBUSTNESS.
Dr. Pablo Ghiglino, Zurich, Switzerland

IAC-20.D1.3.11
PROCESSOR-IN-THE-LOOP TESTING OF AI-AIDED ALGORITHMS FOR SPACECRAFT GNC
Mr. Stefano Silvestrini, Milano, Italy, Politecnico di Milano

D1.4A. Space Systems Engineering - Methods, Processes and Tools (1)

Co-Chair: *Dr. Dapeng Wang, Beihang University, China ; Mr. Peter Dieleman, Netherlands Aerospace Centre (NLR), The Netherlands ;*

Rapporteur: *Mr. Franck Durand-Carrier, Centre National d'Etudes Spatiales (CNES), France ;*

IAC-20.D1.4A.2
SYSTEMS ENGINEERING APPLIED TO ORBIT AND ATTITUDE CONTROL SYSTEM (AOCS) OF FORMATION FLYING SATELLITES
Mr. Iván Felipe Rodríguez Barón, São José dos Campos_ SP, Brazil, National Institute for Space Research - INPE

IAC-20.D1.4A.3
MULTI-ATTRIBUTE EVALUATION APPROACH FOR SMALL LAUNCH VEHICLE WITH MULTI-OBJECTIVE MULTI-DISCIPLINE DESIGN OPTIMIZATION
Mr. Pengcheng Wang, Beijing, China, Beihang University (BUAA)

IAC-20.D1.4A.6
DIGITAL ENGINEERING INFORMATION EXCHANGE MODEL FOR SPACE MISSIONS ARCHITECTURE: A CASE STUDY OF A CUBESAT MISSION
Dr. Yaroslav Menshenin, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.D1.4A.10
A NOVEL APPROACH TO PLANETARY ROVER GUIDANCE, NAVIGATION AND CONTROL BASED ON THE ESTIMATION OF THE REMAINING USEFUL LIFE
Ms. Jasmine Rimani, Cavallermaggiore, Italy, Politecnico di Torino

IAC-20.D1.4A.11
MULTIDISCIPLINARY OPTIMIZATION FOR NANO-SATELLITE LAUNCH VEHICLES
Mr. Daniel McCammon, Toronto, Canada, C6 Launch Systems

D1.4B. Space Systems Engineering - Methods, Processes and Tools (2)

Co-Chair: *Dr. Geilson Loureiro, Instituto Nacional de Pesquisas Espaciais (INPE), Brazil ; Dr. Norbert Frischauf, TU Graz, Austria ;*

Rapporteur: *Mr. Jon Holladay, National Aeronautics and Space Administration (NASA), United States ;*

IAC-20.D1.4B.4
MODEL-BASED APPROACH FOR REQUIREMENTS MANAGEMENT CONNECTION WITH VERIFICATION PROCEDURES APPLIED TO SPACE SYSTEMS
Ms. Karolina Latserus, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.D1.4B.5
MODEL-DRIVEN ENGINEERING FOR SWARM-BASED SPACE EXPLORATION MISSIONS
Ms. Antonia Russo, Reggio Calabria, Italy, University Mediterranea of Reggio Calabria

IAC-20.D1.4B.6
COMPARISON OF MULTIDISCIPLINARY DESIGN OPTIMIZATION ARCHITECTURES FOR THE DESIGN OF DISTRIBUTED SPACE SYSTEMS
Mr. Raja Pandi Perumal, Kirchberg, Luxembourg , University of Luxembourg

IAC-20.D1.4B.8
ENTRY, DESCENT AND IMPACT SYSTEM DESIGN AND ANALYSIS OF A SMALL PLATFORM IN MARTIAN ENVIRONMENT
Mr. Daniele Calvi, Torino, Italy, Politecnico di Torino

IAC-20.D1.4B.9
TEST SYSTEM FOR FUCTIONAL VERIFICATION OF A SBCDA/ARGOS-2 RECEPTOR - STUDY OF CASE: ENVIRONMENTAL DATA COLLECTOR
Mr. Thiago Messias, Parnamirim, Brazil, Federal University of Rio Grande do Norte (UFRN)

IAC-20.D1.4B.10
AN EFFICIENT FRAMEWORK FOR RELIABILITY-BASED MULTIDISCIPLINARY DESIGN OPTIMIZATION USING SYSTEM SENSITIVITY ANALYSIS
Prof. Jafar Roshanian, Tehran, Iran, K. N. Toosi University of Technology

D1.5. Lessons Learned in Space Systems: Achievements, Challenges, Best Practices, Standards.

Co-Chair: *Mr. Eiichi Tomita, Japan Aerospace Exploration Agency (JAXA), Japan ; Prof. Igor V. Belokonov, Samara National Research University (Samara University), Russian Federation ;*

Rapporteur: *Dr. Otfrid G. Liepack, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States ;*

IAC-20.D1.5.3
ASSEMBLY, INTEGRATION AND TEST (AIT) CAMPAIGN OF THE AMAZONIA-1 SATELLITE
Mr. Gabriel Gustavo Coronel Mariño, São José dos Campos, Brazil, Brazilian National Institute for Space Research - INPE

IAC-20.D1.5.6
EARTH OBSERVATION SATELLITE - CBERS4A – PRELIMINARY LESSONS AFTER AIT CAMPAIGN AND ITS SUCCESSFUL LAUNCHING
Mr. Guilherme Venticinque, São José dos Campos, Brazil, Instituto Nacional de Pesquisas Espaciais (INPE)

IAC-20.D1.5.8
LESSONS LEARNED PROCESS ROLE IN FUTURE MISSIONS.
Ms. Noora AlArai, Dubai, United Arab Emirates, Mohammed Bin Rashid Space Centre (MBRSC)

IAC-20.D1.5.9
BROADENING JPL'S MISSION FORMULATION PARADIGM WITH HUMAN CENTERED DESIGN
Dr. Tibor Balint, Pasadena, United States, Art Center College of Design

IAC-20.D1.5.10
EXTENDING THE LIFE OF THE MOBILE SERVICING SYSTEM (MSS) TO SUPPORT EXTENSION OF INTERNATIONAL SPACE STATION (ISS) OPERATIONS
Ms. Juhaina Khan, Brampton, Canada, MDA Corporation

IAC-20.D1.5.13
LESSONS FROM THE HISTORY OF SPACE NUCLEAR DEVELOPMENT PROJECTS
Mr. Lincoln Butcher, Washington, United States, Science and Technology Policy Institute

D1.6. Cooperative and Robotic Space Systems

Co-Chair: *Prof. Klaus Schilling, Zentrum für Telematik, Germany ; Dr. Dapeng Wang, Beihang University, China ;*

Rapporteur: *Mr. Steven Arnold, The John Hopkins University Applied Physics Laboratory, United States ;*

IAC-20.D1.6.1
VALIDATION AND DEMONSTRATION OF EROSS PROJECT: EUROPEAN ROBOTIC ORBITAL SUPPORT SERVICES
Dr. Vincent DUBANCHET, Cannes la Bocca, France, Thales Alenia Space France

IAC-20.D1.6.2
MULTI-FUNCTIONAL SELF-RECONFIGURABLE ROBOTIC ARM (RAMSES) AND ADJOINED SOLAR PANEL PRELIMINARY DESIGN FOR LUNAR ENTRY APPROACH PLATFORM FOR RESEARCH ON GROUND (LEAPFROG)
Ms. Aloisia Russo, Tiggiano, Italy, Politecnico di Milano

IAC-20.D1.6.3
MOSAR-WM: A RELOCATABLE ROBOTIC ARM DEMONSTRATOR FOR FUTURE ON-ORBIT APPLICATIONS
Dr. Mathieu Deremetz, Sint-Stevens-Woluwe, Belgium, Space Applications Services

IAC-20.D1.6.4
DESIGNING AND TESTING A ROBOTIC AVATAR FOR SPACE-TO-GROUND TELEOPERATION: THE DEVELOPERS' INSIGHTS
Dr. Thomas Krueger, Noordwijk, The Netherlands, European Space Agency (ESA)

IAC-20.D1.6.5
INT-BALL2 FOR FULLY-TELEOPERATED JEM ONBOARD CAMERA DRONE WITHOUT CREW AID
Dr. Daichi Hirano, Tsukuba, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.D1.6.7
MODEL BASED MULTI-AGENT NUMERIC PLANNING SYSTEM FOR SPACECRAFT
Ms. Yuting Zhao, Beijing, China, Beijing Institute of technology(BIT)

IAC-20.D1.6.8
SMALL ROBOTIC SWARM TECHNOLOGIES FOR LUNAR SURFACE EXPLORATION
Mr. Rod Mamin, London, United Kingdom, Spacebit Global Ltd

D1.VP. Virtual Presentations - IAF SPACE SYSTEMS SYMPOSIUM

Co-Chair: *Dr. Reinhold Bertrand, European Space Agency (ESA), Germany ; Ms. Jill Prince, National Aeronautics and Space Administration (NASA), United States ;*

IAC-20.D1.VP
FORCE/POSITION IMPEDANCE CONTROL FOR INSERTION AND PULL OF COMPONENTS IN SPACE MANIPULATOR STATION
Mr. Chen-dong ZENG, Fuzhou, China, Fuzhou University

IAC-20.D1.VP
OUTPUT FEEDBACK CONTROL BASED ON SLIDING MODE AND VIBRATION SUPPRESSION FOR A FLEXIBLE-BASE TWO-FLEXIBLE-LINK AND TWO-FLEXIBLE-JOINT SPACE ROBOT WITH ACTUATOR SATURATION
Mr. Xiaodong Fu, Fuzhou, China, Fuzhou University

IAC-20.D1.VP
MITIGATION STRATEGY AGAINST SOLAR FLARES
Mr. Nischith Raj, Bengaluru, India, Ramaiah Institute of Technology

D2. IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM

D2.1. Launch Vehicles in Service or in Development

Co-Chair: *Mr. Iwao Igarashi, Mitsubishi Heavy Industries, Ltd., Japan ; Mr. Randolph Kendall, The Aerospace Corporation, United States ;*

Rapporteur: *Dr. Martin Sippel, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

IAC-20.D2.1.1
NASA'S SPACE LAUNCH SYSTEM
Mr. John Honeycutt, Huntsville, United States, NASA Marshall Space Flight Center

IAC-20.D2.1.2
THE LATEST DEVELOPMENT STATUS OF H3
Mr. Yorichika Mihara, Nagoya City, Japan, Mitsubishi Heavy Industries, Ltd.

IAC-20.D2.1.8
DEVELOPMENT OF INTERNATIONALLY COMPETITIVE SOLID ROCKET BOOSTER FOR H3 LAUNCH VEHICLE
Mr. Masahiro Yanagisawa, Tomioka-shi, Gunma, Japan, IHI Aerospace Co, Ltd.

IAC-20.D2.1.10
LAUNCH VEHICLE PROJECT BASED ON BRAZILIAN SOUNDING ROCKETS
Mr. Fortunato Neto, Santa Maria, Brazil, Universidade Federal de Santa Maria - UFSM

D2.2. Launch Services, Missions, Operations and Facilities

Co-Chair: *Dr. Francesco Santoro, Altec S.p.A., Italy ; Dr. Sylvain Guédron, Centre National d'Etudes Spatiales (CNES), France ;*

Rapporteur: *Mr. Yves Gerard, Airbus Defence & Space, France ;*

IAC-20.D2.2.1
THE FINAL QUALIFICATION OF THE ARIANE 6 LAUNCH PAD
Mr. Jacques BERTRAND, Toulouse, France, Centre National d'Etudes Spatiales (CNES)

IAC-20.D2.2.4
ECONOMIC ANALYSIS OF A SEMI REUSABLE LAUNCHER FOR EUROPE.
Mr. Jean Oswald, PARIS, France, Centre National d'Etudes Spatiales (CNES)

IAC-20.D2.2.11
ESRANGE SPACE CENTER - A NEW TESTING AND ORBITAL LAUNCH FACILITY IN EUROPE
Mr. Christian Krokstedt, Solna, Sweden, Swedish Space Corporation

IAC-20.D2.2.12
SUSTAINABILITY AND RELIABILITY IN MIND WHEN BUILDING EUROPE'S SMALLSAT SPACEPORT IN NORWAY
Ms. Ingrid Hanssen, Andenes, Norway, Andøya Space Center

IAC-20.D2.2.15
A REVIEW OF EUROPEAN SPACEPORTS
Mr. Alan Webb, LONDON, United Kingdom, Commercial Space Technologies Ltd.

D2.3. Upper Stages, Space Transfer, Entry and Landing Systems

Co-Chair: *Dr. Oliver Kunz, RUAG Space, Switzerland ; Mr. Bryan Smith, NASA Glenn Research Center, United States ;*

Rapporteur: *Dr. Oleg Ventskovsky, Yuzhnoye SDO European Representation in Brussels, Ukraine ;*

IAC-20.D2.3.2
A UBIQUITOUS PROPELLANT SUPPLY CHAIN FOR ENHANCEMENT OF LEO TO GEO TRANSFER SERVICES
Mr. Jeremy Schiel, Santa Clara, United States, Orbit Fab

IAC-20.D2.3.4
ADVANCED EUROPEAN RE-ENTRY SYSTEM BASED ON INFLATABLE HEAT SHIELDS: DETAILED DESIGN (EFESTO PROJECT)
Mr. Davide Bonetti, Tres Cantos, Madrid, Spain, Deimos Space SLU

IAC-20.D2.3.5
DESIGNING OF LANDING SYSTEM FOR MARS USING ELECTROMAGNETIC FORCE
Mr. Palaniappan Subramanian, Dehradun, India, University of Petroleum and Energy Studies

IAC-20.D2.3.6
COMPUTATIONAL ANALYSIS OF DRAG CHARACTERISTICS AND OPTIMIZATION OF A PARACHUTE BY VARYING DENSITY OF INLET GASES FOR DIFFERENT PLANETARY ATMOSPHERIC CONDITIONS
Mr. Kanishka Deepak, Bidadi, India, R V College of Engineering, Bengaluru

IAC-20.D2.3.8
INTEGRATION OF THE LARGE ENVELOPE ADVANCED PARACHUTE SYSTEM IN STRATOS IV
Mr. Lars Pepermans, Delft, The Netherlands, Delft Aerospace Rocket Engineering (DARE)

D2.4. Future Space Transportation Systems

Co-Chair: *Mr. José Gavira Izquierdo, European Space Agency (ESA), The Netherlands ; Mr. Nicolas Bérend, ONERA - The French Aerospace Lab, France ;*

Rapporteur: *Ms. Emmanuelle David, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland ;*

IAC-20.D2.4.1
HIGH-PERFORMANCE, PARTIALLY REUSABLE LAUNCHERS FOR EUROPE
Dr. Martin Sippel, BREMEN, Germany, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)

IIAC-20.D2.4.4
THE DESIGN OF THE SPACE RIDER REENTRY MODULE GNC SUBSYSTEM UP TO CDR
Mr. Antonio Figueroa, Tres Cantos, Spain, SENER

IAC-20.D2.4.6
H3 UPGRADE CONCEPT WITH ENHANCED UPPER COMPARTMENT
Mr. Yorichika Mihara, Nagoya City, Japan, Mitsubishi Heavy Industries, Ltd.

IAC-20.D2.4.9
PRELIMINARY DESIGN STATUS OF UNMANNED SUBORBITAL SPACEPLANE WITH LOX/METHANE ENGINES BY TOKYO UNIVERSITY OF SCIENCE'S START-UP WITH THE PARTNERSHIP OF INDUSTRIES: PART 2
Prof. Koichi Yonemoto, Noda, Japan, Tokyo University of Science

IAC-20.D2.4.10
FROM THE EARTH TO THE MOON BY GONDOLA
Mr. Jean-Yves Prado, La Rochelle, France, PLATINEO

IAC-20.D2.4.11
DEVELOPMENT OF A TOOL FOR THE ANALYSIS AND OPTIMISATION OF ATMOSPHERIC RE-ENTRY TRAJECTORIES
Mr. Luca Guerra, Turin, Italy, Politecnico di Torino

IAC-20.D2.4.12
METHOD TO PRESET G-LOAD PROFILE OF LAUNCH VEHICLES
Prof.Dr. Vitaly Yemets, Dnipropetrovsk, Ukraine, Oles Honchar Dnipropetrovsk National University

D2.5. Technologies for Future Space Transportation Systems

Co-Chair: *Mr. Mathieu CHAIZE, ArianeGroup SAS, France ; Prof. Lin Shen, China Academy of Launch Vehicle Technology (CALT), China ;*

Rapporteur: *Mr. Andrea Esposito, Northrop Grumman Corporation, Italy ;*

IAC-20.D2.5.3
ADVANCED MODELING AND TRAJECTORY OPTIMIZATION OF THE IN-AIR-CAPTURING MANEUVER FOR WINGED RLVS
Ms. Lâle Evrim Briese, Wessling, Germany, DLR, German Aerospace Center

IAC-20.D2.5.4
AERIAL RECOVERY TECHNOLOGY OF LAUNCH VEHICLE
Dr. Xiaowei WANG, Beijing, China, China Academy of Launch Vehicle Technology (CALT)

IAC-20.D2.5.5
NAVIGA: A MODULAR LOW-COST SPACE NAVIGATION UNIT FOR SPACE TRANSPORTATION
Mrs. Silvia Diaz, Tres Cantos, Spain, SENER

IAC-20.D2.5.6
DEVELOPMENT OF A MODULAR LOW-SHOCK SEPARATION AND JETTISON SYSTEM
Dr. Alberto Sanchez Cebrian, Zurich, Switzerland, RUAG Space

IAC-20.D2.5.7
THERMAL PERFORMANCE TEST OF VACUUM COMPOSITE INSULATION MATERIAL FOR CRYOGENIC ROCKET TANK BASED ON CRYOCOOLER
Mr. Shaohua Zhang, Beijing, China, China Academy of Launch Vehicle Technology(CALT)

IAC-20.D2.5.10
MODEL PREDICTIVE CONTROL FOR REUSABLE LAUNCHER GUIDANCE IMPROVEMENT
Mr. Jacopo Guadagnini, Correzzana, Italy, Politecnico di Milano

IAC-20.D2.5.11
COMPLEX NUMERICAL SIMULATION OF THE LAUNCH SYSTEM GAS-DYNAMICS
Mr. Serhii Furkalo, Dnepr, Ukraine, Yuzhnoye State Design Office

IAC-20.D2.5.15
VERIFICATION AND VALIDATION ACTIVITIES FOR THE SPEAR MISSION
Ms. Esmée Menting, Delft, The Netherlands, Delft Aerospace Rocket Engineering (DARE)

D2.6. Future Space Transportation Systems Verification and In-Flight Experimentation

Co-Chair: *Dr. David E. Glass, National Aeronautics and Space Administration (NASA), United States ; Dr. Christie Maddock, University of Strathclyde, United Kingdom ;*

Rapporteur: *Mr. Tetsuo Hiraiwa, Japan Aerospace Exploration Agency (JAXA), Japan ;*

IAC-20.D2.6.1
CALLISTO DEMONSTRATOR: FOCUS ON SYSTEM ASPECTS
Dr. Sylvain Guédron, PARIS, France, Centre National d'Etudes Spatiales (CNES)

IAC-20.D2.6.2
HYPERSONIC FLIGHT EXPERIMENT REFEX: STATUS AND FUTURE PERSPECTIVES
Dr. Martin Sippel, BREMEN, Germany, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)

IAC-20.D2.6.6
SPACE COBOT FOR IN-ORBIT REPAIR
Mrs. Marie-Christine Bernelin, Saint-Cloud, France, Dassault Aviation

IAC-20.D2.6.7
DESIGN MODIFICATIONS FOR PERFORMANCE ENHANCEMENT OF A SUBORBITAL ROCKET ILR-33 AMBER 2K
Mr. Michal Pakosz, Warsaw, Poland, Łukasiewicz Research Network – Institute of Aviation

IAC-20.D2.6.8
DEVELOPMENT OF A LOW COST, LOW ALTITUDE TEST VEHICLE FOR HIGH DYNAMIC PRESSURE PARACHUTE TESTING
Mr. Márton Géczi, Delft, The Netherlands, Delft Aerospace Rocket Engineering (DARE)
IAC-20.D2.6.9
LOW COST ROCKET GUIDANCE AND AERODYNAMIC CONTROL DEVELOPMENT PLATFORM
Mr. Dariusz Miedziński, Warszawa, Poland, Warsaw University of Technology (WUT)

D2.7. Small Launchers: Concepts and Operations (Part I)

Co-Chair: *Mr. Harry A. Cikanek, National Oceanic and Atmospheric Administration (NOAA), United States ; Mr. Ulf Palmnäs, SSC, Sweden ;*

Rapporteur: *Mr. Florian Ruhhammer, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

IAC-20.D2.7.1
SMALLSATS BY THE NUMBERS: GROWING SMALLSAT ACTIVITY AND ITS IMPLICATIONS FOR THE SMALL LAUNCH MARKET
Ms. Janice Starzyk, DPO, United States

IAC-20.D2.7.3
RELIABLE LAUNCH OPTIONS FOR SMALL SATELLITES IN THE AGE OF INCREASED LUNAR EXPECTATIONS
Mr. Lars Hoffman, Huntington Beach, United States, Rocket Lab

IAC-20.D2.7.6
HYIMPULSE MINI LAUNCHER – REVOLUTIONARY ACCESS TO SPACE FOR SMALL SATELLITES
Dr. Goutham Karthikeyan, Neuenstadt am Kocher, Germany, HyImpulse Technologies GmbH

IAC-20.D2.7.8
SYSTEM STUDY OF REUSABLE ORBITER FOR EPSILON LAUNCH VEHICLE
Mr. Ryoma Yamashiro, Tsukuba, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.D2.7.13
RADICAL LOW-COST SOLUTION TO A COMMERCIALLY FEASIBLE NANO-LAUNCHER
Dr. Oswaldo Loureda, Foz do Iguaçu, Brazil

D2.8-A5.4. Space Transportation Solutions for Deep Space Missions

Co-Chair: *Mr. K. Bruce Morris, RUAG Space, United States ; Mr. Josef Wiedemann, MT Aerospace AG, Germany ;*

Rapporteur: *Dr. Gerhard Schwehm, ESA (retired), The Netherlands;*

IAC-20.D2.8-A5.4.1
A GATEWAY SUPPLY MISSION SCENARIO AND FLIGHT PLAN WITH UPGRADED H3 AND HTV-X
Dr. Shoyo Hyodo, Nagoya city, Japan, Mitsubishi Heavy Industries, Ltd.

IAC-20.D2.8-A5.4.3
ASSESSMENT OF ON-ORBIT CRYOGENIC REFUELING: OPTIMAL DEPORT ORBITS, LAUNCH VEHICLE MASS SAVINGS, AND DEEP SPACE MISSION OPPORTUNITIES
Mr. Justin Clark, Milford, United States, The Ohio State University College of Engineering

IAC-20.D2.8-A5.4.4
OPTIMAL SPACECRAFT TRAJECTORIES UNDER UNCERTAINTIES
Mr. Deepak Gaur, Noida, India, Amity School of Engineering

IAC-20.D2.8-A5.4.6
KNOWLEDGE AND TECHNOLOGY BUILDING BLOCKS FOR SPACE ACCESS ARCHITECTURES
Mr. Arun Subramanian Venkataraman, Chennai, India

IAC-20.D2.8-A5.4.9
NUCLEAR THERMAL PROPULSION (NTP) POST-BURN TRANSIENT: COOL-DOWN PROPELLANT CONSUMPTION AND ITS EFFECT ON TOTAL DELTA-V
Mr. Jack Plank, Columbus, United States, The Ohio State University College of Engineering

D2.9-D6.2. Emerging Global Space Ventures

Co-Chair: *Ms. Aline Decadi, European Space Agency (ESA), France ; Mr. Charles E. Cockrell Jr., National Aeronautics and Space Administration (NASA), United States ;*

Rapporteur: *Dr. Andrew Aldrin, Florida Institute of Technology, United States ;*

Keywords describing the session best: 1. Space Transportation 2. Commercial Space 3. New Space Ventures

IAC-20.D2.9-D6.2.4
'THE AFRICAN-EUROPEAN SPACE ALLIANCE - A COMMERCIAL FUTURE FOR SPACE MISSIONS'
Mr. Guido Schwartz, Bremen, Germany, Foundation for Space Development South Africa

IAC-20.D2.9-D6.2.7
THE OUTLOOK OF HUMAN SPACEFLIGHT IN 2070: THE OUTLOOK, CONSIDERATION AND ARISING LEGAL ISSUES.
Mr. Scott Steele, Milton Keynes, United Kingdom, Open University

D2.VP. Virtual Presentations - IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM

Co-Chair: *Mr. Christophe Bonnal, Centre National d'Etudes Spatiales (CNES), France ; Dr. Jens Lassmann, ArianeGroup, Germany ;*

Rapporteur: *Mr. Markus Jaeger, Airbus Defence & Space, Space Systems, Germany ;*

IAC-20.D2.VP.1
DEVELOPMENT UPDATE ON MODUL INTERPLANETARY TRANSPORT SYSTEM (M-ITS)
Mr. Rok Kete, Ajdovscina, Slovenia

IAC-20.D2.VP.4
CONCEPT DESIGN OF AN IN-ORBIT PROPULSION SYSTEM BASED ON MAGNETOFLUIDS
Ms. Franziska Hild, Stuttgart, Germany, University of Stuttgart

IAC-20.D2.VP.5
DESIGN AND VERIFICATION OF A ROCKET'S MIRRORING SYSTEM BASED ON DIGITAL TWIN TECHNOLOGY
Mrs. Mengyun Yue, Beijing, China, Beijing Institute of Astronautical Systems Enginnering

IAC-20.D2.VP.8
GENERALIZATION OF PERFORATED FORCED CONVECTION HEAT TRANSFER AND IMPLICATIONS ON AEROSPACE PROPULSION SYSTEMS
Ms. Koshika Pandey, Lucknow, India, SRM Institute of Science and Technology

IAC-20.D2.VP.14
DESIGN AND FABRICATION OF REACTION CONTROL SYSTEM FOR MODEL ROCKETS
Mr. Shantanu Trivedi, Vadodara, India, SRM Institute of Science and Technology

D3. 18TH IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND DEVELOPMENT

D3.1. Strategies & Architectures as the Framework for Future Building Blocks in Space Exploration and Development

Co-Chair: *Mr. John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States ; Dr. Maria Antonietta Perino, Thales Alenia Space Italia, Italy ;*

Rapporteur: *Prof. Anouck Girard, University of Michigan, United States ;*

IAC-20.D3.1.1
DEVELOPING MISSION ARCHITECTURES FOR FORTHCOMING SPACE EXPLORATION PURSUITS USING EXPERIENCE OF MULTI-DISCIPLINARY INTERNATIONAL PROJECTS.
Dr. Olga Bannova, Houston, TX, United States, University of Houston

IAC-20.D3.1.2
TOWARDS A LUNAR OPEN ARCHITECTURE: FACILITATING TRANSPARENCY AND COLLABORATION IN THE NEW ERA OF LUNAR EXPLORATION
Ms. Mehak Sarang, Cambridge, United States, Massachusetts Institute of Technology (MIT)

IAC-20.D3.1.3
AN INTERNATIONAL DESIGN REFERENCE ARCHITECTURE FOR THE MOON VILLAGE
Mr. John C. Mankins, SANTA MARIA, United States, ARTEMIS Innovation Management Solutions, LLC

IAC-20.D3.1.4
BACKUP STRATEGIES FOR MARS LANDING
Prof. Jean-Marc Salotti, Talence, France, Laboratoire de l'Intégration du Matériau au Système

IAC-20.D3.1.7
MARKET CHARACTERIZATION FOR ON-ORBIT SERVICING, ASSEMBLY, AND MANUFACTURING
Ms. Carissa Christensen, Alexandria VA, United States, Bryce Space and Technology

IAC-20.D3.1.10
ACHIEVING SUSTAINABLE PLANETARY EXPLORATION THROUGH NATURAL AND INDUSTRIAL METHODS
Ms. Arjumand Alvi, Katy, United States

D3.2A. Systems and Infrastructures to Implement Sustainable Space Development and Settlement - Systems

Co-Chair: *Ms. Paivi Jukola, Aalto University, Finland ; Mr. Gary Barnhard, XISP-Inc, United States ;*

Rapporteur: *Dr. Junjiro Onoda, ISAS/JAXA, Japan ; Dr. Christopher Moore, National Aeronautics and Space Administration (NASA), United States ;*

IAC-20.D3.2A.1
LUNAR COMMS AND NAV INFRASTRUCTURE – FIRST ORBITER LUNAR PATHFINDER READY TO RELAY DATA TO AND FROM THE MOON FROM 2023 ONWARDS
Mrs. Nelly Offord Harle, Guildford, United Kingdom, Surrey Satellite Technology Ltd (SSTL)

IAC-20.D3.2A.2
CONCEPTUAL DESIGN OF A MARS CONSTELLATION FOR GLOBAL COMMUNICATION SERVICES USING SMALL SATELLITES
Mr. Daniel Wischert, Noordwijk, Germany, Space Generation Advisory Council (SGAC)

IAC-20.D3.2A.3
POWER SYSTEMS ENGINEERING INFRASTRUCTURE: SCALABLE INTEROPERABLE, EVA AND ROBOTIC COMPATIBLE POWER GENERATION, STORAGE, AND DISTRIBUTION SYSTEMS FOR CISLUNAR SPACE
Mr. Gary Barnhard, Cabin John, United States, XISP-Inc

IAC-20.D3.2A.5
VACUUM TRANSPORT SYSTEM FOR MARS
Prof. Piotr Wrzecioniarz, Wrocław, Poland, Wroclaw University of Science and Technology

IAC-20.D3.2A.6
USING PHOBOS AS A PASSIVE LAUNCH SYSTEM FOR SOLAR SYSTEM SPACECRAFT
Prof. Pierfrancesco La Mura, Leipzig, Germany, HHL Leipzig Graduate School of Management

IAC-20.D3.2A.7
TERRAFORMING PLANET EARTH AS A NECESSARY TEST FOR MARTIAN TERRAFORMING
Mr. Giorgio Gaviraghi, verbania, Italy, Unispace Exponential Creativity

IAC-20.D3.2A.11
HOW TO ACCELERATE THE PRODUCTION PROCESSES FOR THE SURVIVAL OF HUMAN COLONIES.
Mr. Lukasz Wilczynski, Krakow, Poland, European Space Foundation

IAC-20.D3.2A.12
IN-SITU RESOURCE UTILIZATION: STUDY OF METHANE-POWERED COMBUSTION ENGINE CONCEPTS FOR MECHANICAL APPLICATIONS ON TITAN
Mr. Augustin Gallois, Dampmart, France, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace

D3.2B. Systems and Infrastructures to Implement Sustainable Space Development and Settlement - Technologies

Co-Chair: *Mr. Alain Pradier, European Space Agency (ESA), The Netherlands ; Dr. Christopher Moore, National Aeronautics and Space Administration (NASA), United States ;*

Rapporteur: *Dr. Alain Dupas, European Bank for Reconstruction and Development, France ; Mr. Gary Barnhard, XISP-Inc, United States ;*

IAC-20.D3.2B.2
STUDY AND TRADE-OFF REVIEW OF NEW CONCEPTS FOR LUNAR HYDRO ANALYSIS
Mr. Palaniappan Subramanian, Dehradun, India, University of Petroleum and Energy Studies

IAC-20.D3.2B.5
AN OVERVIEW OF THE SPACE SERVICING REQUIREMENTS IN A SUSTAINABLE SPACE AGE
Mr. Pablo Lopez Negro, Cannes, France, Thales Alenia Space France, 100 Boulevard du Midi, 06150 Cannes la Bocca, France

IAC-20.D3.2B.6
HOTDOCK: DESIGN AND VALIDATION OF A NEW GENERATION OF STANDARD ROBOTIC INTERFACE FOR ON-ORBIT SERVICING
Dr. Pierre Letier, Sint-Stevens-Wolluwe, Belgium, Space Applications Services

IAC-20.D3.2B.9
UNCERTAINTY ESTIMATION BASED GAME CONTROL FOR ATTITUDE REGULATION DURING ON-ORBIT ASSEMBLY
Ms. Yuan Chai, Xi'an, China, Northwestern Polytechnical University

IAC-20.D3.2B.10
AN IMPROVED ROVER NAVIGATION SYSTEM FOR LONG RANGE TRAVERSES: SURPASSING 1KM PER SOL IN PLANETARY EXPLORATION
Mr. Róbert Marc, Stevenage, United Kingdom, Airbus Defence and Space

D3.3. Space Technology and System Management Practices and Tools

Co-Chair: *Mr. John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States ; Ms. Paivi Jukola, Aalto University, Finland ;*

Rapporteur: *Dr. Maria Antonietta Perino, Thales Alenia Space Italia, Italy ;*

IAC-20.D3.3.3
VISION ENABLED SMART MANIPULATIONS FOR IN-SPACE CONSTRUCTION
Prof. Xiu-Tian Yan, Glasgow, United Kingdom, University of Strathclyde

D4. 18TH IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE

D4.1. Innovative Concepts and Technologies

Co-Chair: Mr. Roger X. Lenard, LPS, United States ; Mr. Giorgio Saccoccia, Italian Space Agency (ASI), Italy ;

Rapporteur: Dr. Xiaowei WANG, China Academy of Launch Vehicle Technology (CALT), China ;

IAC-20.D4.1.3
CHIPSATS - NEW OPPORTUNITIES
Mr. Frederic Schoutetens, Illkirch-Graffenstaden, France, International Space University (ISU)

IAC-20.D4.1.4
THE SPACE MEDICAL CENTRE
Dr. Ilaria Cinelli, Vienna, Austria, Space Generation Advisory Council (SGAC)

IAC-20.D4.1.9
GLOBAL TRENDS IN ON-ORBIT SERVICING, ASSEMBLY, AND MANUFACTURING
Ms. Amana Abdurrezak, Alexandria, United States, IDA Science and Technology Policy Institute

IAC-20.D4.1.10
A CONCEPT FOR SPACE COLONIZATION PROCESS BASED ON ASTEROID MINERY
Mr. Salvador Daniel Escobedo Casillas, Zapopan, Mexico, University of Guadalajara

IAC-20.D4.1.13
BLOCKCHAIN IN SPACE INDUSTRY
Mr. Sulabh Arora, Panchkula, India, NEC

IAC-20.D4.1.17
AVATARMEDIC: CREATING A NEXT GENERATION SOLAR-SYSTEM-WIDE MEDICAL CAPABILITY
Mr. John Hanacek, San Diego, United States

IAC-20.D4.1.20
ASTRAX UNIVERSAL SPACE PLATFORM BY USING BLOCKCHAIN TECHNOLOGY
Mr. Taichi Yamazaki, Kamakura, Japan, ASTRAX, Inc.

D4.2. Contribution of Space Activities to Solving Global Societal Issues

Co-Chair: *Dr. Giuseppe Reibaldi, Moon Village Association (MVA), Austria ; Prof. Yu Lu, China Academy of Launch Vehicle Technology, China, China ;*

Rapporteur: *Ms. Paivi Jukola, Aalto University, Finland ;*

IAC-20.D4.2.1
MOON VILLAGE BENEFITS TO SOCIETY
Dr. Giuseppe Reibaldi, Vienna, Austria, Moon Village Association (MVA)

IAC-20.D4.2.2
A LITERATURE REVIEW OF PSYCHOSOCIAL STRESS IN ICE ENVIRONMENTS FOR THE MOON VILLAGE RESIDENCE
Prof.Dr. Shin-ichiro SASAHARA, Tsukuba-city, Japan, University of Tsukuba

IAC-20.D4.2.4
HYDROGEN ENERGY REALIZES A SUSTAINABLE DEVELOPMENT OF THE GLOBAL SPACE AND MOON FOR FUTURE HUMANKIND
Dr. Hiroaki Kobayashi, Kanagawa, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.D4.2.5
THE RESEARCH CENTRE FOR SPACE COLONY AT THE TOKYO UNIVERSITY OF SCIENCE - DUAL SPACE–EARTH DEVELOPMENT OF FUTURE SPACE LIVING TECHNOLOGIES -
Prof. Shinichi Kimura, Chiba, Japan, Tokyo University of Science

IAC-20.D4.2.7
A SOCIAL LICENSE TO OPERATE FOR LUNAR RESOURCES ACTIVITIES: TOWARDS A FAIR AND SUSTAINABLE ERA OF SPACE EXPLORATION
Mr. Antonino Salmeri, Luxembourg, Luxembourg , University of Luxembourg

IAC-20.D4.2.8
ROADMAP FOR A NON-SPACE FARING COUNTRY TO JOIN THE MOON VILLAGE
Mr. Ghanim Alotaibi, ahmadi, Kuwait

IAC-20.D4.2.9
ARTEMIS : PERSPECTIVES FROM AUSTRALIA, JAPAN, KOREA AND INDIA
Dr. Aaron Pereira, Adelaide, Australia, University of Adelaide

IAC-20.D4.2.10
ASSESSMENT OF LUNAR LAVA TUBES FOR HUMAN HABITATION USING SMALL ROBOTIC SWARM TECHNOLOGIES
Mr. Charles Lauer, Lansing, MI, United States, Rocketplane Global, Inc.

IAC-20.D4.2.11
ASTRAX LUNAR CITY DEVELOPMENT PROJECT 2020
Mr. Taichi Yamazaki, Kamakura, Japan, ASTRAX, Inc.

IAC-20.D4.2.14
METHODOLOGIES FOR MAKING "TAKOYAKI" UNDER ZERO GRAVITY AND MAKING LUNAR SHAPED "TAKOYAKI."
Mr. Masahiko Takehara, Hiratsuka, Japan, ASTRAX LAB

D4.3. Entering the Space Elevator Era

Co-Chair: *Dr. Peter Swan, International Space Elevator Consortium, United States ; Dr. Yoji Ishikawa, Obayashi Corporation, Japan ;*

Rapporteur: *Dr. John Knapman, International Space Elevator Consortium, United Kingdom ;*

Keywords describing the session best: 1. space elevator 2. IAA study 3. Verification 4. Validation 5. Space Tethers

IAC-20.D4.3.2
FAST TRANSIT TO INTERPLANETARY DESTINATIONS
Dr. Peter Swan, Paradise Valley, United States, International Space Elevator Consortium

IAC-20.D4.3.3
EXPERIMENTAL STUDY ON HEAVY LOAD CLIMBER APPLYING HYBRID ROLLER MECHANISM FOR SMALL MANNED SPACE ELEVATOR
Prof. Fumihiro Inoue, Kanagawa, Japan, Shonan Institute of Technology

IAC-20.D4.3.4
THREE-DIMENSIONAL ANALYSIS OF A COUNTERWEIGHT TYPE SPACE ELEVATOR
Mr. Taiki Okino, Hamamatu, Japan, Shizuoka University

IAC-20.D4.3.5
BENEFICIAL ENVIRONMENTAL IMPACTS OF SPACE ELEVATORS
Dr. Peter Swan, Paradise Valley, United States, International Space Elevator Consortium

D4.4. Strategies for Rapid Implementation of Interstellar Missions: Precursors and Beyond

Co-Chair: *Dr. Mae Jemison, 100 Year Starship, United States ; Prof. Giancarlo Genta, Politecnico di Torino, Italy ;*

Rapporteur: *Mr. Les Johnson, National Aeronautics and Space Administration (NASA), Marshall Space Flight Center, United States ;*

IAC-20.D4.4.1
INTERSTELLAR PROBE: SCIENCE DISCOVERIES AT THE BOUNDARY TO INTERSTELLAR SPACE AND BEYOND
Dr. Pontus Brandt, Laurel, United States, Johns Hopkins University Applied Physics Laboratory

IAC-20.D4.4.2
RAPID ACCESS TO THE INTERSTELLAR MEDIUM: A FEASIBILITY STUDY
Dr. Leon Alkalai, Pasadena, CA, United States, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory

IAC-20.D4.4.3
A PRAGMATIC INTERSTELLAR PROBE MISSION: PROGRESS AND STATUS
Dr. Ralph L. McNutt, Jr., Laurel, MD, United States, The John Hopkins University

IAC-20.D4.4.4
SYSTEM ENGINEERING A SOLAR THERMAL PROPULSION MISSION CONCEPT FOR RAPID INTERSTELLAR MEDIUM ACCESS
Dr. Jonathan Sauder, Pasadena, United States, Jet Propulsion Laboratory - California Institute of Technology

IAC-20.D4.4.5
VAPORIZATION OF INTERPLANETARY DUST DURING THE ACCELERATION PHASE OF A LASER-DRIVEN LIGHTSAIL
Ms. Monika Azmanska, Montreal, Canada, McGill University

IAC-20.D4.4.6
FEASIBILITY ASSESSMENT OF DECELERATION TECHNOLOGIES FOR INTERSTELLAR PROBES
Mr. Kush Kumar Sharma, ILLKIRCH-GRAFFENSTADEN, France, International Space University (ISU)

IAC-20.D4.4.8
CASE STUDY OF AN INTERSTELLAR MISSION TO ALTAIR: FOUNDATIONS FOR INTERSTELLAR TRAVEL WITH ADVANCED 21ST CENTURY TECHNOLOGY
Dr. Ugur Guven, Palm Beach Gardens, United States, UN CSSTEAP

IAC-20.D4.4.9
INTERSTELLAR TRAVEL: POSSIBILITY OR A DREAM – PLAUSIBILITY ANALYSIS
Dr. Ugur Guven, Palm Beach Gardens, United States, UN CSSTEAP

IAC-20.D4.4.10
COMPREHENSIVE CASE STUDY OF AN INTERSTELLAR TRAVEL TO BARNARD'S STAR VIA ELECTRIC ION PROPULSION EMPLOYING SEMI-RELATIVISTIC FLIGHT PARAMETER
Ms. Kirti Vishwakarma, Gurgaon, India, University of Petroleum and Energy Studies

IAC-20.D4.4.11
A FEASIBILITY ANALYSIS OF INTERSTELLAR RAMJET CONCEPTS
Ms. Taavishe Gupta, Illkirch-Graffenstaden, France, International Space University (ISU)

IAC-20.D4.4.13
TECHNOLOGIES EVOLUTION FOR INTERSTELLAR TRAVEL CAPABILITY
Mr. Giorgio Gaviraghi, verbania, Italy, Unispace Exponential Creativity

D4.5. Space Resources, the Enabler of the Earth-Moon Econosphere

Co-Chair: *Mr. Roger X. Lenard, LPS, United States ; Dr. Peter Swan, International Space Elevator Consortium, United States ;*

Rapporteur: *Ms. Helen Tung, NewSpace2060, Australia ;*

Keywords describing the session best 1. Space Resources 2. Mining Moon 3. Asteroid Minerals 4. Lunar Water

IAC-20.D4.5.4
LAUNCH STATUS CHECK: COMMERCIAL LUNAR ACTIVITY IN 2020
Mr. Austin Murnane, Brooklyn, United States

IAC-20.D4.5.6
ARIZONA STATE UNIVERSITY DESIGN OF PROSPECTING SATELLITE SEGMENT
Dr. Peter Swan, Paradise Valley, United States, International Space Elevator Consortium

IAC-20.D4.5.7
ANALYSIS OF TECHNOLOGY, ECONOMIC AND LEGISLATION READINESS LEVELS OF ASTEROID MINING INDUSTRY : A BASE FOR THE FUTURE SPACE RESOURCE UTILIZATION MISSIONS
Ms. Smiriti Srivastava, Singapore, Singapore, Republic of, Space Generation Advisory Council (SGAC)

IAC-20.D4.5.10
THE HAGUE INTERNATIONAL SPACE RESOURCES GOVERNANCE WORKING GROUP: CONCLUSION AND WAY FORWARD
Ms. Tanja Masson-Zwaan, Leiden, The Netherlands, International Institute of Air and Space Law, Leiden University
EXPANDING THE VIABILITY ENVELOPE AND DRIVING DOWN THE COSTS OF SPACE RESOURCE UTILIZATION BY IMPROVING TRANSPORTATION EFFICIENCY
Mr. Nicholas Bennett, Hawthorn, Australia, University of New South Wales

IAC-20.D4.5.15
APPLICATION OF PRACTICAL TERRESTRIAL RESOURCE DEVELOP METHODS FOR OFF EARTH MINING
Mr. Jim Hondros, Stirling, South Australia, Australia

IAC-20.D4.5.16
WASTE MANAGEMENT FOR LUNAR RESOURCES ACTIVITIES: TOWARDS A CIRCULAR LUNAR ECONOMY
Mr. Paolo Pino, Messina, Italy, Politecnico di Torino

D4.VP. Virtual Presentations - 18th IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE

Co-Chair: *Prof. Gongling Sun, International Space University, France ; Ms. Helen Tung, NewSpace2060, Australia ;*

IAC-20.D4.VP.1
LONG-TERM MOBILE AND STATIONARY INHABITED STATIONS ON THE SURFACE OF VENUS.
Mr. Oleg Aleksandrov, San Francisco, United States, Private individual www.oleg.space

IAC-20.D4.VP.3
COMMERCIAL SPACE STATIONS WITH ARTIFICIAL GRAVITATION AS REAL BUSINESS
Mr. Oleg Aleksandrov, San Francisco, United States, Private individual www.oleg.space

IAC-20.D4.VP.5
RESULTS OF ZPS PENETRATOR TESTS
Mr. Roger X. Lenard, Edgewood, NM, United States, LPS

D5. 53RD IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE ACTIVITIES

D5.1. Quality and Safety, always a beginning!

Co-Chair: *Dr. Manola Romero, 3AF, France ; Prof. Alexander S. Filatyev, Central AeroHydrodynamic Institute (TsAGI), Russian Federation ;*

Rapporteur: *Ms. Kaitlyn Holm, University of Pennsylvania, United States ;*

Keywords describing the session best: 1. Quality 2. Safety 3. Risk 4. Lessons learned 5. New space

IAC-20.D5.1.1
A NEW COMPLETE SOLUTION TO EFFICIENTLY UTILIZE MODEL BASED SAFETY ANALYSIS (MBSA) TO EVALUATE AEROSPACE SYSTEMS
Mr. Akram Abdellatif, Weßling, Germany, German Aerospace Centre (DLR)

IAC-20.D5.1.3
A DEPLOYABLE REDUNDANT UNIT FOR SPACECRAFT CAUSALITIES
Mr. Chiranthan K, tumkur, India, Ramaiah Institute of Technology
ELECTRICAL SAFETY MANAGEMENT SYSTEM FOR DESIGN, DEVELOPMENT AND OPERATIONS OF SATELLITE SYSTEMS
Mr. Khwaja Bilal Jillani, Karachi, Pakistan

IAC-20.D5.1.10
A DIALOGUE ON THE DIGITIZATION OF REQUIREMENTS, VERIFICATION, AND TEST MANAGEMENT WITH DATA-DRIVEN SYSTEMS ENGINEERING (DDSE)
Ms. Supreet Kaur, Illkirch-Graffenstaden, France, Valispace

IAC-20.D5.1.14
WHISKERS RISK ASSESSMENT METHODOLOGY FOR LEAD-FREE INTERCONNECTION OF COTS COMPONENT FOR SPACE MISSION
Dr. Zhang Wei, Beijing, China, China Academy of Space Technology (CAST)

D5.2. KKnowledge management for space activities in the digital transformation age

Co-Chair: *Ms. Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom ; Mr. Patrick Hambloch, University of Alabama in Huntsville, Germany ;*

Rapporteur: *Dr. Daniel Galarreta, Centre National d'Etudes Spatiales (CNES), France ; Prof. Jeanne Holm, United States ;*

Keywords describing the session best: 1. lessons learned 2. innovation 3. knowledge capture and sharing 4. collaboration

IAC-20.D5.2.1
PROMOTING GLOBAL SPACE KNOWLEDGE AND EXPERTISE IN DEVELOPING COUNTRIES
Prof. Jeanne Holm, Sierra Madre, CA, United States

IAC-20.D5.2.6
NOVEL APPROACH FOR LESSONS LEARNED @ ESA
Mr. Andrew Herd, Noordwijk, The Netherlands, ESA

IAC-20.D5.2.7
STREAMLINED REQUIREMENTS MANAGEMENT AND MATCHMAKING BETWEEN SPACE PAYLOADS AND SATELLITE BUS ENABLED BY INDUSTRY4.0 TRANSFORMATION AND DATA INTELLIGENCE
Mr. Pouya Haschemi, Darmstadt, Germany, HOSTmi GmbH

IAC-20.D5.2.8
SIMULATION OF OFF-WORLD COMMUNITIES BY DESIGN OF STANDARDISED LEARNING PROCEDURES TO ASSESS SAFETY MEASURES AND RISK PREVENTION
Dr. Federico Monaco, Parma, Italy, Università degli Studi di Parma

IAC-20.D5.2.9
A BLOCKCHAIN-BASED SYSTEM FOR TRACKING AND COLLISION AVOIDANCE OF RESIDENT SPACE OBJECTS
Ms. Antonia Russo, Reggio Calabria, Italy, University Mediterranea of Reggio Calabria

IAC-20.D5.2.10
AUTOMATED KNOWLEDGE CENTRE WITH MACHINE LEARNING APPROACH
Ms. Salma Morris, Trivandrum, India, Liquid Propulsion Systems Centre(LPSC), Indian Space Research Organization (ISRO)

IAC-20.D5.2.11
DEVELOPING A COMMUNITY OF PRACTICE TO PROMOTE KNOWLEDGE SHARING ACROSS THE GLOBAL CUBESAT INDUSTRY
Ms. Mary Grace Kalnay, Montreal, Canada, Concordia University

IAC-20.D5.2.12
IMPACT OF ORGANIZATIONAL CULTURE ON KNOWLEDGE MANAGEMENT EFFECTIVENESS
Ms. Karina Perez Molina, Arlington, United States, Aerospace Industries Association

IAC-20.D5.2.15
KNOWLEDGE MANAGEMENT IN ACADEMIC AND INDUSTRIAL INSTITUTION RELATED TO AEROSPACE FIELD
Mr. Jacob Loefdahl, Noordwijk, The Netherlands, ESA - European Space Agency

D5.3. Space Environment and Effects on Space Missions

Co-Chair: *Mr. Jean-Francois Roussel, Office National d'Etudes et de Recherches Aérospatiales (ONERA), France ; Prof. MENGU CHO, Kyushu Institute of Technology, Japan ;*

Rapporteur: *Mr. Carlos Soares, NASA Jet Propulsion Laboratory, United States ;*

Keywords describing the session best: 1. Space environment 2. Space weather 3. Radiation 4. Spacecraft degradation 5. Charging 6. Contamination 7. Natural and induced space environments 8. Combined effects of natural and induced space environments

IAC-20.D5.3.4
SOFTWARE FOR TESTING AND MITIGATING RADIATION-INDUCED EFFECTS IN COMMERCIALLY AVAILABLE INTEGRATED CIRCUITS
Mr. Richard Arthurs, New Westminster, Canada, Simon Fraser University

IAC-20.D5.3.8
DYNAMIC RADIATION TESTING ON COMMERCIAL INTEGRATED MEMS INERTIAL NAVIGATION SYSTEM WITH X-RAYS AND ELECTRONS
Mrs. Giulia Bazzano, Frascati (RM), Italy, ENEA - Ente per le Nuove Tecnologie l'Energia e lAmbiente

D5.4-E9.2 Cyber-Security Threats to Space Missions And Countermeasures to Address Them

Co-Chair: *Mr. Stefano Zatti, University of Rome "La Sapienza", Italy;*
Rapporteur: *Mr. Julien Airaud, Centre National d'Etudes Spatiales (CNES), France ;*

IAC-20.E9.2.D5.4.1
KEYNOTE: CRISES: CYBERSECURITY FOR SMALL-SATELLITE ECOSYSTEM - STATE-OF-THE-ART AND OPEN CHALLENGE
Prof.Dr. Emiliano Casalicchio, Rome, Italy, Sapienza University of Rome

IAC-20.E9.2.D5.4.3
DO CYBERSECURITY LAWS UNDERSTAND CYBERSECURITY? - THE CASE OF THREAT AGAINST SATELLITE SYSTEMS
Ms. Dimitra Stefoudi, Leiden, The Netherlands, Leiden University

IAC-20.E9.2.D5.4.4
SECURITY-COMPLIANT CYBER MEASURES FOR SATELLITE SYSTEMS
Ms. Helena Correia Mendonça, Lisbon, Portugal, Vieira de Almeida & Associados

IAC-20.E9.2.D5.4.5
CYBER-RISK ASSESSMENT IN THE SPACE DOMAIN: CATEGORIZING CYBER-RISK ACROSS SPACE OPERATIONS
Mr. PJ Blount, Lorentzweiler, Luxembourg , University of Luxembourg

IAC-20.E9.2.D5.4.6
HOW TO ESTIMATE INSURANCE COVERAGE FOR CYBERSECURITY PROTECTION FOR SATELLITES
Mr. Mclee Kerolle, Dix Hills, United States, Space Generation Advisory Council (SGAC)

IAC-20.E9.2.D5.4.7
THE MISSION AS A TREE: A NOVEL APPROACH TO IDENTIFYING CYBER THREATS TO SATELLITES
Mr. Sébastien Bonnart, Atlanta, United States, Space Generation Advisory Council (SGAC)

IAC-20.E9.2.D5.4.8
CYBER RANGE SOLUTIONS AND SERVICES FOR SPACE ASSETS
Mr. Gianluca Cerrone, Leiden, The Netherlands, Rhea Group

IAC-20.E9.2.D5.4.9
CRYPTO TRADEABLE EARTH OBSERVATION (CTEO)
Dr. Michele Iacobellis, Bari, Italy, Planetek Italia

IAC-20.E9.2.D5.4.11
THE CHALLENGE OF PROTECTING SPACE-BASED ASSETS AGAINST CYBER THREATS
Mr. Antonio Carlo, Rome, Italy, Space Generation Advisory Council (SGAC)

D5.VP. Virtual Presentations - 53rd IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE ACTIVITIES

Co-Chair: *Prof. Jeanne Holm, United States ; Ms. Roberta*

Mugellesi-Dow, European Space Agency (ESA), United Kingdom ;

IAC-20.D5.VP (non-confirmed)
SUPPLY CHAIN MANAGEMENT IS VITAL TO THE SPACE INDUSTRY OF MANUFACTURING SATELLITES DUE TO THE NEED FOR COST EFFICIENT OPERATIONAL SUPPORT AND TO THE IMPORTANCE OF STREAMLINING ENGINEERING SUPPLY CHAIN ACTIVITY IN ORDER TO INCREASE EFFECTIVE
Mrs. Maryam Belhoul, Dubai, United Arab Emirates, Mohammed Bin Rashid Space Centre (MBRSC)

D6. IAF SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUES

D6.1. Commercial Spaceflight Safety and Emerging Issues

Co-Chair: *Mr. John Sloan, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States ; Dr. Francesco Santoro, Altec S.p.A., Italy ;*

Rapporteur: *Dr. Gennaro Russo, Campania Aerospace District, DAC, Italy ;*

IAC-20.D6.1.1
SUBORBITAL FLIGHTS IN JAPAN: FILLING THE GAP OF THE JAPANESE SPACE ACTIVITIES ACT (2016)
Prof. MANAMI SASAOKA, Yokohama, Japan, Yokohama National University

IAC-20.D6.1.2
UPDATE TO STREAMLINING FAA COMMERCIAL SPACE TRANSPORTATION REGULATIONS
Mr. Wayne Monteith, Washington, United States, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST)

IAC-20.D6.1.3 (non-confirmed)
INTEROPERABLE DATA EXCHANGE FOR SAFE AND EFFICIENT LAUNCH AND RE-ENTRY OPERATIONS IN AN INTERNATIONAL ENVIRONMENT
Mr. Sven Kaltenhaeuser, Braunschweig, Germany, DLR, German Aerospace Center

IAC-20.D6.1.7
INNOVATIVE TRACKING TECHNIQUES APPROACHES: FROM STRATOSPHERIC VEHICLE TESTING TO COMMERCIAL SPACE TRANSPORTATION APPLICATIONS
Mr. Paolo Marzioli, Rome, Italy, Sapienza University of Rome

IAC-20.D6.1.10
PROPOSAL FOR A MODERN INDUSTRY-GOVERNMENT PARTNERSHIP TO ADVANCE COMMERCIAL SPACEFLIGHT SAFETY: THE SPACE SAFETY INSTITUTE
Mr. Tommaso Sgobba, noordwijk, The Netherlands, International Association for the Advancement of Space Safety

IAC-20.D6.1.12
ACOUSTICS ASSISTED FIRE PROPAGATION
Mr. Vinayak Malhotra, chennai, India, SRM University Chennai

D6.2-D2.9. Safe Transportation Systems for Sustainable Commercial Human Spaceflight / Small Launchers: Concepts and Operations (Part II)

Co-Chair: *Ms. Aline Decadi, European Space Agency (ESA), France; Mr. Charles E. Cockrell Jr., National Aeronautics and Space Administration (NASA), United States ;*

Rapporteur: *Dr. Andrew Aldrin, Florida Institute of Technology, United States ;*

Keywords describing the session best: 1. Space Transportation 2. Commercial Space 3. New Space Ventures

IAC-20.D2.9-D6.2.4
'THE AFRICAN-EUROPEAN SPACE ALLIANCE - A COMMERCIAL FUTURE FOR SPACE MISSIONS'
Mr. Guido Schwartz, Bremen, Germany, Foundation for Space Development South Africa

IAC-20.D2.9-D6.2.7
THE OUTLOOK OF HUMAN SPACEFLIGHT IN 2070: THE OUTLOOK, CONSIDERATION AND ARISING LEGAL ISSUES.
Mr. Scott Steele, Milton Keynes, United Kingdom, Open University

D6.3. Enabling safe commercial spaceflight: vehicles and spaceports

Co-Chair: *Mr. John Sloan, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States ; Dr. Francesco Santoro, Altec S.p.A., Italy ;*

Rapporteur: *Dr. Gennaro Russo, Campania Aerospace District, DAC, Italy ;*

IAC-20.D6.3.1
FRENCH GUIANA SPACE CENTER: IMPLEMENTING SOLUTIONS FOR SMALL LAUNCH VEHICLES
Mrs. Laura Appolloni, Paris, France, Centre National d'Etudes Spatiales (CNES)

IAC-20.D6.3.4
HOW WILL ITU AGENDA "REGULATORY PROVISIONS TO FACILITATE RADIOCOMMUNICATIONS FOR SUB-ORBITAL VEHICLES" AFFECT COMMERCIAL SOV ACTIVITY REGULATIONS, ESPECIALLY IN CHINA.
Mr. Wei Shang, Beijing, China, China Academy of Launch Vehicle Technology (CALT)

IAC-20.D6.3.5
SPACEPORT CONCEPT IN GERMANY
Mr. Sven Kaltenhaeuser, Braunschweig, Germany, DLR, German Aerospace Center

IAC-20.D6.3.6
CONTEMPORARY IMPLICATIONS OF STATE AUTHORIZATION AND CONTINUING SUPERVISION TO COMMERCIAL SPACE FLIGHT ACTIVITIES
Mr. Yu Takeuchi, Tsukuba, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.D6.3.8
SINGLE STAGE SUBORBITAL SPACEPLANE, S4
Dr. Gennaro Russo, Naples, Italy, Campania Aerospace District, DAC

IAC-20.D6.3.9
A SECOND GENERATION SUBORBITAL RESEARCH PLATFORM FOR LARGE SCALE MICROGRAVITY FLIGHT EXPERIMENTS AND POINT TO POINT SPACE TOURISM
Mr. Charles Lauer, Lansing, MI, United States, Rocketplane Global, Inc.

IAC-20.D6.3.10
PROTECTION OF LAUNCHING FACILITIES FROM LAUNCH VEHICLE MOTOR JET IMPACT
Mr. Ruslan Mochonov, Dnepr, Ukraine, Yuzhnoye State Design Office

E1. IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM

E1.1. Ignition - Primary Space Education

Co-Chair: *Ms. Kaori Sasaki, Japan Aerospace Exploration Agency (JAXA), Japan ; Ms. Carol Carnett, International Space University (ISU), United States ;*

Rapporteur: *Dr. Christopher Vasko, European Space Agency (ESA), The Netherlands ; Mr. Matteo Emanuelli, Airbus Defence and Space, Germany ;*

IAC-20.E1.1.1
PRIMARILY IGNITING THE PASSION: STEM IN EARLY EDUCATION
Ms. Shawna Christenson, Palm Beach Gardens, United States, BLUECUBE Aerospace

IAC-20.E1.1.3
SPACE EDUCATION FOR TEACHERS' PROFESSIONAL LEARNING: WHAT BRINGS TEACHERS FROM PARTICIPATING TO IMPLEMENTING?
Mr. Yusuke Koga, Sagamihara, Japan, JAXA

IAC-20.E1.1.5
APRENDIENDO CON GALILEO, A SOLUTION TO BRING SPACE TO ALL SCHOOLS AND THAT THOUSANDS OF PEOPLE DREAM AND WORK FOR SPACE DEVELOPMENT.
Mr. David Gomez-Rincon, Bogotá D.C., Colombia, Individual colaboration

IAC-20.E1.1.7
THE IMPACT OF COMIC BOOKS AND ANIMATED CARTOONS ON SPACE EDUCATION: PREPARATION OF THE WAY TO MAKE SPACE STEM OFFICIAL ON THE SCHOOLS AROUND THE WORLD
Mr. Marco Romero, Toulouse, France, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace

IAC-20.E1.1.9
BUILDING AN ASTRONAUTICS EDUCATION ECOSYSTEM BASED ON FUTURE SPACE SCHOLARS MEET
Dr. Yong Mao, China, China

IAC-20.E1.1.10
WATCHING THE SKIES: AN OVERVIEW OF INDIGENOUS ASTRONOMY CURRICULA FOR CANADIAN K-12 TEACHERS
Mr. Michael O'Shea, Toronto, Ontario, Canada, University of Toronto

E1.2. Lift-Off - Secondary Space Education

Co-Chair: *Dr. Seyed Ali Nasseri, Space Generation Advisory Council (SGAC), Canada ; Dr. Christopher Vasko, European Space Agency (ESA), The Netherlands ;*

IAC-20.E1.2.1
BLUE-SKY LEARNING: THE WOLVERINE CUBESAT DEVELOPMENT TEAM (2015-2020)
Mr. Kevin Simmons, Palm Beach Gardens, United States, BLUECUBE Aerospace

IAC-20.E1.2.2
AN APPROACH TO INTRODUCE STEM BASED EDUCATION SYSTEM TO INSPIRE NEXT SPACE GENERATION
Ms. Sara Al Eissaee, Al Ain, United Arab Emirates, The National Space Science and Technology Center (NSSTC)

IAC-20.E1.2.6
FUNCUBE, A LOW-COST SPACE SYSTEM TO TEACH FROM CONCEPT TO OPERATION
Mr. Sajjad Ghazanfarinia, Tehran, Iran

IAC-20.E1.2.7
SPACE EXPLORERS ACADEMY: A UNIQUE EXPERT LED OUTREACH PROGRAM TO ENGAGE YOUTH IN SPACE!
Dr. Parshati Patel, London, Ontario, Canada, Institute for Earth and Space Exploration, Western University

IAC-20.E1.2.9
THE UK SPACE DESIGN COMPETITION: A DISCUSSION ABOUT METHODOLOGIES TO ENHANCE STUDENT ENGAGEMENT WITH THE SPACE SECTOR
Ms. Sophia Lee Roberts, London, United Kingdom

IAC-20.E1.2.11
DREAMCODER – RESPONDING TO A STEM CRISIS WITH AN INQUIRY-BASED SPACE EDUCATION CURRICULUM
Ms. Lauren Milord, Arlington, United States, DreamUp, PBC

IAC-20.E1.2.13
LUNAR DUST MITIGATION ON SPACECRAFT IN A LOW GRAVITY FREEFALL ENVIRONMENT
Mr. Caeden Dooner, Palm Beach Gardens, United States, BLUECUBE Aerospace

IAC-20.E1.2.14
SSC FUTURE HANDS-ON ROCKET AND BALLOON STUDENT PROGRAMS - LAUNCHING AND TEACHING LOCALLY
Mr. Christian Krokstedt, Solna, Sweden, Swedish Space Corporation

E1.3. On Track - Undergraduate Space Education

Co-Chair: *Hubert Diez, CNES, France ; Dr. Camille Alleyne, NASA, United States ;*

Rapporteur: *Mr. Michal Kunes, Czech Republic ;*

IAC-20.E1.3.1
MARS SCIENCE FROM THE PERSPECTIVE OF INTRODUCING UNIVERSITY STUDENTS TO SCIENTIFIC RESEARCH
Dr. Claus Gebhardt, Al Ain, United Arab Emirates

IAC-20.E1.3.4
A SATELLITE COMMUNICATION EXPERIENTIAL LEARNING ACTIVITY FOR UNDERGRADUATE STUDENTS IN AEROSPACE ENGINEERING
Mr. Hooman Jazebizadeh, Ottawa, Canada, Carleton University

IAC-20.E1.3.5
INTRODUCING SPACE ENGINEERING TO ENGINEERING UNDERGRADUATES: DESIGN OF A "INTRODUCTION TO SPACE ENGINEERING" COURSE FOR NON-AEROSPACE ENGINEERING STUDENTS IN COSTA RICA.
Dr. Adolfo Chaves Jiménez, Cartago, Costa Rica, Instituto Tecnológico de Costa Rica (TEC)

IAC-20.E1.3.6
EFFECTIVENESS OF VIRTUAL REALITY TO ENHANCE CLASSROOM INSTRUCTION FOR NAVIGATING THE INTERNATIONAL SPACE STATION.
Dr. Erik Seedhouse, Daytona Beach, United States, Embry-Riddle Aeronautical University

IAC-20.E1.3.8
PROMOTING STEM THROUGH THE SHARJAH ACADEMY FOR ASTRONOMY, SPACE SCIENCES, AND TECHNOLOGY
Dr. Ilias Fernini, Sharjah, United Arab Emirates, Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST)

IAC-20.E1.3.9
ALABAMA ROCKETRY ASSOCIATION: THE EFFECTIVENESS OF STUDENT DESIGN TEAMS IN THE DEVELOPMENT OF THE NEXT GENERATION OF ROCKET ENGINEERS
Ms. Jane Gillette, Tuscaloosa, United States, The University of Alabama

IAC-20.E1.3.11
TESTS IN ORBIT- ONCE IN LIFETIME STUDENT EXPERIMENT COMPETITION IN UNITED ARAB EMIRATES TO LAUNCH NANO LABS INTO INTERNATIONAL SPACE STATION
Prof. Abdul Syed, Dubai, United Arab Emirates, Higher Colleges of Technologies

IAC-20.E1.3.16
SPOCS: A NATIONWIDE OPPORTUNITY TO ENGAGE UNITED STATES UNIVERSITIES, K-12 STUDENTS, AND THE GENERAL PUBLIC IN SPACE STATION RESEARCH
Ms. Lauren Milord, Arlington, United States, DreamUp, PBC

E1.4. In Orbit - Postgraduate Space Education

Co-Chair: *Prof. David B. Spencer, The Pennsylvania State University, United States ; Dr. Camille Alleyne, NASA, United States;*

Rapporteur: *Ms. Carol Carnett, International Space University (ISU), United States ; Mr. Remco Timmermans, International Space University (ISU), United Kingdom ;*

IAC-20.E1.4.2
MODERN AEROSPACE EDUCATIONAL PROGRAMS DEVELOPED BY RENOWNED RUSSIAN UNIVERSITIES
Ms. Oksana Grigorieva, Moscow, Russian Federation, JSC Glavkosmos

IAC-20.E1.4.4
IS THE EDUCATION GAINED DURING ISU SSP ESSENTIAL FOR STARTING A CAREER IN THE SPACE SECTOR?
Dr. Krzysztof Kanawka, Gdansk, Poland, Blue Dot Solutions

IAC-20.E1.4.5
A HOLISTIC APPROACH TO SPACE SECTOR EDUCATION: A CASE STUDY OF A SPACE SECTOR COURSE
Dr. Yaroslav Menshenin, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.E1.4.7
LESSONS LEARNED FROM THE S5LAB HANDS-ON STUDENT ACTIVITIES ON THE LEDSAT, GREENCUBE AND WILDTRACKCUBE-SIMBA NANOSATELLITES
Mr. Paolo Marzioli, Rome, Italy, Sapienza University of Rome

IAC-20.E1.4.8
SPACE LAW SCHOOL: YOUR BOLD WAY TO DISCOVER THE LAW UNIVERSE
Ms. Darya Bohdan, Minsk, Belarus, Belarusian State University

IAC-20.E1.4.9
ASCENSION: AN INNOVATIVE NETWORK TO TRAIN THE SPACE ACCESS LEADERS OF TOMORROW
Ms. Alessia Gloder, Dresden, Germany, Dresden University of Technology (DUT) / Technische Universität Dresden

E1.5. Enabling the Future - Developing the Space Workforce

Co-Chair: *Ms. Kathleen Coderre, Lockheed Martin Corporation, United States ; Ms. Olga Zhdanovich, Modis for European Space Agency, The Netherlands ;*

Rapporteur: *Mr. Michal Kunes, Czech Republic ; Hubert Diez, CNES, France ;*

Session co-organized by: *● The IAF Space Education and Outreach Committee (SEOC) ● The IAF Workforce Development-Young Professionals Programme Committee (WD-YPP)*

IAC-20.E1.5.1
SPACE4WOMEN: A UNOOSA STRATEGY TO ENABLE AND DEVELOP THE SPACE WORKFORCE OF THE FUTURE
Ms. Simonetta Di Pippo, Vienna, Austria, United Nations Office for Outer Space Affairs

IAC-20.E1.5.2
A START-UP FRAMEWORK FOR THE FUTURE ASTRONAUT WORKFORCE
Mr. Sushmith Thuluva, Bengaluru, India, Ramaiah Institute of Technology

IAC-20.E1.5.3
STUDENT CONTEST "I AM PROFESSIONAL: SPACE EXPLORATION" AS A NEW HR INITIATIVE IN THE INTERESTS OF RUSSIAN SPACE INDUSTRY
Dr. Vera Mayorova, Moscow, Russian Federation, Bauman Moscow State Technical University

IAC-20.E1.5.6
ENHANCING THE STEM PIPELINE – USING PUBLIC POLICY TO PROMOTE SPACE INDUSTRY ACCESS TO A HIGHLY SKILLED WORKFORCE
Mr. Kevin Simmons, Palm Beach Gardens, United States, BLUECUBE Aerospace

IAC-20.E1.5.11
OUR GIANT LEAP: TOWARDS A DIVERSE AND INCLUSIVE AEROSPACE WORKFORCE
Ms. Yulia Akisheva, Toulouse, France, Space Generation Advisory Council (SGAC)

IAC-20.E1.5.12
THE MAURITIAN JOURNEY TO SPACE
Mr. Muhammad Ziyaad Soreefan, Ebene, Mauritius, Mauritius Research and Innovation Council (MRIC)

IAC-20.E1.5.14
PROMOTING SPACE ACTIVITIES TO FOSTER THE YOUTH OF AFRICA - OUTCOMES OF THE 3RD AFRICAN SPACE GENERATION WORKSHOP
Mr. Tensae Alemayehu Ali, Addis Ababa, Ethiopia, Space Generation Advisory Council (SGAC)

IAC-20.E1.5.16
THE CONTRIBUTION OF THE ANDEAN ROAD COUNTRIES FOR SCIENCE AND TECHNOLOGY (ARCST) TO THE DEVELOPMENT OF LATIN AMERICAN SPACE WORKFORCE
Prof.Dr. Marco Cabero, Beijing, China, Beihang University

IAC-20.E1.5.17
ENROLLING AND COLLABORATING WITH INDUSTRY EXPERTS
Ms. Kathleen Fredette, Acton, United States

E1.6. Calling Planet Earth - Space Outreach to the General Public

Co-Chair: Mrs. Jessica Culler, NASA Ames Research Center, United ***States ;*** *Dr. Nelly Ben Hayoun, The British Interplanetary Society, United Kingdom ;*

Rapporteur: *Mr. Remco Timmermans, International Space University (ISU), United Kingdom ; Mr. Frank Friedlaender, Lockheed Martin Space Systems Company, United States ;*

IAC-20.E1.6.2
EXPLORER : ANALOG MISSIONS "COMMUNICATING TO THE PUBLIC MY EXPERIENCES AS AN ANALOGUE ASTRONAUT, A CASE STUDY "
Mr. Benjamin Pothier, Charenton le Pont, France, Plymouth University

IAC-20.E1.6.3
COMMSAT'S SEMINAL SATELLITE APPLICATIONS FOR SPACE OUTREACH TO THE GENERAL PUBLIC
Ms. Yuanyuan Peng, Beijing, China

IAC-20.E1.6.4
ISRAEL SPACE WEEK 2020: SPACE EDUCATION OUTREACH EXTRAVAGANZA
Mr. Tal Inbar, Kadima, Israel, The Fisher Institute for Air and Space Strategic Studies

IAC-20.E1.6.5
COLIBRÍ MISSION: HOW TO BOOST THE MEXICAN SPACE INDUSTRY BY INVOLVING THE GENERAL PUBLIC INTO THE DEVELOPMENT OF A SPACE PROGRAM
Ms. Daniela Rodríguez, Mexico City, Mexico

IAC-20.E1.6.6
THE "AROUND THE MOON" EXHIBIT IN DENMARK – CELEBRATING THE JULY 1969 MOONLANDING AND LOOKING FORWARD
Ms. Lykke Pedersen, Copenhagen, Denmark, Danish Astronautical Society

IAC-20.E1.6.7
A CRITICAL GEOGRAPHIC EXAMINATION OF THE INFORMAL SCIENCE EDUCATION ACTIVITIES OF A COMMUNITY-BASED ASTRONOMY ORGANIZATION
Mr. Michael O'Shea, Toronto, Ontario, Canada, University of Toronto

IAC-20.E1.6.8
HOW ONLINE INFLUENCERS HELP TELL THE WORLD THE STORY OF SPACE
Mr. Remco Timmermans, Harwell, United Kingdom, International Space University (ISU)

IAC-20.E1.6.9
THE SPACE INDUSTRY LACKS INFLUENCERS.
Ms. Ksenia Synkova, Istanbul, Turkey

IAC-20.E1.6.10
COULD SPACE SCIENCE COMMUNICATORS COMMUNICATE WITH PUBLIC? - A GULF BETWEEN SCIENCE COMMUNICATOR AND GENERAL PUBLIC IN SPACE FIELDS
Ms. Ruriko Nagashima, Kyoto, Japan, Graduate Schools of Advanced Integrated Studies in Human Survivability, Kyoto University

IAC-20.E1.6.11
CONNECTING SPACE WITH CITIZENS OF ASEAN: A SOCIAL AND POLICY ECOSYSTEM FOR SUSTAINABLE SPACE DEVELOPMENT
Mr. Maximilien Berthet, Tokyo, Japan, University of Tokyo

E1.7. New Worlds - Non-Traditional Space Education and Outreach

Co-Chair: *Dr. Vera Mayorova, Bauman Moscow State Technical University, Russian Federation ; Ms. Olga Zhdanovich, Modis for European Space Agency, The Netherlands ;*

Rapporteur: *Dr. Carol Christian, STScI, United States ; Mrs. Kaori Sasaki, JAXA, Japan ;*

IAC-20.E1.7.1
OPEN INNOVATION FOR NASA ARCHITECTURE LIBRARY
Dr. Samantha Infeld, Santa Cruz, United States, Analytical Mechanics Associates Inc.

IAC-20.E1.7.2
IMPLEMENTING MODEL-BASED SYSTEMS ENGINEERING APPROACH IN A STUDENT SPACE MISSION DESIGN ENVIRONMENT
Mr. Alexander Kharlan, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.E1.7.3
SATELLITE EDUCATION AND LEARNING BY INTERACTIVE VIRTUAL REALITY GAME
Mr. Abdulla Hil Kafi, Dhaka, Bangladesh, BRAC University

IAC-20.E1.7.5
NATURAL PHYSICS GLOBAL OUTREACH: A GLOBAL OUTREACH TEMPLATE FOR OUR GLOBAL COMMUNITY
Mr. LeRoy Larry, Gauchipelin de Escazu, Costa Rica

IAC-20.E1.7.6
ASTROQUIZNIGHT - AN EVENT WHERE SPACE DOESN'T PART US BUT CONNECTS
Mr. András Ordasi, Budapest, Hungary, Konkoly Observatory

IAC-20.E1.7.7
INTERDISCIPLINARY SPACE LAB (PHASE 3 AUSTRALIA-USA PARTNERSHIP): UNDERGRADUATE CURRICULUM INNOVATION ADDRESSING ASTRONAUT HEALTH AND WELLBEING REQUIREMENTS FOR LONG DURATION SPACE MISSIONS (LDMS)
Dr. Sasha Alexander, Penrith NSW, Australia, Western Sydney University

IAC-20.E1.7.8
APRENDIENDO CON GALILEO, EDUCATIONAL PROPOUSAL FOR THE SPACE KNOWLEDGE
Mr. David Gomez-Rincon, Bogotá D.C., Colombia, Individual colaboration

IAC-20.E1.7.9
MAKERSPACES QUIETLY INFLUENCING THE CURRENT AND FUTURE SPACE EDUCATION CASE STUDY AND ROAD-MAP FOR SPACE WORKFORCE DEVELOPMENT
Ms. Nancy C. Wolfson, Washington, United States, Disrupting Space LLC

IAC-20.E1.7.10
LECTURE SERIES FOR ENCOURAGING COMMERCIAL SPACE UTILIZATION FOR THE GENERAL PUBLIC
Dr. Kikuko Miyata, Chiba, Japan, Meijo University

IAC-20.E1.7.12
STUDENT-LED POLICY AND TECHNICAL CAPACITY BUILDING PROGRAM: THE ROAD TO CAMBODIA'S FIRST CUBESAT
Mr. Maximilien Berthet, Tokyo, Japan, University of Tokyo

IAC-20.E1.7.14
A REUNION FOR COLLEAGUES, A PLATFORM FOR EXPERTS, AN OPPORTUNITY FOR STAKEHOLDERS: THE INTERNATIONAL SPACE UNIVERSITY ADELAIDE CONFERENCE FOR IDEA EXCHANGE AND PUBLIC ENGAGEMENT
Mr. Scott Schneider, Adelaide, Australia

IAC-20.E1.7.15
FROM URBAN CITIES TO ISOLATED VILLAGES: CHALLENGES AND BEST PRACTICES IN CONDUCTING UNCONVENTIONAL SPACE EDUCATION ACTIVITIES IN THE PHILIPPINES
Dr. Rogel Mari Sese, Davao City, The Philippines

E1.8. Hands-on Space Education and Outreach

Co-Chair: *Ms. Lyn Wigbels, University Corporation for Atmospheric Research, United States ; Ms. Valerie Anne Casasanto, NASA Goddard/University of Maryland, Baltimore County (UMBC), United States ;*

Rapporteur: *Ms. Carol Carnett, International Space University (ISU), United States ; Mr. Kevin Stube, The Planetary Society, United States ;*

IAC-20.E1.8.2
SPARKING SPACE CURIOSITY: ILEAD AND DREAMUP'S HANDS-ON ACTIVITIES TO SET EDUCATORS AND STUDENTS ON A PATH TO SPACE SCIENCE AND STEAM SUCCESS
Ms. Lauren Milord, Arlington, United States, DreamUp, PBC

IAC-20.E1.8.9
ICESAT-2 TRACKING APP FOR PUBLIC ENGAGEMENT
Ms. Emme Wiederhold, Elm Grove, United States

E1.9. Space Culture – Public Engagement in Space through Culture

Co-Chair: *Dr. Nelly Ben Hayoun, The British Interplanetary Society, United Kingdom ; Prof. Mike Garrett, University of Manchester, United Kingdom ;*

Rapporteur: *Dr. Carol Oliver, University of New South Wales, Australia ; Mr. Nahum Romero, KOSMICA, Germany ; Ms. Priyanka Das Rajkakati, ISAE-Supaero University of Toulouse, France ;*

Session co-organized with: *● The IAF Space Education and Outreach Committee (SEOC) ● The IAF Technical Committee on the Cultural Utilization of Space (ITACCUS) ● The IAA Search for Extraterrestrial Intelligence (SETI) permanent committee*

IAC-20.E1.9.1
THE MYTH OF THE COSMOS: KHASI COSMOLOGY THROUGH ARTISTIC PRACTICE
Ms. Prathima Muniyappa, Cambridge, United States, Massachusetts Institute of Technology (MIT)

IAC-20.E1.9.2
THE IMPORTANCE OF KIMONO IN SPACE TRAVEL
Mrs. Taiko Kawakami, Bunkyo-ku, Tokyo, Japan, ASTRAX, Inc.

IAC-20.E1.9.6
UNISTELLAR: THE LARGEST CITIZEN SCIENCE ASTRONOMY NETWORK FOR ALL OF US
Dr. Franck Marchis, Mountain View, United States, SETI Institute

IAC-20.E1.9.8
CONCEPTUAL SPACE: CASE STUDIES FROM THE NEXUS BETWEEN POPULAR CULTURE AND OUTER SPACE
Dr. Annette Froehlich, LL.M., MAS, Vienna, Austria, European Space Policy Institute (ESPI)German Aerospace Center (DLR)

IAC-20.E1.9.12
EMPOWERING WOMEN TO CREATE SPACE WORKFORCE IN NEPAL
Ms. Manisha Dwa, Kathmandu, Nepal, Nepal Astronomical Society (NASO)

IAC-20.E1.9.13
USE OF A ANALOG COLONY IN NAMIBE AND DUBAI DESERTS TO CREATE A SPACE MUSEUMS CAPABLE TO ATTEND AFRICA'S SPACE EDUCATION, RESEARCH AND CULTURAL ACTIVITIES NEEDS.
Mr. Marco Romero, Toulouse, France, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace

IAC-20.E1.9.14
OUT ASTRONAUT: ADDRESSING INTERSECTIONALITY AND COMMUNITY-IDENTIFIED CONSIDERATIONS FOR SEXUAL AND GENDER MINORITIES IN SPACE
Mr. Nicolas Nelson, Philadelphia, United States

E1.VP. Virtual Presentations - IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM

Co-Chair: *Mr. Kevin Stube, The Planetary Society, United States ; Mrs. Jessica Culler, NASA Ames Research Center, United States ;*

IAC-20.E1.VP.2
SOLVING SPACE'S NARRATIVE PROBLEM
Ms. Erin Madden, Fyshwick, Australia, Nova Systems

IAC-20.E1.VP.6
ODE: THE NEW PERSPECTIVE OF BRAZILIAN EDUCATIONAL COMPETITION
Dr. NADIA BANDEIRA SACENCO KORNIJEZUK, Brasília, Brazil, Brazilian Space Agency (AEB)

IAC-20.E1.VP.10
THE MONASH NOVA ROVER TEAM'S INVOLVEMENT IN THE UNIVERSITY ROVER CHALLENGE - BOOSTING YOUNG WOMEN INTO STEAM CAREERS
Ms. Michelle Fisher, Melbourne, Australia

IAC-20.E1.VP.12
OUTLAST-1: INTERNATIONAL COLLABORATION AND DISRUPTIVE EDUCATION VIA POCKETQUBES
Mr. Beau Kimler, Palm Beach Gardens, United States, BLUECUBE Aerospace

IAC-20.E1.VP.13
CROSS-CULTURAL ANALYSIS ON THE GENDER EQUALITY PERCEPTION AS A DRIVER FOR THE FUTURE SPACE WORKFORCE DEVELOPMENT
Ms. Alice Pellegrino, Tokyo, Japan, Canon Electronics Inc.

IAC-20.E1.VP.22
SPACE ENGINEERING EDUCATION IN NEPAL USING PICO-SATELLITE TRAINING KIT
Mr. Jiten Thapa, Dhulikhel, Nepal, ORION Space

IAC-20.E1.VP.23
EDUCATIONAL SATELLITE TRAINING KIT (ESK-LAB)
Dr. Mohamed Ibrahim, Cairo, Egypt, Egyptian Space Agency (EgSA)

E2. 48TH STUDENT CONFERENCE

E2.1. Student Conference – Part 1

Co-Chair: *Prof. Franco Bernelli-Zazzera, Politecnico di Milano, Italy ; Mrs Benedicte Escudier, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France ;*

Rapporteur: *Mr. Jeong-Won Lee, Korea Aerospace Research Institute (KARI), Korea, Republic of ;*

IAC-20.E2.1.1
ADAPTIVE CONTROL SYSTEM: A ROBUST MULTI MODEL ADAPTIVE CONTROL FOR LAUNCHING VEHICLES
Ms. Ioana Carmen Boglis, Splaiul Independenței nr. 313, Romania, Politechnic University of Bucharest

IAC-20.E2.1.3
REAL TIME SPACE OBJECT TRACKLET EXTRACTION FROM TELESCOPE SURVEY IMAGES WITH MACHINE LEARNING
Mr. Andrea De Vittori, Milan, Italy, Politecnico di Milano

IAC-20.E2.1.4
AUTONOMOUS MOTION PLANNING FOR SPACECRAFTS NEAR SMALL SOLAR SYSTEM BODIES: SIMULTANEOUSLY REFINING THE GRAVITATIONAL FIELD MODEL AND RE-PLANING GRAVITY DEPENDENT MANEUVERS
Mr. Aditya Savio Paul, Tartu, Estonia, University of Tartu

IAC-20.E2.1.5
JUICE'S 3GM GRAVITY EXPERIMENT AROUND GANYMEDE - COMPARISON BETWEEN NOMINAL AND EXTENDED MISSION
Mr. Paolo Cappuccio, Rome, Italy, Sapienza University of Rome

IAC-20.E2.1.8
COORDINATED MAGNETIC ATTITUDE CONTROL IN A SWARM OF CUBESATS: DEEP NEURAL NETWORKS FOR AUTONOMOUS OPERATIONS
Mr. Salman Ali Thepdawala, Moscow, Russian Federation, Skolkovo Institute of Science and Technology

IAC-20.E2.1.9
ASTRAEUS: AERIAL-AQUATIC TITAN MISSION PROFILE
Mr. James E. McKevitt, Loughborough, United Kingdom, Loughborough University

IAC-20.E2.1.10
THE WATER ELECTROLYSIS HALL EFFECT THRUSTER (WET-HET): UNLOCKING CHEMICAL-ELECTRICAL HYBRID PROPULSION WITH WATER
Alexander Schwertheim, London, United Kingdom, Imperial College London

IAC-20.E2.1.11
ATMOSPHERIC BREATHING SOLID-FUEL RAMJET FOR MARTIAN DESCENT MISSIONS
Mr. Sandeep Baskar, Mount Dora, United States, Purdue University

E2.2. Student Conference – Part 2

Co-Chair: *Prof. Marco Schmidt, Bochum University of Applied Sciences, Germany ; Mr. Frank Friedlaender, Lockheed Martin Space Systems Company, United States ;*

Rapporteur: *Mr. Emmanuel Zenou, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France ;*

IAC-20.E2.2.1
EXPERIMENTAL VALIDATION AND REFINED ANALYSIS OF THE NEW RAY TRACING METHOD FOR STUDYING THE ENVIRONMENTAL BEHAVIOUR OF NANOROVERS IN THE MOON'S SURFACE
Mr. Jesús Manuel Muñoz Tejeda, Rivas-Vaciamadrid, Spain, Imperial College London

IAC-20.E2.2.2
DEVELOPMENT OF A POWER MANAGEMENT SUBSYSTEM FOR THE "ALSAT#1" CUBESAT MISSION
Mr. Jorge Panagopoulos, Faro, Portugal, University of Beira Interior

IAC-20.E2.2.3
VISION BASED GNC ARCHITECTURE FOR RETRO-LANDING ROCKETS
Mr. Ishan Jain, Chennai, India, SRM Institute of Science and Technology

IAC-20.E2.2.6
NOVEL ATTITUDE CONTROL DESIGN OF SPACE LAUNCH VEHICLE
Ms. Emi Sakaoka, Sagamihara,Kanagawa, Japan, The Graduate Universty for Advanced Studies[SOKENDAI]

E2.3-GTS.4. Student Team Competition

Co-Chair: *Ms. Andrea Jaime, OHB System AG - Munich, Germany ; Mr. Emmanuel Zenou, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France ;*

Rapporteur: *Ms. Kathleen Coderre, Lockheed Martin Corporation, United States ;*

IAC-20.E2.3-GTS.4.1
PROJECT DAEDALUS: TOWARDS AUTOROTATION BASED LANDING AND DESCENT
Mr. Clemens Riegler, Würzburg, Germany, Julius Maximilians Universität Würzburg

IAC-20.E2.3-GTS.4.3
EXPERIMENTAL PRECISE ORBIT DETERMINATION FOR GEOSAR MISSIONS BASED ON COMPACT INTERFEROMETRY
Mr. Jorge Nicolas-Alvarez, Banyeres del Penedès, Spain, Universitat Politecnica de Catalunya (UPC)

IAC-20.E2.3-GTS.4.6
THE SPECIALIZED TOOL FOR ASTRONAUT RECORDING (STAR)
Mr. Nicholas Lopac, Port Orange, FL, United States, Embry-Riddle Aeronautical University

IAC-20.E2.3-GTS.4.8
SPACE TRAFFIC MANAGEMENT: A CHASER FOR SATELLITES AND SPACE DEBRIS
Mrs. Cindy Angama, Toulouse, France, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace

IAC-20.E2.3-GTS.4.9
CROP ENVIRONMENT FOR THE RESUPPLY AND EXTENSION OF SPACE MISSIONS (CERES) SYSTEM: DEVELOPMENT OF HORTICULTURAL TECHNOLOGIES FOR THE EXPLORATION SYSTEMS AND HABITATION (X-HAB) 2020 ACADEMIC INNOVATION CHALLENGE
Mr. German Acosta Quiros, Jacksonville, United States, Made In Space, Inc.

IAC-20.E2.3-GTS.4.10
CRITICAL DESIGN OF THE MOONFIBRE EXPERIMENTAL APPARATUS FOR THE USE ON A REXUS SOUNDING ROCKET
Mr. Stefan Panajotovic, Aachen, Germany, RWTH Aachen University

IAC-20.E2.3-GTS.4.11
IONSAT : A STUDENT NANOSAT WITH AN IODINE THRUSTER IN VERY LOW EARTH ORBIT
Mr. Hadrien Paugnat, Palaiseau, France, Ecole Polytechnique

IAC-20.E2.3-GTS.4.12
MISSION ORCA: ORBIT REFINEMENT FOR COLLISION AVOIDANCE
Ms. Anaïs Barles, Cranfield, United Kingdom, Cranfield University, Cranfield UK

E2.4. Educational Pico and Nano Satellites

Co-Chair: *Prof. Xiaozhou Yu, Dalian University of Technology (DUT), China ; Prof. Franco Bernelli-Zazzera, Politecnico di Milano, Italy ;*

IAC-20.E2.4.1
CAPSAT-1: DEMONSTRATION OF A NOVEL CUBESAT ELECTRICAL POWER SYSTEM
Mr. Samer Elhoushy, Palm Beach Gardens, United States, BLUECUBE Aerospace

IAC-20.E2.4.11
A 3U CUBESAT FOR MONITORING TERRESTRIAL GAMMA RAY FLASHES: BUS DESIGN AND CONCEPT OF OPERATIONS
Ms. Aysha Alharam, Masdar city, United Arab Emirates, Khalifa University of Science and Technology (KUST)

IAC-20.E2.4.12
MYSAT-2: A 2U CUBESAT FOR EVALUATING NOVEL ATTITUDE CONTROL ALGORITHMS
Ms. Aysha Alharam, Masdar city, United Arab Emirates, Khalifa University of Science and Technology (KUST)

IAC-20.E2.4.13
EFFICIENT STORAGE OF DATA FOR FASTER ACCESS TIME ON NON-VOLATILE MEMORIES IN NANOSATELLITES
Mr. Atharva Lohangade, Pune, India, College Of Engineering , Pune

E3. 33RD IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS

E3.1. International cooperation in using space for sustainable development: Towards a 'Space2030' agenda

Co-Chair: *Mrs. Isabelle Duvaux-Bechon, ESA - European Space Agency, France ; Dr. Dumitru-Dorin Prunariu, Romanian Space Agency (ROSA), Romania ;*

Rapporteur: *Mr. Alexander Soucek, Austrian Space Forum, Austria ; Dr. Peter Stubbe, DLR (German Aerospace Center), Germany ;*

Keywords describing the session best: 1. International cooperation 2. Sustainable development goals 3. Space2030 Agenda 4. UNCOPUOS and SDGs

IAC-20.E3.1.1
ROLE OF ASIA PACIFIC SPACE COOPERATION ORGANIZATION IN SUPPORTING INTERNATIONAL AND REGIONAL COOPERATION FOR ATTAINMENT OF SPACE2030 AGENDA
Ms. Aisha Jagirani, Beijing, China, Asia-Pacific Space Cooperation Organization (APSCO)

IAC-20.E3.1.2
FROM TRENTO TO KUALA LUMPUR: THE EVOLUTION OF THE ASI-IAF "INTERNATIONAL SPACE FORUM" INITIATIVE
Ms. Nunzia Maria Paradiso, Rome, Italy, ASI - Italian Space Agency

IAC-20.E3.1.3
SPACE SUPPORTING AFRICAN CIVIL SOCIETIES: SECURITY, PEACE, AND DEVELOPMENT THROUGH EFFICIENT GOVERNANCE SUPPORTED BY SPACE APPLICATIONS
Dr. Annette Froehlich, LL.M., MAS, Vienna, Austria, European Space Policy Institute (ESPI)German Aerospace Center (DLR)

IAC-20.E3.1.4
JORDAN AND THE UNITED NATIONS SPACE2030 AGENDA: A ROADMAP FOR SPACE AND SUSTAINABLE DEVELOPMENT
Ms. Sahba El-Shawa, Amman, Jordan, International Space University (ISU)

IAC-20.E3.1.5
BRINGING SPACE SERVICES TO EARTH AS A CRUCIAL SUSTAINABLE ENABLER OF GROWTH IN THE DEVELOPING WORLD – A PRIORITY CHART OF COUNTRIES AND INTERNATIONAL COOPERATION PROGRAMMES
Dr. Giacomo Primo Sciortino, Roma, Italy, Italian Space Agency (ASI)

IAC-20.E3.1.9
USE OF SPACE FOR A SUSTAINABLE OCEAN ECONOMY: ENVIRONMENTAL ISSUES RELATED TO THE DEEP SEABED AND SPACE EXPLORATION
Mr. Jordi Sandalinas, Barcelona, Spain

IAC-20.E3.1.12
AFFORDABLE ACHIEVABLE SPACE SOLUTION PROPOSAL TO THE REGIONAL CONCERNS ABOUT SUSTAINABLE DEVELOPMENT GOALS
Mr. Sajjad Ghazanfarinia, Tehran, Iran

E3.2. The Future of Space Exploration and Innovation

Co-Chair: *Mr. Nicolas Peter, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ; Mr. Marc Haese, DLR, German Aerospace Center, Germany ;*

Rapporteur: *Mr. Devanshu Ganatra, International Institute of Space Law (IISL), India ;*

Keywords describing the session best: 1. Space exploration 2. exploration and innovation 3. cooperation and opportunities

IAC-20.E3.2.5
PROPOSING PROMISING SPACE TECHNOLOGIES BASED ON PATENT ANALYSIS
Mr. Junwoo Park, Daejeon, Korea, Republic of, Korea Aerospace Research Institute (KARI)

IAC-20.E3.2.6
ADOPTING ARTIFICIAL INTELLIGENCE (AI) TECHNOLOGIES IN THE SPACE DOMAIN: A UAE CASE STUDY
Mr. Khalfan Al Remeithi, abu dhabi, United Arab Emirates, UAE Space Agency

IAC-20.E3.2.9
HIGH ROAD OR LOW ROAD: WHERE ARE WE HEADED IN THE SPACE ARENA?
Prof. Peter Martinez, Broomfield, United States, Secure World Foundation

IAC-20.E3.2.15
INDONESIAN SPACE DEVELOPMENT ARCHITECTURE IN NEW SPACE ERA
Ms. Yunita Permatasari, Kota Jakarta Pusat, Indonesia, Indonesian National Institute of Aeronautics and Space (LAPAN)

IAC-20.E3.2.17
LEGAL AND ETHICAL FRAMEWORK FOR ROBOTS AND AI - USING SPACE COLONIES AS A CASE STUDY
Mrs. Héloïse Vertadier, Silly-Tillard, France, 1) University of Otago (New Zealand)

IAC-20.E3.2.19
PROTECTING GENETIC PRIVACY IN FUTURE SPACE EXPLORATION
Ms. Giuliana Rotola, Bari, Italy, International Space University (ISU)

IAC-20.E3.2.21
ADAPTIVE GOVERNANCE, SPACE RESOURCES AND MOON VILLAGE
Mr. Armando Luciano, Frascati, Italy

IAC-20.E3.2.22
US EXPORT CONTROL OF SPACE TECHNOLOGY AND INTERNATIONAL COOPERATION
Mr. Jared Strubel, Akron, United States

E3.3. Space Economy - New Models and Economic Approaches for Private Space Ventures, with an Emphasis on the Needs of Emerging Space Nations

Co-Chair: *Dr. Henry Hertzfeld, Space Policy Institute, George Washington University, United States ; Mr. Jean-Jacques Tortora, EURISY, France ;*

Rapporteur: *Mrs. Magda Cocco, Vieira de Almeida & Associados, Portugal ; Prof. Mahulena Hofmann, University of Luxembourg, Luxembourg ;*

Keywords describing the session best: 1. New models of space economy 2. Changing market dynamics 3. Financing and investment in space 4. Start-up's

IAC-20.E3.3.3
ASSET-BASED FINANCING: FINANCING THE SPACE ECONOMY OF THE FUTURE THROUGH AN INTERNATIONAL SYSTEM OF SECURED TRANSACTIONS LAW, ONE SPACE OBJECT AT A TIME.
Prof. Anna Veneziano, Rome, Italy, Unidroit

IAC-20.E3.3.4
OPPORTUNITIES AT THE BEGINNING OF THE PERUVIAN SPACE MARKET
Prof. Avid Roman-Gonzalez, Lima, Peru

IAC-20.E3.3.5
A PROPOSED APPROACH FOR NEWSPACE INDUSTRY DEVELOPMENT IN TAIWAN
Dr. Feng-Tai Hwang, Hsinchu City, Taipei, National Space Organization

IAC-20.E3.3.7
FINANCING OF SPACE ACTIVITIES IN EMERGING SPACE-FARING NATIONS: THE IMPORTANCE OF INTERNATIONAL RECOGNIZED COLLATERAL SYSTEMS.
Ms. Cristina Miranda, Lisbon, Portugal

IAC-20.E3.3.8
SUSTAINING DEVELOPMENT: USING SATELLITES FOR AN ACCESSIBLE AND SECURE BLOCKCHAIN-BASED FINANCIAL SYSTEM
Mr. David Lindgren, Rockville, United States, University of Cape Town

IAC-20.E3.3.10
SPACE IN POCKETS, A COMPETITION TO LEAD THE NEW SPACE RACE FOR A COMMON MARKET
Mr. Sajjad Ghazanfarinia, Tehran, Iran

IAC-20.E3.3.15
THE NEW SPACE ECONOMY AND NEW BUSINESS MODELS
Ms. Rosa Maria Lucia Parrella, Rome, Italy, Agenzia Spaziale Italiana (ASI)

IAC-20.E3.3.16
WIN-WIN MODEL BETWEEN LOCAL CITY AND SMALLSAT STARTUP
Ms. Mi-jin Yoo, Daejeon, Korea, Republic of, Korea Aerospace Research Institute (KARI)

IAC-20.E3.3.18
POSSIBILITIES FOR NEW SPACE HUBS IN BRAZIL
Mr. Victor Baptista, Brasilia, Brazil, Universidade de Brasília

E3.4. Assuring a Safe, Secure and Sustainable Environment for Space Activities

Co-Chair: *Dr. Peter Stubbe, German Aerospace Center (DLR), Germany ; Dr. Jana Robinson, The Prague Security Studies Institute, Czech Republic ;*

Keywords describing the session best: 1. Sustainable space environment 2. Safe, secure space activities 3. Long-term sustainability of outer space activities (LTS) 4. Space traffic management (STM) 5. Safe, secure space infrastructure

IAC-20.E3.4.1
UN COPUOS GUIDELINES FOR THE LONG-TERM SUSTAINABILITY OF OUTER SPACE ACTIVITIES: EARLY IMPLEMENTATION EXPERIENCES AND NEXT STEPS IN COPUOS.
Prof. Peter Martinez, Broomfield, United States, Secure World Foundation

IAC-20.E3.4.2
SPACE GOVERNANCE OF EARTH'S ORBITS: ANALYSIS OF THE LONG-TERM SUSTAINABILITY GUIDELINES AND OTHER NON-BINDING MECHANISMS IN SPACE
Ms. Lauren Napier, Newcastle upon Tyne, United Kingdom, Northumbria University

IAC-20.E3.4.5
EU SPACE SURVEILLANCE & TRACKING – STATE OF PLAY AND PERSPECTIVES
Dr. Regina Peldszus, Bonn-Oberkassel, Germany, DLR, German Aerospace Center

IAC-20.E3.4.8
ON-ORBIT SERVICING: THE KEY TO SUSTAINABILITY IN SPACE OR AN EMERGING ARENA FOR ARMED CONFLICT?
Ms. Angelica Gould, Stuart, United States, Florida State University

IAC-20.E3.4.9
REDUCING VULNERABILITIES OF SPACE ACTIVITIES
Prof. Serge Plattard, London, United Kingdom, University College London (UCL)

IAC-20.E3.4.10
FROM SAFETY TO SECURITY: REDUCING THE THREAT ENVIRONMENT THROUGH THE RESPONSIBLE USE OF OUTER SPACE
Dr. Jessica West, Waterloo, Canada, Project Ploughshares

IAC-20.E3.4.14
ENSURING SAFE, SUSTAINABLE AND SECURE IN-ORBIT ACTIVITIES THROUGH THE UK LICENSING FRAMEWORK
Mr. Toby Harris, Swindon, United Kingdom, UK Space Agency

E3.6. Economics of Procurement in Space Contracting

Co-Chair: *Mr. Eric Morel de Westgaver, ESA - European Space Agency, France ; Dr. Henry Hertzfeld, Space Policy Institute, George Washington University, United States ;*

Rapporteur: *Mr. Pieter Van Beekhuizen, The Netherlands ; Ms. Karina Miranda Sanchez, ESA, The Netherlands ;*

Keywords describing the session best: 1. procurement 2. start-up 3. innovation 4. technology 5. economic benefits

IAC-20.E3.6.1
SPIN-IN AND PROCUREMENT SUPPORT AS KEY COMPONENTS FOR INDUSTRY DEVELOPMENT IN EMERGING SPACE COUNTRIES
Mr. Michal Brichta, Bratislava, Slovak Republic, Slovak Investment and Trade Development Agency (SARIO)

IAC-20.E3.6.4
THE CREATION OF AN EXTENSIVE PAN-EUROPEAN NETWORK OF TECHNOLOGY-BASED BUSINESS INCUBATION CENTERS BY THE EUROPEAN SPACE AGENCY
Mr. Cornelis Eldering, Noordwijk, The Netherlands, European Space Agency (ESA)

IAC-20.E3.6.6
SPACE SECTOR ATTRACTIVENESS FOR START-UPS: EVIDENCES FROM ITALY
Ms. Rosa Maria Lucia Parrella, Rome, Italy, Agenzia Spaziale Italiana (ASI)

IAC-20.E3.6.7
THE USE OF PROCUREMENT TO STIMULATE INNOVATION IN SPACE SECTOR IN BRAZIL
Mr. Henrique Nascimento, Brasilia, Brazil, Brazilian Space Agency (AEB)

E3.VP. Virtual Presentations - 33rd IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS

Co-Chair: *Mr. Jacques Masson, European Space Agency (ESA), The Netherlands ; Dr. Bernhard Schmidt-Tedd, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

Keywords describing the session best: 1. Interactive discussions 2. Interactive sessions 3. Slides on plasma screens

IAC-20.E3.VP.1
A CASE STUDY ON ACCESS TO SPACE IN THE SOUTHERN HEMISPHERE
Dr. Jan Walter Schroeder, Ludwigshafen, Germany, International Space University (ISU)

IAC-20.E3.VP.6
A LATIN AMERICAN AND CARIBBEAN SPACE ORGANIZATION TO BE DELIVERED IN THE SPACE 2030 AGENDA
Dr. Mariano Imbert, Caracas, Venezuela, Bolivarian Agency for Space Activities (ABAE)

E4. 54TH IAA HISTORY OF ASTRONAUTICS SYMPOSIUM

E4.1. Memoirs & Organizational Histories

Co-Chair: *Mrs. Marsha Freeman, 21st Century Science & Technology, United States ; Mr. Niklas Reinke, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

Rapporteur: *Mr. Philippe Cosyn, Belgium ; Dr. Sandra Haeuplik-Meusburger, Vienna University of Technology, Austria ; Dr. Irene Farquhar, United States ;*

Keywords describing the session best: 1. Memoirs of space pioneers 2. Government history 3. Industrial history 4. Organisational history

IAC-20.E4.1.3
60 YEARS INTERNATIONAL INSTITUTE OF SPACE LAW
Mr. Hannes Mayer, Bierbaum am Auersbach, Austria, Karl Franzens Universität Graz

IAC-20.E4.1.8
A HIGHER-FIDELITY COST ANALYSIS OF PROJECT APOLLO
Mr. Casey Dreier, Pasadena, United States, The Planetary Society

IAC-20.E4.1.9
OPERATION MOONWATCH IN AUSTRALIA
Ms. Kerrie Dougherty, Broadway, NSW, Australia

IAC-20.E4.1.10
AFRICAN SPACE PROGRAMS: VIEWING THE PAST
Dr. Benjamin Davis, Columbia, United States, The Davis Group

E4.2. Scientific and Technical Histories

Co-Chair: *Mr. John Charles, Space Center Houston, United States ; Ms. Vera Pinto Gomes, European Commission, Belgium ;*

Rapporteur: *Mr. Hannes Mayer, Karl Franzens Universität Graz, Austria ; Ms. Rachel Tillman, The Viking Mars Missions Education and Preservation Project (VMMEPP), United States ; Mr. Christophe Rothmund, Airbus Safran Launchers, France ;*

Keywords describing the session best: 1. Technical achievements 2. Scientific achievements

IAC-20.E4.2.4
50 YEARS AGO, THE FIRST EAST/WEST COOPERATION IN SPACE - LUNOKHOD 1, THE FIRST SPACE ROVER
Mr. Philippe Jung, Grasse, France, Association Aéronautique & Astronautique de France (3AF)

IAC-20.E4.2.11
CULTURAL IMPACT OF THE APOLLO PROGRAM – THE CASE OF THE "APOLLO DISEASES" IN AFRICA.
Mr. Virgiliu Pop, Timisoara, Romania, Romanian Space Agency (ROSA)

E4.3. History of Middle Eastern Contribution to Astronautics and Astronomy

Co-Chair: *Mr. Karlheinz Rohrwild, Hermann-Oberth-Raumfahrt Museum e.V., Germany ; Dr. Otfrid G. Liepack, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States ;*

Rapporteur: *Ms. Kerrie Dougherty, Australia ; Prof. Radu Rugescu, Association Dedicated to Development in Astronautics (A.D.D.A), Romania ;*

Keywords describing the session best: 1. History of Middle Eastern space activities 2. Social Aspects 3. Technical and political impact

IAC-20.E4.3.2
TAUVEX - THE STORY OF AN ISRAELI SPACE TELESCOPE THAT STAYED ON THE GROUND
Mr. Tal Inbar, Kadima, Israel, The Fisher Institute for Air and Space Strategic Studies

IAC-20.E4.3.3
AEROSPACE AND ASTRONOMY ADVANCES BY THE MIDDLE EAST
Mr. William E. Mayville, Palm Beach Gardens, United States, BLUECUBE Aerospace

E5. 31ST IAA SYMPOSIUM ON SPACE AND SOCIETY

E5.1. Space Architecture: Habitats, Habitability, and Bases

Co-Chair: *Dr. Olga Bannova, University of Houston, United States ; Dr. Anna Barbara Imhof, Liquifer Systems Group (LSG), Austria ;*

Rapporteur: *Ms. Anne-Marlene Rüede, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland ;*

IAC-20.E5.1.1
CONSTRUCTION OF MASONRY LUNAR HABITATS USING LASER-SINTERED BRICKS
Mr. Kevin Farries, Adelaide, Australia, The University of Adelaide

IAC-20.E5.1.4
AUTOMATIC DEPLOYMENT MECHANISM OF ORIGAMI HOUSE
Ms. Miyo Oda, Tokyo, Japan, Obayashi Corporation

IAC-20.E5.1.6
LESSONS LEARNED FROM SPACE STATION INTERIOR CONFIGURATION CONCEPTS FOR GATEWAY
Dr. Anna Barbara Imhof, Vienna, Austria, Liquifer Systems Group (LSG)

IAC-20.E5.1.8
AGRICULTURE IN MARS: HABITAT MARTE FINDINGS
Dr. Julio Rezende, Natal, Brazil, Federal University of Rio Grande do Norte (UFRN)

IAC-20.E5.1.9
LUNARES ANALOG RESEARCH STATION – OVERVIEW OF UPDATED DESIGN AND RESEARCH POTENTIAL
Ms. Agata Mintus, Wrocław, Poland, Space is More

IAC-20.E5.1.10
AMBIENT SENSING AND ELICITATION OF HUMAN AFFECTIVE STATES TO COMBAT MONOTONY AND BOREDOM IN SPACE
Mr. Sayjel Patel, Dubai, United Arab Emirates

IAC-20.E5.1.11
THE ROLE OF SOCIAL NORMS, SPATIAL LANGUAGE, AND AESTHETICS IN THE DEVELOPMENT OF SPACE HABITATS
Dr. Julie Patarin-Jossec, Nice, France, Saint Petersburg State University

E5.2. Is Space R&D Truly Fostering A Better World For Our Future?

Co-Chair: Dr. Olga Bannova, University of Houston, United States ; Ms. Kerry Leonard, National Aeronautics and Space Administration (NASA), Goddard Space Flight Center, United States ;

Rapporteur: Dr. Anna Barbara Imhof, Liquifer Systems Group (LSG), Austria ;

IAC-20.E5.2.2
PUBLIC VALUE IN THE SPACE SECTOR: ESA CASE
Dr. Gianluigi Baldesi, Paris, France, European Space Agency (ESA)

IAC-20.E5.2.4
FEASIBILITY STUDY OF USING APPLICABLE SPACE ASSETS FOR DISASTER MANAGEMENT AND MITIGATION IN JAPAN
Mr. Kazuhiko Momose, Tokyo, Japan

IAC-20.E5.2.5
FLOOD MODELING IN A PERUVIAN CITY AS A DECISION-MAKING TOOL
Prof. Avid Roman-Gonzalez, Lima, Peru

IAC-20.E5.2.8
PRACTICES IN FORESIGHT & SCENARIO BUILDING HELPING SPACE AGENCIES PREPARE FOR & SEIZE FUTURE OPPORTUNITIES
Mr. Piero Messina, Paris, France, European Space Agency (ESA)

IAC-20.E5.2.9
THE FEDERATION: CONNECTING STUDENTS AND DATA FOR R&D INSIGHTS
Prof. Jeanne Holm, Sierra Madre, CA, United States

IAC-20.E5.2.10
GLOBAL HEALTH OUTCOMES THROUGH SPACE APPLICATIONS
Prof. Avid Roman-Gonzalez, Lima, Peru

IAC-20.E5.2.11
SPACE FOR THE SUSTAINABLE DEVELOPMENT GOALS (SPACE4SDGS): MAPPING THE CONTRIBUTIONS OF SPACE TO THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT
Mr. Andre Baumgart, Wien, Austria, United Nations Office for Outer Space Affairs

E5.3. Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach

Co-Chair: *Dr. Sasha Alexander, Western Sydney University, Australia ; Dr. Tibor Balint, Art Center College of Design, United States ;*

Rapporteur: *Dr. Yuri Tanaka, Tokyo University of the Arts, Japan ;*

IAC-20.E5.3.2
MUSICAL CD ARTWORK STYLES BASED IN SPACE: A PERSONAL PERSPECTIVE
Mr. Jordi Sandalinas, Barcelona, Spain

IAC-20.E5.3.3
MARTIAN DELIGHT: EXPLORING QUALITATIVE CONTACT FOR DECOUPLED COMMUNICATIONS
Dr. Chang Hee Lee, London, United Kingdom, Royal College of Art

IAC-20.E5.3.5
PARTICLE POST – LETTERS FROM THE UNIVERSE: A SOUND INSTALLATION THROUGH COSMIC MUONS
Dr. Yuri Tanaka, Kyoto, Japan, Tokyo University of the Arts

IAC-20.E5.3.7
MUSIC EXPRESSION USING SPACE TECHNOLOGY AND SPACE PHYSICS
Mr. Hayaki Tsuji, Yokohama, Japan, N/A

E5.4. Space Assets and Disaster Management

Co-Chair: *Mr. Geoffrey Languedoc, Canadian Aeronautics & Space Institute (CASI), Canada ; Ms. Jillianne Pierce, Space Florida, United States ;*

IAC-20.E5.4.1
RISK MITIGATION AND SATELLITE WARNING SYSTEMS FOR GLOBAL ASSET SECURITY IN PREPARATION FOR A FUTURE CARRINGTON EVENT
Ms. Erika Crowley, Illkirch, France, International Space University (ISU)

IAC-20.E5.4.3
REDESIGNING STATE EMERGENCY MANAGEMENT LEGISLATION TO PROTECT ELECTRICAL NETWORKS IN THE EVENT OF A CARRINGTON EVENT: INTERNATIONAL RESPONSES AND DOMESTIC SOLUTIONS - A UAE, US AND AUSTRALIAN EXPLORATION.
Mr. Thomas Green, Mile End, Australia, Space Industry Association of Australia

IAC-20.E5.4.6
COPERNICUS EMERGENCY MANAGEMENT SERVICE (EMS) AND THE COSMO-SKYMED CONTRIBUTION
Mr. RICCARDO INGROSSO, Roma, Italy, Italian Space Agency (ASI)

IAC-20.E5.4.7
RHETICUS®: DYNAMIC AND CONTINUOUS GEOINFORMATION SERVICE FOR DISASTER MANAGEMENT AND CRITICAL INFRASTRUCTURE
Dr. Daniela Drimaco, Bari, Italy, Planetek Italia

IAC-20.E5.4.8
ANALYSIS OF EARTHQUAKE AFFECTED AREAS USING DATA COMPRESSION TECHNIQUES
Prof. Avid Roman-Gonzalez, Lima, Peru

IAC-20.E5.4.9
DISMAPP: A TOOL FOR NATURAL DISASTERS MANAGEMENT USING CITIZEN SCIENCES
Prof. Avid Roman-Gonzalez, Lima, Peru

E5.5. Sharing space achievements and heritage: space museums and societies

Co-Chair: *Mr. Scott Hatton, The British Interplanetary Society, United Kingdom ; Mr. Jean-Baptiste Desbois, SEMECCEL Cité de l'Espace, France ; Mrs. Ines Prieto, SEMECCEL Cité de l'Espace, France ;*

Rapporteur: *Ms. Clementine Decoopman, Space Generation Advisory Council (SGAC), Austria ;*

IAC-20.E5.5.2
YOUNG PROFESSIONALS IN THE UAE SPACE AGENCY
Ms. Maitha Al Romaithi, Abu Dhabi, United Arab Emirates, UAE Space Agency

IAC-20.E5.5.3
DESIGN AND CONSTRUCTION OF A RELIABLE, VERSATILE AND INEXPENSIVE ROCKET LAUNCHER FOR CANSAT COMPETITIONS.
Mr. Xavier López, Terrassa, Spain

IAC-20.E5.5.5
PEACE THOUGHT AND SOCIO-ECONOMY FOR THE SPACE AGE USING SATELLITES
Mr. Hayaki Tsuji, Yokohama, Japan, N/A

IAC-20.E5.5.7
ASTRONAUT ETHNOGRAPHY: A DESIGN RESEARCH APPROACH TO MICROGRAVITY
Ms. Sana Sharma, Cambridge, United States, Massachusetts Institute of Technology (MIT)

IAC-20.E5.5.8
DESIGN A COLONY ON MARS FOR 25 COUPLES
Mrs. Saba Tadjalli, Tehran, Iran

E5.VP. Virtual Presentations - 31st IAA SYMPOSIUM ON SPACE AND SOCIETY

Co-Chair: *Mr. Geoffrey Languedoc, Canadian Aeronautics & Space Institute (CASI), Canada ; Dr. Olga Bannova, University of Houston, United States ;*

IAC-20.E5.VP.4
SPACE FOR URBAN PLANNING: TEAM PROJECT CONCLUSIONS FROM THE SPACE STUDIES PROGRAM
Ms. Aleksandra Kozawska, Gdansk, Poland, International Space University (ISU)

IAC-20.E5.VP.6
LUNARES III (SPECTRA): TRIDENT OIL RING MAIN UNIT (RMU) HIGH VOLTAGE SWITCH EVA AND VR TO SUPPORT FUTURE WORK IN ON-SITE LUNAR POWER DISTRIBUTION.
Dr. Sarah Jane Pell, Melbourne, Australia, Monash University

IAC-20.E5.VP.8
THE INNER COURTYARD CONCEPT IN THE ARCHITECTURE OF PERSPECTIVE ORBITAL STATIONS
Prof. Nikolay Pavlov, Moscow, Russian Federation

IAC-20.E5.VP.9
NEW COLOUR DESIGN MODEL FOR SPACE HABITABILITY: FROM THE CHINESE SPACE STATION TO THE FUTURE LUNAR BASE
Mr. AO JIANG, leeds, United Kingdom, University of Leeds

IAC-20.E5.VP.10
SAFETY CONSIDERATIONS FOR SPACE ANALOG STATIONS ANS MARS HABITATS
Dr. Julio Rezende, Natal, Brazil, Federal University of Rio Grande do Norte (UFRN)

IAC-20.E5.VP.12
PAVING THE WAY TO THE STARS: INCLUSION AND EDUCATION THROUGH SPACE
Prof.Dr. Javier Mejuto, Tegucigalpa, Honduras, National Autonomous University of Honduras (UNAH)

IAC-20.E5.VP.13
HUMAN FACTORS AND HABITABILITY IMPACT OF PLANTS ON ISOLATION
Dr. Irene Lia Schlacht, Milano, Italy

IAC-20.E5.VP.14
MANNED ROVERS AND MOBILE BASES ON OTHER PLANETS
Mr. Oleg Aleksandrov, San Francisco, United States, Private individual
www.oleg.space

E6. IAF BUSINESS INNOVATION SYMPOSIUM

E6.1. Entrepreneurship and Innovation: The Practitioners' Perspectives

Co-Chair: *Dr. Juergen Drescher, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany ;*

Keywords describing the session best: 1. Entrepreneurship 2. Innovation 3. Business Plans 4. Practitioner Perspective

IAC-20.E6.1.4
COMMERCIAL INCENTIVES FOR DEBRIS REMOVAL SERVICES
Ms. Harriet Brettle, Harwell, United Kingdom, Astroscale Ltd

IAC-20.E6.1.6
THE APPLICATION OF THE BLOCKCHAIN TECHNOLOGY TO THE SPACE INDUSTRY
Mrs. Héloïse Vertadier, Silly-Tillard, France, 1) University of Otago (New Zealand)

IAC-20.E6.1.7
THE UNIFIED PRODUCT AND COMPONENT PORTAL FOR THE ROCKET AND SPACE INDUSTRY
Ms. Oksana Grigorieva, Moscow, Russian Federation, JSC Glavkosmos

IAC-20.E6.1.8
INVESTMENT AND MONETIZATION OF EARLY STAGE LUNAR SURFACE EXPLORATION MISSIONS
Mr. Pavlo Tanasyuk, London, United Kingdom, Spacebit Global Ltd

IAC-20.E6.1.9
FOSTERING THE UAE SPACE ECOSYSTEM: THE GLOBAL SPACE INDUSTRY ACCELERATOR (GSIA)
Mr. Naser AlRashedi, Abu Dhabi, United Arab Emirates, UAE Space Agency

IAC-20.E6.1.14
A BUSINESS CASE ANALYSIS FOR 2ND GENERATION POINT-TO-POINT SUBORBITAL TOURISM AND RESEARCH SPACEFLIGHTS
Mr. Charles Lauer, Lansing, MI, United States, Rocketplane Global, Inc.

E6.2. Finance and Investment: The Practitioners' Perspectives

Co-Chair: *Mr. Joerg Kreisel, JOERG KREISEL International Consultant (JKIC), Germany ;*

Keywords describing the session best: 1. Finance 2. Private Investment 3. Government Financing 4. Practitioner Perspective

IAC-20.E6.2.1
START-UP SPACE: GLOBAL INVESTMENT TRENDS
Ms. Carissa Christensen, Alexandria VA, United States, Bryce Space and Technology

IAC-20.E6.2.3
FINANCE FOR INNOVATION IN SUPPORT OF SPACE-BASED VENTURES: THE EXPERIENCE OF E. AMALDI FOUNDATION IN THE VENTURE CAPITAL INVESTMENT SECTOR
Dr. Lorenzo Scatena, Rome, Italy, Fondazione E. Amaldi

IAC-20.E6.2.5
NEWSPACE COMPANIES AHEAD OF A FUTURE INDUSTRY CONSOLIDATION: HOW CAN VALUATION METHODS CONTRIBUTE TO THEIR SUCCESS?
Ms. Susana Fornies Rodriguez, Toulouse, France

IAC-20.E6.2.7
ASTRODYNAMICS VS. MINING INDUSTRY FINANCING – MODELING VIABLE INVESTMENT STRUCTURES FOR ASTEROID RESOURCES
Mr. Sebastian M. Ernst, Leipzig, Germany

IAC-20.E6.2.9
ASTRAX LUNAR CITY ECONOMIC SYSTEM BY USING BLOCKCHAIN TECHNOLOGY
Mr. Taichi Yamazaki, Kamakura, Japan, ASTRAX, Inc.

IAC-20.E6.2.10
MEASURING THE DIRECT AND INDIRECT ECONOMIC BENEFITS OF COMMERCIAL ACTIVE SPACE DEBRIS REMOVAL SERVICES (ADRS) BASED ON THE UTILIZATION OF DISRUPTIVE FUTURE MODULAR SATELLITE SYSTEMS
Dr. Stella Alexandrova, Sofia, Bulgaria

IAC-20.E6.2.11
HISTORICAL REVIEW HIGHLIGHTS THE NEED TO TRANSITION FROM VENTURE CAPITAL TO INSTITUTIONAL INVESTMENT IN SPACE INDUSTRY
Mr. Kevin Barry, Rockville, United States, George Mason University

IAC-20.E6.2.12
FUNDRAISING STRATEGIES IN THE UK SPACE START-UP ECOSYSTEM
Mr. Marco Gomez Jenkins, London, United Kingdom, Imperial College London

E6.3. Innovation: The Academics' Perspectives

Co-Chair: *Dr. Ken Davidian, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States ;*

Keywords describing the session best: 1. Entrepreneurship 2. Innovation 3. Organization Theory 4. Quantitative Methods 5. Qualitative Methods

IAC-20.E6.3.2
"WHAT IS NEWSPACE?" - A SECTORAL INNOVATION SYSTEMS APPROACH
Dr. Marc-Andre Chavy-Macdonald, Lausanne, Switzerland, Ecole Polytechnique Fédérale de Lausanne (EPFL)

IAC-20.E6.3.6
THE LOGICAL RELATIONSHIP BETWEEN STRATEGIC RESOURCES AND THE COMPETITIVENESS OF AEROSPACE ENTERPRISES IN THE MARKET COMPETITION ENVIRONMENT
Dr. Wenyi CAI, Beijing, China, China Academy of Launch Vehicle Technology(CALT)

IAC-20.E6.3.7
VERTICAL INTEGRATION: A BOON OR BANE FOR NEW SATELLITE COMMUNICATION INDUSTRY ENTRANTS?
Mr. Rama Theertha Kasi, Douglas, United Kingdom

IAC-20.E6.3.8
ASSESSING THE IMPACT OF SPACE PROGRAMS THROUGH MULTI-LEVEL BEHAVIORAL ADDITIONALITY
Mr. Tõnis Eerme, Tartu, Estonia, University of Tartu

IAC-20.E6.3.10
PRIVATE HUMAN MISSIONS TO MARS AND INDIGENOUS LIFE: INSIGHTS FROM AN EARLY EMPIRICAL BIOETHICS STUDY AND THEIR RELEVANCE TO CORPORATE LEGITIMACY
Mr. Georgios Profitiliotis, Zografou, Athens, Greece, National Technical University of Athens

E6.4. Strategic Risk Management for Successful Space & Defence Programmes

Co-Chair: *Ms. Maria-Gabriella Sarah, European Space Agency (ESA), France ;*

Keywords describing the session best: 1. Strategic risk assessment 2. risk appetite 3. opportunities management 4. risk mitigation 5. Space for Defence

IAC-20.E6.4.2
FROM SAFETY TO SECURITY: REDUCING THE THREAT ENVIRONMENT THROUGH THE RESPONSIBLE USE OF OUTER SPACE
Dr. Jessica West, Waterloo, Canada, Project Ploughshares

IAC-20.E6.4.3
RISKS LINKED TO THE MILITARIZATION OF SPACE: CAN WE AVOID A SPACE POLICE?
Mr. Marc Vales, Saint Cloud, France, Dassault Aviation

IAC-20.E6.4.6
ASSESSMENT AND PRIORITIZATION OF STRATEGIES FOR THE LONG TERM SUSTAINABILITY OF OUTER SPACE
Mrs. Fatima AlShamsi, Abu Dhabi, United Arab Emirates, UAE Space Agency

IAC-20.E6.4.10
RISK MANAGEMENT AND THE INSURANCE OF ON-ORBIT SERVICING. THE INSURANCE INDUSTRY AS A DRIVER OF RISKY SPACE INNOVATION.
Prof. Katarzyna Malinowska, Jozefin, Poland, Kozminski University

E6.5-GTS.1. Entrepreneurship Around the World

Co-Chair: *Dr. Ken Davidian, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States ; Ms. Elizabeth Seward, Airbus Defence and Space Ltd, United Kingdom ;*

Keywords describing the session best: 1. Entrepreneurship 2. Innovation 3. Organization Theory 4. Quantitative Methods 5. Qualitative Methods

IAC-20.E6.5-GTS.1.1
KEYNOTE: BUSINESS STRATEGY IN THE EMERGING COMMERCIAL SPACE INDUSTRY SEGMENTS
Dr. Laura Huang, United States, Harvard Business School

IAC-20.E6.5-GTS.1.2
OPENING UP SPACE DATA FOR ALL
Prof. Jeanne Holm, Sierra Madre, CA, United States

IAC-20.E6.5-GTS.1.4
ENTREPRENEURSHIP AND A DIVERSITY APPROACH TO SPACE ECONOMY
Dr. Annamaria Nassisi, Osmannoro (FI), Italy, Thales Alenia Space Italia

IAC-20.E6.5-GTS.1.5
THE SPACE-FARING AFRICA: COMMERCIAL SPACE INDUSTRY AND ITS READINESS FOR INNOVATION-DRIVEN INVESTMENT
Mr. José Pedro Ferreira, Barreiro, Portugal, Polytechnic Institute of Setubal

IAC-20.E6.5-GTS.1.6
AN ANALYSIS OF THE AFRICAN NEWSPACE INDUSTRY LANDSCAPE: MARKET SEGMENTS, INVESTMENT AND REVENUE
Mr. Joseph Ibeh, Lagos, Nigeria, Space Generation Advisory Council (SGAC)

IAC-20.E6.5-GTS.1.7
ALTERNATIVE FUNDING MODELS IN COSTA RICA FOR AEROSPACE ENTREPRENEURSHIP.
Mr. Fabio Murillo, San Jose, Costa Rica, Central American Association for Aeronautics and Space (ACAE)

IAC-20.E6.5-GTS.1.11
COMMSAT'S CASE, AN EXAMPLE OF CHINA'S SPACE ENTREPRENEURIAL ACTIVITIES
Mr. Tao Xie, Beijing, China

IAC-20.E6.5-GTS.1.12
BUSINESS CASE STUDY FOR THE CYCLER – A CIRCUMLUNAR VEHICLE FOR DEVELOPMENT OF SPACE TOURISM AND LUNAR INFRASTRUCTURE BY 2030.
Mrs. Natalia Lemarquis, Illkirch-Graffenstaden, France, International Space University (ISU)

IAC-20.E6.5-GTS.1.13
SUSTAINABLE DESIGN OF LOW-COST MODULAR TEST PLATFORMS AS AN ENTREPRENEURSHIP FOR SPACE DEVELOPMENT IN COLOMBIA
Mr. German Wedge Rodriguez Pirateque, Bogotá, Colombia, Universidad Nacional de Colombia

E6.VP. Virtual Presentations - IAF BUSINESS INNOVATION SYMPOSIUM

Co-Chair: *Dr. Ken Davidian, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States ;*

IAC-20.E6.VP.1
ASSESSING THE IMPACT OF ETHICAL LEADERSHIP ON WELL-BEING IN THE NEWSPACE INDUSTRY
Mr. Konstantin Chterev, Broadstone, United Kingdom, International Space University

IAC-20.E6.VP.5
SPACE PSYCHOLOGY HAS SOMETHING TO OFFER: WHAT CAN WE TRANSFER FROM ASTRONAUT TRAININGS TO BUSINESS TRAININGS?
Ms. Merve Can, Istanbul, Turkey, University of Wales

E7. IISL COLLOQUIUM ON THE LAW OF OUTER SPACE

E7.1. IISL Young Scholars Session and Dr. Jasentuliyana Keynote Lecture by a Leading Space Law Expert

Co-Chair: *Prof. Kai-Uwe Schrogl, European Space Agency (ESA), Germany ; Mr. Mohamed Amara, UAE Space Agency, United Arab Emirates ;*

Rapporteur: *Ms. Jenni Tapio, Ministry of Economic Affairs and Employment of Finland, Finland ;*

Keywords describing the session best: 1. Young Scholar 2. Keynote presentation 3. Current space law issues 4. Professor Stephan Hobe

IAC-20.E7.1.1
KEYNOTE: A NEW FORMAT FOR SPACE LAW?
Prof. Stephan Hobe, Cologne, Germany, University of Cologne

IAC-20.E7.1.4
ARBITRATION OF SPACE-RELATED DISPUTES: CASE TRENDS AND ANALYSES
Ms. Viva Dadwal, Windsor, Canada, McGill Univeristy

IAC-20.E7.1.5
PROTECTING THE DARK SKIES OF THE EARTH FROM SATELLITE CONSTELLATIONS UNDER INTERNATIONAL SPACE LAW
Mr. Tejas Bharadwaj, Chennai, India

IAC-20.E7.1.8
ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING: THE NEW ERA OF THE USE OF FORCE
Ms. Giuliana Rotola, Bari, Italy, International Space University (ISU)

IAC-20.E7.1.9
UTILIZATION OF NATURAL RESOURCES IN OUTER SPACE: COMPLIANCE OF A NATIONAL LAW ON EXPLORATION AND USE OF SPACE RESOURCES WITH THE PRINCIPLES OF INTERNATIONAL SPACE LAW
Mr. Martin Svec, Prague, Czech Republic, Charles University

IAC-20.E7.1.13
EUROPEAN SATCOM LICENSING: CURRENT STATUS AND REFORM EFFORTS
Mr. Edward Burger, Saronno, Italy, Leaf Space s.r.l.

IAC-20.E7.1.14
COMMERCIAL SPACE MINING: NATIONAL LEGISLATION VS. INTERNATIONAL SPACE LAW
Ms. Maquelin Pereira, Ajman, United Arab Emirates

IAC-20.E7.1.15
SPACE HERITAGE: INTERNATIONAL LEGAL ASPECTS OF ITS PROTECTION
Mr. Vladimir Savelev, Moscow, Russian Federation, Peoples' Friendship University of Russia (RUDN University)

IAC-20.E7.1.16
SPACE TOURISM AND SPACE LAW: APPROACH BASED ON THE LAW APPLICABLE TO ASTRONAUTS
Mr. Jonathan Andrade, Santos, Brazil

E7.2. Moon and Mars Settlement: Open Legal Issues

Co-Chair: *Prof. Mahulena Hofmann, University of Luxembourg, Luxembourg ; Mr. Zhenjun Zhang, China Institute of Space Law, China ;*

Rapporteur: *Mr. Federico Bergamasco, University of Luxembourg, Luxembourg ;*

Keywords describing the session best: 1. Moon and Mars settlement 2. Legal issues 3. International law 4. National law 5. Ownership

IAC-20.E7.2.1
'FOR ALL MOONKIND' - LEGAL ISSUES OF HUMAN SETTLEMENTS ON THE MOON: JURISDICTION, FREEDOM AND INCLUSIVENESS
Prof. Frans von der Dunk, Leiden, The Netherlands, University of Nebraska-Lincoln

IAC-20.E7.2.2
LEGAL ISSUES SURROUNDING HUMAN SETTLEMENTS ON THE MOON AND OTHER CELESTIAL BODIES
Prof. Sandeepa Bhat, Kolkata, India, National University of Juridical Sciences

IAC-20.E7.2.4
THE LUNAR REGISTRY: AN ENHANCED REGISTRY OF SPACE OBJECTS AND ACTIVITIES
Ms. Jessy Kate Schingler, San Francisco, United States, Open Lunar Foundation

IAC-20.E7.2.5
DEVELOPING AND MANAGING MOON AND MARS SETTLEMENTS IN ACCORDANCE WITH INTERNATIONAL SPACE LAW
Mr. Antonino Salmeri, Luxembourg, Luxembourg , University of Luxembourg

IAC-20.E7.2.7
PROPERTY RIGHTS AND SOVEREIGNTY WITHIN THE FRAMEWORK OF THE COMMON HERITAGE OF MANKIND PRINCIPLE
Mr. Arpit Gupta, Agra, India

IAC-20.E7.2.8
BACK TO THE FUTURE: ROMAN LAW AND OWNERSHIP OF OBJECTS CREATED ON CELESTIAL BODIES
Ms. Gabrielle Leterre, Differdange, Luxembourg , University of Luxembourg

IAC-20.E7.2.9
'JURISDICTION AND CONTROL' OVER SPACE PRODUCTS IN THE AGE OF MOON AND MARS SETTLEMENT: AN ANALYSIS FROM A PRIVATE LAW PERSPECTIVE
Prof. Fumiko Masuda, Okayama, Japan, Okayama University

IAC-20.E7.2.11
THE EXTRATERRITORIAL APPLICATION OF HUMAN RIGHTS IN OUTER SPACE
Mr. Jonathan Lim, Melbourne, Australia, Jus Ad Astra

IAC-20.E7.2.12
THE FORTHCOMING COLLISION OF INTERNATIONAL MIGRATION LAW AND INTERNATIONAL SPACE LAW IN THE SETTLEMENT OF OUTER SPACE
Mr. Andrew Simon-Butler, Melbourne, Australia, University of Melbourne

IAC-20.E7.2.13
OUTLAWS OF THE MOON? CRIME AND PUNISHMENT FOR A SPACE-FARING CIVILISATION
Prof. Christopher Newman, Newcastle, United Kingdom, Northumbria University

IAC-20.E7.2.14
COLONIES ON THE MOON (AND/OR MARS)? NEW CHALLENGES FOR INTERNATIONAL AND NATIONAL LAW
Prof. George (Georgios) D. Kyriakopoulos, Gyfada, Greece, National and Kapodistrian University Of Athens

IAC-20.E7.2.16
FUTURES SCENARIOS FOR LOCAL AND INTERNATIONAL LAW APPLICABLE TO THE SETTLEMENT OF THE MOON AS THE BASIS OF A SETTLEMENT STRATEGY
Mr. Anton Alberts, Johannesburg, South Africa

IAC-20.E7.2.18
COMPROMISE, COMMONHOLD AND THE COMMON HERITAGE OF MANKIND
Ms. Chelsey Denney, London, United Kingdom, None

IAC-20.E7.2.20
LEGAL SUPPORT FOR THE PRIVATE SECTOR: AN IMPLEMENTATION AGREEMENT FOR THE MOON TREATY
Mr. Dennis O'Brien, Ukiah, United States, Space Treaty Project

IAC-20.E7.2.21
SPACE SETTLEMENTS, SPACE OBJECTS AND THE CONCEPT OF TERRITORY IN OUTER SPACE
Dr. Thomas Cheney, Northampton, United Kingdom, Open University

E7.3. Legal Implications of Evolving Remote Sensing Technologies

Co-Chair: *Prof. Joanne Gabrynowicz, International Institute of Space Law (IISL), United States ; Prof. George (Georgios) D. Kyriakopoulos, National and Kapodistrian University Of Athens, Greece ;*

Rapporteur: *Ms. Kamlesh Brocard, Swiss Space Office (SSO), Switzerland ;*

Keywords describing the session best: 1. Remote sensing 2. Authorisation and supervision 3. National law 4. International law 5. New technologies

IAC-20.E7.3.4
REMOTE SENSING DATA ACCESS POLICY, DATA PRODUCTS REGULATORY FRAMEWORK AND INTELLECTUAL PROPERTY RIGHT CONCERNS IN AN ERA OF ENVIRONMENT PROTECTION URGENCY.
Ms. Sara Dalledonne, Montreal, Canada, Institute of Air and Space Law, McGill University

IAC-20.E7.3.10
DATA LAW ASPECTS OF COMMERCIAL SATELLITE REMOTE SENSING: NEW CHALLENGES FOR THE NEW OPPORTUNITIES
Prof. SOUICHIROU KOZUKA, Tokyo, Japan, Gakushuin University

IAC-20.E7.3.11
THE 1986 UNITED NATIONS PRINCIPLES ON REMOTE SENSING DEALING WITH THE DUAL-USE NATURE OF SPACE IMAGERY
Dr. Anne-Sophie Martin, Rome, Italy, Sapienza University of Rome

IAC-20.E7.3.12
"PURE DATA" OR HOW REMOTE SENSING RESULTS CAN BE USED IN THE LITIGATION?
Ms. Irina Chernykh, Moscow, Russian Federation, Peoples' Friendship University of Russia (RUDN University)

IAC-20.E7.3.15
SOVEREIGN PRIVACY AND THE EVOLUTION OF EARTH OBSERVATION TECHNOLOGY
Ms. Dimitra Stefoudi, Leiden, The Netherlands, Leiden University

E7.4. Application of Space Law to Cyber Activities

Co-Chair: *Mr. PJ Blount, University of Luxembourg, Luxembourg ; Dr. Martha Mejia-Kaiser, Independent Researcher, Germany ;*

Rapporteur: *Ms. Rada Popova, Institute of Air and Space Law, University of Cologne, Germany ;*

Keywords describing the session best: 1. Cybertechnology 2. Telecommunications 3. Network of networks 4. Liability 5. Data protection

IAC-20.E7.4.1
CYBER ACTIVITIES AND CHALLENGES ON STATES RESPONSIBILITY IN SPACE LAW
Dr. Hamid Kazemi, Tehran, Iran, Aerospace Research Institute, Ministry of Science, Research and Technology

IAC-20.E7.4.5
WHEN CYBER ACTIVITIES ARE SPACE ACTIVITIES: DEFINITIONS ARE KEY
Mr. Stefan A. Kaiser, Wassenberg, Germany

IAC-20.E7.4.6
CYBERATTACKS AND THE NEED FOR A NEW LEGAL REGIME
Ms. Sarah de Heer, Maastricht, The Netherlands

IAC-20.E7.4.7
THE OUTER SPACE AND CYBER-ATTACKS: ATTRIBUTING RESPONSIBILITY UNDER INTERNATIONAL SPACE LAW
Ms. Ishita Das, Kolkata, India, National University of Juridical Sciences

IAC-20.E7.4.8
CYBERSECURITY IN OUTER SPACE: COMBATING PERILS OF THE FINAL FRONTIER
Mr. Chinmoy Roy, Bengaluru, India, Antrix Corporation Limited

IAC-20.E7.4.9
SPACE LAW CHALLENGES FOR RECOVERY OF DAMAGE, INFLICTED TO SPACE OBJECTS BY CYBER MEANS
Ms. Darya Bohdan, Minsk, Belarus, Belarusian State University

IAC-20.E7.4.10 (non-confirmed)
CYBER ATTACK ON SPACE ASSETS AND THE APPLICATION OF ARTICLE 51 OF THE UNITED NATIONS CHARTER
Mr. OLUSOJI NESTER JOHN, ILE-IFE, Nigeria, African Regional Center for Space Science and Technology Education in English (ARCSSTE-E)

IAC-20.E7.4.11
GNSS JAMMING AND SPOOFING UNDER NATIONAL AND INTERNATIONAL LAW
Dr. Ingo Baumann, Cologne, Germany, BHO Legal

IAC-20.E7.4.12 (non-confirmed)
SATELLITE JAMMING FOR GOVERNMENTAL PURPOSES: WHAT DO TELECOMMUNICATIONS AND SPACE LAW SAY ABOUT ITS LEGITIMACY?
Ms. Elina Morozova, Moscow, Russian Federation, Intersputnik International Organization of Space Communications

IAC-20.E7.4.13
TERRESTRIAL CYBER ACTIVITY OF NON-GOVERNMENTAL ACTORS AND STATE RESPONSIBILITY UNDER OUTER SPACE TREATY ARTICLE VI
Mr. George Anthony Long, Fountain Hills, Arizona, United States

E7.5. National Space Law Developments with Particular Focus on The Middle East Region

Co-Chair: *Prof. Armel Kerrest, University of Western Brittany (UBO), France ; Mr. K.R. Sridhara Murthi, NIAS, India ;*

Rapporteur: *Ms. Zeina Ahmad, University of Cologne, Germany ;*

Keywords describing the session best: 1. Principles of space treaty law 2. National regulation and enforcement 3. Definition and scope of space activities 4. National licensing of space activities 5. Jurisdiction

IAC-20.E7.5.4
DOMESTIC LEGISLATION AND CHALLENGES RELATED TO OUTER SPACE LAWS IN PAKISTAN
Dr. Shakeel Ahmad, Montreal, Canada, Institute of Air and Space Law, McGill University

IAC-20.E7.5.6
THE REGIONAL PREFERENCE FROM A SPACE LAW AND POLICY PERSPECTIVE AND THE EUROPEAN INTERGOVERNMENTAL ORGANISATION AS A POTENTIAL MODEL FOR THE MIDDLE EAST
Dr. Annette Froehlich, LL.M., MAS, Vienna, Austria, European Space Policy Institute (ESPI)German Aerospace Center (DLR)

IAC-20.E7.5.7
NATIONAL COMPLIANCE WITH INTERNATIONAL SPACE LAW: A CASE STUDY OF THE UNITED STATES, SOUTH KOREA, BRAZIL, SOUTH AFRICA, AND NIGERIA
Mr. David Lindgren, Rockville, United States, University of Cape Town

IAC-20.E7.5.10
A REGIONAL INITIATIVE FOR STUDYING THE STATUS OF NATIONAL SPACE LAWS
Dr. Ikuko Kuriyama, Tokyo, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.E7.5.13
ESTABLISHING THE PHILIPPINE SPACE AGENCY: FROM TECHNOLOGY DEVELOPMENT TO POLICY LEGISLATION
Dr. Rogel Mari Sese, Davao City, The Philippines

E7.7. Space Law in a Networked World

Co-Chair: *Ms. Elina Morozova, Intersputnik International Organization of Space Communications, Russian Federation ; Dr. Olga Stelmakh-Drescher, International Institute of Space Commerce, United States ;*

Rapporteur: *Ms. Gina Petrovici, University of London, Germany ;*

Keywords describing the session best: 1. Space applications 2. Networked space capabilities 3. International space law 4. Space regulatory framework 5. Growth in stakeholders

IAC-20.E7.7.2
DOES THE END JUSTIFY THE MEANS? A LEGAL STUDY ON THE ROLE AND CONSEQUENCES OF NORMATIVE PLURALITY IN INTERNATIONAL SPACE GOVERNANCE
Mr. Alexander Soucek, Noordwijk, The Netherlands, European Space Agency (ESA)

IAC-20.E7.7.3
IMPLICATIONS OF STATE AUTHORIZATION AND CONTINUING SUPERVISION TO CONTEMPORARY SPACE ACTIVITIES
Mr. Yu Takeuchi, Tsukuba, Japan, Japan Aerospace Exploration Agency (JAXA)

IAC-20.E7.7.4
WHOSE FAULT IS IT? - ARTIFICIAL INTELLIGENCE AND LIABILITY IN INTERNATIONAL SPACE LAW
Dr. Michail Chatzipanagiotis, Nicosia, Cyprus, University of Cyprus

IAC-20.E7.7.5
TWO INHIBITORS TO A THRIVING ECONOMY IN OUTER SPACE: REGULATORY UNCERTAINTY AND TAXATION ENTANGLEMENT
Mr. Steve Simon, Chicago, United States

IAC-20.E7.7.7
BACK TO THE FUTURE: SPACE LAW IN A NETWORKED WORLD
Prof.Dr. Ram Jakhu, Montreal, Quebec, Canada, Institute of Air and Space Law, McGill University

IAC-20.E7.7.8
CYA: A LEGAL PERSPECTIVE ON HOW TO DO CYBERSECURITY IN SPACE
Mr. PJ Blount, Lorentzweiler, Luxembourg , University of Luxembourg

IAC-20.E7.7.9
NEW SPACE LAW CREATED TO ENABLE SPACE INNOVATION WHILE PRESERVING THE RF ENVIRONMENT IN SPACE; NOTABLE OUTCOMES OF THE ITU'S 2019 WORLD RADIO CONFERENCE
Ms. Audrey Allison, Arlington, VA, United States, Boeing

IAC-20.E7.7.11
EU INTEGRATED APPROACH TO SPACE AND TELECOMMUNICATION AREAS
Prof. Mahulena Hofmann, Luxembourg, Luxembourg , University of Luxembourg

IAC-20.E7.7.12
INTERNATIONAL REGULATORY AND LICENSING SCHEMES FOR TELECOMMUNICATION SATELLITES IN LOW-EARTH ORBIT TO MITIGATE ANTI-COMPETITIVE BEHAVIOUR AND MANAGE NATURAL MONOPOLIES
Mr. Thomas Green, Mile End, Australia, Space Industry Association of Australia

E7.VP. Virtual Presentations - IISL COLLOQUIUM ON THE LAW OF OUTER SPACE

Co-Chair: *Prof. Lesley Jane Smith, Leuphana University of Lüneburg/Weber-Steinhaus & Smith, Germany ; Dr. Catherine Doldirina, International Institute of Space Law (IISL), Italy ;*

IAC-20.E7.VP.1
FUTURE PERSPECTIVES OF INTERNATIONAL HUMANITARIAN LAW APPLICATION TO STATE ACTIVITIES IN SPACE
Ms. Darya Bohdan, Minsk, Belarus, Belarusian State University

IAC-20.E7.VP.7
SPACE FORCE: THE HARBINGER OF COLD WAR 2?
Mr. Sri Aditya Kumar, Puducherry, India

IAC-20.E7.VP.8
AN INTERNATIONAL LEGAL TRUST SYSTEM TO DEAL WITH THE NEW SPACE ERA
Dr. IVAN FINO, Turin, Italy, University of Turin

IAC-20.E7.VP.9
A COMPLIANCE GUIDE FOR SATELLITE NETWORK OPERATORS WHO PLAN TO CONDUCT BUSINESS IN CHINA.
Mr. Huxiao Yang, Tianjin, China

IAC-20.E7.VP.12
THE CONTINUITY OF OBLIGATION TO PROVIDE THE SERVICES OF GLOBAL NAVIGATION SATELLITE SYSTEM ; LOOKING SPACE LAW THROUGH THE LENS OF HUMAN RIGHTS
Ms. Atefeh Abedinpour, Mashhad, Iran, Shahid Beheshti University

IAC-20.E7.VP.13
NEAR SPACE ACTIVITIES - THE SEARCH FOR A NEW LEGAL REGIME
Ms. Mini Gupta, The Hague, The Netherlands, Leiden University

IAC-20.E7.VP.14
CHALLENGES AND SUGGESTIONS: ENABLING SPACE LAW TO PREPARE FOR HUMAN SETTLEMENT IN OUTER SPACE
Dr. Merve ERDEM BURGER, ANKARA, Turkey

IAC-20.E7.VP.15
LEIDEN LLM STUDENTS AND THE LEGAL AND POLICY ASPECTS OF SPACE RESOURCE UTILIZATION
Mr. Scott Schneider, Adelaide, Australia

IAC-20.E7.VP.16
THE MILITARIZATION OF OUTER SPACE AS A FACTOR OF INNOVATION OF INTERNATIONAL HUMANITARIAN LAW: A COMPARATIVE RESEARCH
Mr. Alexsandro Souza de Lima, Brasilia, Brazil

IAC-20.E7.VP.20
LEGALITY OF MINING IN OUTER SPACE: A CRITICAL ANALYSIS
Mr. Chinmoy Roy, Bengaluru, India, Antrix Corporation Limited

E9. IAF Space Security Symposium

E9.1-A6.8. Policy, Legal, Institutional and Economic Aspects of Space Debris Detection, Mitigation and Removal

Co-Chair: *Prof. Serge Plattard, University College London (UCL), United Kingdom ; Mr. Alexander Soucek, European Space Agency (ESA), The Netherlands ; Ms. Samantha Le May, RMIT University (Royal Melbourne Institute of Technology), Australia ;*

Coordinator: *Mr. Christophe Bonnal, Centre National d'Etudes Spatiales (CNES), France ;*

Rapporteur: *Prof. David B. Spencer, The Pennsylvania State University, United States ;*

IAC-20.E9.1-A6.8.1
KEYNOTE: PROGRESSIVE LEADERSHIP IN SPACE SAFETY REQUIRES A NEW APPROACH TO SETTING DEBRIS MITIGATION STANDARDS
Dr. Timothy Maclay, Lincoln, United States

IAC-20.E9.1-A6.8.2
ENVIRONMENTAL MEANS FOR PROTECTION NEAR-EARTH SPACE FROM DEBRIS
Ms. Anna Hurova, Kyiv, Ukraine, International Institute of Space Law (IISL)

IAC-20.E9.1-A6.8.4
APPLYING LESSONS LEARNED FROM DECOMMISSIONING IN NON-SPACE SECTORS TO ACTIVE DEBRIS REMOVAL
Ms. Harriet Brettle, Harwell, United Kingdom, Astroscale Ltd

IAC-20.E9.1-A6.8.5
NETWORK ANALYSIS OF THE EVOLVING LANDSCAPE FOR SPACE SITUATIONAL AWARENESS
Prof. Mariel Borowitz, Atlanta, GA, United States, Georgia Institute of Technology

IAC-20.E9.1-A6.8.6
SPACE SUSTAINABILITY RATING: DESIGNING A COMPOSITE INDICATOR TO INCENTIVIZE SATELLITE OPERATORS TO PURSUE LONG-TERM SUSTAINABILITY OF THE SPACE ENVIRONMENT
Dr. Minoo Rathnasabapathy, Cambridge, United States, Massachusetts Institute of Technology (MIT)

IAC-20.E9.1-A6.8.8
RECENT DEVELOPMENTS IN THE IMPLEMENTATION OF EUROPEAN SPACE SURVEILLANCE & TRACKING (EU SST) – SECURITY AND DATA POLICY
Mr. Marc Becker, Bonn, Germany, DLR (German Aerospace Center)

IAC-20.E9.1-A6.8.9
PEACEFUL (AB)USE OF OUTER SPACE: INTERNATIONAL LEGAL TOOLS TO CURB KINETIC ANTI-SATELLITE WEAPON TESTS
Mr. Tomas Marozas, Vilnius, Lithuania

IAC-20.E9.1-A6.8.10
POTENTIAL EXPORT CONTROL CHALLENGES AND CONSTRAINTS FOR EMERGING SPACE DEBRIS DETECTION AND REMOVAL TECHNOLOGIES – THE CASE OF ON-ORBIT COLLISION
Mrs. Alice Riviere, Taufkirchen, Germany, Airbus Defence & Space

IAC-20.E9.1-A6.8.13
FINDING A VIABLE ECONOMIC SOLUTION TO SPACE DEBRIS REMOVAL
Mr. Kevin Barry, Rockville, United States, George Mason University

E9.2-D5.4. Cyber-Security Threats to Space Missions And Countermeasures to Address Them

Co-Chair: *Mr. Stefano Zatti, University of Rome "La Sapienza", Italy;*
Rapporteur: *Mr. Julien Airaud, Centre National d'Etudes Spatiales (CNES), France ;*

IAC-20.E9.2.D5.4.1
KEYNOTE: CRISES: CYBERSECURITY FOR SMALL-SATELLITE ECOSYSTEM - STATE-OF-THE-ART AND OPEN CHALLENGE
Prof.Dr. Emiliano Casalicchio, Rome, Italy, Sapienza University of Rome

IAC-20.E9.2.D5.4.3
DO CYBERSECURITY LAWS UNDERSTAND CYBERSECURITY? - THE CASE OF THREAT AGAINST SATELLITE SYSTEMS
Ms. Dimitra Stefoudi, Leiden, The Netherlands, Leiden University

IAC-20.E9.2.D5.4.4
SECURITY-COMPLIANT CYBER MEASURES FOR SATELLITE SYSTEMS
Ms. Helena Correia Mendonça, Lisbon, Portugal, Vieira de Almeida & Associados

IAC-20.E9.2.D5.4.5
CYBER-RISK ASSESSMENT IN THE SPACE DOMAIN: CATEGORIZING CYBER-RISK ACROSS SPACE OPERATIONS
Mr. PJ Blount, Lorentzweiler, Luxembourg , University of Luxembourg

IAC-20.E9.2.D5.4.6
HOW TO ESTIMATE INSURANCE COVERAGE FOR CYBERSECURITY PROTECTION FOR SATELLITES
Mr. Mclee Kerolle, Dix Hills, United States, Space Generation Advisory Council (SGAC)

IAC-20.E9.2.D5.4.7
THE MISSION AS A TREE: A NOVEL APPROACH TO IDENTIFYING CYBER THREATS TO SATELLITES
Mr. Sébastien Bonnart, Atlanta, United States, Space Generation Advisory Council (SGAC)

IAC-20.E9.2.D5.4.8
CYBER RANGE SOLUTIONS AND SERVICES FOR SPACE ASSETS
Mr. Gianluca Cerrone, Leiden, The Netherlands, Rhea Group

IAC-20.E9.2.D5.4.9
CRYPTO TRADEABLE EARTH OBSERVATION (CTEO)
Dr. Michele Iacobellis, Bari, Italy, Planetek Italia

IAC-20.E9.2.D5.4.11
THE CHALLENGE OF PROTECTING SPACE-BASED ASSETS AGAINST CYBER THREATS
Mr. Antonio Carlo, Rome, Italy, Space Generation Advisory Council (SGAC)

GTS - Global Technical Symposium

E6.5-GTS.1. Entrepreneurship Around the World

Co-Chair: *Dr. Ken Davidian, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States; Ms. Elizabeth Seward, Airbus Defence and Space Ltd, United Kingdom ;*

Keywords describing the session best: 1. Entrepreneurship 2. Innovation 3. Organization Theory 4. Quantitative Methods 5. Qualitative Methods

IAC-20.GTS.1E6.5.1
KEYNOTE: BUSINESS STRATEGY IN THE EMERGING COMMERCIAL SPACE INDUSTRY SEGMENTS
Dr. Laura Huang, United States, Harvard Business School

IAC-20.GTS.1-E6.5.2
OPENING UP SPACE DATA FOR ALL
Prof. Jeanne Holm, Sierra Madre, CA, United States

IAC-20.GTS.1-E6.5.4
ENTREPRENEURSHIP AND A DIVERSITY APPROACH TO SPACE ECONOMY
Dr. Annamaria Nassisi, Osmannoro (FI), Italy, Thales Alenia Space Italia

IAC-20.GTS.1-E6.5.5
THE SPACE-FARING AFRICA: COMMERCIAL SPACE INDUSTRY AND ITS READINESS FOR INNOVATION-DRIVEN INVESTMENT
Mr. José Pedro Ferreira, Barreiro, Portugal, Polytechnic Institute of Setubal

IAC-20.GTS.1-E6.5.6
AN ANALYSIS OF THE AFRICAN NEWSPACE INDUSTRY LANDSCAPE: MARKET SEGMENTS, INVESTMENT AND REVENUE
Mr. Joseph Ibeh, Lagos, Nigeria, Space Generation Advisory Council (SGAC)

IAC-20.GTS.1-E6.5.7
ALTERNATIVE FUNDING MODELS IN COSTA RICA FOR AEROSPACE ENTREPRENEURSHIP.
Mr. Fabio Murillo, San Jose, Costa Rica, Central American Association for Aeronautics and Space (ACAE)

IAC-20.GTS.1-E6.5.11
COMMSAT'S CASE, AN EXAMPLE OF CHINA'S SPACE ENTREPRENEURIAL ACTIVITIES
Mr. Tao Xie, Beijing, China

IAC-20.GTS.1-E6.5.12
BUSINESS CASE STUDY FOR THE CYCLER – A CIRCUMLUNAR VEHICLE FOR DEVELOPMENT OF SPACE TOURISM AND LUNAR INFRASTRUCTURE BY 2030.
Mrs. Natalia Lemarquis, Illkirch-Graffenstaden, France, International Space University (ISU)

IAC-20.GTS.1-E6.5.13
SUSTAINABLE DESIGN OF LOW-COST MODULAR TEST PLATFORMS AS AN ENTREPRENEURSHIP FOR SPACE DEVELOPMENT IN COLOMBIA
Mr. German Wedge Rodriguez Pirateque, Bogotá, Colombia, Universidad Nacional de Colombia

GTS.2-B3.9. Human Spaceflight Global Technical Session

Co-Chair: *Mr. Guillaume Girard, Zero2infinity, Spain ; Ms. Andrea Jaime, OHB System AG - Munich, Germany ;*

Keywords describing the session best: 1. Human Spaceflight 2. Global

IAC-20.GTS.2-B3.9.1
AN ANALYSIS OF THE SPACE TOURISM MARKET IN THE UNITED ARAB EMIRATES AND THE KINGDOM OF SAUDI ARABIA AND ITS POTENTIAL FOR DEVELOPMENT OF ZERO GRAVITY AND SUB-ORBITAL COMMERCIAL SPACEFLIGHTS
Mr. Amer Khan, Dubai, United Arab Emirates

IAC-20.GTS.2-B3.9.3
INSIGHTS FROM THE ANALOG ASTRONAUTS SELECTION AND TEAM BUILDING
Ms. Neta Parnas, Haifa, Israel, DMARS - Desert Mars Analog Ramon Station

IAC-20.GTS.2-B3.9.4
LESSONS LEARNT WHILE I WAS TRAINING AS AN ASTRONAUT.
Dr. Ilaria Cinelli, Vienna, Austria, Space Generation Advisory Council (SGAC)

IAC-20.GTS.2-B3.9.5
TYPES OF ASTRONAUTS: HOW CAN I HIRE THE ONE I NEED?
Dr. Ilaria Cinelli, Vienna, Austria, Space Generation Advisory Council (SGAC)

IAC-20.GTS.2-B3.9.6
FROM TEKTITE TO ARTEMIS: 50TH ANNIVERSARY WOMEN UNDERSEA MISSION
Dr. Sarah Jane Pell, Melbourne, Australia, Monash University

GTS.3-B2.8. Space Communications and Navigation Global Technical Session

Co-Chair: *Mr. Kevin Shortt, Germany ; Ms. Stephanie Wan, Space Generation Advisory Council (SGAC), United States ;*

Rapporteur: *Dr. Eric Wille, ESA, The Netherlands ;*

IAC-20.GTS.3-B2.8.1
LINK ANALYSIS OF A CUBESAT BASED QUANTUM KEY DISTRIBUTION PLATFORM
Mr. Dominik Jakab, Vác, Hungary, Budapest University of Technology and Economics

IAC-20.GTS.3-B2.8.3
A FUTURE CARRINGTON EVENT: IMPACT ON INTERNATIONAL TELECOMMUNICATIONS
Mr. Avner Bendheim, Strasbourg, France, International Space University (ISU)

IAC-20.GTS.3-B2.8.4
CLASSIFICATION METHOD OF 5G SATELLITE NETWORK COMPUTING TASKS BASED ON EDGE DATA OFFLOADING
Dr. Chengjun Guo, chengdu, China, University of Electronic Science and Technology of China (UESTC)

IAC-20.GTS.3-B2.8.5
SIMULATED EFFECTS ON SBAS SIGNALS CAUSED BY A TRAVELING WAVE TUBE AMPLIFIER
Mr. Stefan van der Linden, Delft, The Netherlands, S[&]T

IAC-20.GTS.3-B2.8.7
DESIGN AND IMPLEMENTATION OF SINGLE FREQUENCY RTK POSITIONING FRAMEWORK
Ms. Salma Zainab Farooq, Islmamabad, Pakistan, Institute of Space Technology (IST)

IAC-20.GTS.3-B2.8.8
GNSS PERFORMANCE MONITORING USING PUBLICLY AVAILABLE DATA AND TOOLS
Dr. Peter Buist, Noordwijk, The Netherlands, European GNSS Agency (GSA)

IAC-20.GTS.3-B2.8.10
A GNSS/INS INTEGRATED NAVIGATION METHOD BASED ON DEEP LEARNING
Dr. Chengjun Guo, chengdu, China, University of Electronic Science and Technology of China (UESTC)

GTS.4-E2.3. Student Team Competition

Co-Chair: *Ms. Andrea Jaime, OHB System AG - Munich, Germany; Mr. Emmanuel Zenou, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France ;*

Rapporteur: *Ms. Kathleen Coderre, Lockheed Martin Corporation, United States ;*

IAC-20.GTS.4-E2.3.1
PROJECT DAEDALUS: TOWARDS AUTOROTATION BASED LANDING AND DESCENT
Mr. Clemens Riegler, Würzburg, Germany, Julius Maximilians Universität Würzburg

IAC-20.GTS.4-E2.3.3
EXPERIMENTAL PRECISE ORBIT DETERMINATION FOR GEOSAR MISSIONS BASED ON COMPACT INTERFEROMETRY
Mr. Jorge Nicolas-Alvarez, Banyeres del Penedès, Spain, Universitat Politecnica de Catalunya (UPC)

IAC-20.GTS.4-E2.3.6
THE SPECIALIZED TOOL FOR ASTRONAUT RECORDING (STAR)
Mr. Nicholas Lopac, Port Orange, FL, United States, Embry-Riddle Aeronautical University

IAC-20.GTS.4-E2.3.8
SPACE TRAFFIC MANAGEMENT: A CHASER FOR SATELLITES AND SPACE DEBRIS
Mrs. Cindy Angama, Toulouse, France, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace

IAC-20.GTS.E2.3.9
CROP ENVIRONMENT FOR THE RESUPPLY AND EXTENSION OF SPACE MISSIONS (CERES) SYSTEM: DEVELOPMENT OF HORTICULTURAL TECHNOLOGIES FOR THE EXPLORATION SYSTEMS AND HABITATION (X-HAB) 2020 ACADEMIC INNOVATION CHALLENGE
Mr. German Acosta Quiros, Jacksonville, United States, Made In Space, Inc.

IAC-20.GTS.4.-E2.310
CRITICAL DESIGN OF THE MOONFIBRE EXPERIMENTAL APPARATUS FOR THE USE ON A REXUS SOUNDING ROCKET
Mr. Stefan Panajotovic, Aachen, Germany, RWTH Aachen University

IAC-20.GTS.4.-E2.311
IONSAT : A STUDENT NANOSAT WITH AN IODINE THRUSTER IN VERY LOW EARTH ORBIT
Mr. Hadrien Paugnat, Palaiseau, France, Ecole Polytechnique

IAC-20.GTS.4-E2.3.12
MISSION ORCA: ORBIT REFINEMENT FOR COLLISION AVOIDANCE
Ms. Anaïs Barles, Cranfield, United Kingdom, Cranfield University, Cranfield UK

GTS.5-B4.9. Small Satellite Missions Global Technical Session

Co-Chair: *Dr. Matthias Hetscher, DLR (German Aerospace Center), Germany ; Mr. Norbert M.K. Lemke, OHB System AG - Munich, Germany ;*

Rapporteur: *Mr. Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), United Kingdom ;*

IAC-20.GTS.5-B4.9.1
KEYNOTE: CONSTELLATIONS : THE SATELLITE SERIAL PRODUCTION CHALLENGE
Mr. Laurent Jaffart, Taufkirchen, Germany, Airbus Defence and Space

IAC-20.GTS.5-B4.9.2
SYSTEM MODEL VERIFICATION USING IN-FLIGHT KAZSTSAT DATA
Ms. Madina Kalel, Astana, Kazakhstan, Ghalam LLP

IAC-20.GTS.5-B4.9.4
AALTO-1 CUBESAT: THREE YEARS IN ORBIT
Dr. Muhammad Rizwan Mughal, Espoo, Finland, Aalto University

IAC-20.GTS.5-B4.9.7
CABAÑAS: FIRST HONDURAN ACADEMIC GROUND STATION FOR SMALL SATELLITE MISSIONS
Prof.Dr. Javier Mejuto, Tegucigalpa, Honduras, National Autonomous University of Honduras (UNAH)

IAC-20.GTS.5-B4.9.10
FAULT ISOLATION OF REACTION WHEELS ONBOARD 3-AXIS CONTROLLED IN-ORBIT SATELLITE USING MACHINE LEARNING TECHNIQUES
Dr. Afshin Rahimi, Windsor, Canada, University of Windsor

8. IAF AWARDS

8.1 IAF World Space Award

The IAF World Space Award is presented for an outstanding contribution or contributions in space science, space technology, space medicine, space law or space management of exceptional impact to the world's progress in astronautics.

The recipients of this year's award are the Chang'e 4 Mission Leaders WU Weiren, YU Dengyun, SUN Zezhou.

WU Weiren
Designer-in-Chief,
China's Lunar Exploration Program,
China

YU Dengyun
Deputy Designer-in-Chief,
China's Lunar Exploration Program,
China

SUN Zezhou
Designer-in-Chief of probe system,
Chang'e-4 Program,
China

"For Making an Outstanding Contribution to Space Exploration and Technology in their achievement to soft land on the far side of the Moon for the first time in history of humankind and successfully sustain relay communication between the far side of the Moon and the Earth".

8.2 Allan D. Emil Memorial Award

The Allan D. Emil Memorial Award is one of the most prestigious IAF awards. Since 1977, the Allan D. Emil Memorial Award is 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.

Allan D. Emil
(1898 – 1976)

The recipient of this year's award is K. Sivan.

K Sivan
Chairman,
Indian Space Research Organisation (ISRO),
India

"Who has strongly contributed to the development of the Indian Space Programme, fostering international cooperation and inspiring emerging space agencies in continuing with their efforts".

8.3 IAF Excellence in "3G" Diversity Award

The IAF Excellence in "3G" Diversity Award is intended to recognize IAF member organizations (industry, government, academia) worldwide for outstanding contributions to the fostering of "3G" (Geography, Generation, Gender) Diversity within the space sector.

The recipient of this year's award is European Space Agency (ESA).

"For their commitment to create a modern and inclusive working environment and striving to enhance the innovative perspectives brought in by a diverse pool of talents".

Diversity and Inclusiveness at the European Space Agency

Under the leadership of the Director General Jan Wörner, the European Space Agency (ESA) has renewed its commitment to diversity and inclusiveness (D&I) by putting those values high on the corporate agenda and nominating the first ESA Chief Diversity Officer in April 2017. As an indication of the Agency's commitment towards D&I and in support of the objectives set out in the Space 4.0 Agenda, the Director General released a Policy Statement in September 2017 underlining his strong stand towards those values, now presented as an inherent aspect of ESA's identity on the ESA Web Portal. To foster a coherent and strong message, D&I is now part of ESA's People values. ESA's focus on Diversity includes gender, generation, geography, backgrounds, and abilities. The objectives pursued develop along two axes. On one side, ESA strives to foster a broader interest for STEM and space careers and to attract, recruit and retain a more diverse pool of talents. At the same time ESA is also increasing its efforts to create a modern, inclusive working environment where people value diversity in teams, take others' perspectives into account and make sure they feel comfortable being themselves. Over the last years, the actions put in place have started bringing about remarkable results and are expected to continue reinforcing a positive trend in the future.

8.4 IAF Excellence in Industry Award

The IAF Excellence in Industry Award is intended to distinguish an industry organization, member or non-member of the IAF, worldwide for introducing innovative space technologies to the global marketplace and is recognized throughout space industry for successfully executing a landmark space mission.

The recipient of this year's award is Airbus Defence and Space.

AIRBUS

"For delivering world-beating space technology to customers around the world: from the 2400 space craft equipment, to the 18 satellites successfully placed in orbit".

8.5 IAF Hall of Fame

The IAF Hall of Fame is intended to create a standing forum of personalities that have contributed substantially to the progress of space science, technology, and space benefits to mankind. It will consist of a permanent gallery of these personalities, including a citation, biographical information, and a picture, in a special part of the IAF web presence.

The recipients of this year's award are Tomifumi Godai, Elizabeth Kordyum, Meng Zhizhong, Yu Menglun.

Tomifumi Godai
Former President, International Astronautical Federation (IAF),
Former Senior Vice President of National Space Development Agency of Japan (NASDA),
Japan

"As one of the leaders of Japan's space program, Dr. Godai played a fundamental role in launch vehicle research and development beginning with Japan's early sounding rockets and continuing up to the H-II launcher. Throughout his long and very distinguished career Tomifumi Godai has dedicated himself to the advancement of our space profession both in Japan and internationally."

Elizabeth Kordyum
Head of the Department of Cell Biology and Anatomy of the Institute of Botany,
National Academy of Sciences Ukraine,
Ukraine

"For outstanding contribution to the advancement of astronautics in the field of space and gravitational biology, acquisition of fundamental knowledge on plant adaptation to microgravity and working the theoretical bases of space planting."

Yu Menglun
Consultant,
CASC Science and Technology Committee,
Engineer,
China Academy of Launch Vehicle Technology (CALT),
China

"Mr. Yu Menglun has made significant and irreplaceable pioneering contributions to the design of Long March (LM) series launch vehicle trajectory and guidance scheme."

Meng Zhizhong
(In Memoriam)
Former Chief Senior Technical Adviser,
Shanghai Academy of Space Flight Technology,
China

"Mr. Meng Zhizhong, a pioneer and leader in the field of meteorological satellite not only in China but also in the whole world, has made outstanding contributions to the development of polar-orbiting meteorological satellite in China and the rest of the world."

8.6 Frank J. Malina Astronautics Medal

Since 1986, the Frank J. Malina Astronautics Medal is 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.

Frank J. Malina
(1912 – 1981)

The recipient of this year's award is Peter Martinez.

Peter Martinez
Executive Director,
Secure World Foundation,
South Africa

"For his outstanding contributions to space education in South Africa and beyond as well as being an educator and promoter of the study of astronautics and space sciences in academic teaching as well as performing education, public, scientific and political outreach."

8.7 Luigi G. Napolitano Award

The Luigi G. Napolitano Award is presented annually by the Space Education and Outreach Committee (SEOC) of the International Astronautical Federation to a young scientist, below 30 years of age, who has contributed significantly to the advancement of the aerospace science and has given a paper at the International Astronautical Congress on the contribution.

Luigi G. Napolitano
(1912 – 1981)

The Luigi G. Napolitano Award will be given during the closing ceremony on Wednesday 14 October 2020 of the 71st IAC. The award was donated by the Napolitano family and consists of the Napolitano commemorative medal and a certificate of citation. The Luigi Gerardo Napolitano Society sponsors this annual award.

8.8 IAF Distinguished Service Award 2020 Winners

The IAF Distinguished Service Award is intended to reward active volunteers for their distinguished service to the activities of the Federation and we are very pleased to announce the award recipients of the 2020 IAF Distinguished Service Award:

Anna Guerman
Associate Professor,
Dept. of Aerospace Engineering,
University of Beira Interior,
Investigator,,
Center for Mechanical & Aerospace Science & Technologies (C-MAST),
University of Beira Interior,
Portugal

"A Strong Cross-Pollinator of Astrodynamics in IAF and IAA."

Kathleen Howell
Distinguished Professor of Aeronautics and Astronautics,
Purdue University,
United States

"Outstanding Competence and Continuous Dedication to the IAF Astrodynamics Committee and Astrodynamics Symposium for over Twenty Years."

Tom Krimigis
Emeritus Head,
Space Department,
The Johns Hopkins University Applied Physics Laboratory,
Greece

"For his outstanding services to the Federation as an active IPC member and co-chair as part of the symposium on small satellite missions, for over 25 years."

Ali Nasseri
Technical Consultant,
Defence Research and Development Canada,
Canada

"Mr. Ali Nasseri has actively engaged with the activities of the IAF from its committees to the IACs and has had numerous contributions to the development of the next generation of space leaders; he is truly a role model for young professionals who wish to get involved within the IAF and contribute to the space community."

Robie Samanta Roy
Vice President,
Technology,
Lockheed Martin Government Affairs,
United States

"Recognizing steadfast commitment to excellence in building Industry Day to a premier highlight of the IAC, fostering diversity and cooperation across IRC leaders and IAF member organizations."

Rainer Sandau
Adjunct Professor,
Baylor University,
Director Satellites and Space Applications,
International Academy of Astronautics (IAA),
Germany

"For his outstanding services to the Federation as an active IPC member, co-coordinator, and co-chair as part of the symposium on small satellite missions for over 25 years being one of the early advocates and initial supporters of the topic within the IAC and IAF."

Gunter Schreier
Deputy Director of the German Remote Sensing Data Center (DFD),
German Aerospace Center (DLR),
Germany

"For outstanding services to the Federation as Chairmen of the Earth Observation Committee."

8.9 2020 IAF Young Space Leaders (YSL) 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.

Hiroki Akagi
Deputy Director of JAXA Houston Office,
Japan Aerospace Exploration Agency (JAXA),
Japan

Chiara Cocchiara
System Operations Engineer working as Staff member,
EUMETSAT, the European Organization for the Exploitation of Meteorological Satellites,
Italy

Emmanuelle David
Executive Manager,
EPFL Space Center,
Switzerland

Luis Ferreira
Strategist,
Airbus Defence and Space,
Portugal

Arnau Pons
Chair,
Space Generation Advisory Council in support of the United Nations, Program on Space Applications,
Spain

Bruno Sarli
Aerospace Engineer, Contractor,
NASA Goddard Space Flight Center,
Brazil

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Gold Sponsor

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GLAVKOSMOS
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NOAA
SITAEL
TESAT
ThalesAlenia Space
universe
YUZHNOYE design office
SSTL
LEONARDO

10. EXHIBITION

1. German Aerospace Center (DLR)
2. Lockheed Martin
3. European Space Agency (ESA)
4. National Aeronautics and Space Administration (NASA)
5. Canada Pavilion
6. Northrop Grumman
7. Spaceflight Laboratory
8. Saudi Space Commission
9. NewSpace India Limited
10. OHB We.Create.Space
11. Israel Aerospace Industry (IAI)
12. Maxar Technologies
13. Glavkosmos
14. Japan Aerospace Exploration Agency (JAXA)
15. National Oceanic and Atmospheric Administration (NOAA)
16. Hungarian Astronautical Society (MANT)
17. China Aerospace Science and Industry Corporation Limited (CASIC)
18. Canadian Space Agency (CSA)
19. Thales Alenia Space
20. DT Circle
21. Bremen / Bremerhaven - City of Space
22. Astroscale
23. Space Tango
24. Italian Space Agency
25. Australian Space Agency
26. Dragonfly Aerospace
27. Swedish Space Corporation
28. The Boeing Company
29. Israel Space Agency
30. Momentus Space
31. Teledyne Technologies
32. IAF Space Economic Platform (ISEP)
33. International Astronautical Federation (IAF)
34. Alén Space

11. IAF MEMBERS

A9C Capital	Bahrain
Access e.V.	Germany
Adriatic Aerospace Association	Croatia
Advanced Instrumentation and Technology Centre (AITC)	Australia
AED Cluster Portugal	Portugal
Aerojet Rocketdyne	United States
Aerospace Industries Association	United States
Aerospace Research Institute	Iran
Aexa Aerospace LLC	United States
AGI	United States
Agence Spatiale Algérienne (ASAL)	Algeria
Agencia Espacial Mexicana (AEM)	Mexico
Agrupacion Astronautica Espanola	Spain
Airbus Defence and Space GmbH	Germany
Airbus Defence and Space Netherlands B.V.	The Netherlands
Airbus Defence and Space SA	Spain
Airbus Defence and Space SAS	France
Airbus Ltd.	United Kingdom
American Astronautical Society (AAS)	United States
American Institute of Aeronautics and Astronautics (AIAA)	United States
Andøya Space Center	Norway
ArianeGroup SAS	France
Arianespace	France
Asher Space Research Institute (ASRI)	Israel
Association Aéronautique & Astronautique de France (3AF)	France
Association Dedicated to Development in Astronautics (A.D.D.A)	Romania
Association of Space Explorers (ASE)	United States
Associazione Italiana di Aeronautica e Astronautica (AIDAA)	Italy
Astronautic Technology SDN BHD	Malaysia
Astronautical Society of India	India
Astrosat Ltd	United Kingdom
Astoscale	Singapore, Republic of
Auspace Pty Ltd	Australia
Australian Space Agency	Australia
Austrian Research Promotion Agency (FFG)	Austria
AUSTROSPACE	Austria
Axiom Space LLC	United States
Azercosmos	Azerbaijan
Bauman Moscow State Technical University	Russian Federation
bavAIRia e.V.	Germany
Beihang University	China
Beijing FutureSpace Space Technology Institute	China
Beijing Infinite Education Inc.	China
Beijing Interstellar Glory Space Technology Co., Ltd	China
Beijing Smart Satellite Technology Co., Ltd.	China
Beijing SpaceD Aerospace Application & Science Education Technology Co., Ltd.	China
Beijing Sunwise Space Technology Ltd.	China
Belgian Federal Science Policy Office (BELSPO)	Belgium
Ben Gurion University of the Negev	Israel
Berkeley SETI Research Center	United States
beSpace GmbH	Germany
Black Engine Aerospace UG (haftungsbeschränkt)	Germany
Blue Origin LLC	United States
Brazilian Space Agency (AEB)	Brazil
Bryce Space and Technology	United States
Bulgarian Aerospace Agency	Bulgaria
California Polytechnic State University	United States
Canadensys Aerospace Corporation	Canada
Canadian Aeronautics & Space Institute (CASI)	Canada
Canadian Space Agency	Canada
Canadian Space Society	Canada
Center for Planetary Science and Exploration, Western University	Canada
Center of Space Exploration, Ministry of Education (COSE)	China
Central American Association for Aeronautics and Space (ACAE)	Costa Rica
Central Research Institute for Machine Building (FSUE TSNIIMASH)	Russian Federation
Centre for Mechanical and Aerospace Science and Technologies (C-MAST)	Portugal
Centre National de la Cartographie et de la Teledetection (CNCT)	Tunisia
Centre National d'Etudes Spatiales (CNES)	France
Centre Royal de Teledetection Spatiale	Morocco
Centro de Investigacion y Difusion Aeronautico Espacial (CIDA-E)	Uruguay
China Head Aerospace Technology Co.	China
Chinese Society of Astronautics (CSA)	China
CIRA Italian Aerospace Research Centre	Italy
Colegio Federado de Ingenieros y de Arquitectos de Costa Rica (CFIA)	Costa Rica
Colombian Space Agency	Colombia
Comision Nacional de Actividades Espaciales (CONAE)	Argentina
Commission d'Astronautique de l'Academie Roumaine	Romania
Cosmoexport Aerospace Research Agency	Russian Federation
Council of European Aerospace Societies (CEAS)	Belgium
Croatian Astronautical and Rocket Federation (HARS)	Croatia
CSIRO Astronomy & Space Science	Australia
CSL (Centre Spatial de Liège)	Belgium
Curtin University	Australia
CVA (Community of Ariane Cities)	France
Cyprus Astronautical Society	Cyprus
Cyprus Space Exploration Organisation (CSEO)	Cyprus
Czech Space Alliance	Czech Republic
Czech Space Office	Czech Republic
Dalian University of Technology (DUT)	China
Danish Aerospace Company ApS	Denmark
Danish Astronautical Society	Denmark
Dassault Aviation	France
Deimos Space S.L.	Spain
Delft University of Technology	The Netherlands
Denel Spaceteq	South Africa
Department of Space Studies, University of North Dakota	United States
Dereum Labs S.A. de C.V.	Mexico
Deutsche Gesellschaft für Luft-und Raumfahrt, Lilienthal-Oberth e.V. (DGLR)	Germany
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)	Germany
Digantara Research and Technologies Private Limited	India
Disrupting Space LLC	United States
Dnipropetrovsk National University	Ukraine
Dniprotekhservice, SPF, LLC	Ukraine
D-Orbit SpA	Italy
DTU Space	Denmark
Dynetics	United States
Ecole Polytechnique Fédérale de Lausanne (EPFL)	Switzerland
Ecuadorian Civilian Space Agency (EXA)	Ecuador
Embry Riddle Aeronautical University	United States
EMXYS (Embedded Instruments and Systems S.L)	Spain
EnduroSat AD	Bulgaria
Engineers Australia	Australia
Enterprise Estonia	Estonia
EOS Data Analytics Inc.	United States
EUMETSAT	Germany
EURISY	France
Euro Space Center	Belgium
Euroconsult	France
European Conference for Aero-Space Sciences (EUCASS)	Belgium
European GNSS Agency (GSA)	Czech Republic
European Organization for Nuclear Research (CERN)	Switzerland
European Space Agency (ESA)	France
European Space Policy Institute (ESPI)	Austria
European Test Services (ETS) B.V.	The Netherlands
Eurospace	France
Faculty of Aviation and Space Sciences, Necmettin Erbakan University	Turkey
Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST)	United States
Finnish Astronautical Society	Finland
Firefly Aerospace Inc.	United States
Flinders University	Australia
Fondazione E. Amaldi	Italy
Fraunhofer Alliance Space	Germany

Fundacion para el Desarrollo de las Ciencias la Sociedad y el Estado (FUNDECISE)	Costa Rica
Future Space Leaders Foundation	United States
G.A.U.S.S. Srl	Italy
Geo-Informatics and Space Technology Development Agency (GISTDA)	Thailand
German Aerospace Industries Association (BDLI)	Germany
GIFAS	France
GKN Aerospace Engine Systems	Sweden
Global Student Commercial Space Society (GSCSS)	United States
GMV Aerospace & Defence SAU	Spain
GomSpace Aps	Denmark
Graz University of Technology (TU Graz)	Austria
Gumush Aerospace & Defense	Turkey
HE Space	Germany
Hermann-Oberth-Raumfahrt Museum e.V.	Germany
Hermes Engineering	Bulgaria
High Technology Unit (UAT) Faculty of Engineering - UNAM	Mexico
Hong Kong Aerospace Technology Group	China
Hungarian Astronautical Society (MANT)	Hungary
IABG Industrieanlagen - Betriebsgesellschaft mbH	Germany
IHI Aerospace Co, Ltd.	Japan
Incomspace	Mexico
Indian Space Research Organization (ISRO)	India
Indonesian National Institute of Aeronautics and Space (LAPAN)	Indonesia
Infostellar	Japan
IngeniArs Srl	Italy
Institut Français d'Histoire de l'Espace	France
Institut Supérieur de l'Aéronautique et de l'Espace (ISAE)	France
Institute for Biomedical Problems of the Russian Academy of Sciences (IBMP RAS)	Russian Federation
Institute for Q-shu Pioneer of Space, Inc. (iQPS)	Japan
Institute of Experimental and Applied Physics, Czech Technical University in Prague	Czech Republic
Institute of Space Technology (IST)	Pakistan
Instituto de Aeronáutica e Espaço (IAE)	Brazil
Instituto Nacional de Pesquisas Espaciais (INPE)	Brazil
Instituto Nacional de Tecnica Aeroespacial (INTA)	Spain
Instituto Tecnológico de Costa Rica (TEC)	Costa Rica
International Association for the Advancement of Space Safety	The Netherlands
International Institute of Space Commerce	Isle of Man
International Lunar Observatory Association	United States
International Non-Govermental Research Organisation on Space - Asgardia Terra Ark	Austria
International Peace Alliance	China
International Space Center - Space Park Israel Ashkelon	Israel
International Space University (ISU)	France
Internationaler Förderkreis für Raumfahrt – Hermann Oberth – Wernher von Braun e.V.	Germany
Intersputnik International Organization of Space Communications	Russian Federation
Invap S.E.	Argentina
Iranian Space Agency	Iran
ispace, inc	Japan
Israel Aerospace Industries. Ltd.	Israel
Israel Space Agency	Israel
Istanbul Technical University	Turkey
Italian Space Agency (ASI)	Italy
Japan Aerospace Exploration Agency (JAXA)	Japan
Japan Manned Space Systems Corporation (JAMSS)	Japan
Japan Society for Aeronautics and Space Sciences (JSASS)	Japan
Japanese Rocket Society	Japan
Joanneum Research	Austria
Joint-Stock Company GK Launch Services	Russian Federation
JSC Glavkosmos	Russian Federation
JSC NPO Energomash	Russian Federation
JSC SRC Progress	Russian Federation
KBRwyle	United States
Kenya National Space Secretariat	Kenya
Khalifa University of Science and Technology	United Arab Emirates
Khrunichev State Research & Production Space Center	Russian Federation
King Abdulaziz City for Science & Technology (KACST)	Saudi Arabia
Kongsberg Satellite Services AS	Norway
Korea Aerospace Industries, Ltd	Korea, Republic of
Korea Aerospace Research Institute (KARI)	Korea, Republic of
Korea Association for Space Technology Promotion (KASP)	Korea, Republic of
Korea Astronomy and Space Science Institute	Korea, Republic of
Kyiv Politechnic Institute (NTUU "KPI")	Ukraine
Kyushu Institute of Technology	Japan
LandSpace Technology Corporation Ltd.	China
Lavochkin Science and Production Association	Russian Federation
Law Offices of Sterns and Tennen	United States
Leviathan Space Industry LLC	United States
Libre Space Foundation	Greece
LIQUIFER Systems Group GmBH	Austria
Lithuanian Museum of Ethnocosmology	Lithuania
Lithuanian Space Association (LSA)	Lithuania
Lockheed Martin Corporation	United States
Luxembourg Space Agency	Luxembourg
Malaysian Space Agency (MYSA)	Malaysia
Mars Planet	Italy
Massachusetts Institute of Technology	United States
Max-Planck-Institute for Ornithology	Germany
McGill Institute for Aerospace Engineering (MIAE)	Canada
MDA Corporation	Canada
MEDES - IMPS	France
Microcosm, Inc.	United States
Mitsubishi Electric Corporation	Japan
Mitsubishi Heavy Industries, Ltd.	Japan
Mohammed Bin Rashid Space Centre (MBRSC)	United Arab Emirates
Moon Village Association (MVA)	Austria
Moscow Aviation Institute (MAS)	Russian Federation
MT Aerospace AG	Germany
MX Space A.C.	Mexico
Nanjing University of Aeronautics and Astronautics	China
Nanoracks	United States
National Aeronautics and Space Administration (NASA)	United States
National Aerospace Agency (NASA) of Azerbaijan Republic	Azerbaijan
National Astronomical Research Institute of Thailand	Thailand
National Autonomous University of Honduras	Honduras
National Institute of Aerospace (NIA)	United States
National Institute of Information and Communications Technology (NICT)	Japan
National Oceanic and Atmospheric Administration (NOAA)	United States
National Space Centre	Ireland
National Space Research and Development Agency (NASRDA)	Nigeria
National Space Society	United States
NEC Corporation	Japan
Netherlands Aerospace Centre (NLR)	The Netherlands
Netherlands Space Office (NSO)	The Netherlands
Netherlands Space Society (NVR)	The Netherlands
New Zealand Space Agency	New Zealand
NGC Aerospace Ltd.	Canada
Nigerian Meteorological Agency	Nigeria
Norsk Astronautisk Forening	Norway
Northrop Grumman Corporation	United States
Northwestern Polytechnical University	China
Norwegian Space Agency	Norway
Novespace	France
Office National d'Etudes et de Recherches Aérospatiales (ONERA)	France
OHB Italia SpA	Italy
OHB System AG - Munich	Germany
OHB System AG-Bremen	Germany
Open Cosmos	United Kingdom
Pakistan Space and Upper Atmosphere Research Commission (SUPARCO)	Pakistan
Paraguayan Space Agency	Paraguay
Peoples's Friendship University of Russia	Russian Federation
PJSC "Elmiz"	Ukraine
Planet Labs Germany	Germany
Polish Academy of Sciences	Poland
Polish Astronautical Society	Poland
Polish Space Agency (POLSA)	Poland
Politecnico di Milano	Italy
Politecnico di Torino	Italy
PRATIAN LLC	Puerto Rico
Project Management Institute	United States
Proximai.com (Aerospace.AI)	United States

PTS Planetary Transportation Systems GmbH	Germany
Purple Mountain Observatory (PMO)	China
PwC Advisory	France
QinetiQ Space nv	Belgium
Qwaltec Inc.	United States
Rafael Advanced Defense Systems Ltd.	Israel
Ramirez de Arellano y Abogados, S.C. Law Firm	Mexico
RFA - Rocket Factory Augsburg	Germany
Rocket Research Institute, Inc.	United States
Romanian Space Agency (ROSA)	Romania
ROSCOSMOS	Russian Federation
Rovsing A/S	Denmark
RUAG Space	Sweden
Russian Academy of Sciences (RAS)	Russian Federation
S.P. Korolev Rocket and Space Corporation Energia	Russian Federation
Safran Aircraft Engines	France
Samara National Research University (Samara University)	Russian Federation
Sapienza University of Rome	Italy
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Secure World Foundation	United States
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Singapore Technologies Engineering Limited	Singapore
Sirius XM Radio	United States
Sitael Spa	Italy
Sky and Space Global (UK) Ltd	United Kingdom
SODERN	France
Soletop Co., Ltd	Korea, Republic of
South African National Space Agency (SANSA)	South Africa
South African Space Association (SASA)	South Africa
Space Applications Services NV/SA	Belgium
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Space Center Houston	United States
Space Commercial Services Holdings (Pty) Ltd	South Africa
Space Cooperative Inc.	United States
Space Flight Laboratory (SFL)	Canada
Space Foundation	United States
Space Generation Advisory Council (SGAC)	Austria
Space Industry Association of Australia	Australia
Space Policy Institute, George Washington University	United States
Space Systems/Loral	United States
Space Tech Expo - Smarter Shows Ltd	United Kingdom
Space Trust	United Kingdom
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SpaceBuzz	The Netherlands
SpaceChain Foundation Ltd.	Singapore
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SpaceLand Africa	Mauritius
SpaceNed	The Netherlands
Spacety	China
SpaceX	United States
SSC	Sweden
Starsem	France
State Enterprise Production Association Kyivprylad	Ukraine
State Space Agency of Ukraine (SSAU)	Ukraine
Stellenbosch University	South Africa
STM (Savunma Teknolojileri Muhenislik ve Ticaret A.S.)	Turkey
Surrey Satellite Technology Ltd (SSTL)	United Kingdom
Swedish Society for Aeronautics and Astronautics	Sweden
Swiss Space Office SSO	Swizerland
SwissSpace Association	Switzerland
TAMSAT - The Society of Amateur Satellite Technologies of Turkey	Turkey
Tartu Observatory	Estonia
Technical University of Košice	Slovak Republic
Techno System Developments S.R.L.	Italy
Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences	China
Teledyne Brown Engineering	United States
Telespazio S.p.A.	Italy
Telespazio VEGA UK LTD	United Kingdom
Tesat-Spacecom GmbH & Co. KG	Germany
Thales Alenia Space France	France
Thales Alenia Space Italia	Italy
The Aerospace Corporation	United States
The Andy Thomas Foundation	Australia
The Boeing Company	United States
The British Interplanetary Society	United Kingdom
The Chinese Aeronautical and Astronautical Society located in Taipei	Taiwan, China
The Federal University of Technology, Akure (FUTA)	Nigeria
The Johns Hopkins University Applied Physics Laboratory	United States
The Korean Society for Aeronautical and Space Sciences	Korea, Republic of
The National Aerospace Educational Centre of Youth	Ukraine
The National Space Science and Technology Center (NSSTC)	United Arab Emirates
The Ohio State University College of Engineering	United States
The Planetary Society	United States
The Sergei Korolev Space Museum	Ukraine
The University of Sydney	Australia
ThrustMe	France
TNO	The Netherlands
Tsinghua University	China
TÜBITAK	Turkey
U.S. Geological Survey	United States
UAE Space Agency	United Arab Emirates
UK Space Agency	United Kingdom
United Launch Alliance LLC	United States
Universiti Teknologi Mara (UITM)	Malaysia
University Mediterranea of Reggio Calabria	Italy
University of Adelaide	Australia
University of Alabama in Huntsville	United States
University of Bologna	Italy
University of Colorado, Colorado Center for Astrodynamics Research	United States
University of Naples "Federico II"	Italy
University of South Australia	Australia
University of Vigo	Spain
University POLITEHNICA of Bucharest - Research Center for Aeronautics and Space	Romania
University Space Program, Universidad Nacional Autonoma de Mexico	Colombia
University Space Programme, Universidad Nacional Autonoma de Mexico	Mexico
University Wuerzburg	Germany
UNSW Australia	Australia
Valispace	Germany
Victorian Space Science Education Centre	Australia
Vieira de Almeida & Associados	Portugal
Vietnam National Space Center (VNSC)	Vietnam
Virgin Galactic L.L.C	United States
Viterbi School of Engineering, USC	United States
VITO nv	Belgium
Von Karman Institute for Fluid Dynamics	Belgium
WEPA - Technologies GmbH	Germany
WFB - Wirtschaftsförderung Bremen	Germany
Women in Aerospace Europe (WIA-E)	The Netherlands
World Space Week Association	United States
Xovian Research & Technologies Pvt. Ltd	India
Yuzhnoye State Design Office	Ukraine
ZARM Fab GmbH	Germany
Zero2infinity	Spain
Zhuhai Orbita Aerospace Science & Technology Co. Ltd	China

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Amitabh, Amitabh	CA	IAC-20.B6.3.5
Amodio, Angelo	CA	IAC-20.E9.2.D5.4.9
Amoroso, Marilena	CA	IAC-20.A3.4A.2
Amoroso, Marilena	CA	IAC-20.B4.8.8
Amoruso, Leonardo	A	IAC-20.B1.4.5
Amoruso, Leonardo	CA	IAC-20.B4.6A.8
Amoruso, Leonardo	A	IAC-20.D1.2.4
Amouroux, Manuel	CA	IAC-20.A3.2C.7
Amouroux, Manuel	CA	IAC-20.A3.5.11
Amouroux, Manuel	CA	IAC-20.B3.VP.12
Amouroux, Manuel	CA	IAC-20.E2.3-GTS.4.8
Amrutkar, Rushanka	CA	IAC-20.A7.2.11
Amrutkar, Rushanka	CA	IAC-20.B2.4.1
An, Mira	CA	IAC-20.E3.2.5
Anandito, Akhsanto	A	IAC-20.E1.8.3
Anandito, Akhsanto	CA	IAC-20.E5.2.10
Anandkalwas, Mahesh	CA	IAC-20.E2.4.6
Anciaux, Michel	CA	IAC-20.B4.2.3
Andersen, Tom Stian	CA	IAC-20.C2.VP.2
Anderson, Christopher	CA	IAC-20.A7.2.4
Anderson, Collin	CA	IAC-20.A6.7.6
Anderson, Kevin	CA	IAC-20.D4.4.4
Anderson, Robbie	CA	IAC-20.A5.4-D2.8.6
Andhale, Avishkar	CA	IAC-20.E2.4.13
Andiappane, Sabrina	CA	IAC-20.D1.6.1
Andiappane, Sabrina	CA	IAC-20.D3.2B.5
Andrada, Nuno	CA	IAC-20.B4.4.5
Andrade, Jonathan	A	IAC-20.E7.1.16
Andre-Boyet, Laura	CA	IAC-20.B3.5.4
Andreas, Dömel	CA	IAC-20.A3.2B.1
Andrenucci, Mariano	CA	IAC-20.C4.9.3
Andreussi, Tommaso	A	IAC-20.C4.5.5
Andreussi, Tommaso	CA	IAC-20.C4.5.9
Andreussi, Tommaso	A	IAC-20.C4.9.3
Andrews, Daniel	A	IAC-20.A3.2A.1
Andrianov, Artem	CA	IAC-20.C2.VP.20
Andronico, Pietro	CA	IAC-20.B1.5.1
Andrés, Anastasia	CA	IAC-20.E5.2.12
Andrés Miranda, Rodrigo	CA	IAC-20.C4.VP.4
Angama, Cindy	A	IAC-20.E2.3-GTS.4.8
Angeletti, Federica	CA	IAC-20.C2.3.1
Angeletti, Federica	A	IAC-20.C2.9.7
Angeletti, Federica	CA	IAC-20.E1.VP.13
Angelov, Ivaylo	CA	IAC-20.E2.3-GTS.4.1
Anih, Samuel	A	IAC-20.B3.7.11
Anil, Avaneeth	CA	IAC-20.B2.1.10
Anilchandra Bhat, Umesh	A	IAC-20.B6.VP.3
Annen, Jitka	CA	IAC-20.A1.2.1
Annenkova, Anastasiia	A	IAC-20.C2.9.13
Anniciello, Luca	CA	IAC-20.B3.5.4
Ansari, Mohammad Taha	CA	IAC-20.E2.4.11
Ansari, Mohammad Taha	CA	IAC-20.E2.4.12
Anselmo, Luciano	CA	IAC-20.A6.2.1
Anselmo, Luciano	CA	IAC-20.A6.4.5
Anson, Joshua	CA	IAC-20.A3.5.5
Antara, Raihana Shams Islam	CA	IAC-20.E1.7.3
Antikidis, Jean-Pierre	A	IAC-20.E6.1.5
Antonello, Riccardo	CA	IAC-20.B4.6A.5
Antonetti, Stefano	CA	IAC-20.D1.2.4
Antoni, Ntorina	CA	IAC-20.E3.4.11
Antoni, Ntorina	A	IAC-20.E6.3.4
Antoniadou, Eleni	A	IAC-20.B3.7.2
Antonietti, Nicolo	CA	IAC-20.A4.2.7
Antonietti, Nicolò	CA	IAC-20.A4.1.10
Antonietti, Nicolò	A	IAC-20.A4.1.11
Antunes, André	CA	IAC-20.A1.6.3
Aoki, Setsuko	A	IAC-20.E7.3.1
Aoki, Yoshio	CA	IAC-20.D4.3.6
Apel, Uwe	CA	IAC-20.E1.4.9

Apodaca M., M. Regina	CA	IAC-20.A2.3.4
Aponte, Jose	CA	IAC-20.E1.5.16
Appolloni, Laura	A	IAC-20.D6.3.1
Aragay Verdeny, Monica	CA	IAC-20.B4.3.4
Araguas Rodriguez, Silvia	CA	IAC-20.C2.4.9
Arai, Kazuyoshi	CA	IAC-20.A6.1.10
Arai, Kazuyoshi	CA	IAC-20.C2.9.4
Arai, Tomoko	CA	IAC-20.C1.5.10
ARAI, Yo	CA	IAC-20.D4.2.2
Araniti, Giuseppe	CA	IAC-20.B2.1.11
Arasu, Yezhil	CA	IAC-20.C2.1.8
Arbeláez Correa, Juan Mateo	CA	IAC-20.A3.5.17
Ardura, Carlos	CA	IAC-20.C1.9.6
Aria, Adrianus Indrat	CA	IAC-20.C2.6.11
Arink, Frits	CA	IAC-20.E4.1.4
Arita, Shoko	CA	IAC-20.D4.3.4
Armellin, Roberto	CA	IAC-20.C1.5.5
Armellin, Roberto	CA	IAC-20.C1.6.3
Armellin, Roberto	CA	IAC-20.C1.7.2
Arnas, David	A	IAC-20.C1.5.2
Arnas, David	CA	IAC-20.C1.5.3
Arney, Dale	CA	IAC-20.D3.1.7
Arnodo, Cyril	A	IAC-20.D2.4.5
Arnould, Jacques	CA	IAC-20.E3.2.10
Arora, Dhairya	CA	IAC-20.C3.4.5
Arora, Diksha	CA	IAC-20.A1.8.8
Arora, Diksha	CA	IAC-20.A4.2.8
Arora, Diksha	CA	IAC-20.D1.VP
Arora, Diksha	CA	IAC-20.E1.5.2
Arora, Shitij	CA	IAC-20.C2.VP.4
Arora, Sulabh	A	IAC-20.D4.1.13
Arrat, Denis	CA	IAC-20.A3.4B.2
Arrigo, Gabriella	CA	IAC-20.E3.1.2
Arthurs, Richard	A	IAC-20.D5.3.4
Artiaga, Ernest	CA	IAC-20.E5.VP.4
ARVEILLER, Antoine	A	IAC-20.A1.2.17
Aryan, Kaushik	CA	IAC-20.B2.5.5
Asami, Kenichi	CA	IAC-20.B2.4.11
Ashour, Hussien	CA	IAC-20.E1.VP.23
Ashrafi, Behnam	A	IAC-20.C2.4.8
Asla, Mariano	CA	IAC-20.A4.2.7
Aslan, Alim Rüstem	CA	IAC-20.B6.VP.6
Aslan, Alim Rüstem	CA	IAC-20.C2.7.16
Aslanov, Vladimir S.	CA	IAC-20.A6.2.1
Aslanov, Vladimir S.	A	IAC-20.A6.6.8
Aslanov, Vladimir S.	A	IAC-20.C1.3.15
Aslanov, Vladimir S.	A	IAC-20.C1.8.4
Asoh, Dai	CA	IAC-20.A3.2B.9
Aspinall, Daniel	CA	IAC-20.D3.2B.10
Asraff, A.K.	CA	IAC-20.C2.VP.25
Asraff, Ahmedul	CA	IAC-20.C2.1.5
Asraff, Ahmedul	A	IAC-20.C4.1.14
Asrar, Farhan M.	A	IAC-20.A1.3.4
Asrar, Farhan M.	A	IAC-20.A1.3.7
Asrar, Farhan M.	A	IAC-20.B3.5.2
Asrar, Farhan M.	A	IAC-20.E3.2.10
Assadian, Nima	A	IAC-20.A6.5.6
Astorg-lepine@cnes.fr, Christelle	A	IAC-20.B5.3.6
Atachahua, Wilmer	CA	IAC-20.A4.2.7
Atchison, Justin	CA	IAC-20.C1.4.9
ATIE, Tala	A	IAC-20.E3.3.6
Atterwall, Per-Erik	CA	IAC-20.A6.5.5
Atterwall, Per-Erik	CA	IAC-20.C1.4.13
Auburn, John	CA	IAC-20.A6.2.2
Auburn, John	CA	IAC-20.E6.1.4
Auburn, John	CA	IAC-20.E9.1-A6.8.4
Auchlin, Maxime	A	IAC-20.D5.3.5
Auguste, Jean-Louis	CA	IAC-20.B4.6B.10
Aumann, Anna	A	IAC-20.B1.3.4
Aurigemma, Renato	CA	IAC-20.C2.4.1
Avanzi, Alessandro	CA	IAC-20.B4.6A.8
Avendano, Martin	A	IAC-20.C1.5.3
Avendano, Martin E.	CA	IAC-20.C1.5.2

Avila, Marc	CA	IAC-20.A2.5.3
Avraham, Geffen	A	IAC-20.B4.5.13
Awasthi, Kushagra	A	IAC-20.D4.1.16
Ayoobi, Mahmood	CA	IAC-20.D2.VP.3
Azami, Muhammad Hasif	CA	IAC-20.B6.3.11
Azcona, Guisella	CA	IAC-20.A4.2.7
Azelton, Krystal	CA	IAC-20.B1.5.13
Aziz, Michael	CA	IAC-20.A3.2C.3
Aziz, Sarmad	CA	IAC-20.A3.3A.2
Azmanska, Monika	A	IAC-20.D4.4.5

B

Name	Role	Paper
B, Annapurna	CA	IAC-20.C4.6.10
B Rao, Bhavana	CA	IAC-20.D1.VP
B T, KANNAN	CA	IAC-20.C4.VP.30
BABAGANA, ABUBAKAR	A	IAC-20.E1.9.10
BABATUNDE, ALABI	A	IAC-20.B1.VP.21
BABU, KOTA MALLESH	A	IAC-20.B6.3.3
BABU, KOTA MALLESH	A	IAC-20.C1.VP
Bach, Christian	CA	IAC-20.C4.1.13
Bach, Christian	CA	IAC-20.C4.2.11
Bach, Christian	CA	IAC-20.E1.4.9
Bacsardi, Laszlo	CA	IAC-20.B2.8-GTS.3.1
Badoniya, Shritu	A	IAC-20.C4.VP.29
Badri, Khalid	CA	IAC-20.A3.3A.4
Baek, Seungkwan	CA	IAC-20.C4.VP.16
Baerwald, Wolfgang	CA	IAC-20.B4.6A.2
Baglioni, Pietro	CA	IAC-20.A3.3A.2
Bagolan, Giorgio	CA	IAC-20.A2.7.10
Bahenduzi, Chelsea	A	IAC-20.A1.VP.14
BAHU, JEAN-MARC	CA	IAC-20.D2.2.4
Bai, Hao	CA	IAC-20.A1.5.4
Bai, JianQiang	CA	IAC-20.C4.4.7
Bai, Xiaoli	CA	IAC-20.A6.7.3
Bai, Xue	CA	IAC-20.C1.2.15
Bai, Xue	CA	IAC-20.C1.3.4
BAI, Yang	CA	IAC-20.B4.6A.1
Bai, Zhaoguang	CA	IAC-20.B4.3.11
Baiju, AP	A	IAC-20.C4.VP.14
Baize, Lionel	CA	IAC-20.E5.2.3
Bajanaru, Paul	CA	IAC-20.A3.3B.10
Bajanaru, Paul	CA	IAC-20.A3.4A.4
Baker, Noel	CA	IAC-20.B4.2.3
Bakkali Abderrahaman, Amina	CA	IAC-20.A2.7.9
Balachandran, Ribin	CA	IAC-20.D1.6.4
Balan, Mugurel	CA	IAC-20.C1.3.5
Balani, Yash	A	IAC-20.B4.5.11
Balasis, Georgios	CA	IAC-20.D5.3.3
Balasubramaniam, Aditya	CA	IAC-20.A1.8.8
Balasubramaniam, Aditya	A	IAC-20.A4.2.8
Balasubramaniam, Aditya	CA	IAC-20.D1.VP
Baldesi, Gianluigi	CA	IAC-20.D5.2.6
Baldesi, Gianluigi	A	IAC-20.E5.2.2
Baldesi, Gianluigi	A	IAC-20.E6.3.5
Balesdent, Mathieu	CA	IAC-20.D2.4.5
Balestrero Machado, Larissa	A	IAC-20.A3.4A.9
Balint, Tibor	CA	IAC-20.A3.5.15
Balint, Tibor	A	IAC-20.D1.5.9
Balint, Tibor	CA	IAC-20.E5.3.3
Baliukin, Igor	CA	IAC-20.B4.2.13
Balke, Alexander	CA	IAC-20.B2.3.11
Balkrishna, Pol Yogesh	CA	IAC-20.C4.3.13
Ballheimer, Walter	CA	IAC-20.B2.4.5
Ballheimer, Walter	A	IAC-20.B4.6B.4
Ballheimer, Walter	CA	IAC-20.D5.2.7
Balogh, Werner R.	A	IAC-20.B1.1.2
Balomenaki, Christina	A	IAC-20.E5.5.6
Balossino, Alessandro	A	IAC-20.B2.5.7
Bals, Johann	CA	IAC-20.A3.2B.1

Balsamo, Michele	CA	IAC-20.A2.7.4
Balss, Ulrich	CA	IAC-20.B5.1.5
Balta, Daria	A	IAC-20.E7.5.5
Baltide, Emma	CA	IAC-20.E2.3-GTS.4.8
Bammer, Manfred	CA	IAC-20.A1.4.9
Ban, Hong Seop	CA	IAC-20.C4.VP.16
Banatao, Julie Ann	A	IAC-20.B1.4.10
Banatao, Julie Ann	CA	IAC-20.E5.VP.4
Banatao, Julius Anthony	CA	IAC-20.B1.4.10
BANCQUART, Berylia	CA	IAC-20.B6.1.5
Bandla, Sirisha	A	IAC-20.D2.7.4
Bando, Mai	CA	IAC-20.C1.1.11
Bando, Mai	CA	IAC-20.C1.4.6
Bando, Mai	CA	IAC-20.C1.7.6
Bando, Mai	CA	IAC-20.C1.9.2
Banerdt, William Bruce	CA	IAC-20.A3.3A.5
Banirasheed, Ahmed	CA	IAC-20.B2.2.11
Banner, Benjamin	CA	IAC-20.E2.3-GTS.4.6
Bannova, Olga	CA	IAC-20.D1.1.2
Bannova, Olga	A	IAC-20.D3.1.1
Bannova, Olga	CA	IAC-20.E1.7.7
Baoyin, Hexi	CA	IAC-20.A3.VP.30
Baoyin, Hexi	CA	IAC-20.C1.4.15
Bapat, Tanaya	CA	IAC-20.E2.4.6
Baptista, Victor	CA	IAC-20.B4.1.9
Baptista, Victor	CA	IAC-20.E1.VP.6
Baptista, Victor	A	IAC-20.E3.3.18
Baptiste, M.Lenconte	CA	IAC-20.B4.6B.10
Barabash, Petr	CA	IAC-20.A1.VP.15
Barabash, Stanislav	CA	IAC-20.C1.4.13
Barad, Kuldeep Rambhai	A	IAC-20.C1.1.1
Barad, Kuldeep Rambhai	A	IAC-20.D1.4A.8
Baranov, Andrey	CA	IAC-20.A6.2.1
Baranwal, Prerna	CA	IAC-20.B2.4.1
Baranwal, Prerna	CA	IAC-20.D3.2A.2
Baraskar, Aditya	A	IAC-20.C3.4.13
Barato, Francesco	A	IAC-20.C4.3.11
Barbara, Nicholas	CA	IAC-20.D1.2.1
Barbee, Brent	CA	IAC-20.C1.4.9
Barbier, Pascal	A	IAC-20.A7.1.8
Barbier, Pascal	A	IAC-20.B3.7.9
Bardi, Antonio	CA	IAC-20.A2.7.4
Baresi, Nicola	CA	IAC-20.C1.5.5
Baresi, Nicola	CA	IAC-20.C1.6.3
Baresi, Nicola	CA	IAC-20.C1.6.8
Bargen, Ingo von	CA	IAC-20.A3.2B.1
Barles, Anaïs	A	IAC-20.E2.3-GTS.4.12
Barlusconi, Andrea	CA	IAC-20.A2.7.8
Barnhard, Gary	A	IAC-20.C3.2.5
Barnhard, Gary	A	IAC-20.D3.2A.3
Barnhart, David	CA	IAC-20.A3.2B.4
Barnhart, David	CA	IAC-20.C3.4.9
Barnhart, David	CA	IAC-20.D1.6.2
Barnhart, David	CA	IAC-20.D5.1.4
Barnouin, Olivier	CA	IAC-20.A3.4A.3
Barocio, Eduardo	CA	IAC-20.C2.5.9
Barrentine, Emily	CA	IAC-20.A7.2.4
Barrios, Elizabeth	A	IAC-20.D1.3.4
Barry, Kevin	A	IAC-20.E6.2.11
Barry, Kevin	A	IAC-20.E9.1-A6.8.13
Barth, Andrew	A	IAC-20.A3.2B.20
Bartolini, Alana	CA	IAC-20.E1.2.12
Barton, Paul	CA	IAC-20.B4.1.11
Barug, Aniela	CA	IAC-20.E7.VP.15
Baskar, Ajith Kumar	CA	IAC-20.A5.1.6
Baskar, Sandeep	A	IAC-20.E2.1.11
Bastante, Juan Carlos	A	IAC-20.D2.3.1
Batcha, Amelia	CA	IAC-20.A3.2C.18
Bathory, Heidi	CA	IAC-20.E1.3.4
BATICLE, BASTIEN	CA	IAC-20.A1.2.17
Batmunkh, Purevkhuu	CA	IAC-20.B4.1.12
Battaglia, Giuliano	CA	IAC-20.C2.1.10
Battagliere, Maria Libera	CA	IAC-20.E1.VP.13

Battazza, Fabrizio	CA	IAC-20.E5.4.6
Battista, Francesco	A	IAC-20.C4.6.6
Battler, Melissa	CA	IAC-20.A3.2C.3
Baud, Léo	CA	IAC-20.E5.VP.4
Baudeau, Nicolas	CA	IAC-20.A3.2C.7
Baudeau, Nicolas	CA	IAC-20.A3.5.11
Baudeau, Nicolas	CA	IAC-20.B3.VP.12
Bauer, Arnold	CA	IAC-20.A3.2B.1
Bauer, Waldemar	CA	IAC-20.D2.6.2
Baumann, Ingo	A	IAC-20.E7.4.11
Baumgart, Andre	A	IAC-20.E5.2.11
Bavikar, Kunal	CA	IAC-20.A5.1.10
Bavikar, Kunal	CA	IAC-20.C2.6.13
Bayarkhuu, Battuvshin	CA	IAC-20.B4.1.12
Bazzano, Giulia	A	IAC-20.D5.3.8
Beatrici, Marco	CA	IAC-20.C2.VP.13
Beauregard, Laurent	CA	IAC-20.C1.7.4
Beausoleil, Clement	CA	IAC-20.C2.4.8
Beblo-Vranesevic, Kristina	CA	IAC-20.A1.6.3
Becedas, Jonathan	CA	IAC-20.B4.2.5
Becedas, Jonathan	CA	IAC-20.C2.6.12
Becedas Rodríguez, Jonathan	CA	IAC-20.C4.5.11
Beck, James	CA	IAC-20.A6.6.9
Beck, James	CA	IAC-20.C2.6.11
Beck, Peter	CA	IAC-20.B4.4.2
Becker, Marc	A	IAC-20.E9.1-A6.8.8
Becker, Moacir	CA	IAC-20.B4.9-GTS.5.7
Becker, Moacir	CA	IAC-20.E5.VP.12
Bedetti, Emanuele	CA	IAC-20.A6.10-B6.5.1
Bedetti, Emanuele	CA	IAC-20.D6.1.7
Bedrossian, Nazareth	A	IAC-20.D1.4A.7
Bejar-Romero, Juan Antonio	CA	IAC-20.D2.4.4
Bejjani, Marcel	CA	IAC-20.B2.7.1
Bejjani, Marcel	CA	IAC-20.B2.8-GTS.3.5
Bekembayev, Arman	CA	IAC-20.B4.9-GTS.5.2
Belabbes, Samir	A	IAC-20.B1.6.7
Belhoul, Maryam	A	IAC-20.D5.VP
BELIAZI, Maelys	CA	IAC-20.E1.5.11
Belikov, Vladimir	CA	IAC-20.A6.VP.10
Belikov, Vladimir	CA	IAC-20.C1.9.14
Belikov, Vladimir	CA	IAC-20.D1.1.7
Belkin, Sergey	CA	IAC-20.A6.VP.8
Belkouchi, Badia	CA	IAC-20.B4.2.5
Belkouchi, Badia	CA	IAC-20.C4.5.11
Bell, James	CA	IAC-20.B4.8.6
Bell, Jim	CA	IAC-20.A3.3B.4
Bellardo, John	CA	IAC-20.B4.2.7
Bellei, Barbara	CA	IAC-20.A2.7.10
Bellis, Nicholas	CA	IAC-20.A7.2.4
Bello García, Álvaro	CA	IAC-20.C1.8.5
Bello García, Álvaro	CA	IAC-20.E5.2.12
Bellome, Andrea	A	IAC-20.C1.5.12
Bellomo, Nicolas	A	IAC-20.C4.5.17
Bellomo, Nicolas	CA	IAC-20.C4.8-B4.5A.3
Belo, David	CA	IAC-20.B3.7.2
Belokonov, Igor V.	A	IAC-20.C1.3.16
Beltrame, Giovanni	CA	IAC-20.A1.VP.3
Ben-Maor, Shoshana	CA	IAC-20.A7.2.11
Bendheim, Avner	CA	IAC-20.A4.2.6
Bendheim, Avner	CA	IAC-20.B2.8-GTS.3.3
Benetti, Michele	CA	IAC-20.B5.1.5
Benetti, Michele	CA	IAC-20.D1.2.5
Benevides, Rafael	A	IAC-20.C3.3.7
Benhalilou, Faysal	A	IAC-20.E7.VP.10
Bennell, Katherine	A	IAC-20.E3.2.8
Bennet, Francis	CA	IAC-20.A6.5.3
Bennett, Brett	A	IAC-20.B3.5.8
Bennett, Nicholas	A	IAC-20.D4.5.13
Bensaada, Messaoud	A	IAC-20.C3.3.12
Bensaada, Messaoud	A	IAC-20.C3.VP.11
Benvenuti, Piero	CA	IAC-20.A4.2.7
Benvenuti, Piero	CA	IAC-20.B2.1.5
Benvenuto, Eugenio	CA	IAC-20.A1.VP.23

Benvenuto, Eugenio	CA	IAC-20.A2.7.11
Berger, Thomas	CA	IAC-20.A1.5.9
Bergmann, Benedikt	A	IAC-20.A7.3.5
Bergmann, Jannis	CA	IAC-20.E2.3-GTS.4.10
Bergthorson, Jeffrey	CA	IAC-20.A2.VP.2
Bernacchia, David	CA	IAC-20.A3.2B.4
Bernardi, Pernelle	CA	IAC-20.A3.3B.3
Bernardini, Nicolò	A	IAC-20.C1.5.5
Bernelin, Marie-Christine	A	IAC-20.D2.6.6
Bernelin, Marie-Christine	CA	IAC-20.E6.4.3
Bernelli-Zazzera, Franco	CA	IAC-20.E2.2.2
Bernie, Anita	A	IAC-20.D1.1.6
Bertacin, Roberto	CA	IAC-20.C2.1.10
Berthet, Maximilien	A	IAC-20.A6.6.4
Berthet, Maximilien	A	IAC-20.E1.6.11
Berthet, Maximilien	A	IAC-20.E1.7.12
Bertoldi, Francesco	CA	IAC-20.A4.2.7
Bertone, Serena	CA	IAC-20.B3.5.4
BERTRAND, Jacques	A	IAC-20.D2.2.1
Bertrand, Johan	CA	IAC-20.A4.2.6
Betts, Bruce	A	IAC-20.A3.1.9
Beyer, Friederike	CA	IAC-20.A3.3A.2
Bhale, Kanchan	CA	IAC-20.D3.2A.2
BHANOT, MAKRANT	A	IAC-20.A5.4-D2.8.7
Bhansali, Sanskriti	CA	IAC-20.A3.2C.30
Bharadwaj, Tejas	A	IAC-20.E7.1.5
Bhardwaj, Aditya	CA	IAC-20.B2.7.11
Bhaskaran, Amal	CA	IAC-20.C4.10-C3.5.3
Bhaskaran, Amal	CA	IAC-20.C4.10-C3.5.5
Bhat, Sandeepa	A	IAC-20.E7.2.2
Bhat, Sridevi	A	IAC-20.C4.6.2
Bhatia, Sahil	CA	IAC-20.D3.2B.2
Bhattacharya, Ananyo	CA	IAC-20.E6.5-GTS.1.5
Bhattacharya, Sournav	CA	IAC-20.A1.3.1
Bhattarai, Suresh	CA	IAC-20.B4.3.12
Bhattarai, Suresh	CA	IAC-20.E1.9.12
Bhonsle, Uday	CA	IAC-20.A1.5.3
Bialek, Dylan	CA	IAC-20.E2.3-GTS.4.9
Bianchi, Daniele	CA	IAC-20.E1.4.9
Bianchi, Germano	CA	IAC-20.A6.VP.6
Bianchi, Germano	A	IAC-20.A6.VP.11
Bianchi, Stefano	CA	IAC-20.D2.1.5
Bianchi, Stefano	CA	IAC-20.D2.4.3
Bianchi, Tiziano	CA	IAC-20.B5.1.5
Bianchi, Tiziano	CA	IAC-20.D1.2.5
Bianco, G.	CA	IAC-20.A2.1.2
Bianco, Giuseppe	CA	IAC-20.A6.VP.3
Bianco, Paolo	CA	IAC-20.B4.VP.27
Biavaschi, Paola	CA	IAC-20.A4.2.7
Biddington, Brett	CA	IAC-20.D4.2.9
Biele, Jens	CA	IAC-20.A3.4B.2
Biele, Jens	CA	IAC-20.A3.4B.8
Biggs, James Douglas	CA	IAC-20.C1.9.12
Bikmukhanov, Damir	CA	IAC-20.B4.9-GTS.5.2
Biktimirov, Shamil	CA	IAC-20.B5.2.12
Bilal, Mohd	CA	IAC-20.B4.3.5
Bilal, Mohd	CA	IAC-20.B4.4.7
Bilican, Abdurrahman	CA	IAC-20.E2.3-GTS.4.1
Bilkhu, Satnam	CA	IAC-20.E2.3-GTS.4.12
Bille, Artur	CA	IAC-20.B1.4.2
Bilsland, Charlie	CA	IAC-20.E3.3.17
Bilsland, Charlie	CA	IAC-20.E3.VP.3
Bin, Ji	A	IAC-20.C2.2.12
BinAshour, Mohamed	CA	IAC-20.B6.VP.6
Binder, Maximilian	CA	IAC-20.C2.5.13
Bindra, Udai	CA	IAC-20.B4.2.4
Binner, Jon	CA	IAC-20.C2.4.6
Bird, Rachel	CA	IAC-20.B1.2.10
Birello, Edoardo	CA	IAC-20.B4.6A.5
Birlan, Andrei	CA	IAC-20.A3.3B.10
Biscaro, Federico	CA	IAC-20.C1.7.15
Bischoff, Esther	CA	IAC-20.A3.2B.1
Bisgaard, Morten	CA	IAC-20.B4.2.5

Bisgaard, Morten	CA	IAC-20.C4.5.11
Bisharat, Tara	A	IAC-20.A5.3-B3.6.6
Bissonauth, Vickram	CA	IAC-20.E1.5.12
Biswas, Janos	CA	IAC-20.D1.2.10
Bizalion, Hilaire	CA	IAC-20.E2.3-GTS.4.11
Bjorgo, Einar	CA	IAC-20.B1.6.7
Blaber, Andrew	CA	IAC-20.A1.3.3
Blachowicz, Adriana	CA	IAC-20.E3.2.14
Blackerby, Chris	CA	IAC-20.E9.1-A6.8.4
Blazquez, Emmanuel	CA	IAC-20.C1.7.15
Bleacher, Jacob	CA	IAC-20.A3.1.1
Blount, PJ	A	IAC-20.E7.7.8
Blount, PJ	A	IAC-20.E9.2.D5.4.5
Blundell, Mark	CA	IAC-20.A6.5.3
Blunt, Paul	CA	IAC-20.B4.4.1
Blyde, Sarah	CA	IAC-20.B2.8-GTS.3.3
Blyde, Sarah	CA	IAC-20.B4.7.5
Blyde, Sarah	A	IAC-20.C3.1.4
Bo, Xiao	CA	IAC-20.D5.1.14
Bockstahler, Klaus	CA	IAC-20.B3.7.9
Bocolo, Daniel	CA	IAC-20.E1.1.7
Bodrova, Julia	CA	IAC-20.A3.2C.26
Bodrova, Julia	CA	IAC-20.A3.2C.27
Boehrer, Christoph	CA	IAC-20.D1.3.3
Boensch, Nickolas	CA	IAC-20.D2.7.1
Boensch, Nickolas	CA	IAC-20.D3.1.7
Boensch, Nickolas	CA	IAC-20.E6.2.1
Bogan, Line Stensby	CA	IAC-20.E3.3.17
Bogan, Line Stensby	CA	IAC-20.E3.VP.3
Boggio, Mattia	CA	IAC-20.C1.3.3
Boglis, Ioana Carmen	A	IAC-20.E2.1.1
Bogoslovskaja, Olga	CA	IAC-20.A1.8.3
Bohdan, Darya	A	IAC-20.E1.4.8
Bohdan, Darya	A	IAC-20.E7.4.9
Bohdan, Darya	A	IAC-20.E7.VP.1
Boiko, Igor	CA	IAC-20.E2.4.12
Bojda, Aleksander	CA	IAC-20.A2.VP.4
Bojda, Aleksander	CA	IAC-20.B3.VP.7
Boldt-Christmas, Linn	CA	IAC-20.D5.2.15
Bonetti, Davide	CA	IAC-20.D1.1.1
Bonetti, Davide	A	IAC-20.D2.3.4
Bonetti, Davide	CA	IAC-20.E1.4.9
Bonilla, Erin	CA	IAC-20.E3.2.14
Bonnal, Christophe	CA	IAC-20.A6.6.3
Bonnal, Christophe	CA	IAC-20.D2.4.5
Bonnart, Sebastien	CA	IAC-20.B4.1.17
Bonnart, Sébastien	CA	IAC-20.B2.4.1
Bonnart, Sébastien	CA	IAC-20.D3.2A.2
Bonnart, Sébastien	A	IAC-20.E9.2.D5.4.7
Bonsu, Benjamin	A	IAC-20.E6.VP.3
Bonventre, Lucia	CA	IAC-20.C2.8.10
Booth, Stephanie	CA	IAC-20.D3.1.7
Bope, Ashleigh	CA	IAC-20.A1.8.9
Borders, Kareen	A	IAC-20.E1.2.5
Borgognoni, Fabio	CA	IAC-20.D5.3.8
Borla Tridon, Daniela	CA	IAC-20.D2.4.11
Borovikov, Aleksandr	CA	IAC-20.B4.2.9
Borowitz, Mariel	A	IAC-20.B1.5.13
Borowitz, Mariel	A	IAC-20.E9.1-A6.8.5
Bortolotti, Claudio	CA	IAC-20.A6.VP.11
Bos, Andre	CA	IAC-20.B2.7.1
Bos, Andre	CA	IAC-20.B2.8-GTS.3.5
Bosboom, Thomas	CA	IAC-20.D2.3.8
Bosch Borràs, Eduard	CA	IAC-20.C4.8-B4.5A.3
Bosch Bruguera, Miquel	A	IAC-20.B3.5.9
Boschetto, Alberto	CA	IAC-20.C2.9.5
Bosnak, Matevz	CA	IAC-20.B1.2.14
Botelho, Vitor	CA	IAC-20.B4.6B.10
Bothe, Kyle	CA	IAC-20.B2.5.1
Bou-Ali Saidi, Mohammed Mounir	CA	IAC-20.A2.3.8
Bougueroua, Sarah	CA	IAC-20.A7.3.8
Boulnois, Anthony	CA	IAC-20.E2.3-GTS.4.12
Bourdarie, Sébastien	CA	IAC-20.D5.3.3

Bouriat, Simon	CA	IAC-20.B3.8.8
Bowman, Jared	CA	IAC-20.C4.8-B4.5A.5
Boye, Jeffrey	A	IAC-20.D4.1.19
Brain, David	CA	IAC-20.A3.3A.4
Braithwaite, Timothy	CA	IAC-20.B3.1.5
Branco, Moritz	CA	IAC-20.A7.1.8
Brandt, Pontus	A	IAC-20.D4.4.1
Brandt, Pontus	CA	IAC-20.D4.4.3
Brandão, Ana	CA	IAC-20.C2.9.5
Branz, Francesco	CA	IAC-20.B4.6A.5
Braun, Christian	CA	IAC-20.A3.2B.1
Braun, Vitali	CA	IAC-20.A6.2.6
Braun, Vitali	A	IAC-20.A6.4.3
Bravo, Juan Ignacio	CA	IAC-20.B5.1.5
Bravo, Juan Ignacio	CA	IAC-20.D1.2.5
Bravo, Juan Ignacio	CA	IAC-20.D1.3.7
Braxmaier, Claus	CA	IAC-20.A2.6.4
Breit, Helko	CA	IAC-20.B5.1.5
Breit, Helko	CA	IAC-20.D1.2.5
Breitenbücher, Laura	A	IAC-20.A2.2.2
Bresler, Karol	CA	IAC-20.D2.6.9
Bretl, Kathrine	A	IAC-20.B3.VP.1
Brettle, Harriet	A	IAC-20.A6.2.2
Brettle, Harriet	A	IAC-20.E6.1.4
Brettle, Harriet	A	IAC-20.E9.1-A6.8.4
Briatore, Simone	CA	IAC-20.D1.2.6
Brichta, Michal	A	IAC-20.E3.6.1
Briese, Lâle Evrim	A	IAC-20.D2.5.3
Brieß, Klaus	CA	IAC-20.B2.3.11
Brieß, Klaus	CA	IAC-20.B4.6B.8
Britting, Thomas	CA	IAC-20.D2.3.8
Britting, Thomas	CA	IAC-20.D2.5.15
Brockmann, Björn	CA	IAC-20.E5.VP.4
Brodin, Staffan	A	IAC-20.C4.1.12
Brodrick, David	CA	IAC-20.A6.5.3
Bromley, Lars	CA	IAC-20.B1.6.7
Broquetas, Antoni	CA	IAC-20.E2.3-GTS.4.3
Brovar, Yana	CA	IAC-20.D1.4A.6
Bruckmayr, Chris	CA	IAC-20.E5.3.5
Brunner, Bernhard	CA	IAC-20.D1.6.3
Brunner, Sebastian	CA	IAC-20.A3.2B.1
Brussel, Olivia	CA	IAC-20.E3.2.6
Brykov, Vitaly	CA	IAC-20.A1.VP.20
Bua, Raffaele	CA	IAC-20.B1.5.1
Buccafurri, Francesco	CA	IAC-20.D1.4B.5
Buccafurri, Francesco	CA	IAC-20.D5.2.9
Bucchioni, Giordana	A	IAC-20.C1.1.12
Buchholz, Maximilian	A	IAC-20.C4.1.13
Buck, Christopher	CA	IAC-20.B4.4.4
Buckland, Audrey	CA	IAC-20.E1.6.7
Buckland, Darin	CA	IAC-20.B3.8.3
Buckland, Darin	CA	IAC-20.D1.5.10
Buddhacharya, Saman	CA	IAC-20.E1.8.7
Budiantoro, Poki Agung	CA	IAC-20.B4.7.8
Budnik, Sergey	CA	IAC-20.C2.7.9
Budnik, Sergey	CA	IAC-20.C2.8.6
Budoni, Matteo	A	IAC-20.A6.1.1
Budoni, Matteo	CA	IAC-20.A6.9.7
Buist, Peter	A	IAC-20.B2.8-GTS.3.8
Buist, Peter	A	IAC-20.E4.1.4
Buiu, Octavian	CA	IAC-20.D5.3.5
Bukaiev, Bohdan	A	IAC-20.C1.9.14
Bulcha, Berhanu	CA	IAC-20.A7.2.4
Bulgarini, Asia	CA	IAC-20.A7.2.11
Bultitude, James	CA	IAC-20.D2.3.2
Bumelha, Rashed	A	IAC-20.B3.8.13
Bunt, Riccardo	CA	IAC-20.A7.2.11
Buongiorno, Maria Fabrizia	CA	IAC-20.E1.VP.13
Burahmah, Naser	CA	IAC-20.A1.5.2
Burahmah, Naser	A	IAC-20.A1.5.8
Burga, Irene	CA	IAC-20.B5.2.1
Burger, Edward	A	IAC-20.E7.1.13
Burlton, Bruce	CA	IAC-20.E1.3.4
Burov, Alexander	A	IAC-20.D4.1.18
Bursi, Alessandro	CA	IAC-20.A2.1.2
Burville, Kevin	CA	IAC-20.A1.3.3
Burzagli, Fabio	CA	IAC-20.B3.1.10
Bushlaibi, Ahmed	CA	IAC-20.E2.4.11
Bushlaibi, Ahmed	CA	IAC-20.E2.4.12
Bussler, Leonid	CA	IAC-20.D2.4.1
Bussmann, Kristin	CA	IAC-20.A3.2B.1
Bussov, Kadri	CA	IAC-20.A7.2.11
Butcher, Lincoln	CA	IAC-20.A1.6.9
Butcher, Lincoln	A	IAC-20.C4.10-C3.5.9
Butcher, Lincoln	A	IAC-20.D1.5.13
Butterworth, James	CA	IAC-20.A7.1.8
Butterworth, James	CA	IAC-20.B3.7.9
Byers, Harry	CA	IAC-20.C4.2.10
Börner, Anko	CA	IAC-20.A3.2B.1
Bęś, Kamil	CA	IAC-20.B3.VP.7

C

Name	Role	Paper
C K, Krishnadasan	CA	IAC-20.C4.3.1
C K, Krishnadasan	CA	IAC-20.C4.3.13
C K, Krishnadasan	CA	IAC-20.C4.4.3
Cabero, Marco	A	IAC-20.E1.5.16
Cacciatore, Francesco	CA	IAC-20.D2.4.4
Cacombe, Cristovao	CA	IAC-20.A5.1.13
Cacombe, Cristovao	CA	IAC-20.E1.9.13
Cadiou, Hervé	CA	IAC-20.E5.VP.4
Cagna, Diego	A	IAC-20.A5.4-D2.8.8
Cai, Guobiao	CA	IAC-20.C4.4.13
Cai, Guobiao	CA	IAC-20.D1.4A.3
CAI, Wenyi	A	IAC-20.E6.3.6
Cai, Yaxing	CA	IAC-20.A6.6.6
Cai, Zhiming	CA	IAC-20.A7.3.10
Caiani, Enrico Gianluca	CA	IAC-20.A1.2.10
Caitamolo, Alfredo	CA	IAC-20.A5.1.13
Caitamolo, Alfredo	CA	IAC-20.E1.9.13
Califórnia, A.	CA	IAC-20.B4.6B.10
Calunga, Alberto	CA	IAC-20.E1.1.7
Calvi, Daniele	CA	IAC-20.C4.8-B4.5A.3
Calvi, Daniele	A	IAC-20.D1.4B.8
Calzada-Diaz, Abigail	CA	IAC-20.A3.2B.3
Camacho, David	CA	IAC-20.A6.7.4
Camanzo, Alejandro	CA	IAC-20.B4.6B.10
Camayo Basurto, Hans Diego	CA	IAC-20.E2.3-GTS.4.7
Cameron, Bruce	CA	IAC-20.A3.2B.7
Cameron, Bruce	CA	IAC-20.A3.3A.9
Cameron, Bruce	CA	IAC-20.B2.1.7
Campagnoli, Marco	CA	IAC-20.A3.2C.7
Campagnoli, Marco	CA	IAC-20.A3.5.11
Campagnoli, Marco	CA	IAC-20.B3.VP.12
Campagnolo, Lucie	A	IAC-20.E5.2.3
CAMPBELL, LEWIS	A	IAC-20.A2.VP.1
Campo Bagatin, Adriano	CA	IAC-20.A3.4A.3
Can, Merve	A	IAC-20.E6.VP.5
Cano Gómez, Gabriel	CA	IAC-20.A2.2.1
Cano Gómez, Gabriel	CA	IAC-20.D1.3.5
Cano Torres, Alvaro	CA	IAC-20.C1.3.1
Cantoni, Stefania	CA	IAC-20.D2.5.1
Cao, Kai	CA	IAC-20.C2.3.11
Cao, Kai	CA	IAC-20.C3.1.9
Cao, Maurizio	CA	IAC-20.B1.5.1
Caon, Michele	CA	IAC-20.D1.2.5
Capannolo, Andrea	A	IAC-20.A3.4A.2
Capannolo, Andrea	A	IAC-20.C1.6.6
Capasso, Fabio	CA	IAC-20.A6.10-B6.5.3
Capasso, Marco	CA	IAC-20.A3.2C.7
Capasso, Marco	CA	IAC-20.A3.5.11
Capasso, Marco	CA	IAC-20.B3.VP.12
Capatinta, María	CA	IAC-20.A4.2.7
Cappuccio, Paolo	A	IAC-20.E2.1.5
Capuano, Vincenzo	CA	IAC-20.B2.6.2
Capurso, Andrea	CA	IAC-20.E9.2.D5.4.6
Caramagno, Augusto	CA	IAC-20.D2.5.5
Carberry, Christopher	A	IAC-20.B3.8.10
Carbone, Andrea	A	IAC-20.A3.2C.6
CARCAILLON, Elisa	A	IAC-20.B6.1.5
Cardellach, Estel	CA	IAC-20.B4.4.1
CARDENAS, LORENA	CA	IAC-20.B4.VP.10
Cardín, Jorge	CA	IAC-20.D2.4.4
Carey, William	A	IAC-20.A3.2B.2
Carletta, Stefano	CA	IAC-20.A1.6.2
Carletta, Stefano	CA	IAC-20.C1.4.16
Carli, Elisa	A	IAC-20.C1.7.15
Carlo, Antonio	A	IAC-20.E9.2.D5.4.11
Carloni, Claudio	CA	IAC-20.A6.1.1
Carloni, Claudio	A	IAC-20.A6.9.7
Carmaliet, Peter	CA	IAC-20.A1.2.7
Carman, Randall	CA	IAC-20.B2.7.2
Carnelli, Ian	CA	IAC-20.A3.4A.3
Carnelli, Ian	CA	IAC-20.A3.4A.4
Carnevale, Flavia	CA	IAC-20.B1.2.9
Carol Hernández, Víctor	CA	IAC-20.E5.VP.12
Caron, Mathieu	CA	IAC-20.B3.1.5
Carpentier, Simon	CA	IAC-20.A7.1.8
Carpentier, Simon	CA	IAC-20.B3.7.9
Carrasco-Casado, Alberto	CA	IAC-20.B2.2.5
Carrera, Erasmo	A	IAC-20.C2.2.8
Carreras, Bertrand	CA	IAC-20.B2.7.4
Carreño-Megias, Xavier	CA	IAC-20.E2.3-GTS.4.3
Carrillo Flores, Andrea Montserrat	CA	IAC-20.B2.8-GTS.3.3
Carrillo Flores, Andrea Montserrat	CA	IAC-20.D4.1.3
Carroll, Katherine	CA	IAC-20.A5.2.12
Carry, Benoît	CA	IAC-20.A3.4A.3
CARTOCCI, STEFANO	A	IAC-20.A2.7.4
Carvajal-Godinez, Johan	CA	IAC-20.E1.3.5
Casali, Elena	CA	IAC-20.C4.5.5
Casalicchio, Emiliano	A	IAC-20.E9.2.D5.4.1
Casalino, Lorenzo	CA	IAC-20.C1.7.10
Casalino, Lorenzo	CA	IAC-20.D2.4.11
Casanova Álvarez, Marco	CA	IAC-20.D3.2A.2
Cash, Ian	A	IAC-20.C3.4.1
Cassady, R. Joseph	CA	IAC-20.B3.8.10
Cassiano Julio Filho, Antonio	A	IAC-20.B6.1.2
Cassibry, Jason	CA	IAC-20.C4.10-C3.5.1
Castagnolo, Dario	CA	IAC-20.A2.6.1
Castagnolo, Dario	CA	IAC-20.B3.3.2
Castaneda, Alexander	A	IAC-20.A2.2.10
Castelán Castillo, David Daniel	A	IAC-20.C3.4.4
Castillo, Diana	CA	IAC-20.E1.VP.19
Castro, Antero	CA	IAC-20.E1.5.16
Castro de Paula Nunes, Ana Paula	A	IAC-20.A3.VP.7
CASU, Davide	CA	IAC-20.D1.6.1
Casu, Sergio	CA	IAC-20.A6.VP.11
Catal, Egemen	CA	IAC-20.C2.7.16
Catalano, Gabriella	A	IAC-20.E7.2.3
Cataldo, Giuseppe	A	IAC-20.A7.2.4
Cavalli, Lorenzo	CA	IAC-20.D2.5.1
Cavanaugh, Cara	A	IAC-20.A1.6.9
Cawthorne, Andrew	CA	IAC-20.B1.2.10
Cawthorne, Andrew	CA	IAC-20.B4.6A.12
Caïs, Philippe	CA	IAC-20.A3.3B.3
Cañas, Valentin	CA	IAC-20.C4.5.11
Cecchini, Federico	CA	IAC-20.C2.5.3
Cecchini, Federico	CA	IAC-20.C2.5.14
Cefola, Paul	CA	IAC-20.C1.7.16
Celesti, Paola	CA	IAC-20.D6.1.7
Cencetti, Leonardo	CA	IAC-20.D1.6.4
Centers, Ross	A	IAC-20.C3.2.4
Centers, Ross	A	IAC-20.D3.1.8
Centuori, Simone	CA	IAC-20.C1.3.1
Centuori, Simone	CA	IAC-20.C1.5.7
Ceroni, Mauro	CA	IAC-20.A4.2.7
Cerrone, Gianluca	CA	IAC-20.B6.1.7
Cerrone, Gianluca	A	IAC-20.E9.2.D5.4.8
Cerutti-Maori, Delphine	CA	IAC-20.A6.1.1
Cerutti-Maori, Delphine	CA	IAC-20.A6.9.7
Cervone, Angelo	CA	IAC-20.B2.3.4
Cervone, Angelo	A	IAC-20.B4.8.1
Cervone, Angelo	CA	IAC-20.C2.6.1
Cervone, Angelo	CA	IAC-20.C4.8-B4.5A.2
Cervone, Angelo	CA	IAC-20.C4.8-B4.5A.9
Cesco, Nathalie	CA	IAC-20.D2.6.1
Chabot, Nancy	CA	IAC-20.A3.4A.3
Chadaga, Shreyas	CA	IAC-20.A3.3B.9
Chadde, NIkhitha	CA	IAC-20.E5.VP.4
Chaffin, Michael	CA	IAC-20.A3.3A.4
Chagas, Misael	A	IAC-20.A1.2.14
Chai, Yuan	A	IAC-20.D3.2B.9
Chakrabarti, Subrata	CA	IAC-20.C4.2.9
Chakrabarti, Supriya	A	IAC-20.E1.3.15
Chalal, Theo	CA	IAC-20.A1.VP.13
Chalal, Theo	CA	IAC-20.A3.2B.17
Chalal, Theo	CA	IAC-20.A3.2C.24
Chalon, Maxim	CA	IAC-20.A3.4B.2
Chamitoff, Gregory	CA	IAC-20.A1.3.1
Champion, Laura	A	IAC-20.B4.8.6
Chan, Amy	CA	IAC-20.A6.5.3
Chan, Manwei	CA	IAC-20.D5.2.11
Chan, Yung-An	CA	IAC-20.B4.2.5
Chan, Yung-An	CA	IAC-20.C4.5.11
Chand, Suditi	A	IAC-20.B4.8.5
Chandra, Adarsh	CA	IAC-20.A5.1.10
Chandra, Avinash	CA	IAC-20.C4.6.10
Chandra, Rohan	CA	IAC-20.A3.5.4
Chandra, Rohan	A	IAC-20.B6.VP.8
Chandra, Rohan	A	IAC-20.C2.4.4
Chandran, Amal	CA	IAC-20.B4.2.7
Chang, Eva Yi-Wei	A	IAC-20.E4.2.9
Chang, Eva Yi-Wei	A	IAC-20.E5.3.6
Chang, Mochen	A	IAC-20.C2.7.15
Chanie, Anne	CA	IAC-20.B6.2.2
Charles, Barath	CA	IAC-20.A3.2B.25
Charles, Ivan	CA	IAC-20.A7.1.8
Charles, John	CA	IAC-20.A1.5.9
Charnoz, Sébastien	CA	IAC-20.A3.4A.3
CHAROLA, SHREYAS	A	IAC-20.C2.8.2
Chaturvedi, Prerna	CA	IAC-20.C2.8.3
Chaturvedi, Prerna	A	IAC-20.C2.8.5
Chaturvedi, Prerna	CA	IAC-20.C2.8.8
Chaturvedi, Priyanshi	CA	IAC-20.A1.5.7
Chaturvedi, Priyanshi	A	IAC-20.A2.2.13
Chaturvedi, Priyanshi	A	IAC-20.C4.9.8
Chatzipanagiotis, Michail	A	IAC-20.E7.7.4
Chaumont, Monica	CA	IAC-20.B4.7.6
Chavagnac, Christophe	CA	IAC-20.D2.6.1
Chavers, Greg	CA	IAC-20.B3.1.11
Chaves Jiménez, Adolfo	A	IAC-20.C1.9.9
Chaves Jiménez, Adolfo	A	IAC-20.E1.3.5
Chavy-Macdonald, Marc-Andre	A	IAC-20.E6.3.2
Chebakov, Evgeny	A	IAC-20.C2.7.9
Cheetham, Bradey	A	IAC-20.A3.2A.10
Cheikh, Dean	CA	IAC-20.D4.4.4
Chekalina, Angelina	CA	IAC-20.A1.1.3
Chellam, Balamurugan	CA	IAC-20.A5.1.6
Chen, Ao	A	IAC-20.B6.VP.9
Chen, Chao	A	IAC-20.A3.3B.5
Chen, Ding	A	IAC-20.A4.1.7
CHEN, Hang	A	IAC-20.B4.9-GTS.5.11
Chen, Hao	A	IAC-20.C2.2.10
Chen, Hui	CA	IAC-20.A5.1.5
Chen, Hui	A	IAC-20.C4.1.1
Chen, Jiahui	A	IAC-20.C4.4.15
Chen, Jianlin	A	IAC-20.C1.7.9
Chen, Li	CA	IAC-20.A2.VP.5
Chen, Li	CA	IAC-20.C2.3.12

Chen, Li	CA	IAC-20.C2.VP.3
Chen, Li	CA	IAC-20.D1.VP
Chen, Li	CA	IAC-20.D1.VP
CHEN, Liang	A	IAC-20.C2.1.7
Chen, Linghui	CA	IAC-20.B2.8-GTS.3.9
Chen, Linghui	A	IAC-20.E3.4.4
Chen, Maosheng	A	IAC-20.B4.6A.1
Chen, Shih Ning	CA	IAC-20.E3.3.5
Chen, Shiyu	CA	IAC-20.A3.VP.30
CHEN, XIANLIANG	A	IAC-20.B2.7.7
Chen, Yen-Sen	A	IAC-20.C4.3.6
Chen, Yuehai	CA	IAC-20.C3.4.8
Chen, Yundai	CA	IAC-20.A1.8.5
Chen, Zheng	A	IAC-20.C3.VP.10
Chen, Zhenqian	A	IAC-20.A2.2.5
Chendeb EL RAI, Marwa	A	IAC-20.B1.5.18
Chendeb EL RAI, Marwa	A	IAC-20.B1.VP.20
Cheney, Thomas	A	IAC-20.A1.6.10
Cheney, Thomas	A	IAC-20.E7.2.21
Cheng, Andy	CA	IAC-20.A3.4A.3
Cheng, Chen	CA	IAC-20.C4.4.7
Cheng, Haowen	CA	IAC-20.A6.1.2
CHENG, Jiming	CA	IAC-20.C4.3.14
Cheng, Lin	A	IAC-20.C1.2.13
Cheng, Ming	CA	IAC-20.E5.VP.9
Cheng, Rui	CA	IAC-20.B5.1.14
Cherchi, Maria Vittoria	CA	IAC-20.A1.VP.23
Chern, Rock Jeng-Shing	CA	IAC-20.E4.2.9
Chernykh, Irina	A	IAC-20.E7.3.12
Chesi, Simone	CA	IAC-20.B4.1.17
CHIA, TOMUKUM	A	IAC-20.A1.VP.24
Chiacchio, Pasquale	CA	IAC-20.A6.10-B6.5.3
Chiaramida, Vincenzo	A	IAC-20.A3.2C.7
Chiaramida, Vincenzo	CA	IAC-20.A3.5.11
Chiaramida, Vincenzo	CA	IAC-20.B3.VP.12
Chibing, Shen	A	IAC-20.C4.7.16
Chichkanov, Ilia	A	IAC-20.E2.1.2
Chikazawa, Takuya	CA	IAC-20.C1.5.10
Chittaranjan, Vrushali	CA	IAC-20.A4.2.8
Chittaranjan, Vrushali	CA	IAC-20.D1.VP
Chiu, S.W.	A	IAC-20.D5.1.4
CHO, MENGU	A	IAC-20.B4.1.1
CHO, MENGU	CA	IAC-20.B4.2.1
Cho, Mengu	A	IAC-20.B4.2.7
CHO, MENGU	A	IAC-20.B4.6B.5
CHO, MENGU	CA	IAC-20.C4.8-B4.5A.12
Cho, Sang Yeon	A	IAC-20.D5.1.12
Chogle, Firoz	CA	IAC-20.A3.VP.10
Choi, Daniel	CA	IAC-20.B2.7.8
Choi, Daniel	CA	IAC-20.B2.7.9
Choi, Daniel	CA	IAC-20.C2.8.3
Choi, Daniel	CA	IAC-20.C2.8.5
Choi, Daniel	CA	IAC-20.C2.8.8
Choinowski, Andre	CA	IAC-20.B4.6A.2
Chong Castro, Aelyn	CA	IAC-20.A4.2.6
Chou, Estelle	CA	IAC-20.B1.1.9
Chouard,, Yann	CA	IAC-20.A1.VP.13
Choudhary, Shreya	A	IAC-20.A1.5.7
Choudhary, Shreya	CA	IAC-20.C4.9.8
Chow, Chee Lap	CA	IAC-20.B4.2.1
Chow, Chee Lap	CA	IAC-20.B4.2.7
Chowdhary, Amit	CA	IAC-20.D2.VP.14
Chowdhary, Amit	CA	IAC-20.E2.2.3
Chowdhury, Arshad	CA	IAC-20.E1.7.3
Chowdhury, Sreemon	CA	IAC-20.A3.VP.5
Christensen, Carissa	A	IAC-20.D3.1.7
Christensen, Carissa	A	IAC-20.E6.2.1
Christensen, Simon	CA	IAC-20.B4.2.5
Christensen, Simon	CA	IAC-20.C2.6.12
Christenson, Shawna	A	IAC-20.E1.1.1
Christenson, Shawna	CA	IAC-20.E1.2.1
Christiansen, Carissa	CA	IAC-20.E9.1-A6.8.6
Christie, Matthew	CA	IAC-20.A7.2.11

Chterev, Konstantin	A	IAC-20.E6.VP.1
Chu, Wei	CA	IAC-20.C4.VP.21
Chu, Xiaoyu	A	IAC-20.A3.VP.35
Chub, Nikolai	CA	IAC-20.B3.4-B6.4.6
Chujo, Toshihiro	CA	IAC-20.A2.4.13
Chujo, Toshihiro	CA	IAC-20.C1.8.8
Chujo, Toshihiro	CA	IAC-20.C1.9.1
Chujo, Toshihiro	CA	IAC-20.C2.9.2
Chujo, Toshihiro	CA	IAC-20.D1.2.8
Chung, Dae-Won	CA	IAC-20.B6.1.8
Chung, Soon-Jo	CA	IAC-20.B2.6.2
Chung, Soyoung	CA	IAC-20.D4.2.9
Chunmin, WANG	A	IAC-20.C4.VP.2
Chupin, Thibaud	CA	IAC-20.D1.2.10
Churilo, Igor	CA	IAC-20.B4.7.4
Chvanov, Vladimir K.	CA	IAC-20.C4.1.3
Chávez Sánchez, Liz	CA	IAC-20.A4.2.7
Chávez-Moreno, Rafael-Guadalupe	A	IAC-20.B4.1.16
Cimmino, Nicola	CA	IAC-20.C1.1.10
Cinelli, Ilaria	A	IAC-20.A5.2.10
Cinelli, Ilaria	A	IAC-20.B3.5.6
Cinelli, Ilaria	A	IAC-20.B3.9-GTS.2.4
Cinelli, Ilaria	A	IAC-20.B3.9-GTS.2.5
Cinelli, Ilaria	A	IAC-20.D4.1.4
Cinelli, Ilaria	CA	IAC-20.E1.4.4
Ciniglia, Claudia	CA	IAC-20.A1.6.4
Cinquepalmi, Luca	CA	IAC-20.B4.6A.8
Cipollone, Riccardo	CA	IAC-20.E2.1.3
Cirelli, Renato	CA	IAC-20.A3.5.17
Cirina, Cristiana	CA	IAC-20.E3.3.15
Ciufolini, Ignazio	A	IAC-20.A2.1.2
Ciufolini, Ignazio	CA	IAC-20.C2.1.10
Clark, Jonathan	CA	IAC-20.A1.3.4
Clark, Jonathan	CA	IAC-20.A1.3.7
Clark, Jonathan	CA	IAC-20.B3.5.2
Clark, Jonathan	CA	IAC-20.E3.2.10
Clark, Justin	A	IAC-20.A5.4-D2.8.3
Clark, Torin	CA	IAC-20.B3.VP.1
Clavijo Urrelo, Dilhan	CA	IAC-20.B2.VP.2
Cliquet-Moreno, Elisa	CA	IAC-20.D2.6.1
Cocco, Magda	CA	IAC-20.E9.2.D5.4.4
Cocirla, Gianluca	CA	IAC-20.A2.7.10
Coderre, Kathleen	CA	IAC-20.A1.5.9
Cohen, Jacob	CA	IAC-20.A7.2.11
Colagrossi, Andrea	CA	IAC-20.A3.2C.25
Colasurdo, Guido	CA	IAC-20.C1.4.2
Coliolo, Fiorella	A	IAC-20.E1.2.16
Collon, Max	A	IAC-20.A7.1.7
Colombo, Camilla	CA	IAC-20.A6.10-B6.5.6
Colombo, Camilla	CA	IAC-20.A6.VP.14
Colombo, Camilla	CA	IAC-20.B1.5.12
Colombo, Camilla	CA	IAC-20.C1.3.14
Colombo, Camilla	CA	IAC-20.C1.6.10
Colorado Gómez, Mario Andrés	CA	IAC-20.D3.2A.11
Colpari Carrizo, Ricardo	CA	IAC-20.D3.2A.2
Comer, Dawn	CA	IAC-20.B5.2.1
Compin, Matthieu	CA	IAC-20.A2.7.9
Comstock, Douglas	A	IAC-20.B3.2.5
Conaway, Adam	CA	IAC-20.C4.10-C3.5.3
Conaway, Adam	CA	IAC-20.C4.10-C3.5.5
Condori, Marcelo	CA	IAC-20.E1.5.16
Condurache, Daniel	A	IAC-20.C1.VP
CONG, Shanshan	CA	IAC-20.B4.6A.1
Cong, Yuntian	CA	IAC-20.C4.10-C3.5.4
Cong, Yuntian	A	IAC-20.C4.5.13
Connolly, John	CA	IAC-20.B3.1.11
Conte, Alexis	CA	IAC-20.B4.2.5
Conte, Alexis	CA	IAC-20.C4.5.11
Contractor, Noshir	CA	IAC-20.A1.1.5
Contreras, Rafael	CA	IAC-20.B6.2.5
Cook, Timothy	CA	IAC-20.E1.3.15
Cooke, David	A	IAC-20.B4.6A.12
Coors Blankenship, Jesse	A	IAC-20.B3.7.10

Copeland, Michael	CA	IAC-20.A6.5.3
Coppola, Antonio	CA	IAC-20.A6.VP.11
Coral, Giulio	CA	IAC-20.E1.7.12
Corbelli, Alberto	CA	IAC-20.B4.6A.8
Corbin, Benjamin	CA	IAC-20.D4.1.9
Corbin, Benjamin	CA	IAC-20.E3.2.7
Cordero, Zachary	A	IAC-20.C2.5.6
Cordes, Florian	CA	IAC-20.A3.2B.17
Cordie, Troy	A	IAC-20.D1.6.6
Cordova Alarcon, Jose Rodrigo	CA	IAC-20.B4.2.7
Cornara, Stefania	CA	IAC-20.B2.4.12
Cornara, Stefania	CA	IAC-20.D1.2.5
Corona, Diego	A	IAC-20.C2.VP.13
Coronel Mariño, Gabriel Gustavo	A	IAC-20.D1.5.3
Coronel Mariño, Gabriel Gustavo	CA	IAC-20.D1.5.6
Corpino, Sabrina	CA	IAC-20.B6.1.6
Corpino, Sabrina	CA	IAC-20.C4.5.17
Corpino, Sabrina	CA	IAC-20.C4.8-B4.5A.3
Corpino, Sabrina	CA	IAC-20.D1.4B.8
Correia, Bruno	CA	IAC-20.B4.4.5
Correia Mendonça, Helena	CA	IAC-20.E3.3.7
Correia Mendonça, Helena	A	IAC-20.E9.2.D5.4.4
Cortes, Ernesto	CA	IAC-20.E6.5-GTS.1.13
Cortés Gutiérrez, Erick	CA	IAC-20.A2.4.7
Corvaja, Roberto	CA	IAC-20.B4.6A.5
Cosby, Matthew	CA	IAC-20.D3.2A.1
Costa, Pedro	A	IAC-20.B4.8.7
Costa Goulart, Alexandre	A	IAC-20.C4.VP.22
Costantini, Lorenzo	CA	IAC-20.A1.2.10
Costantino, Francesco	CA	IAC-20.C2.9.5
Costedoat, Nathalie	CA	IAC-20.D6.3.1
Cosyn, Philippe	CA	IAC-20.E4.2.7
Coto, Miguel	CA	IAC-20.A7.2.11
Cotten, Brad	CA	IAC-20.B4.7.12
Cotten, Brad	CA	IAC-20.C1.8.13
Courson, Robin	CA	IAC-20.E2.3-GTS.4.11
COURTOIS, Michel	CA	IAC-20.E6.1.5
Couto, Abby	CA	IAC-20.D4.4.4
Coutrier, Asha	CA	IAC-20.E3.3.8
Covello, Chase	CA	IAC-20.E2.3-GTS.4.6
Coverstone, Victoria	CA	IAC-20.E2.3-GTS.4.9
Coverstone, Victoria	CA	IAC-20.E2.3-GTS.4.9
Cowley, Aidan	CA	IAC-20.A3.2C.24
Cox, Ann	CA	IAC-20.B4.2.13
Craig, Douglas	CA	IAC-20.A3.1.1
Cranstoun, Charles	CA	IAC-20.D3.2A.1
Crawley, Edward	CA	IAC-20.A3.2B.7
Crawley, Edward	CA	IAC-20.A3.3A.9
Crawley, Edward	CA	IAC-20.B2.1.7
Crawley, Edward	CA	IAC-20.D1.4A.6
Crawley, Edward	CA	IAC-20.E1.4.5
Cremins, Tom	CA	IAC-20.A3.1.1
Crespo, Juan Carlos	CA	IAC-20.E5.2.12
Cricenti, Alessandro	CA	IAC-20.B1.2.9
Crippa, Roberto	CA	IAC-20.A4.2.7
Crisconio, Marino	CA	IAC-20.A2.6.1
Crisp, Nicholas H.	A	IAC-20.B4.2.5
Crisp, Nicholas H.	CA	IAC-20.C2.6.12
Crisp, Nicholas H.	CA	IAC-20.C4.5.11
Cristillo, Domenico	CA	IAC-20.C2.3.3
Cristina, Vitor	CA	IAC-20.B4.4.5
Critchley-Marrows, Joshua	A	IAC-20.B2.6.5
Croft, Steve	A	IAC-20.A4.1.1
Croft, Steve	CA	IAC-20.A4.1.3
Croft, Steve	CA	IAC-20.A4.1.4
Croft, Steve	CA	IAC-20.A4.1.5
Cropper, Simon	CA	IAC-20.E5.1.10
Cross, Christina	A	IAC-20.A3.2A.4
Cross, Victoria	CA	IAC-20.A3.2A.4
Crowley, Erika	CA	IAC-20.A4.2.6
Crowley, Erika	A	IAC-20.E5.4.1
Cuba, Gerson	CA	IAC-20.E1.5.16
Cucinella, Giovanni	CA	IAC-20.B4.6A.8

Cuesta Arija, Francisco Javier	CA	IAC-20.E2.3-GTS.4.12
Cui, Hong	CA	IAC-20.C2.4.12
Cui, Pingyuan	CA	IAC-20.A3.3B.5
Cui, Pingyuan	CA	IAC-20.A3.VP.31
Cui, Pingyuan	CA	IAC-20.B4.8.10
Cui, Pingyuan	CA	IAC-20.B6.2.10
Cui, Pingyuan	CA	IAC-20.C1.2.8
Cui, Pingyuan	CA	IAC-20.D1.6.7
CUI, Shenshan	CA	IAC-20.C2.1.7
Cui, Yao	CA	IAC-20.A6.5.4
Cullum, Thomas	CA	IAC-20.C4.8-B4.5A.13
Cullum, Thomas	CA	IAC-20.E5.4.3
Cullum, Thomas	CA	IAC-20.E7.7.12
Cunha, Sergio	CA	IAC-20.B4.4.5
Cunha, Sergio	CA	IAC-20.B4.8.7
Curci, Guido	CA	IAC-20.B5.1.5
Curci, Guido	CA	IAC-20.D1.2.5
Curianò, Federico	CA	IAC-20.A2.7.10
Curianò, Federico	A	IAC-20.A2.7.11
Curianò, Federico	CA	IAC-20.A6.1.7
Curianò, Federico	CA	IAC-20.A6.10-B6.5.1
Curianò, Federico	CA	IAC-20.B4.1.8
Curianò, Federico	CA	IAC-20.B4.VP.11
Curianò, Federico	CA	IAC-20.D6.1.7
Curianò, Federico	CA	IAC-20.E1.4.7
Curti, Fabio	CA	IAC-20.A3.2C.6
Cutler, James	CA	IAC-20.A6.10-B6.5.1
Cutler, James	CA	IAC-20.B4.VP.11
Cwik, Tom	A	IAC-20.A3.5.14
Cwilichowska, Natalia	CA	IAC-20.A1.7.4
Cwilichowska, Natalia	A	IAC-20.A1.VP.11
Cwilichowska, Natalia	CA	IAC-20.E5.1.9
Czech, Daniel	CA	IAC-20.A4.1.1
Czech, Daniel	A	IAC-20.A4.1.4
Czech, Daniel	CA	IAC-20.A4.1.5
César, Paulo	CA	IAC-20.E1.9.13

D

Name	Role	Paper
D, Venkittaraman	CA	IAC-20.C4.2.9
D'Ambrosio, Andrea	CA	IAC-20.A3.2C.6
D'Amico, Jurij	CA	IAC-20.D1.6.1
D'Aronco, Stefano	CA	IAC-20.B1.4.13
D'Mello, Darlene	CA	IAC-20.B2.4.4
D'Orgeville, Celine	CA	IAC-20.A6.5.3
D'Ottavio, Andrea	CA	IAC-20.D2.4.11
D'Silva, Oneil	CA	IAC-20.D1.5.10
da Silva Curiel, Alex	A	IAC-20.B1.2.10
da Silva Curiel, Alex	CA	IAC-20.B4.4.1
da Silva Curiel, Alex	CA	IAC-20.B4.6A.12
da Silva Pais Cabral, Francisco	CA	IAC-20.A3.4A.4
da Silva Pais Cabral, Francisco	A	IAC-20.A3.4A.7
Dadwal, Viva	A	IAC-20.E7.1.4
Daglis, Ioannis	A	IAC-20.D5.3.3
Dagvasumberel, Amartuvshin	CA	IAC-20.B4.1.12
Dai, Lu	CA	IAC-20.B4.6A.1
Dai, Wei	A	IAC-20.C4.VP.11
DAI, ZHENG	CA	IAC-20.D2.2.6
Dalfó Ferrer, Blanca	A	IAC-20.A2.7.9
Dalla Vedova, Florio	CA	IAC-20.D1.4B.6
Dalledonne, Sara	A	IAC-20.E7.3.4
Daly, Michael	CA	IAC-20.A3.4B.6
Dalyaev, Igor	CA	IAC-20.A3.2C.26
Danancier, Kévin	CA	IAC-20.A3.2C.7
Danancier, Kévin	CA	IAC-20.A3.5.11
Danancier, Kévin	CA	IAC-20.B3.VP.12
Dangler, Doris	CA	IAC-20.A1.4.9
Daniel, Ebin	CA	IAC-20.C4.10-C3.5.3
Dannemiller, Karen	CA	IAC-20.A1.8.9

Daraio, Maria Girolamo	CA	IAC-20.B1.2.5
Darau, Vlad Dragos	CA	IAC-20.B4.6B.10
Darrouzet, Fabien	CA	IAC-20.D5.3.3
Darsel, Vianey	CA	IAC-20.E2.3-GTS.4.11
Darweesh, Muna	A	IAC-20.B2.3.9
Daryabari, Mohaddese	CA	IAC-20.D3.2A.2
Das, Ankita	CA	IAC-20.A4.2.6
Das, Ishita	A	IAC-20.E7.4.7
Das, Shumit	CA	IAC-20.A1.VP.13
Das Rajkakati, Priyanka	A	IAC-20.A3.2B.12
Das Rajkakati, Priyanka	CA	IAC-20.A3.2C.14
Das Rajkakati, Priyanka	A	IAC-20.B1.5.10
Das Rajkakati, Priyanka	CA	IAC-20.E1.5.11
Das Rajkakati, Priyanka	A	IAC-20.E5.3.1
Dashdondog, Erdenebaatar	CA	IAC-20.B4.1.12
Davenport, Robert	CA	IAC-20.A3.2B.17
Davenport, Robert	CA	IAC-20.E5.1.6
Davidian, Ken	A	IAC-20.E6.3.1
Davidian, Ken	A	IAC-20.E6.3.12
Davis, Benjamin	A	IAC-20.E4.1.10
Davis, Catherine	CA	IAC-20.A1.5.5
Davis, Michael	CA	IAC-20.E1.7.14
Davis, Reece	CA	IAC-20.A3.5.5
Dawar, Kanika	A	IAC-20.C4.7.2
Day, Matthew	CA	IAC-20.B3.5.4
Dayal, Sehaz	A	IAC-20.B4.7.5
Dayarathna, Tharindu	CA	IAC-20.B4.2.1
Dayyani, Aboulfazl	CA	IAC-20.C1.8.14
de Almeida, Délcio	CA	IAC-20.E1.9.13
De Angelis, Vincenzo	CA	IAC-20.D1.4B.5
de Araujo Martos, João Felipe	CA	IAC-20.D2.1.10
De Bortoli, Fabio	CA	IAC-20.A3.2C.7
De Bortoli, Fabio	CA	IAC-20.A3.5.11
De Bortoli, Fabio	CA	IAC-20.B3.VP.12
De Canio, Gabriele	A	IAC-20.B6.2.6
De Gasperin, Riccardo	CA	IAC-20.B6.3.6
De Giorgi, Maria Grazia	CA	IAC-20.C4.8-B4.5A.11
de Heer, Sarah	A	IAC-20.E7.4.6
De Iuliis, Alessia	CA	IAC-20.C1.7.10
de Jong, Nicolás	CA	IAC-20.C4.VP.23
de Jonge, Katarina	CA	IAC-20.E3.6.9
De Keyser, Johan	CA	IAC-20.B4.2.3
De La Llave, Anthony	CA	IAC-20.E2.3-GTS.4.8
De la Riva, Santiago	CA	IAC-20.D2.4.4
De la Torre, Gabriel G.	CA	IAC-20.A1.3.1
De La Torre, Lizbeth B.	A	IAC-20.A7.1.9
de la Torre Aceves, Andrea	CA	IAC-20.A1.7.15
De Laet, Chloë	CA	IAC-20.A1.2.2
de Leon, Julia	CA	IAC-20.A3.4A.3
de León, Fabián	CA	IAC-20.D2.5.6
De Luise, Fiore	CA	IAC-20.A6.VP.3
De Maestri, Maria Elena	A	IAC-20.E7.3.3
De Marco, Greta	CA	IAC-20.D1.1.10
de Melo, Eldrige	CA	IAC-20.A5.1.13
de Melo, Eldrige	CA	IAC-20.E1.1.7
de Melo, Eldrige	CA	IAC-20.E1.9.13
de Oliveira, Élcio Jeronimo	CA	IAC-20.D2.VP.13
De Pascale, Stefania	CA	IAC-20.A2.7.11
De Pascali, Chiara	CA	IAC-20.C4.8-B4.5A.11
De Paula, Ramon P.	A	IAC-20.A3.3A.5
de Paulis, Daniela	CA	IAC-20.A4.2.7
De Ridder, Malika	A	IAC-20.C2.2.2
de Ruiter, Anton	CA	IAC-20.C1.1.5
De Silva, Kavindi	CA	IAC-20.A4.2.6
De Sousa, Jose	A	IAC-20.D4.5.9
De Stefano Fumo, Mario	CA	IAC-20.D2.5.1
De Vittori, Andrea	A	IAC-20.E2.1.3
de Weck, Olivier	CA	IAC-20.A3.2B.7
de Weck, Olivier	CA	IAC-20.A3.3A.9
de Weck, Olivier	CA	IAC-20.A5.2.12
de Wet, Wouter	CA	IAC-20.A1.5.2
Dear, Anna Maria	CA	IAC-20.B3.2.4
DeBoer, David	CA	IAC-20.A4.1.1
DeBoer, David	CA	IAC-20.A4.1.3
DeBoer, David	CA	IAC-20.A4.1.4
DeChurch, Leslie	CA	IAC-20.A1.1.5
DeCoito, Isha	CA	IAC-20.E1.2.7
DECONINCK, Florian	A	IAC-20.B4.4.11
Deecker, Gordon	A	IAC-20.B1.1.9
Deeken, Jan	CA	IAC-20.E1.4.9
Deepak, Kanishka	A	IAC-20.D2.3.6
DeGarmo, Albert	A	IAC-20.B1.1.4
Dei Tos, Diogene Alessandro	CA	IAC-20.C1.4.10
Dei Tos, Diogene Alessandro	CA	IAC-20.C1.5.10
Deighan, Justin	CA	IAC-20.A3.3A.4
Dekker, Paco Lopez	CA	IAC-20.B4.4.4
Del Gado, Emanuela	CA	IAC-20.C2.5.4
Del Gaudio, Costantino	CA	IAC-20.C2.VP.12
Del Gaudio, Costantino	CA	IAC-20.C2.VP.13
Del Mastro, Antonio	CA	IAC-20.D5.2.8
Del Prete, Federica	CA	IAC-20.A2.7.10
Del Rio Vera, Jorge	CA	IAC-20.A2.3.3
Del Rio Vera, Jorge	A	IAC-20.B4.1.2
Del Rio Vera, Jorge	CA	IAC-20.E5.2.11
Delande, Pauline	CA	IAC-20.E1.5.11
Deleflie, Florent	CA	IAC-20.A6.9.8
Deleuze, Muriel	CA	IAC-20.A3.3B.3
Delfini, Andrea	A	IAC-20.C2.6.6
Delfini, Andrea	A	IAC-20.C2.8.6
Dell' Aversana, Pasquale	CA	IAC-20.C2.4.1
Della Corte, Vincenzo	CA	IAC-20.B4.8.8
Delloro, Luca	CA	IAC-20.B1.6.7
Delpech, Michel	CA	IAC-20.C1.2.6
DeLuna, Alan T.	A	IAC-20.B3.5.1
DeMarines, Julia	CA	IAC-20.A4.1.1
DeMarines, Julia	CA	IAC-20.A4.1.3
DeMarines, Julia	CA	IAC-20.A4.1.4
DeMarines, Julia	A	IAC-20.A4.1.5
Demertzi, Athena	CA	IAC-20.A1.2.1
Demeubayeva, Altynay	CA	IAC-20.A4.2.6
Dempster, Andrew G.	CA	IAC-20.C1.2.2
Dempster, Andrew G.	CA	IAC-20.D4.5.13
den Exter, Emiel	CA	IAC-20.A3.2B.2
den Exter, Emiel	CA	IAC-20.D1.6.4
DENARO, ANGELO	A	IAC-20.D2.6.5
Deng, Jianfeng	A	IAC-20.A7.3.10
Deng, Li	CA	IAC-20.A7.3.3
Deng, Li	A	IAC-20.B4.7.3
Deng, Shiyan	A	IAC-20.B2.7.3
Deng, Shiyan	CA	IAC-20.B2.8-GTS.3.10
Denisova, Daria	CA	IAC-20.E1.6.12
Denisova, Daria	CA	IAC-20.E1.VP.3
Denney, Chelsey	A	IAC-20.E7.2.18
Deremaux, Carole	CA	IAC-20.D2.6.1
Deremetz, Mathieu	CA	IAC-20.D1.2.10
Deremetz, Mathieu	A	IAC-20.D1.6.3
Deremetz, Mathieu	CA	IAC-20.D3.2B.6
Desai, Shaunak	CA	IAC-20.B4.4.7
Desai, Shubham	CA	IAC-20.D3.2A.2
Deshmukhe, Rushikesh	CA	IAC-20.E2.4.13
Desmariaux, Jean	CA	IAC-20.D2.6.1
Detry, Andrea Lorenzo Henri	CA	IAC-20.A1.6.4
Deutsch, Alexander	CA	IAC-20.A3.5.5
Deva Durairaj, Hilton	A	IAC-20.C3.VP.6
DeYoreo, Steve	CA	IAC-20.E1.3.15
Dhiyaneeswaran, Sowndariya	CA	IAC-20.D2.3.8
Dhoju, Simran	CA	IAC-20.D3.2A.2
Dhusu, Rajesh	CA	IAC-20.E1.VP.22
Di Benedetto, Mauro	CA	IAC-20.E2.1.5
Di Benedetto, Sara	CA	IAC-20.C2.4.2
Di Caprio, Francesco	A	IAC-20.C2.3.3
Di Cecco, Alessandra	A	IAC-20.A6.VP.3
Di Cecco, Alessandra	CA	IAC-20.A7.1.2
Di Domenico, Gildo	CA	IAC-20.C2.VP.13
Di Giovanni, Adriano	CA	IAC-20.B1.3.11
Di Giovanni, Adriano	CA	IAC-20.B4.2.10
Di Giovanni, Adriano	CA	IAC-20.E2.4.11
Di Lizia, Pierluigi	CA	IAC-20.A6.VP.6
Di Lizia, Pierluigi	CA	IAC-20.A6.VP.11
Di Lizia, Pierluigi	CA	IAC-20.C1.7.2
Di Lizia, Pierluigi	CA	IAC-20.D1.6.2
Di Lizia, Pierluigi	CA	IAC-20.E2.1.3
di Palo, Luigi	CA	IAC-20.A2.7.11
di Palo, Luigi	CA	IAC-20.D6.1.7
Di Pippo, Simonetta	CA	IAC-20.A2.3.3
Di Pippo, Simonetta	A	IAC-20.B1.1.3
Di Pippo, Simonetta	CA	IAC-20.B2.1.5
Di Pippo, Simonetta	CA	IAC-20.B4.1.2
Di Pippo, Simonetta	A	IAC-20.E1.5.1
Di Pippo, Simonetta	CA	IAC-20.E5.2.11
Di Piramo, Agnese	CA	IAC-20.C4.5.17
Di Tana, Valerio	CA	IAC-20.A2.6.1
Di Tana, Valerio	CA	IAC-20.B3.3.2
Di Tana, Valerio	CA	IAC-20.B4.8.8
DIAS, DANIELE	A	IAC-20.A3.5.1
Diaz, Lluc	A	IAC-20.E3.6.9
Diaz, Silvia	A	IAC-20.D2.5.5
Diaz Artiles, Ana	CA	IAC-20.A1.3.1
Diaz de Cerio Goenaga, Rainer	A	IAC-20.B4.3.4
Dick, Kevin	CA	IAC-20.E2.4.5
Dickinson, Cameron	A	IAC-20.A3.4B.6
Dickson, David	CA	IAC-20.C3.2.4
Dielacher, Andreas	CA	IAC-20.B4.4.2
Diet, Fabian	CA	IAC-20.B6.VP.7
DIETLEIN, Ingrid	CA	IAC-20.D2.6.2
Dietlein, Ingrid Monika	CA	IAC-20.D1.1.1
Dietlein, Ingrid Monika	CA	IAC-20.D2.3.4
Dietrich, George B.	CA	IAC-20.C3.1.5
Dietz, Enrico	CA	IAC-20.A3.2B.1
Diez, Hubert	A	IAC-20.E1.5.5
Digney, Toby	CA	IAC-20.A2.3.1
Dimitropoulos, Panagiotis	CA	IAC-20.E2.4.11
Dimitropoulos, Panagiotis	CA	IAC-20.E2.4.12
Dindodi Ramesh, Niranjan	A	IAC-20.A4.1.8
Dindodi Ramesh, Niranjan	CA	IAC-20.B1.5.16
Ding, GuoPeng	A	IAC-20.A1.3.22
Ding, Suquan	A	IAC-20.B4.VP.21
Dingley, James	A	IAC-20.A2.3.1
Dinulović, Pavle	CA	IAC-20.E5.3.5
Dittakavi, Sai Krishna	A	IAC-20.C4.6.5
Divsalar, Donya Naz	A	IAC-20.A1.3.3
Dix-Matthews, Benjamin	CA	IAC-20.B2.4.3
Dix-Matthews, Benjamin	A	IAC-20.B2.4.4
Dix-Matthews, Benjamin	CA	IAC-20.B2.7.2
Djojodihardjo, Harijono	A	IAC-20.C2.3.6
Djojodihardjo, Harijono	A	IAC-20.C4.9.5
Dobler, Joel	CA	IAC-20.E1.3.15
Dobreva-Nielsen, Daniela	A	IAC-20.E3.6.2
Dobrowolska, Katarzyna	CA	IAC-20.D3.2A.8
DOCHE, Julien	CA	IAC-20.D3.1.4
Dodds, Martin	CA	IAC-20.D2.4.5
Doi, Takao	CA	IAC-20.D4.2.13
Doki, Shotaro	CA	IAC-20.D4.2.2
Dolado Perez, Juan Carlos	CA	IAC-20.A6.2.1
Dolan, Sydney	CA	IAC-20.A3.2B.7
Dolan, Sydney	CA	IAC-20.A3.3A.9
Dolgopolov, Anton	CA	IAC-20.D3.1.7
Domingo, Ruben	CA	IAC-20.A3.3B.10
Domingos, Caio Henrique Franco Levi	A	IAC-20.C4.3.7
Domínguez, Cristian	CA	IAC-20.E2.3-GTS.4.3
Domínguez, Rosa María	CA	IAC-20.B4.2.5
Domínguez, Rosa María	CA	IAC-20.C4.5.11
Donders, Nicolas	A	IAC-20.A7.3.7
Donerblics, Mārcis	CA	IAC-20.B2.3.6
Dong, Fei	CA	IAC-20.E5.VP.4
Dongfang, Wang	CA	IAC-20.A6.2.1
Dongkai, YANG	CA	IAC-20.B2.8-GTS.3.7
Dooley, Justin	CA	IAC-20.E1.2.1
Dooner, Caeden	CA	IAC-20.A3.2A.4
Dooner, Caeden	A	IAC-20.E1.2.13
Dorrington, Scott	A	IAC-20.D4.5.11
Doshi, Jeel	CA	IAC-20.C4.10-C3.5.5
Dotto, Elisabetta	CA	IAC-20.A3.4A.2
Dotto, Elisabetta	CA	IAC-20.B4.8.8
Douchin, Nicolas	CA	IAC-20.B2.7.4
Douet, Brice	CA	IAC-20.E2.3-GTS.4.11
Dougherty, Kerrie	A	IAC-20.E4.1.9
Doulfis, Stefanos	CA	IAC-20.D5.3.3
Doyon, Michel	CA	IAC-20.B1.1.9
Dragasanu, Claudiu Gabriel	CA	IAC-20.C1.3.5
Draschka, Lukas	CA	IAC-20.B4.4.7
Dreier, Casey	A	IAC-20.E4.1.8
Dresia, Kai	CA	IAC-20.C4.1.15
Drew, Jamie	CA	IAC-20.A4.1.1
Drew, Jamie	CA	IAC-20.A4.1.3
Drew, Jamie	CA	IAC-20.A4.1.4
Driedger, Matthew	CA	IAC-20.E2.4.5
Drimaco, Daniela	CA	IAC-20.D1.2.4
Drimaco, Daniela	A	IAC-20.E5.4.7
Drimaco, Daniela	CA	IAC-20.E9.2.D5.4.9
Driver, Simon	CA	IAC-20.B2.7.2
Drobik, Marcin	CA	IAC-20.B1.4.6
Drobny, Christian	CA	IAC-20.A6.4.4
Dron', Mykola	CA	IAC-20.D2.4.12
Du, Hui	CA	IAC-20.A3.2A.2
Du, Xiangguang	CA	IAC-20.D2.2.14
Du, YuanJie	A	IAC-20.A7.2.7
Duan, Kang	A	IAC-20.E7.3.5
DUAN, Li	CA	IAC-20.A2.3.7
DUAN, Li	A	IAC-20.A2.4.3
Duarri Albacete, Guillem	CA	IAC-20.E2.3-GTS.4.12
Duarte, José	CA	IAC-20.D1.4B.9
DUBANCHET, Vincent	A	IAC-20.D1.6.1
Dubey, Aditya	CA	IAC-20.C4.VP.29
Duffard, Rene	CA	IAC-20.A7.3.8
Duger, Ulam-Orgikh	CA	IAC-20.B4.1.12
Duggan, Matthew	CA	IAC-20.A5.2.1
Duggan, Matthew	CA	IAC-20.B3.8.2
Duhnsen, Robin	CA	IAC-20.E2.3-GTS.4.10
Dumitru-Dorin, Prunariu	CA	IAC-20.D4.2.1
Dumont, Etienne	CA	IAC-20.D2.6.1
Duncan, Colton	CA	IAC-20.A1.3.1
Dunschen, Frederik	CA	IAC-20.E2.3-GTS.4.1
Duparcq, Celine	CA	IAC-20.D6.3.1
Dupuy, Christian	CA	IAC-20.B4.6B.9
Durand, Gautier	CA	IAC-20.D1.6.1
Durner, Maximilian	CA	IAC-20.A3.2B.1
Durst, Steve	A	IAC-20.A3.2B.6
Durá, Isaac	A	IAC-20.B1.VP.18
Dushin, Vladislav	CA	IAC-20.A2.2.3
Duval, Jean-Marc	CA	IAC-20.A7.1.8
Duvaux-Bechon, Isabelle	CA	IAC-20.E5.2.8
Duvet, Ludovic	CA	IAC-20.A3.3A.2
Duzzi, Matteo	CA	IAC-20.C4.5.17
Dvořák, Ondřej	CA	IAC-20.D2.6.8
Dwa, Manisha	A	IAC-20.E1.9.12
Dwiyanto, Dwiyanto	CA	IAC-20.B4.7.8
Dwyer-Cianciolo, Alicia	CA	IAC-20.B3.1.11
Dülberg, Leon	CA	IAC-20.E2.3-GTS.4.10
Dąbrowski, Adam	A	IAC-20.E3.VP.2
D'Silva, Kritika	CA	IAC-20.B3.7.2

E

Name	Role	Paper
E, Zhibo	CA	IAC-20.C1.4.15
Easdown, William	CA	IAC-20.E2.3-GTS.4.12
Easterson, Joshua	CA	IAC-20.D6.1.2
Ebrahimi, Masoud	CA	IAC-20.D1.4B.10
Echoda, Ngbede	CA	IAC-20.B2.8-GTS.3.7

Echoda, Ngbede Joshua Ada	CA	IAC-20.B2.6.11
Eckersley, Steve	CA	IAC-20.B1.2.10
Eckersley, Steve	CA	IAC-20.B4.VP.27
Eckersley, Steve	CA	IAC-20.C1.5.5
Eddy, Jerry	CA	IAC-20.D4.3.5
Edmondson, Stephen	CA	IAC-20.A2.4.12
Edmondson, Steve	CA	IAC-20.B4.2.5
Edmondson, Steve	CA	IAC-20.C4.5.11
Edmundson, Perry	CA	IAC-20.A3.2A.9
Edwards, Christopher	CA	IAC-20.A3.3A.4
Eerme, Tõnis	A	IAC-20.E6.3.8
Eguchi, Hikaru	CA	IAC-20.A2.4.13
Ehresmann, Manfred	CA	IAC-20.A2.2.2
Ehresmann, Manfred	CA	IAC-20.B4.6A.3
Ehresmann, Manfred	CA	IAC-20.D2.VP.4
Ehrpais, Hendrik	A	IAC-20.C1.9.15
Ehsan, Negar	CA	IAC-20.A7.2.4
Eichhorn, Helge	CA	IAC-20.A3.2B.18
Eigenbrod, Christian	CA	IAC-20.A2.5.3
Eilenberger, Marius	A	IAC-20.C3.3.5
Eiskowitz, Skylar	CA	IAC-20.A3.2B.7
Eiskowitz, Skylar	CA	IAC-20.A3.3A.9
Ekblaw, Ariel	CA	IAC-20.D3.1.2
Ekblaw, Ariel	CA	IAC-20.D5.2.3
Ekblaw, Ariel	CA	IAC-20.E5.5.7
El Khantouti, Imane	CA	IAC-20.B5.1.3
El Khantouti, Imane	CA	IAC-20.E6.5-GTS.1.5
El Moursi, Mohamed	CA	IAC-20.E2.4.10
El-Akhdar, Abdelrahman	CA	IAC-20.B2.5.6
El-sayed, Mohamed	CA	IAC-20.A2.5.9
El-Shawa, Sahba	CA	IAC-20.A4.2.6
El-Shawa, Sahba	A	IAC-20.A4.VP.5
El-Shawa, Sahba	A	IAC-20.B2.8-GTS.3.3
El-Shawa, Sahba	A	IAC-20.E3.1.4
Elankumaran, Kawsihen	A	IAC-20.C1.2.2
Eldering, Cornelis	A	IAC-20.E3.6.4
Elelimy, Sara	CA	IAC-20.B1.4.2
Elfadel, Ibrahim	CA	IAC-20.B2.7.8
Elfadel, Ibrahim	CA	IAC-20.B2.7.9
Elfouly, Mostafa	A	IAC-20.B5.1.3
Elhefnawi, Fatma	CA	IAC-20.B2.5.3
Elhoushy, Samer	CA	IAC-20.A3.2A.4
Elhoushy, Samer	CA	IAC-20.E1.2.13
Elhoushy, Samer	CA	IAC-20.E1.5.6
Elhoushy, Samer	CA	IAC-20.E1.VP.12
Elhoushy, Samer	A	IAC-20.E2.4.1
Elhoushy, Samer	CA	IAC-20.E4.3.3
Elhusseiny, Nermine Mohamed	CA	IAC-20.A2.5.9
Elkins, Jacob	A	IAC-20.C1.9.8
Elmegharbel, Hoda Awny	A	IAC-20.B4.2.1
Elmoselhi, Adel	CA	IAC-20.A1.2.7
Els, Sebastian	CA	IAC-20.B6.VP.5
ELSHIWI, ABDALLA	A	IAC-20.B2.5.3
Emanuelli, Matteo	CA	IAC-20.B1.2.8
Emanuelli, Matteo	CA	IAC-20.E5.2.6
Engad, Neta	CA	IAC-20.A7.2.11
Engle, James	CA	IAC-20.A5.2.1
Engle, James	CA	IAC-20.B3.8.2
Enkhbayar, Badamgarav	CA	IAC-20.B4.1.12
Entrena Utrilla, Carlos Manuel	CA	IAC-20.C4.9.11
Entrena Utrilla, Carlos Manuel	A	IAC-20.E6.1.3
Envall, Jouni	CA	IAC-20.B4.9-GTS.5.4
Enzenhoefer, Andreas	CA	IAC-20.C2.3.7
Epenoy, Richard	CA	IAC-20.C1.6.2
ERDEM BURGER, Merve	A	IAC-20.E7.VP.14
Erdenebat, Usukhbayar	CA	IAC-20.B4.1.12
Erickson, Andrew	A	IAC-20.E4.1.2
Erkel, Daniel	CA	IAC-20.A2.3.4
Ernce, Alexa	CA	IAC-20.A3.2A.4
Ernce, Alexa	CA	IAC-20.E1.2.13
Ernst, Carolyn	CA	IAC-20.A3.4A.3
Ernst, Sebastian M.	A	IAC-20.E6.2.7
Errico, Walter	CA	IAC-20.A7.1.8

Escobar, Arturo	CA	IAC-20.B4.1.17
Escobar Antón, Diego	CA	IAC-20.A6.2.4
Escobar Antón, Diego	CA	IAC-20.A6.9.4
Escobedo Casillas, Salvador Daniel	CA	IAC-20.A1.7.15
Escobedo Casillas, Salvador Daniel	A	IAC-20.B3.4-B6.4.2
Escobedo Casillas, Salvador Daniel	A	IAC-20.D4.1.10
Esfahania, Amir G.	CA	IAC-20.B4.VP.27
Eshete, Yilkal	A	IAC-20.B4.1.7
Eshima, Samuel	A	IAC-20.A1.7.10
Eskildsen, Logan	CA	IAC-20.A3.2A.4
Eskildsen, Logan	CA	IAC-20.E1.2.13
Eskildsen, Logan	CA	IAC-20.E1.5.6
Eskildsen, Logan	CA	IAC-20.E1.VP.12
Eskildsen, Logan	CA	IAC-20.E2.4.1
Eskildsen, Logan	CA	IAC-20.E4.3.3
ESNAULT, François-Xavier	CA	IAC-20.B2.4.4
ESPEJEL, CARLOS	A	IAC-20.E3.2.16
Esposito, Tom	CA	IAC-20.E1.9.6
Esser, Burkard	CA	IAC-20.C2.4.6
Essinger-Hileman, Thomas	CA	IAC-20.A7.2.4
Estaiteyeh, Mohammed	CA	IAC-20.E1.2.7
Estalella Silvela, Alvaro	CA	IAC-20.E2.3-GTS.4.12
Estarlich, Aitor	CA	IAC-20.A3.2C.7
Estarlich, Aitor	A	IAC-20.A3.5.11
Estarlich, Aitor	CA	IAC-20.B3.VP.12
Eugeni, Marco	CA	IAC-20.C2.9.5
Eustice, Makiah	CA	IAC-20.E3.2.14
Eustice, Makiah	CA	IAC-20.E5.VP.4
Evinshteyn, David	CA	IAC-20.E2.3-GTS.4.9
Ewa, Gideon	CA	IAC-20.B2.1.9
Ewa, Gideon	CA	IAC-20.B2.1.12
Ezquerro Navarro, José Miguel	CA	IAC-20.A2.3.8
Ezquerro Navarro, José Miguel	CA	IAC-20.C1.8.5
Ezquerro Navarro, José Miguel	CA	IAC-20.E5.2.12

F

Name	Role	Paper
Fabbri, Valentino	CA	IAC-20.B4.6A.8
Fabbrizi, Angelo	CA	IAC-20.A2.7.10
Faber, Daniel	CA	IAC-20.D2.3.2
Faber, Weston	CA	IAC-20.A6.10-B6.5.7
Facchetti, Giulio	CA	IAC-20.A4.2.7
Facchin, Laura	CA	IAC-20.A4.2.7
Facchinetti, Claudia	CA	IAC-20.B1.2.9
Fadakar, Elyas	A	IAC-20.C2.7.10
Fadakar, Elyas	CA	IAC-20.D1.4B.10
Faddoul, Antoine	A	IAC-20.D4.4.14
Fagbeja, Mofoluso	A	IAC-20.E1.7.16
Fagbemiro, Olayinka Abiodun	A	IAC-20.E1.8.8
Faghihi, Sepideh	A	IAC-20.C1.1.5
Fahmy, Salma	A	IAC-20.A7.2.1
Faizullin, Dmytro	CA	IAC-20.B4.3.7
Faizullin, Dmytro	A	IAC-20.C1.8.12
Fajardo Soria, George Steve	CA	IAC-20.B4.1.17
Fajardo Soria, George Steve	CA	IAC-20.D3.2A.2
Fajardo Soria, George Steve	A	IAC-20.E2.4.8
Falade, Adekunle	CA	IAC-20.E1.7.16
Faldu, Bhavin	CA	IAC-20.D3.2A.2
Falke, Albert	CA	IAC-20.A3.4A.8
Falvella, Maria Cristina	A	IAC-20.A7.1.2
Falvella, Maria Cristina	CA	IAC-20.E3.3.15
Famutimi, Olufikunayo	CA	IAC-20.A3.2B.4
Fan, Huang	A	IAC-20.A7.2.12
Fan, Jiao-rong	A	IAC-20.B2.5.11
Fan, Jinhua	CA	IAC-20.E5.VP.4
Fang, Chuanbo	CA	IAC-20.C4.3.10
Fang, Jing	A	IAC-20.A1.7.17
Fang, Jing	CA	IAC-20.A3.2C.2
Fang, Jing	CA	IAC-20.A3.2C.12
Fang, Qun	CA	IAC-20.A3.VP.20

Fang, Qun	CA	IAC-20.A6.VP.16
Fantino, Elena	CA	IAC-20.A3.3A.10
Fantino, Elena	CA	IAC-20.C1.6.15
Fantino, Elena	CA	IAC-20.C1.7.3
Fantino, Elena	CA	IAC-20.C1.VP
Faragalli, Michele	CA	IAC-20.A3.2C.3
Farah, Wael	A	IAC-20.A4.VP.2
Faraji, Farbod	CA	IAC-20.C4.9.3
Farid, Ahmed	CA	IAC-20.B5.1.3
Farina, Serena	CA	IAC-20.A2.7.8
Farinelli, Ciro	A	IAC-20.B1.1.12
Farinelli, Ciro	CA	IAC-20.B1.2.8
Farinelli, Ciro	CA	IAC-20.E5.2.6
Farishta, Sahil	CA	IAC-20.B3.7.6
Farooq, Salma Zainab	A	IAC-20.B2.8-GTS.3.7
Farquhar, Irene	A	IAC-20.B4.7.2
Farr, Alexander	CA	IAC-20.A1.4.9
Farries, Kevin	A	IAC-20.E5.1.1
Fasano, Giancarmine	CA	IAC-20.B4.7.7
Fasano, Giancarmine	CA	IAC-20.C1.1.10
Fasano, Luca	A	IAC-20.B1.2.9
Fasoulas, Stefanos	CA	IAC-20.B4.2.5
Fasoulas, Stefanos	CA	IAC-20.C4.5.11
Fasoulas, Stefanos	CA	IAC-20.C4.9.6
Fatemi, Javad	A	IAC-20.D1.4B.7
Fathy, Youssef	CA	IAC-20.A2.5.9
Fatile, Samuel	CA	IAC-20.E1.7.16
Fatoyinbo, Temilola	CA	IAC-20.B1.5.15
Faucher, Pascal	CA	IAC-20.E3.4.5
Faucher, Pascal	CA	IAC-20.E9.1-A6.8.8
Fauci, Roberto	CA	IAC-20.D2.5.1
Faure, Pauline	CA	IAC-20.B4.2.7
Faure, Pauline	CA	IAC-20.C3.1.6
FAVIER, Jean-jacques	CA	IAC-20.E6.1.5
Favilli, Leonardo	CA	IAC-20.D2.5.5
Fazzoletto, Emilio	A	IAC-20.B4.8.8
Feast, Simon	A	IAC-20.C4.7.1
Fedele, Alberto	CA	IAC-20.C2.4.1
Fedele, Alberto	CA	IAC-20.D2.3.4
Fedele, Giacomo	CA	IAC-20.E7.1.8
Federici, Lorenzo	A	IAC-20.C1.4.2
Federici, Pierluigi	CA	IAC-20.A2.7.10
Fedorov, Igor	CA	IAC-20.C1.8.6
Fei, Xinyi	CA	IAC-20.A7.3.3
Feichtinger, Elena	A	IAC-20.A1.1.1
Feist, Jörg	CA	IAC-20.C2.4.9
Felicetti, Leonard	CA	IAC-20.C1.3.13
Felicetti, Leonard	CA	IAC-20.C1.5.12
Felicetti, Leonard	CA	IAC-20.E2.3-GTS.4.12
Feltham, David	CA	IAC-20.B4.6A.12
Feng, Gaoping	CA	IAC-20.C4.7.18
Feng, Zhan	CA	IAC-20.C1.3.10
Ferguson, Philip	CA	IAC-20.E2.4.5
Ferlin, Massimo	CA	IAC-20.D6.3.1
Fernandez, Alberto	CA	IAC-20.B6.1.7
Fernandez, Cesar Pablo	CA	IAC-20.D2.5.5
Fernandez Barcellona, Julian	CA	IAC-20.B4.5.13
Fernandez Fraile, Jose Javier	CA	IAC-20.A2.3.8
Fernandez Fraile, Jose Javier	CA	IAC-20.E5.2.12
Fernandez Villace, Victor	CA	IAC-20.C2.4.2
Fernini, Ilias	CA	IAC-20.A3.VP.10
Fernini, Ilias	A	IAC-20.A5.2.9
Fernini, Ilias	CA	IAC-20.A7.1.1
Fernini, Ilias	A	IAC-20.A7.2.10
Fernini, Ilias	CA	IAC-20.A7.3.1
Fernini, Ilias	CA	IAC-20.B6.VP.6
Fernini, Ilias	CA	IAC-20.C2.7.16
Fernini, Ilias	A	IAC-20.E1.3.8
Fernini, Ridwan	CA	IAC-20.A5.2.9
Ferracina, Luca	CA	IAC-20.C2.4.1
Ferran Marques, Marta	A	IAC-20.C2.4.9
Ferrara, Miriam	CA	IAC-20.C2.5.14
Ferrari, Fabio	CA	IAC-20.B2.2.8

Ferrato, Eugenio	CA	IAC-20.C4.5.5
Ferrato, Eugenio	CA	IAC-20.C4.5.9
Ferrato, Eugenio	CA	IAC-20.C4.9.3
Ferreira, Edmundo	CA	IAC-20.A3.2B.2
Ferreira, Edmundo	CA	IAC-20.D1.6.4
Ferreira, José Pedro	A	IAC-20.B4.4.5
Ferreira, José Pedro	A	IAC-20.E6.5-GTS.1.5
Ferreira, Maurício Gonçalves Vieira	CA	IAC-20.B6.1.2
Ferrentino, Enrico	CA	IAC-20.A6.10-B6.5.3
Ferrer, Estel	CA	IAC-20.E2.3-GTS.4.3
Ferrer, Hector	CA	IAC-20.E2.3-GTS.4.11
Ferrer Perez, Jorge Alfredo	CA	IAC-20.B4.1.16
Ferretti, Stefano	A	IAC-20.B5.2.7
Ferrier, Pierric	A	IAC-20.B1.6.10
Ferrington, Nicolas	CA	IAC-20.A3.3A.4
Feruglio, Lorenzo	CA	IAC-20.D1.2.4
Fetzer, Gregory	CA	IAC-20.A6.5.3
Fiamengo, Marcia	A	IAC-20.E1.8.4
Ficarella, Antonio	CA	IAC-20.C4.8-B4.5A.11
Fiengo, Aniello	CA	IAC-20.B2.4.12
Fiengo, Aniello	CA	IAC-20.B5.1.5
Fiengo, Aniello	CA	IAC-20.D1.2.5
Fiengo, Aniello	CA	IAC-20.D1.3.7
Figueroa, Antonio	A	IAC-20.D2.4.4
Figuiere, Robin	CA	IAC-20.A3.2C.7
Figuiere, Robin	CA	IAC-20.A3.5.11
Figuiere, Robin	CA	IAC-20.B3.VP.12
Figuiere, Robin	CA	IAC-20.D3.2A.12
Filatyev, Alexander S.	CA	IAC-20.C1.5.1
Filatyev, Alexander S.	A	IAC-20.C4.6.8
Filatyev, Alexander S.	CA	IAC-20.C4.9.2
Filcek, Magdalena	A	IAC-20.D1.1.11
Filgas, Robert	A	IAC-20.A3.2C.10
Filippetto, Daniele	CA	IAC-20.B4.6A.8
Filippi, Gianluca	CA	IAC-20.C3.4.2
Filippi, Gianluca	A	IAC-20.C3.4.3
Finchenko, Valeri S.	CA	IAC-20.C2.7.5
Finn, Susanna	CA	IAC-20.E1.3.15
Finnell, Abigail	A	IAC-20.C3.2.3
FINO, IVAN	A	IAC-20.E7.VP.8
Fis, Yohan	CA	IAC-20.E2.3-GTS.4.11
FISCHER, NEAL	CA	IAC-20.E3.3.17
FISCHER, NEAL	CA	IAC-20.E3.VP.3
Fish, Sands	CA	IAC-20.E5.5.7
Fisher, Michelle	A	IAC-20.E1.VP.10
Fitrianingsih, Ery	A	IAC-20.B4.7.8
Fittock, Mark	CA	IAC-20.A3.4A.4
Fitzgerald, Michael	CA	IAC-20.D4.3.2
Fitzsimmons, Alan	CA	IAC-20.A3.4A.3
Flegel, Sven Kevin	CA	IAC-20.A6.1.1
Flegel, Sven Kevin	CA	IAC-20.A6.2.6
Flohrer, Tim	CA	IAC-20.A6.7.7
Flores, Roberto	CA	IAC-20.C1.6.15
Flores Medina, Fiorella	CA	IAC-20.E5.4.9
Fogarty, Jennifer	CA	IAC-20.B3.3.12
Foing, Bernard	A	IAC-20.A3.2A.3
Foing, Bernard	CA	IAC-20.A3.2B.1
Foing, Bernard	CA	IAC-20.A3.2B.12
Foing, Bernard	CA	IAC-20.A3.2B.16
Foing, Bernard	CA	IAC-20.A3.2C.14
Foing, Bernard	CA	IAC-20.A3.2C.16
Foing, Bernard	CA	IAC-20.A3.2C.31
Foing, Bernard	CA	IAC-20.A3.VP.24
Foing, Bernard	CA	IAC-20.A5.1.15
Foing, Bernard	CA	IAC-20.E5.3.1
Foing, Bernard	CA	IAC-20.E5.VP.9
Foing, Bernard	CA	IAC-20.E5.VP.13
Fokin, Valeriy	CA	IAC-20.B3.4-B6.4.6
Folami, Mofiyinoluwa	CA	IAC-20.B4.9-GTS.5.10
Folta, David C.	CA	IAC-20.C1.5.6
Fomina, Elena	A	IAC-20.A1.2.3
Fomina, Elena	CA	IAC-20.A1.2.5
Fonseca Prince, Andre	CA	IAC-20.A3.2B.1

Fontaine, Dominique	CA	IAC-20.A6.9.8
Fontanarosa, Donato	A	IAC-20.C4.8-B4.5A.11
Fontani, Lorenzo	CA	IAC-20.A7.1.8
Fonteyne, Romain	CA	IAC-20.A3.2C.7
Fonteyne, Romain	CA	IAC-20.A3.5.11
Fonteyne, Romain	CA	IAC-20.B3.VP.12
Forestieri, Andrea	CA	IAC-20.B2.2.8
Forget, Francois	CA	IAC-20.A3.3A.4
Fornies Rodriguez, Susana	A	IAC-20.E6.2.5
Forshaw, Jason	CA	IAC-20.A6.2.2
Forshaw, Jason	CA	IAC-20.E6.1.4
Forshaw, Jason	CA	IAC-20.E9.1-A6.8.4
Fortezza, Raimondo	CA	IAC-20.A2.6.1
Fortezza, Raimondo	CA	IAC-20.B3.3.2
Fortin, Clement	CA	IAC-20.D1.4A.6
Fortin, Clement	CA	IAC-20.E1.4.5
FORTUNA, ALESSANDRO	CA	IAC-20.A2.7.4
Fortunato, Antonio	CA	IAC-20.B3.VP.3
Fortunato, Vito	CA	IAC-20.D1.2.4
Fossati, Marco	CA	IAC-20.A6.2.11
Foster, Tara	CA	IAC-20.E1.6.8
Foti, Giuseppe	CA	IAC-20.B4.4.1
Fragner, Heinrich	CA	IAC-20.B4.4.2
Fragnito, Francesco	CA	IAC-20.C3.3.9
Fraile, Silvia	CA	IAC-20.D1.2.5
Francesconi, Alessandro	CA	IAC-20.A6.3.1
Francesconi, Alessandro	CA	IAC-20.B2.4.2
Francesconi, Alessandro	CA	IAC-20.B4.6A.5
Francesconi, Alessandro	CA	IAC-20.B4.7.15
FRANCESCONI, DANIELE	CA	IAC-20.D2.6.5
Franceski, Sarah	CA	IAC-20.E2.3-GTS.4.9
Francioso, Luca	CA	IAC-20.C4.8-B4.5A.11
Francis, Chris	A	IAC-20.B3.1.5
Frantzidi, Christos	CA	IAC-20.A1.2.9
Franzese, Vittorio	A	IAC-20.C1.5.13
França Medeiros, Nícolas	A	IAC-20.D1.4B.12
Fratini, Simone	CA	IAC-20.B4.3.1
Frayling, Alyssa	CA	IAC-20.E3.3.6
Frazão, Orlando	CA	IAC-20.B4.6B.10
Freddi, Riccardo	CA	IAC-20.B5.1.5
Freddi, Riccardo	CA	IAC-20.D1.2.5
Fredette, Kathleen	A	IAC-20.E1.5.17
Fredette, Kathleen	CA	IAC-20.E1.8.2
Freeland, Steven	CA	IAC-20.E7.7.7
French, Richard	A	IAC-20.A3.2A.8
Frenoy, Olivier	CA	IAC-20.D2.6.1
Frey, Moritz	CA	IAC-20.D1.3.3
Frey, Stefan	CA	IAC-20.C1.6.10
Frezza, Lorenzo	CA	IAC-20.A2.7.11
Frezza, Lorenzo	CA	IAC-20.A6.10-B6.5.1
Frezza, Lorenzo	A	IAC-20.B4.1.8
Frezza, Lorenzo	CA	IAC-20.B4.2.7
Frezza, Lorenzo	CA	IAC-20.B4.VP.11
Frezza, Lorenzo	CA	IAC-20.D6.1.7
Frezza, Lorenzo	CA	IAC-20.E1.4.7
Friedl, Lawrence	CA	IAC-20.B1.1.10
Friedl, Lawrence	A	IAC-20.B1.5.11
Friend, Jonathan	CA	IAC-20.D3.2A.1
Frischauf, Norbert	A	IAC-20.A1.4.9
Fritsch, Dieter	CA	IAC-20.A6.10-B6.5.4
Froehlich, Christoph	CA	IAC-20.E2.3-GTS.4.1
Froehlich, LL.M., MAS, Annette	A	IAC-20.B4.1.3
Froehlich, LL.M., MAS, Annette	A	IAC-20.E1.9.8
Froehlich, LL.M., MAS, Annette	A	IAC-20.E3.1.3
Froehlich, LL.M., MAS, Annette	A	IAC-20.E7.5.6
Frohmann, Sven	CA	IAC-20.A3.2B.1
Frolov, Kirill	CA	IAC-20.B4.2.9
Frost, Shaun	CA	IAC-20.A5.1.6
Fröhlich, Hubert	CA	IAC-20.B1.2.14
Fu, Tao	CA	IAC-20.C1.VP
Fu, Xiaodong	A	IAC-20.D1.VP
FU, XIAOYU	A	IAC-20.C1.6.3
Fuentes, Carolina	CA	IAC-20.A1.5.3
Fuentes, Carolina	CA	IAC-20.B4.2.4
Fuentes, Nathalie	CA	IAC-20.D6.3.1
Fuertes, Nestor	CA	IAC-20.E5.5.3
Fujikake, Isao	CA	IAC-20.D2.4.6
Fujita, Masahiro	CA	IAC-20.D1.2.8
Fukaya, Haruto	CA	IAC-20.D4.2.11
Fuller, John	CA	IAC-20.D2.6.2
Funabiki, Nobuhiro	CA	IAC-20.E1.7.12
Funase, Ryu	CA	IAC-20.A3.5.10
Funase, Ryu	CA	IAC-20.C1.3.13
Furkalo, Serhii	A	IAC-20.D2.5.11
Furman, Nathan	CA	IAC-20.E2.3-GTS.4.9
Fursova, Anastasiia	A	IAC-20.A3.VP.15
Furukawa, Hikaru	A	IAC-20.A1.6.7
Furuya, Hiroshi	CA	IAC-20.C2.2.4
Fuse, Tetsuharu	CA	IAC-20.B2.2.5
Fusté, Oriol	CA	IAC-20.E2.3-GTS.4.3
Futamata, Ryo	A	IAC-20.D1.5.1
Förstner, Roger	CA	IAC-20.A3.4A.9
Förstner, Roger	CA	IAC-20.B6.2.7

G

Name	Role	Paper
G, Levin	CA	IAC-20.C4.3.1
G, Levin	CA	IAC-20.C4.4.3
G, Renjith	CA	IAC-20.C2.1.2
G R, Chathura	CA	IAC-20.C2.6.13
Gaba, Chirag	CA	IAC-20.A1.VP.12
Gabetti, Stefano	CA	IAC-20.A2.7.9
Gagliardini, Lorenzo Maria	A	IAC-20.B6.1.6
Gaglioti, Martina	CA	IAC-20.B1.1.8
Gahlot, Aishwerya Singh	CA	IAC-20.D1.1.9
Gahlot, Prashant	CA	IAC-20.D2.3.5
Gaias, Gabriella Vittoria Maria	CA	IAC-20.C1.3.14
Gaikov, Georgii	CA	IAC-20.E2.1.2
Gajeri, Marco	A	IAC-20.C4.10-C3.5.2
Gajeri, Marco	CA	IAC-20.C4.9.7
Gajjar, Vishal	CA	IAC-20.A4.1.1
Gajjar, Vishal	A	IAC-20.A4.1.3
Gajjar, Vishal	CA	IAC-20.A4.1.4
Gajjar, Vishal	CA	IAC-20.A4.1.5
Galagan, Denis	CA	IAC-20.C2.7.12
Galano, Damien	CA	IAC-20.B6.2.5
Galarreta, Daniel	A	IAC-20.D5.2.2
Galindo Jr, Charles	CA	IAC-20.B4.4.6
Galla, Antony	CA	IAC-20.A6.5.3
Gallagher, Frank	A	IAC-20.B1.2.1
Gallego Fernández, Ramiro	CA	IAC-20.E2.3-GTS.4.12
Gallego Sanmiguel, Pablo	A	IAC-20.D2.7.7
Gallois, Augustin	CA	IAC-20.A3.2C.7
Gallois, Augustin	CA	IAC-20.A3.5.11
Gallois, Augustin	CA	IAC-20.B3.VP.12
Gallois, Augustin	CA	IAC-20.C4.VP.6
Gallois, Augustin	A	IAC-20.D3.2A.12
GALLUCCI, STEFANO	CA	IAC-20.D2.6.5
Galoforo, Germana	CA	IAC-20.A2.6.1
Galoforo, Germana	CA	IAC-20.A2.7.4
Gambacciani, Giovanni	CA	IAC-20.D1.1.1
Gambacciani, Giovanni	CA	IAC-20.D2.3.4
Gan, Qingbo	A	IAC-20.A6.9.12
Ganburged, Anar	CA	IAC-20.B4.1.12
Gancet, Jeremi	CA	IAC-20.D1.2.10
Ganguly, Satyaki	CA	IAC-20.B2.5.1
Gantert, Steffen	CA	IAC-20.B1.2.8
Gantert, Steffen	CA	IAC-20.E5.2.6
Gantulga, Narantsatsral	CA	IAC-20.B4.1.12
Gao, Ai	CA	IAC-20.B4.8.11
Gao, Dan	CA	IAC-20.C2.1.12
Gao, Dong	CA	IAC-20.C1.3.6
Gao, Jian	CA	IAC-20.C4.VP.10
Gao, Tianyu	A	IAC-20.A6.6.10
Gao, Yidan	A	IAC-20.C1.6.11
Gao, Yue	CA	IAC-20.A6.5.3
Gappmair, Wilfried	CA	IAC-20.B2.4.12
Garau Luis, Juan Jose	A	IAC-20.B2.1.7
Garbi, Giuliani	CA	IAC-20.D1.4B.12
Garcia, Antonio	A	IAC-20.A7.2.2
Garcia, Diego M	CA	IAC-20.A1.1.7
Garcia, Lucia	CA	IAC-20.D1.2.5
Garcia, Roberta	CA	IAC-20.C1.8.1
Garcia, Sergio	CA	IAC-20.A6.4.4
Garcia Hemme, Hugo	CA	IAC-20.B4.VP.12
Garcia Hemme, Hugo	CA	IAC-20.C3.1.6
GARCIA ROJAS VAZQUEZ, LUISA	A	IAC-20.A1.3.19
Garcia-Almiñana, Daniel	CA	IAC-20.B4.2.5
Garcia-Almiñana, Daniel	CA	IAC-20.C2.6.12
Garcia-Almiñana, Daniel	CA	IAC-20.C4.5.11
García Luis, Uxía	CA	IAC-20.B4.6B.10
García-Berenguer, Marina	CA	IAC-20.B4.2.5
García-Cuevas, Sergio	CA	IAC-20.E5.2.12
Gardi, Roberto	CA	IAC-20.C2.4.1
Gardi, Roberto	CA	IAC-20.D2.5.1
Garg, Lavitra	CA	IAC-20.C3.4.5
Garofalo, Riccardo	CA	IAC-20.A2.7.11
Garofalo, Riccardo	CA	IAC-20.D6.1.7
Garton, David	CA	IAC-20.B6.1.7
Garver, Lori	A	IAC-20.B1.VP.1
Garzaniti, Nicola	CA	IAC-20.D1.2.6
Gasbarri, Paolo	CA	IAC-20.C2.3.1
Gasbarri, Paolo	CA	IAC-20.C2.9.7
Gasnault, Olivier	CA	IAC-20.A3.3B.3
Gass, Volker	CA	IAC-20.D5.3.5
Gataulina, Adelina	CA	IAC-20.B4.2.9
Gaudenzi, Paolo	A	IAC-20.C2.9.5
Gaudenzi, Paolo	CA	IAC-20.E9.2.D5.4.1
Gaur, Deepak	A	IAC-20.A5.4-D2.8.4
Gaur, Deepak	A	IAC-20.B2.7.10
Gavaldà, Fina	CA	IAC-20.A2.3.8
Gaviraghi, Giorgio	A	IAC-20.D3.2A.7
Gaviraghi, Giorgio	A	IAC-20.D4.4.13
Gayen, Sneha	A	IAC-20.C4.VP.30
Gaza, Ramona	CA	IAC-20.A1.5.9
Gaza, Razvan	CA	IAC-20.A1.5.9
Ge, Panhe	CA	IAC-20.C4.VP.10
Gebhardt, Claus	CA	IAC-20.A3.3B.1
Gebhardt, Claus	A	IAC-20.E1.3.1
Geda, Márton	CA	IAC-20.D3.3.5
Geelen, Kelly	CA	IAC-20.A3.3A.1
Geelen, Kelly	A	IAC-20.A3.3A.2
Geelhoed, Joost	CA	IAC-20.B2.7.1
Geelhoed, Joost	CA	IAC-20.B2.8-GTS.3.5
Gehring, Ines	CA	IAC-20.E2.3-GTS.4.10
Geiger, Alain	CA	IAC-20.B1.4.13
Geismayr, Laura	A	IAC-20.C2.5.13
Geiss, Markus	CA	IAC-20.B4.VP.12
Geiss, Markus	CA	IAC-20.C3.1.6
Gelino, Nathan	CA	IAC-20.C2.5.4
Gelino, Nathan	CA	IAC-20.D3.2B.3
Geloto, Pascal	CA	IAC-20.D6.3.1
Genest, Marc	CA	IAC-20.C2.4.8
Geng, XU	CA	IAC-20.C4.4.11
George, Elbin	CA	IAC-20.C4.3.1
Georgiou, Marina	CA	IAC-20.D5.3.3
Gerdes, Levin	CA	IAC-20.A3.2B.1
Gerdes, Levin	CA	IAC-20.A3.2B.2
Gerdes, Levin	CA	IAC-20.D1.6.4
German, Nicolas	CA	IAC-20.E5.VP.4
Gerngross, Tobias	CA	IAC-20.D2.5.6
Gers, Luke	CA	IAC-20.A6.5.3
Gertdenken, Felix	CA	IAC-20.E2.3-GTS.4.10
Gerth, Ingo	CA	IAC-20.A3.4A.4
Gessini, Paolo	CA	IAC-20.B4.8.3
Gessini, Paolo	A	IAC-20.C4.6.12
Ghadawala, Rushi	A	IAC-20.B1.4.3
Ghafoor, Nadeem	A	IAC-20.A3.2A.9
Ghazanfarinia, Sajjad	A	IAC-20.E1.2.6
Ghazanfarinia, Sajjad	A	IAC-20.E1.8.10
Ghazanfarinia, Sajjad	A	IAC-20.E3.1.12
Ghazanfarinia, Sajjad	A	IAC-20.E3.3.10
Ghazanfarinia, Sajjad	A	IAC-20.E6.2.4
Gherghescu, Andrei	CA	IAC-20.A3.2B.2
Gherghescu, Andrei	CA	IAC-20.D1.6.4
Ghidini, Tommaso	CA	IAC-20.C2.5.3
Ghiglino, Pablo	A	IAC-20.D1.3.9
Ghorbani, Saeid	A	IAC-20.E1.9.3
Giacomuzzo, Cinzia	CA	IAC-20.A6.3.1
Gianfermo, Andrea	CA	IAC-20.A6.10-B6.5.1
Gianfermo, Andrea	CA	IAC-20.B4.VP.11
Gianfermo, Andrea	CA	IAC-20.E1.4.7
Giannakis, Omiros	CA	IAC-20.D5.3.3
Giannetti, Vittorio	CA	IAC-20.C4.5.5
Giannetti, Vittorio	CA	IAC-20.C4.5.9
Giannetti, Vittorio	CA	IAC-20.C4.9.3
Giannopapa, Christina	A	IAC-20.B4.1.15
Giannopapa, Christina	A	IAC-20.B5.2.9
Giannopapa, Christina	CA	IAC-20.E3.4.11
Giannopapa, Christina	A	IAC-20.E6.3.3
Giannopapa, Christina	CA	IAC-20.E6.3.4
Gibbs, J.D.	CA	IAC-20.E1.8.4
Gibra, Nicholas	CA	IAC-20.D5.2.15
Gierse, Andreas	A	IAC-20.A2.5.3
Gil, David	CA	IAC-20.B4.6A.9
Gil Calle, Eric	CA	IAC-20.A1.1.2
Gil Calle, Eric	A	IAC-20.A1.VP.18
Gil Fernandez, Jesus	CA	IAC-20.A3.4A.4
Gilani, Syed Amer Ahsan	A	IAC-20.A6.9.10
Gilani, Syed Amer Ahsan	A	IAC-20.B2.6.10
Gilani, Syed Amer Ahsan	A	IAC-20.C2.6.3
Gilimalage, Amila	A	IAC-20.A6.6.12
Gill, Eberhard	CA	IAC-20.B4.3.6
Gill, Eberhard	CA	IAC-20.C1.1.1
Gillespie, Drew	A	IAC-20.C3.4.2
Gillespie, Drew	CA	IAC-20.C3.4.3
Gillette, Jane	A	IAC-20.E1.3.9
Giolito, Damien	CA	IAC-20.A6.9.8
Giordano, Carmine	CA	IAC-20.C1.5.13
Giorgini, Diana	A	IAC-20.E6.5-GTS.1.9
Giovannini, Anne	CA	IAC-20.D1.6.1
Giraudeau, Christophe	CA	IAC-20.D2.6.6
Giraudeau, Christophe	CA	IAC-20.E6.4.3
Girault, Florian	CA	IAC-20.E2.3-GTS.4.11
Giridharan, Nithyaashree	CA	IAC-20.A5.1.10
Gismero, Alejandro	CA	IAC-20.C3.3.6
Giubilato, Riccardo	CA	IAC-20.A3.2B.1
Giuliani, Valerio	A	IAC-20.C3.3.9
Glazkova, Natalia	A	IAC-20.B3.2.4
Gloder, Alessia	CA	IAC-20.C4.1.13
Gloder, Alessia	A	IAC-20.E1.4.9
Gloder, Alessia	CA	IAC-20.E1.VP.13
Glukhikh, Dmitrii	CA	IAC-20.A1.2.2
Glukhova, Elisaveta	CA	IAC-20.A3.VP.4
Glukhova, Elizaveta	A	IAC-20.A3.2C.14
Glushchenko, Natalia	CA	IAC-20.A1.8.3
GMK, Bhagavan	CA	IAC-20.C1.1.7
GNANASIROMONY, JEGAN LAL	CA	IAC-20.C2.1.2
Gnat, Marcin	CA	IAC-20.B2.3.6
Gobert, Thibaud	CA	IAC-20.A1.VP.13
Gobert, Thibaud	CA	IAC-20.A3.2B.17
Gobert, Thibaud	CA	IAC-20.A3.2C.24
Godard, Estelle	CA	IAC-20.E5.2.2
Gogu, Dragos	CA	IAC-20.A3.3B.10
Goldberg, Hannah	CA	IAC-20.C1.5.13
Goldberg, Jodi	A	IAC-20.E7.1.6
Golikov, Alexander	CA	IAC-20.C4.6.8
Golikov, Alexander	A	IAC-20.C4.9.2
Golkar, Alessandro	CA	IAC-20.D1.2.6

Gollins, Nick	A	IAC-20.A3.2C.29
Gologanu, Mihai	CA	IAC-20.D5.3.5
Gomes, Derilson	CA	IAC-20.E1.9.13
Gomes dos Santos, Willer	A	IAC-20.C1.1.16
Gomez, Gerard	CA	IAC-20.C1.7.9
Gomez Jenkins, Marco	A	IAC-20.E6.2.12
Gomez-Rincon, David	A	IAC-20.E1.1.5
Gomez-Rincon, David	A	IAC-20.E1.7.8
Gondar, Rui	CA	IAC-20.C1.1.13
Gondelach, David	CA	IAC-20.A6.7.8
Gong, Baichun	CA	IAC-20.C1.2.3
Gong, Haoran	A	IAC-20.B4.VP.5
Gong, Mengmeng	A	IAC-20.C2.5.2
Gong, Zizheng	A	IAC-20.A6.3.2
Gong, Zizheng	A	IAC-20.A6.3.4
Gontijo, Ivair	CA	IAC-20.A3.3B.3
Gontijo, Maurício	A	IAC-20.C4.3.15
Gontijo, Maurício	CA	IAC-20.C4.4.5
Gonzales, Raimundo	CA	IAC-20.E1.5.16
Gonzales Vallejos, Michael Carlos	CA	IAC-20.E1.5.16
Gonzalez, Alfonso	CA	IAC-20.C1.5.13
Gonzalez, Francisco	CA	IAC-20.C2.3.7
Gonzalez, Gorka	A	IAC-20.D2.3.3
Gonzalez, Magdalena	CA	IAC-20.E1.5.16
Gonzalez del Amo, Jose	CA	IAC-20.C4.8-B4.5A.3
Gonzalez Muiño, Alberto	CA	IAC-20.B2.VP.3
Gonzalez-Arjona, David	A	IAC-20.A3.3B.10
Gonzalez-Franquesa, Ferran	A	IAC-20.C1.5.8
Gonzalez-Franquesa, Ferran	CA	IAC-20.C1.5.10
Gonzalez-Llorente, Jesus	CA	IAC-20.C3.3.8
Gonzalo, Juan Luis	A	IAC-20.A6.10-B6.5.6
Gonzalo, Juan Luis	CA	IAC-20.A6.VP.14
González, David	CA	IAC-20.C4.5.11
González, Ezequiel	CA	IAC-20.A4.2.6
González, Paloma	CA	IAC-20.D4.1.10
González Rodríguez, María	CA	IAC-20.C4.VP.23
González-Rodríguez, Alejandro	CA	IAC-20.E2.3-GTS.4.3
Gora, Jimmy	CA	IAC-20.B4.1.17
Gore, Janhavi	CA	IAC-20.D2.VP.14
Gorgolewski, Aleksander	CA	IAC-20.B3.VP.7
Goroshin, Samuel	CA	IAC-20.A2.VP.2
Goswami, Nandu	A	IAC-20.A1.2.7
Goswami, Nandu	A	IAC-20.A1.4.1
Goto, Takuya	CA	IAC-20.D4.2.6
Gotzig, Ulrich	CA	IAC-20.C4.9.6
Gougeon, Erwann	CA	IAC-20.A3.2C.7
Gougeon, Erwann	CA	IAC-20.A3.5.11
Gougeon, Erwann	CA	IAC-20.B3.VP.12
Gougeon, Erwann	CA	IAC-20.D3.2A.12
Gould, Angelica	A	IAC-20.E3.4.8
Governale, Giuseppe	A	IAC-20.D1.1.1
Governale, Giuseppe	CA	IAC-20.D2.3.4
Govinda Raj, Chinmayee	CA	IAC-20.A3.2C.18
Govindan, Jinumon	CA	IAC-20.E2.4.4
Goyal, Tushar	CA	IAC-20.B2.7.11
Gozzard, David	A	IAC-20.B2.4.3
Gozzard, David	CA	IAC-20.B2.4.4
Gozzard, David	CA	IAC-20.B2.7.2
Graber, Thorsten	CA	IAC-20.A3.2B.2
Grabowski, Damian	CA	IAC-20.A3.VP.11
Graham, Jack	A	IAC-20.B6.3.12
Graja, Adrianna	A	IAC-20.A2.7.7
Graja, Adrianna	A	IAC-20.B3.VP.7
Gramiccia, Luciano	CA	IAC-20.C2.4.1
Grando, Fabio	CA	IAC-20.D2.5.6
Grassi, Marcello	A	IAC-20.A1.VP.19
Grassi, Michele	CA	IAC-20.A3.3A.10
Grassi, Michele	CA	IAC-20.B4.7.7
Grassi, Michele	CA	IAC-20.C1.1.10
Grassi, Michele	CA	IAC-20.C2.4.1
Grasso, Marco	CA	IAC-20.B4.7.7
Gravestock, Charles	CA	IAC-20.B2.4.4
Gray, Andrew	CA	IAC-20.A6.5.3

Graziani, Filippo	A	IAC-20.C1.4.16
Graziani, Filippo	CA	IAC-20.C4.5.17
Graziano, Maria Daniela	CA	IAC-20.B4.7.7
Graziano, Mariella	CA	IAC-20.A3.4A.7
Grebenstein, Markus	CA	IAC-20.A3.4B.2
Greco, Cristian	A	IAC-20.C1.4.1
Green, Simon	CA	IAC-20.A3.4A.3
Green, Thomas	A	IAC-20.E5.4.3
Green, Thomas	A	IAC-20.E7.7.12
Greene, Kenton	A	IAC-20.A7.3.4
Gregucci, Stefan	CA	IAC-20.C4.5.5
Grenouilleau, Jessica	CA	IAC-20.A3.2B.2
Gresham, Elaine	CA	IAC-20.D3.1.7
Grey, Kent	CA	IAC-20.E7.7.12
Grigoriev, Valery	CA	IAC-20.C2.3.9
Grigorieva, Oksana	A	IAC-20.B1.3.10
Grigorieva, Oksana	A	IAC-20.B1.5.7
Grigorieva, Oksana	A	IAC-20.B3.2.6
Grigorieva, Oksana	A	IAC-20.E1.4.2
Grigorieva, Oksana	A	IAC-20.E6.1.7
GRIMANI, VALERIO	CA	IAC-20.B1.2.9
Grishin, Alexey	CA	IAC-20.A1.2.5
Grishko, Dmitriy	CA	IAC-20.A6.2.1
Grishko, Dmitriy	CA	IAC-20.C1.6.14
Grishko, Dmitriy	CA	IAC-20.E1.5.3
Grocott, Simon	CA	IAC-20.B1.2.14
Groemer, Gernot	CA	IAC-20.A1.VP.13
Grol, Maria	CA	IAC-20.C2.7.12
Groll, Rodion	CA	IAC-20.B3.4-B6.4.10
Gromov, Anton	CA	IAC-20.C1.9.11
Gross Muñoz, Eduardo Joaquin	CA	IAC-20.B4.9-GTS.5.7
Gross Muñoz, Eduardo Joaquin	CA	IAC-20.E5.VP.12
Grosse, Doris	CA	IAC-20.A6.5.3
Grosse, Jens	CA	IAC-20.A2.6.4
Großhans, Jens	A	IAC-20.B2.3.11
Großhans, Jens	A	IAC-20.B4.6B.8
Großhans, Jens	CA	IAC-20.D5.1.5
Gruber, Samira	CA	IAC-20.C4.1.13
Gruet, Marie	CA	IAC-20.E2.3-GTS.4.11
Grundmann, Jan Thimo	CA	IAC-20.B4.8.5
Gruntman, Mike	CA	IAC-20.D4.4.3
Grunwald, Gerhard	CA	IAC-20.D1.6.3
Grzesik, Benjamin	A	IAC-20.C2.7.2
Grzymisch, Jonathan	CA	IAC-20.C1.9.5
Gscheidle, Christian	CA	IAC-20.D1.2.10
Gu, Xinbo	CA	IAC-20.C1.5.11
Guachi, Roberto	CA	IAC-20.E1.5.16
Guadagnini, Jacopo	A	IAC-20.D2.5.10
Guan, Gongshun	A	IAC-20.A6.3.8
Guan, Hongfei	A	IAC-20.B3.3.5
GUAN, SHUHENG	A	IAC-20.B4.6B.6
Guardabasso, Paolo	A	IAC-20.D1.2.1
Guarini, Rocchina	A	IAC-20.B1.2.5
Gudwani, Heena	CA	IAC-20.C2.8.12
Guerman, Anna	CA	IAC-20.C1.1.13
Guerman, Anna	CA	IAC-20.C1.VP.1
Guerman, Anna	CA	IAC-20.D4.1.18
Guerman, Anna	CA	IAC-20.E2.2.2
Guerra, Luca	A	IAC-20.D2.4.11
Guerra, Mark	CA	IAC-20.E2.3-GTS.4.9
Guerreiro, João	CA	IAC-20.B4.3.1
Gugliermetti, Luca	CA	IAC-20.A1.VP.23
Gugliermetti, Luca	CA	IAC-20.A2.7.11
Gugliermetti, Luca	CA	IAC-20.B4.1.8
Gugliermetti, Luca	CA	IAC-20.E1.4.7
Guido Lavalle, Ricardo	A	IAC-20.E7.7.14
Guidotti, Giuseppe	CA	IAC-20.D1.1.1
Guilarte Herrero, Alfonso	CA	IAC-20.A3.2C.7
Guilarte Herrero, Alfonso	CA	IAC-20.A3.5.11
Guilarte Herrero, Alfonso	CA	IAC-20.B3.VP.12
Guizzo, Gian Paolo	CA	IAC-20.B4.6A.5
Gujral, Akhil	A	IAC-20.D2.1.7
Guliyeva, Sona	A	IAC-20.B1.5.4

Gumiela, Michal	CA	IAC-20.B1.4.6
Gumulya, Yosephine	CA	IAC-20.A7.2.11
Gunga, Hanns-Christian	A	IAC-20.A1.2.4
Guo, Chengjun	CA	IAC-20.B2.1.13
Guo, Chengjun	CA	IAC-20.B2.7.3
Guo, Chengjun	CA	IAC-20.B2.7.12
Guo, Chengjun	A	IAC-20.B2.8-GTS.3.4
Guo, Chengjun	A	IAC-20.B2.8-GTS.3.10
Guo, Chengjun	CA	IAC-20.B5.1.16
Guo, Fengming	A	IAC-20.D2.1.4
Guo, Fengming	CA	IAC-20.D2.2.7
Guo, Jian	CA	IAC-20.B4.3.6
Guo, Jian	A	IAC-20.B4.4.4
Guo, Jian	A	IAC-20.C4.VP.10
Guo, Jungang	A	IAC-20.C2.8.4
Guo, Ming	CA	IAC-20.A1.3.22
Guo, Ming	CA	IAC-20.B4.3.2
Guo, Ming	CA	IAC-20.C2.1.12
Guo, Ming	CA	IAC-20.C2.2.3
Guo, Yufei	CA	IAC-20.A1.7.17
Guo, Yufei	A	IAC-20.A3.2C.2
Guo, Yufei	CA	IAC-20.A3.2C.12
Guo, Yunqiang	CA	IAC-20.C4.3.4
GUPTA, ANURAG	A	IAC-20.C4.10-C3.5.5
Gupta, Arpit	A	IAC-20.E7.2.7
Gupta, Ayush	CA	IAC-20.D1.1.9
Gupta, Devaansh	CA	IAC-20.C3.4.5
Gupta, Mini	A	IAC-20.E7.VP.13
Gupta, Neeraj	A	IAC-20.B3.8.6
Gupta, Subham	A	IAC-20.C2.5.5
Gupta, Suvigya	CA	IAC-20.C3.VP.7
Gupta, Taavishe	CA	IAC-20.D4.1.3
Gupta, Taavishe	A	IAC-20.D4.4.11
Gupta, Yuktee	A	IAC-20.A3.2C.30
Gushin, Vadim	CA	IAC-20.A1.1.1
Gushin, Vadim	A	IAC-20.A1.1.3
Gushin, Vadim	CA	IAC-20.A1.1.8
Gustafson, Lowell	CA	IAC-20.A4.2.7
Gutierrez Ramon, Roger	CA	IAC-20.C1.5.10
Guven, Ugur	CA	IAC-20.A3.5.4
Guven, Ugur	A	IAC-20.A4.2.2
Guven, Ugur	A	IAC-20.A4.2.12
Guven, Ugur	A	IAC-20.A5.1.9
Guven, Ugur	CA	IAC-20.B2.7.6
Guven, Ugur	A	IAC-20.B4.VP.23
Guven, Ugur	A	IAC-20.C4.10-C3.5.7
Guven, Ugur	A	IAC-20.C4.10-C3.5.8
Guven, Ugur	CA	IAC-20.D1.1.9
Guven, Ugur	A	IAC-20.D4.4.8
Guven, Ugur	A	IAC-20.D4.4.9
Guven, Ugur	CA	IAC-20.D4.4.10
Guzman Gomez, Camilo	CA	IAC-20.E1.1.5
Guzman Gomez, Camilo	CA	IAC-20.E1.7.8
Guédron, Sylvain	A	IAC-20.D2.6.1
Gäßler, Björn	CA	IAC-20.D2.5.3
Géczi, Márton	A	IAC-20.D2.6.8
Gómez, Ángel	CA	IAC-20.A4.2.7
Gómez Martínez, Harvey	CA	IAC-20.A3.4A.9
Göddeke, Dominik	CA	IAC-20.D3.3.5
Gül, Emirhan Eser	CA	IAC-20.B6.VP.6
Günzel, Dominik	CA	IAC-20.B5.1.5
Güttler, Carsten	CA	IAC-20.A3.4A.3
Güzel, Mehmet Burak	A	IAC-20.C1.9.10

H

Name	Role	Paper
H S, VENKATESH	CA	IAC-20.C4.6.7
Haber, Roland	A	IAC-20.B4.7.10
Hackett, John	CA	IAC-20.A3.2A.9
HADJ DIDA, ABDELKADER	A	IAC-20.C3.3.10

Hadji Hossein, Shariar	CA	IAC-20.A2.7.11
Hadji Hossein, Shariar	CA	IAC-20.A6.1.7
Haesuler, Martin	CA	IAC-20.B2.3.6
Haeuplik-Meusburger, Sandra	A	IAC-20.A5.2.4
Haeuplik-Meusburger, Sandra	A	IAC-20.E1.2.15
Hagenfeldt, Miguel	CA	IAC-20.A3.4A.7
Haghshenas, Javad	CA	IAC-20.E6.2.4
Haigh, Sarah	CA	IAC-20.B4.2.5
Haigh, Sarah	CA	IAC-20.C4.5.11
Haji, Suhail	CA	IAC-20.A5.1.6
Haken, Dawn	CA	IAC-20.A7.2.11
Hall, Alexander	A	IAC-20.A6.5.2
Hall, Hunter	A	IAC-20.B4.2.12
Hall, Robert	CA	IAC-20.A6.2.3
Hallak, Yanina	CA	IAC-20.B4.6B.10
Halle, Winfried	CA	IAC-20.B4.6A.2
Hamblin, Michael	CA	IAC-20.A1.4.9
Hamed, Olugbenga Jimoh	CA	IAC-20.B2.6.11
Hameed, Hamza	CA	IAC-20.E3.3.3
Hameed, Hamza	A	IAC-20.E9.2.D5.4.2
Hamoudi, Rifat	CA	IAC-20.A1.2.7
Hamza, Anseen	CA	IAC-20.E1.VP.20
Han, Dawei	A	IAC-20.C2.1.13
HAN, FANG	CA	IAC-20.E6.3.6
Han, Huihua	CA	IAC-20.A5.3-B3.6.7
HAN, PEI	A	IAC-20.A1.3.23
Han, Peng	CA	IAC-20.C1.3.6
Hanacek, John	A	IAC-20.D4.1.17
Hanada, Toshiya	CA	IAC-20.C3.4.13
Hanbury-Webber, William	CA	IAC-20.A1.2.17
Handojo, Nicolaas	CA	IAC-20.B1.2.14
Haneef, Mohammad	A	IAC-20.B5.3.3
Haneef, Mohammad	CA	IAC-20.B5.3.4
Haneef, Mohammad	CA	IAC-20.B5.3.5
Hanlon, Michelle	CA	IAC-20.E7.2.4
Hann, Lukas	CA	IAC-20.A3.2B.1
Hann, Lukas	CA	IAC-20.A3.2B.2
Hann, Lukas	CA	IAC-20.D1.6.4
Hannu, Leppinen	CA	IAC-20.B4.9-GTS.5.4
Hanson, Svetlana	A	IAC-20.B3.8.4
Hanssen, Ingrid	A	IAC-20.D2.2.12
HanTian, Gu	CA	IAC-20.D5.1.14
Hanuš, Josef	CA	IAC-20.E1.9.6
Hao, Geng	CA	IAC-20.D2.VP.6
Hao, Zhu	CA	IAC-20.C4.4.8
Haqq-Misra, Jacob	CA	IAC-20.A4.1.5
Harasymczuk, Matt	A	IAC-20.E4.2.5
Harasymczuk, Matt	CA	IAC-20.E5.VP.6
Hardy, Ian	A	IAC-20.B4.VP.18
Hargens, Alan	CA	IAC-20.D4.2.6
Harmansa, Nicholas	A	IAC-20.C4.9.6
Harney, Maria	A	IAC-20.A1.4.5
Harris, Toby	A	IAC-20.A6.2.9
Harris, Toby	A	IAC-20.E3.4.14
Harrison, David	A	IAC-20.B1.3.13
Harshana, Anmol	CA	IAC-20.A3.2C.30
Hart, John	CA	IAC-20.A6.5.3
Hart-Davis, Louis	CA	IAC-20.E2.3-GTS.4.11
Harter, Bryan	CA	IAC-20.B6.2.11
Hartman, Birgit	CA	IAC-20.D5.2.15
Harvard, Alexei	A	IAC-20.B2.6.2
Hasanov, Elchin	CA	IAC-20.B1.5.4
Hasanyan, Armanj	CA	IAC-20.C2.2.8
Hasbi, Wahyudi	A	IAC-20.B4.1.13
Haschemi, Pouya	A	IAC-20.D5.2.7
Hasegawa, Koji	CA	IAC-20.A2.2.4
Hasegawa, Sunao	CA	IAC-20.A6.1.10
Hasegawa, Susumu	A	IAC-20.C4.7.5
Hashemian, Amir Hossein	CA	IAC-20.D2.VP.3
Hashimoto, Ami	CA	IAC-20.D4.2.13
Hashimoto, Tatsuaki	A	IAC-20.A3.2A.11
Hastings, Jaden	A	IAC-20.E3.2.14
Hatano, Shintaro	A	IAC-20.C4.8-B4.5A.6

Hauschildt, Harald	CA	IAC-20.B2.2.3
Hauser, Alondra	A	IAC-20.B3.3.10
Hauser, Alondra	CA	IAC-20.C3.2.4
Hautot, Rodney	CA	IAC-20.D1.5.10
Hawkey, Mike	CA	IAC-20.A5.1.6
Hayashi, Masato	CA	IAC-20.A6.1.6
Hayashi, Takahiro	CA	IAC-20.A3.2B.9
Hayder, Shahd- Lilly	CA	IAC-20.A7.2.11
Hayun, Ehud	CA	IAC-20.A3.2A.6
He, Chenghan	CA	IAC-20.A5.3-B3.6.9
He, Jiang	CA	IAC-20.A7.2.11
He, Jing	A	IAC-20.B2.7.12
He, Jing	CA	IAC-20.B2.8-GTS.3.10
He, Xingji	A	IAC-20.C1.7.7
He, Yanchao	A	IAC-20.C1.3.4
He, Yunhan	A	IAC-20.B4.5.9
He, Zhang	CA	IAC-20.A3.2A.7
Hearsey, Christopher	A	IAC-20.B3.3.8
Hebbar, Sujay	CA	IAC-20.A4.1.8
Hebbar, Sujay	A	IAC-20.B1.5.16
Hebiishi, Kazutsuna	CA	IAC-20.A3.4B.5
Heilbronn, Lawrence	CA	IAC-20.A1.5.2
Heilbronn, Lawrence	CA	IAC-20.A1.5.8
Heim, Bettina	CA	IAC-20.B2.2.1
Hein, Andreas Makoto	CA	IAC-20.C4.9.11
Hein, Andreas Makoto	CA	IAC-20.D4.4.6
Hein, Andreas Makoto	CA	IAC-20.D4.4.11
Hein, Andreas Makoto	CA	IAC-20.D4.5.2
Heinicke, Christiane	CA	IAC-20.B3.4-B6.4.10
Heinrich, Oliver	CA	IAC-20.E3.3.3
Helbert, Joern	A	IAC-20.A3.4B.10
Heldens, Jules	A	IAC-20.C4.2.6
Helin, Kaj	CA	IAC-20.A3.1.3
Hellstad, Stine	CA	IAC-20.D2.2.12
Hemanth, Omkar	CA	IAC-20.E7.VP.7
Hendrick, Patrick	CA	IAC-20.E1.4.9
Henrique, Luan	CA	IAC-20.E1.5.16
Herd, Andrew	A	IAC-20.D5.2.6
Herdrich, Georg	CA	IAC-20.A2.2.2
Herdrich, Georg	CA	IAC-20.B3.7.11
Herdrich, Georg	CA	IAC-20.B4.6A.3
Herdrich, Georg	CA	IAC-20.C4.6.5
Herdrich, Georg	CA	IAC-20.C4.9.1
Herdrich, Georg	CA	IAC-20.C4.9.6
Herdrich, Georg	CA	IAC-20.D2.VP.4
Herdrich, Georg H.	CA	IAC-20.B4.2.5
Herdrich, Georg H.	CA	IAC-20.C2.6.12
Herdrich, Georg H.	CA	IAC-20.C4.5.11
Herique, Alain	CA	IAC-20.A3.4A.3
Herique, Alain	CA	IAC-20.A3.4B.9
Hermosin, Pablo	A	IAC-20.A3.4A.8
Hermosin, Pablo	A	IAC-20.C1.3.1
Hermosin, Pablo	CA	IAC-20.C1.5.7
Hernandez, Francisco Javier	A	IAC-20.B1.VP.2
Hernández, Víctor Carol	CA	IAC-20.B4.9-GTS.5.7
Herrada Gutiérrez, Miguel Ángel	CA	IAC-20.A2.2.1
Herrera Montojo, Javier	CA	IAC-20.D2.3.1
Hertel, Victor	CA	IAC-20.E3.3.8
Hervieu, Calum	A	IAC-20.A3.2B.18
Hess, Larry	CA	IAC-20.A7.2.4
Hesselbach, Sebastian	CA	IAC-20.A6.2.6
HESTROFFER, Daniel	CA	IAC-20.A3.4B.9
Higashide, Masumi	CA	IAC-20.A6.1.10
Higgins, Andrew	CA	IAC-20.D4.4.5
Higginson, Alan	A	IAC-20.A1.3.18
Higginson, Alan	A	IAC-20.B1.4.7
Hijlkema, Jouke	CA	IAC-20.E1.4.9
Hild, Franziska	A	IAC-20.D2.VP.4
Hilliard, Nicole	CA	IAC-20.B4.7.6
Hiltz, Michael	A	IAC-20.B3.8.3
Hinckel, José N.	CA	IAC-20.C4.VP.22
Hinterman, Eric	A	IAC-20.A5.2.12
Hinz, Robert	CA	IAC-20.B5.1.5

Hinz, Robert	CA	IAC-20.D1.2.5
Hinz, Robert	CA	IAC-20.D1.3.7
Hiraka, Kotaro	CA	IAC-20.C4.8-B4.5A.12
Hirako, Keiichi	A	IAC-20.B4.VP.20
Hirano, Daichi	A	IAC-20.D1.6.5
Hirosaki, Tomofumi	CA	IAC-20.E5.2.4
Ho, Tra Mi	CA	IAC-20.B4.8.5
Hobbs, Stephen	CA	IAC-20.A6.6.9
Hobbs, Stephen	CA	IAC-20.C2.6.11
Hobe, Stephan	A	IAC-20.E7.1.1
Hofacker, Max	CA	IAC-20.A3.4A.9
Hoffman, Jeffrey	CA	IAC-20.A5.2.12
Hoffman, Lars	A	IAC-20.D2.7.3
Hoffman, Maraia	CA	IAC-20.E3.2.14
Hoffman, Tyler	CA	IAC-20.C4.2.10
Hofmann, Mahulena	A	IAC-20.E7.7.11
Hoheneder, Waltraut	CA	IAC-20.E5.1.6
Hohmann, Sören	CA	IAC-20.A3.2B.1
Hokamoto, Shinji	CA	IAC-20.C1.1.11
Hokamoto, Shinji	CA	IAC-20.C1.4.6
Hokamoto, Shinji	CA	IAC-20.C1.7.6
Hokamoto, Shinji	CA	IAC-20.C1.9.2
Holbrough, Ian	CA	IAC-20.A6.6.9
Holbrough, Ian	CA	IAC-20.C2.6.11
Holliday, Rebekah	CA	IAC-20.E3.VP.1
Holm, Jeanne	A	IAC-20.B5.2.1
Holm, Jeanne	A	IAC-20.D5.2.1
Holm, Jeanne	A	IAC-20.E5.2.9
Holm, Jeanne	A	IAC-20.E6.5-GTS.1.2
Holmes, Brandon A.	CA	IAC-20.B4.2.5
Hommy, Braden	CA	IAC-20.B4.7.6
Hondros, Jim	A	IAC-20.D4.5.15
Honeycutt, John	A	IAC-20.D2.1.1
Hongkarnjanakul, Natthawat	CA	IAC-20.B4.1.11
Hongyu, Chen	CA	IAC-20.C4.2.4
Hoogeboom, Peter	CA	IAC-20.B4.4.4
Hoormann, Johannes	CA	IAC-20.E2.3-GTS.4.10
Hoover, Bradley	A	IAC-20.C4.8-B4.5A.5
Hoppenbrouwers, Tom	A	IAC-20.B3.5.4
Horack, John M.	CA	IAC-20.A1.8.9
Horack, John M.	CA	IAC-20.A3.5.5
Horack, John M.	CA	IAC-20.A5.4-D2.8.3
Horack, John M.	CA	IAC-20.A5.4-D2.8.9
Horack, John M.	CA	IAC-20.C4.2.10
Horanyi, Mihaly	A	IAC-20.A3.5.15
Horanyi, Mihaly	CA	IAC-20.D1.5.9
HORI, Daisuke	CA	IAC-20.D4.2.2
Hori, Keiichi	CA	IAC-20.C4.4.6
Horii, Shuga	CA	IAC-20.E5.1.4
Hornig, Andreas	A	IAC-20.A6.10-B6.5.4
Hornig, Andreas	A	IAC-20.B6.1.10
Horst, Tim	CA	IAC-20.B4.3.5
Horstmann, Andre	CA	IAC-20.A6.2.6
Hoshino, Takeshi	A	IAC-20.A3.2B.9
Hosny, Amira	CA	IAC-20.E1.VP.23
Hosseini, Elham	A	IAC-20.B2.2.9
Hosseini, Sona	CA	IAC-20.B4.4.10
Hou, Chenggang	CA	IAC-20.B4.3.8
Hou, Kewen	CA	IAC-20.D2.2.13
Hou, Kewen	CA	IAC-20.D2.2.14
Hou, Liqiang	A	IAC-20.C1.5.4
Hou, Qingfeng	CA	IAC-20.C4.10-C3.5.4
Hou, Xinbin	A	IAC-20.C3.1.3
Hou, Xiyun	CA	IAC-20.C1.7.2
Howarth, Joseph	A	IAC-20.E2.4.7
Howe, A. Scott	CA	IAC-20.C2.5.4
Howell, Kathleen	CA	IAC-20.C1.5.6
Howell, Kathleen	CA	IAC-20.C1.6.4
Howlett, Jodie	CA	IAC-20.E3.3.17
Howlett, Jodie	CA	IAC-20.E3.VP.3
Hołyńska, Małgorzata	CA	IAC-20.A1.VP.13
Hu, Changfu	CA	IAC-20.A6.3.8
Hu, Gu	CA	IAC-20.C4.VP.10

Hu, Jiaqian	A	IAC-20.C1.2.3
Hu, Jing	CA	IAC-20.A5.1.6
HU, Jing	A	IAC-20.C4.5.2
Hu, Min	A	IAC-20.B2.6.1
Hu, Min	A	IAC-20.B4.7.11
Hu, Ping	CA	IAC-20.A1.3.22
Hu, Ping	A	IAC-20.A1.8.4
HU, Wen-Rui	CA	IAC-20.A2.3.7
Hu, Zhaobin	CA	IAC-20.A3.2A.2
Hu, Zhenyu	CA	IAC-20.C2.1.13
Huamaní, Enrique Lee	CA	IAC-20.E5.4.9
Huang, Chen	CA	IAC-20.D2.VP.5
Huang, Hai	CA	IAC-20.C3.VP.8
Huang, Hao	CA	IAC-20.C1.2.15
Huang, Jianyou	A	IAC-20.D2.3.12
Huang, Laura	A	IAC-20.E6.5-GTS.1.1
Huang, Liya	A	IAC-20.C4.3.10
Huang, Simeng	A	IAC-20.A6.VP.14
HUANG, Xi	CA	IAC-20.C2.1.7
Huang, YiXin	CA	IAC-20.A6.3.7
Huerta Ramírez, Sofía Andrea	A	IAC-20.E5.VP.11
Huesing, Jakob	CA	IAC-20.A3.3A.2
Hufenbach, Bernhard	CA	IAC-20.B3.1.2
Hufenbach, Bernhard	CA	IAC-20.D3.2A.1
Hugo, Adam	CA	IAC-20.D4.5.16
Hui, Weihua	CA	IAC-20.C4.4.7
Huisman, Lennard	CA	IAC-20.B2.8-GTS.3.8
Hulin, Thomas	CA	IAC-20.D1.6.4
Hulsink, Willem	CA	IAC-20.E3.6.4
Hume, Shayna	CA	IAC-20.A3.2C.18
Hume, Shayna	CA	IAC-20.D4.5.16
Hurova, Anna	A	IAC-20.E7.VP.18
Hurova, Anna	A	IAC-20.E9.1-A6.8.2
Hurrell, James	A	IAC-20.A2.4.1
Hurt, Kane	A	IAC-20.C3.2.2
Hurtado de Mendoza, Diego	A	IAC-20.B2.VP.3
Hurtado Jr., José M.	CA	IAC-20.A3.VP.3
Husain, Mukkarum	A	IAC-20.C4.VP.3
Hussain, Khaja Faisal	CA	IAC-20.C2.1.10
Hussain, Khaja Fayaz	CA	IAC-20.A2.1.2
Hussain, Omar	A	IAC-20.A1.2.18
Hussain, Omar	CA	IAC-20.B6.3.13
Hussain, Sayed Abdullah	CA	IAC-20.C2.6.2
Hussain, Syed Shah Irfan	CA	IAC-20.B2.5.4
Hussein, Amira	CA	IAC-20.E1.VP.23
Hussein, Hesham	CA	IAC-20.A1.5.9
Hussien, Ali	CA	IAC-20.A2.5.9
Huyton, Claire	CA	IAC-20.C4.5.11
Hwang, Feng-Tai	A	IAC-20.E3.3.5
Hyodo, Shoyo	A	IAC-20.A5.4-D2.8.1
Hyvönen, Petrus	CA	IAC-20.B2.3.6
Hörmer, Andreas Johann	A	IAC-20.B4.4.2
Hübers, Heinz-Wilhelm	CA	IAC-20.A3.2B.1
Hülsmann, Maren	A	IAC-20.B6.2.7

I

Name	Role	Paper
Iacobellis, Michele	CA	IAC-20.D1.2.4
Iacobellis, Michele	A	IAC-20.E9.2.D5.4.9
Iakubivskyi, Iaroslav	CA	IAC-20.A3.4B.4
Ianelli, Samantha	CA	IAC-20.C2.4.1
Iannascoli, Lorenzo	A	IAC-20.A1.6.2
Iannelli, Paolo	A	IAC-20.C2.3.1
Iannelli, Paolo	CA	IAC-20.C2.9.7
Ibeh, Joseph	A	IAC-20.E6.5-GTS.1.6
Ibrahim, Mohamed	A	IAC-20.E1.VP.23
Ibrahim, Safaa	CA	IAC-20.E1.VP.23
Ibrahimova, Sevda R.	A	IAC-20.B5.1.9
Idiku, Elizabeth Ebenyin	A	IAC-20.E3.VP.4
Iess, Luciano	CA	IAC-20.E2.1.5

Ignateva, Anastasiia	CA	IAC-20.B4.2.9
Igritsky, Vladimir	CA	IAC-20.D3.1.1
Iida, Tsutomu	CA	IAC-20.D4.2.5
Ijichi, Koichi	CA	IAC-20.C2.6.4
Ikeda, Ryota	CA	IAC-20.D1.2.8
IKEDA, Tomohiko	CA	IAC-20.D4.2.2
IKEDA, Yu	CA	IAC-20.D4.2.2
ILIEV, Yasen	CA	IAC-20.E6.5-GTS.1.12
Illmer, Norbert	CA	IAC-20.B3.5.4
Ilsen, Stijn	CA	IAC-20.B6.2.5
Imai, Shigeru	A	IAC-20.B3.8.7
Imbert, Mariano	A	IAC-20.E3.VP.6
Imhof, Anna Barbara	A	IAC-20.A3.2B.17
Imhof, Anna Barbara	A	IAC-20.E5.1.6
Imhuelse, Thomas	A	IAC-20.D1.1.4
Imoto, Takayuki	CA	IAC-20.D2.7.8
Impey, Sue	CA	IAC-20.C2.6.11
Impresario, Gabriele	CA	IAC-20.B4.8.8
Inagaki, Wataru	CA	IAC-20.E7.VP.15
Inamori, Takaya	CA	IAC-20.B4.VP.26
Inamori, Takaya	A	IAC-20.C1.1.6
Inamori, Takaya	CA	IAC-20.C1.5.11
Inatani, Yoshifumi	CA	IAC-20.D4.2.4
Inatani, Yoshifumi	CA	IAC-20.D4.2.13
Inatomi, Yuko	CA	IAC-20.D4.2.13
Inbar, Tal	A	IAC-20.E1.6.4
Inbar, Tal	A	IAC-20.E4.3.1
Inbar, Tal	A	IAC-20.E4.3.2
Infeld, Samantha	A	IAC-20.E1.7.1
Ingenito, Antonella	CA	IAC-20.C4.3.7
Ingenito, Antonella	CA	IAC-20.C4.7.11
Ingrilli, Sachio	CA	IAC-20.A2.3.1
INGROSSO, RICCARDO	A	IAC-20.E5.4.6
Innocenti, Mario	CA	IAC-20.C1.1.12
Inoue, Fumihiro	A	IAC-20.D4.3.3
Inoue, Fumihiro	CA	IAC-20.E5.1.4
Inoue, Hiroka	CA	IAC-20.A3.2B.9
Inoue, Taro	CA	IAC-20.C4.8-B4.5A.12
Intini, Rodrigo	CA	IAC-20.C4.6.12
Invigorito, Marco	CA	IAC-20.C4.6.6
Ionescu, Octavian-Narcis	CA	IAC-20.D5.3.5
Ip-Jewell, Susan	CA	IAC-20.A1.4.5
Iqbal, Mohammad Imran	CA	IAC-20.D5.1.7
Irani, Jehan	CA	IAC-20.D3.2B.2
Isaacson, Howard	CA	IAC-20.A4.1.1
Isaacson, Howard	CA	IAC-20.A4.1.3
Isaacson, Howard	CA	IAC-20.A4.1.4
Isaacson, Howard	CA	IAC-20.A4.1.5
Isawa, Kota	CA	IAC-20.A6.1.10
Ishikawa, Yoji	CA	IAC-20.D4.3.3
Ishikawa, Yoji	CA	IAC-20.D4.3.4
Ishikawa, Yoji	CA	IAC-20.E5.1.4
Ishimatsu, Shintaro	CA	IAC-20.E5.1.4
Ishimoto, Shinji	CA	IAC-20.D2.6.1
Iskender, Omer Burak	CA	IAC-20.B4.2.7
Iskender, Omer Burak	A	IAC-20.C1.4.8
Islam, Quazi Saimoon	CA	IAC-20.A3.2B.14
Ismail, Mahmoud	CA	IAC-20.E1.VP.23
Ismail, Norilmi	CA	IAC-20.E1.VP.13
Ismail, Norilmi	A	IAC-20.E1.VP.16
Isoletta, Giorgio	A	IAC-20.A3.3A.10
Issa, Hamzeh	CA	IAC-20.E2.4.11
Issa, Hamzeh	CA	IAC-20.E2.4.12
Istasse, Eric	CA	IAC-20.E5.2.12
Ivagnes, Marco Manuel	CA	IAC-20.C2.9.5
Ivanitskiy, Gennadii	CA	IAC-20.D6.3.10
Ivanov, Anton	CA	IAC-20.B1.4.2
Ivanov, Anton	CA	IAC-20.B3.8.11
Ivanov, Anton	CA	IAC-20.B5.2.12
Ivanov, Anton	CA	IAC-20.B6.VP.4
Ivanov, Anton	CA	IAC-20.C1.9.7
Ivanov, Anton	CA	IAC-20.D1.4B.4
Ivanov, Anton	CA	IAC-20.E1.7.2

Ivanov, Anton	CA	IAC-20.E2.1.2
Ivanov, Danil	A	IAC-20.A6.5.5
Ivanov, Danil	CA	IAC-20.B4.7.4
Ivanov, Danil	A	IAC-20.C1.1.13
Ivanov, Danil	A	IAC-20.C1.8.6
Ivanov, Danil	A	IAC-20.C1.VP.1
Ivanov, Danil	CA	IAC-20.C2.9.13
Ivashkin, Vyacheslav V.	CA	IAC-20.C1.6.14
Ivlev, Nikita	CA	IAC-20.C1.9.11
Iwai, Takashi	CA	IAC-20.E7.5.10
Iwase, Satoshi	A	IAC-20.A1.3.2
Iyer, Harshith	A	IAC-20.E7.VP.17
Iyudin, Anatoly	CA	IAC-20.B4.7.4
Izmodenov, Vladimir	CA	IAC-20.B4.2.13
IZUMI, Ryutaro	CA	IAC-20.D4.2.2

J

Name	Role	Paper
J, Jayaprakash	CA	IAC-20.C4.3.13
J, Paul Murugan	A	IAC-20.C2.4.10
J, Paul Murugan	A	IAC-20.C2.VP.4
Jacquemin, Cristophe	CA	IAC-20.C3.3.9
Jaeger, Markus	A	IAC-20.C4.1.11
Jaeger, Markus	A	IAC-20.C4.2.12
Jaffart, Laurent	A	IAC-20.B4.9-GTS.5.1
Jagadeep, Tanooj	CA	IAC-20.D2.VP.8
Jagadeesh, Pruthvi	CA	IAC-20.D5.1.3
JAGATHKARI, NARESH	CA	IAC-20.C2.6.10
Jagirani, Aisha	A	IAC-20.E3.1.1
Jagpal, Rajinder	CA	IAC-20.B1.VP.8
Jah, Moriba	CA	IAC-20.E9.1-A6.8.6
Jaime, Andrea	CA	IAC-20.A3.2A.6
Jaime, Andrea	CA	IAC-20.B1.2.7
Jaimes, Gabriel	CA	IAC-20.E1.5.16
Jain, Ishan	A	IAC-20.E2.2.3
Jain, Umang	CA	IAC-20.C4.4.4
Jakab, Dominik	A	IAC-20.B2.8-GTS.3.1
Jakhu, Ram	A	IAC-20.E7.7.7
Jalal, Zubaida Aminu	A	IAC-20.B2.1.9
Jalal, Zubaida Aminu	CA	IAC-20.B2.1.12
Jalil, Ahmad	CA	IAC-20.A3.3B.1
Jalil, Ahmad	A	IAC-20.A3.3B.12
Jallad, AbdulHalim	A	IAC-20.B4.4.9
Jamier, Raphael	CA	IAC-20.B4.6B.10
Jammot, Timothée	A	IAC-20.B1.4.12
Jana, Tamal	CA	IAC-20.C4.7.6
Jana, Tamal	A	IAC-20.C4.7.8
Jana, Tamal	CA	IAC-20.C4.VP.13
Janakiraman, Sowmya	CA	IAC-20.A6.10-B6.5.7
Jang, Daniel	A	IAC-20.A6.7.8
Jangid, Sandeep	A	IAC-20.C4.10-C3.5.14
Janhunen, Pekka	CA	IAC-20.B4.6B.1
Janhunen, Pekka	CA	IAC-20.B4.9-GTS.5.4
Janikowski, Adam	CA	IAC-20.C3.2.4
Jankovic, Marko	CA	IAC-20.A6.6.7
Janoth, Juergen	A	IAC-20.B1.2.8
Jara, Adolfo	A	IAC-20.B1.5.14
Jaramillo Morales, Miranda	CA	IAC-20.C2.VP.14
Jarrar, Firas	CA	IAC-20.C2.VP.5
Jarrar, Firas	CA	IAC-20.E2.4.4
Jarrar, Firas	CA	IAC-20.E2.4.11
Jashinski, Michal	CA	IAC-20.A1.7.9
Jashinski, Michal	A	IAC-20.D1.4B.1
Javed, Ayesha	CA	IAC-20.A7.3.1
Jayan, N.	CA	IAC-20.C4.2.13
Jayan, N.	CA	IAC-20.C4.VP.14
Jayaprakash, Aditya	A	IAC-20.A1.8.8
Jayaprakash, Aditya	CA	IAC-20.A4.2.8
Jayaprakash, Aditya	CA	IAC-20.B5.1.7
Jayaraman, Yogeshwaran	CA	IAC-20.A3.2B.25
Jazebizadeh, Hooman	A	IAC-20.E1.3.4
Jenkin, Alan B.	A	IAC-20.A6.4.6
Jenkins, Christine	CA	IAC-20.E1.7.1
Jenner, Simon	CA	IAC-20.A4.2.6
Jeurissen, Ben	CA	IAC-20.A1.2.1
Jeyakodi, Deepika	A	IAC-20.E7.1.7
Jha, Devanshu	CA	IAC-20.B2.4.1
Jha, Devanshu	CA	IAC-20.B4.1.17
Jha, Devanshu	CA	IAC-20.E9.2.D5.4.7
Jha, Mukesh	CA	IAC-20.B4.6A.9
Jia, He	A	IAC-20.A3.VP.31
JIANG, AO	A	IAC-20.E5.VP.9
Jiang, Chengyu	A	IAC-20.D4.5.18
Jiang, Hai	CA	IAC-20.A6.1.2
Jiang, Jun	A	IAC-20.B4.3.2
Jiang, Jun	CA	IAC-20.C2.1.12
Jiang, Jun	A	IAC-20.C2.2.3
Jiang, Lin	CA	IAC-20.A5.1.6
Jiang, Mei	A	IAC-20.B2.5.10
Jiang, Min	CA	IAC-20.A1.8.5
Jiang, NingJing	CA	IAC-20.A6.3.7
Jiang, Xiaolun	CA	IAC-20.B4.8.11
Jiang, Yajing	CA	IAC-20.C4.7.18
Jiang, Yu	A	IAC-20.C1.6.7
Jiang, Zhuhui	A	IAC-20.B5.1.14
Jianjun, Luo	CA	IAC-20.C1.VP
Jianjun, Luo	CA	IAC-20.D3.2B.9
Jianping, Yuan	CA	IAC-20.A1.7.17
Jianping, Yuan	CA	IAC-20.B4.3.8
Jianping, Yuan	CA	IAC-20.B6.3.10
Jiantao, Zhu	CA	IAC-20.B3.7.16
Jiao, Yifei	A	IAC-20.C1.4.15
Jillani, Khwaja Bilal	CA	IAC-20.D4.1.16
Jillani, Khwaja Bilal	A	IAC-20.D5.1.7
Jillings, Steven	CA	IAC-20.A1.2.1
Jillings, Steven	CA	IAC-20.A1.2.2
JIN, Bingning	CA	IAC-20.C4.4.11
JIN, Bingning	CA	IAC-20.C4.VP.24
Jin, Jin	CA	IAC-20.B2.1.3
Jinglang, Feng	A	IAC-20.C1.7.2
Jinxiu, Zhang	CA	IAC-20.A7.3.9
Job, Jason	CA	IAC-20.A1.7.7
Jochum, Marcus	CA	IAC-20.B1.2.8
Jochum, Marcus	CA	IAC-20.E5.2.6
Jodehl, Wim	CA	IAC-20.D2.5.15
Jodoin, André	CA	IAC-20.B3.8.3
Johanson, Richard	CA	IAC-20.A5.1.6
Johansson, Henrik	CA	IAC-20.B2.3.6
John, Blessen	CA	IAC-20.B4.1.17
JOHN, LEO JACKSON	CA	IAC-20.B6.3.3
JOHN, LEO JACKSON	CA	IAC-20.C1.VP
JOHN, OLUSOJI NESTER	A	IAC-20.B1.6.4
JOHN, OLUSOJI NESTER	A	IAC-20.E7.4.10
Johnson, Benjamin	A	IAC-20.A1.5.5
Johnson, Christopher	A	IAC-20.E7.2.6
Johnson, Les	A	IAC-20.C4.9.4
Johnston-Lemke, Bryan	CA	IAC-20.B1.2.14
Johnston-Lemke, Bryan	CA	IAC-20.B4.7.6
Jokin, Ivo	A	IAC-20.E1.VP.4
Jones, Geraint	CA	IAC-20.A3.4B.3
Jones, Geraint	CA	IAC-20.C1.5.7
Jonglez, Clement	CA	IAC-20.B4.6B.12
Jorba-Cuscó, Marc	A	IAC-20.C1.6.2
Jordan, Alejandra	CA	IAC-20.A4.2.7
Jordan, Andrew	CA	IAC-20.A1.5.2
Jorgensen, Anders	A	IAC-20.D4.3.9
Joseph, Karan	CA	IAC-20.C3.VP.6
José Targino Vidal, Francisco	CA	IAC-20.D1.4B.9
Jouot, Fabien	CA	IAC-20.D6.3.1
Joyce, Michael	A	IAC-20.C4.10-C3.5.12
Ju, Gwanghyeok	A	IAC-20.A3.2B.11
Juang, Jyh-Ching	A	IAC-20.B1.3.14
Juanico, Yannick	A	IAC-20.B1.3.12
Juanico, Yannick	A	IAC-20.C4.1.9
Jun, Zhou	CA	IAC-20.C2.7.4
Jung, Philippe	A	IAC-20.E4.2.4
Jung, Sangwoo	CA	IAC-20.C4.2.8
Jung, Sangwoo	A	IAC-20.C4.VP.19
Jung, YeonSoo	CA	IAC-20.C4.VP.16
Jurga, Joanna	CA	IAC-20.A1.7.4
Justin, Jeevan	CA	IAC-20.E7.VP.7
Jutzi, Martin	CA	IAC-20.A3.4A.3
Jürgen, Veth	CA	IAC-20.D6.3.5
Jürgens, Anna-Sophie	CA	IAC-20.E1.9.8

K

Name	Role	Paper
K, Bhavana	A	IAC-20.A6.4.8
K, Chiranthan	CA	IAC-20.A1.7.6
K, Chiranthan	CA	IAC-20.A1.8.8
K, Chiranthan	CA	IAC-20.A4.2.8
K, Chiranthan	CA	IAC-20.B1.VP.16
K, Chiranthan	CA	IAC-20.B5.1.7
K, Chiranthan	CA	IAC-20.C3.2.8
K, Chiranthan	CA	IAC-20.C3.2.9
K, Chiranthan	CA	IAC-20.D1.VP
K, Chiranthan	CA	IAC-20.D4.1.16
K, Chiranthan	A	IAC-20.D5.1.3
K, Chiranthan	CA	IAC-20.E1.5.2
K, Harikumar	CA	IAC-20.C4.2.13
K, Jayaraman	CA	IAC-20.C4.7.11
K, SHAMBAYYA	CA	IAC-20.C4.6.7
Kabanov, Nikolay	CA	IAC-20.A3.2C.26
Kaczmarczik, Ulrich	CA	IAC-20.A2.5.3
Kaddoum, Elsy	CA	IAC-20.B1.4.12
Kaderali, Shaziana	CA	IAC-20.A7.2.11
Kafi, Abdulla Hil	A	IAC-20.E1.7.3
Kagiwada, Yoko	CA	IAC-20.E7.5.10
Kaiser, Clemens	A	IAC-20.B2.1.2
Kaiser, Stefan A.	A	IAC-20.E7.4.5
Kaiser, Tobias	A	IAC-20.B4.4.7
Kalden, Osman	CA	IAC-20.B2.7.4
Kaled Da Cás, Pedro Luiz	CA	IAC-20.B4.1.9
Kaled Da Cás, Pedro Luiz	CA	IAC-20.E3.3.18
Kalel, Madina	A	IAC-20.B4.9-GTS.5.2
Kalemci, Emrah	CA	IAC-20.A7.1.1
Kallakutagar, Basavaraj	A	IAC-20.B5.1.11
Kallakutagar, Basavaraj	CA	IAC-20.C2.5.1
Kalnay, Mary Grace	A	IAC-20.D5.2.11
Kalogirou, Georgia Maria (Yolanda)	CA	IAC-20.D4.5.7
Kaltenhaeuser, Sven	A	IAC-20.D6.1.3
Kaltenhaeuser, Sven	A	IAC-20.D6.3.5
Kaluthantrige, Aurelio	A	IAC-20.C1.VP
Kalyaev, Vladimir	CA	IAC-20.C2.7.12
Kamal, Nitish	A	IAC-20.C4.7.6
Kamaletdinova, Guzel	A	IAC-20.A1.VP.6
Kamas, Becky	CA	IAC-20.E1.3.16
Kamatchi, Kamatchi	CA	IAC-20.C2.1.2
Kamatchi, Kamatchi	CA	IAC-20.C4.2.2
Kamath, Vridhi	CA	IAC-20.D1.VP
Kamath, Vridhi	CA	IAC-20.E1.5.2
Kameda, Shingo	CA	IAC-20.A2.4.13
Kameda, Shingo	CA	IAC-20.B4.2.13
Kamiya, Toshio	CA	IAC-20.A3.4B.5
Kanagaraj, Amarsingh Bhabu	A	IAC-20.C2.8.3
Kanagaraj, Amarsingh Bhabu	CA	IAC-20.C2.8.5
Kanagaraj, Amarsingh Bhabu	CA	IAC-20.C2.8.8
Kanamori, Hiroshi	CA	IAC-20.A3.2B.9
Kanawka, Krzysztof	CA	IAC-20.B3.9-GTS.2.5
Kanawka, Krzysztof	A	IAC-20.E1.4.4
Kanazawa, Makoto	A	IAC-20.B4.5.4
KANDE, VIJAYASREE MALLIKARJUNA	CA	IAC-20.B6.3.3
KANDE, VIJAYASREE MALLIKARJUNA	CA	IAC-20.C1.VP
Kandela, Rami	A	IAC-20.B4.7.12
Kandiyoor, Gopal	CA	IAC-20.D2.6.8
Kaneko, Akiko	CA	IAC-20.A2.2.4
Kaneko, Akiko	CA	IAC-20.A2.2.11
Kang, Qi	A	IAC-20.A2.3.7
Kang, Qi	CA	IAC-20.A2.4.3
Kankelborg, Charles	CA	IAC-20.A7.3.7
Kanodia, Vatsal	CA	IAC-20.A3.2C.30
Kapitola, Sascha	CA	IAC-20.B4.6B.12
Kapoglou, Angeliki	CA	IAC-20.D3.1.2
Kapoglou, Angeliki	CA	IAC-20.D5.2.3
Kappers, Martin-Christiaan	CA	IAC-20.C1.7.4
Kaptein, Alexander	CA	IAC-20.B1.2.8
Kaptein, Alexander	A	IAC-20.E5.2.6
Kara, Ozan	A	IAC-20.C4.3.8
Karabadzhak, George	CA	IAC-20.A3.2B.15
Karabadzhak, George	CA	IAC-20.A3.2C.26
Karabadzhak, George	CA	IAC-20.A3.2C.27
Karabadzhak, George	CA	IAC-20.A5.3-B3.6.2
Karabulut, Bogac	CA	IAC-20.B6.VP.6
Karabulut, Bogac	CA	IAC-20.C2.7.16
Karaca, Hilal	CA	IAC-20.D5.2.7
Karacalioglu, Arif Goktug	CA	IAC-20.A1.3.4
Karatekin, Özgür	CA	IAC-20.A3.4A.3
Karidhal, Ritu	CA	IAC-20.B6.3.5
Karim, Abdul	CA	IAC-20.B4.1.13
Karim, Risul	CA	IAC-20.E1.7.3
Karimi, Reza	CA	IAC-20.D4.4.4
Karkala, Aliki	CA	IAC-20.A1.2.9
KARMAKAR, SOURAV	A	IAC-20.C2.9.14
Karouia, Fathi	A	IAC-20.A1.5.6
Karouia, Fathi	A	IAC-20.A2.4.10
Karouia, Fathi	A	IAC-20.A3.2C.8
Karouji, Yuzuru	CA	IAC-20.A3.2B.9
Karpathakis, Skevos	CA	IAC-20.B2.4.4
Karthik, S	CA	IAC-20.D1.VP
Karthikeyan, Goutham	A	IAC-20.D2.7.6
Kasai, Yasuko	CA	IAC-20.C2.1.14
Kashioka, Shuya	CA	IAC-20.C1.2.12
Kasi, Rama Theertha	A	IAC-20.E6.3.7
Kassam, Iqbal	CA	IAC-20.D1.5.10
Kataria, Dhiren	CA	IAC-20.A2.4.12
Kataria, Dhiren	CA	IAC-20.B4.2.5
Kataria, Dhiren	CA	IAC-20.B4.2.5
Kataria, Dhiren	CA	IAC-20.C2.6.12
Kataria, Dhiren	CA	IAC-20.C4.5.11
Kato, Nobuji	CA	IAC-20.C4.4.6
Kato, Shoma	A	IAC-20.A2.2.11
Katsavrias, Christos	CA	IAC-20.D5.3.3
KATSUMATA, Ken-ichi	CA	IAC-20.D4.2.5
Katsumata, Yuji	CA	IAC-20.A3.2B.9
Katushkina, Olga	CA	IAC-20.B4.2.13
Kauffman Jensen, Thomas	CA	IAC-20.B4.2.5
Kaufmann, Hannes	CA	IAC-20.A1.4.9
Kaur, Navneet	CA	IAC-20.B5.3.3
Kaur, Navneet	A	IAC-20.B5.3.4
Kaur, Navneet	CA	IAC-20.B5.3.5
KAUR, RAVNEET	CA	IAC-20.B2.3.8
Kaur, Supreet	A	IAC-20.D5.1.10
Kaushik, Mrinal	CA	IAC-20.C4.7.6
Kaushik, Mrinal	CA	IAC-20.C4.7.8
Kaushik, Mrinal	CA	IAC-20.C4.VP.13
Kaushik, Sonia	A	IAC-20.E5.4.2
Kaushik, Subhash Chandra	A	IAC-20.A7.2.9
Kaushik, Subhash Chandra	CA	IAC-20.E5.4.2
Kavvada, Argyro	A	IAC-20.B1.1.10
kavya kalwala, Sree	CA	IAC-20.B2.7.6
Kawabata, Yo	A	IAC-20.C4.4.6
Kawaguchi, Junichiro	CA	IAC-20.A6.5.12
Kawaguchi, Junichiro	CA	IAC-20.D1.2.8
Kawai, Yuta	CA	IAC-20.A5.3-B3.6.1
Kawai, Yuta	CA	IAC-20.D1.6.5
Kawakami, Taiko	A	IAC-20.B3.2.9

Kawakami, Taiko	A	IAC-20.E1.9.2
Kawakatsu, Yasuhiro	A	IAC-20.A3.4B.1
Kawakatsu, Yasuhiro	CA	IAC-20.C1.4.10
Kawakatsu, Yasuhiro	CA	IAC-20.C1.5.8
Kawakatsu, Yasuhiro	CA	IAC-20.C1.5.10
Kawakatsu, Yasuhiro	CA	IAC-20.C1.6.8
Kawamoto, Satomi	CA	IAC-20.A6.1.6
Kawamoto, Satomi	CA	IAC-20.A6.2.1
Kawano, Taro	CA	IAC-20.A2.4.13
Kawasaki, Shigeo	CA	IAC-20.D1.2.8
Kawashima, Hideto	A	IAC-20.C4.1.6
Kawashima, Rei	A	IAC-20.A3.5.10
Kawashima, Rei	CA	IAC-20.B4.1.1
Kawashima, Rei	CA	IAC-20.E1.VP.13
Kawassaki, Guilherme	CA	IAC-20.D5.1.8
Kawulok, Michal	CA	IAC-20.A6.VP.13
Kaya, Nobuyuki	CA	IAC-20.B6.3.11
Kaya, Tarik	CA	IAC-20.E1.3.4
Kayama, Yuki	CA	IAC-20.C1.4.6
Kazemi, Ali	CA	IAC-20.B5.1.13
Kazemi, Hamid	A	IAC-20.E7.4.1
Kazemi, Hamid	A	IAC-20.E7.5.9
Kedia, Raj	CA	IAC-20.A1.5.7
Kedia, Raj	CA	IAC-20.C4.9.8
Keitaro, Miyahara	A	IAC-20.C1.4.6
Kekez, Daniel	CA	IAC-20.B1.2.14
Kelecy, Thomas	CA	IAC-20.A6.10-B6.5.7
Keller, Nathan	A	IAC-20.A1.3.1
Kelley, Michelle	CA	IAC-20.B6.3.1
Kemble, Stephen	CA	IAC-20.C1.5.12
Kemp, Judith	CA	IAC-20.E1.5.11
Kendall-Bell, Grant	CA	IAC-20.D2.3.2
Kennedy, Sam	A	IAC-20.B5.1.4
Kennedy, William	A	IAC-20.B2.3.5
Kent, Ben	CA	IAC-20.E2.3-GTS.4.12
Keravala, Jim	CA	IAC-20.D4.5.8
Kerkonian, Aram Daniel	A	IAC-20.E7.5.12
Kerolle, Mclee	A	IAC-20.E9.2.D5.4.6
Kerr, Murray	CA	IAC-20.B2.4.12
Kerr, Murray	A	IAC-20.B5.1.5
Kerr, Murray	A	IAC-20.D1.2.5
Kerr, Murray	CA	IAC-20.D1.3.7
Keshk, Mohamed Elhady	A	IAC-20.B2.4.10
Kete, Rok	A	IAC-20.D2.VP.1
Keys, Sian	CA	IAC-20.A5.1.6
Kezerashvili, Roman Ya.	CA	IAC-20.C4.10-C3.5.2
Kezerashvili, Roman Ya.	CA	IAC-20.C4.9.7
Khadri, Syed Peer Mohamed Shah	CA	IAC-20.C1.VP
Khaldi, Hanan	CA	IAC-20.E6.1.9
Khalil, Mohamad	A	IAC-20.B1.5.8
Khan, Aaliya	A	IAC-20.C1.7.3
Khan, Aaliya	CA	IAC-20.E2.4.11
Khan, Aaliya	CA	IAC-20.E2.4.12
Khan, Amer	A	IAC-20.B3.9-GTS.2.1
Khan, Juhaina	A	IAC-20.D1.5.10
Khan, Michael	CA	IAC-20.C1.5.14
Khan, Muhammad Shadab	A	IAC-20.E1.1.4
Khan, Nadia	CA	IAC-20.E9.2.D5.4.2
Khan, Sadben	CA	IAC-20.C2.VP.21
Khan, Sadben	CA	IAC-20.D1.4A.11
Khandelwal, Kshitij	A	IAC-20.B4.VP.15
Khandelwal, Kshitij	A	IAC-20.D4.1.15
Khandelwal, Siddharth	CA	IAC-20.A3.2C.30
Kharade, Jatish	CA	IAC-20.E2.4.13
Kharade, Parth	A	IAC-20.C3.4.5
Kharlamov, Maksim	CA	IAC-20.B3.4-B6.4.6
Kharlan, Alexander	A	IAC-20.B2.1.4
Kharlan, Alexander	A	IAC-20.B5.2.12
Kharlan, Alexander	A	IAC-20.D1.4B.11
Kharlan, Alexander	A	IAC-20.E1.7.2
Kharlan, Iana	A	IAC-20.C4.9.12
Khater, Ashraf	CA	IAC-20.E2.4.11
Khater, Ashraf	CA	IAC-20.E2.4.12

Khayrutdinov, Albert	CA	IAC-20.E7.1.15
Kheng, Kanthéa	CA	IAC-20.D2.2.4
Khesroh, Mohammed	CA	IAC-20.A3.2C.20
Khlystov,, Nikolai	CA	IAC-20.E9.1-A6.8.6
Khodabakhshi, Shahrokh	CA	IAC-20.D5.2.7
Khoory, Mohammad	CA	IAC-20.B6.VP.5
Khromov, Oleg	CA	IAC-20.C1.8.6
Khurelbaatar, Luvsanbat	CA	IAC-20.B4.1.12
Kiani, Samira	CA	IAC-20.E1.8.4
Kicman, Pawel	CA	IAC-20.A3.4A.4
Kieokaew, Rungployphan	CA	IAC-20.D5.3.3
Kiesling, Paul	CA	IAC-20.A3.2A.4
Kiesling, Paul	CA	IAC-20.E1.2.13
Kiesling, Paul	CA	IAC-20.E1.5.6
Kiesling, Paul	CA	IAC-20.E1.VP.12
Kiesling, Paul	CA	IAC-20.E2.4.1
Kiesling, Paul	CA	IAC-20.E4.3.3
Kikuchi, Koichi	CA	IAC-20.E7.5.10
Kikuchi, Yuta	CA	IAC-20.E5.2.4
Kilpua, Emilia	CA	IAC-20.B4.6B.1
Kim, Hye-Won	A	IAC-20.B6.1.8
Kim, Hyo-Suk	CA	IAC-20.B1.6.5
Kim, Hyun-Ok	CA	IAC-20.B1.6.5
Kim, Ju Won	A	IAC-20.C4.VP.16
Kim, Kyeong Ja	CA	IAC-20.A3.2B.11
Kim, Kyu-Seop	A	IAC-20.C4.2.8
Kim, Kyu-Seop	CA	IAC-20.C4.VP.19
KIM, Kyunghwan	A	IAC-20.A3.2C.11
Kim, Sangkyun	CA	IAC-20.B4.2.7
Kim, Sangkyun	CA	IAC-20.B4.6B.5
Kim, Sangkyun	CA	IAC-20.C1.4.8
Kim, Yeji	A	IAC-20.B1.6.5
Kimani, John Njoroge	CA	IAC-20.B4.1.8
Kimishima, Yudai	A	IAC-20.C1.8.8
Kimler, Beau	CA	IAC-20.A3.2A.4
Kimler, Beau	CA	IAC-20.E1.2.13
Kimler, Beau	CA	IAC-20.E1.5.6
Kimler, Beau	A	IAC-20.E1.VP.12
Kimler, Beau	CA	IAC-20.E2.4.1
Kimler, Beau	CA	IAC-20.E4.3.3
Kimpe, Andreas	CA	IAC-20.A3.2B.1
Kimpe, Andreas	CA	IAC-20.A3.2C.17
Kimura, Masaya	CA	IAC-20.C4.4.6
Kimura, Shinichi	CA	IAC-20.A6.6.12
Kimura, Shinichi	A	IAC-20.D4.2.5
Kindomba, Eli Munyala	CA	IAC-20.C4.10-C3.5.5
King, Eric	CA	IAC-20.E1.8.4
Kingston, Jennifer	CA	IAC-20.A6.6.9
Kingston, Jennifer	CA	IAC-20.C2.6.11
Kinnison, James	CA	IAC-20.D4.4.3
KIRAN, GUBBALA	CA	IAC-20.B6.3.3
KIRAN, GUBBALA	CA	IAC-20.C1.VP
Kirchner, Frank	CA	IAC-20.A6.6.7
Kirkland, Julia	CA	IAC-20.E5.VP.4
Kishida, Yusuke	CA	IAC-20.C3.1.11
Kishimoto, Makiko	CA	IAC-20.B4.2.1
Kitaeva, Alena	CA	IAC-20.C4.5.5
Kitaeva, Alena	A	IAC-20.C4.5.9
Kitaeva, Alena	CA	IAC-20.C4.9.3
Kitaya, Yoshiaki	CA	IAC-20.D4.2.3
Kitayama, Osamu	CA	IAC-20.A5.4-D2.8.1
Kitazawa, Yukihito	CA	IAC-20.A3.5.10
Kitazawa, Yukihito	CA	IAC-20.B4.1.1
Kitov, Vladimir	CA	IAC-20.A1.2.5
Kivastik, Joosep	CA	IAC-20.A3.4B.4
Kleinschrodt, Alexander	A	IAC-20.B4.3.5
Kleinschrodt, Alexander	CA	IAC-20.B4.4.7
Klimov, Pavel	CA	IAC-20.B4.7.4
Klinkner, Sabine	CA	IAC-20.B2.3.12
Klopsch, Linda	CA	IAC-20.C2.4.6
Klünker, Carmo Sonja	CA	IAC-20.D6.3.5
Knap, Vaclav	A	IAC-20.C3.3.6
Knittel Kommel, Renata	CA	IAC-20.D2.9-D6.2.2

Knoll, Dominik	CA	IAC-20.D1.4A.6
Knopp, Marcus	A	IAC-20.B6.1.12
Ko, Jeonghwan	CA	IAC-20.D5.1.12
Kobald, Mario	CA	IAC-20.D2.7.6
Kobayashi, Hiroaki	A	IAC-20.D4.2.4
Kobayashi, Ken	CA	IAC-20.A7.3.7
Kobrick, Ryan	CA	IAC-20.A1.1.7
Kobrick, Ryan	CA	IAC-20.E2.3-GTS.4.6
Koch, Helmut	CA	IAC-20.B3.7.11
Koch, Wolfgang	CA	IAC-20.A6.9.7
Kodukula, Ananya	CA	IAC-20.A1.7.6
Kodukula, Ananya	CA	IAC-20.A4.2.8
Kodukula, Ananya	CA	IAC-20.B5.1.7
Kodukula, Ananya	CA	IAC-20.C3.2.9
Kodukula, Ananya	CA	IAC-20.D1.VP
Kodukula, Ananya	CA	IAC-20.E1.5.2
Kofman, Igor	CA	IAC-20.A1.2.5
Koga, Yusuke	A	IAC-20.E1.1.3
Kohli, Pratishtha	CA	IAC-20.E1.1.10
Kohmann, Florian	CA	IAC-20.E2.3-GTS.4.1
Kohmura, Takayoshi	CA	IAC-20.D4.2.5
Koike, Kaishu	A	IAC-20.D4.3.6
Koike, Sota	CA	IAC-20.B3.7.17
Kokalj, Žiga	CA	IAC-20.B1.2.14
Kokkalis, John	CA	IAC-20.D4.4.5
Kolenkina(Skryleva), Evgeniya	CA	IAC-20.A2.1.7
Kolenkina(Skryleva), Evgeniya	A	IAC-20.A2.2.3
Kolev, Dimitar	CA	IAC-20.B2.2.5
Koller, Josef	CA	IAC-20.D6.1.10
Kolodziejczyk, Agata	CA	IAC-20.E5.VP.6
Kondoh, Yoshinori	CA	IAC-20.B6.3.7
Kondratiev, Alexander	CA	IAC-20.A3.2C.26
Konstantinov, Mikhail S.	CA	IAC-20.C1.8.4
Kontogianni, Stavroula	A	IAC-20.E3.4.11
Kontogianni, Stavroula	CA	IAC-20.E6.3.3
Kooke, Elise	CA	IAC-20.A1.3.1
Koops, Bram	CA	IAC-20.D2.3.8
Koops, Bram	CA	IAC-20.D2.5.15
KOPPISETTI, SAI TARUN	CA	IAC-20.B1.VP.16
KOPPISETTI, SAI TARUN	CA	IAC-20.C3.2.8
KOPPISETTI, SAI TARUN	CA	IAC-20.C3.2.9
Koprowski, Evon	CA	IAC-20.E1.VP.2
Koretskii, Maxim	CA	IAC-20.B4.2.9
Korkiakoski, Visa	CA	IAC-20.A6.5.3
KORNIJEZUK, NADIA BANDEIRA SACENCO	A	IAC-20.E1.VP.6
Kornilova, Ludmila	CA	IAC-20.A1.2.2
Korolev, Vladimir	CA	IAC-20.C2.5.12
Kose, Umut	CA	IAC-20.E5.3.5
Kosenkov, Ivan	A	IAC-20.E6.1.1
Kosenkova, Anastasia	A	IAC-20.A3.5.3
Kostrzewa, Daniel	CA	IAC-20.A6.VP.13
Kotani, Takayuki	CA	IAC-20.D1.2.8
Kothandhapani, Adithya	CA	IAC-20.A3.2B.25
Kotov, Oleg	CA	IAC-20.B3.3.12
Kotsur, Oleg	CA	IAC-20.B4.2.9
Kotz, Andreas	CA	IAC-20.B4.6A.2
Koudelka, Otto	A	IAC-20.B2.4.12
Koudelka, Otto	CA	IAC-20.B4.4.2
Koudelka, Otto	CA	IAC-20.B5.1.5
Koudelka, Otto	CA	IAC-20.D1.2.5
Kougianos, Adrian	CA	IAC-20.A5.1.6
Koul, Abhinav	CA	IAC-20.A4.2.8
Koul, Abhinav	CA	IAC-20.B5.1.7
Kourtidou-Papadeli, Chrysoula	A	IAC-20.A1.2.9
Kovacs, Daniela	CA	IAC-20.A2.7.10
Kovalenko, Irina	A	IAC-20.C1.7.4
Kovecses, Jozsef	CA	IAC-20.C2.3.7
Kowalski, Ashley	CA	IAC-20.A3.2C.18
KOya, Dinesh	CA	IAC-20.C1.1.7
Kozawska, Aleksandra	A	IAC-20.E5.VP.4
Kozin, Filipp	CA	IAC-20.A6.5.5
Kozlovskaya, Inesa	CA	IAC-20.A1.2.5
Kozlovskaya, Inesa	CA	IAC-20.A1.VP.20

Kozlowski, Rolf	CA	IAC-20.B6.1.3
Kozlowski, Rolf	CA	IAC-20.B6.1.12
KOZUKA, SOUICHIROU	A	IAC-20.E7.3.10
Krachtis, Agisilaos	CA	IAC-20.A1.2.9
Krag, Holger	CA	IAC-20.A6.2.3
Krag, Holger	CA	IAC-20.A6.2.6
Krainova, Irina	CA	IAC-20.C2.7.9
Kraus, Alexander	CA	IAC-20.A1.4.9
Kreisel, Joerg	CA	IAC-20.E6.2.10
Kremmydas, Panagiotis	CA	IAC-20.B1.3.4
Krenn, Rainer	CA	IAC-20.A3.2B.1
Krijnen, Bas	CA	IAC-20.B4.4.4
Krimigis, Stamatios	CA	IAC-20.D4.4.3
Kringer, Michael	A	IAC-20.D1.3.3
Krishnamoorthy, Iynthezhuthon	CA	IAC-20.C4.4.2
Kristmann, Katriin	A	IAC-20.C3.4.10
Krokstedt, Christian	A	IAC-20.D2.2.11
Krokstedt, Christian	A	IAC-20.E1.2.14
Kroupnik, Guennadi	A	IAC-20.B1.6.2
Krueger, Thomas	CA	IAC-20.A3.2B.1
Krueger, Thomas	CA	IAC-20.A3.2B.2
Krueger, Thomas	A	IAC-20.D1.6.4
Kruth, Jeffrey	CA	IAC-20.B2.3.6
Krämer, Caroline	CA	IAC-20.E2.3-GTS.4.10
Kuang, Linling	CA	IAC-20.B2.1.3
Kubo, Yuki	CA	IAC-20.C1.8.8
Kubo, Yuki	CA	IAC-20.D1.2.8
Kubooka, Toshihiro	CA	IAC-20.B2.2.5
Kubota, Takashi	CA	IAC-20.B2.3.3
Kueppers, Michael	CA	IAC-20.A3.4A.3
Kuga, Helio	CA	IAC-20.C1.8.1
KUKITA, AKIO	A	IAC-20.C3.3.2
Kukoba, Tatyana	CA	IAC-20.A1.2.3
Kulau, Ulf	CA	IAC-20.C2.7.2
Kuleshova, Natalia	CA	IAC-20.A1.1.1
Kuligowski, Piotr	CA	IAC-20.B1.4.6
Kullack, Karsten	CA	IAC-20.D1.2.10
Kumar, Ankush	CA	IAC-20.B6.3.5
Kumar, B Kiran	CA	IAC-20.C2.1.8
Kumar, Jai	CA	IAC-20.A1.VP.12
Kumar, Manish	A	IAC-20.A1.VP.12
Kumar, Pankaj	CA	IAC-20.A3.VP.12
Kumar, Ramesh	CA	IAC-20.C4.VP.29
Kumar, Sri Aditya	A	IAC-20.E7.VP.7
Kumar, Tanumi	CA	IAC-20.E5.VP.4
KUMAR K, ASHOK	A	IAC-20.C1.8.9
Kumar S., Sunil	CA	IAC-20.C4.6.10
Kumar Tetarwal, Hitesh	CA	IAC-20.A5.VP
Kumar V, Sanjeevi	CA	IAC-20.B1.5.5
kumar V M, Lavin	CA	IAC-20.B5.1.11
kumar V M, Lavin	CA	IAC-20.C2.5.1
KUMARI, SAVITRY	A	IAC-20.C4.6.7
Kunimori, Hiroo	CA	IAC-20.B2.2.5
Kunitomi, Koki	CA	IAC-20.D4.2.11
Kunj, Parikh	CA	IAC-20.B4.1.17
Kunstadter, Christopher	CA	IAC-20.A6.2.1
Kunstadter, Christopher	CA	IAC-20.E9.1-A6.8.1
KUO, Jen-Chueh	CA	IAC-20.C2.2.13
Kupreev, Sergei	CA	IAC-20.A6.7.10
Kurian, Thomas	CA	IAC-20.C2.1.8
Kuritsin, Andrey	A	IAC-20.B3.4-B6.4.6
Kuriyama, Ikuko	A	IAC-20.E7.5.10
Kurosaki, Hirohisa	CA	IAC-20.A6.1.6
Kushnirenko, Anatoli	CA	IAC-20.A2.2.6
Kusumoto, Tetsuya	A	IAC-20.A6.5.12
Kutnik, Irina	CA	IAC-20.B3.4-B6.4.6
Kuzmina, Lyudmila	A	IAC-20.C2.2.14
Kuznetsov, Eduard	A	IAC-20.A6.VP.8
Kwon, Jae-wook	A	IAC-20.A3.2A.5
Kwon, Sejin	CA	IAC-20.C4.2.8
Kwon, Sejin	CA	IAC-20.C4.8-B4.5A.1
Kwon, Sejin	CA	IAC-20.C4.VP.16
Kwon, Sejin	CA	IAC-20.C4.VP.19

Kyathasandra Manjunath, Abhishek	CA	IAC-20.B2.1.10
Kyr, Peter	CA	IAC-20.A3.2B.1
Kyriakopoulos, George (Georgios) D.	A	IAC-20.E7.2.14
Kägo, Riho	CA	IAC-20.A3.2B.14
Käosaar, Andres	A	IAC-20.B3.VP.6
Köhler, Werner	CA	IAC-20.A2.VP.3
Könemann, Thorben	CA	IAC-20.A2.5.3
Kössling, Matthias	CA	IAC-20.C4.10-C3.5.10

L

Name	Role	Paper
L, Meenakshi	CA	IAC-20.A1.7.6
L, Ravi Kumar	A	IAC-20.C1.1.7
L, Ravi Kumar	A	IAC-20.C1.1.14
La Mura, Pierfrancesco	A	IAC-20.D3.2A.6
Laamoumi, Omar	CA	IAC-20.C4.9.11
Laamoumi, Omar	CA	IAC-20.E6.1.3
Labate, Demetrio	CA	IAC-20.B4.8.1
Labibian, Amir	A	IAC-20.C1.8.14
Labrini, Cecilia	CA	IAC-20.D1.4B.5
Labutkina, Tatyana V.	A	IAC-20.A6.VP.10
Labutkina, Tatyana V.	A	IAC-20.D1.1.7
Lacroix, Lisa	CA	IAC-20.E9.2.D5.4.11
Laffitte, Lucy	CA	IAC-20.A4.2.7
LAFON, Thierry	A	IAC-20.B1.2.4
Lafranconi, Renato	CA	IAC-20.D2.1.5
Lafranconi, Renato	CA	IAC-20.D2.4.3
Lagadrilliere, Pierre-Alexis	A	IAC-20.B6.1.11
Lagomasino, David	CA	IAC-20.B1.5.15
Lagos, David	CA	IAC-20.A4.2.7
Lagos, Miguel	CA	IAC-20.C2.4.6
Laguna-Juarez, Carlos	CA	IAC-20.E1.6.5
Laine, Pauli	A	IAC-20.A4.VP.3
Laine, Pauli	A	IAC-20.C4.VP.25
Lakkoju, Samuel	CA	IAC-20.C1.1.14
Lakmal, Yasith	CA	IAC-20.B4.1.17
Lal, Bhavya	CA	IAC-20.A1.6.9
Lal, Bhavya	CA	IAC-20.C4.10-C3.5.9
Lal, Bhavya	CA	IAC-20.D1.5.13
Lal, Bhavya	CA	IAC-20.D4.1.9
Lal, Bhavya	CA	IAC-20.E3.2.7
Lama, Luca	CA	IAC-20.A6.VP.11
Lamborelle, Olivier	CA	IAC-20.A5.2.4
Lamborelle, Olivier	A	IAC-20.E4.2.10
Lampani, Luca	CA	IAC-20.C2.9.5
Lamut, Martin	CA	IAC-20.B1.2.14
LAMY, Alain	A	IAC-20.A3.3A.7
Lan, Shengchang	CA	IAC-20.B4.VP.16
Lancee, Jules	A	IAC-20.E1.5.13
Landin, Brett	CA	IAC-20.A3.3A.4
Landis, Amy	A	IAC-20.E1.4.10
Landis, Amy	A	IAC-20.E3.1.7
Landsman, Yoav	CA	IAC-20.E3.3.17
Landsman, Yoav	CA	IAC-20.E3.VP.3
Lange, Caroline	CA	IAC-20.A3.4B.2
Lange, Caroline	CA	IAC-20.B4.8.5
Lange, Sebastian	CA	IAC-20.B2.3.11
Lange, Sebastian	CA	IAC-20.B4.6B.8
Langer, Martin	CA	IAC-20.C2.5.13
Lapuerta, Victoria	CA	IAC-20.A2.3.8
Lapuerta, Victoria	CA	IAC-20.C1.8.5
Larin, Vladimir O.	CA	IAC-20.A6.VP.10
Larin, Vladimir O.	CA	IAC-20.D1.1.7
Larouche, Benoit	CA	IAC-20.B1.2.14
Larouche, Benoit	CA	IAC-20.B4.7.6
Larrea Brito, Natalia	CA	IAC-20.A3.1.4
Larry, LeRoy	A	IAC-20.E1.7.5
Latil, Stéphane	CA	IAC-20.E2.3-GTS.4.11
Latkar, Archit	CA	IAC-20.A1.8.8
Latkar, Archit	A	IAC-20.B5.1.7
Latkar, Archit	CA	IAC-20.D4.1.16
Latorre, Antonio	CA	IAC-20.B5.1.5
Latorre, Antonio	CA	IAC-20.D1.2.5
Latorre, Antonio	A	IAC-20.D1.3.7
Latronico, Loretta	CA	IAC-20.E6.3.5
Latserus, Karolina	A	IAC-20.D1.4B.4
Latyshev, Kir	A	IAC-20.A3.2B.7
Latyshev, Kir	A	IAC-20.A3.3A.9
Lauditi, Anisia	A	IAC-20.A2.7.8
Lauer, Charles	CA	IAC-20.D1.6.8
Lauer, Charles	A	IAC-20.D4.2.10
Lauer, Charles	A	IAC-20.D6.3.9
Lauer, Charles	CA	IAC-20.E6.1.8
Lauer, Charles	A	IAC-20.E6.1.14
Laufer, Rene	CA	IAC-20.B3.7.11
Laulan--Souilhac, Baptiste	CA	IAC-20.A3.2C.7
Laulan--Souilhac, Baptiste	CA	IAC-20.A3.5.11
Laulan--Souilhac, Baptiste	CA	IAC-20.B3.VP.12
Laulan--Souilhac, Baptiste	A	IAC-20.C4.VP.6
Laulan--Souilhac, Baptiste	CA	IAC-20.D3.2A.12
Laurenzi, Susanna	CA	IAC-20.C2.2.5
Laurenzi, Susanna	CA	IAC-20.C2.5.11
Laurenzi, Susanna	A	IAC-20.C2.6.9
Lauretta, Dante	CA	IAC-20.A3.4B.6
Laureys, Steven	CA	IAC-20.A1.2.1
Lavagna, Michèle	CA	IAC-20.A2.7.8
Lavagna, Michèle	CA	IAC-20.A3.2C.23
Lavagna, Michèle	A	IAC-20.A3.2C.25
Lavagna, Michèle	CA	IAC-20.A3.4A.2
Lavagna, Michèle	CA	IAC-20.A3.4A.5
Lavagna, Michèle	CA	IAC-20.B6.3.6
Lavagna, Michèle	CA	IAC-20.C1.2.1
Lavagna, Michèle	CA	IAC-20.C1.6.6
Lavagna, Michèle	CA	IAC-20.D1.3.11
Lavagna, Michèle	CA	IAC-20.D2.5.10
Lavagna, Michèle	CA	IAC-20.E1.4.9
Laveron-Simavilla, Ana	CA	IAC-20.A2.3.8
Laveron-Simavilla, Ana	CA	IAC-20.E5.2.12
Lavraud, Benoit	CA	IAC-20.D5.3.3
Lawrance, Littisha	CA	IAC-20.C3.VP.7
Lax, Gianluca	CA	IAC-20.D1.4B.5
Lax, Gianluca	CA	IAC-20.D5.2.9
Lay, Gary	CA	IAC-20.D3.2A.1
Lazar, Sapir	CA	IAC-20.A1.5.9
Lazarets, Maksym	CA	IAC-20.D1.1.7
Lazarev, Nikita	CA	IAC-20.B4.2.9
Lazzaro, Arianna	CA	IAC-20.B2.6.5
Le Bonhomme, Guillaume	CA	IAC-20.B4.VP.4
Leal Caselato, Anne Elisa	A	IAC-20.C4.3.2
Lebedeva, Svetlana	CA	IAC-20.A1.1.3
LeBleu-DeBartola, Amy	A	IAC-20.E3.VP.8
Lebofsky, Matt	CA	IAC-20.A4.1.1
Lebofsky, Matt	CA	IAC-20.A4.1.3
Lebofsky, Matt	CA	IAC-20.A4.1.4
Lebreton, Jean-Pierre	CA	IAC-20.B4.2.3
Lebreton, Jérémy	CA	IAC-20.C1.2.6
Ledkov, Alexander	CA	IAC-20.A6.6.8
Ledkov, Alexander	CA	IAC-20.C1.8.4
Lee, Chang Hee	A	IAC-20.E5.3.3
Lee, Jessica	CA	IAC-20.A1.VP.19
Lee, Jinseong	A	IAC-20.A1.7.7
Lee, Kerry	CA	IAC-20.A1.5.9
Lee, Seungho	A	IAC-20.C4.8-B4.5A.1
Lee, Sungmin	A	IAC-20.C4.7.7
Lee, Wenxiang	A	IAC-20.B5.1.16
Lee Roberts, Sophia	A	IAC-20.E1.2.9
Lefeber, René	CA	IAC-20.D4.5.10
Legai, Pascal	A	IAC-20.E6.4.4
Lehenkov, Oleksandr	CA	IAC-20.D1.1.7
Lehner, Hannah	CA	IAC-20.A3.2B.1
Lehner, Peter	CA	IAC-20.A3.2B.1
Lei, Haijun	CA	IAC-20.C4.10-C3.5.4
Lei, Yu	A	IAC-20.A1.1.4
Lekan, Paweł	CA	IAC-20.A3.VP.11
Lemarquis, Natalia	CA	IAC-20.E5.4.1
Lemarquis, Natalia	A	IAC-20.E6.5-GTS.1.12
Lemattre, Thibault	CA	IAC-20.A3.2C.7
Lemattre, Thibault	CA	IAC-20.A3.5.11
Lemattre, Thibault	A	IAC-20.B3.VP.12
Lemattre, Thibault	CA	IAC-20.D3.2A.12
Lemattre, Thibault	CA	IAC-20.E2.3-GTS.4.8
Lemke, Norbert M.K.	A	IAC-20.B2.2.1
Lemmens, Stijn	CA	IAC-20.A6.1.1
Lemmens, Stijn	CA	IAC-20.A6.2.1
Lemmens, Stijn	CA	IAC-20.A6.4.3
Lemmens, Stijn	CA	IAC-20.E9.1-A6.8.6
Lenard, Roger X.	CA	IAC-20.D4.5.6
Lenard, Roger X.	A	IAC-20.D4.VP.5
LEONARD, PINEAU	CA	IAC-20.D2.2.4
Leonov, Victor	A	IAC-20.C2.VP.8
Leonov, Victor	CA	IAC-20.E1.5.3
Leporini, Andrea	CA	IAC-20.C4.5.5
Lerda, Fanny	CA	IAC-20.A1.4.3
Lerda, Fanny	CA	IAC-20.A1.VP.19
Leslie, Lewis	CA	IAC-20.A5.4-D2.8.6
Leterre, Gabrielle	A	IAC-20.E7.2.8
Letertre, Victoria	A	IAC-20.A5.1.8
Letier, Pierre	CA	IAC-20.D1.6.3
Letier, Pierre	CA	IAC-20.D3.2B.5
Letier, Pierre	A	IAC-20.D3.2B.6
Letier, Pierre	CA	IAC-20.D3.3.3
Letizia, Francesca	CA	IAC-20.A6.2.1
Letizia, Francesca	CA	IAC-20.E9.1-A6.8.6
LEVEQUE, Thomas	CA	IAC-20.B2.4.4
Levine, Joseph	CA	IAC-20.D3.1.7
Levochkin, Petr	A	IAC-20.C4.1.3
Lewis, Hugh	CA	IAC-20.A6.2.1
Lewis, Hugh	CA	IAC-20.A6.2.2
Lewonowska, Blanka	CA	IAC-20.A3.VP.11
Li, Dongjun	A	IAC-20.B2.6.6
Li, Dun	A	IAC-20.C4.7.17
Li, Fei	CA	IAC-20.A3.2A.7
Li, Gongqiang	A	IAC-20.A6.1.2
Li, Hang	CA	IAC-20.E5.VP.9
Li, Hengnian	CA	IAC-20.C1.6.7
Li, Jia	CA	IAC-20.C3.VP.8
Li, Jingxuan	CA	IAC-20.C2.VP.6
Li, Jingxuan	CA	IAC-20.C4.4.1
Li, Jinxian	A	IAC-20.C4.3.14
Li, Jiuyang	CA	IAC-20.B2.6.1
Li, Jiuyang	CA	IAC-20.B4.7.11
Li, Kang	CA	IAC-20.B2.8-GTS.3.9
Li, Kang	CA	IAC-20.D3.2B.11
LI, LAN	CA	IAC-20.D5.1.2
Li, Lincheng	CA	IAC-20.C1.2.10
Li, Lincheng	CA	IAC-20.C1.6.11
Li, Longfei	A	IAC-20.A3.VP.34
Li, Longfei	A	IAC-20.D4.VP.4
Li, Min	CA	IAC-20.E5.VP.4
Li, Mingtai	CA	IAC-20.C4.3.10
Li, Mingxiang	CA	IAC-20.C1.2.5
Li, Mutian	CA	IAC-20.B6.3.12
Li, Peng	A	IAC-20.B2.7.5
Li, Ru	CA	IAC-20.B2.7.8
Li, Ru	CA	IAC-20.B2.7.9
Li, Shuang	CA	IAC-20.C1.2.3
Li, Shuang	CA	IAC-20.C1.7.12
Li, Shuang	A	IAC-20.C2.3.11
Li, Shuang	A	IAC-20.C3.1.9
Li, Shuang	A	IAC-20.D1.1.5
Li, Shuang	CA	IAC-20.D2.5.12
Li, Weibin	A	IAC-20.A2.4.5
Li, Xiaohui	CA	IAC-20.A3.VP.35
Li, Xiaoyan	A	IAC-20.C2.VP.11
Li, Yangping	CA	IAC-20.A3.2A.12
Li, Yinan	CA	IAC-20.E5.VP.4
Li, Yinghui	CA	IAC-20.A1.1.4
Li, Yinkang	CA	IAC-20.D1.1.5
Li, Yixiao	A	IAC-20.A6.3.5
Li, Yuanhao	CA	IAC-20.B4.4.4
Li, Yuanqi	A	IAC-20.C4.2.4
Li, Yuliang	CA	IAC-20.D2.2.14
Li, Zhaoyu	CA	IAC-20.A3.3B.5
Li, Zhaoyu	A	IAC-20.B6.2.10
Li, Zhaoyu	CA	IAC-20.D1.6.7
Li, Zhe	CA	IAC-20.D6.3.4
Li, Zhi	CA	IAC-20.A6.2.15
Li, Zhi	CA	IAC-20.D3.3.1
Li, Zhigang	CA	IAC-20.A5.1.5
Li, Zhihong	CA	IAC-20.C2.1.7
Li, Zhili	CA	IAC-20.A1.1.4
Li Holden, King Ho	CA	IAC-20.B4.2.1
Li Holden, King Ho	CA	IAC-20.B4.2.7
Lian, Junxiang	CA	IAC-20.A2.4.9
Lian, Xiaobin	CA	IAC-20.A7.3.9
Lian, Yu	CA	IAC-20.A7.2.11
Liang, Zixuan	CA	IAC-20.B4.VP.29
Liang, Zixuan	CA	IAC-20.D1.6.7
Liao, Yu	A	IAC-20.C4.4.11
Licciardi, Giorgio Antonino	A	IAC-20.C2.VP.12
Lidon, Norbert	CA	IAC-20.D2.6.1
Lietaer, Benoit	CA	IAC-20.D1.6.3
Lifson, Miles	CA	IAC-20.C1.5.2
Lifson, Miles	CA	IAC-20.C1.5.3
Lii, Neal	CA	IAC-20.D1.6.4
Liias, Paul	A	IAC-20.E3.4.6
Lili, An	A	IAC-20.B1.VP.9
Lillis, Robert	CA	IAC-20.A3.3A.4
Lim, Jonathan	A	IAC-20.E7.2.11
Lim, Wee Seng	CA	IAC-20.B4.2.7
LIMAM, LAKHDAR	A	IAC-20.C3.3.8
Limonta, Simone	A	IAC-20.C1.6.10
Limper, Ulrich	CA	IAC-20.A1.4.3
Lin, Mingpei	CA	IAC-20.C1.3.4
Lin, Siyuan	CA	IAC-20.E2.3-GTS.4.11
Lin, Wei	CA	IAC-20.A2.2.7
Lin, Wei	A	IAC-20.C4.7.4
Lin, Wei	CA	IAC-20.C4.VP.21
Lin, Ziqiao	A	IAC-20.B2.1.3
LINARES, RICHARD	CA	IAC-20.A6.7.8
LINARES, RICHARD	CA	IAC-20.C1.5.2
LINARES, RICHARD	CA	IAC-20.C1.5.3
LINARES, RICHARD	CA	IAC-20.C1.VP
Lindbergh, Rachel	CA	IAC-20.A1.6.9
Lindblad, Louise	CA	IAC-20.D1.4A.8
Linder, Martin	CA	IAC-20.A7.1.8
Lindgren, David	A	IAC-20.E3.3.8
Lindgren, David	A	IAC-20.E7.5.7
Lindley, Craig	CA	IAC-20.D4.5.11
Lindsay, Mike	CA	IAC-20.A6.2.2
Lindsay, Mike	CA	IAC-20.E6.1.4
Lindsay, Scott	A	IAC-20.C2.VP.21
Lindsay, Scott	CA	IAC-20.D1.4A.11
Ling, Keck Voon	CA	IAC-20.B4.2.7
Ling, Keck Voon	CA	IAC-20.C1.4.8
Lingham, Marcus	CA	IAC-20.A6.5.3
Linn Barnett, Danna	CA	IAC-20.A1.7.9
Linn Barnett, Danna	CA	IAC-20.B3.9-GTS.2.3
Lino, Carlos	A	IAC-20.D5.1.8
Linyu, SONG	CA	IAC-20.C2.VP.7
Liorzou, Françoise	A	IAC-20.B1.3.8
Lipinska, Monika	A	IAC-20.D3.2A.8
Lipinska, Monika	A	IAC-20.E5.1.3
Lipiński, Filip	CA	IAC-20.D3.2A.8
Lisitsyna, Ksenia	A	IAC-20.D5.2.5
Litvinova, Liudmila	CA	IAC-20.A1.2.1
Liu, Hongjun	A	IAC-20.C4.9.15
LIU, JIAN	CA	IAC-20.D2.2.6
Liu, Jing	CA	IAC-20.A6.1.2

Liu, Jing	CA	IAC-20.A6.2.1
Liu, Jizhong	CA	IAC-20.A3.2A.2
Liu, Jun	CA	IAC-20.C3.4.8
Liu, Lulu	CA	IAC-20.B5.1.2
Liu, Meilin	A	IAC-20.C2.9.10
Liu, Peijin	CA	IAC-20.C4.4.11
Liu, Peijin	CA	IAC-20.C4.VP.24
Liu, Qiu-Sheng	A	IAC-20.A2.3.6
Liu, Shang	CA	IAC-20.C4.2.4
Liu, Shengbing	CA	IAC-20.A6.VP.19
Liu, Taiyang	A	IAC-20.B4.8.11
Liu, Weihui	CA	IAC-20.A3.VP.35
Liu, Xiangyue	CA	IAC-20.A7.3.3
Liu, Xin	CA	IAC-20.A5.1.6
Liu, Xu	A	IAC-20.D2.5.12
Liu, Xuliang	CA	IAC-20.A5.3-B3.6.9
Liu, Yangyi	CA	IAC-20.A3.2A.12
Liu, Ying	CA	IAC-20.D2.2.14
LIU, Yuanzhe	A	IAC-20.C4.VP.24
Liu, Yufei	CA	IAC-20.C4.4.13
Liu, Yuxuan	CA	IAC-20.C4.3.10
Liu, Zhanqing	CA	IAC-20.D2.2.13
Liu, Zhanqing	CA	IAC-20.D2.2.14
Liu, Zhiqiang	CA	IAC-20.A5.1.5
Liu, Zifan	CA	IAC-20.A1.8.5
Liu, Ziteng	CA	IAC-20.D2.VP.6
Liucci, Francesco	CA	IAC-20.D3.2A.1
Livadiotti, Sabrina	CA	IAC-20.B4.2.5
Livadiotti, Sabrina	CA	IAC-20.C4.5.11
Liwei, Hao	A	IAC-20.A7.3.11
Lizy-Destrez, Stéphanie	CA	IAC-20.A1.1.2
Lizy-Destrez, Stéphanie	CA	IAC-20.A1.VP.18
Lizy-Destrez, Stéphanie	CA	IAC-20.A2.7.9
Lizy-Destrez, Stéphanie	CA	IAC-20.C1.7.4
Lizy-Destrez, Stéphanie	CA	IAC-20.C1.7.15
Lizy-Destrez, Stéphanie	CA	IAC-20.D1.2.1
Lizy-Destrez, Stéphanie	CA	IAC-20.D1.4A.10
Lizy-Destrez, Stéphanie	CA	IAC-20.D4.5.9
Liśkiewicz, Dominik	CA	IAC-20.D3.2A.5
Lkhagvasuren, Galbayar	CA	IAC-20.B4.1.12
Llano, Julie	CA	IAC-20.E2.3-GTS.4.9
Llorente-Martínez, Salvador	A	IAC-20.C1.9.6
Lobo, Rafael	CA	IAC-20.B4.1.9
Lobo, Rafael	CA	IAC-20.E3.3.18
Locantore, Ilaria	A	IAC-20.A1.7.1
Locke, Jericho	CA	IAC-20.A1.6.9
Locke, Jericho	CA	IAC-20.C4.10-C3.5.9
Lockowandt, Christian	CA	IAC-20.A7.3.8
Lockowandt, Christian	CA	IAC-20.E1.2.14
Loefdahl, Jacob	CA	IAC-20.D5.2.12
Loefdahl, Jacob	A	IAC-20.D5.2.15
Lohangade, Atharva	A	IAC-20.E2.4.13
Lomaka, Igor	CA	IAC-20.C1.3.16
Lombardi, Eleonora	A	IAC-20.B5.2.3
Lombardi, Eleonora	CA	IAC-20.E6.2.3
Long, George Anthony	A	IAC-20.A4.2.1
Long, George Anthony	A	IAC-20.E7.4.13
Long, Jiateng	A	IAC-20.B4.8.10
Long, Mingliang	A	IAC-20.B2.6.9
Long, Teng	CA	IAC-20.C4.6.14
Longo, Josè	CA	IAC-20.D2.6.5
Loo, Chuen Chern	A	IAC-20.B4.9-GTS.5.12
Looper, Mark	CA	IAC-20.A1.5.2
Lootah, Fatma	CA	IAC-20.A3.3A.4
Lopac, Nicholas	A	IAC-20.E2.3-GTS.4.6
Lopez, David	CA	IAC-20.E1.5.16
Lopez Campos, Graciela	A	IAC-20.A2.4.7
Lopez Castellanos, Jose Mario Porfirio	CA	IAC-20.B4.9-GTS.5.7
Lopez Jr., Javier	CA	IAC-20.A5.3-B3.6.3
Lopez Negro, Pablo	CA	IAC-20.D1.6.1
Lopez Negro, Pablo	A	IAC-20.D3.2B.5
Lopinto, Ettore	CA	IAC-20.B1.2.5
Lopinto, Ettore	CA	IAC-20.B1.4.5

Lopota, Alexander	CA	IAC-20.A3.2C.26
Lord, Brendan	A	IAC-20.B1.6.11
Lordos, Alexandros	A	IAC-20.A1.1.10
Lordos, George	CA	IAC-20.A1.1.10
Lordos, George	CA	IAC-20.A3.2B.7
Lordos, George	CA	IAC-20.A3.3A.9
Lorenzini, Enrico C.	CA	IAC-20.A6.4.4
Lorenzini, Enrico C.	CA	IAC-20.A6.5.13
Lorusso, Rino	CA	IAC-20.B1.2.5
Lorusso, Rino	CA	IAC-20.B1.2.9
Losekamm, Martin J.	CA	IAC-20.D1.2.10
Loskutov, Dmitry	CA	IAC-20.B3.2.6
Loureda, Oswaldo	A	IAC-20.D2.7.13
Loureiro, Geilson	CA	IAC-20.D1.4A.2
Loureiro, Geilson	CA	IAC-20.D1.5.3
Loureiro, Geilson	CA	IAC-20.D1.5.6
Lovtsov, Alexander	CA	IAC-20.C4.5.7
Low, Purichmun	CA	IAC-20.D3.2A.2
Lowe, Luke	CA	IAC-20.A7.2.4
Lu, Chunling	A	IAC-20.B4.3.11
Lu, Jianhua	CA	IAC-20.B2.2.13
Lu, Xiaoxuan	A	IAC-20.B4.VP.29
Lu, Ying	CA	IAC-20.D5.1.6
Lucas, Robert	CA	IAC-20.B3.8.3
Lucas-Rhimbassen, Maria	CA	IAC-20.E9.1-A6.8.12
Lucchese, Riccardo	CA	IAC-20.A2.3.9
Luciani, Alain	CA	IAC-20.E5.2.3
Luciano, Armando	A	IAC-20.E3.2.21
Lucken, Romain	A	IAC-20.A6.9.8
Ludivig, Philippe	A	IAC-20.A3.2B.3
Lueders, Kathy	A	IAC-20.B3.1.1
Luitel, Bijaya	CA	IAC-20.D4.5.7
Lumaca, Francesco	CA	IAC-20.C2.5.3
Lumaca, Francesco	CA	IAC-20.C2.5.14
Lund, Thomas	CA	IAC-20.B4.VP.12
Lund, Thomas	CA	IAC-20.C3.1.6
Lungavia, Enrico	CA	IAC-20.A6.5.13
Lunghi, Paolo	CA	IAC-20.A3.2C.23
Lunghi, Paolo	CA	IAC-20.A3.2C.25
Lunghi, Paolo	CA	IAC-20.C1.2.1
Luo, Jianjun	CA	IAC-20.B4.3.8
Luo, Xiaotao	CA	IAC-20.C2.1.13
Luo, Xiuqi	CA	IAC-20.A2.2.7
Luo, Ya-zhong	CA	IAC-20.B3.4-B6.4.1
Luo, Yuxiang	CA	IAC-20.A5.1.6
Luque, Daniel	A	IAC-20.E5.2.12
Luu, Qui	CA	IAC-20.E1.3.15
Luzzi, Erica	CA	IAC-20.A3.2B.2
Lv, Jiangyan	CA	IAC-20.C2.VP.6
Ly, Delphine	CA	IAC-20.A6.9.8
Lyons, Jenny	CA	IAC-20.E1.2.9
Lyra, Wladimir	CA	IAC-20.E1.7.4
Lysova, Natalya	CA	IAC-20.A1.2.5
Lytvynenko, Yaroslav	CA	IAC-20.D1.1.7
Lämmerzahl, Claus	A	IAC-20.A2.1.5
Lämmerzahl, Claus	A	IAC-20.A2.1.6
Lätt, Silver	A	IAC-20.A3.2B.14
López, Didier	CA	IAC-20.A4.2.7
López, Rosario	CA	IAC-20.C1.7.16
López, Xavier	A	IAC-20.E5.5.3
López Rivera, Antonio	CA	IAC-20.D2.3.8
López-Contreras, Elena	CA	IAC-20.D3.2A.2

M

Name	Role	Paper
M, Ganesh Pillai	CA	IAC-20.D5.2.10
M, Maneesh	CA	IAC-20.C2.6.13
M, Prerana	CA	IAC-20.B2.1.10
M, Radhakrishnan	CA	IAC-20.C4.2.9
M, Sunil	A	IAC-20.C2.1.2

M, Vikas	CA	IAC-20.D4.1.16
M S, Ahemedulkabeer	A	IAC-20.C4.3.1
M S, Suresh	CA	IAC-20.C4.VP.8
Ma, Cong	A	IAC-20.C3.VP.12
Ma, Haojun	A	IAC-20.C1.3.6
Ma, Jusha	CA	IAC-20.A7.2.11
Ma, Li	A	IAC-20.C2.VP.22
Ma, Shichao	CA	IAC-20.A6.VP.1
Ma, Weihua	CA	IAC-20.A6.10-B6.5.8
Ma, Weihua	A	IAC-20.B4.3.8
Ma, Weihua	A	IAC-20.C1.VP
Ma, Yuechen	CA	IAC-20.C1.7.7
MA, Yuwei	A	IAC-20.B5.3.2
Ma, Zhong	CA	IAC-20.B5.1.2
Mabrouk, Youmna	CA	IAC-20.A2.5.9
Macario Rojas, Alejandro	CA	IAC-20.B4.2.5
Maccaferri, Andrea	CA	IAC-20.A6.VP.11
Maccone, Claudio	CA	IAC-20.A4.1.10
Maccone, Claudio	CA	IAC-20.A4.1.11
Maccone, Claudio	CA	IAC-20.A4.2.7
Maccone, Claudio	A	IAC-20.A4.2.10
Maccone, Claudio	A	IAC-20.A4.2.11
Maccone, Claudio	A	IAC-20.A4.VP.1
MacDougall, Hamish	CA	IAC-20.A1.2.2
Machado, Vasco	CA	IAC-20.B4.6B.10
Machii, Kanako	CA	IAC-20.C1.5.10
Machuca, Pablo	A	IAC-20.C1.3.13
Mackintosh, Graham	CA	IAC-20.B3.7.2
Maclay, Timothy	A	IAC-20.E9.1-A6.8.1
MacMahon, David	CA	IAC-20.A4.1.1
MacMahon, David	CA	IAC-20.A4.1.3
MacMahon, David	CA	IAC-20.A4.1.4
MacMahon, David	CA	IAC-20.A4.1.5
Madakashira, Hemanth	CA	IAC-20.D1.2.10
Madara, Sahith Reddy	CA	IAC-20.A7.2.10
Madara, Sahith Reddy	CA	IAC-20.B6.VP.6
Madara, Sahith Reddy	CA	IAC-20.C2.7.16
Madden, Erin	CA	IAC-20.E1.7.14
Madden, Erin	A	IAC-20.E1.VP.2
Madhu, Shreesha	CA	IAC-20.A1.5.7
Madhu, Shreesha	CA	IAC-20.C4.9.8
Madhugiri, Niti	A	IAC-20.A3.2B.25
Madrid, Salvador	CA	IAC-20.A6.4.4
Madrid Jaen, Salvador	CA	IAC-20.B6.2.5
Maeda, George	CA	IAC-20.B4.1.1
Maeda, Kento	A	IAC-20.C2.3.8
Mafficini, Andrea	CA	IAC-20.D3.2A.1
Mafra de Carvalho, Manoel Jozeane	CA	IAC-20.D1.4B.12
Maged, Maha	A	IAC-20.B2.5.6
Magli, Enrico	CA	IAC-20.B5.1.5
Magli, Enrico	CA	IAC-20.D1.2.5
Magner, Robert	CA	IAC-20.B4.7.12
Magner, Robert	A	IAC-20.C1.8.13
Magsar, Anand	CA	IAC-20.B4.1.12
Mahajan, Rishika	CA	IAC-20.A4.2.8
Mahapatra, D Roy	CA	IAC-20.C2.3.13
MAHESH, V	CA	IAC-20.C4.3.1
MAHESH, V	CA	IAC-20.C4.3.13
MAHESH, V	CA	IAC-20.C4.4.3
Mahfouz, Ahmed	A	IAC-20.C1.9.12
Mahmoud Abd El Fattah, Reham	CA	IAC-20.E1.VP.23
Mahmoud Elhaj Mohammed, Hind	CA	IAC-20.C3.3.8
Mahmoudi, S. Hadi	CA	IAC-20.E7.VP.12
Mahoney, Erin	CA	IAC-20.A3.1.1
Mahoney, Robert	CA	IAC-20.E5.4.3
Mahoney, Robert	CA	IAC-20.E7.7.12
Maia, Maria Margarida	CA	IAC-20.B4.6B.10
Maier, Philipp	A	IAC-20.A7.3.8
Mainbayar, Altansukh	CA	IAC-20.B4.1.12
Mains, Deanna	A	IAC-20.A6.2.5
Majeed, Yumna	A	IAC-20.E1.1.6
Majewska, Ewa	CA	IAC-20.D2.6.7
Majsak, Joanna	A	IAC-20.A3.VP.11

Maki, Justin	CA	IAC-20.A3.3B.4
Makurunje, Phylis	A	IAC-20.C2.4.7
Malcolm, Kai	CA	IAC-20.D3.2A.2
Malhotra, Vinayak	A	IAC-20.C3.VP.9
Malhotra, Vinayak	A	IAC-20.C4.4.2
Malhotra, Vinayak	CA	IAC-20.D2.VP.8
Malhotra, Vinayak	A	IAC-20.D5.1.13
Malhotra, Vinayak	A	IAC-20.D6.1.12
Malinowska, Katarzyna	A	IAC-20.E6.4.10
Malkus, Mikala	CA	IAC-20.A3.5.5
Mallowan, Lucas	A	IAC-20.E7.7.13
Mallowan, Lucas	A	IAC-20.E9.1-A6.8.12
Maloney, Madison	CA	IAC-20.B3.2.4
Malphrus, Benjamin	CA	IAC-20.B2.3.6
Malvache, Arnaud	CA	IAC-20.E1.9.6
Mamidi, Aditya Vamsi	CA	IAC-20.B6.3.3
Mamin, Rod	A	IAC-20.D1.6.8
Mancini, Luigi Vincenzo	CA	IAC-20.E9.2.D5.4.1
Mandapati, Srikanth	CA	IAC-20.B5.1.5
Mandigma, Catherine Raisa Kimberly P.	A	IAC-20.D4.1.8
Mandt, Kathleen	CA	IAC-20.D4.4.3
Manente, Marco	CA	IAC-20.C4.5.17
Manghaipathy, Pavithra	CA	IAC-20.D4.5.7
Mani, Vipul	A	IAC-20.A3.5.13
Mankins, John C.	A	IAC-20.A1.7.5
Mankins, John C.	A	IAC-20.C3.1.1
Mankins, John C.	CA	IAC-20.C3.1.4
Mankins, John C.	CA	IAC-20.C3.1.11
Mankins, John C.	A	IAC-20.D3.1.3
Mankins, John C.	CA	IAC-20.D4.2.8
Mankins, Willa	CA	IAC-20.A1.7.5
Mann, Harleen Kaur	A	IAC-20.A6.9.6
Manohar, Aswin	CA	IAC-20.A3.2C.7
Manohar, Aswin	CA	IAC-20.A3.5.11
Manohar, Aswin	CA	IAC-20.B3.VP.12
Manousakis, Antonios	A	IAC-20.A7.1.1
Manousakis, Antonios	CA	IAC-20.A7.3.1
Manti, Nebile Pelin	CA	IAC-20.E9.2.D5.4.7
Manuela.aguzzi@polimi.it, Manuela	CA	IAC-20.E1.2.15
Manyapu, Kavya K.	A	IAC-20.B3.7.15
Manzi, Matteo	CA	IAC-20.A6.2.12
Manzi, Matteo	A	IAC-20.C1.6.5
Manzini, Chiara	CA	IAC-20.A2.7.8
Mao, Qingyun	CA	IAC-20.B4.3.2
Mao, Qingyun	CA	IAC-20.C2.1.12
Mao, Yong	A	IAC-20.E1.1.9
Mao, Yuanhong	A	IAC-20.B5.1.2
MaoGong, Jiang	CA	IAC-20.D5.1.14
Maouloud, Itawel Oumrou	CA	IAC-20.A6.1.1
Marasini, Cecilia	CA	IAC-20.E5.2.12
Marc, Róbert	A	IAC-20.D3.2B.10
Marchand, Laurent	CA	IAC-20.D5.3.5
Marchese, Valentina	CA	IAC-20.A3.5.17
Marchese, Valentina	CA	IAC-20.B4.8.8
Marchetti, Mario	CA	IAC-20.C2.6.6
Marchetti, Mario	CA	IAC-20.C2.8.6
Marchetti Spaccamela, Alberto	CA	IAC-20.C2.9.5
Marchionne, Lorenzo	CA	IAC-20.A6.6.3
Marchis, Franck	A	IAC-20.E1.9.6
Marciniak, Karolina	CA	IAC-20.D3.2A.8
Marcos, Cecilia	CA	IAC-20.B5.1.5
Marcos, Cecilia	CA	IAC-20.D1.2.5
Marcos, Miguel	CA	IAC-20.E5.2.12
Mardhani, Simran	CA	IAC-20.D3.2A.2
Mares, Vladimir	CA	IAC-20.A1.5.3
Mares, Vladimir	CA	IAC-20.B4.2.4
Margevich, Thomas	CA	IAC-20.C4.2.10
Maria Nunes de Jesus Luz, Jhéssica	A	IAC-20.C4.6.13
Mariani, Lorenzo	A	IAC-20.A6.1.7
Mariko, Teramoto	CA	IAC-20.B4.2.1
Mariko, Teramoto	CA	IAC-20.B4.2.7
Marini, Marco	CA	IAC-20.C2.4.2
Mariotti, Gilles	CA	IAC-20.B4.6A.8

Markov-Vetter, Daniela	A	IAC-20.B3.4-B6.4.8
Marlow, Jeffrey	CA	IAC-20.E1.7.4
Marmuse, Florian	CA	IAC-20.E2.3-GTS.4.11
MARNAT, Maurice	CA	IAC-20.A7.2.11
Marozas, Tomas	A	IAC-20.E9.1-A6.8.9
Marpu, Prashanth	CA	IAC-20.B4.4.9
Marpu, Prashanth	CA	IAC-20.C2.VP.5
Marpu, Prashanth	CA	IAC-20.E2.4.4
Marpu, Prashanth	CA	IAC-20.E2.4.11
Marpu, Prashanth	CA	IAC-20.E2.4.12
Marquardt, Axel	CA	IAC-20.C4.1.13
Marques, Felipe Lopes	CA	IAC-20.D1.5.3
Marques, Felipe Lopes	CA	IAC-20.D1.5.6
Marques-Quinteiro, Pedro	CA	IAC-20.B3.VP.6
Marrs, Ian	CA	IAC-20.C4.10-C3.5.3
Marsalek, Karel	CA	IAC-20.A1.5.9
Marsetič, Aleš	CA	IAC-20.B1.2.14
Marsh, Marco	CA	IAC-20.D4.1.3
Marshall, Stephen	CA	IAC-20.B1.5.3
Martin, Anne-Sophie	A	IAC-20.E7.3.11
Martin, Annie	CA	IAC-20.B3.7.2
Martin, Donald	CA	IAC-20.C3.4.2
Martin, Gary	CA	IAC-20.A5.1.6
Martin, Sebastian	CA	IAC-20.A3.2B.2
Martin, Sylvain	CA	IAC-20.A7.1.8
Martin Estrana, Veronica	CA	IAC-20.A1.1.2
Martin-Lagarde, Marine	A	IAC-20.A7.2.3
Martin-Neira, Manuel	CA	IAC-20.C1.3.14
Martina, Maurizio	CA	IAC-20.B5.1.5
Martinelli, Hugo	CA	IAC-20.A3.2C.7
Martinelli, Hugo	CA	IAC-20.A3.5.11
Martinelli, Hugo	CA	IAC-20.B3.VP.12
Martinez, Morgan	CA	IAC-20.D3.1.2
Martinez, Morgan	A	IAC-20.D5.2.3
Martinez, Peter	CA	IAC-20.B3.7.11
Martinez, Peter	A	IAC-20.E3.2.9
Martinez, Peter	A	IAC-20.E3.4.1
Martinez, Peter	CA	IAC-20.E7.2.16
Martinez, Peter	CA	IAC-20.E7.5.7
Martinez, Tevon	CA	IAC-20.A3.5.5
Martinez Diaz, Jose Luis	CA	IAC-20.B4.VP.10
Martinez Mata, Alfonso	CA	IAC-20.E2.3-GTS.4.12
Martinez Rey, Noelia	A	IAC-20.A6.5.3
Martinez-Frias, Jesus	CA	IAC-20.A5.1.7
Martinotti, Giuseppe	CA	IAC-20.B4.6A.8
Martucci, Luana Filomena	CA	IAC-20.C2.6.9
Martín-Torres, Javier	CA	IAC-20.A2.3.9
Martínez, Beatriz	CA	IAC-20.E5.2.12
Martínez Mariscal, Javier	CA	IAC-20.E2.3-GTS.4.12
Maru, Yusuke	CA	IAC-20.A2.4.13
Maru, Yusuke	CA	IAC-20.D2.4.2
Mary, Stéphane	CA	IAC-20.A3.4B.2
Marzioli, Paolo	CA	IAC-20.A1.VP.23
Marzioli, Paolo	CA	IAC-20.A2.7.10
Marzioli, Paolo	CA	IAC-20.A2.7.11
Marzioli, Paolo	A	IAC-20.A6.10-B6.5.1
Marzioli, Paolo	CA	IAC-20.B4.1.8
Marzioli, Paolo	CA	IAC-20.B4.2.7
Marzioli, Paolo	A	IAC-20.B4.VP.11
Marzioli, Paolo	A	IAC-20.D1.1.8
Marzioli, Paolo	A	IAC-20.D6.1.7
Marzioli, Paolo	A	IAC-20.E1.4.7
Marzo, Cosimo	CA	IAC-20.A6.VP.3
Marée, Hugo	CA	IAC-20.E1.2.12
Masali, Melchiorre	CA	IAC-20.A3.2C.31
Mascetti, Gabriele	A	IAC-20.A2.6.1
Mascetti, Gabriele	A	IAC-20.B3.3.2
Mascolo, Luigi	A	IAC-20.C1.7.10
Masdemont, Josep J.	CA	IAC-20.C1.7.9
Mashood, Ahmed	CA	IAC-20.B4.6A.9
Mashtakov, Yaroslav	CA	IAC-20.B4.7.4
Mashtakov, Yaroslav	CA	IAC-20.C1.VP.1
Masiero, Riccardo	CA	IAC-20.A2.7.8

Masiero, Riccardo	A	IAC-20.B2.2.8
Maskey, Abhas	A	IAC-20.E1.8.7
Mason, James	CA	IAC-20.A6.5.3
Maspero, Giulio	CA	IAC-20.A4.2.7
Massari, Mauro	CA	IAC-20.A6.VP.11
Massari, Mauro	CA	IAC-20.E2.1.3
Masserini, Alessandro	CA	IAC-20.A6.VP.14
Massironi, Matteo	CA	IAC-20.A3.2B.2
Masson-Zwaan, Tanja	A	IAC-20.D4.5.10
Masson-Zwaan, Tanja	CA	IAC-20.E3.2.10
Masson-Zwaan, Tanja	CA	IAC-20.E7.VP.15
Massotti, Luca	CA	IAC-20.C1.3.3
Masuda, Fumiko	A	IAC-20.E7.2.9
Masuda, Tetsuya	A	IAC-20.A3.4B.5
Masui, Hirokazu	CA	IAC-20.B4.2.7
Masui, Hirokazu	CA	IAC-20.B4.6B.5
Masui, Hirokazu	CA	IAC-20.E6.VP.3
Mathieu, Benoit	CA	IAC-20.B1.2.7
Mathur, Monish	CA	IAC-20.A3.5.4
Mathur, Monish	CA	IAC-20.B6.VP.8
Mathur, Monish	CA	IAC-20.C2.4.4
Matsui, Takafumi	CA	IAC-20.C4.4.6
Matsumiya, Makoto	CA	IAC-20.D6.1.1
Matsumoto, Jun	CA	IAC-20.A2.4.13
Matsumoto, Masato	CA	IAC-20.C1.9.2
Matsumoto, Satoshi	CA	IAC-20.A2.2.11
Matsumoto, Shiori	A	IAC-20.C2.1.14
Matsuo, Shinobu	CA	IAC-20.A5.4-D2.8.1
Matsushita, Masanori	CA	IAC-20.C2.9.3
Matsuura, Shuji	CA	IAC-20.D1.2.8
MATSUZAKI, Ichiyo	CA	IAC-20.D4.2.2
Matthiae, Daniel	CA	IAC-20.A1.5.9
Mattos, Alan	A	IAC-20.B2.VP.2
Matula, Emily	CA	IAC-20.A1.7.7
Matunaga, Saburo	CA	IAC-20.C1.9.1
Matviyenko, Sergiy	A	IAC-20.B1.2.13
Maurice, Sylvestre	CA	IAC-20.A3.3B.3
Maurya, Shubham	CA	IAC-20.C4.3.1
Maurya, Shubham	A	IAC-20.C4.4.3
Mauskopf, Philip	CA	IAC-20.A7.2.4
May, Lisa	CA	IAC-20.B3.8.10
Mayank, Mayank	A	IAC-20.B2.3.8
Mayank, Mayank	A	IAC-20.C2.8.12
Mayditia, Hasan	CA	IAC-20.B4.7.8
Mayer, DeLaine	CA	IAC-20.D4.5.8
Mayer, Hannes	A	IAC-20.E4.1.3
Mayer, Robert	CA	IAC-20.A1.4.9
Mayorova, Vera	A	IAC-20.A6.6.2
Mayorova, Vera	CA	IAC-20.B4.2.9
Mayorova, Vera	CA	IAC-20.B4.6A.10
Mayorova, Vera	CA	IAC-20.C4.8-B4.5A.8
Mayorova, Vera	CA	IAC-20.D3.1.1
Mayorova, Vera	A	IAC-20.E1.5.3
Mayville, William E.	CA	IAC-20.E1.5.6
Mayville, William E.	CA	IAC-20.E1.VP.12
Mayville, William E.	CA	IAC-20.E2.4.1
Mayville, William E.	A	IAC-20.E4.3.3
Mazanek, Daniel	CA	IAC-20.B3.1.11
Małecki, Szymon	CA	IAC-20.D2.6.9
Małek, Andrzej	CA	IAC-20.D3.2A.8
Mbengue, Makane Moïse	CA	IAC-20.E3.1.9
McAlister, Philip	CA	IAC-20.B3.2.5
McAllister, Fiona	A	IAC-20.A1.VP.22
McAllister, Fiona	CA	IAC-20.A4.2.6
McAllister, Fiona	CA	IAC-20.E5.4.1
McAvinia, Ruth	CA	IAC-20.A7.2.11
Mccallister, billy mccallister	CA	IAC-20.D1.4A.7
McCammon, Daniel	CA	IAC-20.B6.1.4
McCammon, Daniel	A	IAC-20.D1.4A.11
McCarthy, Brian	A	IAC-20.C1.6.4
McDevitt, M. Ryan	CA	IAC-20.C4.8-B4.5A.5
McGrath, Michael	CA	IAC-20.A3.3A.4
McGrath II, Peter	A	IAC-20.B3.2.7

McGregor, Carolyn P	CA	IAC-20.A1.4.2
McHenry, Neil	CA	IAC-20.A1.3.1
McKenzie, Taylor	CA	IAC-20.A1.3.3
McKevitt, James E.	A	IAC-20.E2.1.9
McKnight, Darren	A	IAC-20.A6.2.1
McKnight, Darren	A	IAC-20.A6.6.3
McKnight, Darren	CA	IAC-20.E9.1-A6.8.1
McNutt, Jr., Ralph L.	A	IAC-20.D4.4.3
McQuaide, Maria	A	IAC-20.A3.4A.1
McQuaide, Maria	CA	IAC-20.C1.4.9
McVey, John	CA	IAC-20.A6.4.6
Means, Laura	CA	IAC-20.B3.1.11
MEBREK, Mohammed Ali	A	IAC-20.B2.VP.4
Mecella, Massimo	CA	IAC-20.C2.9.5
Medanić, Mirta	CA	IAC-20.E3.3.17
Medanić, Mirta	CA	IAC-20.E3.VP.3
Medon, Artur	CA	IAC-20.A5.1.6
MEENA, VISHAL KUMAR	A	IAC-20.C3.3.4
Megias, Aleix	CA	IAC-20.B4.4.11
Mehrotra, Prachi	CA	IAC-20.B1.4.3
Mehta, Sanjeev	CA	IAC-20.E1.3.15
Mei, Di (Vito)	A	IAC-20.E7.1.11
Meier, Lucas	CA	IAC-20.C4.1.13
Meijer, Lex	CA	IAC-20.C1.9.6
Meister, Jaspar	CA	IAC-20.E2.3-GTS.4.10
Mejuto, Javier	A	IAC-20.B4.9-GTS.5.7
Mejuto, Javier	A	IAC-20.E5.VP.12
Melis, Andrea	CA	IAC-20.A4.2.7
Melnikova, Valeriia	A	IAC-20.B4.2.9
Melograna, Catrina	CA	IAC-20.A7.2.11
Membibre, Francisco	CA	IAC-20.B5.1.5
Membibre, Francisco	CA	IAC-20.D1.2.5
Membibre, Francisco	CA	IAC-20.D1.3.7
Memmo, Giuseppe	CA	IAC-20.C3.3.9
Menaria, Neelabh	A	IAC-20.B1.VP.16
Menaria, Neelabh	CA	IAC-20.C3.2.8
Menaria, Neelabh	CA	IAC-20.C3.2.9
Mendieta, Isaac	CA	IAC-20.E2.3-GTS.4.6
Mendoza, Sandra	CA	IAC-20.D3.2A.11
Meng, Jianghao	A	IAC-20.B1.VP.7
Meng, Liang	CA	IAC-20.C4.3.10
Meng, Siyang	CA	IAC-20.A3.VP.20
Meng, Siyang	A	IAC-20.A6.10-B6.5.8
Mengu, Cho	CA	IAC-20.B1.5.6
Mengu, Cho	CA	IAC-20.B6.3.11
Mengu, Cho	CA	IAC-20.C1.4.8
Mengu, Cho	CA	IAC-20.E6.VP.3
Menicucci, Alessandra	CA	IAC-20.B2.3.4
Menicucci, Alessandra	CA	IAC-20.B4.8.1
Menicucci, Alessandra	CA	IAC-20.C1.1.1
Menicucci, Alessandra	A	IAC-20.C2.6.1
Menkin, Evgeny	CA	IAC-20.D1.4A.7
Menon, Sethu Nandakumar	A	IAC-20.E7.2.15
Menon, Sethu Nandakumar	A	IAC-20.E7.5.8
Menshenin, Yaroslav	A	IAC-20.D1.4A.6
Menshenin, Yaroslav	A	IAC-20.E1.4.5
Menting, Esmée	CA	IAC-20.D2.3.8
Menting, Esmée	A	IAC-20.D2.5.15
Meringolo, Cristina	CA	IAC-20.A2.7.4
Merisio, Gianmario	CA	IAC-20.A3.2B.8
Merz, Klaus	CA	IAC-20.A6.2.3
Messias, Thiago	A	IAC-20.D1.4B.9
Messidoro, Piero	CA	IAC-20.E6.5-GTS.1.9
Messina, Piero	A	IAC-20.E5.2.8
Meszaros, Atila	CA	IAC-20.A3.2C.18
Metelli, Giulio	CA	IAC-20.A1.VP.23
Metelli, Giulio	CA	IAC-20.A2.7.11
Metwally, Mohamed	CA	IAC-20.B1.3.15
Metzger, Lorin	CA	IAC-20.B4.7.6
Meyer, Annaliese	CA	IAC-20.A3.2C.18
Meyer, Lukas	CA	IAC-20.A3.2B.1
Meyer, Marit	CA	IAC-20.A1.8.9
Meyer zu Erpen, Nora	CA	IAC-20.B1.1.12

Meza Cardenas, Alex Frank	CA	IAC-20.E2.3-GTS.4.7
Meza Velez, Ivan	CA	IAC-20.A4.1.10
Mhatre, Pradnesh	CA	IAC-20.B5.1.11
Mi, Zhenhao	A	IAC-20.C2.VP.6
Mi, Zhenhao	A	IAC-20.C4.4.1
Michel, Patrick	A	IAC-20.A3.4A.3
Michel, Patrick	CA	IAC-20.A3.4B.2
Micheletti Cremasco, Margherita	CA	IAC-20.A3.2C.31
Michigami, Keisuke	CA	IAC-20.A2.4.13
Miedziński, Dariusz	A	IAC-20.D2.6.9
Mierkiewicz, Edwarnd	CA	IAC-20.B4.2.13
Mierzwa, Karol	CA	IAC-20.D3.2A.5
Migliorati, Andrea	CA	IAC-20.D1.2.5
Miglioretti, Federico	CA	IAC-20.B4.8.8
Mihai, Sergiu-Ştefan	A	IAC-20.C1.3.5
Mihalache, Nicolae	CA	IAC-20.B6.VP.7
Mihara, Yorichika	A	IAC-20.D2.1.2
Mihara, Yorichika	A	IAC-20.D2.4.6
Mihm, Moritz	CA	IAC-20.E1.7.14
Mikhalchenko, Elena	CA	IAC-20.A2.1.7
Mikhalchenko, Elena	CA	IAC-20.A2.2.6
Mikhalchenko, Elena	A	IAC-20.A2.2.8
Mikhalchenko, Elena	A	IAC-20.C4.7.3
Milani, Fabio	CA	IAC-20.B5.1.5
Milani, Fabio	CA	IAC-20.D1.2.5
Milhim, Mohammed	CA	IAC-20.A7.2.11
Milord, Lauren	A	IAC-20.E1.2.11
Milord, Lauren	CA	IAC-20.E1.3.11
Milord, Lauren	A	IAC-20.E1.3.16
Milord, Lauren	A	IAC-20.E1.8.2
Milstein, Oren	A	IAC-20.A1.5.9
Milton, Julia	CA	IAC-20.B1.1.3
Milton, Julia	CA	IAC-20.E1.5.1
Milton, Julia	A	IAC-20.E1.6.12
Milton, Julia	CA	IAC-20.E1.VP.3
Mimoso, Diogo	A	IAC-20.A1.1.2
Mimoso, Diogo	CA	IAC-20.A1.VP.18
MIN, LIU	A	IAC-20.A6.3.6
MIN, LIU	A	IAC-20.B3.7.16
Minai, Oleksandr	CA	IAC-20.A2.3.5
Minakami, Erika	A	IAC-20.A6.1.10
Mindahun, Wondwossen	A	IAC-20.B5.2.8
Minenko, Victor	CA	IAC-20.A3.5.3
Mingchao, Wang	CA	IAC-20.A1.7.17
Mingchao, Wang	CA	IAC-20.A3.2C.2
Mingchao, Wang	A	IAC-20.A3.2C.12
Mingliang, CHEN	CA	IAC-20.C2.VP.7
Minisci, Edmondo	CA	IAC-20.A6.2.11
Minisci, Edmondo	CA	IAC-20.A6.7.4
Mintus, Agata	A	IAC-20.A1.7.4
Mintus, Agata	A	IAC-20.E5.1.9
Miosso, Cristiano	CA	IAC-20.A3.5.1
Miotti, Luca	CA	IAC-20.B1.4.13
Miralles, Pablo	CA	IAC-20.D3.2A.2
Miranda, Cristina	A	IAC-20.E3.3.7
Miranda, Cristina	CA	IAC-20.E9.2.D5.4.4
Mirek, Krystian	CA	IAC-20.B3.VP.7
Mirzaei, Mona	CA	IAC-20.A7.2.4
Mishra, Ashish	CA	IAC-20.C4.6.2
Misra, Arun	CA	IAC-20.A6.5.6
Misra, Arun	CA	IAC-20.A6.VP.15
Misuri, Tommaso	A	IAC-20.C4.5.3
Mitani, Shinji	CA	IAC-20.D1.6.5
Mitchell, Gareth	CA	IAC-20.C3.4.2
MITRA, SUNNY	A	IAC-20.C4.VP.1
Mittag, Uwe	CA	IAC-20.A1.VP.19
Miyamoto, Kiyona	A	IAC-20.C1.9.1
Miyata, Kikuko	CA	IAC-20.C1.5.11
Miyata, Kikuko	A	IAC-20.E1.7.10
Miyazaki, Yasuyuki	CA	IAC-20.B4.1.1
Mizes, Adam	CA	IAC-20.D4.1.19
Mizoguchi, Hiroshi	CA	IAC-20.C2.1.11
Mizuno, Hiroyasu	CA	IAC-20.A3.2B.9

MN, PRAKASH	A	IAC-20.C4.1.8
Moccia, Antonio	CA	IAC-20.B4.7.7
Mochol, Aleksandra	CA	IAC-20.D2.6.9
Mochonov, Ruslan	A	IAC-20.D6.3.10
Moeller, Gregor	CA	IAC-20.B1.4.13
Mohammad, Murad	CA	IAC-20.A3.1.3
Mohammad Zaki, Syazana Basyirah	A	IAC-20.B6.3.11
Mohan, Pradeep	A	IAC-20.C2.VP.23
MOHAN SUNDARA, SIVA	CA	IAC-20.C1.8.9
Mohanty, Joshit	A	IAC-20.B3.8.11
Mohanty, Joshit	CA	IAC-20.D3.2A.2
Mohanty, Maya	CA	IAC-20.E1.5.6
Mohanty, Maya	CA	IAC-20.E1.VP.12
Mohanty, Maya	CA	IAC-20.E2.4.1
Mohanty, Maya	CA	IAC-20.E4.3.3
Mohite, Akshat	CA	IAC-20.B5.1.11
Moin, Aquib	CA	IAC-20.A3.3B.1
Mok, Sung-Hoon	A	IAC-20.B4.3.6
Mok, Sung-Hoon	CA	IAC-20.B4.4.4
Molin, Stéphanie	CA	IAC-20.B2.2.1
Molina, Maria	CA	IAC-20.B4.9-GTS.5.7
Molina, Maria	CA	IAC-20.E5.VP.12
Molinaro, Antonella	CA	IAC-20.B2.1.11
Mommerency, Maxim	CA	IAC-20.E6.5-GTS.1.5
Momose, Kazuhiko	A	IAC-20.E5.2.4
Monaco, Federico	A	IAC-20.D5.2.8
Monakhova, Uliana	CA	IAC-20.C1.1.13
Monakhova, Uliana	CA	IAC-20.C1.VP.1
Monchaux, David	CA	IAC-20.D2.6.1
Monereo, Yara	CA	IAC-20.A5.1.13
Monereo, Yara	CA	IAC-20.E1.9.13
Monette, Maxime	CA	IAC-20.C4.10-C3.5.10
Monge, Luis	CA	IAC-20.B4.9-GTS.5.7
Monge, Luis	CA	IAC-20.E5.VP.12
Mongis, Jacques	CA	IAC-20.D6.3.1
Monici, Monica	CA	IAC-20.A2.7.4
Monsky, Anneke	CA	IAC-20.A7.2.1
Montabone, Luca	CA	IAC-20.A3.3B.1
Montana, Carlos	A	IAC-20.E1.3.13
Montanari, Elias	A	IAC-20.B5.2.2
Montebugnoli, Stelio	CA	IAC-20.A4.2.7
Monteith, Wayne	A	IAC-20.D6.1.2
Monticelli, Rita Carla Francesca	CA	IAC-20.A4.2.7
Moore, Christopher	A	IAC-20.A5.1.1
Moore, Steven	CA	IAC-20.A1.2.2
Moraguez, Matthew	CA	IAC-20.A3.2B.7
Moraguez, Matthew	CA	IAC-20.A3.3A.9
Moraguez, Matthew	A	IAC-20.D3.2B.8
Morais, Renata	CA	IAC-20.E5.1.10
Morakinyo, Oluwatoyin	CA	IAC-20.E1.7.16
Moran, Joseph	CA	IAC-20.D2.4.6
Morante, David	CA	IAC-20.C1.5.7
Morbiducci, Umberto	CA	IAC-20.A2.7.9
Morchedi, Sondes	CA	IAC-20.D3.2A.2
More, Harshal	CA	IAC-20.D3.2A.2
Moreels, Philippe	CA	IAC-20.B4.9-GTS.5.1
Morelli, Andrea Carlo	CA	IAC-20.B2.2.8
Moreno López, David	CA	IAC-20.C4.VP.23
Moreno-Ibáñez, Manuel	CA	IAC-20.B4.3.4
Morgan-Dimmick, Peter	CA	IAC-20.A5.3-B3.6.3
Mori, Osamu	CA	IAC-20.A2.4.13
Mori, Osamu	CA	IAC-20.A6.5.12
Mori, Osamu	CA	IAC-20.C1.8.8
Mori, Osamu	CA	IAC-20.C2.9.2
Mori, Osamu	CA	IAC-20.C2.9.3
Mori, Osamu	CA	IAC-20.D1.2.8
Moriceau, Clara	CA	IAC-20.A3.2C.7
Moriceau, Clara	CA	IAC-20.A3.5.11
Moriceau, Clara	CA	IAC-20.B3.VP.12
Moriceau, Clara	CA	IAC-20.E1.5.11
Moriceau, Clara	CA	IAC-20.E2.3-GTS.4.8
Moroshima, Reiji	CA	IAC-20.E5.2.4
Morozova, Elina	A	IAC-20.E7.4.12

Morris, Salma	A	IAC-20.D5.2.10
Morsillo, Francesco	A	IAC-20.B4.6A.8
Morzhukhina, Alena V.	CA	IAC-20.C2.7.5
Morzhukhina, Alena V.	CA	IAC-20.C2.8.6
Moseman, Travis	A	IAC-20.A5.2.1
Moseman, Travis	CA	IAC-20.B3.8.2
Moser, Hubert Anton	CA	IAC-20.D1.4B.6
Moses, Robert	CA	IAC-20.D3.2B.3
Mosin, Vasilii	CA	IAC-20.B1.4.2
Moskatiniev, Ivan	CA	IAC-20.A3.2B.15
Moskatiniev, Ivan	CA	IAC-20.A5.3-B3.6.2
Mostafa, Aya Mamdoh Mohamed	CA	IAC-20.D5.1.1
Mostert, Sias	A	IAC-20.E3.1.6
Motazedi, Mohammad	A	IAC-20.B4.6B.9
Motruk, Nandor	A	IAC-20.D2.VP.9
Motto Ros, Paolo	CA	IAC-20.D1.2.5
Motzigemba, Matthias	A	IAC-20.B2.2.4
Mou, Yu	CA	IAC-20.A5.1.6
Mouftaou, Fohla	CA	IAC-20.B1.5.15
Moutsouroufi, Konstantina	CA	IAC-20.D5.3.3
Mozo, Alvaro	CA	IAC-20.B2.8-GTS.3.8
Mpondo, William	CA	IAC-20.E2.3-GTS.4.11
MS, SURESH	CA	IAC-20.C4.VP.14
Mu, Cesar	CA	IAC-20.B3.7.6
Mu, Yao	A	IAC-20.A1.8.11
Mu, ZhongCheng	CA	IAC-20.A6.3.7
Mudau, Naledzani	A	IAC-20.B1.1.7
Mueller, Juergen	CA	IAC-20.D4.4.4
Mueller, Robert	A	IAC-20.C2.5.4
Mueller, Robert	A	IAC-20.D3.2B.3
Mugellesi-Dow, Roberta	CA	IAC-20.B5.2.7
Mugellesi-Dow, Roberta	CA	IAC-20.D5.2.12
Mughal, Muhammad Rizwan	A	IAC-20.B4.6B.1
Mughal, Muhammad Rizwan	A	IAC-20.B4.9-GTS.5.4
Mughal, Muhammad Rizwan	CA	IAC-20.B4.VP.4
Muhire, Desire	A	IAC-20.B2.4.1
Muirhead, Brian	A	IAC-20.A3.3A.1
Muirhead, Brian	CA	IAC-20.A3.3A.2
Mujtahid, Mujtahid	CA	IAC-20.B4.1.13
Mukai, Chiaki	CA	IAC-20.D4.2.5
Mukesh, T Ananda	CA	IAC-20.B1.VP.16
Mukesh, T Ananda	CA	IAC-20.C3.2.8
Mukesh, T Ananda	A	IAC-20.C3.2.9
Mukesh, T Ananda	CA	IAC-20.D1.VP
Mukesh, T Ananda	CA	IAC-20.D5.1.3
Mukhachev, Petr	A	IAC-20.B6.VP.4
Mukhachev, Petr	CA	IAC-20.D1.4B.4
Mukhachev, Petr	CA	IAC-20.E1.7.2
Mukherjee, Bhaskar	A	IAC-20.A1.5.3
Mukherjee, Bhaskar	A	IAC-20.B4.2.4
Mukherjee, Sunip	CA	IAC-20.E1.3.15
Mukherjee, Swarnajyoti	A	IAC-20.A3.5.17
Mukherjee, Swarnajyoti	CA	IAC-20.D1.1.10
Mulder, Edwin	CA	IAC-20.A1.VP.19
Mullie, Jeroen	CA	IAC-20.A7.1.8
Mullin, Nikolay	A	IAC-20.C2.5.12
Mullin, Nikolay	A	IAC-20.C2.7.12
Mullins, Carie	CA	IAC-20.D3.1.7
Munagala, Sivaram	CA	IAC-20.C2.5.1
MUNEMASA, Yasushi	A	IAC-20.B2.2.5
Mungiguerra, Stefano	A	IAC-20.C2.4.6
Muniyappa, Prathima	A	IAC-20.E1.9.1
Munoz-Arias, Mauricio	CA	IAC-20.C1.9.9
Munusamy, Raja	A	IAC-20.B2.7.6
Munusamy, Raja	CA	IAC-20.C3.VP.7
Munusamy, Raja	A	IAC-20.D1.1.9
Murakami, Naomi	CA	IAC-20.B6.3.7
MURANAKA, Takanobu	A	IAC-20.A6.5.8
Murari, Alessandro	CA	IAC-20.A2.7.8
Murayama, Junichi	CA	IAC-20.B4.3.7
Murayama, Junichi	CA	IAC-20.C1.8.12
Murdoch, Naomi	CA	IAC-20.A3.4A.3
Murfett, Anthony	A	IAC-20.B3.1.8

Murillo, Fabio	A	IAC-20.E6.5-GTS.1.7
Murnane, Austin	A	IAC-20.D4.5.4
MUROI, Kei	CA	IAC-20.D4.2.2
Murray, Michelle	CA	IAC-20.D6.1.2
Murray, Neil Paul	CA	IAC-20.D2.6.5
Murrow, David	CA	IAC-20.A1.5.9
Murthi K. R., Sridhara	CA	IAC-20.B1.5.5
Murthi K. R., Sridhara	A	IAC-20.E6.4.5
Murugathasan, Latheepan	CA	IAC-20.B4.2.4
Musarella, Lorenzo	CA	IAC-20.D1.4B.5
Musilova, Michaela	A	IAC-20.A3.2B.16
Musilova, Michaela	CA	IAC-20.A3.VP.24
Musilova, Michaela	CA	IAC-20.A5.1.15
Musso, Paolo	CA	IAC-20.A4.1.10
Musso, Paolo	A	IAC-20.A4.2.7
Muthuswamy, Loganathan	CA	IAC-20.C3.VP.6
Muttoni, Carla	CA	IAC-20.A3.3B.11
Muñoz, Jacinto	CA	IAC-20.D2.5.5
Muñoz Elorza, Iñigo	A	IAC-20.A5.2.8
Muñoz Tejeda, Jesús Manuel	CA	IAC-20.B4.1.17
Muñoz Tejeda, Jesús Manuel	A	IAC-20.C4.VP.23
Muñoz Tejeda, Jesús Manuel	A	IAC-20.E2.2.1
Muñoz-Tuñón, Casiana	CA	IAC-20.B2.1.5
Mwaniki, Charles	CA	IAC-20.B4.1.8
Mwita, Peter	CA	IAC-20.B4.1.8
Myagmar, Otgonbaatar	CA	IAC-20.B4.1.12
Myller, Michal	A	IAC-20.A6.VP.13
Métrailler, Lionel	CA	IAC-20.D5.2.15
Möckel, Pascal	CA	IAC-20.A2.VP.3
Mølgaard, Anders	CA	IAC-20.C4.5.11
Müller, Marcus Gerhard	CA	IAC-20.A3.2B.1
Müller, Michael	CA	IAC-20.C4.1.13

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Name	Role	Paper
N, Vipin	CA	IAC-20.D5.2.10
N.V.S, Arunprakash	CA	IAC-20.D5.2.10
Nabity, James	CA	IAC-20.A1.7.10
Nadeem Alduri, Awais Ahmed	A	IAC-20.B4.VP.14
Nadiradze, Andrey	CA	IAC-20.C2.7.9
Nagasaki, Shuji	CA	IAC-20.C3.4.13
Nagase, Ryo	CA	IAC-20.C4.4.6
Nagashima, Ruriko	A	IAC-20.E1.6.10
Nageswaran, G	CA	IAC-20.C4.VP.14
NAGESWARAN, GANAPATHY NARAYANAN	CA	IAC-20.C2.1.2
NAGESWARAN, GANAPATHY NARAYANAN	CA	IAC-20.C4.2.2
Nahar, Lakshya	CA	IAC-20.A4.2.8
Nailard, Oliver	CA	IAC-20.D2.4.5
Naimark, Yaron	CA	IAC-20.A3.2A.6
Nair, Manu H.	CA	IAC-20.B4.VP.27
Nair P, Unnikrishnan	CA	IAC-20.C4.VP.8
Naja, Geraldine	A	IAC-20.D2.2.2
Najczuk, Justyna	CA	IAC-20.A3.VP.11
Nakajima, Yu	CA	IAC-20.C1.8.2
Nakamura, Takaya	A	IAC-20.C2.1.11
Nakamura, Takaya	CA	IAC-20.C2.9.4
Nakamura, Takaya	CA	IAC-20.C3.1.11
Nakasuka, Shinichi	CA	IAC-20.A3.5.10
Nakasuka, Shinichi	CA	IAC-20.C2.1.14
Naldi, Giovanni	CA	IAC-20.A6.VP.11
Nalepa, Jakub	CA	IAC-20.A6.VP.13
Nalepa, Jakub	A	IAC-20.B1.4.6
NAMTA, GOURAV	CA	IAC-20.B4.1.17
Nanjangud, Angadh	CA	IAC-20.B4.VP.27
Nanjid, Narmandakh	CA	IAC-20.B4.1.12
Nanni, Francesca	CA	IAC-20.C2.5.3
Nanni, Francesca	CA	IAC-20.C2.5.14
Napier, Lauren	A	IAC-20.E3.4.2
Narain, Antariksh	CA	IAC-20.A3.2B.4
Naranchimeg, Chantsaldulam	CA	IAC-20.B4.1.12

Narayanaswamy, Nagarajan	A	IAC-20.A3.VP.17
Nardi, Luca	CA	IAC-20.A1.VP.23
Nardi, Luca	CA	IAC-20.A2.7.11
Nardone, Roberto	CA	IAC-20.D1.4B.5
Nardone, Roberto	CA	IAC-20.D5.2.9
Nascetti, Augusto	CA	IAC-20.A1.6.2
Nascimento, Henrique	A	IAC-20.E3.6.7
Naseh, Hassan	A	IAC-20.B2.6.7
Naseh, Hassan	A	IAC-20.D2.VP.3
Nasi, Afroditi	CA	IAC-20.D5.3.3
Nasila, Antti	CA	IAC-20.B4.9-GTS.5.4
Nassey, Charlotte	CA	IAC-20.B3.8.12
Nassey, Charlotte	CA	IAC-20.E1.5.11
Nassisi, Annamaria	CA	IAC-20.E1.VP.13
Nassisi, Annamaria	A	IAC-20.E6.5-GTS.1.4
Nastasi, Nicholas	A	IAC-20.A1.8.9
Nath, Pranav	CA	IAC-20.C4.6.10
Navarro, Janina	CA	IAC-20.A4.2.7
Navarro-Medina, Fermin	CA	IAC-20.B4.6B.10
Nazarious, Miracle Israel	CA	IAC-20.E5.VP.4
Neal, Clive	CA	IAC-20.B3.8.10
Nechitaylo, Galina	A	IAC-20.A1.8.3
Neculaescu, Ana-Maria	CA	IAC-20.A5.1.6
Neduncheran, Adhithiyan	CA	IAC-20.A2.5.10
Neduncheran, Adhithiyan	A	IAC-20.A3.5.4
Neduncheran, Adhithiyan	CA	IAC-20.B6.VP.8
NEERUGANTI, JAGADEESH	CA	IAC-20.B1.VP.16
NEERUGANTI, JAGADEESH	A	IAC-20.C3.2.8
NEERUGANTI, JAGADEESH	CA	IAC-20.C3.2.9
Negodiaev, Sergei	CA	IAC-20.A6.9.11
Negri, Andrea	CA	IAC-20.B4.6A.8
Negri, Barbara	CA	IAC-20.A2.1.2
Neidlinger, Kristin	A	IAC-20.A5.1.15
Neijndorff, Claire	CA	IAC-20.B2.3.6
Neilson, Hilding	CA	IAC-20.E1.1.10
Nellimala, Abdul Shukoor	CA	IAC-20.E2.4.4
Nelson, Nicolas	A	IAC-20.E1.9.14
Nelson, Tony	CA	IAC-20.A3.3B.3
Nemolato, Altea Renata Maria	A	IAC-20.A1.6.4
Nenarokomov, Aleksey V.	CA	IAC-20.C2.7.5
Nenarokomov, Aleksey V.	CA	IAC-20.C2.7.9
Nenarokomov, Aleksey V.	CA	IAC-20.C2.8.6
Nenarokomov, Kirill	CA	IAC-20.C2.7.5
Nenzi, Paolo	CA	IAC-20.D5.3.8
Nercellas, Aarón	CA	IAC-20.B2.VP.3
Nergaard, Kim	CA	IAC-20.A3.2B.2
Neri, Emanuele	CA	IAC-20.A2.7.10
Nerovny, Nikolay	CA	IAC-20.B4.2.9
Neto, Fortunato	A	IAC-20.D2.1.10
Netti, Vittorio	A	IAC-20.A5.3-B3.6.3
Neumann, Patrick	A	IAC-20.C4.8-B4.5A.13
Neumann, Patrick	CA	IAC-20.E5.4.3
Neumann, Patrick	CA	IAC-20.E7.7.12
Neumann, Tobias	CA	IAC-20.E2.3-GTS.4.1
Neunzig, Oliver	CA	IAC-20.C4.10-C3.5.10
Nevmerzhitskiy, Yan	A	IAC-20.A6.9.11
Newell, Luke	CA	IAC-20.D4.1.9
Newell, Luke	A	IAC-20.E3.2.7
Newell, Raymond	CA	IAC-20.A3.3B.3
Newman, Christopher	A	IAC-20.E7.2.13
Newman, Christopher	CA	IAC-20.E9.1-A6.8.4
Newman, Josh	CA	IAC-20.A3.2A.9
Newton, Elizabeth	CA	IAC-20.A5.4-D2.8.3
Newton, Elizabeth	CA	IAC-20.A5.4-D2.8.9
Newton, Elizabeth	CA	IAC-20.C4.2.10
Ngetich, Gladys	CA	IAC-20.A2.3.4
Nguyen, Anh	CA	IAC-20.A7.2.11
Nguyen, Thi Hien	CA	IAC-20.E5.VP.4
Nicholas, Austin	CA	IAC-20.A3.3A.1
Nicholls, John	CA	IAC-20.C2.4.9
Nicola, Giorgio	CA	IAC-20.A3.2C.7
Nicola, Giorgio	CA	IAC-20.A3.5.11
Nicola, Giorgio	CA	IAC-20.B3.VP.12

Nicolas, Michel	CA	IAC-20.A1.1.4
Nicolas-Alvarez, Jorge	A	IAC-20.E2.3-GTS.4.3
Nicolls, Michael	CA	IAC-20.A6.2.1
Nie, Wansheng	CA	IAC-20.C4.7.4
Nie, Wansheng	CA	IAC-20.C4.VP.21
Nie, Xin	A	IAC-20.B2.6.15
Niehuss, Gerrit	CA	IAC-20.E2.3-GTS.4.10
Nielsen, Jens	CA	IAC-20.B4.2.5
Nielsen, Jens	CA	IAC-20.C4.5.11
Niemelä, Petri	CA	IAC-20.B4.6B.1
Niemelä, Petri	CA	IAC-20.B4.9-GTS.5.4
Nigam, Rupal	CA	IAC-20.B3.7.6
Nigussie, Andnet	CA	IAC-20.B5.2.8
Nikawa, Takeshi	A	IAC-20.A1.8.7
Nikicio, Ajie Nayaka	CA	IAC-20.A5.2.12
Nikitin, Valeriy	CA	IAC-20.A2.2.3
Nikitin, Valeriy	CA	IAC-20.A2.2.8
Nikitin, Valeriy	CA	IAC-20.A2.4.4
Nikitin, Valeriy	CA	IAC-20.C4.7.3
Nikolaev, Evgeny	CA	IAC-20.A3.VP.15
Nikonov, Vasily	CA	IAC-20.D4.1.18
Ning, Xin	CA	IAC-20.A6.VP.1
Nir, Nicole	CA	IAC-20.E5.VP.4
Nishida, Shin-Ichiro	A	IAC-20.A6.VP.17
Nishiyama, Kazutaka	CA	IAC-20.C1.5.10
Nissim Nir, Meir	CA	IAC-20.A3.2A.6
NIU, Aimin	A	IAC-20.A2.3.3
NIU, Aimin	CA	IAC-20.B4.1.2
Nkansah, Kwasi	A	IAC-20.A1.3.8
Nndanganeni, Rendani Rejoyce	A	IAC-20.D5.3.6
Noack, Daniel	CA	IAC-20.B4.6B.8
Nocerino, Alessia	A	IAC-20.C1.1.10
Nodar, Diego	CA	IAC-20.B2.VP.3
Noell, Ryan	CA	IAC-20.E2.3-GTS.4.9
Nogueira, Tiago	CA	IAC-20.B4.3.1
Nohmi, Masahiro	A	IAC-20.B4.6B.3
Noma, Wataru	A	IAC-20.C1.7.6
Nonaka, Satoshi	CA	IAC-20.D2.4.2
Nonaka, Satoshi	A	IAC-20.D2.6.4
Noomen, Ron	CA	IAC-20.D3.3.5
Noorani, Arzoo	CA	IAC-20.A5.2.9
Noorani, Arzoo	CA	IAC-20.A7.3.1
Noorma, Mart	CA	IAC-20.A3.2B.14
Norberg, Carol	A	IAC-20.E1.3.14
NORFINI, ALEANDRO	CA	IAC-20.A2.7.4
Noroozian, Omid	CA	IAC-20.A7.2.4
Nosikova, Inna	CA	IAC-20.A1.2.1
NOSSEIR, Ahmed E. S.	A	IAC-20.C4.8-B4.5A.2
Novak, Daniel	A	IAC-20.B6.2.2
Novak, Daniel	CA	IAC-20.E6.2.5
Novara, Carlo	CA	IAC-20.C1.3.3
Novara, Carlo	CA	IAC-20.C1.9.5
Novin zadeh, Alireza	CA	IAC-20.B2.6.7
Nowak, Maciej	CA	IAC-20.B1.4.6
Nowakowski, Pawel	CA	IAC-20.D2.6.7
Nugnes, Marco	CA	IAC-20.A6.VP.14
Nugnes, Marco	CA	IAC-20.B1.5.12
Nukala, Venkata Sunil Sai	A	IAC-20.C4.2.9
Nummela, Niina	CA	IAC-20.E6.3.8
Nyamsuren, Turmunkh	CA	IAC-20.B4.1.12
Nyaza, Kirill	CA	IAC-20.C2.5.12
Nyberg, Erik	CA	IAC-20.A2.3.9
Nye, Bill	CA	IAC-20.A3.1.9

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Name	Role	Paper
O'Brien, Dennis	A	IAC-20.E7.2.20
O'Leary, Aiden	CA	IAC-20.D2.3.2
Obispo, Hugo	CA	IAC-20.E5.4.9
Ochirsukh, Enkhmend	CA	IAC-20.B4.1.12
Ochoa López, Vilma Lorena	CA	IAC-20.B4.9-GTS.5.7
Ochoa López, Vilma Lorena	CA	IAC-20.E5.VP.12
Oda, Miyo	A	IAC-20.E5.1.4
Offord Harle, Nelly	A	IAC-20.D3.2A.1
Ogawa, Shiho	CA	IAC-20.B3.3.7
Ogawara, Akira	A	IAC-20.C4.1.10
Ogunlesi, Christopher	CA	IAC-20.C2.4.9
Ogunlesi, Christopher	A	IAC-20.C2.5.10
Ogwankwa, Franklin	CA	IAC-20.B4.1.17
Ohira, Genki	A	IAC-20.C1.2.12
Ohira, Yoshinobu	A	IAC-20.D4.2.6
Ohkawa, Yasushi	CA	IAC-20.A6.5.8
Ohtake, Makiko	CA	IAC-20.A3.2B.9
OI, Yuichi	CA	IAC-20.D4.2.2
Oiko, Vitor	CA	IAC-20.C2.6.12
Okabe, Yo	CA	IAC-20.B3.7.17
Okada, Nobu	CA	IAC-20.E9.1-A6.8.4
Okamoto, Hiroyuki	CA	IAC-20.C1.8.2
Okino, Taiki	A	IAC-20.D4.3.4
Okuizumi, N.	CA	IAC-20.C2.9.3
Okumura, Teppei	CA	IAC-20.A6.5.8
Okuyama, Kei-Ichi	CA	IAC-20.C3.3.8
Oladosu, Olakunle Rufus	CA	IAC-20.B2.6.11
Olaniyanu, Emmanuel	A	IAC-20.E2.4.5
Olavio, Chaya	CA	IAC-20.A5.1.13
Oleynik, Sergey	CA	IAC-20.B2.7.1
Oleynik, Sergey	CA	IAC-20.B2.8-GTS.3.5
Olfe García, Karl Stephan	A	IAC-20.C1.8.5
Olfe García, Karl Stephan	CA	IAC-20.E5.2.12
Oliva, Jorge	CA	IAC-20.A4.2.7
Olivares Mendez, Miguel	CA	IAC-20.A3.2B.3
Oliveira, Mariana	CA	IAC-20.E3.6.7
Olivella, Guillem	CA	IAC-20.B2.8-GTS.3.3
Oliver, Steven	CA	IAC-20.A5.3-B3.6.3
Oliver Scholts, Sebastian	CA	IAC-20.D2.3.8
Olivieri, Lorenzo	A	IAC-20.A6.3.1
Olivieri, Lorenzo	CA	IAC-20.A6.4.4
Olivieri, Lorenzo	A	IAC-20.A6.5.13
Oloko-Oba, Mustafa	CA	IAC-20.E1.7.16
Olson, Colleen	CA	IAC-20.D4.5.8
Oltrogge, Daniel	CA	IAC-20.A6.2.3
Oluwafemi, Funmilola Adebisi	A	IAC-20.A2.5.10
Omowumi, Blesssing	CA	IAC-20.B2.1.9
Omowumi, Blesssing	CA	IAC-20.B2.1.12
Ondrej, Santolik	CA	IAC-20.D5.3.3
Onida, Luca	CA	IAC-20.C4.5.5
Onimago, Yakubu	CA	IAC-20.E1.7.16
Onishi, Shunsuke	CA	IAC-20.B4.3.7
Onishi, Shunsuke	CA	IAC-20.C1.8.12
Onuki, Misuzu	A	IAC-20.D6.3.7
Onuki, Misuzu	A	IAC-20.E6.2.6
Opromolla, Roberto	CA	IAC-20.B4.7.7
Opromolla, Roberto	CA	IAC-20.C1.1.10
Oqab, Haroon B.	CA	IAC-20.C3.1.5
Ordasi, András	A	IAC-20.E1.7.6
Ordoubadian, Björn	CA	IAC-20.A3.2A.6
Orduy Rodriguez, Jaime Enrique	CA	IAC-20.D1.4A.2
Orgeira-Crespo, Pedro	CA	IAC-20.B4.6B.10
Oriol, Stephane	CA	IAC-20.D2.4.5
Oroya Barreto, David Dario	CA	IAC-20.E2.3-GTS.4.7
Oroya Barreto, Jhuliño Alexis	CA	IAC-20.E2.3-GTS.4.7
Ortega, Asier	CA	IAC-20.A6.4.4
Ortega Flores, Brenda Vanessa	CA	IAC-20.E1.1.8
Ortega Flores, Brenda Vanessa	CA	IAC-20.E1.VP.19
Ortega-González, Héctor	CA	IAC-20.D3.2A.2
Ortega-Hernandez, Jose Maria	A	IAC-20.A5.1.7
Ortelt, Markus	A	IAC-20.C4.VP.18
Ortiz, Jose-Luis	CA	IAC-20.A7.3.8
Ortiz de Zárate, Jose	CA	IAC-20.A2.3.8
Orzechowski, Leszek	CA	IAC-20.A1.7.4
Orzechowski, Leszek	CA	IAC-20.E5.1.9
Orzechowski, Leszek	CA	IAC-20.E5.VP.6
Osborne, Richard	CA	IAC-20.D2.2.15
Oschwald, Michael	CA	IAC-20.C4.1.15
Osetskiy, Nikolay	CA	IAC-20.A1.2.5
Osetskiy, Nikolay	CA	IAC-20.A1.VP.20
Oshima, Takeshi	CA	IAC-20.A3.4B.5
Osinovyi, Hennadii	A	IAC-20.A1.7.3
Osinski, Gordon	CA	IAC-20.E1.2.7
Osipova, Ksenia	A	IAC-20.D1.2.6
Osmundson, Alan	CA	IAC-20.A3.2B.4
Oswald, Jean	A	IAC-20.D2.2.4
Oswald, Michael	CA	IAC-20.A6.2.6
Ota, Daichi	CA	IAC-20.C2.6.4
Ota, Daichi	A	IAC-20.C3.1.11
Otsuka, Akiko	CA	IAC-20.E1.VP.13
Otsuka, Kiyotoshi	CA	IAC-20.D4.3.4
Otsuka, Shunsuke	CA	IAC-20.A6.5.8
Otsuki, Masatsugu	CA	IAC-20.D1.2.8
Otte, Michael	CA	IAC-20.E2.1.4
Ottolina, Daniele	CA	IAC-20.B6.3.6
Ou yang, Yi nong	A	IAC-20.A3.VP.20
Ou yang, Yi nong	CA	IAC-20.A6.10-B6.5.8
Ouda, Abdelrahman	CA	IAC-20.D5.1.1
Oumer, Nassir W.	CA	IAC-20.D3.3.3
Outlaw, Ron	CA	IAC-20.C4.5.11
Ouyang, Theodore	CA	IAC-20.A3.2A.4
Ouyang, Theodore	CA	IAC-20.E1.2.13
Ouyang, Theodore	CA	IAC-20.E1.5.6
Ouyang, Theodore	CA	IAC-20.E1.VP.12
Ouyang, Theodore	CA	IAC-20.E2.4.1
Ouyang, Theodore	CA	IAC-20.E4.3.3
Ovchinnikov, Mikhail	CA	IAC-20.A6.5.5
Ovchinnikov, Mikhail	A	IAC-20.B4.7.4
Ovchinnikov, Mikhail	A	IAC-20.C1.4.13
Ovchinnikov, Mikhail	CA	IAC-20.C1.8.6
Ovienmhada, Ufuoma	A	IAC-20.B1.5.15
Owczarzak, Mikołaj	CA	IAC-20.A3.VP.11
Owens, Alex	CA	IAC-20.B2.6.5
Ozaki, Naoya	CA	IAC-20.A3.5.10
Ozaki, Naoya	CA	IAC-20.C1.3.13
Ozaki, Naoya	CA	IAC-20.C1.4.10
Ozaki, Naoya	CA	IAC-20.C1.5.8
Ozaki, Naoya	A	IAC-20.C1.5.10
Ozawa, Michio	CA	IAC-20.B4.1.1
Ozoadibe, Chuka	CA	IAC-20.B2.1.9
Ozoadibe, Chuka	CA	IAC-20.B2.1.12
Oštir, Krištof	CA	IAC-20.B1.2.14
O'Shea, Michael	A	IAC-20.E1.1.10
O'Shea, Michael	A	IAC-20.E1.6.7

P

Name	Role	Paper
P, Jayesh	A	IAC-20.C2.VP.25
P, MANOJ	CA	IAC-20.A4.2.8
P, MANOJ	CA	IAC-20.D1.VP
P, Sajeev	CA	IAC-20.C4.VP.1
P, Sandeep Reddy	CA	IAC-20.E1.5.2
P, Sridharan	CA	IAC-20.C4.3.13
P, Sunil	CA	IAC-20.B3.7.13
P K, Gopinathan	CA	IAC-20.C4.2.2
P MOHAN, SARATH	A	IAC-20.C2.VP.24
Paar, Gerhard	CA	IAC-20.A3.2B.1
Paccagnella, Enrico	CA	IAC-20.C4.3.11
Pace, Giovanni	CA	IAC-20.E1.4.9
Pacelli, Claudia	CA	IAC-20.A2.6.1
Packard, Michael	CA	IAC-20.B6.3.1
Paffett, John	CA	IAC-20.D1.1.6
Pagan, Adam S.	CA	IAC-20.B3.7.11
Pagan, Fabio	CA	IAC-20.A4.2.7
Pagani, Alfonso	CA	IAC-20.C2.2.8
Paghdar, Dhavalkumar	CA	IAC-20.C4.6.10
Paglialonga, Alessia	CA	IAC-20.A1.2.10
Pagone, Michele	A	IAC-20.C1.3.3
Pagone, Michele	CA	IAC-20.C1.9.5
Pahler, Andreas	CA	IAC-20.A7.3.8
Paikowsky, Deganit	A	IAC-20.E3.3.1
Paissoni, Christopher	CA	IAC-20.C4.5.5
Paissoni, Christopher Andrea	CA	IAC-20.C4.9.3
Pajusalu, Mihkel	CA	IAC-20.A3.2B.14
Pajusalu, Mihkel	A	IAC-20.A3.4B.4
Pak, Andrey	CA	IAC-20.A6.10-B6.5.4
Pakosz, Michal	A	IAC-20.D2.6.7
Pal, Pritha	CA	IAC-20.C4.VP.30
Palaia, Guido	CA	IAC-20.B1.2.9
Paleari, Lorenzo	CA	IAC-20.C2.5.14
Palecka, Jan	A	IAC-20.A2.VP.2
Paled, Vijayasree	A	IAC-20.B6.3.5
Palladino, Stefano	CA	IAC-20.B2.2.8
Pallaschke, Siegmar	CA	IAC-20.D5.2.12
Pallichadath, Vidhya	CA	IAC-20.C4.8-B4.5A.9
Palmerini, Giovanni B.	CA	IAC-20.B4.3.9
Palmerini, Giovanni B.	CA	IAC-20.C1.1.2
Palmerini, Giovanni B.	CA	IAC-20.D5.3.8
Palmroth, Minna	CA	IAC-20.B4.6B.1
Paloski, William	CA	IAC-20.B3.3.12
Pan, Binfeng	CA	IAC-20.C1.2.5
Pan, Hongliang	CA	IAC-20.C4.7.15
Panagopoulos, Jorge	A	IAC-20.E2.2.2
Panajotovic, Stefan	A	IAC-20.E2.3-GTS.4.10
Pancalli, Maria Giulia	CA	IAC-20.A2.7.10
Pancalli, Maria Giulia	CA	IAC-20.A6.10-B6.5.1
Pancalli, Maria Giulia	CA	IAC-20.B4.VP.11
Pancalli, Maria Giulia	CA	IAC-20.E1.4.7
Pancalli, Maria Giulia	CA	IAC-20.E1.VP.13
Pandele, Alexandru	CA	IAC-20.C1.3.5
Pandey, Koshika	A	IAC-20.D2.VP.8
Pandey, Roshan	A	IAC-20.B4.3.12
Pandi Perumal, Raja	A	IAC-20.D1.4B.6
Pandit, Jiwan Kumar	A	IAC-20.C2.3.13
Pandya, Shawna	A	IAC-20.A1.3.11
Pandya, Shawna	A	IAC-20.A1.3.12
Pandya, Shawna	A	IAC-20.A1.3.13
Pandya, Shawna	A	IAC-20.A1.4.8
Pandya, Shawna	A	IAC-20.A3.VP.3
Panella, Massimo	CA	IAC-20.C2.3.1
Pang, Weijian	A	IAC-20.C2.7.4
Panian, Jaymee	CA	IAC-20.D4.4.4
Panicucci, Paolo	A	IAC-20.C1.2.6
Panigrahi, Sridhar	CA	IAC-20.C4.2.13
Panov, Vladimir	CA	IAC-20.A6.9.11
Pansyrnyi, Oleg	CA	IAC-20.B4.7.4
Pansyrnyi, Oleg	CA	IAC-20.C1.8.6
Panthakkan, Alavikunhu	A	IAC-20.B5.3.1
Pany, Thomas	CA	IAC-20.A3.4A.9
Panzirsch, Michael	CA	IAC-20.D1.6.4
Paolozzi, Antonio	CA	IAC-20.C2.1.10
Papadimitriou, Constantinos	CA	IAC-20.D5.3.3
Papulov, Anatolii	A	IAC-20.C4.VP.15
Paradiso, Nunzia Maria	A	IAC-20.E3.1.2
Parasuram, Suraj	CA	IAC-20.D3.2A.2
Pardal, Paula	CA	IAC-20.C1.8.1
Pardeshi, Bhaskar	CA	IAC-20.E2.4.13
Pardini, Carmen	CA	IAC-20.A6.2.1
Pardini, Carmen	A	IAC-20.A6.4.5
Pareek, Ritvik	A	IAC-20.C4.VP.7
Paris, Claudio	CA	IAC-20.A2.1.2
Paris, Claudio	A	IAC-20.C2.1.10
Paris, Claudio	CA	IAC-20.C2.6.9
Parisi, Leonardo	CA	IAC-20.A6.1.7
Park, Eugene	CA	IAC-20.C3.4.9
Park, Ji Hyun	CA	IAC-20.B4.VP.26
Park, Junwoo	A	IAC-20.E3.2.5
Park, Seonghyeon	A	IAC-20.C4.VP.9
Park, SongYi	A	IAC-20.C2.3.9
Park, Tae-Yong	A	IAC-20.B4.6A.11

Parker, David	A	IAC-20.B3.1.2
Parnas, Neta	A	IAC-20.B3.9-GTS.2.3
Parnichkun, Manukid	CA	IAC-20.A6.6.12
Parrella, Rosa Maria Lucia	A	IAC-20.E3.3.15
Parrella, Rosa Maria Lucia	A	IAC-20.E3.6.6
Pashkov, Anatoliy	CA	IAC-20.D2.4.12
Pasini, Angelo	CA	IAC-20.C4.8-B4.5A.2
Pasini, Angelo	CA	IAC-20.E1.4.9
Pasqualetto Cassinis, Lorenzo	CA	IAC-20.C1.1.1
Pasquaré Mariotto, Federico	CA	IAC-20.A4.2.7
Pastor-Rodríguez, Alejandro	A	IAC-20.A6.9.4
Pastore, Roberto	CA	IAC-20.C2.6.6
Pastore, Roberto	CA	IAC-20.C2.8.6
Patacas, Elisio	CA	IAC-20.E1.9.13
Patamia, Steven	CA	IAC-20.D4.3.9
Patarin-Jossec, Julie	A	IAC-20.E5.1.11
Patatti, Isabella	CA	IAC-20.E6.5-GTS.1.4
Patel, Chirag	CA	IAC-20.A1.5.9
Patel, Parshati	A	IAC-20.E1.2.7
Patel, Sayjel	A	IAC-20.E5.1.10
Paternostro, Simone	CA	IAC-20.E5.VP.4
Patial, Samridh	CA	IAC-20.D3.2B.2
Patil, Hrithik	CA	IAC-20.D2.3.6
Patil, Ishan	CA	IAC-20.B4.VP.14
Patil, Praful	CA	IAC-20.C3.2.9
Patil, Rohit	CA	IAC-20.E2.4.6
Patil, Sanjay	CA	IAC-20.E2.4.13
Patterson, Ava	CA	IAC-20.E1.2.1
Paudel, Saurav	CA	IAC-20.E1.VP.22
Paugnat, Hadrien	A	IAC-20.E2.3-GTS.4.11
Paul, Aditya Savio	A	IAC-20.E2.1.4
Paul, Gary	CA	IAC-20.A7.2.11
Paul, Jose	CA	IAC-20.C2.1.2
Paul, Jose	CA	IAC-20.C4.2.2
Paul, Michael	CA	IAC-20.D4.4.3
Pauli, Maciej	CA	IAC-20.D3.2A.5
Pauly, Lippin	CA	IAC-20.A3.2C.7
Pauly, Lippin	CA	IAC-20.A3.5.11
Pauly, Lippin	CA	IAC-20.B3.VP.12
Pavarin, Daniele	CA	IAC-20.C4.3.11
Pavarin, Daniele	CA	IAC-20.C4.5.17
Pavarin, Daniele	CA	IAC-20.C4.8-B4.5A.3
Pavkov, Vladimir	CA	IAC-20.A2.3.1
Pavlis, Erricos C.	CA	IAC-20.A2.1.2
Pavlov, Nikolay	A	IAC-20.E5.VP.8
Pavlovskis, Edgars	CA	IAC-20.D3.2B.6
Pawlicki, Diana	A	IAC-20.C4.10-C3.5.13
Paxton, Larry	A	IAC-20.B4.2.13
Paxton, Larry	A	IAC-20.B4.4.10
Payler, Samuel	CA	IAC-20.A3.2B.2
Payne, David	CA	IAC-20.B2.6.5
Pazooki, Farshad	CA	IAC-20.B2.6.7
Pearce, Charlotte	CA	IAC-20.A1.4.3
Pearce, Charlotte	CA	IAC-20.A1.VP.19
Pechenkova, Ekaterina	CA	IAC-20.A1.2.1
Peddakotla, Sai Abhishek	A	IAC-20.A6.2.11
Pedersen, Andreas Lyder	CA	IAC-20.D5.2.15
Pedersen, Lykke	A	IAC-20.E1.6.6
Pedrini, Daniela	CA	IAC-20.C4.5.5
Pedrini, Daniela	CA	IAC-20.C4.5.9
Peer, Makthoum	CA	IAC-20.A3.2B.17
Peer Mohamed, Mohamed Makthoum	A	IAC-20.A1.VP.13
Peer Mohamed, Mohamed Makthoum	A	IAC-20.A3.2C.24
Peet, Matthew	CA	IAC-20.D4.3.2
Peev, Thomas	CA	IAC-20.D4.4.4
Peiret, Albert	A	IAC-20.C2.3.7
Pelaez, Jesus	CA	IAC-20.A3.3A.10
Pelaez, Jesus	CA	IAC-20.C1.7.3
Peldszus, Regina	A	IAC-20.E3.4.5
Pell, Sarah Jane	A	IAC-20.B3.9-GTS.2.6
Pell, Sarah Jane	A	IAC-20.E5.VP.6
Pellacani, Andrea	A	IAC-20.A3.4A.4
Pellacani, Andrea	CA	IAC-20.A3.4A.7

Pellander, Erik	CA	IAC-20.E3.3.3
Pellander, Erik	CA	IAC-20.E7.4.11
Pellegrinetti, Dario	CA	IAC-20.C1.5.14
Pellegrini, Gianni	CA	IAC-20.B4.6A.8
Pellegrino, Alice	A	IAC-20.E1.VP.13
Pellegrino, Sergio	CA	IAC-20.C2.2.8
Pellouin, Clément	CA	IAC-20.A3.2C.18
Peluso, Daniel	CA	IAC-20.E1.9.6
Pender-Rose, Ilana	CA	IAC-20.E5.4.3
Pender-Rose, Ilana	CA	IAC-20.E7.7.12
Peng, Bo	CA	IAC-20.D5.1.14
Peng, Hao	A	IAC-20.A6.7.3
PENG, Kun	CA	IAC-20.C1.3.10
Peng, Yuanyuan	A	IAC-20.E1.6.3
Peng, Yuanyuan	CA	IAC-20.E6.5-GTS.1.11
Peng, Zhang	CA	IAC-20.B4.VP.16
Pennec, Yan	CA	IAC-20.B3.7.9
Pepermans, Lars	A	IAC-20.D2.3.8
Pepermans, Lars	CA	IAC-20.D2.5.15
Pepermans, Lars	CA	IAC-20.D2.6.8
Perdigues Armengol, Josep Maria	CA	IAC-20.B2.2.3
Pereira, Aaron	CA	IAC-20.A3.2B.1
Pereira, Aaron	CA	IAC-20.A3.2B.2
Pereira, Aaron	A	IAC-20.B2.4.7
Pereira, Aaron	CA	IAC-20.B2.5.1
Pereira, Aaron	CA	IAC-20.D1.6.4
Pereira, Aaron	A	IAC-20.D4.2.9
Pereira, André Miguel	CA	IAC-20.B4.6B.10
Pereira, Maquelin	A	IAC-20.E7.1.14
Perepechkin, Anatoliy	CA	IAC-20.C4.5.16
Perera, Chamal	A	IAC-20.C1.7.13
Pereyra, Carlota	CA	IAC-20.A4.2.7
Perez, Jerome	CA	IAC-20.D2.4.10
Perez, Karen	CA	IAC-20.A4.1.3
Perez Hernandez, Cristina	A	IAC-20.A6.2.4
Perez Molina, Karina	A	IAC-20.D5.2.12
Perini, Federico	CA	IAC-20.A6.VP.11
Permatasari, Yunita	A	IAC-20.E3.2.15
Perozzi, Ettore	CA	IAC-20.A6.VP.3
Perret, Alain	CA	IAC-20.D2.4.10
Perry, Randall	CA	IAC-20.E1.2.9
Persad, Aaron H.	CA	IAC-20.A3.VP.17
Peter, Ashley	CA	IAC-20.D2.9-D6.2.2
Peters, James S	CA	IAC-20.D1.4A.7
Peters, Thomas Vincent	CA	IAC-20.B6.2.5
Petersen, Michael	CA	IAC-20.E4.1.2
Peterson, Samuel	A	IAC-20.B2.3.6
Peterson, Timothy	CA	IAC-20.B4.1.17
Petit, Alexis	CA	IAC-20.A6.9.8
Petit, Mathieu	CA	IAC-20.A6.VP.14
Petrenko, Olexandr	CA	IAC-20.C4.5.16
Petrenko, Roman	A	IAC-20.C4.2.15
Petro, Elaine	A	IAC-20.C4.9.10
Petrone, Giuseppe	CA	IAC-20.C2.3.3
Petrovichev, Victor	CA	IAC-20.A1.2.1
Petschelt, Stefan	A	IAC-20.B3.4-B6.4.3
Petschelt, Stefan	A	IAC-20.B3.4-B6.4.5
Petschelt, Stefan	A	IAC-20.B3.7.12
Pettersson, Henrik	CA	IAC-20.B2.3.6
Petti, Fulvio	CA	IAC-20.A1.6.4
Petukhov, Viacheslav	CA	IAC-20.A6.6.8
Petukhov, Viacheslav	A	IAC-20.C1.4.12
Peñaloza Flores, Alejandra Michelle	A	IAC-20.B3.VP.9
Peñaloza Flores, Alejandra Michelle	CA	IAC-20.C2.VP.1
Peñin, Luis F.	CA	IAC-20.B6.2.5
Pham, Anthony	CA	IAC-20.E2.3-GTS.4.10
Philip, N K	CA	IAC-20.C1.8.9
Piacenza, Chiara	CA	IAC-20.A2.6.1
Piacenza, Chiara	CA	IAC-20.B3.3.2
Pianorsi, Mattia	CA	IAC-20.D4.5.3
Picard, Martin	CA	IAC-20.A3.2A.9
Picard, Mathieu	CA	IAC-20.B1.4.12
Picardi, Luigi	CA	IAC-20.D5.3.8

Picardo, Mauro	CA	IAC-20.A2.7.10
Picci, Niccolò	CA	IAC-20.A6.10-B6.5.1
Picci, Niccolò	CA	IAC-20.B4.VP.11
Picci, Niccolò	CA	IAC-20.E1.4.7
Piccinin, Margherita	CA	IAC-20.A2.7.8
Piccinin, Margherita	CA	IAC-20.A3.2C.23
Piccinin, Margherita	CA	IAC-20.C1.2.1
Piccirillo, Sara	CA	IAC-20.A2.6.1
Pickard, Aaron	CA	IAC-20.E9.2.D5.4.7
Pierdicca, Nazzareno	CA	IAC-20.B4.4.1
Piergentili, Fabrizio	CA	IAC-20.A6.10-B6.5.1
Piergentili, Fabrizio	CA	IAC-20.B4.VP.11
Piergentili, Fabrizio	CA	IAC-20.C2.6.6
Piergentili, Fabrizio	CA	IAC-20.C2.8.6
Piergentili, Fabrizio	CA	IAC-20.D1.1.8
Piergentili, Fabrizio	CA	IAC-20.D6.1.7
Piergentili, Fabrizio	CA	IAC-20.E1.4.7
Piergiacomo, Alessio	CA	IAC-20.A2.7.10
Pieroux, Didier	CA	IAC-20.B4.2.3
Pietras, Markus	CA	IAC-20.B4.VP.12
Pietras, Markus	CA	IAC-20.C3.1.6
Pigliaru, Lucia	CA	IAC-20.C2.5.14
Pignatelli, David	A	IAC-20.B4.5.7
PIGULEVSKI, IOURI	A	IAC-20.D2.VP.7
Pilinski, Emily	CA	IAC-20.B6.3.1
Pimenta, Joana	CA	IAC-20.B4.6B.10
Pimentel, Gildo	CA	IAC-20.E1.1.7
Pino, Josep	CA	IAC-20.B4.3.4
Pino, Paolo	CA	IAC-20.A3.2C.18
Pino, Paolo	A	IAC-20.D4.5.16
Pinto, Fernando	A	IAC-20.C4.5.8
Pinto, Rui	CA	IAC-20.D5.3.3
Pinto, Tiago	CA	IAC-20.B4.4.5
PINUMALLA, KIRAN	A	IAC-20.C4.3.3
Piperno, Osvaldo	CA	IAC-20.E3.6.6
Pipes, R. Byron	CA	IAC-20.C2.5.9
Piragino, Antonio	CA	IAC-20.C4.5.9
Piragino, Antonio	CA	IAC-20.C4.9.3
Piras, Annamaria	A	IAC-20.B3.1.10
Pires, Ana Lucia	CA	IAC-20.B4.6B.10
Pires dos Santos, Pryscilla	CA	IAC-20.C1.7.14
Pirrotta, Simone	CA	IAC-20.A2.1.2
Pirrotta, Simone	CA	IAC-20.A3.4A.2
Pirrotta, Simone	CA	IAC-20.A6.10-B6.5.1
Pirrotta, Simone	CA	IAC-20.B4.1.8
Pirrotta, Simone	CA	IAC-20.B4.8.8
Pirrotta, Simone	CA	IAC-20.B4.VP.11
Pisanu, Tonino	A	IAC-20.A6.VP.6
Pisanu, Tonino	CA	IAC-20.A6.VP.11
Pisova, Petra	A	IAC-20.B2.7.4
Pizzi, Sara	CA	IAC-20.B2.1.11
Piñeros, Holman	CA	IAC-20.D3.2A.11
Pla-García, Jorge	CA	IAC-20.A5.1.7
Plank, Jack	A	IAC-20.A5.4-D2.8.9
Plattard, Serge	A	IAC-20.E3.4.9
Ploutz-Snyder, Lori	CA	IAC-20.A1.3.1
Podda, Angelo	CA	IAC-20.A6.VP.6
Podda, Angelo	CA	IAC-20.A6.VP.11
Podladchikova, Tatiana	CA	IAC-20.E1.4.5
Poedts, Stefaan	CA	IAC-20.D5.3.3
Poiroux, Auguste	CA	IAC-20.E2.3-GTS.4.11
Pokrovskaya, Marina	A	IAC-20.E6.4.8
Poliacek, Matej	A	IAC-20.A3.2C.18
Poliacek, Matej	A	IAC-20.B3.8.8
Policella, Nicola	CA	IAC-20.B4.3.1
Polschikov, Sergei	CA	IAC-20.B4.2.9
Polsgrove, Tara	CA	IAC-20.B3.1.11
Pont, Gabriel	A	IAC-20.A3.3B.3
Pont, Gabriel	A	IAC-20.A3.4B.2
Pontani, Mauro	A	IAC-20.C1.3.12
Pontani, Mauro	CA	IAC-20.C1.6.15
Pop, Virgiliu	A	IAC-20.E4.2.11
Popov, Garri A.	CA	IAC-20.A6.6.8

Popper, Joseph	CA	IAC-20.E1.9.4
Popper, Rafael	CA	IAC-20.A3.1.3
Popper, Rafael	CA	IAC-20.E3.2.1
Porfirio Lopez Castellanos, Jose Mario	CA	IAC-20.E5.VP.12
Porras-Silesky, Catalina	CA	IAC-20.A2.4.7
Porretta, Marco	CA	IAC-20.B2.8-GTS.3.8
Porseva, Svetlana	CA	IAC-20.B4.2.9
Porter, Jeff	CA	IAC-20.A2.3.8
Posey, Jerry	CA	IAC-20.A1.5.9
Potenza, Fernando	CA	IAC-20.A3.2C.7
Potenza, Fernando	CA	IAC-20.A3.5.11
Potenza, Fernando	CA	IAC-20.B3.VP.12
Pothier, Benjamin	A	IAC-20.E1.6.2
Potter, Seth	CA	IAC-20.C3.2.5
Potter, Seth	CA	IAC-20.D3.2A.3
Potter, Simon	CA	IAC-20.E6.2.1
Pourhomayoun, Mohammad	CA	IAC-20.B5.2.1
Pournelle, Richard	A	IAC-20.B3.2.2
Pouzin, Norbert	CA	IAC-20.A1.VP.18
Pozza, Maria A	A	IAC-20.E7.3.7
Pozzobon, Riccardo	CA	IAC-20.A3.2B.2
Prabhu, A Avinash	CA	IAC-20.A2.VP.6
Pradeep, Shilpa	CA	IAC-20.E2.3-GTS.4.12
Pradhan, Swaraj Sagar	A	IAC-20.B4.7.13
Pradhan, Swaraj Sagar	CA	IAC-20.D4.5.7
Prado, Jean-Yves	A	IAC-20.A3.4B.9
Prado, Jean-Yves	A	IAC-20.D2.4.10
Prado Pino, Bonnie	A	IAC-20.C1.5.6
Praile, Catherine	CA	IAC-20.B6.2.5
Prajapati, Rakesh Chandra	CA	IAC-20.E1.VP.22
Praks, Jaan	CA	IAC-20.B4.6B.1
Praks, Jaan	CA	IAC-20.B4.9-GTS.5.4
Praks, Jaan	CA	IAC-20.B4.VP.4
Pramann, Brian	CA	IAC-20.A3.3A.4
Pranajaya, Freddy	CA	IAC-20.B1.2.14
Prandi, Gabriele	A	IAC-20.E3.2.13
Prasad, Mani Shankar	CA	IAC-20.A5.4-D2.8.4
Prasad, Mani Shankar	CA	IAC-20.B2.7.10
Prasath, Hari	CA	IAC-20.E1.1.7
Prashumn, Prashumn	A	IAC-20.C4.6.10
Pratap Rajawat, Arya	CA	IAC-20.A3.VP.10
Pratomo, Bina	CA	IAC-20.B4.7.8
PRATYUSH, P S B	CA	IAC-20.C4.6.7
Pravec, Petr	CA	IAC-20.A3.4A.3
Praveena, Punati	CA	IAC-20.B1.5.5
Preeti, Preeti	CA	IAC-20.E3.VP.1
Pregnolato Rotta, Francesca F.	CA	IAC-20.A3.2C.31
Preudhomme, Michael	CA	IAC-20.D4.4.4
Prevereaud, Ysolde	CA	IAC-20.D1.1.1
Prevereaud, Ysolde	CA	IAC-20.D2.3.4
Prevereaud, Ysolde	CA	IAC-20.E1.4.9
Price, Daniel	CA	IAC-20.A4.1.1
Price, Daniel	CA	IAC-20.A4.1.3
Price, Daniel	CA	IAC-20.A4.1.4
Price, Ian	CA	IAC-20.A6.5.3
Prinetto, Jacopo	CA	IAC-20.A3.2C.25
Pringle, Frederick	CA	IAC-20.A7.2.11
Pritchett, Robert	CA	IAC-20.C1.5.6
Pritykin, Dmitry	CA	IAC-20.C2.9.13
Priyadarshini, Nikhila	CA	IAC-20.B4.4.7
Proctor, Sian	CA	IAC-20.E3.2.14
Profitiliotis, Georgios	A	IAC-20.E6.3.10
Proietti, Simone	A	IAC-20.C1.6.15
Prokopeva, Angelina	CA	IAC-20.D1.4B.4
Prokudin, Sergey	CA	IAC-20.B4.9-GTS.5.2
Propst, Martin	CA	IAC-20.C4.1.13
Propst, Martin	A	IAC-20.C4.2.11
Prosochkina, Anastasia	A	IAC-20.E1.VP.3
Protopapa, Fabio	CA	IAC-20.A6.VP.11
Provornikova, Elena	CA	IAC-20.B4.2.13
Prysyazhnyuk, Anastasiia	A	IAC-20.A1.4.2
Przybyla, Bartos	CA	IAC-20.A1.5.9
Ptasiński, Grzegorz	CA	IAC-20.D2.6.7

Pu, Juntao	CA	IAC-20.A7.3.3
Puente, Nicolas	CA	IAC-20.D2.5.5
Pugno, Nicola Maria	CA	IAC-20.C2.VP.13
Puig-Hall, Mackenzie	CA	IAC-20.D2.9-D6.2.2
Puisa, Veronika	CA	IAC-20.E3.3.17
Puisa, Veronika	CA	IAC-20.E3.VP.3
Pullen, Anthony	CA	IAC-20.A7.2.4
Punzo, Francesco	A	IAC-20.C2.4.1
Pupillo, Giuseppe	CA	IAC-20.A6.VP.11
Puranik, Ishan	CA	IAC-20.A3.2B.4
Puri, Rachita	CA	IAC-20.C4.2.10
Purio, Mark Angelo	A	IAC-20.B1.5.6
Purpura, Giovanni	CA	IAC-20.A6.VP.11
Pushkarev, Dmitry	CA	IAC-20.C4.1.3
Pushko, Sergey	A	IAC-20.C2.2.11
Pushparaj, Nishanth	CA	IAC-20.C1.5.10
Pushparaj, Nishanth	A	IAC-20.C1.6.8
Pushparaj, Nishanth	CA	IAC-20.C1.VP
Pust, Michael	CA	IAC-20.B2.3.11
Pust, Michael	CA	IAC-20.B4.6B.8
Pustorino, Marco	CA	IAC-20.C1.3.12
Páez Betancourt, César Augusto	A	IAC-20.C2.VP.1
Pätschke, Susann	A	IAC-20.B2.3.12
Påhlsson, Philip	CA	IAC-20.D2.2.11

Q

Name	Role	Paper
Qaisar, Rizwan	A	IAC-20.A1.2.11
QI, Feng	A	IAC-20.D4.1.14
Qi, Song	CA	IAC-20.A6.6.10
Qi, Zumin	CA	IAC-20.D3.2B.11
QianQian, Lv	CA	IAC-20.D5.1.14
QIAO, JUNQING	CA	IAC-20.B4.VP.16
Qin, Fei	CA	IAC-20.C4.7.15
Qing, Zhang	CA	IAC-20.C2.VP.10
Qu, Lina	CA	IAC-20.A1.1.4
Quemerais, Eric	CA	IAC-20.B4.2.13
Quercia, Tatiana	CA	IAC-20.C2.9.5
Querzoni, Leonardo	CA	IAC-20.C2.9.5
Quimbaya, Fabio	CA	IAC-20.D3.2A.11
Quinde Cobos, Patricia	CA	IAC-20.A2.4.7
Quine, Brendan	CA	IAC-20.B1.VP.8

R

Name	Role	Paper
R, Gaurav	CA	IAC-20.A1.7.6
R, Gaurav	CA	IAC-20.A1.8.8
R, Gaurav	CA	IAC-20.A4.2.8
R, Gaurav	CA	IAC-20.B1.VP.16
R, Gaurav	CA	IAC-20.B5.1.7
R, Gaurav	CA	IAC-20.C3.2.8
R, Gaurav	CA	IAC-20.C3.2.9
R, Gaurav	CA	IAC-20.D1.VP
R, Gaurav	CA	IAC-20.D4.1.16
R, Gaurav	CA	IAC-20.D5.1.3
R, Gaurav	CA	IAC-20.E1.5.2
R, Jayalekshmi	CA	IAC-20.C4.1.14
R, Shilpa	CA	IAC-20.B1.5.5
R, Supreeth	CA	IAC-20.A3.3B.9
R, Suraj	CA	IAC-20.D5.1.3
Raadik, Taavi	CA	IAC-20.C3.4.10
Rachelson, Emmanuel	CA	IAC-20.B1.4.12
Rachkin, Dmitry	CA	IAC-20.B4.2.9
Rachmeler, Laurel	CA	IAC-20.A7.3.7
Radhakrishna, Ramesh Kumar	CA	IAC-20.C2.VP.23
Radomski, Nathan	A	IAC-20.C4.2.10
Radulovic, Angelica	CA	IAC-20.E2.3-GTS.4.6
Radziszewski, Kacper	CA	IAC-20.D3.2A.8
Raghavan, Jeenu	CA	IAC-20.C4.3.3
Rahimi, Afshin	A	IAC-20.B4.9-GTS.5.10
Rahmatillah, Rahmi	CA	IAC-20.B4.2.1
Rai, Akhand Pratap	A	IAC-20.E7.VP.5
RAI, NAIJITH	CA	IAC-20.C4.7.2
Raimalwala, Kaizad	A	IAC-20.A3.2C.3
Raimundi, Lucas	CA	IAC-20.D5.1.8
Rainjonneau, Serge	CA	IAC-20.B1.4.12
Raiyan, Mohammed	CA	IAC-20.E1.VP.20
Raj, Arun	CA	IAC-20.C4.3.1
Raj, Arun	A	IAC-20.C4.3.13
Raj, Arun	CA	IAC-20.C4.4.3
Raj, Eshaan	CA	IAC-20.B4.5.11
Raj, Harshit	CA	IAC-20.A4.2.8
Raj, Harshit	CA	IAC-20.D1.VP
Raj, Nischith	CA	IAC-20.A4.2.8
Raj, Nischith	CA	IAC-20.C3.2.9
Raj, Nischith	A	IAC-20.D1.VP
Rajagopalan, Rajeswari Pillai	CA	IAC-20.D4.2.9
Rajan, Aneesh	CA	IAC-20.C4.VP.1
Rajan, Raj Thilak	CA	IAC-20.A6.VP.9
Rajan, Raj Thilak	A	IAC-20.A7.2.11
Rajan, Raj Thilak	CA	IAC-20.B4.3.6
Rajendran, Kiran	A	IAC-20.C4.2.13
Rajkumar, Albert	A	IAC-20.D1.1.2
RAJPUT, SIDDHARTH	A	IAC-20.A1.3.14
Raju, P.L.N.	CA	IAC-20.B1.5.10
Rakotoniaina, Sitraka	A	IAC-20.E1.9.4
Ramage, Steven	CA	IAC-20.B1.1.10
Ramazanova, Dzhamilya	A	IAC-20.B3.7.14
Ramesh, Rakshith	CA	IAC-20.B4.VP.15
Ramesh, Rakshith	CA	IAC-20.D4.1.15
Ramirez, Miguel	A	IAC-20.C2.5.9
Ramirez, Sergio	CA	IAC-20.D2.5.5
Ramirez Aguilar, Alberto	CA	IAC-20.B4.1.16
Ramirez Aguilar, Alberto	CA	IAC-20.C3.4.4
Ramos, Alexis	CA	IAC-20.D1.3.7
Ramírez, Liliana Maricarmen	A	IAC-20.C2.4.11
Randolph, Timothy	CA	IAC-20.B4.4.7
Ranvier, Sylvain	A	IAC-20.B4.2.3
Rao, Mukund Kadursrinivas	A	IAC-20.B1.5.5
Rao, Mukund Kadursrinivas	CA	IAC-20.E6.4.5
RAO, SANDhYA	A	IAC-20.A3.VP.5
Rao, Wei	CA	IAC-20.C4.7.18
Rapinchuk, Jacqueline	CA	IAC-20.D4.4.4
RAPP, Lucien	CA	IAC-20.E7.7.6
RAPP, Lucien	CA	IAC-20.E7.7.13
RAPP, Lucien	CA	IAC-20.E9.1-A6.8.12
Raschke, C.	CA	IAC-20.B4.6A.2
Rasel, Ernst Maria	CA	IAC-20.A2.6.4
Rassel, Emily	CA	IAC-20.B3.7.6
Rathnasabapathy, Minoo	A	IAC-20.E9.1-A6.8.6
Ratkali, Vishal	CA	IAC-20.A1.VP.12
Rauer, Heike	CA	IAC-20.A3.2B.1
Rauer, Heike	CA	IAC-20.A7.2.1
Rautiainen, Kimmo	CA	IAC-20.B4.4.1
Ravan, Shirish	CA	IAC-20.B1.6.8
Ravichandran, Srinath	CA	IAC-20.C1.VP
Ravikumar, Kiran	CA	IAC-20.C3.3.4
Ravilla, Sunil	CA	IAC-20.C4.2.13
Ravindran, Hareesh	CA	IAC-20.A5.1.6
Rawal, Srishti	CA	IAC-20.C3.VP.6
Ray, Triparna	CA	IAC-20.C3.VP.9
Raykunov, Konstantin	CA	IAC-20.A3.2B.15
Raykunov, Konstantin	A	IAC-20.A3.2C.26
Raykunov, Konstantin	A	IAC-20.A3.2C.27
Raykunov, Konstantin	CA	IAC-20.A5.3-B3.6.2
Raza, Mudassir	CA	IAC-20.C3.1.11
Razoumny, Yury	A	IAC-20.A6.7.10
Reales Gutiérrez, Guillermo	CA	IAC-20.C4.VP.23
Rebele, Bernhard	CA	IAC-20.A3.2B.1
Recupero, Cristina	CA	IAC-20.D2.4.4
Reed, Ben	CA	IAC-20.D3.1.7
Reed, Heather	CA	IAC-20.A3.3A.4
Rees, Jean-Michel	CA	IAC-20.A3.3B.3
Rego, Gabriel	CA	IAC-20.E3.6.7
Reibaldi, Giuseppe	A	IAC-20.D4.2.1
Reibaldi, Giuseppe	CA	IAC-20.D4.5.10
Reid, Ewan	CA	IAC-20.A3.2C.3
Reid, Jack	A	IAC-20.B1.4.1
Reihs, Benedikt	A	IAC-20.A6.7.7
Reill, Josef	CA	IAC-20.A3.2B.1
Reinhold, Joachim	A	IAC-20.A1.7.16
Reis, Paulo César	CA	IAC-20.A5.1.13
Reissig, Ralf	CA	IAC-20.B6.1.11
Reiter, Jennifer	CA	IAC-20.B6.3.1
Reiter, Thomas	A	IAC-20.E6.4.1
Relangi, Naresh	A	IAC-20.C4.7.11
Remy, Stéphane	CA	IAC-20.C3.3.9
Ren, YongJie	CA	IAC-20.C4.VP.21
RENAUD, Cécile	CA	IAC-20.A7.2.11
Rencelj, Matija	CA	IAC-20.E5.2.8
Renchin, Tsolmon	CA	IAC-20.B1.5.6
Renda, Maurizio	CA	IAC-20.A2.7.10
Renda, Maurizio	CA	IAC-20.D1.1.8
Renga, Alfredo	A	IAC-20.B4.7.7
Renie, Patrick	CA	IAC-20.D2.4.5
Renić, Ante	CA	IAC-20.E5.VP.4
Renk, Florian	A	IAC-20.C1.5.14
Renk, Florian	A	IAC-20.D3.3.5
Reschke, Millard	CA	IAC-20.A1.2.5
Residori, Sara	CA	IAC-20.C2.VP.13
Restivo Alessi, Riccardo	A	IAC-20.A1.VP.23
Rettberg, Petra	A	IAC-20.A1.6.3
Revilla Veleda, Javier	CA	IAC-20.C4.VP.23
Reviznikov, Dmitry	CA	IAC-20.C2.7.9
Reyes Mantilla, Camilo Andrés	CA	IAC-20.B4.4.7
REYES MORALES, RIGOBERTO	CA	IAC-20.B4.1.17
Reza, Maryam	CA	IAC-20.C4.5.9
Reza, Maryam	CA	IAC-20.C4.9.3
Rezende, Julio	A	IAC-20.E5.1.8
Rezende, Julio	A	IAC-20.E5.VP.10
Riaz, Muhammad Hammad	A	IAC-20.C2.6.2
Ribeiro, Miguel	CA	IAC-20.B4.6B.10
RICARD, Nathalie	CA	IAC-20.B1.1.3
RICARD, Nathalie	A	IAC-20.B2.1.5
Ricard, William	CA	IAC-20.E3.3.6
Ricci, Daniele	CA	IAC-20.C4.6.6
Rice, Melissa	A	IAC-20.A3.3B.4
Rice, Melissa	A	IAC-20.E1.7.4
Richardson, Derek C.	CA	IAC-20.A3.4A.3
Richter, Lutz	A	IAC-20.A3.2A.6
Rickmers, Peter	CA	IAC-20.D2.6.2
Riede, Mirko	CA	IAC-20.C4.1.13
Riegler, Clemens	CA	IAC-20.B4.4.7
Riegler, Clemens	A	IAC-20.E2.3-GTS.4.1
Riesbeck, Luc	A	IAC-20.D2.9-D6.2.2
Rievers, Benny	CA	IAC-20.D1.1.4
Rifert, Vladimir	CA	IAC-20.A1.VP.15
Riffel, Frank	CA	IAC-20.B6.1.11
Rihan, Mohammad	CA	IAC-20.A7.2.10
Rimani, Jasmine	A	IAC-20.D1.4A.10
Rinaldi, Federica	A	IAC-20.B2.1.11
Rinaldi, Marianna	A	IAC-20.C2.5.3
Rinaldi, Marianna	A	IAC-20.C2.5.14
Rincon, Sonia	A	IAC-20.B4.VP.10
Ringas, Nicolas	CA	IAC-20.E3.1.3
Rist, Amber	CA	IAC-20.A5.2.1
Rist, Amber	A	IAC-20.B3.8.2
Ritter, Scott	CA	IAC-20.B1.1.3
Ritter, Scott	CA	IAC-20.E1.5.1
Rittweger, Jörn	CA	IAC-20.A1.VP.19
Rivas, Cody	CA	IAC-20.E2.3-GTS.4.6
Riviere, Alice	A	IAC-20.E9.1-A6.8.10
Rivkin, Andrew	CA	IAC-20.A3.4A.3
Rizwan, Samavia	CA	IAC-20.E1.VP.20
RIZZO, ANGELA MARIA	CA	IAC-20.A2.7.4
Roa, Maximo	CA	IAC-20.D1.6.3
Robalinho, Paulo	CA	IAC-20.B4.6B.10
Roberts, Harry	CA	IAC-20.D3.2B.10
Roberts, Mallory	CA	IAC-20.B1.3.11
Roberts, Mallory	CA	IAC-20.B4.2.10
Roberts, Mallory	CA	IAC-20.E2.4.11
Roberts, Meredith	CA	IAC-20.C4.8-B4.5A.5
Roberts, Peter	A	IAC-20.C2.6.12
Roberts, Peter C.E	CA	IAC-20.C4.5.11
Roberts, Peter C.E.	CA	IAC-20.A2.4.12
Roberts, Peter C.E.	CA	IAC-20.B4.2.5
Roberts, Thomas	A	IAC-20.C1.VP
Robinson, Gregory	A	IAC-20.A7.1.4
Robinson, Julie A.	A	IAC-20.B3.3.12
Robinson, Scott	CA	IAC-20.A3.3B.3
Robison, Kathryn	A	IAC-20.E1.VP.15
Robles, Sonia	CA	IAC-20.E1.6.5
Robles Hernández, Tania María	A	IAC-20.E5.2.1
Rocha, Stephanie	A	IAC-20.C2.9.11
Rocha de Carvalho, Luiz Fernando	CA	IAC-20.B4.8.3
Rocha de Oliveira, Marta	A	IAC-20.C4.9.11
Rocha de Oliveira, Marta	CA	IAC-20.E6.1.3
Rodeck, Lukas	CA	IAC-20.E2.3-GTS.4.10
Rodic, Tomaz	A	IAC-20.B1.2.14
Rodriguez, Jacobo	CA	IAC-20.A2.3.8
Rodriguez, Jacobo	CA	IAC-20.C1.8.5
Rodriguez, Jacobo	CA	IAC-20.E5.2.12
Rodriguez Espinosa, Jose Miguel	CA	IAC-20.B2.1.5
Rodriguez Pirateque, German Wedge	A	IAC-20.E6.5-GTS.1.13
Rodriguez-Donaire, Silvia	CA	IAC-20.B4.2.5
Rodriguez-Donaire, Silvia	CA	IAC-20.C4.5.11
Rodriguez-Fernández, Victor	CA	IAC-20.A6.7.4
Rodríguez, Daniela	A	IAC-20.E1.6.5
Rodríguez, Guillermo	CA	IAC-20.D2.4.4
Rodríguez Barón, Iván Felipe	A	IAC-20.D1.4A.2
Roelof, Edmond	CA	IAC-20.B4.2.13
Roelof, Edmond	CA	IAC-20.D4.4.3
Roesler, Gordon	CA	IAC-20.D3.1.7
Rogers, Henk	CA	IAC-20.A3.2B.16
Rohit, Minal	CA	IAC-20.B6.3.5
ROHITH, SOMA	CA	IAC-20.A1.7.6
ROHITH, SOMA	CA	IAC-20.A4.2.8
ROHITH, SOMA	CA	IAC-20.B1.VP.16
ROHITH, SOMA	CA	IAC-20.B5.1.7
ROHITH, SOMA	CA	IAC-20.C3.2.8
ROHITH, SOMA	CA	IAC-20.C3.2.9
ROHITH, SOMA	CA	IAC-20.D1.VP
ROHITH, SOMA	CA	IAC-20.D4.1.16
ROHITH, SOMA	CA	IAC-20.D5.1.3
ROHITH, SOMA	CA	IAC-20.E1.5.2
Rohrwild, Karlheinz	CA	IAC-20.E4.2.7
Rojas, Mauro	A	IAC-20.D2.VP.13
Rojas Gómez, Sebastián Bautista Jesús	A	IAC-20.C2.VP.14
Roldugin, Dmitry	CA	IAC-20.B4.7.4
Roldugin, Dmitry	CA	IAC-20.C1.VP.1
Roldugin, Dmitry	CA	IAC-20.C2.9.13
Roma, Ilaria	CA	IAC-20.C2.4.1
Roma, Mauro	CA	IAC-20.A6.VP.11
Roman-Gonzalez, Avid	CA	IAC-20.D5.2.15
Roman-Gonzalez, Avid	A	IAC-20.E3.3.4
Roman-Gonzalez, Avid	A	IAC-20.E5.2.5
Roman-Gonzalez, Avid	A	IAC-20.E5.2.10
Roman-Gonzalez, Avid	A	IAC-20.E5.4.8
Roman-Gonzalez, Avid	A	IAC-20.E5.4.9
Romanelli, Cristoforo	CA	IAC-20.D6.1.7
Romanenko, Dmitry	CA	IAC-20.B4.2.9
Romano, Francesco	CA	IAC-20.B4.2.5
Romano, Francesco	A	IAC-20.C4.5.11
Romano, Francesco	CA	IAC-20.C4.9.1
Romero, Marco	CA	IAC-20.A3.2C.7
Romero, Marco	CA	IAC-20.A3.5.11
Romero, Marco	A	IAC-20.A5.1.13

Romero, Marco	CA	IAC-20.B2.4.1
Romero, Marco	CA	IAC-20.B3.VP.12
Romero, Marco	CA	IAC-20.B4.1.17
Romero, Marco	CA	IAC-20.D3.2A.2
Romero, Marco	CA	IAC-20.D4.5.7
Romero, Marco	A	IAC-20.E1.1.7
Romero, Marco	A	IAC-20.E1.9.13
Romero-Calvo, Álvaro	A	IAC-20.A2.2.1
Romero-Calvo, Álvaro	A	IAC-20.D1.3.5
Romo Fuentes, Carlos	CA	IAC-20.B4.1.16
Rondoni, Federico	CA	IAC-20.A4.2.6
Rondoni, Federico	CA	IAC-20.E5.4.1
Rondoni, Federico	CA	IAC-20.E6.5-GTS.1.5
Rong, Guozhi	CA	IAC-20.E5.VP.4
Ronsivalle, Concetta	CA	IAC-20.D5.3.8
Rosa, Paulo	CA	IAC-20.D2.5.10
Rosales Gurmendi, Diana Sofía Milagros	CA	IAC-20.E2.3-GTS.4.7
Rosas, Oscar	A	IAC-20.A5.1.6
Rosato, Antonello	CA	IAC-20.C2.3.1
Rosebrock, Jens	CA	IAC-20.A6.1.1
Rosenberg, Marissa	CA	IAC-20.A1.2.5
Roshanian, Jafar	A	IAC-20.D1.4B.10
Rossi, Alessandro	CA	IAC-20.A6.2.1
Rossi, Angelo Pio	CA	IAC-20.A3.2B.2
Rossi, Lucio	CA	IAC-20.A4.2.7
Rosso, Alessandro	CA	IAC-20.B2.2.8
Rosso, Carole	CA	IAC-20.C1.9.6
Rossodivita, Angela	CA	IAC-20.C4.9.3
Roth, Niels	CA	IAC-20.B4.7.6
Roth, Niels	CA	IAC-20.C1.8.13
Roth, Thomas	CA	IAC-20.A6.10-B6.5.4
Rothacher, Markus	CA	IAC-20.B1.4.13
Rothschild, Lynn	CA	IAC-20.E5.1.3
Rotola, Giuliana	CA	IAC-20.A4.2.6
Rotola, Giuliana	A	IAC-20.E3.2.19
Rotola, Giuliana	CA	IAC-20.E5.4.1
Rotola, Giuliana	A	IAC-20.E7.1.8
Rotteveel, Jeroen	CA	IAC-20.B4.8.1
Rougeot, Raphael	CA	IAC-20.B6.2.5
Roviera, Pier Michele	CA	IAC-20.B6.1.11
Roy, Chinmoy	A	IAC-20.E7.4.8
Roy, Chinmoy	A	IAC-20.E7.VP.20
Roy, Philippe	CA	IAC-20.B4.6B.10
Roy, Raphaëlle N.	CA	IAC-20.A1.1.2
Roy, Raphaëlle N.	CA	IAC-20.A1.VP.18
Roy, Rukmini	CA	IAC-20.A6.7.6
Royer, Morgane	A	IAC-20.B3.8.12
Royo, María	CA	IAC-20.E5.2.12
Rozemeijer, Mark	CA	IAC-20.D2.5.15
Rubinstein, Hilel	CA	IAC-20.A1.7.9
RUBINSTEIN, HILEL	CA	IAC-20.B3.9-GTS.2.3
Ruch, Vincent	CA	IAC-20.A6.2.1
Rucker, Michelle	CA	IAC-20.A3.1.1
Rucker, Michelle	CA	IAC-20.B3.3.12
Rudakova, Olga	A	IAC-20.A3.2B.15
Rudakova, Olga	A	IAC-20.A5.3-B3.6.2
Rudoi, Ivan	A	IAC-20.D2.3.11
Rudolph, Thorsten	CA	IAC-20.E3.6.2
Ruf, Oliver	A	IAC-20.D1.4B.3
Ruffin, Alessandro	CA	IAC-20.C4.3.11
Rufolo, Giuseppe	A	IAC-20.D2.5.1
Rughani, Rahul	CA	IAC-20.A3.2B.4
Ruiz, Mercedes	A	IAC-20.C4.5.12
Ruiz, Xavier	CA	IAC-20.A2.3.8
Rukavishnikov, Ilia	CA	IAC-20.A1.2.5
Rukavishnikov, Ilya	CA	IAC-20.A1.2.1
Rukavishnikov, Ilya	CA	IAC-20.A1.VP.20
Rull, Fernando	CA	IAC-20.A3.3B.3
Rumpf, Clemens	CA	IAC-20.C1.9.8
Rumshiskaya, Alena	CA	IAC-20.A1.2.1
Russell, Brian	CA	IAC-20.B3.7.2
Russo, Aloisia	CA	IAC-20.A3.2B.4
Russo, Aloisia	CA	IAC-20.A3.5.17
Russo, Aloisia	A	IAC-20.C3.4.9
Russo, Aloisia	CA	IAC-20.D1.1.10
Russo, Aloisia	A	IAC-20.D1.6.2
Russo, Aloisia	CA	IAC-20.E1.VP.13
Russo, Antonia	A	IAC-20.D1.4B.5
Russo, Antonia	A	IAC-20.D5.2.9
Russo, Gennaro	A	IAC-20.D6.3.8
Rustamov, Rustam	A	IAC-20.B1.4.11
Ryan, Sean	CA	IAC-20.A3.3A.4
Ryan, Sean	CA	IAC-20.B6.3.1
Ryan, Timothy	CA	IAC-20.E1.7.14
Ryazanskiy, Sergey	CA	IAC-20.A1.VP.20
Rybakin, Boris	A	IAC-20.A2.1.7
Ryumin, Oleg	CA	IAC-20.A1.1.1

S

Name	Role	Paper
s, Anusri	CA	IAC-20.A1.7.6
s, Anusri	CA	IAC-20.A1.8.8
s, Anusri	CA	IAC-20.A4.2.8
s, Anusri	CA	IAC-20.B1.VP.16
s, Anusri	CA	IAC-20.B5.1.7
s, Anusri	CA	IAC-20.C3.2.8
s, Anusri	CA	IAC-20.C3.2.9
s, Anusri	CA	IAC-20.D1.VP
s, Anusri	CA	IAC-20.D4.1.16
s, Anusri	CA	IAC-20.D5.1.3
s, Anusri	CA	IAC-20.E1.5.2
S, Jeyakumar	CA	IAC-20.C4.7.11
S, RAHUL	CA	IAC-20.A1.7.6
S, RAHUL	CA	IAC-20.A4.2.8
S, RAHUL	CA	IAC-20.B1.VP.16
S, RAHUL	CA	IAC-20.B5.1.7
S, RAHUL	CA	IAC-20.C3.2.8
S, RAHUL	CA	IAC-20.C3.2.9
S, RAHUL	CA	IAC-20.D1.VP
S, RAHUL	CA	IAC-20.D4.1.16
S, RAHUL	CA	IAC-20.D5.1.3
S, RAHUL	CA	IAC-20.E1.5.2
S, Vivek	A	IAC-20.C2.1.5
S, Vivek	CA	IAC-20.C4.1.14
S K, DEEPIKA	A	IAC-20.A1.7.6
S K, DEEPIKA	CA	IAC-20.A1.8.8
S N, RAM	CA	IAC-20.C4.6.7
Saad Fayez Jaber, Dina	CA	IAC-20.A7.2.11
Saadat, Atilla	CA	IAC-20.B4.9-GTS.5.10
Saah, David	CA	IAC-20.B1.5.11
SAAJ, CHAKRAVARTHINI M.	A	IAC-20.B4.VP.27
Saavedra, Gonzalo	CA	IAC-20.C1.9.6
Sabath, Dieter	CA	IAC-20.B3.4-B6.4.4
Sabatini, Marco	A	IAC-20.B4.3.9
Sabatini, Marco	CA	IAC-20.C1.1.2
Sabatini, Marco	A	IAC-20.C2.2.5
Sabatini, Marco	CA	IAC-20.C2.9.7
Sabatini, Marco	CA	IAC-20.D5.3.8
Sabattini, Lorenzo	CA	IAC-20.C1.1.16
Sabbatinelli, Beatrice	A	IAC-20.B4.4.8
Sable, Rahul	CA	IAC-20.B1.4.3
Sabovik, Andrew	A	IAC-20.A3.5.5
Sacco, Patrizia	CA	IAC-20.B1.2.5
Sadeghian, Farshid	CA	IAC-20.A1.3.3
Sadretdinov, Tagir	CA	IAC-20.B6.VP.4
Safaryn, Robert	CA	IAC-20.D3.2A.8
Saha, Anisha	A	IAC-20.A2.VP.6
Sahoo, Udit Kumar	CA	IAC-20.B2.3.8
Said, Zafar	A	IAC-20.C2.8.13
Saiki, Takanao	CA	IAC-20.A3.4B.5
Saini, Harshit	CA	IAC-20.C3.VP.6
Saini, Shivam	CA	IAC-20.B2.7.6
Saint-Jacques, David	CA	IAC-20.A1.3.4
Saint-Jacques, David	CA	IAC-20.A1.3.7
Saint-Jacques, David	CA	IAC-20.B3.5.2
Saito, Hirobumi	CA	IAC-20.C2.6.4
SAITO, Tamaki	CA	IAC-20.D4.2.2
Saito, Yoshihiko	CA	IAC-20.B2.2.5
Saitoh, Tomohiko	CA	IAC-20.C2.6.4
Sakagami, Ryo	CA	IAC-20.A3.2B.1
Sakai, Hideki	CA	IAC-20.D4.2.5
Sakal, Morokot	CA	IAC-20.E1.7.12
SAKAMOTO, Kaoruko	A	IAC-20.B3.3.7
Sakamoto, Yuji	CA	IAC-20.B1.4.10
Sakaoka, Emi	A	IAC-20.E2.2.6
Sakay, Danilo	CA	IAC-20.B4.1.9
Sakay, Danilo	CA	IAC-20.E1.VP.6
Sakay, Danilo	CA	IAC-20.E3.3.18
Sakay, Danilo	CA	IAC-20.E3.6.7
Sakurai, Masato	A	IAC-20.D4.2.3
Salamon, Nick	A	IAC-20.C4.1.7
Salazar, Francisco	CA	IAC-20.C1.VP
Saleem, Zainab	CA	IAC-20.B4.9-GTS.5.4
Saleem, Zainab	A	IAC-20.B4.VP.4
Salgado Sanchez, Pablo	A	IAC-20.A2.3.8
Salgado Sanchez, Pablo	CA	IAC-20.E5.2.12
Saliev, Evgeny	CA	IAC-20.B4.6A.10
Salmeri, Antonino	CA	IAC-20.A3.2C.18
Salmeri, Antonino	CA	IAC-20.A7.2.11
Salmeri, Antonino	A	IAC-20.D4.2.7
Salmeri, Antonino	CA	IAC-20.D4.5.16
Salmeri, Antonino	A	IAC-20.E7.2.5
Salo, Maxim	CA	IAC-20.D6.3.10
Salotti, Jean-Marc	A	IAC-20.D3.1.4
Salunke, Saurabh	CA	IAC-20.E2.4.6
Salvioli, Federico	A	IAC-20.A6.10-B6.5.3
Salvoni, Ilenya	CA	IAC-20.D2.4.11
Salzgeber, Frank M	CA	IAC-20.E3.6.9
Samanga, Ruvimbo	CA	IAC-20.A5.1.13
Samanga, Ruvimbo	CA	IAC-20.E1.1.7
Samanga, Ruvimbo	CA	IAC-20.E1.9.13
Samanga, Ruvimbo	CA	IAC-20.E7.2.4
Samara, Evangelia	CA	IAC-20.D5.3.3
Samarth, Pranjal	CA	IAC-20.A4.2.6
Samylovskaya, Anastasia	CA	IAC-20.C2.2.11
Samylovskiy, Ivan	CA	IAC-20.C1.2.14
Samylovskiy, Ivan	CA	IAC-20.C2.2.11
San-Juan, Juan F.	A	IAC-20.C1.7.16
Sanchez, Alana	CA	IAC-20.A2.3.4
Sanchez, Luis	A	IAC-20.A6.2.12
Sanchez, Raul	CA	IAC-20.C1.9.6
Sanchez Cebrian, Alberto	A	IAC-20.D2.5.6
Sanchez Cuartielles, Joan Pau	A	IAC-20.A3.4B.3
Sanchez Cuartielles, Joan Pau	CA	IAC-20.C1.3.13
Sanchez Cuartielles, Joan Pau	A	IAC-20.C1.5.7
Sanchez Cuartielles, Joan Pau	CA	IAC-20.C1.5.12
Sanchez Gamez, Miguel Angel	A	IAC-20.A1.7.15
Sanchez Gamez, Miguel Angel	A	IAC-20.E1.1.8
Sanchez Gamez, Miguel Angel	A	IAC-20.E1.VP.19
Sandalinas, Jordi	A	IAC-20.B1.1.8
Sandalinas, Jordi	A	IAC-20.E3.1.9
Sandalinas, Jordi	A	IAC-20.E5.3.2
Sandau, Rainer	CA	IAC-20.A3.5.10
Sandberg, Ingmar	CA	IAC-20.D5.3.3
Sanders, Gerald	A	IAC-20.A5.1.2
Sandlin, Trevor	CA	IAC-20.E5.4.3
Sandlin, Trevor	CA	IAC-20.E7.7.12
Sanjurjo-Rivo, Manuel	CA	IAC-20.A6.9.4
Sankar, Tejus	CA	IAC-20.A6.4.8
Sanlorenzo, Martina	CA	IAC-20.A1.4.9
Sano, Hajime	CA	IAC-20.D4.2.11
Sansone, Francesco	CA	IAC-20.B2.4.2
Sansone, Francesco	A	IAC-20.B4.6A.5
Sansone, Francesco	CA	IAC-20.B4.7.15
Santachiara, Luca	CA	IAC-20.E3.VP.1
Santeramo, Daniele Antonio	CA	IAC-20.C1.7.2
Santiago Perez, Jose	CA	IAC-20.C4.5.11
SANTILLI, ALESSANDRO	CA	IAC-20.C2.5.11
Santilli, Giancarlo	CA	IAC-20.A3.5.1
Santilli, Giancarlo	A	IAC-20.B4.8.3
Santilli, Giancarlo	CA	IAC-20.C1.8.1
Santilli, Giancarlo	CA	IAC-20.C4.6.12
Santoni, Fabio	CA	IAC-20.A1.VP.23
Santoni, Fabio	CA	IAC-20.A2.7.10
Santoni, Fabio	CA	IAC-20.A2.7.11
Santoni, Fabio	CA	IAC-20.A6.10-B6.5.1
Santoni, Fabio	CA	IAC-20.A6.6.3
Santoni, Fabio	CA	IAC-20.B4.1.8
Santoni, Fabio	CA	IAC-20.B4.2.7
Santoni, Fabio	CA	IAC-20.B4.VP.11
Santoni, Fabio	CA	IAC-20.C2.6.6
Santoni, Fabio	CA	IAC-20.C2.8.6
Santoni, Fabio	CA	IAC-20.D1.1.8
Santoni, Fabio	CA	IAC-20.D6.1.7
Santoni, Fabio	CA	IAC-20.E1.4.7
Santonicola, M. Gabriella	CA	IAC-20.C2.5.11
Santonicola, M. Gabriella	CA	IAC-20.C2.6.9
Santoro, Francesca	CA	IAC-20.B1.4.5
Santoro, Francesco	CA	IAC-20.D6.1.7
Santos, Cristiana	A	IAC-20.E7.7.6
Santos, Rui	CA	IAC-20.B4.4.5
Santos Martins, Antonino Salustiano	CA	IAC-20.B4.8.3
Santos Martins, Antonino Salustiano	CA	IAC-20.C4.6.12
Santra, Shreya	CA	IAC-20.B2.4.1
Santra, Shreya	CA	IAC-20.D3.2A.2
Sapia, Weston	CA	IAC-20.E1.3.15
Sapiecha, Paweł	CA	IAC-20.D3.2A.8
Saponara, Massimiliano	CA	IAC-20.C1.9.6
Sarah, Maria-Gabriella	A	IAC-20.B5.3.7
Sarang, Mehak	A	IAC-20.D3.1.2
Sarang, Mehak	CA	IAC-20.D5.2.3
Sarda, Karan	A	IAC-20.B4.7.6
Sarego, Giulia	CA	IAC-20.A6.4.4
Sarego, Giulia	CA	IAC-20.A6.5.13
Sarkar, Shreya	A	IAC-20.B2.6.13
Sarkar, Shreya	CA	IAC-20.D4.1.3
Sarli, Bruno	A	IAC-20.C1.4.9
Sarmiento, Carlos	CA	IAC-20.D3.2A.11
Sarmiento, German	CA	IAC-20.D3.2A.11
SASAHARA, Shin-ichiro	A	IAC-20.D4.2.2
Sasaki, Takahiro	CA	IAC-20.B6.3.7
Sasaki, Takahiro	A	IAC-20.C1.8.2
Sasaki, Yusei	A	IAC-20.C1.9.2
SASAOKA, MANAMI	A	IAC-20.D6.1.1
Satokin, Valerii	A	IAC-20.C2.7.13
Satou, Yasutaka	CA	IAC-20.C2.9.3
Satou, Yasutaka	CA	IAC-20.D1.2.8
Satpathy, Sagar	A	IAC-20.D2.4.8
Sauder, Jonathan	A	IAC-20.D4.4.4
Saunders, Chris	CA	IAC-20.D3.2A.1
Sauro, Francesco	CA	IAC-20.A3.2B.2
Savalle, Etienne	CA	IAC-20.B2.4.4
Saveko, Alina	A	IAC-20.A1.VP.20
Savelev, Vladimir	A	IAC-20.E7.1.15
Savinkina, Alexandra	CA	IAC-20.A1.1.3
Savino, Michele Pio	CA	IAC-20.D1.2.1
Savino, Raffaele	CA	IAC-20.C2.4.1
Savino, Raffaele	CA	IAC-20.C2.4.6
Savino, Raffaele	CA	IAC-20.D6.3.8
Savio, Giuseppe	CA	IAC-20.A4.2.7
Sawada, Kenichiro	CA	IAC-20.D1.2.8
Sawai, Shujiro	CA	IAC-20.A2.4.13
Saweeres, Fady	CA	IAC-20.D5.1.1
Saxena, Manish	CA	IAC-20.B6.3.5
Saxena, Nikita	CA	IAC-20.B2.7.11
Saxon A, Mathew	CA	IAC-20.C4.VP.1
Sazanishvili, Zoia	CA	IAC-20.C1.9.14
Sazonov, Vasiliy	A	IAC-20.C1.2.14
Sazonov, Vasiliy	CA	IAC-20.C2.2.11

Sbardella, Emanuele	CA	IAC-20.C2.VP.13
Scala, Francesca	A	IAC-20.C1.3.14
Scalera, Marcello Agostino	A	IAC-20.B1.5.12
Scalia, Tanya	A	IAC-20.C2.8.10
Scatena, Lorenzo	CA	IAC-20.B5.2.3
Scatena, Lorenzo	A	IAC-20.E6.2.3
Scatteia, Luigi	CA	IAC-20.E3.3.6
Schachter, Justin	CA	IAC-20.A6.10-B6.5.1
Schachter, Justin	CA	IAC-20.B4.VP.11
Scharnagl, Julian	CA	IAC-20.B1.3.4
Scharnagl, Julian	CA	IAC-20.B4.7.10
Schaub, Hanspeter	CA	IAC-20.A2.2.1
Schaub, Hanspeter	CA	IAC-20.D1.3.5
Schediwy, Sascha	CA	IAC-20.B2.4.3
Schediwy, Sascha	CA	IAC-20.B2.4.4
Schediwy, Sascha	A	IAC-20.B2.7.2
Scheeres, Daniel	A	IAC-20.A3.4B.7
Scher, Mitchell	A	IAC-20.B4.5.8
Schertz, Joshua	CA	IAC-20.C3.2.4
Schertz, Joshua	CA	IAC-20.D3.1.8
Schertz, Joshua	CA	IAC-20.D5.2.11
Schervan, Thomas	CA	IAC-20.E6.2.10
Schervan, Thomas A.	CA	IAC-20.D5.2.7
Schettino, Giulia	A	IAC-20.A3.5.2
Schiaffino, Marco	CA	IAC-20.A6.VP.11
Schiel, Jeremy	A	IAC-20.D2.3.2
Schildknecht, Thomas	CA	IAC-20.A6.7.7
Schildknecht, Thomas	CA	IAC-20.A6.9.3
Schildknecht, Thomas	CA	IAC-20.A6.9.6
Schiller, Aschley	CA	IAC-20.D3.1.7
Schiller, Aschley	CA	IAC-20.E9.1-A6.8.6
Schilling, Klaus	CA	IAC-20.B1.3.4
Schilling, Klaus	CA	IAC-20.B4.3.5
Schilling, Klaus	CA	IAC-20.B4.4.7
Schilling, Klaus	CA	IAC-20.B4.7.10
Schilling, Klaus	CA	IAC-20.C4.1.15
Schilling, Nathan	A	IAC-20.C4.10-C3.5.1
Schimer, Anthony	CA	IAC-20.E5.VP.4
Schingler, Jessy Kate	CA	IAC-20.D3.1.2
Schingler, Jessy Kate	CA	IAC-20.D5.2.3
Schingler, Jessy Kate	A	IAC-20.E7.2.4
Schirp-Schoenen, Maximilian	CA	IAC-20.E2.3-GTS.4.10
Schirru, Luca	CA	IAC-20.A6.VP.6
Schirru, Luca	CA	IAC-20.A6.VP.11
Schirwon, Malte	CA	IAC-20.D3.3.5
Schlacht, Irene Lia	A	IAC-20.A3.2C.31
Schlacht, Irene Lia	CA	IAC-20.E5.VP.9
Schlacht, Irene Lia	A	IAC-20.E5.VP.13
Schleich, Wolfgang	CA	IAC-20.A2.6.4
Schlick, Georg	CA	IAC-20.C2.5.13
Schlosser, Karoly	A	IAC-20.A1.1.9
Schlosser, Karoly	A	IAC-20.B3.8.9
Schlutz, Juergen	CA	IAC-20.B3.1.8
Schmidt, Alexander	A	IAC-20.A2.5.6
Schmidt, Nikola	A	IAC-20.A5.2.2
Schmidt, Nikola	A	IAC-20.C3.4.11
Schmied, Sibylle	CA	IAC-20.A1.VP.13
Schmierer, Christian	CA	IAC-20.D2.7.6
Schmitt, Dirk-Roger	CA	IAC-20.D6.3.5
Schmitt, Mathieu	A	IAC-20.B6.VP.7
Schmitz, Nicole	CA	IAC-20.A3.2B.1
Schnee, Riley	A	IAC-20.B3.7.6
Schneider, Irene	A	IAC-20.A3.VP.1
Schneider, Scott	A	IAC-20.E1.7.14
Schneider, Scott	CA	IAC-20.E3.VP.1
Schneider, Scott	A	IAC-20.E7.VP.15
Schoberth, Achim	CA	IAC-20.C2.4.6
Schoenmaekers, Catho	CA	IAC-20.A1.2.2
Schoonejans, Philippe	CA	IAC-20.A3.2B.2
Schott-Vaupel, Jonathan	CA	IAC-20.E2.3-GTS.4.10
Schoutetens, Frederic	A	IAC-20.D4.1.3
Schraml, Marcel	A	IAC-20.A2.VP.3
Schrammel, Fabian	CA	IAC-20.D3.3.5

Schreiber, Karl Ulrich	CA	IAC-20.B2.7.2
Schroeder, Jan Walter	CA	IAC-20.E3.3.17
Schroeder, Jan Walter	A	IAC-20.E3.VP.1
Schroeder, Jan Walter	CA	IAC-20.E3.VP.3
Schröder, Susanne	CA	IAC-20.A3.2B.1
Schubert, Christian	CA	IAC-20.A2.6.4
Schubert, Daniel	CA	IAC-20.E5.VP.13
Schubert, Peter	CA	IAC-20.C3.2.3
Schubert, Peter	A	IAC-20.C3.2.7
Schubert, Peter	A	IAC-20.C3.4.6
Schubert, Peter	A	IAC-20.C4.10-C3.5.3
Schubert, Peter	A	IAC-20.C4.10-C3.5.5
Schultz, Christian	CA	IAC-20.B4.6A.2
Schulz, Victor	CA	IAC-20.B4.2.1
Schumacher, Johannes	CA	IAC-20.B2.3.8
Schummer, Florian	CA	IAC-20.C2.5.13
Schuster, Martin	CA	IAC-20.A3.2B.1
Schuster, Martin	CA	IAC-20.A3.2C.17
Schwadron, Nathan	CA	IAC-20.A1.5.2
Schwartz, Guido	A	IAC-20.B6.2.9
Schwartz, Guido	A	IAC-20.D2.9-D6.2.4
Schweins, Matthias	CA	IAC-20.A1.VP.13
Schwertheim, Alexander	A	IAC-20.E2.1.10
Schäfer, Felix	CA	IAC-20.A2.2.2
Schäfer, Felix	A	IAC-20.B4.6A.3
Sciarra, Marcello	CA	IAC-20.A3.4A.8
SCIGLIANO, ROBERTO	A	IAC-20.C2.4.2
Scimemi, Sam	CA	IAC-20.B3.2.5
Scimemi, Sam	CA	IAC-20.B3.3.12
Sciortino, Giacomo Primo	A	IAC-20.E3.1.5
Sciortino, Giacomo Primo	A	IAC-20.E3.3.2
Sciti, Diletta	CA	IAC-20.C2.4.6
Scott, Elizabeth	CA	IAC-20.D3.1.8
Sedykh, Oleg	CA	IAC-20.A3.2C.26
Seedhouse, Erik	A	IAC-20.E1.3.6
Segond, Dominique	CA	IAC-20.D2.4.6
Seine, Rüdiger	CA	IAC-20.B3.5.4
Seitzer, Patrick	CA	IAC-20.A6.10-B6.5.1
Seitzer, Patrick	CA	IAC-20.B4.VP.11
Sejera, Marloun	CA	IAC-20.B4.6B.5
Sejkora, Nina	CA	IAC-20.A1.VP.13
Sekiya, Naoki	CA	IAC-20.C2.1.11
Sekiya, Naoki	A	IAC-20.C2.9.4
Sekiya, Naoki	CA	IAC-20.C3.1.11
Selaru, Dan	CA	IAC-20.C1.3.5
Sellamuthu, Harishkumar	A	IAC-20.C1.VP
Semaka, Vadim	CA	IAC-20.A6.9.11
Seminari, Simon	A	IAC-20.A3.1.4
Seminari, Simon	CA	IAC-20.B4.2.5
Seminari, Simon	CA	IAC-20.C2.6.12
Semones, Edward J.	CA	IAC-20.A1.5.9
Sengupta, Mridul	CA	IAC-20.C2.4.4
Sennersten, Charlotte	CA	IAC-20.D4.5.11
Sepp, Jüri	CA	IAC-20.E6.3.8
Serafimov, Gueorguy	CA	IAC-20.A3.2C.7
Serafimov, Gueorguy	CA	IAC-20.A3.5.11
Serafimov, Gueorguy	CA	IAC-20.B3.VP.12
Sereda, Olha	CA	IAC-20.D5.3.5
Serfontein, Zaria	A	IAC-20.A6.6.9
Serfontein, Zaria	A	IAC-20.C2.6.11
Sergeev, Artem	CA	IAC-20.C1.8.6
Sergey, Soloviev	CA	IAC-20.C1.2.14
Serov, Mikhail	CA	IAC-20.B1.3.10
Serov, Mikhail	CA	IAC-20.B1.5.7
Serpelloni, Edoardo	CA	IAC-20.B3.8.3
Serphos, Reuben	CA	IAC-20.E3.3.17
Serphos, Reuben	CA	IAC-20.E3.VP.3
Serra, Daniele	CA	IAC-20.A3.5.2
Serrano, Daniel	A	IAC-20.B6.2.5
Sese, Rogel Mari	A	IAC-20.E1.7.15
Sese, Rogel Mari	A	IAC-20.E7.5.13
Sethi, Vishal	CA	IAC-20.C2.8.12
Sethu, Sagee Geetha	CA	IAC-20.E7.5.1

Setty, Srinivas J.	CA	IAC-20.C1.7.16
Sevastiyanov, Nikolay	CA	IAC-20.A5.1.16
Severson, Patrick	A	IAC-20.C2.VP.17
Sferle, Daciana	CA	IAC-20.E5.VP.4
Sgobba, Tommaso	A	IAC-20.D6.1.10
Sgobba, Tommaso	CA	IAC-20.E7.VP.13
Sha, Jianke	CA	IAC-20.C3.4.8
SHA, VIVEK KUMAR	CA	IAC-20.C4.7.2
Shafi, Riaz	A	IAC-20.B6.1.7
Shah, Jahnavi	CA	IAC-20.A3.2C.18
Shaikh, Areesha	CA	IAC-20.E1.VP.20
Shaikh, Juber	CA	IAC-20.E2.4.6
SHAJI, A	CA	IAC-20.C4.3.1
Shalwani, Anood	CA	IAC-20.B1.VP.19
Shamina, Anastasia	CA	IAC-20.A2.1.7
Shamina, Anastasia	CA	IAC-20.A2.2.3
Shamina, Anastasia	A	IAC-20.A2.2.16
Shamutally, Muhammad Faraaz	CA	IAC-20.E1.5.12
Shang, Wei	A	IAC-20.D6.3.4
Shankaram, Priyam	CA	IAC-20.B1.VP.16
Shaobing, Fan	CA	IAC-20.D2.1.4
Shaobing, Fan	A	IAC-20.D2.2.7
Shapovalov, Anatoly	CA	IAC-20.B4.2.9
Shar, Manny	CA	IAC-20.E6.2.1
Sharaf, Omran	A	IAC-20.A3.3A.4
Sharafi, Ayesha	A	IAC-20.B6.3.13
Sharif, Tausif	CA	IAC-20.B4.6B.7
Sharif, Tausif	A	IAC-20.B6.1.4
Sharma, Abhishek	A	IAC-20.C4.1.2
Sharma, Abhishek	A	IAC-20.C4.2.7
Sharma, Gaurav	A	IAC-20.B2.7.11
Sharma, Kush Kumar	CA	IAC-20.A4.2.6
Sharma, Kush Kumar	A	IAC-20.D4.4.6
Sharma, Kush Kumar	CA	IAC-20.E5.4.1
Sharma, Manish	A	IAC-20.A3.3A.12
Sharma, Ram Krishan	CA	IAC-20.C1.VP
Sharma, Sana	A	IAC-20.E5.5.7
SHARMA, SHREYANSH	A	IAC-20.A5.1.10
Sharma, Vikrant	CA	IAC-20.A3.VP.12
Sharma, Vikrant	A	IAC-20.A5.VP
Sharma Pathak, Jaan	CA	IAC-20.B1.5.10
Shashkov, Andrey	A	IAC-20.C4.5.7
Shaw, Tianna	CA	IAC-20.B3.7.2
Shawyer, Roger	A	IAC-20.C4.6.9
Shcheglov, Georgy	CA	IAC-20.A6.6.2
Shcheglov, Georgy	CA	IAC-20.B4.6A.10
Shcheglov, Georgy	A	IAC-20.C3.4.12
Shcheglov, Georgy	CA	IAC-20.E5.VP.8
Shcherbak, Danylo	A	IAC-20.C4.5.16
Shea, Matthew	CA	IAC-20.C4.8-B4.5A.5
Sheehy, Cody	CA	IAC-20.E1.8.4
Sheffield-Moore, Melinda	CA	IAC-20.A1.3.1
Shehaj, Endrit	A	IAC-20.B1.4.13
Shehryar, Usman	A	IAC-20.B2.5.4
Sheini Dashtgol, Farnoosh	A	IAC-20.A3.VP.24
Shekhar, Saumya	CA	IAC-20.C4.4.2
Shelfer, Tad	CA	IAC-20.A1.5.9
Shen, Dan	CA	IAC-20.A6.2.1
Shen, Huilong	CA	IAC-20.A6.2.15
Shen, Lin	CA	IAC-20.D2.5.4
Shen, Xiaojing	CA	IAC-20.B5.1.14
SHEN, Yue	CA	IAC-20.E6.3.6
Shengying, Zhu	CA	IAC-20.B4.VP.29
Shengying, Zhu	CA	IAC-20.D1.6.7
Shestakov, Sergey	CA	IAC-20.B4.7.4
Shet, Chaitra	CA	IAC-20.E2.4.6
SHETTY, KRITHI D	A	IAC-20.B2.1.10
SHETTY, KRITHI D	CA	IAC-20.B2.5.5
Shetty, Megha S	CA	IAC-20.A1.5.7
Shetty, Megha S	CA	IAC-20.C4.9.8
Shevtsova, Valentina	A	IAC-20.A2.6.5
Shi, Lei	A	IAC-20.C4.7.13
Shi, Pingyan	CA	IAC-20.B2.VP.5

Shi, Qiang	CA	IAC-20.A2.2.7
Shi, Renhe	CA	IAC-20.C4.6.14
Shi, Wengui	CA	IAC-20.A2.7.6
SHI, Xingjian	CA	IAC-20.A7.3.10
Shi, Zijian	CA	IAC-20.A7.2.11
Shibata, Daisuke	CA	IAC-20.A5.3-B3.6.1
SHIKAR, ALON	A	IAC-20.A1.7.9
Shimhanda, Senior	A	IAC-20.C4.8-B4.5A.12
Shin, Hyu-Soung	CA	IAC-20.A3.2B.11
Shipeng, KANG	A	IAC-20.C2.VP.7
Shiraishi, Hiroaki	CA	IAC-20.A3.2B.9
Shirakawa, Masaki	CA	IAC-20.B3.3.7
SHIRAKI, Nagisa	CA	IAC-20.D4.2.2
Shiratama, Koichi	CA	IAC-20.B2.2.5
Shirobokov, Maksim	CA	IAC-20.C1.4.13
Shirshakov, Aleksandr	CA	IAC-20.A3.2C.26
Shitanda, Isao	CA	IAC-20.D4.2.5
Shitong, Zhou	CA	IAC-20.A5.3-B3.6.9
Shonibare, Tayo	A	IAC-20.B4.6B.7
Shonibare, Tayo	CA	IAC-20.B6.1.4
Shouman, Mohamed	A	IAC-20.C1.3.9
SHTANCHAEV, Abduragim	A	IAC-20.B1.4.2
Shuham, Simon	A	IAC-20.B4.1.17
Shumeiko, Andrei	A	IAC-20.C4.8-B4.5A.8
Shuter, Ella	CA	IAC-20.E1.2.1
Shved, Dmitry	CA	IAC-20.A1.1.3
Shved, Dmitry	CA	IAC-20.A1.1.8
Shynkarenko, Olexiy	CA	IAC-20.C4.3.15
Shynkarenko, Olexiy	A	IAC-20.C4.4.5
Siarov, Stefan	CA	IAC-20.D1.4A.8
Siarov, Stefan	CA	IAC-20.D5.1.10
Sibilia, Maria	CA	IAC-20.A1.4.9
Sicard-Piet, Angélica	CA	IAC-20.D5.3.3
Siddiqi, Hamad	A	IAC-20.C2.VP.2
Siddiqui, Rehan	CA	IAC-20.B1.VP.8
Sidhu, Raveen	A	IAC-20.E1.8.5
Sidhu, Raveen	A	IAC-20.E4.1.7
Siebrits, André	CA	IAC-20.B4.1.3
Siebrits, André	CA	IAC-20.E1.9.8
Siedel, Torsten	CA	IAC-20.D3.2B.6
Sieder-Katzmann, Jan	CA	IAC-20.C4.1.13
Sieder-Katzmann, Jan	CA	IAC-20.C4.2.11
Siedykh, Ihor	A	IAC-20.A2.3.5
Siemion, Andrew	CA	IAC-20.A4.1.1
Siemion, Andrew	CA	IAC-20.A4.1.3
Siemion, Andrew	CA	IAC-20.A4.1.4
Siemion, Andrew	CA	IAC-20.A4.1.5
Sier, James	CA	IAC-20.A2.3.1
Sierks, Holger	CA	IAC-20.A3.4A.3
Sierra Pac, Oliver Ernesto	CA	IAC-20.B4.9-GTS.5.7
Sierra Pac, Oliver Ernesto	CA	IAC-20.E5.VP.12
Sierra-Sastre, Yajaira	A	IAC-20.E1.7.13
Siew, Peng Mun	CA	IAC-20.A6.7.8
Sijbers, Jan	CA	IAC-20.A1.2.1
Sil, Aleksander	CA	IAC-20.B3.VP.7
Silva, José	CA	IAC-20.B4.6B.10
Silva, Ricardo	A	IAC-20.B4.3.1
Silva, Sónia	CA	IAC-20.B4.6B.10
Silva, William	CA	IAC-20.B4.8.3
Silva, William	A	IAC-20.C1.8.1
Silva, William	CA	IAC-20.C4.6.12
Silvestrini, Stefano	A	IAC-20.A3.2C.23
Silvestrini, Stefano	A	IAC-20.B6.3.6
Silvestrini, Stefano	A	IAC-20.C1.2.1
Silvestrini, Stefano	A	IAC-20.D1.3.11
Siminski, Jan	CA	IAC-20.A6.7.7
Simmons, Kevin	CA	IAC-20.A3.2A.4
Simmons, Kevin	CA	IAC-20.E1.1.1
Simmons, Kevin	A	IAC-20.E1.2.1
Simmons, Kevin	CA	IAC-20.E1.2.13
Simmons, Kevin	A	IAC-20.E1.5.6
Simmons, Kevin	CA	IAC-20.E1.VP.12
Simmons, Kevin	CA	IAC-20.E2.4.1

Simmons, Kevin	CA	IAC-20.E4.3.3
Simon, Steve	A	IAC-20.E7.7.5
Simon-Butler, Andrew	CA	IAC-20.A7.2.11
Simon-Butler, Andrew	A	IAC-20.E7.2.12
Simone, Domenico	CA	IAC-20.C4.3.2
Simone, Domenico	CA	IAC-20.C4.3.7
Simonetti, Simone	CA	IAC-20.A3.4A.2
Simonetti, Simone	CA	IAC-20.B4.8.8
Sinclair, Giovanni	CA	IAC-20.E2.3-GTS.4.12
Singer, Christian	CA	IAC-20.A1.4.9
Singh, Anand Kumar	A	IAC-20.A3.5.8
Singh, Balbir	CA	IAC-20.B1.4.3
Singh, Dushyant	CA	IAC-20.C2.4.4
Singh, Harjit	CA	IAC-20.C2.VP.25
Singh, Harsh	CA	IAC-20.C3.VP.7
Singh, Harsimran	CA	IAC-20.D1.6.4
Singh, Kartikay	CA	IAC-20.D1.1.9
Singh, Nisheet	CA	IAC-20.A1.VP.13
Singh, Nisheet	CA	IAC-20.A3.2B.17
Singh, Riya	CA	IAC-20.A3.2C.30
Singh, Shourya	CA	IAC-20.D2.VP.8
Singh, Sunny	CA	IAC-20.E2.3-GTS.4.10
Singroha, Navjeet	A	IAC-20.A3.VP.12
Singroha, Navjeet	CA	IAC-20.A5.VP
Sinn, Thomas	A	IAC-20.B4.VP.12
Sinn, Thomas	A	IAC-20.C3.1.6
Sinpetru, Luciana	CA	IAC-20.B4.2.5
Sinpetru, Luciana	CA	IAC-20.C4.5.11
Sippel, Martin	A	IAC-20.D2.4.1
Sippel, Martin	A	IAC-20.D2.6.2
Sippel, Martin	CA	IAC-20.D6.3.5
Sippel, Martin	CA	IAC-20.E1.4.9
Sisaïd, Idriss	CA	IAC-20.B4.6B.9
Sitnikova, Anna	CA	IAC-20.A3.2C.14
Sitnikova, Anna	CA	IAC-20.E5.3.1
Sivkov, Anton	CA	IAC-20.C1.9.11
Sizov, Dmitry A.	CA	IAC-20.C1.3.15
Skalden, Jonathan	CA	IAC-20.C4.6.5
Skinner, Mark A.	A	IAC-20.A6.7.9
Slavinskis, Andris	CA	IAC-20.A3.4B.4
Slavinskis, Andris	CA	IAC-20.B4.6B.1
Slavinskis, Andris	CA	IAC-20.B4.9-GTS.5.4
Slavinskis, Andris	CA	IAC-20.B4.VP.4
Sloan, John	CA	IAC-20.D6.1.2
Slocki, Dylan J.	A	IAC-20.A2.1.8
Smal, Evan	CA	IAC-20.A3.2C.3
Smart Miller, Lea	A	IAC-20.A1.1.7
Smat, Michael	A	IAC-20.A3.2B.4
Smirnov, Nickolay N.	CA	IAC-20.A2.2.3
Smirnov, Nickolay N.	A	IAC-20.A2.4.4
Smirnov, Nickolay N.	A	IAC-20.A6.3.3
Smirnova, Maria	CA	IAC-20.A2.2.6
Smirnova, Maria	CA	IAC-20.A6.3.3
Smisek, Michal	CA	IAC-20.A3.2B.1
Smith, Alan	CA	IAC-20.E3.4.9
Smith, Craig	CA	IAC-20.A6.5.3
Smith, Jacob	CA	IAC-20.B3.8.8
Smith, Joyce	CA	IAC-20.C4.2.10
Smith, Katharine	CA	IAC-20.B4.2.5
Smith, Katharine	CA	IAC-20.C4.5.11
Smith, Marshall	A	IAC-20.A3.1.1
Smith, Michael	CA	IAC-20.A3.3A.4
Smith, Nathan	CA	IAC-20.A3.VP.24
Smith, Phil	CA	IAC-20.D2.7.1
Smith, Sonya	CA	IAC-20.A1.5.2
Smith, Walter F.	CA	IAC-20.A3.4B.8
Smoraldi, Antonio	CA	IAC-20.C4.6.6
Snodgrass, Colin	CA	IAC-20.A3.4A.3
Snodgrass, Colin	CA	IAC-20.A3.4B.3
Snodgrass, Colin	CA	IAC-20.C1.5.7
Snyder, Michael	CA	IAC-20.E2.3-GTS.4.9
SOARES, SERGIO	A	IAC-20.B2.5.13
Soboczenski, Frank	CA	IAC-20.B3.7.2

Sochacki, Mateusz	CA	IAC-20.D2.6.9
Sofrony Esmeral, Jorge Ivan	CA	IAC-20.E6.5-GTS.1.13
Sohail, Muhammad Amjad	A	IAC-20.C4.VP.17
Sojka, Weronika	CA	IAC-20.D3.2A.8
Soken, Halil Ersin	CA	IAC-20.C1.9.10
Solaniuk, Amanda	A	IAC-20.A2.VP.4
Solberg, Margot	A	IAC-20.E1.2.4
Solbiati, Sarah	A	IAC-20.A1.2.10
Soliman, Elrawy	CA	IAC-20.D2.5.15
Solimini, Chiara	CA	IAC-20.D1.2.5
Solomakha, Andrii	A	IAC-20.A1.VP.15
Solovyev, Sergey V.	CA	IAC-20.B6.VP.4
Somanath, Sreedhara Panicker	CA	IAC-20.B3.7.13
Somkuwar, Apoorv	CA	IAC-20.D3.2A.2
Sommariva, Andrea	A	IAC-20.D4.5.3
Sommermann, Daniel	CA	IAC-20.A2.VP.3
Song, Jianing	CA	IAC-20.A2.4.9
Song, Jianing	CA	IAC-20.A7.3.9
Song, Jinfeng	A	IAC-20.A6.VP.16
Song, Junling	A	IAC-20.C4.7.18
Song, Rui	CA	IAC-20.D3.2B.11
Song, Rui	A	IAC-20.D3.3.1
Song, Xumin	CA	IAC-20.D3.3.1
Song, You	CA	IAC-20.A7.3.3
Song, You	CA	IAC-20.B4.7.3
Song, Yuqi	CA	IAC-20.A2.4.9
Song, Yuqi	CA	IAC-20.A7.3.9
Soni, Krishna	CA	IAC-20.D3.2A.2
Sonsalla, Roland U.	CA	IAC-20.A3.2B.17
Sood, Rohan	CA	IAC-20.C1.9.8
Soreefan, Muhammad Ziyaad	A	IAC-20.E1.5.12
Sorge, Marlon	CA	IAC-20.A6.2.5
Sorge, Marlon	CA	IAC-20.A6.4.6
Soria Salinas, Álvaro Tomás	A	IAC-20.A2.3.9
Sorokin, Andrey	CA	IAC-20.A1.VP.6
Sorokin, Igor V.	CA	IAC-20.B3.5.1
Soshkin, Maksim	CA	IAC-20.E9.1-A6.8.6
Sotnichenko, Aleksandr	CA	IAC-20.D6.3.10
Soucek, Alexander	A	IAC-20.E7.7.2
Soulard, Nicolas	CA	IAC-20.E1.5.11
Souza, Davi Alves Feitosa	CA	IAC-20.E5.1.8
Souza, Davi Alves Feitosa	CA	IAC-20.E5.VP.10
Souza, Leonardo	A	IAC-20.B4.1.9
Souza, Leonardo	CA	IAC-20.E3.3.18
Souza, Leonardo	CA	IAC-20.E3.6.7
Souza de Abreu, Mirela	CA	IAC-20.A4.2.6
Souza de Abreu, Mirela	CA	IAC-20.E3.3.17
Souza de Abreu, Mirela	CA	IAC-20.E3.VP.3
Souza de Lima, Alexsandro	A	IAC-20.E7.VP.16
Sowers, George	CA	IAC-20.C3.2.4
Space Exploration Project Group, SGAC	CA	IAC-20.D4.2.7
Space Exploration Project Group, SGAC	CA	IAC-20.D4.5.16
Spagnulo, Marcello	CA	IAC-20.C2.4.1
Sparvieri, Nicola	CA	IAC-20.C1.4.16
Sparvieri, Nicola	CA	IAC-20.C4.5.17
Spaziani, Andrea	CA	IAC-20.A2.1.2
Spaziani, Fulvio	CA	IAC-20.D2.6.5
Spence, Harlan	CA	IAC-20.A1.5.2
Speretta, Stefano	A	IAC-20.B2.3.4
Speretta, Stefano	CA	IAC-20.B4.8.1
Speretta, Stefano	CA	IAC-20.C2.6.1
Spiero, Francois	CA	IAC-20.A1.3.4
Spiero, Francois	CA	IAC-20.E3.2.10
Spiller, Dario	CA	IAC-20.A3.2C.6
Spiriti, Andrea	CA	IAC-20.A4.2.7
Spirito, Germana	CA	IAC-20.E3.3.15
Spirito, Germana	CA	IAC-20.E5.4.6
Splittgerber, Mark	CA	IAC-20.E5.VP.6
Spoto, Francois	CA	IAC-20.A3.3A.2
Srang, Sarot	CA	IAC-20.E1.7.12
Sreeram, G C	CA	IAC-20.B1.5.5
Sridhar, Vishnu	CA	IAC-20.A3.3B.3
Sridharan, Suraj	CA	IAC-20.B4.7.12

Srinivas, Kodati	CA	IAC-20.C2.1.5
Srinivasan, Sitara	A	IAC-20.C2.6.10
Srinivasan, Varun	CA	IAC-20.A4.1.4
Sriram, Ajay	CA	IAC-20.A1.7.6
Sriram, Ajay	CA	IAC-20.A1.8.8
Sriram, Ajay	CA	IAC-20.A4.2.8
Sriram, Ajay	CA	IAC-20.B1.VP.16
Sriram, Ajay	CA	IAC-20.B5.1.7
Sriram, Ajay	CA	IAC-20.C3.2.8
Sriram, Ajay	CA	IAC-20.C3.2.9
Sriram, Ajay	CA	IAC-20.D1.VP
Sriram, Ajay	CA	IAC-20.D4.1.16
Sriram, Ajay	CA	IAC-20.D5.1.3
Sriram, Ajay	CA	IAC-20.E1.5.2
Srivastava, Archit	A	IAC-20.A7.3.12
Srivastava, Archit	A	IAC-20.B2.5.5
Srivastava, Smiriti	A	IAC-20.D4.5.7
St-Pierre, Luc	CA	IAC-20.A2.3.3
St-Pierre, Luc	CA	IAC-20.B2.1.5
St-Pierre, Luc	CA	IAC-20.B4.1.2
Stamov, Lyuben	CA	IAC-20.A2.1.7
Stamov, Lyuben	A	IAC-20.A2.2.6
Stamov, Lyuben	CA	IAC-20.A6.3.3
Stancu, Andrei	CA	IAC-20.C2.9.5
Stappert, Sven	CA	IAC-20.D2.4.1
Stappert, Sven	CA	IAC-20.D2.6.2
Starchenko, Alexander	A	IAC-20.C1.4.3
Starzyk, Janice	A	IAC-20.D2.7.1
Starzyk, Janice	CA	IAC-20.D3.1.7
Starzyk, Janice	CA	IAC-20.E6.2.1
Staudinger, Emanuel	CA	IAC-20.A3.2B.1
Staus, Jonas	CA	IAC-20.E2.3-GTS.4.1
Staško, Martin	CA	IAC-20.B1.1.3
Staško, Martin	CA	IAC-20.E1.5.1
Steelant, Johan	CA	IAC-20.C2.4.2
Steele, Scott	A	IAC-20.D2.9-D6.2.7
Stefoudi, Dimitra	CA	IAC-20.D4.5.10
Stefoudi, Dimitra	A	IAC-20.E7.3.15
Stefoudi, Dimitra	CA	IAC-20.E7.VP.15
Stefoudi, Dimitra	A	IAC-20.E9.2.D5.4.3
Stegmaier, Thomas	CA	IAC-20.A1.VP.13
Steidle, Florian	CA	IAC-20.A3.2B.1
Stella, Fulvio	CA	IAC-20.C4.3.2
Stepanov, Kirill	CA	IAC-20.C2.5.12
Stepanova, Daria	CA	IAC-20.B2.4.1
Stepanova, Daria	A	IAC-20.B2.4.5
Stepanova, Daria	CA	IAC-20.D3.2A.2
Stephens-Simonazzi, Benedict	CA	IAC-20.E2.3-GTS.4.12
Sternschulte, Robert	CA	IAC-20.E2.3-GTS.4.10
Stesina, Fabrizio	CA	IAC-20.C4.5.17
Stesina, Fabrizio	A	IAC-20.C4.8-B4.5A.3
Stesina, Fabrizio	CA	IAC-20.D1.4B.8
Stevenson, Emma	A	IAC-20.A6.7.4
Stevenson, Thomas	CA	IAC-20.A7.2.4
Steyn, Willem	CA	IAC-20.A3.5.10
Stickle, Angela	CA	IAC-20.A3.4A.3
Stinikova, Anna	CA	IAC-20.A3.VP.4
Stober, Javier	A	IAC-20.A2.3.4
Stognii, Mihail	CA	IAC-20.A6.6.2
Stoll, Enrico	CA	IAC-20.A6.2.6
Stoll, Enrico	CA	IAC-20.C2.7.2
Stoll, Enrico	CA	IAC-20.E1.4.9
Stough, Robert	CA	IAC-20.D4.4.3
Straker, Alastair	CA	IAC-20.C4.5.11
Straube, Ulrich	CA	IAC-20.A1.5.9
Strauss, Finley	CA	IAC-20.E1.2.1
Strippoli, Luigi	CA	IAC-20.A3.3B.10
Stroe, Daniel-Ioan	CA	IAC-20.C3.3.6
Strollo, Felice	CA	IAC-20.A1.2.9
Stroozas, Brett	CA	IAC-20.B6.3.1
Strubel, Jared	A	IAC-20.E3.2.22
Stuffler, Timo	CA	IAC-20.A3.2A.6
Stylianou, Stella	A	IAC-20.A3.VP.4

Stölzle, Alexander	A	IAC-20.B3.4-B6.4.4
Stürzl, Wolfgang	CA	IAC-20.A3.2B.1
Su, Lingyu	CA	IAC-20.A2.2.7
Su, Lingyu	CA	IAC-20.C4.7.4
Suarez, Alexandra	A	IAC-20.A3.3B.11
Subramanian, Palaniappan	A	IAC-20.D2.3.5
Subramanian, Palaniappan	A	IAC-20.D3.2B.2
Suda, Toshiki	A	IAC-20.A2.2.4
Sudakov, Vladimir	CA	IAC-20.C4.1.3
Sugawara, Yoshiki	CA	IAC-20.C1.8.8
Sugawara, Yoshiki	CA	IAC-20.C2.1.14
Sugawara, Yoshiki	A	IAC-20.D1.2.8
Sugihara El Maghraby, Ahmed Kiyoshi	A	IAC-20.C2.9.2
Sugihara El Maghraby, Ahmed Kiyoshi	CA	IAC-20.D1.2.8
Sulliotti-Linner, Valeria	CA	IAC-20.B4.2.5
Sulliotti-Linner, Valeria	CA	IAC-20.C4.5.11
Sun, Chong	CA	IAC-20.A6.5.4
Sun, Chong	CA	IAC-20.A6.VP.16
Sun, Chong	A	IAC-20.A6.VP.19
Sun, Gongling	CA	IAC-20.B5.3.2
Sun, Haiyu	CA	IAC-20.A5.1.6
Sun, Jiwei	CA	IAC-20.D6.3.4
Sun, Lin	A	IAC-20.C4.4.7
Sun, Mingming	A	IAC-20.C4.6.1
Sun, Qi	CA	IAC-20.D3.2B.11
Sun, Qinbo	A	IAC-20.E2.4.2
Sun, Rong	A	IAC-20.A5.3-B3.6.7
Sun, Weijian	CA	IAC-20.A5.1.6
Sunada, Eric	CA	IAC-20.D4.4.4
Sundaramoorthy, Guhan	CA	IAC-20.B2.3.8
Supolkina, Natalya	CA	IAC-20.A1.1.3
Supolkina, Natalya	CA	IAC-20.A1.1.8
Sureda, Miquel	CA	IAC-20.B4.2.5
Sureda, Miquel	CA	IAC-20.C4.5.11
Suri, Ramaa Saket	CA	IAC-20.C3.2.7
Sustach, David	CA	IAC-20.E1.5.16
Sutherland, Orson	CA	IAC-20.A3.3A.1
Sutherland, Orson	CA	IAC-20.A3.3A.2
Sutyrina, Olga	CA	IAC-20.B1.4.2
Suzuki, Kazuto	CA	IAC-20.D4.2.9
Suzuki, Kazuya	CA	IAC-20.B3.3.7
Suzuki, Kenji	CA	IAC-20.B2.2.5
Suzuki, Kojiro	CA	IAC-20.A6.6.4
Svarovska, Nicol	A	IAC-20.E9.1-A6.8.15
Svec, Martin	A	IAC-20.E7.1.9
Svertilov, Sergey	CA	IAC-20.B4.7.4
Swaminathan, Akshita	CA	IAC-20.D6.1.12
Swan, Cathy	CA	IAC-20.D4.3.2
Swan, Peter	A	IAC-20.D4.3.2
Swan, Peter	A	IAC-20.D4.3.5
Swan, Peter	A	IAC-20.D4.5.6
Sweatman, Kate	CA	IAC-20.A5.1.6
Sweatman, Kate	CA	IAC-20.B3.1.8
Sweeting, Martin	CA	IAC-20.B1.2.10
Sweeting, Martin	CA	IAC-20.B4.6A.12
Sweeting, Sir Martin	CA	IAC-20.D3.2A.1
Switzer, Eric	CA	IAC-20.A7.2.4
Syed, Abdul	A	IAC-20.E1.3.11
Sylak-Glassman, Emily	CA	IAC-20.B1.5.11
Sylvestre, Desirée	CA	IAC-20.E1.6.7
Synder, Susan	CA	IAC-20.D5.2.15
Synkova, Ksenia	A	IAC-20.E1.6.9
Szczerba, Matthew	CA	IAC-20.A6.10-B6.5.1
Szczerba, Matthew	CA	IAC-20.B4.VP.11
Szewczyk, Jakub	CA	IAC-20.D3.2A.8
Sáez Bo, Daniel	CA	IAC-20.A6.2.4
Sánchez Rodríguez, Eva	CA	IAC-20.A5.1.7
Sánchez-Arriaga, Gonzalo	CA	IAC-20.A6.4.4
Söllner, Gerd	CA	IAC-20.B3.4-B6.4.4
Süllow, Stefan	CA	IAC-20.C2.7.2
Sütterlin, Saskia	CA	IAC-20.A2.2.2

T

Name	Role	Paper
T, THILLAIKUMAR	CA	IAC-20.C4.7.6
T, THILLAIKUMAR	CA	IAC-20.C4.7.8
T, THILLAIKUMAR	A	IAC-20.C4.VP.13
T. Gresser., Götz	CA	IAC-20.A1.VP.13
Tabarah, Edward	CA	IAC-20.B3.1.5
Tadjalli, Saba	A	IAC-20.E5.5.8
Taggio, Nicolo	CA	IAC-20.B1.4.5
Taguchi, Makoto	CA	IAC-20.B4.2.13
Taheran, Mahsa	CA	IAC-20.A7.3.8
Tahmid, Tasmia	A	IAC-20.B3.7.7
Tailhades, Sebastien	A	IAC-20.B1.2.7
Tailor, Neel	CA	IAC-20.C3.4.5
Tajima, Hiroyasu	CA	IAC-20.E1.7.10
Tajima, Tomoyuki	CA	IAC-20.D4.2.13
Tajmar, Martin	CA	IAC-20.A6.4.4
Tajmar, Martin	CA	IAC-20.C4.1.13
Tajmar, Martin	A	IAC-20.C4.10-C3.5.10
Tajmar, Martin	CA	IAC-20.C4.2.11
Tajmar, Martin	CA	IAC-20.E1.4.9
Takahashi, Akira	A	IAC-20.C2.8.9
Takahashi, Chieko	CA	IAC-20.B3.2.10
Takahashi, Hideyuki	A	IAC-20.C2.9.3
Takahashi, Ryohei	CA	IAC-20.E1.7.12
Takahashi, Tsukasa	CA	IAC-20.D4.2.2
Takahashi, Yasuhiro	CA	IAC-20.B2.2.5
Takahira, Ryosuke	CA	IAC-20.B4.3.7
Takahira, Ryosuke	CA	IAC-20.C1.8.12
Takano, Tadashi	A	IAC-20.B3.3.9
Takao, Yuki	CA	IAC-20.A6.5.12
Takao, Yuki	CA	IAC-20.C1.2.12
Takao, Yuki	CA	IAC-20.C2.9.2
Takao, Yuki	CA	IAC-20.C2.9.3
Takashima, Takeshi	CA	IAC-20.C1.5.10
Takehara, Masahiko	A	IAC-20.D4.2.14
Takei, Yuto	CA	IAC-20.B6.3.7
TAKEICHI, Noboru	A	IAC-20.A6.5.9
Takenaka, Hideki	CA	IAC-20.B2.2.5
Takeuchi, Yu	A	IAC-20.D6.3.6
Takeuchi, Yu	A	IAC-20.E7.7.3
Takise, Takumi	CA	IAC-20.C2.1.14
Talaat, Elsayed	A	IAC-20.A7.1.5
Talafha, Mohmmad	A	IAC-20.A3.VP.10
Talbot, Christophe	CA	IAC-20.D2.6.6
Talebi, Zeinab	CA	IAC-20.C1.8.14
Talevi, Monica	CA	IAC-20.E1.2.12
TAN, Lin	CA	IAC-20.E6.3.6
Tan, Pan	A	IAC-20.A6.5.7
Tan, ShuJun	A	IAC-20.C2.3.10
Tan, Yonghua	CA	IAC-20.C4.VP.2
Tanaka, Hidetaka	CA	IAC-20.E1.7.10
Tanaka, Koji	CA	IAC-20.C2.1.11
Tanaka, Koji	CA	IAC-20.C2.6.4
Tanaka, Koji	CA	IAC-20.C2.9.4
Tanaka, Koji	CA	IAC-20.C3.1.11
Tanaka, Kyosuke	A	IAC-20.A1.1.5
Tanaka, Takeshi	CA	IAC-20.E5.1.4
Tanaka, Yuri	A	IAC-20.E5.3.5
Tanasyuk, Pavlo	CA	IAC-20.D1.6.8
Tanasyuk, Pavlo	CA	IAC-20.D4.2.10
Tanasyuk, Pavlo	A	IAC-20.E6.1.8
Tandon, Tushar	CA	IAC-20.B2.3.8
Taneja, Kashish	CA	IAC-20.B2.7.6
Tang, Jingshi	CA	IAC-20.A6.5.7
Tang, Tang	CA	IAC-20.E5.VP.9
Tang, Yuhua	CA	IAC-20.A3.2A.2
Tani, Hiroumi	CA	IAC-20.A2.4.13
TANOUTI, Iliass	A	IAC-20.B4.1.4
TANOUTI, Iliass	A	IAC-20.D1.4B.2
TANOUTI, Iliass	CA	IAC-20.D4.1.3
Tao, Chao	CA	IAC-20.B2.7.12
Tao, Zhang	A	IAC-20.A1.8.6
Tapio, Jenni	CA	IAC-20.E7.7.2
Tarabini-Castellani, Lorenzo	A	IAC-20.A6.4.4
Tardivel, Simon	CA	IAC-20.A3.4B.2
Tarhi, Mehran	A	IAC-20.E7.1.10
Tassi, Tommaso	CA	IAC-20.B2.2.8
Tateshita, Hiroaki	CA	IAC-20.B3.3.7
Tatiossian, Pascal	CA	IAC-20.D2.6.1
Tavana, Siavash	CA	IAC-20.C1.1.5
Tavant, Antoine	CA	IAC-20.E2.3-GTS.4.11
Taylor, John	CA	IAC-20.B2.3.6
Taylor, Nathan	CA	IAC-20.A5.1.6
Taylor, Neil	CA	IAC-20.D2.4.5
Tayyebi, Akram	A	IAC-20.B5.1.13
Tchakerian, Raffi	CA	IAC-20.E1.3.13
Tchakerian, Raffi	CA	IAC-20.E5.1.10
Teichmann, Marek	CA	IAC-20.C2.3.7
Tejumola, Taiwo Raphael	CA	IAC-20.B2.6.13
Tejumola, Taiwo Raphael	CA	IAC-20.B4.1.4
Tekinalp, Ozan	CA	IAC-20.C1.9.10
Telekh, Victor	CA	IAC-20.C4.8-B4.5A.8
Tembhurne, Runal	CA	IAC-20.E2.4.13
Temidayo Isaiah, Oniosun	CA	IAC-20.E6.5-GTS.1.6
Ten, Vladimir	A	IAC-20.B4.1.14
Ten, Vladimir	CA	IAC-20.B4.9-GTS.5.2
Ten, Vladimir	A	IAC-20.B4.VP.30
Tenenbaum, Stepan	CA	IAC-20.B4.2.9
Tepper, Eytan	A	IAC-20.E9.1-A6.8.3
Terada, Masahiro	A	IAC-20.D4.2.13
Terada, Mayu	CA	IAC-20.E7.3.10
Terashima, Chiaki	CA	IAC-20.D4.2.5
Terata, Momoe	CA	IAC-20.D4.3.3
Terui, Fuyuto	CA	IAC-20.A3.4B.5
Terzibaschian, Thomas	A	IAC-20.B4.6A.2
Teschl, Franz	CA	IAC-20.B2.4.12
Teschl, Franz	CA	IAC-20.B5.1.5
Teschl, Franz	CA	IAC-20.D1.2.5
Tesmer, Volker	CA	IAC-20.B1.2.7
TEWARI, BRIJ	A	IAC-20.A1.6.6
Thakur, Riya	CA	IAC-20.C4.VP.29
Thakur, Sahil	CA	IAC-20.C4.VP.29
Thaler-Wolski, Christian	CA	IAC-20.E3.VP.1
Thammasit, Sasiluck	CA	IAC-20.E3.VP.1
Thangavel, Kathiravan	CA	IAC-20.B4.1.17
Thangavel, Kathiravan	CA	IAC-20.D3.2A.2
Thangavelu, Madhu	A	IAC-20.A3.1.10
Thapa, Jiten	A	IAC-20.E1.VP.22
Tharakan, John T	CA	IAC-20.C4.1.2
Tharakan, John T	CA	IAC-20.C4.2.7
Thaxton, James	CA	IAC-20.A1.5.9
Thepdawala, Salman Ali	A	IAC-20.E2.1.8
Thi Ha, Zwe	A	IAC-20.B4.9-GTS.5.8
Thi Ha, Zwe	A	IAC-20.D4.VP.2
THIRION, Guillaume	CA	IAC-20.E1.5.11
THOMABRE, BHUSHAN	CA	IAC-20.C4.4.2
Thomas, Chesler	A	IAC-20.C3.VP.7
Thomas, John	CA	IAC-20.A1.3.3
Thomas, Suresh Mathew	CA	IAC-20.C2.VP.25
Thorn, Elliott	CA	IAC-20.A6.5.3
Thuluva, Sushmith	CA	IAC-20.A1.7.6
Thuluva, Sushmith	CA	IAC-20.A1.8.8
Thuluva, Sushmith	CA	IAC-20.A4.2.8
Thuluva, Sushmith	CA	IAC-20.B1.VP.16
Thuluva, Sushmith	CA	IAC-20.B5.1.7
Thuluva, Sushmith	CA	IAC-20.C3.2.8
Thuluva, Sushmith	CA	IAC-20.C3.2.9
Thuluva, Sushmith	CA	IAC-20.D1.VP
Thuluva, Sushmith	CA	IAC-20.D4.1.16
Thuluva, Sushmith	CA	IAC-20.D5.1.3
Thuluva, Sushmith	A	IAC-20.E1.5.2
Tian, Hui	CA	IAC-20.C4.4.8
Tian, Hui	CA	IAC-20.D1.4A.3
Tian, Jia	A	IAC-20.B2.VP.5
Tian, Weiping	A	IAC-20.C4.3.4
Tian, Xia	CA	IAC-20.B1.VP.9
Tiballi, Christine	CA	IAC-20.D4.1.3
Tiballi, Christine	CA	IAC-20.E5.4.1
Tikka, Tuomas	CA	IAC-20.B4.9-GTS.5.4
Tim, Hoksong	CA	IAC-20.E1.7.12
Timmermans, Remco	A	IAC-20.E1.6.8
Tinao, Ignacio	CA	IAC-20.A2.3.8
Tinel, Claire	CA	IAC-20.B1.6.10
Tings, Björn	CA	IAC-20.D1.2.5
Tiraplegui Riveras, Sergio	CA	IAC-20.B6.2.5
Tiseo, Barbara	CA	IAC-20.D2.5.1
Tisserand, Isabelle	A	IAC-20.E6.4.12
Titov, Dmitry M.	CA	IAC-20.C2.7.5
Titov, Dmitry M.	CA	IAC-20.C2.7.9
Titov, Dmitry M.	CA	IAC-20.C2.8.6
Tits, Daan	CA	IAC-20.B2.7.1
Tits, Daan	CA	IAC-20.B2.8-GTS.3.5
Titz, Alexander	CA	IAC-20.B4.VP.12
Tiutiunnik, Nikolai	CA	IAC-20.B4.6A.10
TIWARI, SHAILJA	CA	IAC-20.A5.1.13
Tkachev, Stepan	CA	IAC-20.B4.7.4
Tkachev, Stepan	CA	IAC-20.C1.VP.1
Tkachov, Yurii	CA	IAC-20.C1.9.14
Tobar, Michael	CA	IAC-20.B2.7.2
Tobiassen, Jonas (PPP)	CA	IAC-20.E5.VP.4
Tokudome, Shinichiro	A	IAC-20.D2.4.2
Tokudome, Shinichiro	CA	IAC-20.D2.7.8
Tolok, Stanislav	CA	IAC-20.C4.5.16
Tomiki, Atsushi	CA	IAC-20.B2.3.3
Tomilovskaya, Elena	CA	IAC-20.A1.2.1
Tomilovskaya, Elena	A	IAC-20.A1.2.5
Tomilovskaya, Elena	CA	IAC-20.A1.VP.20
Tomioka, Kota	CA	IAC-20.E1.7.10
Tomita, Erika	A	IAC-20.C2.VP.20
Tomita, Yuki	A	IAC-20.B6.3.7
Tommei, Giacomo	CA	IAC-20.A3.5.2
Tonetti, Stefania	CA	IAC-20.B2.4.12
Tonetti, Stefania	CA	IAC-20.D1.2.5
Tong, Yiheng	CA	IAC-20.A2.2.7
Tong, Yiheng	CA	IAC-20.C4.7.4
Tong, Yiheng	CA	IAC-20.C4.VP.21
Topputo, Francesco	A	IAC-20.A3.2B.8
Topputo, Francesco	CA	IAC-20.B2.3.4
Topputo, Francesco	CA	IAC-20.B4.8.1
Topputo, Francesco	CA	IAC-20.C1.5.13
Topputo, Francesco	CA	IAC-20.C2.6.1
Torisaka, Ayako	CA	IAC-20.D1.2.8
Torisu, Cristiane	CA	IAC-20.E3.6.7
Tork, Hillar	CA	IAC-20.B2.8-GTS.3.8
Torres Reyes, Ivan Yahir	CA	IAC-20.E1.1.8
Torta, Elena	CA	IAC-20.A2.7.9
Tortora, Paolo	CA	IAC-20.A3.4A.3
Tortorici, Daniele	CA	IAC-20.C2.2.5
Toson, Elena	CA	IAC-20.C4.3.11
Toson, Elena	CA	IAC-20.C4.5.17
Tossaint, Michel	CA	IAC-20.B4.4.1
Toto, Elisa	CA	IAC-20.C2.5.11
Toto, Elisa	CA	IAC-20.C2.6.9
Toukebri, Rania	A	IAC-20.D3.1.11
Toussaint, Wesley	CA	IAC-20.D2.3.8
Townsend, Lawrence W.	CA	IAC-20.A1.5.2
Townsend, Lawrence W.	CA	IAC-20.A1.5.8
Toyoda, Kazuhiro	CA	IAC-20.B4.2.7
Toyoda, Kazuhiro	CA	IAC-20.C4.8-B4.5A.12
Toyoshima, Morio	CA	IAC-20.B2.2.5
Tran, Vienna	CA	IAC-20.A5.1.6
Traub, Constantin	CA	IAC-20.B4.2.5
Traub, Constantin	CA	IAC-20.C4.5.11
Traub, Constantin	CA	IAC-20.C4.9.1
Trauberman, Jeffrey	CA	IAC-20.A1.6.9
Travouillon, Tony	CA	IAC-20.A6.5.3
Traços, Oivandro	CA	IAC-20.E1.9.13
Tremblay, Malcom	CA	IAC-20.A1.3.3
Tresch, Trent	A	IAC-20.E1.3.2
Trezzolani, Fabio	CA	IAC-20.C4.5.17
Trezzolani, Fabio	CA	IAC-20.C4.8-B4.5A.3
Tricarico, Pasquale	CA	IAC-20.B4.8.8
Triebel, Rudolph	CA	IAC-20.A3.2B.1
Trikha, Manish	CA	IAC-20.C2.3.13
Trinh, Phuc V.	CA	IAC-20.B2.2.5
Tripathi, Havishk	A	IAC-20.A1.6.8
Trisolini, Mirko	CA	IAC-20.C1.6.10
Trivedi, Abhishek	CA	IAC-20.B6.VP.8
Trivedi, Abhishek	CA	IAC-20.C2.4.4
Trivedi, Shantanu	A	IAC-20.D2.VP.14
Trofimov, Sergey	CA	IAC-20.C1.4.13
Troisi, Ivan	CA	IAC-20.A3.2C.25
Tronchetti, Fabio	A	IAC-20.E7.5.2
Trouillefou, Christophe Marcel	A	IAC-20.A1.VP.3
Trujillo, Alejandro	CA	IAC-20.A3.2B.7
Trujillo, Alejandro	CA	IAC-20.A3.3A.9
TRUONG AN, HOANG XUAN	A	IAC-20.B4.VP.26
Truscelli, Gianni	CA	IAC-20.A2.6.1
Truscelli, Gianni	CA	IAC-20.B3.3.2
Trusculescu, Marius Florin	CA	IAC-20.C1.3.5
Tscherne, Christoph	CA	IAC-20.B4.4.2
Tse, Man Siu	CA	IAC-20.B4.2.1
Tsiganis, Kleomenis	CA	IAC-20.A3.4A.3
Tsoupos, Alexandros	A	IAC-20.B1.2.6
Tsoupos, Alexandros	CA	IAC-20.B4.6A.9
Tsubakino, Daisuke	CA	IAC-20.C1.1.9
Tsuda, Yuichi	CA	IAC-20.A2.4.13
Tsuda, Yuichi	CA	IAC-20.A3.4B.5
Tsuda, Yuichi	CA	IAC-20.C1.2.12
Tsuji, Hayaki	A	IAC-20.E5.3.7
Tsuji, Hayaki	A	IAC-20.E5.5.5
Tsujihiro, Satoko	CA	IAC-20.D4.2.13
Tsujita, Daisuke	CA	IAC-20.A5.4-D2.8.1
Tsumura, Kohji	CA	IAC-20.D1.2.8
Tsunoda, Hiroaki	CA	IAC-20.C2.9.3
Tulczyjew, Lukasz	CA	IAC-20.A6.VP.13
Tumendemberel, Begzsuren	CA	IAC-20.B4.1.12
Tumenjargal, Turtogtokh	A	IAC-20.B4.1.12
Tumino, Giorgio	A	IAC-20.D2.1.5
Tumino, Giorgio	A	IAC-20.D2.4.3
Turan, Erdem	CA	IAC-20.B2.3.4
Turi, Matteo	CA	IAC-20.B1.2.9
Turner, Calum	A	IAC-20.A6.VP.9
Turner, Calum	CA	IAC-20.A7.2.11
Turner, Calum	CA	IAC-20.D1.2.1
Turner, Garret Michael	CA	IAC-20.A5.1.6
Turner, Neal	CA	IAC-20.A3.5.15
Turner, Neal	CA	IAC-20.D1.5.9
Tuvshinbayar, Ariunbold	CA	IAC-20.B4.1.12
Tylor, Christopher	A	IAC-20.B1.VP.6
Tyni, Mats	CA	IAC-20.D2.2.11
Tysseling, John	A	IAC-20.D2.9-D6.2.3
Tyurenkova, Veronika	CA	IAC-20.A2.2.6
Tyurenkova, Veronika	CA	IAC-20.A2.4.4
Tyurenkova, Veronika	CA	IAC-20.A6.3.3
Téllez, Arnulfo	CA	IAC-20.D3.2A.11
Töpfer, Markus	A	IAC-20.B6.1.3
Tăiatu, Claudiu Mihai	CA	IAC-20.E7.5.6

U

Name	Role	Paper
Ubbels, Wouter Jan	CA	IAC-20.B2.3.4
Ubieto, Victor	CA	IAC-20.E5.5.3
Ueno, Kazuma	CA	IAC-20.A6.5.8
UENO, Munetaka	CA	IAC-20.A3.5.10
Uetsuhara, Masahiko	A	IAC-20.B4.3.7

Uetsuhara, Masahiko	CA	IAC-20.C1.8.12
Ugom, Michael	A	IAC-20.E1.9.5
Ulambayar, Tuguldur	CA	IAC-20.B4.1.12
Ulamec, Stephan	CA	IAC-20.A3.4A.3
Ulamec, Stephan	CA	IAC-20.A3.4B.2
Ulamec, Stephan	CA	IAC-20.A3.4B.8
Ulloa, Carlos	CA	IAC-20.B4.6B.10
Umar, Kabir	CA	IAC-20.B2.1.9
Umar, Kabir	CA	IAC-20.B2.1.12
Uno, Masatoshi	CA	IAC-20.C3.3.2
Unwin, Martin J.	A	IAC-20.B4.4.1
Uppalapati, Sruthi	CA	IAC-20.A3.5.4
Upshur, Ross	CA	IAC-20.A1.3.4
Urbano Rodrigues, Alessandra	CA	IAC-20.D1.4B.12
Urbas, Ana	CA	IAC-20.B1.2.14
Urbina, Diego A.	A	IAC-20.D1.2.10
Urru, Alessandro	A	IAC-20.B1.5.1
Urru, Enrico	CA	IAC-20.A6.VP.6
Urru, Enrico	CA	IAC-20.A6.VP.11
Usenko, V	CA	IAC-20.A1.VP.15
Usinger, Ralf	CA	IAC-20.C2.9.5
Ustiugov, Efim	CA	IAC-20.C1.9.11

V

Name	Role	Paper
Valentini, Gaetano	CA	IAC-20.A6.VP.3
Valentini, Giovanni	CA	IAC-20.A2.6.1
Valentini, Giovanni	CA	IAC-20.B3.3.2
Vales, Marc	CA	IAC-20.D2.6.6
Vales, Marc	A	IAC-20.E6.4.3
Valle, Massimiliano	CA	IAC-20.D2.5.1
Valletta, Gianmarco	CA	IAC-20.A1.6.4
Vallini, Lorenzo	CA	IAC-20.A6.VP.14
Valluri, Sagarika	CA	IAC-20.C2.6.10
Valmorbida, Andrea	CA	IAC-20.A6.4.4
Valmorbida, Andrea	CA	IAC-20.A6.5.13
Van Camp, Adriaen	CA	IAC-20.A3.2B.18
Van Camp, Charlotte	CA	IAC-20.A4.2.6
Van Den Bossche, Mathias	CA	IAC-20.B2.2.1
van der Els, Peter	CA	IAC-20.E4.1.4
van der Hulst, Frank	CA	IAC-20.A3.2B.1
van der Hulst, Frank	CA	IAC-20.A3.2B.2
van der Hulst, Frank	CA	IAC-20.D1.6.4
van der Linden, Stefan	A	IAC-20.B2.7.1
van der Linden, Stefan	A	IAC-20.B2.8-GTS.3.5
Van Ombergen, Angelique	CA	IAC-20.A1.2.1
Vananti, Alessandro	CA	IAC-20.A6.7.7
Vananti, Alessandro	A	IAC-20.A6.9.3
Vananti, Alessandro	CA	IAC-20.A6.9.6
Varacalli, Giancarlo Natale	CA	IAC-20.B1.2.9
Varelidi Strati, Theodora	CA	IAC-20.A3.2C.7
Varelidi Strati, Theodora	CA	IAC-20.A3.5.11
Varelidi Strati, Theodora	CA	IAC-20.B3.VP.12
Vargas, Teófilo	A	IAC-20.A4.1.10
Vargas, Teófilo	CA	IAC-20.A4.2.7
Vargas Martinez, Hector Simon	A	IAC-20.B4.4.6
Vargas-Cuentas, Natalia Indira	CA	IAC-20.E3.3.4
Vargas-Cuentas, Natalia Indira	CA	IAC-20.E5.2.5
Vargas-Cuentas, Natalia Indira	CA	IAC-20.E5.2.10
Vargas-Cuentas, Natalia Indira	CA	IAC-20.E5.4.8
Vargas-Cuentas, Natalia Indira	CA	IAC-20.E5.4.9
Varma, Rithika	CA	IAC-20.A6.4.8
Varman, Gautam Sandesh-Yan	CA	IAC-20.C3.2.9
Varvill, Richard	CA	IAC-20.D2.4.5
Vashishtha, Ankita	A	IAC-20.A5.1.17
Vasile, Massimiliano	CA	IAC-20.A6.2.12
Vasile, Massimiliano	CA	IAC-20.C1.4.1
Vasile, Massimiliano	CA	IAC-20.C1.4.5
Vasile, Massimiliano	CA	IAC-20.C1.6.5
Vasile, Massimiliano	CA	IAC-20.C3.1.5
Vasile, Massimiliano	CA	IAC-20.C3.4.2
Vasile, Massimiliano	CA	IAC-20.C3.4.3
Vasiliev, Andrey	A	IAC-20.A3.VP.22
Vasiliev, Valeriy	CA	IAC-20.B3.4-B6.4.6
Vasilieva, Natalia	CA	IAC-20.B3.4-B6.4.6
Vasisth, Rajath S	CA	IAC-20.A4.1.8
Vasisth, Rajath S	CA	IAC-20.B1.5.16
Vasko, Christopher	A	IAC-20.B2.2.3
Vatine, Emma	CA	IAC-20.B4.5.8
Vaughn, Jennifer	CA	IAC-20.A3.1.9
Vayugundla, Mallikarjuna	CA	IAC-20.A3.2B.1
Vaze, Parag	CA	IAC-20.B1.2.4
Vedant, FNU	CA	IAC-20.A7.2.11
Veenman, Joost	CA	IAC-20.D2.4.4
Vela, Claudio	CA	IAC-20.A1.6.4
Velho, Rochelle	CA	IAC-20.E1.5.13
Veliev, Nikita	CA	IAC-20.E1.7.2
Vellak, Priit	CA	IAC-20.A3.2B.14
Velmurugan, Priyadharshini	CA	IAC-20.C3.VP.9
Vemuru, Ajay	CA	IAC-20.B2.7.4
Vena, Andrea	CA	IAC-20.D5.2.6
Veneziano, Anna	A	IAC-20.E3.3.3
Venkataraman, Arun Subramanian	A	IAC-20.A5.4-D2.8.6
Venkataraman, Arun Subramanian	A	IAC-20.B2.6.8
Venkatesan, Jayakumar	CA	IAC-20.C4.7.11
Venkateswaran, Ashok	CA	IAC-20.B3.7.13
Venkatraman, Rahul	A	IAC-20.E5.1.7
Venticinque, Guilherme	CA	IAC-20.D1.5.3
Venticinque, Guilherme	A	IAC-20.D1.5.6
Ventre, Francesco	A	IAC-20.D1.1.10
Vera Cervantes, Victor Daniel	CA	IAC-20.A4.1.10
Vera Cervantes, Victor Daniel	CA	IAC-20.A4.2.7
Vereš, Peter	CA	IAC-20.E1.9.6
Verma, Arnika	CA	IAC-20.C4.2.9
Vermeulen, Annelie	CA	IAC-20.E1.5.14
Vermeulen, Nancy	A	IAC-20.A3.2C.16
Vernile, Alessandra	CA	IAC-20.D5.2.15
Vernillo, Paolo	CA	IAC-20.C2.4.1
Vernon, Steven	CA	IAC-20.D4.4.3
Verspieren, Quentin	CA	IAC-20.E1.7.12
Vertadier, Héloïse	A	IAC-20.E3.2.17
Vertadier, Héloïse	A	IAC-20.E6.1.6
Vertuani, Davide	CA	IAC-20.A6.5.13
Verzijlenberg, Bart	CA	IAC-20.B3.8.3
Verzola, Ivano	CA	IAC-20.B3.4-B6.4.4
Vestergaard, Lars	CA	IAC-20.C3.3.6
Vestito, Eleonora	A	IAC-20.A2.7.10
Vestito, Eleonora	CA	IAC-20.A6.10-B6.5.1
Vestito, Eleonora	CA	IAC-20.B4.VP.11
Vestito, Eleonora	CA	IAC-20.E1.4.7
Vestito, Eleonora	CA	IAC-20.E1.VP.13
Vetrano, Maria Rosaria	CA	IAC-20.C4.8-B4.5A.11
Vettor, Andrea	A	IAC-20.B2.4.2
Vettor, Andrea	CA	IAC-20.B4.6A.5
Vettor, Andrea	A	IAC-20.B4.7.15
Vianelli, Alberto	CA	IAC-20.A4.2.7
Viaña, Carlos	CA	IAC-20.A4.2.7
Vicentini, Alessandra	CA	IAC-20.A4.2.7
Victor, Mazoyer	CA	IAC-20.A3.2C.7
Victor, Mazoyer	CA	IAC-20.A3.5.11
Victor, Mazoyer	A	IAC-20.A3.5.12
Victor, Mazoyer	CA	IAC-20.B3.VP.12
Vidal, Ruben	CA	IAC-20.C1.5.14
Vidano, Simone	CA	IAC-20.C1.3.3
Vidano, Simone	A	IAC-20.C1.9.5
Vidmar, Matjaz	CA	IAC-20.A5.4-D2.8.6
Vigil, Genevieve	CA	IAC-20.A7.3.7
Vignelles, Aude	CA	IAC-20.B3.1.8
Vignelles, Aude	A	IAC-20.D4.1.1
Vijayan, Ria	CA	IAC-20.B4.4.7
Vijendran, Sanjay	CA	IAC-20.A3.3A.1
Vijendran, Sanjay	CA	IAC-20.A3.3A.2
Vikhrova, Olga	CA	IAC-20.B2.1.11
Vilcapuma, Patricia	CA	IAC-20.A4.2.7
VILLAGRAN DE LEON, Juan Carlos	A	IAC-20.B1.6.8
Villain, Rachel	CA	IAC-20.B4.2.5
Villain, Rachel	CA	IAC-20.C4.5.11
Villarroel, Beatriz	A	IAC-20.A4.1.9
Villegas Jiménez, Maria Camila	CA	IAC-20.D4.2.7
Vincent, Jean-Baptiste	CA	IAC-20.A3.4A.3
Vinita Babu, K	CA	IAC-20.C3.2.9
Vinokhodova, Alla	CA	IAC-20.A1.1.1
Viola, Nicole	CA	IAC-20.D1.1.1
Viola, Nicole	CA	IAC-20.D1.4A.10
Vira, Akshat	CA	IAC-20.A3.2C.30
Virginia, Hanessian	CA	IAC-20.C4.5.11
Vishwakarma, Kirti	CA	IAC-20.A3.5.8
Vishwakarma, Kirti	A	IAC-20.C4.4.4
Vishwakarma, Kirti	A	IAC-20.D4.4.10
Vishwanath, Rakshith	A	IAC-20.A3.3B.9
Visscher, Peter	CA	IAC-20.A3.2A.9
Visser, Ludo	CA	IAC-20.B2.7.1
Visser, Ludo	CA	IAC-20.B2.8-GTS.3.5
VISWANATHAN, RANJITH	CA	IAC-20.B2.6.8
Viswaroopan, Gautham	A	IAC-20.A2.6.9
Vittori, Edoardo	CA	IAC-20.D4.5.3
Vizzi, Carlo	CA	IAC-20.B3.5.4
Vlachopoulou, Eirini Ioanna	CA	IAC-20.B1.1.3
Vlachopoulou, Eirini Ioanna	CA	IAC-20.E5.2.11
Vlasov, Pavel	CA	IAC-20.B3.4-B6.4.6
Vodermayer, Bernhard	CA	IAC-20.A3.2B.1
Volpe, Renato	CA	IAC-20.B4.3.9
Volpe, Renato	A	IAC-20.C1.1.2
von der Dunk, Frans	A	IAC-20.E7.2.1
von der Ohe, Martin	CA	IAC-20.B2.3.11
von der Ohe, Martin	CA	IAC-20.B4.6B.8
von der Straten, Fiona	A	IAC-20.A1.4.3
von der Straten, Fiona	CA	IAC-20.A1.VP.19
von Einem, Maria	A	IAC-20.B3.4-B6.4.10
von Kampen, Peter	CA	IAC-20.A2.5.3
Voos, Holger	CA	IAC-20.D1.4B.6
Voto, Claudio	CA	IAC-20.D6.3.8
Vu, Huu Quan	CA	IAC-20.B2.3.11
Vu, Huu Quan	CA	IAC-20.B4.6B.8
Vu, Thu	CA	IAC-20.E2.4.11
Vu, Thu	CA	IAC-20.E2.4.12
Vuyge, Marie-Laure	CA	IAC-20.D1.2.1
Vyas, Shubham	A	IAC-20.A6.6.7
Võõras, Madis	CA	IAC-20.E6.3.8
Völk, Stefan	CA	IAC-20.A3.2B.1
Völk, Stefan	A	IAC-20.A3.2C.17
Völk, Stefan	A	IAC-20.A3.4B.8

W

Name	Role	Paper
Waclavicek, René	CA	IAC-20.A3.2B.17
Waclavicek, René	CA	IAC-20.E5.1.6
Wada, Keiichi	CA	IAC-20.B6.3.7
Wada, Masaru	CA	IAC-20.A5.3-B3.6.1
Wada, Masaru	CA	IAC-20.D1.6.5
Wada, Yutaka	CA	IAC-20.C4.4.6
Waid, Michael C.	CA	IAC-20.B3.3.12
Wakabayashi, Sachiko	CA	IAC-20.A3.2B.9
Wakui, Yoshitaka	CA	IAC-20.A6.1.10
Walczak, Paulina	CA	IAC-20.A3.VP.11
Wali, Ahmed	CA	IAC-20.B3.4-B6.4.7
Wali, Ahmed	CA	IAC-20.B6.3.1
Wali, Ahmed	A	IAC-20.B6.3.2
Wali, Mohammad	CA	IAC-20.A3.3A.4
Walker, Constance	CA	IAC-20.B2.1.5
Walker, Roger	CA	IAC-20.C1.5.13
Walker, Sara Imari	CA	IAC-20.A1.6.7
Wallis, Joshua	CA	IAC-20.A1.3.3
Walser, Alexandra Martha	A	IAC-20.A5.VP
Walton, Matthew	CA	IAC-20.C4.8-B4.5A.5
Wan, Gang	CA	IAC-20.D5.2.14
Wan, Wen ya	A	IAC-20.A6.5.4
Wan, Wen ya	CA	IAC-20.A6.VP.19
Wanere, Vaibhav	A	IAC-20.E2.4.6
Wang, Brian	CA	IAC-20.B3.7.2
WANG, Chongzhen	A	IAC-20.A1.8.2
Wang, Dianjun	CA	IAC-20.A6.6.6
Wang, Ge	CA	IAC-20.C4.10-C3.5.4
Wang, Haiming	CA	IAC-20.A1.8.5
Wang, Haoyang	CA	IAC-20.D6.3.4
WANG, Huaguang	CA	IAC-20.C2.1.7
WANG, Jia	CA	IAC-20.A2.3.7
Wang, Jianru	CA	IAC-20.C2.VP.6
Wang, Jianru	CA	IAC-20.C4.4.1
Wang, Jilian	CA	IAC-20.A3.2A.2
Wang, Jingshu	CA	IAC-20.A5.3-B3.6.7
Wang, Jufang	CA	IAC-20.A1.5.4
Wang, Jufang	A	IAC-20.A2.7.6
WANG, Kai	CA	IAC-20.C2.VP.22
Wang, Ke	CA	IAC-20.E3.VP.3
Wang, Li	CA	IAC-20.C3.1.8
Wang, Linjie	CA	IAC-20.A1.1.4
WANG, LIWEI	A	IAC-20.D5.1.2
Wang, Liwu	CA	IAC-20.C4.3.4
Wang, Meng	CA	IAC-20.E5.VP.4
Wang, Mingming	CA	IAC-20.D3.2B.9
Wang, Peiji	CA	IAC-20.A2.4.9
Wang, Peiji	A	IAC-20.A7.3.9
Wang, Pengcheng	A	IAC-20.D1.4A.3
WANG, Ping	A	IAC-20.B1.VP.5
Wang, Qihang	CA	IAC-20.A6.VP.1
Wang, Shuang-Feng	A	IAC-20.A2.4.6
WANG, Taishan	CA	IAC-20.D2.5.4
Wang, Wei	A	IAC-20.A6.3.7
Wang, Wei	CA	IAC-20.B2.VP.5
Wang, Wei	A	IAC-20.D2.VP.2
Wang, Weijun	CA	IAC-20.C2.1.13
Wang, Xiaolong	CA	IAC-20.A6.VP.19
WANG, Xiaowei	A	IAC-20.D2.5.4
Wang, Xinglong	A	IAC-20.A6.6.6
Wang, Xinsheng	CA	IAC-20.E1.5.16
Wang, Xinyu	CA	IAC-20.A1.3.22
Wang, Xuyu	CA	IAC-20.B2.6.1
Wang, Xuyu	CA	IAC-20.B4.7.11
Wang, Ya Jun	A	IAC-20.C4.10-C3.5.16
Wang, Yan	CA	IAC-20.E5.VP.4
Wang, Yang	CA	IAC-20.C1.5.13
Wang, Yanjie	CA	IAC-20.A6.5.3
Wang, Yanlei	CA	IAC-20.A1.1.4
Wang, Yifan	A	IAC-20.C2.VP.10
Wang, Yong	CA	IAC-20.B6.VP.9
Wang, Yuanbin	A	IAC-20.A2.VP.5
Wang, Yue	A	IAC-20.C1.7.8
Wang, Yue	A	IAC-20.C1.VP
Wang, Yuheng	A	IAC-20.D3.2B.11
Wang, Zhaokui	CA	IAC-20.B4.5.9
Wang, Zhaokui	CA	IAC-20.C1.1.4
Wang, Zhenbo	CA	IAC-20.C1.2.13
Wang, Zhuopu	CA	IAC-20.C4.VP.24
Wangikar, Aaditya	CA	IAC-20.D2.3.6
Wanyiri, Juliet	CA	IAC-20.A2.3.4
WARANON, LIKHIT	CA	IAC-20.B4.1.11
Ward, Charles	CA	IAC-20.A3.VP.17
Ward, Melanie Jane	CA	IAC-20.A5.1.6
Warner, Marvin	A	IAC-20.A2.6.3
Warren, Alexandra	CA	IAC-20.A3.2C.18
Watanabe, Hideyuki	CA	IAC-20.A5.3-B3.6.1
Watanabe, Kei	CA	IAC-20.C1.9.1
Watanabe, Kentaro	CA	IAC-20.A2.4.13
Waterman, Gideon	CA	IAC-20.A1.5.9
Watson, Sarah	CA	IAC-20.A4.2.6

Watson, Sarah	CA	IAC-20.B2.8-GTS.3.3
Watson-Morgan, Lisa	A	IAC-20.B3.1.11
WATTANUNTACHAI, ATIPAT	A	IAC-20.B4.1.11
Waxenegger-Wilfing, Günther	A	IAC-20.C4.1.15
Waxenegger-Wilfing, Günther	CA	IAC-20.E1.4.9
Webb, Alan	A	IAC-20.D2.2.15
Webb, Claire	CA	IAC-20.A4.1.1
Webb, Claire	CA	IAC-20.A4.1.3
Webb, Gerry	CA	IAC-20.D2.2.15
Webb, James	CA	IAC-20.A6.5.3
Weclewski, Piotr	CA	IAC-20.D3.2B.10
Wedler, Armin	A	IAC-20.A3.2B.1
Wedler, Armin	CA	IAC-20.A3.2C.17
Wegner, Jan Dirk	CA	IAC-20.B1.4.13
Wei, Jiangtao	A	IAC-20.A6.VP.1
Wei, Wenjun	A	IAC-20.A1.5.4
Wei, Wenjun	CA	IAC-20.A2.7.6
Wei, Xiaona	A	IAC-20.B3.VP.13
Wei, Xuanbo	CA	IAC-20.B4.3.8
Wei, Xuanbo	CA	IAC-20.C2.7.15
WEI, XUEZHONG	CA	IAC-20.D5.1.2
Wei, Zhang	A	IAC-20.D5.1.14
Wei, Zhanji	A	IAC-20.D5.2.14
Wei, Zhao	A	IAC-20.C4.6.14
Wei, Zhou	CA	IAC-20.E3.4.4
Weikert, Marcel	CA	IAC-20.C4.10-C3.5.10
Weisman, Yulia	CA	IAC-20.A2.2.3
Weiss, Peter	CA	IAC-20.A1.VP.13
Weiss, Peter	CA	IAC-20.A3.2B.17
Weiss, Peter	CA	IAC-20.A3.2C.24
Weiss, Sascha	A	IAC-20.B4.6B.12
Welch, Chris	CA	IAC-20.A3.5.10
Welch, Chris	CA	IAC-20.B3.7.7
Welch, Chris	CA	IAC-20.C3.1.4
Welch, Chris	CA	IAC-20.D4.4.6
Welch, Chris	CA	IAC-20.D4.4.11
Welch, Chris	CA	IAC-20.E6.5-GTS.1.12
Wen, Wen	CA	IAC-20.A3.VP.35
Wenger, Manuela	CA	IAC-20.B4.4.2
Weppler, Johannes	CA	IAC-20.A7.2.11
Werner, Norbert	A	IAC-20.B4.2.8
Werthimer, Dan	CA	IAC-20.A4.1.4
West, Jessica	A	IAC-20.E3.4.10
West, Jessica	A	IAC-20.E6.4.2
Weste, Neil	CA	IAC-20.B2.4.7
Weste, Neil	CA	IAC-20.B2.5.1
Westland, Stephen	CA	IAC-20.E5.VP.9
White, Dan	CA	IAC-20.B2.3.6
Whittle, Richard S	CA	IAC-20.A1.3.1
Wiedemann, Carsten	A	IAC-20.A6.2.6
Wiederhold, Emme	A	IAC-20.E1.8.9
Wiehle, Stefan	CA	IAC-20.B5.1.5
Wiehle, Stefan	CA	IAC-20.D1.2.5
Wiemer, Douglas	CA	IAC-20.E9.2.D5.4.8
Wiens, Roger	CA	IAC-20.A3.3B.3
Wiesen, Leon	CA	IAC-20.E2.3-GTS.4.10
Wilcoski, Elias	A	IAC-20.C3.2.6
Wilczynski, Lukasz	A	IAC-20.D3.2A.11
Wiley, Jaclyn	A	IAC-20.A6.7.6
Wiley, Jaclyn	CA	IAC-20.D3.1.7
Wilhelm, Claire	A	IAC-20.B6.2.8
Wilkinson, Andy	CA	IAC-20.D3.1.2
Wilkinson, Andy	CA	IAC-20.D5.2.3
Wilkinson, Thomas	CA	IAC-20.A2.3.1
Wille, Eric	CA	IAC-20.B2.2.3
Williams, David	CA	IAC-20.A1.3.4
Williams, David	CA	IAC-20.A1.3.7
Williams, David	CA	IAC-20.B3.5.2
Williams, David	CA	IAC-20.E3.2.10
Willis, Matthew	A	IAC-20.B4.8.9
Willis, Peter	CA	IAC-20.A3.3B.3
Willwater, Jannis	CA	IAC-20.C2.7.2
Wilson, Andrew Ross	A	IAC-20.C3.1.5

Wilson, Andrew Ross	CA	IAC-20.C3.4.2
Wilson, Andrew Ross	CA	IAC-20.C3.4.3
Wilson, James	CA	IAC-20.E3.1.3
Wilson, Jody	CA	IAC-20.A1.5.2
Wimmer-Schweingruber, Robert F.	CA	IAC-20.D4.4.3
Wind, Michael	CA	IAC-20.B4.4.2
Winebarger, Amy	CA	IAC-20.A7.3.7
Winter, Frank H.	A	IAC-20.E4.2.7
Winter, Othon	A	IAC-20.C1.7.14
Winter, Pieter	CA	IAC-20.A3.2C.22
Wischert, Daniel	A	IAC-20.D3.2A.2
Wise, Matthew	A	IAC-20.A1.4.7
Witasiński, Kacper	CA	IAC-20.A3.VP.11
Withnell, Pete	CA	IAC-20.A3.3A.4
Witner, Rachel	CA	IAC-20.A6.2.1
Witt, Johannes	CA	IAC-20.B3.7.9
Witzmann, Marco	CA	IAC-20.D1.4A.8
Wiśniewska, Justyna	CA	IAC-20.A3.VP.11
Woda, Clemens	CA	IAC-20.A1.5.3
Wojciechowski, Konrad	CA	IAC-20.D2.6.9
Wokes, Stephen	CA	IAC-20.A6.2.2
Wolf, Peter	CA	IAC-20.B2.4.4
Wolff, Michael	CA	IAC-20.A3.3A.4
Wolfson, Nancy C.	A	IAC-20.E1.7.9
Woltran, Markus	CA	IAC-20.B1.1.3
Woltran, Markus	CA	IAC-20.E1.5.1
Wong, Kuo	CA	IAC-20.B4.1.11
Wood, Danielle	CA	IAC-20.A2.3.4
Wood, Danielle	CA	IAC-20.A7.1.9
Wood, Danielle	CA	IAC-20.B1.4.1
Wood, Danielle	CA	IAC-20.B1.5.15
Wood, Danielle	CA	IAC-20.E1.9.1
Wood, Danielle	CA	IAC-20.E9.1-A6.8.6
Woods, Juno	CA	IAC-20.E7.2.4
Worden, Pete	CA	IAC-20.A4.1.3
Worden, Pete	CA	IAC-20.A4.1.4
Worden, S. P.	CA	IAC-20.A4.1.1
Wormnes, Kjetil	CA	IAC-20.A3.2B.1
Wormnes, Kjetil	CA	IAC-20.A3.2B.2
Worrall, Stephen	CA	IAC-20.C4.5.11
Wotring, Virginia	CA	IAC-20.A1.VP.22
Wotring, Virginia	CA	IAC-20.E3.2.19
Wrzecioniarz, Piotr	A	IAC-20.D3.2A.5
WU, Di	CA	IAC-20.A2.3.7
Wu, Hao	A	IAC-20.B2.2.13
Wu, Liyin	A	IAC-20.C4.7.10
Wu, Na	A	IAC-20.C1.9.13
Wu, Ruilin	CA	IAC-20.A1.1.4
Wu, Shufan	CA	IAC-20.A6.3.7
Wu, Shufan	CA	IAC-20.C1.5.4
Wu, Wei Chuan	A	IAC-20.C2.2.13
Wu, Weiren	CA	IAC-20.A3.2A.2
Wu, Xiaodan	A	IAC-20.E7.5.11
Wu, Xiaofeng	CA	IAC-20.B4.2.4
Wu, Xiaofeng	CA	IAC-20.C2.9.10
Wu, Xue Ying	CA	IAC-20.A3.2A.7
Wu, Yufei	CA	IAC-20.C4.6.14
Wu, Yun Zhao	A	IAC-20.A3.VP.8
Wu, Zezhao	CA	IAC-20.B4.8.11
Wulfkühler, Jan-Philipp	CA	IAC-20.A6.4.4
Wuyts, Floris	A	IAC-20.A1.2.1
Wuyts, Floris	A	IAC-20.A1.2.2
Wylie, Rick	CA	IAC-20.E5.2.2
Wätzig, Katja	CA	IAC-20.A6.4.4
Wörner, Lisa	A	IAC-20.A2.6.4
Wünnemann, Kai	CA	IAC-20.A3.4A.3
Wüstenberg, Philipp	CA	IAC-20.B2.3.11
Wüstenberg, Philipp	CA	IAC-20.B4.6B.8
Wüstenberg, Philipp	A	IAC-20.D5.1.5

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Name	Role	Paper
Xiang, Yao	CA	IAC-20.E5.VP.9
Xiao, Litian	A	IAC-20.D2.2.13
Xiao, Litian	A	IAC-20.D2.2.14
Xiao, Mingyang	CA	IAC-20.D1.4A.3
Xiao, Nan	CA	IAC-20.D2.2.13
Xiao, Qian	A	IAC-20.C1.2.10
Xiaoli, Chen	A	IAC-20.B1.3.1
XIAOLI, WANG	CA	IAC-20.E1.1.9
Xiaolin, DONG	CA	IAC-20.D2.5.4
Xiaona, Luan	A	IAC-20.B4.VP.16
Xiaoqing, Yang	A	IAC-20.B3.VP.8
Xie, Gengxin	A	IAC-20.A1.6.1
Xie, Limin	A	IAC-20.C2.3.12
Xie, Luxi	CA	IAC-20.D1.4A.3
XIE, QINGCHAO	CA	IAC-20.A4.2.6
XIE, QINGCHAO	CA	IAC-20.B2.8-GTS.3.3
Xie, Tao	CA	IAC-20.E1.6.3
Xie, Tao	A	IAC-20.E6.5-GTS.1.11
Xie, Yong Chun	CA	IAC-20.B6.VP.9
Xin, Jian	CA	IAC-20.B4.6A.1
XIN, JIAN	A	IAC-20.D2.2.6
Xin, Mingyuan	CA	IAC-20.C4.7.18
Xing, Haoyu	CA	IAC-20.B4.5.10
Xing, Haoyu	CA	IAC-20.B4.6B.11
XING, Wanlin	CA	IAC-20.A1.8.2
Xinyuan, SU	CA	IAC-20.C2.VP.7
Xiu, Wenbo	CA	IAC-20.B4.8.10
Xiujuan, Zhao	CA	IAC-20.D5.1.14
Xu, Hao	CA	IAC-20.D2.VP.5
Xu, Meng	A	IAC-20.C3.VP.8
Xu, Ming	CA	IAC-20.C1.2.15
Xu, Ming	CA	IAC-20.C1.3.4
Xu, Ming	CA	IAC-20.C1.3.10
Xu, Ming	CA	IAC-20.C1.7.7
Xu, Qiwen	CA	IAC-20.A1.1.4
Xu, Rui	CA	IAC-20.A3.3B.5
Xu, Rui	CA	IAC-20.B6.2.10
Xu, Rui	CA	IAC-20.D1.6.7
Xu, Weiyang	CA	IAC-20.A5.1.5
Xu, Xiang	CA	IAC-20.A5.1.6
Xu, YaLan	A	IAC-20.B2.1.13
Xu, YaLan	CA	IAC-20.B2.8-GTS.3.4
Xu, YaLan	CA	IAC-20.B2.8-GTS.3.10
XU, YAWEI	CA	IAC-20.D2.2.6
Xu, Yun	A	IAC-20.C1.1.4
Xu, Zhe	CA	IAC-20.C1.7.6
Xu, Zi	CA	IAC-20.A1.1.4
Xue, Changbin	CA	IAC-20.A3.2A.2

Y

Name	Role	Paper
Y D, Sumedha	CA	IAC-20.D2.3.6
Yadav, Jeet	CA	IAC-20.B2.7.11
Yadegari, Hamed	CA	IAC-20.E6.2.4
Yaglioglu, Burak	A	IAC-20.A3.2C.20
Yamada, Yuki	CA	IAC-20.B4.VP.26
Yamagami, Tatsuya	CA	IAC-20.C2.1.11
Yamagami, Tatsuya	CA	IAC-20.C2.9.4
Yamagami, Tatsuya	CA	IAC-20.C3.1.11
Yamagishi, Akihiko	CA	IAC-20.A6.1.10
Yamagishi, Ryoya	CA	IAC-20.C3.1.11
Yamagiwa, Yoshiki	CA	IAC-20.D4.3.4
Yamaguchi, Hironori	A	IAC-20.C1.1.9
Yamaguchi, Kohei	A	IAC-20.C1.5.11
Yamaguchi, Seiko Piotr	A	IAC-20.A5.3-B3.6.1
Yamaguchi, Seiko Piotr	CA	IAC-20.D1.6.5
Yamaguchi, Shun	CA	IAC-20.C2.1.14

Yamakawa, Maiko	A	IAC-20.A2.4.13
Yamamoto, Takayuki	A	IAC-20.C1.4.10
Yamamoto, Takayuki	CA	IAC-20.C1.5.10
Yamamoto, Toru	CA	IAC-20.B6.3.7
Yamamoto, Toru	CA	IAC-20.C1.8.2
Yamaoka, Kazutaka	CA	IAC-20.E1.7.10
Yamashiro, Ryoma	A	IAC-20.D2.7.8
Yamauch, Takashi	CA	IAC-20.B4.6B.5
Yamauchi, Takashi	CA	IAC-20.B4.2.7
Yamazaki, Naoko	CA	IAC-20.E1.VP.13
Yamazaki, Taichi	A	IAC-20.A1.3.15
Yamazaki, Taichi	CA	IAC-20.B3.2.9
Yamazaki, Taichi	A	IAC-20.B3.2.11
Yamazaki, Taichi	A	IAC-20.B3.2.12
Yamazaki, Taichi	A	IAC-20.B3.2.13
Yamazaki, Taichi	A	IAC-20.B3.7.17
Yamazaki, Taichi	A	IAC-20.D4.1.20
Yamazaki, Taichi	A	IAC-20.D4.2.11
Yamazaki, Taichi	CA	IAC-20.D4.2.14
Yamazaki, Taichi	CA	IAC-20.E1.9.2
Yamazaki, Taichi	A	IAC-20.E6.2.9
Yan, Jian	CA	IAC-20.B2.1.3
Yan, Jian	CA	IAC-20.B2.2.13
Yan, Jingye	CA	IAC-20.B4.7.3
Yan, Jiumei	CA	IAC-20.C1.7.12
Yan, Wenhan	CA	IAC-20.E2.3-GTS.4.12
Yan, Xiu-Tian	CA	IAC-20.B6.3.12
Yan, Xiu-Tian	CA	IAC-20.D3.2B.5
Yan, Xiu-Tian	A	IAC-20.D3.3.3
Yanagisawa, Masahiro	A	IAC-20.D2.1.8
Yanagisawa, Toshifumi	A	IAC-20.A6.1.6
Yang, Chaojie	CA	IAC-20.B5.1.2
Yang, Hong	CA	IAC-20.A2.3.1
Yang, Hongwei	CA	IAC-20.C1.2.3
Yang, Hongwei	A	IAC-20.C1.7.12
Yang, Hongwei	CA	IAC-20.C2.3.11
Yang, Hongwei	CA	IAC-20.C3.1.9
Yang, Hongwei	CA	IAC-20.D2.5.12
Yang, Huxiao	A	IAC-20.E7.VP.9
YANG, Jiawei	CA	IAC-20.A1.8.2
Yang, Jie	CA	IAC-20.C4.10-C3.5.4
Yang, Jingwei	A	IAC-20.A7.3.3
Yang, Kasey	CA	IAC-20.D2.3.2
Yang, Keying	A	IAC-20.A6.VP.15
Yang, Qing	CA	IAC-20.B4.VP.16
Yang, Ruikang	A	IAC-20.D2.VP.6
Yang, Xiaoqing	CA	IAC-20.C2.1.13
Yang, Yubin	CA	IAC-20.C3.4.8
Yanli, Liu	CA	IAC-20.B1.VP.9
Yano, Hajime	CA	IAC-20.A2.4.13
Yano, Hajime	CA	IAC-20.A6.1.10
Yanova, Olga	A	IAC-20.C1.5.1
Yao, Na	A	IAC-20.C3.1.8
Yasaka, Tetsuo	CA	IAC-20.C1.8.12
Yasuda, Takehiro	A	IAC-20.C1.1.11
Yasuda, Takeshi	CA	IAC-20.C4.4.6
Yazdani, Shabnam	A	IAC-20.E6.5-GTS.1.10
Yazdani Sarvestani, Hamidreza	CA	IAC-20.C2.4.8
Ye, Dongdong	A	IAC-20.C4.10-C3.5.4
Ye, Jianfeng	CA	IAC-20.E5.VP.4
YE, Jinying	A	IAC-20.C4.7.15
Ye, Quanzhi	CA	IAC-20.D4.5.18
Yemets, Mykhailo	CA	IAC-20.D2.4.12
Yemets, Vitaly	A	IAC-20.D2.4.12
Yevdokymov, Dmytro	A	IAC-20.A2.2.14
Yi, Wei	CA	IAC-20.E5.VP.4
Yi, Xiaosu	CA	IAC-20.B2.4.13
Yli-opas, Perttu	CA	IAC-20.B4.VP.4
Yokota, Shun	CA	IAC-20.D4.3.6
Yonemoto, Koichi	A	IAC-20.D2.4.9
Yoo, Mi-jin	A	IAC-20.E3.3.16
Yoon, Wonjae	CA	IAC-20.C4.8-B4.5A.1
Yoon, Wonjae	CA	IAC-20.C4.VP.16

Yoshida, Akira	A	IAC-20.C2.2.4
Yoshida, Kazuya	CA	IAC-20.B1.4.10
Yoshikawa, Makoto	CA	IAC-20.A3.4B.5
Yoshimitsu, Tetsuo	A	IAC-20.B2.3.3
Yoshimura, Yasuhiro	CA	IAC-20.C3.4.13
Yoshitake, Tetsunobu	CA	IAC-20.B1.5.6
Young, Roland	A	IAC-20.A3.3B.1
Yousef, Areej	CA	IAC-20.A7.2.10
Youssef, Ahmed	CA	IAC-20.B2.5.6
Yousuf, Maryam	CA	IAC-20.A3.3A.4
Yozan, Takahashi	CA	IAC-20.E5.1.4
Ytterskog, Anne	CA	IAC-20.D2.2.11
Yu, Jinpei	CA	IAC-20.A7.3.10
Yu, Nanjia	CA	IAC-20.C4.4.13
Yu, Ruipeng	A	IAC-20.C4.4.8
Yu, Shengxian	A	IAC-20.B6.VP.1
Yu, Xiaoyan	CA	IAC-20.A2.VP.5
Yu, Xiaoyan	CA	IAC-20.A6.6.10
Yu, Xiaoyan	CA	IAC-20.C2.VP.3
Yuan, Jianping	CA	IAC-20.A3.2C.2
Yuan, Jianping	CA	IAC-20.A3.2C.12
Yuan, Jianping	CA	IAC-20.A6.5.4
Yuan, Jianping	CA	IAC-20.C1.7.9
Yuan, Jing	A	IAC-20.B5.1.15
Yuan, Jing	A	IAC-20.B6.3.10
Yuan, Zihao	A	IAC-20.A3.2A.12
Yudanov, Nikolay	CA	IAC-20.C1.8.6
Yue, Mengyun	A	IAC-20.D2.VP.5
Yuehe, Zhu	CA	IAC-20.B3.4-B6.4.1
Yuen, Anthony S.	CA	IAC-20.E1.5.13
Yuen, Anthony S.	CA	IAC-20.E5.2.10
Yukman, Becki	A	IAC-20.B4.9-GTS.5.3
Yuko, Kirihara	A	IAC-20.B3.2.10
Yulin, Zhang	CA	IAC-20.B4.5.9
Yulin, Zhang	CA	IAC-20.C1.1.4
Yun, Sang-Ho	A	IAC-20.B1.6.13
Yurduseven, Okan	A	IAC-20.B2.5.1
Yushan, GAO	CA	IAC-20.C4.VP.2
Yusuf, Aamir	A	IAC-20.C4.2.2
Yusupova, Anna	CA	IAC-20.A1.1.3
Yusupova, Anna	A	IAC-20.A1.1.8

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Name	Role	Paper
Zabiiako, Tatiana	CA	IAC-20.A1.7.3
Zaccagnino, Elio	CA	IAC-20.D2.4.4
Zaccardi, Federica	A	IAC-20.C2.5.11
Zaccardi, Federica	CA	IAC-20.C2.6.9
Zaidi, Waqar	A	IAC-20.A6.10-B6.5.7
Zainab, Rida	CA	IAC-20.D3.2A.2
Zakharchenko, Alexandr	CA	IAC-20.B4.2.9
Zakharova, Anna	CA	IAC-20.E1.4.2
Zakharova, Anna	CA	IAC-20.E6.1.7
Zakirov, Vadim	CA	IAC-20.D2.2.15
Zallo, Antonio	CA	IAC-20.C2.3.3
Zaman, Fahad	A	IAC-20.A1.5.2
Zaman, Fahad	CA	IAC-20.A1.5.8
Zanardi, Maria	CA	IAC-20.C1.8.1
Zank, Gary	CA	IAC-20.A7.3.7
Zannoni, Marco	CA	IAC-20.A3.4A.2
Zanotti, Giovanni	CA	IAC-20.A3.2C.23
Zanotti, Giovanni	CA	IAC-20.A3.2C.25
Zanotti, Giovanni	CA	IAC-20.A3.4A.2
Zanotti, Giovanni	A	IAC-20.A3.4A.5
Zanotti, Giovanni	CA	IAC-20.C1.2.1
Zapata, Remigio	CA	IAC-20.A4.2.7
Zarcone, Gaetano	CA	IAC-20.A6.1.7
Zarcone, Mariano	CA	IAC-20.C2.VP.13
Zarkan, Laetitia	CA	IAC-20.E9.2.D5.4.11
Zarubin, Dmitry	A	IAC-20.A5.1.16
Zarubin, Vladimir	CA	IAC-20.C2.VP.8
Zarubin, Vladimir	CA	IAC-20.C2.VP.8
Zavialova, Natalia	CA	IAC-20.A6.9.11
Zavoli, Alessandro	CA	IAC-20.C1.4.2
Zawiła, Ryszard	CA	IAC-20.A3.VP.11
Zech, Lucas	CA	IAC-20.D5.1.5
Zee, Robert	CA	IAC-20.B1.2.14
Zee, Robert E.	CA	IAC-20.B4.7.6
Zee, Robert E.	CA	IAC-20.C1.8.13
Zeif, Reinhard	CA	IAC-20.B4.4.2
Zeineddine, Anas	CA	IAC-20.E6.1.9
Zelentsov, Vladimir	A	IAC-20.B4.6A.10
ZENG, Chen-dong	A	IAC-20.D1.VP
Zeng, Guiming	CA	IAC-20.D6.3.4
Zeng, Haorang	CA	IAC-20.C1.2.13
Zeng, Huasong	A	IAC-20.B2.4.13
Zengo, Taiga	A	IAC-20.E3.VP.5
Zenou, Emmanuel	CA	IAC-20.C1.2.6
Zewdie, Beza Tesfaye	CA	IAC-20.E1.5.14
Zewdie, Beza Tesfaye	A	IAC-20.E1.VP.9
Zeyad, Shaima	CA	IAC-20.E2.4.11
Zhai, Shenghua	CA	IAC-20.B2.1.8
Zhai, Shenghua	CA	IAC-20.B2.4.8
Zhang, Bingxian	A	IAC-20.B1.VP.10
Zhang, Bo	CA	IAC-20.B4.3.2
Zhang, Bo	A	IAC-20.C2.1.12
Zhang, Bo	CA	IAC-20.C2.2.3
Zhang, Chen	CA	IAC-20.C1.7.8
ZHANG, Chongfeng	A	IAC-20.A5.1.5
Zhang, Chunxi	CA	IAC-20.B2.4.13
Zhang, Duo	CA	IAC-20.A6.3.8
Zhang, Feng	A	IAC-20.C1.VP
Zhang, Fenglin	CA	IAC-20.D2.2.13
Zhang, Fenglin	CA	IAC-20.D2.2.14
Zhang, Haitao	A	IAC-20.A6.2.15
Zhang, Hao	CA	IAC-20.C1.7.8
Zhang, He	CA	IAC-20.A3.2A.2
Zhang, Jia	A	IAC-20.D5.1.6
Zhang, Jia	CA	IAC-20.D5.1.6
Zhang, Jiacheng	A	IAC-20.B3.4-B6.4.1
Zhang, Jiaolong	A	IAC-20.B4.5.10
Zhang, Jiaolong	A	IAC-20.B4.6B.11
Zhang, Jin	CA	IAC-20.B3.4-B6.4.1
Zhang, Jingrui	CA	IAC-20.A6.VP.15
Zhang, Jingrui	CA	IAC-20.C1.2.10
Zhang, Jingrui	CA	IAC-20.C1.6.11
Zhang, Jinxiu	CA	IAC-20.A2.4.9
Zhang, Juzheng	A	IAC-20.A2.4.9
Zhang, Juzheng	CA	IAC-20.A7.3.9
Zhang, Lei	CA	IAC-20.B4.6A.1
ZHANG, Peng	CA	IAC-20.B2.1.8
ZHANG, Peng	CA	IAC-20.B2.4.8
Zhang, Qiang	CA	IAC-20.A3.VP.35
Zhang, Ran	A	IAC-20.A1.8.5
Zhang, Ruikang	CA	IAC-20.C1.7.8
Zhang, Shaohua	A	IAC-20.A2.2.12
Zhang, Shaohua	A	IAC-20.D2.5.7
Zhang, Shuo-Ting	CA	IAC-20.A2.4.3
Zhang, Suming	CA	IAC-20.D2.VP.5
Zhang, Tao	CA	IAC-20.A7.3.10
Zhang, Xiao	CA	IAC-20.E2.3-GTS.4.11
Zhang, Xiaoxin	CA	IAC-20.E1.5.16
Zhang, Xuan	A	IAC-20.B2.2.2
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Zhang, Yingnan	A	IAC-20.B2.4.8
Zhang, Yonghe	CA	IAC-20.A1.3.22
Zhang, Yonghe	CA	IAC-20.C2.1.12
Zhang, Zhe	A	IAC-20.A3.2A.2
Zhang, Zhen	CA	IAC-20.A3.VP.20
Zhang, Zhongping	A	IAC-20.A6.VP.12
Zhanzhuang, He	CA	IAC-20.B5.1.2
Zhao, Bo	CA	IAC-20.C4.4.13
Zhao, Chen	CA	IAC-20.E5.VP.4
Zhao, Dan	A	IAC-20.A7.2.6
Zhao, Dongyue	A	IAC-20.C1.2.8
Zhao, Haifeng	CA	IAC-20.A3.2A.12
Zhao, Hui	CA	IAC-20.A6.6.6
Zhao, Jiafeng	A	IAC-20.C4.VP.21
ZHAO, Jian	CA	IAC-20.C4.VP.2
ZHAO, LiQIAO	CA	IAC-20.D2.2.6
Zhao, Mengxin	A	IAC-20.C1.2.5
Zhao, Sheng	CA	IAC-20.C4.4.8
Zhao, Weihong	CA	IAC-20.A5.1.5
Zhao, Xurui	A	IAC-20.E2.1.7
Zhao, Yang	A	IAC-20.A3.2A.7
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Zhao, Zeng	A	IAC-20.C4.4.13
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Zhaojun, Jin	A	IAC-20.A2.6.6
Zheng, Hansheng	CA	IAC-20.C3.4.8
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ZHENG, Liwei	CA	IAC-20.C2.1.7
Zheng, Wei	CA	IAC-20.C4.10-C3.5.4
Zheng, Yaru	A	IAC-20.C1.2.15
Zheng, Yaru	A	IAC-20.C1.3.10
Zheng, Zixuan	CA	IAC-20.A3.2C.2
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Zhivilo, Ekaterina	CA	IAC-20.B4.2.9
Zhong, Xing	CA	IAC-20.B4.6A.1
ZHONG, Yuan	A	IAC-20.A3.VP.30
Zhou, Cheng	CA	IAC-20.C4.10-C3.5.4
Zhou, Dong	CA	IAC-20.B2.1.13
Zhou, Dong	CA	IAC-20.B2.7.3
Zhou, Dong	CA	IAC-20.B2.8-GTS.3.4
Zhou, Hao	A	IAC-20.A3.VP.2
Zhou, Heng	CA	IAC-20.A1.5.4
Zhou, Janet	CA	IAC-20.B1.5.13
Zhou, Jun	CA	IAC-20.B4.5.10
Zhou, Jun	CA	IAC-20.B4.6B.11
Zhou, Wei	A	IAC-20.B2.8-GTS.3.9
Zhou, Yuanzi	CA	IAC-20.A3.VP.35
Zhou, Zhichao	CA	IAC-20.E5.VP.4
Zhou, Zhicheng	CA	IAC-20.A6.6.6
Zhou, ZhiWei	CA	IAC-20.A6.3.7
Zhu, George.Z.H.	CA	IAC-20.A6.3.6
Zhu, George.Z.H.	CA	IAC-20.B4.2.4
Zhu, Hao	CA	IAC-20.D1.4A.3
ZHU, Shaohua	A	IAC-20.C4.7.9
ZHU, Shaohua	CA	IAC-20.C4.7.15
Zhu, Shengying	CA	IAC-20.A3.3B.5
Zhu, Shengying	CA	IAC-20.A3.VP.31
Zhu, Shengying	CA	IAC-20.B4.8.10
Zhu, Shengying	CA	IAC-20.B6.2.10
Zhu, Shengying	CA	IAC-20.C1.2.8
Zhu, Tianchi	CA	IAC-20.C2.1.13
Zhu, Yang	A	IAC-20.C2.4.12
Zhu, Yangzhu	A	IAC-20.A2.2.7
Zhu, Yangzhu	CA	IAC-20.C4.7.4
Zhu, Yangzhu	CA	IAC-20.C4.VP.21
Zhu, Zihua	CA	IAC-20.E1.6.3
Zhu, Zihua	CA	IAC-20.E6.5-GTS.1.11
Zhuang, Fengchen	CA	IAC-20.C4.7.4
Zimmermann, Kai	CA	IAC-20.D6.3.5
Zinzi, Angelo	CA	IAC-20.B4.8.8
Zitao, Huang	CA	IAC-20.B1.VP.9
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Zorto Aguilera, Fernando José	CA	IAC-20.B4.9-GTS.5.7
Zorto Aguilera, Fernando José	CA	IAC-20.E5.VP.12
Zorzano Mier, María-Paz	CA	IAC-20.A2.3.9
Zou, Jiwei	CA	IAC-20.B4.6A.1
Zou, Shengyu	CA	IAC-20.A6.3.1
zu Eulenburg, Peter	CA	IAC-20.A1.2.1
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Zucker, Richard	CA	IAC-20.B3.8.10
Zumaeta, Esaú	CA	IAC-20.A4.2.7
Zuniga, David	A	IAC-20.D4.5.8
Zuo, Junchao	CA	IAC-20.A7.2.11
Zuo, Junchao	CA	IAC-20.A7.2.11
Zuo, Yi	A	IAC-20.C3.4.8
Zwick, Martin	CA	IAC-20.A3.2B.17

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Name	Role	Paper
Çelik, Onur	CA	IAC-20.C1.5.10

Ñ

Name	Role	Paper
Ñaupa Córdova, Ruben André	A	IAC-20.E2.3-GTS.4.7

Ö

Name	Role	Paper
Örger, Necmi Cihan	CA	IAC-20.B4.2.1
Örger, Necmi Cihan	CA	IAC-20.B4.2.7
Özmaden, Can	CA	IAC-20.E2.3-GTS.4.10

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GSD*	5 m / 10 m multispectral	1.4 m / 2.8 m multispectral	0.7 m / 2.8 m multispectral
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