



UNITED NATIONS
Office for Outer Space Affairs



INTERNATIONAL
ASTRONAUTICAL
FEDERATION

**28th Workshop on Space Technology for Socio Economic Benefits:
“Space Exploration – a source of inspiration, innovation and discovery”**

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

Hosted by the Mohammed Bin Rashid Space Centre



Venue: Dubai World Trade Centre, Sheikh Zayed Rd, Dubai, United Arab Emirates

Dates: 22-24 October 2021

Programme at glance

Opening session: Opening Remarks

Keynote Speech: The importance of Space in Society

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

Session 1a: Space Exploration for All - National and International Perspective

Space exploration activities have peaked in recent years. This journey of space exploration is not limited anymore to the developed nations. Thanks to an inclusive approach implemented by space-faring countries, several developing and space emerging nations are also delving into space exploration. The 1a sub-session will present space exploration National and International efforts on space exploration and reveal the latest and future approach towards space exploration.

Session 1b: Space Exploration for All - Industry Perspective

Space exploration activities have peaked in recent years. This journey of space exploration is not limited anymore to the developed nations. Thanks to an inclusive approach implemented by space-faring countries, several developing and space emerging nations are also delving into space exploration. The 1b sub-session will present space exploration efforts focusing on the industry perspective and reveal the latest and future approach towards space exploration

Session 1c: Space Exploration for All - Civil Society Perspective

Space exploration activities have peaked in recent years. This journey of space exploration is not limited anymore to the developed nations. Thanks to an inclusive approach implemented by space-faring countries, several developing and space emerging nations are also delving into space exploration. The session will present space exploration efforts focusing on the role of civil society and reveal the latest and future approach towards space exploration

Session 2: Capacity-Building for Space Exploration

This session will cover activities to develop capacity in space exploration. It will showcase national, regional and international projects and initiatives supporting the development of skills, infrastructure and capabilities related to space exploration.

Breakout Group Discussions and Presentations

Session 3 (Panel discussion): Opportunities for space emerging countries to join efforts in space exploration

Closing session: Closing remarks

Agenda of the Workshop

Friday, 22 October 2021, Morning Session

Time	Title of Presentation	Speaker	Organisation
08:00-09:00	Registration		
Opening Ceremony			
09:00-09:10	Opening remarks by UNOOSA	Simonetta Di Pippo	Director, UN Office for Outer Space Affairs (UNOOSA)
09:10-09:20	Opening remarks by IAF	Pascale Ehrenfreund	President, International Astronautical Federation (IAF)
09:20-09:30	Mohammed Bin Rashid Space Center – Host Keynote and opening remarks	Salem Al Marri	Deputy Director General and Executive Director, Mohammed Bin Rashid Space Centre (MBRSC)
Keynote speech			
09:35-09:45	The importance of space in society	Christina Giannopapa (on behalf of Athanasios Staveris-Polykalas)	Advisor to the Secretary General of Telecommunications and Post, Ministry of Digital Governance, Greece
Setting the scene			
09:45-10:05	Perspective from the programme committee	Hazuki Mori	UN Office for Outer Space Affairs (UNOOSA)
10:05-10:12	Perspective from the programme committee	Christian Feichtinger	International Astronautical Federation
10:12-10:19	Perspective from the programme committee	Adnan Mohammad Alreis	Mohammed Bin Rashid Space Centre
10:19-10:26	Perspective from the programme committee	Christina Giannopapa	Chair, Committee for Liaison with International Organizations and Developing Nations (CLIODN)
10:26-10:33	Perspective from the programme committee	Valanathan Munsami	Chair, Committee on Developing Countries and Emerging Communities (ACDCEC)
10:33-10:40	Perspective from the programme committee	Christian Sallaberger	Chair, Space Exploration Technical Committee
10:40-10:47	Perspective from the International Space Exploration Coordination Group	Stefaan De Mey	Secretariat of the International Space Exploration Coordination Group
10:47-11:15	Coffee Break/Ice-Breaker		
Session 1a: Space Exploration for All - National and International Perspective			
11:15	Chair: Lily Rospeen Asongfac / Rapporteur: Nonofa Angela Mogopodi		
11:15-11:30	Italian contribution to Space Exploration: an overview	Francesco Longo	Italian Space Agency
11:30-11:45	Opportunities for Space Exploration under the United Nations Access to Space for All Initiative	Hazuki Mori	UN Office for Outer Space Affairs
11:45-12:00	The Algerian Space Agency - National Space Program	Salah Eddine Bentata	Algerian Space Agency
12:00-12:15	The Impact of Space Activities and Economic Growth in El Salvador (Experiences, Challenges and Benefits)	Luis Alfredo Alfaro	El Salvador Aerospace Institute - ESAI
12:15-12:30	National efforts in Venezuela on space exploration and the integration with Latin America and the Caribbean	Marglad Bencomo Noguera	Bolivarian Agency for Space Activities – Venezuela
12:30-12:45	How can space exploration benefit the people from Alcântara and surroundings	Erik Imbuzeiro	Brazilian Space Agency
12:45-13:00	The Creation of the Costa Rica Space Agency: A unique, self-sustainable design to take advantages of space 2.0	Adolfo Chaves Jimenez	Costa Rica Space Agency/Costa Rica Institute of Technology
13:00-13:15	Overview of Ethiopian Space Program Development: Challenges and Prospects	Yeshurun Alemayi Adde	Ethiopia Space Science and Technology Institute
13:15-14:45	Lunch Break		

Session 1a: Space Exploration for All - National and International Perspective (continuation)			
14:45	Chair: Manisha Dwa/ Rapporteur: Mary Kuiper		
14:45-15:00	ESA's Terrae Novae Exploration Programme & Opportunities for an Inclusive Space Exploration Journey	Stefaan De Mey	European Space Agency
15:00-15:15	How the Kenya Space Agency is Fast Growing in the Space Sector	Olivia Mwaniki	Kenya Space Agency
15:15-15:30	JAXA Space Exploration Programme	Masami Onoda	Japan Aerospace Exploration Agency
15:30-15:45	Head's Role in the Global Space Economy	Wei Sun	Head Aerospace
15:45-16:00	Development of a Space Roadmap in Mauritius	Faraaz Shamutally	Mauritius Innovation and Research Council
16:00-16:20	Coffee Break		
16:20-16:35	Egyptian Space Agency's Projects towards CapacityBuilding and Sustainability of Space Exploration	Hoda Awny El-Megharbel	Egyptian Space Agency
16:35-16:50	A Decade After Entering Space	Miguel Contreras	Agencia Boliviana Espacial
16:50-17:05	Emirates Mars Mission	Mohsen Alawadhi	Mohammed Bin Rashid Space Centre
17:05-17:20	Space and Sustainable Development: the inclusive and inspiring actions of Habitat Marte	Julio Rezende	Mars Society Brazil
17:20-17:35	NSSA: A Bright Vision to a Bright Future	Ali Al-Qaraan	National Space Science Agency Bahrain
17:35-17:50	Socio-economic Benefits of Aerospace Development from an Emerging Country Perspective: The case of Paraguay	Alejandro Roman	Paraguay Space Agency
17:00-18:05	Joining the Journey of Space Exploration: the Korea Aerospace Research Institute (KARI) Case	Soyoung Chung	Korea Aerospace Research Institute
END OF DAY 1			

No activities are planned after day 1

DAY 2			
Session 1b: Space Exploration for All - Industry Perspective			
09:00	Chair: George Maeda / Rapporteur: Julio Rezende		
09:00-09:15	MBRC Partnering Growth	Amer AlSayegh	Mohammed Bin Rashid Space Centre
09:15-09:30	Building Partnerships for Student Programs for Emerging Space Nations	Henrik Johansson	Swedish Space Corporation
09:30-09:45	Lessons Learnt from Sustainable Development Programmes	Alex da Silva Curiel	Surrey Satellite Technology
Session 1c: Space Exploration for All - Civil Society Perspective (part I)			
09:30	Chair: Soyoung Chung Rapporteur: Electdom Matandyrotya		
09:45-10:00	Report 2021 from International Lunar Exploration Working Group (ILEWG): Task Groups, Roadmap, Highlights and EUROMOONMARS Campaigns Results	Bernard Foing	International Lunar Exploration Working Group
10:00-10:15	Deep Space Food Challenge	Stephanie Wan	Methuselah Foundation – United States of America
10:15-10:30	Network to Promote STEM Space Education in Brazil	Luisa Santos	Federal University of Rio Grande do Norte (UFRN) – Brazil
10:30-10:45	A Multidisciplinary Approach for Space Sustainability and Colonization	Loredana Santo / Massimo Papa	University of Rome Tor Vergata – Italy
10:45-11:00	Blockchain and Cryptoeconomy for Space Exploration	Itzel Rocillo	National Autonomous University of Mexico

11:00-11:15	An Educational Approach to Planetary Defense for Global Involvement During COVID-19	Nancy Wolfson	IAF Technical Committee on Near Earth Objects
11:15-11:30	Coffee Break		
Session 2: Capacity-Building for Space Exploration (part I)			
11:15	Chair: Bernard Foing / Rapporteur: Ziyaad Sorefan		
11:30-11:45	Space education from the perspective of the African Regional Centre Space and Technology Education	Ganiyu Agbaje	African Regional Centre for Space Science & Technology Education - English (ARCSSTE-E) – Nigeria
11:45-12:00	Space Missions Preparation on Earth	Thorben Konemann	Center for Applied Space Technology and Microgravity (ZARM) – Germany
12:00-12:15	Open-Sourcing of CubeSat Bus for Capacity-Building aimed at Space Exploration	George Maeda	Kyushu Institute of Technology (Kyutech) – Japan
12:15-12:30	Space Education in Africa	Rania Toukebri	Space Generation Advisory Council
12:30-12:45	Hands-on activities in Nepal Astronomical Society	Manisha Dwa	Nepal Astronomical Society
12:45-13:00	The Space Exploration Seed and its Growing during the Inclusion. Economic and Social Impact through the Space Education in the Childhood in Developing Countries. Colombia Case Study.	Heylen Andrea Polo Cano	Apollo Foundation – Colombia
13:00-13:15	Promoting Space Science in Sierra Leone: The Progressive Steps	Kenneth Bamba	Science, Technology, Engineering, Arts and Development (STEAD) Society – Sierra Leone
13:15-13:30	Quetzal-1: paving the way of Guatemala to the stars	Jose Bagur	Universidad del Valle de Guatemala – Guatemala
13:30-14:45	Lunch Break		
Session 2: Capacity-Building for Space Exploration (part II)			
14:45	Chair: Bernard Foing / Rapporteur: Ziyaad Sorefan		
14:45-15:00	Overview of ISU exploration-related team projects over the last three decades	Nicolas Peter	International Space University
15:00-15:15	Analogue Missions: Learning by doing - An Educational Tool for Universities and Primary Schools	Chloe Carriere	Swiss Federal Institute of Technology Lausanne
15:15-15:30	Overview of GISTDA	Atipat Wattanuntachai	Geo-Informatics and Space Technology Development Agency (GISTDA)
15:30-15:45	Coffee Break		
Breakout Sessions (from 15:45 to 17:45) Download Facilitator's Guide			
Scenario 1	You have been appointed scientific advisor Vogspheria, a country without any previous experience in space, your task is to ensure that Vogspheria becomes one of the world references in space in the next 30 years. What are the steps you would take as advisor to reach that goal? Vogspheria also aims at championing inclusiveness. What actions would you suggest tackling inclusiveness?		
Scenario 2	You are the chief coordinator of an international programme that shall ensure that all countries access space, it is not an easy task but we trust you! What are the steps you would take and how much time do you think is realistic to reach that goal? How would you define “to have access to space”?		
Scenario 3	You have been appointed as lead negotiator for the World Space Exploration Alliance, your task is to convince countries to join an international alliance (hopefully worldwide alliance) to explore space, including celestial bodies such as the Moon. What would be your (very convincing) arguments for joining? (give arguments for a developing and for a developed country)		
Scenario 4	Space has attracted the interest of every single country in the world! You have been appointed lead rapporteur for preparing a report to all countries. In that report you have to explain which would be the consequences of all countries accessing space. You need to include in your report all the benefits and drawbacks, and for the drawbacks what would be the recommended mitigation actions. Everybody trusts your judgement!		
17:45-18:00	Flash wrap-up session		
END OF DAY 2			

18:00

Participants are invited to a cocktail organized by the Mohammed Bin Rashid Space Center

DAY 3**Breakout session presentations** (Chair: Stefaan De Mey / Rapporteur : Erik Imbuzeiro)

09:00-10:15

Presentations from each group

Session 3 (Panel discussion): Opportunities for space emerging countries to join efforts in space exploration

10:15-12:15	Chair: Ganiyu Agbaje / Rapporteur: Katherine Herrera	
	Marglad Bencomo Noguera	Executive Director, Bolivarian Agency for Space Activities
	Hugo Andre Costa	Board Member, Portugal Space Agency
	Valanathan Munsami	CEO, South African National Space Agency
	Yeshurun Alemayi Adde	Deputy Director General Ethiopia Space Science and Technology Institute
	Athena Coustenis	Chair, COSPAR Planetary Protection Panel
12:15-12:45	Coffee Break	
	Closing Session	
12:45-13:00	Salem Al Marri	Deputy Director General and Executive Director, Mohammed Bin Rashid Space Centre (MBRSC)
	Pascale Ehrenfreund	President, International Astronautical Federation (IAF)
	Simonetta Di Pippo	Director, United Nations Office for Outer Space Affairs (UNOOSA)
13:00-13:15	Group picture	