



UNITED NATIONS  
Office for Outer Space Affairs



INTERNATIONAL  
ASTRONAUTICAL  
FEDERATION

## 29<sup>th</sup> Workshop on Space Technology for Socio Economic Benefits: “Access to Space for All: Bridging the Space Divide”

Organized by the United Nations Office for Outer Space Affairs (UNOOSA)  
and the International Astronautical Federation (IAF)

Hosted by



**Venue:** Paris Convention Center, 1 Place de la Porte-de-Versailles, Paris, 75015, France

**Dates:** 16-17 September 2022



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### Programme at glance

**Opening session: Opening Remarks**

**Setting the scene: Background and the objectives of the workshop.**

#### **Session 1: Heads of Governmental Space Actors on Innovation, International Cooperation and Socioeconomic Benefits of Space**

Governmental Space Actors bear the most responsibilities to serve social and economic development using space technologies and bring the benefits of space all over the world. The Access to Space for All Initiative works with various governmental actors to bring the access to space opportunities to United Nations Member States with particular attention to developing nations, to bridge the space divide.

#### **Session 2: Access to Space Enablers**

This session will provide an overview of the different elements that are needed to maximize the benefits of space activities. This session welcomes government officials, members of academia, private sector, students and practitioners, aiming at providing a holistic view of the key elements that make space a sustainable endeavour.

#### **Session 3a: Science, Technology and Innovation from Hypergravity and Microgravity Experimentation**

The Hypergravity and Microgravity experimentation aims at developing the knowledge, engineering processes and human workforce to conduct basic science and technology experiments in hypergravity and microgravity conditions. It works as the foundation of space technology and space exploration. Hypergravity and Microgravity experimentation contains ground facility experimentation and in-orbit experimentation, research outcomes, innovation ideas and cooperation efforts are welcome in this session.

#### **Session 3b: Science, Technology and Innovation from Satellite Development**

This session provides a chance in exchanging ideas on satellite development efforts, including educational efforts for developing technical know-how, engineering processes and satellite development case studies. Participants from developing nations are especially encouraged to submit their contributions to this session.

#### **Session 3c: Science, Technology and Innovation from Space Exploration**

Thanks to an inclusive approach implemented by many space-faring countries, several developing, and space emerging nations are also diving into space exploration. Space exploration efforts by international and national entities, space agencies, industry and civil society, reveal the latest and future approaches toward space exploration are welcome in this session.

#### **Flash Wrap-Up Session**

**Closing session: Closing remarks**



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### Agenda of the Workshop

#### Friday, 16 September 2022, Morning Session

Time	Title of Presentation	Speaker	Organisation
08:00-09:00	Registration		
<b>Opening Ceremony</b>			
09:00-09:05	Opening remarks by UNOOSA	Niklas Hedman	Acting Director, UN Office for Outer Space Affairs
09:05-09:10	Opening remarks by IAF	Pascale Ehrenfreund	President, International Astronautical Federation
09:10-09:15	Opening remarks by CNES	Jean-Marc Astorg	Strategy Director, French Space Agency
<b>Setting the scene</b>			
09:20-9:35	Perspective from the programme committee	Jorge Del Rio Vera	United Nations Office for Outer Space Affairs
9:35-9:40	Perspective from the programme committee	Christian Feichtinger	International Astronautical Federation
9:40-9:45	Perspective from the programme committee	Masami Onoda	Chair, Committee for Liaison with International Organizations and Developing Nations, International Astronautical Federation
9:45-09:50	Perspective from the programme committee	Alejandro Roman	Chair, Committee on Developing Countries and Emerging Communities, International Astronautical Federation
<b>Session 1: Heads of Governmental Space Actors on Innovation, International Cooperation and Socioeconomic Benefits of Space (Panel/Round Table)</b>			
	<b>Chair:</b> Niklas Hedman <b>Rapporteur:</b> Giovanna Estefania Ramirez Ruiz		
09:55-11:30	Mambimba Ndjoungui <b>Aboubakar</b>		Deputy General Manager, Gabonese Agency for Space Studies and Observations
	Yeshurun <b>Alemayehu</b>		Deputy Director General, Ethiopian Space Science and Technology Institute
	Jean-Marc <b>Astorg</b>		Strategy Director, French Space Agency
	Marglad <b>Bencomo Noguera</b>		Executive Director, Bolivarian Agency for Space Activities (Venezuela)
	Rodrigo <b>Da Costa</b>		Executive Director, European Union Agency for the Space Programme
	Christyl C. <b>Johnson</b>		Deputy Director for Technology and Research Investments, Goddard Space Flight Center, National Aeronautics and Space Administration (United States)
	Charles Maina <b>Mwangi</b>		Acting Director Space Sector and Technology Development, Kenya Space Agency
	Giorgio <b>Saccoccia</b>		President, Italian Space Agency
	Sherif Mohamed <b>Sedky</b>		Chief Executive Officer, Egyptian Space Agency
11:30-11:45	<b>Group Picture</b>		
11:45-12:15	<b>Coffee Break</b> (sponsored by CNES) <b>Ice Breaker</b>		



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<b>Session 2: Access to Space Enablers</b>			
12:15	<b>Chair:</b> Masami Onoda <b>Rapporteur:</b> Alma Okpalefe		
12:15-12:30	National Space Law as a key Access to Space Enabler	Yukiko Okumura	United Nations Office for Outer Space Affairs
12:30-12:45	Frequency allocations and the corresponding regulatory process for the registration and recording of frequency assignments	Chuen Chern Loo	International Telecommunication Union
12:45-13:00	The Role of Intellectual Property in Promoting Innovation and Access to Space Technologies	Tomoko Miyamoto	World Intellectual Property Organization
13:00-13:15	Socio economic foundations for space programme	Claire Jolly	Organization for Economic Co-operation and Development
13:15-13:30	An overview of ALCE and its connections with STI policies	Gustavo Alonso Cabrera Rodriguez	Latin-American and Caribbean Space Agency
<b>13:30-14:30</b>	<b>Lunch Break</b> (sponsored by IAF)		
14:30	<b>Chair:</b> Pieter van Beekhuizen <b>Rapporteur:</b> Eden Abeselom Habteslasie		
14:30-14:45	Management of Space Exploration, Development and Scientific and Technological Cooperation in Space	Jesus Romero	Mexican Space Agency
14:45-15:00	Strategic Alliances – Key to bridging the Space Divide	Hebe Romero	Paraguay Space Agency
15:00-15:15	The Recovery Observatory	Helene de Boissezon	French Space Agency
15:15-15:30	Jumpstarting the Philippines’ Space Activities Through International Cooperation	Julie Ann Banatao	Philippines Space Agency
15:30-15:45	Activities of the Egyptian Space Agency	Somaia Mohammed	Egyptian Space Agency
15:45-16:00	Activities of the Space Research and Technology Agency	Ismoil Rasulov	Space Research and Technology Agency (Uzbekistan)
16:00-16:15	<b>Coffee Break</b> (sponsored by CNES)		
16:15	<b>Chair:</b> Alejandro Roman <b>Rapporteur:</b> Giovanna Estefania		
16:15-16:30	Space Diplomacy: A U.S. Perspective	JR Littlejohn	State Department, United States
16:30-16:45	The ESA solutions catalogue for the SDGs	Maria Gabriella Sarah	European Space Agency
16:45-17:00	ASECNA (EGNOS - SBAS Use Cases)	Julien Lapie	Agency for Air Navigation Safety in Africa and Madagascar
17:00-17:15	The role of space sustainability for the space economy	Nicolas Peter	International Space University
17:15-17:30	Space Enabled integrated Environment-Vulnerability-Decision-Technology framework	Danielle Wood	Massachusetts Institute of Technology
17:30-17:45	Introduction to the University Space Engineering Consortium (UNISEC)	Rei Kawashima	UNISEC Global
17:45-18:00	The role of the youth in bridging the space divide - SGAC as an enabler for access to space for all.	Hamza Hameed	Space Generation Advisory Council
18:00-18:15	Spacebuzz an immersive outreach and education program inspiring generations	Janine Geijsen	Spacebuzz
<b>END OF DAY 1</b>			

No activities are planned after day 1



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DAY 2			
<b>Session 2: Access to Space Enablers (Cont)</b>			
8:30	<b>Chair:</b> Alejandro Roman <b>Rapporteur:</b> Giovanna Estefania		
08:30-08:45	Access to Space for All	Jorge Del Rio Vera	United Nations Office for Outer Space Affairs
08:45-09:00	Building Nepal's Space Infrastructure and Community from Ground-Up through a Structured Public-Private Partnership Approach	Abhas Maskey	Antarikhya Pratisthan Nepal (Nepal Space Foundation)
09:00-09:15	The importance of inclusive outreach	Remco Timmermans	Spaceside OU
<b>Session 3a: Science, Technology and Innovation from Hypergravity and Microgravity Experimentation</b>			
9:15	<b>Chair:</b> Abhas Maskey <b>Rapporteur:</b> Madiha Rasheed		
09:15-09:30	Spaceflight Associated Neuro-ocular Syndrome (SANS)	Scott Ritter	German Aerospace Center (Germany)
09:30-09:45	Utility of hypergravity as a novel tool in inducing reliable phenotype/s for improving crop plants – A relevance to terrestrial agriculture	Hosamani Ravikumar	University of Agricultural Sciences (India)
09:45-10:00	Microgravity Ground Facility Experimentation on Root Developments and Biochemical Characterization of Selected Vital Crops	Funmilola Oluwafemi	National Space Research and Development Agency (Nigeria)
10:00-10:15	Space Studies Program on Microgravity Supporting the Advancement of Technology in the fields of Space Pharma and Space Medicine	Nambiar Shrirup	Politecnico di Torino (Italy)
10:15-10:30	Human Commercial Space Activities provide an Opportunity Platform for Human Health Discoveries	Dorit Donoviel	Translational Research Institute for Space Health (TRISH) at Baylor College of Medicine (United States)
10:30-10:45	<b>Coffee Break</b> (sponsored by CNES)		
<b>Session 3b: Science, Technology and Innovation from Satellite Development</b>			
10:45	<b>Chair:</b> Umamaheswaran Raman <b>Rapporteur:</b> Natally Mendez		
10:45-11:00	State of Art of Small Satellites Systems, Missions and Applications	Chantal Cappelletti	University of Nottingham (United Kingdom)
11:00-11:15	The First Tunisian Student Satellite	Hana Aouinet	High School of Engineering and Applied Technology (ESPITA) (Tunisia)
11:15-11:30	Open-Sourcing of CubeSat Bus for Capacity Building aimed to Acquire Original Space Development Capability	Tetsuhito Fuse	Kyushu Institute of Technology (Japan)
11:30-11:45	NSSA Aman Payload	Yaqoob Alqassab	National Space Science Agency (Bahrain)
11:45-12:00	Promoting quality education through CubeSat Quetzal-1, the first Guatemalan CubeSat	Cecilia Marsicovetere	University of the Valley (Guatemala)
12:00-12:15	CubeSat as a Platform for space Engineering Education and Training in the Philippines	Adrian Salces	Philippines Space Agency
12:15-12:30	Satellite technology at school. Awakening vocations	Maximiliano Pisano	National Commission on Space Activities (Argentina)



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<b>Session 3c: Science, Technology and Innovation from Space Exploration</b>			
12:30	<b>Chair:</b> Nomfuneko Majaja <b>Rapporteur:</b> Lily Rospeen Asongfac		
12:30-12:45	International Space Exploration Coordination Group	Christian Lange	International Space Exploration Coordination Group / Canadian Space Agency
12:45-13:00	Benefits for the emerging countries of the exploration and use of the Moon with a perspective focused on coordination and cooperation	Rosa Maria	Mexican Space Agency
13:00-13:15	Is it possible socialize the benefits of space exploration? (Policy aspects of space exploration)	Michele Cristina Silva Melo	Brazilian Space Agency
13:15-13:30	European Space Agency and Space Exploration	Thomas Weissenberg	European Space Agency
<b>13:30-14:30</b>	<b>Lunch Break</b> (sponsored by IAF)		
<b>Session 3c: Science, Technology and Innovation from Space Exploration</b>			
14:30	<b>Chair:</b> Nomfuneko Majaja <b>Rapporteur:</b> Lily Rospeen Asongfac		
14:30-14:45	Science and Exploration for All: NASA's Transformation to Open Science	Christa Peters-Lidard	National Aeronautics and Space Administration (United States)
14:45-15:00	The Vision & Activities of Emerging Space Agencies Working Group in ISECG	Soyoung Chung	International Space Coordination Group Korea Aerospace Research Institute
15:00-15:15	COSPAR Planetary Protection	Athena Coustenis	Committee on Space Research
15:15-15:30	Planetary Protection: Exploration of the Solar System in Support of Sustainable Space	Elaine Seasly	National Aeronautics and Space Administration (United States)
15:30-15:45	Space Renaissance for the Benefits of All	Bernard Foing	ILEWG LUNEX EuroMoonMars Earth Space Innovation & Space Renaissance International
15:45-16:00	No one shows a child the sky	Mae Jemison	100 Year Starship
<b>16:00-16:15</b>	<b>Coffee Break</b> (sponsored by CNES)		
16:15-17:00	Flash Round Discussion Session		
<b>Closing Ceremony</b>			
17:00-17:15	Closing remarks by IAF	Pascale Ehrenfreund	President, International Astronautical Federation
17:15-17:30	Closing remarks by CNES	Philippe Baptiste	President, French Space Agency
17:30-17:45	Closing remarks by UNOOSA	Niklas Hedman	Acting Director, United Nations Office for Outer Space Affairs
<b>17:45-18:00</b>	<b>Group Picture</b>		
<b>END OF THE WORKSHOP</b>			

**18:30** Participants are invited to a cocktail organized by the International Astronautical Federation