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Space Agency

77TH
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ANTALYA, TÜRKİYE
5 - 9 OCTOBER



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UPCOMING COURSES

Diagnostic Methods for Electric Propulsion Research and Development
Starts 6 October

Mission Design Workshop: A Hands-on Concurrent Space Systems Engineering Workshop
Starts 26 October

Launch Vehicle Coupled Loads Analysis: Theory and Approaches
Starts 3 November

Project Execution for Aerospace Professionals
Starts 3 November

**Generative AI for Code Generation and Evaluation:
From HumanEval to AeroEval**
Starts 9 November

ON-DEMAND COURSES

Design of Space Launch Vehicles

Fundamentals of Astrodynamics for Space Missile Defense

Fundamentals of Space Systems

Human Spaceflight Operations: Lessons Learned from 60 Years in Space

Liquid Rocket Engines: Emerging Technologies in Liquid Propulsion

Space Architecture: Designing a Lunar Habitation System

Spacecraft Design, Development, and Operations

Turbomachinery for Emerging Space Applications: Liquid Rocket Propulsion



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Agenzia Spaziale Italiana

ITALIAN SPACE AGENCY

ASI is currently among the top six space agencies in the world, a distinction that reflects Italy's prestigious role in the European and global space sector. Italy is one of the First Nations **to have launched a satellite** and the third largest contributor to the European Space Agency (ESA), after France and closely following Germany. Italy is also among the early signatories of the Artemis Accords for NASA's new lunar program. Through its own Agency, Italy operates in **all areas of space applications**. With a strong diplomatic capacity, ASI has strategic collaborations with all major space agencies.

Through these collaborations and continuous cooperation with the scientific community and Italian industries, the Agency has achieved significant **successes in the fields of cosmology, human and robotic exploration, space propulsion, telecommunications, satellite navigation, and Earth Observation**. One of the most remarkable results of these collaborations is the International Space Station, where Italian astronauts operate, and whose habitat modules were built for over 40% by the national industry.

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1. Information

1.1 Information for Authors

All authors are asked to upload their manuscripts and multimedia presentations prior to the Congress to make them available to all participants on the online Proceedings of the 77th International Astronautical Congress.

You can still update your manuscripts through the IAF platform: <https://iafastro.directory/iac/account/login/>. Multimedia presentations can be uploaded in the Speaker Preparation Centre. Your presentation will be automatically preloaded on the computer in the Technical Session Room. Please note that speakers are not allowed to insert USB memory sticks into the computers in the Technical Session rooms. Therefore, all updates need to be uploaded before the Technical Session takes place. Our help desk team will assist you in uploading presentations during operating hours. Speakers are requested to report to their allocated Technical Session room at least 10 minutes prior to the start of their session to meet with their Session Chair and to check their presentation. Some Session Chairs might also ask you for a short biography to introduce you at the session.

1.2 Congress Proceedings and Virtual Technical Gallery

The IAC 2026 Proceedings are available on a password-protected site. The Congress participants will be provided with a link and online password to login and access the Congress Proceedings. If you did not receive the password, please contact: digital.library@iafastro.org. IAC papers will be indexed in the largest cited reference enhanced multidisciplinary databases: Elsevier's SCOPUS and Compendex. Each manuscript presented at IAC 2026 will be registered with a unique DOI.

The materials published as part of the Technical Programme (Lightning Talks, Video Lectures and Papers) will be made available to the Congress Delegates through the [IAC 2026 Virtual Technical Gallery](#).

1.3 Speaker Preparation Centre

Authors who missed the deadline for presentation submission or who wish to update/review their presentation can do so in the Speaker Preparation Centre. Authors are required to bring a back-up copy of their presentation on a USB Memory Stick. Video content should be saved as separate files.

Location: Office 4, Ground Floor, NEST Congress and Exhibition Centre.

1.4 IAF Events App

The full Technical Programme is also incorporated within the IAF App, which will make it easier to follow the entire content and enable you to best plan your participation and choose the events from the Technical Programme to attend.

iOS



Android

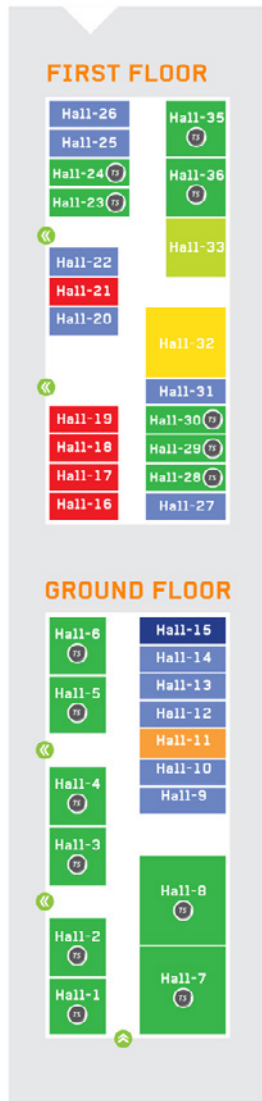


1.5 Certificates of Attendance and Presentation

Certificates of Attendance and Presentation are available on request at the IAF Secretariat Office. Claims of hours of applicability toward professional education requirements are the responsibility of the participant. Post-congress requests for certificates can be addressed at support@iafastro.org.

1.6 IAC 2026 Floor Plans

NEST PLUS BUILDING



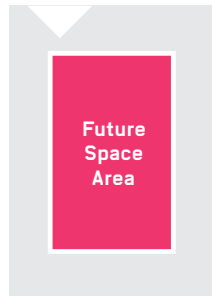
NEST CONVENTION CENTER



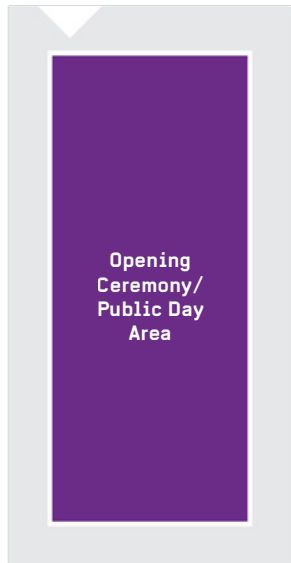
- NEST Football Pitch
- Exhibition Area
- Plenary Programme
- Gloria Sports Hall
- Technical Sessions
- Special Sessions
- IP Sessions
- B2B Area
- Bilateral Rooms
- Meeting Rooms

- Offices
- Speaker Prep. Room
- Committee Meeting
- VIP Luncheon Area
- Members Lounge
- Press Center
- Press Conf. Room
- Service Area / Offices
- Future Space Area
- Prayer Room

FUTURE SPACE AREA

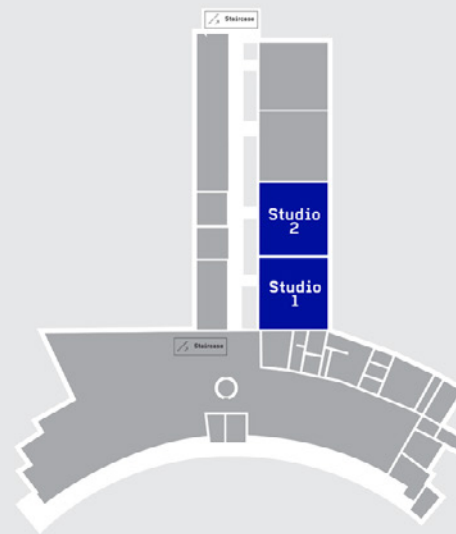


NEST FOOTBALL PITCH



GLORIA SPORTS ARENA

FIRST FLOOR



GROUND FLOOR



- NEST Football Pitch
- Exhibition Area
- Plenary Programme
- Gloria Sports Hall
- Technical Sessions
- Special Sessions
- IP Sessions
- B2B Area
- Bilateral Rooms
- Meeting Rooms

- Offices
- Speaker Prep. Room
- Committee Meeting
- VIP Luncheon Area
- Members Lounge
- Press Center

- Press Conf. Room
- Service Area / Offices
- Future Space Area
- Prayer Room

2. Technical Sessions

2.1 Technical Sessions at a Glance



Date	05/10/2026	06/10/2026	06/10/2026	07/10/2026	07/10/2026	08/10/2026	08/10/2026	09/10/2026	09/10/2026
Time / Room Number	16:30-19:00	10:15-12:45	15:00-17:30	10:15-12:45	15:00-17:30	10:15-12:45	15:00-17:30	10:15-12:45	13:45-16:15
E3	A3.1	A3.2A	A3.2B	A3.3A	A3.3B	A3.4A	A3.5	A3.4B	A3.2C
Hall 23	D2.1	D2.3	D2.2	D2.4	D2.5	D2.6	D2.7	D2.8	D2.9/D6.2
Hall 8	C1.1	C1.2	C1.3	C1.4	C1.5	C1.6	C1.7	C1.8	C1.9
E2	A6.8/E9.1	A6.1	A6.7	A6.9	A6.4	A6.3	A6.2	A6.5	A6.6
E5	B3.1	B3.2	B3.3	B3.5	B3.4/B6.4	B3.7	B3.6/A5.3	B3.8	E10.2
Hall 2	B4.2	B4.1	B4.3	B4.4	B4.5	B4.6A	B4.7	B4.8	B4.6B
Hall 3	E7.1	E7.2	E7.3	E7.4	E7.5	E7.6/E3.5	E10.1	E7.7	
E6	C4.1	C4.3	C4.5	C4.2	C4.6	C4.7	C4.8/B4.5A	C4.9	C4.10/C3.5
E7	C2.1	C2.2	C2.3	C2.4	C2.5	C2.6	C2.7	C2.8	C2.9
Hall 7	A1.1	A1.2	A1.3	C4.4	A1.4	A1.5	A1.6	A1.7	A1.8
G1	A2.7	A4.1	A4.2	A2.1	A2.2	A2.3	A2.4	A2.5	A2.6
Hall 6	D1.1	D1.2	D1.3	A5.1	A5.2	D1.4	D1.5	D1.6	D1.7
Hall 4	B1.1	C3.1	B1.2	B1.7	B1.4	B1.5	B1.6	C3.4	E9.5
Hall 34	E9.2	E3.1	E3.2	E3.3	E3.4	A5.4	E3.6	B5.4	
G2	E5.1	D5.2	E5.2	D5.1	E5.3	D5.3	E5.4	E5.5	E5.6
Hall 5	C3.2	B2.5	B2.6	B2.7	B2.1	B2.2	B2.3	B2.4	A7.4
E1	E1.1	E1.2	E1.3	E1.4	E1.5	E1.6	E1.7	E1.8	E1.9
Hall 24	D4.1	D4.2	D4.3	D3.1	D3.2A	D4.4	D4.5	D3.2B	D3.3
Hall 1	E2.1	E2.2	B6.5	E2.4	B5.2	B5.3	B6.2	B6.3	B6.1
Hall 28	B2.8/GTS.3	D6.1	B4.9/GTS.5	B5.1	E6.4/GTS.1	D6.3	E2.3/GTS.4	D5.4	B3.9/GTS.2
Hall 29	C4.11	E9.4	E6.3	E6.2	E4.1	E4.2	E6.1	E4.3	A6.10/B4.10
Hall 30	A7.1	A7.2	A2.8	E11.1	A7.3	E9.3	C3.3	B1.3	E8.1
Hall 35	B4.11	B1.8	C1.10	A1.9	D1.8	E1.10/E11.2	A6.11	B2.9	

Category E:
Space
& Society
E1--> E11

Category C:
Technology
C1--> C4

Category D:
Infrastructure
D1--> D6

Category A:
Science
& Exploration
A1--> A7

Category B:
Applications
& Operations
B1--> B6

2.2 Technical Sessions by Day

Monday, 5 October 2026

16:30 Technical Sessions		
No.	Title	Room
A1.1	Behaviour, Performance and Psychosocial Issues in Space	Hall 7
A2.7	Life and Physical Sciences under reduced Gravity	G1
A3.1	Space Exploration Overview	E3
A6.8-E9.1	Policy, Legal, Institutional, Economic and Security Aspects of Debris Mitigation, Debris Remediation and STM	E2
A7.1	Space Astronomy missions, strategies and plans	Hall 30
B1.1	International Ventures in Earth Observations	Hall 4
B2.8-GTS.3	Space Communications and Navigation Global Technical Session	Hall 28
B3.1	Governmental Human Spaceflight Programmes (Overview)	E5
B4.2	Small Space Science Missions	Hall 2
B4.11	33rd IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS - Extra Session	Hall 35
C1.1	Attitude Dynamics (1)	Hall 8
C2.1	Space Structures I Design, Development and Verification (Launch Vehicles and Space Vehicles, including their Mechanical/Thermal/ Fluidic Systems)	E7
C3.2	Wireless Power Transmission Technologies and Application	Hall 5
C4.1	Liquid Propulsion (1)	E6
C4.11	Emerging topics in space propulsion	Hall 29
D1.1	Innovative Systems toward Future Architectures	Hall 6
D2.1	Launch Vehicles in Service or in Development	Hall 23
D4.1	Innovative Concepts and Technologies	Hall 24
E1.1	Lift Off: Primary and Secondary Education	E1
E2.1	Student Conference - Part 1	Hall 1
E5.1	Space Architecture: Habitats, Habitability, and Bases	G2
E7.1	Young Scholars Session	Hall 3
E9.1-A6.8	Policy, Legal, Institutional, Economic and Security Aspects of Debris Mitigation, Debris Remediation and STM	E2
E9.2	Cyber-based security threats to space missions: establishing the legal, institutional and collaborative framework to counteract them	Hall 34

Tuesday, 6 October 2026

10:15 Technical Sessions		
No.	Title	Room
A1.2	Human Physiology in Space	Hall 7
A3.2A	Moon Exploration – Part 1	E3
A4.1	SETI Science and Technology: Current and Future Directions	G1
A6.1	Space Debris Measurements and Orbit Determination SST (1)	E2
A7.2	Science Goals and Drivers for Future Exoplanet, Space Astronomy and Space Physics	Hall 30
B1.8	Expanding the Boundaries of Earth Observation	Hall 35

No.	Title	Room
B2.5	Extra-Terrestrial and Interplanetary Communications, and Regulations	Hall 5
B3.2	Commercial Human Spaceflight Programmes	E5
B4.1	27th Workshop on Small Satellite Programmes at the Service of Developing Countries	Hall 2
C1.2	Attitude Dynamics (2)	Hall 8
C2.2	Space Structures II Development and Verification (Orbital deployable and dimensionally stable structures, including mechanical and robotic systems and subsystems)	E7
C3.1	Solar Power Satellite	Hall 4
C4.3	Solid and Hybrid Propulsion (1)	E6
D1.2	Technologies that Enable Space Systems	Hall 6
D2.3	Upper Stages, Space Transfer, Entry & Landing Systems	Hall 23
D4.2	Contribution of Moon Village technologies and activities to Humanity Challenges	Hall 24
D5.2	Emerging trends of knowledge management in organizations	G2
D6.1	Commercial Spaceflight Safety and Emerging Issues	Hall 28
E1.2	Space for All: Promoting Inclusive Practices in Space Exploration	E1
E2.2	Student Conference - Part 2	Hall 1
E3.1	International Cooperation in Using Space for Sustainable Development: The "Space2030" Agenda and Beyond	Hall 34
E7.2	Information Sharing in Outer Space: Theory and Practice	Hall 3
E9.4	Strategic Risk Management for Successful Space & Defence Programmes	Hall 29

15:00 Technical Sessions

No.	Title	Room
A1.3	Medical Care for Humans in Space	Hall 7
A2.8	In-Space Manufacturing and Production Applications	Hall 30
A3.2B	Moon Exploration – Part 2	E3
A4.2	SETI and Society: Exploring the Human Dimension	G1
A6.7	Re-entry Modelling and Interaction with Atmosphere	E2
B1.2	Earth Observation Systems	Hall 4
B2.6	Cubesat, Internet of Things, and Mobile Direct Communications	Hall 5
B3.3	Advancements in Human Space Habitation for Orbital, Transit, and Surface Environments	E5
B4.3	Small Satellite Operations	Hall 2
B4.9-GTS.5	Small Satellite Missions Global Technical Session	Hall 28
B6.5	Large Constellations & Fleet Operations	Hall 1
C1.3	Guidance, Navigation and Control (1)	Hall 8
C1.10	Astrodynamics beyond the Earth	Hall 35
C2.3	Space Structures III Design, Development and Verification (Orbital infrastructure for in orbit service & manufacturing, Robotic and Mechatronic systems, including their Mechanical/Thermal/ Fluidic Systems)	E7
C4.5	Electric Propulsion (1)	E6
D1.3	Emergent Space Systems	Hall 6
D2.2	Launch Services, Missions, Operations, and Facilities	Hall 23
D4.3	The Modern Day Space Elevator as a Permanent Transportation Infrastructure	Hall 24
E1.3	On Track: Undergraduate Space Education	E1
E3.2	The Future of Space Exploration and Innovation	Hall 34
E5.2	Is Space R&D Truly Fostering A Better World For Our Future?	G2
E6.3	Innovation: The Academics' Perspectives	Hall 29
E7.3	Legal and Regulatory Opportunities and Challenges in the Evolving Low Earth Orbit (LEO) Economy	Hall 3

Wednesday, 7 October 2026

10:15 Technical Sessions

No.	Title	Room
A1.9	Life Sciences for Space Exploration	Hall 35
A2.1	Fundamental Physics in Low Gravity	G1
A3.3A	Mars Exploration – missions current and future	E3
A5.1	Human Exploration of the Moon and Cislunar Space	Hall 6
A6.9	Space Debris Measurements and Orbit Determination SST (2)	E2
B1.7	Earth Observations to Address Earth's Environment and Climate Challenges	Hall 4
B2.7	Advances in Space-based Communication Technologies	Hall 5
B3.5	Astronaut Training, Accommodation, and Operations in Space	E5
B4.4	Small Earth Observation Missions	Hall 2
B5.1	Tools and Technology in Support of Integrated Applications	Hall 28
C1.4	Guidance, Navigation and Control (2)	Hall 8
C2.4	Space Structures Control, Dynamics and Microdynamics	E7
C4.2	Liquid Propulsion (2)	E6
C4.4	Solid and Hybrid Propulsion (2)	Hall 7
D2.4	Future Space Transportation Systems	Hall 23
D3.1	Strategies & Architectures as the Framework for Future Building Blocks in Space Exploration and Development	Hall 24
D5.1	For a successful space program: Quality and Safety!	G2
E1.4	In Orbit: Postgraduate Space Education	E1
E2.4	Educational Pico and Nano Satellites	Hall 1
E3.3	Economic Resilience and the Space Economic/Industrial Sector	Hall 34
E6.2	Government and Industry Perspectives on the Future of Space Commerce	Hall 29
E7.4	Planetary Defence: Legal Issues in the Deflection of Hazardous Asteroids and Comets	Hall 3
E11.1	Connecting Emerging Space ecoSystems	Hall 30

15:00 Technical Sessions

No.	Title	Room
A1.4	Medicine in Space and Extreme Environments	Hall 7
A2.2	Fluid and Materials Sciences	G1
A3.3B	Mars Exploration – Science, Instruments and Technologies	E3
A5.2	Human Exploration of Mars	Hall 6
A6.4	Operations in Congested Space: Situational Awareness and Space Traffic Management – SSA	E2
A7.3	Technology Needs for Future Missions, Systems, and Instruments	Hall 30
B1.4	Earth Observation Data Systems and Technology	Hall 4
B2.1	Space-based PNT (Position, Navigation, Timing) Architectures, Applications, and Services	Hall 5
B3.4-B6.4	Flight & Ground Operations aspects of Human Spaceflight - Joint Session of the IAF Human Spaceflight and IAF Space Operations Symposia	E5
B4.5	Access to Space for Small Satellite Missions	Hall 2
B5.2	Integrated Applications End-to-End Solutions	Hall 1
C1.5	Guidance, Navigation & Control (3)	Hall 8
C2.5	Space Structures and Materials for Extreme Environment (High-temperature and cryogenic-temperature applications including thermal insulation concepts)	E7

No.	Title	Room
C4.6	Electric Propulsion (2)	E6
D1.8	IAF SPACE SYSTEMS SYMPOSIUM - Extra session	Hall 35
D2.5	Technologies for Future Space Transportation Systems	Hall 23
D3.2A	Systems and Infrastructures to Implement Sustainable Space Development and Settlement - Systems	Hall 24
E1.5	Enabling the Future: Developing the Space Workforce	E1
E3.4	Policy and Regulatory Approaches for Governing Safety, Security and Sustainability in Space	Hall 34
E4.1	Memoirs & Organisational Histories	Hall 29
E5.3	Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach	G2
E6.4-GTS.1	Entrepreneurship Around the World Global Technical Session	Hall 28
E7.5	Space Stations: Legal Framework	Hall 3

Thursday, 8 October 2026

10:15 Technical Sessions

No.	Title	Room
A1.5	Radiation Fields, Effects and Risks in Human Space Missions	Hall 7
A2.3	Microgravity Experiments from Sub-Orbital to Orbital Platforms	G1
A3.4A	Small Bodies Missions and Technologies (Part 1)	E3
A5.4	Deep Space Habitats and Resources	Hall 34
A6.3	Environment Modelling and Risk Assessment	E2
B1.5	Earth Observation Societal and Economic Applications, Challenges and Benefits	Hall 4
B2.2	Space-based PNT (Position, Navigation, Timing) Sensors and Systems	Hall 5
B3.7	Advanced Systems, Technologies, and Innovations for Human Spaceflight	E5
B4.6A	Generic Technologies for Small Satellites (1)	Hall 2
B5.3	Integrated Commercial Satellite Applications for Sustainability and Climate	Hall 1
C1.6	Mission Design, Operations & Optimization (1)	Hall 8
C2.6	Space Environmental Effects, Spacecraft and Habitats Protection	E7
C4.7	Hypersonic Air-breathing and Combined Cycle Propulsion, and Hypersonic Vehicle	E6
D1.4	Cooperative Systems	Hall 6
D2.6	Future Space Transportation Systems Verification and In-Flight Experimentation	Hall 23
D4.4	Interstellar Exploration - Strategies, Capabilities and Opportunities	Hall 24
D5.3	Prediction, Testing, Measurement and Effects of space environment on space missions	G2
D6.3	Enabling safe commercial spaceflight: vehicles and spaceports	Hall 28
E1.6	Calling Planet Earth: Large Engagement and Communications Initiatives	E1
E1.10-E11.2	Space Education and Outreach in Developing Space Nations	Hall 35
E4.2	Organizational, Scientific and Technical Histories	Hall 29
E9.3	Norms and Standards for Safe and Responsible Behaviour in Space	Hall 30

15:00 Technical Sessions

No.	Title	Room
A1.6	Advancements in Astrobiology and Space Exploration	Hall 7
A2.4	Science Results from Ground Based Research	G1
A3.5	Solar System Exploration including Ocean Worlds	E3
A6.2	Resident Space Objects Characterisation and High Velocity Impacts	E2
A6.11	24th IAA SYMPOSIUM ON SPACE DEBRIS - Extra session	Hall 35
B1.6	The Future of Maritime Protection: An Integrated View on Earth Observation, Advanced Systems, and Policy	Hall 4
B2.3	Advance Higher Throughput Communications and Networks for GEO and LEO satellites	Hall 5
B3.6-A5.3	Human and Robotic Partnerships in Exploration - Joint session of the IAF Human Spaceflight and IAF Exploration Symposia	E5
B4.7	Constellations and Distributed Systems	Hall 2
B6.2	Innovative Space Operations Concepts and Advanced Systems	Hall 1
C1.7	Mission Design, Operations & Optimization (2)	Hall 8
C2.7	Manufacturing and industrialization for Launch Vehicle and Space Vehicle Structures and components (High volume production, industrialization, automation and digitalization)	E7
C3.3	Advanced Space Power Technologies	Hall 30
C4.8-B4.5A	Joint Session between IAA and IAF for Small Satellite Propulsion Systems	E6
D1.5	Systems Engineering Modeling and Analysis	Hall 6
D2.7	Suborbital Rockets and Small Launchers: Concepts, Technologies and Operations including Student Rocketry	Hall 23
D4.5	Space Resources, the Enabler of the Space Exploration	Hall 24
E1.7	Sending out a Signal: Innovative Outreach and Communications Initiatives	E1
E2.3-GTS.4	Student Team Competition Global Technical Session	Hall 28
E3.6	Industrialization as a Catalyst for Competitiveness	Hall 34
E5.4	Space Assets and Disaster Management	G2
E6.1	Space Entrepreneurship and Investment: The Practitioners' Perspectives	Hall 29
E10.1	Planetary Defense from Asteroids and Comets	Hall 3

Friday, 9 October 2026

10:15 Technical Sessions

No.	Title	Room
A1.7	Life Support, habitats and EVA Systems	Hall 7
A2.5	Facilities and Operations of Microgravity Experiments	G1
A3.4B	Small Bodies Missions and Technologies (Part 2)	E3
A6.5	Post Mission Disposal and Space Debris Removal – SEM	E2
B1.3	Earth Observation Sensors and Technology	Hall 30
B2.4	Space-based Optical and Quantum Communications	Hall 5
B2.9	RF & Antenna Technologies for Space Communications	Hall 35
B3.8	Human Space & Exploration	E5
B4.8	Small Spacecraft for Deep-Space Exploration	Hall 2
B5.4	Advancing Earth observation with artificial intelligence across the full value chain	Hall 34
B6.3	Mission Operations, Validation, Simulation and Training	Hall 1

No.	Title	Room
C1.8	Orbital Dynamics (1)	Hall 8
C2.8	Advancements in Materials Applications, Additive Manufacturing, and Rapid Prototyping Manufacturing and Rapid Prototyping	E7
C3.4	Space Power Systems for Ambitious Missions	Hall 4
C4.9	Disruptive Propulsion Concepts for Enabling New Missions	E6
D1.6	Systems Engineering Approaches, Processes and Methods	Hall 6
D2.8	In-Space Transportation Solutions and Space Logistics	Hall 23
D3.2B	Systems and Infrastructures to Implement Sustainable Space Development and Settlement - Technologies	Hall 24
D5.4	Cybersecurity in space systems, risks and countermeasures	Hall 28
E1.8	Show Us Space: Demonstration of Hands On Education and Outreach	E1
E4.3	History of Türkiye and West Asia Contribution to Astronautics	Hall 29
E5.5	Sharing Space Achievements and Heritage: Space Museums and Societies	G2
E7.7	Recent Developments in Space Law – National and Regional Space Legislation	Hall 3

13:45 Technical Sessions

No.	Title	Room
A1.8	Biology in Space	Hall 7
A2.6	Microgravity Sciences on board of Space stations	G1
A3.2C	Moon Exploration – Part 3	E3
A6.6	Orbit Propagation and Mitigation Assessment	E2
A6.10-B4.10	Joint Small Satellite/Space Debris Session on Small Satellite Operations for the Sustainability of Space	Hall 29
A7.4	Lunar astrophysics: scientific instrumentation and ancillary systems	Hall 5
B3.9-GTS.2	Human Spaceflight Global Technical Session	Hall 28
B4.6B	Generic Technologies for Small Satellites (2)	Hall 2
B6.1	Ground Operations - Systems and Solutions	Hall 1
C1.9	Orbital Dynamics (2)	Hall 8
C2.9	Smart Materials and Adaptive Structures & Specialized Technologies, Including Nanotechnology	E7
C4.10-C3.5	Joint Session on Nuclear Power and Propulsion Systems, and Propellantless Propulsion	E6
D1.7	Lessons Learned in Space Systems	Hall 6
D2.9-D6.2	Sustainable Approaches and Impact of Space Transportation Solutions on Earth + Space Environment and on General Safety	Hall 23
D3.3	Space Technology and System Management Practices and Tools	Hall 24
E1.9	Space Culture: Public Engagement in Space through Culture and Art	E1
E5.6	Simulating Space Habitation: Habitats, Design and Simulation Missions	G2
E8.1	Multilingual Astronautical Terminology	Hall 30
E9.5	Mitigating threatening actions in orbit: How to enhance and strengthen space security	Hall 4
E10.2	Informing Planetary Defense	E5

3 Keynote Speakers

Monday 5 October

Keynotes

A7.	IAF SYMPOSIUM ON ONGOING AND NEAR FUTURE SPACE ASTRONOMY AND SOLAR-SYSTEM SCIENCE MISSIONS	Date	Time	Room
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Session: 1. Space Astronomy Missions, Strategies and Plans

5.10.2026

16:30

Hall 30

Sven WITTIG

*L4 Technology Coordinator,
Future Missions Department,
ESA Science Directorate,
European Space Agency (ESA)
Netherlands*

KEYNOTE: A7.1 ESA Technology Preparation for Future Science Missions

Abstract

The European Space Agency systematically prepares enabling technologies to support its future science missions, ensuring technical readiness ahead of mission adoption. Within the Future Missions Department, the Technology Preparation Section (SCI FT) identifies, develops, and coordinates the maturation of critical technologies required across the Science Programme, including advanced x-ray telescopes and optics, next generation detectors, cryogenic systems, thermal and power solutions, and precision mechanisms. These activities directly support mission concepts spanning the Voyage 2050 themes, notably the L class missions such as L4: Moons of the Giant Planets, which demand substantial advancements in instrumentation and spacecraft capabilities. Through close coordination with early phase industrial studies, identification and development of critical technologies with industrial and institutional partners across Europe, ESA continues to prepare, implement and deliver ambitious world-class Science missions, while maintaining and controlling technology, cost and schedule risks. This presentation will summarise key technology development lines, lessons learned from recent preparation cycles, and priority areas shaping Europe's future space science capabilities.

B1.	IAF EARTH OBSERVATION SYMPOSIUM	Date	Time	Room
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Session: 1. International Ventures in Earth Observations

5.10.2026

16:30

Hall 4

Alex HELD

*Chief Research Scientist,
Earth Observation and AquaWatch,
CSIRO Space and Astronomy
Australia*



Christian HAUGLIE-HANSSEN

*Director General,
Norwegian Space Agency (NOSA)
Norway*

KEYNOTE: B1.1 (1) Increasing the Impact of Earth Observations to enable a More Resilient World: Update from the Committee on Earth Observation Satellites

Abstract

The Committee on Earth Observation Satellites (CEOS) is the principal international forum for the coordination of civil space-based Earth observation (EO) programs. Comprised of 35 Members and 32 Associate Members from across the globe, CEOS coordinates multi-agency satellite missions through its eight Virtual Constellations, and addresses topics from coordination of new missions, to calibration and validation of related missions, to capacity building and disaster management – all to deliver sustained, integrated, and user-focused Earth system observations to optimize societal benefit and inform decision-making. This keynote will update IAC attendees on the latest coordination of international EO missions, data and impacts. CEOS is also working with commercial data providers on areas of interoperability to increase the use of data between government and commercial missions.

The 2026 CEOS Chair – “Team Australia,” composed of CSIRO, Geoscience Australia, and the Bureau of Meteorology – has focused its leadership on the headline theme “Positioning for Success in a Rapidly Changing Context,” bringing environmental adaptation and resilience into renewed focus, and driving an ambitious expansion of the CEOS Analysis Ready Data (ARD) strategy – recognizing that interoperable, trusted, easy-to-use ARD is a foundational enabler of greater CEOS impact. This “Future ARD Strategy” will expand access to high-quality EO datasets from government and non-government sources alike, promote consistency across platforms, and accelerate adoption across diverse applications, empowering users worldwide to make informed decisions based on reliable satellite data. The 2026 CEOS Chair will also focus the world's attention on the use of satellite data to support polar science, bringing space leaders together in Australia's gateway to Antarctica – Hobart (Nipaluna), engaging youth and the need to drive cutting-edge science and technology for water quality applications.

Working closely with Team Australia, NASA, the 2026-2028 CEOS Strategic Integration Team (SIT) Chair, has launched two interconnected priorities to leverage international EO capabilities: “Water Planet,” and “Connected Data for Community Resilience.” The first addresses one of the world’s most pressing resource challenges — mounting water scarcity, degraded quality, and escalating flood and drought hazards — by harnessing the collective power of CEOS missions to deliver integrated data products and user-driven solutions. International contributions in new missions measuring water, including SWOT, PACE and Sentinel-6B provide critical information to address water resource challenges through integrated, multiplatform and multispectral data products, and user-driven solutions. The second priority responds to growing data complexity and escalating extreme events by enhancing data interoperability and cross-CEOS collaboration to deliver actionable information that supports resilience at global, regional, and local scales.

Together, the Australian Chair themes and NASA SIT Chair priorities reflect a unified focus on addressing global, and dynamic challenges through internationally coordinated, interoperable, and impactful Earth observation. This paper will highlight efforts across CEOS related to these areas of focus and underscore the essential role of CEOS’ unique technical international cooperation in equipping decision-makers with the highest quality EO information and tools needed to coordinate EO missions and information to build a more resilient world.

B1.	IAF EARTH OBSERVATION SYMPOSIUM	Date	Time	Room
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Session: 1. International Ventures in Earth Observations

5.10.2026

16:30

Hall 4

Karen ST. GERMAIN

Director, Earth Sciences Division,
Science Mission Directorate,
National Aeronautics and Space Administration (NASA)
United States

KEYNOTE: B1.1 (2) Transforming the Speed of Science with a new model for Earth Observation Cooperation: International and Commercial Fleets with More Rapid Mission Development

Abstract

As commercial capabilities in satellite bus development and launch capabilities to low Earth orbit have expanded, the approach to Earth observation cooperation can evolve into a more cost effective and rapid partnering approach. By coordinating launches of disaggregated missions to fly in formation, each partner can shorten time to development and simplify mission integration. Three examples of this approach will be discussed in the context of mission changes announced by NASA in late March 2026, with the latest updates on how international and commercial missions gain synergistic advantages through the approach.

Missions addressing atmosphere, clouds, convection and precipitation are being re-visioned as a new fleet, titled FALCON (Fleet for the Atmosphere Linking Commercial Observations with NASA). This revisioning is flexible to accommodate the JAXA Precipitation Measurement Mission, HAWCsat from the Canadian Space Agency, Radar and Lidar mission contributions from NASA, and a fully commercial radiometry mission, with a recently released RFI. Additional international agency contributions are welcome and under discussion. The missions that join the fleet will benefit from also being part of FALCON integrated science teams that work across the mission data to optimize the combination of observations for rapid advances in scientific and applications.

In the area of Gravimetry, the NASA- DLR mission Grace-Continuity is progressing through final integration and test, while the next mission, NGGM plans information sharing between ESA and NASA.

Observations in advanced hyperspectral and thermal imaging are planned in new missions by NASA, titled EAGLE. Explorer for Artemis Geology Lunar and Earth (EAGLE) provides the fleet concept for advancing surface biology and geology measurements, but also has opportunities for multi-mission observations in Sustainable Land Imaging including Landsat and Sentinel-2 products, and plans for future incorporation of commercial satellite data into harmonized products.

This keynote paper, including international EO leaders as co-authors, will provide an overview of this rapidly changing approach and the latest status of international and commercial cooperation in ensuring rapid implementation of observations that will be new to science.

B1.	IAF EARTH OBSERVATION SYMPOSIUM	Date	Time	Room
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Session: 1. International Ventures in Earth Observations

5.10.2026

16:30

Hall 4

Simonetta CHELI

*Director of Earth Observation Programmes and Head of ESRIN,
European Space Agency (ESA)
Italy*

KEYNOTE: B1.1 (3) ESA's Earth Observation Programmes: The International Perspective

Abstract

As the global community confronts unprecedented environmental challenges, the European Space Agency (ESA) continues to strengthen its leadership in space-based monitoring through a dynamic and evolving Earth Observation (EO) portfolio. This presentation provides an overview of the current status and recent progress of ESA's EO programmes.

ESA's activities span scientific missions that advance understanding of the Earth system, operational programmes such as Copernicus developed with the European Union, and meteorological missions implemented in cooperation with EUMETSAT. These are complemented by emerging initiatives, including the development of Digital Twin Earth components and the DestinE programme, as well as an increasing focus on downstream applications and services, contributing to more resilient and secure EO capabilities.

Recognizing the complexity of Earth's systems, ESA adopts a strongly collaborative approach with its Member States, combining bilateral partnerships with major spacefaring nations, and engages actively in key multilateral frameworks, including CEOS, GEO, WMO, and the United Nations system. The presentation also addresses ESA's role in international development cooperation, including collaboration with international financial institutions, the European Commission (including DG INTPA), the African-European Earth Observation partnership, and mechanisms such as the International Charter "Space and Major Disasters," among others.

By fostering data sharing, technical interoperability, and coordinated mission planning, ESA contributes to enhancing the global community's capacity to monitor environmental change, strengthen resilience, and support the sustainable management of Earth's resources. The presentation concludes with a forward-looking perspective on future EO developments in Europe and beyond.

C2.	IAF MATERIALS AND STRUCTURES SYMPOSIUM	Date	Time	Room
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Session: 1. Space Structures I Design, Development and Verification (Launch Vehicles and Space Vehicles, including their Mechanical/Thermal/ Fluidic Systems)

5.10.2026

16:30

E7

Richard DEGENHARDT

*Senior Scientist,
Institute for Fiber Composite Lightweight Construction and Adaptive Systems,
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)
Germany*

KEYNOTE: C2.1 "Paolo Santini Memorial Lecture" - Buckling of Composite Structures

Abstract

For thin-walled structures buckling is often the design criterion. Stringer-dominant structures as typically used in aerospace show significant post-buckling behaviour. For metallic structures this area is already fully exploited in the design. For composites materials industry is allowing this in the design not to the full extent yet due to the more complex damage behaviour. Unstiffened or skin-dominant structures as used more in space applications do not have relevant post-buckling area and show a very high imperfection sensitivity. The NASA-SP 8007 allows safe design; however, the knock-down factors are very conservative. Using composite materials with appropriate lay-ups allows not only lighter structures but promises less conservative know-down factors. This paper summarizes recent achievements in the field of buckling of composite thin-walled structures and gives 2 more detailed examples. The first is a fast Ritz-method and the second is a non-destructive buckling estimation in the experiment by the vibration-correlation-technique.

Fast simulation of unstiffened cylindrical and conical composite structures

New designs require - especially for composite materials - very high computational effort. Fast tools which are significant faster than FEM-tools are needed. A semi-analytical method based on the Ritz-approach capable to predict the static and the instability response of the non-linear buckling of unstiffened laminated composite cones and cylinders under various loads and boundary conditions is presented. The tool considers geometric and load imperfections. The Ritz method is selected to solve the non-linear set of equations and a new set of appropriate approximation functions for the displacement field is proposed, in order to simulate axial compression, torsion, pressure, load asymmetry, any arbitrary surface or concentrated loads, and any load case combining these loads.

Non-destructive prediction of the buckling load by vibrations

The Vibration Correlation Technique (VCT) allows a non-destructive prediction of the buckling load in the experiment. It is based on the relation that the eigenfrequency becomes smaller under the increase of the axial compression and in the case of the buckling the eigenfrequency is zero. For beams the analytical relationship is linear. For shells the relation is due to the imperfection sensitivity nonlinear, however, an empirical relation was developed and later also analytically proved. During the experiment eigenfrequencies are measured during loading. The relation between them allows a prediction of the real buckling load in the experiment. VCT was demonstrated on academic and also industrial level. Recent developments focused on combined loading, loading imperfections, sensitivities and also consideration of damaged structures. The paper summarizes the benefits and limitations of VCT.

E7.	69th IISL COLLOQUIUM ON THE LAW OF OUTER SPACE	Date	Time	Room
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Session: 1. Young Scholars Session

5.10.2026

16:30

Hall 3

Elina MOROZOVA

*Executive Director,
Intersputnik International Organization of Space Communications
Russia*

KEYNOTE: 7.1 Constellations at Scale: Law, Ethics and Stewardship in a World That Needs More Space

Abstract

The IAC 2026 theme, The World Needs More Space, is especially apt at a time when space activities are increasingly conducted through satellite constellations. At their best, constellations can make space benefits more widely available: supporting governmental functions and public services, advancing scientific research, stimulating economic development, and bringing space-enabled services into everyday life. Constellations are not new. What is new today is their scale, rapid deployment, expanding geographic coverage, and their direct reach to individual users.

Taken together, these developments test law at several levels. In general international law, the fact that space-enabled services are not confined by territorial borders brings sovereign equality and non-intervention into focus, while raising considerations related to the value of the free flow of information. In space law, they engage fundamental provisions concerning the exploration and use of outer space for the benefit and in the interests of all countries, State responsibility for national space activities, authorization and continuing supervision, due regard and international consultations. In the ITU framework, they concern rational, efficient, economical and equitable use of radio frequencies and satellite orbits in an interference-free environment.

The ethical dimension is equally important. Viewed at scale, constellations raise questions of fairness, inclusiveness and regard for future generations: whether technologically advanced actors may shape practical conditions of access for later entrants; how benefits of space activities can remain broadly available in practice; how scientific interests, including dark and quiet skies, should be protected while enabling public and commercial uses; and what present users owe to those who will depend on space tomorrow.

If the world needs more space, it also needs more care in how space is used: foresight at the planning stage, including whether a need is best served by a constellation or by other space-based, terrestrial or airborne solutions; self-restraint where cumulative effects matter, coordination where activities interact, and transparency where decisions taken by some shape the conditions of space use for all. Such stewardship is not the task of one actor alone, but a shared endeavour for States, industry, the scientific community and civil society, each contributing within its role and capacity.

This year's Keynote lecture explores how these legal and ethical dimensions, together with relevant policy, regulatory, operational and other considerations, can be drawn together within a broader approach to stewardship – one that aligns the promise of constellations with the realities of a space environment increasingly used, shared and relied upon.

Tuesday 6 October

A4.	55th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The Next Steps	Date	Time	Room
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Session: 1. SETI Science and Technology: Current and Future Directions

6.10.2026

10:15

G1

David MACMAHON

*Chief Engineer,
Breakthrough Listen, Radio Astronomy Lab,
University of California at Berkeley
United States*

KEYNOTE: A4.1 "Rudolf Pesek Lecture" The First Decade of Breakthrough Listen

Abstract

Announced in July 2015, the Breakthrough Listen initiative of the Breakthrough Prize Foundation set out to be humanity's largest and most comprehensive search for intelligent life beyond Earth. After achieving first light at the end of that year on the Green Bank Telescope in West Virginia, USA, the project expanded to more and more telescopes around the world. Initially conceived and funded as a 10-year endeavour, its success has secured additional funding to at least 2030. The current portfolio of Breakthrough Listen's partner observatories will be presented in chronological order along with a summary of the current observational and computational capabilities at each site. This will highlight the evolution of observing strategy from dedicated observations on single antennas to commensal observations on telescope arrays. Running a unified campaign across such a diverse range of facilities poses interesting technical challenges. Different facilities provide different points of entry to the signal path from the telescope as well as different ways of accessing and synchronizing observational metadata (e.g. sky position, frequency, calibration solutions) that are essential to give meaning to the signal path data. These challenges can be summarized as maximizing commonality and reuse while minimizing site specific customizations. Another challenge not often encountered in one's days as a student is how to manage evolving trends in the electronics and computing industries. Systems that were state of the art when deployed 10 years ago are now on the verge of obsolescence, if not beyond it. Components that were readily available can suddenly become much more expensive and harder to source due to spikes in cryptocurrency mining or AI mega-projects consuming all the product that industry can produce. These challenges can be hard to foresee and often require unique solutions that do not generalize well, but if history is any guide, the overall trend of increasing computational capability per unit cost can be expected over time. Breakthrough Listen's struggles with and solutions to all of these challenges will be discussed. After this retrospective look back on Breakthrough Listen's history we will look forward to what we can achieve in the future. New technologies and increased computational capabilities along with paradigm changing telescope facilities offer exciting new prospects for expanding humanity's search for intelligent life beyond Earth to ever higher levels. We will survey some near-term possibilities and chart a course for next steps.

A4.	55th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The Next Steps	Date	Time	Room
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Session: 2. SETI and Society: Exploring the Human Dimension

6.10.2026

15:00

G1

Kathryn DENNING

Associate Professor,
IAA Associate Member, York University,
IAA SETI Committee
Canada

KEYNOTE: A4.2 “John Billingham Cutting-Edge Lecture” - A New Version of the SETI Protocols: The “Declaration of Principles Concerning the Conduct of the Search for Extraterrestrial Intelligence (SETI): 2026 Update”

Abstract

We (Kathryn Denning, Michael A. Garrett, Carol Oliver, Leslie I. Tennen) report on a multi-year process undertaken within the IAA SETI Committee to update the Declaration of Principles Concerning the Conduct of the Search for Extraterrestrial Intelligence (SETI), long known colloquially as the ‘SETI Post-Detection Protocols’ (Garrett et al. 2025; Tennen et al. 2024; Oliver et al. 2023). The IAA SETI Committee has, since the 1980s, developed guiding principles for the scientific community’s conduct in the event of the possible detection of extraterrestrial intelligence (ETI). The original Declaration of Principles Concerning Activities Following the Detection of Extraterrestrial Intelligence, adopted in 1989, established a voluntary framework for best practices in verification, information sharing, public transparency, and international consultation. It received broad recognition from the international scientific community. This document, along with the complementary 1995 Draft Declaration of Principles Concerning the Sending of Communications to Extraterrestrial Intelligence, was also presented to UNCOPUOS in 2000. In 2010, a streamlined update of the 1989 Declaration with a modified title, The Declaration of Principles Concerning the Conduct of the Search for Extraterrestrial Intelligence, was adopted by the IAA SETI Committee. Over the next decade, significant changes in the communications landscape, coupled with the diversification of technosignatures searches beyond classic radio SETI, made further revision of the Declaration essential. In 2022, the IAA SETI Committee established a Task Group to update the 2010 Declaration, with the aim of preserving the enduring values of earlier documents while making them relevant to the realities of twenty-first century science, media, and public engagement. This process has been informed by historical precedent, evolving scientific practice, and extensive community consultation. The new Declaration of Principles Concerning the Conduct of the Search for Extraterrestrial Intelligence (SETI) – 2026 Update was approved by the IAA SETI Committee in a vote conducted in Dec 2025 - Jan 2026, with a very high voter approval rate. This 2026 Declaration of Principles maintains longstanding emphases on verification and transparency, and also includes: a broadened scope to encompass a range of potential technosignatures; an expanded Preamble which anticipates the creation of supplementary Best Practices (including guidance concerning safety for researchers, and best practices in science communication and risk communication); delineation of the responsibilities of scientists and their institutions; and specific acknowledgement of the need for post-detection-focused research collaboration with interdisciplinary experts in science communication, risk communication, social science, ethics, and law. Further, no transmissions should be sent in response to a confirmed detection without UN-level international consultations.

D4.	24th IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE	Date	Time	Room
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Session: 3. The Modern Day Space Elevator as a Permanent Transportation Infrastructure

6.10.2026

15:00

Hall 24

Yoji ISHIKAWA

Lead Expert,
Obayashi Corporation
Japan

KEYNOTE: D4.3 “Jerome Pearson Memorial Lecture” - Management of the Space Elevator Construction Project and Its Development Process

Abstract

The space elevator represents a prototypical long-term megaproject, requiring several decades and substantial financial investment from initial conceptual planning through eventual realization. The composition of stakeholders is likely to evolve across the development timeline, from early-stage research activities to later-stage implementation. Assuming a project structure in which early-phase funding is provided primarily by public institutions and the final phase transitions toward private-sector-led societal deployment, this paper delineates key management principles deemed critical to the project’s ultimate success, drawing upon insights derived from analogous large-scale technological initiatives. First, in the initial phase, it is imperative either to converge upon an optimal set of foundational technologies—such as selecting between carbon nanotubes and graphene as candidate tether materials, or determining whether a self-propelled or alternative mechanism is most suitable for tether locomotion—or to deliberately maintain technological competition in order to stimulate innovation and accelerate technological maturation. Second, in the subsequent phase, attention must be directed toward identifying and cultivating a viable “platform entity” capable of assuming central responsibility for the long-term operation and commercialization of the space elevator system. This effort is particularly significant given the expected fluidity of stakeholder composition over the project’s duration. Third, the project should seek to enhance complementarities between foundational technologies—such as tether material development, climber propulsion systems, and energy-supply architectures—and applied technologies, including orbital demonstration missions. Fostering such interdependencies is expected to generate synergistic effects that expedite the overall development trajectory. Fourth, the project must remain responsive to emergent challenges, including newly manifesting risks in the space environment as well as changes in legal and regulatory frameworks. Ensuring flexibility and accuracy in addressing such uncertainties is essential for sustaining project viability over extended timescales. Fifth, mechanisms that effectively intermediate between end users of the space elevator and the designated platform entity should be established in order to facilitate smooth societal integration and commercialization of the system. Collectively, these perspectives enable the formulation of milestones that extend beyond purely technical or quantitative criteria and contribute to the development of a qualitative, strategically oriented roadmap for long-term project governance.

Wednesday 7 October

A3.	IAF SPACE EXPLORATION SYMPOSIUM	Date	Time	Room
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Session: 3A. Mars Exploration – Missions Current and Future

7.10.2026

10:15

E3

Maria Antonietta PERINO

*Director for Space Economy Exploration and International Network,
Thales Alenia Space Italia
Italy*

KEYNOTE: A3.3A Exomars Rosalind Franklin Mission: Development & Verification of the Martian Lander

Abstract

In 2028 the ESA's ExoMars Rosalind Franklin Mission (RFM) will be launched to attempt a new landing on Mars in 2030. This mission is rising from the previous mission, Exomars Rover Surface Platform (RSP) developed with Roscomos and later on cancelled due to the geopolitical crisis following events in Ukraine, by decision of the ESA Members States (July 2022). The new mission scenario defined by a joint ESA-NASA mission analysis effort foresees the baseline launch in September/October 2028 (baseline, hybrid T3 transfer profile) with a back-up option in December 2028 (backup, Earth-Mars –Mars profile). Two elements of the Spacecraft are already available: the Carrier Module and the Rover Module. The Descent Module and the Landing Platform require instead an almost complete re-development, with the exclusion of the already existing European contributions to the ExoMars 2022 Descent Module. These contributions consist of a number of avionics units, including the Inertial Measurement Unit, the Doppler radar assembly, the on board computer and the Parachute Assemblies, that will be also re-used for the new lander. The paper will synthetically describe the overall mission architecture, with a focus on the Entry Descent and Landing Module, and in particular on the technological development and verification necessary to achieve a successful landing on Mars.

B5.	IAF SYMPOSIUM ON INTEGRATED APPLICATIONS	Date	Time	Room
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Session: 1. Tools and Technology in Support of Integrated Applications

7.10.2026

10:15

Hall 28

Zhengning ZHANG

*Director of System Demonstration Center,
Space Star Technology Co., Ltd.
China*

KEYNOTE: B5.1 Satellite-Ground Collaboration and Intelligent Integration: Leading the New Paradigm of Commercial Satellite Applications with Integrated Communication, Navigation and Remote Sensing

Abstract

The global space industry is at a historic inflection point. On the one hand, space infrastructure is expanding rapidly in scale and improving markedly in integrated service capability. Over the past five years, the number of low-Earth-orbit satellites worldwide has increased by nearly an order of magnitude. Driven by LEO constellation deployment and direct-to-device technologies, satellite communications are accelerating toward a globally connected network featuring space-ground integration, ubiquitous coverage, high throughput, and low latency. Satellite navigation is advancing toward multi-system compatibility and the widespread provision of high-precision services, with steady improvements in positioning, timing, and resilience against interference. At the same time, remote sensing satellites, enabled by constellation-based architectures and multimodal payloads, are providing all-weather, high-temporal-resolution, and high-spatial-resolution Earth observation capabilities on a global scale.

On the other hand, increasingly complex application scenarios in ecological and environmental protection, disaster management, agriculture, transportation, and other sectors are placing higher demands on space infrastructure. These demands extend beyond more accurate sensing, more efficient transmission, and more reliable positioning. They also require intelligent interpretation, decision support, and collaborative service capabilities tailored to specific operational contexts.

Against this backdrop, commercial space is no longer merely a complement to traditional government-led space systems. It is rapidly becoming a major engine for technological innovation, application expansion, and the development of new productive forces. Correspondingly, commercial satellite applications are evolving from separate communications, navigation, and remote sensing services into integrated space-information solutions for industry-specific applications. The convergence of communications, navigation, and remote sensing, together with the intelligent evolution of space-ground collaboration, is emerging as a new paradigm for commercial satellite applications. In recent years, China has carried out integrated communications-navigation-remote-sensing practices in areas such as Three-River-Source National Park—widely known as “China’s Water Tower”—and China’s Digital Twin Water Conservancy Projects. These practices have improved ecological protection across the Qinghai-Tibet Plateau and strengthened national capabilities for flood and drought prevention and response, demonstrating the practical value and feasibility of this development path.

Meanwhile, multiple countries have launched initiatives to build space artificial intelligence infrastructure, actively promoting the integration of AI with existing space technologies and gradually forming integrated service platforms that combine sensing, communications, computing, and applications. This trend is expected to drive space infrastructure beyond information acquisition and transmission toward intelligent perception, intelligent cognition, and intelligent services, while also creating broader opportunities for commercial satellite applications.

For example, Chinese institutions have proposed intelligent remote sensing satellite system programs that place data, computing resources, and models on orbit, enabling new paradigms such as ground-based training with on-orbit inference and on-orbit data processing with on-orbit computing. These approaches can significantly enhance the real-time processing, multimodal fusion, intelligent analysis, and value extraction of massive remote sensing data, thereby shifting remote sensing services from image delivery to answer delivery. When integrated with communications satellites, space AI infrastructure can support broadband–narrowband collaboration, on-demand resource scheduling, and adaptive networking. When integrated with navigation satellites, it can strengthen autonomous orbit determination and timing, signal monitoring, and anti-jamming performance, thereby improving positioning accuracy, continuity, and service assurance in complex environments. As on-orbit processing capabilities continue to advance, integrated communications-navigation-remote-sensing applications will deepen further, and satellites will evolve from data acquisition platforms and relay nodes into end-to-end intelligent service nodes capable of delivering high-value information directly to users.

Looking ahead, space AI infrastructure, together with the new capability architecture formed through its deep integration with communications, navigation, and remote sensing systems, has the potential to become an important public asset for all humanity. It may provide more inclusive, accessible, and high-value space-information services for users worldwide. Through international platforms such as the International Astronautical Federation, the global community should encourage joint construction, sharing, and utilization of resources; strengthen academic exchange and collaborative innovation; and advance joint research on key technologies and governance issues, including space traffic management, computing-network integration, the fusion of space-based and non-space-based data, and information security. Such efforts will help support the achievement of the United Nations 2030 Sustainable Development Goals and contribute more broadly to global population well-being and economic development.

C1.	IAF ASTRODYNAMICS SYMPOSIUM	Date	Time	Room
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Session: 4. Guidance, Navigation and Control (2)

7.10.2026

10:15

Hall 8

Hanspeter SCHAUB
Distinguished Professor,
University of Colorado Boulder
United States

KEYNOTE: C1.4 “Breakwell Lecture” - Autonomous Spacecraft Scheduling Yielding Scalable and Safe Earth and Space Object Imaging

Abstract

The use of machine learning and neural networks has become an enabling technology for spacecraft operations and mission development. This talk discusses recent work to research means to schedule spacecraft tasking operations using a shielded neural network. Both single and collaborative multi-satellite scenarios are explored, with an emphasis on space-based Earth and spacecraft imaging mission concepts that move beyond static tasking toward adaptive, learning-enabled autonomy.

In particular, the work expands into novel research on coordinated multi-agent Earth observation, where constellations of satellites dynamically allocate sensing responsibilities over evolving regions of interest. These include persistent monitoring of geographically distributed targets, responsive retasking for transient events, and coordinated circumnavigation strategies in which multiple spacecraft maintain distributed vantage points around a region to improve temporal resolution and viewing geometry. The research also considers emerging concepts in space-to-space imaging, where spacecraft observe not only the Earth but also other satellites, enabling new capabilities in on-orbit inspection, situational awareness, and cooperative navigation. Such architectures introduce fundamentally new scheduling challenges, where sensing geometry, line-of-sight constraints, and inter-satellite dependencies must be resolved in real time.

The overarching goal is to develop scalable scheduling solutions that are efficient to compute on-board, robust to uncertainties in spacecraft state and trajectory modeling, require minimal communication across satellites, and remain resilient as satellites are added to or removed from the operational network. Rather than relying on centralized control, the approach emphasizes decentralized decision-making, where individual agents leverage offline learned policies while maintaining collective mission performance. Shielded neural networks play a central role by embedding safety and operational constraints directly into the learning architecture, ensuring that autonomous decisions remain within physically and mission-relevant bounds.

These studies are trained and validated using the open-source, physics-based Basilisk spacecraft simulation framework, which provides high-fidelity modeling of spacecraft dynamics, environments, and sensing interactions. This enables the training of neural networks under realistic conditions, including orbital perturbations, sensor limitations, and communication constraints, thereby improving the transferability of learned policies to flight systems.

C4.	IAF SPACE PROPULSION SYMPOSIUM	Date	Time	Room
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Session: 4. Solid and Hybrid Propulsion (2)

7.10.2026

10:15

Hall 7

Ozan KARA

Technology Innovation Institute;
Lead Engineer, Propulsion and Space,
Space Generation Advisory Council (SGAC)
United Arab Emirates

KEYNOTE: C4.4 Future of Micro Launchers using Hybrid Rocket Propulsion

Abstract

Space exploration has always been done with heavy-launchers (or space shuttles) up until now. The Saturn V, the Space Shuttle, and modern giants like SpaceX's Falcon 9 were built on a simple economic principle: build it massive, pack it full, and spread the staggering cost across thousands of kilograms of cargo. However, a new approach has developed for rocket industry in recent years. Micro-launchers; targeting payloads under/around 1,000 kg. Micro-launchers are more expensive per kilogram, but they fly exactly when and where the customer needs them to go. It means, manufacturing capability, operation feasibility and safety are key advantages of micro (or sometimes small) launchers compared to commercial systems such as Falcon 9. For example, Electron rocket from RocketLab is 20 meter length while Falcon 9 is 70 meters. But, RocketLab costs around \$20k per kg to LEO, while Falcon 9 only costs \$3k per kg to LEO. Therefore the objective of this keynote is to focus major differences in both systems in rocket industry. In addition, the keynote proposes usage of Hybrid Rocket Propulsion for micro-launchers to reduce the launch cost that we experience in Electron Rocket (RocketLab) example. The keynote will first summarize operational rocket companies (launchers) including their performance and cost factors. Then, the keynote will provide advantages (and disadvantages) of hybrid rocket propulsion. In addition, the keynote will provide an insight on "How the launch cost can be reduced if hybrid rockets are used instead of liquid engines?". All practical advantages of hybrid propulsion will be included in this keynote. The keynote also aims to address different applications of hybrid rocket propulsion such as defense, in-space, and planetary missions. The keynote objectives to unite propulsion community at the IAC2026 pointing all scientific and engineering aspects of Hybrid rockets.

D2.	IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM	Date	Time	Room
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Session: 4. Future Space Transportation Systems

7.10.2026

10:15

Hall 23

Giorgio TUMINO

Chief Technical Advisor for Space Transportation,
European Space Agency (ESA)
France

KEYNOTE: D2.4 ESA Preparation for Future European Heavy and Super Heavy Launch Systems

Abstract

ESA is charting the future of European space transportation with a set of activities assessing new approaches for the economical sustainability of future European heavy and super heavy launch systems with dedicated evaluations of the business plan of the associated development with private investments, together with system performance analysis enabling to anchor the financial results with credible reference market and launch system design assumptions.

Indeed, today ESA's Ariane 6 and Vega-C rockets are poised to maintain Europe's access to space as reliable workhorses for governments, academia and industry over the next years, and a disruptive programme has now been initiated at CM25 with the European Launchers Challenge (ELC) to foster the emergence of new actors and their small launchers initiatives. However, evolving markets forecasts show rapid growth for mega constellations deployments, in-space operations and services, and space exploration, resulting in a shift of the profitable market segment towards higher payload deployment capacities (mass and volume), higher launch frequency, and lower launch cost per kg into orbit, for which reusable heavy and super heavy launch systems are considered an enabling capability. This highlights the need for Europe to support a long-term roadmap enabling on one side the necessary European resilience and sovereignty for access to space to secure such applications and, on the other side, future European launch operators to secure their share with profits on such markets.

The paper will provide an insight into the status of the ESA activities performed on Heavy and Super Heavy Reusable Launch Systems, integrating ESA internal studies outcomes complemented by results from past and ongoing industrial studies, with focus on: a) launch systems use-cases, b) launch demand market scenarios, c) launch systems design aspects, d) launch systems performance optimization, e) launch systems financial assessments, f) end-to-end business plans, with sensitivity analysis with respect to key assumptions on launch service costs, prices, market share, cadences, private investments and public-private risk-sharing models.

E1.	IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM	Date	Time	Room
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Session: 4. In Orbit: Postgraduate Space Education

7.10.2026

10:15

E1

Franco BERNELLI ZAZZERA

Full Professor,
Politecnico di Milano
Italy

KEYNOTE: E1.4 Reflections on Space Education in the “Space for All” Era

Abstract

The keynote provides some reflections of the speaker on the evolution of space education at graduate level over the past fifteen years, taking into consideration mainly the evolution in Italy. Reflections will consider appeal of the space education, gender and geographical distribution of students, as well as scope of some Master degrees related to space technology.

E6.	IAF BUSINESSES AND INNOVATION SYMPOSIUM	Date	Time	Room
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Session: 2. Government and Industry Perspectives on the Future of Space Commerce

7.10.2026

10:15

Hall 29

Taylor JORDAN

Director,
Office of Space Commerce,
U.S. Department of Commerce
United States



Rose CROSHIER

International Relations Specialist,
Office of Space Commerce,
National Oceanic and Atmospheric Administration (NOAA)
United States



Nancy WOLFSON

American Institute of Aeronautics
and Astronautics (AIAA)
United States

KEYNOTE: E6.2 The U.S. Department of Commerce and the IAF Space Entrepreneurship & Investment Committee on: Foundations for a Safe and Profitable In-space Economy

Abstract

Join A/S Taylor Jordan, Director of the Office of Space Commerce & Assistant Secretary of Commerce for Environmental Observation and Prediction, U.S. Department of Commerce (DOC) will speak about U.S. plans to attract investment and foster commercial space growth while establishing clear regulatory frameworks, provide an inside look at initiatives designed to improve orbital safety, and provide insight into how global policymakers are addressing the unique challenges and opportunities of unprecedented industry growth. A/S Jordan will be joined for closing remarks by Rose Croshier, Senior International Relations Specialist in the Policy, Advocacy, and International Division of the Office of Space Commerce (OSC) at the U.S. Department of Commerce, and Nancy C. Wolfson, Chairwoman of the IAF Space Entrepreneurship and Investment Committee (SEIC) and Coordinator of the IAF E6 Symposium on Business and Innovation. Ms. Wolfson successfully secured a strategic partnership between the U.S. Department of Commerce and the IAF SEIC extending from 2025 to the present. Their collaboration via the new E6.2 Session “Government and Industry Perspectives on the Future of Space Commerce” explores emerging commercial space sectors such as in-space manufacture, asteroid mining, debris mitigation, and cislunar communication. Further collaboration via the “Commercial Exploration Roundtables” focuses on exploring lunar and in-space technical interoperability, logistics, and regulatory frameworks imperative for both sovereign governments and commercial operators to de-risk long-term exploration and secure strategic socioeconomic benefit.

A2.	IAF MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM	Date	Time	Room
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Session: 2. Fluid and Materials Sciences

7.10.2026

15:00

G1

Valentina SHEVTSOVA

Head of the Research Group,
Microgravity Research Centre of Free Brussels University (ULB)

KEYNOTE: A2.2 Interfacial Transport and Surfactant Control in Absorbing Systems

Abstract

Gas absorption is a fundamental transport process with applications extending beyond thermal systems to environmental control, chemical engineering, and space technology, particularly in life support systems for closed habitats. Efficient control of heat and mass transfer at gas-liquid interfaces is therefore essential for future space missions. In reduced-gravity environments buoyancy-driven convection is strongly suppressed, fundamentally altering heat and mass transfer mechanisms at gas-liquid interfaces.

A3.	IAF SPACE EXPLORATION SYMPOSIUM	Date	Time	Room
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Session: 3A. Mars Exploration – Science, Instruments and Technologies

7.10.2026

15:00

E3

Steve Ankuo CHIEN

Co-Head,
Artificial Intelligence Group,
Jet Propulsion Laboratory (JPL)
United States

KEYNOTE: A3.3B Trusted AI on Mars

Abstract

In October 2023, the Onboard Planner (OBP) took control of the Perseverance rover on Mars, over 200 million miles from Earth. As of December 2025, OBP has operated for over 400 tactical plans covering over 700 Martian days (sols) and has: executed over 12000 activities requested by scientists and engineers, driven over 20 kilometers, acquired over 100,000 images, and collected more than 10 rock core samples. In contrast to the traditional form of operations, where operators provide a rigid set of instructions for the rover, with OBP Perseverance revises its schedule an average of 16 times each day to stay responsive in a dynamic Martian environment where things don't always go as expected. This flexibility allows the mission to manage resources such as energy more efficiently and therefore accomplish more science.

In this talk, we discuss the approach to ensuring that a search-based AI system, specifically the Onboard Planner, would (1) achieve mission objectives; and critically (2) protect the rover, a multi-billion dollar one of a kind asset. We describe the "whole lifecycle" approach to developing trusted autonomy software for M2020, spanning: conception, design, analysis, prototyping, and testing. We then describe the incremental rollout and training to smooth the transition to operations with increased onboard autonomy. Next we discuss how the OBP software has improved mission return in quantity and quality in several different ways. Finally we describe the even greater challenges of autonomy in future missions to hunt for life beyond Earth.

Thursday 8 October

A2.	IAF MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM	Date	Time	Room
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Session: 4. Science Results from Ground Based Research

8.10.2026

15:00

G1

Nikolay N. SMIRNOV

Full Professor,
Moscow M.V.
Lomonosov State University
Russia

KEYNOTE: A2.4 Modeling Study of Hydrogen and/or Ammonia Combustion Safety

Abstract

Cosmonautics does not stand still, designers set themselves new, increasingly ambitious tasks – and governments allocate fabulous money for their implementation. However, all the work and money invested, and most importantly, the lives of astronauts can be at great risk if they do not thoroughly work out all aspects of flight safety: protection from space debris, fire hazards in habitable platforms, reliability of power plants, emergency situations during takeoff and landing, reliable relay systems, computer software, serviceability of communications and much more. Currently, there is an active search for new types of fuels characterized by a low carbon content in the emitted combustion products. Hydrogen is the most environmentally friendly fuel, which is why hydrogen energy has become one of the promising areas for the development of the planet's energy complex. However, hydrogen mixed with air produces explosive gas, which is extremely explosive. Therefore, the efforts of scientists in many countries are aimed at creating combustible mixtures based on hydrogen, which would not be as explosive as mixtures of hydrogen with air. The design of new-fuel engines requires knowledge of chemical kinetics to understand ignition, flame propagation, and pollutant release. The behavior of combustion and emissions in gas turbines is a manifestation of the nonlinear interaction between several physical and chemical processes that are controlled by the configuration and operation of the engine. Therefore, it is very important to have reliable experiments, high accuracy and computational efficiency of a platform for mathematical modeling of hydrodynamic processes in chemically reacting gas streams. Modeling gas-dynamic processes in turbulent flows, taking into account the multi-stage chemical kinetics of chain reactions, is a rather resource-intensive task even for modern supercomputers. At the same time, as shown by previous studies, modeling detailed kinetics can take up to 80% of computing resources in the process of integrating a rigid system of differential equations. Therefore, in order to reduce the need for resources and, consequently, the computing time, it is planned to develop an architecture and train a neural network for predictive modeling of the kinetic chain reaction mechanism, followed by embedding this block into the gas dynamic modeling system. The time spent on creating and training a neural network will more than pay off in the future as a result of reducing the time of computational predictive modeling.

B4.	B4. 33rd IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS	Date	Time	Room
	Session: 7. Constellations and Distributed Systems Chantal CAPPELLETTI <i>Associate Professor, University of Nottingham United Kingdom</i>	8.10.2026	15:00	Hall 2
KEYNOTE: B4.7 Distributed Autonomous Architecture for Propulsion-Free Coordination of PocketQube Swarms in Low Earth Orbit Abstract Low Earth Orbit (LEO) is increasingly populated by large constellations supporting Earth observation, IoT, and communications services, raising challenges related to congestion, collision risk, and scalable formation management. These challenges are especially critical for Pico-class spacecraft such as PocketQubes, where propulsion-based formation keeping is often infeasible due to strict mass, power, and cost constraints. This paper presents a distributed onboard autonomy architecture for propulsion-free coordination architecture of PocketQube swarms in LEO, enabling constellation-level formation control using differential aerodynamic drag. Each spacecraft independently executes lightweight onboard decision-making agent to adjust its attitude and its effective drag area, regulating orbital energy and achieving autonomous in-plane phasing and along-track spacing without reliance on continuous intervention. The proposed control framework is formulated using nonlinear orbital dynamics and explicitly accounts for dominant perturbations, including J2 effects and atmospheric drag. The architecture is designed for realistic PocketQube processing and power budgets, leveraging lightweight optimisation and AI-based guidance methods suitable for COTS-class avionics. By embedding autonomy at the spacecraft level, the approach supports scalable constellation operations and robust coordination under intermittent ground contact. High-fidelity numerical simulations using realistic atmospheric density models and attitude constraints show that the proposed scheme maintains coordinated along-track geometries, limits long-term drift, and improves coverage uniformity and revisit time for distributed sensing and communications missions. These capabilities enable distributed sensing and communications missions, including environmental monitoring and resilient IoT services in regions with limited terrestrial or geostationary coverage. Overall, the results show that PocketQube swarms can achieve autonomous, propulsion-free coordination, providing a low-cost and sustainable pathway for future distributed space systems operating in congested Low Earth Orbits.				

E10.	IAF SYMPOSIUM ON PLANETARY DEFENSE AND NEAR-EARTH OBJECTS	Date	Time	Room
	Session: 1. Planetary Defense from Asteroids and Comets Makoto YOSHIKAWA <i>Team Lead, JAXA Planetary Defense, Japan Aerospace Exploration Agency (JAXA) Japan</i>	8.10.2026	15:00	Hall 3
KEYNOTE: E10.1 Progresses of JAXA's Planetary Defense Activities Abstract This paper reports on the latest status of JAXA's planetary defense activities. First, regarding asteroid missions, the Hayabusa2 Extended Mission (Hayabusa2), the extended mission of Hayabusa2, is scheduled to conduct a flyby of the asteroid (98943) Torifune on July 5, 2026. This flyby mission has the important goal of not only planetary science but also planetary defense. From an engineering perspective, the challenge is how accurately we can get spacecraft to approach a small asteroid, and if accurate navigation is possible, it will lead to technology that can crash spacecraft into a small asteroid and change its orbit. It is also important for planetary defense to confirm how well an asteroid can be recognized through a short observation period by the flyby. We report the results of this flyby mission. Additionally, JAXA is collaborating with ESA on the Hera and RAMSES missions. For Hera, JAXA is providing the thermal infrared camera (TIRI). Hera will arrive at the asteroids Didymos-Dimorphos in November 2026. Dimorphos is the asteroid of a collision experiment conducted by the US spacecraft DART, and it will be of great interest to see how it has changed. RAMSES is a mission to explore the asteroid Apophis, which will approach the Earth in 2029, and JAXA will provide the thermal infrared camera (TIRI), solar paddle, and launch. When RAMSES is launched, JAXA's DESTINY+ probe will also be launched together, and DESTINY+ will first conduct a flyby of Apophis. The DESTINY+ and RAMSES missions to Apophis will provide more extensive data for planetary defense. In addition to missions, JAXA is also involved in observing asteroids that approach the Earth and responding to domestic and international requests. In this presentation, we will report on these progresses.				

Friday 9 October

B5.	IAF SYMPOSIUM ON INTEGRATED APPLICATIONS	Date	Time	Room
	Session: 4. Advancing Earth Observation with Artificial Intelligence Across the Full Value Chain Rita RINALDO <i>Head of Applications, Studies and Projects Division, European Space Agency (ESA) Netherlands</i>	9.10.2026	10:15	Hall 34

KEYNOTE: B5.4 Space for Non-Space

Abstract

The proposed keynote title is Space for Non-Space as the speech is aimed at showing how space technologies and integrated applications can deliver tangible value far beyond the traditional space sector. It will demonstrate that space is not an isolated domain, but a powerful enabler for a wide range of industries, including energy, agriculture, transport, finance, and ecosystem preservation. The speech will reinforce the importance of bridging the gap between the space and non-space communities, fostering a shared understanding of needs, opportunities and pathways for international collaboration.

The speech will highlight how integrated applications enabled by space and other technologies play a pivotal role in tackling environmental challenges, enhancing operational efficiency and advancing sustainable development across all industrial sectors. The keynote will provide practical, real-world examples of how space assets and applications contribute to improving quality of life and strengthening economies on Earth. It will illustrate the positive impact of space-enabled data and services in areas such as biodiversity preservation, resilience of critical infrastructure and global decarbonisation efforts.

It will be presented how new business models are created as integrated applications shape new value chains and create entirely new market opportunities. Integrated applications foster cross-sector ecosystems where data providers, platform operators, and end users co-create value. In this context, space acts as a catalyst—lowering barriers to entry, accelerating digital transformation, and unlocking new revenue streams across industries. By illustrating these dynamics, the keynote will emphasize that enabling new business models is not only about technological advancement, but also about rethinking partnerships, data sharing and commercialization strategies to fully realize the economic potential of integrated applications.

The speech will also emphasize the importance of cooperation across diverse stakeholders, highlighting how partnerships between public agencies, private industry, academia, and representatives of key economic sectors are essential to delivering impactful solutions. Drawing on the experience of the ESA Sectorial Task Forces, the keynote will demonstrate how collaboration drives both innovation and inclusivity within the global space ecosystem. Collaboration with the non-space community is essential to help shape the direction of technological development, ensuring that solutions are aligned with real user needs. These stakeholders also play a critical role as enablers, supporting the scaling of innovations and maximizing their impact across sectors.

A2.	IAF MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM	Date	Time	Room
	Session: 6. Microgravity Sciences on board of Space stations Wei ZHANG <i>Director of Utilization Development Center, Technology and Engineering Center for Space Utilization(CSU), Chinese Academy of Sciences (CAS) China</i>	9.10.2026	13:45	G1

KEYNOTE: A2.6 Space Science Research Progress and Planning of China Space Station

Abstract

China Space Station (CSS) has completed since December 2022. There are 14 experiment racks in pressurized module of CSS and some exposed facilities outside CSS. It can support multiple disciplines of research that include the research areas of space life science, microgravity fluid science, space material science, fundamental physics, space astronomy and astrophysics, earth science and space technology. CSS has become one of the most important space research platform for scientists all over the world. Up to now, hundreds of experiments have been conducted in CSS and got some interesting results in the areas of space life science, space material, etc. This paper will present the primary research progress onboard CSS which involves the cell research on microgravity-induced osteogenesis impeding and muscle atrophy, closed aquatic ecosystem, rice life cycle from seed-to-seed, metals and alloys solidification, functional crystal growth, fluid dynamics research, and so on. Furthermore, the space science mission planning of CSS will be proposed which includes four research areas (space life science and human research, microgravity physics science, space astronomy and earth science, space technology and application) and 32 related research topics. The research objective, research emphasis and expected results of every research area will be discussed. Finally, the international cooperation mode and mechanism of CSS will be presented for future collaborative research.

A7.	IAF SYMPOSIUM ON ONGOING AND NEAR FUTURE SPACE ASTRONOMY AND SOLAR-SYSTEM SCIENCE MISSIONS	Date	Time	Room
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Session: 4. Lunar Astrophysics: Scientific Instrumentation and Ancillary Systems

9.10.2026

13:45

Hall 5

Gustavo MEDINA TANCO

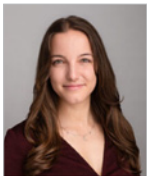
Professor, Laboratory of Space Instrumentation (LINX),
Inst. of Nuclear Sciences, UNAM
Mexico

KEYNOTE: A7.4 Grand Science from the Moon in International Collaboration as a trigger for the development of a lunar economy

Abstract

The Moon presents a distinctive platform for astrophysical observations conducted from its surface, offering environmental conditions that are unparalleled on Earth, stemming from its geophysical properties, low seismic and Newtonian noise, orbital position, tidal locking, high vacuum, large shadowed regions at cryogenic temperatures, wide variety of mineral resources, isolation from terrestrial influences and wide uninhabited areas. These characteristics potentially enable breakthroughs in fields such as radio astronomy, cosmology, multi-messenger and high-energy astrophysics. Realizing such potential is undoubtedly challenging from the technological, financial and legal points of view. Nevertheless, the impact of the science justifies the effort to overcome those challenges. Furthermore, if adequately implemented through international collaboration gathering academy and industry, such endeavors would constitute a unique opportunity not only to advance frontier science, but also to develop the infrastructure and legal framework to enable a sustainable economy on the Moon. The Space Astronomy Technical Committee (SATC) of IAF, gathers both the space science and industry communities, making aware the latter of the future technology needs of the former. As such, the SATC is implementing actions to promote an international effort to identify a key scientific detector which can motivate academia, industry and governments worldwide and serve as the seed for a large lunar infrastructure to shelter a wide variety of future generations of scientific experiments and astronomical observatories. The creation of the A7.4 symposium is one of such actions, which will extend to collaborations with other space related international organizations. We will present a summary of these ideas on some of the current proposals for large lunar surface experiments, as well as the technical challenges they represent from the point of view of scientific instrumentation, infrastructure and deployment.

E10.	IAF SYMPOSIUM ON PLANETARY DEFENSE AND NEAR-EARTH OBJECTS	Date	Time	Room
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Session: 2. Informing Planetary Defense

9.10.2026

13:45

E5

Selina MACHNITZKY

PhD Student, Cranfield University
United Kingdom

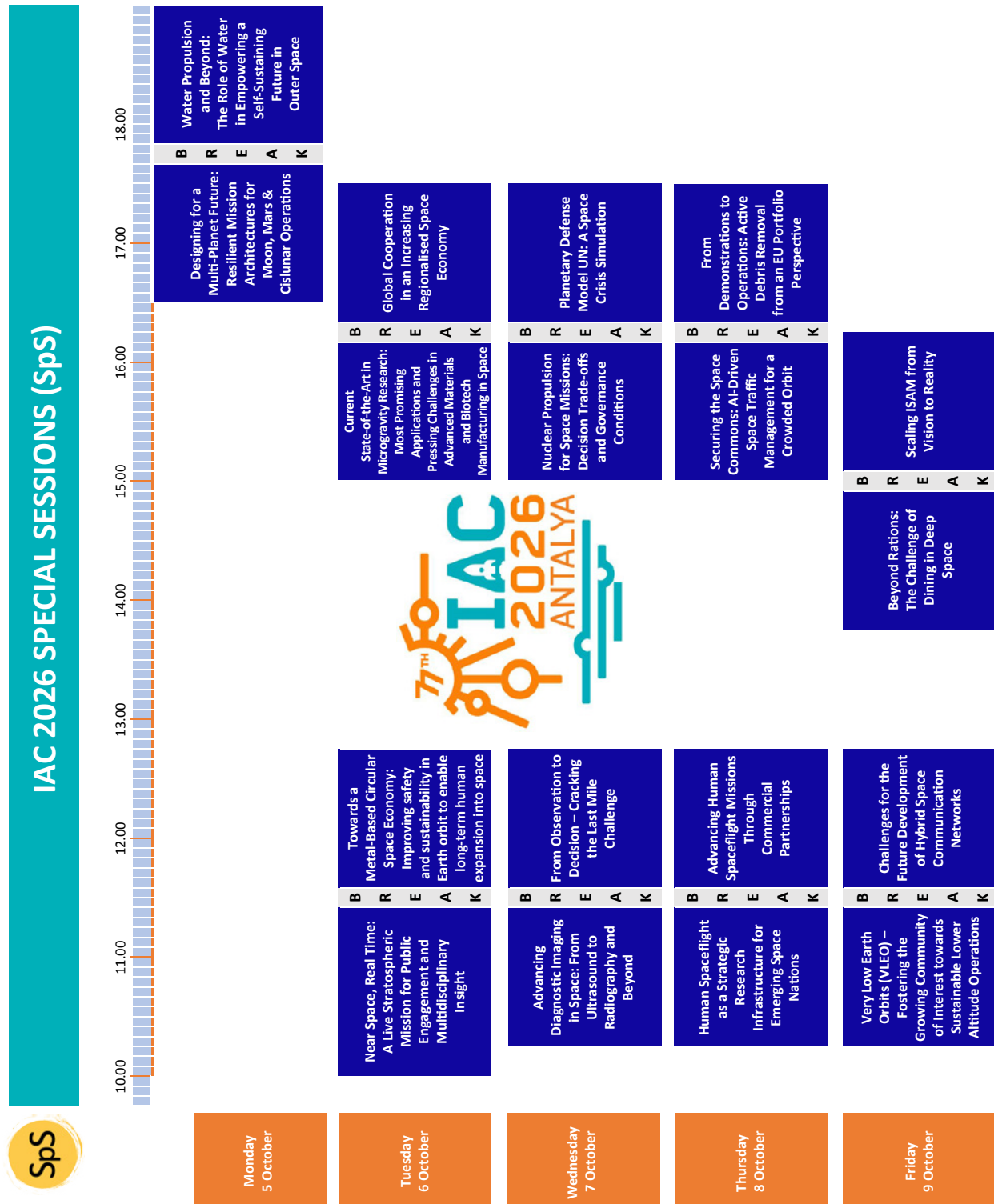
KEYNOTE: E10.2 Introducing the MOUC score: a quantitative metric to systematically characterize under-detected NEA populations

Abstract

Tracking Near-Earth Asteroids (NEAs) is crucial for assessing potential Earth impact risks to inform and design effective mitigation strategies. Current surveys achieve an estimated detection completeness of approximately 88%. This paper investigates families of potentially undiscovered NEAs by comparing the observed NEA population with current asteroids population models. The objective is to identify natural and artificial factors contributing to gaps in NEA discovery and follow-up, including intrinsic dynamical effects or observational limitations. Our approach evaluates discrepancies between observed and predicted orbital densities by means of geodesic distances in the orbital-element space, where magnitude filters have been applied. We introduce a quantitative metric to systematically characterize under-detected NEA populations. Applying this metric reveals two prominent groups of likely uncatalogued objects: (i) NEAs with eccentricities between 0.4 and 0.6, inclinations below 20°, and perihelion distances between 1.1 au and 1.3 au; and (ii) NEAs with low perihelion distances and high inclinations. We find that survey-selection effects and limited Southern Hemisphere coverage are the primary drivers of the missing discoveries in these regions. For the high-inclination, low-perihelion family, we further identify a marked sky-plane clustering along a tilted axis, concentrated within one half of the sky. This pattern has direct implications for future observational strategies and motivates targeted planning to close current detection gaps in planetary defence monitoring.

4 Special Sessions

4.1 Special Sessions at a Glance



INFORMATION

TECHNICAL SESSIONS

KEYNOTE SPEAKERS

SPECIAL SESSIONS

INTERACTIVE PRESENTATIONS

TECHNICAL PAPERS BY SYMPOSIUM

4.2 Special Sessions by Day

Monday 5 October

16:30–17:40 **Designing for a Multi-Planet Future: Resilient Mission Architectures for Moon, Mars & Cislunar Operations**

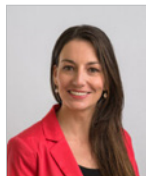
Room: G3, NEST Congress and Exhibition Centre

Format: Workshop

Organizers:



Davide PETRILLO
Managing Director,
Europe, Middle East, and
Africa (EMEA), American
Institute of Aeronautics
and Astronautics (AIAA)
Italy



Natalia LARREA BRITO
Senior Director for Space,
American Institute
of Aeronautics and
Astronautics (AIAA)
United States

Facilitator:



Natalia LARREA BRITO
Senior Director for Space,
American Institute
of Aeronautics and
Astronautics (AIAA)
United States

Speakers:



Bernard FOING
CEO,
ILEWG LUNEX
EuroMoonMars; Chief,
Scientist QOSMOSYS,
Space Renaissance
International (SRI)
Netherlands



Manny SHAR
Senior Director of Growth,
Astrolab
United States



Antonino SALMERI
Director,
Lunar Policy
Platform (LPP)
Italy



Masami ONODA
Director,
International Relations
and Research
Department, Japan
Aerospace Exploration
Agency (JAXA)
United States



Gary LAI
Chief Technology Officer,
Interlune
United States

After brief insights from leading experts, participants will work in small teams to explore critical challenges across Moon, Mars, and cislunar operations—spanning logistics, autonomy, human factors, and infrastructure. Together, we will develop fresh concepts and practical solutions for long-term, interoperable exploration. Be part of shaping the strategic frameworks that will guide humanity's next steps beyond Earth.

17:50–19:00 Water Propulsion and Beyond: The Role of Water in Empowering a Self-Sustaining Future in Outer Space

Room: G3, NEST Congress and Exhibition Centre

Format: Campfire

Organizers:



Fabio FARAONI

PhD Student,
University of Pisa
Italy



Angelo PASINI

Associate Professor,
University of Pisa
Italy

Facilitators:



Paola PIERRETTORI

Consultant, Government
Space Policy & Security,
Novaspace
Italy



Elia PUCCINELLI

Post-doc Researcher,
University of Pisa
Italy



Stefano GIUNTINI

PhD Student,
University of Pisa
Italy

Speakers:



Fabio FARAONI

PhD Student,
University of Pisa
Italy



Angelo PASINI

Associate Professor,
University of Pisa
Italy



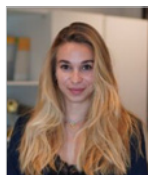
Chiara MANFLETTI

CEO,
NeuraSpace, SA
Germany



Ulrich GOTZIG

Emeritus Expert Orbital
Propulsion and R&T
Manager Alternative
Propellants,
ArianeGroup SAS
Germany



**Candice
MASUCCI-TEMPLIER**

Manager,
Government Practice,
Novaspace
France



Angelo CERVONE

Associate Professor,
Aerospace Engineering
Faculty, Delft University
of Technology
Netherlands

Join a dynamic discussion on how Water-based Space Propulsion (WSP) is expanding the future of in-orbit servicing and space exploration. This session will explore WSP's role in enabling innovative missions and services. Connect with experts to discuss opportunities, challenges, and the broader impact of WSP. Use real-time polling to steer the discussion, propose innovative solutions, and compete to win a special prize. Don't miss this chance to shape the future of sustainable space mobility!

Tuesday 6 October

10:00–11:25 Near Space, Real Time: A Live Stratospheric Mission for Public Engagement and Multidisciplinary Insight

Room: G3, NEST Congress and Exhibition Centre

Format: High Altitude Platform Launch with real-time data transmission and VR experience

Organizers:



Beatrice RIBIS

Lead,
Business Development,
Involve
Italy



Maria Paola VERCESI

Head of Communication,
Involve
Italy

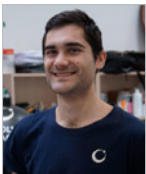
Facilitator:



Jonathan POLOTTO

CEO and Chair of
the Board,
Involve
Italy

Speaker:



Rocco CORSINI

Chief Engineer,
Involve
Italy

Experience the Overview Effect live at IAC 2026! Join Involve Space for a live stratospheric balloon launch from the NEST Convention Centre, streaming from near-space to IAC delegates and attendees. Experience the ascent as it happens and explore how high-altitude platforms advance Earth Observation, and support innovation, scientific and commercial applications, security and resilience. Be part of a multidisciplinary demonstration that brings “The World Needs More Space” to life.

11:35–12:45 Towards a Metal-Based Circular Space Economy: Improving Safety and Sustainability in Earth Orbit to Enable Long-Term Human Expansion into Space

Room: G3, NEST Congress and Exhibition Centre

Format: Fishbowl

Organizers:



Adam M. BAKER
Principal Project Engineer,
Visiting Professor of
Space Systems, Magdrive,
Sheffield University
United Kingdom

Facilitators:



Ruchi NEMA
Co-Founder and CEO,
Neo Asteri Foundation
United Kingdom



David TELLETT
Grant Manager,
Magdrive
United Kingdom

Speakers:



Meganne CHRISTIAN
Reserve Astronaut;
Beyond Earth
Mission Manager,
Satellite Applications
Catapult, European
Space Agency (ESA)
United Kingdom



Andrew FAIOLA
Commercial Director,
Astroscale
United Kingdom



Jennifer KINGSTON
Senior Lecturer in
Space Systems,
Cranfield University
United Kingdom



Holger KRAG
Head of Space Safety
Programme Office,
European Space
Agency (ESA)
Germany



**Patrick "Paddy"
NEUMANN**
Founder, Chief Scientist
& Head of R&D,
Neumann Space
Australia



Joe PAWELSKI
CTO,
Cislunar Industries
United States



Andrew RATCLIFFE
Chief Engineer,
UK Space Agency
United Kingdom



Mark STOKES
CEO,
Magdrive
United Kingdom



Stella TKATCHOVA
Innovation &
Commercialization
Manager,
Space Application
Services
Bulgaria

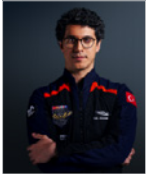
A significant portion of orbital debris originates from spacecraft and rocket structures composed of aluminium, titanium, and other metals, presenting a potential resource base for circular approaches. This interactive fishbowl session explores how a metal-based circular space economy can improve safety and sustainability in Earth orbit while enabling a rapid start to the long-term expansion of human activity beyond Earth. Join the discussion to contribute your perspective and help shape this transition.

15:00–16:10 Current State-of-the-Art in Microgravity Research: Most Promising Applications and Pressing Challenges in Advanced Materials and Biotech Manufacturing in Space

Room: G3, NEST Congress and Exhibition Centre

Format: Campfire

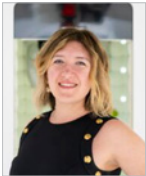
Organizer and Facilitator:



**Tuva CIHANGIR
ATASEVER**

*Astronaut,
Turkish Space
Agency (TUA)
Türkiye*

Speakers:



Pinar MESÇİ

*Global Head,
Biomanufacturing
and Biotechnology,
Axiom Space, LLC
United States*



Mary MURPHY

*Principal Mission
Manager,
Voyager Technologies
United States*



Mike GOLD

*President,
Redwire
United States*



Nicole WAGNER

*CEO & President,
LambdaVision
United States*

Over the next decade, microgravity research being conducted in the fields such as advanced materials and biotechnology has the potential to translate into tangible solutions that can solve major global challenges while creating significant financial value. If you want to learn about some of the cutting-edge research investigations and pressing challenges of the field, you are invited to join this conversation which will bring some of the leading experts from academia and industry.

16:20–17:30 Global Cooperation in an Increasing Regionalised Space Economy

Room: G3, NEST Congress and Exhibition Centre

Format: Roundtable Session

Organizers:



Ruchi NEMA
Co-Founder and CEO,
Neo Asteri Foundation
United Kingdom



Duncan MCKENZIE
Co-Founder and
Managing Director,
Neo Asteri Foundation
United Kingdom

Facilitators:



Logan WARE
Commercial Director,
International,
Blue Origin
United States



Luigi SCATTEIA
Partner,
Novaspace
France

Speakers:



Aarti HOLLA-MAINI
Director,
United Nations Office
for Outer Space
Affairs (UNOOSA)
Austria



Tania CELANI
Deputy Director,
Department for Business,
Innovation, Science
and Trade (BIST),
UK Space Agency
United Kingdom



**Eric MOREL DE
WESTGAVER**
Director of European,
Legal and International
Matters (D/ELI),
European Space
Agency (ESA)
France



Rasha AL-AMAD
Chief Strategic
Planning & Projects,
Bahrain Space Agency
Bahrain



**Rogério Luiz Verissimo
CRUZ**
Director of Governance
for the Space Sector
Brazilian Space
Agency (AEB)
Brazil



Mike GOLD
President,
Redwire
United States

Global space cooperation is evolving fast. National priorities, industrial strategies, and market access rules are reshaping how programmes are designed and partnerships formed. This interactive roundtable invites agencies, industry, and policymakers to exchange real world experiences, challenge assumptions, and explore how cooperation and competition now coexist. Join the discussion to help shape future approaches to international collaboration in a changing space economy.

Wednesday 7 October

10:15–11:25 Advancing Diagnostic Imaging in Space: From Ultrasound to Radiography and Beyond

Room: G3, NEST Congress and Exhibition Centre

Format: Fishbowl

Organizer and Facilitator:



Laura Antonia CERBONE

PhD Candidate,
Scuola Superiore
Meridionale
Italy

Speakers:



Jeanne WALTER

Vice President,
Marketing and Sales,
MinXray
United States



Begum Aydogan MATHYK

Doctor of Medicine
Obstetrics and
Gynecology,
University of
South Florida
United States



Shawna PANDYA

Physician, Aquanaut,
Scientist-Astronaut
Candidate Program
Graduate,
International Institute
for Astronautical
Sciences (IIAS)
Canada



Mark ROSENBERG

Director of the Aerospace
and Performance
Neurology Program,
Assistant Professor
of Neurology,
Medical University
of South Carolina
United States



Alessandro BARTOLONI

Researcher,
Italian Institute of
Nuclear Physics, Sapienza
University of Rome
Italy

How far have diagnostic imaging capabilities in spaceflight progressed? Is ultrasound the limit, or are other imaging techniques ready for emergency care in space? This interactive Special Session invites participants to explore the role of X-ray imaging and other imaging techniques for astronauts' health monitoring. Through a fishbowl format, participants will debate with experts about advantages, risks, and technological challenges in this field, helping shape the direction for medical imaging in human space exploration.

11:35–12:45 From Observation to Decision – Cracking the Last Mile Challenge

Room: G3, NEST Congress and Exhibition Centre

Format: Fishbowl

Organizers:



Harry CIKANEK

Director,
Center for Satellite
Applications and Research
(Retired), Satellite and
Information Service,
National Oceanic
and Atmospheric
Administration (NOAA)
United States



James GRAF

Director,
Earth Science and
Technology, Jet Propulsion
Laboratory (JPL), National
Aeronautics and Space
Administration (NASA)
United States

Facilitator:



Simonetta CHELI

Director of Earth
Observation Programmes
and Head of ESRIN,
European Space
Agency (ESA)
Italy

Speakers:



Karen ST. GERMAIN

Director,
Earth Sciences Division,
Science Mission
Directorate, National
Aeronautics and Space
Administration (NASA)
United States



Futoshi TAKIGUCHI

Vice President;
Director General,
Space Technology
Directorate I, Japan
Aerospace Exploration
Agency (JAXA)
Japan



Irene PARKER

Acting Assistant
Administrator,
National Environmental
Satellite, Data, and
Information Service,
National Oceanic
and Atmospheric
Administration (NOAA)
United States



Tania CELANI

Deputy Director,
Department for Business,
Innovation, Science
and Trade (BIST),
UK Space Agency
United Kingdom



Florian DECONINCK

Vice President,
Growth, Open Cosmos
United Kingdom

Every citizen on Earth could benefit from Earth observation data from space, if we can only bridge across the “last mile” to make it readily accessible and usable by non-experts to meet their needs. Provide your contribution to Space Agency and Commercial Earth observations leaders as they consider the factors that enable use of Earth observations from space--the expertise, infrastructure and communications approaches that will maximize the positive impact of space observations for everyone.

15:00–16:10 Nuclear Propulsion for Space Missions: Decision Trade-offs and Governance Conditions

Room: G3, NEST Congress and Exhibition Centre

Format: Workshop

Organizer:



Paola PIERRETTORI

*Consultant,
Government Space Policy
& Security, Novaspaces
Italy*

Facilitators:



Jamila MANSOURI

*Head,
Propulsion,
Aerothermodynamics and
Flight Vehicles Engineering
Division, European
Space Agency (ESA)
France*



Angelo PASINI

*Associate Professor,
University of Pisa
Italy*



Dale THOMAS

*Professor and Eminent Scholar
of Systems Engineering in
the Department of Industrial
and Systems Engineering and
Engineering Management,
University of Alabama
in Huntsville
United States*



Mauro AUGELLI

*Head,
Systems Engineering,
UK Space Agency
United Kingdom*



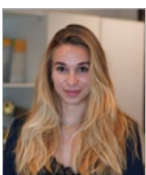
Paola PIERRETTORI

*Consultant,
Government Space Policy
& Security, Novaspaces
Italy*



Elia PUCCINELLI

*Post-doc Researcher,
University of Pisa
Italy*



Candice MASUCCI-TEMLIER

*Manager,
Government Practice,
Novaspaces
France*

Under what conditions could nuclear propulsion be considered for future space missions? This interactive workshop explores mission-level trade-offs, governance constraints, and legitimacy challenges surrounding nuclear propulsion, beyond technical feasibility. Bringing together propulsion experts, system architects, and institutional stakeholders, the session offers a structured space to discuss how such high-impact decisions are assessed, authorised, and communicated within today's space ecosystem.

16:20–17:30 Planetary Defense Model UN: A Space Crisis Simulation

Room: G3, NEST Congress and Exhibition Centre

Format: Workshop

Organizers and Facilitators:



Alissa J. HADDAJI

Director,
The Space Consortium;
Adj. Professor of Space
Law, Policy & Ethics,
Massachusetts Institute
of Technology (MIT)
United States



Alex KARL

Space Engineer,
Planetary Defense,
ISS Operations, Public
Education & Outreach,
Space Applications
Services NV/SA
Belgium

Join the Planetary Defense Model UN Special Session! Step into the role of a UN Security Council delegate and navigate a real-time planetary defense crisis. Work with experts, negotiate international strategies, tackle legal and policy challenges, and decide the fate of Earth. This interactive session offers a unique, hands-on experience in space governance and emergency response. Don't miss this opportunity to test your diplomacy, critical thinking, and crisis management skills!

Thursday 8 October

10:15–11:25 Human Spaceflight as a Strategic Research Infrastructure for Emerging Space Nations

Room: G3, NEST Congress and Exhibition Centre

Format: Fishbowl

Organizer and Facilitator:



Ömer ATAŞ

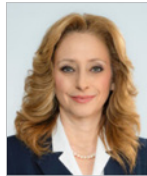
Chief Researcher and
Systems Engineering
Group Leader,
TÜBİTAK Space
Technologies Research
Institute (TÜBİTAK UZAY)
Türkiye

Speakers:



Ella CARLSSON

Director General,
Swedish National
Space Agency (SNSA)
Sweden



Orsolya FERENCZ

Professor,
Óbuda University,
Eötvös University and
Debrecen University
Hungary



Mehmet NEFES

Director,
TÜBİTAK Space
Technologies
Research Institute
Türkiye



Jonathan W. CIRTAIN

Chief Executive
Officer and President,
Axiom Space, LLC
United States

This special session invites researchers, space agencies, and program managers to explore how human spaceflight can enable high-quality scientific research in emerging space nations. Through country-level perspectives and interdisciplinary discussion, the session will examine how access to microgravity via international partnerships translates into scientific output, research capacity building, and sustained microgravity programs. Participants interested in space life sciences, microgravity research, and inclusive models of human spaceflight are encouraged to join the discussion.

11:35–12:45 Advancing Human Spaceflight Missions Through Commercial Partnerships

Room: G3, NEST Congress and Exhibition Centre

Format: Fishbowl

Organizers:



Sam SCIMEMI

Senior Assistant,
Exploration Systems
Development
Mission Directorate
(ESDMD), National
Aeronautics and Space
Administration (NASA)
United States



Kevin FOLEY

(Retired) Program
Development Manager,
Commercial | Human
Spaceflight, The
Boeing Company
United States

Facilitator:



Sam SCIMEMI

Senior Assistant,
Exploration Systems
Development
Mission Directorate
(ESDMD), National
Aeronautics and Space
Administration (NASA)
United States

Speakers:



Jacki CORTESE

Vice President,
Civil Space, Blue Origin
United States



Justin KUGLER

Senior Director, Business
Development,
Intuitive Machines
United States



Tetsuya KANATA

General Manager,
Space Mobility
Development Division,
Toyota Motor Corporation
Japan



Caitlin SMITH

Director,
Government Program
Development, SpaceX
United States



Didier SCHMITT

Head of Future
Preparation,
European Space
Agency (ESA)
France

We have entered a commercial-first era for space communications, and we need your insights to overcome implementation challenges. Join our interactive fishbowl session to advance space communications and navigation through high-impact commercial collaboration. Together, government and industry will unite to expand infrastructure access, catalyze innovation, boost connectivity, and build a sustainable space economy for future exploration. Your success is our success. Let's create the roadmap together.

15:00–16:10 Securing the Space Commons: AI Driven Space Traffic Management for a Crowded Orbit

Room: G3, NEST Congress and Exhibition Centre

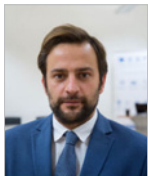
Format: Fishbowl

Organizers:



Martina BRUNO
Senior Manager EMEA,
American Institute
of Aeronautics and
Astronautics (AIAA)
Italy

Speakers:



Marco ALIBERTI
Associate Director
for International
Engagement, Partnership
and Education,
European Space Policy
Institute (ESPI)
Austria



Benedetta Margrethe CATTANI
CEO & CTO,
Ecosmic s.r.l.
Italy



Amal ALBINALI
Chief,
Strategic Planning &
Projects Management
Department, Bahrain
Space Agency
Bahrain



Vera YANG
Co-Founder and President,
Flexcompute
United States



Mark SKINNER
Senior Project Leader
for Space Traffic
Management,
The Aerospace
Corporation
United States

Bringing together agency leaders, industry operators, and AI experts, the session will examine the technical, regulatory, and ethical foundations needed to protect the space commons. Through an interactive fishbowl format, participants will help shape forward-looking frameworks for sustainable, secure access to space. Don't miss this opportunity to influence one of the field's most urgent global challenges.

16:20–17:30 From Demonstrations to Operations: Active Debris Removal from an EU Portfolio Perspective

Room: G3, NEST Congress and Exhibition Centre

Format: Fishbowl

Organizer:



**Fernando RUIZ
VINCERIA**

*Project Lead,
STRATOLASER, AICIA /
GRVC Robotics Lab
Spain*

Facilitator:



Stella TKATCHOVA

*Innovation &
Commercialization
Manager,
Space Application
Services
Bulgaria*

Speakers:



Maximo ROA

*Project Manager,
EROSS-IOD, Deutsches
Zentrum für Luft- und
Raumfahrt e.V. (DLR)
Germany*



Tim FLOHRER

*Head of Space
Debris Office,
Space Safety Department,
Directorate of
Operations, European
Space Agency (ESA)
Germany*



**Miguel Angel
OLIVARES-MENDEZ**

*Associate Professor,
University of Luxembourg
Luxembourg*



Andrew FAIOLA

*Commercial Director,
Astroscale
United Kingdom*

Active Debris Removal is widely discussed, yet rarely operational. This interactive Special Session invites participants from academia, industry and institutions to engage in an open, question-driven discussion on what is truly holding ADR back. Using an EU portfolio perspective while welcoming global viewpoints, the session moves beyond technical presentations to explore governance, economics and long-term sustainability. Expect a highly participatory format where the audience actively shapes the debate.

Friday 9 October

10:15–11:25 Very Low Earth Orbits (VLEO) – Fostering the Growing Community of Interest Towards Sustainable Lower Altitude Operations

Room: G3, NEST Congress and Exhibition Centre

Format: Workshop

Organizer:

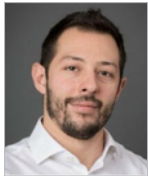


Constantin TRAUB
Research Group Leader,
CRC 1667 ATLAS, Institute
of Space Systems,
University of Stuttgart
Germany



Nicholas H. CRISP
Lecturer,
Aerospace Systems, The
University of Manchester
United Kingdom

Speakers:



Juan P. RAMOS
BD Lead - Defence &
Security Programmes,
Redwire Space
Belgium



Tomotaka YAMAMOTO
Satellite Systems Engineer,
Japan Aerospace
Exploration Agency (JAXA)
Japan



Tim FLOHRER
Head of Space
Debris Office,
Space Safety Department,
Directorate of
Operations, European
Space Agency (ESA)
Germany



Peter ROBERTS
Lecturer,
Spacecraft Technology,
The University of
Manchester
United Kingdom



Adrián SENAR
CEO and Co-Founder,
Kreios Space
Spain

The Very Low Earth Orbit (VLEO) regime is beneficial for indispensable satellite services of our modern knowledge, information and communication society. This second iteration of the workshop aims to foster the growing VLEO community by exploring the current state-of-the-art in research and technology as well as by identifying key challenges to the realization of sustained missions. Participants explore ongoing work, share insights on the current challenges, and collaborate on pathways forward towards implementation and exploitation.

11:35–12:45 Challenges for the Future Development of Hybrid Space Communication Networks

Room: G3, NEST Congress and Exhibition Centre

Format: Workshop

Organizer:



Guy SEGUIN

CEO,
INSARSAT
Canada

Facilitator:



**Gunes KARABULUT
KURT**

Professor,
Polytechnique Montreal
Canada

Speakers:



Murat UYSAL

Professor,
NYU Abu Dhabi
United Arab Emirates



Elif UYSAL

Professor,
Middle East Technical
University (METU)
Türkiye



Laurent JAFFART

Director of Resilience,
Navigation and
Connectivity;
Head of ECSAT,
European Space
Agency (ESA)
United Kingdom



Behzad KOOSHA

Adjunct Professor,
The George Washington
University
United States

Satellite Communication Network enabled by LEO constellations are emerging as a key enabler for secure, low-latency, and resilient space operations. This Special Session will examine the major challenges facing Hybrid Space Communication Network deployment, including large-scale satellite harmonization, cost-benefit tradeoffs, cross-segment interoperability across space/air/ground systems, and resilience against cyber-physical threats. Bringing together space agencies, industry, and academia, the session aims to identify common strategies for sustainable and robust future communication networks.

13:45–14:55 Beyond Rations: The Challenge of Dining in Deep Space

Room: G3, NEST Congress and Exhibition Centre

Format: Fishbowl

Organizers:



Angela HERBLET
Operations and Initiatives,
Deep Space Food
Consortium
United States



Ralph FRITSCHÉ
Head,
Strategy and
Development, Deep
Space Food Consortium
United States



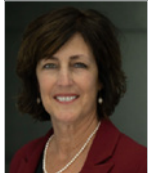
Stephanie WAN
Special Partnerships,
Deep Space Food
Consortium
Australia

Facilitator:



Tor BLOMQVIST
Head,
Food Systems
Architecture, Programs
& Policy, Deep Space
Food Consortium
Germany

Speakers:



Robyn GATENS
National Aeronautics and
Space Administration
(NASA)
United States



Kyunghwan KIM
Researcher,
Deutsches Zentrum für
Luft- und Raumfahrt
e.V. (DLR)
Germany



Omar ALAYLI
Space Architect, Founder
Future Space Architecture
Germany



Annie SHELTON
Head,
Science & Research, Deep
Space Food Consortium
United Kingdom



Jarin CHU
Co-Founder,
Space Sensory Lab
United States

The next frontier of exploration might start with rockets, but it will be sustained by the systems that keep humans alive and thriving. Food for deep-space missions isn't a menu, a product, or a single technology, it is a complex, multi-layered challenge. Solving it will require collaboration across disciplines, organizations, and nations.

Join this interactive Fishbowl session to help shape the future of food beyond Earth. Engineers, scientists, culinary experts, mission planners, safety specialists, and industry leaders will work through real mission constraints to uncover integration challenges, debate trade-offs, and identify the pathways needed for sustainable human exploration.

15:05–16:15 Scaling ISAM from Vision to Reality

Room: G3, NEST Congress and Exhibition Centre

Format: Workshop

Organizer and Facilitator:



**Victoria
CARTER-CORTEZ**
Astroscale
France

Speakers:



Holger KRAG
Head of Space Safety
Programme Office,
European Space
Agency (ESA)
Germany



Andrew FAIOLA
Commercial Director,
Astroscale
United Kingdom



Charity WEEDEN
Associate Administrator
for Technology,
Policy, and Strategy,
National Aeronautics and
Space Administration
(NASA)
United States

In-Orbit Servicing, Assembly and Manufacturing (ISAM) is emerging as a foundational capability for a sustainable and scalable space economy. It encompasses spacecraft life extension, active debris removal, in-orbit assembly and manufacturing. It is the infrastructure required for continued safe and secure access to space.

As launch costs decrease and orbital congestion increases, the ability to maintain, upgrade, assemble and manufacture assets in orbit is becoming economically and strategically important. Governments and commercial actors are investing in ISAM to support more resilient architectures, responsive operations and long-term exploration.

However, barriers remain, including technical maturity, standardised interfaces, viable business models, regulation, liability and market demand. Policy developments across the United States, Europe, UK, Japan, amongst others, are beginning to shape the frameworks and incentives required for deployment.

This Special Session will explore how ISAM can move from vision and individual demonstrations towards routine, scalable services. It will bring together technical, commercial, policy and international perspectives to examine the conditions required to build a sustainable orbital economy.



5 Interactive Presentations

5.1 Category Coordinators and Members of the IP Award Committee

IP COORDINATOR AND CHAIR OF IP AWARD COMMITTEE



Francesco Santoro
ALTEC Spa
Program Manager of the Technology and Space Exploitation
Business Line – Retired
Italy

Category A SCIENCE AND EXPLORATION



Pierre W. Bousquet
Deputy of the Associate Director for Exploration
and Human Spaceflight
Centre National d'Etudes Spatiales (CNES)
France

Category B APPLICATIONS AND OPERATIONS



Igor V. Sorokin
Deputy Head of Space Stations Utilization Center
S.P. Korolev Rocket and Space Corporation Energia
Russian Federation

Category C TECHNOLOGY



John C. Mankins
Vice President President, Moon Village Association (MVA)
Vice President, ARTEMIS Innovation Management Solutions
United States

Category D INFRASTRUCTURE



Roberta Mugellesi-Dow
Integrated Applications Manager,
European Space Agency (ESA)
United States

Category E SPACE AND SOCIETY



Pascale Ehrenfreund
IAF past President,
IAF Bureau
President,
Committee on Space Research (COSPAR)



5.2 IP Sessions and IP Award Ceremony

IP Session

Monday 05 October
12:00 – 13:00
D4/E4/E8/D-E Foyer, Ground Floor,
NEST Convention Center

IP Session

Tuesday 06 October
12:45 – 13:45
D4/E4/E8/D-E Foyer, Ground Floor,
NEST Convention Center

IP Session

Wednesday 07 October
12:45 – 13:45
D4/E4/E8/D-E Foyer, Ground Floor,
NEST Convention Center

IP Award Ceremony

Thursday 08 October
13:00 – 13:30
D4/E4/E8/D-E Foyer, Ground Floor,
NEST Convention Center

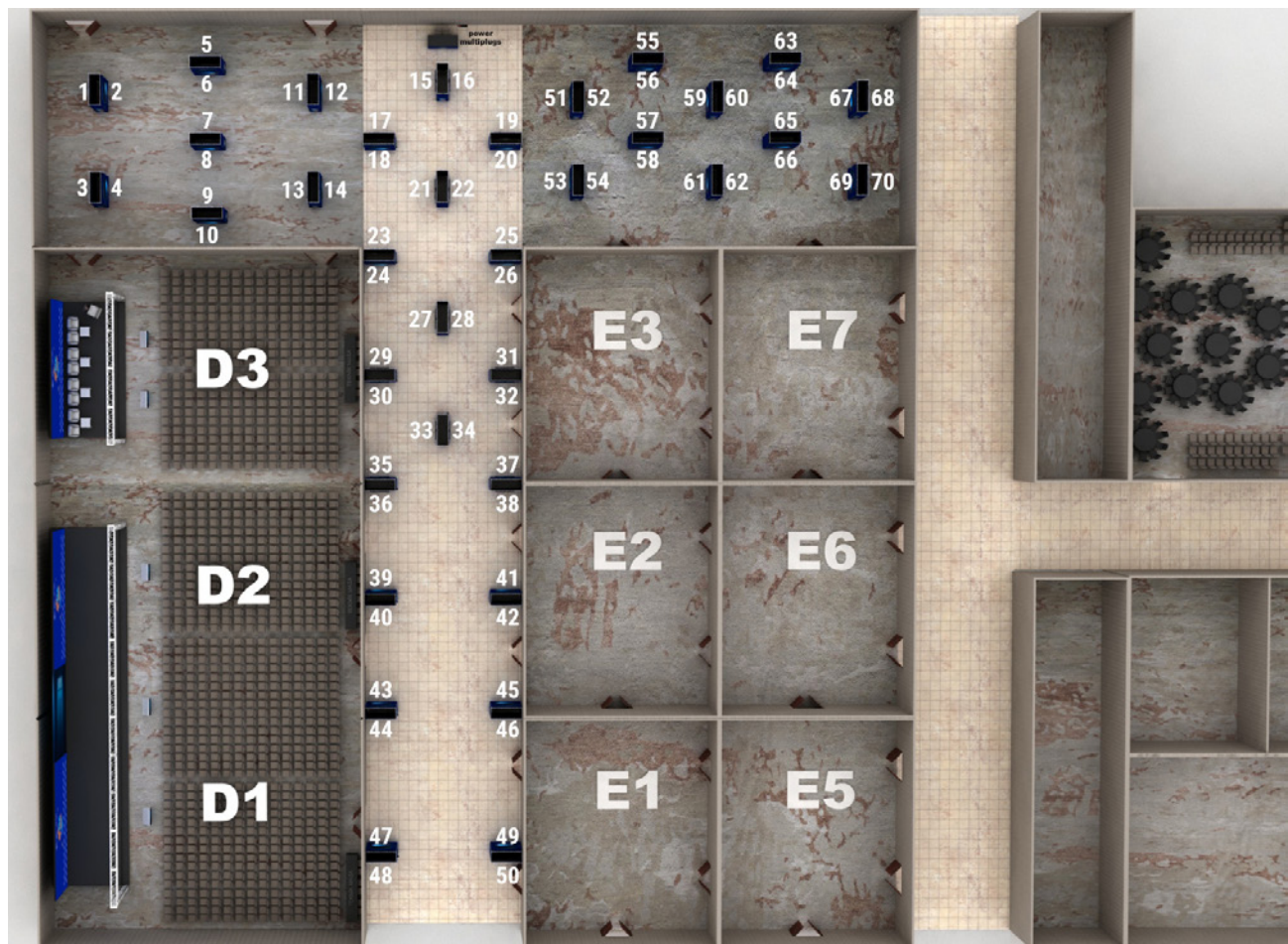
IP Session & Cocktail Reception

Thursday 08 October
13:30 – 14:50
D4/E4/E8/D-E Foyer, Ground Floor,
NEST Convention Center

IP Session

Friday 09 October
12:45 – 13:45
D4/E4/E8/D-E Foyer, Ground Floor,
NEST Convention Center

5.3 Interactive Presentations Floor Plans



5.4 Interactive Presentations Schedule

Please check the IAF App to get the latest updates on the Interactive Presentations.

Monday 5 October

SCREEN 2

- 12:00-12:10 IAC-26/A1/IP/105863**
MINIATURISED ENVIRONMENTAL DETERMINATION AND CONTROL SUBSYSTEM FOR BIOMEDICAL EXPERIMENTS IN SPACE
Sedat Izcan, University of Nottingham, United Kingdom
- 12:10-12:20 IAC-26/A1/IP/113923**
SEX SPECIFIC DIFFERENCES IN ASTRONAUT ADAPTATION TO SPACEFLIGHT AND IMPLICATIONS FOR LONG-DURATION SPACE MISSIONS.
Lisa McNamee, Ireland
- 12:20-12:30 IAC-26/A1/IP/113259**
MICROBIAL DICTATORSHIP AND NEURO-COGNITIVE RESILIENCE: A SYSTEMATIC REVIEW ON GUT-GLYMPHATIC READOUT AND THE THERAPEUTIC POTENTIAL OF FONTURACETAM IN MARS MISSIONS
Leyla Aghayeva, Azerbaijan Medical University, Azerbaijan
- 12:30-12:40 IAC-26/A1/IP/117138**
NEUROADAPTIVE MODULATION OF COGNITIVE LOAD AND STRESS INOCULATION DURING SIMULATED SPACECRAFT RE-ENTRY AND CABIN FIRE EMERGENCIES
Aagam Jain, India
- 12:50-13:00 IAC-26/A1/LBA/117906**
THE DEVELOPMENT OF AN INTEGRATED BIO-CUBESAT MODULE FOR REAL-TIME MONITORING OF BACTERIAL GROWTH VIA FLUORESCENCE UNDER LAUNCH DYNAMIC
Dilara Durak, Türkiye

SCREEN 3

- 12:00-12:10 IAC-26/A1/IP/114038**
BEYOND THE INTERNAL MODEL: HOW MICROGRAVITY RESHAPES THE BRAIN'S TEMPORAL ARCHITECTURE AND DECISION-MAKING
Amal Mirzayev, National Aviation Academy - Azerbaijan, Azerbaijan
- 12:10-12:20 IAC-26/A1/IP/108105**
ADAPTIVE FLUID REDISTRIBUTION AND INTRACRANIAL PRESSURE STABILIZATION ARCHITECTURE FOR LONG-DURATION SPACEFLIGHT
Murad Garamollayev, Azerbaijan State Oil and Industry University (ASOIU), Azerbaijan
- 12:20-12:30 IAC-26/A1/IP/108090**
A WEARABLE SYSTEM THAT PROVIDES MUSCLE RECOVERY, FUNCTION PRESERVATION AND RELAXATION IN MICROGRAVITY CONDITIONS EQUIPPED WITH AN ELECTRICAL MUSCLE STIMULATION SYSTEM.
Nuran Alizade, Azerbaijan State Oil and Industry University (SABAH Groups), Azerbaijan
- 12:40-12:50 IAC-26/A1/IP/114848**
COMPARATIVE ANALYSIS OF THE NEK GROUND EXPERIMENTAL COMPLEX AND OTHER SPACE MISSION ANALOG FACILITIES DURING THE INTERNATIONAL „SIRIUS PROJECT 2017 – 2025“
Vít Stibor, Czech Republic
- 12:50-13:00 IAC-26/A1/LBA/117956**
SIMULATED MICROGRAVITY USING A 3D CLINOSTAT: PHENOTYPIC CHANGES IN CANDIDA ALBICANS ATCC 10231 AND THE ANTIFUNGAL POTENTIAL OF THE HYDROETHANOLIC EXTRACT OF THE PEEL OF THE PERUVIAN BANANA (MUSA PARADISIACA L.)
Daniela Romina Tito Tudela, Intinauta Research Center, Peru

SCREEN 4

- 12:00-12:10 IAC-26/A1/IP/105434**
A MULTIMODAL ACOUSTIC APPROACH FOR NON-INVASIVE INTRACRANIAL PRESSURE MONITORING IN SPACEFLIGHT
Yoshita Sharma, University of Rome - Tor Vergata, Italy
- 12:10-12:20 IAC-26/A1/IP/104701**
CRISPR-ENHANCED FUNGAL PROTEIN SYSTEMS FOR SUSTAINABLE NUTRITION IN LONG-DURATION SPACE MISSIONS
Serpil Korkmaz, Bursa Uludag University, Türkiye
- 12:20-12:30 IAC-26/A1/IP/114030**
PRESERVATION OF STEM CELL IDENTITY IN MICROGRAVITY: MODULATORY ROLE OF FONTURACETAM ON BONE MARROW–BRAIN AXIS AND NUCLEAR STABILITY.
Taja Jafarova, Azerbaijan Sports Academy, Azerbaijan
- 12:40-12:50 IAC-26/A1/IP/108230**
DIRECTIONAL CONTROL OF WHEAT ROOTS UNDER SIMULATED MICROGRAVITY VIA DIRECT CURRENT ELECTRIC FIELDS
Muhammed YÜCEDAĞ, Türkiye
- 12:50-13:00 IAC-26/A1/IP/114664**
FEMALE HEALTH IN SPACEFLIGHT: A SYSTEMS-LEVEL SYNTHESIS OF SEX DIFFERENCES, HORMONAL INTERSECTIONS, GAPS, AND COUNTERMEASURES
Sumbal Mushtaq, Space Generation Advisory Council (SGAC), United States

SCREEN 5

- 12:00-12:10 IAC-26/A1/IP/108626**
DEVELOPMENT STATUS OF THE CARBON DIOXIDE REMOVAL ASSEMBLY AT THE INSTITUTE OF SPACE SYSTEMS
Felicitas Leese, Institute of Space Systems, University of Stuttgart, Germany
- 12:20-12:30 IAC-26/A1/LBA/117997**
WEARABLE MECHANOTRANSDUCTION COUNTERMEASURE FOR MUSCULOSKELETAL RESILIENCE IN LONG-DURATION SPACEFLIGHT
Mustafa Kutlu INCI, Pearl Space Industries LLC, Türkiye
- 12:30-12:40 IAC-26/A1/IP/115770**
DEVELOPING ASTRONAUTS' NEUROADAPTATION STRATEGIES IN ANALOG STATIONS: EFFECTIVE USE OF NOISY GALVANIC VESTIBULAR STIMULATION (NGVS) AND CLASSIC COGNITIVE EXERCISES IN MISSIONS
Gözde SONAY, MoEP - Mars on Earth Project, Türkiye
- 12:50-13:00 IAC-26/A1/IPB/116748**
A TRANSIENT BIOLOGICAL RADIATION PROTECTION SYSTEM BASED ON DSUP-MRNA: AN INNOVATIVE APPROACH FOR DEEP SPACE MISSIONS
Zeynep Güleriyüz, Gebze Technical University, Türkiye

SCREEN 6

- 12:50-13:00 IAC-26/A1/IPB/110764**
RADIATION-INDUCED NEUROCOGNITIVE RISK, PSYCHOLOGICAL ADAPTATION, AND LEGAL RESPONSIBILITY IN LONG-DURATION SPACEFLIGHT
Maralgül Erol, Türkiye

Monday 5 October

SCREEN 7

12:50-13:00 IAC-26/A1/IP/114424
INTEGRATING ENGINEERED VIBRIO NATRIEIGENS INTO CUBESAT PLATFORMS
Santiago Gollarza, BLUECUBE Aerospace, United States

SCREEN 9

12:00-12:10 IAC-26/A3/IP/113398
SCIENCE-DRIVEN LUNAR EXPLORATION AND ITS LEGAL IMPLICATIONS: SAFEGUARDING SCIENTIFIC ACTIVITIES IN THE EARLY GOVERNANCE OF LUNAR RESOURCES
Jiaying YU, Shenzhen MSU-BIT University (SMBU), China

12:10-12:20 IAC-26/A3/IP/110171
ADAPTIVE CHAOTIC FORMATION OPTIMIZATION OF MULTI-UAV SYSTEMS FOR MARTIAN REGIONAL EXPLORATION
Fengru Yang, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, Xi'an, China, China

12:30-12:40 IAC-26/A3/IP/115084
VISION TRANSFORMER-BASED AUTONOMOUS GUIDANCE FOR TERMINAL APPROACH TO ASTEROID APOPHIS VIA REINFORCEMENT LEARNING
Yutong Sun, Tsinghua University, China

12:40-12:50 IAC-26/A3/IP/115913
ADVANCED GEOTECHNICAL MODELING OF EXCAVATION AND REGOLITH HANDLING IN LOW GRAVITY USING FEM AND DEM
Lucero Lidia Ventura Cruz, Universidad Nacional Mayor de San Marcos, Peru

12:50-13:00 IAC-26/A3/IP/108627
COMPARATIVE STUDY OF LUNAR ILMENITE AND TERRESTRIAL IRON-BEARING OXIDE EXPLORATION BASED ON LATIN AMERICAN MINING PROCESSES
Ana Carolina Thompson Gálvez, Universidad Tecnológica Centroamericana (UNITEC), Honduras

SCREEN 10

12:00-12:10 IAC-26/A3/IP/107576
SINGLE-TRACE GPR CLUTTER RECONSTRUCTION AND STATISTICAL CHARACTERIZATION VIA PHYSICS-CONSTRAINED TEMPORAL LEARNING
Yisu Yan, Harbin Institute of Technology, China

12:10-12:20 IAC-26/A3/IP/111279
3I/ATLAS AS A TEST CASE FOR INTERSTELLAR OBJECT EXPLORER MISSION DESIGN.
Matt Freeman, Southwest Research Institute, United States

12:20-12:30 IAC-26/A3/IP/113902
BREAKING THE LANDING-SITE TRAP: A HYBRID BALLISTIC-AERIAL SHUTTLE FOR MULTI-SITE PLANETARY EXPLORATION
Devesh Pande, India

12:30-12:40 IAC-26/A3/IP/116726
MODULAR ISRU DEMONSTRATOR FOR MARS: MOLTEN REGOLITH ELECTROLYSIS INTEGRATED WITH COMPACT SOEC
Hesen Dadaszade, Azerbaijan State Oil and Industry University (SABAH Groups), Azerbaijan

12:40-12:50 IAC-26/A3/IP/116853
DEVELOPMENT OF A MODULAR ROVER PROTOTYPE FOR IN-SITU CONSTRUCTION: INTEGRATION OF ENERGY AND COMMUNICATION SYSTEMS IN A ROBUST CHASSIS
Javier Yanpier Garay Yovera, Universidad Nacional de Ingeniería (Lima, Perú), Peru

12:50-13:00 IAC-26/A3/IP/104516
STUDY ON THE EFFECTS OF ENERGETIC IONS FROM EARTH ON THE LUNAR SURFACE
Panze GE, State Key Laboratory of Lunar and Planetary Sciences, Macau University of Science and Technology (MUST), China

SCREEN 11

12:00-12:10 IAC-26/A3/IP/115442
MARS ANALOG HABITAT IN UZBEKISTAN: A HABITAT FOR FUTURE PLANETARY EXPLORATION TECHNOLOGIES
Fattokh Sadriddinov, Uzbekspace Agency, Uzbekistan

12:10-12:20 IAC-26/A3/IP/108173
HIERARCHICAL CONTROL ARCHITECTURE FOR MULTI-ROBOT COLLABORATIVE TRANSPORTATION ON THE LUNAR SURFACE
Wenzhe Yin, School of Astronautics, Beihang University, China

12:20-12:30 IAC-26/A3/IP/114892
ASSESSMENT OF LONG-TERM SURFACE STABILITY OF MARTIAN LANDING SITES
Azar Valiyev, Azerbaijan State Oil and Industry University (SABAH Groups), Azerbaijan

12:30-12:40 IAC-26/A3/IP/113740
DEVELOPMENT AND PROSPECTS OF AN RRAM-BASED EDGE AI AUTONOMOUS CONTROL STATION FOR REMOTELY OPERATED RESEARCH ROBOTS ON MARS
Sahib Iskandarli, Azerbaijan Technical University, Azerbaijan

12:40-12:50 IAC-26/A3/IP/115460
PASSIVE THERMAL CONTROL DESIGN FOR MOON-FACING SPACECRAFT EQUIPMENT IN LUNAR ORBIT UNDER VARIABLE BETA ANGLE CONDITIONS
Bugse Beril ARI KOVAN, TUBITAK Uzay, Space Technologies Research Institute, Türkiye

12:50-13:00 IAC-26/A3/IP/115338
AN OVERVIEW OF THE ATTITUDE AND ORBIT CONTROL SUBSYSTEM OF TLM-1 SPACECRAFT
Berk Yurttagül, TUBITAK Uzay, Space Technologies Research Institute, Türkiye

SCREEN 12

12:00-12:10 IAC-26/A3/IP/116648
HIGH-FIDELITY MULTI-PHYSICS MODELING OF NON-COHESIVE LUNAR REGOLITH-TOOL INTERACTION TO SUPPORT SURFACE ACTIVITIES DESIGN AND OPERATIONS
Sabrina Lanfranco, Politecnico di Milano, Italy

12:10-12:20 IAC-26/A3/IP/109640
LEARNING-ASSISTED MULTI-SENSOR HAZARD ASSESSMENT AND DECISION SUPPORT FOR AUTONOMOUS LUNAR LANDING
Muzaffer Mert Yazici, Istanbul Technical University, Türkiye

12:20-12:30 IAC-26/A3/IP/108180
NOISE REDUCTION TECHNIQUE INVESTIGATION FOR ENHANCED CENTROID ESTIMATION IN STAR SENSOR FOR LUNAR SURFACE NAVIGATION
Yasser Asrul Ahmad, International Islamic University Malaysia, Malaysia

12:30-12:40 IAC-26/A3/IP/107910
HOPPER-BASED SYNTHETIC APERTURE RADAR FOR FUTURE MOON EXPLORATION: PHYSICS-CONSTRAINED TRAJECTORY ERROR CORRECTION USING A PASSIVE CORNER REFLECTOR
Changqing Ding, School of Aerospace, Tsinghua University, Beijing, China

12:40-12:50 IAC-26/A3/IP/111894
A SAR IMAGING-BASED INVERSION METHOD FOR MARTIAN POLAR LAYERED DEPOSITS USING SHARAD DATA
Fanyi Liu, School of Aerospace, Tsinghua University, Beijing, China

Monday 5 October

SCREEN 13

12:00-12:10 IAC-26/A3/IP/108940

A PROPOSAL OF GRAVEYARD SITE ON THE MOON FOR END-OF-LIFE LUNAR ORBITERS

Shotaro Yoshikawa, Tokyo Metropolitan University, Japan

12:10-12:20 IAC-26/A3/IP/114935

ANALOG RESEARCH FACILITIES AS TESTBEDS FOR ROBOTIC AND HUMAN SOLAR SYSTEM EXPLORATION: A CASE STUDY FROM PAKISTAN

Nasir Rizwan, The Mars Society, Pakistan

12:20-12:30 IAC-26/A3/IP/113081

A ROVER-DRONE APPROACH TO MARTIAN LAVA TUBES EXPLORATION: INTEGRATING ACTIVE SEISMIC SENSING AND OPTICAL AERIAL SURVEYING

Luis Centeno, International Space University (ISU), France

12:30-12:40 IAC-26/A3/IP/114644

A PHYSICS-GUIDED DISTRIBUTIONAL ROBUST REINFORCEMENT LEARNING FRAMEWORK FOR COUPLED ATTITUDE-ORBIT CONTROL OF ASTEROID SURFACE LANDING

Boyang Sun, Tsinghua University, China

12:40-12:50 IAC-26/A3/IP/117151

A LUNAR ENVIRONMENTAL MONITORING MISSION USING PERSISTENT THERMAL INFRARED OBSERVATIONS TO SUPPORT FUTURE HUMAN EXPLORATION

Ankur Arun Giri, Technical University of Munich (TUM), Germany

12:50-13:00 IAC-26/A3/IP/116533

TINY PILOT MODULE REPRESENTING AN ALL-IN-ONE HABITATION MODULE TO TEST PASSIVE CONSTRUCTION ON THE MOON

Jun Sato, University of Tokyo, Japan

SCREEN 14

12:00-12:10 IAC-26/A3/IP/110927

A ROTATING DRUM TEST STAND FOR CHARACTERIZING REGOLITH-ALUMINUM WALL INTERACTIONS UNDER VACUUM CONDITIONS

Filip Wylegata, AGH University of Science and Technology, Poland

12:10-12:20 IAC-26/A3/IP/112829

BEYOND MOON & MARS: A MODULAR MISSION DESIGN FRAMEWORK FOR OCEAN WORLDS, GAS GIANTS, AND THE UNEXPLORED FRONTIER

Samiksha Raviraja, Airbus Defence and Space, United Kingdom

12:20-12:30 IAC-26/A3/IP/116992

ADAPTIVE BACKSTEPPING CONTROL FOR THE COMPENSATION OF UNCERTAIN AERODYNAMIC TORQUES AND THERMAL TURBULENCE IN COAXIAL DRONES FOR SUBSURFACE EXPLORATION

Jose Luis Segundo Manayay, Universidad Nacional de Ingeniería (Lima, Perú), Peru

12:30-12:40 IAC-26/A3/IP/105000

HIGH-RESOLUTION GEOLOGICAL MAPPING OF THE SOUTHERN MARE SERENITATIS REGION FOR ARTEMIS-ORIENTED LUNAR EXPLORATION AND ISRU ASSESSMENT

Adriana Ariza Pardo, Università degli studi Gabriele d'Annunzio, Italy

12:40-12:50 IAC-26/A3/IP/109380

INTEGRATED TRANSFER OPTIMIZATION AND PRE-DESCENT RECOVERABILITY MARGINS FOR LUNAR MISSIONS FROM HIGHLY ELLIPTICAL EARTH ORBITS

Murat Can Şentürk, Istanbul Technical University, Türkiye

12:50-13:00 IAC-26/A3/IP/109365

PROPULSION SIZING DRIVEN FEASIBILITY ENVELOPES FOR PINPOINT LUNAR LANDING VIA INDIRECT OPTIMAL CONTROL

Memiş Efe Özer, Istanbul Technical University, Türkiye

SCREEN 15

12:00-12:10 IAC-26/A3/IP/106143

MPC-BASED COLLISION AVOIDANCE STRATEGY FOR AEROBRACING SPACECRAFT

Yang Ma, Beihang University (BUAA), China

12:10-12:20 IAC-26/A3/IP/109136

WHOLE-BODY CONTROL OF A HOLOMOMIC WHEELED MOBILE MANIPULATOR FOR COVERAGE-CONTINUOUS SURFACE INTERACTION ON LUNAR INFRASTRUCTURE

Bingqi Huang, Tsinghua University, China

12:20-12:30 IAC-26/A3/IP/115796

MATERIAL-CONSERVATIVE TERRAIN SHAPING FOR GRANULAR LOCOMOTION TESTBEDS USING ADAPTIVE HISTOGRAM EQUALIZATION

Atakan Durmaz, Middle East Technical University, Türkiye

12:30-12:40 IAC-26/A3/IP/115757

A UNIFIED RRT AND FRONTIER-BASED EXPLORATION FRAMEWORK FOR PLANETARY SURFACE MISSIONS

Atakan Durmaz, Middle East Technical University, Türkiye

12:40-12:50 IAC-26/A3/IP/116032

A CRATER-BASED HAZARD MAPPING APPROACH FOR LUNAR SURFACE NAVIGATION

Atakan Durmaz, Middle East Technical University, Türkiye

12:50-13:00 IAC-26/A3/IP/104932

EXPLORATION OF THE LUNAR FAR SIDE WITH A 12U NANOSATELLITE FROM L2: A COLLABORATIVE MISSION FOR DEVELOPING NATIONS

Michael Vincent Quispe Mendoza, Moscow Aviation Institute (National Research Institute, MAI), Russian Federation

SCREEN 16

12:00-12:10 IAC-26/A3/IP/110782

DESIGN AND OPTIMIZATION OF DYNAMIC MICROWAVE HEATING STRATEGIES FOR IN-SITU LUNAR WATER EXTRACTION

Yunzhi Cheng, Tsinghua University, China

12:10-12:20 IAC-26/A3/IP/112083

DYNAMIC ILLUMINATION-ROBUST 3D GAUSSIAN SPLATTING FOR HIGH-FIDELITY ASTEROID SURFACE RECONSTRUCTION

Ziyao Luo, Tsinghua University, China

12:20-12:30 IAC-26/A3/IP/105073

PRELIMINARY DESIGN OF NANOSATELLITE AEROBRACING DEMONSTRATION MISSION FOR EASIER INTERPLANETARY TRANSPORTATION

Maximilien Berthet, University of Tokyo, Japan

12:40-12:50 IAC-26/A3/IP/112057

ROBUSTNESS-ORIENTED EVALUATION OF UAV STATE ESTIMATION METHODS IN GNSS-DEGRADED AND DENIED ENVIRONMENTS

Mehmet Edip Öztürk, Erciyes University, Türkiye

12:50-13:00 IAC-26/A3/IP/104648

MULTI-TARGET EXPLORATION OF EXTREME TRANS-NEPTUNIAN OBJECTS VIA SECONDARY SMALL SPACECRAFT MISSIONS

Vladislav Zubko, Space Research Institute (IKI), Russian Academy of Sciences (RAS), Russian Federation

SCREEN 17

12:00-12:10 IAC-26/A5/IP/108010

MARS HABITAT SITE SELECTION CRITERIA EVALUATION VIA BERTOPIC

Can Uzun, Istanbul Technical University, Türkiye

Monday 5 October

12:10-12:20 IAC-26/A5/IP/105043

MODULAR DESIGN OF A LUNAR SUBSURFACE MEDICAL FACILITY UTILIZING LAVA TUBES

Xing Xu, Harbin Institute of Technology, China

12:20-12:30 IAC-26/A5/IP/115157

GALVANIZE : RADIATION WHY WOMEN ARE DISCRIMINATED AGAINST FOR TRAVEL TO MARS!

Naomi McGill, [unlisted], United Kingdom

12:30-12:40 IAC-26/A5/IPB/107030

DIANA: A SATELLITE-BASED LUNAR TIME AND FREQUENCY SYSTEM

Changgang Zheng, Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST), China

12:50-13:00 IAC-26/A5/IP/109486

ANTARCTIC ANALOGUES FOR INNOVATIVE SPACE OPERATIONS: AUTONOMOUS SYSTEMS AND HUMAN-CENTERED RESEARCH BY AMBITIONS EXPEDITION

Kyunghwan KIM, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Institute of Space Systems, Germany

SCREEN 19

12:30-12:40 IAC-26/A5/IP/114004

SYNERGISTIC HABITAT DESIGN: INTEGRATING AN ISRU-DRIVEN HYDROPONIC GREENHOUSE INTO A LUNAR CRATER RIM OUTPOST

Sevinc Zeynalova, Azerbaijan State Pedagogical University (ASPU), Azerbaijan

12:40-12:50 IAC-26/A5/IP/114956

INDUSTRIAL-SCALE MARTIAN ATMOSPHERIC WATER EXTRACTION VIA ISRU-BASED WAVAR SYSTEM

Movlan Omerov, Azerbaijan Architecture and Construction University (SABAH groups), Azerbaijan

12:50-13:00 IAC-26/A5/IP/112672

SUSTAINABLE MODULAR MICROGREEN PRODUCTION SYSTEM FOR EXTREME CONDITIONS AND ISOLATED HABITATS

Eda Günay, Çanakkale Onsekiz Mart University, Türkiye

SCREEN 20

12:00-12:10 IAC-26/A6/IP/115960

OPERATOR IMPACT ASSESSMENT PLATFORM: INTEGRATING CONJUNCTION ANALYSIS WITH ECONOMIC MODELLING TO ENABLE MARKET-DRIVEN ORBITAL DEBRIS REMEDIATION

Stirling Forbes, Italy

12:10-12:20 IAC-26/A6/IP/116837

REMOVAL OF SPACE DEBRIS USING INDUCED EDDY CURRENTS: FEASIBILITY STUDY BY SIMULATION

Erik Alejandro Espinel Bernilla, Universidad Nacional Mayor de San Marcos, Peru

12:20-12:30 IAC-26/A6/IP/107670

ALGORITHM COMPARISON FOR IMAGE PROCESSING-BASED SPACE DEBRIS DETECTION, TRACKING, AND CHARACTERIZATION

Emirhan Tekcanözü, ASELSAN, Türkiye

12:30-12:40 IAC-26/A6/IP/107669

PHYSICS-BASED SYNTHETIC DATASET GENERATION FOR SPACE DEBRIS DETECTION AND TRACKING: HIGH-DIMENSIONAL MODELING

Akil Kutlu, ASELSAN, Türkiye

12:40-12:50 IAC-26/A6/IP/110939

COMPARATIVE ANALYSIS OF LASER ABLATION METHODS ACCORDING TO REGION AND ENERGY SOURCES FOR SPACE DEBRIS REMOVAL IN LEO

Volkan Ozsoy, Middle East Technical University, Türkiye

12:50-13:00 IAC-26/A6/IP/106589

ESTIMATION OF ANGULAR VELOCITY AND ROTATION AXIS OF A BOX-WING SATELLITE WITH LOW ANGULAR VELOCITY USING PHOTOMETRIC BRIGHTNESS VARIATIONS

Hanik Kim, Satellite Technology Research Center (SaTReC), KAIST, Republic of Korea

SCREEN 21

12:00-12:10 IAC-26/A6/IP/109986

ATTITUDE DETERMINATION OF H-2A ROCKET BODIES ASSUMING PRECESSION MOVEMENT

Tomáš Hrobár, Comenius University, Faculty of Mathematics, Physics and Informatics, Slovakia

12:10-12:20 IAC-26/A6/IPB/109727

PERFORMANCE ANALYSIS OF ANGLES-ONLY RELATIVE ORBIT ESTIMATION FOR NON-COOPERATIVE DEBRIS CAPTURE

Dhai Song, Sejong University, Republic of Korea

12:20-12:30 IAC-26/A6/IP/112451

ESA MASTER-9 MODEL UPGRADE

Sven Kevin Flegel, OKAPI:Orbits GmbH, Germany

12:40-12:50 IAC-26/A6/IP/110825

INTEGRATED OPTICAL TRACKING AND SSA OPERATIONS: FIVE YEARS OF JOINT GLOBAL MONITORING BY OKAPI:ORBITS AND SYBILLA TECHNOLOGIES

Adrian Diez, OKAPI:Orbits GmbH, Germany

12:50-13:00 IAC-26/A6/IP/111735

RESEARCH ON MISSION PLANNING FOR SPACE OBJECT ORBIT DETERMINATION BASED ON SPACE-BASED COMMON-VIEW AND HANDOVER OBSERVATION

Xu Wu, Beihang University, China

SCREEN 22

12:00-12:10 IAC-26/A6/IPB/107801

THE EVOLUTION OF INTERNATIONAL SPACE DEBRIS POLICIES

Netra Patel, University of Calgary, Canada

12:10-12:20 IAC-26/A6/IP/112032

AI-DRIVEN ANALYSIS OF GEO PHOTOMETRIC TIME SERIES FOR ATTITUDE ANOMALY IDENTIFICATION

Manuel Sanjurjo, Universidad Carlos III de Madrid, Spain

12:20-12:30 IAC-26/A6/IPB/107629

REPLACE VS REPAIR: A LIFE CYCLE ASSESSMENT OF SATELLITE LIFETIME EXTENSION STRATEGIES THROUGH ON-ORBIT SERVICING

Joséphine Koffler, German Aerospace Center (DLR), Germany

12:30-12:40 IAC-26/A6/IP/109263

PHYSICS-INFORMED MASS-CONSERVING UNCERTAINTY PROPAGATION FOR LONG-TERM SPACE DEBRIS ENVIRONMENT MODELING

Dengwei Gao, College of Astronautics, Northwestern Polytechnical University, China

12:40-12:50 IAC-26/A6/IP/109211

TOWARDS BINDING REGULATORY FRAMEWORKS FOR LEO SUSTAINABILITY: LEGAL, INSTITUTIONAL, ECONOMIC, AND SECURITY PERSPECTIVES ON DEBRIS MITIGATION, REMEDIATION, AND STM

Annamaria Nassisi, Thales Alenia Space Italia, Italy

12:50-13:00 IAC-26/A6/IP/109501

ATTITUDE CONTROLLED DRAG SAIL BASED SELF-DISPOSAL UNDER THERMOSPHERIC VARIABILITY

Ahmet Ali Çetin, Istanbul Technical University, Türkiye

Monday 5 October

SCREEN 23

12:00-12:10 IAC-26/A6/IP/107618

A HYBRID AUTONOMOUS COLLISION AVOIDANCE FRAMEWORK FOR LEO SATELLITES USING STACK-CNN AND IMPROVED ARTIFICIAL POTENTIAL FIELDS

Muhammed Emin Candan, [unlisted], Türkiye

12:10-12:20 IAC-26/A6/LBA/117671

FINAL VALIDATION OF A STRATOSPHERIC DUAL-BALLOON LASER ARCHITECTURE FOR PRECISE TRACKING AND RANGING OF NON-COOPERATIVE SPACE OBJECTS TOWARDS ACTIVE DEBRIS REMOVAL

Fernando Ruiz Vincueria, Asociación de Investigación y Cooperación Industrial de Andalucía, AICIA, Spain

12:20-12:30 IAC-26/A6/IP/110392

KNOWLEDGE-DRIVEN SPACE EVENT PREDICTION AND SITUATIONAL ASSESSMENT IN CONGESTED LEO

Ying Weng, Northwestern Polytechnical University@NPU, China

12:30-12:40 IAC-26/A6/IP/107286

FRAGMENTATION ANALYSIS OF A HETEROGENEOUS COLLISION IN THE CISELUNAR ENVIRONMENT: A CUBESAT-LARGE ORBITER SCENARIO

Nicolò Trabacchin, University of Padova - DII/CISAS, Italy

12:40-12:50 IAC-26/A6/IP/110406

LEARNING-ENHANCED CHANCE-CONSTRAINED VISUAL SERVOING FOR NON-COOPERATIVE SPACECRAFT RENDEZVOUS

Zhenbo Zhao, Harbin Institute of Technology, China

12:50-13:00 IAC-26/A6/IPB/106999

A RENEWED FRENCH SPACE OPERATION ACT TO MASTER MODERN SPACE OPERATIONS

Paolo Baiocco, CNES, France

SCREEN 24

12:00-12:10 IAC-26/A6/IP/116744

ADAPTIVE BACKSTEPPING-BASED IMPEDANCE CONTROL FOR SPACE DEBRIS CAPTURE WITH UNCONTROLLED TUMBLING MOTION USING N-DOF ROBOTIC ARMS

Jose Luis Segundo Manayay, Universidad Nacional de Ingeniería (Lima, Perú), Peru

12:10-12:20 IAC-26/A6/IPB/113771

ATMOSPHERIC SATELLITE DEMISE: AEROTHERMAL ANALYSIS AND PLASMA WIND TUNNEL EXPERIMENTS

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

12:20-12:30 IAC-26/A6/IP/109762

DATA-DRIVEN CONTINUOUS-TIME ORBITAL DYNAMICS MODELING FOR LARGE-SCALE SPACE DEBRIS PROPAGATION USING NEURAL ODE AND DIFFERENTIAL ALGEBRA

Lin Shi, Northwestern Polytechnical University; National Key Laboratory of Aerospace Flight Dynamics, China

12:30-12:40 IAC-26/A6/IP/111185

FROM COLLECTIVE PERCEPTION TO COLLECTIVE CAPTURE OF UNCOOPERATIVE TUMBLING SPACE TARGETS IN ON-ORBIT SERVICING USING SPACECRAFT SWARMS

El Ghali ASRI, York University, Canada

12:40-12:50 IAC-26/A6/IP/111269

SPACE DEBRIS CREDITS AND A SPACE DEBRIS EXPOSURE RATING: COMPLIANCE, INSURANCE, AND GOVERNANCE INSTRUMENTS FOR DEBRIS MITIGATION, REMEDIATION, AND SPACE TRAFFIC MANAGEMENT

Maxime Kadri, [unlisted], France

12:50-13:00 IAC-26/A6/IP/114471

PUSHING THE LIMITS OF LEO SATELLITE TRAFFIC OPTIMIZATION THROUGH A PREDICTIVE COLLISION AVERSION PROTOCOL

Yekta Shabani, Polytechnique Montreal, Canada

SCREEN 25

12:00-12:10 IAC-26/A6/IPB/113326

HYPERVELOCITY IMPACT EVALUATION OF POROUS SRM SLAG SIMULANTS FABRICATED BY METAL 3D PRINTING

Kumi Nitta, Japan Aerospace Exploration Agency (JAXA), Japan

12:10-12:20 IAC-26/A6/IP/109763

END-TO-END SPATIO-TEMPORAL TRANSFORMER FOR SHORT-TERM TRAJECTORY PREDICTION OF UNCATALOGUED SPACE DEBRIS

Jiang Tao, Shanghai Ocean University, China

12:20-12:30 IAC-26/A6/IP/115925

SUDDEN FRAGMENTATION EVENT RESPONSE IN SPACE DEBRIS MONITORING: SEARCH-TRACKING TASK PLANNING

Peiran Mu, Beijing Institute of Technology, China

12:30-12:40 IAC-26/A6/IPB/113190

EXPERIMENTAL BENCHMARKING OF NEUROMORPHIC VISION SENSORS AGAINST ASTRONOMY FRAME-BASED IMAGING FOR DYNAMIC SPACE SITUATIONAL AWARENESS

Yusra Alkendi, Technology Innovation Institute (TII), United Arab Emirates

12:40-12:50 IAC-26/A6/IP/116608

PRE-FRAGMENTATION ANOMALY DETECTION IN SPACE DEBRIS OBJECTS USING TLE TIME SERIES AND MACHINE LEARNING

Pinar Cetin, Acibadem University, Türkiye

12:50-13:00 IAC-26/A6/IP/106035

SUSTAINABLE DEVELOPMENT OF SPACE ACTIVITIES: OVERCOMING THE LEGAL CHALLENGES OF MICRO-POLLUTION

Eugeniya Danilova, MGIMO University, Russian Federation

SCREEN 26

12:00-12:10 IAC-26/A6/IP/104950

STOCHASTIC PROPERTIES OF GNSS CONSTELLATION SATELLITE DISPOSAL ORBITS

Eduard Kuznetsov, Ural Federal University, Russian Federation

12:20-12:30 IAC-26/A6/IP/107807

VISION-BASED DETECTION AND TRACKING FOR RESIDENT SPACE OBJECTS BY COOPERATIVE SATELLITE CLUSTER

Pengfei Liu, National University of Defense Technology, China

12:30-12:40 IAC-26/A6/IP/112118

PINN-BASED GAME-THEORETIC METHODS FOR EFFICIENT CAPTURE OF NON-COOPERATIVE TARGET

Zhihang Jing, Northwestern Polytechnical University, China

12:40-12:50 IAC-26/A6/IP/110845

HYBRID SCREENING ARCHITECTURE FOR HIGH-RISK CONJUNCTIONS OF LARGE-SCALE SPACE OBJECTS

Wenhe Bian, Beihang University (BUAA), China

12:50-13:00 IAC-26/A6/IP/112880

OPERATIONALIZING ORBITAL STABILITY: AN AI-ENABLED SSA PILOT FOR SCALABLE SPACE TRAFFIC MANAGEMENT IN LARGE LEO CONSTELLATIONS

Tuana Yazici, United States

SCREEN 27

12:40-12:50 IAC-26/A7/IPB/109582

PROBING THE INFLUENCE OF INTERNAL STELLAR STRUCTURE ON MULTI WAVELENGTH LIGHT CURVE MORPHOLOGIES OF VARIABLE STARS

Bayan AL-ansari, Saudi Arabia

INFORMATION

TECHNICAL SESSIONS

KEYNOTE SPEAKERS

SPECIAL SESSIONS

INTERACTIVE PRESENTATIONS

TECHNICAL PAPERS BY SYMPOSIUM

Monday 5 October

SCREEN 28

12:20-12:30 IAC-26/A7/IP/115271

INSIGHTS OF EXOPLANET IMAGING OBSERVATIONS WITH DAG400 TELESCOPE

Ebru Uzunçam, Türkiye National Observatories, Türkiye

12:30-12:40 IAC-26/A7/IP/112577

STATISTICAL DETERMINATION OF THE EFFECT OF CARBON DIOXIDE (CO₂) FLOW, ONE OF THE AIR POLLUTION FACTORS, ON AURORA FORMATION FREQUENCY AND AURORAL POWER USING CORRELATION ANALYSIS

Şenay UÇAR, [unlisted], Türkiye

SCREEN 29

12:00-12:10 IAC-26/B1/IP/116085

A REMOTE SENSING METHOD FOR DETECTING LEGACY AGROCHEMICALS FROM ORBIT

Anastasiia Podshivalova, Moscow Institute of Physics and Technology (MIPT), Russian Federation

12:10-12:20 IAC-26/B1/IP/109800

CLOUD DETECTION IN SATELLITE IMAGERY USING GEOSPATIAL FOUNDATION MODELS: A COMPARATIVE STUDY OF EFFICIENT ADAPTATION STRATEGIES

Han Oh, Korea Aerospace Research Institute (KARI), Republic of Korea

12:20-12:30 IAC-26/B1/IP/109795

SURFACE-ADAPTIVE MESH WARPING FOR ROBUST DEEP LEARNING-BASED REGISTRATION OF HIGH-RESOLUTION NEONSAT IMAGES

juyoung kim, University of Science & Technology of Korea (UST), Republic of Korea

12:30-12:40 IAC-26/B1/IP/111037

CAPTURING GLINT FROM ORBIT: RESULTS FROM THE TANAGER MISSION

Ravi teja Nallapu, Planet, United States

12:40-12:50 IAC-26/B1/IP/115039

HARDWARE-SOFTWARE CO-DESIGN OF A COMPACT PAYLOAD COMPUTER FOR NEAR REAL-TIME MULTIPURPOSE EDGE AI INFERENCE ON A 6U CUBESAT

Trijal Srimal, National University of Singapore, Singapore

12:50-13:00 IAC-26/B1/IP/111157

ON-BOARD AI-DRIVEN WILDFIRE RISK ASSESSMENT FOR CUBESAT MISSIONS USING MULTISPECTRAL EDGE COMPUTING

Sercan Kahvecioglu, Türkiye

SCREEN 30

12:00-12:10 IAC-26/B1/IP/110750

INTEGRATING MULTI-SOURCE EARTH OBSERVATION DATA INTO URBAN DIGITAL TWIN ARCHITECTURES: ENVIRONMENTAL DATA ENRICHMENT FOR THE CITY OF TURIN

Sona Guliyeva, Politecnico di Torino, Italy

12:10-12:20 IAC-26/B1/IP/109995

Basin-scale assessment of XCH₄ concentrations using LULC analysis, anomaly detection, and an integrated pollution index: the case of EĞİRDİR and BURDUR lakes

Gül Nur Karal Nesil, Istanbul Technical University, Türkiye

12:20-12:30 IAC-26/B1/IP/106350

A SATELLITE-BASED FRAMEWORK FOR INTEGRATING RIVER WATER AVAILABILITY AND IRRIGATION DEMAND

M Abdullah Khan, Space Generation Advisory Council (SGAC), Bangladesh

12:30-12:40 IAC-26/B1/IP/114852

EARTH OBSERVATION-DRIVEN PLANNING OF SUSTAINABLE URBAN ENERGY AND TRANSPORTATION SYSTEMS: A GIS, AI, AND QUANTUM-INSPIRED OPTIMIZATION FRAMEWORK IN A PHILIPPINE CASE STUDY

Mark Angelo Purio, Adamson University, Philippines

12:40-12:50 IAC-26/B1/IP/116606

ANALYSIS OF ADVANCED METHODS FOR AGGREGATING HETEROGENEOUS DATA FROM REMOTE SENSING SATELLITES TO SOLVE THE PROBLEM OF CONSTRUCTING A 3D PROFILE OF AN OPEN-PIT ORE MINE, FOLLOWED BY THEMATIC CLASSIFICATION OF THE MINE SURFACE

Irina Sliusareva, Moscow Institute of Physics and Technology (MIPT), Russian Federation

12:50-13:00 IAC-26/B1/IP/107660

TEMPLATE-CONSTRAINED LLM SYNTHESIS FOR SATELLITE IMAGING MISSION PLANNING

Haiqing Tang, Harbin Institute of Technology, China

SCREEN 31

12:00-12:10 IAC-26/B1/IP/108925

MODULATION TRANSFER FUNCTION BASED MISALIGNMENT DETECTION IN SMALL SATELLITE OPTICAL TELESCOPE SUBSYSTEMS USING DEEP LEARNING

Alper Şanlı, National Defense University, Türkiye

12:10-12:20 IAC-26/B1/IP/112116

ONBOARD MISSION REPLANNING FOR MULTI-SATELLITE OBSERVATION SYSTEM VIA DEEP REINFORCEMENT LEARNING

xuan jin, Harbin Institute of Technology, China

12:20-12:30 IAC-26/B1/IP/105647

HUMAN-INFORMED ENVIRONMENTAL MODELS FOR SITE SUITABILITY AND SUSTAINABLE URBAN INFRASTRUCTURE USING EARTH OBSERVATION AND MOBILITY DATA

Nodira Tillayeva, Nagoya University, Japan

12:30-12:40 IAC-26/B1/IP/106075

MONITORING URBAN GROWTH IN BAHRAIN USING MULTI-TEMPORAL DEEP LEARNING

Yasmeen Almahmeed, Bahrain

12:40-12:50 IAC-26/B1/IP/108127

LATENCY DIGITAL TWIN FOR DYNAMIC MULTI-CLOUD BURST SCHEDULING IN EO CRISIS RESPONSE

Khayal Aliyev, Azerbaijan State Oil and Industry University (SABAH Groups), Azerbaijan

12:50-13:00 IAC-26/B1/IP/104503

EO-DRIVEN DESIGN FOR THE "THIRD HERITAGE": SATELLITE APPLICATIONS IN THE REGENERATION OF CONFISCATED ASSETS

Giacomo D'Amico, University Mediterranea of Reggio Calabria, Italy

SCREEN 32

12:00-12:10 IAC-26/B1/IP/109658

PAKAL-1: EXPANDING SOCIO-ECONOMIC EARTH OBSERVATION VALUE THROUGH ACADEMIC AI-ENHANCED 1U CUBESAT OPERATIONS

Manuel González Mendoza, Universidad Panamericana de Ciudad de México, Mexico

12:10-12:20 IAC-26/B1/IPB/112982

DATA SHARING TRENDS IN EARTH OBSERVATION, 2016-2026

Mariel Borowitz, Georgia Tech Space Research Institute, United States

12:20-12:30 IAC-26/B1/IP/116308

CLASSIFYING THE PREDOMINANT GEOPHYSICAL SURFACE PHENOMENON IN SAR SCENES NEAR THE MACHU PICCHU ANTARCTIC SCIENTIFIC STATION (ECAMP) USING DEEP LEARNING

Omar Enrique Blas Morales, Universidad Nacional de Ingeniería, Peru, Peru

Monday 5 October

12:40-12:50 IAC-26/B1/IP/110402
PI-SARNET: PHYSICS-INFORMED DEEP UNROLLING FOR JOINT SAR IMAGING AND ENHANCEMENT
Yihang Ding, School of Aerospace, Tsinghua University, Beijing, China

12:50-13:00 IAC-26/B1/IP/113383
SATELLITE-BASED IDENTIFICATION OF PRIORITY AREAS FOR ECOSYSTEM RESTORATION
Gulshan Aliyeva, Azercosmos, Space Agency of Republic of Azerbaijan, Azerbaijan

SCREEN 33

12:00-12:10 IAC-26/B1/IP/107885
A REAL-TIME INTELLIGENT SCHEDULING METHOD FOR TIME-SENSITIVE TARGET SEARCH IN MEGA-CONSTELLATION
Haihan Zhao, Harbin Institute of Technology, China

12:10-12:20 IAC-26/B1/IP/106552
SUB-CENTER FEATURE LEARNING FOR SAR REMOTE SENSING IMAGERY IN EARTH OBSERVATION
Gu Lingyun, School of Aerospace, Tsinghua University, Beijing, China

12:20-12:30 IAC-26/B1/IP/115854
A DATA-DRIVEN FRAMEWORK FOR SATELLITE-BASED DETECTION OF VOLCANIC SO₂ EMISSIONS USING EARTH OBSERVATION DATA
Farhad Budagov, Azerbaijan State Oil and Industry University (ASOIU), Azerbaijan

12:40-12:50 IAC-26/B1/IP/106046
COMPARATIVE MODELING OF SENTINEL-5P NITROGEN DIOXIDE AND AEROSOL INDEX DATA FOR TIME-SERIES FORECASTING AND SPATIAL ANALYSIS
Shikhatalzain Alkaabi, [unlisted], Bahrain

12:50-13:00 IAC-26/B1/IP/113994
SYNERGISTIC MULTI-MODAL DEEP LEARNING FRAMEWORKS FOR HIGH-FIDELITY CLIMATE MONITORING AND ENVIRONMENTAL ANOMALY DETECTION
Kazim Mammadli, Baku Higher Oil School, Azerbaijan

SCREEN 34

12:20-12:30 IAC-26/B1/IP/109815
SMARTPHONE-BASED IMAGING FOR OPPORTUNISTIC EARTH OBSERVATION IN ORBITAL ENVIRONMENTS
Narmina Ibrahimova, Azerbaijan State Oil and Industry University (ASOIU), Azerbaijan

12:50-13:00 IAC-26/B1/IP/105084
ADAPTIVE MISSION PLANNING FOR AGILE EARTH OBSERVATION SATELLITES: A ROLLING HORIZON ARCHITECTURE BASED ON DEEP REINFORCEMENT LEARNING
Guangtong Zhu, Northwestern Polytechnical University; National Key Laboratory of Aerospace Flight Dynamics, China

SCREEN 35

12:00-12:10 IAC-26/B2/IP/110586
VISION-LIDAR BASED RELATIVE NAVIGATION ARCHITECTURE FOR AUTONOMOUS RENDEZVOUS WITH TUMBLING SPACE DEBRIS
Shabadini Sampath, University of Strathclyde / Mechanical and Aerospace Engineering, United Kingdom

12:10-12:20 IAC-26/B2/IP/112129
EXPLORING THE FUTURE USE OF LEO AND GEO ORBITS FOR TELECOMMUNICATION SERVICES
Berk SAGLİCAK, [unlisted], Türkiye

12:20-12:30 IAC-26/B2/IPB/115929
ENHANCING X-RAY PULSAR NAVIGATION WITH GNSS MEASUREMENTS IN LUNAR ORBIT
Yasin Güngör, TÜBİTAK Uzay, Space Technologies Research Institute, Türkiye

12:30-12:40 IAC-26/B2/IPB/109225
MOAL: MUTUAL ODOMETRY AND LOCALIZATION FOR LUNAR ROBOT CLUSTER
Bingchuan Wei, Tsinghua University School of Aerospace, China

12:40-12:50 IAC-26/B2/IP/116984
MIXED COMMUNITY NETWORKS FOR DISTRIBUTED CONNECTIVITY INFRASTRUCTURE
Joshua Abdiel Barragán Guardado, Universidad Iberoamericana, Mexico

12:50-13:00 IAC-26/B2/IP/109393
INTEGRATED OPTO-MECHANICAL CO-SIMULATION OF DUAL-STAGE POINTING FOR SATELLITE QKD: MITIGATING MICRO-VIBRATIONS TO MAXIMIZE KEY RATE
Kadir Marat, Istanbul Technical University, Türkiye

SCREEN 36

12:00-12:10 IAC-26/B2/IP/109068
QUANTIFYING PERFORMANCE LOSS IN LEO CONSTELLATIONS NETWORKS DURING FEASIBILITY PHASE OF LAUNCH-SITE AND MCC PROJECTS
Arif AKKURT, HAVELSAN, Türkiye

12:10-12:20 IAC-26/B2/IP/111838
TOKEN DRIVEN BANDWIDTH ALLOCATION METHOD FOR AIRBORNE PLATFORMS IN CONGESTED SATCOM ENVIRONMENTS
Mehmet Serdar AYDIN, HAVELSAN, Türkiye

12:20-12:30 IAC-26/B2/IP/111769
RESEARCH AND EMPIRICAL ANALYSIS OF BUNDLED PROTOCOL SECURITY (BPSEC) ARCHITECTURE FOR DEEP SPACE INTERNET SECURITY
Sooyeon Kang, Korea Aerospace Research Institute (KARI), Republic of Korea

12:30-12:40 IAC-26/B2/IPB/104965
A ROBUST INTER-SATELLITE LINK WITH ADAPTIVE MULTI-ACCESS INTERFERENCE CANCELLATION FOR DEEP-SPACE MULTI-VEHICLE MISSIONS
Yongfei Miao, Innovation Academy for Microsatellites, Chinese Academy of Sciences, China

12:40-12:50 IAC-26/B2/IP/108480
STELLAR TRANSFORMERS: VISION TRANSFORMERS FOR AUTONOMOUS STAR TRACKING AND ATTITUDE ESTIMATION
Menatallh hammad, University of Würzburg, Germany

12:50-13:00 IAC-26/B2/IPB/105553
LESSONS LEARNED FROM TELEMETRY BASED ANALYSIS OF S-BAND ANOMALIES IN CUBESAT MISSIONS
Fadwa Belali, [unlisted], Morocco

SCREEN 37

12:00-12:10 IAC-26/B2/IP/106562
SEQUENTIAL FILTERING AND COVARIANCE RECONSTRUCTION FOR AUTONOMOUS FORMATION FLYING NAVIGATION
Mauro Franqueira, University of Florida, United States

12:10-12:20 IAC-26/B2/IP/110877
KUBERNETES ABOVE THE CLOUD: ORBIT-AWARE ORCHESTRATION OF SOFTWARE DEFINED 5G CORE AND RAN ON DISTRIBUTED DATA CENTERS IN SPACE
Oriol Fusté, i2CAT, Spain

Monday 5 October

12:20-12:30 IAC-26/B2/IP/115168

RESILIENT PNT ARCHITECTURE FOR LEO NANOSATELLITES VIA GNSS AND DUAL ONE-WAY RANGE (DOWR) INTEGRATION
Mariano Gonzalo Agustin Rodriguez Saboya, Universidad Nacional Mayor de San Marcos, Peru

12:30-12:40 IAC-26/B2/IPB/112294

A PROPOSED REDUNDANT AVIONICS ARCHITECTURE FOR A SMALL-SCALE MICROSATELLITE LAUNCH VEHICLE
Necati ÇAĞAN, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Türkiye

12:40-12:50 IAC-26/B2/IPB/109318

A COMPARISON OF DIFFERENT ORIENTATION ESTIMATION METHODS FOR AN EMBEDDED ATTITUDE AND HEADING REFERENCE SYSTEM
Mert Turanlı, Link Robotics, Türkiye

12:50-13:00 IAC-26/B2/IP/117051

RESILIENT CLOCK SYNCHRONISATION FOR DISTRIBUTED SATELLITE SWARMS
Raj Thilak Rajan, Delft University of Technology (TU Delft), Netherlands (Kingdom of the)

SCREEN 38

12:10-12:20 IAC-26/B3/IP/108221

OPTICAL PERFORMANCE AND TOLERANCE ANALYSIS OF CURVED VOLUME HOLOGRAPHIC WAVEGUIDES FOR HUD & AR APPLICATIONS
Cenk Bural, ASELSAN, Türkiye

12:20-12:30 IAC-26/B3/IP/113922

THE CONCEPT OF A MANEUVERING MANNED SPACE STATION
Georgiy Shcheglov, Bauman Moscow State Technical University, Russian Federation

12:40-12:50 IAC-26/B3/IP/114986

TOWARD SYNTHETIC AGROECOSYSTEMS FOR SPACE HABITATS: INTEGRATING PLANT GENETIC ENGINEERING AND MICROBIAL DESIGN
Ziyad Mammadjanov, Baku State University, Azerbaijan

12:50-13:00 IAC-26/B3/LBA/118014

THE LUNAR OUTPOST PEGASUS: A CREWED LUNAR TERRAIN VEHICLE FOR NASA'S MOON BASE SURFACE OPERATIONS
Kaila Pfrang, [unlisted], United States

SCREEN 39

12:20-12:30 IAC-26/B3/IP/109404

FOLD OUT, LOCK IN: A DEPLOYABLE TABLE FOR MEALS AND SCIENCE IN SPACE
Molly McCormick, Vast, United States

12:30-12:40 IAC-26/B3/IP/109663

REQUIREMENT AND DESIGN OF AN INTELLIGENT PERSONAL PROTECTIVE SYSTEM (PPS) – A SAFE SPACE GARMENT SOFTWARE ARCHITECTURE
Miklos Kozlovsky, Óbuda University, John von Neumann University, Hungary

12:40-12:50 IAC-26/B3/IP/114240

AI-ENHANCED ATP BIOLUMINESCENCE CHIPS FOR REAL-TIME DETECTION OF BIOLOGICAL AEROSOLS IN CREWED SPACECRAFT CABINS
Khadija Valiyeva, Baku State University, Azerbaijan

12:50-13:00 IAC-26/B3/IP/114420

DESIGN AND IMPLEMENTATION OF A ROBOTIC MODULE FOR AUTONOMOUS TRANSPLANTING OF LETTUCE SEEDLINGS IN HYDROPONIC SYSTEMS FOR MARTIAN HABITATS
Fidel Castro Suazo, Universidad Nacional de Ingeniería (Lima, Perú), Peru

SCREEN 40

12:00-12:10 IAC-26/B4/IP/111611

GAME-THEORETIC INCENTIVE-COMPATIBLE DISTRIBUTED CONTROL FOR SCALABLE AND FAIR MEGA-CONSTELLATION MAINTENANCE
Xiaoyu Zuo, Beihang University, China

12:10-12:20 IAC-26/B4/IP/105247

ELECTRO-OPTICAL OBSERVATION SYSTEM FOR SMALL SATELLITES
Khatayi Rustamov, Azercosmos, Space Agency of Republic of Azerbaijan, Azerbaijan

12:20-12:30 IAC-26/B4/IP/112810

IN-ORBIT THERMAL TRANSFER CHARACTERISATION OF A PROGRAMMABLE MULTILAYER PAYLOAD STACK IN LEO SUN SYNCHRONOUS ORBIT ON A 1U CUBESAT
John Hudson, Aiglon College, Switzerland

12:30-12:40 IAC-26/B4/IP/108638

PERFORMANCE-OPTIMIZED INTEGRATED ORBIT-ATTITUDE CONTROL FOR EARTH-OBSERVATION CONSTELLATIONS USING LOW-THRUST
Zhengqing Fang, Tsinghua University School of Aerospace, China

12:40-12:50 IAC-26/B4/IP/107806

SELF-ORGANIZING COMMUNICATION NETWORK DESIGN FOR FREE-FLYING SATELLITE CLUSTER
Pengfei Liu, National University of Defense Technology, China

SCREEN 41

12:00-12:10 IAC-26/B4/IP/109850

DISTRIBUTED X-RAY NAVIGATION IN ISL-CONNECTED REGIONAL AND GLOBAL LEO CONSTELLATIONS: A CONSTELLATION-LEVEL PERFORMANCE ANALYSIS
Sibel Turkoglu, ASELSAN, Türkiye

12:10-12:20 IAC-26/B4/IP/106322

SYSTEM DESIGN, ORBIT SELECTION, AND DATA ANALYSIS STRATEGY FOR A 6U CUBESAT MISSION MONITORING ANDEAN GLACIER RETREAT
Elvis Kewin bam Coaquira Huanca, Beijing Institute of Technology (BIT), China

12:20-12:30 IAC-26/B4/IP/110363

CUBESAT-BASED OBSERVATIONS FOR EARLY DETECTION AND RISK ASSESSMENT OF SMALL SOLAR SYSTEM BODIES
Ramila Aliyeva, Azerbaijan

12:30-12:40 IAC-26/B4/IP/116088

MISSION REQUIREMENT DERIVATION FOR A MEXICO-OPTIMIZED OPTICAL CUBESAT PLATFORM FOR FLOOD AND VEGETATION MONITORING
Angel Axel Reyes Aparicio, Tecnológico de Estudios Superiores de Ecatepec, Mexico

12:40-12:50 IAC-26/B4/IP/115234

VIGILANCIA AEROSPAIAL HÍBRIDA MEDIANTE NANOSATÉLITES DE 3U: FUSIÓN DE DATOS ADS-B Y VALIDACIÓN ÓPTICA MEDIANTE PROCESAMIENTO DE IA EN EL BORDE
Juan Salvador Palacios Bett, Universidad Nacional de Ingeniería (Lima, Perú), Peru

12:50-13:00 IAC-26/B4/IP/116474

TECHNOLOGY MATURATION OF A COMPACT SYSTEM FOR AUTONOMOUS DOCKING BETWEEN CUBESATS
Martina Imperatrice, CISAS – “G. Colombo” Center of Studies and Activities for Space, Italy

Monday 5 October

SCREEN 42

- 12:00-12:10 IAC-26/B4/IP/111192**
DEVELOPMENT AND VALIDATION OF CUSTOM LATERAL PANELS FOR A LOW-COST 1U CUBESAT MISSION
Riccardo Riva, Politecnico di Milano, Italy
- 12:10-12:20 IAC-26/B4/IP/113353**
A MULTI-PLANE, MULTI-LAYER SAR CONSTELLATION ARCHITECTURE FOR HIGH RESPONSIVENESS APPLICATIONS
Gianluca Coppa, University of Naples Federico II, Italy
- 12:20-12:30 IAC-26/B6/IP/105930**
COMMERCIAL READINESS FOR IN-ORBIT REFUELING AND LIFE EXTENSION OF SPACE ASSETS: INSIGHTS FROM AN INDUSTRY-DRIVEN DISCOVERY STUDY
Sai Susmitha Guddanti, Department of Space Studies, University of North Dakota, United States
- 12:30-12:40 IAC-26/B6/IP/108855**
AN END-TO-END MISSION FAILURE CLASSIFICATION FRAMEWORK FOR LARGE-SCALE LEO EARTH OBSERVATION CONSTELLATION OPERATIONS
Jaehyoung Park, Korea Aerospace Research Institute (KARI), Republic of Korea
- 12:40-12:50 IAC-26/B6/IP/108257**
ESTIMATION OF RELATIVE POSITION USING COLOR MARKER IN IMAGE-BASED SYSTEMS FOR ON-ORBIT SERVICING
Shun Nishida, Tokyo University of Science, Japan
- 12:50-13:00 IAC-26/B6/IP/108349**
ESTIMATING THE RELATIVE ATTITUDE OF SATELLITES USING VISIBLE IMAGES FOR ON-ORBIT SERVICING: AN EXPERIMENTAL INVESTIGATION WITH AN ENVIRONMENTAL TESTBED
Kai Shoji, Tokyo University of Science, Japan

SCREEN 43

- 12:00-12:10 IAC-26/B6/IP/107858**
SATELLITE ATTITUDE OPERATION STRATEGY FOR VARIOUS MISSIONS OF KOMPSAT USING UNIFIED GUIDANCE PROFILE FORMAT
Jeonghoon Hyun, Korea Aerospace Research Institute (KARI), Republic of Korea
- 12:10-12:20 IAC-26/B6/LBA/117865**
COMPUTATIONAL INTELLIGENCE-BASED MULTI-STRIP MISSION PLANNING FOR EARTH OBSERVATION CUBESAT CONSTELLATIONS
Syed Saad Azhar Ali, King Fahd University of Petroleum and Minerals, Saudi Arabia
- 12:20-12:30 IAC-26/B6/IP/110134**
ONE PLATFORM TO TRACK THEM ALL: AN OPEN-SOURCE APPROACH TO MULTI-DOMAIN SPACE AWARENESS
Arcee Juan, Philippine Space Agency (PhilSA), Philippines
- 12:30-12:40 IAC-26/B6/IPB/117940**
SKIMMING THE MOON: A TETHERED SPACECRAFT FOR NEAR-SURFACE LUNAR OBSERVATION
Qi Zhang, York University, Canada
- 12:40-12:50 IAC-26/B6/IP/105539**
ENHANCING FIDELITY IN ANALOG SPACE MISSIONS: DEVELOPING A COMPREHENSIVE KPI FRAMEWORK FOR GROUND SEGMENT AND OPERATIONS REALISM IN ANALOGS
Marília De Almeida Carvalho Matos, ESA - European Space Agency, Italy
- 12:50-13:00 IAC-26/B6/IP/113087**
HEALTH-AWARE STATION-KEEPING OPERATIONS FOR SUSTAINABLE HETEROGENEOUS MEGA-CONSTELLATIONS
Wenchi Zhao, School of Astronautics, Beihang University, China

SCREEN 44

- 12:00-12:10 IAC-26/B6/IP/104501**
PREPARATION AND VERIFICATION METHOD FOR INITIAL ACTIVATION AND CHECKOUT AFTER SATELLITE LAUNCH
Bosung Kim, Korea Aerospace Industries, Ltd, Republic of Korea
- 12:10-12:20 IAC-26/B6/IP/115968**
ROBUST COLLISION AVOIDANCE MANOEUVRE AUTOMATION WITH DEEP CONTEXTUAL BANDITS
Ullisse Romagnoli, Delft University of Technology (TU Delft), The Netherlands, Italy
- 12:20-12:30 IAC-26/B6/IP/112097**
A MANEUVER DETECTION AND INTENTION RECOGNITION METHOD FOR SPACE NON-COOPERATIVE TARGETS BASED ON CHAOTIC POLYNOMIALS AND TRANSFORMER
Yongbin Yu, Harbin Institute of Technology, China
- 12:30-12:40 IAC-26/B6/IP/114933**
SYSTEM ENGINEERING-DRIVEN LEOP, IN-ORBIT TESTING AND ORBITAL LONGITUDE RELOCATION OF A GEO COMMUNICATION SATELLITE
Eren Can Kovan, TUBITAK Uzay, Space Technologies Research Institute, Türkiye
- 12:40-12:50 IAC-26/C1/IP/104956**
MULTI-FORMULATION UNCERTAINTY-AWARE LEO DRAG PROPAGATION WITH FIRST-EXIT RISK METRICS
Nijanthan Vasudevan, West Virginia University, United States
- 12:50-13:00 IAC-26/C1/IP/107896**
AN IMPROVED MONTE CARLO TREE SEARCH FOR AUTONOMOUS OPTIMIZATION OF LOW-THRUST GRAVITY-ASSIST SEQUENCES
Yutong Guan, Harbin Institute of Technology, China

SCREEN 45

- 12:00-12:10 IAC-26/C1/IP/109922**
ARGON-C: AUTONOMOUS REAL-TIME SPACECRAFT GUIDANCE VIA OPTIMAL NEURAL COLLOCATION — INSPIRED BY THE ATHENA POINTING SCENARIO
Luca Macchiaiolo, OHB System AG-Bremen, Germany
- 12:10-12:20 IAC-26/C1/IP/115140**
LEARNING-BASED TIME-SYNCHRONIZED CONTROL FOR DISTURBANCE-FREE DUAL-CABIN SPACECRAFT WITH OBSTACLE AVOIDANCE
Xiang Guo, Beihang University (BUAA), China
- 12:20-12:30 IAC-26/C1/IP/109946**
RRT-BASED MULTI-DIMENSIONAL HOMOTOPY FOR PROPELLANTLESS SOLAR-SAIL TRANSFER OPTIMIZATION
Xinliang Liu, Harbin Institute of Technology, China
- 12:30-12:40 IAC-26/C1/IP/110691**
DATA-EFFICIENT GENERATIVE LEARNING OF SPACECRAFT SWARM DENSITY CONTROL WITH NEURAL ODE AND CONFIGURATION INVARIANT
Junfeng Yuan, Beihang University, China
- 12:40-12:50 IAC-26/C1/IP/109220**
DATA-DRIVEN NONLINEAR MODEL PREDICTIVE CONTROL FOR SPACECRAFT LANDING WITH OPTIMIZATION THROUGH LYAPUNOV-STABLE LEARNED TERMINAL COST
Hongmai Chen, Beihang University, China
- 12:50-13:00 IAC-26/C1/IP/113426**
REINFORCEMENT LEARNING-BASED GNC FOR POWERED DESCENT AND PRECISION LANDING ON MARS USING PPO AND A RECURRENT LINEAR TRANSFORMER
Mattas Ten Voorde, Delft University of Technology (TU Delft), Netherlands (Kingdom of the)

Monday 5 October

SCREEN 46

12:00-12:10 IAC-26/C1/IPB/109219

OPTIMAL INSPECTION VIEWPOINT SEQUENCING FOR ON-ORBIT SERVICING VIA SAFE REINFORCEMENT LEARNING

Adam Abdin, CentraleSupélec, France

12:10-12:20 IAC-26/C1/LBA/117776

FUEL-EFFICIENT CONTROL BARRIER FUNCTION-EMBEDDED MODEL PREDICTIVE CONTROL FOR AUTONOMOUS SPACECRAFT RENDEZVOUS AND DOCKING

Sabire Betül Çınar, Istanbul Technical University, Türkiye

12:20-12:30 IAC-26/C1/IPB/110947

DATA-DRIVEN ATTITUDE CONSENSUS CONTROL FOR HETEROGENEOUS SPACECRAFT

Zhijie Ning, Harbin Institute of Technology, China

12:30-12:40 IAC-26/C1/IP/114983

GLOBAL SEARCH FOR OPTIMAL SOLAR SAIL TRAJECTORIES USING DIFFUSION MODELS

Shizhan Gao, School of Astronautics, Beihang University, China

12:40-12:50 IAC-26/C1/IP/112207

TRAJECTORY DESIGN FOR MULTI-TARGET L4 TROJAN FLYBYS USING JOVIAN-SYSTEM GRAVITY ASSISTS FOR RIDESHARE PROBES

Yixuan Wu, Tsinghua University, China

12:50-13:00 IAC-26/C1/IP/113986

GNSS-BASED GROUND-TARGET DIRECTION ESTIMATION FOR ACCURATE BEAM POINTING IN THE OHISAMA WIRELESS POWER TRANSMISSION DEMONSTRATOR

Simon Maillot, The Graduate University for Advanced Studies (SOKENDAI), Japan

SCREEN 47

12:00-12:10 IAC-26/C1/IP/110649

COMPOSITE ANTI-DISTURBANCE CONTROL FOR ENERGY-EFFICIENT OPERATION OF VERY LOW EARTH ORBIT VEHICLES SERVO SYSTEM

Shaoguang Rong, Beihang University (BUAA), China

12:10-12:20 IAC-26/C1/IP/108456

AN IMPROVED HYBRID CNN-LSTM AND PSEUDOSPECTRAL METHOD FOR SPACE SHUTTLE REENTRY TRAJECTORY OPTIMIZATION

Yuanxin Yang, Northwestern Polytechnical University, China

12:20-12:30 IAC-26/C1/IPB/111065

FAULT DETECTION AND ISOLATION OF SATELLITE ATTITUDE CONTROL USING A CASCADE FILTER STRUCTURE FOR AN INTEGRATED REACTION WHEEL-MAGNETORQUER ACTUATION SYSTEM

Numan Çavdar, Istanbul Technical University, Türkiye

SCREEN 48

12:00-12:10 IAC-26/D2/IPB/114356

REINFORCEMENT LEARNING-BASED OPTIMAL CONTROL ALLOCATION FOR OVER-ACTUATED REUSABLE LAUNCH VEHICLES

Junesuk Kim, Seoul National University, Republic of Korea

12:20-12:30 IAC-26/D2/IPB/115368

RAPID MULTIDISCIPLINARY DESIGN OF LAUNCH VEHICLES VIA INTEGRATED LIQUID PROPULSION MODELING AND VECTORIZED TRAJECTORY SIMULATION

Kubilay ÖZÇELİK, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Türkiye

12:30-12:40 IAC-26/D2/IP/110789

A HYBRID MODEL-DATA-DRIVEN REENTRY GUIDANCE METHOD BASED ON SEQUENTIAL OPTIMAL TRAJECTORY SETS

Yelin Liu, Northwestern Polytechnical University, China

12:40-12:50 IAC-26/D2/IP/113755

SUSTAINABLE SPACE TRANSPORTATION: VERSATILE DEPLOYABLE SAIL SPACECRAFT

Zitong Bai, School of Astronautics, Beihang University, China

SCREEN 49

12:00-12:10 IAC-26/C2/IP/111546

316L SS/B4C DIFFUSION BONDED JOINTS FOR NTP RADIATION SHIELDING: MICROSTRUCTURAL EVOLUTION UNDER IRRADIATION

Calvin Chandler, The Ohio State University, United States

12:20-12:30 IAC-26/C2/IPB/113685

ROBOTIC ARM CONCEPT FOR IN-SPACE BONDING TO ASSEMBLE, REPAIR AND MAINTAIN LARGE SPACE STRUCTURES

Lukas Bartschinski, Munich University of Applied Sciences, Germany

12:40-12:50 IAC-26/C2/IP/111944

MACHINE-LEARNING MAPPING OF NIOBIUM MATERIALS FOR AEROSPACE: REVEALING FUNCTIONAL DOMAINS IN THIN FILMS, UHT ALLOYS, AND ADAPTIVE COATINGS

Enes İNCE, Erzurum Technical University, Türkiye

12:50-13:00 IAC-26/C2/IPB/110207

KNOWLEDGE-EMBEDDED AUTOMATION FOR LAUNCH VEHICLE HARNESS STRUCTURAL DESIGN AND MANUFACTURING PREPARATION

Yajie HU, LandSpace Technology Corporation Ltd., China

SCREEN 50

12:20-12:30 IAC-26/C2/IPB/116258

A DESIGN-DRIVEN SYSTEMS ENGINEERING APPROACH FOR THE STRUCTURAL OPTIMIZATION OF A HYBRID AA7075-CARBON COMPOSITE CUBESAT WITH CERAMIC-INFUSED RESIN INTEGRATION

Volkan Dagli, ITouch Bilisim Sistemleri (ITouch Systems), Türkiye

12:30-12:40 IAC-26/C2/LBA/117898

LABORATORY REPRODUCTION OF MOONQUAKE-INSPIRED ACCELEROGRAMS FOR SIMULATION-TO-TEST VERIFICATION OF LUNAR HABITAT STRUCTURES

Fidel Angel Castro Suazo, Universidad Nacional de Ingeniería (Lima, Perú), Peru

SCREEN 51

12:00-12:10 IAC-26/C2/IPB/109623

MULTILAYER ANISOTROPIC HEAT SHIELD: ANALYSIS OF THE THERMAL STRESS STATE IN CASE OF SEMI-TRANSPARENCY OF LAYERS

Victor Leonov, Bauman Moscow State Technical University, Russian Federation

12:10-12:20 IAC-26/C2/IP/116657

A NUMERICAL COMPARATIVE ANALYSIS OF AUXETIC-INSPIRED LANDING LEGS IN REUSABLE LAUNCH VEHICLES

Oluwatosin Kolade, Nigeria

12:20-12:30 IAC-26/C2/IPB/115790

CHEMICAL STABILIZATION OF REGOLITH WITH UREA ADDITIVES FOR THE CONSTRUCTION OF SUSTAINABLE SPACE HABITATS

Lucero Lidia Ventura Cruz, Universidad Nacional Mayor de San Marcos, Peru

12:50-13:00 IAC-26/C2/IP/116963

VIBRATION ATTENUATION IN HONEYCOMBS STRUCTURES

Diego Hernández, Facultad de Ingeniería-UNAM, Mexico

Monday 5 October

SCREEN 52

12:00-12:10 IAC-26/C4/IPB/110594
VERIFICATION OF A PHYSICS-INFORMED MULTIPHASE THERMAL MODEL USING THE CENTRIFUGAL NUCLEAR THERMAL ROCKET
Joshua Naudet, The Ohio State University College of Engineering, United States

12:20-12:30 IAC-26/C4/IP/111978
OVERVIEW OF LE-9 ENGINE TURBOPUMP DESIGN AND TURBINE BLADE VIBRATION MEASUREMENT TEST
Atsuhiko TSUNODA, Japan Aerospace Exploration Agency (JAXA), Japan

12:40-12:50 IAC-26/C4/IP/114285
END-TO-END TRANSIENT SIMULATION AND EXPERIMENTAL VALIDATION OF A NITROUS OXIDE FEED LINE FOR A LAB-SCALE HYBRID ROCKET MOTOR
Rukiyye Melek AYDURMUŞ, Gebze Technical University, Türkiye

12:50-13:00 IAC-26/C4/IP/106801
DESIGN AND TECHNICAL REQUIREMENTS OF A METHANE ROCKET ENGINE COMBUSTION TEST FACILITY FOR FUTURE LAUNCH VEHICLE DEVELOPMENT
Donghyuk Kang, Korea Aerospace Research Institute (KARI), Republic of Korea

SCREEN 53

12:00-12:10 IAC-26/C4/IP/116780
CHARACTERIZATION OF POWER PROCESSING UNIT INTEGRATION AND ITS INFLUENCES ON COAXIAL PULSED PLASMA THRUSTERS
Dillon O'Reilly, Southeast Technological University of Ireland, Ireland

12:10-12:20 IAC-26/C4/LBA/117556
COMPARATIVE HEAT TRANSFER ANALYSIS OF DEMİRKAZIK-IV ENGINE : ANALYTICAL, NUMERICAL AND EXPERIMENTAL APPROACHES
Gökdeniz Yıldırım, Yıldız Technical University, Türkiye

12:20-12:30 IAC-26/C4/IP/104943
DESIGN AND CHARACTERIZATION OF AN OPTIMIZED MINIATURIZED ION PROPULSION SYSTEM FOR CUBESAT MISSIONS
Furkan Kaplan, Karadeniz Technical University, Türkiye

12:30-12:40 IAC-26/C4/IPB/116667
FAST PROPELLANT MARGIN ESTIMATION FOR EARLY-PHASE LIQUID ROCKET ENGINE DESIGN UNDER O/F RATIO AND LOADING UNCERTAINTIES
Kubilay ÖZÇELİK, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Türkiye

12:50-13:00 IAC-26/C4/IP/110581
ENGINEERING ASSESSMENT OF ELECTRODELESS PLASMA ACCELERATOR OPERATING REGIMES DURING PRELIMINARY DESIGN
Artur Andronov, Bauman Moscow State Technical University, Russian Federation

SCREEN 55

12:20-12:30 IAC-26/D1/IP/108526
EXPLORING TASK ALLOCATION AND MOTION PLANNING FOR COOPERATIVE MULTI-SATELLITE DEBRIS REMOVAL AND ON ORBIT SERVICING MISSIONS
Alex Shufflebotham, Cranfield University, Cranfield UK, United Kingdom

12:30-12:40 IAC-26/D1/IP/110765
MANUFACTURING-INFORMED EARLY-STAGE TRADE STUDIES FOR SPACE SYSTEMS DESIGN
Nicole Gainska, University of Strathclyde, United Kingdom

12:40-12:50 IAC-26/D1/IP/109204
SAFE FAULT-TOLERANT SPACE DOCKING VIA PASSIVITY AND CONTROL BARRIER FUNCTIONS
Takahiro KATO, The University of TOKYO, Graduate school, Japan

12:50-13:00 IAC-26/D1/IPB/106145
TECHNOLOGY FOR ATTITUDE RECONSTRUCTION OF A LEO NANOSATELLITE ON THE EXAMPLE OF THE SAMSAT-IONOSPHERE MISSION
Igor V. Belokonov, Samara National Research University (Samara University), Russian Federation

SCREEN 56

12:00-12:10 IAC-26/D1/IPB/104743
AN UNCERTAINTY-INFORMED SUSTAINABILITY ASSESSMENT FRAMEWORK FOR EARLY-PHASE SPACE MISSION ECO-DESIGN
Cecilia Lanfredi Alberti, University of Strathclyde, United Kingdom

12:10-12:20 IAC-26/D1/IP/113502
EXPLORATION OF THE TETHERED SOLAR SHIELD CONCEPT TO HELP MITIGATE GLOBAL WARMING
Jesse Elder, McGill University, Canada

12:20-12:30 IAC-26/D1/IPB/115942
AUTOMATING REQUIREMENTS-BASED FLIGHT SOFTWARE TESTING USING LARGE LANGUAGE MODELS
Paul Darm, University of Strathclyde / Mechanical and Aerospace Engineering, United Kingdom

12:30-12:40 IAC-26/D1/IP/109055
ENERGY-ORBIT COOPERATIVE BALANCE CONTROL FOR VERY LOW EARTH ORBIT SATELLITES UNDER SOLAR ACTIVITY UNCERTAINTY
Xiuying Liu, School of Astronautics, Beihang University, China

12:40-12:50 IAC-26/D1/IPB/115636
SOCIO TECHNICAL COMPLEXITY MANAGEMENT IN NEXT GENERATION AVIONICS SYSTEMS
Paras Adlaka, Cornell University, India

SCREEN 57

12:00-12:10 IAC-26/D3/IP/106990
XENOFERRA — SIMULATING MARTIAN REGOLITHIC IRON BIOMINING: INVESTIGATING METABOLIC PATHWAYS AND EFFICIENCY IN-SILICO FOR MODEL ORGANISMS
Rohini Parthasarathy, International Space University, France

12:10-12:20 IAC-26/D3/IP/110990
COMPARATIVE ANALYSIS OF HIGH-LEVEL VERSUS DISCRETE THRUSTER CONTROL ARCHITECTURES FOR AUTONOMOUS FREE-FLYERS GNC TASKS
Ricard Marsal I Castan, University of Luxembourg, Luxembourg

12:20-12:30 IAC-26/D3/IP/113842
FROM ANALOG ASTRONAUT TO ANALOG MISSION INFRASTRUCTURE: A FRAMEWORK FOR ESTABLISHING A STUDENT-LED MARTIAN ANALOG MISSION IN MOROCCO.
Somaya Bennani, [unlisted], Switzerland

12:30-12:40 IAC-26/D3/IP/112316
LUNAR TRIPLET METROPOLIS: A MULTI-SECTOR BURIED CITY FOR PERMANENT HUMAN SETTLEMENT ON THE MOON
Parisa Hajji, Matrix Gemini, Canada

12:40-12:50 IAC-26/D3/IP/112762
ENABLING SUSTAINABLE SPACE EXPLORATION THROUGH ADDITIVE MANUFACTURING: A MODULAR ROVER CASE-STUDY
Eden Buch Kornreich, ISAE-Supaero University of Toulouse, France

12:50-13:00 IAC-26/D3/IP/105153
AN AR-ASSISTED NAVIGATION FRAMEWORK AS AN ENABLING BUILDING BLOCK FOR EXTRATERRESTRIAL UNDERGROUND HABITATS
Xing Xu, Harbin Institute of Technology, China

Monday 5 October

SCREEN 58

- 12:00-12:10 IAC-26/E1/IP/108911**
INTEGRATING REAL-WORLD ASTROPHYSICS INTO K-12 CURRICULA: A MULTI-LEVEL INQUIRY MODEL FOR GIFTED STUDENTS USING AI-DRIVEN SPECTROSCOPY
Sevda Seçer Esmer, [unlisted], Türkiye
- 12:10-12:20 IAC-26/E1/IP/104988**
RETHINKING LEADERSHIP IN AEROSPACE: CONFIDENCE, CULTURE, AND ACCESS IN HIGH-STAKES TECHNICAL ORGANIZATIONS
Kiah May, United States
- 12:20-12:30 IAC-26/E1/IP/105297**
BUILDING AFRICA'S SPACE WORKFORCE: KENYA SPACE AGENCY'S MULTI-TIERED MODEL FOR EMERGING SPACE NATIONS
Erick Villa Okeyo, Kenya Space Agency (KSA), Kenya
- 12:30-12:40 IAC-26/E1/IP/107639**
HANDS ON TRAINING FOR SPACE MEDICINE PHYSICIANS
Dana Levin, Vast, United States
- 12:40-12:50 IAC-26/E1/IP/105500**
ISOLATIONISM VERSUS INTEGRATION: THE IMPACTS OF EDUCATION CUTS ON SPACE INVESTMENT
Ishani Peddi, Georgia Institute of Technology, United States
- 12:50-13:00 IAC-26/E1/IPB/104490**
EXPANDING SPACE EDUCATION ACCESS: THE ALABAMA SPACE GRANT CONSORTIUM AMBASSADOR PROGRAM
Debra Nielson, University of Alabama in Huntsville, United States

SCREEN 59

- 12:00-12:10 IAC-26/E1/IP/105966**
COSMIC PERIODIC TABLE
Chaima Bhibah, Astronomical Society of Tunisia, Tunisia
- 12:10-12:20 IAC-26/E1/IP/113910**
ASTRONAUTS IN THE CLASSROOM: THE IMPACT OF SPACE THEMED LESSONS ON STUDENT INTEREST IN STEM CAREERS
Fidan Shixaliyeva, Garabagh University, Azerbaijan
- 12:20-12:30 IAC-26/E1/IP/108551**
THE ENTRY PATHWAYS AND RETENTION LEVERS FOR AN UPCOMING WORKFORCE IN THE AEROSPACE INDUSTRY
Laurianne Favreau, Canada
- 12:40-12:50 IAC-26/E1/IP/105414**
UNIVERSITY-LED CUBESAT AND CANSAT PROGRAMS AS WORKFORCE DEVELOPMENT PLATFORMS IN ASEAN: LESSONS FROM THE PHILIPPINES
Mark Angelo Purio, Adamson University, Philippines

SCREEN 60

- 12:20-12:30 IAC-26/E1/IP/104835**
A DEAD END FOR MANY
Benjamin Yekinni, Lagos State University, Nigeria
- 12:30-12:40 IAC-26/E1/IPB/110393**
DEMISTIFYING HIGH-ENERGY ASTROPHYSICS: A PEDAGOGICAL APPROACH TO TEACHING DIFFUSIVE SHOCK ACCELERATION USING MECHANICAL ANALOGIES
Gulbeyaz Korkmaz, Mimar Sinan Fine Arts University, Türkiye
- 12:50-13:00 IAC-26/E1/IP/104508**
SCIENCE EDUCATION IN THE SPACE AGE: A COMPARATIVE ANALYSIS OF THE 2018 CURRICULUM AND THE 2024 CENTURY OF TÜRKİYE EDUCATION MODEL IN THE CONTEXT OF EARTH AND SPACE SCIENCES
Elif Sida Karaismailoğlu, Hacettepe University, Türkiye

SCREEN 61

- 12:00-12:10 IAC-26/E1/IP/117190**
REACHING THE UNREACHED: A FIELD-BASED METHODOLOGY FOR DELIVERING SPACE EDUCATION TO UNDERREPRESENTED PRIMARY SCHOOLS
Alev Sönmez, Fraunhofer Alliance Space, Germany
- 12:20-12:30 IAC-26/E1/IP/113099**
HANDS-ON WORKSHOP BASED ON SIMULATED EXTRAVEHICULAR ACTIVITY (EVA) AS A TOOL FOR CAREER GUIDANCE AND DEVELOPMENT OF ENGINEERING COMPETENCIES IN STUDENTS
Veronika Kameneva, Bauman Moscow State Technical University, Russian Federation
- 12:40-12:50 IAC-26/E1/IP/107453**
CULTIVATING CURIOSITY THROUGH COMMUNICATION: EXPLORING ENVIRONMENTS THAT SPARK STUDENTS' INTEREST IN SPACE EDUCATION
Naomi Kagawa, Shimane University, Japan

SCREEN 62

- 12:00-12:10 IAC-26/E1/IP/108236**
"THE MAGICAL HEROES OF THE UNIVERSE": GAME-BASED LEARNING IN EARLY CHILDHOOD SPACE EDUCATION
Khadija Huseynli, Azerbaijan State Oil and Industry University (ASOIU), Azerbaijan
- 12:20-12:30 IAC-26/E1/IP/107244**
EXPANDING A SPACE STATION WITH ISRU CAPABILITIES: EVALUATING THE SECOND YEAR OF A MULTI-YEAR CONCEPT FOR THE SPACE STATION DESIGN WORKSHOP
Lina Salman, Technical University of Munich (TUM), Germany

SCREEN 63

- 12:20-12:30 IAC-26/E1/IP/115251**
SUPPORTING EARLY ENGAGEMENT IN SPACE AND STEM EDUCATION
Luis Cormier, University of Nottingham, United Kingdom
- 12:50-13:00 IAC-26/E1/IP/116520**
"LISTENING TO THE UNIVERSE: DATA-DRIVEN MUSIC AS A TOOL FOR PUBLIC ENGAGEMENT IN ASTROPHYSICS"
İsa Baghirov, Azerbaijan

SCREEN 64

- 12:00-12:10 IAC-26/E3/IP/111323**
DOES ASYMMETRY CHALLENGE STABILITY? GOVERNANCE DESIGN IN MULTINATIONAL SPACE COOPERATION
Gabriel Jörg Schwarzkopf, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany
- 12:10-12:20 IAC-26/E3/IP/105771**
ANALYSIS OF SPACE STATION MISSION DIVERSIFICATION IN THE POST-ISS ERA AND STRATEGIC POLICY DIRECTIONS FOR SOUTH KOREA
GiWon Nam, Korea Aerospace Research Institute (KARI), Republic of Korea
- 12:20-12:30 IAC-26/E3/IP/106069**
SPACE FUTURES FOR ALL: ETHICAL STORYTELLING, CLIMATE EDUCATION, INDIGENOUS KNOWLEDGE, AND INCLUSIVE GOVERNANCE
Jessica Noble, Griffith University, Australia

Monday 5 October

12:30-12:40 IAC-26/E3/IPB/111169
THE 17 SUSTAINABLE DEVELOPMENT GOALS STATUS – WHY THE 18TH SDG, SPACE FOR ALL ON EARTH AND BEYOND IS NEEDED
Adriano V. Autino, Space Renaissance International, Italy

12:40-12:50 IAC-26/E3/IP/114469
SCALING NATIONAL SATELLITE CAPABILITIES IN EMERGING SPACE NATIONS: THE CASE OF PERU BEYOND PERUSAT-1
Frank Raul Quintana Quispe, Universidad Nacional Tecnológica de Lima Sur, Peru

12:50-13:00 IAC-26/E3/IP/105693
STRATEGIC CONSEQUENCES: SCIENCE IN RETREAT. THE RISKS OF SURRENDERING SPACE LEADERSHIP.
Celin Hidalgo, Gran Sasso Science Institute, Italy

SCREEN 65

12:00-12:10 IAC-26/E3/IP/109834
A STUDY ON THE PARADIGM SHIFT IN KOREA'S SPACE RISK PREPAREDNESS POLICY: FOCUSING ON A COMPARATIVE ANALYSIS OF THE 1ST AND 2ND BASIC PLANS
Nammi Choe, Korea Aerospace Research Institute (KARI), Republic of Korea

12:20-12:30 IAC-26/E3/IP/111402
FROM ANTARCTICA TO SPACE2030: A NON-PROFIT EXPEDITION MODEL LINKING SPACE ANALOGUES AND SUSTAINABLE DEVELOPMENT GOALS
Julie LESPAGNOL, Ambitions Expedition, France

12:40-12:50 IAC-26/E6/IP/108670
EMBEDDING SPACE CONTEXTS AS AN INNOVATION STRATEGY IN ENGINEERING EDUCATION
Nishanth Pushparaj, University of Nottingham, United Kingdom

12:50-13:00 IAC-26/E6/IP/105773
COMPARATIVE ANALYSIS OF MISSION ASSURANCE FRAMEWORKS IN THE UNITED STATES AND EUROPE AND POLICY IMPLICATIONS FOR EMERGING SPACE NATIONS
Ami Yun, Korea Aerospace Research Institute (KARI), Republic of Korea

SCREEN 66

12:00-12:10 IAC-26/E6/IP/112855
BUILDING THE POST ISS ECONOMY: GOVERNMENT, INDUSTRY, AND THE FUTURE OF COMMERCIAL STATIONS
Ruchi Nema, Space Exchange, United Kingdom

12:10-12:20 IAC-26/E6/IP/113738
FACTORY IN SPACE: A SUSTAINABLE BUSINESS MODEL FOR AN ON-ORBIT FACTORY
Farouk Abdulhamid, Politecnico di Milano, Italy

12:20-12:30 IAC-26/E6/IP/109076
RESOURCES FOR REUTILISATION AND RECYCLING OF SPACECRAFT SYSTEMS IN GEO
Fernando Vargas Rodriguez, Cranfield University, UK, United Kingdom

SCREEN 67

12:00-12:10 IAC-26/E7/IP/105648
THE CONFLICT BETWEEN PRIVATISATION AND CULTURAL RIGHTS OF INDIGENOUS AND RELIGIOUS GROUPS IN OUTER SPACE.
Elvis Cosmos, [unlisted], Kenya

12:10-12:20 IAC-26/E7/IP/107368
BRIDGING TERRESTRIAL AND CELESTIAL CONSTRUCTION CONTRACTS: A COMPARATIVE ANALYSIS OF FIDIC STANDARDS AND INTERNATIONAL SPACE FACILITY AGREEMENTS
Hasan Efehan Bilen, Istanbul Technical University, Türkiye

SCREEN 68

12:30-12:40 IAC-26/E7/IPB/106640
REGIME FRAGMENTATION AND INTERACTION: THE FOREIGN INVESTMENT PROTECTION OF COMMERCIAL SPACE ACTIVITIES
Yanru Chen, The University of Hong Kong, Hong Kong SAR, China

12:40-12:50 IAC-26/E10/IP/112684
VALUE FOCUSED THINKING AS A TOOL FOR THE DEFINITION OF ELIGIBLE INITIATIVES FOR A PLANETARY DEFENCE STRATEGY IN BRAZIL
Ana Lucia Pegetti, ITA-CTA, Brazil

SCREEN 69

12:00-12:10 IAC-26/E10/IP/113905
MBSE-DRIVEN EARLY PHASE DESIGN FRAMEWORK FOR A NEO SURVEYOR MISSION IN SUPPORT OF ACTIVE PLANETARY DEFENSE
Dhanisha Sateesh, Space Generation Advisory Council (SGAC), India

12:10-12:20 IAC-26/E10/IP/115344
TRAJECTORY PLANNING METHOD FOR MULTI-SPACECRAFT COOPERATIVE KINETIC IMPACT USING LOW-THRUST PROPULSION FOR ASTEROID DEFENSE
Tianyou Li, Beijing Institute of Technology, China

12:20-12:30 IAC-26/E11/IP/110525
TRUST BREAKDOWN AND REPAIR IN MULTINATIONAL SPACE ECOSYSTEMS
Allison Nicholls, Aligned Orbits, United States

SCREEN 70

12:00-12:10 IAC-26/E11/IP/117128
IMPACT OF STRATEGIC STORYTELLING ON CLOSING THE INFORMATION GAP AND LEGITIMIZING THE FIRST AEROSPACE ENGINEERING MAJOR IN DECENTRALIZED REGIONS OF PERU: THE CASE OF THE CHASQUI II PROJECT - NATIONAL UNIVERSITY OF ENGINEERING
Meliza Elizabeth Leon Chambi, Universidad Nacional de San Agustín, Peru

12:10-12:20 IAC-26/E11/IP/105766
MYANMAR'S SPACE JOURNEY: INSTITUTIONAL AND POLITICAL STRUGGLES IN EMERGING SPACE DEVELOPMENT
Ei Phyu Phyu, King Mongkut's University of Technology North Bangkok, Thailand

12:20-12:30 IAC-26/E11/IP/104504
DIPLOMACY AS A PATHWAY FOR INTEGRATED AND SUSTAINABLE SPACE ECOSYSTEMS IN TÜRKİYE AND THE UAE
Sarah Salem, Space Policy Institute, George Washington University, United States

12:30-12:40 IAC-26/E11/IP/104824
VALUATION AND GROWTH TRAJECTORY OF THE AFRICAN SPACE ECONOMY: A 2024 ASSESSMENT AND 2030 PROJECTIONS
Mustapha Iderawumi, Space in Africa, Nigeria

12:40-12:50 IAC-26/E11/IP/106015
STRATEGIC IMPLEMENTATION OF REGIONAL SPACE CENTERS IN EMERGING NATIONS: THE CHILEAN CASE STUDY.
Cristobal Troncoso, [unlisted], Chile

12:50-13:00 IAC-26/E11/IP/113281
THE (NEW SPACE) ECONOMICS BEHIND CUBESATS V2: CONNECTING EMERGING CEE SPACE ECOSYSTEMS THROUGH ECONOMIC PERFORMANCE AND SUSTAINABILITY
Péter Kristóf, Óbuda University, John von Neumann University, Hungary

Tuesday 6 October

SCREEN 1

12:45-12:55 IAC-26/A1/IPB/116947

IN-SITU 3D BIOPRINTING IN HYPOGRAVITY CONDITIONS: RHEOLOGICAL OPTIMIZATION OF BIO-INKS FOR AUTONOMOUS TREATMENT OF CUTANEOUS LESIONS IN DEEP SPACE MISSIONS
Rosario Yulisa Huayanay Flavio, Universidad Nacional Mayor de San Marcos, Peru

12:55-13:05 IAC-26/A1/IPB/109645

EDGE-BASED LSTM PREDICTION OF CARDIOVASCULAR DECONDITIONING IN MICROGRAVITY ANALOGUES: A TRANSLATIONAL FRAMEWORK FOR DEEP-SPACE MEDICAL AUTONOMY
Mustafa Selim Yavuz, Karamanoğlu Mehmetbey University (KMU), Türkiye

13:05-13:15 IAC-26/A1/IPB/114786

FROM AVIATION TO SPACE: A STRATIFIED MEDICAL RISK CASCADE FOR HUMAN SPACEFLIGHT CERTIFICATION
Tuğba Özüari, University of Health Sciences, Türkiye, Türkiye

13:15-13:25 IAC-26/A1/IP/115711

BACTERIAL TAXIS IN PLANETARY SURFACE CONDITIONS
Madelyn MacRobbie, Michigan Technological University, United States

13:25-13:35 IAC-26/A1/IP/107691

INVESTIGATING LOWER BODY NEGATIVE PRESSURE AS A SPACEFLIGHT COUNTERMEASURE ACROSS MICROGRAVITY, LUNAR, AND MARTIAN GRAVITY: A CARDIOVASCULAR DIGITAL TWIN STUDY
Francesco Tripoli, Politecnico di Torino, Italy

13:35-13:45 IAC-26/A1/IP/107620

A MULTISCALE CARDIOVASCULAR-OCULAR DIGITAL TWIN FOR ASSESSING SPACEFLIGHT ASSOCIATED NEURO-OCULAR SYNDROME (SANS)
Giovanna Colussi, Politecnico di Torino, Italy

SCREEN 2

12:45-12:55 IAC-26/A1/IP/117092

MICROBIAL ECOSYSTEMS OF CUATRO CIÉNEGAS AS ANALOGS FOR EARLY MARTIAN ENVIRONMENTS
Katya Hassel Vázquez Rodríguez, [unlisted], Mexico

12:55-13:05 IAC-26/A1/IP/111420

STRUCTURAL AND FUNCTIONAL CHARACTERIZATION OF UNKNOWN GENES UPREGULATED UNDER SPACE CONDITIONS USING ALPHAFOLD: HOMO SAPIENS AND MUS MUSCULUS MODELS
Abdullah Elci, KU Leuven, Belgium

13:05-13:15 IAC-26/A1/IP/112359

GRAVITY DEPENDENT ADAPTATION OF SPEECH PRODUCTION: IMPLICATIONS FOR HUMAN PHYSIOLOGY AND COMMUNICATION IN MICROGRAVITY ENVIRONMENTS
Aysegül Sarı Sülüker, Independent Researcher, United States

13:15-13:25 IAC-26/A1/IP/116569

TIME-RESOLVED LONG-READ TELOMERE DYNAMICS IN AXIOM-2 ASTRONAUTS ACROSS PRE-FLIGHT, IN-FLIGHT, AND RECOVERY PHASES
Eyup Alper Saygili, New York-Presbyterian Hospital / Weill Cornell Medical Center, Türkiye

13:25-13:35 IAC-26/A1/IPB/109471

SPACE-RELEVANT SIMULATION OF PHARMACEUTICAL STABILITY: PACKAGING-DEPENDENT DEGRADATION MODELING OF VITAMIN C FOR LONG-DURATION MISSIONS
Ceren Kara, Istanbul Health and Technology University, Türkiye

13:35-13:45 IAC-26/A1/LBA/117654

LIFE-HISTORY AND FEEDING BEHAVIOUR RESPONSES TO MICROALGAL BIOMASS UNDER SIMULATED MICROGRAVITY CONDITIONS
Berkan EREN, Necmettin Erbakan University, Türkiye

SCREEN 3

12:45-12:55 IAC-26/A1/IP/107876

NEUROCOGNITIVE IMPAIRMENT AND MEDICAL INTERVENTION SIMULATION IN SPACE UNDER COMMUNICATION DELAY
Gürkan Özden, [unlisted], Türkiye

12:55-13:05 IAC-26/A1/IPB/107901

IS OUR UNDERSTANDING OF SPACE MEDICINE SUFFICIENT? NEW FIELDS, NEW APPROACHES
Serdar Santaş, [unlisted], Türkiye

13:05-13:15 IAC-26/A1/IP/109080

DEVELOPING AN ALTERNATIVE SOLUTION TO OXYGEN TANKS IN SPACE SUITS
Zeynep Begüm Yalçın, Antalya Yusuf Ziya Öner Science High School, Türkiye

13:15-13:25 IAC-26/A1/IP/111052

BRAIN VENTRICLE VOLUME INCREASES IN MICROGRAVITY: A HYPOTHESIS
Richard Rosato, Dartmouth Medical School, United States

13:25-13:35 IAC-26/A1/IP/110709

EFFECTS OF SIMULATED MICROGRAVITY ON AN ESCHERICHIA COLI - T7 BACTERIOPHAGE SYSTEM
Vivien Simon, University Semmelweis, Academy Of Sciences - Research Group Biophysics, Hungary

13:35-13:45 IAC-26/A1/IPB/108223

SIMULATING MICROGRAVITY TO ACCELERATE AGEING RESEARCH: A UNIQUE INTERSECTION BETWEEN BIOLOGY AND ENGINEERING
Sofia Rossi, University of Amsterdam, Germany

SCREEN 4

12:45-12:55 IAC-26/A1/IP/113829

CHRONONUTRITION: A COUNTERMEASURE TO CIRCADIAN DYSRHYTHMIA AND INVESTIGATING STEM CELL REGENERATION AND THE GUT-NEURO-AXIS MICROBIOME IN H8GH-FIDELITY ANALOG ASTRONAUT ICE MISSIONS
Susan Ip-Jewell, United States

12:55-13:05 IAC-26/A1/IP/116999

THE MENSTRUAL CYCLE IN MICROGRAVITY: PHYSIOLOGICAL CHANGES OF FEMALE ASTRONAUTS DURING SPACEFLIGHT
Elza Salimli, Azerbaijan Medical University, Azerbaijan

13:05-13:15 IAC-26/A1/IP/107667

DATA-DRIVEN CLASSIFICATION OF MUSCULOSKELETAL DEGRADATION IN ASTRONAUTS: A BAYESIAN-OPTIMIZED MACHINE LEARNING APPROACH
Miraç Bazancir, Gaziantep University, Türkiye

13:15-13:25 IAC-26/A1/IP/114836

MANAGING THE ICK FACTOR" FOR SPACE READINESS - HISTORIC APPROACHES & FUTURE OPPORTUNITIES FOR NAUSEA, MENSTRUATION, AND EXCREMENT
Jarin Chu, United States

13:25-13:35 IAC-26/A1/IP/109027

THE POTENTIAL OF VIBROTACTILE SENSORY SUBSTITUTION FOR THE VESTIBULAR SYSTEM TO MITIGATE POSTURAL INSTABILITY IN ASTRONAUTS DURING READAPTATION TO EARTH GRAVITY
Elvira Gainutdinova, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Russian Federation

Tuesday 6 October

13:35-13:45 IAC-26/A1/IP/105857
INFORMING MARTIAN URBAN PLANNING THROUGH
TERRESTRIAL LIVABILITY METRICS AND ANALYTICAL REASONING
Maria José Ramírez Cifuentes, Universidad del Valle de Guatemala
(UVG), Guatemala

SCREEN 5

12:45-12:55 IAC-26/A1/IPB/115208
AUTONOMOUS MEDICAL DECISION SUPPORT SYSTEMS FOR
LONG-DURATION PLANETARY SURFACE MISSIONS
Salam Aualhayja'a, MENA Engineering Education and Training,
Jordan

12:55-13:05 IAC-26/A1/IP/107317
PLAN T: BIO-REGENERATIVE LIFE SUPPORT FOR EXTRA-
TERRESTRIAL HABITATS
Amirmohsen Paziresh, Students Space Association, Warsaw
University of Technology, Poland

13:05-13:15 IAC-26/A1/IP/107312
ARCHAEA AND HYDROTHERMAL VENT ANALOGUES ON
ENCELADUS: IMPLICATIONS FOR EXTRATERRESTRIAL LIFE
Amirmohsen Paziresh, Students Space Association, Warsaw
University of Technology, Poland

13:15-13:25 IAC-26/A1/IP/109018
THE LEADING FACTOR IN CHRONIC INCREASE OF CORTICOSPINAL
EXCITABILITY UNDER THE SUPPORT WITHDRAWAL CONDITIONS:
PRELIMINARY RESULTS
Alexandra Riabova, Institute of Biomedical Problems (IBMP), Russian
Academy of Sciences (RAS), Russian Federation

13:25-13:35 IAC-26/A1/IP/108817
EARLY OOGENESIS IN DROSOPHILA MELANOGASTER DOES NOT
CHANGE UNDER SIMULATED WEIGHTLESSNESS
Irina V. Ogneva, SSC RF Institute of Biomedical problems of RAS,
Russian Federation

13:35-13:45 IAC-26/A1/IP/108914
ELECTROMYOSTIMULATION AS A COUNTERMEASURE FOR
MICROGRAVITY-INDUCED MOTOR DEFICITS: FROM GROUND-
BASED ANALOGS TO CLINICAL APPLICATION
Tatiana Shigueva, State Scientific Center of the Russian Federation -
Institute of Biomedical Problems of the Russian Academy of Sciences,
Russian Federation

SCREEN 6

12:45-12:55 IAC-26/A1/IP/108097
DEVELOPMENT AND CHARACTERIZATION OF A MICROGRAVITY-
COMPATIBLE WHOLE-FOOD NUTRIENT BAR AS A NUTRITIONAL
COUNTERMEASURE FOR FEMALE ASTRONAUTS
Fidan Guliyeva, Azerbaijan State University of Economics, Azerbaijan

13:05-13:15 IAC-26/A1/IP/113558
POST-MISSION JOB SATISFACTION AMONG ASTRONAUTS :
PSYCHOSOCIAL AND EMOTIONAL DETERMINANTS
Simara Hasanova, Baku State University, Azerbaijan

13:15-13:25 IAC-26/A1/IP/106405
RESOURCE PSYCHOLOGY MANAGEMENT (RPM): QUANTIFYING
HUMAN RESOURCE PRIORITIZATION AND DECISION-MAKING
UNDER SCARCITY IN ISOLATED AND EXTREME ANALOG
ENVIRONMENTS
Raul Antonio Mariani Galarza, Mars Academy USA, United States

13:25-13:35 IAC-26/A1/IP/117144
(CFD) MODELING AND 4D FLOW FOR THE CARDIOVASCULAR AND
CEPHALIC SYSTEM IN RESPONSE TO SPACE CONDITIONS
Alexander Hugo Barzola Chavez, Intinauta Research Center, Peru

13:35-13:45 IAC-26/A1/IP/114765
DEVELOPMENT OF A CLOSED-LOOP NEUROADAPTIVE
BIOFEEDBACK FRAMEWORK FOR ASTRONAUT WELL-BEING
THROUGH IMMERSIVE AR/VR ENVIRONMENTS
Aagam Jain, India

SCREEN 7

12:45-12:55 IAC-26/A2/IP/106949
SOFTWARE-DEFINED ORCHESTRATION AND EDGE
AI INFRASTRUCTURE FOR DISTRIBUTED IN-SPACE
MANUFACTURING SYSTEMS
Rama Afullo, Satlyt Inc., United States

SCREEN 8

12:45-12:55 IAC-26/A3/IP/116413
LUNAR HELIUM-3 EXTRACTION: ARCHITECTURAL BASELINE FOR
THE THEIA MISSION
Mattia Morelli, Politecnico di Milano, Italy

12:55-13:05 IAC-26/A3/IP/104706
FEASIBILITY ANALYSIS AND MISSION DESIGN OF AN ION-
PROPELLED LUNAR CUBESAT WITH IMPACTOR AND ORBITER FOR
INTA'S FIRST LUNAR EXPLORATION
Alicia Garcia Garcia, OHB System AG, Spain

13:05-13:15 IAC-26/A3/IP/106799
SAFE LUNAR LANDING SYSTEM USING MULTIPLE VENTED
AIRBAGS
Tatsuaki Hashimoto, Japan Aerospace Exploration Agency (JAXA),
Japan

13:15-13:25 IAC-26/A3/IP/105182
DEVELOPMENT OF WATERLESS VIBRATORY COMPACTION
TECHNIQUES FOR LUNAR REGOLITH BLOCKS TOWARD THE
LUNAR IN-SITU CONSTRUCTION OF LANDING PADS
Tatsuya Nukushina, National Institute of Technology (Japan), Japan

13:25-13:35 IAC-26/A3/IP/109394
INTEGRATED CO₂-TO-METHANE ISRU ARCHITECTURE FOR
SUSTAINABLE ENERGY AND PROPELLANT PRODUCTION ON
MARS
Arif Salayev, Azerbaijan State Oil and Industry University (ASOIU),
Azerbaijan

13:35-13:45 IAC-26/A3/IP/105527
THE ARAF CORE HYPOTHESIS: A BINARY-CORE TRANSITION
MODEL FOR PLANETARY EVOLUTION AND THE ANKA EQUATION
Berkut Gençay Sarıkız, Türkiye

SCREEN 9

12:45-12:55 IAC-26/A3/IP/113743
MID-AIR REORIENTATION AND CONTACT-AWARE LANDING OF A
JUMPING QUADRUPED ROBOT FOR LUNAR EXPLORATION
Jin Tae Choi, Seoul National University, Republic of Korea

12:55-13:05 IAC-26/A3/IP/114939
INTEGRATED GUIDANCE, NAVIGATION AND CONTROL
ARCHITECTURE FOR ADAPTIVE VERTICAL LANDING USING COLD
GAS PROPULSION UNDER LUNAR GRAVITY
Tuğba Batumoglu, Ataturk University, Türkiye

13:05-13:15 IAC-26/A3/IP/108875
AUTONOMOUS AERIAL LOGISTICS FOR MARTIAN SETTLEMENTS
A SUSTAINABLE INFRASTRUCTURE MODEL UTILIZING ISRU-
BASED CO₂ COLD GAS PROPULSION
Samet ŞİŞMANLAR, Ataturk University, Türkiye

Tuesday 6 October

13:15-13:25 IAC-26/A3/IP/110884
DEEP VISCOUS SINTERING OF LUNAR REGOLITH FOR
MECHANICALLY RESILIENT SUBSURFACE INFRASTRUCTURE
Robin Tom Nitschke, TU Berlin, Germany

13:25-13:35 IAC-26/A3/IP/109802
AN AUTONOMOUS GRAVITY FIELD RECONSTRUCTION
FRAMEWORK FOR UNKNOWN ASTEROIDS BASED ON A
DISTRIBUTED SPACECRAFT SYSTEM
*Gao Huaixu, School of aeronautics and astronautics, Sun Yat-Sen
University Guangzhou, China*

13:35-13:45 IAC-26/A3/IP/110206
FROM TRAVERSE TO FETCH: DEMONSTRATING END-TO-END SFR
OPERATIONS WITH A SAMPLE TUBE ACQUISITION SUBSYSTEM
Róbert Marc, Airbus Defence and Space, United Kingdom

SCREEN 10

12:45-12:55 IAC-26/A3/IP/112100
REAL-TIME OPTIMIZATION-BASED GUIDANCE FOR FIXED-WING
AERIAL VEHICLES IN PLANETARY EXPLORATION MISSIONS VIA
SEQUENTIAL CONVEX OPTIMIZATION
Mostafa Abdelkhalek, Istanbul Technical University, Türkiye

12:55-13:05 IAC-26/A3/IP/115941
AUTONOMOUS MULTI-HOP COMMUNICATION NETWORKS FOR
ROBOTIC EXPLORATION OF PLANETARY LAVA TUBES
Daniele Di Battista, Politecnico di Torino, Italy

13:05-13:15 IAC-26/A3/IP/114013
DEM-BASED PARTICLE-SCALE THERMAL ANALYSIS OF ICY LUNAR
REGOLITH UNDER MICROWAVE VOLUMETRIC HEATING
Evre Erdoğan, Boğaziçi University, Türkiye

13:15-13:25 IAC-26/A3/IP/116235
DESIGN AND OPTIMIZATION OF ROTARY MECHANISM FOR
LUNAR LANDER APPLICATIONS
Muneera Almalki, Bahrain Space Agency (BSA), Bahrain

13:25-13:35 IAC-26/A3/IP/108868
STAR OCCULTATION FILTERING FOR LUNAR ROVER NAVIGATION
IN UNLIT ENVIRONMENTS
Kent Mizunuma, The University of TOKYO, Graduate school, Japan

13:35-13:45 IAC-26/A3/IP/116650
SUPER-EFFICIENT UNMANNED AGRICULTURE FOR LUNAR
COLONIZATION
Arda Kağan Menteş, Cukurova University, Türkiye

SCREEN 11

12:45-12:55 IAC-26/A3/IP/114412
DEVELOPMENT AND EXPERIMENTAL VALIDATION OF A COMPACT
SPECTROMETER FOR WATER DETECTION ON THE CANADIAN
PEEKBOT LUNAR ROVER
Emily St-Onge, Polytechnique Montreal, Canada

12:55-13:05 IAC-26/A3/IP/107048
FROM VEHICLE LAYOUT TO TOUCHDOWN: CO-DESIGN AND
CONVEX GUIDANCE OF A LUNAR SOFT LANDER UNDER
PROPULSION CHALLENGES
Emre Aklan, TURKUZAYSAN, Türkiye

13:05-13:15 IAC-26/A3/IP/114057
DETECTING ICE-OCEAN INTERFACES ON EUROPA-TYPE MOONS
USING PASSIVE SEISMOLOGY
Ilham Mammadzada, French-Azerbaijani University (UFAZ), Azerbaijan

13:15-13:25 IAC-26/A3/IP/108340
TOWARDS STANDARDISED LUNAR MICRO ROVERS: INSIGHTS
FROM A SURVEY OF ROVER DESIGNS, INTERFACES, AND
DEPLOYMENT CONCEPTS
*Niek Meijering, Delft University of Technology (TU Delft), Netherlands
(Kingdom of the)*

13:25-13:35 IAC-26/A3/IP/111383
APPROACHES TO ENSURE STRUCTURAL INTEGRITY OF HEAT SHIELD
OF CARGO DESCEND PROBE RETURNING FROM THE MOON
*Victor Leonov, Bauman Moscow State Technical University, Russian
Federation*

13:35-13:45 IAC-26/A3/IP/116868
ASSESSING THE γ -RADIATION STABILITY OF PYRITE (FES₂) AS
A POTENTIAL ISRU SOLAR CELL MATERIAL FOR THE LUNAR
ENVIRONMENT
Marc Heemskerk, Tallinn University of Technology, Estonia

SCREEN 12

12:45-12:55 IAC-26/A3/IP/113096
TELEOPERATION AND MULTI-HOP COMMUNICATION
ARCHITECTURE OF A MARS CAVE ROVER VIA SATELLITE
INTERFACE: RESULTS FROM TERRESTRIAL ANALOG TESTS
Johannes Frithjof Koch, German Aerospace Center (DLR), Germany

12:55-13:05 IAC-26/A3/IP/116295
MONOCULAR DEPTH ESTIMATION FOR TRAVERSABILITY AND
HAZARD-AWARE MICRO-ROVER NAVIGATION
Umut Kurt, Middle East Technical University, Türkiye

13:05-13:15 IAC-26/A3/IP/106953
THERMAL INTEGRITY OF LUNAR REGOLITH SAMPLES DURING
DRILLING AND TRANSFER USING REDUCED-ORDER TRANSIENT
MODELING
Dalia Alrudaini, Kuwait University, Kuwait

13:15-13:25 IAC-26/A3/IP/109132
REGOLITH TO METAL: ADDITIVE MANUFACTURING OF CERAMIC
MOLDS FOR LUNAR CASTING
Maxim Isachenkov, Politecnico di Milano, Italy

13:25-13:35 IAC-26/A3/IP/109314
NUMERICAL MODELLING OF MAGNETIC BENEFICIATION OF
LUNAR REGOLITH FOR ISRU APPLICATIONS
Lorenzo Di Mattia, Politecnico di Milano, Italy

13:35-13:45 IAC-26/A3/IP/117324
COOPERATIVE AUTONOMOUS EXPLORATION OF PLANETARY
ANALOGUE ENVIRONMENTS: RESULTS AND TECHNOLOGICAL
VALIDATION OF THE VAMEX-3 PHASE IN THE LANGENALTHEIM
FIELD TEST
Rene Weller, University of Bremen, Germany

SCREEN 13

12:45-12:55 IAC-26/A3/IP/116881
COMPETING FOR LUNAR ORDER: NORMS, POWER, AND
GOVERNANCE IN THE NEW MOON RACE
Giulia Pascuzzi, Space Generation Advisory Council (SGAC), Italy

12:55-13:05 IAC-26/A3/IP/110017
TUBE-BASED MPC FOR LANDING ON SMALL CELESTIAL BODIES
USING A FLEXIBLE LANDER
*Keyi Zhang, School of Aerospace Engineering, Beijing Institute of
Technology, China*

13:05-13:15 IAC-26/A3/IP/117049
MARS DOES NOT HAVE A SINGLE TYPE OF CLIMATE
irem sultan göktürk, Erciyes University, Türkiye

13:15-13:25 IAC-26/A3/IP/113772
AUTONOMOUS LANDING AREA EVALUATION METHOD FOR
ASTEROID EXPLORATION USING SEQUENTIAL IMAGES
*Yilin CAO, School of Aerospace Engineering, Beijing Institute of
Technology, China*

13:25-13:35 IAC-26/A3/IP/112311
JOINT TRAVERSABILITY-COMMUNICATIONS OPTIMIZATION FOR
LUNAR SOUTH POLE ROVER TRAVERSE PLANNING
Cengizhan Dogan, Eper Technologies, Türkiye

Tuesday 6 October

13:35-13:45 IAC-26/A3/IP/108356
OPTIMIZATION OF LUNAR REGOLITH SHIELDING FOR LONG-DURATION HUMAN HABITATS
Belinay Akben, [unlisted], Türkiye

SCREEN 14

12:45-12:55 IAC-26/A3/IP/113491
A HYBRID TRANSFORMABLE ROVER WITH INTEGRATED AERIAL MOBILITY FOR ADVANCED MARTIAN EXPLORATION
Zahra Garibova, National Aviation Academy - Azerbaijan, Azerbaijan

12:55-13:05 IAC-26/A3/IP/115055
MULTI-VIEW COOPERATIVE NAVIGATION USING OPEN-CURVE FEATURES FOR SMALL CELESTIAL BODY EXPLORATION
Ming Zhen Che, Beijing Institute of Technology, China

13:05-13:15 IAC-26/A3/IP/107558
A VIRTUAL BLUEPRINT-BASED FRAMEWORK FOR SELF-ADAPTIVE LUNAR SWARM CONSTRUCTION
Ziyue Feng, Harbin Institute of Technology, China

13:15-13:25 IAC-26/A3/IP/110151
A DEPLOYABLE MICRO-PROBE (SEEDSAT) NETWORK FOR PRE-LANDING SITE SELECTION: MISSION ARCHITECTURE AND SYSTEM-LEVEL TRADE STUDY FOR MARTIAN MISSIONS
Ömer Faruk AKPINAR, T3 Foundation, Türkiye

13:25-13:35 IAC-26/A3/IP/112410
DEVELOPMENT OF A DUST-MITIGATION CONNECTOR CONCEPT FOR HUMAN LUNAR SURFACE INFRASTRUCTURE
Carys Burchell, University of Surrey, United Kingdom

SCREEN 15

12:45-12:55 IAC-26/A6/IP/105147
DEVELOPMENT OF AN INTEGRATED SHAPE MEMORY ALLOY NET FOR AUTONOMOUS CAPTURE AND CONTROLLED DEORBIT OF ORBITAL DEBRIS
Nikita Sharath Rodham, [unlisted], India

12:55-13:05 IAC-26/A6/IP/109139
OPTIMIZING SPACE DEBRIS MITIGATION: A REDUNDANT AND FAIL-SAFE DRAG SAIL SYSTEM
Valeria Figini, SASA-Sapienza Aerospace Student Association, Italy

13:05-13:15 IAC-26/A6/IPB/113196
MITIGATING BACKGROUND ACTIVITY IN EVENT-BASED SENSORS: A BIAS OPTIMIZATION APPROACH FOR ORBITAL MONITORING
Alessandra Colucci, Politecnico di Bari, Italy

13:15-13:25 IAC-26/A6/IP/108829
ESTIMATION OF MICRO DEBRIS FLUX USING IN-SITU OBSERVATION SATELLITES
Kaito Miyoshi, Kyushu University, Japan

13:25-13:35 IAC-26/A6/IP/116916
MODELING AND CONTROL OF SPACE MANIPULATORS WITH MARKOVIAN JUMPS APPLIED TO CAPTURE AND REORIENTATION TASKS IN ORBIT
Tatiana Pazelli, Federal University of São Carlos (UFSCar - Universidade Federal de São Carlos), Brazil

13:35-13:45 IAC-26/A6/IP/106332
AI-ENABLED ANOMALY DETECTION IN SPACE OBJECT LIGHT CURVES FOR SPACE SITUATIONAL AWARENESS
Weixiao Li, Beihang University, China

SCREEN 16

12:45-12:55 IAC-26/A6/IP/110674
P.A.N.D.A.: DEVELOPMENT AND EXPERIMENTAL VALIDATION OF A DOCKING INTERFACE FOR CUBESATS
Vincenzo Quitadamo, University of Padua, Italy

12:55-13:05 IAC-26/A6/IP/115951
AUTONOMOUS TRANSMISSIVE DRAG SAIL DEPLOYMENT FOR CUBESAT POST-MISSION DISPOSAL AND SPACE DEBRIS MITIGATION
Natasha Thompson, University of Nottingham, United Kingdom

13:05-13:15 IAC-26/A6/IPB/111327
FINAL DISPOSAL OF CLUSTER SATELLITES: A DUAL-SEQUENCE RE-ENTRY
Sara De Masi, IMS Space Consultancy, Germany

13:15-13:25 IAC-26/A6/IP/116399
SPACE DEBRIS AS A RESOURCE: A CONCEPTUAL APPROACH FOR BORON RECOVERY FROM LOW EARTH ORBIT
Sinem Karaca, Erciyes University, Türkiye

13:25-13:35 IAC-26/A6/IP/113509
HIERARCHICAL DEEP LEARNING FOR SPACE DEBRIS DETECTION USING AUGMENTED HYBRID TLE-GROUNDED DATASETS
Fatima Alakbarli, ADA University, Azerbaijan

13:35-13:45 IAC-26/A6/IP/105859
GOVERNING THE COMMONS IN SPACE: BLOCKCHAIN-BASED GOVERNANCE TECHNOLOGIES FOR GLOBAL DECISION-MAKING AND INVESTMENT
Isabelle Mierau, [unlisted], Germany

SCREEN 17

12:45-12:55 IAC-26/A6/IP/110502
TERMA'S COLLISION AVOIDANCE SYSTEM: STUDY CASES AND VALIDATION
Lucía Ayala Fernández, Terma GmbH, Germany

12:55-13:05 IAC-26/A6/IP/111300
HIERARCHICAL ANALYTICAL MODELING OF LONG-TERM ORBITAL POPULATION EVOLUTION FOR FRAGMENTATION EVENTS
Miguel Rodriguez Poza, SUPAERO- Ecole Nationale Supérieure de l'Aéronautique et de l'Espace, France

13:15-13:25 IAC-26/A6/IP/107948
REINFORCEMENT-LEARNING-DRIVEN AUTONOMOUS COLLISION AVOIDANCE FOR OPERATIONS IN CONGESTED SPACE
Rodion Immel, Intersputnik International Organization of Space Communications, Serbia

13:25-13:35 IAC-26/A6/IP/107134
OPTICAL DATA FUSION FOR MULTI-ORBIT SPACE OBJECT CHARACTERISATION FROM A GEO PLATFORM
Fatma Balik, Istanbul Technical University, Türkiye

13:35-13:45 IAC-26/A6/IP/112865
MODELLING THE FUTURE OF LOW EARTH ORBIT: PROPAGATION, POPULATION EVOLUTION, AND ETHICAL FRAMEWORKS FOR SUSTAINABLE USE OF OUTER SPACE
Fazira Huwaidaa, Space Generation Advisory Council (SGAC), Ireland

SCREEN 18

12:45-12:55 IAC-26/A6/IP/114764
MACHINE LEARNING-BASED SIMULATION APPROACH FOR ASSESSING SPACE DEBRIS COLLISION RISK IN LOW EARTH ORBIT
Mustafa İsa Oruçtutan, Fırat University, Türkiye

Tuesday 6 October

12:55-13:05 IAC-26/A6/IP/107110

BEYOND DOCKING: GECKO ADHESIVE TECHNOLOGY FOR UNIVERSAL SPACECRAFT SURFACE OPERATIONS
Maëlle Mathieu, Polytechnique Montreal, Canada

13:05-13:15 IAC-26/A6/IP/113899

SIMULATION OF THE SPACE DEBRIS OBJECT CAPTURE DYNAMIC BY A GEOSTATIONARY WRECKER SPACECRAFT
Georgiy Shcheglov, Bauman Moscow State Technical University, Russian Federation

13:15-13:25 IAC-26/A6/IP/116075

ROBUST AUTONOMOUS CAPTURE OF NON-COOPERATIVE TUMBLING TARGETS: AN ADAPTIVE CONTROL BARRIER FUNCTION-BASED MODEL PREDICTIVE CONTROL APPROACH WITH FORMAL SAFETY GUARANTEES
Hasan Baran Gurbuz, Erciyes University, Türkiye

13:25-13:35 IAC-26/A6/IPB/108297

HYBRID PULSED MAGNETIC-ELECTROSTATIC SYSTEM FOR LOCALIZED PERTURBATION OF MILLIMETER-SCALE DEBRIS IN LOW EARTH ORBIT
Ahmet Berkay Karakuş, Niğde Atatürk Anatolian High School, Türkiye

13:35-13:45 IAC-26/A6/IPB/108207

EVALUATING GEO OBJECT IDENTIFICATION FROM OPTICAL MEASUREMENTS VIA CONSTRAINED ADMISSIBLE-REGION ORBIT DETERMINATION
Masaharu MORIOKA, Kyushu University, Japan

SCREEN 19

12:45-12:55 IAC-26/A6/IPB/116271

PRIORITIZED OBSERVATION STRATEGY FOR FRAGMENTATION DEBRIS CLOUDS USING LAMBERT SOLUTIONS AND BREAKUP MODEL-BASED HEAT MAP
Lorenzo Ostrogovich, University of Naples Federico II, Italy

12:55-13:05 IAC-26/A6/IP/112518

SYNCHRONOUS CO-DIRECTIONAL BIPOLAR MODULATION: MITIGATING GEOMAGNETIC COUPLING EFFECTS IN DUAL-SPACECRAFT EDDY-CURRENT DETUMBLING
Feiyang Wen, Harbin Institute of Technology, China

13:05-13:15 IAC-26/A6/IP/116231

SPACE-BASED LOCAL SENSING FOR AUGMENTED CONJUNCTION ANALYSIS
Annarita Argirò, University of Naples Federico II, Italy

13:15-13:25 IAC-26/A6/IPB/112866

DESIGN AND PERFORMANCE ANALYSIS OF A MULTI-SCALE GEOMETRY-ENHANCED ALUMINUM UHMWPE-STF SHIELD FOR IMPROVED HYPERVELOCITY ORBITAL DEBRIS IMPACT MITIGATION IN SPACE APPLICATIONS.
Raúl Ávila Sierra, Mexico

13:25-13:35 IAC-26/A6/IP/108975

OPENLEO-DSS: DEMOCRATIZING ORBITAL SAFETY THROUGH EXPLAINABLE AI AND MULTI-SOURCE ANALYTICS
Şahizer Aksoy, Karamanoğlu Mehmetbey University (KMU), Türkiye

13:35-13:45 IAC-26/A6/IP/116981

CONTROL SYSTEMS FOR DOCKING SPACE TARGETS THROUGH REPEATED-IMPACT-BASED DETUMBLING BY A FREE-FLOATING DUAL-ARM SPACE MANIPULATOR
Tatiana Pazelli, Federal University of São Carlos (UFSCar - Universidade Federal de São Carlos), Brazil

SCREEN 20

12:45-12:55 IAC-26/B1/IP/110496

EARLY ON-ORBIT OPERATIONAL VERIFICATION OF THE HYPERSPECTRAL EARTH OBSERVATION PAYLOADS OF ARAB SATELLITE 813
Hajer Alabdouli, The National Space Science and Technology Center (NSSTC), United Arab Emirates

12:55-13:05 IAC-26/B1/IP/111859

RHETICUS ELECTRIC TOWERS: A SAR-BASED NEAR-REAL-TIME SERVICE FOR DAMAGE ASSESSMENT OF ELECTRICAL TRANSMISSION INFRASTRUCTURE UNDER EXTREME EVENTS
Maurizio Laterza, Planetek Italia, Italy

13:05-13:15 IAC-26/B1/IP/110091

MULTISOURCE SATELLITE-BASED LAND COVER AND LAND USE CLASSIFICATION IN CONTRASTING URBAN ENVIRONMENTS: A COMPARATIVE STUDY OF YEREVAN, ARMENIA AND DUBAI, UAE
Mina Al-Saad, Mohammed Bin Rashid Space Centre (MBRSC), United Arab Emirates

13:15-13:25 IAC-26/B1/IP/113736

L-BAND RADIO FREQUENCY INTERFERENCE DETECTION AND COLLECTION PAYLOAD-SYSTEM ON A PICOSATELLITE PLATFORM
Franchesca Margarette Visitacion, University of the Philippines Diliman, Philippines

13:25-13:35 IAC-26/B1/IP/112273

COORDINATED TASK PLANNING FOR HETEROGENEOUS EARTH OBSERVATION CONSTELLATIONS WITH MULTI-OWNER COLLABORATION
Xiaoyu Zuo, Beihang University, China

13:35-13:45 IAC-26/B1/IP/108289

SPATIAL METADATA-GUIDED RECONSTRUCTION OF PSDS INSAR TIME-SERIES FOR RAILWAY INFRASTRUCTURE MONITORING
Winter Kim, [unlisted], Republic of Korea

SCREEN 21

12:45-12:55 IAC-26/B1/IP/115645

THE ODEM MISSION CONCEPT FOR GLOBAL MAPPING OF ATOMIC OXYGEN IN THE MESO- AND LOWER THERMOSPHERE
Philipp Maier, Institute of Space Systems, University of Stuttgart, Germany

12:55-13:05 IAC-26/B1/IP/112618

SUB-PIXEL COREGISTRATION OF VERY HIGH RESOLUTION SATELLITE IMAGERY FOR CHANGE DETECTION USING DEEP LEARNING SPATIAL FEATURE EXTRACTION AND LOCAL HOMOGRAPHY
Mahammad Mehdi, Azercosmos, Space Agency of Republic of Azerbaijan, Azerbaijan

13:05-13:15 IAC-26/B1/IP/113395

SATELLITE AND GIS-BASED ASSESSMENT OF TECHNOGENICALLY DISTURBED SOILS IN THE ABSHERON PENINSULA
Gulshan Aliyeva, Azercosmos, Space Agency of Republic of Azerbaijan, Azerbaijan

13:15-13:25 IAC-26/B1/IP/108880

INTEGRATING SATELLITE-DERIVED OBSERVATIONS WITH USER-CONTRIBUTED DATA FOR DELINEATION OF BEE FORAGE RESOURCES
Michał Lupa, AGH University of Krakow, Poland

13:25-13:35 IAC-26/B1/IP/114014

SPACE-BASED AGRICULTURAL MONITORING ACROSS CONTRASTING CLIMATES: AN INTEGRATED SENTINEL-1/2 FUSION AND NRT YIELD ESTIMATION SYSTEM
Saliha Şimşek, Bilecik Seyh Edebali University, Türkiye

13:35-13:45 IAC-26/B1/IP/110888

HIERARCHICAL ON-BOARD INTELLIGENCE FOR VOLCANIC MONITORING: OPTIMIZING LEO DOWNLINK VIA HETEROGENEOUS EDGE COMPUTING
Bharadwaj Chintalapati, Luleå University of Technology, Sweden

Tuesday 6 October

SCREEN 22

- 12:45-12:55 IAC-26/B1/IP/115801**
DESIGN AND PRELIMINARY VALIDATION OF A DUAL-MIRROR BACK-SCANNING STEP-AND-STARE IMAGING SYSTEM FOR HIGH-RESOLUTION WIDE-SWATH EARTH OBSERVATION
Iijin wang, University of Nottingham, China
- 13:05-13:15 IAC-26/B1/IP/109524**
SATELLITE CONSTELLATION GEOMETRY AND PHASING TRADE STUDY FOR REGIONAL EARTH OBSERVATION COVERAGE
Sali Alrubayan, King Fahd University of Petroleum and Minerals, Saudi Arabia
- 13:15-13:25 IAC-26/B1/IP/108843**
CAMERA-NOISE-TOLERANT OBJECT DETECTION FOR REMOTE SENSING SATELLITES
Hanbin Lee, Chungnam National University, Republic of Korea
- 13:25-13:35 IAC-26/B1/IP/109238**
A TID- AND SEU-TOLERANT SAR ADC CORE FOR SPACE APPLICATIONS
Ahmet Enes Turan, Istanbul Technical University, Türkiye
- 13:35-13:45 IAC-26/B1/IP/107701**
FEASIBILITY ANALYSIS OF LOW-COST CUBESAT CONSTELLATIONS FOR EARLY DETECTION OF FOREST FIRES
Beren Doğan, Türkiye

SCREEN 23

- 12:45-12:55 IAC-26/B1/IP/116471**
SATELLITE-BASED MONITORING OF ICE SURFACE VARIATIONS AND SEA LEVEL CHANGES IN ANTARCTICA: A STUDY AT THE PERUVIAN ANTARCTIC SCIENTIFIC STATION MACHU PICCHU (ECAMP) DURING ANTAR XXXII EXPEDITION
Omar Enrique Blas Morales, Universidad Nacional de Ingenieria, Peru, Peru
- 12:55-13:05 IAC-26/B1/IP/110510**
A CROSS-CUEING MISSION PLANNING FRAMEWORK FOR MOVING-TARGET TRACKING IN HETEROGENEOUS CONSTELLATIONS USING LÉVY-HHA
Weijian Wang, Harbin Institute of Technology, China
- 13:05-13:15 IAC-26/B1/IP/107803**
A GEOGRAPHIC GRID-BASED CONSTELLATION TASK PLANNING METHOD FOR REGIONAL COVERAGE
Peiyao Liu, Harbin Institute of Technology, China
- 13:15-13:25 IAC-26/B1/IP/110901**
IGNIS: INTELLIGENT GEOSPATIAL NEURAL INFERENCE SYSTEM
Ege Kayseri, Antalya Yusuf Ziya Öner Science High School, Türkiye
- 13:25-13:35 IAC-26/B1/IP/106539**
A METHODOLOGICAL FRAMEWORK FOR SATELLITE-BASED FOREST PEST AND DISEASE MONITORING USING MULTI-FEATURE PROBABILISTIC FUSION OF KOMPSAT-3 MULTISPECTRAL IMAGERY
Lee Sun-Gu, Korea Aerospace Research Institute (KARI), Republic of Korea
- 13:35-13:45 IAC-26/B1/IPB/107607**
THE EUROPEAN EARTH OBSERVATION ECOSYSTEM BEYOND 2040: A SYSTEM-OF-SYSTEMS ARCHITECTURE EVOLUTION TOWARDS A MIXED, RESILIENT AND INSTITUTIONALLY SOVEREIGN OBSERVATION INFRASTRUCTURE.
Vito Fortunato, Planetek Italia, Italy

SCREEN 24

- 12:45-12:55 IAC-26/B1/IP/111075**
MULTI-TARGET REPOINTING OF AGILE SMALL SATELLITES FOR EARTH OBSERVATION
Darpanjeet Deka, Sapienza University of Rome, Italy
- 12:55-13:05 IAC-26/B1/IP/107053**
SWAP-OPTIMIZED HYPERSPECTRAL PAYLOAD ARCHITECTURE FOR AI-DRIVEN PRECISION AGRICULTURE MISSIONS IN LEO SMALL SATELLITES
Haruna Mohammed Hamza, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea
- 13:05-13:15 IAC-26/B1/IP/107430**
FROM TRITON TO GOLD: TECHNICAL INNOVATIONS AND MISSION OUTLOOK OF TAIWAN'S NEXT-GENERATION INTEGRATED GNSS-RO/R PAYLOAD
Yung-Fu Tsai, Taiwan Space Agency (TASA)
- 13:15-13:25 IAC-26/B1/IP/107566**
DVB-S2 SATELLITE AND GROUND STATION LINK EMULATOR FOR UZMASAT-1 EARTH OBSERVATION SATELLITE
Yasser Asrul Ahmad, International Islamic University Malaysia, Malaysia
- 13:25-13:35 IAC-26/D1/IP/111344**
DISTRIBUTED MODEL-FREE ADAPTIVE CONTROL AND SPACE-GROUND CONSISTENCY ANALYSIS FOR ULTRA-LARGE SPACE STRUCTURES
Wei Qiao, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, China
- 13:35-13:45 IAC-26/D1/IP/113463**
COMPARATIVE ANALYSIS OF SINGLE-VEHICLE VIO VS. SWARM-BASED GEOMETRIC POSITIONING FOR MARS AERIAL EXPLORATION MISSIONS
Ebrar Acar, Konya Technical University, Türkiye

SCREEN 25

- 12:45-12:55 IAC-26/D1/IP/108974**
STANDARDIZATION - A PREREQUISITE FOR IN-SPACE SERVICING, ASSEMBLY AND MANUFACTURING (ISAM) AND A SUSTAINABLE FUTURE SPACE INFRASTRUCTURE
Tolga Ors, New Space Consulting Ltd., United Kingdom
- 12:55-13:05 IAC-26/D1/IPB/115803**
ENABLING SUSTAINABILITY TRADE-OFFS IN CONCURRENT ENGINEERING: A RAPID E-LCA FRAMEWORK INTEGRATION WITHIN DLR'S EARLY PHASE MISSION DESIGN ENVIRONMENT
Yauanah Jeyagobi, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany
- 13:05-13:15 IAC-26/D1/IP/115640**
A GNC ARCHITECTURE FOR DIFFERENTIAL-DRAW FORMATION FLYING BASED ON GNSS NAVIGATION, ATTITUDE-AWARE EKF ESTIMATION, AND MULTI-AGENT CONTROL
Saverio Maria Currà, University of Rome "La Sapienza", Italy
- 13:15-13:25 IAC-26/D1/IP/108732**
DRIFT-RESILIENT DISTRIBUTED SWARM CONTROL FOR MULTI-UAV LIDAR SLAM VIA MUTUAL OBSERVATIONS IN PLANETARY SUBSURFACE EXPLORATION
Taku Hamazaki, The University of TOKYO, Graduate school, Japan
- 13:25-13:35 IAC-26/D1/IP/105952**
MOSA AS A PLATFORM FOR SUSTAINABLE AND EVOLVABLE AEROSPACE SYSTEMS: A LAUNCH VEHICLE VERIFICATION CASE
Omar Aristizabal, Universidad de Antioquia, Colombia

Tuesday 6 October

SCREEN 26

12:45-12:55 IAC-26/B2/IP/107137

HIGH-PRECISION RELATIVE POSITIONING SERVICES OF LUNAR LANDER PAYLOAD FOR A LUNAR SURFACE EXPLORATION ROVER
Sangman Moon, Korea Aerospace Research Institute (KARI), Republic of Korea

12:55-13:05 IAC-26/B2/IP/107808

OPTICAL COMMUNICATION FOR FUTURE DEEP SPACE MISSIONS
Fidan Shiralizada, National Aviation Academy - Azerbaijan, Azerbaijan

13:05-13:15 IAC-26/B2/IP/105902

A SOFTWARE-ONLY INTERSATELLITE NETWORK FOR VIRTUALIZED EDGE COMPUTING IN ORBIT
Rama Afullo, Satlyt Inc., United States

13:15-13:25 IAC-26/B2/IP/111789

NOISE-AWARE DIGITAL TWIN FRAMEWORK FOR SUSTAINABLE ROUTING IN 6G LEO SATELLITE CONSTELLATIONS VIA HEURISTIC CONTROL GATES
Nagehan Raziye Dinç, Istanbul Technical University, Türkiye

13:25-13:35 IAC-26/B2/IP/109295

THE OPTIMUS MISSION PLANNING SYSTEM: REACTIVE SCHEDULING OF OPTICAL GROUND STATIONS
Thomas Fruth, DLR (German Aerospace Center), Germany

13:35-13:45 IAC-26/B2/IP/114124

MODELLING ENTANGLEMENT DYNAMICS IN COUPLED QUANTUM SYSTEMS FOR SPACE-BASED QUANTUM COMMUNICATION
Noora Alameri, Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST), United Arab Emirates

SCREEN 27

12:45-12:55 IAC-26/B2/IP/107934

ADVANCING GNSS-FREE POSITIONING: A NR-PRS PERFORMANCE EVALUATION FOR NTN
Isabel Gallardo Duval, i2CAT, Spain

12:55-13:05 IAC-26/B2/IP/106617

A SELF-SUPERVISED VISUAL LOCALIZATION METHOD OF NON-COOPERATIVE SPACE TARGETS FOR ON-ORBIT SPACECRAFT
Yuejiao Wang, Xi'an Jiaotong University, China

13:05-13:15 IAC-26/B2/IP/111341

ULUGBEY SATELLITE SYSTEM AND MATHEMATICAL ANALYSIS
Tuana Irmak Tuğrul, Türkiye

13:15-13:25 IAC-26/B2/IP/112696

ADAPTIVE RESIDUAL CAPACITY ALLOCATION FOR OPPORTUNISTIC RURAL CONNECTIVITY IN LEO SATELLITE BROADBAND NETWORKS
Celia Chavez Virgen, Instituto Politécnico Nacional, Mexico

13:25-13:35 IAC-26/B2/IP/110797

LAPLACIAN-BASED TOPOLOGY DESIGN FOR EFFICIENT AND ROBUST LEO MEGA-CONSTELLATION NETWORKS
Yuhe Mao, Nanjing University of Aeronautics and Astronautics, China

13:35-13:45 IAC-26/B2/IP/116765

ROBUST LEO ATTITUDE DETERMINATION VIA SUN-HORIZON FUSION USING FACTOR GRAPH OPTIMIZATION
Sabire Betül Çınar, Istanbul Technical University, Türkiye

SCREEN 28

12:45-12:55 IAC-26/B2/IP/105710

GENERALIZATION OF AI MODELS FOR SATELLITE INTERFERENCE DETECTION BASED ON TRANSFER LEARNING
David Diaz, University of Luxembourg, Luxembourg

12:55-13:05 IAC-26/B2/IP/116993

KRILZ: REVOLUTIONARY IN-FLIGHT LABORATORY FOR NEXT-GENERATION NAVIGATION AND TELEMETRY IN EXTREME SPACE CONDITIONS
Melek Baghirova, National Aviation Academy - Azerbaijan, Azerbaijan

13:05-13:15 IAC-26/B2/IP/114234

VIABILITY OF SMALLSAT LASER COMMUNICATION SYSTEMS
Erik A. Hoff, BLUECUBE Aerospace, United States

13:15-13:25 IAC-26/B2/IPB/108715

SIMULATION OF DELAYED COMMUNICATION NETWORKS IN DEEP SPACE
Shabnam Ibrahimova, ADA University, Azerbaijan

13:25-13:35 IAC-26/B2/IP/115074

MANAGING IOT TRAFFIC ACROSS EDGE, CLOUD AND SATELLITE NETWORKS USING SDN
Ramal Huseynov, Azerbaijan

13:35-13:45 IAC-26/B2/IP/116125

PARAMETRIC PERFORMANCE ANALYSIS OF CCSDS SCPPM OVER DEEP-SPACE POISSON OPTICAL CHANNELS
Zeynep Burcin Kaykac Egilmez, Kırıkkale University, Türkiye

SCREEN 29

12:45-12:55 IAC-26/B3//106827

ACQUISITION AND TRANSMISSION OF BIOSIGNAL AND ENVIRONMENTAL DATA IN HUMAN SPACE MISSIONS AND HABITATS
Aslı Pınar Tan, International Space University (ISU), Türkiye

12:55-13:05 IAC-26/B3/IP/112202

SWARM-BUILT WORLDS: MULTI-AGENT ROBOTIC PRECURSORS FOR ETHICAL ISRU HABITAT CONSTRUCTION AND PLANETARY HERITAGE PRESERVATION ON MARS
Karagozayim Turganbek, Technische Universität Wien (TU Wien), Austria

13:05-13:15 IAC-26/B3/IP/106477

PHYSIOLOGICAL CONSTRAINTS OF HIGH-G SPACEFLIGHT: A REVIEW OF HUMAN AND ANIMAL ACCELERATION TOLERANCE
Phil Swan, Stevens Institute of Technology, United States

13:15-13:25 IAC-26/B3/IP/113939

ADAPTIVE INTRACELLULAR RADIOPROTECTION VIA A BIOINSPIRED MANGANESE NANOPLATFORM FOR DEEP-SPACE MISSIONS
Shabnam Jabbarli, Baku State University, Azerbaijan

13:25-13:35 IAC-26/B3/IPB/109433

MAINTAINING HUMAN CIRCADIAN AND CULTURAL RHYTHMS UNDER MARTIAN LIGHT: AN ANTHROPOLOGICAL ENGINEERING APPROACH FOR SUSTAINABLE COLONIES
Farhad Seyfulla, Azerbaijan State Academy of Physical Education and Sport, Azerbaijan

13:35-13:45 IAC-26/B3/IP/105536

SANA-1 FEMALE TEAM ISOLATION EXPERIMENT FOR ASTRONAUT TRAINING
Suman Sherwani, [unlisted], Switzerland

SCREEN 30

12:45-12:55 IAC-26/B4/IP/111624

PRE-HARDWARE MIGRATION AND VALIDATION OF THE BIRDS BUS OBC PIC FIRMWARE TO ARM CORTEX THROUGH PROTEUS FOR THE FIRST BOLIVIAN NANOSATELLITE
Luis Alejandro Saenz, Universidad Tecnológica Boliviana, Bolivia

12:55-13:05 IAC-26/B4/IP/113068

AUTOMATED, HARDWARE-IN-THE-LOOP SOFTWARE TESTING FOR THE TALOS SATELLITE CONSTELLATION
Aapo Kiiso, TALOS GmbH, Germany

Tuesday 6 October

13:05-13:15 IAC-26/B4/IP/111428
ONBOARD AI-DRIVEN DISTRIBUTED SIGINT ARCHITECTURE FOR REAL-TIME EW THREAT GEOLOCATION USING LEO CONSTELLATIONS
ChanHee Jung, Korea Aerospace University, Republic of Korea

13:15-13:25 IAC-26/B4/IP/115551
FIRST RUSSIAN 16U REMOTE SENSING CUBESATS: FLIGHT RESULTS AND LESSONS LEARNED
Yaroslav Mashtakov, Keldysh Institute of Applied Mathematics of RAS, Russian Federation

13:25-13:35 IAC-26/B4/IP/105903
A COMPACT FPGA-BASED EDGE-AI STAR TRACKER WITH ENHANCED NOISE ROBUSTNESS FOR SMALL SATELLITES
Chang-Lun Ho, Kyushu Institute of Technology, Japan

13:35-13:45 IAC-26/B4/IP/112941
MISSION-LEVEL HARDWARE-IN-THE-LOOP VERIFICATION AND VALIDATION OF CUBESAT ELECTRICAL POWER SYSTEM OPERATIONAL MODES IN THE WASKIRI-SAT MISSION
Miguel Silva, Universidad Catolica Boliviana San Pablo, Bolivia

SCREEN 31

12:45-12:55 IAC-26/B4/IP/106392
A LOW-COST SMALL SATELLITE MISSION CONCEPT FOR PIPELINE LEAK MONITORING IN DEVELOPING REGIONS
Shahla Ahmadzade, Azerbaijan

13:05-13:15 IAC-26/B4/IP/105898
GROUNDING ARCHITECTURAL DESIGN FOR ROMEO MISSION: EXPLORING THE UNEXPLORED PLASMA ENVIRONMENT OF MEO
Akshata Raut, Luleå University of Technology, Sweden

13:15-13:25 IAC-26/B4/IP/108386
ORBITAL THERMAL DESIGN AND VERIFICATION OF RAMSESS: A 6U CUBESAT FOR A SUN-SYNCHRONOUS LEO MISSION
Giovanni Radio, CIRA Italian Aerospace Research Center, Capua, Italy

13:35-13:45 IAC-26/B4/IP/115081
ILLUMINATION CONDITIONS ANALYSIS FOR CUBESATS IN RENDEZVOUS, INSPECTION AND DOCKING MISSIONS
Luca Niero, Politecnico di Torino, Italy

SCREEN 32

12:45-12:55 IAC-26/B6/LBA/117851
STATION-KEEPING MANOEUVRES DETECTION AND VALIDATION OF VLEO CONSTELLATIONS USING DISSIPATIVE ENERGY ANALYSES
Wenze Ma, Beijing University of Aeronautics and Astronautics (BUAA), China

12:55-13:05 IAC-26/B6/IP/112065
LLM-ASSISTED INTELLIGENT MISSION OPERATIONS FOR AUTONOMOUS MISSION PLANNING IN SPACECRAFT SYSTEMS
Qiyun Zheng, Beihang University, China

13:05-13:15 IAC-26/B6/IP/115798
ACTOR-MODEL ARCHITECTURE FOR FAULT-TOLERANT SIMULATION OF MEGA-CONSTELLATION OPERATIONS
Abdulrahman Algburi, Atılım University, Türkiye

13:15-13:25 IAC-26/B6/IP/115380
PREPARING FOR OPERATIONAL CONTROL: VALIDATION, SIMULATION, AND TRAINING ACTIVITIES SUPPORTING THE H2SAT GROUND SEGMENT TRANSITION
Naomi Reichmann, Telespazio Germany GmbH, Germany

13:25-13:35 IAC-26/B6/IP/113551
MULTI-ARM ROBOT ON-ORBIT ADDITIVE MANUFACTURING AND ASSEMBLY CONTROL FOR SPACE TRUSS CONSTRUCTION
Chang Wang, Harbin Institute of Technology, China

13:35-13:45 IAC-26/B6/IPB/116584
LUNAR HELIUM-3 EXTRACTION: PRELIMINARY ROBOTICS AND OPERATIONS DESIGN FOR THE THEIA MISSION
Matteo Fulgheri, Politecnico di Milano, Italy

SCREEN 33

12:45-12:55 IAC-26/B6/IP/105668
FAULT-TOLERANT ATTITUDE CONTROL DURING ORBIT OPERATIONS
Huda Sedaki, Deltav Space Technologies, Inc., Türkiye

12:55-13:05 IAC-26/B6/IP/107012
AI-BASED THERMAL HEALTH MONITORING FOR SMALL SATELLITES USING SELF-SUPERVISED TIME-SERIES MODELS ON ON-ORBIT TELEMETRY
Dalia Alrudaini, Kuwait University, Kuwait

13:05-13:15 IAC-26/B6/IP/111012
ORBIT-SCHEDULER: A MISSION-PRIORITIZED AND CONFLICT-AWARE DYNAMIC SCHEDULING APPROACH FOR GROUND STATION NETWORKS
Uğur Berktaş, Fırat University, Türkiye

13:15-13:25 IAC-26/B6/IP/113597
MERGING TRADITIONAL MATHEMATICAL FILTERS WITH AI GROUPS TO REACH HIGH ACCURACY IN CATCHING RARE AND UNPREDICTABLE ELECTRICAL FAULTS
Imran Karimov, Vilnius Gediminas Technical University, Lithuania

13:25-13:35 IAC-26/B6/IP/113858
A SIMULATION-BASED FRAMEWORK FOR ANOMALY DETECTION IN SMALL SATELLITE TELEMETRY
Laman Taghiyeva, Azerbaijan State Oil and Industry University (ASOIU), Azerbaijan

SCREEN 34

12:45-12:55 IAC-26/B6/LBA/117738
DETERMINISTIC COTS-BASED TELEMETRY REPLAY FOR SPACE RIDER RF SUITCASE QUALIFICATION
Lucas Matias Barrera, SPACELAB S.p.A., Italy

12:55-13:05 IAC-26/B6/IPB/108620
AI-DRIVEN RESILIENT OPERATIONS MANAGEMENT FOR SATELLITE GROUND STATION NETWORKS UNDER UNCERTAIN TRAFFIC AND FAILURE SCENARIOS
Sabina Aghazade, National Aviation Academy - Azerbaijan, Azerbaijan

13:05-13:15 IAC-26/B6/IP/105202
REAL-TIME TELEMETRY STREAMING ARCHITECTURES FOR SCALABLE SATELLITE MISSION OPERATIONS
Zaman Kazimov, Azerbaijan State Oil and Industry University (ASOIU), Azerbaijan

13:15-13:25 IAC-26/B6/IP/111872
FROM EVENT LOGS TO ACTION: PROCEDURE GROUNDED ANOMALY PRIORITIZATION FOR HUMAN MACHINE TEAMING IN SATELLITE OPERATIONS
Seunghyun Yoon, Korea Institute of Energy Technology (KENTECH), Republic of Korea

13:25-13:35 IAC-26/B6/IP/111132
MACHINE LEARNING INTEGRATION IN AUTONOMOUS SPACEFLIGHT OPERATIONS: IMPLICATIONS FOR PROXIMITY AND DOCKING
Sima Septan, Tarbiat Modares University, Iran

13:35-13:45 IAC-26/B6/LBA/117518
A PHASE-BY-PHASE SOLAR RADIATION LOAD CLASSIFICATION FOR SATELLITE LAUNCH VEHICLES BRIDGING ECSS AND MIL-STD-810H
Koray ÖZDEMİR, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Türkiye

Tuesday 6 October

SCREEN 35

12:45-12:55 IAC-26/B5/IP/114126

SPACE FOOD: EMERGING FOOD PRESERVATION TECHNOLOGIES APPLICABLE FROM SPACE TO EARTH

Dayhana Crispin Almerco, Intinauta Research Center, Peru

12:55-13:05 IAC-26/B5/LBA/117813

INTEGRATION OF SATELLITE REMOTE SENSING, NUMERICAL SIMULATION, AND MONITORING IN THE TREATMENT OF MINING-CONTAMINATED WATER USING ELECTROCOAGULATION

Frank Agustin Orozco Chupos, Universidad Peruana Cayetano Heredia - UPCH, Peru

13:05-13:15 IAC-26/B5/IP/110327

ALONG-TRACK RADAR INTERFEROMETRY FOR MARITIME SURVEILLANCE USING TETHERED SATELLITE SYSTEM

Andrea Ricci, Politecnico di Torino, Italy

13:15-13:25 IAC-26/B5/IP/113609

RESILIENT COMMUNICATIONS WITH NOMADIC 5G AND SATELLITE-BASED CONNECTIVITY FOR PPDR APPLICATIONS

Carlos Guimarães, Siemens AG, Germany

13:25-13:35 IAC-26/B5/IP/110219

AN INTEGRATED SMALL SATELLITE ARCHITECTURE FOR SPECTRALLY SELECTIVE CLIMATE RESPONSE MODULATION

Abian Sanchez Barreto, University of Nottingham, United Kingdom

13:35-13:45 IAC-26/B5/IP/114347

THE IMPACT OF SEVERE GEOMAGNETIC STORMS ON POWER GRIDS AND THE DESIGN OF A MICROCONTROLLER-BASED AUTONOMOUS GIC PROTECTION UNIT

Yasin Emre Yaşar, Kocaeli University, Türkiye

SCREEN 36

12:55-13:05 IAC-26/B5/IP/105401

BRIDGING THE LAST-MILE GAP: AN END-TO-END MOBILE ECOSYSTEM FOR SATELLITE-INFORMED MUNICIPAL ENVIRONMENTAL MANAGEMENT

Onur Eren Tasci, Samsun University, Türkiye

13:05-13:15 IAC-26/B5/IP/104966

OPPORTUNISTIC SPACE WEATHER MONITORING: TRANSFORMING IDLE GNSS CHANNELS INTO ZERO-COST SENSING ASSETS FOR SUSTAINABLE LEO CONSTELLATIONS

Yongfei Miao, Innovation Academy for Microsatellites, Chinese Academy of Sciences, China

13:15-13:25 IAC-26/B5/IP/108226

THE TRANS-CASPIAN DIGITAL SPINE: SATELLITE-BASED QUANTUM KEY DISTRIBUTION (QKD) FOR MIDDLE CORRIDOR LOGISTICS

Nargiz Aliyeva, ADA University, Azerbaijan

13:25-13:35 IAC-26/B5/IP/113221

DIGITAL TWIN AND MISSION ANALYSIS OF A BASELINE PLANETARY SUNSHADE SYSTEM MODULE ORBITING THE SUN-EARTH PHOTO-GRAVITATIONAL EQUILIBRIUM POINT

Marina Coco, Politecnico di Torino, Italy

13:35-13:45 IAC-26/B5/IP/114353

FROM SPACE-BASED DATA TO URBAN POLICY: INTEGRATED APPLICATIONS FOR SMART CITYGOVERNANCE

Federico Bonarota, Italy

SCREEN 37

12:45-12:55 IAC-26/C1/IP/110623

MULTI-VIEW ICP-BASED REGISTRATION FOR POSE ESTIMATION AND 3D RECONSTRUCTION OF NON-COOPERATIVE TARGETS

Alessia Nocerino, University of Naples Federico II, Italy

12:55-13:05 IAC-26/C1/IP/111740

EFFICIENT DYNAMIC ANALYSIS OF TETHERED NET CAPTURE FOR SPACE DEBRIS USING LINEAR COMPLEMENTARITY PROBLEM

Ryotaro Ichimiya, Aoyama Gakuin University, Japan

13:05-13:15 IAC-26/C1/IP/105665

AGILE NANOSATELLITE ATTITUDE CONTROL WITH REACTION WHEELS AND ON-OFF THRUSTERS VIA EMBEDDED CONVEX OPTIMIZATION

Franklin Josue Ticona Coaquira, Kyushu Institute of Technology, Japan

13:15-13:25 IAC-26/C1/IP/106805

VISION-BASED RELATIVE POSE ESTIMATION FOR NON-COOPERATIVE SPACECRAFT VIA LINE-SEGMENT DISTRIBUTIONS

Bohyun Chang, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea

13:25-13:35 IAC-26/C1/IPB/110564

REAL-TIME MISSED THRUST RECOVERY MARGIN EVALUATION ENABLED BY PHYSICS-INFORMED NEURAL SURROGATES

Jiajun Zhu, Nanjing University of Aeronautics and Astronautics, China

13:35-13:45 IAC-26/C1/IP/111062

ANALYSIS OF REACTION WHEEL CONFIGURATION AND PERFORMANCE FOR SMALL AGILE EARTH OBSERVATION SATELLITES

Darpanjeet Deka, Sapienza University of Rome, Italy

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12:45-12:55 IAC-26/C1/IPB/110475

INTEGRATING LOW-THRUST TRANSFER DYNAMICS INTO POMDP PLANNING FOR ON-ORBIT SERVICING

Susmitha Patnala, CentraleSupélec, France

12:55-13:05 IAC-26/C1/IPB/107835

ENERGY-OPTIMAL PORT-HAMILTONIAN ATTITUDE CONTROL OF A MAGNETORQUER-ONLY 1U CUBESAT WITH PROCESSOR-IN-THE-LOOP VALIDATION

Álvaro Pérez Mora, Starlogics, Costa Rica

13:05-13:15 IAC-26/C1/IP/114654

ROTATION-MINIMIZING TIDAL-IMPEDANCE RELATIVE DYNAMICS FOR NEAR RECTILINEAR HALO ORBIT PROXIMITY OPERATIONS: APPLICATION TO THE LUNAR GATEWAY

Harish Vernekar, University of Arizona, United States

13:15-13:25 IAC-26/C1/IP/107054

SOLAR GRAVITY PERTURBATIONS ON ENCELADUS SCIENCE ORBITS

Gabriel Richard, ISAE-Supaero University of Toulouse, France

13:25-13:35 IAC-26/C1/IP/113963

DESIGN OF A SUN SENSOR EMULATION BOARD FOR FLAT-SAT HIL TESTS

Francesco Cataffo, Politecnico di Milano, Italy

13:35-13:45 IAC-26/C1/IP/108743

LONG-TERM ORBITAL DYNAMICS WITH A SELF-SUSTAINING ENERGY MODULATION OF SOLAR SAIL IN NEAR EARTH SPACE

Xiaohan Jing, National Space Science Center (NSSC), Chinese Academy of Sciences, China

SCREEN 39

12:45-12:55 IAC-26/C2/IP/108454

DEPLOYABLE THICK-PANEL CYLINDRICAL MODULE DESIGN FOR SCALABLE ON-ORBIT ASSEMBLY

Hyun-Jun Jeon, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea

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Tuesday 6 October

12:55-13:05 IAC-26/C2/IP/109927
EXPERIMENTAL ASSESSMENT OF FOCUS RETENTION OF A COTS MICROSCOPE MODULE UNDER LAUNCH VIBRATION ENVIRONMENTS FOR SPACE MEDICINE APPLICATIONS
Ji-Won Chae, Korea Aerospace University, Republic of Korea

13:05-13:15 IAC-26/C2/IP/109319
CONTROL-STRUCTURE INTERACTION AND STABILITY OF A SPACECRAFT ATTITUDE CONTROL SYSTEM UNDER STRUCTURAL VIBRATIONS
Alexandra Korolyeva, National Aviation Academy - Azerbaijan, Azerbaijan

13:15-13:25 IAC-26/C2/IP/110340
ELECTRO-THERMAL SELF-HEALING MECHANISM FOR ROCKET STRUCTURES
Nigar Hasanazade, National Aviation Academy - Azerbaijan, Azerbaijan

13:35-13:45 IAC-26/C2/IP/111486
ARBOSAT - TOWARDS A NEW CLASS OF SUSTAINABLE STRUCTURAL MATERIALS FOR SMALL SATELLITES BASED ON TECHNICAL ENHANCED WOOD
Deborah Müller, ETH Zurich, Switzerland

SCREEN 40

12:45-12:55 IAC-26/C2/IP/117046
ADDITIVE MANUFACTURING OF SIC PARTICLE-REINFORCED ZIRCONIA CERAMICS FOR DURABLE, PASSIVE LUNAR DUST MITIGATION
Seetha Raghavan, Embry-Riddle Aeronautical University, United States

12:55-13:05 IAC-26/C2/IP/104952
ATOMIC OXYGEN EROSION YIELD PREDICTION OF POSS POLYIMIDE FOR LOW EARTH ORBIT SPACECRAFTS
Nurdan Gedikoğlu, National Defence University of Türkiye, Türkiye

13:15-13:25 IAC-26/C2/IP/105376
THERMOELECTRIC ANALYSIS OF PRELOAD LOSS IN BOLTED JOINTS UNDER THERMAL CYCLING CONDITIONS
Fidan Azimova, National Aviation Academy - Azerbaijan, Azerbaijan

13:25-13:35 IAC-26/C2/IP/107655
DEEP LEARNING-BASED PERFORMANCE PREDICTION OF CYLINDRICAL LATTICE STRUCTURES FOR LAUNCH VEHICLES: AN AUTOMATED DESIGN FRAMEWORK FOR BUCKLING AND FREQUENCY ANALYSIS
Pinar Ece Opan, Istanbul Technical University, Türkiye

13:35-13:45 IAC-26/C2/IP/108483
INVESTIGATION OF THE POLYMERS LIGHT EROSION INTENSITY IN THE FIELD OF BROADBAND AND MONOCHROMATIC RADIATION
Vadim Danilov, Bauman Moscow State Technical University, Russian Federation

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12:45-12:55 IAC-26/C2/IP/108334
IN-SITU OBSERVATIONS OF PORE EVOLUTION DURING MELTING IN LUNAR REGOLITH SIMULANT TOWARD IN-SITU RESOURCE UTILIZATION
Yuki Wakai, Waseda University, Japan

12:55-13:05 IAC-26/C2/IP/113311
NONLINEAR JOINT DYNAMICS AND CONTROL STRATEGIES IN LARGE-SCALE DEPLOYABLE SPACE TRUSS STRUCTURES: A SYSTEMATIC REVIEW
Beverley Chelsea Saungweme, Bauman Moscow State Technical University, Russian Federation

13:05-13:15 IAC-26/C2/IP/105538
COMPARATIVE ANALYSIS OF SHAPE MEMORY ACTUATORS FOR PRISMA MISSION ANTENNA DEPLOYABLE
Ismat Ustad, United Arab Emirates

13:25-13:35 IAC-26/C2/IP/116245
DESIGN OF ADHESIVELY BONDED JOINTS FOR SPACE APPLICATION
Zehra Ahi, Ankara Yıldırım Beyazıt University, Türkiye

13:35-13:45 IAC-26/C2/IPB/110284
DEVELOPMENT OF AN EXPERIMENTAL SETUP FOR WRINKLING CHARACTERIZATION OF REFLECTIVE MEMBRANES FOR ORBITING SOLAR REFLECTORS
Vaibhav Somaji Anuse, University of Glasgow, United Kingdom

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12:45-12:55 IAC-26/C2/IP/107925
ACTIVE VIBRATION ISOLATION FOR HIGH-RESOLUTION REMOTE SENSING SATELLITES WITH CONTINUOUS ROTATING MIRROR SYSTEMS
Ankang Li, Harbin Institute of Technology, China

12:55-13:05 IAC-26/C2/IP/113379
EXPERIMENTAL AND NUMERICAL INVESTIGATION OF ZRB2-SIC BEHAVIOUR IN MARTIAN-LIKE ENTRY PLASMAS
Raffaele Costanzo, University of Naples Federico II, Italy

13:05-13:15 IAC-26/C2/IP/112237
SOLID-STATE POLYMER ELECTROLYTE FOR MULTIFUNCTIONAL STRUCTURAL BATTERIES
Nina Mamcarz, Delft University of Technology (TU Delft), Netherlands (Kingdom of the)

13:15-13:25 IAC-26/C2/IP/108571
SIC/SIC CMCS FOR DEEP SPACE NUCLEAR PROPULSION
Ebrar Cakiray, Yildiz Technical University, Türkiye

13:35-13:45 IAC-26/C2/IP/110059
DESIGN AND MANUFACTURING OF LOW-DENSITY ABLATIVE THERMAL PROTECTION MATERIALS FOR RE-ENTRY APPLICATIONS
Burak Selamet, Istanbul Technical University, Türkiye

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12:45-12:55 IAC-26/C3/IP/105327
OPTIMIZED SPACE SOLAR POWER SATELLITE CONSTELLATION ARCHITECTURES TO ACHIEVE LUNAR EXPLORATION GOALS
Connor MacRobbie, University of Waterloo, Canada

12:55-13:05 IAC-26/C3/IP/104555
MAGNIFICENT DESOLATION AND THE ENGINEERING OF EXTREMES: CROSS-DOMAIN INNOVATIONS LINKING LUNAR ANALOGUES AND ELECTRICITY TRANSMISSION NETWORKS
king kumire, University of South Africa - UNISA, United Kingdom

13:05-13:15 IAC-26/C3/LBA/117587
A HYBRID SPACE SOLAR POWER ARCHITECTURE USING POST-DEPLOYMENT THORIUM BREEDING AND AERIAL RECTENNA RECEPTION
Devesh Pande, India

13:35-13:45 IAC-26/C3/IP/104497
FINANCING SPACE SOLAR POWER CONSTELLATIONS: RISK ALLOCATION AND PPP MODELS FOR SCALABLE ORBITAL ENERGY
Carmen Guinrand, Sciences Po Paris, France

SCREEN 44

12:45-12:55 IAC-26/C4/IP/108849
DEVELOPMENT OF AN ANNULAR CHAMBER BASED 1N-CLASS INDUCTION HEATING THRUSTER FOR NON-CATALYTIC NITROUS OXIDE THERMAL DECOMPOSITION
Junseo Hwang, Pusan National University, Republic of Korea

Tuesday 6 October

12:55-13:05 IAC-26/C4/IP/111063

EXPLORING RECYCLED METAL PROPELLANTS FOR MAGDRIVE THRUSTERS VIA PLUME DEPOSITION CHARACTERISATION
Emerald Greenwood, Magdrive Ltd, United Kingdom

13:05-13:15 IAC-26/C4/IP/107343

DESIGN AND TESTING OF A SCALABLE PISTON PROPELLANT TANK FOR A SMALL SATELLITE PROPULSION SYSTEM
Daniel Kichma, Space Flight Laboratory (SFL), Canada

13:15-13:25 IAC-26/C4/IP/106447

LINEARIZED DETAILED ELECTRON MODEL FOR HYBRID PIC-DSMC HALL THRUSTER PLUME SIMULATIONS
Sang Hun Kang, Konkuk University, Republic of Korea

13:25-13:35 IAC-26/C4/IP/110748

OPTIMAL MAGNETIC FIELD CONFIGURATION FOR ECR ELECTROSTATIC THRUSTER
Amalia Lefevre, Osmos X, France

13:35-13:45 IAC-26/C4/IP/112688

OPTICAL DIAGNOSTICS OF DISCHARGE IN PLASMA THRUSTER WITH CLOSED RING-SHAPED GAS DISCHARGE CHAMBER
Lev Scherbakov, Bauman Moscow State Technical University, Russian Federation

SCREEN 45

12:45-12:55 IAC-26/C4/IP/108477

LASER ABLATION AND PULSED PLASMA MICRO-PROPULSION SYSTEMS
Vadim Danilov, Bauman Moscow State Technical University, Russian Federation

12:55-13:05 IAC-26/C4/IP/109346

LARGE EDDY SIMULATION OF THE SCRAMJET COMBUSTOR USING A DEVELOPED DENSITY-BASED OPENFOAM SOLVER
Veli Uysal, National Defence University of Türkiye, Türkiye

13:05-13:15 IAC-26/C4/IPB/113535

PRELIMINARY DESIGN FRAMEWORK FOR TORCH-TYPE IGNITERS IN SOLID ROCKET MOTORS
Alexandra Lopez Gutierrez, Universidad de Costa Rica, Costa Rica

13:15-13:25 IAC-26/C4/IP/113795

A NOVEL DESIGN OF AN INDUCTIVELY COUPLED PLASMA ION THRUSTER WITH DISTRIBUTED FERROMAGNETIC CORES
Gökçe Uluşu, Boğaziçi University, Türkiye

13:25-13:35 IAC-26/C4/IP/116115

VARIABLE GEOMETRY THRUSTER NOZZLE INSPIRED BY SQUID JET PROPULSION FOR ION PROPULSION SYSTEMS
Efe Aras Aykut, Darüşşafaka High School, Türkiye

13:35-13:45 IAC-26/C4/IP/117114

DISTRIBUTED ION THRUSTER ARRAYS FOR SCALABLE AND FAULT-TOLERANT ELECTRIC PROPULSION SYSTEMS
Shahed Alshab, MENA ENGINEERING EDUCATION AND TRAINING, Jordan

SCREEN 46

12:45-12:55 IAC-26/C4/IP/111792

MULTIPHYSICS MODELING & OPTIMIZATION OF ELECTROSPRAY ARRAYS
Punya Malaiya Jain, Indian Institute of Technology, Madras, India

12:55-13:05 IAC-26/C4/IP/116517

DESIGN METHODS AND LIFE-CYCLE ASSESSMENT OF OPAL, A HYBRID AUTOPHAGE THRUSTER FOR HIGH-ΔV IN-SPACE MOBILITY
Martin Gros, Alpha Impulsion, France

13:05-13:15 IAC-26/C4/IP/115554

THERMOCHEMICAL CHARACTERIZATION AND PERFORMANCE PREDICTION OF 3D PRINTED POLYMER FUELS FOR HYBRID ROCKET ENGINES
Aleksandra Zieleżny, Wrocław University of Science and Technology, Poland

13:15-13:25 IAC-26/C4/IP/115997

STARGATE: AN UNDERGRADUATE EXPERIMENTAL GRIDDED THRUSTER STUDENT RESEARCH PROJECT
Claude Blue, University of Alabama in Huntsville, United States

13:25-13:35 IAC-26/C4/IP/110522

DEVELOPMENT OF A WATER-FED ELECTRODELESS PLASMA THRUSTER WITHIN THE W.E.T PROJECT
Dounia Bartal, [unlisted], Morocco

13:35-13:45 IAC-26/C4/IP/105495

A DESIGN CONCEPT FOR A COMBINED FULL-FLOW STAGED COMBUSTION AND CONTINUOUS DETONATION ROCKET ENGINE FOR MARS MISSIONS
Onur Kağan Yıldırım, Türkiye

SCREEN 47

12:45-12:55 IAC-26/D2/LBA/117577

HYBRID PROPULSION SPACEPLANE FOR SKYHOOK-ENABLED SOLAR SYSTEM ACCESS
Shourya Lohakare, Student, India

13:05-13:15 IAC-26/D2/IPB/112302

ANALYSIS OF COMMERCIAL COMPETITIVENESS IN FUTURE LAUNCH VEHICLE CONFIGURATIONS
Alex Dunne, The Queen's University of Belfast, United Kingdom

SCREEN 48

12:45-12:55 IAC-26/D2/LBA/117781

SAFETY-GATED STAGED RECOVERY FOR PREVENTING FALSE ACTIVATION IN HIGH-ALTITUDE EXPERIMENTAL ROCKETS
Polatcan Polat, Sabanci University, Türkiye

12:55-13:05 IAC-26/D2/IP/110662

A SUB-OPTIMAL STAGING METHOD FOR USAGE IN PRE-CONCEPTUAL DESIGN OF LAUNCH VEHICLES
Ahmet Sofyalı, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Türkiye

13:35-13:45 IAC-26/D2/IP/106681

A GUIDANCE ALGORITHM FOR SUBORBITAL VEHICLE POWERED DESCENT PHASE BASED ON IMPROVED CONVEX OPTIMIZATION
Hang Hu, CAS Space, China

SCREEN 49

12:45-12:55 IAC-26/D4/IP/106792

AI, AUTOMATION AND THE FUTURE OF SPACE WORKFORCE: STRATEGIC IMPLICATIONS FOR INNOVATION ECOSYSTEMS
Tural Salmanov, Azercosmos, Space Agency of Republic of Azerbaijan, Azerbaijan

12:55-13:05 IAC-26/D4/IP/111844

AN ENERGY-AWARE THETA* BASED OPTIMAL ENERGY CONSUMPTION PATH PLANNING METHOD FOR LUNAR ROVER
Pengyu Sun, Northwestern Polytechnical University; National Key Laboratory of Aerospace Flight Dynamics, China

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12:55-13:05 IAC-26/D4/IP/107855
RESEARCH ON DESIGN CONSTRAINTS OF THE MANNED UNIT OF THE INTERNATIONAL LUNAR RESEARCH STATION
Hongyuan Mei, Harbin Institute of Technology, China

13:25-13:35 IAC-26/D4/IPB/111107
ENVISIONING THE SILVER LATTICE: A TRANS-LAGRANGE TENSEGRITY ARCHITECTURE FOR INTEGRATED Cislunar LOGISTICS AND POWER DISTRIBUTION
Akshay Joshi, United States

SCREEN 51

12:45-12:55 IAC-26/D5/IP/113070
AUTONOMOUS MULTI-AGENT KNOWLEDGE SYSTEMS FOR DEEP SPACE EXPLORATION UNDER COMMUNICATION DELAYS
Ilkin Abdullayev, Azerbaijan State Oil and Industry University (SABAH Groups), Azerbaijan

12:55-13:05 IAC-26/D5/IP/116583
BRIDGING ENGINEERING AND OPERATIONS: A HYBRID KNOWLEDGE MANAGEMENT PLATFORM ARCHITECTURE FOR NEWSPACE ORGANIZATIONS
Elnur Huseynov, Istanbul Technical University, Türkiye

13:15-13:25 IAC-26/D5/IPB/108959
CYBER-RESILIENT INVENTORY MANAGEMENT FRAMEWORK FOR AEROSPACE SUPPLY CHAINS
Seymur Shamkhalov, National Aviation Academy - Azerbaijan, Azerbaijan

13:25-13:35 IAC-26/D5/IP/106410
ENGINEERING FAILURES IN SPACE ROBOTIC ARMS AND THEIR LEGAL IMPLICATIONS WITHIN THE FRAMEWORK OF INTERNATIONAL SPACE LIABILITY REGIMES
Kamil Mahmudov, National Aviation Academy - Azerbaijan, Azerbaijan

13:35-13:45 IAC-26/D5/IP/113663
ISS KNOWLEDGE MANAGEMENT AS A MODEL FOR REDUCING PREVENTABLE SURGICAL ERRORS IN HOSPITAL OPERATING ROOMS
Samira Mammadova, ADA University, Azerbaijan

SCREEN 52

12:45-12:55 IAC-26/D5/IP/108672
RADIATION SAFETY IN HUMAN SPACEFLIGHT: INTEGRATING ASTROPARTICLE AND MEDICAL PHYSICS KNOWLEDGE
Alessandro Bartoloni, National Institute of Nuclear Physics - INFN, Italy

SCREEN 53

12:45-12:55 IAC-26/E1/IP/105412
ROBOPALOOZA: MINING, ROBOTICS, AND SPACE - ADVANCING INNOVATIONS AND GENERATIONS THROUGH CROSS-INDUSTRY COLLABORATION
Anay Ashwin, University of Southern Queensland, Australia

12:55-13:05 IAC-26/E1/IP/107331
BRIDGING GOVERNANCE LITERACY GAPS: A STRUCTURED CAPACITY-BUILDING MODEL FOR INCLUSIVE PARTICIPATION IN SPACE EXPLORATION
Paola Alejandra Zamudio Torres, Universidad Nacional Autónoma de México (UNAM), Mexico

13:05-13:15 IAC-26/E1/IP/107412
BARRIERS AND BELONGING: UNDERSTANDING DIVERSITY AT THE ENTRY TO THE SPACE SECTOR
Lamyea Ahmed, UKSEDS, United Kingdom

13:15-13:25 IAC-26/E1/IP/106546
WHAT MAKES A GOOD SPACE ENGINEER? INITIAL RESULTS AND A RESEARCH AGENDA
Joanna Pyrkosz-Pacyna, AGH University of Science and Technology, Poland

13:25-13:35 IAC-26/E1/IPB/111982
CLOSED-LOOP AI-DRIVEN VR TRAINING FOR ORBITAL DEBRIS EMERGENCY RESPONSE ON THE ISS
Özgül Rana Çökkayışlı, Istanbul Health and Technology University, Türkiye

13:35-13:45 IAC-26/E1/IP/108423
BUILDING SPACE AWARENESS IN BAHRAIN THROUGH SCHOOL-BASED STEM INTEGRATION: A MEASURED IMPACT STUDY OF STRUCTURED EDUCATIONAL STRATEGIES
Raaheel Aamer, Bahrain

SCREEN 54

12:45-12:55 IAC-26/E1/LBA/117740
ASSESSING ASTEROID IMPACT SIMULATORS FOR SCIENTIFIC OUTREACH
Marco Castronuovo, Agenzia Spaziale Italiana (ASI), Italy

12:55-13:05 IAC-26/E1/IP/108325
THE SPACE BETWEEN: AN INVESTIGATION OF HIGH SCHOOL STUDENTS' AWARENESS OF SPACE DEBRIS AND THE ENHANCEMENT OF THEIR KNOWLEDGE
Mine Benal, Türkiye

13:15-13:25 IAC-26/E1/IP/116930
IMMERSIVE AEROSPACE ENGINEERING: SYNERGIZING UNREAL ENGINE 5 REAL-TIME SIMULATIONS AND ADVANCED VISUAL STORYTELLING FOR NATIONAL SPACE OUTREACH IN PERU
Andres Zelada, Universidad Nacional de Ingeniería (Lima, Perú), Peru

13:25-13:35 IAC-26/E1/IP/109542
INTRODUCING SPACE SCIENCE IN RURAL SCHOOLS THROUGH LOW-COST HANDS-ON ACTIVITIES
Yılmaz İnce, Türkiye

13:35-13:45 IAC-26/E1/IPB/114922
HANDS-ON SATELLITE COMMUNICATION EDUCATION USING THE AL-RHIM SAT CUBESAT MISSION
Nada Khatib, Al Hussein Technical University, Jordan

SCREEN 55

12:45-12:55 IAC-26/E1/IP/113365
AMPLIFYING SPACE OUTREACH: THE ROLE OF PODCASTS IN ENGAGING THE NEXT GENERATION OF SPACE PROFESSIONALS
Sabina Adilova, Azercosmos, Space Agency of Republic of Azerbaijan, Azerbaijan

12:55-13:05 IAC-26/E1/IP/115892
SPILLI SPAZIALI (SPACE PINS): DEVELOPING AN OPEN METHODOLOGY FOR CRITICAL AND PLURAL NARRATIVES IN SPACE COMMUNICATION
Eleonora Lombardi, Fondazione E. Amaldi, Italy

13:05-13:15 IAC-26/E1/IP/105671
BRIDGING EDUCATION AND SECTOR DEVELOPMENT: THE ROLE OF THE EUROPEAN ROVER CHALLENGE IN THE POLISH SPACE INDUSTRY
Zofia Kaczmarek, AGH University of Krakow, Poland

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- 13:15-13:25 IAC-26/E1/IP/109441**
COMMUNITY-DRIVEN AND SUSTAINABLE SPACE WORKFORCE DEVELOPMENT IN AN EMERGING SPACE NATION: THE CASE OF TÜRKİYE
Beste Boybaşı, Space Generation Advisory Council (SGAC), Türkiye
- 13:25-13:35 IAC-26/E1/IPB/111233**
THE ROSPIN SATELLITE DATA PROCESSING MASTERCLASS: A SCALABLE MODEL FOR EO EDUCATION
Simonel-Olimpiu David, Romanian Space Initiative, Romania
- 13:35-13:45 IAC-26/E1/IP/108642**
INFORMAL REASONING AND DECISION-MAKING IN GIFTED STUDENTS THROUGH SPACE MISSION SCENARIOS
Cennet Yıldırım, [unlisted], Türkiye

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- 12:45-12:55 IAC-26/E1/IP/106879**
BEYOND BOOKS: LIBRARIES AS CATALYSTS FOR SPACE AWARENESS IN DEVELOPING NATIONS
Riccardo Corrado, CamEd Business School, Cambodia
- 12:55-13:05 IAC-26/E1/IP/111921**
PROJECT ROADMAP: FOSTERING SOCIETAL ENGAGEMENT FOR DEEP SPACE EXPLORATION THROUGH A GLOBAL COMMUNICATION FRAMEWORK.
Ruchira Huchgol, International Space University (ISU), France
- 13:05-13:15 IAC-26/E1/IP/109407**
DESIGNING IMMERSIVE UX FOR PUBLIC ENGAGEMENT WITH SPACE MISSIONS A HUMAN-CENTERED EVALUATION FRAMEWORK
Aysu Maryam Gurbanova, Azerbaijan State Oil and Industry University (ASOIU), Azerbaijan
- 13:15-13:25 IAC-26/E1/IP/116058**
FROM MYTH TO MOON: A COLLABORATIVE FRAMEWORK FOR BRIDGING CULTURAL LUNAR NARRATIVES AND MODERN SELENOLOGY IN THE 21ST CENTURY
Anh Truong, University of Northampton, United Kingdom
- 13:25-13:35 IAC-26/E1/IP/108115**
BUILDING AN INCLUSIVE GLOBAL SPACE WORKFORCE: LESSONS FROM THE WOMEN4SPACE MENTORING PROGRAMME
Uma Cladellas, International Space University (ISU), Spain
- 13:35-13:45 IAC-26/E1/IP/115302**
ORBIT N-37: SCALING SPACE EDUCATION AND SDGS AWARENESS IN NIGERIA
Chioma Ezeigbo, Nigeria

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- 12:45-12:55 IAC-26/E1/IP/108941**
SPACECLEAN: AN IMPLEMENTED, UDL-ALIGNED MOBILE GAME FOR ORBITAL DEBRIS RISK LITERACY WITH TELEMETRY-BASED EVALUATION
Ecrin Taran, Izmir Science High School, Türkiye
- 12:55-13:05 IAC-26/E1/IP/104917**
THE IMPACT OF OUT-OF-SCHOOL LEARNING ENVIRONMENTS ON MIDDLE SCHOOL ASTRONOMY EDUCATION: A SYSTEMATIC LITERATURE REVIEW AND A PROPOSED EVALUATION FRAMEWORK FOR ACADEMIC RETENTION
Kaan Değirmenci, [unlisted], Türkiye
- 13:05-13:15 IAC-26/E1/IP/116847**
STRATOREACH: A SYSTEMS ENGINEERING-BASED HIGH-ALTITUDE BALLOON PROGRAM TO PRE-UNIVERSITY STUDENTS
Zsófia Bodo, [unlisted], Germany

- 13:15-13:25 IAC-26/E1/IP/110243**
COSMOAMAUTAS: EMPOWERING TEACHERS THROUGH SPACE AND ASTRONOMY TO BUILD SUSTAINABLE SCIENTIFIC EDUCATION
Gabriela Calistro Rivera, DLR (German Aerospace Center), Germany
- 13:25-13:35 IAC-26/E1/IPB/109522**
BUILDING A SUSTAINABLE FUTURE FOR SPACE EXPLORATION: A MODELING-ORIENTED ASTROPHYSICS EDUCATION FRAMEWORK FOR DIVERSE COGNITIVE LEVELS
Hira Nur Deniz, Marmara University, Türkiye
- 13:35-13:45 IAC-26/E1/IP/115808**
FROM TRAINING TO RESILIENCE: EARLY OUTCOMES AND EMERGING BEST PRACTICES OF THE CYBERPRO TRAIN PROGRAMME FOR THE EUROPEAN CYBERSECURITY SPACE ECOSYSTEM
Valerio Roscani, Fondazione E. Amaldi, Italy

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- 12:45-12:55 IAC-26/E1/IP/115387**
SPACE FOR NUTRITION: A SPACE-BASED, HANDS-ON APPROACH TO PROMOTING AWARENESS AND HEALTHY EATING HABITS.
Gianmarco Ciocca, IIS Orsini - Licini, Italian Ministry of Education, Italy
- 12:55-13:05 IAC-26/E1/IPB/116318**
BRIDGING THE SPACE EDUCATION GAP: A STUDENT-LED PEER-TO-PEER MODEL
Hava Nur Delikanlı, Ankara Yıldırım Beyazıt University, Türkiye
- 13:05-13:15 IAC-26/E1/IP/107636**
TEACHING SPACE CONCEPTS TO YOUNG CHILDREN THROUGH AN INTERACTIVE PLATFORM
Rahil Aghabayli, Azerbaijan State Oil and Industry University (ASOIU), Azerbaijan
- 13:15-13:25 IAC-26/E1/IP/106229**
COSMIC BREVITY: ENHANCING SPACE LITERACY AND EMOTIONAL CONNECTION THROUGH HAIKU POETRY IN GIFTED MIDDLE SCHOOL EDUCATION
Salim Gönü, [unlisted], Türkiye
- 13:25-13:35 IAC-26/E1/IP/116577**
SPACE-LAB: AN ACTIVE LEARNING FRAMEWORK FOR AEROSPACE ENGINEERING STUDENTS THROUGH REAL-TIME SATELLITE DATA COMPETITIONS
Esma Yumuşak, Ankara Yıldırım Beyazıt University, Türkiye
- 13:35-13:45 IAC-26/E1/IP/107101**
SPACE@HOME: DESIGNING A CITIZEN SCIENCE OUTREACH MODEL INSPIRED BY THE INTERNATIONAL SPACE STATION
Marcin Zwierdzyński, AGH University of Krakow, Poland

SCREEN 60

- 12:45-12:55 IAC-26/E7/IP/117326**
RETHINKING SPACE ACTIVITIES THROUGH PRIVATE LAW: LIABILITY, AI, AND INTELLECTUAL PROPERTY
Francesco Pugno, University of Turin, Italy
- 13:25-13:35 IAC-26/E7/IP/116974**
WHEN THE ONLY WAY OUT IS A TREATY BREACH: THE PLEA OF NECESSITY IN THE USE OF NUCLEAR TECHNOLOGY FOR PLANETARY DEFENSE
Vera I. Palialexi, National and Kapodistrian University Of Athens, Greece
- 13:35-13:45 IAC-26/E7/IP/110801**
GOVERNING THE INTERPLANETARY INTERNET: AN INTERNATIONAL LAW PERSPECTIVE
Berna Akcali Gur, Queen Mary University of London, United Kingdom

Tuesday 6 October

SCREEN 61

12:45-12:55 IAC-26/E7/IP/113125
FROM TREATIES TO TRANSACTIONS: FINANCIAL GUARANTEES AND THE EVOLUTION OF STATE OVERSIGHT IN LEO
Vasif Aliyev, Azerbaijan State University of Economics, Azerbaijan

12:55-13:05 IAC-26/E7/LBA/117952
THE EU SPACE ACT AND THE GLOBAL SPACE ECONOMY: REGULATORY IMPLICATIONS FOR NON-EU OPERATORS AND INVESTORS
Kate Ekaterina Ursul, Georgetown University Law Center, United States

13:25-13:35 IAC-26/E7/IPB/105784
INTO THE BRUSSELS ORBIT: THE EU SPACE ACT, EQUIVALENCE JURISDICTION AND WHAT IT MEANS FOR THE AMERICAN SPACE INDUSTRY.
Elizabeth Chang, United States

13:35-13:45 IAC-26/E7/IP/116129
WHY EXCLUDE THE DISCUSSION OF EFFECTS ON JUS AD BELLUM IN OUTER SPACE?
Ayten-Selin Dogan, Durham University, United Kingdom

SCREEN 62

12:45-12:55 IAC-26/E3/IPB/109998
INDIA'S SPACE INSTITUTIONAL ARCHITECTURE: EVOLUTION, CONSTRAINTS AND FUTURE PATHWAYS
isha singh, Amity University, Noida, India

12:55-13:05 IAC-26/E3/IP/110829
SPACE FOR RESILIENCE: A RIGHT TO CONNECT AND THE FUTURE OF SATELLITE CONNECTIVITY IN DISASTER RELIEF
Berna Akcali Gur, Queen Mary University of London, United Kingdom

13:05-13:15 IAC-26/E3/IP/116745
SOFT POWER AS STRATEGIC INTELLIGENCE: EU SPACE DIPLOMACY FOR GOVERNANCE, ECONOMIC SECURITY, AND STRATEGIC AUTONOMY
Büşra Dursun, [unlisted], Netherlands (Kingdom of the)

13:15-13:25 IAC-26/E3/IPB/115825
FINANCING THE SPACE2030 AGENDA: THE ROLE OF THE WORLD BANK GROUP IN ADVANCING INTERNATIONAL COOPERATION FOR SUSTAINABLE DEVELOPMENT
Ute Reisinger, United States

13:25-13:35 IAC-26/E3/LBA/117916
INSTITUTIONAL ADAPTATION AND GOVERNANCE GAPS IN LOW EARTH ORBIT: STRUCTURAL MECHANISMS OF MULTILATERAL REGULATORY OVERSIGHT
Anand Kumar Singh, CapGemini, France

13:35-13:45 IAC-26/E3/LBA/117409
PRIVATIZED DETERRENCE - THE DOUBLE DUAL-USE DILEMMA IN ORBITAL CONFLICT
Kelly Soverns, [unlisted], United States

SCREEN 63

12:45-12:55 IAC-26/E3/IP/107465
A NOVEL FRAMEWORK FOR MEASURING AND PROMOTING EQUITABLE ACCESS TO SPACE RESOURCES AND OPPORTUNITIES
Emmanuel Githinji, Technical University of Kenya, Kenya

12:55-13:05 IAC-26/E3/IP/108908
DATA-DRIVEN ANALYSIS OF TÜRKİYE AS AN EMERGING SPACE ACTOR: CAPABILITIES AND DEVELOPMENT TRAJECTORIES
Gizem Ezgi GÜLER, Türkiye

13:05-13:15 IAC-26/E3/IP/111739
ORBITAL ALLOCATION AND LONG-TERM SUSTAINABILITY: A POLICY GAP ANALYSIS.
Juana Lizeth Sanchez Sanchez, High Technology Unit (UAT) Faculty of Engineering - UNAM, Mexico

13:15-13:25 IAC-26/E3/IP/105410
DIGITAL TWINS IN SPACE OPERATIONS: INTERNATIONAL RESPONSIBILITY AND ACCOUNTABILITY FOR SOFTWARE-DRIVEN DECISION MAKING
Zamara Rodriguez, Space Industry Association of Australia, Australia

13:25-13:35 IAC-26/E3/IP/106538
THE IMPACT OF INTERNATIONAL NORMS ON NATIONAL SPACE GOVERNANCE: AN INSTITUTIONAL ANALYSIS
Talut Huseynov, National Aviation Academy - Azerbaijan, Azerbaijan

13:35-13:45 IAC-26/E3/IP/106536
THE EVOLUTION OF PRIVATE-SECTOR INVOLVEMENT IN SPACE ACTIVITIES: INSTITUTIONAL AND LEGAL PERSPECTIVES
Talut Huseynov, National Aviation Academy - Azerbaijan, Azerbaijan

SCREEN 64

12:45-12:55 IAC-26/E5/IP/107102
FROM ISS EXPERIMENTS TO IMMERSIVE HABITATS: USING VIRTUAL REALITY TO SIMULATE SPACE OPERATIONS AND SOCIAL DYNAMICS
Marcin Zwierdziński, AGH University of Krakow, Poland

12:55-13:05 IAC-26/E5/IP/112706
FROM OUTPOST TO CIVILISATION: ENGINEERING AND SOCIETAL CHALLENGES OF LUNAR SETTLEMENT ACROSS A CENTURY
Samiksha Raviraja, United Kingdom

13:15-13:25 IAC-26/E5/IPB/105452
A HUMAN FACTORS-BASED COMPARATIVE ASSESSMENT OF MODULAR HABITAT CONFIGURATIONS FOR COMMERCIAL SPACE STATIONS
Xinyue Pei, Harbin Institute of Technology, China

13:25-13:35 IAC-26/E5/IP/105040
BIOMECHANICAL LOADING, VIBRATION, AND MUSCULOSKELETAL HEALTH IN SPACE MISSIONS: RISKS, MODELS, AND REHABILITATION STRATEGIES
Cumali Altundağ, [unlisted], Türkiye

13:35-13:45 IAC-26/E5/IP/111805
ADAPTIVE SUBTERRANEAN ARCHITECTURE: ENGINEERING NON-INVASIVE ANALOG HABITATS FOR THE ASCLEPIOS VI MISSION
Francesca Mison, Arcada University of Applied Sciences, Finland

SCREEN 65

12:45-12:55 IAC-26/E5/IP/117087
ACCESSIBILITY AS MISSION ASSURANCE: A UNIVERSAL DESIGN FRAMEWORK FOR MISSION INTERFACE STANDARDIZATION
Kashish Makhija, Concordia University, Canada

12:55-13:05 IAC-26/E5/IP/105825
INTERNATIONAL COOPERATION, PUBLIC TRANSPARENCY, AND CONTINUITY IN SPACE POLICY: LESSONS FROM THE BRAZILIAN SPACE SECTOR OBSERVATORY
Alan Freitas, Brazilian Space Agency (AEB), Brazil

13:05-13:15 IAC-26/E5/IP/113167
EMPOWERING THE NORTH: APPLYING AEROSPACE TECHNOLOGIES FOR ARCTIC COMMUNITY RESILIENCE
Moervica Anushree Prashant, University of Toronto Aerospace Team (UTAT), Canada

Tuesday 6 October

13:35-13:45 IAC-26/E5/IP/106185
DESIGNING THE MISSION BEFORE THE PLANET: ARCHITECTURAL
TRANSLATION OF HUMAN EXPERIENCE IN TROPICAL SEISMIC
ANALOG HABITATS
Álvaro Pérez Mora, Starlogics, Costa Rica

SCREEN 66

12:45-12:55 IAC-26/E5/IP/114732
LUNAR VITALITY HUB: A SPORTS-CENTERED HABITAT AT THE
MOON'S SOUTH POLE
Yuxuan Ma, Xi'an Jiaotong - Liverpool University, China

12:55-13:05 IAC-26/E5/IP/108175
UNVEILING HYPOTHETICAL SPACE HABITAT IMAGINARIES VIA
VISUAL Q-METHODOLOGY
Shuqi Li, Harbin Institute of Technology, China

13:05-13:15 IAC-26/E5/IPB/107740
ANALOG HABITAT AS A DUAL-PURPOSE PLATFORM: HUMAN-
CENTERED SPACE ARCHITECTURE BRIDGING URBAN HOUSING
INNOVATION AND FUTURE PLANETARY SETTLEMENTS.
Omar Saldana Penetro, Institute of Analog Research & Arts, Mexico

13:25-13:35 IAC-26/E5/IP/108874
LUNAR DOME: A MISSION-ORIENTED ARCHITECTURAL DESIGN
AND SPATIAL STRATEGY FOR THE CREWED LUNAR RESEARCH
STATION
Yaokun Liu, Harbin Institute of Technology, China

13:35-13:45 IAC-26/E5/IP/116987
THE SOCIETAL IMPACT OF COMMERCIAL SPACEFLIGHT
Diego Hernández, Facultad de Ingeniería-UNAM, Mexico

SCREEN 67

13:05-13:15 IAC-26/E6/IP/105780
SPACE MUST GROW OUTSIDE OF THE INDUSTRY: THE DIVERSE
WORKFORCE NECESSARY FOR CONTINUED GROWTH OF THE
SPACE ECONOMY
Sarah Freese, Nominal, Inc, United States

13:15-13:25 IAC-26/E6/IP/114140
PUBLIC-PRIVATE SPACE ECOSYSTEMS: ACCELERATING THE
NEWSPACE ECONOMY THROUGH THE SPACE CITY MODEL
Srikanth Kodeboyina, Blue Eye Soft Corp, United States

SCREEN 68

12:45-12:55 IAC-26/E9/IP/116130
CYBERSECURITY OF SATELLITE DATA: ANALYSIS OF CURRENT
THREATS AND PROTECTION MECHANISMS
Matanat Ahmadova, Sumgait State University (SABAH Groups), Azerbaijan

12:55-13:05 IAC-26/E9/IPB/109563
AUTONOMOUS AIR-GAPPING AND ORBITAL HONEYPOTS
(SANDBOX)
Javidan Ashurlu, Azerbaijan State Oil and Industry University (ASOIU), Azerbaijan

13:05-13:15 IAC-26/E9/IPB/111575
BEYOND THE FIRST MOVE: CONDITIONS FOR ENDURING
ADVANTAGE ON THE MOON
Fernando Miranda Espana, Georgia Institute of Technology, United States

13:15-13:25 IAC-26/E9/IPB/105836
MAINTAINING SECURITY IN SPACE THROUGH ENHANCED
VERIFICATION & ATTRIBUTION CAPABILITIES: AN INTEGRATED
TECHNICAL AND POLICY APPROACH
James Shin, University of Cambridge, United Kingdom

13:25-13:35 IAC-26/E9/IPB/112350
INCENTIVE ALIGNMENT AND LEGAL DESIGN IN SPACE DEBRIS
MITIGATION: THE ROLE OF LEADING ACTIVE DEBRIS REMOVAL
FIRMS
Meili Vergnolle, Tsinghua University, China

13:35-13:45 IAC-26/E9/IPB/117153
A STUDY OF THE LEGAL ARCHITECTURE FOR COUNTERING
CYBER-THREATS TO SPACE MISSIONS
VERA I. PALIALEXI, National and Kapodistrian University Of Athens, Greece

SCREEN 69

12:45-12:55 IAC-26/E9/IP/115446
AN ANALYSIS OF CURRENT RISK ASSESSMENT AND VALIDATION
TECHNIQUES FOR SECURE SPACE SYSTEMS AND THEIR SECURITY
IMPLICATIONS
Cláudia Faria, Universidade do Minho, Portugal

12:55-13:05 IAC-26/E9/IP/111843
ECONOMIC INCENTIVE DESIGN AND FINANCIAL RISK
ALLOCATION FOR SPACE SECURITY AND LONG-TERM
SUSTAINABILITY
Vasif Aliyev, Azerbaijan State University of Economics, Azerbaijan

13:15-13:25 IAC-26/E11/IP/104642
72% OF AFRICA'S SATELLITES ARE SMALL SATELLITES, BUT CAN
THEY SEE ANYTHING WORTH SEEING?
Mustapha Iderawumi, Space in Africa, Nigeria

13:35-13:45 IAC-26/E11/IP/108353
SHARED INFRASTRUCTURE MODELS FOR EMERGING SPACE
ECOSYSTEMS: REDUCING ENTRY BARRIERS FOR NEW SPACE
STARTUPS
Buket GEVIS, Akdeniz University, Türkiye

SCREEN 70

12:45-12:55 IAC-26/E11/IP/115701
SYNERGIZING FRONTIERS: A STRATEGIC FRAMEWORK FOR
CONNECTING EMERGING SPACE AND FINTECH ECOSYSTEMS
Takeshi Ikeda, [unlisted], Japan

12:55-13:05 IAC-26/E11/IP/117123
ACTIVATING NATIONAL SPACE ECOSYSTEMS: A PARTICIPATORY
WORKSHOP MODEL FOR EMERGING SPACE NATIONS
Muhammed Akif Ünal, Türkiye

13:05-13:15 IAC-26/E11/IP/116490
BUILDING FROM WITHIN: YOUTH AS CONNECTORS OF
FRAGMENTED SPACE ECOSYSTEMS IN EMERGING SPACE
NATIONS - LESSONS FROM SG PORTUGAL 2025
Alice Pais de Castro, Space Generation Advisory Council (SGAC), Portugal

13:25-13:35 IAC-26/E11/IPB/111023
EXPLORING THE CIRCULAR ECONOMY IN SPACE
Beril Turnbull, Durham University, United Kingdom

13:35-13:45 IAC-26/E11/IP/106387
THE BENIN NATIONAL SPACE STRATEGY PROPOSAL: A
FRAMEWORK FOR THE DEVELOPMENT OF SPACE POLICY AND
TECHNOLOGIES TO SUPPORT SUSTAINABLE DEVELOPMENT
Prudence AYIVI, Space Generation Advisory Council (SGAC), Benin

Wednesday 7 October

SCREEN 1

- 12:45-12:55 IAC-26/A1/IP/112714**
THE MISSING LAYER: TEN YEARS LATER AND DNA SEQUENCING IN SPACE IS STILL NOT ROUTINE
Anjali Gupta, ANTA Biotech, United States
- 13:05-13:15 IAC-26/A1/IP/115772**
MOLECULAR AND COGNITIVE ANALYSIS OF THE NEUROPROTECTIVE EFFECTS OF LACTOBACILLUS RHAMNOSUS GG AGAINST GUT-BRAIN AXIS DYSFUNCTION IN ADULT MALE MICE UNDER SIMULATED MICROGRAVITY (HLU)
Ahmet Emre AYDOĞAN, Eskisehir Technical University, Türkiye
- 13:25-13:35 IAC-26/A1/IP/111618**
OPTIMISING THE LUNAR HABITAT: HUMAN-CENTERED DESIGN FOR PSYCHOLOGICAL WELL-BEING
Samuel Will, Australia
- 13:35-13:45 IAC-26/A1/IP/114337**
RAD51-MEDIATED DNA REPAIR AS A MOLECULAR CONSTRAINT ON PLANETARY HABITABILITY IN HIGH-RADIATION ENVIRONMENTS
İpek Kayrancıoğlu, Istanbul Technical University, Türkiye

SCREEN 2

- 12:45-12:55 IAC-26/A1/IP/115455**
BIOLOGICAL MINIMALISM: AI-DRIVEN MINIMAL SENSOR ARCHITECTURES AND DIGITAL TWIN FRAMEWORK FOR AUTONOMOUS ASTRONAUT HEALTH MONITORING IN DEEP SPACE MISSIONS
Furkan Atila, Haydarpaşa High School, Türkiye
- 12:55-13:05 IAC-26/A1/IP/115973**
COMPUTATIONAL FLUID DYNAMICS OF WIND GUSTS ON THE STRUCTURE OF A DOME-SHAPED MARTIAN HABITAT
Junior Miler Tinuco Zuñiga, Universidad Nacional Mayor de San Marcos, Peru
- 13:15-13:25 IAC-26/A1/IP/114761**
MODELING MINIMAL GENE NETWORKS FOR MARTIAN SURFACE CONDITIONS
Esinnur Calisir, Istanbul University, Türkiye

SCREEN 3

- 12:45-12:55 IAC-26/A1/IPB/117112**
GRADED-Z HYBRID SHIELDING FOR PHARMACEUTICAL STABILITY IN DEEP SPACE MISSIONS: KAPTON-ALUMINUM-POLYETHYLENE AND BIOMIMETIC MELANIN SYNERGY
Nurcan Metin, Middle East Technical University, Türkiye
- 13:05-13:15 IAC-26/A1/LBA/117793**
SPACEFLIGHT-DRIVEN MICROBIAL ADAPTATION AND BIODETERIORATION OF SPACESUIT FABRICS REVEALED BY METATRANSCRIPTOMICS
Hafsa Sunniya, Beijing Institute of Technology (BIT), China
- 13:15-13:25 IAC-26/A1/IP/116539**
THE THEORETICAL FOUNDATIONS OF GROWING POTATOES ON MARS
Yağmur Şenbakan, Erciyes University, Türkiye
- 13:35-13:45 IAC-26/A1/IP/116647**
HEMODYNAMIC RESPONSE OF THE VERTEBROBASILAR SYSTEM TO MICROGRAVITY-RELATED CEREBRAL INFLOW ELEVATION
Anastasiya Liankova, [unlisted], Belarus

SCREEN 4

- 12:45-12:55 IAC-26/A1/IP/108260**
SYSTEMIC HEMODYNAMICS AND OCULAR PERFUSION IN SPACEFLIGHT ASSOCIATED NEURO-OCULAR SYNDROME: THE ROLE OF ARTERIAL HYPERTENSION
Alessia Sportelli, Politecnico di Bari, Italy
- 12:55-13:05 IAC-26/A1/IP/114413**
PREDICTIVE DETECTION OF WATER STRESS IN LETTUCE USING MULTISPECTRAL IMAGING AND MACHINE LEARNING MODELS FOR AUTONOMOUS AGRICULTURE ON MARS
Fidel Castro Suazo, Universidad Nacional de Ingeniería (Lima, Perú), Peru
- 13:05-13:15 IAC-26/A1/IP/107711**
BEYOND HUMANITY: THE LEGAL STATUS AND RIGHTS OF EXTRATERRESTRIAL INTELLIGENCE UNDER INTERNATIONAL LAW
Aure Allexandre, International Institute for Air and Space Law, Leiden, Switzerland
- 13:15-13:25 IAC-26/A1/IP/112242**
PREDICTING HEMODYNAMIC SHIFTS IN MICROGRAVITY: A DEEP LEARNING APPROACH TO CUFFLESS BLOOD PRESSURE ESTIMATION
Renatto Tommasi Hernández, Hungary
- 13:35-13:45 IAC-26/A1/IPB/112488**
MULTIMODAL AI-DRIVEN MONITORING OF CIRCADIAN AND PHYSIOLOGICAL ADAPTATION IN ISOLATED SPACE AND TERRESTRIAL EXTREME ENVIRONMENTS
Hasan Ali Oruç, [unlisted], Türkiye

SCREEN 5

- 12:45-12:55 IAC-26/A1/IP/116483**
ENHANCING CONTROLLED ENVIRONMENT AGRICULTURE IN ANALOG SPACE MISSIONS: UPGRADES TO THE GREENLAB AT HABITAT MARTE
Julio Rezende, Federal University of Rio Grande do Norte (UFRN), Brazil
- 12:55-13:05 IAC-26/A1/IP/116448**
YOGA PROTOCOL APPLICATION IN AN ANALOG SPACE MISSION
Julio Rezende, Federal University of Rio Grande do Norte (UFRN), Brazil
- 13:05-13:15 IAC-26/A1/LBA/117812**
PHYSIOLOGICAL ADAPTATION DURING LONG-DURATION ANALOGUE HABITAT MISSIONS IN HIGH-ALTITUDE ENVIRONMENTS
Arati Kothawade, University of Pune, India
- 13:15-13:25 IAC-26/A1/IP/111115**
CELLULAR MECHANISMS OF HUMAN PHYSIOLOGICAL ADAPTATION UNDER MICROGRAVITY AND RELATIVISTIC CONDITIONS
Esra Albayrak, Middle East Technical University, Türkiye
- 13:25-13:35 IAC-26/A1/IP/110145**
MODELING STRUCTURE AND DYNAMICS OF MICROBIAL COMMUNITY IN SPACE
Funmilola Oluwafemi, National Space Research and Development Agency (NASRDA), Abuja Nigeria, Nigeria
- 13:35-13:45 IAC-26/A1/IPB/112144**
BIOINFORMATIC ANALYSIS OF ANTIMICROBIAL RESISTANCE AND ADAPTIVE NETWORKS UNDER SIMULATED MICROGRAVITY
Erdem Emir Sevinç, MoEP - Mars on Earth Project, Türkiye

Wednesday 7 October

SCREEN 6

12:55-13:05 IAC-26/A1/IP/110106

DEVELOPMENT OF SAKE BREWING UNIT AND FIRST SPACE BREWING EXPERIMENT UNDER LUNAR GRAVITY SIMULATION ABOARD THE ISS: THE DASSAI MOON PROJECT
Atsuko Homma, Mitsubishi Heavy Industries Ltd. Japan, Japan

13:05-13:15 IAC-26/A1/IP/116079

SUSCEPTIBILITY TO BETA-LACTAMS AND PHENOTYPIC CHANGES IN KLEBSIELLA PNEUMONIAE STRAINS WITH DIFFERENT RESISTANCE PROFILES IN SIMULATED MICROGRAVITY AND VARIABLE PH
Zulema Mamani Condori, Universidad Científica del Sur, Peru

13:15-13:25 IAC-26/A1/IPB/114119

QUINOA (CHENOPODIUM QUINOA) AS A MODEL CROP IN THE ESA-PRODEX ORION SEEDS TO SPACE INITIATIVE
Orsolya Meier, Orion Space Generation Public Benefit Foundation, Hungary

13:25-13:35 IAC-26/A1/IPB/109478

ETHICAL CONSIDERATIONS IN REPRODUCTIVE HEALTH RESEARCH IN SPACE
Aylin Yaba, Yeditepe University, Türkiye

13:35-13:45 IAC-26/A1/IP/116022

THE PHYTOCUBE SPACE EXPERIMENT ON GROWING PLANTS IN SPACE – BIOLOGICAL UNIT
Vera Mayorova, Bauman Moscow State Technical University, Russian Federation

SCREEN 7

13:05-13:15 IAC-26/A1/IP/105158

RESILIENT COMMUNICATION IN HIGH-RISK TEAMS: INSIGHTS FROM THE APOLLO 13 MISSION
Mohamad Cherry, London School of Economics and Political Science, United Kingdom

13:15-13:25 IAC-26/A1/IP/107543

ADAPTATIONS OF ANTARCTIC PLANTS TO EXTREME CONDITIONS: THEIR POTENTIAL AS MODELS FOR SPACE BIOLOGY AND ASTROBIOTECHNOLOGY
Suveybe Yüksel, [unlisted], Türkiye

13:25-13:35 IAC-26/A1/IP/116475

DESIGN AND FINITE ELEMENT ANALYSIS OF ADDITIVE MANUFACTURED ORTHODONTIC APPLIANCES FOR COMPENSATING REDUCED PHYSIOLOGICAL DENTAL LOADS IN SPACE ENVIRONMENTS
Ayşenur Aydın, Yıldız Technical University, Türkiye

13:35-13:45 IAC-26/A1/IPB/111409

SPACE WOUND MANAGEMENT USING NATURAL BIOACTIVE TOPICAL FORMULATION FOR EXTREME ENVIRONMENTS
Elif Kalyoncu, Ege University, Türkiye

SCREEN 8

12:45-12:55 IAC-26/A1/IP/108796

AGRICULTURAL UTILIZATION OF UNESCO GLOBAL GEOPARK KULA (MANİSA) GEOSITES AS MARS AND MOON REGOLITH SIMULANTS VIA SPACE STATION WASTE COMPOSTING AND AI OPTIMIZATION
Asya Morsümbül, [unlisted], Türkiye

12:55-13:05 IAC-26/A1/IPB/106098

BIOMEDICAL PRODUCT DEVELOPMENT ARCHITECTURE FOR MICROGRAVITY ENVIRONMENTS: A CASE STUDY ON CONTROLLED-RELEASE NANOSTRIPS FOR SPACE MISSIONS
Gülseren SAKARYA, Ministry of Industry and Technology of Türkiye, Türkiye

13:25-13:35 IAC-26/A1/IPB/115763

CONCEPTUAL DESIGN OF A CREWED SPACECRAFT WITH ACTIVE HTS MAGNETIC SHIELDING AND MONTE CARLO EVALUATION OF ITS RADIOBIOLOGICAL PERFORMANCE USING GEANT4
Eddy Joel Silupu Jibaja, Universidad Nacional Mayor de San Marcos, Peru

13:35-13:45 IAC-26/A1/IPB/111633

ESTIMATING MOTOR NEURON DEGENERATION IN DEEP SPACE RADIATION ENVIRONMENTS
Dawood Ahmed, University of Alberta, Canada

SCREEN 9

12:45-12:55 IAC-26/A1/IPB/109596

DESIGN OF A PERSONALIZED HEALTH DECISION SUPPORT SYSTEM BASED ON MULTIMODAL AI AND RAG ARCHITECTURE: MYHEALTHASIST
Hatice Dilay Işık, [unlisted], Türkiye

13:35-13:45 IAC-26/A1/IP/106223

BEYOND TECHNOLOGY: A HUMAN-CENTERED SPACE ETHICS AND SOCIETAL IMPACT MODEL AYŞEGÜL AĞCA INDEPENDENT RESEARCHER INTERNATIONAL ASTRONAUTICAL CONGRESS (IAC) Ayşegül Ağca, Türkiye

SCREEN 10

12:45-12:55 IAC-26/A2/IP/108872

APPLICATION OF A NEURAL NETWORK APPROACH TO MODELING THE COMBUSTION OF ATOMIZED LIQUID FUEL
Veronika Tyurenkova, Scientific Research Institute for System Analysis, Russian Academy of Sciences (RAS), Russian Federation

12:55-13:05 IAC-26/A2/IP/106602

ROTATIONAL DYNAMICS OF ANISOTROPIC COLLOIDS IN COMPLEX MEDIA UNDER MICROGRAVITY
Jia Zhang, Beihang University, China

13:05-13:15 IAC-26/A2/IP/109100

RESEARCH ON THREE-PHASE FLOWS IN THE HELE-SHAW CELL
Lusine Paremskaia, Lomonosov Moscow State University, Russian Federation

13:15-13:25 IAC-26/A2/IP/109176

SIMULATION OF MICROGRAVITY CONDITIONS USING A HELE-SHAW CELL WITH POROUS INSERTS
Anastasia Manakhova, Lomonosov Moscow State University, Russian Federation

13:25-13:35 IAC-26/A2/IP/108896

COMBUSTION AND HEAT TRANSFER IN POROUS MEDIA
Nickolay N. Smirnov, Lomonosov Moscow State University, Russian Federation

13:35-13:45 IAC-26/A2/IP/109007

MODELING OF CONTINUOUS SPIN DETONATION OF A CARBON-FREE MIXTURE
Elena Mikhachenko, Lomonosov Moscow State University, Russian Federation

SCREEN 11

12:45-12:55 IAC-26/A3/IP/111741

AN INTEGRATED REGOLITH HANDLING SYSTEM FOR LUNAR EXCAVATION, PROCESSING, AND HELIUM-3 RECOVERY
Süleyman Salihler, Polimak Space, Türkiye

12:55-13:05 IAC-26/A3/IP/114657

MULTI-BOUNDARY EVENT-TRIGGERED HOVERING CONTROL METHOD FOR GRAVITY TRACTOR DEFLECTING ASTEROIDS
hao pang, Beijing Institute of technology, China

Wednesday 7 October

13:05-13:15 IAC-26/A3/IP/114445
AI-DRIVEN TERRAIN-AWARE NAVIGATION FOR ENHANCED ROVER PERFORMANCE IN THE NASA HUMAN EXPLORATION ROVER CHALLENGE
Paolo Vásquez Terán, Universidad Nacional de Ingeniería (Lima, Perú), Peru

13:25-13:35 IAC-26/A3/IP/107348
KINETIC EXCAVATION YIELD & STRUCTURAL TECTONIC OPERATIONS NANO-ENGINEER
Luis Fernando Favian Curiel, Universidad La Salle, Mexico

13:35-13:45 IAC-26/A3/IP/106494
A FEDERATED EDGE-INTELLIGENCE FRAMEWORK FOR DISTRIBUTED ENVIRONMENTAL MAPPING IN BANDWIDTH-CONSTRAINED MARTIAN ROVER SWARMS
Samet Karakas, Adana Alparslan Turkes Science and Technology University (ATU), Türkiye

SCREEN 12

12:45-12:55 IAC-26/A3/IP/106270
A SWARM OF INTERNALLY ACTUATED LUNAR MOBILE ROBOTS WITH DISTRIBUTED FUNCTIONALITIES
Bo Meng, School of Astronautics, Beihang University, China

12:55-13:05 IAC-26/A3/IP/116362
MACHINE LEARNING ARCHITECTURE FOR PREDICTING THERMAL PROPERTIES OF AEROSPACE MATERIALS INTENDED FOR MARS
Carlos González Ramírez, Instituto Politécnico Nacional, Mexico

13:05-13:15 IAC-26/A3/IP/110186
COMPARATIVE GEOMORPHOLOGICAL ANALYSIS OF TERRESTRIAL PALEOHYDROLOGICAL NETWORKS ON MARS AND EARTH: FRACTAL GEOMETRY AND STRUCTURAL SIMILARITY MODELING
Selin SAN, [unlisted], Türkiye

13:15-13:25 IAC-26/A3/IP/108481
ONLINE TEMPORAL CALIBRATION OF VISUAL-INERTIAL ODOMETRY FOR PLANETARY EXPLORATION PLATFORMS
Shengyun Zhao, Beihang University, China

13:25-13:35 IAC-26/A3/IP/114781
JAMSS'S INITIATIVE TOWARDS LUNAR EXPLORATION AND BEYOND
Shigeru Imai, Japan Manned Space Systems Corporation, Japan

SCREEN 13

12:45-12:55 IAC-26/A3/IP/115516
AUTONOMOUS NAVIGATION PIPELINE FOR MARTIAN RILLE ENTRANCE DISCOVERY AND LAVA TUBES EXPLORATION VALIDATED VIA DIGITAL TWIN SIMULATION FRAMEWORK
Jacopo Zanchetta, Politecnico di Torino, Italy

12:55-13:05 IAC-26/A3/IP/117296
SHALLOW CRYOSPHERE DYNAMICS ON MARS INFERRED FROM ANTARCTIC STONE CIRCLE ANALOGUES
Alper Gürbüz, Ankara University, Türkiye

13:05-13:15 IAC-26/A3/IP/115360
ACCESSIBLE SIMULATION OF LUNAR CATENÆ FORMATION USING FRAGMENTATION-BASED MODELING AND 3D VISUALIZATION
Nur Sima Karhan, Izmir Science High School, Türkiye

13:15-13:25 IAC-26/A3/IP/112839
FROM LAKE TUZ TO MARS: COLD-WATER CO₂ GEYSERS, MINERAL LAYERS, AND POTENTIAL BIOSIGNATURES
Alper Gürbüz, Ankara University, Türkiye

13:25-13:35 IAC-26/A3/IP/108961
EXPLORATION OF SMALL BODIES WITH SMALL SATELLITE IN NEW SPACE PROJECT OF MOSCOW UNIVERSITY
Vladislav Osedlo, Lomonosov Moscow State University, Russian Federation

13:35-13:45 IAC-26/A3/IP/113866
OBSERVATION SEQUENCE OPTIMIZATION METHOD FOR OPTICAL NAVIGATION OF DEEP SPACE PROBE BASED ON OBSERVABILITY ENHANCEMENT
zhengdong liu, Beijing Institute of technology, China

SCREEN 14

12:45-12:55 IAC-26/A3/IP/115805
MAPPING LUNAR ENERGETIC NEUTRAL ATOM OBSERVATIONS USING CHANDRAYAAN-1 CENA DATA
Sena Nur Çalışkan, University of Turkish Aeronautical Association, Türkiye

12:55-13:05 IAC-26/A3/IP/116268
AI-ASSISTED AUTONOMOUS ROVER CONCEPT FOR ASTROBIOLOGICAL EXPLORATION OF MARTIAN POLAR ICE DEPOSITS
Zeynep Dede, University of Turkish Aeronautical Association, Türkiye

13:05-13:15 IAC-26/A3/IP/116924
PRE-PHASE A AND PERFORMANCE ANALYSIS OF AN HELICOPTER ROVER FOR MARTIAN LAVA TUBES EXPLORATION
Michael Lucchi, Politecnico di Torino, Italy

13:15-13:25 IAC-26/A3/IP/115206
GAIT OPTIMIZATION FOR PLANETARY ROVERS ON GRANULAR TERRAIN VIA REINFORCEMENT LEARNING USING DISCRETE ELEMENT METHOD
Gizem Asya Yılmaz, Yıldız Technical University, Türkiye

13:25-13:35 IAC-26/A3/IP/116219
BAYESIAN GAIT OPTIMIZATION FOR C-POD QUADRUPED ROVERS USING DISCRETE ELEMENT METHOD
N. Tarık Mut, Yıldız Technical University, Türkiye

13:35-13:45 IAC-26/A3/IP/116480
THE KULA-SALİHLİ UNESCO GLOBAL GEOPARK (TÜRKİYE) AS A CANDIDATE MARS ANALOGUE SITE: GEOLOGICAL CONTEXT AND IMPLICATIONS FOR PLANETARY SURFACE STUDIES
Ayşe Ceylin Çelebi, Università degli Studi di Napoli "Federico II", Italy

SCREEN 15

12:45-12:55 IAC-26/A3/IP/107600
LIDAR SATELLITE SYSTEM FOR HIGH-RESOLUTION LUNAR LANDING SITE CHARACTERIZATION
Mehmet Fatih Engin, University of Turkish Aeronautical Association, Türkiye

12:55-13:05 IAC-26/A3/IP/111781
LUNAR REGOLITH IN-SITU MANUFACTURING VIA ELECTRON BEAM SINTERING: A DATA-DRIVEN PROCESS OPTIMIZATION APPROACH
Tongcai Wang, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences., China

13:15-13:25 IAC-26/A3/IP/111829
IN-SITU MANUFACTURING OF LUNAR SURFACE COMPONENTS VIA REGOLITH-BASED PHOTOTHERMAL-COUPLED VAT PHOTOPOLYMERIZATION
Rihan Zhang, University of Chinese Academy of Sciences; Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China

13:35-13:45 IAC-26/A3/IP/114444
ROBOTIC PILE-DRIVING AND EXCAVATION CONCEPTS FOR LUNAR SURFACE INFRASTRUCTURE
Kerem Turkmus, University of Bristol, United Kingdom

Wednesday 7 October

SCREEN 16

12:45-12:55 IAC-26/A3/IP/113079

THE CHALLENGES OF BUILDING A DEDICATED MULTI-MISSION LUNAR GROUND STATION NETWORK

Martin Krynitz, Kongsberg Satellite Services AS, Norway

12:55-13:05 IAC-26/A3/IP/115943

BAT-SWARM: BIOMIMETIC SONAR-GUIDED MICRO DRONE SWARMS FOR LUNAR LAVA TUBE EXPLORATION IN GNSS-DENIED ENVIRONMENTS

Erdem Ceylan, Eskişehir Private Murat Yıldırım Vocational and Technical Anatolian High School, Türkiye

13:05-13:15 IAC-26/A3/IP/108776

CAMERA-BASED OBSTACLE DETECTION FOR PLANETARY ROVER NAVIGATION

Mehriban Aliyeva, ADA University, Azerbaijan

13:15-13:25 IAC-26/A3/IP/107111

HYPERLOOP: HYPERSPECTRAL-ASSISTED LOOP CLOSURE DETECTION IN 3D-SLAM FOR PLANETARY EXPLORATION

Annie Bhalla, Germany

13:25-13:35 IAC-26/A3/IP/110116

DYNAMIC THERMAL RADIATION ANALYSIS FOR LUNAR CUBESATS

Emre Kaplan, Turkish-German University, Türkiye

13:35-13:45 IAC-26/A3/IP/108662

MULTIMODAL ANALYSIS OF ROBOTIC INTERFACES FOR LUNAR OPERATIONS

Pragya Jain, International Space University (ISU), Netherlands (Kingdom of the)

SCREEN 17

13:05-13:15 IAC-26/A3/IP/108443

REAL-TIME POST-DISASTER DAMAGE ASSESSMENT USING ON-BOARD EDGE COMPUTING AND SYNTHETIC APERTURE RADAR (SAR) SEGMENTATION

Valeh Amirbayov, None, Azerbaijan

13:25-13:35 IAC-26/A3/IP/111820

AERODYNAMIC SIZING, CFD ANALYSIS, AND CONFIGURATION OPTIMIZATION OF A HEAVY-CLASS CARGO ROTORCRAFT FOR MARTIAN ATMOSPHERIC CONDITIONS

Selver Altun, Erciyes University, Türkiye

13:35-13:45 IAC-26/A3/IP/110532

DESIGN OF AN ADAPTIVE MORPHING WING AND LQR CONTROLLER ANALYSIS FOR ENHANCED AERODYNAMIC EFFICIENCY IN MARTIAN ATMOSPHERIC CONDITIONS

Firdevs Sultan Kaçmaz, Erciyes University, Türkiye

SCREEN 18

12:45-12:55 IAC-26/A6/IPB/113690

DEVELOPMENT AND IN-ORBIT DEMONSTRATION OF LEAF, A DRAG SAIL FOR MICROSATELLITES

Takeru Nakamura, cosmobloom Inc., Japan

12:55-13:05 IAC-26/A6/IP/111087

STATUS OF THE ISON OPTICAL TELESCOPE NETWORK AND DATABASE ON SPACE DEBRIS

Igor Molotov, Keldysh Institute of Applied Mathematics, RAS, Russian Federation

13:05-13:15 IAC-26/A6/IP/110422

DUAL-USE STAR TRACKER-BASED DETECTION AND CHARACTERIZATION OF RESIDENT SPACE OBJECTS

Ceylan Şevval İnan, Istanbul Technical University, Türkiye

13:15-13:25 IAC-26/A6/IP/113924

MULTI-OBJECTIVE OPTIMIZATION OF AUTONOMOUS COLLISION AVOIDANCE MANEUVERS: OPTIMAL TIMING AND FUEL EFFICIENCY IN SATELLITE-TO-SATELLITE ENCOUNTERS

Ege Duran, T3 Foundation, Türkiye

13:25-13:35 IAC-26/A6/IP/105577

PASSIVE RADAR DETECTION OF SPACE DEBRIS USING GNSS SIGNAL REFLECTIONS FOR COLLISION AVOIDANCE

Alina Santander, Stanford University, United States

13:35-13:45 IAC-26/A6/IPB/107979

PRE-LAUNCH POST-SEPARATION SCREENINGS FOR MTG-S1 AND METOP-SG A1 LAUNCHES

Pier Luigi Righetti, EUMETSAT, Germany

SCREEN 19

12:45-12:55 IAC-26/A6/IP/105605

INCENTIVIZING ORBITAL SUSTAINABILITY: AN ORBITAL DEBRIS CREDIT SYSTEM FOR MANAGING SPACE DEBRIS AS A MARKET FAILURE

Bence Antonya, Hungary

12:55-13:05 IAC-26/A6/IPB/107235

TOWARDS A FEDERATED EUROPEAN FRAMEWORK FOR SPACE SURVEILLANCE: POLICY, SECURITY, AND COOPERATIVE PATHWAYS FOR A MULTI SOURCE, MULTI SERVICE SSA PLATFORM

Nicolas FROUVELLE, CS GROUP, France

13:05-13:15 IAC-26/A6/IP/110273

HIGH-VELOCITY IMPACT PERFORMANCE OF A SCUTOID-BASED CORE FOR AEROSPACE PROTECTIVE STRUCTURES

Kağan Yaşar, Istanbul Technical University, Türkiye

13:15-13:25 IAC-26/A6/IP/117052

ORBIT ASSOCIATION OF RESIDENT SPACE OBJECTS IN ESA SWARM STAR-TRACKER IMAGERY: COVARIANCE-AWARE CATALOGUE MATCHING AND CROSS-SATELLITE VALIDATION IN NEAR-POLAR ORBITS

Vithurshan Suthakar, University of Waterloo, Canada

13:25-13:35 IAC-26/A6/IP/116688

AUTONOMOUS ONBOARD QUBO-BASED ROUTE OPTIMIZATION FOR MULTI-VEHICLE ACTIVE DEBRIS REMOVAL SWARMS IN CONGESTED LEO SHELLS

Irmak Yıldız, Hacettepe University, Türkiye

13:35-13:45 IAC-26/A6/IP/108342

DRAG MODELING UNCERTAINTY VS. MECHANICAL CONFIGURATION FOR CUBESAT DEORBITING

Ashraf Khater, Bahrain Space Agency (BSA), Bahrain

SCREEN 20

12:45-12:55 IAC-26/A6/IP/105867

ENHANCING STOCHASTIC GEOMETRY BASED TIME-INVARIANT SENSOR TASKING FOR CATALOGUE MAINTENANCE OF LEO SPACE OBJECTS USING REINFORCEMENT LEARNING

Harsha M, IIIT Delhi, India

12:55-13:05 IAC-26/A6/IP/106913

SHIELDING THE HEAVENS: RECONCILING DARK AND QUIET SKIES WITH THE EXPANSION OF LEO, MEO, AND HELIOCENTRIC UNDER THE FIVE PILLARS OF THE OUTER SPACE.

Lakshmi Narayanan Nammalwar, India

13:05-13:15 IAC-26/A6/IP/115735

EXPERIMENTAL ANALYSIS OF A CATASTROPHIC CUBESAT FRAGMENTATION

Martin Schimmerohn, Fraunhofer - Institute for High-Speed Dynamics, Germany

13:15-13:25 IAC-26/A6/IPB/111359

FUEL-OPTIMAL TETHER-ASSISTED SPACE DEBRIS REMOVAL CONSIDERING THE EFFECT OF AERODYNAMIC DRAG

Arun Misra, Mc Gill Institute for Aerospace Engineering (MIAE), Canada

Wednesday 7 October

13:25-13:35 IAC-26/A6/IP/116439
COOPERATIVE APPROACH CONTROL OF TETHERED ROBOTS FOR SPACE DEBRIS CAPTURE
Moe Urushihara, Tokyo Metropolitan University, Japan

13:35-13:45 IAC-26/A6/IP/108379
EDGE-AI DRIVEN AUTONOMOUS CHARACTERIZATION AND PREDICTIVE TARGETING OF NON-COOPERATIVE SPACE DEBRIS: A HARDWARE-IN-THE-LOOP VALIDATED ARCHITECTURE
Yasin Çavuşoğlu, [unlisted], Türkiye

SCREEN 21

12:45-12:55 IAC-26/A6/IP/110779
BALLISTIC COEFFICIENT ESTIMATION FOR THE CZ-6A AND COSMOS 1408 DEBRIS FAMILIES
Enis ARIKAN, CISAS – “G. Colombo” Center of Studies and Activities for Space, University of Padova, Italy

12:55-13:05 IAC-26/A6/IP/109143
MMOD RISK ASSESSMENT: A TWO-PHASE APPROACH BASED ON INTRINSIC GEOMETRICAL VULNERABILITY USING THE CSTS TOOL
Alberto Abiti, CISAS G. Colombo - University of Padova, Italy

13:05-13:15 IAC-26/A6/IP/107085
TRANSFORMER BASED MMOD IMPACT DETECTION IN LEO TELEMETRY: A BENCHMARK AGAINST EKF AND LSTM
Beyzanur Ertan, Istanbul Medeniyet University, Türkiye

13:25-13:35 IAC-26/A6/IP/115856
PLA WOOD SATELLITE TO REDUCE THE SPACE DEBRIS A NEW APPROACH FOR A GREENER FUTURE
Ezgi Karabakan, Katip Celebi University, Türkiye

13:35-13:45 IAC-26/A6/IP/109358
INTEGRATING CLOUD-NATIVE CONJUNCTION SCREENING AND COLLISION AVOIDANCE INTO ROUTINE LEO CONSTELLATION OPERATIONS
Gaia Roncalli, Ecosmic s.r.l., Italy

SCREEN 22

12:45-12:55 IAC-26/A6/IP/107951
IMPROVING ORBIT PREDICTION ACCURACY IN LEO USING ATMOSPHERIC DENSITY MODEL CORRECTION
Andrey Nosyrev, Moscow Institute of Physics and Technology (MIPT), Russian Federation

12:55-13:05 IAC-26/A6/IPB/109427
HYBRID PHYSICS-INFORMED RESIDUAL LEARNING FOR SHORT-TERM SPACE DEBRIS ORBIT PROPAGATION
Maryam Akhundova, Azerbaijan State Oil and Industry University (SABAH Groups), Azerbaijan

13:05-13:15 IAC-26/A6/IP/107733
ESTABLISHING BRAZIL'S FIRST PRIVATE SPACE DEBRIS MONITORING CENTER TO ADDRESS THE SOUTHERN HEMISPHERE SSA BLIND SPOT AND STRENGTHEN THE BRAZILIAN SPACE ECONOMY
Luis Felipe Alves de Oliveira, Safe on Orbit, Brazil

13:15-13:25 IAC-26/A6/IP/111857
CAUSAL LOOP DIAGRAM-BASED MODELING OF DYNAMIC INTERACTIONS BETWEEN SPACE TOURISM AND SPACE DEBRIS
Büşra Önlér Çiğdem, İstanbul Gelişim University, Türkiye

13:25-13:35 IAC-26/A6/IP/112639
FROM COMPLIANCE TO INTERVENTION: ORBIT'S LIGHT AS A TECHNOLOGICAL CATALYST FOR ORBITAL DEBRIS GOVERNANCE IN MEXICO
Sofia Blancas, Facultad de Ingeniería-UNAM, Mexico

13:35-13:45 IAC-26/A6/IPB/107341
LONG-TERM CONJUNCTION RISK ASSESSMENT VIA ELLIPTICAL APPROXIMATIONS IN THE FAST VARIABLE DOMAIN
Shota Takahashi, Kayhan Space, United States

SCREEN 23

12:45-12:55 IAC-26/A6/IPB/110076
A HYBRID LIFE CYCLE ASSESSMENT FRAMEWORK FOR SATELLITE END-OF-LIFE SUSTAINABILITY: INCORPORATING ORBITAL COLLISION RISK AND CONGESTION METRICS
Federico Toson, CISAS G. Colombo - University of Padova, Italy

12:55-13:05 IAC-26/A6/IP/114951
UPPER LIMIT DEFINITION FOR SPACE CAPACITY USING THE THEMIS INDICATOR
Daniel Lück, Politecnico di Milano, Italy

13:05-13:15 IAC-26/A6/IP/113421
ORBITAL SAFETY IN THE ERA OF MEGA-CONSTELLATIONS: THE STRATEGIC ROLE OF SPACE SITUATIONAL AWARENESS IN MITIGATING COLLISION RISKS AND ENSURING SUSTAINABLE SPACE OPERATIONS
Victoria Costa, Safe on Orbit, Brazil

13:15-13:25 IAC-26/A6/IP/107498
SOLAR-POWERED PASSIVE DRAG AUGMENTATION SYSTEM FOR END-OF-LIFE DISPOSAL OF SMALL SATELLITES
Abdullah Çavdar, Baykar Science High School, Türkiye

13:25-13:35 IAC-26/A6/IPB/112320
J2-ASSISTED TIME-DEPENDENT TSP ROUTE OPTIMIZATION FOR MULTI-TARGET ACTIVE DEBRIS REMOVAL USING A MOTHERSHIP DEORBIT-KIT
Cengizhan Dogan, Eper Technologies, Türkiye

13:35-13:45 IAC-26/A6/IP/107190
AI-ENHANCED ENCKE PROPAGATOR
Rosario López, Universidad de La Rioja, Spain

SCREEN 24

12:45-12:55 IAC-26/A6/IPB/110028
EVOLVING METHODOLOGIES TO ASSESS COLLISION RISK STATISTICS AND RELATED EFFORT IN RISK MITIGATION
Vitali Braun, IMS Space Consultancy, Germany

12:55-13:05 IAC-26/A6/IP/113499
ADAPT: A PHYSICS-FIRST FORENSIC FRAMEWORK FOR THE ROTATIONAL CHARACTERIZATION OF LARGE-SCALE LEO DEBRIS
Yusuf Kerim Kaymakçı, Baykar Science High School, Türkiye

13:05-13:15 IAC-26/A6/IP/115582
BENEFITS FOR CONSTELLATIONS USING DRAG SAILS FOR DEORBITING
Dorottya Milánkovich, HPS GmbH, Germany

13:15-13:25 IAC-26/A6/IP/107437
LICENSING SPACE OPERATIONS IN LOW EARTH ORBIT: ENVIRONMENTAL COMPLIANCE AND PRIVATE OPERATOR RESPONSIBILITY
Amjith Sudheer Bindu, Erets Space, United Kingdom

13:25-13:35 IAC-26/A6/IP/112905
NANOSATELLITE SWARM ESTABLISHMENT AND CONTROL FOR ACTIVE REMOVAL OF NON-COOPERATIVE TUMBLING SPACE DEBRIS
Fatima Alnaqbi, Technology Innovation Institute (TII), United Arab Emirates

13:35-13:45 IAC-26/A6/IP/107445
ONBOARD AUTONOMOUS DEORBIT PLANNING AND CONTROL FOR LARGE CONSTELLATIONS
Wang Qianhao, China

SCREEN 25

12:45-12:55 IAC-26/B1/IP/110176
A DIGITAL TWIN FRAMEWORK FOR VOLCANIC ASH PLUME MONITORING USING MULTI-SENSOR EO DATA: THE MOUNT ETNA CASE STUDY
Mascia Bucciarelli, Sapienza University of Rome, Italy

Wednesday 7 October

12:55-13:05 IAC-26/B1/IP/110065

MONITORING MANGROVE AND WATER QUALITY DYNAMICS UNDER TEMPORARY HYDROLOGICAL DISTURBANCE: A TIME-SERIES REMOTE SENSING APPROACH

Surya Deb Chakraborty, Mohammed Bin Rashid Space Centre (MBRSC), United Arab Emirates

13:05-13:15 IAC-26/B1/IPB/105599

HIGH RESOLUTION IMAGERY FROM VERY-LOW EARTH ORBIT : AN ANALYSIS OF EARTH OBSERVATION CAPABILITIES AND CHALLENGES OF THE NEO-1 SATELLITE

Ilyas El Wafi, [unlisted], United Kingdom

13:15-13:25 IAC-26/B1/IP/106695

SATELLITE DATA FOR CLIMATIC PURPOSES: FOSTERING DATA TRACTABILITY TO MEET THE NEEDS OF CLIMATE DATA USER

Timothée Cabos, École Normale Supérieure, France

13:25-13:35 IAC-26/B1/IP/107326

LEVERAGING ESA COPERNICUS MULTISPECTRAL AND HYPERSPECTRAL DATA FOR COMPLIANCE WITH THE EU DEFORESTATION REGULATION (EUDR)

Jakub Leś, University of Wrocław (UWr), Poland

13:35-13:45 IAC-26/B1/IP/117097

RAINFALL-INDUCED LANDSLIDE SUSCEPTIBILITY MAPPING IN THE PERUVIAN ANDES USING EARTH OBSERVATION AND MACHINE LEARNING

Erik Alejandro Espinel Bernilla, Universidad Nacional Mayor de San Marcos, Peru

SCREEN 26

12:45-12:55 IAC-26/B1/IP/112574

MONITORING AGRICULTURAL WATER USAGE IN UZBEKISTAN: SATELLITE-BASED EVAPOTRANSPIRATION MODELING FOR SUSTAINABLE WATER MANAGEMENT

Jakhongir Iskhakov, Uzbekspace Agency, Uzbekistan

12:55-13:05 IAC-26/B1/IP/113927

MONITORING PLANNED VERSUS ACTUAL CROP CULTIVATION THROUGH EARTH OBSERVATION FOR AGRICULTURAL CREDIT OVERSIGHT

Jakhongir Mirzo Khafizov, Uzbekspace Agency, Uzbekistan

13:05-13:15 IAC-26/B1/IP/113261

ENHANCING SATELLITE IMAGE SPATIAL RESOLUTION USING ARCHIVAL HIGH-RESOLUTION IMAGERY AS TEMPORAL PRIORS

Farkhod Makhmudkhujayev, Uzbekspace Agency, Uzbekistan

13:15-13:25 IAC-26/B1/IP/106734

LONG-TERM ASSESSMENT OF GLACIER RETREAT AND MORAINES LAKE EVOLUTION IN THE NORTHERN TIEN SHAN USING REMOTE SENSING DATA

Alima Amangeldi, Ionosphere Institute, Kazakhstan

13:25-13:35 IAC-26/B1/IP/111237

AN AI-DRIVEN PLATFORM FOR CONVERSATIONAL EARTH OBSERVATION DECISION SUPPORT

Simone-Lolimpia David, Romanian Space Initiative, Romania

13:35-13:45 IAC-26/B1/IP/114393

REVIEW AND PROSPECT OF CHINA'S NATIONAL SPACE REMOTE SENSING INFRASTRUCTURE

Ming Li, DFH Satellite Co., Ltd., China

SCREEN 27

12:45-12:55 IAC-26/B1/IP/116127

MULTI-MODAL DETECTION OF CAMOUFLAGED OBJECTS IN EARTH OBSERVATION IMAGERY USING ARTIFICIAL INTELLIGENCE

Zeynep Kara, Istanbul Technical University, Türkiye

12:55-13:05 IAC-26/B1/IP/105612

SPACE-BASED DEFORESTATION MONITORING IN ZIMBABWE: USING SENTINEL DATA AND MACHINE LEARNING FOR NEAR REAL-TIME ENVIRONMENTAL RESPONSE

Muongeni Tamara Manda, Space Generation Advisory Council (SGAC), Zimbabwe

13:05-13:15 IAC-26/B1/IP/105658

INTEGRATING MULTI-SENSOR EARTH OBSERVATION DATA AND MACHINE LEARNING FOR SPATIOTEMPORAL ANALYSIS OF WILDFIRE BURNT AREA IN ZIMBABWE DISTRICT, ZIMBABWE

Prince Gudoshava, Chinhoyi University of Technology, Zimbabwe

13:15-13:25 IAC-26/B1/IP/107875

PERFORMANCE EVOLUTION OF MACHINE LEARNING AND GEOSTATISTICAL MODELS FOR NIGHT SKY BRIGHTNESS MAPPING OVER ANTALYA

Fethullah Polat, Ataturk University, Türkiye

13:25-13:35 IAC-26/B1/IP/113433

ENHANCING ALPINE SOLAR RADIATION PREDICTIONS THROUGH MULTI-SOURCE DATA FUSION AND MACHINE LEARNING

Alper Sametoglu, ETHZ, Switzerland

13:35-13:45 IAC-26/B1/IP/110010

ARCHITECTURAL DESIGN OF A HIGH-THROUGHPUT ON-BOARD DATA HANDLING AND MASS MEMORY UNIT FOR MULTI-CHANNEL RF DOWNLINK IN LEO MISSIONS

Bengül Bayraktaroğlu Kara, ASELSAN, Türkiye

SCREEN 28

12:45-12:55 IAC-26/B1/IP/115874

TRAINING SAR OBJECT DETECTION MODELS ON PURELY SYNTHETIC AND TESTING ON MEASURED DATA

Vladimir Abramov, Moscow Institute of Physics and Technology (MIPT), Russian Federation

12:55-13:05 IAC-26/B1/IP/107449

A HIGH-PRECISION INFRARED LASER OCCULTATION DETECTION CONTROL SYSTEM BASED ON SOFTWARE AND HARDWARE DECOUPLING

Yang LIU, Innovation Academy for Microsatellites, Chinese Academy of Sciences, China

13:05-13:15 IAC-26/B1/IP/116221

EARLY STAGE WARNING AND MONITORING SYSTEM FOR FLOODING AND LANDSLIDES IN RWANDA

David Salmon, International Space University (ISU), United Kingdom

13:15-13:25 IAC-26/B1/IPB/106018

SATELLITE-BASED EVALUATION OF THE ENVIRONMENTAL PAUSE DECREE (DS 5225) EFFECTIVENESS IN BOLIVIA: DYNAMIC RISK MODELING AND THERMAL REMOTE SENSING INTEGRATION.

Joel Duran Paredes, Universidad Católica Boliviana San Pablo, Bolivia

13:25-13:35 IAC-26/B1/IP/111814

AN ONBOARD-DEPLOYABLE AUTOSCHEDULER FOR EARTH OBSERVATION CONSTELLATIONS EXPLOITING REDUNDANCY TO MINIMIZE DATA LATENCY

Giulia Sala, Argotec, Italy

13:35-13:45 IAC-26/B1/IP/113548

MAPPING THE SATELLITE DATA HANDOFF DELAY THAT COSTS LIVES IN WILDFIRE EVACUATIONS

Shabnam Ibrahimova, ADA University, Azerbaijan

SCREEN 29

12:45-12:55 IAC-26/B1/IP/115287

SATELLITE-INFORMED CLIMATE ANALYSIS OF ASIAN CROP YIELD VULNERABILITY: SPACE-ENABLED PATHWAYS FOR AGRICULTURAL RESILIENCE

Tarana Karimova, Baku Engineering University, Azerbaijan

Wednesday 7 October

12:55-13:05 IAC-26/B1/IP/109320
SMART AQUACULTURE FROM SPACE: INTEGRATING SATELLITE DATA AND MARKET INTELLIGENCE FOR SUSTAINABLE DEVELOPMENT
Antonello Aiello, Planetek Italia, Italy

13:05-13:15 IAC-26/B1/IPB/112957
SATELLITE-BASED ASSESSMENT OF RENEWABLE ENERGY AIR QUALITY BENEFITS IN WESTERN TÜRKİYE
Leyla Yusifzade, Khazar University, Azerbaijan

13:15-13:25 IAC-26/B1/IP/108654
A COMPREHENSIVE SURVEY AND CASE STUDY ANALYSIS OF ELECTRO-OPTICAL SYSTEM PAYLOADS FOR SMALL SATELLITE MISSIONS
Cengiz Onat Yapanel, Kabatas Erkek High School, Türkiye

13:25-13:35 IAC-26/B1/IP/106249
ORBITAL PROPAGATION-BASED PREDICTIVE FRAMEWORK FOR THE GEOMETRIC AND RADIOMETRIC EVALUATION OF MULTISPECTRAL ACQUISITIONS.
Sebastian Sifuentes Zavala, Samara National Research University (Samara University), Russian Federation

13:35-13:45 IAC-26/B1/IP/110880
ADAPTIVE SOC-BASED ONBOARD PROCESSING FOR GEOSPATIAL INTELLIGENCE IN THE NEW SPACE ERA
Fernando Aguado Agelet, University of Vigo, Spain

SCREEN 30

12:45-12:55 IAC-26/B2/IPB/109868
SBAS SIGNAL SIMULATION TESTBED FOR A NATIONAL SBAS IN TÜRKİYE
Zeynep Sena Erkan, ASELSAN, Türkiye

12:55-13:05 IAC-26/B2/IP/115560
A MULTI-STANDARD DIGITAL IP-CORE ECOSYSTEM FOR HIGH-PERFORMANCE SPACE-BASED OPTICAL COMMUNICATIONS
Daniele Davalle, IngeniArs Srl, Italy

13:05-13:15 IAC-26/B2/IP/112171
USE AND EVALUATION OF RIGHT-INVARIANT EXTENDED KALMAN FILTER FOR SUB-ORBITAL ROCKET NAVIGATION SYSTEM
Mateusz Pilecki, Wrocław University of Technology, Poland

13:15-13:25 IAC-26/B2/IPB/109783
DEVELOPMENT OF A DEMONSTRATION MODEL OF A SATELLITE BASED AUGMENTATION SYSTEM (SBAS) FOR TÜRKİYE
Ali Özgür TAŞOĞLU, ASELSAN, Türkiye

13:35-13:45 IAC-26/B2/IP/109032
ENHANCING GNSS-SDR TRACKING RESILIENCE FOR LEO DYNAMICS: IMPLEMENTATION OF AN FLL-ASSISTED PLL ARCHITECTURE
Aza Elyamani, Kyushu Institute of Technology, Egypt

SCREEN 31

12:45-12:55 IAC-26/B2/IP/113193
ESTABLISHING DETERMINISTIC DEDICATED PATHS IN LEO MEGA-CONSTELLATIONS: A LINK-GEOGRAPHIC CO-DESIGN APPROACH
Gaosai Liu, Innovation Academy for Microsatellites, Chinese Academy of Sciences, China

12:55-13:05 IAC-26/B2/IP/108993
INTEGRATED SENSOR FUSION AND ANALOG-CALIBRATED SIMULATION FOR TUMBLEWEED ROVERS NAVIGATION ON MARS
Giovanni Cozzolongo, Team Tumbleweed, Netherlands (Kingdom of the)

13:05-13:15 IAC-26/B2/IP/113682
INVESTIGATING REINFORCEMENT LEARNING FOR ADAPTIVE SIGNAL TRANSMISSION IN HIGH-ALTITUDE COMMUNICATION SYSTEMS
Mysha Hamid, University of Waterloo, Canada

13:25-13:35 IAC-26/B2/IP/110800
GENERATION OF A HIGH-FIDELITY SYNTHETIC DATASET FOR THE ANALYSIS OF ATMOSPHERIC TURBULENCE VARIABLES IN SATELLITE OPTICAL UPLINKS
Fernando Aguado Agelet, University of Vigo, Spain

13:35-13:45 IAC-26/B2/IP/109363
ORBITLINK: A SPACE-BASED OFFLINE, GLOBAL, DECENTRALIZED DATA RELAY ARCHITECTURE USING ORBITAL SIGNAL VERIFICATION
Arda Karahan, Muğla Sıtkı Koçman University, Türkiye

SCREEN 32

12:45-12:55 IAC-26/B2/IPB/108231
ENHANCING THROUGHPUT IN MIXED ACM AND NON-ACM GEO SATELLITE NETWORKS USING DEEP REINFORCEMENT LEARNING
Mohd Safwan Bin Muda, Universiti Teknologi MARA (UITM), Malaysia

12:55-13:05 IAC-26/B2/IP/108273
EQUIVARIANT BIAS-INCLUSIVE JOINT IMU AND LINEAR VELOCITY PREINTEGRATION ON AN EXTENDED GALILEAN GROUP FOR PLANETARY SURFACE ROBOTICS
Mingyue Wang, Beihang University, China

13:05-13:15 IAC-26/B2/IP/105691
AI DRIVEN OPTIMIZATION OF MULTI-ORBIT GEO AND LEO SATELLITE COMMUNICATION NETWORKS
Feven Alemu Beyecha, Space Science and Geospatial Institute (SSGI), Ethiopia

13:15-13:25 IAC-26/B2/IP/112303
AUTONOMOUS LUNAR NAVIGATION USING TRANSFORMER-BASED CRATER DETECTION AND GEOMETRIC INVARIANTS MATCHING
Vincenzo Prisco, Sapienza University of Rome, Italy

13:25-13:35 IAC-26/B6/IP/116458
MULTIMODAL GRAPH NEURAL NETWORKS FOR COGNITIVE WORKLOAD PREDICTION IN SPACE TELEOPERATION
Elmira Poladova, French-Azerbaijani University (UFAZ), Azerbaijan

SCREEN 33

12:45-12:55 IAC-26/B6/IPB/115688
CONSTRAINT-BASED MISSION PLANNING FOR MULTI-SATELLITE OPERATIONS: THE CELESPLAN SCHEDULING ENGINE
Latifa BENAMEUR, France

12:55-13:05 IAC-26/B6/LBA/118029
A MULTI-OBJECTIVE SECURITY-AWARE OPTIMIZATION MODEL FOR TASK SCHEDULING IN SPACE OPERATIONS
Ayşe Nur Sucu, Hacettepe University, Türkiye

13:05-13:15 IAC-26/B6/IP/116267
FROM CONSENSUS TO COMPLIANCE: GROUPTHINK IN HUMAN-AI TEAMS AS A PRECURSOR TO HUMAN OVERRELIANCE
Alita Regi, Florida Institute of Technology, United Arab Emirates

13:15-13:25 IAC-26/B6/IP/106912
FLYBY OPERATIONS FOR THE EMIRATES MISSION TO THE ASTEROID BELT; PRODUCT EXCHANGES, MISSION OPERATIONS SUPPORT TOOLS, AND OBSERVATION COMMAND ARCHITECTURE
Shahad Badri, UAE Space Agency, United Arab Emirates

13:25-13:35 IAC-26/B6/IPB/107138
DEPLOYING OPENVOCS AT THE GERMAN SPACE OPERATIONS CENTER
Markus Töpfer, German Aerospace Center (DLR), Germany

13:35-13:45 IAC-26/B6/LBA/117881
DRAWING THE AUTONOMY LINE: THREE ARCHITECTURAL APPROACHES FOR AGENTIC ARTIFICIAL INTELLIGENCE IN SATELLITE MISSION OPERATIONS
Alexandru Moloceniuc, Germany

Wednesday 7 October

SCREEN 34

12:45-12:55 IAC-26/B6/IP/109370

A STRUCTURED MAINTENANCE FRAMEWORK FOR REUSABLE LAUNCH VEHICLES USING THE ATA 2200 MODEL AS A CONCEPTUAL REFERENCE

Jesús Camilo Álvarez Valenz, Instituto Politécnico Nacional, Mexico

12:55-13:05 IAC-26/B6/IP/107349

BIOMORPHIC EXTERNAL EXPLORATION & TECHNICAL LOGISTICS ENTITY

Luis Fernando Favian Curiel, Universidad La Salle, Mexico

13:05-13:15 IAC-26/B6/IPB/115034

MULTI-ENCOUNTER COLLISION PROBABILITY ESTIMATION

Alejandro Álvarez Salazar, GMV Aerospace & Defence SAU, Spain

13:25-13:35 IAC-26/B6/LBA/117543

DOWNLINK STRATEGY FOR METOP-SG-B1 FLIGHT OPERATIONS

Nigar Mehraliyeva, EUMETSAT, Germany

13:35-13:45 IAC-26/B6/LBA/117537

TOWARD AI TRANSFORMATION (AX) IN SATELLITE OPERATIONS: A DOMAIN-DRIVEN FRAMEWORK FOR AUTONOMOUS MULTI-SATELLITE MANAGEMENT

Okchul Jung, Korea Aerospace Research Institute (KARI), Republic of Korea

SCREEN 35

12:55-13:05 IAC-26/B3/IP/112111

RETHINKING FOOD AS A MATRIX MODEL: CONCEPTUAL PERSPECTIVES FOR HUMAN SPACEFLIGHT

Canan Kartal, Ege University, Türkiye

13:05-13:15 IAC-26/B3/IP/105270

DESIGN OF A PASSIVE VISCOELASTIC PERIOULAR PROTOTYPE FOR SANS

Fulin Babayiğit, Haydarpaşa High School, Türkiye

13:15-13:25 IAC-26/B3/IP/113655

EFFICIENT AND REUSABLE UAV PLATFORM FOR AUTONOMOUS FLIGHT MAPPING AND EARLY DUST STORM WARNING IN MARS EXPLORATION

İbrahim Musab Baylan, Independent Researcher, Türkiye

13:25-13:35 IAC-26/B3/IP/116262

DESIGN AND DEVELOPMENT OF A COMPACT LOW-FIELD MAGNETIC RESONANCE SENSOR FOR AUTONOMOUS HEALTH MONITORING IN HUMAN SPACEFLIGHT

Zehra Kadumi, Türkiye

13:35-13:45 IAC-26/B3/IP/116087

BOARD TELESCOPE OF NEUTRONS (BTN) EXPERIMENT ON THE RS ISS: GOALS, RESULTS AND APPLICATION

Dmitry Golovin, Space Research Institute (IKI), Russian Academy of Sciences (RAS), Russian Federation

SCREEN 36

13:05-13:15 IAC-26/B3/IP/105925

ADAPTATION OF AN ELECTROMECHANICAL ASSISTIVE HAND EXOSKELETON FROM REHABILITATION TO EVA GLOVE APPLICATIONS

Nuria Hernández Alás, Instituto Tecnológico Autónomo de México, Mexico

13:15-13:25 IAC-26/B3/IPB/105418

DESIGN AND IMPLEMENTATION OF ANALOG HABITABILITY TRIALS IN EARLY-PHASE CREWED SPACEFLIGHT MISSIONS

Rekhanshi Varma, Indian Space Research Organization (ISRO), India

13:25-13:35 IAC-26/B4/IP/106093

NEW OPPORTUNITIES DRIVEN BY SMALL SATELLITE CONSTELLATIONS FOR RADIO OCCULTATION TECHNOLOGY

Congliang Liu, National Space Science Center (NSSC), Chinese Academy of Sciences, China

13:35-13:45 IAC-26/B4/IP/116050

KUUPCAMERA: A SOFTWARE DEFINED, ULTRA LOW POWER AI CAPABLE SPACE CAMERA FOR MISSION ADAPTIVE ON BOARD PERCEPTION

Ric Dengel, University of Tartu, Estonia

SCREEN 37

12:55-13:05 IAC-26/B4/IP/110080

CROSS-MONITORED HYBRID ON-BOARD COMPUTER ARCHITECTURE DESIGN AND VALIDATION FOR THE FIRST BOLIVIAN NANOSATELLITE

Karen Wendy Vidaurre Torrez, Universidad Tecnológica Boliviana, Bolivia

13:05-13:15 IAC-26/B4/IP/116217

DESIGN OF A DEPLOYMENT SYSTEM FOR THE CHASQUI II 3U CUBESAT

Raul Martin Figueroa Teran, Universidad Nacional de Ingeniería (Lima, Perú), Peru

13:35-13:45 IAC-26/B4/IP/108336

DESIGN AND DEVELOPMENT OF THE POCKETQUBE SANOSAT-2.1 FOR LEO MISSIONS

Rakesh Chandra Prajapati, Switzerland

SCREEN 38

12:45-12:55 IAC-26/B4/IP/110718

FULLY AUTONOMOUS OPERATIONS FOR LOW-COST CUBESATS: ON-BOARD SCHEDULING, DISTRIBUTED BEACON DOWNLINK AND EMBEDDED FDIR

Pasquale Marzaioli, Politecnico di Milano, Italy

12:55-13:05 IAC-26/B4/IP/111205

THE HUMAN FRONTIER: SYSTEMS ENGINEERING CAPACITY DEVELOPMENT IN AFRICAN SMALL SATELLITE PROGRAMMES

Israa Elthahir, Erzurum Technical University, Türkiye

13:05-13:15 IAC-26/B4/IP/108969

EXPERIENCE OF DEPLOYMENT AND USE OF A MOSCOW UNIVERSITY CUBESAT CONSTELLATION FOR SCIENTIFIC AND EDUCATIONAL PURPOSES

Sergey Svertilov, Lomonosov Moscow State University, Russian Federation

13:15-13:25 IAC-26/B4/IP/108980

THE 16U CUBESAT SINP-MSU-80 OF MOSCOW UNIVERSITY FOR EARTH ATMOSPHERE OBSERVATION IN U, X- AND GAMMA RAYS

Vitaly Bogomolov, Lomonosov Moscow State University, Russian Federation

13:35-13:45 IAC-26/B4/IP/112835

QHAWANA-SAT PATHFINDER: ADVANCED CHARACTERIZATION OF EQUATORIAL IONOSPHERIC SCINTILLATION USING HIGH-RATE GNSS OBSERVABLES AND MULTI-SENSOR DATA FUSION

Juan Salvador Palacios Bett, Universidad Nacional de Ingeniería (Lima, Perú), Peru

SCREEN 39

12:45-12:55 IAC-26/C1/LBA/117433

DESIGN AND EVALUATION OF AN ASYMMETRIC SKEW-OCTAGON SGCMG CONFIGURATION FOR HIGH-SPEED SPACECRAFT ATTITUDE MANEUVERS

Hirohisa Kojima, Tokyo Metropolitan University, Japan

Wednesday 7 October

12:55-13:05 IAC-26/C1/IPB/110479
PCBSATS SWARM RELATIVE NAVIGATION AND CONTROL USING MAGNETORQUERS AND RADIOMETRIC METHODS
Vladislav Orlov, Keldysh Institute of Applied Mathematics of RAS, Russian Federation

13:05-13:15 IAC-26/C1/IP/106203
DUAL-ACTUATOR ATTITUDE CONTROL OF FLEXIBLE SATELLITE USING PD WITH MOVABLE MASS
Jalal eddine benmansour, Agence Spatiale Algérienne (ASAL), Algeria

13:15-13:25 IAC-26/C1/IPB/105855
COMPACT MULTI-SENSOR ATTITUDE DETERMINATION UNIT WITH FAULT DETECTION CAPABILITY FOR NANOSATELLITES
Mehmet Esit, Kyushu Institute of Technology, Japan

13:25-13:35 IAC-26/C1/IP/107222
HYBRID DYNAMICAL-STATISTICAL ORBIT DETERMINATION IN THE RESTRICTED THREE-BODY PROBLEM UNDER SPARSE OBSERVABILITY FOR DEBRIS MONITORING AND NAVIGATION
Jessica Gyegwe, [unlisted], Nigeria

13:35-13:45 IAC-26/C1/IPB/114810
STATELESS SPIKING CONTROL FOR SPACECRAFT NAVIGATION AND CONTROL
Stefano Silvestrini, Politecnico di Milano, Italy

SCREEN 40

12:45-12:55 IAC-26/C1/IP/108154
NEURAL NETWORK ASSISTED ADAPTIVE COVARIANCE TUNING FOR QUATERNION BASED CUBESAT EKF
Karhan Göktuğ Yasar, Turkish-German University, Türkiye

12:55-13:05 IAC-26/C1/IPB/115667
SOLAR RADIATION PRESSURE-BASED RECONFIGURATION OF ORBITING SOLAR REFLECTOR CONSTELLATIONS FOR ENHANCED TERRESTRIAL POWER GENERATION
Tariq Alibux, Delft University of Technology (TU Delft), Netherlands (Kingdom of the)

13:05-13:15 IAC-26/C1/IP/109528
UNCERTAINTY-AWARE FLOQUET MODE APPROACH FOR STATIONKEEPING OF LIBRATION POINT ORBITS
Xiaoyu Fu, University of Liverpool, United Kingdom

13:15-13:25 IAC-26/C1/IPB/110576
ADCS PRELIMINARY DESIGN AND SIMULATION OF A TETHERED SATELLITE SYSTEM WITH TETHER-TORQUE-BASED CONTROL
Arianna Lamorte, Politecnico di Torino, Italy

13:25-13:35 IAC-26/C1/IP/108122
EFFICIENT PLANNING AND GUIDANCE FOR CONSTELLATION RECONFIGURATION BASED ON J2-PERTURBED LAMBERT SOLVER
Giulio De Angelis, Sapienza University of Rome, Italy

13:35-13:45 IAC-26/C1/IP/110583
IMPROVED POD OF SENTINEL-6A BY A HIGH PRECISION THERMAL RADIATION PRESSURE MODEL
Benny Rievers, ZARM, University of Bremen, Germany

SCREEN 41

12:45-12:55 IAC-26/C1/IPB/108757
INVARIANT TORI AND THEIR MANIFOLDS NEAR TRIANGULAR LIBRATION POINTS IN THE ELLIPTIC RESTRICTED THREE-BODY PROBLEM
Lei Peng, Beihang University, China

12:55-13:05 IAC-26/C1/IP/112123
A SCALABLE LUNAR REPEAT GROUND-TRACK CONSTELLATION FOR PERSISTENT SOUTH POLE OBSERVATION
Yuhang Yu, Tsinghua University, Beijing, China

13:05-13:15 IAC-26/C1/IP/110531
REAL-TIME STOCHASTIC OPTIMAL ATTITUDE STABILIZATION FOR AUTONOMOUS SPACECRAFT VIA SEQUENTIAL POWER-SERIES APPROXIMATION
Hengpeng Lun, Beihang University, China

13:15-13:25 IAC-26/C1/IP/111039
HIERARCHICAL SEQUENTIAL CONVEX PROGRAMMING FOR STOCHASTIC FUEL-OPTIMAL LOW-THRUST TRAJECTORY DESIGN UNDER UNCERTAINTY
Hengpeng Lun, Beihang University, China

13:25-13:35 IAC-26/C1/IP/111139
MODEL-BASED DESIGN AND VERIFICATION OF A CUBESAT ADCS WITH GROUND TARGET TRACKING MODE FOR OPTICAL COMMUNICATION
Joseph Thompson, University College Dublin (UCD), Ireland

13:35-13:45 IAC-26/C1/IPB/115194
SPATIOTEMPORAL POINTING ANALYSIS FOR FORMATION OF TUMBLING SPACECRAFT
Aleksey Trivailo, RMIT University (Royal Melbourne Institute of Technology), Australia

SCREEN 42

12:45-12:55 IAC-26/C2/LBA/117734
NUMERICAL ASSESSMENT OF COOLANT PERFORMANCE AND THERMAL EFFICIENCY IN A HYBRID HEATSHIELD
Lukáš Hudáček, Technical University Košice, Slovakia

12:55-13:05 IAC-26/C2/IPB/111303
DEVELOPING LOW-BINDER LUNAR REGOLITH-BASED GEOPOLYMERS FOR CONSTRUCTION ON THE MOON USING CEMENT CONTOUR CRAFTING ADDITIVE MANUFACTURING
Lorenzo Di Mattia, Politecnico di Milano, Italy

13:05-13:15 IAC-26/C2/IP/111348
DESIGN VALIDATION AND EXPERIMENTAL TEST OF A DIFFERENTIAL BAR MECHANISM FOR FOUR-WHEEL ROVER APPLICATIONS
Luca Di Palma, Politecnico di Torino, Italy

13:15-13:25 IAC-26/C2/LBA/117999
DATA-DRIVEN PREDICTION OF FLEXIBLE SPACECRAFT DOCKING SUCCESS
Federica Angeletti, University of Rome "La Sapienza", Italy

13:25-13:35 IAC-26/C2/LBA/118003
ENHANCED OFF-AXIS BUCKLING RESISTANCE IN WOVEN CFRP LAMINATES WITH A DOUBLE-HELICOIDAL ARCHITECTURE
Seda Tepe, Istanbul Technical University, Türkiye

13:35-13:45 IAC-26/C2/IPB/109425
APPLICATION OF HIGH-TEMPERATURE HEAT PIPES TO ENHANCE THE PERFORMANCE OF RADIATIVE-INSULATIVE THERMAL PROTECTION SYSTEMS FOR LIFTING BODY VEHICLES
Dmitrii Kremnev, Bauman Moscow State Technical University, Russian Federation

SCREEN 43

12:45-12:55 IAC-26/C2/IP/116094
EXPERIMENTAL ANALYSIS OF FRICTION CHARACTERISTICS BETWEEN PEEK POLYMER AND LUNAR REGOLITH SIMULANTS
Nisanur Tahtaloğlu, Middle East Technical University, Türkiye

12:55-13:05 IAC-26/C2/IP/109099
A RESOURCE-EFFICIENT APPROACH TO TRIPLE MODULAR REDUNDANCY (TMR) IMPLEMENTATION IN FPGAS USING ARTIFICIAL NEURAL NETWORKS (ANNS)
Hanifi Mert APAYDIN, ASELSAN, Türkiye

Wednesday 7 October

13:05-13:15 IAC-26/C2/IP/114029

SELF-HEALING AND NANOTUBE-REINFORCED UHTCMC DESIGN FOR HYPERSONIC APPLICATIONS

Pınar Altındağ, Samsun Metropolitan Municipality, Türkiye

13:15-13:25 IAC-26/C2/LBA/117844

ARCHITECTURE-LEVEL DESIGN OF MULTI-PATH INTERSTAGE SYSTEMS FOR ENHANCED LOAD DISTRIBUTION AND STRUCTURAL EFFICIENCY IN NEXT-GENERATION LAUNCH VEHICLES

Mixu Mayli Alarcon Aliaga, Intinauta Research Center, Peru

13:25-13:35 IAC-26/C2/IPB/108451

QUASI-ZERO STIFFNESS METAMATERIAL EMPLOYEMENT IN SATELLITE SYSTEMS FOR DUAL-SCENARIO MECHANICAL PROTECTION: INTEGRATED BROADBAND VIBRATION ISOLATION AND IMPACT ENERGY ABSORPTION

Zühal Uçkun, Istanbul Technical University, Türkiye

13:35-13:45 IAC-26/C2/LBA/117665

FROM DUST TO DURABLE COMPONENTS: INTEGRATED MOLTEN REGOLITH CASTING AND THERMAL SPRAY METALLIZATION FOR LUNAR ISRU

Frank Koch, Polimak Space, Luxembourg

SCREEN 44

12:45-12:55 IAC-26/C2/LBA/117768

INVESTIGATION OF HIGH-SPEED IMPACT OF SMALL SPACE DEBRIS ON CARBON FIBER COMPOSITE LAMINATE PANELS REINFORCED WITH MWCNT

Hatice Kübra Aydın, Istanbul Technical University, Türkiye

12:55-13:05 IAC-26/C2/LBA/117769

EXPERIMENTAL INVESTIGATION ON THE BUCKLING AND POST-BUCKLING BEHAVIOR OF SANDWICH PANELS SUBJECTED TO SMALL-SCALE HIGH-SPEED DEBRIS IMPACT

Bedriye BOLAT, Istanbul Technical University, Türkiye

13:05-13:15 IAC-26/C2/IP/112968

FROM CONCEPT TO FLIGHT: DEVELOPMENT OF MXENE FORCE SENSORS FOR MICROGRAVITY EXPERIMENTS

Jakub Kopeć, AGH University of Krakow, Poland

13:15-13:25 IAC-26/C2/IP/109653

ANISOTROPY EFFECT ON TRANSIENT HEAT TRANSFER BEHAVIOR OF COMPOSITE MATERIAL NOZZLE IN ROCKET-BASED-COMBINED-CYCLE ENGINE

RongQing Jiang, Northwestern Polytechnical University, China

13:25-13:35 IAC-26/C2/IP/115126

STRUCTURAL INTEGRITY ASSESSMENT OF ORIGAMI-INSPIRED SATELLITE COMPONENTS USING FINITE ELEMENT ANALYSIS

Victor Adeleke, Nigeria

13:35-13:45 IAC-26/C2/IP/114373

A COMPUTATIONAL FRAMEWORK FOR EVALUATING SOLAR-TRIGGERED SELF-HEALING IN INTRINSIC CFRP COMPOSITES FOR REUSABLE AND SUSTAINABLE SPACE VEHICLE STRUCTURES

Öznur Kotan, Ankara Yıldırım Beyazıt University, Türkiye

SCREEN 45

12:45-12:55 IAC-26/C3/IP/109560

PROGRAMMABLE PULSE-POWER ARCHITECTURE FOR MULTI-PURPOSE, HIGH-POWER SPACE MISSIONS

Ilhan Kaan Turkover, Politecnico di Torino, Italy

13:05-13:15 IAC-26/C3/IPB/107666

NEXT-GENERATION BATTERY CHEMISTRIES AND EFFICIENT STATE ESTIMATION FOR SPACECRAFT POWER SYSTEMS

Marius Eilenberger, DLR (German Aerospace Center), Germany

13:25-13:35 IAC-26/C3/IP/115522

DEVELOPMENT AND PERFORMANCE ANALYSIS OF AN INTELLIGENT POWER DISTRIBUTION ALGORITHM FOR EXTENDING THE OPERATIONAL LIFESPAN OF NANO-SATELLITES IN LOW EARTH ORBIT (LEO)

Nuray Abasali, National Aviation Academy - Azerbaijan, Azerbaijan

13:35-13:45 IAC-26/C3/LBA/117534

ACHIEVABILITY AND CHALLENGES OF RADIO-FREQUENCY WIRELESS POWER TRANSMISSION FOR ZERO-ENERGY SENSOR NETWORKS ON THE MARTIAN SURFACE

Aastha Bhatt, International Space University, France

SCREEN 46

12:45-12:55 IAC-26/C4/IP/110299

3D COMBUSTION FLOW FIELD PREDICTION FOR THE FORCED IGNITION PROCESS OF RBCC ENGINES

Jizheng Qiu, Northwestern Polytechnical University, China

12:55-13:05 IAC-26/C4/IP/116185

STATIC FIRING OF AN INTEGRATED HYBRID AUTOPHAGE ENGINE USING THE FIRST EMBEDDED, FLIGHT-REPRESENTATIVE PROPELLANT INSERTION SYSTEM

Martin Gros, Alpha Impulsion, France

13:05-13:15 IAC-26/C4/IP/110373

PERFORMANCE EVALUATION OF 3D-PRINTED ABS FUEL FOR LOW-COST HYBRID ROCKET PROPULSION

Najihah Abd Razak, International Islamic University Malaysia, Malaysia

13:15-13:25 IAC-26/C4/IP/116882

GRAPHENE-REINFORCED PARAFFIN-BASED HYBRID ROCKET FUEL FOR ENHANCED COMBUSTION PERFORMANCE

Senanur Gamli, Gebze Technical University, Türkiye

13:25-13:35 IAC-26/C4/IP/113593

FERRITE-CORE PRE-IONIZATION FOR ENHANCED IGNITION IN RF ION THRUSTERS

Gökçe Uluğsu, Boğaziçi University, Türkiye

13:35-13:45 IAC-26/C4/IP/115035

DESIGN AND EXPERIMENTAL VALIDATION OF A LOW-VOLTAGE IONIC PLASMA THRUSTER WITH GEOMETRIC OPTIMIZATION FOR CUBESAT PROPULSION

Merve Koca, Tarsus University (Tarsus Üniversitesi), Türkiye

SCREEN 47

12:45-12:55 IAC-26/C4/IP/110913

DEVELOPMENT OF A GPU-ACCELERATED HIGH-ORDER COMPACT INCOMPRESSIBLE FLOW SOLVER

Elif Mihriban Zeyveli, Istanbul Technical University, Türkiye

12:55-13:05 IAC-26/C4/IP/108885

STREAM ELECTRIC GEAR PUMP ENABLING LOW-PRESSURE PROPELLANT FEED ARCHITECTURES

Adam Hláček, Stellar Exploration Inc, Czech Republic

13:05-13:15 IAC-26/C4/IPB/115963

RAVEN: REACHING 1KN ENGINE MILESTONE, TEST BENCH UPDATES AND BEYOND

Gustavo Neves, Giron Space Organisation, Sweden

13:15-13:25 IAC-26/C4/LBA/117971

HYBRID AI-DRIVEN THRUST SCHEDULING FOR ENERGY-CONSTRAINED 3U CUBESATS WITH ION PROPULSION

Aymar SUERY, Ecole Centrale de Lyon, France

13:25-13:35 IAC-26/C4/IP/115718

PRECISION THRUST CONTROL FOR LOW-POWER HALL THRUSTERS: ENABLING AUTONOMOUS SMALL SATELLITE OPERATIONS

Ahmet emir Daştan, Baykar Science High School, Türkiye

Wednesday 7 October

13:35-13:45 IAC-26/C4/IP/116553
INITIAL OPERATION OF A SMALL-SCALE ROTATING DETONATION ENGINE WITH NON-PREMIXED PROPELLANTS
Jeongmoo Huh, Student, United Arab Emirates

SCREEN 48

12:45-12:55 IAC-26/C4/IP/115608
WATERCUBE IOD PREPARATION: FUNCTIONAL, STRUCTURAL, PROPULSIVE & THERMAL QUALIFICATION CAMPAIGN
Dani Kiblawi, Capsule Corporation, Italy

12:55-13:05 IAC-26/C4/IP/117249
INTEGRATED SOFTWARE ARCHITECTURE FOR AUTONOMOUS METROLOGY, REAL-TIME SIGNAL PROCESSING, AND ANOMALY DETECTION IN MICRO-NEWTON THRUST STANDS
Luana Almeida, University of Brasilia, Brazil

13:05-13:15 IAC-26/C4/IP/113473
VISUAL OBSERVATION OF VORTEX COOLED METHANE/OXYGEN COMBUSTION IN A TRANSPARENT ACRYLIC THRUSTER
Jeongmoo Huh, Student, United Arab Emirates

13:15-13:25 IAC-26/C4/IP/111347
DEVELOPMENT OF AN ELECTRICAL SYSTEM FOR VACUUM ARC THRUSTER
Dmitriy Myatezhnyy, Bauman Moscow State Technical University, Russian Federation

13:25-13:35 IAC-26/C4/IP/104654
DFT AND NEB ANALYSIS OF MAGNESIUM-CATALYZED METHANE DISSOCIATION FOR ISRU-ENABLED HIGH-PERFORMANCE PROPELLANTS IN INTERPLANETARY MISSIONS
Kinga Wysocka, Embry-Riddle Aeronautical University, United States

13:35-13:45 IAC-26/C4/IP/109617
SIMULATION-BASED DESIGN OF AN ADDITIVELY MANUFACTURED BI-LIQUID ROCKET ENGINE COAXIAL SWIRL INJECTOR
Joel Jia Le Tan, ETH Zurich, Switzerland

SCREEN 49

12:45-12:55 IAC-26/D1/IP/113892
FROM STRATEGIC TECHNOLOGY GAPS TO ARCHITECTURAL TRADE-OFFS: AN INTEGRATED SYSTEMS ENGINEERING FRAMEWORK
Leonardo Maria Festa, Politecnico di Torino, Italy

12:55-13:05 IAC-26/D1/IP/112362
MODELING AND TRADE STUDIES FOR A SERVICEABLE LEO SPACE DATA CENTER WITH REPLACEABLE COMPUTE ORUS
Pablo Sueiro Martinez, University of Vigo, Spain

13:05-13:15 IAC-26/D1/IP/117325
SPACECRAFT SYSTEMS ENGINEERING APPROACH ON EMIRATES ASTEROIDS MISSION TO THE ASTEROID BELT (EMA)
Razan Alkaabi, UAE Space Agency, United Arab Emirates

13:15-13:25 IAC-26/D1/IP/117157
A SYSTEMS ENGINEERING APPROACH TO AIV&V: DERIVING AN ANALYTICAL SCALING FACTOR FOR PROTON-TO-HEAVY-ION SEE PREDICTION IN 14NM FINFETS
Yousef Khreim, Al Hussein Technical University, Jordan

13:25-13:35 IAC-26/D1/IP/117314
ADAPTIVE SPATIAL ORGANIZATION FOR ILRS PHASE 2.0: A SYMBIOTIC LUNAR URBANISM PROTOTYPE INTEGRATING CHINESE GARDEN PRINCIPLES AND ROBOT-CITY INTERACTION FRAMEWORK
Shiqi Dai, Tsinghua University, China

13:35-13:45 IAC-26/D1/IP/109702
A ROBUST RELATIVE POSITION ESTIMATION METHOD CONSIDERING OBSERVATION UNCERTAINTY VIA CORRESPONDENCE WEIGHTING IN OPTICAL NAVIGATION FOR COOPERATIVE PROXIMITY OPERATIONS
Kaine Amakawa, The University of TOKYO, Graduate school, Japan

SCREEN 51

12:45-12:55 IAC-26/D4/IP/115297
STUDY OF A YOUNG AND OLD AGE DAYCARE CENTER CONSIDERING LIFE ON THE MOON
Taiko Kawakami, ASTRAX, Inc., Japan

SCREEN 52

12:45-12:55 IAC-26/D5/IP/116068
DEVELOPMENT AND REAL MISSION-BASED VALIDATION OF A STANDARDISED RADIATION HARDNESS ASSURANCE WORKFLOW FOR CUBESAT MISSIONS
Michela Boscia, Sapienza University of Rome, Italy

12:55-13:05 IAC-26/D5/IP/106984
A STRUCTURED REVIEW OF AI-BASED EARLY COLLISION RISK PREDICTION METHODS FOR SPACE OPERATIONS
Khagani Abdullayev, National Aviation Academy - Azerbaijan, Azerbaijan

13:05-13:15 IAC-26/D5/LBA/117572
ENHANCEMENT OF THE TESTING COVERAGE FOR A SIMULATOR ENVIRONMENT USED IN REUSABLE LAUNCH VEHICLES' MISSIONS
Elia Santinato, Alma Mater Studiorum - University of Bologna, Italy

13:15-13:25 IAC-26/D5/IP/114044
RISK-BASED QUALITY METRICS FOR MISSION ASSURANCE IN SPACE SYSTEMS
Pratyaksha Shetty, North Carolina State University, United States

13:25-13:35 IAC-26/D5/IP/111686
THE TOPIC FILE FORMAT: CONNECTING PRACTICE AND MODELING
Shoichi Seto, University of Tokyo, Japan

SCREEN 53

12:45-12:55 IAC-26/E1/IP/109287
INTEGRATION OF SPACE RESEARCH METHODOLOGY INTO SCHOOL EDUCATION THROUGH A STEAM-BASED INSTRUCTIONAL MODEL
Fatimeyi-Zahra Amrahova, Baku State University, Azerbaijan

13:05-13:15 IAC-26/E1/IP/115283
BRIDGING SECONDARY EDUCATION AND AEROSPACE ENGINEERING THROUGH EXPERIENTIAL LEARNING: A LOW-COST THERMAL PROTECTION SYSTEMS WORKSHOP IN SOUTHERN BRAZIL
Isabélili Marques, Universidade Federal de Santa Maria - UFSM, Brazil

13:25-13:35 IAC-26/E1/IP/110131
EMPOWERING THE NEXT GENERATION OF THERMAL ENGINEERS IN STUDENT CUBESAT PROJECTS
Laura Gonzalez Llamazares, Radian Systems, Spain

13:35-13:45 IAC-26/E1/IP/117230
EXPANDING ACCESS TO SPACE: A SPACE-THEMED STEM INITIATIVE FOR RURAL AND INDIGENOUS STUDENTS IN MEXICO
Julietth Fernanda Contreras Venegas, ITESM, Mexico

SCREEN 54

12:45-12:55 IAC-26/E1/IP/111340
FROM EARTH TO SPACE: MITIGATING SPATIAL ANXIETY IN MIDDLE SCHOOL STUDENTS THROUGH TRANSDISCIPLINARY DESIGN
ayşe tosun, Türkiye

Wednesday 7 October

12:55-13:05 IAC-26/E1/IPB/104860

A DIGITAL-SUPPORTED MODEL ROCKET PLATFORM FOR HANDS-ON SPACE EDUCATION AND OUTREACH
Recep Savas, Uzinova Space Systems, Türkiye

13:05-13:15 IAC-26/E1/IP/106291

THE IMPACT OF ENGINEERING AND SPACE COMPETITIONS AND ELECTIVE COURSES ON HIGH SCHOOL STUDENTS' CAREER PLANS
Sezgin Tetik, Tokat Atatürk Anatolian High School, Türkiye

13:15-13:25 IAC-26/E1/IP/109966

THE CONTRIBUTION OF ARTIFICIAL INTELLIGENCE TO SPACE STUDIES IN SECONDARY EDUCATION
Kemal Ersay, Karabük Science and Art Center (BILSEM), Türkiye

13:25-13:35 IAC-26/E1/IP/114688

STELLARIUM-BASED INTERACTIVE ASTRONOMY EDUCATION MODEL: LMS INTEGRATION AND IMPACT ANALYSIS BASED ON MICROSERVICE ARCHITECTURE
Duru Melek Yukatar, Türkiye

13:35-13:45 IAC-26/E1/IP/105860

BRIDGING THE GAP BETWEEN SCIENCE AND SOCIETY: APPLYING STEM ENGAGEMENT LESSONS TO SPACE WEATHER COMMUNICATION
Nkosinathi Masango, South African National Space Agency (SANSA), South Africa

SCREEN 55

12:45-12:55 IAC-26/E1/IP/113776

DEVELOPING A MODULAR CREDENTIALING STANDARD FOR FLIGHT SAFETY ANALYST TRAINING
Diane Howard, International Institute of Space Law (IISL), United States

12:55-13:05 IAC-26/E1/IP/109214

MARSS-9 CONCEPTUAL PROJECT: CITIZEN SCIENCE PLATFORM FOR OPEN SPACE EDUCATION
Javiera Cortez, International Institute for Astronautical Sciences (IIAS), Chile

13:05-13:15 IAC-26/E1/IPB/112642

THE GENEVA MODEL: USING CINEMATIC STORYTELLING TO DEMOCRATIZE SPACE SCIENCE FOR YOUTH
Adeboye Malumi, Nigeria

13:15-13:25 IAC-26/E1/IP/108238

THE IMPORTANCE OF TEXTILE ENGINEERING IN SPACE EXPLORATION AND ASTRONAUT SAFETY
Hiveen Ramachandra, University of Southampton, United Kingdom

13:25-13:35 IAC-26/E1/IP/114329

FROM MICROSCOPE TO TELESCOPE: BIOART NARRATIVES OF LIFE AND HUMAN SPACE EXPLORATION
Aslıhan Yesir, Boğaziçi University, Türkiye

13:35-13:45 IAC-26/E1/IPB/109113

FROM LIVE OBSERVATION TO DIGITAL SIMULATION: BIO-STASIS AS A SCALABLE MODEL FOR ASTROBIOLOGY EDUCATION
Akın Karahasan, Gökmen Space and Aviation Training Center (GUHEM), Türkiye

SCREEN 56

12:45-12:55 IAC-26/E1/IP/116317

LEVERAGING SPACE TECHNOLOGY FOR LOCAL CONSERVATION: PUBLIC RELATIONS AND OUTREACH STRATEGY FOR THE AL-RHIM SAT MISSION
Dareen Jarrar, Al Hussein Technical University, Jordan

12:55-13:05 IAC-26/E1/IP/106864

THE LUNAR IMPACT FLASH GEMINID OBSERVING CAMPAIGN
Elisa Maria Alessi, Consiglio Nazionale delle Ricerche (CNR), Italy

13:05-13:15 IAC-26/E1/IP/115552

ADVANCING STEM-BASED SPACE ENGINEERING EDUCATION IN PAKISTAN THROUGH A CANSAT OUTREACH PROGRAM
Umama Khan, Institute of Space Technology (IST), Pakistan

13:15-13:25 IAC-26/E1/IP/114052

EQUALASTRA: AN AI-POWERED MOBILE ECOSYSTEM FOR ELDERLY, DISABLED, AND UNDERSERVED SPACE LEARNERS
Danyal Çayırbaşan, Baykar Science High School, Türkiye

13:25-13:35 IAC-26/E1/IP/117328

IMPLEMENTING THE BRUNO EDUROVER MARS ROVER EDUCATIONAL KIT: CHALLENGES, INSIGHTS, AND OUTCOMES
Manisha Mahesh Kumar, United Kingdom

13:35-13:45 IAC-26/E1/IP/117269

GAMIFIED SPACE EDUCATION TO FOSTER EARLY STEM ENGAGEMENT IN GIRLS: THE APULAB EDUCATIONAL GAME
Penelope Alaska Berlanga Yriarte, Universidad Nacional Mayor de San Marcos, Peru

SCREEN 57

12:55-13:05 IAC-26/E1/IP/115620

THE SPACE4WOMEN LANDMARK STUDY IN THE GLOBAL SPACE SECTOR: TRACKING WOMEN'S REPRESENTATION IN THE SPACE SECTOR TO SUPPORT ADEQUATE INITIATIVES
Anne-Claire GROSSIAS, UN Office of Outer Space Affairs, Austria

13:05-13:15 IAC-26/E1/IP/115977

EMPOWERING THE NEXT GENERATION: THE ROLE OF REGIONAL WORKSHOPS IN FOSTERING SPACE CULTURE AND COOPERATION
Muhammed Ali Baba, Türkiye

13:15-13:25 IAC-26/E1/IP/108617

FROM HERTZ TO SPACE: ADVANCING SPACE EDUCATION THROUGH AMATEUR RADIO
Ceren Tüylü, Türkiye

13:25-13:35 IAC-26/E1/IP/116493

BRIDGING THE STEM GENDER GAP THROUGH DIGITAL ASTRONOMY: TÜRKİYE'S STELLAR LAB INITIATIVE AS A FRAMEWORK FOR SDGS 4 AND 5
Halil Bağis, [unlisted], Türkiye

13:35-13:45 IAC-26/E1/IP/108077

STREAMER-BASED SPACE EDUCATION: AN IMPROVISED TEAM FRAMEWORK FOR K-12 EXPERIENTIAL LEARNING AND TEACHER ENABLEMENT
arpit dugar, United Arab Emirates

SCREEN 58

12:45-12:55 IAC-26/E1/IP/111299

ENHANCING SPACE VISION THROUGH SATELLITE-DRIVEN CITIZEN SCIENCE IN K-12 EDUCATION
selami şavklıyıldız, [unlisted], Türkiye

13:05-13:15 IAC-26/E1/IP/110191

MOBILE PLANETARIUM AND VR-SUPPORTED STEM EDUCATION FOR DISADVANTAGED MIDDLE SCHOOL STUDENTS IN THE CONTEXT OF COGNITIVE LOAD THEORY: A CURRICULUM MAPPING ANALYSIS
Dilara Karadeni, Samsun Metropolitan Municipality, Türkiye

13:25-13:35 IAC-26/E1/IP/107742

BUILDING A SPACE EDUCATION COMMUNITY: THE GUHEM TEACHER NETWORK EXPERIENCE
Yağmur Karan, Gökmen Space and Aviation Training Center (GUHEM), Türkiye

13:35-13:45 IAC-26/E1/IP/106625

ASTROSLEEP EDU: A PROTOTYPE-SUPPORTED EXPERIENTIAL SPACE EDUCATION MODEL FOR PRIMARY AND SECONDARY STUDENTS
Aycan Seymen, Samsun Metropolitan Municipality, Türkiye

Wednesday 7 October

SCREEN 59

12:45-12:55 IAC-26/E2/IPB/116428

LIQUID SLOSH CHARACTERIZATION IN THE IREC FLIGHT ENVIRONMENT: ANALYSIS OF NON-INTRUSIVE CAPACITIVE SENSOR DATA VIA EQUIVALENT PENDULUM MODEL
Ahmet Atakan Culban, Istanbul Technical University, Türkiye

12:55-13:05 IAC-26/E2/IPB/114159

LOW-COST PROTOTYPING OF REUSABLE LAUNCH SYSTEMS: DESIGN AND FLIGHT TESTING OF A COLD-GAS VERTICAL LANDING ROCKET
Hasan Baran Gurbuz, Erciyes University, Türkiye

13:05-13:15 IAC-26/E2/IP/116194

FEATURES OF THE DESIGN METHODOLOGY FOR SMALL REENTRY VEHICLES FOR SCIENTIFIC AND INDUSTRIAL APPLICATIONS
Veronika Kameneva, Bauman Moscow State Technical University, Russian Federation

13:15-13:25 IAC-26/E2/IPB/114921

DEVELOPMENT AND FLIGHT VALIDATION OF A NOVEL NON-PYROTECHNIC PNEUMATIC DEPLOYMENT MECHANISM FOR AMATEUR ROCKETRY IN A NON-SPACEFARING NATION
Heisei Dweyne Mansanadez, De La Salle University (DLSU), Philippines

13:25-13:35 IAC-26/E2/IPB/110187

MODEL-INFORMED REDLINE PROTECTION FOR A PRESSURE-FED LIQUID ROCKET ENGINE USING MULTI-DOMAIN DYNAMIC SIMULATION
Havva Nur Kırık, Istanbul Technical University, Türkiye

SCREEN 60

12:45-12:55 IAC-26/E3/IP/115150

RECLAIMING TEMPORAL OWNERSHIP: TIME, FORESIGHT, AND STRATEGY IN THE FUTURE OF SPACE
Philipp Kürten, University of Vienna, Austria

12:55-13:05 IAC-26/E3/IP/115489

THE PARADOX OF PARTNERSHIP: BALANCING IMMEDIATE TECHNOLOGICAL ACCESS WITH LONG TERM INDIGENOUS SOVEREIGNTY IN THE AFRICAN SPACE PROGRAMME
Beza Tesfaye Zewdie, [unlisted], Ethiopia

13:05-13:15 IAC-26/E3/IPB/107894

ENHANCING SUSTAINABLE DEVELOPMENT THROUGH ITALY-ASEAN SPACE COOPERATION
Fabrizio Lenti, Agenzia Spaziale Italiana (ASI), Italy

13:15-13:25 IAC-26/E3/LBA/118064

A DATA-DRIVEN MODEL OF LEO SPECTRUM SATURATION AND EQUITY IMPLICATIONS
Şahizer Aksoy, Karamanoğlu Mehmetbey University (KMU), Türkiye

13:25-13:35 IAC-26/E3/IP/113124

THE GUARDIAN OF SMALL ISLAND DEVELOPING STATES: A COORDINATED RESPONSE FOR COASTAL RESILIENCE IN DISASTER MANAGEMENT USING SPACE LAW AND TECHNOLOGY INTEROPERABILITY
La-Quita George, Trinidad and Tobago

13:35-13:45 IAC-26/E3/IP/115331

FROM FLOODS TO THE FUTURE: SPACE COOPERATION FOR SUSTAINABLE WATER MANAGEMENT
Chioma Ezeigbo, Nigeria

SCREEN 61

12:45-12:55 IAC-26/E3/IP/116347

MAPPING COMMERCIAL SPACE CAPABILITIES TO MUNICIPAL SUSTAINABILITY NEEDS: VERIFYING BOTTOM-UP EVIDENCE FOR SPACE2030 IMPLEMENTATION
Newton Campbell, Everything Lives LLC, United States

13:05-13:15 IAC-26/E3/LBA/118002

WHO OWNS AN ORBIT? A CAPACITY-BASED LICENSING FRAMEWORK FOR SUSTAINABLE LOW EARTH ORBIT ACCESS
Jahangir Mammadov, Garabagh University, Azerbaijan

13:15-13:25 IAC-26/E3/IPB/114904

PLATFORM OR PERIPHERY: INDUSTRIAL STANDARDIZATION, UNEVEN TRANSITION AND THE NEW DETERMINANTS OF SPACE ECONOMY COMPETITIVENESS
Ana Maria Segura Paz, [unlisted], Colombia

13:25-13:35 IAC-26/E3/IP/107066

FROM GLOBALIZATION TO MULTI-PLANETARY ECONOMY: INVESTMENT, GOVERNANCE, AND GEOPOLITICAL RISKS IN THE LUNAR CONTEXT
Medeni Soysal, TUBITAK Uzay, Space Technologies Research Institute, Türkiye

13:35-13:45 IAC-26/E3/LBA/117704

PROTECTION OF THE SATELLITE IMAGERY CREDIBILITY AS LEGAL EVIDENCE AGAINST ARTIFICIAL INTELLIGENCE ABUSE
Farah Diya Yasmine, Secretariat General for the House of Representatives of the Republic of Indonesia, Indonesia

SCREEN 62

12:55-13:05 IAC-26/E5/IP/113003

ARCHITECTURAL FRAMEWORKS FOR EXTREME ENVIRONMENTS: DESIGNING RESILIENT INFRASTRUCTURE FOR LUNAR ACTIVITIES
Rogelio Morales, Central University of Venezuela (UCV), Venezuela

13:35-13:45 IAC-26/E5/IP/117178

PRESSED FOR TIME: THE NEED OF AN INTEGRATED AI-DRIVEN CATASTROPHE (EARLY) WARNING SYSTEM
I. Pessôa-Lopes, International Space Consultant, Portugal

SCREEN 63

13:05-13:15 IAC-26/E5/IP/106779

PROJECT AURORA – THE IMPACT OF ADAPTIVE LIGHTING ON THE PSYCHOLOGICAL WELL-BEING AND STRESS LEVELS OF ANALOG ASTRONAUTS: AN EEG-BASED STUDY
Silvio De Mio, Independent Researcher, Italy

13:25-13:35 IAC-26/E5/IP/113791

THE SECOND GROUND: SUBSURFACE ARCHITECTURE FOR LUNAR HABITATION
Yinuo Zhang, Xi'an Jiaotong - Liverpool University, China

SCREEN 64

12:55-13:05 IAC-26/E5/IP/116686

PROJECT AURORA – THE IMPACT OF ADAPTIVE LIGHTING ON THE PSYCHOLOGICAL WELL-BEING AND STRESS LEVELS OF ANALOG ASTRONAUTS: AN EEG-BASED STUDY
Armin Ernst, Wrocław University of Science and Technology, Poland

13:05-13:15 IAC-26/E5/IP/105017

FROM SPACE TO CLINIC: INNOVATIVE REHABILITATION APPROACHES BASED ON MICROGRAVITY MODELS
Elif ÖNAL ÇENGEL, Türkiye

13:15-13:25 IAC-26/E5/IP/116736

HUMAN-CENTERED INTERIOR DESIGN STRATEGIES OF A CORE HABITAT MODULE FOR A CONCEPTUAL MARS RESEARCH STATION
Sumaiya Islam Oishi, Sasakawa International Center for Space Architecture, United States

13:35-13:45 IAC-26/E6/IPB/106559

CIRCULAR VALUE CHAIN INTEGRATION AS AN ENTREPRENEURIAL STRATEGY FOR EMERGING SOCIETIES IN AEROSPACE ACTIVITIES
Oumaima Nakrimi, Space Generation Advisory Council (SGAC), Morocco

Wednesday 7 October

SCREEN 65

12:45-12:55 IAC-26/E6/IP/111267

ASSESSMENT OF TECHNO-ECONOMIC IMPACT OF SHORT-TERM PRIVATE ASTRONAUT MISSIONS TO ISS
Krzysztof Kanawka, Blue Dot Solutions, Poland

13:05-13:15 IAC-26/E6/IP/110983

IMPLEMENTING AGILE METHODOLOGIES TO ENHANCE SYSTEMS ENGINEERING IN ESA OPERATIONS
Isha Parvaiz, European Space Agency (ESA), United Kingdom

13:35-13:45 IAC-26/E6/IP/113847

POLICY-DRIVEN GOVERNANCE MODEL: CHINA'S SUPPORTIVE AND REGULATORY FRAMEWORK FOR SPACE COMMERCE
Songyue Li, Beijing Institute of Technology (BIT), China

SCREEN 66

12:45-12:55 IAC-26/E7/IPB/116743

FROM MULTILATERAL DIPLOMACY TO A NEW CONCERT OF POWERS? A CRITICAL ANALYSIS OF THE ROLE OF MIDDLE AND SMALL POWERS IN SPACE DIPLOMACY AND GOVERNANCE
Giulia Pascuzzi, Space Generation Advisory Council (SGAC), Italy

13:05-13:15 IAC-26/E7/IP/107485

SPACE TOURISM: LEGAL CHALLENGES IN THE OFFING
Resham Chhabra, India

13:15-13:25 IAC-26/E7/IPB/116016

DEVELOPING INTERNATIONAL SPACE LAW TO INCLUDE PASSENGER CARRIER LIABILITY
Reabetswe Mampame, University of Pretoria, South Africa

13:25-13:35 IAC-26/E7/IP/117198

FROM THE DEEP SEA TO THE MOON: LESSONS FROM THE ISA FOR EQUITABLE SPACE RESOURCE GOVERNANCE
Lydia Veronica (Lilliana) Fan, Space Generation Advisory Council (SGAC), United Kingdom

13:35-13:45 IAC-26/E7/IPB/107074

BEYOND TERRITORIALITY IN THE EXPANDING LEO ECONOMY: RETHINKING IP ENFORCEMENT AND AUTONOMOUS SATELLITE OPERATIONS IN A CONGESTED ORBITAL ENVIRONMENT
Hisako Moriguchi, Japan

SCREEN 67

12:55-13:05 IAC-26/E7/IP/108614

AN APPROACH TO INTELLECTUAL PROPERTY RIGHTS BEYOND EARTH ATTEMPTING HARMONIZATION OF SPACE LAW AND GLOBAL IP REGIMES IN THE COMMERCIAL SPACE AGE
Mustafa Remzi Bayoglu, ITU, Türkiye

13:05-13:15 IAC-26/E7/IP/106649

REFRAMING THE NEW SPACE RACE: COOPETITION AND THE FUTURE OF SPACE STATION GOVERNANCE
Christian Grantham, University of Nebraska, College of Law, United States

13:15-13:25 IAC-26/E9/IP/111400

CONSTELLATIONS AT RISK: SYSTEMIC IMPACT ASSESSMENT OF CYBER INCIDENTS IN LOW EARTH ORBIT
Frank Raul Quintana Quispe, Universidad Nacional Tecnológica de Lima Sur, Peru

13:25-13:35 IAC-26/E9/IP/114709

WHO PAYS FOR SAFER ORBITS? INSURANCE AND COST-SHARING MECHANISMS FOR SUSTAINABLE STM: INSIGHTS FROM CHINA'S REGULATORY PRACTICE
yuqi shen, Beijing Institute of Technology, China

13:35-13:45 IAC-26/E9/IP/113022

EVIDENCE-BASED SPACE SUSTAINABILITY: POLICY, INSTITUTIONAL AND ECONOMIC IMPLICATIONS OF PROPULSION-FREE PMD DEMONSTRATION FOR ROCKET BODIES
Yasuhito Uto, BULL Co., Ltd., Japan

SCREEN 68

12:45-12:55 IAC-26/E9/IP/116919

BUSINESS CONTINUITY PLAN AS A CATALYST FOR CYBER RESILIENCE AND THE EXCHANGE OF GOOD PRACTICES AMONG SPACE ENTERPRISES
Kaja Hopej, Kozminski University, Poland

12:55-13:05 IAC-26/E9/IP/114517

COST-EFFECTIVE CYBERSECURITY ARCHITECTURE SIZING FOR NATIONAL SATELLITE OPERATIONS CENTRES: A CASE STUDY FROM AN EMERGING SPACE NATION
Frank Raul Quintana Quispe, Universidad Nacional Tecnológica de Lima Sur, Peru

13:05-13:15 IAC-26/E9/IPB/105732

HARMONIZING SPACE SUSTAINABILITY: COMPILING GUIDELINES, STANDARDS, AND BEST PRACTICES FOR SPACE ACTORS
Molly MacEachen, United States

13:25-13:35 IAC-26/E9/IPB/116207

REGULATING SPACE SITUATIONAL AWARENESS: A BALANCING ACT BETWEEN SECURITY AND SAFETY IN SPACE
Sonja Agata Biscan, Croatia

13:35-13:45 IAC-26/E9/IP/116099

FUTURE SPACE FLIGHT SUSTAINABILITY ACT: A LEGISLATIVE PROPOSAL FOR THE 120TH UNITED STATES CONGRESS
Claude Blue, University of Alabama in Huntsville, United States

SCREEN 69

12:45-12:55 IAC-26/E11/IP/104759

FROM ANTARCTICA TO THE MOON: AURORA AND THE ROLE OF SPACE SPILLOVERS IN EMERGING SPACE ECOSYSTEMS.
Joselyn Robledi, Chile

12:55-13:05 IAC-26/E11/IP/104742

THE SKY ABOVE, THE DATA BELOW: ASSESSING CHINA'S SATELLITE PARTNERSHIPS IN FIVE AFRICAN NATIONS
Mustapha Iderawumi, Space in Africa, Nigeria

13:05-13:15 IAC-26/E11/IP/114307

ONE REGION, ONE FRAMEWORK: ASSESSING THE VIABILITY OF A UNIFIED SPACE COORDINATION BODY FOR THE MENA REGION
Maryam Badran, Türkiye

13:35-13:45 IAC-26/E11/IP/109632

POLITICAL INSTABILITY AND INSTITUTIONAL RESILIENCE: THE BUFFERING ROLE OF INTERCONNECTEDNESS IN EMERGING SPACE ECOSYSTEMS
Merve Nur YAŞAR, Ondokuz Mayıs University, Türkiye

SCREEN 70

12:45-12:55 IAC-26/E11/IP/113116

SPACE POLITICAL AWARENESS AND THE EMERGENCE OF CONNECTED SPACE ECOSYSTEMS IN LATIN AMERICA
Margarita Herrera, Chile

13:35-13:45 IAC-26/E11/IP/105690

WHEN ACCESS SCALES FASTER THAN INSTITUTIONS: GOVERNANCE GAPS IN SPACE-AS-A-SERVICE MODELS
Paulina Valle, Space Generation Advisory Council (SGAC), Mexico

Thursday 8 October

SCREEN 1

- 13:30-13:40 IAC-26/A1/IP/117250**
GRAVITY-INDEPENDENT EXTRACORPOREAL CARDIOPULMONARY SUPPORT AS A NEW MEDICAL CAPABILITY FOR HUMAN SPACEFLIGHT
Joshua Norton, Texas A&M University, United States
- 13:40-13:50 IAC-26/A1/IP/113827**
REWINDING THE EVOLUTIONARY CLOCK: SIMULATING ARCHEAN ENZYMES ON MARS
Hayriye Beray Cinkara, Baykar Science High School, Türkiye
- 14:10-14:20 IAC-26/A1/IP/112284**
WEARABLE INERTIAL SENSOR-BASED ESTIMATION OF FUNCTIONAL RESERVE UNDER SIMULATED MUSCULOSKELETAL DECONDITIONING
Utku Gürcüoğlu, Turkish-German University, Türkiye

SCREEN 2

- 13:30-13:40 IAC-26/A1/IP/107263**
TRANSCRIPTOMIC PROFILING AND FUNCTIONAL ANALYSIS OF ION TRANSPORTER GENE FAMILIES IN ARABIDOPSIS THALIANA UNDER ISS CONDITIONS
Damla Baykara, Ege University, Türkiye
- 13:50-14:00 IAC-26/A1/IP/108665**
FROM PRECISION COSMIC-RAY MEASUREMENTS TO SPACE HEALTH: ALPHA MAGNETIC SPECTROMETER AS A TRANSLATIONAL RESEARCH INFRASTRUCTURE
Alessandro Bartoloni, National Institute of Nuclear Physics - INFN, Italy
- 14:00-14:10 IAC-26/A1/IP/107187**
ENGINEERED MICROORGANISM RESILIENCE IN A MARS-MOON ANALOGUE ENVIRONMENT: FUNCTIONAL VALIDATION OF PERCHLORATE-METABOLISING STRAINS FOR ISRU AND LIFE-SUPPORT APPLICATIONS
Weronika Boguś, Imperial College London, Poland

SCREEN 3

- 13:30-13:40 IAC-26/A1/IP/116972**
ARTIFICIAL INTELLIGENCE AND DATA-DRIVEN APPROACHES FOR DETECTING POTENTIAL BIOSIGNATURES IN EXOPLANETARY SYSTEMS
Hande Ozelik, Universidad Estatal a Distancia (UNED), Spain
- 13:50-14:00 IAC-26/A1/IP/115627**
SYSTEMATIC REVIEW AND META-ANALYSIS OF ATTENTION REGULATION UNDER MICROGRAVITY: IMPLICATIONS FOR ADHD TRAITS AND EXECUTIVE FUNCTION IN SPACEFLIGHT
Günsu Bostancı, Ankara University, Türkiye
- 14:20-14:30 IAC-26/A1/IP/115622**
SYSTEMATIC REVIEW AND META-ANALYSIS OF TIME PERCEPTION AND NUMBER SENSE UNDER MICROGRAVITY AND SENSORY DEPRIVATION: IMPLICATIONS FOR COGNITIVE FUNCTION IN LONG-DURATION SPACEFLIGHT
Günsu Bostancı, Ankara University, Türkiye

SCREEN 4

- 13:30-13:40 IAC-26/A1/IPB/112368**
SYNTHETIC PATIENT SIMULATOR FOR MATERNAL-FETAL DIGITAL TWIN VALIDATION: A LOW-COST EMBEDDED PLATFORM FOR SPACE TELEMEDICINE DEVELOPMENT
Norberto Urbina Brito, Polytechnic University of Chiapas, Mexico

SCREEN 5

- 13:30-13:40 IAC-26/A1/IP/111511**
AVIAN ADAPTATIONS TO SPACEFLIGHT: A SYSTEMATIC REVIEW
Mason Kruger, University of Alberta, Canada
- 14:00-14:10 IAC-26/A1/IP/116890**
ARBUSCULAR MYCORRHIZAL FUNGI FOR LOW-INPUT CROP PRODUCTION IN FUTURE SPACE AGRICULTURE
Ayako Kurono, [unlisted], Japan
- 14:20-14:30 IAC-26/A1/LBA/117807**
CIRCADIAN ENTRAINMENT CHALLENGES AND CLINICAL COUNTERMEASURES FOR LONG-DURATION CREWED MISSIONS ON THE LUNAR SURFACE
Prachiti Kothawade, India
- 14:30-14:40 IAC-26/A1/IP/111358**
MICROALGAE-BASED INTEGRATED SYSTEMS FOR HUMAN MARS MISSIONS
Simge Sertgümeç, Istanbul Technical University, Türkiye
- 14:40-14:50 IAC-26/A1/IP/116430**
DESIGN OF A MODULAR AND INTELLIGENT STIMULATION SUIT TO PREVENT DEEP MUSCLE ATROPHY IN MICROGRAVITY ENVIRONMENTS
Ertuğrul Kovan, Türkiye

SCREEN 6

- 13:30-13:40 IAC-26/A1/IP/111171**
OPTIMIZATION OF A CUSTOM RANDOM POSITIONING MACHINE FOR STUDYING AIRWAY EPITHELIAL RESPONSES TO SIMULATED MICROGRAVITY
Elif Öz, Acibadem University, Türkiye
- 13:40-13:50 IAC-26/A1/IP/112052**
A MULTI-STAGE TRANSFER LEARNING FRAMEWORK FOR THE PREDICTIVE RISK ASSESSMENT OF SPACEFLIGHT-ASSOCIATED NEURO-OCULAR SYNDROME (SANS)
Rasha Ghandour, Koc University, Türkiye
- 13:50-14:00 IAC-26/A1/IP/107830**
SAFEGUARDING THE SEARCH FOR LIFE: A DETERMINISTIC SANDWICH ARCHITECTURE FOR AUTONOMOUS BIO-SIGNATURE DETECTION IN OCEAN WORLDS
Mehmet Acar, Türkiye
- 14:00-14:10 IAC-26/A1/IP/117374**
R²OOTs: A BIOREGENERATIVE LIFE SUPPORT SYSTEM DESIGN CONCEPT FOR THE OASIS LUNAR BASE
Fiorella Arias Bonilla, Costa Rica Institute of Technology (ITCR), Costa Rica
- 14:10-14:20 IAC-26/A1/IP/108541**
EVALUATION OF MTOR INHIBITION AND AUTOPHAGY INDUCTION AS A COUNTER MEASURE FOR ACCELERATED AGING IN MICROGRAVITY
Furkan Gür, Yozgat Bozok University, Türkiye
- 14:20-14:30 IAC-26/A1/IP/112694**
UTILIZATION OF RADIORESISTANT MICROORGANISMS SUCH AS RAMAZZOTTIUS VARIEORNATUS, BACILLUS SUBTILIS, DEINOCOCCUS SPP. IN DEEP SPACE MISSIONS
İclal Akkuş, Türkiye
- 14:30-14:40 IAC-26/A1/IP/111399**
CONCEPTUAL DESIGN OF AN AUTONOMOUS CAPSULE FOR MAMMALIAN IVF EXPERIMENTS IN MICROGRAVITY: AN OVINE MODEL APPROACH
Hamza Akdemir, Yıldız Technical University, Türkiye

Thursday 8 October

14:40-14:50 IAC-26/A1/IP/113136
ASTRONAUTS' OLFACTION AND WELL-BEING IN THE CONTEXT OF
DEEP SPACE MISSIONS
Léo Baud, France

SCREEN 7

13:30-13:40 IAC-26/A2/IP/108783
PHYSIOLOGICAL AND ROOT ARCHITECTURE ENHANCEMENTS
DRIVE YIELD STABILITY IN BRINJAL (SOLANUM MELONGENA L.)
FOLLOWING SHORT-DURATION SPACEFLIGHT
Sreejalekshmi Kumaran G, Space Science and Technology Institute, India

13:40-13:50 IAC-26/A2/IP/111578
A COMPREHENSIVE STUDY ON THE IGNITION PROPERTIES OF
SOLID COMBUSTIBLE IN SLOW CONVECTION ENVIRONMENTS
Shuang-Feng Wang, NML, Institute of Mechanics, Chinese Academy of Sciences, China

14:10-14:20 IAC-26/A2/IP/114155
MULTIDISCIPLINARY ANALYSIS OF FIBROBLAST BEHAVIOR IN
MICROGRAVITY
Suden Alay, Türkiye

14:20-14:30 IAC-26/A2/IP/113015
REAL-TIME ACTIVE VIBRATION COMPENSATION IN
MICROGRAVITY ADDITIVE MANUFACTURING VIA KINEMATIC
SPEED MODULATION
Ali Dereyurt, Fatih Sultan Mehmet Vakıf University, Türkiye

14:30-14:40 IAC-26/A3/IP/107775
DEVELOPMENT AND CONTROL OF A SOLAR TRACKER SYSTEM
FOR NANOSATELLITES
Carlos Alfredo Aguilera Manriquez, Samara National Research University (Samara University), Russian Federation

14:40-14:50 IAC-26/A3/IP/104920
LIDAR HAZARD DETECTION FOR LUNAR/MARS LANDERS
Carlos Alfredo Aguilera Manriquez, Samara National Research University (Samara University), Russian Federation

SCREEN 8

13:30-13:40 IAC-26/A3/IP/106571
COMMUNICATIONS PLANNING FOR LUNAR EXPLORATION
Joshua Kassulke, International Space University (ISU)/University of South Australia, Australia

13:40-13:50 IAC-26/A3/IP/116289
EXLABS' APOPHISEXL MISSION: A COMMERCIAL MAAS
PATHFINDER FOR SCIENCE AND PLANETARY DEFENSE AT
ASTEROID (99942) APOPHIS
Dalibor Djuran, Exploration Laboratories (ExLabs), United States

13:50-14:00 IAC-26/A3/IP/108184
DUAL-STREAM FUSION NETWORK FOR MOTION-BLURRED
MARTIAN CRATER DETECTION
Li Zhuohang, Innovation Academy for Microsatellites, Chinese Academy of Sciences, China

14:00-14:10 IAC-26/A3/IP/112036
CHARACTERIZING THE LUNAR ENVIRONMENT FOR FUTURE
ASTROPHYSICAL PLATFORMS: SCIENTIFIC OBJECTIVES AND
PAYLOAD SYNERGIES OF THE AYAP-1 MISSION
Fakhri Zeynalov, Istanbul University, Türkiye

SCREEN 9

13:50-14:00 IAC-26/A3/IP/109221
ARTPS: OPERATIONALLY SAFE TARGET PRIORITIZATION VIA
DEPTH-ENHANCED HYBRID ANOMALY DETECTION
Poyraz Baydemi, Türkiye

14:00-14:10 IAC-26/A3/IP/116637
IMAGE-BASED LUNAR LANDING NAVIGATION USING LROC
REFERENCE IMAGERY AND LOCAL FEATURE TRANSFORMER
Şimal Aybüke Konca, Karadeniz Technical University, Türkiye

SCREEN 10

13:30-13:40 IAC-26/A3/IP/112579
A SIMULATION FRAMEWORK FOR THE LUNAR SECONDARY
RADIATION RESPONSE TO COSMIC RAYS AND REGOLITH
PROPERTIES
Jannik Eschler, University of Oslo, Norway

14:00-14:10 IAC-26/A3/IP/108267
A CUBESAT SWARM FOR HIGH-RESOLUTION LUNAR SURFACE
AND GRAVITY FIELD CHARACTERIZATION
Domenica Paulina Vaca Velasquez, Shanghai Jiaotong University, China

14:30-14:40 IAC-26/A3/IP/108372
A QUANTITATIVE ASSESSMENT METHOD FOR DECISION
COMPLEXITY IN UNKNOWN LAVA TUBE ENVIRONMENTS BASED
ON IMPROVED CYNEFIN FRAMEWORK
Qi Zhang, Harbin Institute of Technology, China

SCREEN 11

14:10-14:20 IAC-26/A3/IP/112541
SEARCH FOR COMPLEX NITRILES IN TITAN'S STRATOSPHERE
Athena Coustenis, Observatoire de Paris, France

SCREEN 12

13:30-13:40 IAC-26/A3/IP/115549
A MACHINE LEARNING FRAMEWORK FOR SELECTING
TERRESTRIAL LAVA TUBE ANALOGS FOR PLANETARY
EXPLORATION
Chiara Galtieri, Politecnico di Torino, Italy

13:40-13:50 IAC-26/A3/IP/110278
CENTRALLY COORDINATED MINI-ROBOT SWARM ARCHITECTURE
FOR SCALABLE LUNAR SURFACE EXPLORATION
Ishraq Al Yahyae, Sultan Qaboos University (SQU), Oman

14:30-14:40 IAC-26/A3/IP/108652
AI-DRIVEN AUTONOMY AND SOFTWARE ARCHITECTURE FOR
ROVER-DRONE COOPERATIVE SUBSURFACE EXPLORATION IN
MARS' ELYSIUM PLANITIA
Norbert Muzila, International Space University (ISU), France

SCREEN 13

13:30-13:40 IAC-26/A4/IP/114475
THE 3RD INTERNATIONAL WORKSHOP ON INTERSTELLAR
MESSAGE CONSTRUCTION
Paolo Musso, InCosmiCon Research Center, Italy

14:20-14:30 IAC-26/A4/IP/113317
INCREASING DRAKE EQUATION TERMS USING AN ABSURDLY
LARGE SEGMENTED SPACE BASED APERTURE - OPTICAL REEF
Howard Hall, Viterbi School of Engineering, USC, United States

Thursday 8 October

14:30-14:40 IAC-26/A4/IP/112195
SELF-ENVIRONMENT DYNAMICS: A COGNITIVE PERSPECTIVE ON
TECHNOSIGNATURES IN SETI
Nehir Gökoğlu, Izmir University of Economics, Türkiye

14:40-14:50 IAC-26/A4/IP/113123
SEARCH FOR TECHNO SIGNATURES IN RADIO AT MEDICINA
RADIO TELESCOPE.
Pierpaolo Pari, National Institute for Astrophysics (INAF), Italy

SCREEN 14

13:30-13:40 IAC-26/A4/IP/117315
REDESIGNING THE GOLDEN RECORD: HUMANITY'S UNFINISHED
MESSAGE TO THE UNIVERSE
Khadija Valiyeva, Baku State University, Azerbaijan

13:40-13:50 IAC-26/A4/IP/107088
A STATISTICAL APPROACH TO THE BIG SILENCE AND FERMI
PARADOX
Amri Wandel, Hebrew University of Jerusalem, Israel

13:50-14:00 IAC-26/A4/IP/115845
THE HAT CREEK OBSERVATORY: A FACILITY FOR TECHNOLOGY
DEVELOPMENT IN RADIO ASTRONOMY AND HIGH-
PERFORMANCE DIGITAL SIGNAL PROCESSING
Jay Frothingham, SETI Institute, United States

14:00-14:10 IAC-26/A4/IP/106867
PREPARED OR PERILOUS? ASSESSING HUMANITY'S READINESS
FOR CONTACT WITH EXTRATERRESTRIAL INTELLIGENCE
Maralgül Erol, Türkiye

14:10-14:20 IAC-26/A5/IP/109703
AN AI-AGENT ASSISTED REVIEW OF CONSTRUCTION METHODS
FOR EXTRA-TERRESTRIAL HABITATS
Zhelun Zhu, Xi'an Jiaotong - Liverpool University, China

14:20-14:30 IAC-26/A5/IP/114601
DESIGN, ANALYSIS AND FABRICATION OF BIOMIMETIC ADDITIVE
MANUFACTURED MEDICAL WRIST SPLINT UNDER ANALOG
ENVIRONMENTS
Mudra Patil, India

14:30-14:40 IAC-26/A5/IP/105564
A STAGED MISSION SCENARIO FRAMEWORK AND A MULTI-
LEVEL SYSTEMATIC DESIGN WORKFLOW FOR LUNAR RESEARCH
STATION PROTOTYPES
Jixian Wang, Harbin Institute of Technology, China

14:40-14:50 IAC-26/A5/IP/115581
A TRADE-SPACE EXPLORATION FRAMEWORK FOR HUMAN
PRESENCE FEASIBILITY IN PLANETARY LAVA TUBES
Chiara Galtieri, Politecnico di Torino, Italy

SCREEN 15

13:30-13:40 IAC-26/A5/IP/116515
PLANNING, PREPARATION AND INFRASTRUCTURE
DEVELOPMENT FOR THE BEATRICE BIOREGENERATIVE
EXPERIMENT SPELEOLOGY ANALOG MISSION TESTING
Paolo Marzioli, Sapienza University of Rome, Italy

13:40-13:50 IAC-26/A5/IP/107773
INTEGRATED LUNAR BIOME SYSTEMS: THE PINEFLUX
ARCHITECTURE FOR SUSTAINABLE HABITATS
Samer El Sayary, Lebanon

13:50-14:00 IAC-26/A5/IP/107777
BIOMIMETIC LUNAR REEFS: A CORAL-INSPIRED PARADIGM FOR
MODULAR SPACE ARCHITECTURE
Samer El Sayary, Lebanon

14:00-14:10 IAC-26/A5/IP/105209
PHYSARUM-BASED UNCONVENTIONAL COMPUTING MODEL FOR
IDENTIFYING SUITABLE REGIONS FOR HUMAN COLONIZATION
ON THE MARTIAN SURFACE
Muhammed YILMAZ, Türkiye

14:10-14:20 IAC-26/A5/IP/107959
BIO-REGENERATIVE HABITAT INTELLIGENCE FOR SCALABLE AND
AUTONOMOUS MARS COLONIES
Aydan Suleymanli, Azerbaijan

14:40-14:50 IAC-26/A5/IP/114320
SELECTION OF EDIBLE EXTREMOPHILIC PLANTS FOR
BIOREGENERATIVE LIFE SUPPORT SYSTEMS ON MARS
*Romildo Genaro Silva Cuadros, Universidad Nacional Mayor de San
Marcos, Peru*

SCREEN 16

13:30-13:40 IAC-26/A6/IPB/116081
FRAGMENTATION EVENTS IN SSO: DEBRIS FLUX, COLLISION RISK,
AND MANEUVER REQUIREMENTS FOR EARTH OBSERVATION
SATELLITES
Jakub Leś, University of Wrocław (UWr), Poland

13:40-13:50 IAC-26/A6/IPB/113101
DEPENDENCE OF ELECTRO-OPTICAL OBSERVATION LATITUDE ON
POLAR LEO SSA
Russell Johnson, [unlisted], United States

14:00-14:10 IAC-26/A6/IP/116002
PRESERVING OUR DARK SKIES: A PROPOSAL FOR THE
CONSIDERATION OF THE EFFECTS OF LIGHT POLLUTION WHEN
DESIGNING, DEVELOPING AND DEPLOYING LEO SATELLITE
CONSTELLATIONS.
Francheska Abreu Rodriguez, Concordia University, Canada

14:30-14:40 IAC-26/A6/IP/107443
SWARM-BASED AI FOR SELF HEALING CONSTELLATIONS
RESILIENCE AGAINST CASCADING DEBRIS EVENTS
Aarón Escobedo, Student, Mexico

SCREEN 17

13:40-13:50 IAC-26/A6/IPB/113534
SCALABLE DESIGN METHODOLOGY FOR BARE ELECTRODYNAMIC
TETHER DE-ORBIT SYSTEMS APPLIED TO CUBESATS
Marcos López, Universidad del Valle de Guatemala (UVG), Guatemala

14:00-14:10 IAC-26/A6/IPB/110697
NUMERICAL INVESTIGATION OF SHOCK-INDUCED ACOUSTIC
EMISSION UNDER HYPERVELOCITY IMPACT USING A HYBRID
FEM-SPH FRAMEWORK
Abdullah Samet Köse, Istanbul Technical University, Türkiye

14:10-14:20 IAC-26/A6/IP/105623
THE SPACE DEBRIS RISK INDEX (SDRI): A NOVEL MARKET-BASED
TOOL FOR PRICING RISK AND INCENTIVIZING DEBRIS REMOVAL
Racheal Wanyana, Germany

SCREEN 18

13:30-13:40 IAC-26/A6/IP/117332
FOCUSED SOLAR ABLATION: A CUBESAT-BASED CONCEPT FOR
SUSTAINABLE ACTIVE REMOVAL OF LOW EARTH ORBIT DEBRIS
H S D Anoojya Jami, Space Generation Advisory Council (SGAC), India

14:00-14:10 IAC-26/A6/IP/106086
DEVELOPMENT OF A 4-DIMENSIONAL GEOGRAPHIC
INFORMATION SYSTEM-BASED SPACE CADASTRE MODEL FOR
SPACE
Nihal Yüksel, Istanbul Technical University, Türkiye

Thursday 8 October

SCREEN 19

13:30-13:40 IAC-26/A6/IP/112147

INTEGRATED MODELING AND REENTRY ASSESSMENT OF FLEXIBLE DRAG-AUGMENTED DEORBIT SYSTEMS IN VLEO
Xinlei Guo, Beijing Institute of Technology, China

13:40-13:50 IAC-26/A6/IP/110795

COLLISION RISK ASSESSMENT OF SPACE DEBRIS BASED ON TRANSITS THROUGH A SPACECRAFT OPERATIONAL CORRIDOR
Yurun Yuan, Beijing Institute of Technology, China

13:50-14:00 IAC-26/A6/IP/110492

CONFIGURATION ANALYSIS AND OBSERVATION PERFORMANCE OF GEO-BASED OPTICAL SSA SENSORS FOR SPACE SITUATIONAL AWARENESS
Rabia Tüylek Tok, TUBITAK Uzay, Space Technologies Research Institute, Türkiye

14:00-14:10 IAC-26/A6/IP/113706

A MOBILE AUGMENTED REALITY PLATFORM FOR SPACE SITUATIONAL AWARENESS THROUGH VISUALIZATION OF SPACE OBJECTS
Zeynep Özbek, TUBITAK Uzay, Space Technologies Research Institute, Türkiye

14:10-14:20 IAC-26/A6/IP/114649

SCALING SPACE SITUATIONAL AWARENESS: OPTIMIZATION OF DISTRIBUTED FRAMEWORKS FOR NEAR REAL TIME ORBITAL DATA
Furkan Karaca, TUBITAK Uzay, Space Technologies Research Institute, Türkiye

14:20-14:30 IAC-26/A6/IP/115928

RETRIEVAL AUGMENTED GENERATION NATURAL LANGUAGE INTERACTION WITH SPACE SITUATIONAL AWARENESS DATA
Taha Muharrem LAHAÇLAR, TUBITAK Uzay, Space Technologies Research Institute, Türkiye

14:30-14:40 IAC-26/A6/IP/114492

SHAPE DETECTION FROM SATELLITE IMAGERY USING DEEP LEARNING BASED APPROACHES
Melike Işık, TUBITAK Uzay, Space Technologies Research Institute, Türkiye

SCREEN 20

13:30-13:40 IAC-26/A6/IP/104578

THE PROBLEM WITH PERMANENT OWNERSHIP OF SPACE OBJECTS
Tate Few, National Center for Remote Sensing, Air, and Space Law & University of Mississippi School of Law, United States

14:00-14:10 IAC-26/A6/IP/115480

EXTENDING THE 5-YEAR DEORBITING MANDATE TO LEGACY DEBRIS: OPTIMIZATION AND FEASIBILITY OF ADR OPERATIONS
Alessia Manca, Politecnico di Torino, Italy

14:20-14:30 IAC-26/A6/IP/115327

HYBRID ELECTROSTATIC-BRUSH SOLAR PANEL CLEANING SYSTEM FOR SATELLITE APPLICATIONS
Abdulhekim Helpem, Baykar Science High School, Türkiye

14:30-14:40 IAC-26/A6/IP/115207

INCENTIVIZING SPACE DEBRIS REMOVAL: OVERCOMING LEGAL AND POLICY BARRIERS
Mustafa Ekrem ERDAL, Baykar Science High School, Türkiye

14:40-14:50 IAC-26/A6/IP/113184

ANALYSIS OF METHODS FOR THE PRELIMINARY DETECTION OF CLOSE APPROACHES BETWEEN CATALOGUED OBJECTS
Gleb Belyi, Moscow Institute of Physics and Technology, Russian Federation

SCREEN 21

13:30-13:40 IAC-26/A6/IP/109753

INFERENCE AND LOCALIZATION OF UNOBSERVED NODES BASED ON SWARM TOPOLOGY AWARENESS
Shu-heng Yang, College of Astronautics, Northwestern Polytechnical University, China

13:40-13:50 IAC-26/A6/IP/105870

"REFRAMING SPACE DEBRIS AS DYNAMICAL SYSTEMS: INFERRING RESIDUAL RCS ACTIVITY FROM PUBLIC MULTI-OBJECT TRACKING DATA"
Anuj Kansara, Chandigarh University, India

13:50-14:00 IAC-26/A6/IP/110612

INTEGRATED AI-DRIVEN MISSION PLANNING AND ATTITUDE CONTROL FOR MULTI-SATELLITE HIGH-PRECISION OBSERVATION OF SPACE DEBRIS
Zhan Wang, Beijing Institute of Technology (BIT), China

14:40-14:50 IAC-26/A6/IP/108052

PHYSICS-CONSTRAINED CROSS-MODAL FUSION: ROBUST 6-DOF POSE ESTIMATION OF NON-COOPERATIVE DEBRIS USING NEUROMORPHIC EVENT-BASED VISION
Rasul Ahmadov, Baku Higher Oil School, Azerbaijan

SCREEN 22

14:00-14:10 IAC-26/A7/IP/113920

MULTI BAND LIGHT CURVE MODELLING OF ECLIPSING BINARY SYSTEMS USING THE SHARJAH ASTRONOMICAL OBSERVATORY
Abdulla Esmail, Sharjah Academy for Astronomy, Space Sciences, and Technology (SAASST), United Arab Emirates

14:30-14:40 IAC-26/A7/IPB/110660

IMPROVING THE IN-SITU AND ACCRETED CLASSIFICATION OF STARS IN OUR GALAXY: A STATISTICAL RE-EVALUATION IN THE [MG/MN] VS. [AL/FE] PLANE WITH APOGEE
Sedat KAMAÇ, Akdeniz University, Türkiye

SCREEN 23

13:40-13:50 IAC-26/A7/IP/115684

AUTONOMOUS ON-BOARD DATA PROCESSING FOR THE LISA MISSION: A CONCEPTUAL EDGE COMPUTING FRAMEWORK FOR REAL-TIME NOISE MITIGATION AND EARLY WARNING GENERATION
Rabia YILMAZ, Ataturk University, Türkiye

13:50-14:00 IAC-26/A7/LBA/118001

POTENTIAL AND SUSTAINABILITY ANALYSIS OF UV/EUV SPACE OBSERVATORIES IN VERY LOW EARTH ORBITS (VLEOS)
Abel Antonio Quispe Since, Glorioso Colegio Nacional de Ciencias, Peru

SCREEN 24

13:30-13:40 IAC-26/A7/IP/111342

GALACTIC ORIGINS OF METAL-POOR STARS IN THE SOLAR NEIGHBORHOOD: INVESTIGATING POTENTIAL LINKS WITH NGC 5139 (Ω CENTAURI)
Nur Çınar, Akdeniz University, Türkiye

13:50-14:00 IAC-26/A7/IP/110042

NANOSPACE KNOWLEDGE HUB: AN INTERDISCIPLINARY, TOOL-INTEGRATED SCIENCE 4.0 DATABASE FOR COSMIC NANOCARBONS IN SPACE
İdil Sincer, Dogus University, Türkiye

Thursday 8 October

14:00-14:10 IAC-26/A7/IP/110698

REFINING CUBESAT COSMIC RAY DETECTOR MEASUREMENTS BY ATTITUDE RECONSTRUCTION USING AN ON-BOARD MAGNETOMETER
Danil Ivanov, Keldysh Institute of Applied Mathematics of RAS, Russian Federation

14:10-14:20 IAC-26/A7/IP/105439

AUTOMATED SUNSPOT DETECTION DURING THE PEAK OF SOLAR CYCLE 25: AN ACTIVE LEARNING PIPELINE AND OPEN-SOURCE BENCHMARK DATASET
Youssef Maad, Galala University, Egypt

14:20-14:30 IAC-26/A7/LBA/117443

CALIBRATING THE LOCAL DISTANCE SCALE WITH POPULATION I CEPHEID VARIABLES: A DISTANCE ANALYSIS OF MESSIER 100 (NGC 4321)
Zeynep Feyza Özdemir, [unlisted], Türkiye

14:40-14:50 IAC-26/A7/IP/116322

ANOMALY DETECTION APPLICATIONS IN CELESTIAL IMAGE PROCESSING
Jacob Medeiros, Georgia Institute of Technology, United States

SCREEN 25

13:30-13:40 IAC-26/B1/IP/115312

LOW-COST RECOVERABLE SOUNDING BALLOON SYSTEM FOR MULTI-PARAMETER ATMOSPHERIC CHARACTERISATION: TWO FLIGHT CAMPAIGNS FROM THE ITALIAN PENINSULA.
Federico Toson, CISAS G. Colombo - University of Padova, Italy

SCREEN 26

13:30-13:40 IAC-26/B1/IP/105762

A HYBRID QUANTUM-CLASSICAL PIPELINE FOR DIMENSIONALITY-CONSTRAINED HYPERSPECTRAL SATELLITE IMAGE CLASSIFICATION USING VARIATIONAL QUANTUM KERNELS
Diego Pérez Reyes, Instituto Tecnológico Autónomo de México, Mexico

14:10-14:20 IAC-26/B1/IPB/105787

AN EARTH OBSERVATION BASED SEISMIC RISK MAPPING AND DECISION SUPPORT SYSTEM (SRMDSS) FOR DISASTER RISK REDUCTION
Hira Tassadaq, Institute of Space Technology (IST), Pakistan

SCREEN 27

14:10-14:20 IAC-26/B1/IP/110224

SRGAN ENHANCED STEREO VISION FOR LOW EARTH ORBIT IMAGERY: A DUAL-STAGE EVALUATION OF 3D RECONSTRUCTION ACCURACY
Cem Yigit USTUNDAG, ASELSAN, Türkiye

14:20-14:30 IAC-26/B1/IP/110546

SAR TO OPTICAL MAPPINGS FOR SATELLITE IMAGERY USING DEEP GENERATIVE MODELS
Ismail Erdem Bayar, ASELSAN, Türkiye

14:30-14:40 IAC-26/B1/IP/114116

STANDARDIZATION AS A CATALYST FOR GLOBAL RESILIENCE: HARMONIZING EARTH OBSERVATION DATA USE ACROSS NATIONAL DISASTER MANAGEMENT SYSTEMS
Hassan Abouseada, Egyptian Space Agency (EgSA), Egypt

14:40-14:50 IAC-26/B1/IP/104775

STRATOSTATS A STRATOSPHERIC EARTH OBSERVATION SYSTEM FOR HIGH RESOLUTION PERSISTENT MONITORING
Beatrice Ribis, Involve, Italy

SCREEN 28

13:30-13:40 IAC-26/B1/IP/110083

AUTOMATED CHARACTERIZATION FRAMEWORK FOR RF DRIVE ELECTRONICS IN SPACEBORNE AOTF-BASED EARTH OBSERVATION INSTRUMENTS
Pallab Kr Gogoi, Delft Institute Of Technology (TU Delft), Netherlands (Kingdom of the)

13:40-13:50 IAC-26/B1/IP/105879

MAPPING AND CHARACTERIZING EARTH MEGAFAN SYSTEMS USING MULTISPECTRAL SATELLITE DATA
Norbert Muzila, International Space University (ISU), France

14:10-14:20 IAC-26/B1/IP/115998

AI-ASSISTED UAV AND SATELLITE IMAGING FOR ENVIRONMENTAL MONITORING APPLICATIONS
Mohammad Alnakhli, Saudi Space Community (SSC), Saudi Arabia

SCREEN 29

13:30-13:40 IAC-26/B2/IP/109754

MULTI-AGENT INTENTION INFERENCE AND ADAPTIVE COLLABORATION METHOD UNDER COMMUNICATION CONSTRAINTS
Fengxin Shen, Northwestern Polytechnical University, China

13:40-13:50 IAC-26/B2/IP/110100

MMIB-DRIVEN ADAPTIVE MODULATION AND CODING FOR RESILIENT LEO SATELLITE COMMUNICATIONS IN JAMMING ENVIRONMENTS
Mustafa Çelik, ASELSAN, Türkiye

13:50-14:00 IAC-26/B2/IP/114599

GROUND-TO-SPACE OPTICAL SIGNALING USING AN EXISTING EARTH-OBSERVATION CAMERA FOR LOW-COST SPACE MISSIONS
Diego Pérez Reyes, Instituto Tecnológico Autónomo de México, Mexico

14:00-14:10 IAC-26/B2/IP/104755

DESIGN AND OPTIMIZATION OF REGIONAL NAVIGATION SATELLITE SYSTEM USING MULTI-OBJECTIVE GENETIC ALGORITHMS

Daniyal Raza Kazmi, Institute of Space Technology (IST), Pakistan

14:20-14:30 IAC-26/B2/IP/108507

ATMOSPHERIC TURBULENCE CHARACTERIZATION USING CN2 PROFILING FOR PERFORMANCE ASSESSMENT OF SPACE-TO-GROUND OPTICAL LINKS

Enes Malik Kocaman, Faculty of Aviation and Space Sciences, Necmettin Erbakan University, Türkiye

14:30-14:40 IAC-26/B2/IP/115678

OPTIMAL DESIGN OF A REGIONAL NAVIGATION SATELLITE CONSTELLATION FOR PAKISTAN USING GENETIC ALGORITHM-BASED OPTIMIZATION

Usama Ahmed, Institute of Space Technology (IST), Pakistan

14:40-14:50 IAC-26/B2/IP/113320

TOWARDS A UNIFIED RELATIVISTIC REFERENCE FRAME FOR LUNAR NAVIGATION IN THE ARTEMIS ERA
Yaritzel Vidal, Peru

SCREEN 30

13:30-13:40 IAC-26/B2/IPB/114425

REAL-TIME CONSOLIDATED RANGE AND CLOCK SYNCHRONIZATION - SCHEME AND DEVICE DEVELOPMENT TAKING RELATIVISTIC EFFECTS INTO ACCOUNT
Junichiro Kawaguchi, Australian National University (ANU), Australia

Thursday 8 October

13:40-13:50 IAC-26/B2/IP/116477

MACHINE-LEARNING-BASED SPECTRAL ANOMALY DETECTION FOR INTERFERENCE MONITORING IN GEO-LEO SATELLITE COMMUNICATIONS

Elif Avci, Balıkesir University, Türkiye

13:50-14:00 IAC-26/B2/IP/116966

PERFORMANCE ANALYSIS OF GEO SATELLITE LINKS IN RURAL AREAS OF ANGOLA

Pedro Ngombo Lungueki, Angolan National Space Program Management Office (GGPEN), Angola

14:00-14:10 IAC-26/B2/IP/116964

MATHEMATICAL MODELING OF SATELLITE SIGNAL PROPAGATION UNDER SOLAR STORMS AND MITIGATION STRATEGIES

Leonela Viviana Vargas Zuta, Universidad Nacional Mayor de San Marcos, Peru

14:10-14:20 IAC-26/B2/IP/116371

TESTING AND INTEGRATION OF THE S-BAND CHAIN ON THE CUBESAT CONTROL CENTRE

Sara Di Pasquale, Politecnico di Torino, Italy

14:20-14:30 IAC-26/B2/IP/114330

COEXISTENCE ANALYSIS OF NTN-D2D-5G UNDER DOPPLER DYNAMICS AND AGGREGATE INTERFERENCE CONSIDERING LEO SATELLITE CONSTELLATIONS

Erick Gómez, Universidad Autónoma de Querétaro, Mexico

14:30-14:40 IAC-26/B2/IP/115429

THE UNCERTAIN QUANTUM INTERNET - AN ANALYSIS OF CURRENT TECHNIQUES, APPLICATIONS AND SECURITY IMPLICATIONS

Cláudia Faria, Universidade do Minho, Portugal

SCREEN 32

13:30-13:40 IAC-26/B4/IP/112331

INTEGRATED ANOMALY-DRIVEN TELEMETRY AND AUTONOMOUS DESCENT ARCHITECTURE FOR ENERGY-CONSTRAINED SMALL SATELLITE SYSTEMS

Beyza YILMAZ, Ankara University, Türkiye

14:00-14:10 IAC-26/B4/IP/112216

COMPARATIVE ANALYSIS OF RADIATION DETECTOR TECHNOLOGIES FOR LOW EARTH ORBIT (LEO) CUBESAT MISSIONS

Demet Özdemir, Ege University, Türkiye

14:10-14:20 IAC-26/B4/IP/106383

SYSTEM ENGINEERING AND MISSION DESIGN FOR BENIN'S FIRST SATELLITE: A 3U CUBESAT FOR EARTH OBSERVATION AND IOT APPLICATIONS

Prudence AYIVI, Space Generation Advisory Council (SGAC), Benin

14:40-14:50 IAC-26/B4/IP/116287

OPTIMAL SOLAR PANEL CONFIGURATIONS FOR MICRO/NANO SATELLITES

Yunus Emre Cicek, Istanbul Technical University, Türkiye

SCREEN 33

13:50-14:00 IAC-26/B4/IP/115984

SATELLITE CONNECTED IOT FOR LEO SMALL SATELLITE CONSTELLATION FOR IOT CONNECTIVITY IN THE GCC REGION

Muhammad Rizwan Mughal, Sultan Qaboos University (SQU), Oman

14:00-14:10 IAC-26/B5/IP/109988

KEY TECHNOLOGIES FOR GEO-LEO SATELLITE COLLABORATIVE MISSION PLANNING IN REMOTE SENSING APPLICATIONS

Yongkang Wang, Beihang University (BUAA), China

SCREEN 34

13:30-13:40 IAC-26/B5/IP/117371

CUAIMA: AN INTELLIGENT AUTONOMOUS UNIVERSAL BOX FOR ARTIFICIAL MONITORING

Hermin Sosa, Central University of Venezuela (UCV), Venezuela

13:40-13:50 IAC-26/B5/LBA/117815

SMART EARLY WARNING SYSTEM FOR PREVENTIVE WATER MANAGEMENT IN HIGH-ANDEAN COMMUNITIES IN PERU THROUGH THE INTEGRATION OF EARTH OBSERVATION, IOT, AND TINYML

Dante Arhon Rojas Palacios, Universidad Nacional Mayor de San Marcos, Peru

14:10-14:20 IAC-26/B5/IP/112369

EARLY SITUATIONAL AWARENESS FOR FIRST RESPONDERS: THE DARPDAS CONCEPT WITHIN THE MEXICAN EMERGENCY FRAMEWORK

Dayana Isabel Juárez Roa, Universidad Nacional Autónoma de México (UNAM), Mexico

14:30-14:40 IAC-26/B5/IP/112748

SPACE DART, A DELTA-WING STRATOSPHERIC GLIDER, FOR ENTERTAINMENT, EDUCATION AND SCIENTIFIC RESEARCH.

Jacopo Sartori, Politecnico di Torino, Italy

SCREEN 35

14:30-14:40 IAC-26/B6/IPB/111715

A CENTRALIZE WEB-BASED MISSION CONTROL ARCHITECTURE FOR THE TSC-1 GROUND STATION

Jetsada Jinaka, National Astronomical Research Institute of Thailand (NARIT), Thailand

14:40-14:50 IAC-26/B6/LBA/117631

AN AUTONOMOUS MULTI-AGENT ARTIFICIAL INTELLIGENCE ARCHITECTURE FOR REAL-TIME SPACE MISSION OPERATIONS IN LEO SATELLITE CONSTELLATIONS

Şakir KAYA, Burdur Mehmet Akif Ersoy University, Türkiye

SCREEN 36

13:30-13:40 IAC-26/B6/IP/114925

IMPROVEMENT OF GROUND SEGMENT RELIABILITY IN EMERGING CUBESAT PROGRAMS: OPERATIONAL EXPERIENCE FROM NEPAL'S SLIPPERS2SAT MISSION

Sajan Duwal, Nepal Space Foundation, Nepal

13:50-14:00 IAC-26/B6/IP/114147

AUTONOMOUS CONJUNCTION RISK CLASSIFICATION AND MANEUVER DECISION SUPPORT SYSTEM FOR LEO SMALL SATELLITES

Yusuf Hamit Hakbilir, Karadeniz Technical University, Türkiye

14:00-14:10 IAC-26/B6/IPB/114003

AUTONOMOUS MISSION PLANNING VIA DECENTRALIZED REINFORCEMENT LEARNING FOR RESILIENT SPACECRAFT OPERATIONS

Punhan Gulubayli, Baku Higher Oil School, Azerbaijan

14:30-14:40 IAC-26/B6/IPB/106010

FROM CDMS TO OPERATOR-GRADE DECISIONS: CALIBRATED, EXPLAINABLE PRIORITIZATION AND GO/NO-GO SUPPORT FOR COLLISION AVOIDANCE

Mohaddese Daryabari, Sharif University of Technology, Iran

Thursday 8 October

14:40-14:50 IAC-26/B6/IP/115761
AUTONOMOUS PROXIMITY OPERATIONS FOR SATELLITE SERVICING USING THE ENVIRONMENT-VULNERABILITY-DECISION-TECHNOLOGY FRAMEWORK IN REAL TIME SIMULATION
Dinuri Rupasinghe, Massachusetts Institute of Technology (MIT), United States

SCREEN 37

13:50-14:00 IAC-26/C1/IP/107866
INTEGRATED TERRAIN-RELATIVE NAVIGATION AND HAZARD DETECTION FRAMEWORK FOR AUTONOMOUS LUNAR PRECISION LANDING
Çağrı ÇIBUK, Isik University, Türkiye

14:00-14:10 IAC-26/C1/IPB/108329
MULTI-TARGET OBSERVATION-RENDEZVOUS HYBRID TRAJECTORY PLANNING FOR ON-ORBIT SERVICING BASED ON HIERARCHICAL REINFORCEMENT LEARNING
Siyuan Guo, Beihang University, China

14:10-14:20 IAC-26/C1/IP/106496
A DIGITAL-TWIN AND HARDWARE-IN-THE-LOOP FRAMEWORK FOR CUBESAT ADCS VERIFICATION
Ali Elmorshedy, United Arab Emirates University (UAEU), United Arab Emirates

14:20-14:30 IAC-26/C1/IPB/111812
A COOPERATIVE ATTITUDE-ORBIT RECONFIGURATION STRATEGY FOR DISTRIBUTED SPACE-BASED TELESCOPE FORMATIONS WITH BODY-FIXED UNIDIRECTIONAL THRUST CONSTRAINTS
Yihan Peng, Beihang University (BUAA), China

14:40-14:50 IAC-26/C1/IPB/112167
INTELLIGENT COUPLED DYNAMICS AND UNCERTAINTY-AWARE CONTROL OF FLEXIBLE SPACECRAFT IN VERY LOW EARTH ORBIT
Xinlei Guo, Beijing Institute of Technology, China

SCREEN 38

14:00-14:10 IAC-26/C1/IPB/106158
REDUCED-ORDER MODELING OF PROPELLANT SLOSHING VIA DIFFERENTIAL VARIATIONAL INEQUALITIES FOR ON-ORBIT REFUELING DOCKING MISSIONS
Gianni Cassoni, Università degli Studi Roma Tre, Italy

14:10-14:20 IAC-26/C1/IP/109086
AN AUTONOMOUS AI-DRIVEN COLLISION AVOIDANCE ARCHITECTURE FOR MULTI-OBJECT ORBITAL CONJUNCTION SCENARIOS
Ali Haydar Kara, Samsun University, Türkiye

SCREEN 39

13:30-13:40 IAC-26/C2/IP/107572
SPACE-GRADE SELF-HEALING COMPOSITE: MULTI-CYCLE CRACK MITIGATION IN SATELLITES VIA COVALENT ADAPTABLE NETWORKS AND SILOXANE MOBILITY
Waleed Aslam, Pakistan Space and Upper Atmosphere Research Commission (SUPARCO), Pakistan

13:50-14:00 IAC-26/C2/IP/112253
DESIGN AND DEVELOPMENT OF HIGH-RADIAL STIFFNESS, HIGH-ACCURACY COMPLIANT PIVOT
Luca Mazzotti, Ecole Polytechnique Fédérale de Lausanne (EPFL), Micromechanical and Horological Design Laboratory (INSTANT-LAB), Italy

14:00-14:10 IAC-26/C2/IP/114538
DEVELOPMENT OF A HYBRID PEO/SOL-GEL COATING SYSTEM FOR AA7075 ROVER WHEELS IN PERCHLORATE-RICH MARTIAN ENVIRONMENTS
Zişannur Uzun, Istanbul Technical University, Türkiye

14:10-14:20 IAC-26/C2/IPB/115580
ADAPTIVE PETAL POLYMER REFLECTOR DEMONSTRATOR: INFLUENCE FUNCTION MEASUREMENT AND PREDICTED WAVEFRONT CORRECTION
Carl Johan G. Nielsen, Université Libre de Bruxelles, Belgium

14:30-14:40 IAC-26/C2/IPB/110390
PRACTICAL EVALUATION OF VIBRATION CONTROL STRATEGIES IN SATELLITE DYNAMIC TESTING
Muhammet Fatih YALIN, TUBITAK Uzak, Space Technologies Research Institute, Türkiye

SCREEN 40

13:30-13:40 IAC-26/C2/IP/112379
DESIGN OF BIPOD FLEXURE MOUNTS FOR TSC-1 HYPERSPECTRAL IMAGING PAYLOAD
Wichayuth Klankla, National Astronomical Research Institute of Thailand (NARIT), Thailand

13:50-14:00 IAC-26/C2/IP/116197
ADAPTIVE MULTIFUNCTIONAL PEROVSKITE THIN FILM ARCHITECTURES FOR SPACE
Guler Kocak, SPACELIS Space Technologies, Türkiye

14:00-14:10 IAC-26/C2/IP/113662
MULTILAYER BORON DOPED NANOFIBER COMPOSITES FOR RADIATION SHIELDING IN SPACE ENVIRONMENTS
Kadir Asrın SARI, Özdemir Bayraktar Aerospace Technologies Vocational and Technical Anatolian High School, Türkiye

14:10-14:20 IAC-26/C2/LBA/117982
MITIGATING HYPERVELOCITY DEBRIS CHANNELLING IN ADDITIVELY MANUFACTURED LATTICE-CORE SPACECRAFT SHIELDS
Serhat Arda Şahin, Imperial College London, United Kingdom

14:20-14:30 IAC-26/C2/IP/107388
EVENT-BASED CAMERAS FOR ON-ORBIT STRUCTURAL HEALTH MONITORING OF FLEXIBLE SOLAR ARRAYS: CONCEPT AND FEASIBILITY ASSESSMENT
giray yillikci, Istanbul Technical University, Türkiye

14:30-14:40 IAC-26/C2/IP/112525
BEYOND LEADED GLASS: LORIS — A LOCALIZED MAGNETO-OPTICAL RADIATION INTERFACE FOR DEEP SPACE HABITAT WINDOWS
Nursaç Karabacak, Türkiye

14:40-14:50 IAC-26/C2/IP/115940
MAGNETIC GATE AND TRACTION-SPRING EJECTION MECHANISM FOR AN ADDITIVELY MANUFACTURED 3U CUBESAT DISPENSER
Lucas Mitidieri, Argentina

SCREEN 41

13:30-13:40 IAC-26/C3/IP/111168
MITIGATION OF HARMONIC DISTORTION IN MEGAWATT-CLASS SPACE PHOTOVOLTAIC INVERTER SYSTEMS FOR SURFACE POWER INFRASTRUCTURE
Huseyn Mammadli, Azerbaijan

14:00-14:10 IAC-26/C3/IPB/110003
AI-OPTIMIZED RESILIENT POWER MANAGEMENT FOR AUTONOMOUS SPACE ROBOTS
Turkay Huseynova, National Aviation Academy - Azerbaijan, Azerbaijan

Thursday 8 October

14:20-14:30 IAC-26/C3/IP/107194
BIOHYBRID SELF-STABILIZING SOLAR ENERGY ARCHITECTURE
FOR LONG-DURATION LUNAR SURFACE SPACE MISSIONS
Nisa Yıldırım, [unlisted], Türkiye

14:30-14:40 IAC-26/C3/IPB/112724
COMPUTATIONAL STUDIES OF HEALING PROPERTIES OF
PEROVSKITE SOLAR CELL ON RADIATION-INDUCED DEFECTS FOR
LOW EARTH ORBIT APPLICATIONS
A. Deniz Aydın, Koc University, Türkiye

14:40-14:50 IAC-26/C3/IP/112473
ENERGY-AWARE PLACEMENT OF SOLAR RECHARGING STATIONS
FOR MARS SURFACE MOBILITY
muhammet sahin, Türkiye

SCREEN 42

13:30-13:40 IAC-26/C4/IP/115493
FLOW CHARACTERISATION OF A COTS BREATHING VALVE FOR USE
IN SOUNDING ROCKET COMPARTMENT VENTING
Sarisha Harrylal, University of KwaZulu-Natal (UKZN), South Africa

13:40-13:50 IAC-26/C4/IP/109566
INTEGRATED TEST CAMPAIGN FOR THE CHEMICAL PROPULSION
SYSTEM OF THE EMIRATES MISSION TO THE ASTEROID BELT
Nourah Alyammahi, UAE Space Agency, United Arab Emirates

13:50-14:00 IAC-26/C4/IP/115670
EFFECTS OF SOLID OXIDIZER ADDITIVES IN HYBRID ROCKET FUELS
ON OXIDIZER TANK SIZING AND PROPULSION SYSTEM MASS
Hüseyin Eren Çaka, Türkiye

14:00-14:10 IAC-26/C4/IP/115419
MECHANICAL DESIGN AND CHEMICAL COMPATIBILITY OF FLOW
CONTROL ELEMENTS FOR HIGH-PERFORMANCE HYBRID ROCKET
PROPULSION SYSTEMS
Semih Tiryakiol, [unlisted], Türkiye

14:30-14:40 IAC-26/C4/IP/105339
REVIEW ON ACTIVE THERMAL PROTECTION AND HEAT TRANSFER
FOR AIRBREATHING HYPERSONIC VEHICLES
Zeki Inanc Genc, Samsun University, Türkiye

SCREEN 43

13:30-13:40 IAC-26/C4/IP/110916
THRUST PROFILE OPTIMIZATION OF SOLID ROCKET MOTORS VIA
INTERNAL AND EXTERNAL BALLISTIC INTEGRATION
Hanyun Zheng, Beihang University (BUAA), China

SCREEN 44

13:30-13:40 IAC-26/C4/IP/111793
REINFORCEMENT LEARNING FOR AUTONOMOUS OPERATION OF
SPACECRAFT PROPULSION SYSTEMS
Taiki Achiha, The University of TOKYO, Graduate school, Japan

13:40-13:50 IAC-26/C4/IP/115806
DEMİRKAZIK-IV: TÜRKİYE'S HIGHEST TOTAL IMPULSE STUDENT-
BUILT HYBRID MOTOR
Alp Bora Görüşken, Yıldız Technical University, Türkiye

13:50-14:00 IAC-26/C4/LBA/118032
DESIGN AND OPTIMIZATION OF A PYROTECHNIC IGNITION
SYSTEM FOR HYBRID ROCKET MOTORS
Umay Akkuyu, Yıldız Technical University, Türkiye

14:00-14:10 IAC-26/C4/IP/113043
DEVELOPMENT AND BENCH-SCALE DEMONSTRATION OF A
NOVEL MEMS-BASED ELECTROSPRAY THRUSTER HEAD WITH
HIGH-IMPEDANCE MICROFLUIDIC CHANNELS
Blanca Pavón-Castillo, Xiroi Aerospace, Spain

14:20-14:30 IAC-26/C4/LBA/118021
GEODESIC DOME PROFILE OPTIMIZATION WITH FRICTION-
INTEGRATED WINDING KINEMATICS AND PROGRESSIVE FAILURE
ANALYSIS FOR HYBRID ROCKET MOTOR COPVS
Namık Hisar, Yıldız Technical University, Türkiye

14:30-14:40 IAC-26/C4/IP/107598
COMPARATIVE ASSESSMENT OF ANALYSIS METHODS FOR HOT-
GAS-SIDE HEAT TRANSFER PREDICTION IN PRELIMINARY LIQUID
ROCKET ENGINE DESIGN
Kerem Kizilboga, Istanbul Technical University, Türkiye

14:40-14:50 IAC-26/C4/IP/116488
COLD-FLOW CHARACTERIZATION OF SHOWERHEAD, VORTEX
AND SWIRL INJECTORS FOR HYBRID ROCKET MOTORS UNDER
TWO-PHASE OXIDIZER CONDITIONS
Fırat Aydın, Yıldız Technical University, Türkiye

SCREEN 45

13:30-13:40 IAC-26/D1/IP/116969
A CONCERT OF LIFE EXTENSIONS: NEXT GENERATION GEO FLEET
MANAGEMENT ENABLED BY INTERMITTENT STATION KEEPING
Leonard de Guzman, - Katalyst Space Technologies, United States

13:40-13:50 IAC-26/D1/IP/107350
ORBITAL RECONFIGURABLE INFRASTRUCTURE & OPERATIONS NODE
Luis Fernando Favian Curiel, Universidad La Salle, Mexico

13:50-14:00 IAC-26/D1/IP/116470
BENCHMARKING AND DOMAIN ADAPTATION OF 3D SCENE
RECONSTRUCTION MODELS FOR EXTRATERRESTRIAL SURFACE
EXPLORATION
Aytaç Sekmen, Middle East Technical University, Türkiye

14:30-14:40 IAC-26/D1/IP/107564
PERFORMANCE EVALUATION ON TIME-SENSITIVE NETWORKING
FOR MISSION-CRITICAL AEROSPACE APPLICATIONS
*Longfei Li, Xi'an Microelectronics Technology Institute, China
Aerospace Science and Technology Corporation (CASC), China*

14:40-14:50 IAC-26/D1/IP/113897
AN OVERVIEW OF SPACE SYSTEMS: FROM DESIGN TO
DEPLOYMENT
Avid Roman-Gonzalez, Universidad Nacional Tecnológica de Lima Sur, Peru

SCREEN 46

13:40-13:50 IAC-26/D1/IP/116929
A CRITICAL ANALYSIS OF SPACE-BASED DATA CENTERS FROM
ECONOMIC, HARDWARE, SOFTWARE, AND CYBERSECURITY
PERSPECTIVES
Oguz Karasu, University of Oxford, United Kingdom

14:00-14:10 IAC-26/D1/IPB/110362
GEO COMMUNICATION TRANSPARENT PAYLOAD DEVELOPMENT:
TURKSAT 6A NATIONAL SATELLITE CASE STUDY
Ozlem Ipek, ASELSAN, Türkiye

14:10-14:20 IAC-26/D3/IP/107274
ACTIVE ELECTROSTATIC DUST SHIELDING AND DETECTION
SYSTEM DESIGN FOR SUSTAINABILITY IN LUNAR SURFACE
EXPLORATION MISSIONS
Ayşen Başkan, Karadeniz Technical University, Türkiye

14:20-14:30 IAC-26/D3/IPB/112060
THE FRONTIERS OF ARCHITECTURE: DESIGN PRINCIPLES IN
EXTREME AND SPACE ENVIRONMENTS
Hale Nur ERDOĞAN, [unlisted], Türkiye

14:30-14:40 IAC-26/D3/IP/115905
STRATEGIC IMPORTANCE OF LUNAR-SOURCED PROPELLANTS:
A PRELIMINARY PERFORMANCE ANALYSIS OF ISRU-DRIVEN
CHEMICAL PROPULSION
Ahmet Arif Durhan, Istanbul Technical University, Türkiye

Thursday 8 October

SCREEN 47

13:30-13:40 IAC-26/D2/IP/107813

COMBINED ATTITUDE CONTROLLER TUNING AND CONTROL SYSTEM ACTUATOR OPTIMIZATION FOR A SMALL RAPID RESPONSE LAUNCHER

Hao Gu, Beihang University, China

13:50-14:00 IAC-26/D2/IPB/113140

COMPARATIVE TWO-DIMENSIONAL THERMO-MECHANICAL ANALYSIS OF CNT AND GRAPHENE REINFORCED POLYIMIDE NANOCOMPOSITES FOR HYPERSONIC BLUNTED LEADING EDGES OF REUSABLE LAUNCH VEHICLES

Miraç Yağmur, Samsun University, Türkiye

14:00-14:10 IAC-26/D2/LBA/117974

SENSITIVITY AND UNCERTAINTY QUANTIFICATION OF ATMOSPHERIC RE-ENTRY TRAJECTORIES FOR SPACE TRANSPORTATION SAFETY ASSESSMENT

Melek Cevşen Yücel, Ankara Yıldırım Beyazıt University, Türkiye

14:10-14:20 IAC-26/D2/IP/110228

IMPLEMENTATION-ORIENTED ANALYSIS OF SLIDING MODE CONTROL FOR VERTICAL LANDING ROCKETS WITH ACTUATOR FEASIBILITY CONSTRAINTS

Ayşe Sultan ŞAHİNCİ, Kırklareli University, Türkiye

14:30-14:40 IAC-26/D2/IPB/106748

FEASIBILITY ANALYSIS OF EML TRANSPORTATION FOR SPACE MINING OPERATIONS

Kemal Barış Tanrıverdi, Türkiye

SCREEN 48

13:30-13:40 IAC-26/D4/IP/116735

CONNECTING THE AEROSPACE GAP: THE ROLE OF THE POLSA STUDENT COUNCIL IN SYNERGIZING ACADEMIA-INDUSTRY RELATIONS AND ENHANCING PROFESSIONAL PATHS

Natalia Plekaniec, AGH University of Krakow, Poland

13:40-13:50 IAC-26/D4/IP/113629

ASTRONOMY AND AI RESEARCH IN THE FUTURE

Ravan Hajiye, Azerbaijan Technical University, Azerbaijan

13:50-14:00 IAC-26/D4/IP/116230

ACOUSTIC TRAPPING: A THEORETICAL FRAMEWORK FOR CAPTURING RESIDUAL SOUND FREQUENCIES IN THE UPPER ATMOSPHERE

Zeynep Neva Aygün, Gebze Technical University, Türkiye

14:00-14:10 IAC-26/D4/IP/117143

A SMALL-SPACECRAFT INTERSTELLAR MISSION TO PROXIMA CENTAURI

Rivaldo Carlos Duran-Aquino, Universidad Nacional Mayor de San Marcos, Peru

14:10-14:20 IAC-26/D4/IP/113024

FINANCING THE 2050-2075 SPACE HORIZON: STRATEGIC CAPITAL, INSTITUTIONAL INNOVATION, AND THE ECONOMICS OF LUNAR AND DEEP-SPACE PERMANENCE

Vasif Aliyev, Azerbaijan State University of Economics, Azerbaijan

14:20-14:30 IAC-26/D4/IPB/113996

COSMIC DUST AND HOW TO REDUCE ITS AMOUNT IN SPACE USING SATELLITE SYSTEMS

Aysu Rana Özkumru, [unlisted], Türkiye

SCREEN 49

13:30-13:40 IAC-26/D5/IP/116173

AI-POWERED SPACE MISSION RISK PREDICTION: ADVANCES IN ADAPTIVE DECISION-MAKING, EXPLAINABILITY, AND ETHICAL GOVERNANCE

Anh Truong, University of Northampton, United Kingdom

13:40-13:50 IAC-26/D5/LBA/117722

ARTEMIS: PRODUCT ASSURANCE AND SAFETY ASPECTS

Raffaele Campagnuolo, ESA - European Space Agency, Netherlands (Kingdom of the)

14:00-14:10 IAC-26/D5/IP/113537

ENHANCING COTS MICROELECTRONICS SURVIVABILITY IN HIGH-RADIATION ENVIRONMENTS VIA SYSTEM-LEVEL DYNAMIC BIASING STRATEGIES

Ramazan Ozkan, Bursa Uludağ University, Türkiye

SCREEN 50

13:30-13:40 IAC-26/D6/IPB/110024

DE-RISKING SPACECRAFT RETURNS - ASSURING AIRSPACE SITUATIONAL AWARENESS THROUGH HYPERDYNAMIC MULTISPECTRAL SENSING.

Tori Murray, Southern Launch, Australia

13:40-13:50 IAC-26/D6/IPB/116029

AN AUTOMATION ARCHITECTURE FOR REAL-TIME TRACEABILITY AND RAPID SPACE SYSTEM CERTIFICATION WORKFLOWS

Shreya Ballolli, Aerione Bharat, India

14:40-14:50 IAC-26/D6/IPB/110370

REVISITING THE IMAGINED FUTURES OF BRITISH SPACEPORTS

Robert Lynn, University of Edinburgh, United Kingdom

SCREEN 51

13:30-13:40 IAC-26/E1/IP/105973

ITALY AS AN ENABLER OF THE GLOBAL SPACE WORKFORCE: THE ASI-IILA CAPACITY-BUILDING MODEL FOR SUSTAINABLE AND INCLUSIVE SPACE DEVELOPMENT

Luna Panei, Agenzia Spaziale Italiana (ASI), Italy

13:50-14:00 IAC-26/E1/IP/110836

INCREASING YOUNG PEOPLE'S INTEREST IN SPACE STUDIES: VR-BASED SPACE MUSEUM MODEL

Suveybe Yüksel, [unlisted], Türkiye

14:20-14:30 IAC-26/E1/IP/112534

SPACEVR: SPACE FROM THE PAST TO THE PRESENT

Tuğçe Naz Yıldırım, [unlisted], Türkiye

14:30-14:40 IAC-26/E1/IP/116732

TRIANGULATING SPACE WORKFORCE DEVELOPMENT IN ROMANIA: SECTOR NEEDS, STUDENT READINESS & NON-FORMAL EDUCATION

Maria Alexandra Nita, Romanian Space Initiative, Romania

SCREEN 52

13:30-13:40 IAC-26/E1/IP/116093

A UNIVERSITY-BASED ANALOG SPACE MISSION PLATFORM FOR TRAINING FUTURE SPACE ENGINEERS IN EMERGING SPACE NATIONS

Avid Roman-Gonzalez, Universidad Nacional Tecnológica de Lima Sur, Peru

14:20-14:30 IAC-26/E1/IP/111108

PHILOSOPHY AND HISTORY OF SCIENCE IN SPACE EDUCATION

Ufuk Balkan, New Horizon Cyprus – Space and Science Initiative, Cyprus

14:30-14:40 IAC-26/E1/IP/108463

SPACE WORKFORCE READINESS INITIATIVES - ROADMAP FOR NEWCOMERS

Cüneyt Dirican, İstanbul Arel University, Türkiye

Thursday 8 October

SCREEN 53

13:30-13:40 IAC-26/E1/IP/116255

SPACE MANIFESTO: A SPECULATIVE WORKSHOP REDEFINING PLANETARY GOVERNANCE WITH THE NEXT GENERATION
Aoife van Linden Tol, European Space Policy Institute (ESPI), United Kingdom

14:00-14:10 IAC-26/E1/IP/112088

ENGAGING PRIMARY AND SECONDARY STUDENTS IN SPACE APPLICATIONS IN AN OVERSEAS TERRITORY: THE PIKALI RUN EDUCATION MODEL IN REUNION ISLAND
Erika Velio, PIKALI, France

14:10-14:20 IAC-26/E1/IP/112305

EARLY TALENT PIPELINE FOR SPACE: A NATIONWIDE STUDY OF AEROSPACE-FOCUSED HIGH SCHOOL PROGRAMS IN CHINA
Meili Vergnolle, Tsinghua University, China

14:30-14:40 IAC-26/E1/IPB/110305

ZERO GRAVITY, NOTE ONE: DEFINING THE SENSORIMOTOR FRAMEWORK FOR LIVE MUSICAL PERFORMANCE IN SPACE
Leonardo Barilaro, [unlisted], Malta

14:40-14:50 IAC-26/E1/IP/110823

RE-EVALUATING HIGH SCHOOL STUDENTS' ATTITUDES TOWARD ASTRONOMY: A LONGITUDINAL COMPARATIVE STUDY
Sedef Deniz, Martyrs Prof.Dr.Ilhan Varank Science and Art Center, Türkiye

SCREEN 54

13:40-13:50 IAC-26/E1/IPB/104441

MENTORSHIP, INTERNSHIPS, NETWORKS: A PROVEN FORMULA FOR GLOBAL SPACE WORKFORCE GROWTH
Joshua Ingersoll, Amazon, United States

13:50-14:00 IAC-26/E1/IP/115083

NEPALISAT-2: A FRAMEWORK FOR INSTITUTIONAL KNOWLEDGE RETENTION AND SUSTAINABLE SPACE CAPACITY IN NEPAL
Rishav Adhikari, Nepal Space Foundation, Nepal

14:00-14:10 IAC-26/E1/IP/115691

FROM A LOST SOCK ON THE ISS TO 10,000 YOUNG EXPLORERS: INCLUSIVE SPACE EDUCATION IN HUNGARY
Anett Fenyőfalvi, [unlisted], Hungary

14:10-14:20 IAC-26/E1/IP/115290

BUILDSAT
Selin Sertel, Ozel Antalya Lara Bahcesehir Koleji, Türkiye

14:20-14:30 IAC-26/E1/IP/116958

TRANSLATING ASTRONAUT SELECTION RESEARCH INTO ACCESSIBLE KNOWLEDGE: SCIENCE COMMUNICATION STRATEGIES WITHIN THE DIVINAS PROJECT
Saira O. Williams, Space Generation Advisory Council (SGAC), Costa Rica

14:30-14:40 IAC-26/E1/IP/112428

A HANDS-ON UNIVERSITY-HIGH SCHOOL COLLABORATION FOR SOLAR SYSTEM RESEARCH USING ARCHIVAL TELESCOPE DATA
Hasan H. Esenoglu, Istanbul University, Türkiye

SCREEN 55

13:30-13:40 IAC-26/E1/IPB/108797

HANDS-ON LUNAR OUTREACH IN THE METAVERSE (VRCHAT): UPGRADING LUMARNITY™ VR WITH INDUSTRY ASSETS AND CULTURE-LED ENGAGEMENT
Takuya Yokoyama, JGC Corporation, Japan

13:50-14:00 IAC-26/E2/IPB/112214

AALTO-3: DUAL RADIATION EFFECTS CHARACTERIZATION AND HIGH-INTEGRATION TECHNOLOGY VALIDATION IN A 1U CUBESAT
Augustinas Rukas, Aalto Space Association (ASA), Finland

14:00-14:10 IAC-26/E2/IPB/114521

DESIGN AND VALIDATION OF A LAB-SCALE MARTIAN ATMOSPHERIC SIMULATION CHAMBER
Ibaad Abro, University of British Columbia, Canada

14:10-14:20 IAC-26/E2/IPB/114787

DESIGN AND ENVIRONMENTAL VERIFICATION OF A CUBESAT ADCS UNIT WITH INTEGRATED REACTION WHEELS FOR THE BIRDS-RPM MISSION
Ernesto Cortes, Kyushu Institute of Technology, Japan

14:20-14:30 IAC-26/E2/IP/113985

A TURKISH CANSAT EXPERIENCE: SYSTEMS ENGINEERING-DRIVEN DEVELOPMENT, SIMULATION, AND FLIGHT VALIDATION OF A WORLD-RANKING ARCHITECTURE
Alperen Ragıp Söyler, Gazi University, Türkiye

14:30-14:40 IAC-26/E2/IP/114300

DESIGN AND VALIDATION OF A SERVICE-ORIENTED AVIONICS ARCHITECTURE WITH MANDARYNA MODULAR STACKING FOR THE R7 ORZEŁ HYBRID ROCKET
Jakub Jablonski, Gdansk University of Technology, Poland

14:40-14:50 IAC-26/E2/IPB/113966

MULTIOBJECTIVE OPTIMIZATION OF ROVER WHEEL-SOIL INTERACTION USING HYBRID SPH-FEM NUMERICAL ANALYSIS
Panagiotis Rallis, Beyond Orbit, Greece

SCREEN 56

13:30-13:40 IAC-26/E3/IP/105905

ECONOMIC AND ORGANIZATIONAL RISKS OF AI CENTRALIZATION IN SPACE PROGRAMS
Alberto Báez Jiménez, Instituto Tecnológico Autónomo de México, Mexico

13:40-13:50 IAC-26/E3/LBA/117810

JURISDICTIONAL CHALLENGES FOR IN-ORBIT CENTRES: BRIDGING THE GAP BETWEEN SPACE INFRASTRUCTURE AND SPACE LAW
Pramiti Kothawade, ILS Law College, India

13:50-14:00 IAC-26/E3/IP/108633

STARS IN THE SAND: HOW INTERNATIONAL COOPERATION SHAPES SPACE 2030 INTEGRATION IN THE UAE, SAUDI ARABIA AND QATAR
Merve Nur YAŞAR, Ondokuz Mayıs University, Türkiye

14:00-14:10 IAC-26/E3/IP/111100

EUROPEAN SPACE POLICY: A EUROPEAN UNION PERSPECTIVE THROUGH MULTILATERAL SPACE POLICIES AND INTERNATIONAL COOPERATION
Luca Romano, ASI - Italian Space Agency, Italy

14:10-14:20 IAC-26/E3/IP/116922

DUE REGARD IN MODERN ORBITAL OPERATIONS: THE LEGAL STANDARDS UNDER ARTICLE IX OST
Kürsad Yilmaz, Germany

14:30-14:40 IAC-26/E3/LBA/117453

PERU AND THE ARTEMIS ACCORDS: ASSESSING THE GAP BETWEEN FORMAL COMMITMENT AND IMPLEMENTATION CAPACITY IN A DEVELOPING SPACE NATION
Dafer Paola Quispe Durand, Universidad Nacional Mayor de San Marcos, Peru

Thursday 8 October

SCREEN 57

13:30-13:40 IAC-26/E3/IP/112447
ADAPTIVE FINANCIAL ARCHITECTURES AND TWO-STAGE ROYALTY REGIMES IN EMERGING SPACE RESOURCE GOVERNANCE
Zsófia Farkas, Central European Academy, Budapest, Hungary

SCREEN 58

13:50-14:00 IAC-26/E4/IP/112163
ASTRONOMERS IN TURKISH AND OTTOMAN HISTORY
Güven TÜRK, Yenimahalle BİLSEM, Türkiye

14:00-14:10 IAC-26/E4/IP/108114
A CHARACTERIZATION OF INTERPLANETARY EXTENDED MISSIONS
Mollie Johnson, Massachusetts Institute of Technology (MIT), United States

SCREEN 59

13:30-13:40 IAC-26/E5/LBA/118103
GENERATIVE DESIGN OF LUNAR SHELL SHELTERS THROUGH ROBUST TOPOLOGY OPTIMIZATION UNDER MULTI-HAZARD LOADING
Yukun Ma, Harbin Institute of Technology, China

14:00-14:10 IAC-26/E5/IP/111421
A MULTIVARIATE ANALYSIS OF PUBLIC READINESS FOR HUMAN SPACE EXPLORATION IN THE CONTEXT OF "THE WORLD NEEDS MORE SPACE"
Ayşenur Çelik, Türkiye

14:20-14:30 IAC-26/E5/IP/109792
THE SPATIAL HORIZON OF COMPUTE: OPPORTUNITIES, CHALLENGES, AND GEOPOLITICS OF ORBITAL DATA CENTERS
Deborah Kala Perkins, American Astronautical Society (AAS), United States

14:30-14:40 IAC-26/E5/IPB/114333
FOLDING GEOMETRIES FOR THE DEPLOYMENT FROM CYLINDRICAL PAYLOAD BAYS OF COMPLEX SHAPED INFLATABLE HABITATS
Lucia Nicotera, [unlisted], Uruguay

14:40-14:50 IAC-26/E5/IP/106791
ECONOMIC MULTIPLIER EFFECTS OF SATELLITE DATA APPLICATIONS IN AGRICULTURE AND CLIMATE MONITORING: A COST-BENEFIT AND INPUT-OUTPUT ANALYSIS
Tural Salmanov, Azercosmos, Space Agency of Republic of Azerbaijan, Azerbaijan

SCREEN 60

13:30-13:40 IAC-26/E5/IP/105749
FROM BORDER TO BORDER: AN EMERGING NATIONAL MODEL FOR KNOWLEDGE TRANSFER FROM SPACE R&D TO INDIGENOUS AND AFRODESCENDANT COMMUNITIES IN MEXICO
Monserrat Ochoa-Altamirano, Universidad Nacional Autónoma de México (UNAM), Mexico

13:40-13:50 IAC-26/E5/IP/117316
ASTROTOURISM AS AN EXPERIENTIAL INTERFACE BETWEEN SPACE AND SOCIETY
Emrah Taşarar, Batman University, Türkiye

14:00-14:10 IAC-26/E5/IP/106778
EVALUATING THE VALUE OF SPACE INVESTMENT FOR HUMANITY
necla saygi, Türkiye

14:10-14:20 IAC-26/E5/IP/117305
EARTH BASE "EARTHIAN" HABITATS: INDIGENOUS-INFORMED, AI-DESIGNED/AI-PARAMETRIC, ROBOTIC-ASSEMBLED ARCTIC ANALOGS FOR SPACE-READY HABITATION IN CANADA'S NORTH
Sait (Saeid) Aynaci (Aeinechi), EARTH BASE, Canada

14:20-14:30 IAC-26/E5/IP/114768
ALGAE-CORE: A LOW-COST AUTONOMOUS ALGAL BIOREACTOR FOR OXYGEN GENERATION AND CO₂ REGULATION IN LONG-DURATION SPACE MISSIONS
Emir Özdemir, [unlisted], Türkiye

14:30-14:40 IAC-26/E5/IP/112325
DESIGN, PRODUCTION, AND OPTICAL PERFORMANCE EVALUATION OF A NEWTONIAN REFLECTING TELESCOPE DEVELOPED BY STUDENTS FOR THE DETECTION AND VISUALIZATION OF VISIBLE ELECTROMAGNETIC RADIATION FROM CELESTIAL BODIES
Şirin Küçükşener, Türkiye

14:40-14:50 IAC-26/E5/IP/111751
OPERATIONAL AND HUMAN FACTORS: LESSONS LEARNED FROM AN ANALOG MISSION.
Juana Lizeth Sanchez Sanchez, High Technology Unit (UAT) Faculty of Engineering - UNAM, Mexico

SCREEN 61

14:00-14:10 IAC-26/E6/IP/115010
DESIGNING AN ESA BUSINESS INCUBATION CENTRE (BIC) FOR CANADA
Angelica Lee, International Space University (ISU), France

14:10-14:20 IAC-26/E6/IPB/104946
TOWARDS A SUSTAINABLE BUSINESS INCUBATION MODEL IN EGYPT AND AFRICA
aya abouelosud, Egyptian Space Agency (EgSA), Egypt

14:20-14:30 IAC-26/E6/IP/115076
BATTERY INNOVATION IN LEO MEGACONSTELLATIONS AND ITS ECONOMIC IMPACT
Yige Sun, University of Oxford, United Kingdom

14:30-14:40 IAC-26/E6/IP/116316
DEMOCRATIZING VLEO MISSION DESIGN: DEVELOPMENT OF OPEN-ACCESS COMPUTATIONAL TOOLS FOR EMERGING SPACE NATIONS AND COMMERCIAL NEWSPACE VENTURES
Tahir Çebi, Samsun University, Türkiye

14:40-14:50 IAC-26/E6/IPB/111231
PUBLIC-PRIVATE PARTNERSHIPS IN SPACE EXPLORATION: ANALYZING CHINA'S MARKET-ORIENTED APPROACH AND ITS VIABILITY FOR RUSSIA USING THE SEP PROJECT AS A CASE STUDY
Evgenii Tatarchenko, Research Center for Space Economy and Policy, Russian Federation

SCREEN 62

13:30-13:40 IAC-26/E7/IP/107971
EVOLUTION OF SPACE RULES IN THE RECONSTRUCTION OF CUSTOMARY INTERNATIONAL LAW: THEORETICAL DEBATES, PRACTICAL STATUS, AND FUTURE PROSPECTS
Fei Ge, Shenzhen University, China

13:40-13:50 IAC-26/E7/LBA/118085
ORBITAL DATA CENTERS AS SPACE STATIONS? A LEGAL FRAMEWORK FOR SPACE-BASED CLOUD INFRASTRUCTURE
Omar Reyes, Mexico

Thursday 8 October

14:00-14:10 IAC-26/E7/IPB/115607
ORBITAL CONGESTION IN LOW EARTH ORBIT: A MODEL OF STATE RESPONSIBILITY FOR ACTIVE DEBRIS REMEDIATION
Arpit Gupta, India

14:20-14:30 IAC-26/E7/IPB/116681
EQUATORIAL LAUNCH OPERATIONS AND INTERNATIONAL RESPONSIBILITY: EVALUATING TÜRKİYE'S PROPOSED SPACEPORT IN SOMALIA UNDER INTERNATIONAL SPACE LAW
Melek Orhan, Erciyes University, Türkiye

14:30-14:40 IAC-26/E7/IPB/116675
REGULATING ACCESS TO OUTER SPACE: AUTHORIZATION OF SPACE ACTIVITIES UNDER ITALIAN LAW NO. 89/2025
Leonardo Cerisano, Italy

14:40-14:50 IAC-26/E7/IPB/112737
INFORMATION SHARING AND HARMFUL INTERFERENCE ON THE MOON: BRIDGING THE OUTER SPACE TREATY AND THE ITU RADIO REGULATIONS IN LUNAR OPERATIONS
Cynthia Jimenez-Monroy, Finland

SCREEN 63

13:30-13:40 IAC-26/E7/IP/111456
RETHINKING DISARMAMENT AND RESPONSIBILITY IN OUTER SPACE: CYBER ATTACKS, ARTIFICIAL INTELLIGENCE AND DUAL-USE SPACE SYSTEMS AMID EMERGING LEGAL GAPS IN SPACE GOVERNANCE
Merve Ayşegül KULULAR, Hacettepe University, Türkiye

14:10-14:20 IAC-26/E7/IP/116957
MEXICO AND THE ARTEMIS ACCORDS: A PROMISING PATH TOWARD LUNAR EXPLORATION AND THE COLMENA MISSION
Itzel Rocillo, KIBSEEK, Mexico

14:20-14:30 IAC-26/E7/IP/115485
THE EU INTERNAL MARKET AND THE GOVERNANCE OF SPACE RESOURCES
Zsófia Farkas, Central European Academy, Budapest, Hungary

14:30-14:40 IAC-26/E7/IPB/113778
LEGAL PROTECTION OF AI-ENHANCED EARTH OBSERVATION DATA: COPYRIGHTABILITY IN THE AGE OF ARTIFICIAL INTELLIGENCE
Weronika Krzyżak, Space Generation Advisory Council (SGAC), Poland

SCREEN 64

13:30-13:40 IAC-26/E9/IP/104757
WHO PAYS WHEN SPACE DEBRIS FALLS? LIABILITY, ATTRIBUTION, AND INTERNATIONAL SECURITY RISKS OF UNCONTROLLED SPACE DEBRIS REENTRIES OVER THE ANTARCTIC CONTINENT (2005–2025)
Victoria Valdivia, European Space Policy Institute (ESPI), Chile

14:10-14:20 IAC-26/E9/IP/116281
OUTER SPACE AS A PROVINCE OF ALL MANKIND AND INTERNATIONAL ENVIRONMENTAL LAW: ENVIRONMENTAL PROTECTION FOR THE ELECTROMAGNETIC SPECTRUM IN OUTER SPACE
Lucy Richmond, The Space Court Foundation Inc., United Kingdom

14:20-14:30 IAC-26/E9/LBA/118092
SIMULATION-BASED CIRCULAR ECONOMY FRAMEWORK FOR RESOURCE RECOVERY AND ENERGY RESILIENCE IN ARTEMIS-ERA LUNAR HABITATS
Mel Huaman Matos, [unlisted], France

14:30-14:40 IAC-26/E9/IPB/114629
CYBER SECURITY OF THE GNSS SYSTEMS
Nazli Can, Istanbul Technical University, Türkiye

SCREEN 65

13:40-13:50 IAC-26/E9/IP/106503
CYBER THREAT INTELLIGENCE IN SPACE: COUNTING AND UNDERSTANDING CYBER ATTACKS
Clémence Poirier, The Center for Security Studies (CSS) at ETH Zurich, Switzerland

13:50-14:00 IAC-26/E9/IPB/109585
A FRAMEWORK FOR MODELLING ON-BOARD AUTONOMOUS AI AGENTS AS INSIDER THREATS ON DEEP SPACE MISSIONS
Samin Zaman, University of Alberta, Canada

14:10-14:20 IAC-26/E9/LBA/117412
SECURITY GOVERNANCE OF A CONGESTED SPACE
Elena Vocale, Space Generation Advisory Council (SGAC), Italy

SCREEN 66

13:30-13:40 IAC-26/E11/IP/110545
ENRICHING SOUTHEAST ASIA'S EMERGING SPACE ECOSYSTEM: A REGIONAL ANALOG MISSION NETWORK FOR LUNAR AND MARTIAN EXPLORATION
Sarinya Jitklongsab, Space Generation Advisory Council (SGAC), Thailand

13:50-14:00 IAC-26/E11/IP/113475
FROM PROJECTS TO PARTNERSHIPS: TURNING CONFERENCE VISIBILITY INTO SUSTAINABLE COLLABORATION IN EMERGING SPACE ECOSYSTEMS
Zuleyha savci, Ankara Yıldırım Beyazıt University, Türkiye

14:00-14:10 IAC-26/E11/IPB/114058
CLOSING CONNECTIVITY GAPS IN AFRICA'S EMERGING SPACE ECOSYSTEMS: A CASE STUDY OF CONNECT ANGOLA ENABLED BY ANGOSAT-2
Oswaldo Porto, Angolan National Space Program Management Office (GGPEN), Angola

14:20-14:30 IAC-26/E11/IP/115619
NATIONAL SPACE ECO-SYSTEM: THE NCGSA MODEL FOR CAPACITY BUILDING AND ACHIEVING UN SDGS
Najam Naqvi, Institute of Space Technology (IST), Pakistan

SCREEN 67

13:30-13:40 IAC-26/E11/IP/113836
YOUNG PROFESSIONALS IN SOUTH AMERICA: EXPECTATIONS FOR CAREER GROWTH AND REGIONAL DEVELOPMENT IN THE SPACE SECTOR
Julia Alvarez Vallero, University of Texas at Arlington, United States

13:40-13:50 IAC-26/E11/IP/115175
BUILDING THE SPACE: ARGO'S MODEL FOR GROWING A SPACE SECTOR IN AN EMERGING SPACE ECOSYSTEM
Vuk Maksić, Argo, Serbia

13:50-14:00 IAC-26/E11/IP/107923
SCIENTIFIC PUBLICATIONS AS AN INDICATOR OF PARAGUAY'S EMERGING SPACE SECTOR
Thanya Idoyaga, Paraguayan Space Agency, Paraguay

14:00-14:10 IAC-26/E11/IP/111536
SUSTAINABILITY IN THE SATELLITE INDUSTRY: A WORLDWIDE STUDY OF CURRENT PRACTICES, IMPLEMENTATION BARRIERS, AND RECOMMENDATIONS
Jessa Propogo, Philippine Space Agency (PhilSA), Philippines

14:10-14:20 IAC-26/E11/IP/105717
THE DEVELOPMENT OF THE SPACE SECTOR IN LATIN AMERICA FROM NATIONAL FRAMEWORKS TO REGIONAL INTEGRATION
Nicole Jimeno Ruiz, Red Boliviana de Ciencias Planetarias y Exploración Espacial, Bolivia

Thursday 8 October

14:20-14:30 IAC-26/E11/IP/105844
LEVERAGING EMERGING SPACE ECOSYSTEMS TO FOSTER INTERNATIONAL COOPERATION AND SUSTAINABLE SPACE SECTOR GROWTH
Albert Nicolás López, Institut d'Estudis Espacials de Catalunya (IEEC), Spain

14:30-14:40 IAC-26/E11/IP/114277
DESIGNING SCALABLE TECHNOLOGY INFRASTRUCTURE FOR EMERGING SPACE NATIONS: THE MULTI-TIERED CAPABILITY MATURITY ARCHITECTURE
Elgun Gafarzada, Azerbaijan State Oil and Industry University (ASOIU), Azerbaijan

SCREEN 68

13:40-13:50 IAC-26/E10/IP/113462
AI-ASSISTED DECISION SUPPORT SYSTEM FOR ASTEROID SEARCH PROCESSES
Aysegül Balım Yabacı, Karabük Science and Art Center (BILSEM), Türkiye

13:50-14:00 IAC-26/E6/IP/111395
GOVERNMENTAL ENTREPRENEURSHIP IN THE BRAZILIAN SPACE SECTOR: CONSOLIDATING PRIME CONTRACTORS FOR SATELLITES' AND LAUNCH VEHICLES' DEVELOPMENTS
Daniela Simonini T. VillasBôas, ITA-DCTA, Brazil

14:00-14:10 IAC-26/B5/IP/111853
COMMERCIAL SATELLITE REMOTE SENSING EMPOWERS REGIONAL ECOLOGICAL QUALITY INDEX AND SUSTAINABLE DEVELOPMENT RESEARCH
Li Zhi, China Aerospace Science and Technology Corporation (CASC), China

14:10-14:20 IAC-26/E6/IPB/112122
SOLVING THE NAVIER-STOKES EQUATION OF BUSINESS: BUILDING SPACE HARDWARE STARTUPS IN BRAZIL
Arthur Bahdur, Bizu Space, Brazil

14:20-14:30 IAC-26/E2/IPB/111059
DESIGN, SIMULATION AND EXPERIMENTAL VALIDATION OF A STUDENT-DEVELOPED S-BAND COMMUNICATION SUBSYSTEM FOR THE SOURCE-2 CUBESAT
Tudor Focsa-Lutz, KSat e.V., Germany

14:30-14:40 IAC-26/B3/IP/112830
SUPPORTING CREW COGNITION IN LUNAR EMERGENCIES THROUGH MATHEMATICALLY STRUCTURED INTERFACES
Sneha Gayen, University of Illinois at Urbana-Champaign, United States

14:40-14:50 IAC-26/E5/IP/112662
IN-SITU BIOFABRICATION OF MELANIN-CHITIN BIOCOMPOSITE RADIATION SHIELDING FOR MARS HABITATS
Berkut Gençay Sarıkız, Türkiye

SCREEN 69

13:30-13:40 IAC-26/E5/IP/107961
MYTHIC NAMING AS SOFT INFRASTRUCTURE IN COMPETING LUNAR ORDERS: ARTEMIS AND CHANG'E
Risa Koyanagi, University of Cambridge, Japan

13:40-13:50 IAC-26/E3/IP/107963
CONDITIONAL OPENNESS: HOW UNIVERSALIST LANGUAGE PRODUCES BOUNDARIES IN FUTURE LUNAR EXPLORATION GOVERNANCE
Risa Koyanagi, University of Cambridge, Japan

13:50-14:00 IAC-26/C2/IP/109731
FIELD EVALUATION OF ACTIVE ARMADILLO-INSPIRED SPINE CONTROL FOR STABILITY AND GRANULAR SAMPLING IN A SEGMENTED ROVER: VALIDATION IN THE SALAR DE UYUNI PLANETARY ANALOG ENVIRONMENT
Miguel Silva, Universidad Catolica Boliviana San Pablo, Bolivia

14:00-14:10 IAC-26/C4/IP/115996
INTEGRATED MIMO CONTROL FRAMEWORK FOR SIMULTANEOUS THRUST VECTORING AND POWER OPTIMIZATION IN GRIDDED ION THRUSTERS
Abdulrahman Al-Essa, Saudi Space Community (SSC), Saudi Arabia

14:10-14:20 IAC-26/D2/LBA/117763
ACTIVE FLUIDIC INJECTION FOR SHOCK WAVE MITIGATION ON GRID FINS DURING SUPERSONIC RETRO-PROPULSION
Adil Demirel, Istanbul Technical University, Türkiye

14:20-14:30 IAC-26/D5/IP/111222
PROBABILISTIC SOLAR ERUPTION FORECASTING FOR RADIATION RISK MITIGATION IN DEEP SPACE MISSIONS
Saatvik Sumanta, India

14:30-14:40 IAC-26/B5/IP/112901
APPLYING ASTRONOMICAL IMAGING AND EARTH OBSERVATION TECHNIQUES TO REAL-TIME URBAN PARKING INTELLIGENCE
Hadi Rasheed, [unlisted], Kuwait

14:40-14:50 IAC-26/A1/IP/114459
BEHAVIORAL HEALTH AND PSYCHOLOGICAL LONGEVITY FOR DEEP SPACE MISSIONS: THE MINDFULNESS-BASED ASTRONAUT RESILIENCE AND LONGEVITY PROTOCOL (MARF)
Elzbieta Jablonska, Poland

SCREEN 70

13:30-13:40 IAC-26/E7/IPB/107715
LEGAL AND REGULATORY OPPORTUNITIES AND CHALLENGES PRESENTED BY SPACE-TO-SPACE POWER PRODUCTION AND TRANSMISSION SERVICES IN LOW EARTH ORBIT
Michael Mineiro, Greenberg Traurig, United States

13:40-13:50 IAC-26/A4/IP/107324
WHERE NOT TO LOOK: A PARAMETRIC AVOIDANCE MODEL FOR SETI TARGET SELECTION
Şahin Torlakçık, Türkiye

13:50-14:00 IAC-26/D2/LBA/117847
FAST STOCHASTIC ASCENT TRAJECTORY REPLANNING FOR LAUNCH VEHICLES VIA ALTERNATING OPTIMIZATION
Dai Shen, Beihang University (BUAA), China

14:00-14:10 IAC-26/A3/IP/112266
NONLINEAR MIDCOURSE CORRECTION STRATEGY FOR LOW-ENERGY EARTH-MOON TRANSFER TRAJECTORIES
Zihang Wang, Beihang University (BUAA), China

14:10-14:20 IAC-26/A6/IP/112086
HIGH-ACCURACY ORBITAL PROPAGATION MODEL USING PHYSICS-INFORMED DEEP LEARNING
Yang Junning, Beihang University (BUAA), China

14:20-14:30 IAC-26/D5/IP/111066
A FUZZY-BASED QUANTITATIVE FRAMEWORK FOR ESTIMATING HERITAGE DATA APPLICABILITY IN BAYESIAN LAUNCH VEHICLE RELIABILITY ANALYSIS
HyeonSeon Jo, Korea Aerospace Research Institute (KARI), Republic of Korea

14:30-14:40 IAC-26/E3/IP/115717
DIGITAL INFRASTRUCTURE FOR SPACE (DI4SPACE): THE RISE OF THE GROUND SEGMENT AS A SERVICE MODEL
Iago Bojczuk, University of California, Berkeley, United States

14:40-14:50 IAC-26/E5/IP/111513
RECONFIGURABLE HABITAT SYSTEMS FOR LUNAR LAVA TUBES BASED ON QUASI-SPHERICAL UNITS
Takashi Mizuguchi, teamLab Architects inc., Japan

Friday 9 October

SCREEN 1

12:55-13:05 IAC-26/A1/IPB/116937
ASYNCHRONOUS TELESURGERY IN DEEP SPACE: AN ARTIFICIAL INTELLIGENCE ARCHITECTURE FOR LATENCY COMPENSATION IN EMERGENCY ROBOTIC PROCEDURES
Rosario Yulisa Huayanay Flavio, Universidad Nacional Mayor de San Marcos, Peru

13:05-13:15 IAC-26/A1/IPB/117009
CLINICAL MANAGEMENT OF PERSISTENT HEMOLYSIS AND AUTOLOGOUS HEMOTRANSFUSION PROTOCOLS: ERYTHROPOIETIC STABILIZATION STRATEGIES FOR DEEP SPACE MISSIONS
Rosario Yulisa Huayanay Flavio, Universidad Nacional Mayor de San Marcos, Peru

13:15-13:25 IAC-26/A1/IP/109719
REMOTE-GUIDED FLEXIBLE NASOLARYNGOSCOPY TO EVALUATE ACUTE AIRWAY CHANGES DURING SHORT-DURATION SPACEFLIGHT
Taania Girgla, Harvard Medical School, United States

SCREEN 2

12:45-12:55 IAC-26/A1/IP/108822
MORPHOLOGICAL AND PHYSIOLOGICAL STUDIES IN LEPIDIUM SATIVUM SEEDLINGS UNDER SIMULATED MICROGRAVITY USING A RANDOM POSITIONING MACHINE
Sreejalekshmi Kumaran G, Space Science and Technology Institute, India

SCREEN 3

12:45-12:55 IAC-26/A1/IPB/110381
GROWTH PERFORMANCE OF ANTARCTIC CHLORELLA SOROKINIANA EGEMEN.001 IN LUNAR AND MARTIAN REGOLITH SIMULANT-DERIVED MEDIA
Beyza Karacaoğlu, Yıldız Technical University, Türkiye

SCREEN 6

12:45-12:55 IAC-26/A1/IP/115352
DEFINING THE HEALING THAT COMES WITH SPACE TRAVEL
Taiko Kawakami, ASTRAX, Inc., Japan

13:35-13:45 IAC-26/A1/IP/116555
SYNTHETIC PLANT-MICROBE ECOSYSTEMS FOR LONG-DURATION SPACE MISSIONS
Rana Aleya Dal, Türkiye

SCREEN 7

13:35-13:45 IAC-26/A1/IP/108560
AN INVESTIGATION IN RELATION TO THE EXPLORATION OF PILOT PEER SUPPORT PROGRAMS' EFFECTIVENESS
A. Arınç Sönmez, Istanbul University, Türkiye

SCREEN 8

13:35-13:45 IAC-26/A1/IP/117251
ANALYSIS AND DESIGN TRADE-OFFS OF ARTIFICIAL GRAVITY SYSTEMS AS A COUNTERMEASURE TO PHYSIOLOGICAL ALTERATIONS IN HUMAN DEEP SPACE EXPLORATION
Rym Chaid, Concordia University, Canada

SCREEN 10

13:05-13:15 IAC-26/A3/IP/112107
INTRODUCTION TO THE SPACE TRAJECTORY DEMONSTRATOR (STD 1.0) DEVELOPMENT FOR DEEP SPACE EXPLORATION
Sang-Wook Kang, KARI, Republic of Korea

13:15-13:25 IAC-26/A3/IP/112170
THE INITIAL STUDY ON THE STRATEGIC PLAN OF KOREAN MARS DRONE DEVELOPMENT FOR MARS EXPLORATION
Deog-Kwan Kim, Korea Aerospace Research Institute (KARI), Republic of Korea

SCREEN 12

12:45-12:55 IAC-26/A3/IP/111604
MARTIAN EXPLORATION VIA BIOMIMETIC SENSOR SWARMS: INTEGRATION OF DANDELION-INSPIRED MICRO-ROVERS AND OPTIMIZED WIRELESS NETWORKS
Ana Paola Granados López de Nava, Instituto Politécnico Nacional, Mexico

SCREEN 14

13:35-13:45 IAC-26/A3/IP/112206
PREDICTIVE CONTROL OF A LUNAR MULTI-MODAL LOCOMOTION PNEUMATIC SOFT ROBOT VIA HYBRID MODEL-BASED AND DATA-DRIVEN APPROACH
Yufei Guo, Northwestern Polytechnical University; National Key Laboratory of Aerospace Flight Dynamics, China

SCREEN 15

13:35-13:45 IAC-26/A3/IP/114780
ROBUST VISUAL NAVIGATION FOR ASTEROID PROBES VIA ADAPTIVE POINT-LINE-PLANE FEATURE WEIGHTING
Shuai Li, Beijing Institute of Technology (BIT), China

SCREEN 17

13:35-13:45 IAC-26/A6/IP/113907
IMPLEMENTATION AND EVALUATION OF THE 3D-NC COLLISION PROBABILITY ALGORITHM FOR OPERATIONAL SPACE TRAFFIC MANAGEMENT
Dmitrii Vokhmintsev, Russian Federation

Friday 9 October

SCREEN 18

12:45-12:55 IAC-26/A6/IP/113614
SPACE-BASED EVENT-DRIVEN IMAGING AS A COMPLEMENTARY SENSOR FOR SPACE SITUATIONAL AWARENESS
Taha Muharrem LAHAÇLAR, TUBITAK Uzay, Space Technologies Research Institute, Türkiye

SCREEN 20

12:45-12:55 IAC-26/A6/IP/111631
SPACE COLLABORATIVE OBSTACLE AVOIDANCE AND CLOSE PROXIMITY DECISION-MAKING METHODS FOR SPACE DEBRIS
Xu Tang, Harbin Institute of Technology, China

13:35-13:45 IAC-26/A6/IP/112671
VISION-BASED ON-BOARD DIAGNOSTICS FOR HYPERVELOCITY IMPACT CHARACTERIZATION
Muhammet ASLAN, Türkiye

SCREEN 21

12:55-13:05 IAC-26/A6/IP/112157
COORDINATED SPACE-GROUND OPTICAL TASKING WITH JOINT ROLLING-HORIZON SCHEDULING
Jiao Liang, Sun Yat-sen University (Guangzhou), China

SCREEN 22

12:45-12:55 IAC-26/A6/IPB/113376
LIGNOSAT: EVALUATING WOODEN SATELLITES FOR SUSTAINABLE REENTRY - THERMAL, CHEMICAL, AND ENVIRONMENTAL PERFORMANCE OF LIGNIN-BASED MATERIALS IN SMALL-SATELLITE ATMOSPHERIC DEMISE
Raphael Eyiram Soglo, Space Generation Advisory Council (SGAC), Ghana

12:55-13:05 IAC-26/A6/IP/112141
ACTIVE SPACE DEBRIS REMOVAL PLANNING BASED ON TEMPORAL COLLISION RISK NETWORK DISMANTLING
Jiao Liang, Sun Yat-sen University (Guangzhou), China

SCREEN 23

12:45-12:55 IAC-26/A6/IPB/112238
RESEARCH ON INTELLIGENT PLANNING TECHNOLOGY FOR ON-ORBIT SPACECRAFT SAFETY CORRIDORS IN DYNAMIC AND CONGESTED SPACE ENVIRONMENTS
Zongfu Luo, Sun Yat-sen University (Guangzhou), China

12:55-13:05 IAC-26/A6/IPB/107517
ORBIT PROPAGATION AT SCALE USING GPU ACCELERATION
Pablo Arbelo, Politecnico di Milano, Italy

13:05-13:15 IAC-26/A6/IP/107542
MULTI-OBJECTIVE DESIGN OF LOW-THRUST ASSISTED NATURAL REENTRY TRAJECTORIES
Damien Courteville, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, France

13:15-13:25 IAC-26/A6/IP/106600
INFLUENCE OF SOLAR CYCLE ON ORBITAL DECAY RATES FOR LEO CUBESATS, VALIDATION AND FORECAST APPROACH FOR SOLAR CYCLE 25
Arif Armagan Gozutok, TUBITAK Uzay, Space Technologies Research Institute, Türkiye

SCREEN 25

13:15-13:25 IAC-26/B1/IP/116497
LOSSLESS VS. NEAR-LOSSLESS HYPERSPECTRAL IMAGE COMPRESSION ON FPGA USING CCSDS 123.0-B-2
Ruaa Saadi, United Arab Emirates University (UAEU), United Arab Emirates

13:25-13:35 IAC-26/B1/IP/110244
COMPARISON OF STEREO-VISION DETECTION & MATCHING ALGORITHMS FOR LEO SATELLITE IMAGERY
Asude Çiflik, ASELSAN, Türkiye

13:35-13:45 IAC-26/B1/IP/112558
FEDERATED LEARNING UNDER DATA HETEROGENEITY IN REMOTE SENSING APPLICATIONS
Abdullah ALMANE, Sultan Qaboos University (SQU), Oman

SCREEN 26

13:05-13:15 IAC-26/B1/IPB/105743
TECHNO-ECONOMIC ASSESSMENT OF SEA-LEVEL RISE AND SOIL SALINITY IN THE NILE DELTA USING MULTI-SENSOR SATELLITE DATA AND MACHINE LEARNING
Saif Elderini, [unlisted], Egypt

13:35-13:45 IAC-26/B1/IP/110602
USING MEDIUM AND HIGH RESOLUTION SATELLITE REMOTE SENSING DATA FOR FOREST FIRE RISK ASSESSMENT
Gizem Aytaç, Istanbul Technical University, Türkiye

SCREEN 29

12:45-12:55 IAC-26/B2/IP/106854
ENHANCING LUNAR PNT PERFORMANCE THROUGH SURFACE STATION-ENABLED RADIOMETRIC OBSERVABLES
Toshiki Tanaka, University of Tokyo, Japan

12:55-13:05 IAC-26/B2/IP/115725
DESIGNING IN-ORBIT GATEWAYS FOR ENHANCED THROUGHPUT
nesrine benchoubane, Polytechnique Montreal, Canada

SCREEN 31

12:45-12:55 IAC-26/B2/IP/107127
HERMETICALLY SEALED COMPLETE RF TRANSMITTER FOR X-BAND DATA UNIT
Muhammed Serkan Akyul, ASELSAN, Türkiye

12:55-13:05 IAC-26/B2/IPB/110241
OPTIMIZATION FOR ORBIT SELECTION AND PHASING OF A GLOBAL LUNAR NAVIGATION SATELLITE SYSTEM USING HYBRID FROZEN ORBITS
İrem Beyza Özdemir, Istanbul Technical University, Türkiye

SCREEN 32

13:25-13:35 IAC-26/B3/IPB/107093
DIAL-ST (DEDICATED INTERNATIONAL ACCELERATOR LABORATORY FOR SPACE TRAVEL RELATED RADIATION RESEARCH)
Dilara Aktürk, [unlisted], Türkiye

13:35-13:45 IAC-26/B3/IP/111274
FLIGHT PHYSIOLOGY TRAININGS IN THE FIRST MANNED SPACE MISSION OF TÜRKİYE AND AEROSPACE MEDICINE HISTORY
Nazim Ata, Faculty of Aerospace Medicine, Türkiye

Friday 9 October

SCREEN 37

12:45-12:55 IAC-26/B6/IP/109601
A STOCHASTIC FRAMEWORK FOR QUANTIFYING TRANSIENT
SUBSYSTEM INTERACTIONS IN SMALLSAT MISSION DESIGN
Orestis Ousoultzoglou, Emtech - Excel Micro Technologies, Greece

SCREEN 39

12:45-12:55 IAC-26/B6/IP/115765
CONCEPTUAL SYSTEM DESIGN OF ROTOR-CONTROLLED MATRIX
SWITCHING FOR OPTIMIZING SPACE OPERATIONS
*Seok-Bae SEO, Korea Aerospace Research Institute (KARI), Republic
of Korea*

13:25-13:35 IAC-26/D1/IP/116396
MISSION-DRIVEN SYSTEMS ARCHITECTURE OF THE FIRST
TURKISH LUNAR MISSION SPACECRAFT
*Biter Boga Inaltekin, TUBITAK Uzay, Space Technologies Research
Institute, Türkiye*

SCREEN 40

13:05-13:15 IAC-26/D1/IP/105939
TOWARDS SATELLITE-ON-CHIP: NEPAL'S DEVELOPMENT OF A
LOW-POWER RISC-V RV32 MICROCONTROLLER FOR ATTITUDE
DETERMINATION IN CUBESAT
Prem Bahadur Rana, Nepal Space Foundation, Nepal

SCREEN 41

12:45-12:55 IAC-26/C1/IP/105713
A HYBRID APPROACH FOR ATTITUDE DETERMINATION AND
SENSOR CALIBRATION IN CUBESATS
*Angelo Espinoza Valles, Samara National Research University
(Samara University), Russian Federation*

12:55-13:05 IAC-26/C1/IP/114357
ENHANCED GEOMAGNETIC FIELD MEASUREMENT-BASED
AUTONOMOUS ORBIT DETERMINATION FOR SMALL SATELLITES
IN LEO
Filipe Cardoso, University of Brasilia, Brazil

13:35-13:45 IAC-26/C1/IP/109782
FREQUENCY-CONSTRAINED PREDICTIVE SHAPING CONTROL
FOR DUMBBELL-SHAPED FLEXIBLE SPACECRAFT VIBRATION
SUPPRESSION
Xinhai Ma, Harbin Institute of Technology, China

SCREEN 42

12:45-12:55 IAC-26/C1/LBA/117928
PERIODIC COVERAGE SMALL SATELLITE CONSTELLATIONS WITH
A SINGLE-LAUNCH DEPLOYMENT
Jorge Panagopoulos, University of Beira Interior, Portugal

13:05-13:15 IAC-26/C1/IP/111363
CENTER MANIFOLD DIRECTION-FIELD GUIDANCE FOR IN-FAMILY
LOW-THRUST RECONFIGURATION OF HALO ORBITS
Bohao Du, School of Astronautics, Beihang University, China

13:35-13:45 IAC-26/C1/IP/104657
DETERMINING ECLIPSE DURATION FOR A VENUS ORBITER USING
A GEOMETRIC SHADOW CURVE MODEL
*Vladislav Zubko, Space Research Institute (IKI), Russian Academy of
Sciences (RAS), Russian Federation*

SCREEN 43

13:05-13:15 IAC-26/C1/IPB/111235
NONCOOPERATIVE TARGET RELATIVE POSE ESTIMATION
VIA COOPERATIVE MULTI-SATELLITE OBSERVATION:
HETEROGENEOUS MEASUREMENT MODELING AND
INFORMATION-THEORETIC DESIGN OF OPTIMAL SATELLITE
NUMBER AND FORMATION GEOMETRY
Yanjun YU, Harbin Institute of Technology, China

13:35-13:45 IAC-26/C1/IP/112223
RESEARCH ON INTELLIGENT ORBIT GENERATION AND
CLASSIFICATION METHOD FOR EFFICIENT RECONSTRUCTION OF
POINCARÉ SECTIONS
Xukang Xie, Sun Yat-sen University (Guangzhou), China

SCREEN 44

12:45-12:55 IAC-26/C2/LBA/118069
PROBABILISTIC FATIGUE ASSESSMENT OF AS-BUILT WAAM SPACE
STRUCTURES: A FINITE ELEMENT FRAMEWORK FOR SURFACE-
INDUCED STRESS CONCENTRATION
Özgür Mert Küçük, Koc University, Türkiye

13:35-13:45 IAC-26/C2/IP/108200
DEVELOPMENT OF AI-BASED SPACE WEATHER PREDICTION
MODELS FOR ASSESSING ATOMIC OXYGEN EROSION IMPACTS IN
LOW EARTH ORBIT(LEO)-SATELLITE
*You Gwang Kim, Korea Aerospace Research Institute (KARI), Republic
of Korea*

SCREEN 45

12:45-12:55 IAC-26/C2/IP/110222
DEVELOPMENT AND CHARACTERIZATION OF TRANSPARENT,
HYDROPHOBIC, AND OLEOPHOBIC MGO/ZNO-DOPED HYBRID
NANOCOMPOSITES VIA SOL-GEL FOR SPACE OPTICAL SYSTEMS
Büşra Atkesen, Akdeniz University, Türkiye

13:05-13:15 IAC-26/C2/IP/115938
NONLINEAR VIBRATION MODELLING AND MACHINE LEARNING-
ASSISTED OPTIMISATION OF SELF-STIFFENING LATTICE
STRUCTURES FOR SPACECRAFT VIBRATION ISOLATION USING
VIBRANT
İnci Pir, Istanbul Technical University, Türkiye

13:15-13:25 IAC-26/C2/IP/105801
ANDEAN POTATO DERIVED HYDROGELS FOR IONIZING
RADIATION ATTENUATION IN SPACE HABITATS
*Nataly Andrea Rojas Barnett, Universidad Nacional Mayor de San
Marcos, Peru*

13:35-13:45 IAC-26/C2/IPB/110095
NONLINEAR MODELING, REACHABILITY, AND CONTROLLABILITY
ANALYSIS OF A EXTENDABLE DEA SOFT MANIPULATOR FOR
SPACE APPLICATIONS
Yuyao Zhai, Sun Yat-sen University (Guangzhou), China

SCREEN 46

13:05-13:15 IAC-26/C2/IP/113813
DEVELOPMENT OF THERMAL VACUUM HEAT-TREATMENT
OF OAK, ASH, AND BIRCH WOODS FOR USE IN SPACECRAFT
STRUCTURES
Francisco Ribeiro Stelzer, University of Southampton, United Kingdom

13:25-13:35 IAC-26/C2/IPB/113130
INTEGRATED ORBITAL-THERMOELASTIC ANALYSIS OF
SPACECRAFT SOLAR PANELS: A 3,315-CASE PARAMETRIC STUDY
FROM LEO TO GEO
Alperen Tekay, University of Turkish Aeronautical Association, Türkiye

Friday 9 October

13:35-13:45 IAC-26/C2/LBA/118030
GENERATIVE INVERSE DESIGN OF CUTOOUT GEOMETRY IN COMPOSITE LAMINATES BASED ON A SEMI-ANALYTICAL ANISOTROPIC STRESS FRAMEWORK
Yunus Batuhan Kaptı, Istanbul Technical University, Türkiye

SCREEN 48

13:35-13:45 IAC-26/C4/IP/115792
DEVELOPMENT OF EPC-RFT-1, AN "EXPEDIENT RADIO FREQUENCY GRIDDED ION THRUSTER"
Claude Blue, University of Alabama in Huntsville, United States

SCREEN 49

13:25-13:35 IAC-26/C4/IP/110052
COMPACT, EFFICIENT, AND MISSION-ADAPTABLE: A 150–250 W CLASS HALL EFFECT THRUSTER DEVELOPMENT
Seda Kayra Gullu, TUBITAK Uzak, Space Technologies Research Institute, Türkiye

13:35-13:45 IAC-26/C4/IPB/115147
RHEOLOGY-INFORMED DESIGN OF GEL PROPULSION SYSTEMS: MODELING NON-NEWTONIAN HYDRAULIC BEHAVIOR AND INJECTOR RESPONSE
Utku Can Yıldız, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Türkiye

SCREEN 50

12:45-12:55 IAC-26/C4/LBA/117582
ELECTRIC THRUSTER PLUME AND SURFACE CHARGING ANALYSIS OF HALE-1500 FOR DESIGN VALIDATION OF THE TÜRKSAT-6A SATELLITE
Arif Armagan Gozutok, TUBITAK Uzak, Space Technologies Research Institute, Türkiye

12:55-13:05 IAC-26/C4/IPB/109639
ULTRA-LIGHTWEIGHT TENSEGRITY-BASED HYBRID BUOYANT-PROPULSIVE AERIAL PLATFORM FOR SURFACE INSPECTION
Wilberth Corrales, Universidad de Costa Rica, Costa Rica

13:05-13:15 IAC-26/E4/IP/114367
ACTA ASTRONAUTICA: 70TH ANNIVERSARY WITH 70 YEARS OF EXCELLENCE
Jeng-Shing (Rock) Chern, International Academy of Astronautics (IAA), Canada

13:25-13:35 IAC-26/E4/IP/108053
CURATING SPACE HERITAGE: EXHIBITING HARDWARE, ARCHIVES, AND MISSION NARRATIVES FOR PUBLIC MEANING
Ahmet Kurnaz, Istanbul Sabahattin Zaim University, Türkiye

13:35-13:45 IAC-26/E4/IP/110671
REVISITING THE POST-COLONIAL FOUNDATIONS OF SPACE LAW: HISTORICAL LEGACIES AND TRANSFORMATIONS IN THE NEW SPACE ERA
Yaoyao Lu, The University of Hong Kong, Hong Kong SAR, China

SCREEN 55

13:15-13:25 IAC-26/E1/IP/107360
INVESTIGATION OF PRIMARY SCHOOL STUDENTS' CONCEPTUAL KNOWLEDGE IN LEARNING ASTRONOMY
Duru Tanrısever, Yenimahalle BİLSEM, Türkiye

SCREEN 57

13:35-13:45 IAC-26/E1/IP/109517
MOVING STAR SIMULATOR: AN AI-SUPPORTED INTERACTIVE ASTRONOMY LEARNING TOOL FOR PRIMARY AND SECONDARY STUDENTS
Ali Yagiz Öz, Yenimahalle BİLSEM, Türkiye

SCREEN 58

12:45-12:55 IAC-26/E1/IP/108649
THE WORLD NEEDS MORE SPACE: A GRASSROOTS MODEL FOR EXPANDING ACCESS TO THE SPACE WORKFORCE
Deniel Must, [unlisted], Finland

12:55-13:05 IAC-26/E1/IP/115342
CULTIVATING CULTURE IN SPACE: AN EDUCATIONAL MODEL FOR SPACE AGRICULTURE AND SUSTAINABILITY
Sezin Irmak Gümüş, MoEP - Mars on Earth Project, Türkiye

13:05-13:15 IAC-26/E1/IP/111004
IMPLEMENTATION OF PRIVATE SPACE PIONEERING EDUCATION IN JAPAN: A COLLABORATIVE CASE STUDY OF THE ASTRAX AND CHALLENGE WORLD EXPERIENTIAL PROGRAM
Taichi Yamazaki, ASTRAX, Inc., Japan

13:15-13:25 IAC-26/E1/IP/111068
DEVELOPMENT AND EDUCATIONAL APPLICATION OF THE ASTRAX ZERO GRAVITY AIRCRAFT EDUCATION AND TRAINING SIMULATOR 2026
Taichi Yamazaki, ASTRAX, Inc., Japan

13:25-13:35 IAC-26/E1/IP/112255
IDENTIFYING SUSCEPTIBILITY TO PSEUDOSCIENCE IN PRIMARY AND SECONDARY SCHOOL STUDENTS AND TRANSFORMING THROUGH EDUCATION
Elanur Güler Yaraşır, Türkiye

13:35-13:45 IAC-26/E1/IPB/105761
DEVELOPING A SUSTAINABLE SPACE ECOSYSTEM IN COSTA RICA: A MODEL FOR BOTTOM-UP LEADERSHIP AND GLOBAL COLLABORATION
Mileyca Oport, Descubre Robótica, Costa Rica

SCREEN 60

12:45-12:55 IAC-26/E3/IP/105804
LIABILITY FOR AUTONOMOUS OBJECTS IN OUTER SPACE
Mustapha Eleyawa Agbadi, [unlisted], Nigeria

SCREEN 63

12:45-12:55 IAC-26/E5/IP/109293
A SPACE ENGINEERING-ORIENTED AI ALGORITHM TO PREVENT DIGITAL COLONIALISM
Lee Seoyeon, University of Science and Technology (UST), Republic of Korea

13:25-13:35 IAC-26/E5/IP/108004
BRIDGING THE ECONOMIC GAP IN SPACE EXPLORATION: TOWARDS INCLUSIVE AND EQUITABLE ACCESS TO THE FINAL FRONTIER
Zeynep Dündar, Suleyman Demirel University, Türkiye

13:35-13:45 IAC-26/E5/IPB/112329
DEVELOPING A HIGH-FIDELITY 360° VIRTUAL TOUR FOR THE VSSC SPACE MUSEUM: A TECHNICAL CASE STUDY AND LESSONS LEARNED
Krishnadas M, Vikram Sarabhai Space Centre, ISRO, Thiruvananthapuram, India

Friday 9 October

SCREEN 64

12:45-12:55 IAC-26/E6/IPB/106793

STRATEGIC GROWTH PATHWAYS IN THE SPACE INDUSTRY: A COMPARATIVE STUDY OF INTEGRATION, DIVERSIFICATION, AND ACQUISITION STRATEGIES

Tural Salmanov, Azercosmos, Space Agency of Republic of Azerbaijan, Azerbaijan

12:55-13:05 IAC-26/E6/IP/114531

FROM ASTEROIDS TO ARTEMIS: SECURING THE UN 2030 SUSTAINABILITY MANDATE THROUGH SPACE RESOURCES

Nancy C. Wolfson, American Institute of Aeronautics and Astronautics (AIAA), United States

SCREEN 67

12:45-12:55 IAC-26/E9/IP/116204

SPACE ENABLED MISSILE DEFENCE AND THE FUTURE OF STRATEGIC STABILITY: GOVERNING A MAJOR SHIFT IN THE NUCLEAR BALANCE

Wael Charif, University of Geneva, France

SCREEN 68

12:45-12:55 IAC-26/E11/IP/105033

BUILDING A NATIONAL SPACE ECOSYSTEM IN AN EMERGING SPACE NATION: THE KENYAN EXPERIENCE

Erick Villa Okeyo, Kenya Space Agency (KSA), Kenya

SCREEN 70

12:45-12:55 IAC-26/E2/IP/108269

INTEGRATING AI-DRIVEN SATELLITE IMAGE ANALYSIS INTO NATIONAL DISASTER RISK REDUCTION STRATEGIES: A GOVERNANCE FRAMEWORK FOR CLIMATE RESILIENCE IN EMERGING SPACE NATIONS

Ishimwe Serge, Rwanda Space Agency, Rwanda

12:55-13:05 IAC-26/E5/IP/115264

IDENTIFYING THE 'SENSE OF PLACE' AND ITS IMPORTANCE FOR HABITABILITY IN EXTREME ENVIRONMENTS

Christina Balomenaki, Technical University of Crete, Greece

13:05-13:15 IAC-26/C1/IPB/110356

DESIGN OF DIGITAL FILTERS FOR A LAUNCH VEHICLE BENDING AND SLOSHING STABILIZATION

Nagihan Doğru, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Türkiye

13:15-13:25 IAC-26/C2/IP/104477

THERMAL SHOCK RESISTANCE AND OXIDATION BEHAVIOUR OF REFRACTORY HIGH-ENTROPY ALLOYS (RHEAS) FOR REUSABLE ROCKET NOZZLE EXTENSIONS

Asad Ullah, Rolls-Royce plc, United Kingdom

13:25-13:35 IAC-26/A3/IP/113216

HOMOTOPY-BASED RAPID REACHABLE SET BOUNDARY IDENTIFICATION FOR MORPHING VEHICLES

Xini Niu, School of Aerospace Engineering, Beijing Institute of Technology, China

13:35-13:45 IAC-26/B3/IP/116554

ADAPTIVE FULL-BODY LINKAGE MECHANISM FOR MICROGRAVITY REHABILITATION

Öykü Çevikol, Erciyes Üniversitesi, Türkiye

INFORMATION

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BY SYMPOSIUM

6 Technical Papers by Symposium



Technical Papers as of September 2026.

Please check the IAF App to get the latest updates on the Technical Papers.

A1. IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM

Coordinator(s): Alain Maillet, MEDES - IMPS, France; Elena Fomina, State Scientific Center of Russian Federation, Institute of Biomedical Problems, Russian Academy of Sciences, Russian Federation.

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

October 5 2026, 16:30 — Hall 7

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

IAC-26.A1.1.1

WHEN COMMUNICATION BECOMES THE MISSION: PSYCHOSOCIAL RISKS OF ASYNCHRONOUS CREW-MCC INTERACTION IN LONG-DURATION ISOLATION STUDIES
Dr. Iva Polacková Solcova, Institute of Psychology, Czech Academy of Sciences, Brno, Czech Republic;

IAC-26.A1.1.2

SOCIOMAPPING COMPARATIVE STUDY OF THE STRUCTURE AND DYNAMICS OF INTERPERSONAL RELATIONSHIPS OF FOUR SPACE CREWS IN THE INTERNATIONAL "SIRIUS PROJECT 2017 – 2025" IN THE FIELD OF COMMUNICATION AND COOPERATION OF ASTRONAUTS
Prof. Radvan Bahbouh, QEDGROUP Ltd, Prague, Czech Republic;

IAC-26.A1.1.3

THE SUCCESS OF COGNITIVE TASKS AND CHANGES IN ELECTROPHYSIOLOGICAL PARAMETERS IN RESPONSE TO PHYSICAL AND COGNITIVE LOAD IN «SIRIUS-23» PARTICIPANTS
Ms. Anna Ganicheva, SSC RF Institute for bio-medical problems RAS, Moscow, Russian Federation;

IAC-26.A1.1.4

STRESS ASSESSMENT USING THE TIME REPRODUCTION METHOD: SIRIUS-21
Dr. Shotaro Doki, University of Tsukuba, Tsukuba, Ibaraki, Japan;

IAC-26.A1.1.5

COPING WITH PSYCHO-SOCIAL DEMANDS DURING LONG DURATION MISSIONS: A THEMATIC ANALYSIS OF POST MISSION INTERVIEWS
Prof. Gro M. Sandal, University of Bergen, Bergen, Norway;

IAC-26.A1.1.6

CULTURAL DIFFERENCES IN WORK AND MISSION SUCCESS IN ANTARCTIC SPACE ANALOGUES: HOW CAN ANTHROPOLOGY CONTRIBUTE TO HUMAN SPACEFLIGHT RESEARCH?
Dr. Susie Pottier, École Normale Supérieure, Paris, France;

IAC-26.A1.1.7

DOES MISSION DESIGN INFLUENCE CREW DYNAMICS? RESEARCH ROADMAP FOR ANALOG MISSION ARCHITECTURE AND PSYCHOSOCIAL COUNTERMEASURES
Dr. Madelyn MacRobbie, Michigan Technological University, Cambridge, United States;

IAC-26.A1.1.8

COSMIC: EMOTIONALLY INTELLIGENT AGENTS TO SUPPORT MENTAL AND EMOTIONAL WELL-BEING IN EXTREME ISOLATION: LESSONS FROM ANALOG ASTRONAUT TRAINING MISSIONS
Dr. Anna Xygykou-Tsiomoulou, University of Kent, Canterbury, United Kingdom;

A1.2. Human Physiology in Space

October 6 2026, 10:15 — Hall 7

Co-Chair(s): Elena Fomina, State Scientific Center of Russian Federation, Institute of Biomedical Problems, Russian Academy of Sciences, Russian Federation; Jens Jordan, Institute of Aerospace Medicine (DLR), Germany;

Rapporteur(s): Alain Maillet, MEDES - IMPS, France; Angelique Van Ombergen, European Space Agency (ESA), Netherlands (Kingdom of the);

IAC-26.A1.2.2

NEUROPHYSIOLOGICAL MECHANISMS OF SENSORIMOTOR ADAPTATION TO ALTERED GRAVITY: FROM MODEL EXPERIMENTS TO SPACEFLIGHTS
Ms. Svetlana Glagoleva, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-26.A1.2.3

DYNAMICS OF OPERATOR SUCCESS AFTER SPACE FLIGHTS OF VARIOUS DURATION
Prof. Elena Fomina, State Scientific Center of Russian Federation, Institute of Biomedical Problems, Russian Academy of Sciences, Moscow, Russian Federation;

IAC-26.A1.2.4

CHANGE OF GRIP FORCE CONTROL PARAMETERS IN SIMULATED MICROGRAVITY CONDITIONS (DRY IMMERSION)
Ms. Olga Kurbanova, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-26.A1.2.5

ELECTROMECHANICAL CARDIAC ALTERATIONS DURING LONG-TERM HEAD DOWN BED REST: AN ECG-SCG STUDY
Ms. Maddalena Lovotti, Istituto Italiano di Tecnologia, Como, Italy;

IAC-26.A1.2.6

GENDER-SPECIFIC AUTONOMIC RESPONSES TO GRAVITATIONAL REINSTATEMENT AFTER 21-DAY HEAD-DOWN TILT BED REST
Prof. Enrico Caiani, Politecnico di Milano, Milano, Italy;

IAC-26.A1.2.7

POSTURAL PARAMETERS REVEALED BY PLANTAR PRESSURE MAPPING DURING 7-DAY DRY IMMERSION
Ms. Maria Bekreneva, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-26.A1.2.8

LOCOMOTION PATTERN DEVELOPMENT TREADMILL TRAINING IN SEMI-ANNUAL SPACE FLIGHT BASED OF GROUND REACTION FORCES
Mrs. Anna Burakova, FSC RF-IBMP, Moscow, Russian Federation;

IAC-26.A1.2.9 (unconfirmed)

AUTONOMIC AND HEMODYNAMIC RESPONSES TO POSTURE AND SENSORY CONFLICT IN VR
Dr. Malik Nasir Afzal Khan, Mohammed Bin Rashid University of Medicine and Health Sciences, Dubai, United Arab Emirates;

IAC-26.A1.2.10

BEHAVIORAL, AFFECTIVE, COGNITIVE AND NEUROPHYSIOLOGICAL RESPONSES TO SUBORBITAL SPACEFLIGHT (BEACON)
Dr. Vladimir Ivkovic, Department of Psychiatry, Massachusetts General Hospital, Harvard Medical School, Charlestown, United States;

IAC-26.A1.2.11

KINEMATIC AND DYNAMIC ANALYSIS OF MANUAL EXTERNAL CHEST COMPRESSION ON THE CMRS/ARS PLATFORM PERFORMED IN NEUTRAL BUOYANCY AND HUMAN TRAINING CENTRIFUGE (ZERO-G) CONDITIONS
Dr. Arkadiusz Trzos, Jagiellonian University, Krakow, Poland;

A1.3. Medical Care for Humans in Space

October 6 2026, 15:00 — Hall 7

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

Rapporteur(s): Hasan Birol Cotuk,, Türkiye; Katrin Stang, DLR (German Aerospace Center), Germany;

IAC-26.A1.3.1

ADAPTATION OF THE AMA GUIDES METHODOLOGY FOR MULTI-LEVEL QUANTITATIVE HEALTH ASSESSMENT OF RETIRED COSMONAUTS: RESULTS AND PROSPECTS

Ms. Ekaterina Faber, Federal Scientific Clinical Centre of the Federal Biomedical Agency of Russia, Moscow, Russian Federation;

IAC-26.A1.3.2

URINARY OXALATE EXCRETION IN ASTRONAUTS DURING LONG-DURATION SPACEFLIGHT: AN EXPLORATORY ANALYSIS

Dr. David Sobel, Portland, United States;

IAC-26.A1.3.3

FROM THE ISS TO DEEP SPACE: A PRINTABLE CROSSLINKER INK FOR EXTRUSION-BASED 3D-BIOPRINTING IN MICROGRAVITY

Mr. Johannes Windisch, TU Dresden, Dresden, Germany;

IAC-26.A1.3.4

POSTURAL AND LOCOMOTOR INSTABILITY AFTER SHORT- AND LONG-TERM SUPPORT WITHDRAWAL: TESTING PHASE-SPECIFIC COUNTERMEASURES FOR PROGRESSIVE SENSORIMOTOR ALTERATIONS

Dr. Alina Saveko, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-26.A1.3.5

INSTANT EFFECTS OF ELECTROMYOSTIMULATION ON THE VISCOELASTIC PROPERTIES OF MUSCLES UNDER CONDITIONS OF SUPPORT UNLOADING

Mr. Ivan Ponomarev, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-26.A1.3.6

ATLAS: AN ELECTROMAGNETIC SYSTEM ENABLING ABDOMINAL SUTURING IN MICROGRAVITY

Mr. Baptiste Sigal, Centre National d'Etudes Spatiales (CNES), Castelnau d'Estretfonds, France; Mr. Antoine Lestrade, ISAE-Supaero University of Toulouse, Montauban, France;

IAC-26.A1.3.7

CHRONOPHYSIOLOGY IN SPACE. REGULATION OF CIRCADIAN RHYTHMS AND THE POTENTIAL OF CHRONOTHERAPY FOR COSMONAUT HEALTH

Dr. Galina Vassilieva, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-26.A1.3.8

TOWARD OCULAR RESILIENCE TO RADIOFREQUENCY IN LONGDURATION SPACEFLIGHT: ARPE19 RESPONSES TO 2.1 GHZ WCDMA MICROWAVE EXPOSURE AND MODULATION BY CALCITRIOL

Dr. Engin Demir, University of Health Sciences, Türkiye, Ankara, Türkiye;

IAC-26.A1.3.9

THROMBOLYTIC PHARMACODYNAMICS IN MICROGRAVITY: IMPLICATIONS FOR AUTONOMOUS MEDICAL CARE IN DEEP SPACE

Mr. Adrian Tabari, University of British Columbia, Vancouver, Canada;

IAC-26.A1.3.10

MONITORING FLUID CHANGES IN THE NECK USING ELECTRICAL IMPEDANCE TO ASSESS SPACEFLIGHT INTERNAL JUGULAR VEIN THROMBOSIS RISK: A POSTURE STUDY

Ms. Sadafossadat Tabatabaei, Dartmouth College, West Lebanon, NH, United States;

IAC-26.A1.3.11

SPACE-RELATED DERMATOSES AS A MODEL FOR INCLUSIVE ASTRONAUT SELECTION

Mr. Oscar Miles, Bristol, United Kingdom;

IAC-26.A1.3.12

MULTI-OMIC PROFILING OF EXTREME PHENOTYPES TO BETTER UNDERSTAND AND ENHANCE ASTRONAUT HEALTH AND PERFORMANCE

Mr. Anurag Sakharkar, Maldives Space Research Organisation (MSRO), Saskatoon, Canada;

IAC-26.A1.3.14

THE ASTRONAUT'S ALGORITHM: ARTIFICIAL INTELLIGENCE IN SPACEFLIGHT-ASSOCIATED NEURO-OCULAR SYNDROME (SANS)

Dr. Eirini Maliagkani, National and Kapodistrian University Of Athens, Athens, Greece;

A1.4. Medicine in Space and Extreme Environments

October 7 2026, 15:00 — Hall 7

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

Rapporteur(s): Jeffrey R. Davis,, United States; Alexander Choukér, University of Munich, Germany;

IAC-26.A1.4.1

AGENTIC AI-DRIVEN PRECISION NUTRITION, CHRONONUTRITION, AND MULTI-OMICS MONITORING AS PHYSIOLOGICAL COUNTERMEASURES FOR ASTRONAUT HEALTH IN ANALOG MISSIONS WITHIN ISOLATED, CONFINED, AND EXTREME (ICE) ENVIRONMENTS

Ms. Susan Ip-Jewell, Van Nuys, United States;

IAC-26.A1.4.2

ANALOG MISSIONS AS STRUCTURED PHARMACOLOGY VALIDATION PLATFORMS FOR HUMAN SPACE EXPLORATION

Dr. Raj Badhan, VASTX Limited, London, United Kingdom;

IAC-26.A1.4.3

CROSS-ENVIRONMENT NEUROVESTIBULAR MONITORING WITHIN THE ASCLEPIOS ANALOG ASTRONAUT PROGRAM

Ms. Vivien Simon, University Semmelweis, Academy Of Sciences - Research Group Biophysics, Budapest, Hungary;

IAC-26.A1.4.4

PHASE-RESOLVED BIOENERGETIC PHARMACOKINETICS USING A DIGITAL TWIN DRIVEN BY MISSION-SCHEDULE AND PERSONALIZED ACTIVITY PROFILES IN ANALOG ASTRONAUT

Ms. Susan Ip-Jewell, Van Nuys, United States;

IAC-26.A1.4.5

ELECTROSPUN BIOACTIVE-LOADED NANOFIBER PATCHES FOR TRANSDERMAL NUTRITION SUPPORT: STABILITY AND RELEASE UNDER ARCTIC MARINE EXTREME CONDITIONS

Prof. Filiz Altay, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.A1.4.6

AUTONOMOUS SOLAR-POWERED ORGANOID BIOPRINTING AND HUMAN PHARMACOKINETICS IN ANALOG ASTRONAUT MISSIONS FOR PRECISION SPACE PHARMACOLOGY AND PBPK DIGITAL TWIN MODELING

Ms. Emmy Helen Jewell, Mars Academy USA, Los Angeles, United States;

IAC-26.A1.4.7

EMBRYO DIGITAL TWIN FOR SPACEFLIGHT STRESS FACTORS: COMPUTER SIMULATION OF RADIATION, GRAVITY/ACCELERATION, CRYOPRESERVATION, AND OXIDATIVE MECHANISMS

Mr. Enes Taş, Ege University, Izmir, Türkiye;

IAC-26.A1.4.8

VIRTUAL REALITY SYSTEM WITH BIOFEEDBACK FOR MENTAL HEALTH AND WELLBEING VIABILITY STUDY IN ANTARCTICA

Prof. Alexander Aroyo, Universidad Católica del Uruguay, Montevideo, Uruguay;

IAC-26.A1.4.9

PERSONALIZED RISK STRATIFICATION FOR SPACEFLIGHT-ASSOCIATED NEURO-OCULAR SYNDROME (SANS)

Dr. Noura Kanjo, Medipol University, Istanbul, Türkiye;

IAC-26.A1.4.10

THE CORNELL AEROSPACE MEDICINE BIOBANK (CAMBANK): OPERATIONAL CHALLENGES AND INDUSTRY RECOMMENDATIONS FOR SCALABLE SPACE MEDICINE RESEARCH INFRASTRUCTURE

Mr. Jeremy Wain Hirschberg, New York-Presbyterian Hospital / Weill Cornell Medical Center, New York City, United States;

IAC-26.A1.4.11

CHARACTERIZING PHOTOPLETHYSMOGRAPHY (PPG) PULSE WAVE MORPHOLOGY CHANGES DURING SHORT-DURATION ISS MISSION

Dr. József Nagy-Bozsoky, Semmelweis University of Health Sciences, Budapest, Hungary;

IAC-26.A1.4.12

CONTINUOUS 24-HOUR AMBULATORY BLOOD PRESSURE AND HEART RATE VARIABILITY MONITORING REVEAL AUTONOMIC AND HEMODYNAMIC ADAPTATION DURING SHORT-DURATION SPACE FLIGHT

Dr. Maya Baksay, Semmelweis University of Health Sciences, Budapest, Hungary;

IAC-26.A1.4.13

SPACE AGE: A TRANSLATIONAL SPACE HEALTH PLATFORM TO ACCELERATE INNOVATION AND SUPPORT COMMERCIAL-ACADEMIC-GOVERNMENT CO-DEVELOPMENT

Ms. Elizabeth Reynolds, Baylor College of Medicine, Houston, United States;

IAC-26.A1.4.14

DYNAMICS OF STRUCTURAL AND FUNCTIONAL CHANGES IN THE SPINE DURING DEEP MOTOR UNLOADING: STRATEGIES FOR PREVENTION AND MINIMIZATION OF INJURY RISKS

Dr. Ilya Rukavishnikov, Institute of Biomedical Problems, Russian Academy of Sciences, Moscow, Russian Federation;

IAC-26.A1.4.15

NUTRITION AND MUSCULOSKELETAL ADAPTATION ON EARTH AS A MODEL FOR SPACEFLIGHT-INDUCED DEGENERATION

Mr. Federico Gonzalez, San Fernando, Mexico;

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

October 8 2026, 10:15 — Hall 7

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

Rapporteur(s): Premkumar Saganti, Prairie View A&M University, United States;

IAC-26.A1.5.1

PERSISTENT ONCOGENE AND TUMOR SUPPRESSOR GENE DYSREGULATION UNDER SUSTAINED MICROGRAVITY EXPOSURE

Dr. Cihan Taştan, Üsküdar University, İstanbul, Türkiye;

IAC-26.A1.5.2

RADIATION CHALLENGES FOR LUNAR EXPLORATION: ARTEMIS I FINDINGS AND IMPLICATIONS FOR MISSION PLANNING

Mr. Alessandro Bucci, ENAC, Rome, Italy;

IAC-26.A1.5.3

BONE DETERIORATION FOLLOWING SIMULATED SPACE RADIATION EXPOSURE: A SYSTEMATIC REVIEW AND META-ANALYSIS

Mr. Lev Sushanek, University of Alberta, Edmonton, Canada;

IAC-26.A1.5.4

INVESTIGATION OF CELLULAR RESPONSES TO SPACE-RADIATION SIMULATED WITH PROTON BEAM APPLICATION IN DENTAL PULP STEM CELLS

Mrs. Sumeyya Akkum, Hacettepe University, ANKARA, Türkiye;

IAC-26.A1.5.5

RADIATION HORMESIS: RE-EVALUATING CANCER RISK AND DEVELOPING THERAPEUTIC COUNTERMEASURES FOR SPACEFLIGHT AND TERRESTRIAL HEALTH

Dr. Dana Levin, Vast, Long Beach, United States;

IAC-26.A1.5.6

A FALSIFIABLE SYNERGY MODEL FOR NK CELL IMMUNOSUPPRESSION UNDER COMBINED MICROGRAVITY AND RADIATION EXPOSURE: MATHEMATICAL FRAMEWORK AND PROPOSED VALIDATION PROTOCOL

Mrs. Ekin Öz, Antalya Yusuf Ziya Öner Science High School, Antalya, Türkiye;

IAC-26.A1.5.8

INFLUENCE OF LUNAR CRATER TOPOGRAPHY AND SHIELDING ON RADIATION EXPOSURE IN LUNAR HABITATS

Dr. Naser Burahmah, Kuwait University, Kuwait City, Kuwait;

IAC-26.A1.5.9

DESIGNS AND PRODUCTION OF LIGHT AND LOW POWER CONSUMING PORTABLE SCINTILLATION DETECTOR FOR FUTURE CUBESAT MISSIONS

Mr. Ömer Berkant Yıldız, Akdeniz University, Antalya, Türkiye;

IAC-26.A1.5.11

ADVANCING RADIATION SHIELDING IN LONG-TERM SPACE MISSIONS AND DEEP SPACE HABITATS THROUGH IN-SITU RESOURCES FOR ADDITIVE MANUFACTURING AND AI-OPTIMIZED STRUCTURAL DESIGN

Ms. Noordeep Cheema, Toronto Metropolitan University, Brampton, Canada;

IAC-26.A1.5.12

HYDROGEN-RICH HYDROGEL PATCH FOR TARGETED RADIOPROTECTION OF SENSITIVE ANATOMICAL AREAS IN SPACE AND ON EARTH

Ms. Carlotta Achille, Fondazione E. Amaldi, Rome, Italy;

A1.6. Advancements in Astrobiology and Space Exploration

October 8 2026, 15:00 — Hall 7

Co-Chair(s): Fathi Karouia, NASA Ames Research Center, Blue Marble Space Institute Of Science; BioServe Space Technologies, University of Colorado Boulder, United States; Stephan Ulamec, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

IAC-26.A1.6.1

ASTROBIOLOGICAL IMPLICATIONS OF EXTREMOPHILIC FUNGI: METAL NANOPARTICLE BIOSYNTHESIS UNDER SIMULATED MICROGRAVITY

Dr. Alireza Armand, State Key Laboratory of Lunar and Planetary Sciences, Macau University of Science and Technology (MUST), Macau, Macao SAR, China;

IAC-26.A1.6.2

AUTONOMOUS MICROBIAL FUEL CELL-POWERED CULTIVATION BIOREGENERATIVE PAYLOAD INTEGRATION FOR FUTURE LUNAR MISSIONS: DEVELOPMENT AND TESTING OF THE BEATRICE SYSTEM

Dr. Paolo Marzioli, Sapienza University of Rome, Rome, Italy;

IAC-26.A1.6.3

EXTENDED EXOPLANET HABITABILITY: THE ECOZONE AND PLANETARY WATER CONTENT.

Prof. Amri Wandel, Hebrew University of Jerusalem, Jerusalem, Israel;

IAC-26.A1.6.4

NUTRIENT SENSING STRATEGIES VIA TOR SIGNALING PATHWAY IN TOMATO PLANTS GROWN ON LUNAR REGOLITH (LHS-1) SIMULANT ENRICHED WITH PIONEERING PLANTS

Ms. Yaren Akkaya, Ege University, Izmir, Türkiye;

IAC-26.A1.6.6

VENOM: VENTURE THE EXTRACTION OF ORGANIC MOLECULES – MAINFRAME REDESIGN AND SUBSYSTEM RECONFIGURATION FOR PLANETARY ASTROBIOLOGY MISSIONS

Mr. Tommaso Troise, CISAS – “G. Colombo” Center of Studies and Activities for Space, University of Padova, PADOVA, Italy;

IAC-26.A1.6.7

CATALYTIC ROLE OF C60 FULLERENE IN MILLER-UREY EXPERIMENT REACTIONS: AN AB INITIO STUDY ON THE ORIGIN OF LIFE

Mr. Eftal Gezer, Gebze Technical University, Kocaeli, Türkiye;

A1.7. Life Support, habitats and EVA Systems

October 9 2026, 10:15 — Hall 7

Co-Chair(s): Gisela Detrell, Technical University of Munich (TUM), Germany; Lucie Poulet, Université Clermont Auvergne (UCA), France;

Rapporteur(s): Hong Liu, Xi'an Satellite Control Centre (XSCC), China;

IAC-26.A1.7.1

WATER REGENERATION FROM ATMOSPHERIC HUMIDITY CONDENSATE ON THE RUSSIAN SEGMENT OF THE ISS: STATUS OF IMPLEMENTATION AND PROSPECTS FOR FUTURE MISSIONS

Mr. Aleksandr Pavlov, NIICHHMASH, Moscow, Russian Federation;

IAC-26.A1.7.2

PRELIMINARY DESIGN CONSIDERATIONS AND CONCEPT FOR LIFE SUPPORT SYSTEMS IN COMMERCIAL LEO SPACE STATIONS

Mr. Jayanth Narra, Technische Universität München, Ottobrunn, Germany;

IAC-26.A1.7.3

A STRUCTURED DATABASE OF MICROALGAE SPECIES FOR BIOREGENERATIVE SPACE LIFE SUPPORT SYSTEM

Mr. Jayanth Narra, Technische Universität München, Ottobrunn, Germany;

IAC-26.A1.7.4

DESIGN OF AN INTEGRATED CROP PRODUCTION SYSTEM ARCHITECTURE FOR ANALOG RESEARCH

Mr. Oscar Ojeda, Cydonia Foundation, Bogota, Colombia;

IAC-26.A1.7.5

GENETIC ENHANCEMENT OF CHLORELLA VULGARIS TO IMPROVE THE EFFICIENCY OF BIOREGENERATIVE LIFE SUPPORT SYSTEMS IN SPACE MISSIONS

Mr. Mahmut Durna, Istanbul, Türkiye;

IAC-26.A1.7.6

IMPACT OF PERCHLORATE STRESS ON THE GERMINATION DYNAMICS AND SEED VIABILITY OF HALOPHYTE HALOCNEMUM STROBILACEUM & INVASIVE DIPTOXIS TENUIFOLIA

Mr. Hacieren Gürbüz, Ankara University, Ankara, Türkiye;

IAC-26.A1.7.7

FOOD SAFETY IN SPACE AGRICULTURE: BRIDGING BIOLOGICAL RISKS AND REGULATORY GAPS.

Mr. Cosimo Sarti, University of Trento, Department of Physics, National PhD in Space Science and Technology, Trento, Italy; Ms. Giulia Priotti, University of Trento, Turin, Italy;

IAC-26.A1.7.8

A DATA-DRIVEN MICROBIOLOGICAL HYGIENE SOP FOR MICROBIAL RISK CONTROL IN MARS ANALOG HABITATS AND EVA INTERFACES

Dr. Susan Jewell, AvatarMEDIC, LLC, Lancaster, United States;

IAC-26.A1.7.9

DESIGNING BIOLOGICAL AUTONOMY FOR ORBITAL HABITATS - INFLATABLE CONTROLLED ECOLOGICAL LIFE SUPPORT SYSTEM (ICELSS)

Mr. Luka Pejic, Technische Universität Wien (TU Wien), Vienna, Austria;

IAC-26.A1.7.10

MULTI-SCENARIO EVA OPERATIONAL FRAMEWORK FOR PLANETARY SURFACE MISSIONS: FIELD VALIDATION OF EIGHT EVA TYPES IN A MARS ANALOG ENVIRONMENT

Mrs. SALAM ABUALHAYJA'A, MENA ENGINEERING EDUCATION AND TRAINING, Irbid, Jordan;

A1.8. Biology in Space

October 9 2026, 13:45 — Hall 7

Co-Chair(s): Didier Chaput, Centre National d'Etudes Spatiales (CNES), France; Jancy C. McPhee, National Aeronautics and Space Administration (NASA), Johnson Space Center, United States;

Rapporteur(s): Marta Del Bianco, Italian Space Agency (ASI), Italy;

IAC-26.A1.8.1

MICROGRAVITY-INDUCED REWIRING OF LONGEVITY AND MECHANOTRANSDUCTION NETWORKS IN HUMAN IMMUNE CELLS DURING THE MESSAGE SCIENCE MISSION

Dr. Cihan Taştan, Üsküdar University, Istanbul, Türkiye;

IAC-26.A1.8.2

A MICROGRAVITY-RESPONSIVE CELLULAR AXIS OF GLUCOSE METABOLISM ADAPTATION IN ASTRONAUT PERIPHERAL BLOOD MONONUCLEAR CELLS

Ms. Beyza AYDIN, Üsküdar University, Istanbul, Türkiye;

IAC-26.A1.8.3

IN SILICO COMPARATIVE GENOMIC AND EVOLUTIONARY ANALYSIS OF DNA REPAIR GENES OF NIALIA TIANGONGENSIS SP. NOV., ISOLATED FROM TIANGONG SPACE STATION

Ms. Danielle Canillo, Philippine Space Agency (PhilSA), Quezon City, Philippines;

IAC-26.A1.8.4

OXIDATIVE STRESS AND ANTIOXIDANT DEFENSE REGULATION IN TOMATO PLANTS GROWN IN LUNAR (LHS-1) REGOLITH SIMULANT

Ms. Ayşe Akkan, Ege University, Bornova, Türkiye;

IAC-26.A1.8.5

SPACEFLIGHT AND EXERCISE: THE IMPACT OF THE PROTEIN CDKN1A/P21 ON BONE REGENERATION IN MICE

Ms. Josephine Maglio, Uppsala University, Knivsta, Sweden;

IAC-26.A1.8.6

ENGINEERED BONE ANALOG MODELS DESIGNED FOR TESTING ON THE INTERNATIONAL SPACE STATION

Prof. Gunes Uzer, Boise State University (BSU), Boise, United States;

IAC-26.A1.8.7

DESIGNING LOW-COST MICROGRAVITY PLANT GROWTH EXPERIMENTS FOR SOUNDING ROCKET PLATFORMS: ENABLING SPACE BIOLOGY RESEARCH FOR EMERGING SPACE NATIONS

Ms. Dasuni Hewawasam, Nittambuwa, Sri Lanka;

IAC-26.A1.8.8

BIOACTIVE SEED COATING AS A PROTECTIVE STRATEGY AGAINST SIMULATED MICROGRAVITY AND RADIATION STRESS FOR SUSTAINABLE SPACE AGRICULTURE

Mr. Ahmed Fehim SAĞIRLI, İstanbul, Türkiye;

IAC-26.A1.8.10

PLANT RESPONSES TO SPACE-RELATED STRESSORS AND ADVANCED CULTIVATION SYSTEMS FOR BIOREGENERATIVE LIFE SUPPORT IN LONG-DURATION MISSIONS

Dr. Chiara Amitrano, University of Naples “Federico II”, Napoli, Italy;

IAC-26.A1.8.11

FROM LAUNCHPAD TO COASTLINE: FUNCTIONAL OUTCOMES OF THE ‘MANGROVES IN SPACE’ MISSION AND THE FUTURE OF SPACE-ENHANCED REFORESTATION

Mr. Anurag Sakharkar, Maldives Space Research Organisation (MSRO), Saskatoon, Canada;

IAC-26.A1.8.12

COMPARATIVE PERFORMANCE OF POLAR AND TEMPERATE MICROALGAE IN MICROGRAVITY CONDITIONS ON THE ISS: ALGALSPACE EXPERIMENT

Ms. Gülcan Aysin Karaca, Yildiz Technical University, İstanbul, Türkiye;

IAC-26.A1.8.13

MICROGRAVITY: A TOOL FOR BREAKING SEED DORMANCY AND ENHANCEMENT OF SEED RECOVERY

Mr. JohnPaul Enemali, National Space Research and Development Agency (NASRDA), Abuja Nigeria, FCT, ABUJA, Nigeria;

A1.9. Life Sciences for Space Exploration

October 7 2026, 10:15 — Hall 35

Co-Chair(s): Elena Fomina, State Scientific Center of Russian Federation, Institute of Biomedical Problems, Russian Academy of Sciences, Russian Federation; Alain Maillet, MEDES - IMPS, France;

IAC-26.A1.9.2

ETHICAL AND MORAL CONSIDERATIONS IN THE INDUCTION OF TORPOR IN HUMANS AND ASTRONAUT CREWS

Dr. Ekaterina Kostioukhina, Oakland Park, United States;

IAC-26.A1.9.4

ASSESSING HEAD-DOWN TILT AS A GROUND ANALOGUE FOR A QUANTITATIVE COMPRESSION-ULTRASOUND BIOMARKER OF JUGULAR VEIN THROMBOSIS UNDER MICROGRAVITY-RELEVANT VENOUS CONDITIONS

Mr. Janez Urevc, University of Ljubljana, Ljubljana, Slovenia;

IAC-26.A1.9.5

COMPRESSION FORCE RESPONSE OF THE INTERNAL JUGULAR VEIN TO GRADED HEAD-UP TILT MEASURED WITH A NON-INVASIVE ULTRASOUND-BASED DEVICE

Dr. Andrej Bergauer, University of Ljubljana, Maribor, Slovenia;

IAC-26.A1.9.6

LOWER-LIMB JOINT LOADING DURING ISS RESISTIVE EXERCISE: A BIOMECHANICAL ANALYSIS

Mr. Michele Brambilla, Politecnico di Milano, Garlate, Italy;

IAC-26.A1.9.7

AGENTIC AI-SUPPORTED CHRONONUTRITION AND PHASE-RESOLVED BIOENERGETIC COHERENCE AMONG ANALOG ASTRONAUTS DURING ISOLATED AND EXTREME ENVIRONMENTS

Ms. Susan Ip-Jewell, Van Nuys, United States;

IAC-26.A1.9.8

ANALYSIS OF RISK-ASSOCIATED PROTEINS IN THE BLOOD OF COSMONAUTS DURING LONG-TERM SPACEFLIGHT

Mrs. Daria Kashirina, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-26.A1.9.10

EXERCISE PROTOCOLS AND HUMAN PERFORMANCE IN ISOLATED AND CONFINED ENVIRONMENTS: EVIDENCE FROM HABITAT MARTE (2021–2025)

Dr. Julio Rezende, Federal University of Rio Grande do Norte (UFRN), Natal, Brazil;

IAC-26.A1.9.11

CAN WE BUILD DIGITAL TWINS USING 3D-PRINTED FOODS COUPLED WITH DIGITAL SENSORS FOR SPACE MISSIONS THAT PREDICT ASTRONAUT MENU FATIGUE?

Ms. Arnika Wain, University of Melbourne, Melbourne, Australia;

A2. IAF MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM

Coordinator(s): Angelika Diefenbach, German Aerospace Center (DLR), Germany; Remi Canton, Centre National d'Etudes Spatiales (CNES), France; Qiu-Sheng Liu, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China;

A2.1. Fundamental Physics in Low Gravity

October 7 2026, 10:15 — G1

Co-Chair(s): Thomas Driebe, DLR (German Aerospace Center), Germany; Vladimir Pletser, Blue Abyss, United Kingdom;

IAC-26.A2.1.1

AMORPHOUS NANOPARTICLE AGGREGATES IN MICROGRAVITY FOR NOVEL INSIGHTS INTO PLANETARY FORMATION

Dr. Michael Kio, University of Maryland - College Park, Gaithersburg, United States;

IAC-26.A2.1.2

BIO-INSPIRED "SEQUENTIAL COMPRESSION" MECHANISM FOR LAMINAR FLUID TRANSFER IN MICROGRAVITY ARTIFICIAL HEART APPLICATIONS: A MULTI-CAPILLARY PERISTALTIC APPROACH

Mr. Ozan Ceyhan GÜNEŞDOĞDU, Samsun Metropolitan Municipality, samsun, Türkiye;

IAC-26.A2.1.3 (unconfirmed)

FIVE DEGREES OF FREEDOM MOTION PLATFORM FOR GROUND-BASED EXPERIMENT OF GRAVITATIONAL WAVE DETECTION SATELLITES

Dr. Chenglei Yue, Northwestern Polytechnical University; National Key Laboratory of Aerospace Flight Dynamics, Xi'an, China;

IAC-26.A2.1.4

MICROGRAVITY ASSISTED ANALYSIS OF STATISTICAL FIDELITY IN NUCLEAR DECAY MEASUREMENTS

Mr. Göktuğ Güler, Antalya Yusuf Ziya Öner Science High School, Döşemealti, Türkiye;

IAC-26.A2.1.5

SIMULATING A NOVEL PARABOLIC CAVITY ATOM INTERFEROMETER

Mr. Tuna Ozer, KU Leuven, Leuven, Belgium;

IAC-26.A2.1.6

STABLE AND ROBUST LASER SYSTEM FOR THE BECCAL EXPERIMENT ABOARD THE ISS

Mr. David Latorre-Bastidas, Johannes Gutenberg University of Mainz, Mainz, Germany;

IAC-26.A2.1.7

HIGH-RESOLUTION ACCELEROMETER FOR SPACE APPLICATIONS WITH INTERFEROMETRIC READOUT

Dr. Massimo Zucco, INRIM, Torino, Italy;

A2.2. Fluid and Materials Sciences

October 7 2026, 15:00 — G1

Co-Chair(s): Nickolay N. Smirnov, Lomonosov Moscow State University, Russian Federation; Qi Kang, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., China;

IAC-26.A2.2.1

KEYNOTE: INTERFACIAL TRANSPORT AND SURFACTANT CONTROL IN ABSORBING SYSTEMS

Prof. Valentina Shevtsova, University of Mondragon, Mondragon, Spain;

IAC-26.A2.2.2

INVESTIGATION OF FLUID FLOWS THROUGH A POROUS MEDIUM UNDER MICROGRAVITY CONDITIONS.

Ms. Evgeniya Skryleva, Lomonosov Moscow State University, Moscow, Russian Federation;

IAC-26.A2.2.3

MEASUREMENT OF THE SOROT COEFFICIENT IN A BINARY MIXTURE USING DIGITAL HOLOGRAPHY INTERFEROMETER
Prof. Li Duan, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., Beijing, China;

IAC-26.A2.2.4

DEVELOPMENT AND VALIDATION OF A COUPLED COMPRESSIBLE CFD-DEM SOLVER FOR MARS PLUME-SURFACE INTERACTION
Mr. Ryutaro Onishi, Department of Engineering, The University of Tokyo, Sagami, Japan;

IAC-26.A2.2.5

EXPERIMENTAL THERMAL CHARACTERIZATION OF AN ACTIVE TWO-PHASE COOLING SYSTEM FOR SPACE APPLICATIONS: THE BARIDI SANA FLIGHT MODEL
Ms. Alessia Di Giacomo, Sapienza University of Rome, Roma, Italy;

IAC-26.A2.2.6

TWO-PHASE FLUID FLOW STABILITY IN MICROGRAVITY THERMAL CONTROL SYSTEMS FOR ADVANCED EXTRAVEHICULAR MOBILITY UNITS
Mrs. SALAM ABUALHAYJA'A, MENA ENGINEERING EDUCATION AND TRAINING, Irbid, Jordan;

IAC-26.A2.2.7

3D HEAT TRANSFER AND ELECTROMAGNETIC MODEL OF ARC WELDING IN OUTER SPACE ENVIRONMENT
Dr. Umer Masood Chaudry, University of Leicester, Leicester, United Kingdom;

IAC-26.A2.2.8 (unconfirmed)

PROPELLANT SLOSHING BEHAVIOR DURING THE LANDING IGNITION PROCESS OF THE LOX/LCH₄ REUSABLE LAUNCH VEHICLE "ZQ-3"
Ms. Shibo Yang, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-26.A2.2.11

ADVANCING PHARMACEUTICAL CRYSTALLIZATION IN SIMULATED MICROGRAVITY: IMPLICATIONS FOR SPACE-ENABLED DRUG DEVELOPMENT
Mr. Dhaval Pravinsinh Solanki, Institute of Pharmacy, Nirma University, Ahmedabad, India;

IAC-26.A2.2.12

ITERATIVE DOMAIN REDUCTION AND OCTREE MESH REFINEMENT STRATEGY FOR SUPERSONIC FLOW ANALYSES
Mr. Yağız Kaplan, Istanbul Technical University, Türkiye, Türkiye;

IAC-26.A2.2.13

MACHINE LEARNING SURROGATE MODELING OF CAPILLARY TWO-PHASE FLOW IN MICROGRAVITY
Ms. Margarita Belali, National Technical University of Athens, Athens, Greece;

IAC-26.A2.2.15

RANDOM POSITIONING MACHINE HYDROTHERMAL SYNTHESIS OF LAYERED ALPHA MOO₃ AS A PIONEER PLATFORM FOR LAYERED AND TWO DIMENSIONAL MATERIAL CRYSTALLIZATION UNDER SIMULATED MICROGRAVITY
Ms. Norhan Eloclo, Khalifa University of Science and Technology (KUST), Abu Dhabi, United Arab Emirates;

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

October 8 2026, 10:15 — G1

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

Rapporteur(s): Vladimir Pletser, Blue Abyss, United Kingdom;

IAC-26.A2.3.1

MARA: INVESTIGATING THE FEASIBILITY OF CORE-DRILLING FOR ISRU IN REDUCED GRAVITY
Mr. Liam Rathsmann, Luleå University of Technology, Kiruna, Sweden;

IAC-26.A2.3.2

COMPUTATIONAL SEDIMENTATION MODELLING CALIBRATION: A TOOL TO MEASURE THE SETTLING VELOCITY AT DIFFERENT GRAVITY CONDITIONS
Prof. Nikolaus Kuhn, University of Basel, Department of Environmental Sciences, Basel, Switzerland;

IAC-26.A2.3.3

EXPERIMENTAL VALIDATION OF 1-G ROVER TESTING METHODS USING LUNAR-G PARABOLIC FLIGHT DATA IN COHESIVE REGOLITH
Mr. George Butt, Concordia University, Montreal, Canada;

IAC-26.A2.3.4

THE GRAVITY EFFECTS ON WEAK TURBULENT NON-PREMIXED FLAME
Ms. Feng Zhu, NML, Institute of Mechanics, Chinese Academy of Sciences, Beijing, China;

IAC-26.A2.3.6

STANDARDIZING SUBORBITAL ACCESS: FLIGHT PERFORMANCE AND ECSS COMPLIANCE OF THE BRAZILIAN MICROGRAVITY PLATFORM (PSM)
Mr. Felipe Portela Aguiar de Oliveira, São Luís, Brazil;

IAC-26.A2.3.7

STUDY OF THE TARAXACUM KOK-SAGHYZ IN LOW EARTH ORBIT TO DETERMINE THE EFFECTS OF MICROGRAVITY ON NATURAL RUBBER PRODUCTION
Mr. Nick Gomori, The Ohio State University, Columbus, United States;

IAC-26.A2.3.8

FEASIBILITY AND OBSERVATIONS OF CRACKING RAW EGGS IN REDUCED GRAVITY
Dr. Norah Patten, International Institute for Astronautical Sciences (IIAS), Dublin 4, Ireland;

IAC-26.A2.3.9

INVESTIGATING THE IMPACT OF SIMULATED MICROGRAVITY ON MAIZE GROWTH AND PRODUCTION IN AN EARTH BASED SPACE FARMING SYSTEMS
Ms. Basuti Bolo, African Space Institute / Universities Space Research Association / NASA, Mutare, Zimbabwe;

IAC-26.A2.3.10

OPPORTUNITIES FOR HYPERGRAVITY AND MICROGRAVITY EXPERIMENTATION UNDER THE UNITED NATIONS ACCESS TO SPACE FOR ALL INITIATIVE: ACHIEVEMENTS IN 2025-2026
Ms. Mami Sasamura, United Nations Office for Outer Space Affairs, Vienna, Austria;

A2.4. Science Results from Ground Based Research

October 8 2026, 15:00 — G1

Co-Chair(s): Valentina Shevtsova, University of Mondragon, Spain; Antonio Viviani, Università degli Studi della Campania "Luigi Vanvitelli", Italy;

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

IAC-26.A2.4.1

KEYNOTE: MODELING STUDY OF HYDROGEN AND/OR AMMONIA COMBUSTION SAFETY
Prof. Nickolay N. Smirnov, Lomonosov Moscow State University, Moscow, Russian Federation;

IAC-26.A2.4.2

SPACE EXPERIMENTS ON CHINESE SPACE STATION UNRAVELING THE HYDRODYNAMIC INSTABILITY OF ANNULAR THERMOCAPILLARY CONVECTION
Prof. Qi Kang, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., Beijing, China;

IAC-26.A2.4.3

GROUND-TEST VALIDATION OF MANIFOLD-BASED STATE AND PARAMETER ESTIMATION FOR SLOSH-AFFECTED RIGID-BODY MOTION

Mr. Herman Gunter, Embry-Riddle Aeronautical University, Daytona Beach, United States;

IAC-26.A2.4.4

SPACE EXPERIMENTAL INVESTIGATION PROJECT OF NANOFUIDS DROPLET EVAPORATION ONBOARD CHINA SPACE STATION

Prof. Qiu-Sheng Liu, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, Beijing, China;

IAC-26.A2.4.5

DEVELOPMENT OF THE FLOW IN A CHANNEL WITH INJECTION OF COLD GAS THROUGH POROUS WALL INTO A COMBUSTION PRODUCTS ZONE

Ms. Elena Mikhachenko, Lomonosov Moscow State University, Moscow, Russian Federation;

IAC-26.A2.4.6

EXPERIMENTAL AND SIMULATION STUDY OF A MASTER-SLAVE TRACKING GROUND-BASED MICROGRAVITY SIMULATION SYSTEM FOR ON-ORBIT CAPTURE-RELEASE INTERACTIVE OBJECT EQUIVALENT VALIDATION

Mr. Fan Ding, Nanjing University of Aeronautics and Astronautics, nanjing, China;

IAC-26.A2.4.7

INVESTIGATION OF PROPELLANT SLOSHING AND TANK PRESSURE COLLAPSE DURING THE SATELLITE-LAUNCH VEHICLE SEPARATION PROCESS OF A LOX/LCH₄ LAUNCH VEHICLE

Ms. Lingqi Zhao, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-26.A2.4.8

TEMPERATURE REGULATION FOR A CELL CULTURE BIOREACTOR MODULE ON THE INTERNATIONAL SPACE STATION

Mr. Kacper Nowakowski, AGH University of Krakow, Gorzeń Dolny, Poland;

IAC-26.A2.4.9 (unconfirmed)

THRUST VECTOR CONTROL OF THE PERUN ROCKET - LESSONS LEARNED FROM FOUR FLIGHTS

Dr. Adam Matusiewicz, SpaceForest, Gdynia, Poland;

IAC-26.A2.4.11

THE INVESTIGATION OF COMPRESSOR BLADE EROSION USING AN EULERIAN-LAGRANGIAN METHOD

Mr. Taha Irfan Cagdas, National Defense University, İstanbul, Türkiye;

A2.5. Facilities and Operations of Microgravity Experiments

October 9 2026, 10:15 — G1

Co-Chair(s): Qiu-Sheng Liu, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China; Remi Canton, Centre National d'Études Spatiales (CNES), France;

IAC-26.A2.5.1

LIFE SCIENCE EXPERIMENT SYSTEM ON CHINESE SPACE STATION

Prof. Zhang Tao, Shanghai Institute of Technical Physics, Chinese Academy of Sciences (CAS), Shanghai, China;

IAC-26.A2.5.2

AN IMPROVED DESIGN FOR HUMAN INTERFACING OF PAYLOAD PLATFORMS ABOARD THE STARLAB SPACE STATION FOR INCREASED EFFICIENCY OF RESEARCH OPERATIONS IN LOW-EARTH ORBIT.

Mr. Nick Gomori, The Ohio State University, Columbus, United States;

IAC-26.A2.5.3

PERFORMANCE STUDIES OF ZARM'S GRAVITOWER FOR EXPERIMENTS IN MICROGRAVITY AND PARTIAL-GRAVITY CONDITIONS

Dr. Thorben Koenemann, ZARM Fab GmbH, Bremen, Germany;

IAC-26.A2.5.4

IOSLAB: A PLUG-AND-PLAY IN-ORBIT SERVICING LABORATORY FOR ACCESSIBLE MICROGRAVITY RESEARCH AND TECHNOLOGY DEVELOPMENT

Ms. Maria Casanovas Crespo, S.A.B. Aerospace s.r.o., Barcelona, Czech Republic;

IAC-26.A2.5.5

REDUCED-GRAVITY SEED GERMINATION IN A MARS ANALOG SETTING USING A ROTATIONAL POSITIONING APPARATUS

Ms. Saranya Ravva, Purdue University, West Lafayette, United States;

IAC-26.A2.5.7

MINI FLUORESCENCE MICROSCOPE: FROM EARLY GENERATIONS TO FLIGHT AND FUTURE MISSIONS

Ms. Kiira Tiensuu, Aboa Space Research Oy, Turku, Finland;

IAC-26.A2.5.8

ENABLING MASS ADOPTION OF MICROGRAVITY FOR RESEARCH AND MANUFACTURING THROUGH PRE-QUALIFIED PAYLOAD CONTAINERS

Mr. Guillaume Brault, Team Tumbleweed, Rotterdam, Netherlands (Kingdom of the);

IAC-26.A2.5.9

DESIGN ORIENTATION FOR MICROGRAVITY

Dr. Barbara Brownie, Royal College of Art, London, United Kingdom;

IAC-26.A2.5.10

DEXTEROUS GRASPING FOR SPACE ROBOTS IN MICROGRAVITY VIA LEARNING-ENABLED HAND CONTROL

Mr. Shengyun Zhao, Beihang University, Beijing, China;

A2.6. Microgravity Sciences on board of Space stations

October 9 2026, 13:45 — G1

Co-Chair(s): Angelika Diefenbach, German Aerospace Center (DLR), Germany; MengYun Chen, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China;

Rapporteur(s): Thomas Driebe, DLR (German Aerospace Center), Germany;

IAC-26.A2.6.1

KEYNOTE: SPACE SCIENCE RESEARCH PROGRESS AND PLANNING OF CHINA SPACE STATION

Mr. Wei Zhang, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, Beijing, China;

IAC-26.A2.6.2

ENABLING MULTI-DISCIPLINARY SCIENCE IN SPACE: NEW TAILORED PAYLOAD USER SUPPORT CONCEPTS AT MUSC FOR ISS AND BEYOND

Ms. Katharina Hildebrandt, German Aerospace Center (DLR), Cologne, Germany;

IAC-26.A2.6.4

LIQUID-BASED SOFT METAMATERIALS: IN-ORBIT CONSTRUCTION AND ELECTROMAGNETIC REGULATION IN MICROGRAVITY

Prof. Yuren Wang, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., Beijing, China;

IAC-26.A2.6.5

INERT SOLID PARTICLE DYNAMICS IN A FLUID ENVIRONMENT: PRELIMINARY RESULTS FROM THE ISS AX-3 GMETAL PROJECT

Prof. Dr. Iskender Gokalp, Middle East Technical University, Ankara, Türkiye;

IAC-26.A2.6.6

STUDY ON THE HEAT TRANSFER ENHANCEMENT MECHANISM OF BOILING ON MICRO-PIN-FINS UNDER MICROGRAVITY CONDITIONS

Dr. Yilong Yan, Xi'an Jiaotong University, Xi'an City, Shaanxi Province, China;

IAC-26.A2.6.7

ESTIMATION OF NON-GRAVITATIONAL DISTURBANCES ACTING ON THE ISS VIA VISION-BASED DETERMINATION OF AN INTERIOR FREE-FLOATING BODY MOTION

Dr. Danil Ivanov, Keldysh Institute of Applied Mathematics of RAS, Moscow, Russian Federation;

IAC-26.A2.6.8

RESEARCH ON THE IN-ORBIT VERIFICATION FRAMEWORK FOR FUNDAMENTAL AEROSPACE KEY TECHNOLOGIES IN MICROGRAVITY ENVIRONMENT

Ms. Yuhe Mao, Nanjing University of Aeronautics and Astronautics, Nanjing, China;

IAC-26.A2.6.9

GENOMIC CHARACTERIZATION OF MICROBACTERIUM MEIRIAE SP. NOV., A NOVEL BACTERIUM ISOLATED FROM THE INTERNATIONAL SPACE STATION

Dr. Fathi Karouia, NASA Ames Research Center, Blue Marble Space Institute Of Science; BioServe Space Technologies, University of Colorado Boulder, Moffett Field, United States;

IAC-26.A2.6.10

MICROGRAVITY AS AN ACCELERATED AGING PLATFORM: TARGETED NANOTHERAPEUTICS IN 3D HUMAN ORGANIDS

Dr. Ashraf Farahat, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia;

A2.7. Life and Physical Sciences under reduced Gravity

October 5 2026, 16:30 — G1

Co-Chair(s): Angelika Diefenbach, German Aerospace Center (DLR), Germany; Remi Canton, Centre National d'Etudes Spatiales (CNES), France;

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

IAC-26.A2.7.1

AGROBACTERIUM MEDIATED GENE TRANSFER EFFICIENCY IN ARABIDOPSIS THALIANA ON BOARD OF ISS CONDUCTED DURING AX-3 MISSION

Ms. TUGCE CELAYIR, Boğaziçi University, ISTANBUL, Türkiye;

IAC-26.A2.7.2

CARBON DIOXIDE CAPTURE EFFICIENCY AND OMICS-LEVEL ADAPTATION OF MICROALGAE DURING AN ISS SPACEFLIGHT MISSION

Dr. Berat Zeki Haznedaroğlu, Boğaziçi University, İstanbul, Türkiye;

IAC-26.A2.7.3

DESIGN, PROTOTYPING, AND PERFORMANCE ASSESSMENT OF THE ANGIOLOGY IN MICROGRAVITY (AIM) EXPERIMENTAL PLATFORM FOR ESA SPACE RIDER'S MAIDEN FLIGHT.

Ms. Weronika Dziaduch, European Space Agency (ESA), Cologne, Germany;

IAC-26.A2.7.4

EFFECT OF SHORT-DURATION SPACEFLIGHT ON HUMAN BALANCING

Mr. Kristóf Martinovich, Budapest University of Technology and Economics, Budapest, Hungary;

IAC-26.A2.7.5

FROM GYMNASTICS TO MICROGRAVITY: NEUROMOTOR TRAINING AND BCI MONITORING FOR ASTRONAUT ADAPTATION

Ms. Jhovana Vota, Individual collaboration, Parral, Chihuahua, Mexico;

IAC-26.A2.7.6

GENDER DIFFERENCES IN MICROGRAVITY ADAPTATION: NEUROENDOCRINE ASPECTS AND IMPLICATIONS FOR PERSONALIZED SPACE MEDICINE

Ms. Kseniia Kondrashkina, Sechenov University, Moscow, Russian Federation;

IAC-26.A2.7.7

REPRODUCTIVE RISK ARCHITECTURE FOR DEEP-SPACE MISSIONS: RADIATION AND VAGINAL MICROBIOME INSTABILITY AS EMERGING OPERATIONAL CONSTRAINTS

Mrs. Aleksandra Aksanova, Sechenov University, Moscow, Russian Federation;

IAC-26.A2.7.8

THE IMPACT OF MICROGRAVITY ON THE HYPOTHALAMIC-PITUITARY-GONADAL AXIS IN WOMEN: MECHANISMS AND IMPLICATIONS FOR REPRODUCTIVE HEALTH

Ms. Kseniia Kondrashkina, Sechenov University, Moscow, Russian Federation;

IAC-26.A2.7.9 (unconfirmed)

NON-INVASIVE ASSESSMENT OF INTRACRANIAL PRESSURE IN MICROGRAVITY: THE IMPACT OF VENOUS CONGESTION ON CEREBRAL HEMODYNAMICS

Mr. Yael E. Castrejón-Ocampo, Instituto Politécnico Nacional, Mexico City, Mexico;

A2.8. In-Space Manufacturing and Production Applications

October 6 2026, 15:00 — Hall 30

Co-Chair(s): Fathi Karouia, NASA Ames Research Center, Blue Marble Space Institute Of Science; BioServe Space Technologies, University of Colorado Boulder, United States; David Estrada, Boise State University (BSU), United States;

Rapporteur(s): Albert Houcine TOUATI, Université Clermont Auvergne (UCA), France;

IAC-26.A2.8.1

EXPERIMENTAL STUDY IN MICROGRAVITY ON DED BASED METAL ADDITIVE MANUFACTURING

Dr. Yifei Liu, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, Beijing, China;

IAC-26.A2.8.2

ADDITIVE MANUFACTURING OF BIOPOLYMERS FOR SPACE FOOD PRODUCTION

Ms. Manisha Mahesh Kumar, Southampton, United Kingdom;

IAC-26.A2.8.3

DE-RISKING ROBOTIC WELDING FOR IN-SPACE METAL JOINING THROUGH PHYSICS-GROUNDED DIGITAL TWINS

Dr. Zhou Daniel Hao, University of Leicester, Leicester, United Kingdom;

IAC-26.A2.8.4

DESIGN, QUALIFICATION, AND PERFORMANCE OF A MICROALGAE-BASED EXPERIMENTAL CUBE FOR BIOLOGICAL LIFE SUPPORT SYSTEM AT THE INTERNATIONAL SPACE STATION

Mr. Dogukan Parlak, Boğaziçi University, İstanbul, Türkiye;

IAC-26.A2.8.6

EFFECTS OF SIMULATED LUNAR GRAVITY ON PHYSICAL REGolith PROCESSING

Mr. Connor MacRobbie, University of Waterloo, Waterloo, Canada;

IAC-26.A2.8.7

THERMO-FLUID MULTIPHYSICS MODELING OF WIRE-FED LASER METAL DEPOSITION UNDER VACUUM AND MICROGRAVITY FOR IN-SPACE MANUFACTURING

Ms. Mitra Taghizadeh, York University, Toronto, Canada;

IAC-26.A2.8.8

IN-SPACE BIOMANUFACTURING: THE FINAL FRONTIER TO ACCELERATE BREAKTHROUGHS IN BIOMEDICINE

Dr. Pinar Mesci, Axiom Space, Houston, United States;

IAC-26.A2.8.9

ELECTRICITY-BASED HYDROGEN PEROXIDE PRODUCTION AND CHEMICAL-FREE RECYCLED WATER DISINFECTION IN SPACE

Dr. Alexander Gutsol, RedShift Energy, Inc., Warwick, Pennsylvania, United States;

IAC-26.A2.8.10

NVASIVE: UNRAVELING THE ENIGMA OF METASTASIS
Dr. Armin Rad, University of Connecticut, Farmington, United States;

IAC-26.A2.8.11

IN-SPACE AUTOGENOUS WELDING OF ALUMINUM ALLOY MODULAR STRUCTURES FOR SPACE INFRASTRUCTURE CONSTRUCTION
Ms. Maria Moreno, Central University of Venezuela (UCV), Caracas, Venezuela;

A3. IAF SPACE EXPLORATION SYMPOSIUM

Coordinator(s): Pierre W. Bousquet, Centre National d'Etudes Spatiales (CNES), France; Keyur Patel, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States; Maria Antonietta Perino, Thales Alenia Space Italia, Italy;

A3.1. Space Exploration Overview

October 5 2026, 16:30 — E3

Co-Chair(s): Keyur Patel, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States; Norbert Frischauf, TU Graz, Austria;

Rapporteur(s): Dmitry Zarubin, Space Research Institute (IKI), Russian Academy of Sciences (RAS), Russian Federation;

IAC-26.A3.1.1

THE FUTURE OF SCIENCE IN SPACE: WHAT IT LOOKS LIKE TO BE AN IMPLEMENTATION PARTNER IN THE FADING DAYS OF THE INTERNATIONAL SPACE STATION
Mr. Michael Lewis, Voyager Technologies, Webster, United States;

IAC-26.A3.1.2

SPACE EXPLORATION TECHNOLOGY ROADMAP: THE SPACE IT UP! APPROACH
Dr. Nunzia Favaloro, CIRA Italian Aerospace Research Centre, CAPUA, Italy;

IAC-26.A3.1.3

OPERATIONAL ADMISSIBILITY OF GENERATIVE AI FOR MARS ROVER ROUTE PLANNING
Mr. Keri Arango Arellanes, High Technology Unit (UAT) Faculty of Engineering - UNAM, Mexico City, Mexico;

IAC-26.A3.1.4

DLR'S CURRENT ROBOTIC ACTIVITIES IN EXPLORATION
Dr. Armin Wedler, German Aerospace Center (DLR), Wessling, Germany;

IAC-26.A3.1.5

ORBITAL STATIONS AS MULTI-GRAVITY TESTBEDS
Dr. Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Gumpoldskirchen, Austria;

IAC-26.A3.1.6

LOW-COST ACCESS TO NEAR-EARTH TARGETS USING A UNIVERSAL ELECTRIC-PROPULSION SMALLSAT PLATFORM
Prof. Mikhail Ovchinnikov, Keldysh Institute of Applied Mathematics, RAS, Moscow, Russian Federation;

IAC-26.A3.1.7

MISSION DESIGN ARCHITECTURE OF THE EMIRATES MISSION TO THE ASTEROID BELT
Ms. Fatema Al Hameli, UAE Space Agency, Abu Dhabi, United Arab Emirates;

IAC-26.A3.1.8

EMIRATES MISSION TO THE ASTEROIDS BELT OVERVIEW
Mr. Mohsen Al Awadhi, UAE Space Agency, Dubai, United Arab Emirates;

IAC-26.A3.1.9

BEYOND A SINGLE VIEW: TRANSFORMING HELIOSPHERIC SCIENCE WITH THE 4P SOLAR MISSION
Dr. Nour E. Raouafi, The John Hopkins University Applied Physics Laboratory, Laurel, Maryland, United States;

IAC-26.A3.1.10 (unconfirmed)

VIBRATIONAL SPECTROSCOPY AND MACHINE LEARNING METHODS FOR DECIPHERING COMPLEX MINERAL ASSEMBLAGES: APPLICATIONS TO PLANETARY EXPLORATION
Dr. Roman Shendrik, A. P. Vinogradov Institute of Geochemistry SB RAS, Irkutsk, Russian Federation;

A3.2A. Moon Exploration – Part 1

October 6 2026, 10:15 — E3

Co-Chair(s): Bernard Foing, ILEWG "EuroMoonMars", Netherlands (Kingdom of the); David Korsmeyer, National Aeronautics and Space Administration (NASA), Ames Research Center, United States;

Rapporteur(s): Nadeem Ghafoor, Avalon Space, Canada; Dmitry Zarubin, Space Research Institute (IKI), Russian Academy of Sciences (RAS), Russian Federation;

IAC-26.A3.2A.1

CNES INVOLVEMENT ON THE MOON SURFACE, AND PERSPECTIVES.
Mr. Pierre W. Bousquet, Centre National d'Etudes Spatiales (CNES), Toulouse, France;

IAC-26.A3.2A.2

LUNAR WATER SIGNATURE AND ELEMENTAL MAPS BY KPLO GAMMA-RAY SPECTROMETER (KGRS)
Dr. Kyeong Ja Kim, Korea Institute of Geoscience and Mineral Resources, Daejeon, Republic of Korea;

IAC-26.A3.2A.3

THE PAST, PRESENT AND FUTURE OF INDIAN LUNAR EXPLORATION PROGRAM
Prof. Anil Bhardwaj, Physical Research Laboratory, Ahmedabad, India;

IAC-26.A3.2A.5

NASA VIPER'S EXPLORATION AND THE ARTEMIS CONNECTION
Dr. David Korsmeyer, National Aeronautics and Space Administration (NASA), Ames Research Center, Moffett Field, United States;

IAC-26.A3.2A.6

CONNECTING METEORITE SPECTRA TO LUNAR SURFACE COMPOSITION USING HYPERSPECTRAL IMAGING AND MACHINE LEARNING
Ms. Fatemeh Fazel Hesar, Leiden University, Leiden, Netherlands (Kingdom of the);

IAC-26.A3.2A.7

LUNAR OUTPOST'S LUNAR VOYAGE 1 MISSION AND IMPACTS ON THE FUTURE OF SPACE EXPLORATION
Mr. Justin Cyrus, Lunar Outpost, Arvada, United States;

IAC-26.A3.2A.8

LUNAR POLAR EXPLORATION (LUPEX), SIMULATIONS TO EVALUATE THE ROVER'S MOTION BEHAVIOR ON THE MOON
Mr. Tomohiro Oya, Japan Aerospace Exploration Agency (JAXA), Ibaraki, Japan;

IAC-26.A3.2A.10

ONEIROS: A GIANT STEP TOWARDS AFFORDABLE MOON LANDING
Dr. Christophe Figus, The Exploration Company GmbH, Dremil Lafage, France;

IAC-26.A3.2A.11

RUSSIAN LUNAR EXPLORATION PROGRAM: MISSIONS, EXPERIMENTS AND COOPERATION OPPORTUNITIES
Mr. Dmitry Zarubin, Space Research Institute (IKI), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-26.A3.2A.12

THE TERRAIN TESTING INSTRUMENT (TTI) AS A SELECTED PAYLOAD FOR THE CHANG'E 8 LUNAR LANDING MISSION
Dr. Lutz Richter, Terra Nova Industries, Karlsruhe, Germany;

IAC-26.A3.2A.13

TOWARDS THE MOON: FROM MISSION, SCIENCE AND TECHNOLOGY OBJECTIVES OF THE FIRST TURKISH LUNAR MISSION TO THE FLIGHT MODEL OF TÜRKİYE'S FIRST DEEP SPACE SPACECRAFT
Dr. Burak Yaglioglu, Tubitak Uzay, Space Technologies Research Institute, Ankara, Türkiye;

A3.2B. Moon Exploration – Part 2

October 6 2026, 15:00 — E3

Co-Chair(s): Bernard Foing, ILEWG “EuroMoonMars”, Netherlands (Kingdom of the); David Korsmeyer, National Aeronautics and Space Administration (NASA), Ames Research Center, United States;

Rapporteur(s): Nadeem Ghafoor, Avalon Space, Canada; Dmitry Zarubin, Space Research Institute (IKI), Russian Academy of Sciences (RAS), Russian Federation;

IAC-26.A3.2B.1 (unconfirmed)

THE USC FALL 2025 QUO VADIS ARTEMIS PROJECT: ESSENTIAL FOUNDATION BLOCKS FOR PERMANENT LUNAR INFRASTRUCTURE
Mr. Madhu Thangavelu, University of Southern California, ROLLING HILLS ESTATES, United States;

IAC-26.A3.2B.2

LUMI-M: A COMMERCIAL ROVER MISSION PROVIDING PAYLOAD MOBILITY ON THE MOON
Mr. Olivier Lamborelle, Space Applications Services, Sint Stevens Woluwe, Belgium;

IAC-26.A3.2B.3

ILEWG LUNEX EUROMOONMARS SCIENCE & EXPLORATION REPORT 2026: DATA ANALYSIS, INSTRUMENTS, PAYLOAD, MISSIONS & FIELD TESTS
Prof. Bernard Foing, ILEWG “EuroMoonMars”, Wassenaar, Netherlands (Kingdom of the);

IAC-26.A3.2B.4

EAGLE LTV'S FIRST DEMONSTRATION MISSION FOCUSES ON SCIENCE APPLICATIONS
Ms. Kaila Pfrang, Lunar Outpost, Arvada, United States;

IAC-26.A3.2B.6

FROM CONCEPT TO THE DETAILED DESIGN: EVOLUTION OF CHERI LUNAR MICRO ROVERS
Dr. Halil Ersin Soken, Middle East Technical University, Ankara, Türkiye;

IAC-26.A3.2B.7

MAGPIE: MISSION FOR ADVANCED GEOPHYSICS AND POLAR ICE EXPLORATION – MISSION OVERVIEW
Ms. Abbie Hatty, ispace, inc., Luxembourg, Luxembourg ;

IAC-26.A3.2B.8

INSIGHTS INTO THE CAPABILITIES, USE AND EXTENSIONS OF THE LUNA ANALOG FACILITY AND DESIGN FEATURES FOR LUNAR MISSION OPERATION BASED ON TEST CAMPAIGN EXPERIENCES
Ms. Maria Hallinger, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Cologne, Germany;

IAC-26.A3.2B.9

MOONLIGHT LCNS - MISSION PERFORMANCES AND SERVICE SCENARIOS
Dr. Fabrizio Paolillo, Telespazio S.p.A., Roma, Italy;

IAC-26.A3.2B.10

OPTICAL SYSTEM PERFORMANCE ANALYSIS OF THE TURKISH LUNAR MISSION HIGH-RESOLUTION CAMERA
Dr. Zeynep Nilüfer Öztürk, Tubitak Uzay, Space Technologies Research Institute, Ankara, Türkiye;

IAC-26.A3.2B.11

OASIS AND LUCY ENABLING PAYLOADS ON THE LUNAR SURFACE
Ms. Catarina Antunes da Silva, OHB System AG, Bremen, Germany;

IAC-26.A3.2B.12

PROGRAMME PROPOSAL FOR A LUNAR OUTPOST
Dr. Rolf Janovsky, OHB System AG-Bremen, Bremen, Germany;

IAC-26.A3.2B.13 (unconfirmed)

THE NECESSITY OF IN-SITU PLASMA MEASUREMENTS ON THE LUNAR SURFACE
Prof. Stanislav Barabash, Swedish Institute of Space Physics, Kiruna, Sweden;

IAC-26.A3.2B.14

SCIENTIFIC PAYLOADS OF THE FIRST TURKISH LUNAR MISSION (TLM-1): A FOCUS ON THE SYNERGISTIC OBJECTIVES OF LNT AND LNR
Ms. Zeynep Altay Dorum, TUBITAK Uzay, Space Technologies Research Institute, Ankara, Türkiye;

IAC-26.A3.2B.15

VOLATILES CHARACTERIZATION AND COMMERCIAL IN-SITU GAS ANALYSIS INSTRUMENTATION FOR LUNAR EXPLORATION
Dr. Andres Diaz, INFICON, East Syracuse, United States;

A3.2C. Moon Exploration – Part 3

October 9 2026, 13:45 — E3

Co-Chair(s): Bernard Foing, ILEWG “EuroMoonMars”, Netherlands (Kingdom of the); David Korsmeyer, National Aeronautics and Space Administration (NASA), Ames Research Center, United States;

Rapporteur(s): Sylvie Espinasse, European Space Agency (ESA), Netherlands (Kingdom of the); Nadeem Ghafoor, Avalon Space, Canada;

IAC-26.A3.2C.1

DESIGN OVERVIEW OF PEGASUS V1, A FOUR-LEGGED ROVER FOR LUNAR EXPLORATION ON ROUGH TERRAIN
Dr. Claudio Semini, Istituto Italiano di Tecnologia, Genova, Italy;

IAC-26.A3.2C.2

EVALUATING ENVIRONMENTAL EFFECTS OF LONG-DURATION HUMAN ACTIVITIES ON THE MOON
Dr. Afreen Siddiqi, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.A3.2C.3

LUNIS: EXPERIMENTAL VALIDATION OF AI-ENABLED MICRO-ROVERS FOR FUTURE LUNAR MISSIONS WITH NIGHT SURVIVAL CAPABILITY
Mr. Hilmi Dogu Küçüker, DFKI GmbH, Robotics Innovation Center, Bremen, Germany;

IAC-26.A3.2C.4

SUPPORTING HUMAN LIFE ON THE MOON: DEVELOPMENT OF AN AUTONOMOUS SUB-REGOLITH GREENHOUSE SYSTEM
Ms. Diyora Daminova, University of Colorado Boulder, chirchiq, Uzbekistan;

IAC-26.A3.2C.5

ANALOG ASTRONAUT MISSIONS AS STEPPING-STONES FOR ISS-GATEWAY TRANSITIONS: INSIGHTS FROM ASTRAEA EXP-103
Dr. Guelin Dede, University of Turkish Aeronautical Association, Bonn, Germany, Türkiye;

IAC-26.A3.2C.6

LESSONS LEARNED FROM LUNEX EUROMOONMARS ANALOG 2025
Mr. Théo LEREUIL, ILEWG «EuroMoonMars», IS-sur-Tille, France;

IAC-26.A3.2C.7

EMPAATIC: ESTABLISHING THE FIRST BALTIC ANALOGUE ASTRONAUT MISSION THROUGH A 100-HOUR UNDERGROUND HABITAT DEMONSTRATOR IN ESTONIA
Mr. Marc Heemskerk, Tallinn University of Technology, Tallinn, Estonia;

IAC-26.A3.2C.8

O.A.S.I.S.: A MODULAR LUNAR BASE CONCEPT FOR SUSTAINABLE HABITATION AND ISRU OPERATIONS (SSDW 2025)

Ms. Abril Alvarado, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia;

IAC-26.A3.2C.9

CONCEPTUAL DESIGN OF AN INTEGRATED LUNAR SURFACE COMMUNICATION SYSTEM FOR THE PRESSURIZED ROVER "LUNAR CRUISER"

Ms. Aya Asamura, TOYOTA MOTOR CORPORATION, Tokyo, Japan;

IAC-26.A3.2C.10

FIELD EXPERIMENT IN AN AUSTRALIAN CAVE ON COOPERATIVE EXPLORATION USING MULTIPLE SMALL ROVERS FOR FUTURE LUNAR LAVA TUBE MISSION

Prof. Dr. Yasuharu Kunii, Chuo University, Tokyo, Japan;

IAC-26.A3.2C.11

INTEGRATED LUNAR ISRU PATHWAYS FOR CLOSED-LOOP RESOURCE UTILIZATION AND SURFACE INFRASTRUCTURE

Ms. Schelin Ireland, University of Colorado Boulder, Boulder, United States;

IAC-26.A3.2C.12

LABORATORY AND IN-SITU INVESTIGATION OF THE LUNAR SURFACE DUST ACTIVITY

Mr. Ilia Kuznetsov, Space Research Institute (IKI), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-26.A3.2C.13

LUNAR INFRASTRUCTURE SYSTEM ARCHITECTURE ENABLED BY WATER BASED ISRU PLANT

Mr. Kiho Fukaura, JGC Corporation, Kanagawa, Japan;

IAC-26.A3.2C.15

PROJECT MANAGEMENT AND SYSTEMS ENGINEERING CHALLENGES IN THE EARLY DEVELOPMENT OF THE PRESSURIZED ROVER

Mr. Yusuke Funakoshi, TOYOTA MOTOR CORPORATION, Tokyo, Japan;

IAC-26.A3.2C.16

SIMULATION OF REGOLITH ON THE LUNAR SURFACE

Mr. Tobias Lamping, Technical University of Braunschweig, Braunschweig, Germany;

IAC-26.A3.2C.17

TOWARDS AUTONOMOUS IN-SITU PLANETARY SCIENCE ON A LOW-COST LUNAR ROVER PLATFORM

Mr. Ivan Gilberto Martin Enciso, DLR (German Aerospace Center), Weßling, Germany;

IAC-26.A3.2C.18

LUNARCOBOT: ADVANCING TECHNOLOGIES AND COORDINATION APPROACHES FOR COOPERATIVE LUNAR ROBOTICS

Mr. Mehmed Yüksel, DFKI GmbH, Robotics Innovation Center, Bremen, Germany;

IAC-26.A3.2C.19

MULTI-ROVER COOPERATIVE TERRAIN PROSPECTING FOR LUNAR SURFACE OPERATIONS

Dr. Rok Vrabič, University of Ljubljana, Ljubljana, Slovenia;

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

October 7 2026, 10:15 — E3

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

Rapporteur(s): Cheryl L.B. Reed, Northrop Grumman Corporation, United States; Lisa May,, United States;

IAC-26.A3.3A.1

KEYNOTE: EXOMARS ROSALIND FRANKLIN MISSION: DEVELOPMENT & VERIFICATION OF THE MARTIAN LANDER

Dr. Maria Antonietta Perino, Thales Alenia Space Italia, Turin, Italy;

IAC-26.A3.3A.2

EARTH2MARS: INTERFACE STANDARDIZATION TO ENABLE FREQUENT LOWER COST MARS MISSIONS ON A COLLABORATIVE INTERNATIONAL TUG

Dr. Michael G. Fifield, Jet Propulsion Laboratory - California Institute of Technology, Pasadena, United States;

IAC-26.A3.3A.3

A MULTISTAGE MISSION ARCHITECTURE FOR JAPAN'S FIRST MARS LANDING: CONCEPT, TECHNOLOGIES, AND 2030 TRAJECTORY DESIGN

Ms. Chikako Hirose, Japan Aerospace Exploration Agency (JAXA), Sagami-hara Kanagawa, Japan;

IAC-26.A3.3A.4

THE CONCEPT OF GENERIC BACON PLOTS FOR RAPID EVALUATION OF LOW-THRUST MISSIONS TO MARS

Dr. Yuto Takei, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

IAC-26.A3.3A.5

PHAROS-M: A SERVICE-ORIENTED MARS ON-ORBIT SERVICING NODE FOR REFUELLING, RELOCATION AND MAINTENANCE

Mr. Mert Emrem, Politecnico di Milano, Milano, Italy;

IAC-26.A3.3A.7

GEOMORPHIC EVOLUTION OF VEDRA VALLIS, MARS

Mrs. Deniz Yazıcı, Istanbul Technical University, Sariyer, Türkiye;

IAC-26.A3.3A.8

OPTIMAL CONTROL SOLUTION FOR INTERPLANETARY TRANSFER ORBITS OPTIMIZATION IN HIGH THRUST, HIGH SPECIFIC IMPULSE MISSIONS.

Mr. Filippo de Martino, Politecnico di Torino, Rome, Italy;

IAC-26.A3.3A.9

SUSTAINABLE MOBILITY IN VALLES MARINERIS: SYSTEM INTEGRATION OF ISRU-BASED PROPULSION FOR A MARS HOPPER

Mr. Fabian Riegelsberger, Technical University of Munich (TUM), Ottobrunn, Germany;

IAC-26.A3.3A.10

HIGH-RESOLUTION MAPPING OF THE MARTIAN SURFACE: A PHOTONIC AESA RADAR SYSTEM

Ms. Semiha KÖROĞLU, Düzce University, SAKARYA, Türkiye;

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

October 7 2026, 15:00 — E3

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

Rapporteur(s): Cheryl L.B. Reed, Northrop Grumman Corporation, United States; Lisa May,, United States;

IAC-26.A3.3B.1 (unconfirmed)

KEYNOTE: TRUSTED AI ON MARS

Dr. Steve Chien, Jet Propulsion Laboratory, United States;

IAC-26.A3.3B.2 (unconfirmed)

TOWARDS WEATHER FORECASTING ON MARS: THE BEBOP EXPERIMENT FOR THE ESA LIGHTSHIP MISSIONS TO MARS

Dr. Kevin Olsen, University of Oxford, Oxford, United Kingdom;

IAC-26.A3.3B.3

CONFIGURATION OPTIMIZATION STRATEGY FOR SENSORS IN MARS-ORBIT RENDEZVOUS FOR MARS SAMPLE RETURN

Mr. Haozhang Wu, Beijing Institute of Technology, Beijing, China;

IAC-26.A3.3B.4

DESIGN OF A MECHANICALLY COMPLIANT ROVER FOOT WITH VARIABLE STIFFNESS: ADAPTIVE MOBILITY ON PLANETARY SURFACES

Ms. Rumeysa Bağlan, Yıldız Technical University, İstanbul, Türkiye;

IAC-26.A3.3B.5

DATA DRIVEN RECONSTRUCTION OF THE MARTIAN NIGHTSIDE THERMOSPHERIC NEUTRAL DENSITIES: SEASONAL STRUCTURE, SPACE WEATHER RESPONSE AND CRUSTAL MAGNETIC FIELD MODULATION

Dr. Sergey Nikiforov, New York University Abu Dhabi, Abu Dhabi, United Arab Emirates;

IAC-26.A3.3B.6 (unconfirmed)

BRIDGING THE SPATIAL RESOLUTION GAP: QUANTITATIVE EVALUATION OF MDGP CATEGORICAL UPSCALING FROM ROVER TARGETS TO HYPERSPECTRAL PIXELS

Mr. Yael E. Castrejón-Ocampo, Instituto Politécnico Nacional, Mexico City, Mexico;

IAC-26.A3.3B.7

ORBITAL DETECTION AND CHARACTERIZATION OF MARTIAN LAVA TUBES: A MULTI-SENSOR DATA FUSION APPROACH

Mr. Florian DURIX, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, Toulouse, France;

IAC-26.A3.3B.8

DEPLOYABLE DECELERATOR WITH FLEXIBLE THERMAL PROTECTION SYSTEM FOR A 35 KG CLASS MICRO MARS LANDER: DESIGN, SIMULATION, AND FULL-SCALE DEMONSTRATION

Mr. Alexander Ring, DLR (German Aerospace Center), Stuttgart, Germany;

IAC-26.A3.3B.9

SCALE-AWARE AI FOR AUTONOMOUS ROCK MASS CHARACTERIZATION ON MARS: BRIDGING THE GAP BETWEEN TERRESTRIAL TRAINING AND PLANETARY APPLICATION

Dr. Ertuğrul Karakaplan, Pamukkale University, Denizli, Türkiye;

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

October 8 2026, 10:15 — E3

Co-Chair(s): Stephan Ulamec, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Cheryl L.B. Reed, Northrop Grumman Corporation, United States;

Rapporteur(s): Norbert Frischauf, TU Graz, Austria; Shana Diez, SpaceX, United States;

IAC-26.A3.4A.1

READY FOR LAUNCH: DEPARTURE OF MMX TO THE MARTIAN MOONS

Dr. Yasuhiro Kawakatsu, Japan Aerospace Exploration Agency (JAXA), ISAS, Sagami-hara, Kanagawa, Japan;

IAC-26.A3.4A.2

IDEFIX - THE MMX ROVER: ONE MONTH BEFORE LAUNCH

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

IAC-26.A3.4A.3

THE CONTRIBUTION OF CNES TO THE TRAJECTORY DESIGN OF MMX MISSION: FROM PRELIMINARY MISSION ANALYSIS TO PHOBOS PROXIMITY OPERATIONS

Dr. Elisabet Canalias, Centre National d'Etudes Spatiales (CNES), Toulouse, France;

IAC-26.A3.4A.4

RESULTS OF ASTEROID FLYBY IN HAYABUSA2 EXTENDED MISSION

Dr. Yuya Mimasu, Japan Aerospace Exploration Agency (JAXA), Sagami-hara-shi, Kanagawa, Japan;

IAC-26.A3.4A.5

JUSTITIA RENDEZVOUS AND PROXOPS DESIGN APPROACH FOR THE EMIRATES MISSION TO THE ASTEROID BELT (EMA) EXPLORER – UAE'S RECENT DEEP SPACE MISSION

Ms. Heyam Alblooshi, United Arab Emirates Space Agency, Abu Dhabi, United Arab Emirates;

IAC-26.A3.4A.6

EMIRATES MISSION TO THE ASTEROID BELT (EMA) LANDER: MISSION CONCEPT OF OPERATIONS AND FAULT MANAGEMENT ARCHITECTURE FOR A FULLY AUTONOMOUS ASTEROID LANDER

Mr. Muhammad Taha Ansari, Technology Innovation Institute (TII), Abu Dhabi, United Arab Emirates;

IAC-26.A3.4A.7

DESTINY* BASELINE CHANGE AND DEVELOPMENT STATUS

Mr. Hiroshi Imamura, JAXA, Sagami-hara City, Kanagawa prefecture, Japan;

IAC-26.A3.4A.8

MULTI-FLYBY TRAJECTORY ARCHITECTURE FOR DESTINY*:

ENCOUNTERS WITH APOPHIS, PHAETHON, AND ADDITIONAL NEOS
Dr. Takayuki Yamamoto, Japan Aerospace Exploration Agency (JAXA), Chuo-Ku, Sagami-hara, Kanagawa, Japan;

IAC-26.A3.4A.9

CURRENT STATUS OF JAPAN'S NEXT SMALL BODY EXPLORATION STUDY TOWARD THE EARLY 2030S

Dr. Takanao Saiki, Japan Aerospace Exploration Agency (JAXA), Sagami-hara, Kanagawa, Japan;

IAC-26.A3.4A.10 (unconfirmed)

THE PROPOSED M8 MISSION CALICO+ - EXPLORING OCEAN WORLD CERES

Prof. Stanislav Barabash, Swedish Institute of Space Physics, Kiruna, Sweden;

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

October 9 2026, 10:15 — E3

Co-Chair(s): Stephan Ulamec, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Cheryl L.B. Reed, Northrop Grumman Corporation, United States;

Rapporteur(s): Norbert Frischauf, TU Graz, Austria; Shana Diez, SpaceX, United States;

IAC-26.A3.4B.2

THE ESA HERA MISSION : LESS THAN A MONTH BEFORE ARRIVAL TO THE BINARY ASTEROID DIDYMOS

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

IAC-26.A3.4B.3

IN-FLIGHT ANTENNA DEPLOYED LENGTH OPTIMISATION FOR THE HERA MISSION'S JUVENTAS CUBESAT RADAR (JURA)

Mr. Christian Schmidt, Emtronix Sarl, Hautcharage, Luxembourg ;

IAC-26.A3.4B.4

THE RAMSES MISSION TO APOPHIS DURING ITS 2029 CLOSE EARTH ENCOUNTER

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

IAC-26.A3.4B.5

AUTONOMOUS PROXIMITY OPERATIONS NEAR APOPHIS: INTERPRETABILITY AND GENERALISATION ANALYSIS OF A META-REINFORCEMENT LEARNING OPTIMISED FUZZY INFERENCE SYSTEM

Dr. Anirudh Chhabra, University of Liverpool, Liverpool, United Kingdom;

IAC-26.A3.4B.8

APPLICABILITY OF ANGLES-ONLY INITIAL ORBIT DETERMINATION FOR FUNCTIONALLY SEPARATED SMALL-BODY SAMPLE RETURN MISSIONS

Mr. Ayumu Kawasaki, The University of TOKYO, Graduate school, Sagami-hara-shi, Japan;

IAC-26.A3.4B.9

TOFINO: HIGH-RESOLUTION TIME-OF-FLIGHT MASS SPECTROMETRY AS A MISSION-ENABLING PAYLOAD CAPABILITY FOR FUTURE COMET EXPLORATION

Mr. Robin Bonny, University of Bern, Bern, Switzerland;

IAC-26.A3.4B.10

OPIC ON COMET INTERCEPTOR: TOWARDS AUTONOMOUS IMAGING OF POORLY CHARACTERIZED TARGETS OF OPPORTUNITY

Mr. Sten Salumets, University of Tartu, Tartu, Estonia;

IAC-26.A3.4B.11

BALLISTIC RENDEZVOUS MANEUVER OF AN ASTEROID SURFACE PROBE AND AN ORBITING MOTHERCRAFT VIA ROBOTIC HOPPING

Mr. Pierluigi Vergari, Politecnico di Torino, Botrugno, Italy;

A3.5. Solar System Exploration including Ocean Worlds

October 8 2026, 15:00 — E3

Co-Chair(s): Mariella Graziano, GMV Aerospace & Defence SAU, Spain; Junichiro Kawaguchi, Australian National University (ANU), Australia;

Rapporteur(s): Charles E. Cockrell Jr., United States; Gabriel Pont, Centre National d'Etudes Spatiales (CNES), France;

IAC-26.A3.5.1

SAFE EXPLORATION OF THE OUTER SOLAR SYSTEM AND ICY WORLDS: PLANETARY PROTECTION CONSIDERATIONS

Dr. Athena Coustenis, Observatoire de Paris, Meudon, France;

IAC-26.A3.5.2 (unconfirmed)

COMPARATIVE RADAR SCATTERING OF ICE TERRAINS ON ENCELADUS, TITAN AND TERRESTRIAL ICE ANALOGS FROM CASSINI KU-BAND SAR OBSERVATIONS

Prof. Marco Mastrogiuseppe, Roma, Italy;

IAC-26.A3.5.3

TECHNOLOGY DEVELOPMENT CHALLENGES FOR THE FUTURE EUROPEAN LARGE-CLASS SCIENCE MISSION L4 TO ENCELADUS

Dr. Sven Wittig, ESA - European Space Agency, Noordwijk, Netherlands (Kingdom of the);

IAC-26.A3.5.4

EVALUATION OF ONBOARD AUTONOMOUS ANOMALY DETECTION FOR MASS SPECTROMETRY IN RESOURCE-CONSTRAINED OCEAN WORLD MISSIONS

Mr. Samin Zaman, University of Alberta, Edmonton, Canada;

IAC-26.A3.5.5

HERSCHEL - HABITABILITY AND ENVIRONMENTAL RECONNAISSANCE SYSTEM FOR CRYOVOLCANIC HYDROTHERMAL EXPLORATION OF ENCELADUS

Mr. Amirmohsen Pazireh, Students Space Association, Warsaw University of Technology, Warsaw, Poland;

IAC-26.A3.5.6

PLUME-AWARE OPERATIONS FOR ENCELADUS: TRANSLATING SOUTH-POLAR EJECTA MODELS INTO SAMPLING CORRIDORS AND KEEP-OUT ZONES FOR FUTURE SPACE EXPLORATION MISSIONS

Mr. Leonardo Ociel Espinoza Zepeda, University of California, San Diego, San Diego, United States;

IAC-26.A3.5.7

ENCORE: CONCEPT FOR A SELF-SUSTAINING ENCELADUS MISSION

Mr. Fabian Riegelsberger, Technical University of Munich (TUM), Ottobrunn, Germany;

IAC-26.A3.5.8 (unconfirmed)

PRESERVING THE 'BRAIN': PASSIVE THERMAL SURVIVAL FOR VENUS SURFACE PROBES

Ms. Rashi Mishra, TU Berlin, Berlin, Germany;

IAC-26.A3.5.10

HYBRID DIGITAL TWINS FOR AUTONOMOUS NAVIGATION OF AEROSTATS WITHIN VENUSIAN SUPER-ROTATING WINDS.

Mr. Michael Vincent Quispe Mendoza, Moscow Aviation Institute (National Research Institute, MAI), Moscow, Russian Federation;

IAC-26.A3.5.11 (unconfirmed)

TITAN: A RESOURCE-RICH REFUELING STOP FOR EXPLORATION OF THE OUTER SOLAR SYSTEM

Dr. Conor Nixon, NASA Goddard Space Flight Center Greenbelt MD 20771, Greenbelt, United States;

IAC-26.A3.5.12

COMPARATIVE AERODYNAMIC ANALYSIS OF STANDARD AIRFOILS IN EARTH AND TITAN ATMOSPHERIC CONDITIONS: EVALUATING COMPRESSIBILITY AND PERFORMANCE METRICS

Mr. Burak Can Kalkan, Samsun University, Adana, Türkiye;

A4. 55th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The Next Steps

Coordinator(s): Andrew Siemion, Berkeley SETI Research Center, United States; Michael Albert Garrett, University of Manchester, United Kingdom;

A4.1. SETI Science and Technology: Current and Future Directions

October 6 2026, 10:15 — G1

Co-Chair(s): Karen Perez, SETI Institute, United States; David DeBoer, Oxford University, United Kingdom;

IAC-26.A4.1.1

KEYNOTE: "RUDOLF PESEK LECTURE" THE FIRST DECADE OF BREAKTHROUGH LISTEN

Mr. David MacMahon, Berkeley SETI Research Center, Berkeley, CA, United States;

IAC-26.A4.1.2

RETHINKING RADIO SETI: A FRAMEWORK TO DETECT PLANETARY BROADBAND LEAKAGE

Prof. Michael Albert Garrett, University of Manchester, United Kingdom;

IAC-26.A4.1.3

AN INTERFEROMETRIC SEARCH FOR TECHNOSIGNATURES USING THE LWA SWARM

Dr. Craig Taylor, University of New Mexico (UNM), Albuquerque, United States;

IAC-26.A4.1.4

MEERKAT BAND 5 PROGRESS FOR SETI

Dr. Andrea Melis, INAF - Istituto Nazionale di AstroFisica, Selargius, Italy;

IAC-26.A4.1.5

A NEW TECHNOSIGNATURE RADIO TELESCOPE ON THE LUNAR FAR SIDE: LFT3

Dr. Steve Prabu, University of Oxford, Oxford, United Kingdom;

IAC-26.A4.1.6

THE ROBOTS ARE COMING: ARTIFICIAL INTELLIGENCE SEARCHING FOR EXTRATERRESTRIAL INTELLIGENCE

Dr. Steve Croft, University of California, Berkeley, Berkeley, United States;

IAC-26.A4.1.7

BREAKING THE SPATIAL RESOLUTION BOTTLENECK IN THE SEARCH FOR WASTE-HEAT TECHNOSIGNATURES

Mr. Tongtian Ren, The University of Manchester, Manchester, United Kingdom;

IAC-26.A4.1.9

OPTICAL SETI SURVEY USING ESO ESPRESSO ARCHIVAL DATA.

Dr. Nicolò Antonietti, INAF - IRA, san Maurizio canavese, Italy;

IAC-26.A4.1.10

A TECHNOSIGNATURE SURVEY OF THE ANTI-SOLAR POINT: THE SETI INSTITUTE'S LARGEST-EVER CAMPAIGN WITH THE ALLEN TELESCOPE ARRAY

Ms. Isabel Gerrard, University of Oxford, Oxford, United Kingdom;

IAC-26.A4.1.11

EXPANDING TECHNOSIGNATURE SEARCHES AT THE SARDINIA RADIO TELESCOPE: BREAKTHROUGH LISTEN CAMPAIGNS, ALGORITHMIC INNOVATIONS, AND CAPACITY BUILDING

Mr. Alessandro Cabras, INAF, Selargius, Italy;

IAC-26.A4.1.12

A PHOTOMETRIC SEARCH FOR SURFACE TECHNOSIGNATURES ON EXOPLANETS

Ms. Tilsım Çalık, Baykar Science High School, İstanbul, Türkiye;

IAC-26.A4.1.13

A GPU-ACCELERATED REAL-TIME IMAGING PIPELINE FOR SETI AT THE ALLEN TELESCOPE ARRAY

Dr. Karen Perez, SETI Institute, Tucson, United States;

IAC-26.A4.1.14

THE BREAKTHROUGH LISTEN SEARCH FOR INTELLIGENT LIFE: A TECHNOSIGNATURE SEARCH OF 1176 NEARBY STARS AT 1–12 GHZ

Mr. Ben Jacobson-Bell, University of California, Berkeley, Berkeley, United States;

A4.2. SETI and Society: Exploring the Human Dimension

October 6 2026, 15:00 — G1

Co-Chair(s): Lori Walton,, Canada; Paolo Musso, InCosmiCon Research Center, Italy;

IAC-26.A4.2.1

KEYNOTE: "JOHN BILLINGHAM CUTTING-EDGE LECTURE" - A NEW VERSION OF THE SETI PROTOCOLS: THE "DECLARATION OF PRINCIPLES CONCERNING THE CONDUCT OF THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI): 2026 UPDATE"

Dr. Leslie I. Tennen, Law Offices of Sterns and Tennen, Glendale, Arizona, United States;

IAC-26.A4.2.2

STRATEGIC FORESIGHT FOR EXPLORING SETI POST-DETECTION FUTURES

Mrs. Kate Genevieve, Victoria University of Wellington, Wellington, New Zealand;

IAC-26.A4.2.3

BEST PRACTICES GUIDELINES FOR SCIENCE AND RISK COMMUNICATION FOR TECHNOSIGNATURES SEARCHES AND DETECTIONS: A DRAFT FOR DISCUSSION

Dr. Andreas Schwarz, Ilmenau, Germany;

IAC-26.A4.2.4

DISCOVERY AND FUTURES LAB: A NEW INITIATIVE FOR ACCELERATING INTERDISCIPLINARY SETI RESEARCH

Dr. Chelsea Haramia, University of Bonn, Bonn, Germany;

IAC-26.A4.2.5

SAFETY FOR SCIENTISTS ENGAGED IN TECHNOSIGNATURES AND BIOSIGNATURES RESEARCH

Prof. Michael Albert Garrett, University of Manchester, United Kingdom;

IAC-26.A4.2.6

WHY ALL THE OTHER CIVILIZATIONS IN THE MILKY WAY MIGHT ALREADY BE AWARE OF OUR EXISTENCE AND WHAT THIS IMPLIES FOR TERRESTRIAL SETI

Dr. Paolo Musso, InCosmiCon Research Center, Torino, Italy;

IAC-26.A4.2.7

CULTURAL FRAMING OF EXTRATERRESTRIAL SIGNAL DETECTION: MEDIA STRUCTURES AND INTERPRETATIVE RESILIENCE IN LATIN AMERICA

Ms. Valeria Alvarado, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.A4.2.8

THE VISIBILITY–SURVIVAL TRADEOFF: A QUANTITATIVE FRAMEWORK FOR THE FERMI PARADOX

Mr. Şahin Torlakçık, ÇAYCUMA/Zonguldak, Türkiye;

IAC-26.A4.2.9

REVEAL AS A CASE STUDY IN PLANETARY COORDINATION: TEMPORAL SCHELLING POINTS AND COOPERATIVE DATA PRACTICES FOR SETI

Mrs. Kate Genevieve, Victoria University of Wellington, Wellington, New Zealand;

IAC-26.A4.2.10 (unconfirmed)

ENCODING BIOLOGY IN INTERSTELLAR MESSAGES: THE FIRST STEPS

Dr. Alberto Vianelli, University of Insubria, Varese, Italy;

IAC-26.A4.2.11

PATTERNS IN PERCEPTION OF A SIMULATED MESSAGE FROM SPACE

Ms. Daniela De Paulis, SETI Institute, Mountain View, United States;

IAC-26.A4.2.12

PHILOSOPHY, THEOLOGY, AND THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE: ETHICAL AND CULTURAL FRAMEWORKS FOR A POST-DETECTION WORLD

Mr. Vinay Lakshman, International Space University (ISU), strasbourg, France;

IAC-26.A4.2.13

NETWORK AND SYNTACTIC ANALYSIS OF HUMPBACK WHALE SONG AS SETI TECHNOSIGNATURES

Mr. Saeed Jafari, Space Generation Advisory Council (SGAC), Tehran, Iran;

A5. 29th IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM

Coordinator(s): Christian Sallaberger, Canadensys Aerospace Corporation, Canada; Maria Antonietta Perino, Thales Alenia Space Italia, Italy;

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

October 7 2026, 10:15 — Hall 6

Co-Chair(s): Nadeem Ghafoor, Avalon Space, Canada; Greg Chavers, NASA, United States;

Rapporteur(s): Marc Haese, DLR, German Aerospace Center, Germany; Henrik Pettersson, Swedish Space Corporation, Sweden;

IAC-26.A5.1.1 (unconfirmed)

EARLY INFRASTRUCTURE TECHNOLOGIES TO ADVANCE A LUNAR BASE

Dr. Wesley Fuhrman, Johns Hopkins University Applied Physics Laboratory, Laurel, MD, United States;

IAC-26.A5.1.2

ISECG LUNAR SURFACE REFERENCE SCENARIO UPDATES SINCE GER 2024

Mr. Shinichiro Narita, JAXA, Sagami-hara, Japan;

IAC-26.A5.1.3

LUNAR LAISSEZ-FAIRE: A PERSPECTIVE ON LUNAR EXPLORATION

Mr. Andrew Thomas, The British Interplanetary Society, Market Harborough, United Kingdom;

IAC-26.A5.1.4

CISLUNAR ORBITAL TRAFFIC CONTROL: A HYBRID HUMAN-AI COORDINATION SYSTEM FOR MANAGING CONJUNCTIONS, RENDEZVOUS, AND DEBRIS IN THE EARTH-MOON CORRIDOR (UNDER THE SODC ARCHITECTURE)

Ms. Wanjiku Chebet Kanjumba, University of Florida, Vicillion, Gainesville, United States;

IAC-26.A5.1.5

LUNAR-SEGMENT COMMUNICATIONS: CONNECTIVITY ARCHITECTURES FOR HUMAN OPERATIONS ON THE SURFACE OF THE MOON

Mr. Joshua Kassulke, International Space University (ISU)/University of South Australia, Toowoomba, Australia;

IAC-26.A5.1.6

THE LUNAR TESTBED: DE-RISKING MARS THROUGH INSTITUTIONAL AND ETHICAL PROTOTYPING

Mr. Lars R. "Jones" Vadjina, University of Tübingen, Rottenburg, Germany;

IAC-26.A5.1.7

TOWARD COORDINATED LUNAR GOVERNANCE UNDER UNCOORDINATED FRAMEWORKS: A COMPARATIVE LEGAL ANALYSIS OF THE ARTEMIS ACCORDS AND THE ILRS PARTNER GUIDELINES

Mr. Junyi Duan, Beijing Institute of Technology (BIT), Beijing, China;

IAC-26.A5.1.8

CONSULTATIVE PATHWAYS FOR LUNAR GOVERNANCE: STRATEGIC PERSPECTIVES FROM THE ACTION TEAM ON LUNAR ACTIVITIES CONSULTATION (ATLAC)

Dr. Ulpia Elena Botezatu, Romanian Space Agency (ROSA), Bucuresti, Romania;

IAC-26.A5.1.9

FROM SHORT MISSIONS TO SUSTAINED PRESENCE: A SCENARIO-BASED FRAMEWORK FOR ASSESSING HOW INFRASTRUCTURE AND INTEROPERABILITY SHAPE LUNAR CREW-TIME SCALING

Ms. Ekaterina Seltikova, Lille, France;

IAC-26.A5.1.10

END-TO-END MULTIMODAL DETECTION OF LUNAR AND MARTIAN LAVA TUBES

Mr. Gian Mario Marongiu, Politecnico di Torino, Busachi, Italy;

IAC-26.A5.1.11

AUTONOMOUS RESILIENCE: A COMPARATIVE ANALYSIS AND CHALLENGES OF SELF-HEALING CONCRETE TECHNOLOGIES FOR SUSTAINABLE LUNAR INFRASTRUCTURE

Prof. Giancarlo Genta, Politecnico di Torino, Torino, Italy;

A5.2. Human Exploration of Mars

October 7 2026, 15:00 — Hall 6

Co-Chair(s): Maria Antonietta Perino, Thales Alenia Space Italia, Italy; Kathy Laurini, Osare Space Consulting Group, United States;

Rapporteur(s): Norbert Frischauf, TU Graz, Austria;

IAC-26.A5.2.1

A HUMAN MARS CAMPAIGN USING THE SLS AND HIAD TECHNOLOGIES

Dr. James Green, Space Science Endeavors, Silver Spring, United States;

IAC-26.A5.2.2

ADVANCED PROPULSION FOR FAST MARS TRAVELS

Prof. Giancarlo Genta, Politecnico di Torino, Torino, Italy;

IAC-26.A5.2.3

AN ALTERNATIVE TO REFUELING-INTENSIVE MARS ARCHITECTURES: THE STARBOAT CONCEPT

Prof. Jean-Marc Salotti, Laboratoire de l'Intégration du Matériau au Système, Talence, France;

IAC-26.A5.2.4

HUMAN-CENTERED OPERATIONAL DE-RISKING OF ECLSS FOR LONG-DURATION LAVA TUBE ANALOG MISSIONS

Mr. Stylianos Tsalas, Politecnico di Torino, Foiano della Chiana, Italy;

IAC-26.A5.2.6

PROGRESSIVE HUMAN-ROBOT MISSION DESIGN FOR LAVA TUBES HABITATION: FROM TERRESTRIAL ANALOGUES TO MARTIAN IMPLEMENTATION.

Ms. Margherita Bertoglio, Politecnico di Torino, ANCONA, Italy;

IAC-26.A5.2.7

ADAPTIVE HUMAN-AI DECISION AUTHORITY ARCHITECTURE FOR MULTINATIONAL MARS EXPLORATION MISSIONS

Mrs. Zeynep Hilal Erdoğan, Ankara University, Ankara, Türkiye;

IAC-26.A5.2.8

GEOL'EX: A 3D PRINTED SPECTROSCOPE FOR GEOLOGICAL ANALYSIS IN THE CONTEXT OF A MARTIAN ANALOG MISSION

Mrs. Céline Parnaud-Amy, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, Toulouse, France;

IAC-26.A5.2.9

MARSMAP: ARTIFICIAL INTELLIGENCE-BASED DYNAMIC RISK MAPPING SYSTEM FOR MARS COLONY SAFETY

Ms. Azra Özbir, Adana, Türkiye;

IAC-26.A5.2.10

CHALLENGES OF MARTIAN DUST AND EQUIPMENT PERFORMANCE IN FUTURE HUMAN MARS MISSIONS

Ms. Hayrunnisa Adar, Gebze Technical University, Kocaeli, Türkiye;

IAC-26.A5.2.11

MARTE: A MARS ANALOG FACILITY ON EARTH

Mr. Vito Costantini, Lazzero Tecnologie srl, TORINO, Italy;

A5.4. Deep Space Habitats and Resources

October 8 2026, 10:15 — Hall 34

Co-Chair(s): Anna Barbara Imhof, Liquifer Systems Group (LSG), Austria; Maria Antonietta Perino, Thales Alenia Space Italia, Italy;

Rapporteur(s): Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Austria; Olga Bannova, University of Texas at San Antonio, United States;

IAC-26.A5.4.2

INTEGRATED PHENOTYPING OF PIONEER SPECIES AND TOMATO TO ASSESS PLANT-DRIVEN SUBSTRATE MODIFICATION AND NUTRIENT SUPPLEMENTATION IN LUNAR REGOLITH SIMULANT (LHS-1)

Dr. Nil Demircan, Ege University, Izmir, Türkiye;

IAC-26.A5.4.3

A DISTRIBUTED IOT MESH ARCHITECTURE FOR AUTONOMOUS ENVIRONMENTAL AND BIOMETRIC MONITORING IN ANALOG ASTRONAUT HABITATS

Mrs. Maria Alejandra Marulanda, Instituto Politécnico Nacional, Mexico city, Mexico;

IAC-26.A5.4.4

TOWARD IN-SITU GROWN HABITAT MATERIALS: SEQUENTIAL LAYERING COLONIZATION OF MYCELIUM-BASED COMPOSITE FOR MARTIAN HABITATS

Mr. Henning Dörfler, University of Innsbruck, Innsbruck, Austria;

IAC-26.A5.4.5

ADAPTIVE WASTE-INTEGRATED POLYETHYLENE SHIELDING ARCHITECTURE FOR MARS TRANSIT HABITATS

Mr. Muhammed Furkan Yamli, Ondokuz Mayıs University, samsun, Türkiye;

IAC-26.A5.4.6

THE ORBITAL FERRY: A NOVEL PROPELLANTLESS LOGISTICS SYSTEM FOR SUSTAINABLE CARGO TRANSPORT IN LUNAR AND MARTIAN ORBITS

Dr. Sergei Kupreev, Peoples' Friendship University of Russia (RUDN University), Moscow, Russian Federation; Mr. Fadi Ibrahim, Peoples' Friendship University of Russia (RUDN University), Moscow, Russian Federation;

IAC-26.A5.4.7

EXPERIMENTAL EVALUATION OF HYBRID BIOLOGICAL LIFE SUPPORT SYSTEMS UNDER SIMULATED MARTIAN LOW-PRESSURE AND REGOLITH CONDITIONS

Ms. Azra Hastürk, Antalya Science and Art Center, ANTALYA, Türkiye;

IAC-26.A5.4.8

EXTENDING ECSS SYSTEMS ENGINEERING PROCESSES FOR HYBRID BIOLOGICAL SPACE SYSTEMS: ARCHITECTURE, AIV&V AND RISK-BASED VERIFICATION FRAMEWORK FOR CONTROLLED ECOLOGICAL HABITATS.

Mr. Jose Maria Ortega-Hernandez, Wrexham, United Kingdom;

IAC-26.A5.4.9

FROM CONCEPT TO HABITATION: A CRITICAL REASSESSMENT OF STARSHIP-DERIVED LUNAR HABITAT CONCEPTS IN LIGHT OF NASA LUNAR SAFE HAVEN STUDIES

Mr. Omar Alayli, Future Space Architecture, Berlin, Germany;

IAC-26.A5.4.11

JAXA'S EXPERIMENTAL STUDY ON HOW THE STATE OF LUNAR ICY REGOLITH AFFECTS THE WATER EXTRACTION PROCESS

Ms. Suzuna Okamoto, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

IAC-26.A5.4.12

MICROALGAE-BASED BIOREGENERATIVE PHOTOBIOREACTOR SYSTEMS FOR HABITAT-SCALE LIFE SUPPORT IN MARS SURFACE MISSIONS

Ms. Dilara Gündüz, Balıkesir, Türkiye; Mrs. Ayşe Sena Türeyyen, İSTANBUL-ANADOLU, Türkiye;

A6. 24th IAA SYMPOSIUM ON SPACE DEBRIS

Coordinator(s): Mark A. Skinner, The Aerospace Corporation, United States; Noelia Sanchez Ortiz, Arribes Enlightenment, Spain; Pierre Omaly, Astroscale France SAS, France;

A6.1. Space Debris Measurements and Orbit Determination SST (1)

October 6 2026, 10:15 — E2

Co-Chair(s): Thomas Schildknecht, SwissSpace Association, Switzerland; Mark A. Skinner, The Aerospace Corporation, United States;

Rapporteur(s): Dmitriy Grishko, Bauman Moscow State Technical University, Russian Federation;

IAC-26.A6.1.1

ANALYSIS OF INITIAL OBSERVATIONS OF 2014-058A AFTER THE FRAGMENTATION EVENT OF 2026-01-30

Dr. Johannes Herzog, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Weßling, Germany;

IAC-26.A6.1.2

SATFIELD - ONLINE SERVICE FOR ASTRONOMICAL IMAGES CONTAMINATION ASSESSMENT

Dr. Jiří Šilha, Astros Solutions s.r.o., Bratislava-Karova Ves, Slovakia;

IAC-26.A6.1.3

A RAPIDLY SCALING DISTRIBUTED OPTICAL NETWORK FOR MULTI-REGIME SPACE OBJECT TRACKING AND ORBIT DETERMINATION

Dr. Franck Marchis, SETI Institute, Mountain View, United States;

IAC-26.A6.1.4

A ROBUST DEEP LEARNING PIPELINE FOR SPACE OBJECT DETECTION ACROSS DIFFERENT SNR CONDITIONS

Mr. Sebastian Samuele Rizzuto, Politecnico di Milano, Milan, Italy;

IAC-26.A6.1.5

DARK AND QUIET SKIES: FURTHER OBSERVATIONAL TESTS OF A PREDICTIVE TECHNIQUE TO MITIGATE OPTICAL INTERFERENCE ON ASTRONOMICAL OBSERVATORIES

Dr. Mark A. Skinner, The Aerospace Corporation, United States;

IAC-26.A6.1.6

SPACE DEBRIS LIDAR FOR DETECTING AND CHARACTERIZING THE SUB-MILLIMETER DEBRIS POPULATION IN-SITU

Dr. John McVey, The Aerospace Corporation, El Segundo, United States;

IAC-26.A6.1.7

TOWARDS SINGLE PHOTON AVALANCHE DIODE PHOTOMETRY OF SPACE DEBRIS

Mr. Silas Fiore, Astronomical Institute University of Bern (AIUB), Bern, Switzerland;

IAC-26.A6.1.8

SENSOR SCHEDULING FOR CATALOGUE GENERATION UTILIZING ADMISSIBLE REGIONS

Mr. Bart Kieboom, Airbus Defence and Space - Space Systems, Friedrichshafen, Germany;

IAC-26.A6.1.9

AN INTEGRATED DIGITAL TWIN AND LABORATORY FRAMEWORK FOR MULTI-SPECTRAL LIGHT CURVE GENERATION

Mr. Lorenzo Cimino, Sapienza University of Rome, Roma, Italy;

IAC-26.A6.1.10

NON BAYESIAN ORBIT DETERMINATION VIA EPISTEMIC SUPPORT POINT FILTERING

Prof. Moriba Jah, Privateer Space, Inc., Kihei, Hawaii, United States;

A6.2. Resident Space Objects Characterisation and High Velocity Impacts

October 8 2026, 15:00 — E2

Co-Chair(s): Zizheng Gong, Beijing Institute of Spacecraft Environment Engineering, China Academy of Space Technology (CAST), China; Satomi Kawamoto, Institute of Science Tokyo, Japan;
Rapporteur(s): Yukihito Kitazawa, Japan;

IAC-26.A6.2.1

INTRODUCING FRAGMENT SHAPES AND MATERIALS INTO ESA MASTER'S BREAK-UP MODEL

Mr. Daniel Raphael Wacker, TU Braunschweig, Institute of Space Systems, Braunschweig, Germany;

IAC-26.A6.2.2

EXPERIMENTAL CHARACTERIZATION OF FRAGMENTS FROM HYPERVELOCITY IMPACTS ON SANDWICH PANELS

Dr. Lorenzo Olivieri, University of Padova - DII/CISAS, Padova, Italy;

IAC-26.A6.2.3

ADAPTIVE FEM-SPH MODELLING OF DEBRIS CLOUD EVOLUTION AND SHOCK-INDUCED STRUCTURAL RESPONSE IN WHIPPLE SHIELDS

Ms. ceyda nilsu Ççimen, Istanbul Technical University, İstanbul, Türkiye;

IAC-26.A6.2.4

ARTIFICIAL SPACE OBJECTS CHARACTERIZATION USING GROUND-BASED OPTICAL MEASUREMENTS AND LABORATORY MEASUREMENTS

Dr. Jiří Šilha, Comenius University, Faculty of Mathematics, Physics and Informatics, Bratislava, Slovakia;

IAC-26.A6.2.5

OPTICAL CHARACTERIZATION OF SPACE-DEBRIS LIKE FRAGMENTS

Mrs. Elena Galletta, Sapienza University of Rome, Viterbo, Italy;

IAC-26.A6.2.6

THE DEVELOPMENT OF A PUBLIC SPACE MATERIALS BRDF TO ENABLE MATERIAL DETERMINATION THROUGH LIGHT CURVE INVERSION TECHNIQUES.

Mr. Luís Gonçalves, Universidade de Coimbra, Coimbra, Portugal;

IAC-26.A6.2.7

LONG-TERM ATTITUDE DYNAMICS OF UNCONTROLLED BOX-WING SATELLITES DRIVEN BY SOLAR RADIATION PRESSURE

Dr. Nicola Cimmino, Astronomical Institute of the University of Bern, Bern, Switzerland;

IAC-26.A6.2.8

CATALOG-LEVEL PHOTOMETRY ANALYSIS OF LEO
Mr. Max Geissbuhler, Slingshot Aerospace, Edwards, United States;

IAC-26.A6.2.9

FUSION OF LIGHT CURVES AND SATELLITE LASER RANGING MEASUREMENTS FOR THE INITIAL ESTIMATION OF THE ATTITUDE AND ANGULAR VELOCITY OF RESIDENT SPACE OBJECTS
Mr. Pasquale Bencivenga, University of Naples "Federico II", Aversa (CE), Italy;

IAC-26.A6.2.10

DISTURBANCE-AWARE COUPLED DYNAMICAL ESTIMATION OF NON-COOPERATIVE SPACE OBJECTS UNDER TRANSIENT PERTURBATIONS
Ms. Elif Şahin, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.A6.2.12

EXPLOITING RADAR MICRO-DOPPLER SIGNATURES FOR SPIN STATE CHARACTERIZATION OF UNCOOPERATIVE SPACE OBJECTS
Ms. Maria Alessandra De Luca, Politecnico di Milano, Milan, Italy;

A6.3. Environment Modelling and Risk Assessment

October 8 2026, 10:15 — E2

Co-Chair(s): Dan Oltrogge, COMSPOC Corp., United States;
Carmen Pardini, ISTI-CNR, Italy;
Rapporteur(s): Camilla Colombo, Politecnico di Milano, Italy;

IAC-26.A6.3.1

GENERATION OF A SYNTHETIC POPULATION OF SPACE DEBRIS RESULTING FROM THE EXPLOSION OF A LARGE CONSTELLATION SATELLITE
Dr. Lorenzo Olivieri, University of Padova - DII/CISAS, Padova, Italy;

IAC-26.A6.3.2

SCALABILITY AND COLLISION RISK OF KILOMETERSCALE ORBITAL INFRASTRUCTURE IN AN INCREASINGLY CONGESTED ENVIRONMENT
Mr. Sven Kevin Flegel, OKAPI:Orbits GmbH, Braunschweig, Germany;

IAC-26.A6.3.3

ENHANCED TECHNIQUES FOR THE EARLY EPOCH RECONSTRUCTION OF Cislunar FRAGMENTATION EVENTS FROM A SINGLE FRAGMENT STATE
Ms. Paola Grattagliano, Politecnico di Milano, Milano, Italy;

IAC-26.A6.3.4

FROM 2025 ONWARDS: 50-YEAR SPACE DEBRIS PROJECTION WITH ESA'S MASTER FUTURE POPULATION
Mr. André Horstmann, IMS Space Consultancy, Darmstadt, Germany;

IAC-26.A6.3.5

CHARACTERISTIC-BASED SPACE DEBRIS DENSITY EVOLUTION VIA ADAPTIVE TAYLOR POLYNOMIAL PATCHES
Mr. Luca Gao, University of Auckland, Auckland, New Zealand;

IAC-26.A6.3.6

SPACE SUSTAINABILITY AND RISKS FROM SMALL ORBITAL DEBRIS
Dr. J.-C. Liou, National Aeronautics and Space Administration (NASA), Houston, United States;

IAC-26.A6.3.7

THE IMPACT OF SATELLITE REQUIRED NAVIGATION PERFORMANCE ON ORBITAL CAPACITY AND SPACE TRAFFIC MANAGEMENT
Mr. Pietro Russo, University of Naples "Federico II", SCAFATI, Italy;

IAC-26.A6.3.8

HIGH-FIDELITY Cislunar COLLISION RISK ASSESSMENT FOR THE LUNAR GATEWAY: SCALABLE UNCERTAINTY PROPAGATION UNDER MULTI-BODY DYNAMICS
Mr. Aldo Tonnini, ISAE-Supaero University of Toulouse, Toulouse, France;

IAC-26.A6.3.10

CORRELATIONAL ASSESSMENT OF SPACE ENVIRONMENT INDICES
Mr. Dominick Bologna, The Aerospace Corporation, El Segundo, United States;

IAC-26.A6.3.11

RAPTOR: UNCERTAINTY QUANTIFICATION OF THERMOSPHERIC NEUTRAL DENSITY FOR ORBIT PROPAGATION IN LEO
Dr. Yashica Katri, Luxembourg, Luxembourg ;

IAC-26.A6.3.12

PROBABILISTIC LIFETIME AND END-OF-LIFE COMPLIANCE RISK ASSESSMENT FOR LEO SATELLITES UNDER UNCERTAINTY
Ms. İrem Çetinkaya, Ankara Yıldırım Beyazıt University, ANKARA, Türkiye;

A6.4. Operations in Congested Space: Situational Awareness and Space Traffic Management – SSA

October 7 2026, 15:00 — E2

Co-Chair(s): Andrew Monham, EUMETSAT, Germany; Vincent Martinot, Thales Alenia Space France, France;
Rapporteur(s): Darren McKnight, LeoLabs, United States;

IAC-26.A6.4.1

USING LANES IN SPACE: \\GUIDANCE TARGET COMMUNICATION FOR MANEUVER ADJUDICATION REDUCTION
Mr. Ryan W. Shepperd, Iridium, Leesburg, VA, United States;

IAC-26.A6.4.2

STATUS AND PERSPECTIVES OF THE SUB-ORBITAL ACTIVITIES: RISK ASSESSMENT AND OPERATIONAL CHALLENGES FOR SPACE TRAFFIC MANAGEMENT IN CONGESTED ENVIRONMENTS
Dr. Paolo Baiocco, CNES, Paris, France;

IAC-26.A6.4.3

COORDINATION OF SPACE ENVIRONMENT SUSTAINABILITY APPROACHES IN THE COORDINATED GROUP FOR METEOROLOGICAL SATELLITES (CGMS).
Mr. Andrew Monham, EUMETSAT, Darmstadt, Germany;

IAC-26.A6.4.4

EU SST – TRACSS JOINT STUDY ON OPERATIONAL INFORMATION EXCHANGE
Dr. Mariel Borowitz, Georgia Tech Space Research Institute, Atlanta, GA, United States;

IAC-26.A6.4.5

OPERATIONAL SPACE-BASED SSA: END-TO-END PIPELINE ARCHITECTURE FOR RESIDENT SPACE OBJECT CATALOGUING
Dr. Paolo Guardabasso, ARCA Dynamics, Rome, Italy;

IAC-26.A6.4.6

DISCOS VS SATCAT: FROM CATALOGUE DISCREPANCIES TO OBJECT TYPE AI INFERENCE
Ms. Marta Guimaraes, NeuraSpace, SA, Coimbra, Portugal;

IAC-26.A6.4.7

ASSESSING CONSISTENCY OF CONJUNCTION DATA MESSAGES FROM MULTIPLE SOURCES FOR SAFER SPACE OPERATIONS
Mr. Floris Weijand, OKAPI:Orbits GmbH, Braunschweig, Germany;

IAC-26.A6.4.8

ANALYSIS OF WORST-CASE COLLISION PROBABILITIES CONSIDERING LARGE UNCERTAINTIES
Mr. Eduard Gamper, IMS Space Consultancy, Darmstadt, Germany;

IAC-26.A6.4.9

SATAIS: ENABLING FEDERATED SPACE TRAFFIC MANAGEMENT VIA AN APPLICATION-LAYER PROTOCOL FOR DIRECT SATELLITE-TO-SATELLITE COORDINATION
Mr. Sibtain Ali Thepdawala, Technical University of Munich (TUM), Munich, Germany;

A6.5. Post Mission Disposal and Space Debris Removal – SEM

October 9 2026, 10:15 — E2

Co-Chair(s): Roberto Opromolla, University of Naples “Federico II”, Italy; Christophe Bonnal, European Conference for Aero-Space Sciences (EUCASS), France;

Rapporteur(s): Jason Forshaw, Astroscale Ltd, United Kingdom;

IAC-26.A6.5.1

IRUS: IN-ORBIT REFURBISHMENT AND UPGRADING SERVICE – TOWARDS A CIRCULAR ECONOMY IN SPACE

Dr. Rowan Curtis, Astroscale Ltd, Didcot, United Kingdom;

IAC-26.A6.5.2

ESA'S CAT MISSION: ENABLING ACTIVE DEBRIS REMOVAL THROUGH THE IN-ORBIT DEMONSTRATION OF STANDARDISED DESIGN-FOR-REMOVAL INTERFACES

Mr. Daniel Wischert, European Space Agency (ESA), Noordwijk, Netherlands (Kingdom of the);

IAC-26.A6.5.3

SCENARIO ANALYSIS, IMPLEMENTATION, AND TESTING IN AN ON-GROUND DUAL ROBOTIC ARM HARDWARE-IN-THE-LOOP DOCKING SIMULATOR

Mr. Setra Yoman Prahayang, TU Berlin, West Jakarta, Germany;

IAC-26.A6.5.4

PROJECT DEXTER: DEBRIS EXTRACTION TOOLS FOR EXTRATERRESTRIAL RECYCLING

Dr. Leonard Felicetti, Cranfield University, Cranfield, United Kingdom;

IAC-26.A6.5.5

UPGRADED TESTING FACILITY FOR ACTIVE DEBRIS REMOVAL ADVANCED TECHNOLOGIES VERIFICATION AND VALIDATION

Mr. Samuele Giuseppe Labo, Politecnico di Milano, Milano, Italy;

IAC-26.A6.5.6

CONCEPT AND DESIGN OF THE TARAZ SPACE DEBRIS REMOVAL DEMONSTRATION MISSION USING TETHER TOWING AND AERODYNAMIC BRAKING

Dr. Dmitry A. Sizov, Nazarbayev University, Astana, Kazakhstan;

IAC-26.A6.5.7

PRELIMINARY ANALYSIS OF LASER-BASED ACTIVE DEBRIS REMOVAL FROM STRATOSPHERIC BALLOONS

Prof. Giulio Avanzini, Sapienza University of Rome, Roma, Italy;

IAC-26.A6.5.8

SEARCH FOR GPS LONG-TERM REENTRY DISPOSAL STRATEGY WITH ODMSP-COMPLIANT REENTRY CASUALTY RISK

Mr. Marlon Sorge, The Aerospace Corporation, Albuquerque, United States;

IAC-26.A6.5.9

DESIGN AND CONTROL OF A MINIATURIZED DEPLOYMENT MECHANISM WITH RETRIEVAL CAPABILITIES FOR THE E.T.COMPACT PROJECT

Mr. Marco Ghedin, CISAS – “G. Colombo” Center of Studies and Activities for Space, University of Padova, Padova, Italy;

IAC-26.A6.5.10

IN-ORBIT DEMONSTRATION OF A PROPULSION-FREE PASSIVE DEORBIT MEMBRANE FOR POST-MISSION DISPOSAL OF ROCKET BODIES

Dr. Yusuke Egawa, BULL Co., Ltd., Utsunomiya, Japan;

A6.6. Orbit Propagation and Mitigation Assessment

October 9 2026, 13:45 — E2

Co-Chair(s): Marlon Sorge, The Aerospace Corporation, United States; Tim Flohrer, European Space Agency (ESA), Germany;

Rapporteur(s): Jan Siminski, ESA - European Space Agency, Germany;

IAC-26.A6.6.1

SENSITIVITY OF COLLISION ESTIMATORS IN LONG-TERM DEBRIS ENVIRONMENT PROPAGATION

Mr. Francesco De Bortoli, Politecnico di Milano, Milano, Italy;

IAC-26.A6.6.2

MOLNIYA POPULATION DESCRIPTION AND CHARACTERIZATION THROUGH A STATISTICAL SEARCH SURVEY METHOD

Mr. Matteo Rossetti, Sapienza University of Rome, Orvieto TR, Italy;

IAC-26.A6.6.3

LONG-TERM SPACE ENVIRONMENT PROJECTIONS BEFORE AND AFTER LARGE LEO CONSTELLATIONS

Mr. Gregory Henning, The Aerospace Corporation, Albuquerque, United States;

IAC-26.A6.6.4

STAKEHOLDER-INFORMED MODELLING OF DEBRIS MITIGATION STRATEGIES TO SUPPORT EVIDENCE-BASED POLICYMAKING AND OPERATOR DECISIONS

Ms. Martina Rusconi, Politecnico di Milano, Valmadrera, Italy; Dr. Qian Shi, Secure World Foundation, Broomfield, United States;

IAC-26.A6.6.5

NEW SEMI-ANALYTICAL THEORY OF MOTION FOR A SPACE OBJECT UNDER SOLAR RADIATION PRESSURE

Mr. Ivan Khripunov, Moscow Institute of Physics and Technology (MIPT), Moscow region, Dolgoprudny, Russian Federation;

IAC-26.A6.6.6

PROPELLANT-EFFICIENT END-OF-LIFE DEORBIT DESIGN MAPS FOR LEO SPACE DEBRIS MITIGATION: IMPULSIVE VS LOW-THRUST

Ms. Büşra Türk, Istanbul Technical University, Ankara, Türkiye; Mr. Bora Cüneyt Akçakin, Suleyman Demirel University, Bursa, Türkiye;

IAC-26.A6.6.7

ASSESSING EFFECTIVENESS OF MAINSTREAM PROBABILITY-BASED COLLISION AVOIDANCE

Mr. Dan Oltrogge, COMSPOC Corp., Colorado Springs, United States;

IAC-26.A6.6.8

FROM INJECTION EPOCH TO PRESENT: ANALYSIS OF ARIANE ROCKET ELEMENTS' ORBITAL EVOLUTION

Dr. Melissa Zemoura, Centre National d'Etudes Spatiales (CNES), Paris, France;

IAC-26.A6.6.9

LIFETIME MAPS FOR LOW LUNAR ORBITS

Ms. Mathilda Bolis, Politecnico di Milano, Entratico, Italy;

IAC-26.A6.6.10

TOPOLOGY-BASED ANOMALY DETECTION USING ORBITAL DATA

Mr. Partha Chowdhury, IIIT Delhi, New Delhi, India;

A6.7. Re-entry Modelling and Interaction with Atmosphere

October 6 2026, 15:00 — E2

Co-Chair(s): Ysolde PREVEREAUD, ONERA - The French Aerospace Lab, France; Stijn Lemmens, European Space Agency (ESA), Netherlands (Kingdom of the);

Rapporteur(s): Pierre Omaly, Astroscale France SAS, France;

IAC-26.A6.7.1

REVIEW OF LAUNCH AND RE-ENTRY EMISSION ASSESSMENT METHODS AND ATMOSPHERIC INTERACTION

Mr. Jens Neubert, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-26.A6.7.2

MODELLING OF STRATOSPHERIC ACCUMULATION AND TRANSPORT OF SATELLITE RE-ENTRY EMISSIONS

Mr. Jakub Jerzy Sypek, University of Southampton, Southampton, United Kingdom;

IAC-26.A6.7.3

ASSESSING THE ENVIRONMENTAL CONSEQUENCES OF SATELLITE REENTRY: IMPACT ON OZONE LAYER DEPLETION USING THE GEOS-CHEM GLOBAL CHEMISTRY-TRANSPORT MODEL

Mr. Denis Michael Acker, Institute of Space Systems, University of Stuttgart, Castle Hill, Sydney, Australia;

IAC-26.A6.7.4

HIGH-ALTITUDE BALLOON PLATFORM FOR IN-SITU INVESTIGATION OF STRATOSPHERIC AEROSOLS AND RE-ENTRY-RELATED PARTICLES

Dr. Zsófia Bodo, Muenchen, Germany;

IAC-26.A6.7.5

DSMC ANALYSIS AND SURROGATE MODELLING OF DEPLOYABLE SYSTEMS FOR SATELLITE RE-ENTRY FROM VERY LOW EARTH ORBIT

Mr. Antonio Sannino, Bundeswehr University Munich, Neubiberg, Germany;

IAC-26.A6.7.6

DEVELOPMENT OF A SCALABLE HIGH-POWER ICP TORCH FOR ASSESSING ATMOSPHERIC RE-ENTRY EMISSIONS AND ENVIRONMENTAL IMPACT

Prof. Minkwan Kim, University of Southampton, Southampton, United Kingdom;

IAC-26.A6.7.9

ROSIE MISSIONS STATUS AND CAMPAIGNS OVERVIEW

Dr. Matej Zigo, Astros Solutions s.r.o., Bratislava, Slovakia;

IAC-26.A6.7.10

RESULTS OF SPACE DEBRIS MITIGATION PROJECT TEMIS-DEBRIS

Mr. Thorn Schleutker, DLR (German Aerospace Center), Cologne, Germany;

A6.8-E9.1. Policy, Legal, Institutional, Economic and Security Aspects of Debris Mitigation, Debris Remediation and STM

October 5 2026, 16:30 — E2

Co-Chair(s): David Spencer, The Aerospace Corporation, United States; Serge Plattard, University College London (UCL), United Kingdom; Tanja Masson-Zwaan, International Institute of Air and Space Law, Leiden University, Netherlands (Kingdom of the); Andrea Capurso, LUISS Guido Carli University, Italy;

Rapporteur(s): Victoria Samson, Secure World Foundation, United States; Emma Kerr, Defence Science and Technology Laboratory (DSTL), United Kingdom;

IAC-26.A6.8-E9.1.1

SPACE DEBRIS AS ENVIRONMENTAL HARM: LEGAL RESPONSIBILITY AND GOVERNANCE GAPS IN LOW EARTH ORBIT

Dr. Abhiram Jayan Nair, Erets Space, London, United Kingdom;

IAC-26.A6.8-E9.1.2

CLOSING THE GAPS: STATE OBLIGATIONS UNDER INTERNATIONAL LAW FOR THE ENVIRONMENTAL REGULATION OF SPACE OBJECT REENTRIES IN AREAS BEYOND NATIONAL JURISDICTION

Ms. Reagan Aylmer, University of Oslo, Tromsø, Norway;

IAC-26.A6.8-E9.1.3

SPACE DEBRIS AND ORBITAL SUSTAINABILITY: REFRAMING STATE RESPONSIBILITY IN THE AGE OF TECHNOLOGICAL ADVANCEMENT

Prof. George (Georgios) D. Kyriakopoulos, National and Kapodistrian University Of Athens, Gyfada, Greece;

IAC-26.A6.8-E9.1.4

A LAUNCHING STATE-LED VOLUNTARY OWNERSHIP AND LIABILITY CONSOLIDATION MECHANISM FOR ACTIVE DEBRIS REMOVAL (ADR)

Mr. Yoshiyuki Muto, Japan Aerospace Exploration Agency (JAXA), Chiyoda-ku, Tokyo, Japan;

IAC-26.A6.8-E9.1.5

LUNAR ORBITER REGISTRATION AND INFORMATION SHARING FOR STM GOVERNANCE: PRINCIPLES, TOOLS, IMPLEMENTATION GAPS AND LESSONS FROM THE KPLO EXPERIENCE

Dr. Nammi Choe, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

IAC-26.A6.8-E9.1.6

LEGAL PREPAREDNESS FOR ORBITAL EMERGENCIES: RETHINKING ACCOUNTABILITY AND COORDINATION IN SPACE TRAFFIC EMERGENCY MANAGEMENT

Prof. Yongliang Yan, Beijing Jiaotong University, Beijing, China;

IAC-26.A6.8-E9.1.7

FROM REGULATORY CHALLENGES TO GOVERNANCE OPPORTUNITIES: LEGAL PATH CONSTRUCTION FOR SUSTAINABLE DEVELOPMENT OF LOW EARTH ORBIT GIANT CONSTELLATIONS

Mr. Tao Zhang, Xiamen University, Shenzhen, China;

IAC-26.A6.8-E9.1.8

GOVERNING THE ORBITAL COMMONS INEQUALITY, CATASTROPHIC RISK, AND THE DESIGN OF A SPACE SUSTAINABILITY REGIME

Mr. Guankun Chen, Columbia University, New York, United States;

IAC-26.A6.8-E9.1.9

THE TRAGEDY OF THE ORBITAL COMMONS IN LEO: A VCG MECHANISM WITH SOCIAL COLLATERAL AS A SUBSTITUTE FOR DIPLOMATIC TRUST

Mr. Dmitrii Vokhmintsev, Saint-Petersburg, Russian Federation;

IAC-26.A6.8-E9.1.10

INTERNALIZING ORBITAL DEBRIS EXTERNALITIES IN LOW EARTH ORBIT: INCENTIVE DESIGN FOR SUSTAINABLE GOVERNANCE

Mr. Oscar Adrian Robalino Florett, SDA Bocconi School of Management, Bocconi University, MILAN, Italy;

IAC-26.A6.8-E9.1.11

EVALUATING 10R-BASED CIRCULAR ECONOMY STRATEGIES FOR SPACE DEBRIS MITIGATION USING A MULTI-CRITERIA DECISION-MAKING FRAMEWORK

Ms. İrem Çetinkaya, Ankara Yıldırım Beyazıt University, ANKARA, Türkiye;

IAC-26.A6.8-E9.1.12

AI-ENABLED SPACE OPERATIONS: HOW DO INTERNATIONAL RESPONSIBILITY AND LIABILITY APPLY?

Dr. Elina Morozova, Intersputnik International Organization of Space Communications, Moscow, Russian Federation;

A6.9. Space Debris Measurements and Orbit Determination SST (2)

October 7 2026, 10:15 — E2

Co-Chair(s): Fabrizio Piergentili, Sapienza University of Rome, Italy; Juan Carlos Dolado Perez, Look Up Space, France;

IAC-26.A6.9.1

SPACE DEBRIS DETECTION NETWORK BASED ON LONG-SHORT EXPOSURE SYNERGISTIC FEATURES

Dr. Zhe Fu, Northwestern Polytechnical University, Xi'an Shaanxi, China;

IAC-26.A6.9.2

AI-BASED INITIAL ORBIT DETERMINATION FOR EARTH-MOON LIBRATION POINT ORBITS

Mr. Hongyu Liu, Beihang University, Beijing, China;

IAC-26.A6.9.3

A MULTI-SOURCE DEEP LEARNING APPROACH FOR OPTICAL SATELLITE TRAIL DETECTION

Mr. Arif Can Başbüyük, Middle East Technical University, Ankara, Türkiye;

IAC-26.A6.9.4

DAYLIGHT OPTICAL TRACKLETS IN THE NIR-SWIR BAND FOR ORBIT DETERMINATION OF LEO OBJECTS

Mr. Andrea Ederle, Sapienza University of Rome, Casoria, Italy;

IAC-26.A6.9.5

DYNAMIC MODELLING AND FEASIBILITY ANALYSIS OF PASSIVE BISTATIC RADAR IN STRATHCUBE

Ms. Anushka Bansode, University of Strathclyde / Mechanical and Aerospace Engineering, Glasgow, United Kingdom;

IAC-26.A6.9.6

ORBIT DETERMINATION USING LARGE SCALE SPACE-BASED MEASUREMENTS FOR SPACE SITUATIONAL AWARENESS

Dr. Juan Félix San-Juan, Universidad de La Rioja, Logroño, Spain;

IAC-26.A6.9.7

INITIAL ORBIT DETERMINATION FROM RADAR MEASUREMENTS USING THE ENTIRE ATTRIBUTABLE SET.

Dr. Marco Felice Montaruli, Politecnico di Milano, Milan, Italy;

IAC-26.A6.9.8

HYBRID AI-AUGMENTED FRAMEWORK FOR HIGH-FIDELITY TRACKING OF NON-COOPERATIVE OBJECTS

Ms. Aayushi Doshi, American Museum of Natural History in New York, New York, United States;

IAC-26.A6.9.9

EARLY-PHASE FRAGMENTATION CHARACTERIZATION: FROM OPTIMIZED SENSOR TASKING TO RESIDENT SPACE OBJECT CHARACTERIZATION

Mr. Alessandro Mignocchi, Politecnico di Milano, Milan, Italy;

IAC-26.A6.9.10

ROBUST ATTITUDE ESTIMATION USING MULTISPECTRAL LIGHT CURVE MEASUREMENTS

Dr. Fiona Porter, University of Strathclyde / Mechanical and Aerospace Engineering, Glasgow, United Kingdom;

A6.10-B4.10. Joint Small Satellite/Space Debris Session on Small Satellite Operations for the Sustainability of Space

October 9 2026, 13:45 — Hall 29

Co-Chair(s): Paolo Marzioli, Sapienza University of Rome, Italy;
Philip Davies, Byspace Ltd, United Kingdom;

Rapporteur(s): Norman Fitz-Coy, University of Florida, United States;

IAC-26.A6.10-B4.10.1

PAYING ZERO DEBRIS CUBESAT MISSIONS: ESA'S CLEAN CUBE IN-ORBIT DEMONSTRATIONS

Mr. Daniele Valentino Bella, IMS Space Consultancy, Darmstadt, Germany;

IAC-26.A6.10-B4.10.2

PAVING THE WAY FOR A SUSTAINABLE UTILIZATION OF SPACE: THE ACTIVE DEBRIS REMOVAL MISSION CLEARSPACE-1

Dr. Svenja Woicke, OHB System AG, Bremen, Germany;

IAC-26.A6.10-B4.10.3

CAT-IOD OPERATIONAL ENVELOPES USING SMALL SATELLITES: BENCHMARK FOR FUTURE ADR MISSIONS

Mr. Raul Arribas, Astroscale Ltd, Didcot, United Kingdom;

IAC-26.A6.10-B4.10.4

MULTI-PHASE GUIDANCE AND CONTROL FOR DUAL-AGENT TETHER ENCIRCLEMENT OF TUMBLING DEBRIS

Mr. Bogachan Ondes, University of Florida, Gainesville, United States;

IAC-26.A6.10-B4.10.5

A LIFECYCLE ASSESSMENT OF FOUR ORGANIC AND SUSTAINABLE ALUMINIUM SUBSTITUTES FOR USE IN SPACECRAFT STRUCTURES

Ms. Kalei Chesney, University of Southampton, Palm Beach Gardens, United States;

IAC-26.A6.10-B4.10.6

DEVELOPMENT OF AN INTEGRATED, SELF-CONTAINED COLLISION AVOIDANCE AND POST-MISSION DISPOSAL MODULE ENABLING SCALABLE, SUSTAINABLE OPERATIONS OF MICROSATELLITES IN CONGESTED ORBITS

Prof. Hironori Sahara, Tokyo Metropolitan University, Tokyo, Japan;

IAC-26.A6.10-B4.10.7

LOW-COST VERSATILE ON-ORBIT SERVICING CUBESAT WITH REFUELLABLE MULTIMODAL WATER-PROPELLANT PROPULSION SYSTEM

Dr. Chengyu Ma, Chinese Academy of Sciences, Shanghai, China;

IAC-26.A6.10-B4.10.8

DEVELOPMENT OF A PROPULSION-FREE PASSIVE DEORBIT MEMBRANE FOR ROCKET BODIES ON A SMALL SATELLITE PLATFORM

Dr. Yusuke Egawa, BULL Co., Ltd., Utsunomiya, Japan;

IAC-26.A6.10-B4.10.9

DEVELOPMENT AND EXPERIMENTAL VALIDATION OF AN OPTIMIZATION-BASED GUIDANCE AND CONTROL ARCHITECTURE FOR NON-COOPERATIVE RENDEZVOUS MANOEUVRES

Mr. Agostino Madonna, University of Naples "Federico II", Aversa, Italy;

IAC-26.A6.10-B4.10.10

A LOW-LATENCY ACOUSTIC NETWORK FOR IN-SITU HYPERVELOCITY IMPACT EVALUATION IN EARTH ORBIT

Prof. Leonardo Barilaro, New York University Abu Dhabi, Abu Dhabi, United Arab Emirates;

IAC-26.A6.10-B4.10.11

DESIGN AND DEVELOPMENT OF NEPAL'S FIRST COMPACT, LOW-COST, LOW-POWER, AND MODULAR 0.5U DRAG SAIL SYSTEM AS NEPALISAT-2'S PRIMARY PAYLOAD

Ms. Ashlesha Dangal, Nepal Space Foundation, Kathmandu, Nepal;

IAC-26.A6.10-B4.10.12

AUTONOMOUS DEORBITING MICRO-PODS (ADMP): EDGE AI-GUIDED SWARM ARCHITECTURE FOR ACTIVE DEBRIS REMOVAL

Mr. Arda Kağan Menteş, Cukurova University, Adana, Türkiye;

A6.11. 24th IAA SYMPOSIUM ON SPACE DEBRIS - Extra session

October 8 2026, 15:00 — Hall 35

Co-Chair(s): Noelia Sanchez Ortiz, Arribes Enlightenment, Spain;

IAC-26.A6.11.1

INVESTIGATION OF SPH SMOOTHING LENGTH (CSLH) EFFECT ON DEBRIS CLOUD FORMATION IN ADAPTIVE FEM-SPH HYPERVELOCITY IMPACT ANALYSIS

Mr. Yunus Emre Altun, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.A6.11.3

REFLECTANCE SPECTROSCOPY OF RESIDENT SPACE OBJECTS: VISIBLE-RANGE OBSERVATIONS AND MATERIAL INTERPRETATION CONSTRAINTS

Mrs. Katarína Sabolová, Comenius University, Faculty of Mathematics, Physics and Informatics, Bratislava, Slovakia;

IAC-26.A6.11.5

OPTICAL OBSERVATIONS OF NOAA 6 NON-OPERATIONAL WEATHER SATELLITE AND ADVANCED COMPOSITE SOLAR SAIL SYSTEM (ACS3) TECHNOLOGY DEMONSTRATION SATELLITE.

Mr. Solomon Appekey, LEEDS, United Kingdom;

IAC-26.A6.11.6

OPTIMIZED DESIGN OF OPTICAL OBSERVATION SATELLITE CONSTELLATIONS FOR CATALOGING CENTIMETER-LEVEL LOW-ORBIT SPACE DEBRIS

Mr. Weixiao Li, Beihang University, Beijing, China;

IAC-26.A6.11.7

SPECTRAL-CLUSTERING-ENHANCED POSSIBILITY FUSION FOR DISTRIBUTED MULTI-SENSOR SPACE OBJECT TRACKING

Mr. Zehao Sun, Beijing Institute of Technology, Beijing, China;

IAC-26.A6.11.8

TRANSFERABLE MULTI-SCALE INTELLIGENT ORBIT-TRACKLET ASSOCIATION FOR IMPULSIVE AND LOW-THRUST MANEUVERS

Mr. Yihang Jiang, Beijing Institute of technology, Beijing, China;

IAC-26.A6.11.9

CLUSTER-BASED CONFLICT RESOLUTION AND PARTICLE SWARM OPTIMIZATION FOR AUTONOMOUS SPACE-BASED SSA SENSORS SCHEDULING AND TASKING

Mr. Marco Mangione, University of Naples "Federico II", Naples, Italy;

IAC-26.A6.11.10

APPLICATION OF ENSEMBLE TECHNIQUES TO SPACE DEBRIS MODELLING

Mrs. Elisa Bocolari, Politecnico di Milano, Milano, Italy;

IAC-26.A6.11.11

MEGA-CONSTELLATION RE-ENTRY AND STRATOSPHERIC IMPACT: A REVIEW OF DIVERGENT ESTIMATES AND A DECISION FRAMEWORK FOR THE DETECTION-COMMITMENT GAP

Ms. Navapan Khunnasarn, COMSPOC Corp., West Chester, United States;

IAC-26.A6.11.12

AI-DRIVEN AUTONOMOUS PERCEPTION AND ROBOTIC MANIPULATION FOR ACTIVE DEBRIS REMOVAL AND ON-ORBIT SERVICING

Ms. Annamaria Sambrini, Politecnico di Torino, Torino, Italy;

IAC-26.A6.11.13

REINFORCEMENT LEARNING APPROACH IN MULTI-TARGET DEBRIS REMOVAL MISSION OPTIMIZATION: A COMPARATIVE STUDY WITH CLASSICAL METHOD

Mr. Suhandinata Suhandinata, Georgia Institute of Technology, Atlanta, Tangerang, United States;

IAC-26.A6.11.14

MISSION-DRIVEN DEORBIT ENGINEERING FRAMEWORK FOR CUBESATS IN SYSML V2

Ms. Aza Elyamani, Kyushu Institute of Technology, Fukuka, Egypt;

A7. IAF SYMPOSIUM ON ONGOING AND NEAR FUTURE SPACE ASTRONOMY AND SOLAR-SYSTEM SCIENCE MISSIONS

Coordinator(s): Andrew Court, TNO, Netherlands (Kingdom of the); Alessandra Di Cecco, Agenzia Spaziale Italiana (ASI), Italy; Gustavo Medina Tanco, Universidad Nacional Autónoma de México (UNAM), Mexico;

A7.1. Space Astronomy missions, strategies and plans

October 5 2026, 16:30 — Hall 30

Co-Chair(s): Eric Wille, ESA, Netherlands (Kingdom of the); Alessandra Di Cecco, Agenzia Spaziale Italiana (ASI), Italy;
Rapporteur(s): Andrew Court, TNO, Netherlands (Kingdom of the);

IAC-26.A7.1.1

KEYNOTE: ESA TECHNOLOGY PREPARATION FOR FUTURE SCIENCE MISSIONS

Dr. Sven Wittig, ESA - European Space Agency, Noordwijk, Netherlands (Kingdom of the);

IAC-26.A7.1.2

CURRENT AND FUTURE PLANETARY EXPLORATION PROGRAM OF INDIA

Prof. Anil Bhardwaj, Physical Research Laboratory, Ahmedabad, India;

IAC-26.A7.1.4

PARKER SOLAR PROBE: FROM BREAKTHROUGH DISCOVERIES IN SOLAR CYCLE 25'S RISE TO PROBING ITS DECLINE

Dr. Nour E. Raouafi, The John Hopkins University Applied Physics Laboratory, Laurel, Maryland, United States;

IAC-26.A7.1.7 (unconfirmed)

MISSION OVERVIEW OF QUVIK : THE FIRST CZECH-LED SPACE TELESCOPE AND ITS SCIENCE CASE

Dr. Lydia Stofanova, VZLU Aerospace, a.s., Praha-Letnany, Czech Republic;

IAC-26.A7.1.8

SPACE RADIO INTERFEROMETRIC TELESCOPE EXPLORER (SPRITE): A MISSION CONCEPT TO STUDY BLACK HOLES USING SPACE-BASED INTERFEROMETRY

Prof. E. Glenn Lightsey, Georgia Institute of Technology, Atlanta, United States;

IAC-26.A7.1.9

PRESERVING DARK SKIES: A FRAMEWORK TO PROTECT EARTH OBSERVATION, ASTRONOMY, AND CULTURAL HERITAGE

Ms. Sofia Rossi, University of Amsterdam, Cologne, Germany;

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

October 6 2026, 10:15 — Hall 30

Co-Chair(s): Pietro Ubertini, INAF, Italy; Maria Cristina Falvella, Italian Space Agency (ASI), Italy;

Rapporteur(s): Alessandra Di Cecco, Agenzia Spaziale Italiana (ASI), Italy;

IAC-26.A7.2.1

SEARCHING FOR EM COUNTERPARTS TO GW MERGERS IN THE NEXT DECADE WITH GRINTA

Dr. James Rodi, INAF-IAPS, Roma, Italy;

IAC-26.A7.2.2

OBSERVATION AND ANALYSIS OF THE LIGHT CURVE OF THE INTERACTING 2MASS J00532822+2536229 BINARY STAR SYSTEM

Dr. Selami Kalkan, Ondokuz Mayıs University, Samsun, Türkiye;

IAC-26.A7.2.3

NEAR-INFRARED DETECTABILITY ON MAGNETARS AND X-RAY BINARIES WITH THE DAG400 TELESCOPE

Ms. Elif Köksal, Türkiye National Observatories, Erzurum, Türkiye;

IAC-26.A7.2.4

A COMPREHENSIVE REVIEW OF GRAVITATIONAL MICROLENSING METHODS FOR LENSED QUASARS

Mr. Abdulla Esmail, Sharjah Academy for Astronomy, Space Sciences, and Technology (SAASST), Sharjah, United Arab Emirates;

IAC-26.A7.2.5

INVESTIGATION OF OPTICAL PERIODICITY CHARACTERISTICS OF SELECTED BLAZARS THROUGH TURKISH GROUND-BASED OBSERVATIONS

Mr. Murat Tekkesinoglu, Ataturk University, Erzurum, Türkiye;

IAC-26.A7.2.6

MAGNETIC FIELD STRENGTH LIMITATIONS ON LIFE OVER HABITABLE ZONE EXOPLANETS

Mr. Resul Ayberk Şahpaz, Bilkent University, Antalya, Türkiye;

IAC-26.A7.2.8

HYBRID SURFACE ENVIRONMENTS ON TIDALLY LOCKED M-DWARF PLANETS: INSIGHTS FROM K2-18B WITH SIMULATIONS

Mr. Sahib Safarov, Baku State University, Baku, Azerbaijan;

IAC-26.A7.2.9

MULTI-STAGE MODELING AND JWST-TESTABLE PREDICTIONS FOR BORON-NITROGEN ALTERNATIVE BIOCHEMISTRY IN LIQUID AMMONIA

Mr. Utku Demirel, ÜSKÜDAR, Türkiye;

IAC-26.A7.2.10

SOLAR WIND CME IMPACTS ON THE MARTIAN IONOSPHERE: INSIGHTS FROM MAVEN OBSERVATIONS AND ENLIL SIMULATIONS

Mrs. Yasmina Yege, Yildiz Technical University, İSTANBUL, Türkiye;

IAC-26.A7.2.11

MULTI-WAVELENGTH SPECTROSCOPY IN THE CLASSIFICATION OF SOLAR-TYPE STARS: A METHODOLOGICAL REASSESSMENT ON A SMALL SAMPLE

Ms. Sena Aleya Şentürk, Akdeniz University, Antalya, Türkiye;

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

October 7 2026, 15:00 — Hall 30

Co-Chair(s): Eric Wille, ESA, Netherlands (Kingdom of the); Andrew Court, TNO, Netherlands (Kingdom of the);

Rapporteur(s): Maria Cristina Falvella, Italian Space Agency (ASI), Italy;

IAC-26.A7.3.1

THE STATUS OF SPACE-BASED OPTICAL INTERFEROMETRY
Prof. Dr. Sascha Quanz, ETH Zurich, Zurich, Switzerland;

IAC-26.A7.3.2

OPTICAL REEF - THE ABSURDLY LARGE FORMATION FLYING SEGMENTED SPACE TELESCOPE
Mr. Howard Hall, Viterbi School of Engineering, USC, Los Angeles, United States;

IAC-26.A7.3.3

GENDERLESS FLUX-PINNED INTERFACES SUPPORTING IN-SPACE ASSEMBLY OF NEXT-GENERATION, LARGE SEGMENTED SPACE TELESCOPE APERTURES
Ms. Maddy Stratton, Viterbi School of Engineering, USC, Los Angeles, United States;

IAC-26.A7.3.4

A MULTI-MODAL DEEP LEARNING PIPELINE FOR SUB-MILLISECOND DISCOVERY OF FAINT AND UNCATALOGUED X-RAY SOURCES VIA CROSS-ATTENTION TRANSFORMERS AND BAYESIAN UNCERTAINTY QUANTIFICATION
Mr. Hesên Dadaszade, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

IAC-26.A7.3.5 (unconfirmed)

PROTECTING THE LUNAR FAR SIDE FOR RADIO ASTRONOMY: GOVERNANCE CHALLENGES IN AN ERA OF EXPANDING LUNAR ACTIVITIES
Ms. Shrawani Shagun, National Law University, Delhi, India;

IAC-26.A7.3.6

PHOTOMETRIC MAPPING OF SILICATES, HYDROCARBONS, AND WATER ICE IN THE INTERSTELLAR MEDIUM
Dr. Burcu Günay, Izmir, Türkiye;

IAC-26.A7.3.7

RADIATION-RESILIENT EDGE AI ARCHITECTURES FOR AUTONOMOUS DATA PRIORITIZATION IN DEEP SPACE EXPLORATION
Ms. Meryem Nur Sultan Kayış, Baykar Science High School, İstanbul, Türkiye;

IAC-26.A7.3.8 (unconfirmed)

CHARACTERIZING SONY IMX CMOS SENSORS FOR X-RAY ASTRONOMY USING POISSON DETECTOR SIMULATIONS AND MACHINE LEARNING
Ms. Carissima McGee, Massachusetts Institute of Technology (MIT), Cambridge, MA, United States;

IAC-26.A7.3.9

SOLAR CME IMAGE QUALITY AS A FACTOR IN CONTEMPORARY RESEARCH
Dr. Andrei Sadovski, Space Research Institute (IKI), RAS, Moscow, Russian Federation;

IAC-26.A7.3.10

TESS-RANK: MACHINE LEARNING RANKING OF EXOPLANET TRANSIT CANDIDATES FROM TESS LIGHT CURVES
Ms. Landry Nicol Bardales Guadalupe, Universidad Nacional Mayor de San Marcos, Chachapoyas, Peru;

A7.4. Lunar astrophysics: scientific instrumentation and ancillary systems

October 9 2026, 13:45 — Hall 5

Co-Chair(s): Gustavo Medina Tanco, Universidad Nacional Autónoma de México (UNAM), Mexico; Pietro Ubertini, INAF, Italy;

Rapporteur(s): Andrew Court, TNO, Netherlands (Kingdom of the);

IAC-26.A7.4.1

KEYNOTE: GRAND SCIENCE FROM THE MOON IN INTERNATIONAL COLLABORATION AS A TRIGGER FOR THE DEVELOPMENT OF A LUNAR ECONOMY
Prof. Dr. Gustavo Medina Tanco, Universidad Nacional Autónoma de México (UNAM), Mexico, Mexico;

IAC-26.A7.4.3

AI-ENHANCED STEREO VISION FOR ROBUST DEPTH PERCEPTION IN DUST-DEGRADED PLANETARY ENVIRONMENTS
Mr. Yaqoob Alqassab, Bahrain Space Agency (BSA), Hidd, Bahrain;

IAC-26.A7.4.4

DE - CENTRALIZED NETWORK FOR CO-ORDINATED LUNAR ROBOTIC ACTIVITY
Ms. Aayushi Doshi, American Museum of Natural History in New York, New York, United States;

IAC-26.A7.4.5

DYNAMICS OF LUNAR DUST AND IMPLICATIONS FOR MITIGATION METHODS
Ms. Sara Ghaleb, Kyushu Institute of Technology, Fukuoka, Japan;

IAC-26.A7.4.6

LIGHTWEIGHT VISION-BASED BEV OCCUPANCY MAPPING FOR AUTONOMOUS LUNAR ROVER OPERATIONS USING LIDAR-BASED GROUND-TRUTH
Mr. Rando Avarmaa, University of Tartu, Tartu, Estonia;

IAC-26.A7.4.7

MODAA: MODULAR OBSERVATION DEVICE FOR ASTRONOMY AND ASTROPHYSICS IN HUMAN SPACE AND ANALOGUE MISSIONS
Ms. Hannah Zipfinger, Wien, Austria; Ms. Surabhi Sonawane, Edmonton, Canada;

IAC-26.A7.4.8

NUMERICAL ANALYSIS OF DUST-INDUCED THERMAL PERFORMANCE DEGRADATION IN LUNAR SURFACE SYSTEMS
Mr. Omar Alothman, Muharraq, Bahrain;

IAC-26.A7.4.10

SWARM ROBOTICS FOR LUNAR PROSPECTION
Prof. Dr. Gustavo Medina Tanco, Universidad Nacional Autónoma de México (UNAM), Mexico, Mexico;

B1. IAF EARTH OBSERVATION SYMPOSIUM

Coordinator(s): Luís Ferreira, Airbus Defence and Space, Germany; Annamaria Nassisi, Thales Alenia Space Italia, Italy; Shimrit Tirosh Maman, Israel Space Agency, Israel;

B1.1. International Ventures in Earth Observations

October 5 2026, 16:30 — Hall 4

Co-Chair(s): Kyriaki Minoglou, European Space Agency (ESA), Netherlands (Kingdom of the); Cristian Bank, EUMETSAT, Germany;

Rapporteur(s): Mukund Kadursrinivas Rao, Independent consultant, India; José Gavira Izquierdo, International Space Consultant, Netherlands (Kingdom of the);

IAC-26.B1.1.1

KEYNOTE: INCREASING THE IMPACT OF EARTH OBSERVATIONS TO ENABLE A MORE RESILIENT WORLD: UPDATE FROM THE COMMITTEE ON EARTH OBSERVATION SATELLITES
Dr. Alex Held, CSIRO Space and Astronomy, Dickson, Australia;

IAC-26.B1.1.2

KEYNOTE: TRANSFORMING THE SPEED OF SCIENCE WITH A NEW MODEL FOR EARTH OBSERVATION COOPERATION: INTERNATIONAL AND COMMERCIAL FLEETS WITH MORE RAPID MISSION DEVELOPMENT
Dr. Karen St. Germain, National Aeronautics and Space Administration (NASA), United States;

IAC-26.B1.1.3 (unconfirmed)

KEYNOTE: ESA'S EARTH OBSERVATION PROGRAMMES: THE INTERNATIONAL PERSPECTIVE
Mrs. Simonetta Cheli, European Space Agency (ESA), Frascati RM, Italy;

IAC-26.B1.1.4

STATUS OF THE EUMETSAT PROGRAMMES METEOSAT 3RD GENERATION (MTG), EPS 2ND GENERATION (EPS-SG) AND EPS-STERNA FOLLOWING THE RECENT LAUNCHES.
Mr. Cristian Bank, EUMETSAT, Darmstadt, Germany;

IAC-26.B1.1.5

HOW COLLABORATION WITH COUNTRIES NEW TO SPACE ACTIVITIES TRANSFORMS THE DEVELOPMENT OF EARTH OBSERVATION APPLICATIONS AND RESEARCH PRACTICES IN JAPAN
Dr. Susie Pottier, École Normale Supérieure, Paris, France;

IAC-26.B1.1.6

WATCHING THE PLANET TOGETHER: A NETNOGRAPHY OF SATELLITE DATA IN ONLINE PUBLICS
Mrs. Audrey Medaino-Tardif, University of Toronto, Morin Heights, Canada;

IAC-26.B1.1.7

LUCE: A MULTI-DISCIPLINARY SPACE LIDAR MISSION FOR EARTH SCIENCES
Dr. Francesco Longo, ASI - Italian Space Agency, Rome, Italy;

IAC-26.B1.1.9

CUBESAT CONSTELLATION FOR GLOBAL TSUNAMI EARLY WARNING USING MULTIPLE OBSERVATION TECHNIQUES
Prof. Masashi Kamogawa, University of Shizuoka, Shizuoka, Japan;

B1.2. Earth Observation Systems

October 6 2026, 15:00 — Hall 4

Co-Chair(s): Annamaria Nassisi, Thales Alenia Space Italia, Italy; Timo Stuffer, OHB System AG - Munich, Germany;

Rapporteur(s): Doris Klein, DLR (German Aerospace Center), Germany; Erick Lansard, Satellite Research Center, Nanyang Technological University (NTU), Singapore;

IAC-26.B1.2.1

CUTTING-EDGE SPACEBORNE SYNTHETIC APERTURE RADAR TECHNOLOGIES FOR THE CHALLENGES OF NEXT DECADES
Prof. Michelangelo Villano, German Aerospace Center (DLR), Wessling, Germany;

IAC-26.B1.2.2

PLATINO-1: A COMPACT X-BAND MONOSTATIC AND BISTATIC SAR MISSION
Dr. Francesco Longo, ASI - Italian Space Agency, Roma, Italy;

IAC-26.B1.2.3

FROM CONSTELLATION TO CLOUD: ADVANCING POLAND'S NATIONAL EARTH OBSERVATION ECOSYSTEM THROUGH CAMILA AND NSIS
Dr. Radosław Gurdak, Polish Space Agency (POLSA), Warsaw, Poland;

IAC-26.B1.2.4

CONCEPTUALISING SAUDI ARABIA'S TANDEM SAR AND OPTICAL CONSTELLATION
Dr. Darryn Jordan, SARsatX, Cape Town, South Africa;

IAC-26.B1.2.5

SYSTEM DESIGN AND ENABLING TECHNOLOGY FOR MULTI-CUBESAT LOW-COST MISSION DESIGN AROUND THE TROPICS: A COORDINATED PASSIVE MICROWAVE RADIOMETER AND HYPERSPECTRAL CUBESAT ARCHITECTURE EMPOWERED BY EDGE AI
Prof. Erick Lansard, Satellite Research Center, Nanyang Technological University (NTU), Singapore, Singapore;

IAC-26.B1.2.6

THE CUBY DEMONSTRATOR MISSION: ENGINEERING CHALLENGES, CONSTELLATION ARCHITECTURE, AND INITIAL ONORBIT PERFORMANCE
Mr. Alexander Kleinschrodt, Zentrum für Telematik, Wuerzburg, Germany;

IAC-26.B1.2.7

DEVELOPMENT OF A LOW-COST 2U SUBORBITAL IMAGING PLATFORM FOR VEGETATION INDEX FEASIBILITY ASSESSMENT OVER AMARANTH CROPS
Mr. Angel Vázquez, High Technology Unit (UAT) Faculty of Engineering - UNAM, Mexico City, Mexico;

IAC-26.B1.2.8

HIGH-RESOLUTION OPTICAL CUBESAT DESIGN AND SYSTEM APPLICATION
Dr. Kun Liu, Innovation Academy for Microsatellites, Chinese Academy of Sciences, Shanghai, China;

IAC-26.B1.2.9

RESEARCH ON DISTRIBUTED OPTICAL SUPER-RESOLUTION SPACEBORNE IMAGING TECHNOLOGY
Prof. Dr. Jingjing G, Beijing Institute of Space Mechanics&Electricity, Beijing, China;

IAC-26.B1.2.10

IGNIS PHASE B: COTS-BASED EARTH THERMAL OBSERVATION SYSTEM
Mr. Pierluca De Felice, University of Naples "Federico II", Naples, Italy;

IAC-26.B1.2.11

MODERNIZING LEGACY RF MISSIONS: A SMAD-BASED TRADE-OFF ANALYSIS FOR TRANSITIONING TO HYBRID MULTI-INT ARCHITECTURES
Mr. Ataberk Taşdemir, TAI - Turkish Aerospace Industries, Inc., Ankara, Türkiye;

B1.3. Earth Observation Sensors and Technology

October 9 2026, 10:15 — Hall 30

Co-Chair(s): Andrew Court, TNO, Netherlands (Kingdom of the); Oana van der Togt, Netherlands Aerospace Centre (NLR), Netherlands (Kingdom of the);

Rapporteur(s): Jeffrey Apeldoorn, ICEYE, Finland; Camilo Andres

Reyes Mantilla, Colombian Space Agency, Colombia;

IAC-26.B1.3.1

ASI TECHNOLOGICAL ROADMAP FOR EO MISSIONS

Dr. Raffaele Votta, ASI - Italian Space Agency, Roma, Italy;

IAC-26.B1.3.2

COPERNICUS CHIME SPECTROMETERS: FROM EQM ENVIRONMENTAL QUALIFICATION TO PFM DELIVERY READINESS.

Mr. Etienne Renotte, Advanced Mechanical and Optical Systems (AMOS), Angleur, Belgium;

IAC-26.B1.3.3

FEASIBILITY ANALYSIS OF SPECTRAL MONITORING OF GREENHOUSE GASES AND CARBON MONOXIDE FROM LOW EARTH ORBIT NANOSATELLITES FOR URBAN EMISSION ASSESSMENT IN MEXICO

Dr. Alejandro Farah Simon, University Space Program, Universidad Nacional Autonoma de Mexico, Mexico

IAC-26.B1.3.4 (unconfirmed)

THE DAY NIGHT DETECTOR: ADDRESSING THE ABILITY TO IMAGE IN DEMANDING FINE-SCALE SPATIAL DETAIL WITH SHARP BOUNDARIES

Mr. Jerome Pratlong, Chelmsford, United Kingdom;

IAC-26.B1.3.5

BISTATIC SAR TEST SCHEME OF CAS500-5

Dr. Hyeon-Cheol Lee, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

IAC-26.B1.3.6

IN-ORBIT PERFORMANCE OF THE GNSS OCCULTATION SOUNDER ON A SMALL SATELLITE CONSTELLATION

Prof. Dr. Congliang Liu, National Space Science Center (NSSC), Chinese Academy of Sciences, Beijing, China;

IAC-26.B1.3.7

PHASE SYNCHRONIZATION ERROR MODELLING IN BISTATIC LEO SAR SYSTEMS

Dr. Meltem Koroglu, ASELSAN, Ankara, Türkiye;

IAC-26.B1.3.8

KUBUS-3U: DESIGN AND VALIDATION OF A DUAL-CAMERA IMAGING PAYLOAD FOR A NATIONAL CUBESAT

Dr. Muhammad Hasif bin Azami, Universiti Teknologi MARA (UITM), Shah Alam, Malaysia;

IAC-26.B1.3.9

DESIGN AND OPTIMIZATION OF A COMPACT DUAL-BAND OPTICAL PAYLOAD FOR 3U CUBESAT EARTH OBSERVATION MISSIONS

Ms. Hayrunnisa KARAVAR, University of Turkish Aeronautical Association, Ankara, Türkiye;

IAC-26.B1.3.10

DEVELOPMENT OF A HIGH RESOLUTION CUBESAT EARTH OBSERVATION IMAGING PAYLOAD USING COMMERCIAL OFF THE SHELF COMPONENTS

Mr. Pradyumn Vashishtha, National University of Singapore, Singapore, Singapore;

B1.4. Earth Observation Data Systems and Technology

October 7 2026, 15:00 — Hall 4

Co-Chair(s): Ana-Mia Louw, Simera Sense, South Africa; James Graf, Jet Propulsion Laboratory, United States;

Rapporteur(s): Agnieszka Lukaszczuk, Hialtitude Space, Poland;

IAC-26.B1.4.1

EDGE-AI INTEGRATED FRAMEWORK FOR REAL-TIME ENVIRONMENTAL MONITORING: BRIDGING EARTH OBSERVATION DATA WITH MUNICIPAL ACTION SYSTEMS

Mr. Onur Eren Tasci, Samsun University, Samsun, Türkiye;

IAC-26.B1.4.3

A UNIFIED CLOUD-BASED ARCHITECTURE FOR SOIL SEALING MONITORING USING AI AND MULTI-SOURCE EO DATA

Mr. Maurizio Laterza, Planetek Italia, Bari, Italy;

IAC-26.B1.4.4

QUANTUM OPTIMIZATION FOR EARTH OBSERVATION: THE QU4EO PROJECT

Mr. Leonardo Amoruso, Planetek Italia, Bari, Italy;

IAC-26.B1.4.5

ASMAN: A REPRODUCIBLE SENTINEL-1 SAR PIPELINE FOR POST-WILDFIRE CHANGE MAPPING AND MULTIMODAL IMPACT SCORING

Ms. Defne Canoğlu, Antalya Science and Art Center, Antalya, Türkiye;
Ms. Melinay Akay, Antalya Science and Art Center, Antalya, Türkiye;

IAC-26.B1.4.6

DECISION-FOCUSED EO TASKING TO REDUCE FORECAST UNCERTAINTY IN SIMULATION OF NON-COOPERATIVE LOGISTICS

Mr. Fahri Mert Ünsal, Ankara, Türkiye;

IAC-26.B1.4.7

ANALYSIS-READY MULTIMODAL SAR—OPTICAL DATASET CONSTRUCTION FOR POST-EARTHQUAKE DAMAGE MAPPING

Ms. Fatma Elik, Istanbul Turkey, Türkiye;

IAC-26.B1.4.9

GENESIS: SCALING EARTH OBSERVATION WORKFLOWS THROUGH AUTONOMOUS MULTI-AGENT ORCHESTRATION

Ms. Yağmur Mavruk, Maiden Space B.V., Rotterdam, Netherlands (Kingdom of the);

IAC-26.B1.4.10

FROM ANALYSIS-READY DATA TO INTELLIGENCE SERVICES: OPERATIONAL PROGRESS OF APISS FOR THE NEONSAT CONSTELLATION

Dr. Hyun-Ok Kim, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

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

October 8 2026, 10:15 — Hall 4

Co-Chair(s): Na Yao, Qian Xuesen Laboratory of Space Technology, China Academy of Space Technology (CAST), China; Michael Kern, ESA, France;

Rapporteur(s): Masami Onoda, Japan Aerospace Exploration Agency (JAXA), Japan; Luís Ferreira, Airbus Defence and Space, Germany;

IAC-26.B1.5.2

FROM DATA TO SERVICES: SOCIO-ECONOMIC VALUE AND MARKET DEVELOPMENT IN OPERATIONAL EARTH OBSERVATION

Ms. Tuana Yazici, Boca Raton, United States;

IAC-26.B1.5.3

RAPID POST-SEISMIC DAMAGE ASSESSMENT USING SENTINEL-1 SAR CHANGE DETECTION: THE 2023 TÜRKİYE EARTHQUAKE CASE STUDY

Dr. Matus Bakon, Presov, Slovakia;

IAC-26.B1.5.4

AN EVDT FRAMEWORK APPROACH TO EARTH OBSERVATION IN HUMANITARIAN RESPONSE FOR CONFLICT ZONES

Ms. Ritisha Das, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.B1.5.5

AN INTEGRATED SATELLITE DECISION ENGINE FOR DETERMINISTIC EARTH OBSERVATION UNDER OPERATIONAL CONSTRAINTS

Mr. Abdul Moeed, Institute of Space Technology (IST), Islamabad, Pakistan;

IAC-26.B1.5.6

COMMERCIAL HIGH-RESOLUTION EARTH OBSERVATION FOR DISASTER RESPONSE IN LOWER-INCOME COUNTRIES (2020-2025): THE CASES OF HAITI AND MALAWI

Ms. Sofia Motta, Perugia, Italy;

IAC-26.B1.5.7

E-MOBILITY SPACELINK: SPACEENABLED INTELLIGENCE FOR AUTONOMOUS OFFGRID EV CHARGING

Dr. Riccardo Puglisi, Archimede, Syracuse, Italy;

IAC-26.B1.5.8

EARTH OBSERVATION DATA AND CLIMATE RISK UNDERWRITING: SATELLITE-DRIVEN PARAMETRIC RISK INSTRUMENTS

Mr. Orestis Delardas, Individual collaboration, Welwyn Garden City, United Kingdom;

IAC-26.B1.5.9

EARTH OBSERVATION IN THE NEW SPACE ERA: DATA SHARING PRACTICES AND THEIR FUTURE PERSPECTIVES. THE NEW ITALIAN CONSTELLATION "IRIDE".

Ms. Giulia Priotti, University of Trento, Turin, Italy;

IAC-26.B1.5.10

ECONOMIC SUSTAINABILITY IN EARTH OBSERVATION: A COMPARATIVE ANALYSIS OF GOVERNMENT AND PRIVATE EO SATELLITE PROGRAMS

Mr. Jonas Tobiassen, International Space University, Kristiansand S, Norway;

IAC-26.B1.5.11

THE HEALTH TREE PLATFORM: A CITIZEN SCIENCE APPROACH TO TREE MONITORING

Mr. Rahil Aghabayli, Azerbaijan State Oil and Industry University (ASOIU), Salyan, Azerbaijan;

IAC-26.B1.5.12

FEASIBILITY ASSESSMENT OF PROBABILISTIC EARTHQUAKE PREDICTION USING IONOSPHERIC VLF ELECTRIC FIELD VARIATIONS AND EVALUATION OF CONSTELLATION OPERATION ADVANTAGES

Ms. Nagisa Sone, Nihon University, Funabashi, Japan;

B1.6. The Future of Maritime Protection: An Integrated View on Earth Observation, Advanced Systems, and Policy

October 8 2026, 15:00 — Hall 4

Co-Chair(s): Krystal Azelton, Secure World Foundation, United States; Mariel Borowitz, Georgia Tech Space Research Institute, United States;

Rapporteur(s): Chen Xiaoli, Beijing Institute of Space Mechanics & Electricity, China Academy of Space Technology (CAST), China; Alexandra Jercaianu, Nara Space, Republic of Korea;

IAC-26.B1.6.1

A PROTOTYPE FOR DARK SHIP DETECTION USING MULTI-MISSION MULTI-FREQUENCY SATELLITE DATA

Mr. Gianluca Coppa, University of Naples "Federico II", Torre del Greco, Italy;

IAC-26.B1.6.2

AI-POWERED MARITIME SURVEILLANCE AND OCEAN HEALTH MONITORING USING MULTI-SOURCE EARTH OBSERVATION DATA

Ms. Nezire Tosun, Istanbul, Türkiye;

IAC-26.B1.6.3

BEYOND THE HORIZON: OPEN EARTH OBSERVATION FOR PREVENTIVE AND INVESTIGATIVE MARITIME HEALTH MONITORING

Mr. Sahil Sheikh, Illinois Institute of Technology, Mumbai, India;

IAC-26.B1.6.4

EVALUATION OF PASSIVE RELATIVE ORBIT FORMATIONS FOR MULTISTATIC SAR SYSTEMS IN MARITIME DOMAIN AWARENESS

Mr. John Papoudos, Surrey Space Centre - University of Surrey, Guildford, United Kingdom;

IAC-26.B1.6.5

LEGAL AND POLICY ASPECTS OF USING COPERNICUS SERVICES FOR MARITIME SPATIAL PLANNING

Dr. Krisztina Tilinger, University of Public Service (UPS), Dombóvár, Hungary;

IAC-26.B1.6.6

MARINE POLLUTION MONITORING VIA SENTINEL-1 SAR: A COMPARATIVE ANALYSIS OF VISION TRANSFORMERS AND DENSE NETWORKS

Ms. Aisha Alowais, Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST), Sharjah, United Arab Emirates;

IAC-26.B1.6.7

SOFTWARE-DEFINED RADIO SATELLITE AIS SIMULATOR TO TEST PACKET DE-COLLISION ALGORITHMS

Dr. Charleston Dale Ambatali, University of the Philippines Diliman, Quezon City, Philippines;

IAC-26.B1.6.8

STABILIZING TRANSFORMER-BASED OBJECT DETECTORS FOR SAR SHIP DETECTION

Mr. Grigory Filimonov, Universitat Politècnica de Catalunya (UPC), Lleida, Spain;

IAC-26.B1.6.9

THE DOUBLE-EDGED ORBIT: A FRAMEWORK FOR ETHICAL SATELLITE GOVERNANCE

Mr. Juan Francisco Colin Aguirre, Instituto Politécnico Nacional, CDMX, Mexico;

IAC-26.B1.6.10

USER-DRIVEN WATER DISCHARGE MONITORING USING SIMULATED CHIME AND LSTM COPERNICUS EXPANSION MISSION DATA

Mr. Maurizio Laterza, Planetek Italia, Bari, Italy;

IAC-26.B1.6.11

AI AND EARTH OBSERVATION FOR INCLUSIVE COASTAL CLIMATE RESILIENCE IN DEVELOPING REGIONS

Ms. Rani Mesele, Space Science and Geospatial Institute (SSGI), Addis Ababa, Ethiopia, Ethiopia;

IAC-26.B1.6.12

MIDS: AN INTEGRATED MULTI-SOURCE EARTH OBSERVATION SYSTEM FOR WATER LEAKAGE DETECTION AND WATER QUALITY MONITORING

Dr. Fabiana Ravellino, Eurosoft srl, Napoli, Italy;

B1.7. Earth Observations to Address Earth's Environment and Climate Challenges

October 7 2026, 10:15 — Hall 4

Co-Chair(s): Ole Morten Olsen, Norwegian Space Agency (NOSA), Norway; Patrick Castellan, Centre National d'Études Spatiales (CNES), France;

Rapporteur(s): Shimrit Tirosh Maman, Israel Space Agency, Israel; Harry A. Cikanek, National Oceanic and Atmospheric Administration (NOAA), United States;

IAC-26.B1.7.1

THE TANGO SCOUT MISSION - DESIGN AND KEY DEVELOPMENT RESULTS

Mr. Zeger de Groot, Innovative Solutions in Space BV, Delft, Netherlands (Kingdom of the);

IAC-26.B1.7.2

DEVELOPMENT OF THE KOREA'S FIRST METHANE MONITORING MICROSATELLITE CONSTELLATION FOR ENABLING NET ZERO - NARSHA

Dr. Geuk-Nam Kim, Nara Space, Seoul, Republic of Korea;

IAC-26.B1.7.3

HIGH-RESOLUTION VEGETATION OPTICAL DEPTH FOR ENHANCED CARBON CYCLE ASSESSMENT

Dr. Cristina Vittucci, University of Rome "Tor Vergata", Roma, Italy;

IAC-26.B1.7.4

INFRARED ATMOSPHERIC SOUNDING INTERFEROMETER NEW GENERATION PROGRAM (IASI-NG) : IN-FLIGHT PERFORMANCES STATUS

Mr. Francisco BERMUDO, Centre National d'Etudes Spatiales (CNES), Toulouse, France;

IAC-26.B1.7.5

INTEGRATED EARTH OBSERVATION APPROACH FOR ASSESSING MORaine-DAMMED LAKE OUTBURST HAZARD IN THE NORTHERN TIEN SHAN UNDER CLIMATE CHANGE

Ms. Madina Sagat, Ionosphere Institute, Almaty, Kazakhstan;

IAC-26.B1.7.6

MAPPING SPATIOTEMPORAL PATTERNS OF SALTWATER INTRUSION USING SATELLITE EARTH OBSERVATIONS

Dr. Md Sariful Islam, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.B1.7.7

MISSION DESIGN OF A NANOSATELLITE CONSTELLATION FOR ENVIRONMENTAL MONITORING IN COSTA RICA

Ms. Maria Celeste Alvarado Durán, Samara National Research University (Samara University), Samara, Russian Federation;

IAC-26.B1.7.8

PLANET AREA MONITORING SERVICE: OPERATIONAL SATELLITE-BASED MONITORING FOR LARGE-SCALE AGRICULTURAL COMPLIANCE AND SUSTAINABILITY

Mr. Luis Peraza, Planet Labs Germany GmbH, Berlin, Germany;

IAC-26.B1.7.9

DESIGNING CLIMATE-AWARE SATELLITE CONSTELLATIONS UNDER BIDIRECTIONAL CLIMATE-OBSERVATION DYNAMICS

Ms. Şeymanur Demirkan, Fatih Sultan Mehmet Vakıf University, İstanbul, Türkiye;

IAC-26.B1.7.10

NEXT-GENERATION PREDICTIVE WILDFIRE INTELLIGENCE: AN AI-DRIVEN FRAMEWORK UTILIZING MULTISPECTRAL SATELLITE DATA AND AUTONOMOUS RISK MODELING

Mr. Javidan Ashurlu, Azerbaijan State Oil and Industry University (ASOIU), BAKU, Azerbaijan;

B1.8. Expanding the Boundaries of Earth Observation

October 6 2026, 10:15 — Hall 35

Co-Chair(s): Shimrit Tirosh Maman, Israel Space Agency, Israel; Luís Ferreira, Airbus Defence and Space, Germany; Annamaria Nassisi, Thales Alenia Space Italia, Italy;

IAC-26.B1.8.1

INTEGRATING EARTH OBSERVATION AND MULTIMODAL ENVIRONMENTAL SENSING FOR CLIMATE-RELATED HEALTH MONITORING: EARLY OUTCOMES FROM THE VERACIS INITIATIVE IN BRAZIL

Ms. Renata Prôa, Harvard University, Boston, United States;

IAC-26.B1.8.2

AI-DRIVEN DETECTION OF PATHOGENIC BIO-SIGNATURES VIA HYPERSPECTRAL ANOMALY ANALYSIS FOR GLOBAL BIO-SECURITY

Mr. Kemal Kizilcay, Sivas University of Science and Technology, Aydin, Türkiye;

IAC-26.B1.8.3

ASSESSING THE SPECTRAL THREAT OF URBAN LIGHTING TO THE TÜBİTAK NATIONAL OBSERVATORY USING SDGSAT-1 GLIMMER DATA

Ms. Sima Aydın, Ataturk University, Erzurum, Türkiye;

IAC-26.B1.8.4

BENCHMARKING SUPERVISED LEARNING ALGORITHMS FOR MINING FOOTPRINT MAPPING: BALANCING ACCURACY, COMPUTATIONAL COST, AND FALSE POSITIVE RATES

Mr. Carlos Rojas, Intinauta Research Center, Lima, Peru;

IAC-26.B1.8.5

CLIMATE-DRIVEN MONITORING OF PASTURE ECOSYSTEMS: FORECASTING NDVI DYNAMICS FROM SENTINEL-2 AND METEOROLOGICAL TIME SERIES USING HYBRID TRANSFORMER-LSTM ARCHITECTURES

Dr. Farkhod Makhmudkhujaev, Uzbekspace Agency, Tashkent, Uzbekistan;

IAC-26.B1.8.6

A TWO-STAGE SPACE-AI FRAMEWORK FOR INFORMAL SETTLEMENT MAPPING FROM VHR SATELLITE IMAGERY: THE UN-HABITAT NAMIBIA PILOT

Mr. Feiyu Peng, STAR.VISION Aerospace Group Limited, Hangzhou, China;

IAC-26.B1.8.7

TRUSTED EARTH OBSERVATION ANALYTICS FOR CLIMATE AND INFRASTRUCTURE CLAIMS USING CRYPTOGRAPHIC EVIDENCE CHAINS

Mr. Sylvester Kaczmarek, Imperial College London, London, United Kingdom;

IAC-26.B1.8.8

NATIONAL ECOSYSTEM EXTENT MAPPING FOR ENVIRONMENTAL-ECONOMIC ACCOUNTING USING COPERNICUS DATA: SOCIETAL AND ECONOMIC APPLICATIONS IN POLAND

Mr. Adam Waśniewski, Polish Space Agency (POLSA), Warsaw, Poland;

IAC-26.B1.8.10

EARTH OBSERVATION INSIGHTS INTO MAIZE-BASED CROPPING PATTERNS AND FARMER DECISION-MAKING USING DESIS HYPERSPECTRAL DATA

Ms. Charlynnne Jepkosgei, Women In Space Kenya, Nairobi, Kenya;

IAC-26.B1.8.11

SASCA – SATELLITE SCANNING AND CONSTRUCTION ANALYTICS - SAR BASED CONSTRUCTION TRACKING FOR LARGE SCALE CONSTRUCTION PROJECTS

Mr. Roland Nemeth, Paulinyi & Partners Ltd., Budapest, Hungary;

B2. IAF SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM

Coordinator(s): Laszlo Bacsardi, Budapest University of Technology and Economics, Hungary; Morio Toyoshima, National Institute of Information and Communications Technology (NICT), Japan;

B2.1. Space-based PNT (Position, Navigation, Timing) Architectures, Applications, and Services

October 7 2026, 15:00 — Hall 5

Co-Chair(s): Giovanni B. Palmerini, Sapienza University of Rome, Italy; Raj Thilak Rajan, Delft University of Technology (TU Delft), Netherlands (Kingdom of the);

Rapporteur(s): Rania Toukebri, AKKA, Germany; Stephanie Wan, ICEYE, United States;

IAC-26.B2.1.1

DESIGN OF POSITION, VELOCITY AND TIMING ALGORITHM FOR MARS USER APPLICATION IN LIGHTSHIP MISSION SCENARIO

Mr. Gabriele Paggi, Thales Alenia Space Italia (TAS-I), Rome, Italy;

IAC-26.B2.1.2

SYSTEM ARCHITECTURE ANALYSIS FOR POSITION, NAVIGATION AND TIMING ON MARS

Ms. Rida Zainab, Cranfield University, Cranfield UK, Cranfield, United Kingdom;

IAC-26.B2.1.4

PRECISION LUNAR LANDING USING LUNAR SATELLITE NAVIGATION, ONBOARD LIDAR, AND GROUND LASER RETROREFLECTOR

Prof. Mauro Leonardi, University of Rome "Tor Vergata", Rome, Italy;

IAC-26.B2.1.5

AN INDEPENDENT CISLUNAR NAVIGATION SERVICE POWERED BY CO-ORBITAL SIGNAL SOURCES

Mr. Luis Cormier, University of Nottingham, Nottingham, United Kingdom;

IAC-26.B2.1.6

PERFORMANCE EVALUATION OF DIFFERENTIAL CORRECTION ALGORITHMS DEVELOPED FOR SBAS OF TÜRKİYE

Dr. Mehmet Fikret Ocal, ASELSAN, Ankara, Türkiye;

IAC-26.B2.1.7

MULTI-OBJECTIVE OPTIMIZATION OF LASER INTER-SATELLITE LINKS FOR NEXT-GENERATION GNSS

Dr. Bingbing Xu, Innovation Academy for Microsatellites, Chinese Academy of Sciences, Shanghai, China;

IAC-26.B2.1.8

DESIGN OF A COLD ATOM INTERFEROMETRY BASED HYBRID NAVIGATION ARCHITECTURE FOR NEAR-SPACE AND INTERPLANETARY MISSIONS

Mr. Talha Mert ERGÜN, Karadeniz Technical University, TRABZON, Türkiye;

IAC-26.B2.1.9

QUANTITATIVE ASSESSMENT OF SPACE WEATHER EFFECTS ON GNSS-BASED NAVIGATION ACCURACY IN LOW EARTH ORBIT SPACECRAFT

Ms. Karla Melisa Vargas Palacios, Instituto Politécnico Nacional, Estado de México, Mexico;

IAC-26.B2.1.11

GPS SPOOFING AT SCALE: HOW NATION-STATES CAN BLIND AN ENTIRE THEATER OF WAR FROM SPACE

Mr. Yusif Kazimli, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-26.B2.1.12

CONCEPTUAL DESIGN OF A LEO CUBESATS -BASED REGIONAL NAVIGATION CONSTELLATION FOR PAKISTAN

Dr. Abdul Waheed, Institute of Space Technology (IST), Islamabad, Pakistan;

B2.2. Space-based PNT (Position, Navigation, Timing) Sensors and Systems

October 8 2026, 10:15 — Hall 5

Co-Chair(s): Sanat K Biswas, IIIT Delhi, India; Peter Buist, European Union Agency for the Space Programme (EUSPA), Netherlands (Kingdom of the);

Rapporteur(s): Chris Rizos, University of New South Wales, Australia; Rania Toukebri, AKKA, Germany;

IAC-26.B2.2.1

END-TO-END SIMULATION FRAMEWORK FOR LUNANET AND MARS GPS-LIKE SIGNALS

Mr. Ivan Acosta Bayona, Keysight Technologies, Valencia, Spain;

IAC-26.B2.2.2

GALILEO HAS INITIAL SERVICE FOR SPACEBORNE ORBIT DETERMINATION & TIME SYNCHRONISATION: HAUT-S

Mr. Pedro PINTOR, SpaceOpal, Munich, Germany;

IAC-26.B2.2.3

MULTI-LAYER HYBRID PNT ARCHITECTURE VIA LEO COMMUNICATION SATELLITES FOR AUGMENTATION SERVICES

Dr. Yoola Hwang, Electronics and Telecommunications Research Institute (ETRI), Daejeon, Republic of Korea;

IAC-26.B2.2.4

DEVELOPMENT OF THE CRONOS PAYLOAD: A SPACE DEMONSTRATOR FOR AN OPTICAL RUBIDIUM TWO-PHOTON ATOMIC CLOCK

Mr. Moritz Eisebitt, Ferdinand-Braun-Institut, Leibniz-Institut für Höchstfrequenztechnik, Berlin, Germany;

IAC-26.B2.2.5

SECURE GNSS AND INTER-SATELLITE LINK SYNCHRONIZATION FOR LEO SATELLITES SUPPORTING SPACE-BASED AIRCRAFT MULTILATERATION

Ms. Mahsa Mohebbi, University of Rome Tor Vergata, Roma, Italy;

IAC-26.B2.2.6

ROBUST ORBIT DETERMINATION FOR CUBESATS UNDER DEGRADED GNSS MEASUREMENTS AND SIGNAL OUTAGES

Ms. Şerife Şara Şahin, Adana Alparslan Turkes Science and Technology University (ATU), Adana, Türkiye;

IAC-26.B2.2.7

GNSS-VISION RELATIVE POSITION ESTIMATION FOR A COOPERATIVE LEADER-FOLLOWER CONFIGURATION IN LUNAR ORBIT

Mrs. Caterina Speranza, CIRA Italian Aerospace Research Centre, Capua, Italy;

IAC-26.B2.2.8

GNSS SNAPSHOT POSITIONING: POWER-EFFICIENT TRACKING FOR THE ICARUS SYSTEM

Mr. Vincent Brückner, Luleå University of Technology, Luleå, Sweden;

B2.3. Advance Higher Throughput Communications and Networks for GEO and LEO satellites

October 8 2026, 15:00 — Hall 5

Co-Chair(s): Norbert Frischauf, TU Graz, Austria; Hoda Awmy, Egyptian Space Agency (EgSA), Egypt;

Rapporteur(s): Debra Emmons, The Aerospace Corporation, United States; Otto Koudelka, Graz University of Technology (TU Graz), Austria;

IAC-26.B2.3.1

CAN LEO SATELLITE CONSTELLATIONS REPLACE TERRESTRIAL COMMUNICATION NETWORKS? A CASE STUDY OF INDIA

Ms. Shrutika Agarwal, Airbus Defence & Space, Space Systems, Portsmouth, United Kingdom;

IAC-26.B2.3.2

ENGINEERING ASSESSMENT OF SPACE WEATHER IMPACTS ON RADIO-FREQUENCY COMMUNICATION LINKS IN LOW EARTH ORBIT MISSIONS

Mr. Ivan Martínez Ávalos, Instituto Politécnico Nacional, CDMX, Mexico;

IAC-26.B2.3.3

A PREDICTIVE AND QOS-AWARE HEURISTIC MF-TDMA RETURN LINK SCHEDULER: ADDRESSING HIGH RTT, ACI, RAIN FADING AND TRANSPONDER SATURATION

Mr. Osman Can Güney, ASELSAN, Ankara, Türkiye;

IAC-26.B2.3.4

VULNERABILITY ANALYSIS AND RESILIENT WAVEFORM DESIGN AGAINST JAMMING ATTACKS IN LEO SATELLITE COMMUNICATIONS

Mr. Ali Serdar Yavuz, ASELSAN, Ankara, Türkiye;

IAC-26.B2.3.5

EVALUATION OF THE PRICE OF AUTONOMY IN MULTI-OPERATOR NTN ORCHESTRATION

Dr. Yuma Abe, National Institute of Information and Communications Technology (NICT), Tokyo, Japan;

IAC-26.B2.3.6

ECONOMICALLY SCALABLE MULTI-GIGABIT MILLIMETER-WAVE ARCHITECTURES FOR PROLIFERATED SPACE SYSTEMS

Mr. Christophe Bauer, Elve, Inc., Davis, United States;

IAC-26.B2.3.7

THROUGHPUT/CAPACITY PERFORMANCE COMPARISON/
ANALYSIS OF BENT PIPE, DIGITAL TRANSPARENT AND
REGENERATIVE PAYLOADS IN HTS GEO SATELLITES

Mr. Ahmet Fazıl YARAŞLI, ASELSAN, ANKARA, Türkiye;

IAC-26.B2.3.8

PROPOSAL OF A NOVEL CONSTELLATION MANAGEMENT
FRAMEWORK FOR HANDOVER OPTIMIZATION IN LEO 5G NTNS

Dr. Tiziana Fiori, Sapienza University of Rome, Roma, Italy;

IAC-26.B2.3.9

DFT-SPREAD ORTHOGONAL FREQUENCY DIVISION
MULTIPLEXING TRANSMITTER POWER REDUCTION FOR SPACE
COMMUNICATIONS

Mr. Aimal Siraj, Void inc., Tokyo, Japan;

IAC-26.B2.3.10

READINESS OF NICT'S COMMUNICATION MISSIONS; HIGH-SPEED
LASER COMMUNICATIONS MISSION, "HICALI" AND COMMON
COMMUNICATION SYSTEM ON ENGINEERING TEST SATELLITE 9
(ETS-9)

Dr. Yasushi Munemasa, National Institute of Information and
Communications Technology (NICT), Koganei, Japan;

IAC-26.B2.3.11

A PREDICTIVE APPROACH TO ADAPTIVE CODING AND
MODULATION FOR INCREASED THROUGHPUT IN SMALL
SATELLITE DOWNLINK

Mr. Liam McGarry, Space Flight Laboratory (SFL), Concord, Canada;

B2.4. Space-based Optical and Quantum Communications

October 9 2026, 10:15 — Hall 5

Co-Chair(s): Laszlo Bacsardi, Budapest University of Technology
and Economics, Hungary; Kevin Shortt, Airbus Defence & Space,
Germany;

Rapporteur(s): Nader Alagha, ESA, Netherlands (Kingdom of the);
Christopher Vasko, European Space Agency (ESA), Netherlands
(Kingdom of the);

IAC-26.B2.4.1

FROM TESTBED TO OPERATIONS: VALIDATING DISTRIBUTED
OPTICAL GROUND STATION SERVICES WITH OPTIMUS

Mr. Adam Santifaller, DLR-GfR, Munich, Germany;

IAC-26.B2.4.2 (unconfirmed)

ASSESSING FREE-SPACE OPTICAL COMMUNICATION LINK
AVAILABILITY THROUGH WRF-BASED CLOUD FRACTION
ANALYSIS: A WINTER CASE STUDY OVER CENTRAL ANATOLIA

Dr. Ali Ulvi Galip Şenocak, Ankara Yıldırım Beyazıt University, Ankara,
Türkiye;

IAC-26.B2.4.3

LINK BUDGET DESIGN OF LOW-LATENCY BROADBAND INTER-
SATELLITE OPTICAL NETWORK SYSTEM WITH ALL-OPTICAL RELAY
LINKS

Dr. Hideaki Kotake, National Institute of Information and
Communications Technology (NICT), Koganei city, Tokyo, Japan;

IAC-26.B2.4.4

DEVELOPMENT OF A SCINTILLATION-BASED KEY
GENERATION PROTOCOL FOR MOBILE LEO CUBESAT OPTICAL
COMMUNICATION LINKS

Mrs. Irmak Karadag, Antalya, Türkiye;

IAC-26.B2.4.5

THERMO-MECHANICAL OPTIMIZATION AND TESTING OF A
COMPLIANT FAST STEERING PRISM

Mr. Giovanni Trevisanuto, CISAS "G. Colombo" - University of Padova,
Padova (PD), Italy;

IAC-26.B2.4.6

DEEP LEARNING-BASED MITIGATION OF ATMOSPHERIC
TURBULENCE IN ORBITAL ANGULAR MOMENTUM (OAM)
OPTICAL COMMUNICATION FOR SPACE-TO-GROUND LINKS

Mr. Mehmet Emin Karatas, Gazi University, Ankara, Türkiye;

IAC-26.B2.4.7

MODELLING OF OPTICAL INTER-SATELLITE LINK TERMINALS
FOR OPERATIONAL REAL-TIME SIMULATIONS OF LEO
CONSTELLATIONS

Ms. Aurora Bedendo, DLR, German Aerospace Center, Munich,
Germany;

IAC-26.B2.4.8

ARCHITECTURAL DESIGN OF OPTICAL GROUND SEGMENTS FOR
MULTI-ORBIT SATELLITE NETWORKS WITH BI-DIRECTIONAL
FEEDER LINKS

Mr. Romain Laigo, Cailabs, Rennes, France;

IAC-26.B2.4.9

FROM EXPERIMENTAL TO READY TO FLY: A SPACE QUALIFIED
COMPACT POLARIZATION ENCODED QKD PAYLOAD FOR SMALL
SATELLITE

Dr. Luca Lion, ThinkQuantum Srl, Sarcedo (VI), Italy;

IAC-26.B2.4.10

INTEGRATING SWARM UAV SYSTEMS INTO SPACE NETWORKS
USING SECURE LASER BASED OPTICAL COMMUNICATION

Mr. Ertuğrul Emir HÜYÜK, Antalya, Türkiye;

B2.5. Extra-Terrestrial and Interplanetary Communications, and Regulations

October 6 2026, 10:15 — Hall 5

Co-Chair(s): Dipak Srinivasan, The Johns Hopkins University
Applied Physics Laboratory, United States; Ramon P. De Paula,
Retired NASA, United States;

Rapporteur(s): Sara AlMaeeni, Mohammed Bin Rashid Space
Centre (MBRSC), United Arab Emirates; Dunay Badirkhanov,
Azercosmos, Space Agency of Republic of Azerbaijan, Azerbaijan;

IAC-26.B2.5.1 (unconfirmed)

HOW TO USE NASA'S DEEP SPACE NETWORK IN THE NEW SPACE
ECONOMY

Mr. Sami Asmar, Jet Propulsion Laboratory - California Institute of
Technology, Pasadena, United States;

IAC-26.B2.5.2

A NEXT GENERATION DEEP SPACE COMMUNICATIONS
ARCHITECTURE

Ms. Lisa Kuo, Rocket Lab, Long Beach, United States;

IAC-26.B2.5.3

THE USE OF MULTI-NODE MESH NETWORKS TO ENHANCE LUNAR
COMMUNICATIONS AND EXPLORATION

Mr. Samuel Will, Warradale, Australia;

IAC-26.B2.5.4

COMMS-COMPUTE CO-DESIGN FOR CISELUNAR OPERATIONS:
A REFERENCE ARCHITECTURE FOR DELAY-TOLERANT EDGE
AUTONOMY AND MULTI-ACTOR INTEROPERABILITY

Mr. Thomas Suen, Bothell, WA, United States;

IAC-26.B2.5.5

COMMUNICATION ARCHITECTURE FOR PLANETARY LAVA TUBE
EXPLORATION: A LAYERED RELAY FRAMEWORK BRIDGING
SUBSURFACE ASSETS TO EARTH

Mr. Florian DURIX, ISAE - Institut Supérieur de l'Aéronautique et de
l'Espace, Toulouse, France;

IAC-26.B2.5.6

AUTONOMOUS DELAY-TOLERANT NETWORKING ARCHITECTURE
FOR SURFACE-TO-ORBIT COMMUNICATION IN FUTURE MARS
MISSIONS

Mr. Murad Garamollayev, Azerbaijan State Oil and Industry University
(ASOIU), Baku, Azerbaijan;

IAC-26.B2.5.7

SIMULATING LUNAR COMMUNICATION ARCHITECTURES: OVERCOMING TCP/IP LIMITS WITH DELAY-TOLERANT NETWORKING (DTN) AND STORE-AND-FORWARD ROUTING
Mr. Samet ORMAN, Erciyes Üniversitesi, KAYSERİ, Türkiye;

IAC-26.B2.5.8

GOAL-ORIENTED BUNDLE MANAGEMENT AND FLOW CONTROL FOR DEEP-SPACE COMMUNICATIONS VIA REINFORCEMENT LEARNING
Dr. Sajjad Baghaee, Middle East Technical University, Ankara, Türkiye;

IAC-26.B2.5.9

MUTUAL INTERFERENCE BETWEEN NGSO MEGA-CONSTELLATIONS: MODELLING, SIMULATION AND QUANTITATIVE IMPACT ASSESSMENT
Mr. Alexander Hofmann, Fraunhofer - Institut für Integrierte Schaltungen IIS, Erlangen, Germany;

IAC-26.B2.5.10

COMMUNICATION AND NAVIGATION ARCHITECTURE FOR SUBSURFACE LAVA TUBE EXPLORATION
Mr. Giacomo Vargiu, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, Toulouse, France;

B2.6. Cubesat, Internet of Things, and Mobile Direct Communications

October 6 2026, 15:00 — Hall 5

Co-Chair(s): Debra Emmons, The Aerospace Corporation, United States; Giuseppe D'Amore, Agenzia Spaziale Italiana (ASI), Italy;

Rapporteur(s): Enrique Pacheco Cabrera, International Academy of Astronautics, Mexico; Yuma Abe, National Institute of Information and Communications Technology (NICT), Japan;

IAC-26.B2.6.1

DEVELOPMENT OF HAB NAVIGATION AND TELEMETRY SYSTEM, TRANSITIONING FROM 868MHZ DATA TRANSMISSION SYSTEM TO 2.4 GHZ TIME-OF-FLIGHT RANGING
Mr. Batuhan Can Azakoğlu, Middle East Technical University, Ankara, Türkiye;

IAC-26.B2.6.2

A CUBESAT NON-TERRESTRIAL NETWORK ARCHITECTURE FOR MULTI-BAND DIRECT-TO-USER DISASTER COMMUNICATIONS
Ms. İkbâl Yöner, Antalya, Türkiye;

IAC-26.B2.6.3

LORA TRANSCEIVER PAYLOAD MODULE FOR IOT APPLICATIONS
Mr. Nuri Dogancan Aksu, ASELSAN, Ankara, Türkiye;

IAC-26.B2.6.4

SCALING SATELIOT'S 3GPP 5G NB-IOT NTN BACKBONE: OPERATIONALIZING MULTI-ORBIT FLIGHT FORMATION FOR A SERVICE-ORIENTED EXPANSION
Mr. Dídac Cabús, Sateliot, Barcelona, Spain;

IAC-26.B2.6.5

AN EXPERIMENTAL END-TO-END IMPLEMENTATION OF O-RAN FOR NTN MULTI-TENANCY
Ms. Isabel Gallardo Duval, i2CAT, Barcelona, Spain;

IAC-26.B2.6.6

BLIND SUBSPACE TRACKING AND OPPORTUNISTIC SPATIAL DIVISION MULTIPLE ACCESS ARCHITECTURE FOR MASSIVE LEO-IOT NETWORKS
Dr. Galip Orkun Arican, ASELSAN, Ankara, Türkiye;

IAC-26.B2.6.7

AL-RHIM SAT – A HIGH-SENSITIVITY DIRECT-TO-SATELLITE IOT ARCHITECTURE FOR GLOBAL WILDLIFE MONITORING
Mr. Zaid Khraim, Jordan University of Science & Technology, Amman, Jordan;

IAC-26.B2.6.8

IN-ORBIT VALIDATION OF A BP-TUNNEL ARCHITECTURE FOR 3GPP NTN TRAFFIC VIA THE MINAIRÓ MISSION
Mr. Oriol Fusté, i2CAT, Barcelona, Spain;

IAC-26.B2.6.9

COMMISSIONING AND PRELIMINARY IN-ORBIT RESULTS OF THE 6GSTARLAB MISSION
Dr. Adrian Perez-Portero, i2CAT, Barcelona, Spain;

IAC-26.B2.6.10

BALLOON-TO-SATELLITE DISTRIBUTED TELEMETRY NETWORK EXPERIMENTS WITH THE ABEAR, WILDTRACKCUBE-SIMBA AND CORAL PROJECTS: RESULTS FROM THE DEMONSTRATION CAMPAIGNS
Mr. Riccardo Garofalo, Sapienza University of Rome, Monterotondo, Italy;

IAC-26.B2.6.11

AI-BASED FREQUENCY PRE-COMPENSATION FOR DOPPLER MITIGATION IN LORA DIRECT-TO-SATELLITE WILDLIFE COLLAR UPLINKS FOR LEO CUBESAT MISSIONS
Mr. Omar al ethamat, Al-Balqa Applied University, Al Salt, Jordan;

IAC-26.B2.6.12

TRANSMISSION OF TELEMETRY DATA USING DEEP LEARNING METHODS OVER AN AWGN CHANNEL WITH LORA CSS TECHNOLOGY
Mr. Mehmet Emin Yilmaz, Ankara, Türkiye;

IAC-26.B2.6.13

DEVELOPMENT OF A MEMBRANE PHASED-ARRAY ANTENNA FOR DIRECT-TO-DEVICE COMMUNICATION ON SMALL SATELLITES
Dr. Ryohei Orii, cosmobloom Inc., yoshinodai, chuo-ku, sagamihara-shi, kanagawa, Japan;

B2.7. Advances in Space-based Communication Technologies

October 7 2026, 10:15 — Hall 5

Co-Chair(s): Enrique Pacheco Cabrera, International Academy of Astronautics, Mexico; Eva Fernandez Rodriguez, Netherlands Organisation for Applied Scientific Research (TNO), Spain;

Rapporteur(s): Elemer Bertenyi, Canadian Aeronautics and Space Institute, Canada; Steven Shumsky, Millennium Space Systems, A Boeing Company, United States; Alvin Michael Mulumba, International Space University (ISU), France;

IAC-26.B2.7.1

LOLASAT: SYSTEM LEVEL TESTING OF A VLEO CUBESAT FOR VERY LOW LATENCY KA-BAND COMMUNICATIONS
Prof. Klaus Schilling, Zentrum für Telematik, Wuerzburg, Germany;

IAC-26.B2.7.2

S-BAND LEO SATELLITE PAYLOAD DESIGN AND THROUGHPUT CHARACTERIZATION FOR DIRECT-TO-HANDHELD TACTICAL COMMUNICATIONS
Dr. Umit Irgin, ASELSAN, Ankara, Türkiye;

IAC-26.B2.7.3

IMPLEMENTATION OF A CCSDS COMPATIBLE TELECOMMAND DECODER SUBSYSTEM WITH THE ASCON-AEAD128 LIGHTWEIGHT AUTHENTICATED ENCRYPTION ALGORITHM
Mr. Arda Hüseyin Özalp, Istanbul Technical University, Merkez, Türkiye;

IAC-26.B2.7.4

AUTOMATING OF THE AEROSPACE COMMUNICATION TECHNOLOGIES DEVELOPMENT
Dr. Valentin Olenev, Saint Petersburg State University of Aerospace Instrumentation, St. Petersburg, Russian Federation;

IAC-26.B2.7.5

ENHANCED SPECTRUM MONITORING IN BENT-PIPE SATELLITES VIA DIGITAL CHANNELIZER-ASSISTED SPECTRAL REFINEMENT
Mr. Ali yasin Çakilci, ASELSAN, Ankara, Türkiye;

IAC-26.B2.7.6

GLOBAL AND DISTRIBUTED HYBRID ROUTING FOR LARGE-SCALE THREE-LAYER HETEROGENEOUS COMMUNICATION-REMOTE SENSING CONSTELLATIONS WITH MULTI-TYPE SERVICES

Prof. Dr. Shengyu Zhang, Innovation Academy for Microsatellites, Chinese Academy of Sciences, Shanghai, China;

IAC-26.B2.7.7

AI-ASSISTED ELECTROMAGNETIC AND NETWORK CO-SIMULATION OF RESILIENT LEO NON-TERRESTRIAL COMMUNICATION SYSTEMS

Ms. Hilal Çimen, Erciyes University, Ankara, Türkiye;

IAC-26.B2.7.8

AM-FIRST COMPACT KA-BAND UNEQUAL POWER DIVIDER BASED ON ANGLED-IRIS TUNING FOR HIGH-THROUGHPUT SATELLITE BEAMFORMING FEED NETWORKS

Dr. Bawoul Chung, Electronics and Telecommunications Research Institute (ETRI), Daejeon, Republic of Korea;

IAC-26.B2.7.9

EXPERIMENTAL EVALUATION OF TIME-SENSITIVE NETWORKING IN REDUNDANT MULTI-HOP AEROSPACE NETWORKS

Dr. Tiziana Fiori, Sapienza University of Rome, Roma, Italy;

IAC-26.B2.7.10

DOPPLER PRE-COMPENSATION FOR LORA DIRECT-TO-SATELLITE IOT COMMUNICATIONS IN LEO CUBESAT

Mrs. Nada Khatib, Al Hussein Technical University, Salt, Jordan;

IAC-26.B2.7.11

CHARACTERIZATION AND EMC TESTING OF THE RADIO FREQUENCY (RF) BOARD FOR TELEMETRY, TRACKING AND COMMAND (TT&C) OPERATIONS OF THE MEXICAN NANOSATELLITE K'OTO.

Ms. Zhara Ixel Tavares Ramirez, Universidad Nacional Autónoma de México (UNAM), Queretaro, Mexico;

IAC-26.B2.7.12

ADAPTIVE COMMUNICATION TECHNOLOGIES SATELLITE (ACT-SAT1)

Mr. Harrison Auerbach, BLUECUBE Aerospace, Palm Beach Gardens, United States;

IAC-26.B2.7.13

COMPARATIVE ANALYSIS OF EKF-BASED CARRIER SYNCHRONIZATION ARCHITECTURES FOR LEO SATELLITE NETWORKS

Mr. Pandith Harsh Chaurasia, University of Luxembourg, Luxembourg, Luxembourg;

B2.8-GTS.3. Space Communications and Navigation Global Technical Session

October 5 2026, 16:30 — Hall 28

Co-Chair(s): Eric Wille, ESA, Netherlands (Kingdom of the); Joshua Critchley-Marrows, ArkEdge Space Inc., Australia; Eleonora Lombardi, Fondazione E. Amaldi, Italy;

Rapporteur(s): Behnoosh Meskoob, Spark Microsystems, Canada; Manish Saxena, Indian Space Research Organization (ISRO), India;

IAC-26.B2.8-GTS.3.1

A NEW-GENERATION COMMERCIAL DATA RELAY SATELLITE SYSTEM

Dr. Liyan Zhang, Cangyu Space, Beijing, China;

IAC-26.B2.8-GTS.3.2

A RAPID DESIGN FRAMEWORK FOR HETEROGENEOUS EARTH-MOON CONSTELLATIONS BASED ON AGENT MODEL OPTIMIZATION

Mr. Jialong Wang, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, Xi'an, Xi'an, China;

IAC-26.B2.8-GTS.3.3

AN AUTONOMOUS SCHEDULING FRAMEWORK FOR RELAY ACCESS IN A LARGE SCALE MARS ROVER SWARM

Ms. Aybuke Sude Buzkiran, Tumbleweed Mars, Istanbul, Türkiye; Ms. Ilgin Ozkan, Tumbleweed Mars, Ankara, Türkiye;

IAC-26.B2.8-GTS.3.4

EVALUATING ORBITAL NETWORK RESILIENCE: HIGH-FIDELITY SIMULATION OF OPTICAL COMMUNICATIONS IN LARGE SATELLITE CONSTELLATIONS

Mr. Martin Hartenberger, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Wessling, Germany;

IAC-26.B2.8-GTS.3.5

SATELLITE TRAUMA-RESPONSIVE LEARNING NETWORK (STRLN) - A BATTERY-POWERED SOLUTION FOR POST-DISASTER EDUCATION AND PSYCHOSOCIAL SUPPORT

Ms. Khanim Asadova, Garabagh University, Khankendy, Azerbaijan;

IAC-26.B2.8-GTS.3.6

MINIMIZING THE SIZE OF LEO SATELLITE CONSTELLATIONS FOR REAL-TIME LAUNCH VEHICLE TELEMETRY COVERAGE

Mr. Sedat Turan, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Ankara, Türkiye;

IAC-26.B2.8-GTS.3.7

MOONLIGHT LCNS, ESA'S INITIATIVE FOR THE CREATION OF A LUNAR COMMUNICATIONS AND NAVIGATION SYSTEM

Dr. Félix Cuervo González, Hispasat SA, Arganda del Rey, Madrid, Spain;

IAC-26.B2.8-GTS.3.8

NEXTGEN NEAR SPACE DOMAIN COMMUNICATIONS

Mr. Nafiz Karabudak, Lockheed Martin Corporation, Bethesda, MD, United States;

IAC-26.B2.8-GTS.3.10

SIFTING VERSUS PLUG-AND-PLAY LOSSES IN INTER-SATELLITE QUANTUM CROSSLINKS

Dr. Laszlo Bacsardi, Budapest University of Technology and Economics, Budapest, Hungary;

IAC-26.B2.8-GTS.3.11

STATUS OVERVIEW, GOALS, AND EVOLUTION OF THE CONSULTATION PROCESS ESTABLISHED BY THE RESOLUTION 609 (REV. WRC-07) OF THE ITU RADIO REGULATIONS

Mr. Vladislav Beregovskiy, International Telecommunication Union (ITU), Geneva [Genève (fr)], Switzerland;

IAC-26.B2.8-GTS.3.12

TERRESTRIAL DEMONSTRATION OF 100GBPS OPTICAL COMMUNICATION USING A GIMBAL-BASED LASER COMMUNICATION TERMINAL FOR SATELLITE-TO-GROUND COMMUNICATION

Mr. Sang-won Park, Korea Astronomy and Space Science Institute, Korea, Daejeon, Republic of Korea;

B2.9. RF & Antenna Technologies for Space Communications

October 9 2026, 10:15 — Hall 35

Co-Chair(s): Rania Toukebri, AKKA, Germany; Alvin Michael Mulumba, International Space University (ISU), France;

Rapporteur(s): Laszlo Bacsardi, Budapest University of Technology and Economics, Hungary;

IAC-26.B2.9.1

COMPACT DUAL-BAND K/KA MICROSTRIP ANTENNA FOR 5G NTN LEO SATELLITE APPLICATIONS

Mr. Hasan KARASALLI, ASELSAN, Ankara, Türkiye;

IAC-26.B2.9.2

COMPACT MULTI-BAND SIW-FED PLANAR ANTENNA FOR SUB-TERAHERTZ CUBESAT AND SMALL SATELLITE COMMUNICATION SYSTEMS

Prof. Cetin Kurnaz, Ondokuz Mayıs University, Samsun, Türkiye;

IAC-26.B2.9.3

DESIGN OF A DEPLOYABLE TAPE-SPRING DIPOLE ANTENNA FOR 1090 MHZ ADS-B RECEPTION IN CUBESAT PLATFORMS

Mr. Peter Perez, Universidad Nacional de Ingeniería (Lima, Perú), Lima, Peru;

IAC-26.B2.9.4

PLASMA ANTENNAS FOR SATCOM APPLICATIONS

Dr. Federico Cescon, University of Padua, San Polo di Piave, Italy;

IAC-26.B2.9.5

DESIGN OF AN ORIGAMI STRUCTURED DEPLOYABLE S-BAND HELICAL ANTENNA FOR 6U CUBESATS

Mrs. Rümeysa Üstüncan, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.B2.9.6

TECHNICAL ANALYSIS OF A SCALABLE GEOSTATIONARY SATELLITE COMMUNICATION SWARM - A DISTRIBUTED PHASED-ARRAYS FOR COHERENT SPARSE-APERTURE SYNTHESIS

Mr. Ludwig von Matuschka, Cranfield University, UK, London, United Kingdom;

IAC-26.B2.9.7

INVESTIGATION OF SUB-REFLECTOR LOADED ISOFLUX CHOKE RING HORN ANTENNA DESIGNS FOR LEO SATELLITE APPLICATIONS

Dr. Beyit Barakali, ASELSAN, Yenimahalle-Ankara, Türkiye;

IAC-26.B2.9.8

WIDE BEAM MULTI-MODE STACK PATCH ANTENNA FOR LEO PHASED ARRAY SYSTEMS

Mr. Batuhan Kaltalioglu, ASELSAN, Ankara, Türkiye;

IAC-26.B2.9.9

DESIGN OF AN ABSORPTIVE BROADBAND REFLECTIONLESS FILTER FOR X-BAND RF APPLICATIONS

Mr. SABAHATTİN DORUK YILDÖN, Yeditepe University, Istanbul, Türkiye;

B3. IAF HUMAN SPACEFLIGHT SYMPOSIUM

Coordinator(s): Kevin D. Foley, The Boeing Company, United States; Sam Scimemi, National Aeronautics and Space Administration (NASA), United States; Alex Karl, Space Applications Services, Belgium; Kavya Manyapu, Space Generation Advisory Council (SGAC), United States;

B3.1. Governmental Human Spaceflight Programmes (Overview)

October 5 2026, 16:30 — E5

Co-Chair(s): Robyn Gatens, National Aeronautics and Space Administration (NASA), United States; Juergen Schlutz, European Space Agency (ESA), Germany;

Rapporteur(s): Antonio Fortunato, European Space Agency (ESA), Germany;

IAC-26.B3.1.1 (unconfirmed)

SPACE OPERATIONS MISSION DIRECTORATE PROGRESS AND ROLE IN SUSTAINING HUMAN PRESENCE IN LOW EARTH ORBIT AND ENABLING DEEPER EXPLORATION ABSTRACT

Mr. Joel Montalbano, NASA, Washington, DC, United States;

IAC-26.B3.1.2

TERRAE NOVAE: A FRAMEWORK FOR EUROPEAN LEADERSHIP IN HUMAN AND ROBOTIC EXPLORATION

Mr. Daniel Neuenschwander, European Space Agency (ESA), Paris, France;

IAC-26.B3.1.3

PROGRESS AND PROSPECTS OF JAXA'S HUMAN SPACEFLIGHT AND SPACE EXPLORATION ACTIVITIES

Ms. Mayumi Matsuura, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

IAC-26.B3.1.5

NASA'S ARTEMIS II TEST FLIGHT: LESSONS LEARNED

Mr. Jeremy Parsons, NASA, Merritt Island, United States;

IAC-26.B3.1.6 (unconfirmed)

NASA'S PROGRESS TOWARD COMMERCIAL LOW EARTH ORBIT DESTINATIONS: SUSTAINING RESEARCH AND ENABLING DEEP SPACE EXPLORATION

Mrs. Angela Hart, National Aeronautics and Space Administration (NASA), Houston, United States;

IAC-26.B3.1.7

TÜRKİYE'S FIRST HUMAN SPACEFLIGHT AND SCIENCE MISSION: PROGRAMMATIC DESIGN, MICROGRAVITY RESEARCH MANAGEMENT AND OUTREACH IMPACT

Mr. Ömer Atas, TÜBİTAK Uzay, Space Technologies Research Institute, Ankara, Türkiye;

IAC-26.B3.1.8

ADDRESSING THE ENVIRONMENTAL CHALLENGES AND INFRASTRUCTURE NEEDS OF THE LUNAR SOUTH POLE

Mr. Carlos Garcia-Galan, NASA, Medina, United States;

IAC-26.B3.1.10

NASA'S HUMAN LANDING SYSTEM: DEMONSTRATING THE CAPABILITY TO LAND ARTEMIS ASTRONAUTS ON THE MOON BY 2028

Ms. Beverly Perry, NASA Marshall Space Flight Center, Marshall Space Flight Center, United States;

IAC-26.B3.1.11

NASA'S ARTEMIS ERA SCIENCE STRATEGY FOR EXPLORATION AND DISCOVERY

Dr. Nicola Fox, NASA, Washington, DC, United States;

B3.2. Commercial Human Spaceflight Programmes

October 6 2026, 10:15 — E5

Co-Chair(s): Kevin D. Foley, The Boeing Company, United States; Michael Lopez-Alegria, Axiom Space, United States;

Rapporteur(s): Sergey K. Shaevich, Khrunichev State Research & Production Space Center, Russian Federation;

IAC-26.B3.2.1

FROM OVERVIEW EFFECT TO REVENUE: A COMMERCIAL PLAYBOOK FOR SPACE-BASED CULTURAL EVENTS AND GLOBAL DIGITAL DISTRIBUTION

Mr. Ari Eisenstat, University of Hawaii, Honolulu, United States;

IAC-26.B3.2.2

UPDATES FROM THE IIAS FLIGHT OPPORTUNITIES PROGRAM

Dr. Shawna Pandya, International Institute for Astronautical Sciences (IIAS), Sherwood Park, Canada;

IAC-26.B3.2.3

PAYLOAD OPERATIONS: FROM INSTITUTIONAL TO COMMERCIAL MODEL

Dr. Manuela Aguzzi, Space Applications Services, Woluwe Saint Lambert, Brussels, Belgium;

IAC-26.B3.2.4

BEYOND THE HYPE: LEO MANUFACTURING VALUE FOR NON-SPACE CUSTOMERS

Prof. Paolo Trucco, Politecnico di Milano, Milan, Italy;

IAC-26.B3.2.5

COMMERCIAL DISPUTES IN A MULTI-STATION ORBITAL ECONOMY: CONTRACTUAL CLAIMS, TORT LIABILITY, AND DISPUTE RESOLUTION FOR THE POST-ISS ERA

Ms. Neha Dagley, Coral Gables, United States;

IAC-26.B3.2.6

COMMERCIAL HUMAN SPACEFLIGHT: CURRENT STATUS, MARKET REALITY AND ENVIRONMENT

Ms. Aileen Rabsahl, DLR (German Aerospace Center), Oberpfaffenhofen, Germany;

IAC-26.B3.2.7

DESIGNING HUMAN-CENTERED KITCHENS FOR LEO SPACE STATIONS

Ms. Charlotte Heffron, Arizona State University, Scottsdale, United States;

IAC-26.B3.2.8

ON-DEMAND 3D FOOD PRINTING WITH MICROALGAE BIO-INKS FOR SPACE STATIONS AND DEEP-SPACE EXPLORATION

Mr. Mehmet Yiğit Gezer, Boğaziçi University, İstanbul, Türkiye;

IAC-26.B3.2.9

FROM ISS TO COMMERCIAL SPACE STATIONS: A HIGH LEVEL ARCHITECTURE COMPARISON STUDY

Ms. Krishna Patel, University of Calgary, Calgary, Canada;

IAC-26.B3.2.10

EXTENDING THE LIFE OF ISS

Dr. James Green, Space Science Endeavors, Silver Spring, United States;

IAC-26.B3.2.11

ARCHITECTURAL APPROACHES TO HUMAN SPACE HABITATION IN COMMERCIAL ORBITAL PLATFORMS

Mr. Darren Berlein, Strasbourg, France;

B3.3. Advancements in Human Space Habitation for Orbital, Transit, and Surface Environments

October 6 2026, 15:00 — E5

Co-Chair(s): Eleanor Morgan, Lockheed Martin Corporation, United States; Kavya K. Manyapu, NASA, United States; Thomas A.E. Andersen, Danish Aerospace Company A/S, Denmark;

IAC-26.B3.3.1

BEYOND WET WIPES: H₂ORBIT, A PRELIMINARY ANALYSIS OF A RESOURCE-EFFICIENT AND CREW-CENTRED HYGIENE SYSTEM FOR MICROGRAVITY ENVIRONMENTS

Ms. Talin Aswad, Technical University of Berlin, Berlin, Germany; Ms. Anna Victoria Voos, Technical University Berlin, Berlin, Germany; Dr. Elias Mulky, CHASM, Rümlang, Switzerland;

IAC-26.B3.3.2

RUSSIAN ORBITAL STATION AS AN OUTPOST OF INDUSTRIAL SPACE EXPLORATION

Dr. Igor V. Sorokin, S.P. Korolev Rocket and Space Corporation Energia, Korolev, Moscow Region, Russian Federation;

IAC-26.B3.3.3

VERIDIAN ORBITAL SPACE STATION

Mr. Robert Rochel, Skidmore, Owings & Merrill LLP, Burlingame, CA, United States;

IAC-26.B3.3.4

HUMAN FACTORS ASSESSMENT FRAMEWORK FOR THE LUNAR AGRICULTURE MODULE USING THE LAM-RGS SIMULATOR: INITIAL 1G EXPERIMENTAL CAMPAIGN AT THE EDEN LABORATORY AND EDEN LUNA

Mr. Kyunghwan KIM, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Institute of Space Systems, Bremen, Germany;

IAC-26.B3.3.5

A RAPID EMERGENCY ACTION & CONTINGENCY TOOL (REACT) FOR MARS DEPRESSURIZATION EMERGENCIES

Ms. Haaniya Ahmed, McMaster University, Oakville, Canada; Ms. Alisa Norenberg, McMaster University, Mississauga, Canada; Mr. Garret Langlois, McMaster University, Grand Valley, Canada; Ms. Safana Al-Emara, McMaster University, Brantford, Canada; Mr. Dylan Vaughn Villanueva, McMaster University, Stoney Creek, Canada;

IAC-26.B3.3.7

OPTIMISE BEHAVIOURAL HEALTH AND HUMAN FACTORS RESEARCH FOR DEEP SPACE MISSIONS BY CLASSIFYING ANALOGUE SCENARIOS AND FIDELITY

Mr. Karoly Schlosser, Humansys Ltd, London, United Kingdom;

IAC-26.B3.3.8

INFLATABLE HABITATION MODULES WITH REGOLITH PROTECTION TO SHIELD AGAINST RADIATION IN LUNAR SURFACE SETTLEMENTS.

Ms. Mery Cuno Zevallos, Universidad Católica de Santa María (UCSM), Arequipa, Peru;

IAC-26.B3.3.9

MINE ENVIRONMENTS AS ANALOGS FOR PLANETARY UNDERGROUND HABITATS: OPERATIONAL LESSONS FROM AN ANALOG SPACE MISSION IN THE SZKLARY NICKEL MINE, POLAND

Mr. Mikołaj Zawadzki, University of Warsaw, Warsaw, Poland;

IAC-26.B3.3.10

RADIATION SHIELDING ASSESSMENT FOR LONG-DURATION HUMAN PRESENCE IN PLANETARY LAVA TUBES

Mr. Giacomo Vargiu, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, Toulouse, France;

IAC-26.B3.3.11

SPACER ORBITAL DETERMINATION: TRANSIT AND DESIGN FOR THE FIRST SPACE EMERGENCY ROOM

Ms. Ayumi Tsuyuki, Columbia University, Sterling, United States;

IAC-26.B3.3.12

COMPARISON OF ORGANIZATIONAL, OPERATIONAL AND TECHNICAL ELEMENTS OF THE LUNA AND LUNARES ANALOG FACILITIES

Ms. Aileen Rabsahl, DLR (German Aerospace Center), Oberpfaffenhofen, Germany;

B3.4-B6.4. Flight & Ground Operations aspects of Human Spaceflight - Joint Session of the IAF Human Spaceflight and IAF Space Operations Symposia

October 7 2026, 15:00 — E5

Co-Chair(s): Dieter Sabath, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Annamaria Piras, Thales Alenia Space Italia, Italy;

Rapporteur(s): Jérôme Campan, European Space Agency (ESA), Germany; Maria Grulich, Telespazio Germany GmbH, Germany;

IAC-26.B3.4-B6.4.1

ARTEMIS II FLIGHT RESULTS: INDUSTRY PERSPECTIVE AND LESSONS LEARNED

Mr. Timothy Cichan, Lockheed Martin Corporation, Littleton, United States;

IAC-26.B3.4-B6.4.2

DESIGN CONSTRAINTS FOR OPERATION SCHEMES OF SPACE APPLICATION PAYLOADS ONBOARD CHINA'S SPACE STATION

Dr. Yuanyuan Sun, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, Beijing, China;

IAC-26.B3.4-B6.4.3

EVOLVING HUMAN SPACE FLIGHT: ASSESSMENT OF ISS OPERATIONS UNDER INCREASING COMMERCIAL UTILIZATION

Ms. Vivien-Sophie Stotz, Telespazio Germany GmbH, München, Germany; Ms. Carolin Widmann, Deutsches Zentrum für Luft- und Raumfahrt, München, Germany;

IAC-26.B3.4-B6.4.4

JEM FLIGHT CONTROL TRAINING: CERTIFICATION PROCESS OPTIMIZATION AND IMPROVED TRAINING EFFICIENCY

Mr. Koya Takemoto, Japan Manned Space Systems Corporation (JAMSS), Tsukuba, Ibaraki, Japan;

IAC-26.B3.4-B6.4.5

OPERATIONS CONCEPT - FROM COLUMBUS LABORATORY TO A LUNAR BASE

Mr. Jakob Lorenz, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), München, Germany;

IAC-26.B3.4-B6.4.6

OPERATIONAL METHODOLOGIES AND UTILISATION SCENARIOS FOR EVA SUIT SIMULATORS IN THE LUNA ANALOG FACILITY

Ms. Weronika Dziaduch, European Space Agency (ESA), Cologne, Germany;

IAC-26.B3.4-B6.4.7

OPERATIONAL EVALUATION OF A PHOTOBIOREACTOR SYSTEM INSTALLED IN THE FLEXHAB ANALOG HABITAT OF THE LUNA ANALOG FACILITY

Mr. Timon Karl-Heinz Schwarz, German Aerospace Center (DLR), Munich, Germany;

IAC-26.B3.4-B6.4.8

FAULT DIAGNOSIS AND DECISION-MAKING SYSTEM DESIGN FOR SPACE SCIENCE EXPERIMENTS IN THE WENTIAN MODULE BASED ON KNOWLEDGE GRAPH AND LARGE LANGUAGE MODEL

Dr. Yuanyuan Sun, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, Beijing, China;

IAC-26.B3.4-B6.4.9

TOWARDS NATURAL LANGUAGE ASSISTANTS IN HUMAN SPACEFLIGHT OPERATIONS

Mr. Carsten Hartmann, German Aerospace Center (DLR), Wessling, Germany;

IAC-26.B3.4-B6.4.11

FREE-FLYING MODULES IN THE INFRASTRUCTURE OF THE RUSSIAN ORBITAL STATION: DESIGN AND METHODOLOGY OF UTILIZATION

Mr. Andrey Lobykin, RSC Energia, Korolev, Russian Federation;

B3.5. Astronaut Training, Accommodation, and Operations in Space

October 7 2026, 10:15 — E5

Co-Chair(s): Igor V. Sorokin, S.P. Korolev Rocket and Space Corporation Energia, Russian Federation; Alan T. DeLuna, American Astronautical Society (AAS), United States;

Rapporteur(s): Andrea Boyd,, Germany;

IAC-26.B3.5.1

SELECTION AND SCREENING FOR THE NEW SPACE AGE

Dr. Simon Evetts, Nautex Global, Camberley, United Kingdom;

IAC-26.B3.5.2

ASTRONAUTS, OPERATORS & END-USERS TRAINING FROM INSTITUTIONAL TO COMMERCIAL SECTOR

Dr. Manuela Aguzzi, Space Applications Services, Woluwe Saint Lambert, Brussels, Belgium;

IAC-26.B3.5.3

JAMSS EXPERIENCE IN PROVIDING JEM TRAINING FOR PRIVATE ASTRONAUT MISSIONS FROM AX-1 THROUGH AX-4 AND IMPLICATIONS FOR FUTURE COMMERCIAL HUMAN SPACEFLIGHT

Mrs. Misa Oniwa, Japan Manned Space Systems Corporation (JAMSS), Sengen, Tsukuba, Ibaraki, Japan;

IAC-26.B3.5.5 (unconfirmed)

PREPARING CREWS FOR AUTONOMOUS DECISION-MAKING: TRAINING IMPLICATIONS FOR FUTURE EXPLORATION MISSIONS

Ms. Poonampreet Kaur Josan, CRADLE Corp., Altadena, United States;

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

October 8 2026, 15:00 — E5

Co-Chair(s): Mark Hempsell, The British Interplanetary Society, United Kingdom;

Rapporteur(s): Jan Marius Bach, DLR (German Aerospace Center), Germany; Scott Ritter, International Institute for Astronautical Sciences (IIAS), United States;

IAC-26.B3.6-A5.3.1

HAND GESTURE RECOGNITION FOR HUMAN-ROBOT INTERACTION USING THE ASTROBEE FREEFLYER ON THE ISS

Dr. Scott Dorrington, Massachusetts Institute of Technology (MIT), Somerville, United States;

IAC-26.B3.6-A5.3.2

GESTURE-DRIVEN ACTION GENERATION FOR LUNAR ROBOTIC SYSTEMS BASED ON MULTIMODAL LARGE LANGUAGE MODELS

Mr. Bingqi Huang, Tsinghua University, Beijing, China;

IAC-26.B3.6-A5.3.3

ORB: FREE-FLYING ROBOT ASSISTANT FOR INSPECTION & CINEMATOGRAPHY IN ZERO-G

Ms. Anna Shaposhnik, San Jose, United States;

IAC-26.B3.6-A5.3.4

AN EXPERIMENTAL EXPLORATION OF THE INVESTMENT CONSTRUCT IN HUMAN-ROBOT INTERACTION FOR SPACE HABITAT OPERATIONS

Dr. Ulubilge Ulusoy, University of Colorado Boulder, Boulder, United States;

IAC-26.B3.6-A5.3.5

MIXED-INITIATIVE MISSION PLANNING FOR HUMAN-ROBOT COLLABORATIVE LUNAR SURFACE OPERATIONS

Mr. Shizhen Li, Beijing Institute of technology, Beijing, China;

IAC-26.B3.6-A5.3.6

COLLABORATIVE MISSION CONTROL FOR REAL-TIME ROBOTIC EXPLORATION: INSIGHTS FROM AN ANALOG ROVER MISSION

Ms. Nina Bažela, Jagiellonian University, Kraków, Poland;

IAC-26.B3.6-A5.3.7

DAMAGE DETECTION AND OPERATION PLANNING FOR HUMAN AND ROBOT COLLABORATIVE ON-ORBIT SERVICING

Dr. Zongfu Luo, Sun Yat-sen University (Guangzhou), Guangzhou, China;

IAC-26.B3.6-A5.3.8

AUTONOMOUS SYSTEMS FOR MARS ROVER OPERATIONS: ASSESSING THE IMPACT OF AUTONOMY LEVELS ON HUMAN PERFORMANCE AND HUMAN FACTORS OUTCOMES

Dr. Sarah Khayat, International Space University (ISU), Illkirch-Graffenstaden Strasbourg, France;

IAC-26.B3.6-A5.3.9

SAFETY-CRITICAL SHARED CONTROL FOR HUMAN-ROBOT COLLABORATIVE ASSEMBLY IN ORBITAL HABITATS USING DYNAMIC VIRTUAL FIXTURES AND ENERGY TANKS

Ms. Mansi Gupta, University of Petroleum and Energy Studies, Delhi, India;

IAC-26.B3.6-A5.3.10

INTEGRATED HAZARD AND RESOURCE MAPPING FOR HUMAN-ROBOTIC LUNAR MISSION OPERATIONS

Ms. SEDEF DENLİ, Hatay, Türkiye;

IAC-26.B3.6-A5.3.11

RESEARCH ON VISUAL PERCEPTION ENHANCEMENT FOR SPACE STATION CABIN ROBOTS BASED ON LARGE LANGUAGE MODELS

Ms. Xinyu Fu, National Key Laboratory of Aerospace Flight Dynamics, Northwestern Polytechnical University, Xi'an, Xi'an, China;

IAC-26.B3.6-A5.3.12

MISSION-ORIENTED ASSESSMENT OF AN INFLATABLE
DEPLOYABLE ROBOTIC ARM FOR ORBITAL AND PLANETARY
APPLICATIONS

Dr. Pierpaolo Palmieri, Politecnico di Torino, Torino, Italy;

IAC-26.B3.6-A5.3.13

INTUITIVE PHYSICAL HUMAN-ROBOT INTERACTION FOR INTRA-
VEHICULAR ACTIVITY SUPPORT IN LUNAR HABITATS

*Mr. Elmar Heyderov, Azerbaijan Technical University, Baku,
Azerbaijan;*

B3.7. Advanced Systems, Technologies, and Innovations for Human Spaceflight

October 8 2026, 10:15 — E5

Co-Chair(s): Mauro Augelli, UK Space Agency, United Kingdom;
Sébastien BARDE, Centre National d'Etudes Spatiales (CNES),
France;

Rapporteur(s): Gi-Hyuk Choi, Korea Aerospace Research Institute
(KARI), Republic of Korea;

IAC-26.B3.7.1

NEXT-GENERATION SAFETY TOOLS FOR POST-ISS
EXTRA-VEHICULAR ACTIVITY

*Ms. Rowan Moorkens O'Reilly, European Space Agency (ESA/ESTEC),
Dublin, Ireland;*

IAC-26.B3.7.2

PROJECTION-MAPPED SITUATIONAL AWARENESS FOR
EMERGENCY RESPONSE IN HUMAN SPACEFLIGHT

*Ms. Sneha Gayen, University of Illinois at Urbana-Champaign,
Urbana, United States; Mr. Raghav Agarwal, University of Illinois at
Urbana-Champaign, Katy, United States;*

IAC-26.B3.7.4

DUAL FUNCTION MATERIALS: CARBON DIOXIDE MANAGEMENT
FOR EARTH AND SPACE

Ms. Rayida Mammadzada, Baku State University, Baku, Azerbaijan;

IAC-26.B3.7.5

OMICRON PROJECT: AN AUTONOMOUS ROBOTIC ASSISTANT FOR
LOW-CREW SPACE MISSIONS

*Mrs. Sebastián Chacón, Universidad de Costa Rica, San Jose, Costa
Rica;*

IAC-26.B3.7.6

MONITORING THE SPATIAL DISTRIBUTION OF AIR CONDITIONS
ON THE KIBO MODULE OF THE ISS AND A CONCEPTUAL DESIGN
FOR AN ENVIRONMENTAL MONITORING SYSTEM USING A FREE-
FLYING ROBOT

Ms. Hikaru Oi, Tokyo University of Science, Chiba, Japan;

IAC-26.B3.7.7

CFD-BASED EVALUATION OF VENTILATION OUTLET
CONFIGURATION IN JAPANESE EXPERIMENT MODULE "KIBO" ON
INTERNATIONAL SPACE STATION

Dr. Hideaki Nagano, Tokyo City University, Tokyo, Japan;

IAC-26.B3.7.8

SMMAARTE: A MODULAR ANALOG SPACE-MEDICINE FACILITY
FOR TRAINING MMAARS SPACE MEDICS AND FUTURE SPACE
HEALTHCARE SPECIALTIES

Dr. Susan Jewell, AvatarMEDIC, LLC, Lancaster, United States;

IAC-26.B3.7.9

DESIGN OF COMPLEMENTARY CATALYTIC SETUPS FOR LOW-
TEMPERATURE O₃-ASSISTED TOTAL OXIDATION OF VOLATILE
ORGANIC COMPOUNDS IN LOW EARTH ORBIT AND CLOSED
SPACE HABITATS

*Dr. Albert Houcine Touati, Université Clermont Auvergne (UCA),
Royat, France;*

IAC-26.B3.7.10

DIGITAL TWIN FRAMEWORK FOR ASTRONAUT HEALTH
MONITORING AND PERFORMANCE OPTIMIZATION

Ms. N.N Ayinwi Sobo, Beyond Space Technologies, Chandigarh, India;

IAC-26.B3.7.11

A VERIFIED CFS-BASED SAFETY GATEWAY FOR ICAROUS
INTEGRATION WITH AUTONOMOUS DECISION-MAKING
MODULES IN HUMAN AND CIS-LUNAR SPACEFLIGHT
OPERATIONS

*Mrs. Bibi Sara Karimullah, Titans Space Industries Inc., Chittagong,
Bangladesh;*

IAC-26.B3.7.12

LIFE SUPPORT SYSTEM ARCHITECTURE FOR HUMAN LAVA TUBE
EXPLORATION

*Mr. Giacomo Vargiu, ISAE - Institut Supérieur de l'Aéronautique et de
l'Espace, Toulouse, France;*

IAC-26.B3.7.13

MXENE IN LEO ON AXIOM-4 MISSION: EARLY INSIGHTS INTO
MXENE STABILITY AND BIOMEDICAL SENSING IN SPACE

Dr. Krzysztof Grabowski, AGH University of Krakow, Kraków, Poland;

B3.8. Human Space & Exploration

October 9 2026, 10:15 — E5

Co-Chair(s): Dan King, MDA Space, Canada; Joost van Tooren,
ALATYR, France;

Rapporteur(s): Joao Lousada, GMV GmbH, Spain;

IAC-26.B3.8.2

A FRAMEWORK FOR IN-SITU MAINTENANCE AND REPAIR OF
SPACESUITS DURING LONG-DURATION SURFACE MISSIONS

*Ms. Pranika Gupta, Department of Space Studies, University of North
Dakota, Grand Forks, United States;*

IAC-26.B3.8.3

LUNAR TERRAIN VEHICLE AND PORTABLE LUNAR UTILITY
SYSTEM CAPABILITIES

*Dr. James Green, Space Science Endeavors, Silver Spring,
United States;*

IAC-26.B3.8.4

THE NEW HUMANS ANALOG HABITAT: OBJECTIVES, DESIGN
DRIVERS AND MASTER SCHEDULE

Mr. Giacomo Luccisano, Politecnico di Torino, Torino, Italy;

IAC-26.B3.8.5

THE LUNAR OUTPOST MAPP ROVER ON ARTEMIS IV
DEMONSTRATES THE FIRST ROBOT-ASTRONAUT INTERACTIONS
ON THE MOON

Ms. Kaila Pfrang, Lunar Outpost, Arvada, United States;

IAC-26.B3.8.6

HUMAN-AI COLLABORATION IN LONG-DURATION SPACE
MISSIONS

Ms. Mehriban Aliyeva, ADA University, Sumgait, Azerbaijan;

IAC-26.B3.8.7

GATEWAY AVIONICS COMMAND AND DATA HANDLING
ARCHITECTURE: UPDATED NETWORK CONCEPT OF OPERATIONS

Dr. Svetlana Hanson, NASA, Houston, United States;

IAC-26.B3.8.8

MODULAR STRUCTURE WITH TENSEGRITY SUPPORT (MOST)

*Mr. Harry Espiloy, University of Houston, Houston, United States; Mr.
Lewis Bittner, University of Houston, Houston, United States;*

IAC-26.B3.8.9

ANALYSIS OF EFFECTIVE DOSES OF IONIZING RADIATION IN
HUMAN PATIENTS UNDERGOING TOMOGRAPHY STUDIES IN
HOSPITAL RADIOLOGY DEPARTMENT VS ASTRONAUTS DURING
INTERPLANETARY JOURNEY

Dr. Maria Santoyo-Llamas, Zacatecas, Mexico;

IAC-26.B3.8.10

ANALOG HABITAT WAYPOINT (ANAHAW): A BENCHMARK
UNIVERSITY-BASED PILOT FOR FUTURE ANALOG MISSIONS IN
THE PHILIPPINES

*Ms. Danielle Canillo, Philippine Space Agency (PhilSA), Quezon City,
Philippines;*

B3.9-GTS.2. Human Spaceflight Global Technical Session

October 9 2026, 13:45 — Hall 28

Co-Chair(s): Guillaume Girard, Zero2infinity, Spain; Andrea Jaime, Isar Aerospace Technologies GmbH, Germany; Eleonora Lombardi, Fondazione E. Amaldi, Italy;
Rapporteur(s): Joao Lousada, GMV GmbH, Spain;

IAC-26.B3.9-GTS.2.1

TITLE: HYPATIA III: ADVANCING HUMAN, ENVIRONMENTAL, AND TECHNOLOGICAL RESEARCH THROUGH AN ALL-FEMALE MARS ANALOG MISSION IN THE ARCTIC

Dr. Estel Blay, Hypatia Mars, Barcelona, Spain;

IAC-26.B3.9-GTS.2.2

BIOMIMETIC VITRIFICATION FOR COLD-CHAIN-FREE BIOPRESERVATION IN DEEP SPACE MISSIONS: A TARDIGRADE-INSPIRED STRATEGY

Mr. Yusuf Mert DALGIÇ, İstanbul, Türkiye; Mr. Abdullah Nazım Karanfil, İstanbul, Türkiye; Mrs. Pınar Özdemir, İstanbul, Türkiye;

IAC-26.B3.9-GTS.2.3

PLASTIC SURGERY PRINCIPLES IN MICROGRAVITY: ASSESSING THE FUTURE OF RECONSTRUCTIVE SURGICAL CARE IN SPACE
Ms. Jordyn Carroll, Medical University of South Carolina, Charleston, United States;

IAC-26.B3.9-GTS.2.5

FROM ISS TO COMMERCIAL LOW EARTH ORBIT (LEO): THE ROLE OF THE REQUIREMENTS PLANNING TEAM (RP-TEAM) IN THE POST ISS ERA.

Mr. Leonardo Surdo, Space Applications Services N.V./S.A, Noordwijk, Netherlands (Kingdom of the);

IAC-26.B3.9-GTS.2.6

INCLUSIVE RISK PLANNING AND ASSESSMENTS FOR ASTRONAUTS' HEALTH FOR MARS-BOUND MISSIONS – INTEGRATING GENDERED INFORMED RADIATION SCENARIOS FOR RISK EVALUATIONS

Dr. S.W. Chiu, Viterbi School of Engineering, USC, Exeter, United States;

IAC-26.B3.9-GTS.2.7

QUANTIFYING ASTRONAUT PROFILE EVOLUTION: FROM A DESCRIPTIVE FRAMEWORK TO EVIDENCE-BASED INSIGHTS
Ms. Saira O. Williams, Space Generation Advisory Council (SGAC), San Rafael, Costa Rica;

IAC-26.B3.9-GTS.2.8

KIDNEY STONES IN SPACE: OPERATIONAL RISKS AND COUNTERMEASURES FOR LONG-DURATION SPACEFLIGHT
Mr. Kyle Stegmann, Medical University of South Carolina, Charleston, United States;

IAC-26.B3.9-GTS.2.9

APPLICATION OF FINE BUBBLE TECHNOLOGY TO WATERBASED HYGIENE SYSTEMS FOR FUTURE HUMAN SPACEFLIGHT
Ms. Hina Bando, Japan Manned Space Systems Corporation (JAMSS), Tsukuba, Japan;

IAC-26.B3.9-GTS.2.11

ENABLING MISSION SUCCESS TOGETHER: RESIDENT OFFICES AT THE NEXUS OF NASA AND INDUSTRY PARTNERS
Dr. Jackelynne Silva-Martinez, NASA, Houston, United States;

B4. 33rd IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS

Coordinator(s): Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), United Kingdom; Jian Guo, Delft University of Technology (TU Delft), Netherlands (Kingdom of the);

B4.1. 27th Workshop on Small Satellite Programmes at the Service of Developing Countries

October 6 2026, 10:15 — Hall 2

Co-Chair(s): Sias Mostert, Space Commercial Services Holdings (Pty) Ltd, South Africa; Nathalie RICARD, United Nations Office for Outer Space Affairs, Austria;

Rapporteur(s): Danielle Wood, Massachusetts Institute of Technology (MIT), United States; Taiwo Raphael Tejumola, University of Southampton, United Kingdom;

IAC-26.B4.1.1

A DECADE OF THE BIRDS PROGRAM: TRANSITIONING FROM FIRST-SATELLITE SUCCESS TO SUSTAINABLE SPACE ECOSYSTEMS
Prof. Tetsuhito Fuse, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-26.B4.1.2

LOW-COST CUBESAT IOT RELAY FOR ENVIRONMENTAL MONITORING AND NATIONAL CAPACITY BUILDING
Mr. Badis Ennejah, raoued, Tunisia;

IAC-26.B4.1.3

ADVANCING NATIONAL OWNERSHIP IN SMALL SATELLITE PROJECTS THROUGH PROGRESSIVE TECHNOLOGY TRANSFER IN PARAGUAY
Prof. Anibal Mendoza, Paraguayan Space Agency, Asuncion, Paraguay;

IAC-26.B4.1.4

MISSION DESIGN FOR IOT M2M COMMUNICATIONS USING A RECONFIGURABLE SDR PAYLOAD ON A NANOSATELLITE
Mrs. NAHIRI LEILA, RABAT, Morocco;

IAC-26.B4.1.5

CONCEPTUAL DESIGN OF A CUBESAT MISSION FOR THERMAL AND DEFORMATION MONITORING OF COTOPAXI VOLCANO, ECUADOR
Ms. Karen Arleth Caizaguano Sarango, Moscow Aviation Institute, Moscow, Russian Federation;

IAC-26.B4.1.6

KS4E: A CUBESAT TRAINING ECOSYSTEM TO SUPPORT SPACE CAPACITY DEVELOPMENT IN EMERGING NATIONS
Ms. Raihana Shams Islam Antara, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-26.B4.1.7

FROM CLASSROOM TO ORBIT: THE AL-RHIM SAT 1U MISSION FOR JORDANIAN WILDLIFE CONSERVATION.
Dr. Firas Jarrar, Al Hussein Technical University, Amman, Jordan;

IAC-26.B4.1.8

BUILDING SPACE: FIRST SPACE RESEARCH ORIENTED FACILITIES IN HONDURAS
Prof. Javier Mejuto, National Autonomous University of Honduras (UNAH), Tegucigalpa, Honduras;

IAC-26.B4.1.9

CNN-BASED ONBOARD CHANGE DETECTION FOR SMALL EARTH OBSERVATION SATELLITES: A PRACTICAL APPROACH FOR RESOURCE-CONSTRAINED PLATFORMS
Mr. Iyed FAREK, Constantine, Algeria;

IAC-26.B4.1.10

STRUCTURAL AND VIBRATION QUALIFICATION TESTING OF KNACKSAT-2 3U SATELLITE IN A NON-SPACE INDUSTRIAL FACILITY
Mrs. Ei Phyu Phyu, King Mongkut's University of Technology North Bangkok, Bangkok, Thailand;

IAC-26.B4.1.11

SYSTEMS ENGINEERING OF A HIGH ALTITUDE GROUND STATION IN THE BOLIVIAN ALTIPLANO: A LINK BUDGET CASE STUDY FOR THE NATION'S FIRST NANOSATELLITE
Ms. Mariel Valeriano, Universidad Catolica Boliviana San Pablo, La Paz, Bolivia;

IAC-26.B4.1.12

OPPORTUNITIES FOR CUBESAT-RELATED CAPACITY-BUILDING UNDER THE UNITED NATIONS ACCESS TO SPACE FOR ALL INITIATIVE: ACHIEVEMENTS IN 2025-2026
Ms. Mami Sasamura, United Nations Office for Outer Space Affairs, Vienna, Austria;

IAC-26.B4.1.13

AN ALLIANCE BETWEEN GOVERNMENT, ACADEMIA, AND INDUSTRY MARKS AN HISTORIC MILESTONE FOR MEXICO: THE LAUNCH OF THE MXAO-1 A HIGH-RESOLUTION EARTH OBSERVATION SATELLITE
Dr. Enrique Pacheco Cabrera, International Academy of Astronautics, Mexico City, Mexico;

IAC-26.B4.1.14

GEOGRAPHY SHOULD NOT BE OUR DESTINY: LOW-COST SATELLITE INTERNET FOR BRIDGING DIGITAL GAPS IN RURAL AREAS
Ms. Elif Zeren ADALI, İstanbul, Türkiye;

IAC-26.B4.1.15

STAKEHOLDER EXPECTATIONS FOR LONG-TERM SATELLITE TECHNOLOGY PLANNING IN PERU: A SYSTEMS ENGINEERING PERSPECTIVE
Mr. George Steve Fajardo Soria, Universidad Nacional de Ingenieria, Peru, Chimbote, Peru;

B4.2. Small Space Science Missions

October 5 2026, 16:30 — Hall 2

Co-Chair(s): Larry Paxton, The Johns Hopkins University Applied Physics Laboratory, United States; Oana van der Togt, Netherlands Aerospace Centre (NLR), Netherlands (Kingdom of the);

Rapporteur(s): Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;

IAC-26.B4.2.1

LEVERAGING SMALLSATS FOR AN ARCHITECTURALLY DIVERSE HELIOPHYSICS FLEET
Dr. Joe Westlake, NASA, Washington, DC, United States;

IAC-26.B4.2.2

THE COSPAR-1 MISSION: ADVANCING SPACE SCIENCE THROUGH CAPACITY BUILDING
Dr. Amal Chandran, Laboratory for Atmospheric and Space Physics (LASP) at University of Colorado, Boulder, United States;

IAC-26.B4.2.3

OPUS-1: AN ULTRACOMPACT CUBESAT-BASED GALACTIC COSMIC RAY DETECTOR
Mr. Colin Quinn, BLUECUBE Aerospace, Palm Beach Gardens, United States;

IAC-26.B4.2.4

SUN WHISPERER-K: A CUBESAT SOLAR-SAIL MISSION TO EARTH'S QUASI-MOON KAMO'OALEWA
Mr. Dillon O'Reilly, Southeast Technological University of Ireland, Kildare, Ireland;

IAC-26.B4.2.6

SIGNIFICANCE OF 6U CUBESAT PRELUDE FOR ON-ORBIT INVESTIGATION OF SEISMO-IONOSPHERIC VARIATIONS
Dr. Masahiko Yamazaki, Nihon University, Chiba, Japan;

IAC-26.B4.2.7

THE PLASMA OBSERVATORY MISSION CONCEPT: COST-EFFECTIVE SOLUTIONS FOR A RELIABLE EUROPEAN SCIENCE MISSION
Ms. Catarina Antunes da Silva, OHB System AG, Bremen, Germany;

IAC-26.B4.2.8

DEVELOPMENT OF THE RADICALS BUS: A CANADIAN SPIN-STABILIZED SPACECRAFT ENABLING A BETTER UNDERSTANDING OF EARTH'S CLIMATE
Ms. Ana Vukojevic, Space Flight Laboratory (SFL), Toronto, Canada;

IAC-26.B4.2.9

IDENTIFYING ASTEROID COMPOSITION USING SATELLITE PERTURBATION SIGNATURES COMBINED WITH SHAPE RECONSTRUCTION AND SPECTRAL DATA FUSION: A CUBESAT-BASED APPROACH
Mr. Jayasheel Siram, chirala, India;

IAC-26.B4.2.10

A TRIPLE-LAYER LABR₃:CE COMPTON CAMERA FOR GAMMA-RAY BURST DETECTION AND LOCALISATION ABOARD A 3U CUBESAT "SABHASAT"
Mr. Snehaadeep Kumar, Durgapur, India;

IAC-26.B4.2.11

VERSATILITY OF PRECISION FOR SPACE SCIENCE AND OTHER NON-EO MISSIONS
Mr. Alex da Silva Curriel, Surrey Satellite Technology Ltd (SSTL), Guildford, Surrey, United Kingdom;

B4.3. Small Satellite Operations

October 6 2026, 15:00 — Hall 2

Co-Chair(s): Andreas Hornig, AerospaceResearch.net, Germany; Nijin Jose Thykkathu, Science and Technology Facilities Council, United Kingdom;

Rapporteur(s): Lynette Tan, Space Faculty, Singapore; Stephan Roemer, OHB, Germany;

IAC-26.B4.3.1

EIGHT YEARS' ON-ORBIT OPERATIONS OF QUEQIAO LUNAR RELAY COMMUNICATION SMALL SATELLITE
Dr. Lihua Zhang, DFH Satellite Co. Ltd., Beijing, China;

IAC-26.B4.3.2

A DRAG-INFORMED METHOD TO OPTIMISE THE COMMUNICATIONS ARCHITECTURE OF A VLEO SATELLITE
Mr. Sachin Solanki, New Orbit Space, Reading, United Kingdom;

IAC-26.B4.3.3

DESIGN OF A MID-SIZE SPACECRAFT PLATFORM FOR INTEGRATED EARTH OBSERVATION AND SPACE-BASED SSA
Ms. Delia Visconi, Università degli Studi di Padova, Rezzato, Italy;

IAC-26.B4.3.4

ON-ORBIT PERFORMANCE ENHANCEMENT FOR VERY HIGH RESOLUTION MICROSAT EARTH OBSERVATION MISSION
Prof. Alim Rüstem Aslan, Istanbul Technical University, Maslak, Istanbul, Türkiye;

IAC-26.B4.3.5

CONOPS AND PRE-FLIGHT SIMULATION OF RESISTOJET-ENABLED ALTITUDE CONTROL FOR A 4U CUBESAT
Dr. Manu Mohan, Trivandrum, India;

IAC-26.B4.3.7

DESIGN AND CONTROL OF A LOW-COST ON-ORBIT SERVICING SATELLITE ROBOTIC ARM
Mr. Leyan Li, Hefei University of Technology, Hefei, China;

IAC-26.B4.3.8 (unconfirmed)

ELECTROMAGNETIC-RECONFIGURATION ON-ORBIT VERIFICATION BY CUBESAT FOR FUTURE LARGE SPACE STRUCTURE CONSTRUCTION MISSION

Prof. Jun Jiang, Shanghai Engineering Center for Microsatellites, Chinese Academy of Sciences (CAS), Shanghai, China;

IAC-26.B4.3.9

ON-ORBIT RESULTS AND LESSONS LEARNED FROM THE LEOPARD 3U CUBESAT

Ms. Sara Aziz, Kyushu Institute of Technology, Fukuoka, Japan;

IAC-26.B4.3.10

VERIFICATION OF RAPID-RESPONSE OBSERVATION OPERATIONS FOR THE MULTI-PLATFORM MICROSATELLITE PETREL THROUGH GROUND SYSTEM-INTEGRATION TESTING

Ms. Haruna Hagio, Tokyo Institute of Technology, Tokyo, Japan;

IAC-26.B4.3.11

CONCEPTUAL STUDY OF SOLAR ENERGETIC PARTICLE MONITORING USING THE BOLIVIA DEEP SPACE 3U SOLAR CUBESAT DEPLOYED FROM THE ISS

Mr. Michael Vincent Quispe Mendoza, Moscow Aviation Institute (National Research Institute, MAI), Moscow, Russian Federation;

IAC-26.B4.3.12

SPACE SIMULATION REFUELING TASK BASED ON FLEXIBLE ROBOTIC ARM

Dr. Lei Cheng, Suzhou SUSTAIN SPACE Technology Co., Ltd., Suzhou, China;

IAC-26.B4.3.13

TIME-CONSTRAINED COOPERATIVE CONTROL METHOD FOR SATELLITE CONSTELLATIONS DEPLOYMENT

Mr. Chen YuXuan, Beijing Institute of Technology, Beijing, China;

B4.4. Small Earth Observation Missions

October 7 2026, 10:15 — Hall 2

Co-Chair(s): Larry Paxton, The Johns Hopkins University Applied Physics Laboratory, United States; Eugene D Kim, Satrec Initiative, Republic of Korea;

Rapporteur(s): Carsten Tobehn, European Space Agency (ESA), Netherlands (Kingdom of the); Marco Gomez Jenkins,, United Kingdom;

IAC-26.B4.4.1

GUARDIANS OF THE MEDITERRANEAN: AN ORBIT-BASED DISTRIBUTED PROCESSING CONCEPT FOR RAPID WILDFIRE ALERT GENERATION

Mr. Ferhat Aytimur AHISKA, Turkish Technology Team Foundation, İstanbul, Türkiye;

IAC-26.B4.4.2

THE 'NEAR-COAST AND INLAND AQUATIC IMPACT DATA' (NAIAD) MISSION SMALL SATELLITE APPROACH TO REMOTE SENSING OF OPTICALLY COMPLEX COASTAL AND IN-LAND WATER TYPES

Mr. Andrew Palfreyman, Surrey Satellite Technology Ltd (SSTL), Guildford, United Kingdom;

IAC-26.B4.4.3

SYSTEMATIC PARAMETER DESIGN AND PERFORMANCE OPTIMIZATION FOR X-BAND SAR ON SMALL SATELLITES UNDER STRICT APERTURE CONSTRAINTS

Dr. Yihang Ding, School of Aerospace, Tsinghua University, Beijing, Beijing, China;

IAC-26.B4.4.4 (unconfirmed)

GREENSAT PHASES I & II: INCREMENTAL ARCHITECTURE AND TECHNICAL TRADE-OFFS IN A COST-EFFECTIVE IOT AND HYPERSPECTRAL CUBESAT EARTH OBSERVATION PROGRAM

Dr. Pilar Zamora Acevedo, Colombian Space Agency, Bogotá D.C., Colombia;

IAC-26.B4.4.5

ONBOARD EDGE AI FOR WILDFIRE MONITORING USING VISIBLE AND LWIR IMAGERY ON BOLIVIA'S FIRST NANOSATELLITE

Mr. Franklin Josue Ticona Coaquira, Kyushu Institute of Technology, Fukuoka, Japan;

IAC-26.B4.4.6 (unconfirmed)

CUBESAT-BASED SPARSE CONSTELLATIONS FOR CO₂ DETECTION: ORBITAL ARCHITECTURE, HIGH-DIMENSIONAL DATA ANALYSIS INVERSION STRATEGIES, AND ANALYTICAL CHALLENGES

Mr. Abdelmalek Saadi Drissi, Space Generation Advisory Council (SGAC), Rabat, Morocco;

IAC-26.B4.4.7

EVENT BASED NEUROMORPHIC VISION SENSOR ARCHITECTURE WITH ONBOARD AI FOR ADVANCED EARTH OBSERVATION

Mr. Ayush Pradhan, ReOrbit, Helsinki, Finland;

IAC-26.B4.4.9

SENSORIS: RESULTS OF PHASE 0/A STUDY FOR DAILY GRAVITY FIELD SOLUTIONS USING CUBESATS

Dr. Benny Rievers, ZARM, University of Bremen, Bremen, Germany;

IAC-26.B4.4.10

DESIGN AND FLIGHT RESULTS OF AN INTELLIGENT OPTICAL REMOTE SENSING PAYLOAD FOR CUBESATS

Prof. Jyh-Ching Juang, National Cheng Kung University, Tainan, Taiwan, China;

IAC-26.B4.4.11

GXIBA-1: FROM CONCEPT TO ORBIT. A UNIVERSITY CUBESAT FOR VOLCANIC MONITORING

Mr. Alan Gomez, Universidad Popular Autónoma del Estado de Puebla, Puebla, Mexico;

IAC-26.B4.4.12

MIRZO ULUGBEK: ENGINEERING MODEL VERIFICATION AND DEVELOPMENT OF UZBEKISTAN'S FIRST 6U CUBESAT FOR EARTH OBSERVATION

Dr. Victor Schulz, LaSEINE, Kyushu Institute of Technology, Kitakyushu, Fukuoka, Japan;

IAC-26.B4.4.13

LOW-ORBIT ATMOSPHERIC OBSERVATION CUBESAT FOR MONITORING THE STATE OF THE STRATOSPHERIC OZONE LAYER

Mr. Dante Arhon Rojas Palacios, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.B4.4.14

UAEU50-SAT: 4U EDUCATIONAL CUBESAT DESIGN AND QUALIFICATION RESULTS FOR OPTICAL AND PASSIVE MICROWAVE MISSIONS

Dr. AbdulHalim Jallad, UAE University, Faculty of Engineering, Al Ain, United Arab Emirates;

B4.5. Access to Space for Small Satellite Missions

October 7 2026, 15:00 — Hall 2

Co-Chair(s): Yves Gerard, Airbus Defence & Space, France; Philip Davies, Byspace Ltd, United Kingdom;

Rapporteur(s): Jeffrey Michlitsch, The Aerospace Corporation, United States; Carlos Niederstrasser, Northrop Grumman Corporation, United States;

IAC-26.B4.5.1

A NEW SPACEPORT FOR THE UK?

Mr. Andrew Thomas, The British Interplanetary Society, Market Harborough, United Kingdom;

IAC-26.B4.5.2

FROM DEDICATED CONSTELLATIONS TO OPPORTUNISTIC DISTRIBUTED SENSING: THE DIAMAGRAD MISSION APPROACH TO MAGNETOMETRY MISSIONS ACCESS TO ORBIT

Dr. Paolo Marzioli, Sapienza University of Rome, Rome, Italy;

IAC-26.B4.5.3

BIZUPOD: A LOW-COST MODULAR CUBESAT DEPLOYER FAMILY FOR SMALL LAUNCH MISSIONS

Mr. Guilherme Lima, Bizu Space, Sao Jose dos Campos, Brazil;

IAC-26.B4.5.5

DOCKING WITH CONFIDENCE: EXPERIMENTAL CHARACTERISATION OF GRASP-RAFTI CAPTURE DYNAMICS

Mr. Sebastian Hill, Orbit Fab Ltd, Oxford, United Kingdom;

IAC-26.B4.5.6

SAFE DEPLOYMENT STRATEGIES FOR TWO CUBESATS IN RENDEZVOUS, INSPECTION AND DOCKING MISSIONS

Dr. Luca Niero, Politecnico di Torino, Borgosesia, Italy;

IAC-26.B4.5.7

ORBITAL PHASE CORRECTION METHOD TO IMPROVE CUSTODY MAINTENANCE IN LEOP

Mr. André Ribeiro, NeuraSpace, SA, Braga, Portugal;

IAC-26.B4.5.8

DESIGN, INTEGRATION, AND VERIFICATION OF A NICHROME BURN-WIRE DEPLOYMENT SYSTEM FOR METUCUBE

Mr. Umut Bariş Genç, Middle East Technical University, Ankara, Türkiye;

B4.6A. Generic Technologies for Small Satellites (1)

October 8 2026, 10:15 — Hall 2

Co-Chair(s): Philip Davies, Byspace Ltd, United Kingdom; Joost Elstak, ICEYE, Netherlands (Kingdom of the);

Rapporteur(s): Jian Guo, Delft University of Technology (TU Delft), Netherlands (Kingdom of the); Thomas Terzibaschian, Astro- und Feinwerktechnik Adlershof GmbH, Germany; Youngho Eun, Yonsei University, Republic of Korea;

IAC-26.B4.6A.1

A PLUG-AND-PLAY ATTITUDE DETERMINATION AND CONTROL SYSTEM AND ITS ON-ORBIT APPLICATION IN NANOSATELLITES

Prof. Fei Xing, Tsinghua University, Beijing, Beijing, China;

IAC-26.B4.6A.2

ONE WHEEL IS ENOUGH: CONTROL STRATEGIES FOR THE 3+1 ACTUATOR ARCHITECTURE ACROSS SMALL SATELLITE MISSION PROFILES

Mr. Niclas Scheuer, ETH Zurich, Zurich, Switzerland;

IAC-26.B4.6A.3

ICARVS: PHASE 0/A OF A 3U CUBESAT DEMONSTRATOR FOR RL-BASED ATTITUDE CONTROLLERS

Dr. Tobia Armando La Marca, Università degli Studi di Napoli "Federico II", Naples, Italy;

IAC-26.B4.6A.4

ON-BOARD FDIR USING ML AND FEDERATED FILTERS FOR ATTITUDE DETERMINATION ON SMALL SATELLITES

Mr. Jasper Jeuken, Netherlands Aerospace Centre (NLR), Amsterdam, Netherlands (Kingdom of the);

IAC-26.B4.6A.5

INERTIAL REFERENCE MODELLING AND ON-ORBIT ATTITUDE DETERMINATION FOR A 2U CUBESAT

Mr. Bas Stijnen, University College Dublin (UCD), Tralee, Ireland;

IAC-26.B4.6A.6

CONFLICT-AWARE COOPERATIVE CONTROL FOR SMALL SATELLITE CLUSTER POSE MANEUVERS

Dr. Yingkai Cai, Tsinghua University, Beijing, China;

IAC-26.B4.6A.7

SOFTWARE-DEFINED EARTH SENSOR FOR PRECISION ATTITUDE DETERMINATION IN CUBESATS: AI-DRIVEN LANDMARK RECOGNITION AND FPGA-ACCELERATED VISUAL NAVIGATION

Mr. Kaan Göktürk, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.B4.6A.8

VEKTOR-FDA: DEVELOPMENT AND QUALIFICATION OF A MULTI DEGREE OF FREEDOM LIQUID METAL ACTUATOR FOR SPACE APPLICATION IN SMALL SATELLITES

Mr. Huu Quan Vu, Technical University of Berlin, Berlin, Germany;

IAC-26.B4.6A.9

SOFTWARE-DEFINED RADIO ARCHITECTURE FOR MULTI-STANDARD CUBESAT COMMUNICATIONS: LESSONS LEARNED FROM ONGLAISAT AND SCIONX

Mr. YiYu Chang, National Central University, Department of Space Science and Engineering, Taoyuan City, Taiwan, China;

IAC-26.B4.6A.10

DESIGN OF A LOW COST COMMUNICATION SUBSYSTEM FOR 3U CUBESATS

Mr. Yunus Emre Özdemir, Middle East Technical University, Ankara, Türkiye;

IAC-26.B4.6A.11

A FULLY NON-INVASIVE, STANDALONE PROOF-OF-LIFE SIGNALLING BEACON SUBSYSTEM FOR CUBESATS

Mr. Vamshi Sainath Gavani, Chennai, India;

IAC-26.B4.6A.12

RELIABILITY ASSESSMENT OF CUBESAT ANTENNA DEPLOYMENT ARCHITECTURES: REVIEW AND CONSIDERATIONS TO WASKIRI-SAT

Ms. Mariel Valeriano, Universidad Catolica Boliviana San Pablo, La Paz, Bolivia;

B4.6B. Generic Technologies for Small Satellites (2)

October 9 2026, 13:45 — Hall 2

Co-Chair(s): Andy Vick, RAL Space, United Kingdom; Martin von der Ohe, Lacuna Space, Germany;

Rapporteur(s): Hoda Awany, Egyptian Space Agency (EgSA), Egypt; Paolo Marzioli, Sapienza University of Rome, Italy;

IAC-26.B4.6B.1

FADING AS A FEATURE: EXPLOITING INTRA-SATELLITE WIRELESS LINKS FOR DEPLOYMENT DIAGNOSTICS

Mr. SungHo Lee, Yonsei University, Seoul, Republic of Korea;

IAC-26.B4.6B.2

INTEGRATED RADIATION PROTECTION AND MONITORING SYSTEM FOR COTS-BASED SMALLSAT CYBERSECURITY

Dr. Isai Fajardo-Tapia, Deloitte Tohmatsu Cyber LLC., Tokyo, Japan;

IAC-26.B4.6B.3 (unconfirmed)

A SMALL WIRE, A CRITICAL IMPACT: A CASE STUDY IN CABLE HARNESS DESIGN FOR ORBITAL SYSTEMS

Mr. Przemyslaw Sitnik, Łukasiewicz Research Network – Institute of Aviation (ILOT), Warsaw, Poland;

IAC-26.B4.6B.4

TOWARDS HARNESS-FREE SMALL SATELLITES: LASER-BASED INTRA-SATELLITE COMMUNICATION ARCHITECTURES

Mr. Carlos Daniel Morales Ramirez, Space Generation Advisory Council (SGAC), Bogotá D.C., Colombia;

IAC-26.B4.6B.5

RTOS & EVENT-DRIVEN FLIGHT SOFTWARE: COMPARATIVE RESILIENCE TO RADIATION-LIKE FAULTS IN CUBESAT SYSTEMS

Mr. Kamal Pashayev, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

IAC-26.B4.6B.6

OSIL: AN OPEN SCIENCE IMAGING LABORATORY FOR 3U CUBESAT WITH ON-BOARD IMAGE CLASSIFICATION AND FAULT-TOLERANT PAYLOAD CONTROL

Ms. Vatasta Koul, Space Generation Advisory Council (SGAC), New Delhi, India;

IAC-26.B4.6B.8

A MULTI-LAYER TELESCOPE AS PARTICLE DETECTOR FOR CUBESATS

Dr. Wolfgang Treberspurg, University of Applied Science Wiener Neustadt, Wiener Neustadt, Austria;

IAC-26.B4.6B.9

ENHANCING ON-ORBIT MAGNETIC FIELD MEASUREMENTS VIA MULTI-MAGNETOMETER AND BLIND SOURCE SEPARATION: LEOPARD 3U CUBESAT

Ms. Enkhmend Ochirsukh, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-26.B4.6B.10

EXPLORATION OF SUSTAINABLE 1U CUBESAT STRUCTURAL DESIGNS IN ALIGNMENT WITH UNITED NATIONS INTERNATIONAL SUSTAINABILITY POLICIES

Mr. Oliver McLaughlin, University of Southampton, Malvern, United Kingdom;

IAC-26.B4.6B.12

QUALIFICATION OF RAFTI FOR WIDELY USED PROPELLANTS TO SUPPORT RANGE OF SMALL SAT MISSIONS

Mr. Samuel Furness, Orbit Fab Ltd, Didcot, United Kingdom;

B4.7. Constellations and Distributed Systems

October 8 2026, 15:00 — Hall 2

Co-Chair(s): Rainer Sandau, International Academy of Astronautics (IAA), Germany; Michele Grassi, University of Naples “Federico II”, Italy;

Rapporteur(s): Jaime Esper, National Aeronautics and Space Administration (NASA), United States; Maria Daniela Graziano, University of Naples “Federico II”, Italy; Klaus Schilling, University Wuerzburg, Germany;

IAC-26.B4.7.1

KEYNOTE: DISTRIBUTED AUTONOMOUS ARCHITECTURE FOR PROPULSION-FREE COORDINATION OF POCKETQUBE SWARMS IN LOW EARTH ORBIT

Dr. Chantal Cappelletti, University of Nottingham, Nottingham, United Kingdom;

IAC-26.B4.7.2

ANSER CUBESAT CLUSTER - THREE YEARS OF OPERATIONS IN ORBIT

Mr. Nicolás Pardina Popp, Instituto Nacional de Técnica Aeroespacial (INTA), Torrejón de Ardoz, Spain;

IAC-26.B4.7.3

CONSTELLATION DESIGN FOR GNSS-LIKE RADIOFREQUENCY INTERFERENCE DETECTION, GEOLOCATION AND ALERT

Mr. Ahmet Orhun Sivasli, Politecnico di Milano, Milano, Italy;

IAC-26.B4.7.4

CYBERSECURITY CHALLENGES IN CUBESAT AND SPACE-ENABLED IOT COMMUNICATION NETWORKS

Ms. Mehriban Karimova, Azerbaijan State University of Economics, Baku, Azerbaijan;

IAC-26.B4.7.5

A FULLY INTEGRATED 2U CUBESAT BUS FOR FORMATION FLIGHT: OVER TWO YEARS OF IN-ORBIT EXPERIENCE WITH THE NANOFF MISSION

Mr. Fynn Bastian Boyer, Technische Universität Berlin, Berlin, Germany;

IAC-26.B4.7.6

REDUCED-DYNAMIC EXTENDED KALMAN FILTER FOR REAL-TIME GNSS RELATIVE NAVIGATION: APPLICATION TO RODIO DISTRIBUTED SAR MISSION

Ms. Francesca Pelliccia, University of Naples “Federico II”, Naples, Italy;

IAC-26.B4.7.7

DISTRIBUTED INTERNET-OF-THINGS TELEMETRY SYSTEMS WITH NANO-SATELLITE CONSTELLATIONS: FROM THE WILDTRACKCUBE-SIMBA AND CORAL MISSIONS TO FUTURE 5G NTN INFRASTRUCTURES

Mr. Riccardo Garofalo, Sapienza University of Rome, Monterotondo, Italy;

IAC-26.B4.7.8

MULTI-SENSOR RELATIVE NAVIGATION FOR CUBESAT RENDEZVOUS AND DOCKING MISSIONS

Ms. Valentina Rotti, Politecnico di Torino, Torino, Italy;

IAC-26.B4.7.9

COMMUNICATION ARCHITECTURES FOR DATA OFFLOADING IN HOSTED LEO MISSIONS

Ms. Bisma Sajid, ENAC, Toulouse, France;

IAC-26.B4.7.10

FRACTIONATED GEO SWARMS: A SCALABLE ARCHITECTURE FOR REGIONALLY PERSISTENT IOT CONNECTIVITY

Mr. Pedro Teixeira, Cranfield University, UK, Paços de Ferreira, Portugal;

IAC-26.B4.7.11

DIFFERENTIAL DRAG-ONLY PHASING CONTROL OF LEO CUBESAT CONSTELLATION UNDER OPERATIONAL CONSTRAINTS

Ms. Alyona Fedurina, Keldysh Institute of Applied Mathematics of RAS, Moscow, Russian Federation;

IAC-26.B4.7.12

DECENTRALIZED GRAPH NEURAL NETWORKS FOR RESILIENT CUBESAT SWARMS IN ACTIVE DEBRIS REMOVAL AND AGILE TARGET INTERCEPTION

Mr. Rasul Ahmadov, Baku Higher Oil School, Baku, Azerbaijan;

IAC-26.B4.7.13

PERFORMANCE AND CONTROL ASSESSMENT OF FORMATION FLYING ARCHITECTURES FOR DISTRIBUTED SAR CUBESATS MISSIONS

Ms. Maria Salvato, University of Naples “Federico II”, Cardito, Italy;

IAC-26.B4.7.14

FEDERATED EDGE LEARNING FOR DISTRIBUTED SHIP DETECTION IN LEO SATELLITE CONSTELLATIONS

Mr. Hilal Albusaidi, Sultan Qaboos University (SQU), alseeb, Oman;

B4.8. Small Spacecraft for Deep-Space Exploration

October 9 2026, 10:15 — Hall 2

Co-Chair(s): Leon Alkalai, Mandala Space Ventures, United States; Rene Laufer, Luleå University of Technology, Sweden;

Rapporteur(s): Lihua Zhang, DFH Satellite Co. Ltd., China;

IAC-26.B4.8.1

LUNAR PATHFINDER – LONG-DURATION LUNAR COMMUNICATIONS SERVICES ARE ABOUT TO COMMENCE!

Mr. Philip Davies, Byspace Ltd, West Byfleet, Surrey, United Kingdom;

IAC-26.B4.8.2

MISSION DESIGN OF OPENS-1: TOWARD THE ASTEROID BELT AND BEYOND WITH A STANDARDIZED SMALL SPACECRAFT

Dr. Yuki Takao, Yokohama National University, Kanagawa, Japan;

IAC-26.B4.8.3

ATLAS MISSION: A SMALL SPACECRAFT PLATFORM FOR HIGH-PRECISION LUNAR TOPOGRAPHIC MAPPING

Mr. Kirill Suslov, Space Research Institute (IKI), RAS, Dolgoprudny, Russian Federation;

IAC-26.B4.8.4

LUNAR SPACE SCIENCE AND EXPLORATION MISSIONS ENABLED BY SMALL SATELLITES

Mr. Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), Guildford, Surrey, United Kingdom;

IAC-26.B4.8.5

PASSIVE BISTATIC RADAR FOR LUNAR EXPLORATION VIA MICROSATELLITE TELEMETRY: PROCESSING ARCHITECTURE AND EMPIRICAL LIMITS FROM DSLWP-B

Mr. Haoran You, Harbin Institute of Technology, Harbin City, China;

IAC-26.B4.8.6

ARCHITECTURAL DESIGN AND SIMULATION OF DYNAMICALLY RECONFIGURABLE COTS FPGA AVIONICS FOR DEEP-SPACE SMALL SPACECRAFT

Ms. Esra Şahin, Bursa Technical University, Istanbul, Türkiye;

IAC-26.B4.8.7

EVENT-DRIVEN CRATER DETECTION FOR AUTONOMOUS APPROACH AND LANDING IN DEEP-SPACE MISSIONS

Ms. Ileana Piscitelli, University of Naples "Federico II", Naples, Italy;

IAC-26.B4.8.8

NONLINEAR CONTROL STRATEGIES FOR SMALL SPACECRAFT FORMATION FLIGHT AROUND ASTEROID 4179 TOUTATIS

Ms. Ekaterina Eroshenko, Moscow Institute of Physics and Technology (MIPT), Dolgoprudny, Russian Federation;

IAC-26.B4.8.9

OPERATIONAL SENSITIVITY OF SOLAR-SAILING CUBESATS IN BINARY NEAR-EARTH ASTEROID SYSTEMS

Mr. Abian Sanchez Barreto, University of Nottingham, Nottingham, United Kingdom;

IAC-26.B4.8.10

MISSION DESIGN AND FUEL-OPTIMAL DESCENT ANALYSIS OF A CUBESAT-CLASS MARS ENTRY SPACECRAFT

Mr. Shoki Kurata, University of Tokyo, Tokyo, Japan;

B4.9-GTS.5. Small Satellite Missions Global Technical Session

October 6 2026, 15:00 — Hall 28

Co-Chair(s): Matthias Hetscher, DLR (German Aerospace Center), Germany; LIKHIT WARANON, Geo-Informatics and Space Technology Development Agency (Public Organization), Thailand; Eleonora Lombardi, Fondazione E. Amaldi, Italy;

Rapporteur(s): Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), United Kingdom; Victoria Barabash, Luleå University of Technology, Sweden;

IAC-26.B4.9-GTS.5.1

REQUIREMENTS FOR A SMALL SATELLITES ASSEMBLY, INTEGRATION AND TEST FACILITY.

Ms. Adriana Marcela Barrios Garcia, University of Bremen, BREMEN, Germany;

IAC-26.B4.9-GTS.5.2

AL-RHIM SAT: A LORA-BASED 1U CUBESAT MISSION FOR ENDANGERED WILDLIFE TRACKING IN REMOTE ECOSYSTEMS

Ms. Diana Aljbour, Jordan University of Science & Technology, Amman, Jordan;

IAC-26.B4.9-GTS.5.3

A SMALL SATELLITE CONSTELLATION FOR EARLY DROUGHT PREDICTION AND SUSTAINABLE WATER MANAGEMENT: AN INNOVATIVE CUBESAT-BASED APPROACH

Mrs. Lamia Shaheen, Riyadh, Saudi Arabia;

IAC-26.B4.9-GTS.5.4

GUARANISAT-2: DESIGN, INTEGRATION, QUALIFICATION AND CAPACITY BUILDING FOR PARAGUAY'S SECOND CUBESAT MISSION

Prof. Esteban Rafael Fretes Ruiz Diaz, Paraguayan Space Agency, Asuncion, Paraguay;

IAC-26.B4.9-GTS.5.5

PHOENIX: ESTABLISHING A MODULAR CUBESAT ARCHITECTURE FOR AUTONOMOUS PROXIMITY OPERATIONS THROUGH OPTICAL NAVIGATION AND DUALLINK COMMUNICATIONS

Ms. Shannon Rennie, University of Manchester, London, United Kingdom;

IAC-26.B4.9-GTS.5.6

LESSONS LEARNED AND ACHIEVEMENTS FROM THE PRELIMINARY IN-ORBIT OPERATIONS OF THE CORAL 2U CUBESAT

Ms. Michela Boscia, Sapienza University of Rome, Roma, Italy;

IAC-26.B4.9-GTS.5.7

D-SAT: AN OVERVIEW OF DELOITTE TOHMATSU CYBER'S 6U CYBERSECURITY CUBESAT AND ITS EARLY DEVELOPMENT RESULTS

Dr. Jorge Rubén Casir Ricaño, Deloitte Tohmatsu Cyber LLC., Tokyo, Japan;

IAC-26.B4.9-GTS.5.8

DEVELOPMENT OF ENERGY-EFFICIENT ALGORITHMS FOR CONTROLLING THE RELATIVE MOTION OF SMALL SATELLITE CONSTELLATIONS

Mr. Fedor Mitin, Baltic State Technical University VOENMEH, St. Petersburg, Russian Federation;

IAC-26.B4.9-GTS.5.9 (unconfirmed)

AUTONOMOUS MORPHING AERODYNAMIC SURFACES FOR FUEL EFFICIENCY AND MISSION LIFE EXTENSION IN V-LEO SMALLSATS

Ms. Zeliha Sevvall Akyol, Erciyes University, Kayseri, Türkiye;

IAC-26.B4.9-GTS.5.10

CUBESAT MISSION ASSURANCE THROUGH EARLY-PHASE CONSULTATION VIA A CHATBOT SYSTEM AT THE CUBESAT SALON

Mr. Abdulla Hil Kafi, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-26.B4.9-GTS.5.11

FIREGUARD-1: AI-BASED PREDICTIVE WILDFIRE EARLY WARNING SYSTEM USING MULTI-SOURCE SATELLITE DATA

Mr. Ege Berk Çınar, Ortaokul Science High School, AYDIN, Türkiye;

IAC-26.B4.9-GTS.5.12

FROM SYNTHETIC DATA GENERATION TO ON BOARD DEPLOYMENT: A PERCEPTION PIPELINE FOR AI DRIVEN SPACE IMAGING

Mr. Ric Dengel, University of Tartu, Tõravere, Estonia;

IAC-26.B4.9-GTS.5.13

IMPACT OF INTERNAL POWER SCHEDULING ON CUBESAT THERMAL STABILITY DURING ECLIPSE

Ms. Dasuni Hewawasam, Nittambuwa, Sri Lanka;

B4.11. 33rd IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS - Extra Session

October 5 2026, 16:30 — Hall 35

Co-Chair(s): Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), United Kingdom; Jian Guo, Delft University of Technology (TU Delft), Netherlands (Kingdom of the);

IAC-26.B4.11.1

INITIAL FLIGHT RESULTS OF HELIOS-R: A LIGHTWEIGHT DEPLOYABLE MEMBRANE STRUCTURE WITH SOLAR POWER GENERATION AND ANTENNA FUNCTIONS

Dr. Masanori Matsushita, National Defense Academy of Japan, Yokosuka, Kanagawa, Japan;

IAC-26.B4.11.2

HELIOS-R MEMBRANE-DEPLOYED MICROWAVE INTERFEROMETER DEMONSTRATION MISSION: FLIGHT RESULTS AND LESSONS LEARNED

Dr. Ahmed Kiyoshi Sugihara El Maghraby, Japan Aerospace Exploration Agency (JAXA), Sagami City, Japan;

IAC-26.B4.11.3

MULTI-SENSOR CONSTELLATIONS – THE NEXT PHASE

Mr. Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), Guildford, Surrey, United Kingdom;

IAC-26.B4.11.4

DEVELOPMENT AND VERIFICATION OF STEP-1: A 3U CUBESAT TO ENABLE ACCESSIBLE DEEP SPACE MISSIONS

Dr. Dulani Chamika Withanage, Massachusetts Institute of Technology (MIT), Cambridge, MA, United States;

IAC-26.B4.11.5

EXPERIMENTAL 12U CUBESAT PLATFORM FOR TETHER DEPLOYMENT AND DYNAMICS VALIDATION

Mr. Rodrigo Laguna, Pontifical Catholic University of Peru, Lima, Peru;

IAC-26.B4.11.6

ESTABLISHING A SOVEREIGN CAPABILITY: OPERATIONAL SUCCESS OF TPA-1 AND THE COLLABORATIVE FRAMEWORK OF TPA-2

Prof. Guglielmo Aglietti, University of Auckland, Auckland, New Zealand;

IAC-26.B4.11.7

LEO-2-VLEO: INNOVATIVE SMALLSAT SYSTEM DESIGN FOR AGILE, RESILIENT, AND RESPONSIBLE OPERATIONS

Mr. Lian Ming Goh, ISIS - Innovative Solutions In Space B.V., Pijnacker, Netherlands (Kingdom of the);

IAC-26.B4.11.9

ON-ORBIT DEGRADATION MONITORING OF PEROVSKITE SOLAR CELLS AND ORGANIC BATTERIES ABOARD A 3U CUBESAT

Mr. Ilia Cherniavskikh, HSE University, Odintsovo, Russian Federation; Mr. Dmitrii Bondarenko, Moscow Institute of Electronics and Mathematics of National Research University Higher School of Economics (MIEM NRU HSE), Moscow, Russian Federation;

IAC-26.B4.11.10

A DIGITAL TWIN-DRIVEN RADIATION-AWARE POWER MANAGEMENT ARCHITECTURE FOR 1U CUBESATS

Mrs. Fatima Suleymanli, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-26.B4.11.11

ADDITIVELY MANUFACTURED TRANSPARENT ANTENNA INTEGRATION ON CUBESAT SOLAR PANELS

Mr. Nevzat Eren Sevim, Teknokrat Defence and Aerospace Inc., Ankara, Türkiye;

IAC-26.B4.11.12

DESIGN OF KIRIGAMI-BASED DEPLOYABLE SOLAR PANELS INTEGRATING PEROVSKITE/CIGS TANDEM SOLAR CELLS

Ms. Gaia Lorenzi, N.P.C. New Production Concept, Imola, Italy;

B5. IAF SYMPOSIUM ON INTEGRATED APPLICATIONS

Coordinator(s): Jeanne Holm, University of California, Los Angeles (UCLA), United States; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;

B5.1. Tools and Technology in Support of Integrated Applications

October 7 2026, 10:15 — Hall 28

Co-Chair(s): Jeanne Holm, University of California, Los Angeles (UCLA), United States; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;

Rapporteur(s): Marion Allayioti, European Space Agency (ESA), United Kingdom;

IAC-26.B5.1.1

KEYNOTE: SATELLITE-GROUND COLLABORATION AND INTELLIGENT INTEGRATION: LEADING THE NEW PARADIGM OF COMMERCIAL SATELLITE APPLICATIONS WITH INTEGRATED COMMUNICATION, NAVIGATION AND REMOTE SENSING

Mr. Zhengning Zhang, Space Star Technology Co., Ltd., China;

IAC-26.B5.1.2

VEGETATION BIOMARKERS AS SPECTRAL INDICATORS FOR ECO-INNOVATIVE MINERAL EXPLORATION

Mr. Jesus Camacho, Central University of Venezuela (UCV), Caracas, Venezuela;

IAC-26.B5.1.3

DEVELOPMENT OF AN AI POWERED MULTI-SENSOR (LANDSAT & SENTINEL) SATELLITE DATA ANALYSIS PLATFORM

Mr. Emre Öz, TÜBİTAK Marmara Research Center, Bursa, Türkiye;

IAC-26.B5.1.4

THE USE OF INTEGRATED AUTONOMOUS MEDICAL SUPPORT ARCHITECTURES FOR ISOLATED ENVIRONMENTS

Mr. Arthur Roosevelt Soares Carvalho, Geração de Marte Institute, São Luís, Brazil;

IAC-26.B5.1.5

FROM SPACE SYSTEMS TO SMART PORTS: INFRASTRUCTURE INSIGHTS FOR AUTONOMOUS OPERATIONS

Dr. Daniela Petrovic, Oxford, United Kingdom;

IAC-26.B5.1.6

AN AI-ENABLED HIERARCHICAL ACOUSTIC MONITORING FRAMEWORK FOR UAV PLATFORM AND MANEUVER RECOGNITION IN INTELLIGENT AIRSPACE APPLICATIONS

Dr. Omer Yaman, Istanbul Medeniyet University, Istanbul, Türkiye;

IAC-26.B5.1.7

FROM THE ROAD TO THE STARS: ACCELERATING THE GLOBAL SPACE INDUSTRY'S INDUSTRIAL REVOLUTION.

Dr. Georg Heinecke, Hamburg, Germany;

IAC-26.B5.1.8

A SEMANTIC SAFETY GATEWAY ARCHITECTURE FOR LANGUAGE-ENABLED AUTONOMOUS AERIAL SYSTEMS IN THE INTERNET OF DRONES

Dr. Anıl Sezgin, Istanbul, Türkiye;

IAC-26.B5.1.10

ADVANCING CARBON FARMING THROUGH EARTH OBSERVATION, AI AND DIGITAL MARKET MECHANISMS: FINAL RESULTS FROM THE INNO4CFIS PROJECT

Mrs. Eleonora Lombardi, Fondazione E. Amaldi, Rome, Italy;

IAC-26.B5.1.11

TOWARD PREDICTIVE MARINE PLASTIC POLLUTION MANAGEMENT: INTEGRATING SENTINEL-2, DEEP LEARNING AND HYDRODYNAMIC MODELING

Mr. Mountashour Rahman, BRAC University, Dhaka, Bangladesh;

IAC-26.B5.1.12

MURUGREEN-HAB: APPLYING SPACE ANALOGUE GREENHAB TECHNOLOGIES TO EXPAND PERU'S AGRICULTURAL FRONTIER

Ms. Margarita Salazar Reyes, Universidad Nacional Mayor de San Marcos, Lima, Peru;

B5.2. Integrated Applications End-to-End Solutions

October 7 2026, 15:00 — Hall 1

Co-Chair(s): Marcello Romano, Technical University of Munich (TUM), Germany; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom; Jeanne Holm, University of California, Los Angeles (UCLA), United States;

Rapporteur(s): Marion Allayioti, European Space Agency (ESA), United Kingdom;

IAC-26.B5.2.1

SYSTEMS THINKING: EVALUATING THE USE OF INTEGRATED SPACE APPLICATIONS FOR DISASTERS USING THE EVDT FRAMEWORK

Prof. Danielle Wood, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.B5.2.2

THE SPACE4OCEAN ALLIANCE: AN INTERNATIONAL COALITION OF SPACE AND MARINE ACTORS TO BETTER PROTECT THE OCEAN

Mr. Jean-Marc Astorg, retired from CNES, Abu Dhabi, United Arab Emirates;

IAC-26.B5.2.4

DEVELOPMENT OF AL-RHIM SAT CUBESAT GROUND SEGMENT NODES: PROGRESS AND EDUCATIONAL IMPACT

Ms. Raghad Maraqa, Al Hussein Technical University, Amman, Jordan;

IAC-26.B5.2.5

EXPLORING NTN CONNECTIVITY SCENARIOS FOR SMART GRIDS PROTECTION: A LINE DIFFERENTIAL PROTECTION ANALYSIS

Dr. Carlos Guimarães, Siemens AG, Munich, Germany;

IAC-26.B5.2.6

FLOWING NARRATIVES, BEYOND RIVEINS: MERGING SATELLITE DATA AND HUMANCENTRED ENVIRONMENTAL INSIGHT

Ms. Priyanka Das Rajkakati, Karman Project, TOULOUSE, France;

IAC-26.B5.2.7

HARNESSING SATELLITE DATA FOR CANCER CONTROL: OPPORTUNITIES FOR EPIDEMIOLOGY, HEALTHCARE, AND BIOMEDICAL APPLICATIONS

Dr. Alessandro Bartoloni, National Institute of Nuclear Physics - INFN, Roma, Italy;

IAC-26.B5.2.8

MULTI-SOURCE REMOTE SENSING DATA-DRIVEN DYNAMIC RISK ASSESSMENT TECHNOLOGY FOR DISASTER CHAINS

Dr. Zhengning Zhang, Space Star Technology Co., Ltd, China Academy of Space Technology (CAST), Beijing, China;

IAC-26.B5.2.9

QUASAR: QUANTUM-BASED ABSOLUTE IN-SATELLITE RADIOMETRIC-CALIBRATION

Mr. Catello Leonardo Matonti, Politecnico di Torino, Turin, Italy;

IAC-26.B5.2.10

SOUTH AFRICAN NATIONAL SPACE AGENCY SPACE WEATHER CAPABILITIES

Ms. Boitumelo Makobe, South African National Space Agency (SANSA), Hermanus, South Africa;

IAC-26.B5.2.11

THE ROAD TO RIYADH: METRICS AND ANALYSIS ON THE IMPACT OF SPACE DATA AT THE WDF (WORLD DATA FORUM) ON SOCIAL ISSUES

Ms. Kaitlyn Holm, University of Pennsylvania, Bryn Mawr, United States;

B5.3. Integrated Commercial Satellite Applications for Sustainability and Climate

October 8 2026, 10:15 — Hall 1

Co-Chair(s): Bruce Chesley, Teaching Science and Technology, Inc (TSTI), United States;

Rapporteur(s): Jeanne Holm, University of California, Los Angeles (UCLA), United States;

IAC-26.B5.3.1

INTEGRATING EARTH OBSERVATION INTO WILDFIRE MONITORING AND DECISION WORKFLOWS

Dr. Minoo Rathnasabapathy, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.B5.3.2

TOWARD A NEW APPLICATION MODE OF SPACEBORNE DISTRIBUTED SAR FOR THREE-DIMENSIONAL ATMOSPHERIC OBSERVATION: VALIDATION WITH COMMERCIAL SATELLITES

Mr. Tao Huang, China Aerospace Science and Technology Corporation (CASC), Beijing, China;

IAC-26.B5.3.3

RESILIENT ENERGY THROUGH SPACE-BASED INFRASTRUCTURE

Dr. Sanjay Vijendran, Luxembourg, Luxembourg ;

IAC-26.B5.3.4

RESPONSIVE STAKEHOLDER-INFORMED TASKING OF GHGSAT COMMERCIAL SATELLITE DATA TO CHARACTERIZE METHANE EMISSIONS IN THE SEROPÉDICA LANDFILL OF RIO DE JANEIRO

Mr. Frederick Ajisafe, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.B5.3.5

LEVERAGING EARTH OBSERVATION SATELLITES FOR CLIMATE CHANGE ADAPTATION: ENHANCING GLOBAL RESILIENCE THROUGH DATA-DRIVEN DECISION MAKING

Mrs. Gunel Valiyeva, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-26.B5.3.6

QUANTUM INFRASTRUCTURE AS ENABLER: INTEGRATED COMMERCIAL SPACE-TERRESTRIAL SYSTEMS FOR CLIMATE AND SUSTAINABILITY APPLICATIONS

Dr. Bruce Chesley, Teaching Science and Technology, Inc (TSTI), Georgetown, TX, United States;

IAC-26.B5.3.7

RESEARCH ON THE INTEGRATED SATELLITE APPLICATION SERVICE MODE OF SENSING-COMMUNICATION-COMPUTING-APPLICATION FOR CARBON EMISSION MITIGATION AND ENERGY UTILIZATION EFFICIENCY IMPROVEMENT IN MARINE SHIPPING

Mr. Mengyuan Zheng, China Satellite Communications Co. Ltd. (China Satcom), Beijing, China;

IAC-26.B5.3.8

COUPLING ASTRODYNAMICS AND CLIMATE MODELING FOR A DISTRIBUTED PLANETARY SUNSHADE SYSTEM: IMPACTS OF NON-UNIFORM RADIATIVE FORCING

Mr. Catello Leonardo Matonti, Politecnico di Torino, Turin, Italy;

IAC-26.B5.3.9

MULTI-INDICES AND AI-DRIVEN VEGETATION MONITORING AND CROP YIELD ESTIMATION USING SATELLITE AND MULTISPECTRAL DATA

Mr. Ahmed Albadri, Oman Lens, Muscat, Oman;

IAC-26.B5.3.10

MISSION ANALYSIS FOR A CONSTELLATION OF SPACECRAFT COMBINING PLANETARY SUNSHADE WITH SPACE-BASED DATA CENTERS

Mrs. Silvia Busi, Technical University of Munich (TUM), Taufkirchen, Germany;

IAC-26.B5.3.11

EARTH OBSERVATION FOR SUSTAINABLE SOIL MANAGEMENT AND TRACKING OF AGENDA 2030: SCALING CLIMATE ADAPTATION THROUGH OPERATIONAL MONITORING

Ms. Claudia Barbetti, Roma, Italy;

B5.4. Advancing Earth observation with artificial intelligence across the full value chain

October 9 2026, 10:15 — Hall 34

Co-Chair(s): Luís Ferreira, Airbus Defence and Space, Germany; Piera di Vito, European Space Agency (ESA/ESRIN), Italy; Beatrice Barresi, European Space Agency (ESA), Netherlands (Kingdom of the);

Rapporteur(s): Beatrice Barresi, European Space Agency (ESA), Netherlands (Kingdom of the);

IAC-26.B5.4.1

KEYNOTE: SPACE FOR NON-SPACE

Ms. Rita Rinaldo, European Space Agency (ESA), Noordwijk, Netherlands (Kingdom of the);

IAC-26.B5.4.2

DEMOCRATIZING EARTH OBSERVATION: TRANSFORMING THE VALUE CHAIN THROUGH GENERATIVE AI AND TASK-SPECIFIC SATELLITE ANALYTICS

Mr. Naruo Kanemoto, Tokyo, Japan;

IAC-26.B5.4.3

AN ARTIFICIAL INTELLIGENCE-BASED COMPREHENSIVE SATELLITE MONITORING SYSTEM AND ASSESSMENT OF SOCIO-ECONOMIC IMPACT IN AZERBAIJAN

Prof. Sevda R. Ibrahimova, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-26.B5.4.4

ECONOMIC IMPACT OF SCALABLE AI INFRASTRUCTURE FOR INNOVATIVE EARTH OBSERVATION DATA PROCESSING

Dr. Oguz Karasu, University of Oxford, London, United Kingdom;

IAC-26.B5.4.5

DEVELOPING CODES OF ETHICS IN THE USE OF SATELLITE DATA

Dr. Jeanne Holm, University of California, Los Angeles (UCLA), Sierra Madre, CA, United States;

IAC-26.B5.4.6

MULTIMODAL INTELLIGENCE FUSION: INTEGRATING LLM-DRIVEN OSINT WITH SATELLITE IMAGERY FOR ENHANCED SITUATIONAL AWARENESS

Ms. Zeyneb Suleymanli, Azerbaijan State University of Economics, Baku, Azerbaijan;

IAC-26.B5.4.7

"PIPEYE": SPACE-BASED PROACTIVE MONITORING OF TERRESTRIAL PIPELINE VULNERABILITIES UTILIZING SYNTHETIC APERTURE RADAR (SAR) AND ARTIFICIAL INTELLIGENCE

Mr. Javidan Ashurlu, Azerbaijan State Oil and Industry University (ASOIU), BAKU, Azerbaijan;

IAC-26.B5.4.8

AI-DRIVEN MULTISOURCE EARTH OBSERVATION DATA FUSION FOR INTEGRATED URBAN MONITORING AND SMART CITY ANALYTICS

Mr. Norbert Muzila, International Space University, Illkirch-Graffenstaden, France;

IAC-26.B5.4.10

AI-DRIVEN MARITIME MONITORING USING SATELLITE WITH EDGE-PROCESSING & OPEN-SOURCE DATA.

Mr. Ahmed Albadri, Oman Lens, Muscat, Oman;

IAC-26.B5.4.11

SATELLITE IMAGERY PIPELINE FOR DISASTER DETECTION AND LANDSCAPE SEGMENTATION

Mr. Ilia Cherniavskikh, HSE University, Odintsovo, Russian Federation;

IAC-26.B5.4.12

PERCEPTION GUIDED COMPRESSION WITH INFORMATIVE PRIORS FOR REMOTE SENSING

Dr. Zhe Fu, Northwestern Polytechnical University, Xi'an Shaanxi, China;

B6. IAF SPACE OPERATIONS SYMPOSIUM

Coordinator(s): Andreas Rudolph, European Space Agency (ESA), Germany; Otfried G. Liepack, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States; Zeina Mounzer, Telespazio VEGA Deutschland GmbH, Germany; Borre Pedersen, Kongsberg Satellite Services AS, Norway; Claude Audouy, Centre National d'Etudes Spatiales (CNES), France;

B6.1. Ground Operations - Systems and Solutions

October 9 2026, 13:45 — Hall 1

Co-Chair(s): Sean Burns, EUMETSAT, Germany; Claude Audouy, Centre National d'Etudes Spatiales (CNES), France;

Rapporteur(s): Regina Mosenkis, Airbus Defence & Space, Germany; Keyur Patel, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States;

IAC-26.B6.1.1

PREPARING FOR METOP-SG B1 LAUNCH: TESTING STRATEGY FOR THE EUMETSAT EPS-SG GROUND SEGMENT

Mrs. Hatice Ceylan, EUMETSAT, Alsbach-Hähnlein, Germany;

IAC-26.B6.1.2

ENSURING GROUND SEGMENT READINESS: AN END-TO-END PRE-LAUNCH VALIDATION CAMPAIGN FOR THE S813 MISSION

Mr. Mohammed Altamimi, The National Space Science and Technology Center (NSSTC), Al Ain, United Arab Emirates;

IAC-26.B6.1.3

OPERATIONAL CONTEXT-AWARE CYBERSECURITY RISK ASSESSMENT FOR SATELLITE GROUND STATIONS

Ms. Sevgi Deniz, Muğla Sıtkı Koçman University, Muğla, Türkiye;

IAC-26.B6.1.4

EVOLVING GROUND SEGMENT ARCHITECTURES: DATA CENTRES, POWER DEMAND, AND OPERATIONAL RESILIENCE

Ms. Samiksha Raviraja, Airbus Defence and Space, WELWYN GARDEN CITY, United Kingdom;

IAC-26.B6.1.5

MULTI-SOURCE CLOUD COVER ANALYSIS AND MACHINE LEARNING-BASED ASTRONOMICAL OBSERVATION TYPES CLASSIFICATION FOR THE EASTERN ANATOLIA OBSERVATORY (DAG)

Ms. Fatma Ölmez, Ataturk University, Erzurum, Türkiye;

IAC-26.B6.1.6

OPERATIONAL ARCHITECTURE OF THE S813 HYPERSPECTRAL SATELLITE AND GROUND SEGMENT DATA FLOW OPTIMIZATION AND AUTOMATION FRAMEWORK

Mrs. Alreem Alshamsi, The National Space Science and Technology Center (NSSTC), Al Ain, United Arab Emirates;

IAC-26.B6.1.7

CLOUD-ENABLED DISTRIBUTED OPERATIONS ARCHITECTURE FOR THE EMIRATES MISSION TO THE ASTEROID BELT (EMA)

Mr. Ahmed Alzaabi, UAE Space Agency, RAK, United Arab Emirates;

IAC-26.B6.1.8

A MISSION-FLOW-DRIVEN UNIFIED GROUND SEGMENT ARCHITECTURE FOR SCALABLE AND AUTONOMOUS-READY SATELLITE OPERATIONS

Mr. Atakan YILMAZ, Plan-S Satellite and Space Technologies, Ankara, Türkiye;

IAC-26.B6.1.9

YAMCS SAAS: TRANSITIONING OPENSOURCE MISSION CONTROL TO CLOUDNATIVE OPERATIONS

Mr. Mathieu Schmitt, Space Applications Services, Zaventem, Belgium;

IAC-26.B6.1.10

COLLABORATIVE OPEN-SOURCE GROUND STATION NETWORKS: DEVELOPMENT, CHALLENGES, AND INSIGHTS

Mr. Alexander Kleinschrodt, Zentrum für Telematik, Wuerzburg, Germany;

IAC-26.B6.1.11

OPTIMIZATION OF DATA RETURN AND GROUND STATION TIME USING ELEVATION BASED BIT RATES FOR ESA'S INTERPLANETARY SOLAR ORBITER MISSION

Mr. Sam Bammens, SSC Space, Darmstadt, Germany;

B6.2. Innovative Space Operations Concepts and Advanced Systems

October 8 2026, 15:00 — Hall 1

Co-Chair(s): Mario Cardano, Thales Alenia Space France, Italy; Andreas Ohndorf, European Space Agency (ESA-ESTEC), Netherlands (Kingdom of the);

Rapporteur(s): Jackelynne Silva-Martinez, NASA, United States; Yuichiro Nogawa, Japan Manned Space Systems Corporation (JAMSS), Japan;

IAC-26.B6.2.1

RESPONSIVE, COMMERCIALY AVAILABLE, AND AFFORDABLE IN-SPACE SERVICING: UNLOCKING A NEW WAVE OF DYNAMIC SPACE OPERATIONS

Mr. Kieran Wilson, - Catalyst Space Technologies, Denver, Colorado, United States;

IAC-26.B6.2.2

A MISSION-PHASE-TAILORED FAULT PROTECTION CONCEPT FOR THE EMIRATES MISSION TO THE ASTEROID BELT EXPLORER

Mr. Saeed Khthil, UAE Space Agency, Alain, United Arab Emirates;

IAC-26.B6.2.3

EMIRATES MARS MISSION PERPETUAL OPERATIONS: AN AUTONOMY FRAMEWORK FOR SUSTAINED SCIENCE

Mrs. Emily Pilinski, Laboratory for Atmospheric and Space Physics (LASP) at University of Colorado, Boulder, United States;

IAC-26.B6.2.4

CONNECTIVITY-GAP-RESILIENT TELEMETRY SYSTEM FOR IN-ORBIT EXPERIMENT SCHEDULING

Dr. Adrian Perez-Portero, i2CAT, Barcelona, Spain;

IAC-26.B6.2.5

ADVANCED IMMERSIVE MISSION CONTROL TECHNOLOGY FOR SPACE APPLICATIONS

Haroon B. Oqab, Space Canada Corporation, Canada;

IAC-26.B6.2.6

CHEOPS AUTOMATED COLLISION AVOIDANCE OPERATIONS

Mrs. Naiara Fernández de Bobadilla, Instituto Nacional de Técnica Aeroespacial (INTA), MADRID, Spain;

IAC-26.B6.2.7

REINFORCEMENT LEARNING CONTROL FOR OFFSET-PORT AUTONOMOUS DOCKING WITH COUPLED ROTATIONAL-TRANSLATIONAL DYNAMICS IN LOW EARTH ORBIT

Mr. Onur Aytekin, Air Force Institute of Technology, dayton, United States;

IAC-26.B6.2.8

DEMONSTRATION OF EVENT-DRIVEN AUTONOMOUS OPERATIONS ON THE NASA MMS MISSION

Dr. Miles Bengtson, Iron Station, United States;

IAC-26.B6.2.9

THE ITALIAN IN-ORBIT SERVICING (IOS) DEMO MISSION

Dr. Maria Antonietta Perino, Thales Alenia Space Italia, Turin, Italy;

IAC-26.B6.2.10

USE-CASES OF NON-EARTH IMAGERY: THE SUSTAINABLE RECOVERY OF RSOS

Ms. Laurene Colin, HEO Robotics, London, United Kingdom;

B6.3. Mission Operations, Validation, Simulation and Training

October 9 2026, 10:15 — Hall 1

Co-Chair(s): Andreas Rudolph, European Space Agency (ESA), Germany; Zeina Mounzer, Telespazio VEGA Deutschland GmbH, Germany;

Rapporteur(s): Borre Pedersen, Kongsberg Satellite Services AS, Norway; Matthew Duggan, The Boeing Company, United States;

IAC-26.B6.3.1

A STUDY ON HUMAN-IN-THE-LOOP REINFORCEMENT LEARNING FOR OPTIMIZING COMMAND RECOVERY IN AUTOMATED LEO SATELLITE GROUND OPERATIONS

Mr. Jeongsik Choi, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

IAC-26.B6.3.2

A GROUND-BASED SEMI-PHYSICAL CLOSED-LOOP SIMULATION AND VERIFICATION SYSTEM FOR INTELLIGENT COOPERATIVE SATELLITE CLUSTER MISSIONS

Dr. Zhixun Zhang, Innovation Academy for Microsatellites, Chinese Academy of Sciences, Shanghai, China;

IAC-26.B6.3.3

MULTI-OBJECTIVE REINFORCEMENT LEARNING FOR AUTONOMOUS DEBRIS REMOVAL WITH COOPERATIVE DUAL-ARM SPACE ROBOTICS

Ms. Nasim Fallahiazroodar, York University, Toronto, Canada;

IAC-26.B6.3.4

AN INDUSTRIAL SOFTWARE TOOL FOR HIGH-ACCURACY, AUTOMATED ITU INTERFERENCE EVENTS ANALYSIS

Mr. Romanos Voulgarakis, Emtech - Excel Micro Technologies, Athens, Greece;

IAC-26.B6.3.5

THE EMIRATES MISSION TO THE ASTEROID BELT (EMA) LAUNCH AND EARLY OPERATION PHASE

Mr. Mohammed Alameri, UAE Space Agency, Abu Dhabi, United Arab Emirates;

IAC-26.B6.3.6

NEO-DERINKUYU: HYBRID SUBSURFACE SETTLEMENT STRATEGY IN MARTIAN LAVA TUBES

Mr. Onur Çakır, Independent Researcher, siirt, Türkiye;

IAC-26.B6.3.7

LESSONS LEARNED FROM LUNAR SURFACE TESTING AND TRAINING SCENARIOS IN THE ESA-DLR ANALOG FACILITY

Dr. Andrea Emanuele Maria Casini, German Aerospace Center (DLR), Cologne, Germany;

IAC-26.B6.3.9

SIMULATION-DRIVEN VALIDATION FRAMEWORK FOR LUNAR ROVER PERCEPTION USING A DIGITAL TWIN AND PHYSICAL ANALOG TESTBED

Ms. Lara Cecilia Bernardes de Souza, University of Tartu, Tartu, Estonia;

IAC-26.B6.3.10

BEYOND FIRST PRINCIPLES: A STANDARDISED FDIR FRAMEWORK FOR CAPTURING AND REUSING OPERATIONAL KNOWLEDGE ACROSS MISSIONS

Ms. Samiksha Raviraja, Airbus Defence and Space, WELWYN GARDEN CITY, United Kingdom; Mr. Giorgio Brancaccio, Airbus Defence & Space, Stevenage, United Kingdom;

B6.5. Large Constellations & Fleet Operations

October 6 2026, 15:00 — Hall 1

Co-Chair(s): Simon Plum, European Space Agency (ESA-ESOC), Germany; Thomas Uhlig, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

Rapporteur(s): Shawn Linam, Qwaltec, Inc., United States; Mario Cardano, Thales Alenia Space Italia, Italy;

IAC-26.B6.5.1

ORBITAL HIGHWAYS: A CONCEPTUAL FRAMEWORK FOR SPACE TRAFFIC MANAGEMENT IN THE ERA OF MEGACONSTELLATIONS

Mr. Josue Sirath Ramirez Zavala, Instituto Politécnico Nacional, Estado de Mexico, Mexico;

IAC-26.B6.5.2 (unconfirmed)

MACHINE LEARNING BASED CONJUNCTION RISK CLASSIFICATION AND ALERT PRIORITIZATION FOR LEO CONSTELLATION OPERATIONS USING HYBRID TLE AND SYNTHETIC ENCOUNTER DATA

Mrs. Yeliz Buhanoğlu, Kocaeli University, Kocaeli, Türkiye;

IAC-26.B6.5.5

REINFORCEMENT LEARNING MAINTENANCE STRATEGY FOR SCALABLE MEGA-CONSTELLATIONS BASED ON A STAR-MASKED TRANSFORMER

Mr. Chenrun Yang, Beihang University, Beijing, China;

IAC-26.B6.5.6

DESIGN AND IMPLEMENTATION OF AUTONOMOUS EXECUTION OF LEO REAL TIME OPERATIONS

Mr. Ferdinando Chianese, Argotec, Torino, Italy;

IAC-26.B6.5.7

WHEN LEO BREAKS: CASCADING FAILURE, SOCIETAL DEPENDENCY, AND THE LIMITS OF CONGESTION MANAGEMENT
Mr. Gigi Dinut, Stevenage, United Kingdom;

IAC-26.B6.5.9

CENTRALIZED NOMINAL OPERATIONS SCHEDULING FOR EARTH OBSERVATION CONSTELLATIONS WITH INTER-SATELLITE-LINK
Mr. Fabrizio Maccari, Politecnico di Milano, Viterbo, Italy;

IAC-26.B6.5.10

DISTRIBUTED RF MONITORING OF LARGE SATELLITE CONSTELLATIONS
Mr. Radim Badsı, Montpellier, France;

IAC-26.B6.5.11

DESIGN AND IMPLEMENTATION OF A NEXT-GENERATION CONSTELLATION MANAGEMENT ARCHITECTURE FOR SATELLITE FLEETS
Mr. Adrian Scadding, SSC Space, Darmstadt, Germany;

IAC-26.B6.5.12

VERY LOW EARTH ORBIT (VLEO) CONSTELLATIONS: EMERGING CHALLENGES IN FLIGHT DYNAMICS, OPERATIONS, AND ORBITAL SAFETY

Ms. Laura Brady, OKAPI:Orbits GmbH, Braunschweig, Germany;

IAC-26.B6.5.13

AC³NP: AUTONOMOUS CROSS-CONSTELLATION COLLISION NEGOTIATION FOR LARGE SATELLITE CONSTELLATIONS
Ms. Narmin Putiyeva, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

C1. IAF ASTRODYNAMICS SYMPOSIUM

Coordinator(s): Elena Fantino, Khalifa University of Science and Technology (KUST), United Arab Emirates; Vincent Martinot, Thales Alenia Space France, France;

C1.1. Attitude Dynamics (1)

October 5 2026, 16:30 — Hall 8

Co-Chair(s): Marcello Romano, Technical University of Munich (TUM), Germany; Bin Meng, Beijing Institute of Control Engineering, Beijing, 100080, P.R. China, China;

Rapporteur(s): Mikhail Ovchinnikov, Keldysh Institute of Applied Mathematics, RAS, Russian Federation;

IAC-26.C1.1.1

CABLESAIL: MOMENTUM MANAGEMENT ACTUATOR FOR NEXT-GENERATION SOLAR SAILS

Ms. Soojeong Lee, University of Minnesota Twin Cities, Minneapolis, United States;

IAC-26.C1.1.2

IN-ORBIT DEMONSTRATION AND EFFICIENT USE OF THE GARRIOTT – DZHANIBEKOV EFFECT IN THE ANSER CLUSTER
Prof. Pavel Trivailo, RMIT University (Royal Melbourne Institute of Technology), Melbourne, Australia;

IAC-26.C1.1.3

AUTONOMOUS MULTI-MODE GNC FOR VLEO CUBESATS: MONTE CARLO VALIDATION OF HIGH-RATE DEPLOYMENT RECOVERY AND PRECISION POINTING

Mr. Batuhan Akkova, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.C1.1.4

THREE-AXIS ATTITUDE CONTROL AND VIBRATION SUPPRESSION \\ FOR SPACECRAFT WITH FLEXIBLE STRUCTURES: \\ AN APPROACH USING DECOUPLED OPTIMAL SERVO CONTROL (DECOPS)

Mr. Yuto Yamamoto, Osaka Metropolitan University, Sakai, Japan;

IAC-26.C1.1.5

ACTIVE FEEDBACK CONTROL OF ELECTRODYNAMIC TETHERS IN LEO: MITIGATING KINEMATIC INSTABILITY VIA CUBESAT SWARM LOGIC AND TENSION MODULATION

Mr. Muhammad Teymurlu, Baku Higher Oil School, Baku, Azerbaijan;

IAC-26.C1.1.6

DATA-DRIVEN TAKEOVER CONTROL FOR NON-COOPERATIVE SPACECRAFT WITH UNKNOWN PARAMETERS: DESIGN AND EXPERIMENTAL VALIDATION

Ms. FENGXIN SHEN, Northwestern Polytechnical University, Xi'an, China;

IAC-26.C1.1.7

DIOSCURI: A DUAL-SOLAR-ARRAY COOPERATIVE MOMENTUM UNLOADING SYSTEM

Dr. Changgang Zheng, Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology, Beijing, China;

IAC-26.C1.1.8

STABLE REINFORCEMENT LEARNING-BASED SPACECRAFT ATTITUDE CONTROL WITH MAGNETIC-ONLY ACTUATION

Prof. Fabio Curti, University of Arizona, Tucson, United States;

IAC-26.C1.1.9

ON-ORBIT DEMONSTRATION OF MULTI-POINT EARTH OBSERVATION ENABLED BY VARIABLE-SHAPE ATTITUDE CONTROL WITH GROUND POINTING ESTIMATION DURING RAPID MANEUVERS ON THE MICROSATELLITE HIBARI

Mr. Yusaku Ozeki, Tokyo Institute of Technology, Tokyo, Japan;

IAC-26.C1.1.10

STABILIZATION OF THE ORBITAL ORIENTATION OF A SPACECRAFT USING A SYSTEM OF MOMENTUM CONTROL DEVICES

Ms. Eva Kolomiets, Bauman Moscow State Technical University, Moscow, Russian Federation;

C1.2. Attitude Dynamics (2)

October 6 2026, 10:15 — Hall 8

Co-Chair(s): Feng Jinglang, University of Strathclyde, United Kingdom; Bang Hyochoon, Korea Advanced Institute of Science and Technology (KAIST), Republic of Korea;

Rapporteur(s): Anna Guerman, Centre for Mechanical and Aerospace Science and Technologies (C-MAST), Portugal;

IAC-26.C1.2.1

THREE-AXIS DETUMBLING OF RESOURCE-CONSTRAINED FEMTOSATELLITES

Mr. Satyam Bhatti, University of Glasgow, Glasgow, United Kingdom;

IAC-26.C1.2.2

DYNAMIC INSTABILITY OF A SPINNING RING TETHERED SPACE SYSTEM WITH SHIFTING CENTER OF MASS

Mr. Jannes Hühnerbein, Technical University of Munich (TUM), Taufkirchen, Germany;

IAC-26.C1.2.3

AN APPROXIMATE ANALYTICAL APPROACH FOR ATTITUDE ESTIMATION AND PREDICTION OF A TUMBLING TARGET

Dr. Chuan Ma, Northwestern Polytechnical University, Xian, China;

IAC-26.C1.2.4

EXPERIMENTAL VALIDATION OF ADAPTIVE ATTITUDE CONTROL CONSIDERING TIME-VARYING MASS PROPERTIES ON A SATELLITE TESTBED

Mr. Geongsu Park, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea;

IAC-26.C1.2.5

ORIGAMI-INSPIRED VARIABLE-SHAPE AEROBRAKE FOR SATELLITE ATTITUDE CONTROL DURING DESCENT

Dr. Dmitry A. Sizov, Nazarbayev University, Astana, Kazakhstan;

IAC-26.C1.2.6

A NOVEL PUMPED FLUID SPHERICAL ACTUATOR FOR SATELLITE ATTITUDE CONTROL

Dr. Krishna Kumar, Toronto Metropolitan University, Toronto, Canada;

IAC-26.C1.2.8

MOMENTUM UNLOADING FOR REACTION WHEELS VIA SOLAR RADIATION PRESSURE: INTEGRATING SUN-TRACKING AND HARDWARE CONSTRAINTS

Dr. Tetsuya Kusumoto, Japan Aerospace Exploration Agency (JAXA), ISAS, TokyoTokyoBunkyo, Japan;

IAC-26.C1.2.9

A MULTISPECTRAL EPOCH METHOD APPROACH TO ATTITUDE DETERMINATION

Dr. Fiona Porter, University of Strathclyde / Mechanical and Aerospace Engineering, Glasgow, United Kingdom;

IAC-26.C1.2.10

TIME-VARYING DYNAMIC MODELING AND DISTRIBUTED PRESCRIBED-TIME CONTROL FOR ON-ORBIT ASSEMBLY OF LARGE SPACE ANTENNA ARRAY

Mr. Zhihang Jing, Northwestern Polytechnical University, Xi'an, China;

C1.3. Guidance, Navigation and Control (1)

October 6 2026, 15:00 — Hall 8

Co-Chair(s): Shinichiro Sakai, ISAS/JAXA, Japan; Steve Ulrich, Carleton University, Canada;

Rapporteur(s): Guo Linli, Institute of Manned Space System Engineering, China Academy of Space Technology (CAST), China;

IAC-26.C1.3.1

FIRST IN-ORBIT DEMONSTRATION OF DIFFERENTIAL LIFT IN INTA'S ANSER CLUSTER

Dr. Constantin Traub, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-26.C1.3.2

DECENTRALIZED FORMATION CONTROL WITH DIFFERENTIAL DRAG FOR CLOSE-PROXIMITY SATELLITE CLUSTERS

Dr. Patrick McKeen, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.C1.3.3

DRAG-ONLY FULLY BOUNDED IN-PLANE DECENTRALIZED RELATIVE MOTION CONTROL OF SATELLITE SWARMS

Dr. Shamil Biktimirov, Technology Innovation Institute (TII), Abu Dhabi, United Arab Emirates;

IAC-26.C1.3.4

OPTIMAL DEPLOYMENT OF SWARM SATELLITES CONSIDERING SENSING COVERAGE CONSTRAINTS

Mr. Takehiro Yasuda, Kyushu University, Fukuoka, Japan;

IAC-26.C1.3.5

SEMI-ANALYTICAL GUIDANCE WITH OPERATIONAL CONSTRAINTS FOR THE ACTIVA AUTONOMOUS COLLISION AVOIDANCE SYSTEM

Mr. Eduardo Maria Polli, Politecnico di Milano, Marotta di Mondolfo, Italy;

IAC-26.C1.3.6

REACHABILITY-BASED SAFE-START REGIONS FOR APPROACH TO A TUMBLING TARGET WITH ROTATING LOS CONSTRAINTS

Dr. Omer Burak Iskender, Nanyang Technological University, Singapore, Singapore;

IAC-26.C1.3.7

APERIODIC CONTROL FOR 6-DOF SPACECRAFT PROXIMITY OPERATIONS

Ms. Yonsoo Kim, Yonsei University, Seoul, Republic of Korea;

IAC-26.C1.3.8

SLOSHING AWARE TUBE MPC WITH PARTIAL TIGHTENING FOR SPACECRAFT PROXIMITY OPERATIONS

Mr. Jose Luis Redondo Gutierrez, German Aerospace Center (DLR), Bremen, Germany;

IAC-26.C1.3.9

DIRECT FAST MODEL PREDICTIVE CONTROL INCLUDING REALISTIC THRUSTER CONSTRAINTS FOR SPACECRAFT RENDEZVOUS WITH A TUMBLING TARGET

Mr. Vishnuvardhan Shakthibala, University of Rome "La Sapienza", Roma, Italy;

IAC-26.C1.3.10

TIME-OPTIMAL GUIDANCE AND CONTROL FOR RAPID SPACECRAFT RENDEZVOUS IN LEO

Dr. Andrea Colagrossi, Politecnico di Milano, Milano, Italy;

C1.4. Guidance, Navigation and Control (2)

October 7 2026, 10:15 — Hall 8

Co-Chair(s): Mai Bando, Kyushu University, Japan; Hanspeter Schaub, Colorado Center for Astrodynamics Research, University of Colorado, United States;

Rapporteur(s): Krishna Dev Kumar, Toronto Metropolitan University, Canada;

IAC-26.C1.4.1

KEYNOTE: "BREAKWELL LECTURE" - AUTONOMOUS SPACECRAFT SCHEDULING YIELDING SCALABLE AND SAFE EARTH AND SPACE OBJECT IMAGING

Prof. Hanspeter Schaub, Colorado Center for Astrodynamics Research, University of Colorado, Boulder, CO, United States;

IAC-26.C1.4.2

THETA-TIME-PROFILE-BASED TRAJECTORY DESIGN FOR A GIMBALED SOLID-ROCKET TOUCH-AND-GO SAMPLING PROBE (TAG-SP)

Mr. Hinata Yamamoto, The University of TOKYO, Graduate school, Sagamihara, Japan;

IAC-26.C1.4.3

SPACE TRAFFIC CONTROL FOR AUTONOMOUS VEHICLES IN CONGESTED RENDEZVOUS SPHERES

Dr. Matthew Wittal, ASTROSCALE JAPAN Inc., Tokyo-to, Sumida-ku, Kinshi, Japan;

IAC-26.C1.4.4

ROBUST AND FAST GUIDANCE FOR LUNAR HOPPERS USING POLYNOMIAL CHAOS EXPANSION AND KOOPMAN OPERATOR

Mr. Chunwei Yang, Beihang University (BUAA), Beijing, China;

IAC-26.C1.4.5

DYNAMICAL ASPECTS OF REALISTIC SUNDIVER SOLAR SAILING MISSIONS

Mr. Denis Perepukhov, Keldysh Institute of Applied Mathematics, RAS, Moscow, Russian Federation;

IAC-26.C1.4.6

TASK-ORIENTED PLANNING FOR UGV-UAV COLLABORATIVE NAVIGATION UNDER RESOURCE CONSTRAINTS ON MARS

Mr. Chenhui Li, Kyushu University, Fukuoka, Japan;

IAC-26.C1.4.7

LOW-ENERGY MULTI-MOON TRAJECTORY DESIGN FOR JOVIAN SATELLITES USING L1-REGULARIZED PATH-INTEGRAL OPTIMAL CONTROL

Mr. Yuki ODAGIRI, Kyushu University, Fukuoka, Japan;

IAC-26.C1.4.8

ACCELERATION OF SPACECRAFT RENDEZVOUS COMPUTATION UNDER ORBITAL PERTURBATIONS

Mr. Vladimir Chiniaev, Moscow Institute of Physics and Technology (MIPT), Dolgoprudny, Russian Federation;

IAC-26.C1.4.9

HORIZON-DEPENDENT TUBE MPC FOR ELLIPTICAL-ORBIT RENDEZVOUS UNDER MASS UNCERTAINTY

Dr. Omer Burak Iskender, Nanyang Technological University, Singapore, Singapore;

C1.5. Guidance, Navigation & Control (3)

October 7 2026, 15:00 — Hall 8

Co-Chair(s): Puneet Singla, Pennsylvania State University, United States; Bernard Lübke-Ossenbeck, OHB System AG-Bremen, Germany;

Rapporteur(s): Chen-Huan Pi,, ;

IAC-26.C1.5.1

RELATIVE POSE ESTIMATION OF UNCOOPERATIVE SPACECRAFT USING A MONOCULAR-LRF ARRAY IN CLOSE-PROXIMITY OPERATIONS

Ms. Yeowon Kim, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea;

IAC-26.C1.5.2

ESTIMATION AND COMPENSATION OF THRUSTER IMPULSE ERROR USING DISTURBANCE OBSERVER FOR HIGH-PRECISION POSITION AND ATTITUDE CONTROL

Mr. Daichi Ishido, The Graduate University for Advanced Studies, Kanagawa, Japan;

IAC-26.C1.5.3

VISION-BASED POSE ESTIMATION FOR AUTONOMOUS RENDEZVOUS AND DOCKING UTILIZING SHADOW BOUNDARIES

Mr. Daiki Tsuzuki, Department of Engineering, The University of Tokyo, Yokohama, Japan;

IAC-26.C1.5.4

PERCEPTION-AWARE MOTION PLANNING FOR SPACECRAFT PROXIMITY MANEUVERS USING VISUAL SENSORS

Prof. Roberto Oromolla, University of Naples "Federico II", Naples, Italy;

IAC-26.C1.5.5

PROBABILISTIC END-TO-END SPACECRAFT POSE ESTIMATION VIA EPRO-PNP LAYER AND DUAL ANNEALING INFERENCE

Mr. Xiayu Chen, Shanghai Jiao Tong University, Shanghai, China;

IAC-26.C1.5.6

DEVELOPMENT AND VERIFICATION OF AN ERROR-STATE KALMAN FILTER-BASED MULTISENSOR NAVIGATION SYSTEM FOR LUNAR ROVERS

Mr. Chulsoo Lim, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea;

IAC-26.C1.5.7

DOMAIN GAP ADAPTATION FOR AI BASED SENSOR FUSION FOR ASTEROID RELATIVE NAVIGATION

Mr. Iain Hall, University of Strathclyde, Glasgow, United Kingdom;

IAC-26.C1.5.8

AUTONOMOUS RENDEZVOUS AND DOCKING VIA MONOCULAR EXPANDING IMAGE SEQUENCES AND MANEUVER-DRIVEN OBSERVABILITY

Mr. Jiro Takada, The University of TOKYO, Graduate school, Chuo-ku, Sagami-hara-shi, Kanagawa, Japan;

IAC-26.C1.5.9

FORMATION FLYING STRATEGIES FOR DISTRIBUTED RADAR SOUNDERS

Mr. Reuben Solomon Katz, DLR (German Aerospace Center), Weßling, Germany;

IAC-26.C1.5.10

ROBUST CHANCE-CONSTRAINED TRANSFER BETWEEN QUASI-SATELLITE ORBITS UNDER ELLIPTICAL HILL DYNAMICS WITH IRREGULAR GRAVITY FIELD PERTURBATIONS

Dr. Takahiro Sasaki, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

C1.6. Mission Design, Operations & Optimization (1)

October 8 2026, 10:15 — Hall 8

Co-Chair(s): Erick Lansard, Satellite Research Center, Nanyang Technological University (NTU), Singapore; Paolo Teofilatto, Sapienza University of Rome, Italy;

Rapporteur(s): Michèle Lavagna, Politecnico di Milano, Italy;

IAC-26.C1.6.1

LOW-ENERGY TOURS OF NEAR-EARTH OBJECTS USING SOLAR ELECTRIC PROPULSION

Mr. Alessandro Beolchi, Khalifa University of Science and Technology (KUST), Abu Dhabi, United Arab Emirates;

IAC-26.C1.6.2

DATA-DRIVEN RECEDING HORIZON PLANNING WITH REACHABLE SETS FOR INSPECTION OF MANEUVERING NON-COOPERATIVE SPACECRAFT

Ms. Yanan Li, Beihang University (BUAA), Beijing, China;

IAC-26.C1.6.3

COMET-INTERCEPTOR TRAJECTORY DESIGN: REACHABILITY ANALYSIS VIA INVARIANT MANIFOLD AND MOON-FLYBY TRANSFERS

Mr. Erwan Ramanantsoavina, ISAE-Supaero University of Toulouse, Toulouse, France;

IAC-26.C1.6.4

A MILP FRAMEWORK FOR SATURNIAN MOON TOUR DESIGN \\ WITH AN EMBEDDED RELU NEURAL LAMBERT SURROGATE

Mr. Shota Ito, Tokyo Metropolitan University, Hino, Japan;

IAC-26.C1.6.6

CLOSE-PROXIMITY OPERATIONS AT BINARY ASTEROIDS USING MANIFOLD-BASED TOURS

Mr. Marco Manelli, Delft University of Technology (TU Delft), Delft, Netherlands (Kingdom of the);

IAC-26.C1.6.7

LONG-TERM ORBIT MAINTENANCE AND FORMATION KEEPING FOR PROPULSION-FREE EQUATORIAL CONSTELLATIONS USING A PHYSICS-CONSTRAINED DIFFUSION FRAMEWORK

Dr. Lincheng Li, Nanyang Technological University (NTU), Singapore, Singapore;

IAC-26.C1.6.8

TRAJECTORY DESIGN AND OPTIMISATION OF A FLYBY MISSION TOWARDS ASTEROID 2024 YR4

Ms. Aya Belkat, Tetouan, Morocco;

IAC-26.C1.6.9

MULTIDISCIPLINARY ENERGY-AWARE LOW-THRUST TRANSFER FOR MARTIAN IN ORBIT SERVICING MISSION

Mr. Mert Emrem, Politecnico di Milano, Milano, Italy;

IAC-26.C1.6.10

RESEARCH OF THE OPTIMAL THRUST VECTOR CONTROL OF AIR-BREATHING ELECTRIC PROPULSION IN ULTRA-LOW ELLIPTICAL ORBITS

Prof. Alexander S. Filatyev, Lomonosov Moscow State University, Zhukovsky, Russian Federation;

C1.7. Mission Design, Operations & Optimization (2)

October 8 2026, 15:00 — Hall 8

Co-Chair(s): Diane Davis, Texas A&M University, United States; Richard Epenoy, Centre National d'Etudes Spatiales (CNES), France;

Rapporteur(s): Stéphanie Lizy Destrez, SUPAERO- Ecole Nationale Supérieure de l'Aéronautique et de l'Espace, France;

IAC-26.C1.7.1

TEMPORAL DEEP UNROLLING-BASED GLOBAL SEARCH FOR EARTH-MOON L2 NRHO TRANSFER TRAJECTORIES AND IDENTIFICATION OF NEW SOLUTION FAMILIES

Mr. Satoshi Ueda, Japan Aerospace Exploration Agency (JAXA), Sagami-hara-shi, Kanagawa, Japan;

IAC-26.C1.7.2

DYNAMICS-DRIVEN END-OF-LIFE DISPOSAL TRAJECTORIES FOR SPACECRAFT OPERATING IN Cislunar SPACE

Ms. Mathilda Bolis, Politecnico di Milano, Entratico, Italy;

IAC-26.C1.7.3

TRACKING Cislunar TARGET ORBITS FROM VISIBILITY-INFORMED OPTICAL OBSERVER CONSTELLATIONS

Mr. Noah Isaac Sadaka, Purdue University, West Lafayette, United States;

IAC-26.C1.7.4

DISTRIBUTED OPTIMIZATION WITH SCALABILITY GUARANTEES FOR SATELLITE CONSTELLATION OPERATIONS IN Cislunar SPACE

Mr. Hongseok Kim, The University of Texas at Austin, Austin, TX, United States;

IAC-26.C1.7.5

LUNAR ORBIT TO LUNAR IMPACT: SURFACE ACCESS FROM HALO ORBITS IN Cislunar SPACE

Dr. Diane Davis, Texas A&M University, College Station, TX, United States;

IAC-26.C1.7.6

RECOVERY TRAJECTORY OF NRHO TRANSFER IN CREWED AND CARGO MISSIONS FOR SAFETY AND ROBUSTNESS

Mr. Junji Kikuchi, Japan Aerospace Exploration Agency (JAXA), ISAS, Sagami, Japan;

IAC-26.C1.7.7

NEAR-EARTH MEAN MOTION RESONANCE AND ITS LOW-ENERGY CONNECTION WITH THE Cislunar SPACE

Mr. Yongjie Chen, School of Astronautics, Beihang University, Beijing, China;

IAC-26.C1.7.8

DESIGN AND PERFORMANCE ASSESSMENT OF A COMMUNICATION RELAY SYSTEM FOR THE LUNAR FAR SIDE USING RESONANT LIBRATION ORBITS

Mr. Armando Pastore, Sapienza University of Rome, Rome, Italy;

IAC-26.C1.7.9

CAPSTONE 02: AN AUTONOMOUS Cislunar RENDEZVOUS & PROXIMITY OPERATIONS DEMONSTRATION MISSION

Mr. Matthew Bolliger, Advanced Space, Thornton, United States;

IAC-26.C1.7.10

COMPARISON OF END-OF-LIFE DISPOSAL STRATEGIES FOR SATELLITES IN MEDIUM AND HIGH LUNAR ORBITS

Prof. Anna Guerman, Centre for Mechanical and Aerospace Science and Technologies (C-MAST), Covilha, Portugal;

C1.8. Orbital Dynamics (1)

October 9 2026, 10:15 — Hall 8

Co-Chair(s): Othon Winter, UNESP - São Paulo State University, Brazil; Kathleen Howell, Purdue University, United States;

Rapporteur(s): Yoshitsugu Hitachi, ispace, inc., Japan;

IAC-26.C1.8.1

THE ASTRODYNAMICS OF TRANSLUNAR SPACE: LUNISOLAR RESONANT STRUCTURE BEYOND THE MOON

Dr. Aaron J. Rosengren, University of California, San Diego, La Jolla, United States;

IAC-26.C1.8.3

INSTANTANEOUS PHOTO-GRAVITATIONAL EQUILIBRIA AND SOLAR-SAIL DYNAMICS IN THE SUN-EARTH-MOON BI-CIRCULAR RESTRICTED FOUR-BODY PROBLEM

Mr. Christian Bellinazzi, Politecnico di Torino, Rivalta di Torino, Italy;

IAC-26.C1.8.4

ENHANCED DYNAMICAL MODELING OF LOW-ENERGY TRAJECTORIES IN MULTI-MOON PLANETARY SYSTEMS

Ms. Chiara Pozzi, Khalifa University of Science and Technology (KUST), Abu Dhabi, United Arab Emirates;

IAC-26.C1.8.5

EVOLUTION ANALYSIS OF SPATIAL HETEROCLINIC CONNECTIONS BETWEEN EARTH-MOON AND SUN-EARTH LIBRATION POINT REGIMES

Mr. Ruilong Li, Universitat Politècnica de Catalunya (UPC), Barcelona, Spain;

IAC-26.C1.8.6

DIFFRACTIVE-SAIL WEAK STABILITY BOUNDARY STRUCTURE AND ITS APPLICATION TO ACHIEVING EFFICIENT BALLISTIC ESCAPE

Mr. Shuyue Fu, Beihang University (BUAA), Beijing, China;

IAC-26.C1.8.7

CAPTURING LAGRANGIAN COHERENT STRUCTURES IN LOW-ENERGY TRANSFER VIA THE LAGRANGIAN DESCRIPTOR FIELD WITH KEY DYNAMICAL INFORMATION

Mr. Yongjie Chen, School of Astronautics, Beihang University, Beijing, China;

IAC-26.C1.8.8

ASSESSING LONG-TERM SOLAR-SAIL ENVIRONMENTAL DEGRADATION FOR PLANETARY SUNSHADE MISSIONS OPERATING NEAR THE PHOTO-GRAVITATIONAL EQUILIBRIUM POINT L1

Mr. Catello Leonardo Matonti, Politecnico di Torino, Turin, Italy;

IAC-26.C1.8.9

EFFECTS OF DYNAMIC MODEL ORDER ON OBSERVABILITY IN MULTI-SPACECRAFT ANGLES-ONLY AUTONOMOUS NAVIGATION

Ms. Menglu Gao, Northwestern Polytechnical University, Xi'an, China;

IAC-26.C1.8.10

BIFURCATION ANALYSIS OF LIBRATION POINTS AND MANIFOLDS IN A TWO-PARAMETER GENERALIZED RESTRICTED THREE-BODY PROBLEM

Mr. TuZhi Xu, School of Astronautics, Beihang University, Beijing, China;

C1.9. Orbital Dynamics (2)

October 9 2026, 13:45 — Hall 8

Co-Chair(s): Roberto Armellini, The University of Auckland, New Zealand; Josep J. Masdemont, Universitat Politècnica de Catalunya (UPC), Spain;

Rapporteur(s): Danil Ivanov, Keldysh Institute of Applied Mathematics of RAS, Russian Federation;

IAC-26.C1.9.1

PERIODIC MOTION IN THE EARTH-MOON SYSTEM THROUGH THE LOCUS OF LYAPUNOV ORBITS

Dr. Edoardo Maria Leonardi, Sapienza University of Rome, Rome, Italy;

IAC-26.C1.9.2

SPATIAL BIFURCATION AND DYNAMICAL ANALYSIS OF THREE-DIMENSIONAL RESONANT TRANSITION PERIODIC ORBITS IN THE EARTH-MOON SYSTEM

Mr. Arimoto Mahiro, Kyushu University, Hukuokashi Hukuoka prefecture, Japan;

IAC-26.C1.9.3

QUASI-BALLISTIC MOON-EARTH-MOON CYCLING TRAJECTORIES EXPLOITING WEAK STABILITY BOUNDARIES

Mr. Francesco Nuzzo, Politecnico di Milano, Milano (MI), Italy;

IAC-26.C1.9.4

RESONANT NORMAL FORMS AS OSCULATING COORDINATES FOR HIGHER-FIDELITY Cislunar LIBRATION-POINT MOTION

Mr. Juan-Pablo Almanza-Soto, Purdue University, West Lafayette, IN, United States;

IAC-26.C1.9.5

HIGH-ORDER SEMI-ANALYTICAL CONSTRUCTION OF W4/ W5 FAMILIES VIA COUPLING-INDUCED BIFURCATION NEAR TRIANGULAR LIBRATION POINTS

Dr. Xiaoyu Fu, University of Liverpool, Liverpool, United Kingdom;

IAC-26.C1.9.6

REMOVING SMALL DIVISORS FROM BROUWER'S PERTURBATION SOLUTION

Dr. Juan Félix San-Juan, Universidad de La Rioja, Logroño, Spain;

IAC-26.C1.9.7

SPACECRAFT INTENTION RECOGNITION IN THE INERTIAL FRAME USING MANEUVER-AWARE ORBITAL FEATURES

Ms. Xuduo Tong, Beijing Institute of Technology, Beijing, China;

IAC-26.C1.9.8

SHAPE-INDUCED THERMAL EFFECTS ON ATMOSPHERIC DRAG IN RECONFIGURABLE SPACECRAFT

Dr. Kikuko Miyata, Meijo University, Nagoya, Japan;

IAC-26.C1.9.9

INTERIOR GRAVITY FIELD MODELLING OF HETEROGENEOUS SOLAR SYSTEM BODIES: A NOVEL MATHEMATICAL FORMULATION TO THE MASCON-BASED APPROACH

Dr. Nicolo' Stronati, University of Liverpool, Liverpool, United Kingdom;

IAC-26.C1.9.10

A ROBUST INITIAL ORBIT DETERMINATION ALGORITHM FOR A SATELLITE IN A MULTI-BODY ENVIRONMENT

Mr. Jonathon Hope, Pennsylvania State University, Leesport, United States;

C1.10. Astrodynamics beyond the Earth

October 6 2026, 15:00 — Hall 35

Co-Chair(s): Vincent Martinot, Thales Alenia Space France, France; Elena Fantino, Khalifa University of Science and Technology (KUST), United Arab Emirates;

IAC-26.C1.10.1

THE DYNAMICAL LANDSCAPE OF CIRCULUNAR SPACE: RECONSTRUCTING THE DEMISE OF HISTORICAL CIRCULUNAR SATELLITES

Dr. Aaron J. Rosengren, University of California, San Diego, La Jolla, United States;

IAC-26.C1.10.2

CORRECTION METHOD FOR PRELIMINARY DESIGN OF MULTIPLE LUNAR SWING-BY TRAJECTORIES USING PATCHED CONICS APPROXIMATION

Mr. Takuro Mito, University of Tokyo, Sagamiara City, Kanagawa, Japan;

IAC-26.C1.10.3

BEYOND GAUSSIANITY: SCALABLE NON-MYOPIC SENSOR TASKING FOR CISELUNAR REGIMES

Mr. Taylor Stiffler, The University of Texas at Austin, Austin, United States;

IAC-26.C1.10.5

EVENT-DRIVEN RECONFIGURATION OF LUNAR NAVIGATION CONSTELLATIONS TO SUPPORT PRECISION LANDING, ASCENT AND GATEWAY PHASING CONSTRAINTS

Ms. Heba Gaballa, Technical University of Munich (TUM), Munich, Germany;

IAC-26.C1.10.6

ANALYSIS OF ATTITUDE DYNAMICS FOR A RIGID SPACECRAFT ON PERIODIC ORBITS IN THE CIRCULAR RESTRICTED THREE-BODY PROBLEM

Mr. Xuesong Li, Beijing University of Technology, Beijing, China;

IAC-26.C1.10.7

A STUDY ON ATTITUDE CONTROL OF THE LITEBIRD SATELLITE WITH SPIN AND PRECESSION MOTION

Prof. Toshio Kamiya, Meisei University, Tokyo, Japan;

IAC-26.C1.10.8

DISTURBED DYNAMICS OF A MARTIAN PNT SPACECRAFT CONSTELLATION: IMPLICATIONS FOR ORBITAL ARCHITECTURE AND SERVICE QUALITY

Mr. Dale Mueller, University of Colorado Colorado Springs, Pueblo West, United States;

IAC-26.C1.10.9

MULTI-OBJECTIVE OPTIMIZATION OF SPACECRAFT TRAJECTORIES WITH DEEP SPACE MANEUVERS USING IMPROVED SEARCH SPACE PRUNING

Dr. Xinyi Li, Beihang University (BUAA), Beijing, China;

IAC-26.C1.10.10

VERY LOW ORBITS BEYOND EARTH: ATMOSPHERIC DRIVERS OF SPACECRAFT AND MISSION DESIGN

Mr. Isaac Lloyd, University of Manchester, Prestatyn, United Kingdom;

C1.IPB. Interactive Presentations - IAF ASTRODYNAMICS SYMPOSIUM

— IP Area

Co-Chair(s): Vladimir Razoumny, RUDN University, Russian Federation; Manoranjan Sinha, Indian Institute of Technology, India; Feng Jinglang, University of Strathclyde, United Kingdom;

IAC-26.C1.IPB.12

SOLAR RADIATION PRESSURE-BASED RECONFIGURATION OF ORBITING SOLAR REFLECTOR CONSTELLATIONS FOR ENHANCED TERRESTRIAL POWER GENERATION

Dr. Onur Çelik, Delft University of Technology, Delft, Netherlands (Kingdom of the);

IAC-26.C1.IPB.13 (unconfirmed)

A TRANSFORMER-BASED LEARNED OPTIMIZER FOR SAMPLE-EFFICIENT TRAJECTORY OPTIMIZATION

Mr. Rundao Li, Tsinghua University, Beijing, China;

IAC-26.C1.IPB.14

SPATIOTEMPORAL POINTING ANALYSIS FOR FORMATION OF TUMBLING SPACECRAFT

Mr. Arun Ramachandran Nair, RMIT University, Melbourne, Australia; Mr. Guillaume Knight, RMIT University, Melbourne, Australia;

IAC-26.C1.IPB.15

STATELESS SPIKING CONTROL FOR SPACECRAFT NAVIGATION AND CONTROL

Dr. Andrea Colagrossi, Politecnico di Milano, Milano, Italy;

IAC-26.C1.IPB.16

ADCS PRELIMINARY DESIGN AND SIMULATION OF A TETHERED SATELLITE SYSTEM WITH TETHER-TORQUE-BASED CONTROL

Mr. Stefano Aliberti, Politecnico di Torino, Turin, Italy; Mr. Catello Leonardo Matonti, Politecnico di Torino, Turin, Italy;

IAC-26.C1.IPB.17

INTELLIGENT COUPLED DYNAMICS AND UNCERTAINTY-AWARE CONTROL OF FLEXIBLE SPACECRAFT IN VERY LOW EARTH ORBIT

Mr. Xinlei Guo, Beijing Institute of Technology, Beijing, China;

IAC-26.C1.IPB.19

NONCOOPERATIVE TARGET RELATIVE POSE ESTIMATION VIA COOPERATIVE MULTI-SATELLITE OBSERVATION: HETEROGENEOUS MEASUREMENT MODELING AND INFORMATION-THEORETIC DESIGN OF OPTIMAL SATELLITE NUMBER AND FORMATION GEOMETRY

Dr. Yanjun Yu, Harbin Institute of Technology, Harbin, China;

IAC-26.C1.IPB.20

A COOPERATIVE ATTITUDE-ORBIT RECONFIGURATION STRATEGY FOR DISTRIBUTED SPACE-BASED TELESCOPE FORMATIONS WITH BODY-FIXED UNIDIRECTIONAL THRUST CONSTRAINTS

Mr. Siyuan Guo, Beihang University, Beijing, China;

IAC-26.C1.IPB.21

FAULT DETECTION AND ISOLATION OF SATELLITE ATTITUDE CONTROL USING A CASCADE FILTER STRUCTURE FOR AN INTEGRATED REACTION WHEEL-MAGNETORQUER ACTUATION SYSTEM

Mr. Numan Çavdar, Istanbul Technical University, İstanbul, Türkiye;

IAC-26.C1.IPB.22

DATA-DRIVEN ATTITUDE CONSENSUS CONTROL FOR HETEROGENEOUS SPACECRAFT

Mr. Zhijie Ning, Harbin Institute of Technology, Harbin, China;

IAC-26.C1.IPB.23

REAL-TIME MISSED THRUST RECOVERY MARGIN EVALUATION ENABLED BY PHYSICS-INFORMED NEURAL SURROGATES

Mr. Jiajun Zhu, Nanjing University of Aeronautics and Astronautics, Nanjing, China;

IAC-26.C1.IPB.24 (unconfirmed)

EFFICIENT 6-DOF LANDING TRAJECTORY PLANNING USING LEARNING-TO-OPTIMIZE AND SEQUENTIAL CONVEX PROGRAMMING

Dr. Zhuo Zhang, National Key Laboratory of Aircraft Configuration Design, Northwestern Polytechnical University, Xian, China;

IAC-26.C1.IPB.25

INTELLIGENT CONTINUATION AND CLASSIFICATION OF Cislunar PERIODIC ORBITS IN TIME-PERIODIC DYNAMICAL REGIMES

Mr. Ruilong Li, Universitat Politecnica de Catalunya (UPC), Barcelona, Spain;

IAC-26.C1.IPB.26

PCBSATS SWARM RELATIVE NAVIGATION AND CONTROL USING MAGNETORQUERS AND RADIOMETRIC METHODS

Mr. Vladislav Orlov, Keldysh Institute of Applied Mathematics of RAS, Moscow, Russian Federation;

IAC-26.C1.IPB.27

INVARIANT TORI AND THEIR MANIFOLDS NEAR TRIANGULAR LIBRATION POINTS IN THE ELLIPTIC RESTRICTED THREE-BODY PROBLEM

Dr. Yuying Liang, Beihang University (BUAA), Beijing, China;

IAC-26.C1.IPB.28 (unconfirmed)

CONTROL OF DEPLOYMENT AND STABILIZATION OF A PHOBOS SPACE ELEVATOR FROM L1 LIBRATION POINT

Prof. Vladimir S. Aslanov, Samara National Research University (Samara University), Samara, Russian Federation;

IAC-26.C1.IPB.29

INTEGRATING LOW-THRUST TRANSFER DYNAMICS INTO POMDP PLANNING FOR ON-ORBIT SERVICING

Ms. SUSMITHA PATNALA, CentraleSupélec, Massy, France;

IAC-26.C1.IPB.30

DESIGN OF DIGITAL FILTERS FOR A LAUNCH VEHICLE BENDING AND SLOSHING STABILIZATION

Mrs. Nagihan Doğru, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Ankara, Türkiye;

IAC-26.C1.IPB.31

MULTI-TARGET OBSERVATION-RENDEZVOUS HYBRID TRAJECTORY PLANNING FOR ON-ORBIT SERVICING BASED ON HIERARCHICAL REINFORCEMENT LEARNING

Mr. Siyuan Guo, Beihang University, Beijing, China;

IAC-26.C1.IPB.32

OPTIMAL INSPECTION VIEWPOINT SEQUENCING FOR ON-ORBIT SERVICING VIA SAFE REINFORCEMENT LEARNING

Prof. Adam Abdin, CentraleSupélec, Paris, France;

IAC-26.C1.IPB.33

REDUCED-ORDER MODELING OF PROPELLANT SLOSHING VIA DIFFERENTIAL VARIATIONAL INEQUALITIES FOR ON-ORBIT REFUELING DOCKING MISSIONS

Mr. Gianni Cassoni, Università degli Studi Roma Tre, ROMA, Italy;

IAC-26.C1.IPB.34

ENERGY-OPTIMAL PORT-HAMILTONIAN ATTITUDE CONTROL OF A MAGNETORQUER-ONLY 1U CUBESAT WITH PROCESSOR-IN-THE-LOOP VALIDATION

Mr. Álvaro Pérez Mora, Starlogics, Cartago, Costa Rica;

IAC-26.C1.IPB.35

TASK AGGREGATION AND GENERATION METHOD FOR HETEROGENEOUS REMOTE SENSING CONSTELLATIONS BASED ON MULTIDIMENSIONAL GEOGRAPHIC INFORMATION GRID

Prof. Bin Meng, Beijing Institute of Control Engineering, Beijing, 100080, P.R. China, Beijing, China;

IAC-26.C1.IPB.36

COMPACT MULTI-SENSOR ATTITUDE DETERMINATION UNIT WITH FAULT DETECTION CAPABILITY FOR NANOSATELLITES

Dr. Mehmet Esit, Kyushu Institute of Technology, Kitakyushu, Fukuoka, Japan;

C2. IAF MATERIALS AND STRUCTURES SYMPOSIUM

Coordinator(s): Jochen Albus, ArianeGroup, Germany; Alwin Eisenmann, Deutsche Gesellschaft für Luft-und Raumfahrt, Lilienthal-Oberth e.V. (DGLR), Germany;

C2.1. Space Structures I Design, Development and Verification (Launch Vehicles and Space Vehicles, including their Mechanical/Thermal/Fluidic Systems)

October 5 2026, 16:30 — E7

Co-Chair(s): Alwin Eisenmann, Deutsche Gesellschaft für Luft-und Raumfahrt, Lilienthal-Oberth e.V. (DGLR), Germany; Jochen Albus, ArianeGroup, Germany;

Rapporteur(s): Coraline Dalibot, Rutherford Appleton Laboratory, United Kingdom;

IAC-26.C2.1.1

KEYNOTE: "PAOLO SANTINI MEMORIAL LECTURE" - BUCKLING OF COMPOSITE STRUCTURES

Prof. Richard Degenhardt, German Aerospace Center (DLR), Braunschweig, Germany;

IAC-26.C2.1.2

DESIGN OPTIMIZATION AND EXPERIMENTAL VALIDATION OF A DUAL-KEY TORQUE TRANSMISSION SYSTEM FOR AEROSPACE TURBOPUMPS

Mr. Alp Eren Calicioglu, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Ankara, Türkiye;

IAC-26.C2.1.3

A NOVEL STRUCTURAL DAMPING APPROACH FOR 50 KG-CLASS MICROSATELLITES WITHOUT MASS AND VOLUMETRIC PENALTIES

Mr. Kentaro Shirai, Tokyo Metropolitan University, Machida-shi, Tokyo, Japan;

IAC-26.C2.1.4

A TWO-PHASE MECHANICAL VALIDATION FRAMEWORK FOR ACCEPTANCE CRITERIA OF WRINKLE-INDUCED DELAMINATIONS IN THICK-SECTION CFRP COMPOSITE RODS FOR SPACE APPLICATIONS

Mr. Saban Otenkaya, TUBITAK Uzay, Space Technologies Research Institute, Ankara, Türkiye;

IAC-26.C2.1.5

STRESS DISTRIBUTION ANALYSIS IN CYLINDRICAL FUEL TANK STRUCTURES DURING ASCENT PHASE

Ms. Lala Mirzayeva, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-26.C2.1.6

CAVITATION CHARACTERISTICS OF PROPELLANT MANAGEMENT DEVICES IN SPACECRAFT PROPELLANT FEED SYSTEMS

Mr. Oleksandr Minai, Yuzhnoye State Design Office, Dnipro, Ukraine;

IAC-26.C2.1.7

REFRACTORY HIGH-ENTROPY ALLOYS FOR LIQUID ROCKET ENGINE COMBUSTION CHAMBERS AND THROAT LINERS

Mr. Asad Ullah, Rolls-Royce plc, Stevenage, United Kingdom;

IAC-26.C2.1.8

DEVELOPMENT AND EVALUATION OF CENOSPHERES-BASED LIGHTWEIGHT THERMAL STRUCTURES FOR REUSABLE AEROSPACE SYSTEMS

Mr. Akshat Sharma, surat, India;

IAC-26.C2.1.9

STRESS-BASED FUNCTIONALLY GRADED DESIGN AND ITERATIVE OPTIMIZATION FOR PLANETARY LANDING GEARS

Ms. Ayşenur Aydın, Yıldız Technical University, Istanbul, Türkiye;

IAC-26.C2.1.10

BIO-INSPIRED HELICAL HONEYCOMB CRUSH CORES FOR SPACECRAFT LANDING

Ms. Buse İrem Girdap, Middle East Technical University, Ankara, Türkiye;

IAC-26.C2.1.11

STUDY ON A NOVEL SPACECRAFT THERMAL CONTROL SYSTEM BASED ON PHASE CHANGE HEAT STORAGE

Dr. Dong La, Shanghai Institute of Satellite Engineering, Shanghai, China;

IAC-26.C2.1.12

COMPREHENSIVE THERMAL ANALYSIS FOR WOODEN CUBESATS IN LOW EARTH ORBIT

Mr. Yaqoob Alqassab, Bahrain Space Agency (BSA), Hidd, Bahrain;

IAC-26.C2.1.13

FLEXIBLE ROCKET DYNAMICS AND MULTIPHASE TRAJECTORY OPTIMIZATION: AN INTEGRATED CONTROL APPROACH

Dr. Elcio Jeronimo de Oliveira, Associazione Italiana di Aeronautica e Astronautica (AIDAA), Montevideo, Uruguay;

C2.2. Space Structures II Development and Verification (Orbital deployable and dimensionally stable structures, including mechanical and robotic systems and subsystems)

October 6 2026, 10:15 — E7

Co-Chair(s): Paolo Gasbarri, University of Rome “La Sapienza”, Italy; Pavel Trivailo, RMIT University (Royal Melbourne Institute of Technology), Australia;

Rapporteur(s): Jiawen Qiu,, China; Javad Fatemi, Airbus Defence and Space Netherlands, Netherlands (Kingdom of the);

IAC-26.C2.2.1

PRE- AND POST-ANALYSIS OF ON-ORBIT MEMBRANE DEPLOYMENT OF HELIOS-R: BOOM-DEPLOYABLE MEMBRANE EQUIPPED WITH MULTI-DEVICES

Mr. Kazuki Hamatsuki, Tokyo Metropolitan University, Hino, Tokyo, Japan;

IAC-26.C2.2.2

BISTABLE AUXETIC STRUCTURES FOR ADVANCED DEPLOYABLE SPACE HABITATS

Prof. Enrico Zappino, Politecnico di Torino, Torino, Italy;

IAC-26.C2.2.3

TRACKING METHODOLOGY FOR A FAILED SPINNING SATELLITE USING A ARM-HAND SPACECRAFT

Dr. Hongxu Wang, Harbin Institute of Technology, Harbin, China;

IAC-26.C2.2.4

ITERATIVE LEARNING CONTROL FOR HIGH-PRECISION ATTITUDE TRACKING OF FLEXIBLE MULTIBODY SPACECRAFT WITH PROPELLANT SLOSHING AND A SPINNING REFLECTOR

Mr. Matteo Carattoli, Sapienza University of Rome, Roma, Italy;

IAC-26.C2.2.5

RIGID-FLEXIBLE COUPLED DYNAMIC MODELING AND PHYSICS-GUIDED PRECISION PREDICTION OF SPATIAL OPTICAL SUPPORT MECHANISMS UNDER MULTI-SOURCE UNCERTAINTIES

Dr. Fengxiao Yan, Harbin Institute of Technology, Harbin, China;

IAC-26.C2.2.6

INTERNAL DEPLOYMENT SYSTEM DEVELOPMENT AND TESTING FOR DIPOLE ANTENNAS IN CUBESATS

Mr. Chinathip Narongphun, Kyushu Institute of Technology, Kitakyushu City, Fukuoka, Japan;

IAC-26.C2.2.7

DESIGN OF MULTI-DIMENSIONAL SENSING DOCKING PANEL FOR SATELLITE ON-ORBIT SPLICING AND REAL-TIME DEFORMATION INVERSION

Mr. Bo Zhang, Innovation Academy for Microsatellites, Chinese Academy of Sciences, shanghai, China;

IAC-26.C2.2.8

A DIGITAL TWIN-ENHANCED AUTOMATED TESTING APPROACH IN FUNCTIONAL VERIFICATION OF TURKSAT6A SATELLITE

Mr. Eren Alp CELIK, ASELSAN, Ankara, Türkiye;

IAC-26.C2.2.9

INVERSE-KINEMATIC DESIGN OF DEPLOYABLE SCISSOR MECHANISMS ALONG ARBITRARY CURVES

Dr. Yuling Shen, Soochow University, Suzhou, China;

IAC-26.C2.2.10

MAKING TITANIUM DEMISABLE THROUGH CONTROLLED POROSITY AND FUNCTIONAL COATINGS

Dr. Isil Sakraker Ozmen, German Aerospace Center (DLR), Stuttgart, Germany;

IAC-26.C2.2.11

DEVELOPMENT AND EVALUATION OF GRAVITY SAG PREVENTION DEVICE FOR THE MULTI-STAGE DEPLOYABLE MESH REFLECTOR ANTENNA

Mr. YeonSoo Jung, LIG Defense&Aerospace (LIG D&A), Seongnam-si, Gyeonggi-do, Republic of Korea;

IAC-26.C2.2.12

DEVELOPMENT AND VERIFICATION OF DIMENSIONALLY STABLE LAS GLASS-CERAMICS FOR HIGH-PRECISION OPTICAL STRUCTURES

Ms. Hüma Velidedeoğlu, Istanbul Technical University, İSTANBUL, Türkiye;

C2.3. Space Structures III Design, Development and Verification (Orbital infrastructure for in orbit service & manufacturing, Robotic and Mechatronic systems, including their Mechanical/Thermal/ Fluidic Systems)

October 6 2026, 15:00 — E7

Co-Chair(s): Andreas Rittweger, DLR (German Aerospace Center), Germany; Pier Marzocca, RMIT University, Australia;

Rapporteur(s): Ijar Da Fonseca, ITA-DCTA, Brazil; Oleg Alifanov, MAI, Russian Federation;

IAC-26.C2.3.1

A DEPLOYABLE TRUSS-STRUCTURED ROBOTIC ARM FOR EFFICIENT ON-ORBIT MANIPULATION AND DOCKING OPERATIONS

Mr. Alberto Báez Jiménez, Instituto Tecnológico Autónomo de México, Mexico City, Mexico;

IAC-26.C2.3.2

A TRAFFICABILITY-DRIVEN ROBOTIC ASSEMBLY ARCHITECTURE FOR LARGE MODULAR SPACE STRUCTURES WITHIN THE REALISE² FRAMEWORK

Prof. Stefano Seriani, Università degli studi di Trieste, Trieste, Italy;

IAC-26.C2.3.3

AMOCIS: EVALUATION OF ON-ORBIT MANUFACTURING FOR LARGE ANTENNA SUPPORT STRUCTURES.

Mr. David Schäfer, German Aerospace Center (DLR), Braunschweig, Germany;

IAC-26.C2.3.4

ARAYQS-D3: IN-ORBIT MANUFACTURING OF STRUCTURAL BOOMS AND DEPLOYMENT OF A 2 KW SOLAR ARRAY WITH INTEGRATED POWER BEAMING

Mr. Michael Kringer, Dcubed GmbH, Germering, Germany;

IAC-26.C2.3.5

COMPARATIVE THERMAL MODELING OF IN-SPACE PROPELLANT STORAGE ACROSS LEO, GEO, HEO AND CIS-LUNAR ENVIRONMENTS

Ms. Sai Susmitha Guddanti, Department of Space Studies, University of North Dakota, Grand Forks, United States;

IAC-26.C2.3.6

COMPUTATIONAL SIMULATION OF RENDEZVOUS AND ROBOTIC BERTHING FOR ON-ORBIT SERVICING: VALIDATION AGAINST OPERATIONAL MISSION DATA

Dr. Ijar Milagre da Fonseca, Instituto Tecnológico de Aeronáutica (ITA), Sao Jose dos Campos, Brazil;

IAC-26.C2.3.7

CONTACT-AWARE MODEL PREDICTIVE CONTROL FOR IN ORBIT MANIPULATION OF MULTI-ARM ROBOT

Mr. Praveen Elavazhagan, Cranfield University, Cranfield UK, Cranfield, United Kingdom;

IAC-26.C2.3.8

DEPLOYABLE 3D-PRINTED HIGH APERTURE TELESCOPE PAYLOAD FOR CUBESAT HYPERSPECTRAL IMAGING

Mr. Henrik Øvrebø, Norwegian University of Science and Technology, Trondheim, Norway;

IAC-26.C2.3.9

DESIGN OF A HETEROGENEOUS MULTI-ROBOT ON-ORBIT ASSEMBLY SYSTEM FOR LARGE SPACE STRUCTURES WITH ELECTRON BEAM WELDING

Mr. Shogo Onishi, Space Quarters Inc., Kawasaki-shi, Japan;

IAC-26.C2.3.10

EXPERIMENTAL VALIDATION OF REAL-TIME BIRRT TRAJECTORY PLANNING FOR AUTONOMOUS CAPTURE OF TUMBLING TARGETS FOR IN-ORBIT SERVICING

Prof. Marco Sabatini, Sapienza University of Rome, Rome, Italy;

IAC-26.C2.3.11

STRUCTURAL-ROBOTIC CO-DESIGN OF WELDING-ENABLED ORBITAL INFRASTRUCTURE FOR IN-SPACE ASSEMBLY

Dr. Zhou Daniel Hao, University of Leicester, Leicester, United Kingdom;

IAC-26.C2.3.12

EXPERIMENTAL INVESTIGATION OF STICK-SLIP FRICTIONAL INSTABILITIES AT MECHANICAL INTERFACES RELEVANT TO SPACECRAFT STRUCTURES

Ms. Gulenaz Baygeldi, Middle East Technical University, Ankara, Türkiye;

C2.4. Space Structures Control, Dynamics and Microdynamics

October 7 2026, 10:15 — E7

Co-Chair(s): Federica Angeletti, University of Rome "La Sapienza", Italy; Élcio Jeronimo de Oliveira, Associazione Italiana di Aeronautica e Astronautica (AIDAA), Uruguay;

Rapporteur(s): Harijono Djojodihardjo, Bandung Institut of Technology, Indonesia; André Da Silva, European Space Agency (ESA), France;

IAC-26.C2.4.1

EFFECT OF QUALIFICATION-LEVEL VIBRATION AND SHOCK LOADS ON THE MICRO-VIBRATION CHARACTERISTICS OF REACTION WHEEL ASSEMBLIES FOR HIGH-RESOLUTION OPTICAL SATELLITES

Dr. Ali Özdemir, Tubitak Uzay, Space Technologies Research Institute, Çankaya, Türkiye;

IAC-26.C2.4.2

TRAJECTORY OPTIMIZATION FOR FREE-FLOATING SPACE MANIPULATOR CAPTURE MANEUVERS

Mr. Efe Can Batur, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.C2.4.3

INTEGRATED POINTING AND DISTURBANCE SUPPRESSION SYSTEM USING FLUX PINNING FOR SPACE TELESCOPES

Mr. Itsuki Kawamoto, University of Tokyo, Sagami-hara-shi, Japan;

IAC-26.C2.4.4

ADJUSTABLE TIME-DELAY INPUT SHAPING FOR VIBRATION SUPPRESSION OF FLEXIBLE APPENDAGES DURING ON-ORBIT MANIPULATOR MANEUVERS

Dr. Bo Meng, School of Astronautics, Beihang University, Beijing, China;

IAC-26.C2.4.6

HIGH FIDELITY SAFE AUTONOMOUS CLOSE-APPROACH CONTROL OF FLEXIBLE SATELLITES VIA DEEP REINFORCEMENT LEARNING

Mr. Matteo Giannitti, Sapienza University of Rome, Roma, Italy;

IAC-26.C2.4.7

GEOMETRIC MODELING OF MULTI-CONTACT TOUCHDOWN DYNAMICS AND STABILITY OF LUNAR LANDERS

Ms. Rithika Nagarajan, Embry-Riddle Aeronautical University, Daytona Beach, United States;

IAC-26.C2.4.8

THERMO-MECHANICAL MODAL ANALYSIS OF HYPERSONIC VEHICLE STRUCTURAL PANELS UNDER EXTREME AERODYNAMIC HEATING

Mr. HARSH VERMA, DEFENCE INSTITUTE OF ADVANCED TECHNOLOGY, ORAI, India;

IAC-26.C2.4.9

DESIGN AND COUPLING ANALYSIS OF A GROUND MICRO-VIBRATION UNLOADING SYSTEM FOR SATELLITES WITH LARGE OPTICAL PAYLOADS

Dr. Xianbo Yin, Innovation Academy for Microsatellites, Chinese Academy of Sciences, Shanghai, China;

IAC-26.C2.4.10

FREE GIVEAWAY OF THE LOW COST EXCITING NEW SPACE EXPERIMENTS

Prof. Pavel M. Trivailo, RMIT University, Melbourne, VIC, Australia;

IAC-26.C2.4.11

RESULTS OF A SHOCK TEST FACILITY DEVELOPMENT MODEL TEST CAMPAIGN

Ms. Emily Seeberg, Universite Paul Sabatier Toulouse III, Augsburg, Germany;

IAC-26.C2.4.12

ASSESSMENT OF DAMPING CHARACTERISTICS IN WOOD FOR SPACE STRUCTURES APPLICATIONS

Mr. Kyung-Min Oh, Korea Aerospace University, Goyang-si, Republic of Korea;

C2.5. Space Structures and Materials for Extreme Environment (High-temperature and cryogenic-temperature applications including thermal insulation concepts)

October 7 2026, 15:00 — E7

Co-Chair(s): David E. Glass, National Aeronautics and Space Administration (NASA), United States; James Tucker, American Astronautical Society (AAS), United States;

Rapporteur(s): Pierre Baudry, ArianeGroup, France;

IAC-26.C2.5.1

THERMO-STRUCTURAL ASSESSMENT OF AN AEROGEL-BASED THERMAL DECOUPLING CONCEPT FOR CRYOGENIC TURBOPUMP SYSTEMS

Mr. Ali Askarov, Azerbaijan Technical University, Baku, Azerbaijan;

IAC-26.C2.5.2

TWO-MODEL APPROACH FOR ESTIMATION OF THE THERMOPHYSICAL PROPERTIES OF SUPERCONDUCTING MATERIALS IN SPACECRAFT POWER SYSTEMS

Prof. Aleksey V. Nenarokomov, Moscow Aviation Institute (National Research Institute, MAI), Moscow, Russian Federation;

IAC-26.C2.5.3

HYDROGEN CONTAMINATION PHENOMENA ON HERMETICALLY SEALED RF SPACE MODULES

Mr. Mehmet Ali Solmaz, ASELSAN, Ankara, Türkiye;

IAC-26.C2.5.4

THERMALLY TRIGGERED DEMISABLE JOINTS USING ZINC-BASED SACRIFICIAL WASHERS FOR SPACECRAFT RE-ENTRY

Mr. Ahmad Ajabi Hussaini, University of Strathclyde, Glasgow, United Kingdom;

IAC-26.C2.5.5

DEVELOPMENT OF HIGH TEMPERATURE RESISTANT COMPOSITES FOR HYPERSONIC VEHICLES

Ms. Melek Cevşen Yücel, Ankara Yıldırım Beyazıt University, Ankara, Türkiye;

IAC-26.C2.5.6

PRODUCTION OF CHOPPED CARBON FIBER REINFORCED SIC COMPOSITES FOR NOZZLE APPLICATIONS

Ms. Zeynep Bayındır, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.C2.5.7

REUSABILITY EXAMINATION OF CARBON-POLYIMIDE ABLATIVE LINER FOR AIR TURBO ROCKET ENGINE SECONDARY COMBUSTORS

Mr. Motoki Ida, The Graduate University for Advanced Studies[SOKENDAI], Sagamihara, Japan;

IAC-26.C2.5.8

INFLUENCE OF ADDITIVES ON THE ABLATION AND MECHANICAL PERFORMANCE OF CHOPPED HIGH SILICA FIBER REINFORCED PHENOLIC COMPOSITES

Mr. Burak Selamet, Istanbul Technical University, İstanbul, Türkiye;

IAC-26.C2.5.9

THERMAL INSULATION DESIGN FOR CRYOGENIC PROPELLANT TANKS IN UPPER STAGE VEHICLES

Ms. Lala Mirzayeva, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-26.C2.5.10

PLASMA WIND TUNNEL TEST ON DAMAGED SPACE RIDER COMPONENT

Ms. Miriam Vanzanella, CIRA Italian Aerospace Research Center, Capua, Capua, Italy;

IAC-26.C2.5.11

COMPARATIVE EVALUATION OF PASSIVE THERMAL PROTECTION AND FUNCTIONALLY GRADED MATERIALS UNDER HIGH-SPEED AERODYNAMIC HEATING FOR HYPERSONIC FLIGHT VEHICLES

Mr. HARSH VERMA, DEFENCE INSTITUTE OF ADVANCED TECHNOLOGY, ORAI, India;

IAC-26.C2.5.12

STUDY ON THERMAL PROTECTION PERFORMANCE OF C/SIC-METAL ACTIVELY COOLING PLATES

Mr. Liang Z, Northwestern Polytechnical University@NPU, Xi'an, China;

C2.6. Space Environmental Effects, Spacecraft and Habitats Protection

October 8 2026, 10:15 — E7

Co-Chair(s): Antonio Del Vecchio, CIRA Italian Aerospace Research Centre, Italy; Anatolii Lohvynenko, Yuzhnoye State Design Office, Ukraine;

Rapporteur(s): Giuliano Marino, CIRA Italian Aerospace Research Centre, Italy;

IAC-26.C2.6.1

ROBUST, HIGH-CONDUCTIVITY METALLIC DELAFOSSITE OXIDE THIN FILMS ON SAPPHIRE FOR SPACE APPLICATIONS

Dr. Takayuki Harada, National Institute for Materials Science, Tsukuba, Japan;

IAC-26.C2.6.2

NUMERICAL REBUILDING AND EXPERIMENTAL VALIDATION OF THE SMS CAPSULE HEAT SHIELD IN PLASMA WIND TUNNEL

Mr. Antonio Schettino, CIRA Italian Aerospace Research Center, Capua, Capua, Italy;

IAC-26.C2.6.3

FAULT-TOLERANT MEMORY SUBSYSTEM DESIGN FOR RADIATION-HARDENED PLANETARY SYSTEM-ON-CHIP ARCHITECTURES

Ms. Ilaha Karimova, Azerbaijan Technical University, Baku, Azerbaijan;

IAC-26.C2.6.4

GRADED Z COMPOSITE RADIATION SHIELDING USING METAL COATED FIBRES: SIMULATION AND IN-ORBIT DEMONSTRATION OF A LIGHTWEIGHT ALTERNATIVE TO ALUMINIUM IN LEO

Mr. Felix Schmidt, Aachen, Germany;

IAC-26.C2.6.5

ELECTROMAGNETIC SHIELDING PERFORMANCE OF METAL MESH-COATED TRANSPARENT SUBSTRATES FOR AEROSPACE OPTICAL SYSTEMS

Mr. Furkan Özdemircan, TÜBİTAK SAGE, Defense Industries Research and Development Institute, Ankara, Türkiye;

IAC-26.C2.6.6

A DUAL ENGINE SIMULATION FRAMEWORK FOR MULTILAYER RADIATION SHIELDING OPTIMIZATION

Dr. Filippo Maria Soccorsi, Sapienza University of Rome, Roma, Italy;

IAC-26.C2.6.7

KONIOCLAST: AN INTEGRATED ELECTROSTATIC, MECHANICAL, AND GAS FLOW SYSTEM FOR REGOLITH MANAGEMENT IN SUSTAINED HUMAN PRESENCE

Mr. Oscar Castillo Brenes, Descubre Robótica, San José, Costa Rica;

IAC-26.C2.6.8

COMPARISON OF PIEZOELECTRIC IMPULSE AND DIRECT PULL-OFF METHODS FOR MEASURING LUNAR REGOLITH ADHESION UNDER VACUUM

Mr. Filip Wylęgała, AGH University of Science and Technology, Kraków, Poland;

IAC-26.C2.6.10

MITIGATING LUNAR DUST ADHESION THROUGH DURABLE 3D-PRINTED CERAMICS WITH BIO-INSPIRED MICROSCALE SURFACE TOPOGRAPHIES.

Ms. Emma Levenson, Embry-Riddle Aeronautical University, Daytona Beach, United States; Dr. Seetha Raghavan, Embry-Riddle Aeronautical University, Daytona Beach, United States;

IAC-26.C2.6.11

ASYMMETRIC HYBRID HONEYCOMB SANDWICH PANELS FOR MICROMETEOROID AND ORBITAL DEBRIS RESILIENT SPACE SOLAR ARRAYS

Ms. Pelin Yıldız, Gebze Technical University, Antalya, Türkiye;

IAC-26.C2.6.12

MULTI-PHYSICS MATERIAL POINT SIMULATION OF REPEATED MICROMETEOROID IMPACTS AND PROGRESSIVE DAMAGE IN SPACECRAFT STRUCTURES

Mr. Álvaro Pérez Mora, Starlogics, Cartago, Costa Rica;

C2.7. Manufacturing and industrialization for Launch Vehicle and Space Vehicle Structures and components (High volume production, industrialization, automation and digitalization)

October 8 2026, 15:00 — E7

Co-Chair(s): Aicke Patzelt, MT Aerospace AG, Germany; Elizabeth Barrios, American Institute of Aeronautics and Astronautics (AIAA), United States;

Rapporteur(s): Oliver Kunz, Beyond Gravity, Switzerland;

IAC-26.C2.7.1

EDGE-AI VISUAL QUALITY ASSURANCE DIGITAL THREAD FOR MATERIAL-EXTRUSION ADDITIVE MANUFACTURING OF SMALL-SATELLITE HARDWARE

Mr. Beytullah DUMAN, Erciyes University, Kayseri, Türkiye;

IAC-26.C2.7.2 (unconfirmed)

AI-DRIVEN DIGITAL DESIGN AND MANUFACTURING: A UNIFIED WORKFLOW FOR GENERATIVE AND ADDITIVE MANUFACTURING

Ms. Daamini Visaalaakshi, Georgia Institute of Technology, Atlanta, United States;

IAC-26.C2.7.3

INDUSTRIALIZING THE HAWK PLUS PLATFORM: PRACTICAL INSIGHTS FROM STM PRODUCTION, AIV OPTIMIZATION, AND INITIAL MISSION IMPLEMENTATIONS

Mr. Marco Giolo, Argotec, San Mauro Torinese, Italy;

IAC-26.C2.7.4

A NEXT-GENERATION CONTROL ARCHITECTURE FOR SATELLITE QUALIFICATION LABORATORIES: MCP-BASED MACHINE INTERFACES AND AI-ASSISTED OPERATIONS

Mr. Arthur Descamps, Planet, Sunnyvale, United States;

IAC-26.C2.7.5

MANUFACTURING AND STRUCTURAL EVALUATION OF FILAMENT-WOUND COMPOSITE ROCKET MOTOR CASINGS USING AN AUTOMATED WINDING SYSTEM, AWTER.

Mr. Michał Tomporowski, Warsaw University of Technology (WUT), Warsaw, Poland;

IAC-26.C2.7.6

DERIVING EMPIRICAL DOSE CONVERSION FACTORS FOR COTS MICROELECTRONICS USING FILTERED X-RAYS FOR TOTAL IONIZING DOSE VALIDATION

Mr. Yousef Khreim, Al Hussein Technical University, Amman, Jordan;

IAC-26.C2.7.7

FRUGAL MANUFACTURING FRAMEWORKS FOR SUBORBITAL ACCESS: HYBRID MATERIAL INTEGRATION AND PNEUMATIC RECOVERY IN THE INTINAUTA SOUNDING ROCKET

Ms. Melany Margarita Garro Velasquez, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.C2.7.8

RESEARCH, MODELING AND OPTIMIZATION OF THERMOPHYSICAL PROPERTIES OF A PROMISING COMPOSITE MATERIAL FOR SPACE TECHNOLOGY

Prof. Aleksey V. Nenarokomov, Moscow Aviation Institute (National Research Institute, MAI), Moscow, Russian Federation;

IAC-26.C2.7.9

PARAMETRIC MODELLING OF BEAD GEOMETRY IN GTAW-BASED WIRE ARC ADDITIVE MANUFACTURING OF INCONEL 625 USING RESPONSE SURFACE METHODOLOGY

Mr. Kartik Kharbada, Birla Institute of Technology and Science (BITS), SECUNDERABAD, India;

IAC-26.C2.7.10

ASSESSMENT OF ADDITIVE MANUFACTURING FOR BULK PRODUCTION OF CUBESAT STRUCTURAL COMPONENTS

Mr. Muhammad Afaq, Skolkovo Institute of Science and Technology, Lahore, Pakistan;

IAC-26.C2.7.11

FABRICATION OF LARGE 3D COLLOIDAL CRYSTALS IN SPACE

Mrs. Mary Murphy, Voyager Technologies, DC, United States;

C2.8. Advancements in Materials Applications, Additive Manufacturing, and Rapid Prototyping Manufacturing and Rapid Prototyping

October 9 2026, 10:15 — E7

Co-Chair(s): Eleonore Poli, Centre Suisse d'Electronique et de Microtechnique SA (CSEM), Switzerland; Raymond G. Clinton, NASA Marshall Space Flight Center, United States;

Rapporteur(s): Mario Marchetti, Sapienza University of Rome, Italy;

IAC-26.C2.8.1

INVESTIGATION OF THE POTENTIAL USE OF LUNAR REGOLITH AS AN ACTIVE FILLER TO COMPENSATE FOR VOLUMETRIC SHRINKAGE IN POLYMER-DERIVED CERAMICS (PDC): TESTING AN IN-SITU CARBURIZATION HYPOTHESIS

Mr. Mehmed Furkan İlbeyli, Marmara University, İstanbul, Türkiye;

IAC-26.C2.8.2

OPTIMIZATION OF 3D PRINTING IN MICROGRAVITY: LOAD-ORIENTED VOID MINIMIZATION VIA FERROMAGNETIC-DOPED POLYMERS AND LOCALIZED MAGNETIC FIELDS

Mr. Yağız Muhammed Tan, Pamukkale University, Aydın, Türkiye;

IAC-26.C2.8.3

PVD-BASED COATINGS FOR ENHANCED DEMISABILITY OF STRUCTURAL AND FUNCTIONAL ALLOYS

Dr. Ronja Anton, German Aerospace Center (DLR), Cologne, Germany;

IAC-26.C2.8.4

3D-PRINTED FLEXIBLE WHEELS WITH PANTOGRAPHIC ARCHITECTURE USING SHAPE MEMORY POLYMERS AS A LOW-COST ALTERNATIVE TO NITINOL FOR EXTREME TERRAIN ROVERS

Mr. Alexander Laurente, Universidad Nacional Mayor de San Marcos, PUENTE PIEDRA, Peru;

IAC-26.C2.8.5

STRAIN RATE DEPENDENT FLEXURAL BEHAVIOUR OF HONEYCOMB STRUCTURES FOR SPACE APPLICATIONS

Ms. İnci Pir, Istanbul Technical University, İstanbul, Türkiye;

IAC-26.C2.8.6

EXPERIMENTAL VALIDATION OF SELF-HEALING BIODEGRADABLE SATELLITE STRUCTURES: THERMAL-VACUUM TESTING, RADIATION RESISTANCE, AND CONTROLLED DEGRADATION PATHWAYS FOR SUSTAINABLE LEO MISSIONS

Mr. Sarkhan Huseynov, ADA University, Baku, Azerbaijan;

IAC-26.C2.8.7

DATA-DRIVEN MICROSTRUCTURE MODELING FOR ADDITIVELY MANUFACTURED LUNAR REGOLITH CERAMICS

Mr. Aleksandar Mandradzhiev, Politecnico di Milano, Milano, Italy;

IAC-26.C2.8.8

DEVELOPMENT, MANUFACTURING AND TESTING OF ADDITIVELY MANUFACTURED PURE COPPER HEAT SPREADER AND CAPACITOR DEVICES BASED ON PHASE CHANGE MATERIALS.

Mr. Matvei Andreev, Berlin, Germany;

IAC-26.C2.8.9

TITOMIC KINETIC FUSION™ REVOLUTIONISES MANUFACTURING FOR SPACE.

Mr. Yog Shah, Melbourne, Australia;

IAC-26.C2.8.10

INVERSE DESIGN OF LATTICE ENERGY ABSORBERS FOR PLANETARY EXPLORATION USING GENERATIVE MACHINE LEARNING

Mr. Doğukan Akgün, Istanbul Technical University, İstanbul, Türkiye;

IAC-26.C2.8.11

COST OPTIMIZATION OF EXPENDABLE LAUNCH VEHICLE FUSELAGES: A COMPARATIVE ANALYSIS OF ALTERNATIVE RESIN MATRICES AND REPAIR METHODS

Mr. Derda GÜNEY, Samsun University, Samsun, Türkiye;

IAC-26.C2.8.12

OPTIMIZATION OF CUBESAT STRUCTURE FABRICATION VIA HYBRID ADDITIVE-SUBTRACTIVE WORKFLOWS AND ACCESSIBLE DESIGN FOR MANUFACTURING

Mr. Miguel Silva, Universidad Catolica Boliviana San Pablo, La Paz, Bolivia;

C2.9. Smart Materials and Adaptive Structures & Specialized Technologies, Including Nanotechnology

October 9 2026, 13:45 — E7

Co-Chair(s): Behnam Ashrafi, Canadian Aeronautics & Space Institute (CASI), Canada; Aashish Agrawal, Space Applications Centre (ISRO), India;

Rapporteur(s): Kanjuro Makihara, Tohoku University, Japan;

IAC-26.C2.9.1

DEVELOPMENT AND CHARACTERIZATION OF MULTIFUNCTIONAL SELF-HEALING COMPOSITES FOR ENHANCED RELIABILITY OF SPACE STRUCTURES

Dr. Maxim Isachenkov, Politecnico di Milano, Milano, Italy;

IAC-26.C2.9.2

DEVELOPMENT OF A GAS SENSOR FOR ACETONE DETECTION IN BREATH FOR DIABETES MONITORING IN AERONAUTICAL PERSONNEL

Mr. Luis Alfonso Rodríguez Salinas, Instituto Politécnico Nacional, Ciudad de México, Mexico;

IAC-26.C2.9.3

VIBRATION ENERGY HARVESTING USING SMART MAGNETOSTRICTIVE MATERIAL AND NONLINEAR CONTROL FOR SPACE TRUSS STRUCTURE

Prof. Kanjuro Makihara, Tohoku University, Sendai, Japan;

IAC-26.C2.9.4

DEVELOPMENT OF SELF-MONITORING COMPOSITES FOR SPACE STRUCTURES VIA 3D PRINTING WITH PIEZOELECTRIC SENSOR INTEGRATION

Mr. Hamza Elçi, Firat University, TUŞBA, Türkiye;

IAC-26.C2.9.5

ADJUSTABLE QUASI-ZERO STIFFNESS SUSPENSION FOR ROLLOVER ENHANCEMENT AND ISOLATION PRESERVATION IN PLANETARY ROVERS

Dr. Abrar H Baluch, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia;

IAC-26.C2.9.7

REVERSIBLE TEMPERATURE-RESPONSIVE THERMAL CONDUCTIVITY SWITCH ENABLED BY CHIRAL PORPHYRIN-CENTERED STAR-SHAPED POLYMERS

Mr. Yichen Hou, Beihang University (BUAA), Beijing, China;

IAC-26.C2.9.8

A NOVEL MULTIFUNCTIONAL RADIATION SHIELDING TO ENABLE THE USE OF COTS BASED ELECTRONICS IN SPACE

Prof. Dr. Lembit Sihver, Cosmic Shielding Corporation, Huntsville, United States;

IAC-26.C2.9.9

DEVELOPMENT OF MGO-BASED SMART TEXTILE COMPOSITES FOR PASSIVE RADIATIVE THERMAL CONTROL IN SPACE SYSTEMS

Ms. Nadide Kurak, Adana Alparslan Turkes Science and Technology University (ATU), Ceyhan, Türkiye;

IAC-26.C2.9.10

AUTONOMOUS REPAIR IN EXTREME ENVIRONMENTS: A COMPARATIVE STUDY OF BIO-BASED AND IONIC LIQUID-BASED SELF-HEALING MATERIALS FOR SPACE INFRASTRUCTURE

Mr. Sarkhan Huseynov, ADA University, Baku, Azerbaijan;

IAC-26.C2.9.11

BIOMIMETIC PENGUIN FEATHER-INSPIRED SURFACE TEXTURES FOR PASSIVE ICE ACCRETION MITIGATION AND FLOW CONTROL IN AEROSPACE STRUCTURES

Ms. Dona Beatrix Marabe, De La Salle University (DLSU), Mandaluyong City, Philippines;

IAC-26.C2.9.12

AIRCRAFT ANTI-ICING ANALYSIS: WATER DROPLET DYNAMICS UNDER HIGH-FREQUENCY ATOMIZATION AND SUPERHYDROPHOBIC EFFECTS

Mr. Kevin Thomas Fernandez, Virginia Polytechnic Institute and State University, Blacksburg, United States;

C3. IAF SPACE POWER SYMPOSIUM

Coordinator(s): John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States; Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan; Serdar Baycan, Solar Space Technologies Pty Ltd, Australia;

C3.1. Solar Power Satellite

October 6 2026, 10:15 — Hall 4

Co-Chair(s): John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States; Ming Li, DFH Satellite Co., Ltd., China;

Rapporteur(s): Leopold Summerer, European Space Agency (ESA), Netherlands (Kingdom of the); Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan; Nasr Al-Sahhaf, Moon Village Association (MVA), Saudi Arabia;

IAC-26.C3.1.1

MOVING BEYOND THE BASELINE: UPDATES TO THE 2024 SPS-ALPHA MARK-IV

Mr. John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, SANTA MARIA, United States;

IAC-26.C3.1.2 (unconfirmed)

EFFICIENCY ENHANCEMENT OF SOLAR PANELS OF SATELLITES THROUGH PHOTOVOLTAIC-THERMOELECTRIC HYBRID SYSTEMS

Dr. Selçuk Bulat, Sakarya University, Sakarya, Türkiye;

IAC-26.C3.1.3

PATHWAYS FOR SPACE SOLAR POWER IMPLEMENTATION FOR AUSTRALIA AND THE ASIA-PACIFIC SERDAR BAYCAN (A), JOHN C. MANKINS (B)

Mr. Serdar Baycan, Solar Space Technologies Pty Ltd, Melbourne, Australia;

IAC-26.C3.1.4

ALTERNATIVE HARVESTING METHODS FOR SBSP

Mr. Orestis Delardas, Individual collaboration, Welwyn Garden City, United Kingdom;

IAC-26.C3.1.5

SPACE SOLAR POWER AND SPACE DATA CENTER — A COMPARISON AND ANALYSIS

Dr. Xinbin Hou, CAST, Beijing, China;

IAC-26.C3.1.6

A REVIEW OF LAUNCH REQUIREMENTS FOR SPACE BASED SOLAR POWER SYSTEMS

Mr. Nicolas Bérend, ONERA - The French Aerospace Lab, Palaiseau, France;

IAC-26.C3.1.7

A NOVEL SPACE-BASED EMERGENCY POWER NETWORK ARCHITECTURE USING HYBRID LASER-RF WIRELESS POWER TRANSMISSION

Prof. Joon-Min Choi, HanSeo University, Daejeon, Republic of Korea;

IAC-26.C3.1.8

THE POWER BEAM PROJECT: DEVELOPING SPACE-BASED SOLAR POWER CAPABILITY IN THE PHILIPPINES

Dr. Charleston Dale Ambatali, University of the Philippines Diliman, Quezon City, Philippines;

IAC-26.C3.1.9

ENVIRONMENTAL IMPACT AND SUSTAINABILITY OF SOLAR POWER SATELLITES AND LARGE SPACE MISSIONS: ADVANCES IN FRAGMENTATION MODELLING AND SUSTAINABILITY INDEXES WITHIN THE JAXA-STRAETHCLYDE COLLABORATION

Mr. Pietro De Marchi, University of Strathclyde, Glasgow, United Kingdom;

IAC-26.C3.1.10

META-SOLARIS: A STUDY BASED ON THE THALES SBSP SYSTEM

Haroon B. Oqab, Space Canada Corporation, Canada;

IAC-26.C3.1.11

SPACE SOLAR POWER - 2026 OVERVIEW OF INITIATIVES, USE CASES & FUTURE APPLICATIONS

Mr. Erik Kulu, Tallinn, Estonia;

IAC-26.C3.1.12

PROGRESS STATUS OF OHISAMA PROJECT

Dr. Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Sagami, Japan;

C3.2. Wireless Power Transmission Technologies and Application

October 5 2026, 16:30 — Hall 5

Co-Chair(s): Ming Li, DFH Satellite Co., Ltd., China;

Rapporteur(s): Massimiliano Vasile, University of Strathclyde, United Kingdom; Haroon B. Oqab, Space Canada Corporation, Canada; Nobuyuki Kaya, Kobe University, Japan; Gustavo Medina Tanco, Universidad Nacional Autónoma de México (UNAM), Mexico;

IAC-26.C3.2.1

ACTIVE ARRAYED WIRELESS POWER TRANSMISSION SYSTEM USING MILLIMETER WAVE BEAMS

Dr. Sang-Hwa Yi, Korea Electrotechnology Research Institute (KERI), Ansan, Republic of Korea;

IAC-26.C3.2.3

END-TO-END CALIBRATION AND VALIDATION OF TWO-AXIS DIRECTION FINDING FOR HIGH-ACCURACY POWER BEAM CONTROL IN THE OHISAMA MISSION

Mr. Simon Maillot, The Graduate University for Advanced Studies (SOKENDAI), Sainte-Clotilde, Japan;

IAC-26.C3.2.4

POWER WITHOUT BORDERS: A FRAMEWORK FOR WIRELESS ENERGY TRANSMISSION BETWEEN ORBITAL ASSETS AND LUNAR SURFACE NODES

Mr. Gigi Dinut, Stevenage, United Kingdom;

IAC-26.C3.2.5

A SATELLITE CONSTELLATION FOR A LUNAR WIRELESS POWER TRANSMISSION OPERATIONAL SCENARIO WITH EPS SIZING, AUTONOMOUS NAVIGATION AND PRECISE BEAM STEERING.

Mr. Leonardo Pappalardo, Politecnico di Torino, Torino, Italy;

IAC-26.C3.2.6

MODELING AND OPTIMIZATION OF WIRELESS POWER TRANSFER FOR UNDERGROUND LUNAR SEISMOMETERS.

Mr. Aldo Fabricio Ruiz Collazos, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.C3.2.7

AN INTEGRATED WIRELESS POWER TRANSMISSION AND MULTI-PHYSICS FRAMEWORK FOR PINN-BASED OPTIMIZATION OF SPACE-BASED SOLAR POWER SYSTEMS

Dr. Erdem Onur Özyurt, Turkish-German University, İstanbul, Türkiye;

IAC-26.C3.2.8

INDUCTIVE COUPLING-BASED WIRELESS POWER TRANSFER USING VARIABLE INDUCTOR DOUBLE-SIDED LCC TOPOLOGY FOR SPACE APPLICATIONS

Dr. Ekrem Kandemir, Türkiye National Observatories, Antalya, Türkiye;

IAC-26.C3.2.9

INTERNATIONAL SPACE SOLAR POWER STUDENT COMPETITION PAPER NO. 1

Mr. George B. Dietrich, Space Canada Corporation, Kitchener, ON, Canada;

IAC-26.C3.2.10

INTERNATIONAL SPACE SOLAR POWER STUDENT COMPETITION PAPER NO. 2

Mr. Shinnosuke Sano, Hosei University, Tokyo, Japan;

IAC-26.C3.2.11

INTERNATIONAL SPACE SOLAR POWER STUDENT COMPETITION PAPER NO. 3

Mr. George B. Dietrich, Space Canada Corporation, Kitchener, ON, Canada;

C3.3. Advanced Space Power Technologies

October 8 2026, 15:00 — Hall 30

Co-Chair(s): Gary Barnhard, National Space Society, United States; Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan;

Rapporteur(s): Lee Mason, National Aeronautics and Space Administration (NASA), Glenn Research Center, United States; Michael Gross, Jet Propulsion Laboratory, United States; Gustavo Medina Tanco, Universidad Nacional Autónoma de México (UNAM), Mexico;

IAC-26.C3.3.1

OPTIMIZATION OF LUNAR SURFACE MICROGRIDS: INTEGRATING PEROVSKITE TANDEM CELLS, PHIL VALIDATION, SMG AND MMG ARCHITECTURES

Mr. Aleksander Stasiw, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.C3.3.2

BIDIRECTIONAL ROVER-TO-HABITAT ENERGY SHARING IN LUNAR MICROGRIDS: A PROBABILISTIC ENERGY MANAGEMENT FRAMEWORK WITH MOBILE STORAGE ASSETS

Mr. Huseyn Mammadli, Sumgait, Azerbaijan;

IAC-26.C3.3.3

OVERCOMING THE LUNAR NIGHT: NUCLEAR SYSTEM ARCHITECTURE AND POWER DISTRIBUTION STRATEGIES FOR EQUATORIAL HIGH-POWER MISSIONS

Mr. Marvin Ahlborn, Politecnico di Milano, Buseck, Germany;

IAC-26.C3.3.4

RESILIENCE-ORIENTED ENERGY ARCHITECTURE FOR A 4-5 CREW SUSTAINED MARTIAN HABITAT: HYBRID STORAGE AND AUTONOMOUS POWER MANAGEMENT

Ms. Shahed Alshab, Zarqa, Jordan;

IAC-26.C3.3.5

PROBABILISTIC DIGITAL TWIN-BASED PERFORMANCE ASSESSMENT OF A SELF-HEALING HYBRID PHOTOVOLTAIC ARCHITECTURE WITH EDS AND TCT RECONFIGURATION FOR EXTRATERRESTRIAL SURFACE MISSIONS

Mr. Nailcan Aksoy, Karadeniz Technical University, Trabzon, Türkiye;

IAC-26.C3.3.6

USING REGENERATIVE FUEL CELL SYSTEM (RFCS) AS VITAL BUILDING BLOCK TO ENABLE LUNAR NIGHT SURVIVAL AND OPERATIONS

Ms. Nora Volling, OHB System AG-Bremen, Bremen, Germany;

IAC-26.C3.3.7

RADIATION TOLERANCE OF LITHIUM-ION MICRO-BATTERIES FOR SPACECRAFT POWER SYSTEMS UNDER MARS-EQUIVALENT NEUTRON FLUENCE

Ms. Fatima Alsheikh, Saudi Space Community (SSC), Jeddah, Saudi Arabia;

IAC-26.C3.3.8

MULTIMISSION MODULAR BATTERY SYSTEM ARCHITECTURE

Dr. Daniel Gomez Toro, DLR (German Aerospace Center), Stuttgart, Germany;

IAC-26.C3.3.9

ENERGY-CONSTRAINED MISSION DESIGN AND POWER ANALYSIS OF SOLAR-POWERED HIGH-ALTITUDE PLATFORM STATION

Ms. SEYDANUR AKGUN, University of Turkish Aeronautical Association, Etimesgut, Türkiye;

IAC-26.C3.3.10

SYSTEM-LEVEL OPTIMIZATION OF POWER CONDITIONING AND DISTRIBUTION UNITS (PCDU) FOR LUNAR MISSIONS LEVERAGING WIDE-BANDGAP GALLIUM NITRIDE (GAN) SEMICONDUCTORS

Ms. Esra Şahin, Bursa Technical University, İstanbul, Türkiye;

IAC-26.C3.3.11

TOWARD AI-ORCHESTRATED HYBRID POWER ARCHITECTURES FOR MULTI-PHASE DEEP SPACE MISSIONS: A SYSTEM-LEVEL REVIEW AND CONCEPTUAL FRAMEWORK

Mr. Furkan Çizmeciogullari, Manisa Celal Bayar University, İzmir, Türkiye;

IAC-26.C3.3.13

INITIAL RESULT OF ON-ORBIT DEMONSTRATION FOR NEXT GENERATION SPACE SOLAR CELL ON HTV-X
Dr. Teppei Okumura, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

C3.4. Space Power Systems for Ambitious Missions

October 9 2026, 10:15 — Hall 4

Co-Chair(s): Massimiliano Vasile, University of Strathclyde, United Kingdom; Xinbin Hou, CAST, China;

Rapporteur(s): Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan; Michael Gross, Jet Propulsion Laboratory, United States;

IAC-26.C3.4.1

RESEARCH ON LARGE-SCALE DEVELOPMENT AND APPLICATION OF SPACE-BASED SOLAR POWER TECHNOLOGY
Dr. Ming Li, DFH Satellite Co., Ltd., Beijing, China;

IAC-26.C3.4.2

A CLOSED-FORM DEGRADATION MODEL FOR AM-241 RTGS: EXTENDING POWER PREDICTIONS BEYOND 20 YEARS FOR ULTRA-LONG DURATION SPACE MISSIONS
Mr. Farid Calderón Machuca, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.C3.4.3

DEVELOPMENT OF WIRELESS POWER TRANSMISSION SYSTEM BETWEEN FLYING BODIES IN THE OHISAMA PROJECT
Mr. Naoki Warigai, Tokyo University of Science, Tokyo, Japan;

IAC-26.C3.4.4

POWER SCALING AND SYSTEM TRADE STUDIES FOR NUCLEAR ELECTRIC PROPULSION JUPITER RENDEZVOUS MISSIONS
Mrs. Monica Salunkhe, University of Alabama in Huntsville, Huntsville, United States;

IAC-26.C3.4.5

TRADE-OFF ANALYSIS FOR A CONSTELLATION OF SOLAR REFLECTORS TO SUPPORT ENERGY NEEDS OF FUTURE MOON ACTIVITIES
Ms. Astrid Barzaghi, Delft University of Technology (TUD), Leiden, Netherlands (Kingdom of the);

IAC-26.C3.4.6

SOLID OXIDE FUEL CELLS FOR SPACE EXPLORATION: INTEGRATED BREADBOARD ARCHITECTURE AND VALIDATION OF A METHANE-OXYGEN BASED SYSTEM
Mr. Theodor Heutling, Technische Universität Dresden (DTU), Dresden, Germany;

IAC-26.C3.4.7

GLOBAL DEMAND-DRIVEN RECONFIGURATION OF ORBITAL SOLAR REFLECTOR CONSTELLATIONS
Dr. Robert Gordon, University of Glasgow, Glasgow, United Kingdom;

IAC-26.C3.4.8

ORCHESTRATING SYMBIOSIS: INTEGRATING HUMANS, ROBOTS, AND ADVANCED AUTONOMA NEEDED TO BUILD, OPERATE, AND MAINTAIN SPACE SOLAR POWER SYSTEMS
Mr. Gary Barnhard, National Space Society, Cabin John, United States;

IAC-26.C3.4.9

AUTONOMOUS DIGITAL TWIN BASED INCIPIENT FAULT DETECTION FOR SPACE-BASED SOLAR ARRAYS
Mr. Sachin Solanki, Imperial College London, Watford, United Kingdom;

IAC-26.C3.4.10

AN OVERVIEW OF COMPARATIVE ANALYSIS AND EVALUATION OF INTEGRATED BATTERY MANAGEMENT CIRCUIT FOR CUBESAT ELECTRICAL POWER SYSTEMS
Mr. Babu Vishwanath Hemath Kumar, Kyushu Institute of Technology, Kitakyūshū, Japan;

C4. IAF SPACE PROPULSION SYMPOSIUM

Coordinator(s): Angelo Cervone, Delft University of Technology (TU Delft), Netherlands (Kingdom of the); Adam Okninski, Łukasiewicz Research Network – Institute of Aviation (ILOT), Poland; Ozan Kara, Technology Innovation Institute (TII), United Arab Emirates; Saroj Kumar, Propulsion Research Center, University of Alabama in Huntsville, United States; Andrei Shumeiko, Bauman Moscow State Technical University, Russian Federation;

C4.1. Liquid Propulsion (1)

October 5 2026, 16:30 — E6

Co-Chair(s): Giuseppe Fiore, CNES, France; Ozan Kara, Technology Innovation Institute (TII), United Arab Emirates;

Rapporteur(s): Adam Okninski, Łukasiewicz Research Network – Institute of Aviation (ILOT), Poland; Justin Hardi, German Aerospace Center (DLR), Germany;

IAC-26.C4.1.1

DEEP THROTTLING IMPLEMENTATION OF THE TQ-12A METHALOX ENGINE FOR ZQ-3 LAUNCH VEHICLE'S BOOSTER RECOVERY
Mr. Hua Wei, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-26.C4.1.2

FINAL DEVELOPMENT RESULTS OF LE-9 TYPE2 ENGINE
Mr. Shogo Ozaki, JAXA, Ibaraki, Japan;

IAC-26.C4.1.3

A PRACTICAL UNSUPERVISED LSTM-BASED FDHM FRAMEWORK FOR LOX/METHANE ROCKET ENGINES TOWARD ZQ-3 REUSABLE MISSIONS
Dr. Jianing Liu, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-26.C4.1.4

PROGRESS IN THE DEVELOPMENT OF SOUTH AFRICA'S SAFFIRE LIQUID ROCKET ENGINE
Prof. Jean Pitot, University of KwaZulu-Natal (UKZN), Durban, South Africa;

IAC-26.C4.1.6

NUMERICAL DISPERSION ANALYSIS OF STARTUP TRANSIENTS IN A STAGED COMBUSTION CYCLE ENGINE
Dr. Insang Moon, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

IAC-26.C4.1.7

UPPER STAGE ROCKET ENGINE DEVELOPMENT IN BRAZIL USING HIGH TEST PEROXIDE
Mr. Nicolas Miquelin, Bizu Space, São José dos Campos, Brazil;

IAC-26.C4.1.8

DEVELOPMENT STATUS OF JAPAN'S NEXT-GENERATION UPPER-STAGE ENGINE: PRELIMINARY DESIGN AND BREADBOARD MODEL TEST RESULTS
Mr. Hideo Sunakawa, Japan Aerospace Exploration Agency (JAXA), Ibaraki, Japan;

IAC-26.C4.1.9

DEVELOPMENT OF THE NYX EARTH PROPULSION SYSTEM
Mr. Markus Jaeger, The Exploration Company GmbH, Gauting, Germany;

IAC-26.C4.1.10

IN-ORBIT DEMONSTRATION OF THE VYOM-2U PROPULSION SYSTEM ENABLED BY MS289: A SAFE, RELIABLE, AND HIGH-PERFORMANCE GREEN MONOPROPELLANT FOR SMALL SATELLITES
Mr. Amitabh Roy, Mumbai, India;

IAC-26.C4.1.11

MULTISCALE HIGH-TEST PEROXIDE (HTP) BASED PROPULSION SYSTEMS FOR SMALL SATELLITES: INTEGRATED DEVELOPMENT AND EXPERIMENTAL VALIDATION
Ms. Fatima AlHammedi, Khalifa University of Science and Technology (KUST), Abu Dhabi, United Arab Emirates;

IAC-26.C4.1.12

EXPERIMENTAL INVESTIGATION OF OPERATIONAL PARAMETERS GOVERNING THE STEADY-STATE PERFORMANCE OF A HYDROGEN PEROXIDE MONOPROPELLANT THRUSTER

Dr. Ugur Kokal, Deltav Space Technologies, Inc., Istanbul, Türkiye;

C4.2. Liquid Propulsion (2)

October 7 2026, 10:15 — E6

Co-Chair(s): Angelo Cervone, Delft University of Technology (TU Delft), Netherlands (Kingdom of the); Andrew Devereaux, UK Civil Aviation Authority, United Kingdom;

Rapporteur(s): Christian Bach, Technische Universität Dresden (DTU), Germany; Bhavyashree Janardhana, Women in Aerospace Europe (WIA-E), Germany;

IAC-26.C4.2.1

SUBSCALE INJECTOR SCREENING FOR REUSABLE LOX/METHANE ENGINES: FOCUSING ON METHANE TEMPERATURE SENSITIVITY AND INJECTOR CONFIGURATION OPTIMIZATION

Ms. Jingyun Zhao, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-26.C4.2.2

SLOSH-RESILIENT FILL-LEVEL ESTIMATION IN MICROGRAVITY PROPELLANT TANKS USING A DIGITAL TWIN-ENABLED MODAL VIBRATION SIGNATURE

Mr. Rüzgar Ata Kудay, Gaziantep Private Sanko Schools, Gaziantep, Türkiye; Ms. Zeynep Mihrimah Şahin, Gaziantep Private Sanko Schools, Türkiye, Türkiye;

IAC-26.C4.2.3

NEAR-WALL O/F RATIO BIASING AS A METHOD OF REDUCING ABLATIVE WALL EROSION IN THE SAFFIRE ENGINE

Mr. Ryan Cooper, University of KwaZulu-Natal (UKZN), Durban, South Africa;

IAC-26.C4.2.4 (unconfirmed)

EXPERIMENTAL STUDY ON GAS-SOLID TWO-PHASE FLOW CHARACTERISTICS AND PARTICLE SPATIAL DISTRIBUTION OF VACUUM PLUME

Mr. Chen Chen, Beijing University of Aeronautics and Astronautics (BUAA), Beijing, China;

IAC-26.C4.2.5

COMPARISON OF SPARK AND HOT SURFACE IGNITION METHODS FOR A KEROSENE/GASEOUS OXYGEN TORCH IGNITER USING IGNITION RELIABILITY AND PRESSURE TRANSIENT METRICS.

Mr. Alexander Aubertin, Viterbi School of Engineering, USC, Los Angeles, United States; Mr. Jasper Fisher, Viterbi School of Engineering, USC, Los Angeles, United States; Mr. Isai Andrade, Viterbi School of Engineering, USC, Los Angeles, United States; Ms. Annetta Davoli, Viterbi School of Engineering, USC, Los Angeles, United States; Mr. Adrian Tejada, Viterbi School of Engineering, USC, Los Angeles, United States;

IAC-26.C4.2.7 (unconfirmed)

EXPERIMENTAL EVALUATION OF A REGENERATIVELY COOLED N₂O-IPA LIQUID ROCKET ENGINE WITH A DOUBLE-WALL COMBUSTION CHAMBER

Mr. Ishaan Dutta, R V College of Engineering, Bengaluru, Bengaluru, India;

IAC-26.C4.2.8

ENERGY CONVERSION AND EFFICIENCY ANALYSIS OF A THERMALLY ASSISTED HYDROGEN PEROXIDE THRUSTER

Ms. Mariam Alnuaimi, United Arab Emirates University (UAEU), Al Ain, United Arab Emirates; Ms. Ahoud Alkaabi, United Arab Emirates University (UAEU), Al Ain, United Arab Emirates; Ms. Hessa Alghaithi, United Arab Emirates University (UAEU), Abudhabi, United Arab Emirates;

IAC-26.C4.2.9

DEVELOPMENT AND TESTING OF HIGH-SPEED ELECTROPUMPS FOR SOUTH AFRICA'S LIQUID ROCKET ENGINE

Mr. Yashik Singh, University of KwaZulu-Natal (UKZN), Durban, South Africa;

IAC-26.C4.2.10

DESIGN AND PRELIMINARY TESTING OF A 100 N THRUSTER POWERED BY HYDROGEN PEROXIDE AND HYDROGEN FOR INNOVATIVE IN-SPACE WATER PROPULSION

Mr. Fabio Faraoni, University of Pisa, Pisa, Italy;

IAC-26.C4.2.12

WEIGHT REDUCTION OF A PROPELLANT VALVE BY USING ADDITIVE MANUFACTURING: IMPLEMENTATION OF DESIGN, MANUFACTURING AND TESTING

Mr. CİHAT ÇİFTÇİ, ROKETSAN Roket Sanayi ve Ticaret A.Ş., İSTANBUL, Türkiye;

IAC-26.C4.2.13

LIQUID PROPULSION FOR FUTURE EUROPEAN LAUNCHERS: RESEARCH, TECHNOLOGY MATURATION AND CURRENT ENGINE DEVELOPMENTS

Mr. Giuseppe Fiore, CNES, Paris, France;

IAC-26.C4.2.14

OPTIMIZED HIGH-PRESSURE TRIM CONTROL VALVE DESIGN & VERIFICATION FOR LIQUID PROPELLANT ROCKET ENGINES

Mr. Kamil Yekta Us, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Ankara, Türkiye;

C4.3. Solid and Hybrid Propulsion (1)

October 6 2026, 10:15 — E6

Co-Chair(s): Ozan Kara, Technology Innovation Institute (TII), United Arab Emirates; Jouke Hijlkema, ONERA, France;

Rapporteur(s): Djamal DARFILAL, Khalifa University of Science and Technology (KUST), United Arab Emirates; Yuji Saito, Tohoku University, Japan;

IAC-26.C4.3.1

ANALYTICAL AND EXPERIMENTAL INVESTIGATION OF THE EFFECTS OF FUEL ADDITIVES ON THE REGRESSION CORRECTION COEFFICIENTS OF HYBRID ROCKETS

Mr. Emir Han Bulut, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.C4.3.2

HARDWARE-IN-THE-LOOP VALIDATION OF A HYBRID ROCKET TELEMETRY SYSTEM

Ms. Heba Youssef, Technology Innovation Institute (TII), Abu Dhabi, United Arab Emirates;

IAC-26.C4.3.3

HYBRID SOUNDING ROCKET AVIONICS AND TELEMETRY SYSTEM

Dr. Ozan Kara, Technology Innovation Institute (TII), Masdar City, United Arab Emirates;

IAC-26.C4.3.4

BENCH-TO-FLIGHT VALIDATION OF THRUST CURVE AND TIME-VARYING STABILITY FOR A SMALL-SCALE SOLID-PROPELLANT ROCKET

Mr. Carlos Rojas, Intinauta Research Center, Lima, Peru;

IAC-26.C4.3.5

THERMO-STRUCTURAL AND CONJUGATE HEAT TRANSFER (CHT) ANALYSIS OF THE COMBUSTION CHAMBER AND NOZZLE OF A SMALL-SCALE HYBRID ROCKET MOTOR

Ms. Sara AYDOĞAN, Samsun University, SAMSUN, Türkiye;

IAC-26.C4.3.6

DESIGN AND OPTIMIZATION OF A H₂O₂ HYBRID ROCKET CLUSTER FOR UPPER-STAGE APPLICATIONS

Dr. Antonella Ingenito, Sapienza University of Rome, Rome, Italy;

IAC-26.C4.3.8

CASE STUDY - STATIC TEST OF THE PARAFFIN/N₂O FUELED HIGH POWER HYBRID ROCKET ENGINE

Mr. Dominik Jaszczuk, Wrocław University of Science and Technology, Kłobuck, Poland;

IAC-26.C4.3.9

EXPERIMENTAL INVESTIGATION OF ADDITIVE-CONTAINING HDPE FUELS IN A HYDROGEN PEROXIDE-BASED CATALYST-BED HYBRID ROCKET

Mr. Ahmet Nihat Karci, University of Southampton, Southampton, United Kingdom;

IAC-26.C4.3.10

SYSTEM LEVEL HYBRID ROCKET ENGINE MODELLING VALIDATED AGAINST GROUND TESTS AND FLIGHT DATA
Mr. Guillaume Knight, RMIT University, Melbourne, Australia;

C4.4. Solid and Hybrid Propulsion (2)

October 7 2026, 10:15 — Hall 7

Co-Chair(s): Yuji Saito, Tohoku University, Japan; Adam Okninski, Łukasiewicz Research Network – Institute of Aviation (ILOT), Poland;

Rapporteur(s): Mario Kobald, Hylmpulse Technologies GmbH, Germany; Jouke Hijlkema, ONERA, France;

IAC-26.C4.4.1

KEYNOTE: FUTURE OF MICRO LAUNCHERS USING HYBRID ROCKET PROPULSION

Dr. Ozan Kara, Technology Innovation Institute (TII), Masdar City, United Arab Emirates;

IAC-26.C4.4.2

HIGH-PRECISION DIRECT MEASUREMENT OF RESIDUAL THRUST IN HYBRID THRUSTERS

Mr. Hinata Kariya, Tohoku University, Sendai, Japan;

IAC-26.C4.4.3

DESIGN AND EXPERIMENTAL VALIDATION OF A LOW ENVIRONMENTAL IMPACT SOLID ROCKET MOTOR CASING IN PERU USING A LIGNOCELLULOSIC BIOCOMPOSITE AND PALF REINFORCEMENT

Mr. Italo Paolo Ambrosio Huanay, Universidad Nacional de Ingeniería (Lima, Perú), Lima, Peru;

IAC-26.C4.4.4

RESEARCH ON COMPOSITE THERMAL INSULATION MATERIALS FOR AMATEUR AND STUDENT ROCKET MOTORS

Mr. Dominik Jaszczuk, Wrocław University of Science and Technology, Kłobuck, Poland;

IAC-26.C4.4.5

COMPARATIVE COLLECTION AND ENVIRONMENTAL CHARACTERIZATION OF HYBRID AND SOLID ROCKET ENGINE FIRE PLUMES

Mr. Huzeyfe Ali Karakuşoğlu, Mechanical and Chemical Industries Corporation, Çankaya, Türkiye;

IAC-26.C4.4.6

MODELING N₂O DISCHARGE CHARACTERISTICS: AN APPROACH WITH EXPERIMENTAL VALIDATION

Ms. Selin Çetin, Koc University, Istanbul, Türkiye;

IAC-26.C4.4.7

STATE-TRANSITION THERMOFLUID MODELING AND EXPERIMENTAL VALIDATION OF SELF-PRESSURIZING NITROUS OXIDE PROPELLANT FEED SYSTEMS

Mr. Kotaka Nagayama, Tohoku University, Sendai, Japan;

IAC-26.C4.4.8

NITROUS OXIDE DECOMPOSITION UNDER PYROGENIC INITIATION: EXPERIMENTAL PEAK PRESSURES VS. ANALYTICAL PREDICTIONS

Mr. Ömerül Faruk İrgav, Deltav Space Technologies, Inc., Istanbul, Türkiye;

IAC-26.C4.4.9

INVESTIGATION OF THE EFFECTS OF INJECTOR DESIGN ON PERFORMANCE IN HYBRID FUEL ROCKET MOTORS

Ms. Fatme Sevgili, Gebze Technical University, Güngören, Türkiye;

IAC-26.C4.4.10

HYDROGEN PEROXIDE IGNITION SYSTEM FOR AN IN-SPACE HYBRID PROPULSION MISSION

Mrs. İlknur Akkaya Arslan, Deltav Space Technologies, Inc., Istanbul, Türkiye;

IAC-26.C4.4.11

SCALING EFFECTS IN TENS-OF-NEWTONS-CLASS H₂O₂ HYBRID ROCKET ENGINES THROUGH EXPERIMENTAL INVESTIGATION
Mr. Riccardo Guida, Scuola Superiore Meridionale, Napoli, Italy;

IAC-26.C4.4.12

COMPARISON OF DIFFERENT METHODS OF PARAFFIN WAX FUEL GRAIN CASTING

Mr. Krzysztof Kondracki, Gdansk University of Technology, Gdańsk, Poland;

C4.5. Electric Propulsion (1)

October 6 2026, 15:00 — E6

Co-Chair(s): Giorgio Saccoccia, Vast, France; Marco Di Clemente, Italian Space Agency (ASI), Italy;

Rapporteur(s): Merve Balaban, Berlin Space Consortium GmbH, Germany; Vincent Guyon, SAFRAN, France;

IAC-26.C4.5.1

PERFORMANCE EVALUATION OF MAGNETICALLY SHIELDED AND UNSHIELDED HALL THRUSTERS USING PROPELLANT MIXTURES AT LOW POWER LEVELS

Mr. Yusuf Capuk, University of Southampton, Southampton, United Kingdom;

IAC-26.C4.5.2

BREAKING BARRIERS WITH THE HIGH-ISP PPS[®]X000-HI THRUSTER

Mr. Claude-Martin Brito, SAFRAN, Vernon, France;

IAC-26.C4.5.3

DEVELOPMENT AND CHARACTERISATION OF A MODULAR HEATERLESS HOLLOW CATHODE FOR HALL THRUSTERS

Mr. Claude-Martin Brito, SAFRAN, Vernon, France;

IAC-26.C4.5.4

DESIGN AND TESTING OF HALE-HC25 LAB6 HOLLOW CATHODE FOR HALL EFFECT THRUSTERS AT TUBITAK UZAY

Mr. Gökay Deniz, TUBITAK Uzay, Space Technologies Research Institute, ÇANKAYA, Türkiye;

IAC-26.C4.5.5

MULTI-OPERATING-POINT NUMERICAL MODELLING OF THE 5-KW HALL THRUSTER PLUME IN GROUND-TEST CONDITIONS

Mr. Egor Pliashkov, Optic Solutions Systems LLC, Abu Dhabi, United Arab Emirates;

IAC-26.C4.5.6

DATA-DRIVEN ENGINEERING FRAMEWORK FOR HOLLOW CATHODE EROSION AND OPERATING MODE CHARACTERIZATION IN STATIONARY PLASMA THRUSTERS USING HALL2DE HYBRID FLUID/PIC SIMULATIONS AND THERMO-VACUUM TESTING UNDER VARIABLE KEEPER-ORIFICE GEOMETRIES AN

Mr. ALEXIS SALAZAR AQUINO, Instituto Politécnico Nacional, CIUDAD DE MEXICO, Mexico; Ms. Monserrat Martínez Rendón, Instituto Politécnico Nacional, Ciudad de México, Mexico;

IAC-26.C4.5.7

INTERACTION BETWEEN THE PLUME OF A GRIDDED ION THRUSTER AND SPACECRAFT SURFACES

Dr. Federico Cescon, University of Padua, San Polo di Piave, Italy;

IAC-26.C4.5.8

DEVELOPMENT OF A DRY NEUTRALIZER SYSTEM FOR ELECTRIC MICRO-PROPULSION SYSTEMS

Dr. Bernhard Seifert, FOTEC Forschungs- und Technologietransfer GmbH, Wiener Neustadt, Österreich, Austria;

IAC-26.C4.5.9

PROTON IRRADIATION EFFECTS ON FEED THRUSTER EMITTERS: PERFORMANCE AND SURFACE MORPHOLOGY ASSESSMENT

Dr. Laura Bettiol, FOTEC Forschungs- und Technologietransfer GmbH, Wiener Neustadt, Austria;

IAC-26.C4.5.10

ADVANCING SPACE PROPULSION: AN EXPERIMENTAL AND NUMERICAL STUDY OF IONIC LIQUID EMITTERS FOR ELECTROSPRAY

Mr. Gyandeep Gyandeep, Indian Institute of Technology, Madras, Chennai, India;

IAC-26.C4.5.11

CHARACTERIZATION OF NOVEL "PIXEL" ELECTROSPRAY THRUSTER

Mrs. Catherine Nachtigal, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.C4.5.12

DEVELOPMENT AND CHARACTERIZATION OF A 500W HIGH-VOLTAGE ARGON-FED HALL THRUSTER

Mr. Bhavya Mahajan, Universität der Bundeswehr München, Neubiberg, Germany;

IAC-26.C4.5.13

PHYSICS-INFORMED INTERPOLATION, EXTRAPOLATION, AND VELOCITY INFERENCE IN ELECTRIC PROPULSION PLUMES FROM DENSITY-ONLY MEASUREMENTS

Mr. Nadim Maraqtan, University of Stuttgart, Stuttgart, Germany;

IAC-26.C4.5.14

DESIGN AND BIASING IMPLICATIONS FOR THE BEAM TARGET OF A PASSIVELY FED, EXTERNALLY WETTED ELECTROSPRAY THRUSTER OPERATING IN BIPOLAR MODE

Mr. Robin Josef Paul Scholtes, IENAI SPACE, Leganés, Spain;

IAC-26.C4.5.15

SCALABLE PLASMA PROPULSION: DEVELOPMENT OF MAGDRIVE'S ARRAY ARCHITECTURE

Mr. Alex Chandler, Magdrive Ltd, Thame, United Kingdom;

C4.6. Electric Propulsion (2)

October 7 2026, 15:00 — E6

Co-Chair(s): Djamal DARFILAL, Khalifa University of Science and Technology (KUST), United Arab Emirates; Lahib Balika, Thales Alenia Space, United Kingdom;

Rapporteur(s): Andrei Shumeiko, Bauman Moscow State Technical University, Russian Federation; Paolo Gessini, Brazilian Space Agency (AEB), Brazil;

IAC-26.C4.6.1

IMPLEMENTATION OF A THRUST CALIBRATION DEVICE (TCD) ON A MICRO THRUST MEASURING SCALE FOR SATELLITES

Mr. André Lyra, Univerisity of Brasilia, Brasília, Brazil;

IAC-26.C4.6.2

DEVELOPMENT OF AN IN-HOUSE TIME-OF-FLIGHT DIAGNOSTIC FOR AN IMPULSIVE METAL PLASMA THRUSTER

Dr. James Saletes, Magdrive Ltd, Didcot, United Kingdom;

IAC-26.C4.6.3

AMPSS-2: DEVELOPMENT AND IN-ORBIT VERIFICATION PREPARATION OF A 70 W CLASS MICRO ELECTRIC PROPULSION SYSTEM FOR SMALL SATELLITES

Ms. Merve Balaban, Berlin Space Consortium GmbH, Berlin, Germany;

IAC-26.C4.6.4

NUMERICAL AND EXPERIMENTAL CHARACTERIZATION OF AN IODINE-FED FLUIDIC SUBSYSTEM FOR ELECTRODELESS PLASMA THRUSTERS

Ms. Nouhayla Oamer, Université Internationale de Rabat, Sale, Morocco;

IAC-26.C4.6.5

DEVELOPMENT OF CIRA CRHET-250 HALL THRUSTER – RECENT TEST ACTIVITIES

Dr. Daniele Ricci, CIRA Italian Aerospace Research Center, Capua, Capua, Italy;

IAC-26.C4.6.6

DESIGN, MODELING, AND EXPERIMENTAL VALIDATION OF A LOW-POWER WATER RESISTOJET THRUSTER FOR SMALL SATELLITE PROPULSION SYSTEMS

Mr. Ryan McPherson, Space Flight Laboratory (SFL), Ottawa, Canada;

IAC-26.C4.6.7

COUPLING TESTS OF A MODULAR 1 KW POWER PROCESSING UNIT WITH MULTIPLE HALL EFFECT THRUSTERS

Dr. Jan Walter Schroeder, CisLunar Industries, Fort Collins, United States;

IAC-26.C4.6.8

RADIO FREQUENCY CATHODE FOR IODINE ELECTRIC PROPULSION

Mr. Renwei Tan, University of Padua, padova, Italy;

IAC-26.C4.6.9

EXPERIMENTAL EVALUATION OF LIFETIME EXTENSION STRATEGIES FOR GRIDDED ION ENGINES THROUGH MODIFIED PROPELLANT COMPOSITIONS

Dr. Pavel Smirnov, TransMIT GmbH, Gießen, Germany;

IAC-26.C4.6.10

ANALYSIS OF THE APPLICABILITY OF KRYPTON AS A PROPELLANT FOR MINIATURIZED ELECTRIC PROPULSION SYSTEMS

Ms. Merve Balaban, Berlin Space Consortium GmbH, Berlin, Germany;

IAC-26.C4.6.11

MAGNETIC EDDY CURRENT DAMPER FOR A MICRO THRUST SCALE IN SIMPLE PENDULUM CONFIGURATION

Mr. André Lyra, University of Brasilia, Brasília, Brazil;

IAC-26.C4.6.12

EVALUATION OF AN OPEN-SOURCE PIC SOLVER ON ONE-DIMENSIONAL PLASMA FLOW PROBLEMS

Ms. Fatma Tuğçe Yılmaz, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.C4.6.13

DEEP - DECENTRALIZED ENERGY SUPPLIED ELECTRIC PROPULSION - A DEGRADATION-FREE ELECTRIC PROPULSION SYSTEM FOR MICRO SATELLITES

Dr. Sebastian Geier, German Aerospace Center (DLR), Braunschweig, Germany;

IAC-26.C4.6.14 (unconfirmed)

DEVELOPMENT AND IN-FLIGHT STATUS OF LOW POWER ELECTRIC PROPULSION SYSTEM SPS-25

Dr. Bohdan Yurkov, Institute Of Technical Mechanics of National Academy Of Sciences Of Ukraine and State Space Agency Of Ukraine, Dnipro, Ukraine;

C4.7. Hypersonic Air-breathing and Combined Cycle Propulsion, and Hypersonic Vehicle

October 8 2026, 10:15 — E6

Co-Chair(s): Mario Kobald, Hylmpulse Technologies GmbH, Germany; Riheng Zheng, Beihang University, China;

Rapporteur(s): Angelo Cervone, Delft University of Technology (TU Delft), Netherlands (Kingdom of the);

IAC-26.C4.7.1

DYNAMIC SHOCK SHIELD DESIGN AND THEORETICAL FRAMEWORK FOR ADAPTIVE SPACECRAFT PROTECTION DURING EXOPLANETARY ATMOSPHERIC ENTRY

Mr. Abdullah Algharrash, Saudi Space Community (SSC), Riyadh, Saudi Arabia;

IAC-26.C4.7.2

STATE-CONSTRAINED AEROPROPULSIVE CONTROL FOR ENGINE-SAFE OPERATION OF AIR-BREATHING HYPERSONIC VEHICLES

Mr. Fatma Nur Ay, Samsun University, Samsun, Türkiye; Mrs. Fadime Zehra TATLI, Samsun University, Samsun, Türkiye;

IAC-26.C4.7.3

ENHANCEMENT OF SUPERSONIC HYDROGEN COMBUSTION VIA MICRO-STRUCTURED LOWER WALL IN A SCRAMJET COMBUSTOR
Dr. Maher Dhahri, Elisa Aerospace, Saint Quentin, France;

IAC-26.C4.7.4

SENSITIVITY ANALYSIS OF RAMJET INLET PRESSURE RECOVERY AND TRANSITION BEHAVIOR IN A ROCKET-BASED COMBINED CYCLE ENGINE.

Ms. Ines Romdhani, Koc University, Istanbul, Türkiye;

IAC-26.C4.7.5

FEASIBILITY OF ROTATING DETONATION ENGINES OPERATED WITH PARTICULATE ALUMINIUM AND OXYGEN MIXTURES

Mr. Arun Ramachandran Nair, RMIT University, Melbourne, Australia;

IAC-26.C4.7.6

LES INVESTIGATION OF BASE FLOW AND DRAG CHARACTERISTICS OF A HYPERSONIC VEHICLE WITH HOT AND COLD JET EXHAUSTS

Mr. Mert Ali Yoldaş, Samsun University, Samsun, Türkiye;

IAC-26.C4.7.7

FLAME CHARACTERISTICS AND PREDICTION OF CH* RADICALS IN A SUPERSONIC COMBUSTOR WITH STRUT/CAVITY FLAMEHOLDERS

Mr. Yi Gao, Northwestern Polytechnical University, Xi'an, China;

IAC-26.C4.7.8

PHYSICS-INFORMED ROBUSTNESS ASSESSMENT OF A MACH 6 SCRAMJET INLET UNDER GEOMETRIC UNCERTAINTY EFFECTS

Mr. Mert Emir Avci, TED University, Mechanical Engineering Department, Ankara, Türkiye;

IAC-26.C4.7.9

THEORETICAL ANALYSIS AND PERFORMANCE EVALUATION OF POWDER-FUELED ROTATING DETONATION RAMJET ENGINES

Mr. Jiebo Zhang, Beihang University (BUAA), Beijing, China;

IAC-26.C4.7.11

THRUST CONTROL SYSTEM OF AN AIR-TURBO ENGINE FOR VERTICAL TAKE-OFF AND LANDING DEMONSTRATOR VEHICLE

Dr. Shinichiro Tokudome, Japan Aerospace Exploration Agency (JAXA), ISAS, Sagami, Japan;

IAC-26.C4.7.12

SHOCK TUBE/LASER EXPERIMENTS TO STUDY PYROLYSIS AND BURNING OF AIRBREATHING HYBRID PROPELLANTS

Prof. Subith Vasu, University of Central Florida (UCF), Orlando, United States;

C4.8-B4.5A. Joint Session between IAA and IAF for Small Satellite Propulsion Systems

October 8 2026, 15:00 — E6

Co-Chair(s): Jeffrey Michlitsch, The Aerospace Corporation, United States; Paolo Gessini, Brazilian Space Agency (AEB), Brazil;

Rapporteur(s): Elena Toson, T4i, Italy; Sabrina Corpino, Politecnico di Torino, Italy;

IAC-26.C4.8-B4.5A.2

A COST-EFFECTIVE, SCALABLE THRUST MEASUREMENT SYSTEM FOR A SOLAR THERMAL THRUSTER PROTOTYPE

Dr. Angelo Cervone, Delft University of Technology (TU Delft), Delft, Netherlands (Kingdom of the);

IAC-26.C4.8-B4.5A.3

CALIBRATION METHODOLOGY FOR A MICRO-NEWTON PENDULUM THRUST BALANCE APPLIED TO PULSED PLASMA THRUSTERS

Prof. Paolo Gessini, Universidade de Brasília, Gama, DF, Brazil;

IAC-26.C4.8-B4.5A.5

DESIGN OF A REGULATOR-LESS PROPELLANT FEED SYSTEM WITH ACTIVE THROTTLING CAPABILITIES FOR HALL THRUSTERS

Mr. Hidir Ilyas Sezer, Kağıthane, Türkiye;

IAC-26.C4.8-B4.5A.6

DEVELOPMENT OF DUAL MODE THRUSTER FOR 2U-SIZE MICROSATELLITE-FRIENDLY MULTI-PURPOSE PROPULSION SYSTEM (MFMP-PROP) FOR COLLISION AVOIDANCE MANEUVER (CAM) AND POST MISSION DISPOSAL (PMD)

Dr. Toshiaki Iizuka, National Institute of Technology, Oyama College, Tochigi, Japan;

IAC-26.C4.8-B4.5A.7

HIGH-PERFORMANCE COLD-GAS PROPULSION MODULE FOR 6U CUBESATS: A DESIGN AND SIMULATION CASE STUDY FOR EMERGING SPACE NATIONS

Mr. GodsFavour Idaewor, Kwara State University (KWASU), Abuja, Nigeria;

IAC-26.C4.8-B4.5A.8

HYBRID ROCKET PROPULSION SYSTEM INTEGRATED ALUMINIUM-HTPB/N₂O AND ELECTRIC PROPULSION

Mr. Kaustubh Singh, Vellore Institute of Technology, Bhopal, India;

IAC-26.C4.8-B4.5A.9

OPTIMIZATION OF A HYBRID CHEMICAL-ELECTRICAL ARCHITECTURE FOR LEO-GEO TRANSFER IN SMALL SATELLITES

Mr. Adriano Castillo Huayanay, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.C4.8-B4.5A.10

REUSABLE MULTI-METALLIC OXIDE CATALYSTS FOR SMALL SPACE THRUSTERS: REGENERATION AFTER FIRING SHOTS

Mr. Riccardo Guida, Scuola Superiore Meridionale, Napoli, Italy;

IAC-26.C4.8-B4.5A.11

SPECTRAL PHOTON-COUNTING COMPUTED TOMOGRAPHY FOR NON-DESTRUCTIVE ASSESSMENT OF HIGH-PRECISION MICRO-PROPULSION SYSTEMS

Dr. Djamal Darfilal, Khalifa University of Science and Technology (KUST), Abu Dhabi, United Arab Emirates;

IAC-26.C4.8-B4.5A.12

DEVELOPMENT OF AN ACTIVE COOLING SYSTEM USING WATER PROPELLANT FOR ELECTRIC THRUSTERS IN MICRO-SATELLITES

Mr. Masaki Fujii, The University of TOKYO, Graduate school, Tokyo, Japan;

IAC-26.C4.8-B4.5A.13

THRUST AND TRUST: THE REGULATORY PUSH FOR SUSTAINABLE SMALL SATELLITES

Ms. Miraslava Kazlouskaya, ION-X, Paris, France;

IAC-26.C4.8-B4.5A.14

DEVELOPMENT AND TESTING OF A LOW-POWER, STEADY-STATE WATER RESISTOJET FOR CUBESATS

Mr. Riccardo Mariani, Sapienza University of Rome, Rome, Italy;

C4.9. Disruptive Propulsion Concepts for Enabling New Missions

October 9 2026, 10:15 — E6

Co-Chair(s): Justin Hardi, German Aerospace Center (DLR), Germany; Christian Bach, Technische Universität Dresden (DTU), Germany;

Rapporteur(s): Markus Jaeger, The Exploration Company GmbH, Germany; Marco Di Clemente, Italian Space Agency (ASI), Italy;

IAC-26.C4.9.1

IMPULSE TRANSFER THRUSTER FOR ACTIVE DEBRIS REMOVAL

Mrs. Maria Smirnova, TransMIT GmbH, Giessen, Germany;

IAC-26.C4.9.2

SIMULATION-DRIVEN STRUCTURAL DYNAMICS AND DESIGN REFINEMENT OF A LUNAR KINETIC SLINGSHOT LAUNCHER: FLEXIBLE ARM-HUB MODELING AND CFRP FAILURE ASSESSMENT

Ms. Noor Hureirat, ASELSAN, Amman, Jordan;

IAC-26.C4.9.3

HEATED HELIUM THRUSTER TESTBENCH FOR REPLICATING HYDRAZINE PLUME CHARACTERISTICS AT MARS PRESSURE

Mrs. Charlotte Heibig, Caltech/JPL, Lausanne, Switzerland;

IAC-26.C4.9.4

ENCORE: WATER ELECTROLYSIS PROPULSION SYSTEM CONCEPT FOR A SELF SUSTAINING ENCELADUS EXPLORER MISSION

Mr. Fabian Riegelsberger, Technical University of Munich (TUM), Ottobrunn, Germany;

IAC-26.C4.9.5

MECHANISMS OF CIRCUMFERENTIAL MOMENTUM, COMBUSTION COMPLETION, AND PRESSURE LOSS IN COMBUSTOR-NOZZLE COUPLED RDES FOR ACHIEVING PROPULSION ADVANTAGES OVER CONVENTIONAL ROCKET ENGINES

Mr. Nobuaki Aoki, Kanazawa Institute of Technology, Kanazawa, Japan;

IAC-26.C4.9.6

SPATIAL AND TEMPORAL CONTROL OF LASER-SUPPORTED PLASMA IN CONTINUOUS-WAVE LASER PROPULSION SYSTEMS

Mr. Futa Hayashi, Kanazawa Institute of Technology, Nonoichi, Japan;

IAC-26.C4.9.7 (unconfirmed)

AUTONOMOUS ELECTRODYNAMIC TETHER FOR LOW-ORBIT SPACECRAFT PROPULSION

Mr. Pavel Bechasnov, Bauman Moscow State Technical University, Kolomna, Moscow region, Russian Federation;

IAC-26.C4.9.8

MARS ATMOSPHERE-BREATHING RF THRUSTER: DESIGN, VACUUM TESTS, AND PERFORMANCE IN LOW MARTIAN ORBITS

Dr. Pavel Smirnov, TransMIT GmbH, Gießen, Germany;

IAC-26.C4.9.9

INITIAL EXPERIMENTAL CHARACTERIZATION OF AN RIT THRUSTER FOR ABEP

Dr. Meenakshee Sharma, Orbiit Space, Ahmedabad, India;

IAC-26.C4.9.10

COMBINING METASURFACES AND ELECTRODELESS SPACE PROPULSION

Mr. Renwei Tan, University of Padova, CISAS – “G. Colombo” Center of Studies and Activities for Space, Padova, Italy;

IAC-26.C4.9.11

THE EXPANSION OF ABEP CONCEPT FOR STABLE LONG TERM VLEO FLIGHTS

Mr. Vasilii Dudin, Lomonosov Moscow State University, Moscow, Russian Federation;

IAC-26.C4.9.13

ORBIT-CYCLING ABEP SYSTEM USING GAS STORAGE STRATEGY FOR SUSTAINABLE VLEO OPERATIONS

Mr. Chenxi Xia, Beihang University (BUAA), Beijing, China;

IAC-26.C4.9.14

DESIGN, SIMULATION AND EXPERIMENTAL TEST OF AN ATMOSPHERE-BREATHING ELECTRIC PROPULSION CUBESAT

Dr. Yuxuan Zhong, National University of Defense Technology, Changsha, China; Mr. Peng Zheng, College of Aerospace Science and Engineering, National University of Defense Technology, Changsha, China;

IAC-26.C4.9.15

MISSION PROPOSAL AND DEVELOPMENT STATUS OF AIR-BREATHING ION ENGINE ON-ORBIT EXPERIMENT (ABIE-X)

Mr. Tomotaka Yamamoto, Japan Aerospace Exploration Agency (JAXA), TSUKUBA-SHI, Japan;

C4.10-C3.5. Joint Session on Nuclear Power and Propulsion Systems, and Propellantless Propulsion

October 9 2026, 13:45 — E6

Co-Chair(s): Leopold Summerer, ESA - European Space Agency, Netherlands (Kingdom of the); Saroj Kumar, Propulsion Research Center, University of Alabama in Huntsville, United States; Markus Jaeger, The Exploration Company GmbH, Germany;

Rapporteur(s): Lahib Balika, Thales Alenia Space, United Kingdom; Lisa May, United States;

IAC-26.C4.10-C3.5.1

WHY DON'T WE HAVE MWE-CLASS NUCLEAR ELECTRIC PROPULSION

Dr. Francesco Bardi, The Aerospace Corporation, Arlington, United States;

IAC-26.C4.10-C3.5.3

DYNAMIC ENERGY MANAGEMENT VIA FUZZY MACHINE LEARNING FOR SNEP ARCHITECTURES WITH MPD PROPULSION IN MARS MISSIONS

Mr. Haniel Castellano Guarachi, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.C4.10-C3.5.4

FROM NTP TO NEP: COUPLED NEUTRONIC-THERMAL ANALYSIS OF A BIMODAL PARTICLE BED NUCLEAR REACTOR FOR SPACE PROPULSION

Mr. Stefano Giuntini, University of Pisa, Pisa, Italy;

IAC-26.C4.10-C3.5.5

CENTRIFUGAL NUCLEAR THERMAL ROCKET DEVELOPMENT: PROGRESS TOWARD ENGINEERING VIABILITY

Dr. Dale Thomas, University of Alabama in Huntsville, Huntsville, United States;

IAC-26.C4.10-C3.5.6

COMMERCIAL RADIOISOTOPE POWER SYSTEMS APPLIED IN THE MOON AND MARS FRONTIERS

Mr. A.C. Charania, Zeno Power Systems, Washington, United States;

IAC-26.C4.10-C3.5.7

EVALUATION OF HYBRID MANEUVERS FOR A BIMODAL AMMONIA-FED NUCLEAR ROCKET

Mr. Stefano Giuntini, University of Pisa, Pisa, Italy;

IAC-26.C4.10-C3.5.8

TRANSIENT ANALYSIS FOR THE START-UP OF A PARTICLE BED NUCLEAR REACTOR FOR SPACE PROPULSIVE APPLICATIONS

Mr. Elia Puccinelli, University of Pisa, Massarosa, Italy;

IAC-26.C4.10-C3.5.10

RADIOISOTOPE THERMOELECTRIC GENERATOR DESIGN OPTIMIZATION FOR POWER PRODUCTION ON THE LUNAR SURFACE

Dr. Stylianos Kyrimis, German Aerospace Center (DLR), Cologne, Germany;

IAC-26.C4.10-C3.5.11

LEGAL PATHWAYS FOR DEPLOYING NUCLEAR SMALL MODULAR REACTORS ON THE MOON

Mr. Akinari OGAWA, Tohoku University, Sendai, Japan;

IAC-26.C4.10-C3.5.12

TOPOLOGY, POROSITY, AND UNIT CELL SIZE EFFECTS ON POWER PEAKING AND MAXIMUM FUEL TEMPERATURE IN POROUS LATTICE MEDIA

Mr. Ian Harris, The Ohio State University, Westerville, United States;

C4.11. Emerging topics in space propulsion

October 5 2026, 16:30 — Hall 29

Co-Chair(s): Angelo Cervone, Delft University of Technology (TU Delft), Netherlands (Kingdom of the); Merve Balaban, International Space University (ISU), Germany;

Rapporteur(s): Riheng Zheng, Beihang University, China; Mario Kobald, Hylmpulse Technologies GmbH, Germany;

IAC-26.C4.11.1

OVERVIEW OF THE CHEMICAL PROPULSION SYSTEM OF THE FIRST TURKISH LUNAR MISSION

Mr. Michael Biehler, ArianeGroup, Lampoldshausen, Germany;

IAC-26.C4.11.2

DESIGN AND DEVELOPMENT OF A HYBRID PROPULSION SYSTEM FOR TÜRKİYE'S LUNAR EXPLORATION PROGRAM

Mr. Serhat Erat, Deltav Space Technologies, Inc., İstanbul, Türkiye;

IAC-26.C4.11.3

SIMULATING CRYOGENIC LIQUID OXYGEN AND KEROSENE FLOW FOR THRUST CONTROL OF BI-PROPELLANT PROPULSIVE LANDER VEHICLE

Mr. Rupin Nagireddy, Viterbi School of Engineering, USC, Irvine, United States;

IAC-26.C4.11.4

A FEASIBILITY ASSESSMENT OF AMMONIA-BASED HALEU NUCLEAR THERMAL PROPULSION FOR CIS-LUNAR TRANSPORTATION

Mr. Alexandre Chappuis, PSI (Paul Scherrer Institute), Baden, Switzerland;

IAC-26.C4.11.5

PERFORMANCE ENVELOPES AND FEASIBILITY MAPPING FOR SPACE NUCLEAR PROPULSION SYSTEMS IN Cislunar TRANSPORTATION

Dr. Dale Thomas, University of Alabama in Huntsville, Huntsville, United States;

IAC-26.C4.11.7

EFFECT OF NOZZLE SPACING ON MULTIPLE PLUME INTERACTION AND CONVECTIVE HEATING OF A LUNAR LANDER

Mr. ANANT SINGHAL, Indian Space Research Organization (ISRO), Liquid Propulsion Systems Centre (LPSC), TRIVANDRUM, India;

IAC-26.C4.11.8

COMPOSITION DESIGN AND PERFORMANCE INVESTIGATION OF ENVIRONMENTALLY FRIENDLY PLANT-DERIVED SUSTAINABLE ROCKET PROPELLANT (SRP)

Mr. Taisei Takaoka, Department of Engineering, The University of Tokyo, SAGAMIHARA city, Japan;

IAC-26.C4.11.10

NUMERICAL STUDY ON VAPOUR COOLED MULTI-LAYER INSULATION SCHEMES FOR CRYOGENIC PROPELLANT TANKS FOR LONG DURATION SPACE EXPLORATION MISSIONS

Mr. Vishnu Viswanath, Liquid Propulsion System centre, Trivandrum, India;

IAC-26.C4.11.11

HYDROGEN PEROXIDE PROPELLANT FOR IN-SPACE PROPULSION

Mr. Santiago Olvera, Center for Technical and Higher Education (CETYS University), Mexicali, Mexico;

D1. IAF SPACE SYSTEMS SYMPOSIUM

Coordinator(s): Matteo Emanuelli, Airbus Defence and Space, Germany; Mamatha Maheshwarappa, UK Space Agency, United Kingdom; Jill Prince, National Aeronautics and Space Administration (NASA), United States;

D1.1. Innovative Systems toward Future Architectures

October 5 2026, 16:30 — Hall 6

Co-Chair(s): Xavier Roser, Thales Alenia Space France, France; Hui Du, Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST), China;

Rapporteur(s): Daniel Wischert, European Space Agency (ESA), Netherlands (Kingdom of the); Marcos Eduardo Rojas Ramirez, Space Generation Advisory Council (SGAC), France;

IAC-26.D1.1.1 (unconfirmed)

ESA'S VISION FOR INSPACE SERVICING, ASSEMBLY AND MANUFACTURING (ISAM) AND THE SPACE CIRCULAR ECONOMY

Mr. Tiago Soares, European Space Agency (ESA), Noordwijk, Netherlands (Kingdom of the);

IAC-26.D1.1.2 (unconfirmed)

"THE TRANSITION TO DESIGN-FOR-CIRCULARITY: IMPACT ON MISSION CONCEPTS, INVESTMENT, AND RISK PROFILES"

Mr. Dan Bast, ESA - European Space Agency, Didcot, United Kingdom;

IAC-26.D1.1.3

THE GECKO PROJECT: DEVELOPMENT OF A GECKO-INSPIRED CAPTURE KIT FOR DOCKING WITH UNCOOPERATIVE AND UNPREPARED ORBITAL ASSETS

Mr. Tony Erdmann, Technische Universität Berlin, Berlin, Germany;

IAC-26.D1.1.4

DESIGNING FUTURE SPACECRAFT PLATFORMS FOR ZERO DEBRIS COMPLIANCE

Mr. Daniele Valentino Bella, IMS Space Consultancy, Darmstadt, Germany;

IAC-26.D1.1.5

HOW TO RECYCLE ALUMINUM ON THE LUNAR SURFACE

Ms. Rebecca Palmer, Georgia Institute of Technology, Atlanta, United States;

IAC-26.D1.1.6

QUANTITATIVE MAPPING OF RECOVERABLE MATERIAL RESOURCES FOR IN-ORBIT RECYCLING IN LEO AND MEO

Mr. Santiago García De La Peña, Cranfield University, Bedfordshire, United Kingdom;

IAC-26.D1.1.7

AN ORBITAL TRANSFER VEHICLE NETWORK ARCHITECTURE FOR THE SPACE SUPERHIGHWAY

Dr. Qian Shi, Secure World Foundation, Broomfield, United States;

IAC-26.D1.1.8

ESA LOFT: AN ADAPTABLE DESIGN SYSTEM FOR ROBOTICALLY ASSEMBLED RECONFIGURABLE ORBITAL STRUCTURES

Dr. Marina Konstantatou, London, United Kingdom;

IAC-26.D1.1.9

MOSAICO: A MODULAR AND SCALABLE SPACE PLATFORM FOR THE AUTOMATIC IN-ORBIT ASSEMBLY

Mrs. Serena Pipolo, Lazzero Technologie srl, Torino, Italy;

IAC-26.D1.1.10

SCALABLE AND FLEXIBLE FUTURE SPACE INFRASTRUCTURE: ISAM ELEMENTS ENABLING DATA CENTERS IN SPACE

Mr. Thomas A. Schervan, iBOSS GmbH, Aachen, Germany;

IAC-26.D1.1.11

FEASIBILITY ANALYSIS OF ORBITAL AI DATA CENTERS IN DAWN-DUSK SUN-SYNCHRONOUS ORBIT: POWER, THERMAL, AND CONSTELLATION SCALING

Mr. Eren Berkay Paşaoğlu, Koc University, İstanbul, Türkiye;

IAC-26.D1.1.12

VAMEX-3 MARSSYMPHONY: ENABLING ROBUST MARS CAVE EXPLORATION WITH DISTRIBUTED SENSOR NETWORKS

Mr. Andreas Maurer, Julius Maximilians Universität Würzburg, Würzburg, Germany;

D1.2. Technologies that Enable Space Systems

October 6 2026, 10:15 — Hall 6

Co-Chair(s): Jill Prince, National Aeronautics and Space Administration (NASA), United States; Steven Arnold, The Johns Hopkins University Applied Physics Laboratory, United States;
Rapporteur(s): Audrey Berquand, European Space Agency (ESA), Netherlands (Kingdom of the); Sybren De Jong, Netherlands Aerospace Centre (NLR), Netherlands (Kingdom of the);

IAC-26.D1.2.1

AI4CE - BENCHMARKING DEEP REINFORCEMENT LEARNING FOR AUTOMATED SATELLITE GENERATION

Mr. Jan-Peter Ceglarek, TU Darmstadt, Bickenbach, Germany;

IAC-26.D1.2.2

SYSTEM-LEVEL ASSESSMENT OF THE BENEFITS AND IMPACTS OF DRAG-REDUCING COATINGS FOR VLEO SATELLITE DESIGN

Mr. Jai Mamman, The University of Manchester, Manchester, United Kingdom;

IAC-26.D1.2.3

DEVELOPMENT OF ALUMINIUM-STABILISED REBCO CONDUCTOR FOR FUTURE SPACE-BORNE HTS APPLICATIONS

Ms. Bahar Karahan, European Organization for Nuclear Research (CERN), Ferney-Voltaire, Switzerland;

IAC-26.D1.2.4

CHARUCO-BASED GEOMETRIC CALIBRATION OF MICROBOLOMETER SENSOR FOR THERMAL INFRARED SPACE IMAGE SIMULATOR

Ms. Lucia Bianchi, Politecnico di Milano, Pagnana Lario (CO), Italy;

IAC-26.D1.2.5

ON-EDGE AI INFERENCE FOR FAULT DIAGNOSIS ON GNC SENSORS: DEVELOPMENT AND INTEGRATED TESTING ON FPGA ARCHITECTURE.

Mr. Enrico Crotti, Politecnico di Milano, Sandigliano, Italy;

IAC-26.D1.2.6

AI-ENABLED PHYSICS-BASED FRAMEWORK FOR TIP-OVER RISK PREDICTION IN LUNAR LANDER TOUCHDOWN

Ms. Rithika Nagarajan, Embry-Riddle Aeronautical University, Daytona Beach, United States;

IAC-26.D1.2.7

RADIATION AND TEMPERATURE PERFORMANCE OF AN ASE LIGHT SOURCE WITH SPACE-QUALIFIED ERBIUM-DOPED FIBER

Dr. Cihan Yesil, ASELSAN, Ankara, Türkiye;

IAC-26.D1.2.8

CLOSED-LOOP ATTITUDE CONTROL VERIFICATION FOR THE TOM NANOSATELLITE FORMATION

Ms. Tanuja Datar, Zentrum für Telematik, Würzburg, Germany;

IAC-26.D1.2.9

NEXT-GENERATION PAYLOAD DATA HANDLING: BRIDGING MISSION REQUIREMENTS AND TECHNOLOGY CAPABILITIES

Dr. Ertan Göklü, DSI Aerospace Technologie GmbH, Bremen, Germany;

IAC-26.D1.2.10

DEVELOPMENT OF SPACECRAFT AI COMPUTER FOR HIGH RESOLUTION EARTH OBSERVATION CAMERA

Ms. Jingyeong Choi, Chungnam National University, Daejeon, Republic of Korea;

IAC-26.D1.2.11

TIME-TRIGGERED-ARCHITECTURE FOR FAULT-TOLERANT, DETERMINISTIC ROBOTIC APPLICATIONS IN SPACE USING ROS2 AND TTETHERNET

Mr. David Hofer, TTTech Computertechnik AG, Vienna, Austria;

IAC-26.D1.2.12

ENERGY CONSISTENCY-BASED KINEMATIC MODELING AND VISION-BASED CLOSED-LOOP CONTROL FOR MULTI-CABLE REDUNDANT FLEXIBLE MANIPULATORS

Mr. Rui Lin, Beihang University (BUAA), Beijing, China;

D1.3. Emergent Space Systems

October 6 2026, 15:00 — Hall 6

Co-Chair(s): Tibor Balint, International Academy of Astronautics (IAA), United States; Reinhold Bertrand, European Space Agency (ESA), Germany;
Rapporteur(s): Igor V. Belokonov, Samara National Research University (Samara University), Russian Federation; Alena Probst, EnduroSat AD, Germany;

IAC-26.D1.3.1

A CUSTOMISABLE AR AND VR BASED CUBESAT ASSEMBLY, INTEGRATION AND VERIFICATION PLATFORM FOR TRAINING ENGINEERS, STUDENTS AND INDUSTRY

Mr. Vamshi Sainath Gavani, Chennai, India;

IAC-26.D1.3.2

AI-BASED CONCURRENT ENGINEERING FACILITY FOR FUTURE SPACE MISSIONS DESIGN

Ms. Mascia Bucciarelli, Sapienza University of Rome, Rome, Italy;

IAC-26.D1.3.3

AI-POWERED FAULT-TOLERANT CONTROL OF AN UNDERACTUATED PLANETARY LANDER FOR AUTONOMOUS TARGET IDENTIFICATION, TARGET SELECTION, AND SOFT LANDING

Dr. Krishna Kumar, Toronto Metropolitan University, Toronto, Canada;

IAC-26.D1.3.5

HUMAN-CENTERED DESIGN OF A MODULAR PLANETARY SUPPORT ROVER: RESULTS FROM THE MDRS330 MISSION

Ms. Emma Seabrook, ISAE-Supaero University of Toulouse, Toulouse, France;

IAC-26.D1.3.6

ARCHITECTURAL SIMPLICITY AND GLOBAL INCLUSION: THE EVOLUTION OF THE EMIRATI SPACE SECTOR THROUGH INCREMENTAL, HUMAN CENTERED SPACE SYSTEM DESIGN

Mr. Ahmed Salem, Mohammed Bin Rashid Space Centre (MBRSC), Dubai, United Arab Emirates;

IAC-26.D1.3.7

SPACE CYBER THREAT INTELLIGENCE PLATFORM USING HONEYPOT CUBESATS FOR ATTACKER IDENTIFICATION

Mr. Jamil Jafarli, Baku State University, Baku, Azerbaijan;

IAC-26.D1.3.8

PHASE-AWARE INTRUSION DETECTION ARCHITECTURE FOR SMALL SATELLITE SYSTEMS

Mr. Jamil Jafarli, Baku State University, Baku, Azerbaijan;

IAC-26.D1.3.9

SPACE DATA CENTERS: ENABLING THE FUTURE OF SPACE-BASED DATA MANAGEMENT

Mr. Niels de Graaf, Huld s.r.o., Praha, Czech Republic;

IAC-26.D1.3.10

RADIATION TOLERANT ELECTRONICS ARCHITECTURE FOR AUTONOMOUS SPACE ROBOTS

Dr. Tolga Ors, New Space Consulting Ltd., London, United Kingdom;

D1.4. Cooperative Systems

October 8 2026, 10:15 — Hall 6

Co-Chair(s): Otfried G. Liepack, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States; Klaus Schilling, Zentrum für Telematik, Germany;

Rapporteur(s): Eberhard Gill, Delft University of Technology, Netherlands (Kingdom of the); Avid Roman-Gonzalez, Universidad Nacional Tecnológica de Lima Sur, Peru;

IAC-26.D1.4.1

A COOPERATIVE MULTI-SENSOR ALGORITHM TESTBED FOR METHANE HOTSPOT DETECTION: EVALUATING DISTRIBUTED EARTH OBSERVATION ARCHITECTURES THROUGH HISTORICAL REPLAY SIMULATION

Mr. Alev Sönmez, Fraunhofer Alliance Space, Marl, Germany;

IAC-26.D1.4.2

MODULAR ROBOT AND TOOLS FOR ON-ORBIT INSPECTION AND MAINTENANCE OPERATIONS: SYSTEM DESIGN AND TEST RESULTS

Dr. Giuseppe Ventura, Space Applications Services, Sint-Stevens-Woluve, Belgium;

IAC-26.D1.4.3

MIXED CONSISTENCY DISTRIBUTED STATE FOR SPACE SITUATIONAL AWARENESS IN SATELLITE SWARMS

Mr. Ezra Fielding, Centre National d'Etudes Spatiales (CNES), Toulouse, France;

IAC-26.D1.4.4

ADVANCING SIROM: ENHANCING AND MATURING A MODULAR INTERFACE SOLUTION FOR FUTURE IN-ORBIT SERVICING AND LOGISTICS

Mr. Alejandro Lazaro, SENER, Bilbao, Spain;

IAC-26.D1.4.5

FULL DEPLOYMENT OF THE AIX COOPERATIVE EDGE-AI CONSTELLATION: HYBRID EDGE-CLOUD ORCHESTRATION AND IN-ORBIT COORDINATION OF HIGH-PERFORMANCE SPACE SYSTEMS

Mr. Leonardo Amoroso, Planetek Italia, Bari, Italy;

IAC-26.D1.4.6

AN OPEN-SOURCE SIMULATION TESTBED FOR COOPERATIVE MULTI-ACTOR LUNAR SURFACE OPERATIONS

Mr. Aleksa Djurdjevic, LunCo, Belgrade, Serbia;

IAC-26.D1.4.7

ANOMALY IDENTIFICATION FOR AUTONOMOUS DECISION-MAKING IN ONBOARD SPACECRAFT HEALTH MONITORING

Dr. Shun Katsube, Tokyo University of Science, Fuchu-shi, Japan;

IAC-26.D1.4.8

CONTROL AND COLLISION ASSESSMENT FOR MULTISTATIC SYNTHETIC APERTURE RADAR SWARM

Mr. Reuben Solomon Katz, DLR (German Aerospace Center), Weßling, Germany;

IAC-26.D1.4.9

AUTONOMOUS TIP & CUE ON-BOARD SCHEDULER FOR EARTH OBSERVATION

Mr. Alessandro Balossino, Argotec, Torino, Italy;

IAC-26.D1.4.10

COLLABORATIVE NAVIGATION ON LUNAR SURFACE

Mr. Mustafa Oğuzhan Şahan, Middle East Technical University, Ankara, Türkiye;

D1.5. Systems Engineering Modeling and Analysis

October 8 2026, 15:00 — Hall 6

Co-Chair(s): Jon Holladay, National Aeronautics and Space Administration (NASA), United States; Thierry Floriant, Centre National d'Etudes Spatiales (CNES), France;

Rapporteur(s): Sapna Rao, Lockheed Martin (Space Systems Company), United States; Marcos Eduardo Rojas Ramirez, Space Generation Advisory Council (SGAC), France;

IAC-26.D1.5.1

A MODEL-BASED SYSTEMS ENGINEERING APPROACH FOR THE MONITORING AND CONTROL SYSTEM OF LUNA

Dr. Orkun Zorba, SSC Space, Gilching, Germany;

IAC-26.D1.5.2

MODEL BASED FUNCTIONAL FAILURE MODES AND EFFECT ANALYSIS WITH INTEGRATED SEMANTIC DATA ENVIRONMENTS FOR COMPLEX SPACE MISSIONS

Mr. Hakan Yanik, Airbus Defence & Space, Space Systems, Konstanz, Germany;

IAC-26.D1.5.3

INTEGRATING COST ENGINEERING AND SUSTAINABILITY INTO A DLR MODEL-BASED SYSTEMS ENGINEERING TOOL FOR CONCURRENT ENGINEERING

Dr. Livia Ionescu, German Aerospace Center (DLR), Bremen, Germany;

IAC-26.D1.5.4

PREDICTIVE SPACE WEATHER RISK MODEL FOR LOW EARTH ORBIT MISSION DESIGN

Ms. Karla Melisa Vargas Palacios, Instituto Politécnico Nacional, Estado de México, Mexico;

IAC-26.D1.5.5

VERY LOW EARTH ORBIT (VLEO) SPACECRAFT SYSTEMS DIGITAL TWIN DEVELOPMENT USING NVIDIA OMNIVERSE: UTILISING A DUAL DIGITAL TWIN FRAMEWORK FOR OPERATING AND TESTING SPACECRAFT

Mr. Mirza Talha Baig, The University of Manchester, Manchester, United Kingdom;

IAC-26.D1.5.6

SYNESYS - AI COMPANION FOR SYSTEM ENGINEERS & MBSE AUTOMATION FOR AEROSPACE & DEFENSE PROGRAMS.

Mr. Vincent Hummel, Mews Partners, 75008, France; Mr. FREDERIC SAFFAR, Mews Partners, Toulouse, France;

IAC-26.D1.5.7

A DATA-CENTRIC MBSE APPROACH ENABLING LLM-ASSISTED ROCKET DESIGN

Mr. Yuan Liu, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-26.D1.5.8

DATA-CENTRIC SYSTEMS ENGINEERING: TOWARD AN ECOSYSTEM SERVICE META-MODEL FOR SIMULATION-READY LIFECYCLE TRADE STUDIES

Mr. Fahri Mert Ünsal, Ankara, Türkiye;

IAC-26.D1.5.9

REAL-TIME HYBRID DIGITAL TWIN FOR SPACECRAFT AUTONOMY VERIFICATION WITH GENERATIVE FAULT TELEMTRY

Dr. Andrea Colagrossi, Politecnico di Milano, Milano, Italy;

IAC-26.D1.5.10

A CASE-STUDY OF A SATELLITE POWER BUDGET DESIGN AND IN-FLIGHT EVALUATION TOOL: A SYSTEMS ENGINEERING PERSPECTIVE

Dr. Ekaterina Gorbunova, St. Petersburg, Russian Federation;

IAC-26.D1.5.11

TOWARDS DIGITAL TWIN ENGINEERING IN SPACE SYSTEM DESIGN USING MODEL SYNCHRONIZATION

Ms. Aprajita Kain, DLR (German Aerospace Center), Braunschweig, Germany;

IAC-26.D1.5.12

AN AI-ENABLED FAULT DETECTION FRAMEWORK FOR SMALL SATELLITE POWER SUBSYSTEMS

Mr. Huseyn Aliyev, Koc University, Istanbul, Türkiye;

D1.6. Systems Engineering Approaches, Processes and Methods

October 9 2026, 10:15 — Hall 6

Co-Chair(s): Guilherme Venticinque, Instituto Nacional de Pesquisas Espaciais (INPE), Brazil; Timothy Cichan, Lockheed Martin Corporation, United States;

Rapporteur(s): Dapeng Wang, Beihang University, China; Geilson Loureiro, Instituto Nacional de Pesquisas Espaciais (INPE), Brazil;

IAC-26.D1.6.2
TOWARDS INDUSTRIALIZED SATELLITE PRODUCTION: INITIAL INSIGHTS ON AUTOMATED ADCS CALIBRATION AND VERIFICATION
Ms. Tanuja Datar, Zentrum für Telematik, Würzburg, Germany;

IAC-26.D1.6.4
DCEP: A RESEARCH PLATFORM FOR DIGITAL CONCURRENT ENGINEERING IN SPACE SYSTEM DEVELOPMENT
Dr. Gina Grünauer, German Aerospace Center (DLR), Stuttgart, Germany;

IAC-26.D1.6.5
DEMONSTRATING A DIGITAL ENGINEERING WORKFLOW APPROACH WITH A SPACE APPLICATION USE CASE
Dr. Livia Ionescu, German Aerospace Center (DLR), Bremen, Germany;

IAC-26.D1.6.8
PARAMETRIC SUSTAINABILITY TRADE-OFF ANALYSIS FOR EARLY-STAGE SATELLITE SYSTEM DESIGN
Mr. Matthew Trevor, University of Strathclyde, Glasgow, United Kingdom;

IAC-26.D1.6.9
HOLISTIC LIFE CYCLE ASSESSMENT FOR SUSTAINABLE SPACE MISSIONS: A SYSTEMS ENGINEERING APPROACH
Dr. Manu Nair, University of Manchester, Manchester, United Kingdom;

IAC-26.D1.6.10
APPLYING SPACE MISSION SYSTEMS ENGINEERING LIFECYCLE FRAMEWORKS TO SOFTWARE-DEFINED EARTH OBSERVATION PLATFORMS: A STRUCTURED METHODOLOGY FOR CLIMATE INTELLIGENCE SYSTEM DEVELOPMENT
Mr. Alev Sönmez, Fraunhofer Alliance Space, Marl, Germany;

IAC-26.D1.6.11
ENHANCING THE IDREAM TOOLSET FOR HUMAN LUNAR LANDER DESIGN: A TIGHTLY COUPLED MULTIDISCIPLINARY DESIGN LOOP INTEGRATING MISSION ANALYSIS, COST ESTIMATION, AND TECHNOLOGY ROADMAPING
Dr. Jasmine Rimani, Politecnico di Torino, Torino, Italy;

IAC-26.D1.6.12
CONSTRAINT-CONSISTENT COGNITIVE DESIGN FRAMEWORK FOR MODULAR ASSEMBLED SPACECRAFT CONFIGURATION
Mr. Xiaoleng Jia, School of Astronautics, Beihang University, Beijing 100191, PR China, Beijing, China;

D1.7. Lessons Learned in Space Systems

October 9 2026, 13:45 — Hall 6

Co-Chair(s): Yoshihisa Arikawa, Japan Aerospace Exploration Agency (JAXA), Japan; Giuseppe Guidotti, Deimos Space SLU, Italy; Hamed Gamal, Mynaric, Germany;

Rapporteur(s): Alena Probst, EnduroSat AD, Germany;

IAC-26.D1.7.1
LESSONS LEARNED FROM MISSION LIFECYCLE IMPLEMENTATION IN THE VULTUR STUDENT ROCKETRY TEAM IN MEXICO
Ms. Dayana Isabel Juárez Roa, Universidad Nacional Autónoma de México (UNAM), Mexico City, Mexico;

IAC-26.D1.7.2
TÜRKSAT 6A: BUILDING NATIONAL CAPABILITY IN GEOSTATIONARY COMMUNICATION SATELLITE DEVELOPMENT
Dr. Cevher Levent Ertürk, TÜBITAK Uzay, Space Technologies Research Institute, Çankaya, Türkiye;

IAC-26.D1.7.3
LESSON LEARNED FROM MUNAL AND S2S: SYSTEMATIC KNOWLEDGE TRANSFER IN NEPAL'S CUBESAT PROGRAM
Ms. Anjali Dhami, Nepal Space Foundation, Kathmandu, Nepal;

IAC-26.D1.7.4
END-TO-END DEVELOPMENT OF A 1U CUBESAT STRUCTURE: DESIGN, OPTIMIZATION, AND MANUFACTURING IN A NON-SPACEFARING COUNTRY
Mr. Wenceslao Bejarano, National Autonomous University of Honduras (UNAH), Tegucigalpa, Honduras;

IAC-26.D1.7.5
LESSONS LEARNED IN FLIGHT SOFTWARE DEVELOPMENT FOR THE DA VINCI SATELLITE CUBESAT MISSION
Mr. Bora Menekşe, Delft University of Technology (TU Delft), The Hague, Netherlands (Kingdom of the);

IAC-26.D1.7.6
THE EMIRATES MISSION TO THE ASTEROID BELT: ASSEMBLY, INTEGRATION, AND TEST SCHEDULE PHILOSOPHY
Ms. Aisha Alhammadi, Technology Innovation Institute (TII), Abu Dhabi, United Arab Emirates;

IAC-26.D1.7.7
OPTIMIZING SPACE SYSTEMS LIFECYCLE: LESSONS LEARNED FROM A GLOBAL STUDY ON KNOWLEDGE MANAGEMENT AND ORGANIZATIONAL COMMUNICATION FRAMEWORKS
Mr. John Leur Labrador, Philippine Space Agency (PhilSA), Quezon City, Philippines;

IAC-26.D1.7.8
INTEGRATING SYSTEMS ENGINEERING WITH ALGORITHM-DRIVEN DEVELOPMENT: LESSONS FROM A CONCEPTUAL DESIGN OF A CONJUNCTION MANAGEMENT SYSTEM
Dr. Yana Brovar, Skolkovo Institute of Science and Technology, Moscow, Russian Federation;

IAC-26.D1.7.9
BEYOND DELIVERY: THE KALEIDOSCOPE ROLE OF THE SPACE PROJECT MANAGER IN THE NEW SPACE ECOSYSTEM
Dr. Mario Cardano, Thales Alenia Space Italia, Torino, Italy;

IAC-26.D1.7.10
EFFECTS OF STUDENT ROCKETRY IN FUTURE SPACE TECHNOLOGIES
Mr. Mehmet Efe Hatır, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.D1.7.11
DESIGN, GROUND VALIDATION, AND IN-ORBIT PERFORMANCE OF THE LEOPARD CUBESAT ADCS
Dr. Mehmet Esit, Kyushu Institute of Technology, Kitakyushu, Fukuoka, Japan;

IAC-26.D1.7.12
LESSONS LEARNED FROM THE DEVELOPMENT OF THE K'OTO CUBESAT: ADDRESSING MAJOR CHANGES IN SYSTEM ARCHITECTURE THROUGH SYSTEMS ENGINEERING AND PROJECT MANAGEMENT
Ms. Zhara Ixel Tavares Ramirez, Universidad Nacional Autónoma de México (UNAM), Queretaro, Mexico;

D1.8. IAF SPACE SYSTEMS SYMPOSIUM - Extra session

October 7 2026, 15:00 — Hall 35

Co-Chair(s): Matteo Emanuelli, Airbus Defence and Space, Germany; Mamatha Maheshwarappa, UK Space Agency, United Kingdom; Jill Prince, National Aeronautics and Space Administration (NASA), United States;

IAC-26.D1.8.1

INTEGRATING RISK-INFORMED SYSTEMS ENGINEERING AND DIGITAL TWIN-SUPPORTED VERIFICATION FOR LAUNCH VEHICLE DEVELOPMENT

Ms. Merve Dericioğlu, Mechanical and Chemical Industries Corporation, Ankara, Türkiye;

IAC-26.D1.8.3

RISK-SENSITIVE MISSION PLANNING FOR MULTI-TARGET ON-ORBIT INSPECTION VIA DISTRIBUTIONAL REINFORCEMENT LEARNING

Prof. Adam Abdin, CentraleSupélec, Paris, France;

IAC-26.D1.8.4

A ROBOTIC SPACE STATION FOR PAYLOAD DEPOT AND SATELLITE SERVICING

Dr. Mathieu Deremetz, Space Applications Services, Sint-Stevens-Woluwe, Belgium;

IAC-26.D1.8.5

ADVANCED PROPORTIONAL NAVIGATION FOR A 7DOF SPACE MANIPULATOR AUTONOMOUSLY SERVICING A NON-COOPERATIVE GEO SATELLITE

Prof. Marco Sabatini, Sapienza University of Rome, Rome, Italy;

IAC-26.D1.8.6

DESIGN AND VERIFICATION OF A LOW-SHOCK ON-ORBIT REFUELING DOCKING AND VALVE SYSTEM FOR REUSABLE ORBITAL TRANSFER VEHICLES

Ms. KANG Dayeong, Chosun University, Gwangju, Republic of Korea;

IAC-26.D1.8.7

ZKSWARM: POST-QUANTUM SECURE ZERO-KNOWLEDGE PROTOCOL FOR COOPERATIVE SATELLITE SWARMS

Mr. Murat Görkem Kahya, Muğla Sıtkı Koçman University, Muğla, Türkiye;

IAC-26.D1.8.8

SIMULATION-DRIVEN CLOSED-LOOP PHASED DEPLOYMENT OPTIMIZATION FOR ROBUST LEO MEGA CONSTELLATIONS UNDER CASCADING FAILURE RISK

Ms. Junru Lin, Space Engineering University (Beijing), Beijing, China;

IAC-26.D1.8.9

RESILIENT CRYPTOGRAPHIC KEY MANAGEMENT ARCHITECTURES FOR DISTRIBUTED SATELLITE SYSTEMS

Mr. Daniel Estephano Venturi Calero, Universidad Nacional Tecnológica de Lima Sur, Lima, Lima, Peru;

IAC-26.D1.8.10

PROJECT THESEUS: THE ECONOMIC AND ENVIRONMENTAL BENEFITS OF PERPETUAL, SERVICEABLE CONSTELLATION PLATFORMS

Mr. MIKE LINDSAY, Astroscale Holdings, Minato-ku, Japan;

IAC-26.D1.8.12

ESTABLISHING AN AI-POWERED CONCURRENT ENGINEERING FACILITY FOR FULL LIFE CYCLE SPACECRAFT DESIGN

Mr. Niclas Pueschel, Innovation Academy for Microsatellites, Chinese Academy of Sciences, Shanghai, China;

D2. IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM

Coordinator(s): Yuguang Yang, China Aerospace Science & Industry Corporation (CASIC), China; Oliver Kunz, Beyond Gravity, Switzerland; Aaron Weaver, National Aeronautics and Space Administration (NASA), United States;

D2.1. Launch Vehicles in Service or in Development

October 5 2026, 16:30 — Hall 23

Co-Chair(s): Aaron Weaver, National Aeronautics and Space Administration (NASA), United States; Martin Sippel, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;

Rapporteur(s): Giuseppe Rufolo, CIRA Italian Aerospace Research Centre, Italy; Anurup Marath, Indian Space Research Organization (ISRO), India;

IAC-26.D2.1.1

AN OVERVIEW OF REUSABLE LAUNCH VEHICLES: CURRENT STATUS AND FUTURE DEVELOPMENTS

Dr. Francesca Maria Pisano, CIRA Italian Aerospace Research Centre, Capua, Italy;

IAC-26.D2.1.2

AUTOGENOUS PRESSURIZATION SYSTEM OF THE ZQ-3 METHALOX ROCKET: ARCHITECTURE AND FLIGHT VALIDATION IN BOOSTER RECOVERY

Dr. Qian Wan, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-26.D2.1.3

EVOLUTION FROM H-IIA/B TO H3: HERITAGE SUCCESSION AND BLOCK UPGRADE PROGRESS

Mr. Koji Kita, Mitsubishi Heavy Industries, Ltd., Nagoya, Japan; Mr. Ryoma Yamashiro, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

IAC-26.D2.1.4

DEVELOPMENT OF KOREA'S NEXT GENERATION LAUNCH VEHICLE (KSLV-III)

Dr. Chang-Su Park, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

IAC-26.D2.1.5

EUROPE'S EXPANDING HORIZONS: ENHANCED PERFORMANCE AND FLEXIBILITY WITH ARIANE 6'S 2026 JOURNEY

Mr. Florent BOURNEAUD, ArianeGroup, Les Mureaux, France;

IAC-26.D2.1.6

THE SPACE LAUNCH SYSTEM UTILIZING THE CENTAUR-V UPPER STAGE

Mr. Benjamin Donahue, The Boeing Company, Huntsville, AL, United States;

IAC-26.D2.1.7

DEVELOPMENT AND HOT-FIRE TESTING OF THE YQ-1 REUSABLE LOX/METHANE LAUNCH VEHICLE

Dr. Chen Liang, Shanghai Cosmoleap Aerospace Science and Technology Co., Ltd., Beijing, China;

IAC-26.D2.1.8

ELECTRON LAUNCH VEHICLE FLIGHT PARAMETERS ESTIMATION BASED ON OPEN DATA

Mr. Egor Piatibrat, Skolkovo Institute of Science and Technology, Moscow, Russian Federation;

IAC-26.D2.1.9

AFRICAN LAUNCH VEHICLES AND SITES: EXAMINATION OF PAST, PRESENT, AND FUTURE

Mr. Jonas Tobiassen, International Space University, Kristiansand S, Norway;

IAC-26.D2.1.10

EXPERIMENTAL INVESTIGATION OF EFFECTIVE REYNOLDS NUMBER FOR WIND TUNNEL TESTING OF LAUNCH VEHICLE GROUND WIND LOAD PREDICTIONS

Mr. Atakan Oncul, ROKETSAN Roket Sanayi ve Ticaret A.S., Ankara, Türkiye;

IAC-26.D2.1.11

THE IMPACT OF AERODYNAMIC CHARACTERISTICS DETERMINATION ACCURACY ON THE PROBABILISTIC ENERGY PERFORMANCE OF LAUNCH VEHICLES

Mrs. Olena Koliada, Yuzhnoye State Design Office, Dnipro, Ukraine;

IAC-26.D2.1.12

COMPARISON OF SOUTH KOREA'S NURI ROCKET AND NEXT-GENERATION LAUNCH VEHICLE-BASED CREWED LAUNCH VEHICLE DEVELOPMENT STRATEGIES

Dr. Keum-Oh Lee, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

D2.2. Launch Services, Missions, Operations, and Facilities

October 6 2026, 15:00 — Hall 23

Co-Chair(s): Tina Buechner da Costa, European Space Agency (ESA), France; Iwao Igarashi, Mitsubishi Heavy Industries, Ltd., Japan;

Rapporteur(s): Christian Corba, EUMETSAT, Germany; Geovian Stower, Kenya Space Agency (KSA), Kenya; Jeremy Pinier, National Aeronautics and Space Administration (NASA), Langley Research Center, United States;

IAC-26.D2.2.1

CSG ELM MULTILAUNCHER SPACEPORT TOPOLOGY AGAINST LAUNCH SYSTEM CONOPS

Mrs. Ursula Aniakou, Centre National d'Etudes Spatiales (CNES), Paris, France;

IAC-26.D2.2.2

CONSTRUCTION OF THE EMERGENCY RESCUE LAUNCH SITE SYSTEM FOR CHINA SPACE STATION MISSIONS

Mr. Guoan Liu, Zhejiang University, Hangzhou, China;

IAC-26.D2.2.3

A MULTI-TIERED FRAMEWORK FOR ASSESSING "LEFT OF LAUNCH" BOTTLENECKS IN THE 2030-2035 ERA

Mr. Akhil Gujral, The Aerospace Corporation, El Segundo, United States;

IAC-26.D2.2.4

PRELIMINARY THERMAL AND MECHANICAL LOADS ESTIMATION FOR DIFFERENT CATEGORY LAUNCHER STAGES VERTICAL LANDING ON A SEA BARGE

Dr. Francesca Maria Pisano, CIRA Italian Aerospace Research Centre, Capua, Italy;

IAC-26.D2.2.5

STRATEGIC AND TECHNICAL CONSIDERATIONS FOR DEVELOPING A COMPETITIVE SPACEPORT IN URUGUAY

Dr. Élcio Jeronimo de Oliveira, Associazione Italiana di Aeronautica e Astronautica (AIDAA), Montevideo, Uruguay;

IAC-26.D2.2.6

FROM GEOGRAPHY TO SAFETY: ASSESSING ALCÂNTARA'S POTENTIAL AS A COMPETITIVE EQUATORIAL LAUNCH HUB

Prof. Ijar Da Fonseca, ITA-DCTA, São José dos Campos, Brazil;

IAC-26.D2.2.7

DEVELOPMENT AND IMPLEMENTATION OF INTEGRATED MANAGEMENT FOR DEDICATED RIDESHARE LAUNCH SERVICES

Mr. Xiangyu Li, China Great Wall Industry Corporation (CGWIC), Beijing, China;

IAC-26.D2.2.8

MULTI-CRITERIA DECISION FRAMEWORK AND CONTRACTUAL RISK ASSESSMENT FOR EQUATORIAL SPACEPORT SITE SELECTION: AN AI-INTEGRATED APPROACH APPLIED TO THE TURKISH NATIONAL SPACE PROGRAM

Mr. Hasan Efekan Bilen, Istanbul Technical University, Bursa, Türkiye;

IAC-26.D2.2.9

THERMAL ASSESSMENT OF LAUNCH VEHICLE CRYOGENIC TANK OPERATIONS UNDER VARIABLE GROUND CONDITIONS

Mr. Onur Torun, ROKETSAN Roket Sanayi ve Ticaret A.S., Ankara, Türkiye;

IAC-26.D2.2.10

METHODOLOGY FOR DECOMPOSING LAUNCH CAPABILITY INDICATORS OF CHINA'S FIRST LIQUID OXYGEN METHANE REUSABLE LAUNCH VEHICLE (ZQ-3) FLEET

Mr. Tengyue HU, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-26.D2.2.11

A COMPARISON STUDY OF THE CFD SOLVERS FOR THE JET NOISE COMPUTATION

Mr. Tolga Tortum, ROKETSAN Roket Sanayi ve Ticaret A.S., Ankara, Türkiye;

IAC-26.D2.2.12

DEVELOPMENT OF AN ACTIVELY STABILIZED MARINE LAUNCH PLATFORM FOR SMALL ROCKET LAUNCH OPERATIONS

Mr. Álvaro Pérez Mora, Starlogics, Cartago, Costa Rica;

D2.3. Upper Stages, Space Transfer, Entry & Landing Systems

October 6 2026, 10:15 — Hall 23

Co-Chair(s): Oliver Kunz, Beyond Gravity, Switzerland; Nicole Viola, Politecnico di Torino, Italy;

Rapporteur(s): John M. Horack, The Ohio State University College of Engineering, United States; Ysolde PREVEREAUD, ONERA - The French Aerospace Lab, France;

IAC-26.D2.3.1 (unconfirmed)

DEVELOPMENT AND FLIGHT VALIDATION OF A STANDARDIZED MARITIME RECOVERY SYSTEM FOR THE BRAZILIAN SUBORBITAL PLATFORM (PSM)

Mr. Felipe Portela Aguiar de Oliveira, São Luís, Brazil;

IAC-26.D2.3.2

DEVELOPMENT STATUS OF THE ICARUS PROJECT WITHIN THE REALM OF INNOVATIVE ENTRY TECHNOLOGIES FOR FUTURE SPACE TRANSPORTATION SYSTEMS.

Mr. Giuseppe Guidotti, Deimos Space SLU, Madrid, Italy;

IAC-26.D2.3.3

PERFORMANCE CHARACTERIZATION OF PROPORTIONAL COLD GAS PROPULSION SYSTEMS FOR VERTICAL TAKEOFF AND LANDING PLATFORMS AND DESIGN OF A CALIBRATION TEST SETUP

Mr. Melih Samet Akçay, Ataturk University, Erzurum, Türkiye;

IAC-26.D2.3.4

A ROCKET LANDING GUIDANCE METHOD BASED ON ANALYTICAL MAPPING AND NULL-SPACE PROJECTION FOR REUSABLE METHA-LOX LAUNCH VEHICLES

Dr. Chunzhi Li, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-26.D2.3.5

AERO-THERMODYNAMIC AND FLUID STRUCTURE INTERACTION ANALYSIS OF THE INFLATABLE HEAT SHIELD OF THE EUROPEAN ICARUS AERODEMONSTRATOR

Mr. Nicolas Bérend, ONERA - The French Aerospace Lab, Palaiseau, France;

IAC-26.D2.3.6

DEVELOPMENT OF A SOLID-PROPELLANT KICK STAGE FOR HIGH-FREQUENCY DEEP SPACE EXPLORATION

Dr. Masashi Miura, Japan Aerospace Exploration Agency (JAXA), ISAS, Sagami-hara, Japan;

IAC-26.D2.3.7

INTEGRATED PROPULSION SYSTEM FOR UPPER STAGES AND ORBITAL TRANSFER VEHICLES

Mr. Arthur Bahdur, Bizu Space, São José dos Campos, Brazil;

IAC-26.D2.3.8

VERIFICATION AND VALIDATION OF ADVANCED GNC ALGORITHMS FOR SPACE RIDER'S AUTONOMOUS RE-ENTRY AND LANDING

Mr. Gabriel Graur, Indra Sistemas, București, Romania;

IAC-26.D2.3.9

HIGH-ENERGY ORBITAL LOGISTICS: ARCHITECTING THE "EXPRESS" LAYER OF THE Cislunar Economy VIA STORABLE HIGH-THRUST PROPULSION

Mr. Jonathan Goff, Gravitics, Inc., Marysville, United States;

IAC-26.D2.3.10

JOINING AL-LI CRYOGENIC TANKS: WELDING STRATEGIES FOR REUSABLE LAUNCH SYSTEMS

Mrs. Marbella Cota, Universidad Nacional Autónoma de México (UNAM), Ciudad de México, Mexico;

IAC-26.D2.3.11

AUTONOMOUS MULTI-SKIP AEROCAPTURE GUIDANCE FOR PLANETARY ATMOSPHERIC ENTRY

Mr. Dennis Terry Trevino, Department of Space Studies, University of North Dakota, San Francisco, United States;

IAC-26.D2.3.12

RAPID PREDICTION OF HYPERSONIC AEROTHERMAL ENVIRONMENTS USING DEEP LEARNING SURROGATE MODELS

Mr. Emre Güler, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.D2.3.13

ROBUST MULTI-PHASE DESCENT GUIDANCE FOR A REUSABLE LAUNCH VEHICLE

Mr. Kangmuk Jang, Seoul National University, SEOUL, Republic of Korea;

D2.4. Future Space Transportation Systems

October 7 2026, 10:15 — Hall 23

Co-Chair(s): José Gavira Izquierdo, International Space Consultant, Netherlands (Kingdom of the); Pier Michele Riviera, True Anomaly, Inc., United States;

Rapporteur(s): Nicolas Bérend, ONERA - The French Aerospace Lab, France; Geovian Stower, Kenya Space Agency (KSA), Kenya;

IAC-26.D2.4.1

KEYNOTE: ESA PREPARATION FOR FUTURE EUROPEAN HEAVY AND SUPER HEAVY LAUNCH SYSTEMS

Mr. Giorgio Tumino, European Space Agency (ESA), Paris, France;

IAC-26.D2.4.3

FROM CONCEPT SELECTION TO FLIGHT SIMULATION: IMPLEMENTING CONVEX GUIDANCE AND CONTROL METHODS FOR VERTICAL STAGE LANDING

Ms. Tuğçe Sena Koyuncu Yılmaz, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Ankara, Türkiye;

IAC-26.D2.4.4

ROBUSTNESS AND FEASIBILITY EVALUATION OF ROCKOON-BASED HYBRID ROCKETS CONSIDERING INITIAL ATTITUDE UNCERTAINTIES

Mr. TAKENORI YOSHIKAWA, Chiba Institute of Technology, Minato-ku, Japan;

IAC-26.D2.4.5

PREPARING FOR THE FUTURE OF SPACE TRANSPORTATION: PERSPECTIVES, METHODOLOGIES AND FRENCH STRATEGIC MEANS TO ACCELERATE THE PACE

Mrs. Ursula Aniakov, Centre National d'Etudes Spatiales (CNES), Paris, France;

IAC-26.D2.4.6

VORTEX, A REUSABLE ORBITAL SPACEPLANE FOR THE NEXT INDUSTRIAL REVOLUTION

Mr. Igor Fain, Dassault Aviation, Saint-Cloud, France;

IAC-26.D2.4.7

ANALYSES AND CRITICAL ASSESSMENT OF ADVANCED SPACE TRANSPORTATION SYSTEMS

Dr. Martin Sippel, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Bremen, Germany;

IAC-26.D2.4.8

ELECTRIFIED SPACEPORTS AND ORBITAL PROPELLANT LOGISTICS: A GROUND-POWERED LAUNCH INFRASTRUCTURE FOR THE EMERGING ORBITAL FUEL ECONOMY

Mr. Tetsuya Ikegami, Independent Researcher, Fukui, Japan;

IAC-26.D2.4.9

MANTIS: ENABLING FLEXIBLE MARS ASSET DELIVERY AND RELAY OPERATIONS THROUGH A MODULAR INFRASTRUCTURE AND MULTI-ORBIT SERVICE DESIGN

Mr. Francesco Pezzi, Politecnico di Milano, Albano Laziale, Italy;

IAC-26.D2.4.10

THE ECONOMIC IMPERATIVE OF HIGH-ACCELERATION ELECTROMAGNETIC SPACE LAUNCH: A TECHNO-ECONOMIC ANALYSIS OF HUMAN-RATED INFRASTRUCTURE

Mr. Philip Swan, Redmond, United States;

D2.5. Technologies for Future Space Transportation Systems

October 7 2026, 15:00 — Hall 23

Co-Chair(s): Franck Koebel, ArianeGroup, France; Christophe Bonnal, European Conference for Aero-Space Sciences (EUCASS), France;

Rapporteur(s): Shoyo Hyodo, Mitsubishi Heavy Industries, Ltd., Japan; Shana Diez, SpaceX, United States;

IAC-26.D2.5.1

EVOLUTION FROM H3 TO NEXT GENERATION LAUNCH VEHICLE

Dr. Shoyo Hyodo, Mitsubishi Heavy Industries, Ltd., Nagoya city, Japan;

IAC-26.D2.5.2

A SYSTEMATIC METHODOLOGY FOR STAGE SEPARATION ANALYSIS OF MULTI-STAGE LAUNCH VEHICLES

Mr. Mücahit Furkan Önal, ROKETSAN Roket Sanayi ve Ticaret A.Ş., Ankara, Türkiye;

IAC-26.D2.5.3

DESIGN METHODOLOGY FOR A 100-TIME REUSABLE SPACE TRANSPORTATION SYSTEM

Dr. Rong Chen, China Academy of Launch Vehicle Technology, Beijing, China;

IAC-26.D2.5.4

DEVELOPMENT OF ROCKOON SYSTEM USING HYBRID ROCKET AND CMG-BASED ATTITUDE CONTROL DEVICE

Dr. Tadayoshi Shoyama, AstroX, Inc., Tokyo, Japan;

IAC-26.D2.5.5

JOINT OPTIMIZATION OF UPPER-STAGE TRAJECTORY AND SATELLITE RELEASE CONDITIONS FOR ACCELERATED CONSTELLATION DEPLOYMENT

Dr. Sai Chen, Zhejiang University, Hangzhou, China;

IAC-26.D2.5.6

AERODYNAMIC AND AEROTHERMODYNAMIC ANALYSIS OF THE HYPERSONIC FLIGHT TEST ATHEAT

Dr. Sebastian Willems, German Aerospace Center (DLR), Köln, Germany;

IAC-26.D2.5.7

LOSSLESS CONVEX OPTIMIZATION FOR REUSABLE LAUNCH VEHICLE REENTRY TRAJECTORY PLANNING WITH MULTIPLE CONSTRAINTS

Dr. Jun Zhang, Northwestern Polytechnical University, Xi'an, Shaanxi Province, China;

IAC-26.D2.5.8

GEORYDER SYSTEM-LEVEL VALIDATION OF EMBEDDED GUIDANCE AND NAVIGATION ALGORITHMS FOR AUTONOMOUS RENDEZVOUS AND DOCKING

Dr. Mauro Massari, Politecnico di Milano, Milan, Italy;

IAC-26.D2.5.9

A MULTIFACETED APPROACH TO ENABLING MULTI-MANIFEST LAUNCH AGILITY

Mr. Akhil Gujral, The Aerospace Corporation, El Segundo, United States;

IAC-26.D2.5.10

NUMERICAL INVESTIGATION OF AEROTHERMODYNAMIC CHARACTERISTICS IN THE SLIP-FLOW REGIME FOR AN AEROASSISTED ORBITAL TRANSFER VEHICLE AND PRELIMINARY ANALYSIS OF ITS PROPELLANT- SAVING CAPABILITY

Dr. Mingyue Lin, China Academy of Launch Vehicle Technology, Beijing, China;

D2.6. Future Space Transportation Systems Verification and In-Flight Experimentation

October 8 2026, 10:15 — Hall 23

Co-Chair(s): David E. Glass, National Aeronautics and Space Administration (NASA), United States; Mauro Augelli, UK Space Agency, United Kingdom;

Rapporteur(s): Christie Maddock, University of Strathclyde, United Kingdom; Tetsuo Hiraiwa, Japan Aerospace Exploration Agency (JAXA), Japan;

IAC-26.D2.6.1

THE REUSABILITY FLIGHT EXPERIMENT – REFEX: TRIMMING AND FULL SYSTEM BENCH TEST AS FINAL PREPARATION FOR FLIGHT

Dr. Martin Sippel, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Bremen, Germany;

IAC-26.D2.6.2

ASTRAL: A MISSION TO PERFORM THE FIRST HIGH PRESSURE REFUELLING AND DOCKING EXPERIMENT IN ORBIT VIA THE RAFTI INTERFACE

Mr. Sebastian Hill, Orbit Fab Ltd, Oxford, United Kingdom;

IAC-26.D2.6.3

DEVELOPMENT OF ROLL CONTROL SYSTEM FOR COLLEGIATE LIQUID PROPULSION LANDER VEHICLE

Ms. Lana Wurts, Viterbi School of Engineering, USC, Los Angeles, United States;

IAC-26.D2.6.4 (unconfirmed)

INTEGRATED DESIGN AND EXPERIMENTAL VALIDATION OF A COLD-GAS AUTONOMOUS VERTICAL LANDING FLIGHT VEHICLE

Mr. Fırat Mehmet Günkân, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.D2.6.6

LOW-COST ORBITAL TRANSFER VEHICLES FOR COMPLEX MISSIONS: DEVELOPMENT STATUS AND FUTURE DIRECTIONS

Ms. Xinyue Li, CAS Space, Beijing, China;

IAC-26.D2.6.7

STATE ESTIMATION AND FLIGHT CONTROLLER FOR A LIQUID PROPULSION HOPPER ROCKET: ARCHITECTURE AND VALIDATION

Mr. Noah Simon, Viterbi School of Engineering, USC, San Diego, United States;

IAC-26.D2.6.8

A HYBRID ROCKET–CUBESAT FLIGHT EXPERIMENT ARCHITECTURE FOR RAPID IN-FLIGHT VERIFICATION OF EMERGING SPACE TRANSPORTATION TECHNOLOGIES

Mrs. Miray İkra Yanlıç, Moscow Aviation Institute (National Research Institute, MAI), Moscow, Russian Federation;

D2.7. Suborbital Rockets and Small Launchers: Concepts, Technologies and Operations including Student Rocketry

October 8 2026, 15:00 — Hall 23

Co-Chair(s): Harry A. Cikanek, National Oceanic and Atmospheric Administration (NOAA), United States; Christian Corba, EUMETSAT, Germany;

Rapporteur(s): Joachim Despature, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland;

IAC-26.D2.7.1

ADVANCING HIGH-POWER ROCKETRY IN EMERGING ECOSYSTEMS: A RESOURCE-EFFICIENT METHODOLOGY FOR GEOMETRIC OPTIMIZATION AND STRUCTURAL INTEGRATION OF COMPOSITE FUSELAGES

Mr. Julio Morales, Universidad Nacional Autónoma de México (UNAM), Mexico city, Mexico;

IAC-26.D2.7.2

MISSION PLANNING AND PRELIMINARY DESIGN OF THE DECCAN-1M LAUNCH VEHICLE FOR DEDICATED MICROSATELLITE MISSIONS TO V-LEO

Mr. Rajesh Muneshwar, Nagpur, India;

IAC-26.D2.7.3

END-TO-END DEVELOPMENT AND FLIGHT VALIDATION OF AN 18,000 FT SUBORBITAL ROCKET POWERED BY A 1200 N N2O/JET-A1 LIQUID ENGINE

Mr. Erhan Şencan, Turkish Technology Team Foundation, Ankara, Türkiye;

IAC-26.D2.7.4

MODULAR ACTIVE CANARD STABILIZATION FOR LOW-VELOCITY SOUNDING ROCKETS: A LOW-COST APPROACH TO TRAJECTORY DISPERSION CONTROL

Ms. Melany Margarita Garro Velasquez, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.D2.7.5

ARTAM-II: TÜRKİYE'S HIGHEST-ALTITUDE AND HIGHEST TOTAL IMPULSE STUDENT-BUILT HYBRID ROCKET

Mr. Yiğit Kağan Meriç, Yıldız Technical University, Esenler, Türkiye;

IAC-26.D2.7.6

A HYBRID OPTIMIZATION METHOD FOR RAPID TRAJECTORY PLANNING OF SMALL LAUNCH VEHICLES

Dr. Jun Zhang, Northwestern Polytechnical University, Xi'an, Shaanxi Province, China;

IAC-26.D2.7.7

DESIGN GUIDELINES AND TRADE STUDY FOR METALLIC CRYOGENIC COMMON-BULKHEAD TANKS IN PRESSURE-FED SUBORBITAL ROCKETS

Mr. Mohamed-Sofiane Ferrani, McGill University, Montreal, Canada;

IAC-26.D2.7.9

SMALL LAUNCH VEHICLE FOR SENDING A 3U CUBESAT: FROM CONCEPTUAL TO PRELIMINARY DESIGN.

Mr. Irving Enrique Gomez Fernandez, Instituto Politécnico Nacional, Ciudad de México, Mexico;

IAC-26.D2.7.10

NUMERICAL ANALYSIS OF AERODYNAMIC STABILITY OF A TRANSONIC SOUNDING ROCKET WITH A STAGGERED FIN CONFIGURATION

Mr. Mikołaj Festo, Wrocław University of Science and Technology, Nowa Ruda, Poland;

IAC-26.D2.7.11

LOW-COST ACTIVE FLIGHT CONTROL USING CANARDS FOR SMALL SOLID ROCKETS: DESIGN, SIMULATION, AND FLIGHT VALIDATION

Mr. Angel Vázquez, High Technology Unit (UAT) Faculty of Engineering - UNAM, Mexico City, Mexico;

IAC-26.D2.7.12

SIMULATION AND VALIDATION OF ROCKET MODEL FOR THE DESIGN SUPPORT OF MULTI-IMU/GNSS NAVIGATION EXPERIMENTS

Mr. Tommaso Pantalani, Sapienza University of Rome, Rome, Italy;

D2.8. In-Space Transportation Solutions and Space Logistics

October 9 2026, 10:15 — Hall 23

Co-Chair(s): Akhil Gujral, The Aerospace Corporation, United States; Josef Wiedemann, Isar Aerospace Technologies GmbH, Germany;

Rapporteur(s): Élcio Jeronimo de Oliveira, Associazione Italiana di Aeronautica e Astronautica (AIDAA), Uruguay;

IAC-26.D2.8.1

FLARE-XL: UNIFYING LUNAR SURFACE-ORBIT LOGISTICS AND ORBITAL SERVICING WITH ISRU WATER-DERIVED PROPULSION

Mr. Thomas Suen, Bothell, WA, United States;

IAC-26.D2.8.2

THE DEPOT PROBLEM: WHY IN-SPACE REFUELLING INFRASTRUCTURE IS THE UNLOCKING CAPABILITY NOBODY IS FUNDING

Mr. Orestis Delardas, Individual collaboration, Welwyn Garden City, United Kingdom;

IAC-26.D2.8.3 (unconfirmed)

AI-OPTIMIZED SURFACE LOGISTICS NETWORK DESIGN FOR SCALABLE LUNAR AND MARTIAN SETTLEMENT OPERATIONS

Mr. Vishnurath Kadagadakai, Ramaiah Institute of Technology, Bangalore, India;

IAC-26.D2.8.5

DRIFT-AWARE MULTI-TARGET SPACE TUG LOGISTICS USING NATURAL ORBITAL PRECESSION

Mr. Kaan Göktürk, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.D2.8.6

ADAPTIVE PLANNING FOR LEO IN-ORBIT SERVICING: OPERATIONAL DECISION-MAKING AND STRATEGIC EVALUATION

Ms. Alice Caseiro, Delft University of Technology (TU Delft), Lisboa, Netherlands (Kingdom of the);

IAC-26.D2.8.7

A MILP-BASED DECISION MODEL FOR THE DESIGN OF A SUSTAINABLE ORBITAL FUELING INFRASTRUCTURE

Ms. Rabia Çok, Ankara Yıldırım Beyazıt University, Ankara, Türkiye;

IAC-26.D2.8.8

LUNAR GATEWAY EVOLUTION BY UTILIZING GLENNWAY ARCHITECTURE

Mr. Rok Kete, ILEWG "EuroMoonMars", Ajdovscina, Slovenia;

IAC-26.D2.8.9

GREEN SWAP – INNOVATIVE HYDROGEN PEROXIDE-HYDROGEN IN-SPACE WATER PROPULSION: SECOND YEAR PROJECT OVERVIEW

Dr. Angelo Pasini, University of Pisa, Pisa, Italy;

IAC-26.D2.8.10

A CONCEPTUAL WORKING PRINCIPLE FOR A REUSABLE LEO-BASED TRANSFER SYSTEM IN CIS-LUNAR LOGISTICS

Mrs. Bbegüm Ddinçsoy, Istanbul Technical University, İstanbul, Türkiye;

IAC-26.D2.8.11

GEOHEX - ORBITAL TRANSFER VEHICLE FOR GTO-TO-GEO TRANSFER SERVICES

Ms. Maria Casanovas Crespo, S.A.B. Aerospace s.r.o., Barcelona, Czech Republic;

IAC-26.D2.8.12

THE MISSING LINK TO SPACE SUPERIORITY: IN-ORBIT REFUELING

Mr. Marco Borghi, Novaspace, Brussels, Belgium;

IAC-26.D2.8.14

SPACE-BASED CARGO DELIVERY - ASSESSING CAPABILITIES AND OVERCOMING CHALLENGES

Mr. Akhil Gujral, The Aerospace Corporation, El Segundo, United States;

D2.9-D6.2. Sustainable Approaches and Impact of Space Transportation Solutions on Earth + Space Environment and on General Safety

October 9 2026, 13:45 — Hall 23

Co-Chair(s): Shana Diez, SpaceX, United States; Charles E. Cockrell Jr., United States;

Rapporteur(s): Francesco Santoro, Altec S.p.A., Italy; Jillian Yurich, SpaceX, United States;

IAC-26.D2.9-D6.2.1

CONTROLLED DRAINAGE PROCEDURE FOR LIQUID TOXIC FUEL RESIDUES FROM THE TANK OF A SEPARATED STAGE OF A LAUNCH VEHICLE ON THE DESCENT TRAJECTORY

Dr. Vladislav Urbansky, Omsk State Technical University, Omsk, Russian Federation;

IAC-26.D2.9-D6.2.2

BIOCHEMICAL EVALUATION OF KEROSENE FROM GREEN COCONUT AND BABASSU COCONUT RESIDUES FOR THE RENEWAL OF THE BRAZILIAN AEROSPACE ENERGY MATRIX

Mr. João Victor Alberto Cancissú, Federal University of Maranhão (UFMA), São Luís, Brazil;

IAC-26.D2.9-D6.2.3

FEASIBILITY STUDY OF A SOUNDING ROCKET FOR IN-SITU PLUME PROBING

Mr. Alessandro Perfetti, Politecnico di Milano, Apecchio, Italy;

IAC-26.D2.9-D6.2.5

SUSTAINABLE STRATEGIES FOR REDUCING THE ENVIRONMENTAL IMPACT OF SPACE TRANSPORTATION SYSTEMS

Mrs. Hande Özcelik, Universidad Estatal a Distancia (UNED), Vigo, Spain;

IAC-26.D2.9-D6.2.6

BREAKING THE HYDRAZINE BARRIER: A TECHNICAL AND POLICY FRAMEWORK FOR SUSTAINABLE GREEN PROPULSION ADOPTION IN EMERGING SPACE ECOSYSTEMS

Ms. Cansu Demiroğlu, Erciyes University, Ankara, Türkiye;

IAC-26.D2.9-D6.2.7

COMPARATIVE LIFE CYCLE ASSESSMENT OF LAUNCH VEHICLE OPERATIONS: LANDING METHODS AND MISSION PROFILES FOR FALCON 9 AND ARIANE

Mr. Ansgar Kirste, RWTH Aachen University, Aachen, Germany;

IAC-26.D2.9-D6.2.8

AUTONOMOUS POST-MISSION DEBRIS MITIGATION ARCHITECTURE FOR LAUNCH VEHICLE UPPER STAGES TO ENHANCE SUSTAINABILITY AND ORBITAL SAFETY

Mrs. Miray İkra Yanlıç, Moscow Aviation Institute (National Research Institute, MAI), Moscow, Russian Federation;

IAC-26.D2.9-D6.2.9

MODELLING AN END-TO-END SPACE TRANSPORTATION MISSIONS IN THE ASSESSMENT AND COMPARISON TOOL – ENVIRONMENTAL RESULTS, SOFTWARE CAPABILITIES, AND PERSPECTIVES

Mr. Marnix Hendrik Gustaaf Verkammen, EcoDeltaV Sàrl, Lausanne, Switzerland;

IAC-26.D2.9-D6.2.10

LIFE CYCLE ASSESSMENT RESULTS FOR SOAR CUBESAT AND LESSONS LEARNED

Ms. Mairi Johnston, University of Manchester, North Berwick, United Kingdom;

D3. 24th IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND DEVELOPMENT

Coordinator(s): John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States; Maria Antonietta Perino, Thales Alenia Space Italia, Italy;

D3.1. Strategies & Architectures as the Framework for Future Building Blocks in Space Exploration and Development

October 7 2026, 10:15 — Hall 24

Co-Chair(s): John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States; Maria Antonietta Perino, Thales Alenia Space Italia, Italy;

Rapporteur(s): Nasr Al-Sahhaf, Moon Village Association (MVA), Saudi Arabia;

IAC-26.D3.1.1

ENABLING EFFECTIVE AND TIMELY DEVELOPMENT: THE LUNAR RESEARCH PARK

Mr. John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, SANTA MARIA, United States;

IAC-26.D3.1.2

ENABLING SUSTAINABLE AND SERVICEABLE SPACE INFRASTRUCTURE: THE NEED FOR A MODULAR SATELLITE (MODSAT) DESIGN STANDARD FOR NEXT GENERATION OF SPACECRAFT

Mr. Sam Kurian, Cranfield University, Huntingdon, United Kingdom;

IAC-26.D3.1.3

COMEJÉN 2.0: AN INTEGRATED ISRU PLATFORM FOR AUTONOMOUS REGOLITH CHARACTERIZATION AND IN-SITU INFRASTRUCTURE FABRICATION

Prof. Rogelio Morales, Central University of Venezuela (UCV), Caracas, Venezuela;

IAC-26.D3.1.4

STRATEGIC ARCHITECTURAL BUILDING BLOCKS FOR LUNAR OPERATIONS: THE LUNAR INTEGRATED DATA REPOSITORY (LIDR) FRAMEWORK

Mr. Hassan Abouseada, Egyptian Space Agency (EgSA), Cairo, Egypt;

IAC-26.D3.1.5

AVOIDING INFRASTRUCTURE FRAGMENTATION IN THE EMERGING LUNAR ECONOMY: COORDINATION, STANDARDS, AND GOVERNANCE GAPS

Ms. Shreya Chandra, University of California, Davis, Dublin, CA, United States;

IAC-26.D3.1.6

THE STRATEGIC ROLE OF EMERGING LUNAR NAVIGATION AND COMMUNICATION SERVICES IN ENABLING SUSTAINABLE LUNAR AND CISLUNAR OPERATIONS

Mr. Francesco Ventre, ispace, inc., Luxembourg, Luxembourg ;

IAC-26.D3.1.7

TRANSLATING AUTONOMOUS RESEARCH ARCHITECTURES ACROSS EMERGING SPACEFLIGHT PLATFORMS

Dr. Danielle Rosales, Space Tango, Lexington, United States;

IAC-26.D3.1.8

PARAMETRIC ANALYSIS OF SPECIFIC MASS SCALABILITY FOR THE OPTIMIZATION OF SNEP HYBRID ARCHITECTURES WITH MPD PROPULSION

Mr. Daniel Castellano Guarachi, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.D3.1.9

COORDINATED LUNAR TIME: A FOUNDATION FOR MULTINATIONAL OPERATIONS

Ms. Ashling Sugarman, Pepperdine Law School, Malibu, CA, United States;

IAC-26.D3.1.10

BUILDING BLOCK STRATEGIES FOR TÜRKİYE'S EMERGING SPACE INDUSTRY

Mr. Hakan Yalcindag, TUBITAK Uzak, Space Technologies Research Institute, Ankara, Türkiye;

IAC-26.D3.1.11

PSYCHOLOGICAL SUSTAINABILITY IN MARS LAVA-TUBE UNDERGROUND ARCHITECTURE

Mrs. Leyla Aliyeva, Azerbaijan Architecture and Construction University (SABAH groups), Baku, Azerbaijan;

IAC-26.D3.1.12

INTEGRATION OF AN INTER ASSET NETWORK AND GROUND SEGMENT FOR LUNAR EXPLORATION

Mr. Manuel Diz-Folgar, University of Vigo, Vigo, Spain;

IAC-26.D3.1.13

ENABLING EXPLORATION FROM EARTH: AUSTRALIAN GROUND BASED TRACKING AND COMMUNICATIONS AS STRATEGIC BUILDING BLOCKS IN FUTURE SPACE ARCHITECTURES

Mr. Jeremy Butler, Canberra, Australia;

D3.2A. Systems and Infrastructures to Implement Sustainable Space Development and Settlement - Systems

October 7 2026, 15:00 — Hall 24

Co-Chair(s): Frank Preud'homme, Redwire Space, Belgium; Gary Barnhard, National Space Society, United States;

Rapporteur(s): Paivi Jukola, Aalto University, Finland;

IAC-26.D3.2A.1

CREATING OASIS: REVERSE ENGINEERING A SUSTAINABLE ARCHOLOGY ON THE MOON

Mr. Gary Barnhard, National Space Society, Cabin John, United States;

IAC-26.D3.2A.2

INTEGRATED SUBSURFACE-SURFACE LUNAR INFRASTRUCTURE: A SYSTEMS ENGINEERING TRADE STUDY ON LAVA TUBE UTILIZATION, LEGAL FRAMEWORK AND HEALTH-RISK MITIGATION

Ms. Auriane Thilloy, Université de Montréal, Montréal, Canada;

IAC-26.D3.2A.3

SABATIER-BASED ISRU ARCHITECTURE INTEGRATING PROPELLANT PRODUCTION AND REGOLITH SINTERING ON MARS

Mr. Serkan Savaşkan, Gazi University, Ankara, Türkiye; Ms. Zeynep Sude AKIN, Gazi University, ANKARA, Türkiye;

IAC-26.D3.2A.4

A MULTIDISCIPLINARY FRAMEWORK FOR SUSTAINABLE LUNAR DEVELOPMENT: INTEGRATING ISRU, CONSTRUCTION, ARCHITECTURE, AND AUTONOMOUS OPERATIONS

Prof. Rogelio Morales, Central University of Venezuela (UCV), Caracas, Venezuela;

IAC-26.D3.2A.5

A ROBUST, SOLAR-REGOLITH HYBRID ISRU ARCHITECTURE FOR METHANE PRODUCTION VIA RAW ATMOSPHERIC INTAKE AND SUBSURFACE WATER MINING ON MARS

Mr. Osaid Haimour, MENA ENGINEERING EDUCATION AND TRAINING, Amman, Jordan;

IAC-26.D3.2A.6

MODELLING AND SIMULATION OF A ROVER-ENABLED TRANSPORTATION NETWORK FOR SUSTAINED LUNAR SURFACE OPERATIONS

Mr. Rael Taylor-Sezgin, Cranfield University, Manuden, United Kingdom;

IAC-26.D3.2A.7

PORTABLE FOLDABLE REGOLITH-DUST SIMULATION LABORATORY FOR MARS-ANALOG TESTING

Ms. Cinthya Ariana Perez Cornejo, Intinauta Research Center, Lima, Peru;

IAC-26.D3.2A.8

FIRN & TARN: BERMED WATER-THERMAL UTILITY NODES FOR LUNAR NIGHT SURVIVAL, HEAT REJECTION, AND BANKABLE WATER RESERVES

Mr. Thomas Suen, Bothell, WA, United States;

IAC-26.D3.2A.9

STRATEGIC MASTER PLANNING FOR CONSTRUCTION OF COMPLEX INFRASTRUCTURE AND HABITATS

Ms. Paivi Jukola, Aalto University, Helsinki, Finland;

IAC-26.D3.2A.10

MODULAR ARCTIC AND LUNAR INFRASTRUCTURE: ADDRESSING CHALLENGES IN REMOTE AND HARSH ENVIRONMENTS

Mr. Eric Kwas, Matrix Gemini, Edmonton, Canada;

IAC-26.D3.2A.11

AUTONOMOUS ARTIFICIAL INTELLIGENCE FOR DRILLING AND WATER EXTRACTION ON MARS

Mr. Fariz Karimov, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

D3.2B. Systems and Infrastructures to Implement Sustainable Space Development and Settlement - Technologies

October 9 2026, 10:15 — Hall 24

Co-Chair(s): Raymond G. Clinton, NASA Marshall Space Flight Center, United States;

Rapporteur(s): Gary Barnhard, National Space Society, United States;

IAC-26.D3.2B.2

CARBON EXTRACTION FROM CO₂ PLASMA FOR IN-SITU RESOURCE UTILIZATION ON MARS

Mr. Paul Erik Hofmeyer, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-26.D3.2B.3

CLOSED-LOOP LIFE SUPPORT USING A SPIRULINA PHOTOBIOREACTOR UNDER 1/6G AND 3/8G: OXYGEN, NUTRITION, AND WASTE RECOVERY FOR MOON AND MARS

Mr. Syed Hayath, Bengaluru, India;

IAC-26.D3.2B.4

THE LUNAR OUTPOST EAGLE LTV – LUNAR SURFACE INFRASTRUCTURE TO EXPAND HUMAN & ROBOTIC EXPLORATION ON THE MOON

Mr. Andrew Gemer, Lunar Outpost Inc., Arvada, United States;

IAC-26.D3.2B.5

IF LUNAR NUCLEAR REACTORS FAIL: CONSEQUENCES AND SAFETY ZONES

Mr. Taylor Hampson, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.D3.2B.6

IN-SITU REGOLITH THERMAL ENERGY STORAGE FOR LUNAR NIGHTTIME POWER: A THERMOELECTRIC GENERATION CONCEPT FOR FUTURE MOON VILLAGE INFRASTRUCTURE

Mr. Tugcag DUMLUPINAR, INPE - National Institute for Space Research, Sao Paulo, Brazil; Ms. Akanksha Bhagat, Indian Institute of Technology, Bombay, Mumbai, India; Ms. Gagana Yuvaraju, R V College of Engineering, Bengaluru, Bangalore, India;

IAC-26.D3.2B.7

DEVELOPMENT OF MODULAR SELF-CONFIGURABLE ROBOTIC SYSTEM FOR AUTONOMOUS ASSEMBLY OF STRUCTURES IN MARS ENVIRONMENT.

Ms. Raghad Maraqa, Al Hussein Technical University, Amman, Jordan;

IAC-26.D3.2B.9

LUNAR-MAGWAY MK2: INTEGRATED ELECTRONICS AND AUTONOMOUS CONTROL ARCHITECTURE FOR LEVITATING LUNAR LOGISTICS VEHICLE

Mr. Denis Michael Acker, Institute of Space Systems, University of Stuttgart, Castle Hill, Sydney, Australia;

IAC-26.D3.2B.10

MAITRI ROBOTIC CO-PILOT FOR CREW ASSISTANCE AND EXPERIMENTAL OPERATIONS IN SPACE

Mr. Anand Nagesh, Bengaluru, India;

IAC-26.D3.2B.11

MULTI-ARM MANIPULATOR FOR LARGE ORBITAL TELESCOPE ASSEMBLY

Dr. Mathieu Deremetz, Space Applications Services, Sint-Stevens-Woluwe, Belgium;

IAC-26.D3.2B.12

BIO-INSPIRED CORRUGATED AIRFOIL CONFIGURATIONS FOR MARS ATMOSPHERIC FLIGHT: A COMPARATIVE CFD ANALYSIS AND SURROGATE-BASED OPTIMIZATION FRAMEWORK

Mr. Ahamed Waseem Areekadan, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.D3.2B.13

THE SPIN-DENSITY MODEL AS A FOUNDATIONAL PARADIGM FOR FUTURE SPACE CAPABILITIES: FROM FUNDAMENTAL PHYSICS TO TRANSFORMATIVE EXPLORATION ARCHITECTURES

Dr. Sergei Kupreev, Peoples' Friendship University of Russia (RUDN University), Moscow, Russian Federation;

D3.3. Space Technology and System Management Practices and Tools

October 9 2026, 13:45 — Hall 24

Co-Chair(s): Maria Antonietta Perino, Thales Alenia Space Italia, Italy; John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States;

Rapporteur(s): Paivi Jukola, Aalto University, Finland;

IAC-26.D3.3.1

A MANAGEMENT TOOL FOR MATERIAL CIRCULARITY IN SPACE PROGRAMS: A PASSPORT-BASED AND TECHNOLOGICAL-DELTA APPROACH

Dr. Rebecca Masia, Space It Up S.C.a r.l., Torino, Italy;

IAC-26.D3.3.3

MAKING EVE FAULT-TOLERANT: FDIR STRATEGY FOR THE PLANT-HARVESTING AUTONOMOUS ROBOTIC ASSISTANT IN FUTURE LUNAR GREENHOUSES

Mr. Andre Fonseca Prince, German Aerospace Center (DLR), Oberpfaffenhofen, Germany;

IAC-26.D3.3.4

ECOSYSTEM-AWARE DESIGN: FORMALIZING PROGRAMMATIC FRAGILITY IN EARLY-PHASE ECLSS SIZING FOR HUMAN LUNAR MISSIONS

Dr. Jasmine Rimani, Politecnico di Torino, Torino, Italy;

IAC-26.D3.3.5

DUAL-USE SPACE TECHNOLOGIES AND STRATEGIC AUTONOMY: A TREND-BASED FORESIGHT PERSPECTIVE TOWARD 2040

Mr. Hakan Yalcindag, TUBITAK Uzay, Space Technologies Research Institute, Ankara, Türkiye;

IAC-26.D3.3.6

A STUDY ON THE ECONOMIC EFFECTIVENESS AND TICKET PRICE ISSUES OF CURRENT SUBORBITAL SPACE TOURISM PROGRAMS

Prof. Eva Yi-Wei Chang, Minghsin University of Science & Technology, Xinfeng Village, Hsinchu County;

IAC-26.D3.3.7

COMMUNITY SPACE EXPLORATION: A THIRD PILLAR OF HUMANITY'S PRESENCE BEYOND EARTH

Mr. Louis Li, Innovaspace UK, Shanghai, China;

IAC-26.D3.3.9

BEYOND INSTITUTIONAL FRAMEWORKS: SYSTEMS ENGINEERING AND PROGRAMMATICS FOR THE LIFE SPACE MISSION

Mr. Maximilian Kirchhoff, ETH Zurich, Zurich, Switzerland;

IAC-26.D3.3.10

BUILDING TOWARDS TRANSPARENT AUTONOMY: PROTOTYPING EXPLAINABLE LLM-ASSISTED DECISION SUPPORT SYSTEMS FOR SPACE STATION MANAGEMENT USING COTS HARDWARE

Mr. Harlee Quizzagan, Space Generation Advisory Council (SGAC), Makati City, Philippines;

IAC-26.D3.3.11

FROM HIGH HEIGHTS TO ORBITAL OPERATIONS: SCALE PROPOSAL TO ANALYZE AND EVALUATE THE READINESS, SCALABILITY AND MATURITY OF SPACEPORTS GOING FROM SUBORBITAL TO ORBITAL LAUNCH OPERATIONS SUPPORT

Ms. Melissa Cardona, Universidad de Antioquia, Rionegro, Colombia;

IAC-26.D3.3.12

STRATEGIC PLANNING FOR HUMAN SPACEFLIGHT AND THE BUILT ENVIRONMENT - THE TRL TECHNOLOGY READINESS LEVEL FRAMEWORK - WHEN A BUILDING BECOMES A MACHINE; MACHINES BECOME LIVING ENVIRONMENTS

Ms. Paivi Jukola, Aalto University, Helsinki, Finland;

D4. 24th IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE

Coordinator(s): Giuseppe Reibaldi, Moon Village Association (MVA), Austria; Shuai Yuan, Harbin Institute of Technology, China;

D4.1. Innovative Concepts and Technologies

October 5 2026, 16:30 — Hall 24

Co-Chair(s): Alessandro Bartoloni, National Institute of Nuclear Physics - INFN, Italy; Ulpia Elena Botezatu, Romanian Space Agency (ROSA), Romania;

Rapporteur(s): Timothy Cichan, Lockheed Martin Corporation, United States;

IAC-26.D4.1.1

TOWARDS A ONE-HEALTH ASTROMYCOLOGY ROADMAP FOR SUSTAINABLE LUNAR PRESENCE

Prof. Marta Filipa Simões, State Key Laboratory of Lunar and Planetary Sciences, Macau University of Science and Technology (MUST), Taipa, Macao SAR, China;

IAC-26.D4.1.2

DESIGN, PROTOTYPING AND VALIDATION OF A SOLAR-SAIL DEPLOYMENT MECHANISM FOR PLANETARY SUNSHADE PRECURSOR MISSIONS

Mr. Christian Bellinazzi, Politecnico di Torino, Rivalta di Torino, Italy;

IAC-26.D4.1.3

HIGH-AVAILABILITY INDUSTRIAL SERVICES BY FUNCTION-AS-A-SERVICE IN SATELLITE COMPUTING NETWORKS

Ms. Elizaveta Boriskova, Siemens AG, Munich, Germany;

IAC-26.D4.1.4

FIBER OPTIC DISTRIBUTED ACOUSTIC SENSING FOR STRUCTURAL HEALTH MONITORING AND ANOMALY DETECTION IN SPACE SYSTEMS

Ms. Kamila Rahimova, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-26.D4.1.5

MASHMO: A RECONFIGURABLE TENSEGRITY ROBOTIC ARCHITECTURE FOR EXTREME LUNAR AND PLANETARY SUBSURFACE EXPLORATION

Mr. Alexis Francisco Sosa Zamora, Facultad de Ingeniería-UNAM, Mexico City, Mexico;

IAC-26.D4.1.6

RADIATION-RESILIENT DNA DATA STORAGE VIA GENOME INTEGRATION IN DEINOCOCCUS RADIODURANS USING METAHEURISTIC OPTIMIZATION ALGORITHMS

Dr. Beyza Öztürk, Istanbul Atlas University, Bağcılar, Türkiye;

IAC-26.D4.1.7

FROM ANALOG FACILITIES TO INTEGRATED LUNAR SIMULATION PLATFORMS

Mr. Lapo Calosci, Moon Village Association (MVA), Florence, Italy;

IAC-26.D4.1.8

COMPLEX ADAPTIVE EXPLORATION: ENGINEERING EMERGENT BEHAVIOR IN ROBOTIC SWARMS FOR HIGH-UNCERTAINTY ENVIRONMENTS

Prof. Rogelio Morales, Central University of Venezuela (UCV), Caracas, Venezuela;

IAC-26.D4.1.9

AI-ENHANCED ATTITUDE AND ORBITAL CONTROL OF A VERY LARGE GEOSTATIONARY SPACE DATA CENTRE

Mr. Yarkin Eser, University of Bristol, Bristol, United Kingdom;

IAC-26.D4.1.10

FROM PAST TO FUTURE FRONTIERS: SPACE NEUROSCIENCE

Ms. MARALGÜL EROL, ANKARA, Türkiye;

IAC-26.D4.1.11

ORBIT-CAP:

Ms. Elis Liya SARIKAYA, Efeler, Türkiye;

IAC-26.D4.1.12

MARSDAO: BLOCKCHAIN CONSTITUTIONAL ARCHITECTURE FOR SELF-SOVEREIGN MARTIAN CIVILIZATION

Mr. Boris Petrovic, Belgrade, Serbia;

IAC-26.D4.1.13

URBAN FUTURISM: A REVIEW OF STRATEGIC PLANNING FOR SELF-SUSTAINING EXTRATERRESTRIAL SETTLEMENTS

Mr. Onur Özçatalbaş, Akdeniz University, Antalya, Türkiye;

D4.2. Contribution of Moon Village technologies and activities to Humanity Challenges

October 6 2026, 10:15 — Hall 24

Co-Chair(s): Giuseppe Reibaldi, Moon Village Association (MVA), Austria; Xiaowei WANG, China Academy of Launch Vehicle Technology (CALT), China;

Rapporteur(s): Paivi Jukola, Aalto University, Finland;

IAC-26.D4.2.1

DE-ORBIT DISPOSAL OF SPACECRAFT IN LUNAR ORBITS: CURRENT STATUS AND A WAY FORWARD

Mr. Hui Du, Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST), Beijing, China;

IAC-26.D4.2.2

INTEROPERABILITY IN THE EMERGING LUNAR OPERATIONAL ENVIRONMENT: FROM TECHNICAL COMPATIBILITY TO OPERATIONAL COORDINATION

Dr. Ulpia Elena Botezatu, Romanian Space Agency (ROSA), Bucuresti, Romania;

IAC-26.D4.2.3

EVOLUTION OF JAPAN'S LUNAR INDUSTRY VISION: FROM PLANET 6.0 TO COMMERCIAL ECOSYSTEM DEVELOPMENT

Mr. TAKAHIRO NAKAMURA, Tokyo, Japan;

IAC-26.D4.2.4

LUNAR INDUSTRIAL DEVELOPMENT AND ITS CONTRIBUTIONS TO SOLVING EARTH'S CHALLENGES

Mr. Satoru Kurosuo, Cross Space & Sustainability, LLC, Saitama, Japan;

IAC-26.D4.2.5

ACHIEVEMENTS AND INNOVATION: THE 5TH PROMOMOON INITIATIVE FOR THE MOON VILLAGE GENERATION

Dr. Iryna Husarova, Yuzhnoye State Design Office, Dnipro, Ukraine;

IAC-26.D4.2.6

SITES OF SPECIAL SCIENTIFIC INTEREST ON THE MOON: OPERATIONALIZING SCIENTIFIC PRESERVATION IN AN ERA OF EXPANDING LUNAR ACTIVITY

Dr. Ulpia Elena Botezatu, Romanian Space Agency (ROSA), Bucuresti, Romania;

IAC-26.D4.2.7

OPEN AFRIKA SPACE EXPLORATION & ANALOG SIMULATION INITIATIVE: DEVELOPMENT OF AFRICA'S FIRST LUNAR ANALOG ECOSYSTEM FOR EXPLORATION AND SETTLEMENT

Dr. Claire Nelson, The Futures Forum, Jamaica;

IAC-26.D4.2.8

MOONARCH: CULTURAL AND TECHNOLOGICAL INFRASTRUCTURE FOR THE MOON VILLAGE – A REGOLITH-BASED URBAN HABITAT SYSTEM FOR LONG-TERM HUMAN SUSTAINABILITY

Ms. Ayse Oren, Istanbul, Türkiye;

IAC-26.D4.2.9

FROM ISLAND ANALOGS TO MOON VILLAGE: A REVENUE, SCIENCE, AND CULTURE OPTIMIZATION FRAMEWORK INFORMED BY HAWAII HUMAN SPACEFLIGHT AND INTERNATIONAL ECLIPSE FESTIVALS

Mr. Ari Eisenstat, University of Hawaii, Honolulu, United States;

IAC-26.D4.2.10

DEMONSTRATION OF ELECTRON-BEAM WELDING OF REGOLITH-BASED BUILDING MATERIALS FOR ON-SITE LUNAR CONSTRUCTION

Mr. Shogo Onishi, Space Quarters Inc., Kawasaki-shi, Japan;

IAC-26.D4.2.11

ASTRAX LUNAR CITY PROJECT 2026: COMMUNITY MANAGEMENT CONCEPT FOR IMPROVING LUNAR LIFE USING THE ASTRAX LUNAR CITY SIMULATION FACILITY

Ms. Taiko Kawakami, ASTRAX, Inc., Bunkyo-ku, Tokyo, Japan;

IAC-26.D4.2.12

EX ANTE RISK ALLOCATION AMONG PRIVATE SECTORS IN LUNAR RESOURCE DEVELOPMENT THROUGH CONTRACT

Mr. Hinata Oshima, Nakamura Tsunoda & Matsumoto, Tokyo, Japan;

IAC-26.D4.2.13

LUNAR HELIUM-3: A COMMERCIALY SCALABLE EXTRACTION ARCHITECTURE FOR FUSION ENERGY, QUANTUM COOLING, AND A PERMANENT LUNAR ECONOMY

Dr. Chris Salvino, Scottsdale, United States;

IAC-26.D4.2.14

LUNAR BASED QUANTUM INFRASTRUCTURE: LEVERAGING DEEP SPACE PASSIVE COOLING FOR THERMODYNAMIC EFFICIENCY AND SCALABILITY OF SUPERCONDUCTING QUBITS.

Ms. Amine Ceyda Çalışkan, Darüşşafaka High School, Istanbul, Türkiye;

D4.3. The Modern Day Space Elevator as a Permanent Transportation Infrastructure

October 6 2026, 15:00 — Hall 24

Co-Chair(s): Peter Swan, Space Elevator Development Corporation, United States; Yoji Ishikawa, Obayashi Corporation, Japan; John Knapman, International Space Elevator Consortium, United Kingdom;

Rapporteur(s): Masashi Kamogawa, Tokyo Gakugei University, Japan;

IAC-26.D4.3.1

KEYNOTE: "JEROME PEARSON MEMORIAL LECTURE" - MANAGEMENT OF THE SPACE ELEVATOR CONSTRUCTION PROJECT AND ITS DEVELOPMENT PROCESS

Dr. Yoji Ishikawa, Obayashi Corporation, Tokyo, Japan;

IAC-26.D4.3.3

ROLES OF MODERN-DAY SPACE ELEVATOR SPACEPORTS

Dr. John Knapman, International Space Elevator Consortium, Chandlers Ford, United Kingdom;

IAC-26.D4.3.4

INTRODUCTION OF THE IAA COMMITTEE ON SPACE ELEVATORS

Mr. Akira Tsuchida, Kobe, Japan;

IAC-26.D4.3.5 (unconfirmed)

REINFORCEMENT LEARNING-ASSISTED MISSION SEQUENCE PLANNING FOR PARTIAL SPACE ELEVATOR MAIN SATELLITE ORBITAL STABILITY

Dr. Gefei Shi, Sun Yat-sen University (Guangzhou), Guangzhou, China;

IAC-26.D4.3.6

SOLAR POWER FOR SPACE ELEVATORS

Dr. John Knapman, International Space Elevator Consortium, Chandlers Ford, United Kingdom;

IAC-26.D4.3.8

DRIVING CHARACTERISTICS OF SPACE ELEVATOR CLIMBER IN HIGH VACUUM ENVIRONMENT

Ms. Momoe Terata, Shonan Institute of Technology, Kanagawa, Japan;

IAC-26.D4.3.9

A PHYSICS-INFORMED NEURAL NETWORK FRAMEWORK FOR DYNAMIC ANALYSIS OF SPACE ELEVATOR TETHERS

Mr. Yunosuke Kudo, Tohoku University, Sendai, Japan;

IAC-26.D4.3.10

BEYOND THE PERFECT MATERIAL: A DEFECT-TOLERANT GRAPHENE HYBRID CONCEPT FOR SPACE ELEVATOR CABLES

Ms. Zahida Mirzayeva, Azerbaijan State University of Economics, Baku, Azerbaijan;

IAC-26.D4.3.11

DEFECT TOLERANCE IN A SPACE-ELEVATOR TETHER

Dr. John Knapman, International Space Elevator Consortium, Chandlers Ford, United Kingdom;

IAC-26.D4.3.12

STUDY OF THE STRENGTHENING MECHANISM OF INITIAL SPACE ELEVATOR TETHER AND SPECIALIZED REPAIR CLIMBER BASED ON THIS MECHANISM

Prof. Fumihito Inoue, Shonan Institute of Technology, Kanagawa, Japan;

IAC-26.D4.3.13

A DATA-DRIVEN FRAMEWORK FOR SPACE ELEVATOR PORT ACCESSIBILITY BASED ON LEO DYNAMICS

Mr. Akinari OGAWA, Tohoku University, Sendai, Japan;

IAC-26.D4.3.14

LIGHTNING CURRENT CHARACTERISTICS DERIVED FROM ELF OBSERVATIONS FOR ASSESSING SPACE ELEVATOR ANCHOR SITE LOCATIONS

Prof. Masashi Kamogawa, University of Shizuoka, Shizuoka, Japan;

IAC-26.D4.3.15

LIFTOFF ELEVATOR: A RESILIENT ALTERNATIVE TO SPACE ELEVATOR AND FUEL-FREE INTERPLANETARY LAUNCH CAPABILITY. ACTION PLAN, MASS-ENERGY BUDGET AND FEASIBILITY ASSESSMENT

Mr. Ole Babanin, Independent Researcher, m.Chayki Buchanskiy distr, Ukraine;

IAC-26.D4.3.17 (unconfirmed)

THE MOST IMPORTANT SPACE TRANSPORT OF THE FUTURE: THE SPACE ELEVATOR

Mrs. Dilbar Müslümzadə, Baku State University, BAKU, Azerbaijan;

D4.4. Interstellar Exploration - Strategies, Capabilities and Opportunities

October 8 2026, 10:15 — Hall 24

Co-Chair(s): Mae Jemison, 100 Year Starship, United States;
Giancarlo Genta, Politecnico di Torino, Italy;

Rapporteur(s): Les Johnson,, United States;

IAC-26.D4.4.1

TOWARD THE STARS: A FRAMEWORK FOR INTERSTELLAR PROPULSION AND ENERGY FINDINGS FROM THE HOWARD UNIVERSITY WORKSHOP

Prof. Sonya Smith, Howard University, Washington, DC, United States;

IAC-26.D4.4.2

PROSPECTS FOR USING NUCLEAR ELECTRIC PROPULSION FOR AN INTERSTELLAR PROBE

Dr. Ralph L. McNutt, The John Hopkins University, Laurel, MD, United States;

IAC-26.D4.4.4

A UNIFIED MULTI-OPERATIONAL PROPULSION ARCHITECTURE FOR AUTONOMOUS AI-DRIVEN INTERSTELLAR PROBES

Mr. Nizami Rzayev, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-26.D4.4.5

AUTOPHAGIC AND SELF-RECONFIGURING ARCHITECTURES FOR LONG-DURATION INTERSTELLAR EXPLORATION

Haroon B. Oqab, Space Canada Corporation, Canada;

IAC-26.D4.4.6

INTERSTELLAR COLONIZATION USING SPACE ARKS

Prof. Giancarlo Genta, Politecnico di Torino, Torino, Italy;

IAC-26.D4.4.7 (unconfirmed)

INCLUSIVE ENGINEERING EDUCATION FOR THE FUTURE OF HUMANITY IN SPACE

Prof. Dr. Lizbeth Goodman, Smartlab, Dublin, Ireland;

IAC-26.D4.4.8

AUTONOMOUS CIVILIZATION ARCHITECTURES FOR INTERSTELLAR EXPLORATION: BIOLOGICAL MASS MINIMIZATION, QUANTUM NAVIGATION, AND REGENERATIVE SUSTAINABILITY

Mr. Scott Rodriguez, Voyager Technologies, Webster, United States;

IAC-26.D4.4.9

INTERSTELLAR DESIGN STRATEGIES: A PRACTICAL FRAMEWORK FOR A MULTI-DISCIPLINARY, HUMAN-CENTERED PROCESS.

Dr. Karl Aspelund, The University of Rhode Island, Kingston, United States;

IAC-26.D4.4.10

BIOMATERIAL AND TISSUE ENGINEERING STRATEGIES FOR INFECTION CONTROL AND WOUND HEALING DURING LONG-DURATION SPACEFLIGHT

Prof. Dr. Ronke Olabisi, University of California, Irvine, Irvine, United States;

IAC-26.D4.4.11

VIRTUAL HUMAN: TOWARD THE DEVELOPMENT OF AN INDEPENDENT DEEP SPACE AND INTERSTELLAR HUMAN HEALTH INFRASTRUCTURE

Dr. Mae Jemison, 100 Year Starship, United States;

IAC-26.D4.4.12

AN EDGE-BASED ROUTING ARCHITECTURE FOR UNCHARACTERIZED INTERSTELLAR ENVIRONMENTS

Ms. Megan Pouncy, University of Michigan, Ann Arbor, New Baltimore, United States;

IAC-26.D4.4.13

THE SPIN-DENSITY MODEL AS A FOUNDATIONAL PARADIGM FOR INTERSTELLAR FLIGHT: ENABLING TECHNOLOGIES AND STRATEGIC ROADMAPS FOR THE 22ND CENTURY AND BEYOND

Dr. Sergei Kupreev, Peoples' Friendship University of Russia (RUDN University), Moscow, Russian Federation;

IAC-26.D4.4.14

EXPLORING HIGHER-DIMENSIONAL SPACETIME CONCEPTS FOR FUTURE INTERSTELLAR NAVIGATION

Mr. Ayush Bhatt, New Delhi, India;

IAC-26.D4.4.15

FROM DISCOVERY SCIENCE TO DECISION SCIENCE: SYSTEMATIC EVIDENCE SYNTHESIS FOR FUTURE INTERSTELLAR MISSIONS

Dr. Mona Nasser, University of Plymouth, plymouth, United Kingdom;

D4.5. Space Resources, the Enabler of the Space Exploration

October 8 2026, 15:00 — Hall 24

Co-Chair(s): Roger X. Lenard, LPS, United States; Mark Sundhal, Cleveland State University, United States;

Rapporteur(s): Güneş Ünüvar, University of Exeter, United Kingdom;

IAC-26.D4.5.1

LUNAR REGOLITH TO STRUCTURAL ALLOYS AND LOX: AN INTEGRATED MULTI-SITE ISRU FRAMEWORK FOR MINERALOGICAL GRADING, ORE PROCESSING, AND ENERGY PLANNING

Ms. Yagmur Arzum Kaya, University of Turkish Aeronautical Association, Ankara, Türkiye;

IAC-26.D4.5.3

STRUCTURAL ANALYSIS UNDER COMBINED LOADS OF A HELICAL EXTRACTION DEVICE IN A MARTIAN ENVIRONMENT

Ms. Mariel Antonella Huaranca Chilquillo, Universidad Nacional Mayor de San Marcos, Lima cercado, Peru;

IAC-26.D4.5.4

TITLE TRANSFER IN TRANSITU: THE SPACE BILL OF LADING AS A LEGAL FOUNDATION FOR THE EARTH-MOON ECONOSPHERE

Mr. Lucillien Denoyelle, Université Paris 1 Panthéon-Sorbonne, Paris, France;

IAC-26.D4.5.5

TOWARDS SPACE SALVAGE NORMS

Ms. Rebecca Palmer, Georgia Institute of Technology, Atlanta, United States;

IAC-26.D4.5.6

SPACE RESOURCES AS A FOUNDATIONAL CAPABILITY FOR THE FUTURE OF SPACE EXPLORATION

Ms. ERNESTINA BINNI, European Space Resources Innovation Centre (ESRIC), L4592, Luxembourg ;

IAC-26.D4.5.7

THE EUROPEAN UNION AND THE INTERNAL MARKET OF THE MOON: INVESTIGATING ARTICLE 114 TFEU AS AN ENABLER FOR SPACE RESOURCES GOVERNANCE

Ms. Cecilia Nota, CENTRE FOR HIGHER DEFENCE STUDIES (CASD)-SCHOOL OF ADVANCED DEFENCE STUDIES (SSUOS), Rivoli, Italy;

IAC-26.D4.5.8

COMMERCIAL AUTONOMOUS LUNAR SURFACE OPERATIONS: AI-DRIVEN ROVERS FOR SCALABLE EXPLORATION AND RESOURCE UTILIZATION

Ms. Wanjiku Chebet Kanjumba, University of Florida, Vicillion, Gainesville, United States;

IAC-26.D4.5.10

ASTEROID EXPLORATION AS A PRECURSOR TO SPACE RESOURCE GOVERNANCE: LEGAL AND POLICY PATHWAYS EMERGING FROM STATE-LED MISSIONS

Mrs. Malak Trabelsi Loeb, Moon Village Association (MVA), Dubai, United Arab Emirates;

IAC-26.D4.5.11

SPACE GAS STATIONS: A PRECURSOR STUDY OF ONBOARD PROCESSING OF ASTEROID REGOLITH FOR ROCKET FUEL

Mr. Alex McDougall-Page, University of Strathclyde, Glasgow, United Kingdom;

IAC-26.D4.5.12

BEYOND THE FINAL FRONTIER: REFRAMING NON-APPROPRIATION FOR THE EARTH-MOON ECONOMY

Mrs. Jiang Qian, China Great Wall Industry Corporation (CGWIC), Beijing, China;

IAC-26.D4.5.13

AUTONOMOUS AI-DRIVEN SPACE RESOURCE EXTRACTION ARCHITECTURES FOR LUNAR AND ASTEROID INDUSTRIAL ECOSYSTEMS

Mrs. SALAM ABUALHAYJA'A, MENA ENGINEERING EDUCATION AND TRAINING, Irbid, Jordan;

IAC-26.D4.5.14

STRATEGIC EVALUATION OF ASTEROID RESOURCES FOR FUTURE SPACE INDUSTRY AND COLONIZATION

Ms. Elza Suleymanova, Azerbaijan State Oil and Industry University (SABAH Groups), Absheron, Azerbaijan;

IAC-26.D4.5.15

HOW MANY LITRES IN ONE LUNAR BARREL? QUANTIFYING LUNAR ICE FOR LEGAL CLARITY AND COMMERCIAL EFFICIENCY

Mr. Scott Scoular, Institute of Air and Space Law, McGill University, Aberdeen, United Kingdom;

D5. 59th IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE ACTIVITIES

Coordinator(s): Jeanne Holm, University of California, Los Angeles (UCLA), United States; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;

D5.1. For a successful space program: Quality and Safety!

October 7 2026, 10:15 — G2

Co-Chair(s): Alexander S. Filatyev, Lomonosov Moscow State University, Russian Federation; Kaitlyn Holm, University of Pennsylvania, United States;

IAC-26.D5.1.1 (unconfirmed)

A TRUSTWORTHINESS ASSESSMENT FRAMEWORK FOR AI SYSTEMS IN SPACE OPERATIONS: BRIDGING ECSS STANDARDS, REGULATORY REQUIREMENTS, AND OPERATIONAL REALITY

Ms. İlhami Novruzova, Baku, Azerbaijan;

IAC-26.D5.1.2

FROM PILOT INTUITION TO AUTONOMOUS LOGIC: A BIOMIMETIC DECISION ARCHITECTURE FOR AUTONOMOUS SPACECRAFT BASED ON SIV SURVIVAL STRATEGIES.

Mr. Recep Sel, Cukurova University, Adana, Türkiye;

IAC-26.D5.1.3

SOFTWARE COMPLEXITY AS A DRIVER OF OBSOLESCENCE IN LONG-DURATION SPACE MISSIONS

Ms. Rashika Sugganahalli Natesh Babu, Stevens Institute of Technology, Jersey City, United States;

IAC-26.D5.1.4

AN EXPLAINABLE ARTIFICIAL INTELLIGENCE APPROACH TO DEEP LEARNING-BASED FAULT DIAGNOSIS IN AUTONOMOUS SPACE OPERATIONS

Ms. İkbālur Ozkan, Erzurum Technical University, Erzurum, Türkiye;

IAC-26.D5.1.5

AN INTEGRATED HUMAN-MACHINE SAFETY FRAMEWORK FOR DEEP-SPACE CREWED SPACECRAFTS

Mr. KangSan Kim, National Space Society, Incheon, Republic of Korea;

IAC-26.D5.1.6

APPLICATION OF RELIABILITY ENHANCEMENT TESTS BASED ON EXTREMELY SMALL SAMPLES ON ELECTRICAL PRODUCTS FOR CHINA'S FIRST LOX/LCH4 REUSABLE LAUNCH VEHICLE (ZQ-3)

Mr. Tengyue HU, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-26.D5.1.7

CHESA : STANDARDISATION, REGULATION AND TRANSFER OF EXPERIMENTS IN ANALOGUE MISSIONS FOR ESA SPACE MOON AND MARS HUMAN EXPLORATION ADVANCEMENT

Dr. Eleonore Poli, Centre Suisse d'Electronique et de Microtechnique SA (CSEM), Lausanne, Switzerland;

IAC-26.D5.1.8

AUDIT-READY ASSURANCE FOR ONBOARD AI IN SPACE MISSIONS WITH KRI-STD-001

Mr. Sylvester Kaczmarek, Imperial College London, London, United Kingdom;

IAC-26.D5.1.9

INTELLIGENT VISUAL EARLY WARNING SYSTEM WITH CONTEXT-WEIGHTED DYNAMIC RISK SCORING AND MULTI-SENSOR FUSION: AN INTEGRATED APPROACH FOR SPACE-GROUND OPERATIONS

Ms. Şevval Ece KILINÇER, Baykar Science High School, Başakşehir, Türkiye;

IAC-26.D5.1.10

EXPLORING RISK MANAGEMENT FRAMEWORK FOR A LUNAR ISRU PLANT ~ FROM THE VIEWPOINT OF THE PROCESS INDUSTRY ~

Mrs. Miho Masugi, JGC Corporation, Yokohama, Japan;

IAC-26.D5.1.11

AI-BASED INFRARED INSPECTION OF SATELLITE SOLAR CELLS FOR HIGH-RECALL SPACE MANUFACTURING QUALITY ASSURANCE

Ms. Patrizia Ferrini, TXT E-Tech, Milan, Italy;

IAC-26.D5.1.12

ADAPTING ECSS Q-BRANCH FOR NEW SPACE: IMPLEMENTATION AND LESSONS LEARNED FROM THE ANSER PROGRAMME

Mrs. Amaia Santiago Pé, National Institute for Aerospace Technology (INTA), Torrejón de Ardoz, Spain;

IAC-26.D5.1.13

GLOBAL SENSITIVITY ANALYSIS OF FAULT PROPAGATION IN SATELLITE FORMATION ADCS: IDENTIFYING FAILURE-PRONE REGIMES UNDER PROGRESSIVE ACTUATOR DEGRADATION

Ms. ZEHRİ Baydur, Cukurova University, İstanbul, Türkiye;

IAC-26.D5.1.14

LIFETIME PREDICTION OF AEROSPACE SOLID-STATE DRIVES BASED ON DOMAIN ADAPTATION

Dr. Yuanhong Mao, Xi'an Microelectronics Technology Institute, CASC, Xi'an, China;

IAC-26.D5.1.15

A LEAN APPROACH TO SUPPLIER PRODUCT ASSURANCE IN SATELLITE PROJECTS

Dr. Aylin Konez Eroglu, OHB System AG-Bremen, Bremen, Germany;

D5.2. Emerging trends of knowledge management in organizations

October 6 2026, 10:15 — G2

Co-Chair(s): Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom; Jeanne Holm, University of California, Los Angeles (UCLA), United States;

Rapporteur(s): Daniel Galarreta, retired from CNES, France;

IAC-26.D5.2.1

MONITORING THE SCIENTIFIC OUTPUT AND TECHNOLOGICAL READINESS LEVEL IN THE SPACE IT UP! NATIONAL SPACE PARTNERSHIP

Dr. Mirco Bartolomei, Space It Up S.C.a r.l., Torino, Italy;

IAC-26.D5.2.2

A SOCIO-TECHNICAL SYSTEM ARCHITECTURE APPROACH FOR SPACE PROGRAM MANAGEMENT

Dr. Gülseren Sakarya, Ministry of Industry and Technology of Türkiye, Istanbul, Türkiye;

IAC-26.D5.2.3

CROSSING THE SPACE DATA GAP: PRACTICAL PATHWAYS FOR DEVELOPING COUNTRIES

Ms. Kaitlyn Holm, University of Pennsylvania, Bryn Mawr, United States;

IAC-26.D5.2.4

OPERATIONALISING AI-ASSISTED DISSENT AND ALIGNMENT MECHANISMS TO MITIGATE KNOWLEDGE ENTROPY FOR COLLECTIVE INTELLIGENCE OF DISTRIBUTED SPACE COMMUNITIES: LESSONS LEARNED FROM V-ORBIT-LM

Mr. Harlee Quizzagan, Space Generation Advisory Council (SGAC), Makati City, Philippines;

IAC-26.D5.2.5

AN AI AGENT-DRIVEN KNOWLEDGE MANAGEMENT FRAMEWORK FOR MAPPING NATIONAL SPACE CAPABILITIES TO GLOBAL TAXONOMIES: A PROOF OF CONCEPT ON LUNAR LANDING DYNAMICS

Ms. Dahyun Lee, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

IAC-26.D5.2.6

PROGRESS AND FUTURE DIRECTIONS OF THE SPACE SUSTAINABILITY TASK FORCE (SSTF) BY NASA, ESA, AND JAXA

Dr. Kumi Nitta, Japan Aerospace Exploration Agency (JAXA), Tsukuba-shi, Japan;

IAC-26.D5.2.7

RAG BASED LLM FOR SPACE SETTLEMENT MODULE PLANNING: A DOMAIN-SPECIFIC ARCHITECTURAL DECISION SUPPORT ASSISTANT

Mr. Utku Alperen ŞEN, Akdeniz University, Antalya, Türkiye;

IAC-26.D5.2.8

WHAT THE SECTOR ALREADY KNOWS: KNOWLEDGE MANAGEMENT FRAMEWORKS FOR SPACE CYBERSECURITY INCIDENT SHARING

Mrs. Fidan Huseynova, Caspel LLC, Baku, Azerbaijan;

IAC-26.D5.2.9

CODIFYING THE SPACE ENGINEERING MIND: EXECUTABLE SKILL MODULES FOR HUMAN-AI KNOWLEDGE MANAGEMENT

Mr. Rod Mamin, LunCo, Apatin, Serbia;

IAC-26.D5.2.10

OPERATIONAL KNOWLEDGE MANAGEMENT FOR ONBOARD AI IN SPACE WITH A STANDARD INCIDENT AND ANOMALY REPORTING FRAMEWORK

Mr. Sylvester Kaczmarek, Imperial College London, London, United Kingdom;

IAC-26.D5.2.11

ETHICAL GOVERNANCE OF AI-ENABLED SCIENTIFIC KNOWLEDGE SYSTEMS: IMPLICATIONS FOR DATA-DRIVEN RESEARCH AND SPACE EXPLORATION

Dr. Svetlana Hanson, NASA, Houston, United States;

IAC-26.D5.2.12

THE DISASTER OF DISAPPEARING SPACE DATA

Dr. Jeanne Holm, University of California, Los Angeles (UCLA), Sierra Madre, CA, United States;

D5.3. Prediction, Testing, Measurement and Effects of space environment on space missions

October 8 2026, 10:15 — G2

Co-Chair(s): Henry de Plinval, Office National d'Etudes et de Recherches Aéronautiques (ONERA), France; Teppei Okumura, Japan Aerospace Exploration Agency (JAXA), Japan; Jeanne Holm, University of California, Los Angeles (UCLA), United States; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;

Rapporteur(s): Carlos Soares, Boeing Integrated Defense Systems, United States;

IAC-26.D5.3.1

DEVELOPMENT OF AN INDIGENOUS DOSIMETER FOR THE TLM-1 SPACECRAFT AND DEEP SPACE RADIATION MEASUREMENT STRATEGY

Ms. Terlan Doğan, TÜBİTAK Uzay, Space Technologies Research Institute, Ankara, Türkiye;

IAC-26.D5.3.2

STRATOSPHERIC RADIATION MEASUREMENTS USING HIGH-ALTITUDE BALLOONS AS COMPLEMENTARY DATA FOR SPACE WEATHER MODELING

Ms. Berna Duru Taşkın, Middle East Technical University, Ankara, Türkiye; Mr. Uzay Eren Koldemir, Middle East Technical University, Ankara, Türkiye;

IAC-26.D5.3.3

ON THE PREDICTION OF FUTURE IMPACTS OF SOLAR ACTIVITY ON SATELLITE OPERATIONS

Ms. Kıymet Yıldır, Izmir University of Economics, İzmir / Çeşme, Türkiye;

IAC-26.D5.3.4

RADIATION-AWARE FAULT INJECTION FOR NEUROMORPHIC SAFETY MONITORS IN AUTONOMOUS SPACE SYSTEMS

Mr. Sylvester Kaczmarek, Imperial College London, London, United Kingdom;

IAC-26.D5.3.5

PRIORITIZED STRUCTURAL COVERAGE FRAMEWORK FOR SAFETY-CRITICAL SOFTWARE ON SPACE ENVIRONMENT

Mr. Alisan Aygar, ASELSAN, Ankara, Türkiye;

IAC-26.D5.3.6

A STANDARDS-COMPLIANT FRAMEWORK FOR RADIATION HAZARD MODELING IN LUNAR AND MARTIAN MISSIONS

Dr. Francesco Pizzirani, Sapienza University of Rome, Roma, Italy;

IAC-26.D5.3.7

A DATA-BASED APPROACH FOR IONOSPHERIC THREAT MITIGATION AND CHANNEL MODELING FOR SPACE

Dr. Ozan Koroglu, Hacettepe University, Ankara, Türkiye;

IAC-26.D5.3.8

IMAGE-BASED QUANTIFICATION OF LUNAR REGOLITH DUST PLUMES FROM APOLLO LRV FOOTAGE AND ASSESSMENT OF CONTAMINATION RISKS TO ROVER SUBSYSTEMS

Ms. Neva Doktoroğlu, Gaziantep Private Sanko Schools, Gaziantep, Türkiye;

IAC-26.D5.3.9

NEAR REAL-TIME FORECASTING OF ENERGETIC STORM PARTICLE EVENTS: ADDRESSING KEY LIMITATIONS IN INTERPLANETARY SHOCK PREDICTION

Dr. Maher Dayeh, Southwest Research Institute, San Antonio, United States;

IAC-26.D5.3.10

LUNAR DUST CONTAMINATION QUANTIFICATION: LUNAR REGOLITH SIMULANT FIDELITY AND MEASUREMENT GAPS
Ms. Ekaterina Faber, Federal Scientific Clinical Centre of the Federal Biomedical Agency of Russia, Moscow, Russian Federation;

D5.4. Cybersecurity in space systems, risks and countermeasures

October 9 2026, 10:15 — Hall 28

Co-Chair(s): Julien Airaud, Centre National d'Etudes Spatiales (CNES), France; Stefano Zatti, University of Rome "La Sapienza", Italy;

Rapporteur(s): Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;

IAC-26.D5.4.1

A NOVEL THREAT ASSESSMENT FRAMEWORK FOR AI-ENHANCED CYBER THREATS AGAINST SPACE SYSTEMS
Dr. Sana Belguith, The University of Bristol, Bristol, United Kingdom;

IAC-26.D5.4.2

ACTIVE DEFENSE THROUGH ORBITAL HONEYPOTS
Ms. Nezire Tosun, Istanbul, Türkiye;

IAC-26.D5.4.3

BEYOND TERRESTRIAL METRICS: A SPACE-SPECIFIC CVSS EXTENSION FOR IEEE P3349-COMPLIANT ORBITAL INFRASTRUCTURE
Ms. Zahra Imanova, SABAH.HUB, Baku, Azerbaijan;

IAC-26.D5.4.4

BIOMIMETIC SWARM INTELLIGENCE-BASED SATELLITE NETWORK CYBER DEFENSE SYSTEM
Ms. Ayşe Efsa AYDIN, Baykar Science High School, Istanbul, Türkiye;

IAC-26.D5.4.5

CYBERSECURITY FOR SMALL SATELLITES: FLIGHT DEMONSTRATION OF THE OPEN-SOURCE RACCOON OS ON CYBEESAT
Mr. Jens Freymuth, Berlin, Germany;

IAC-26.D5.4.6

DECENTRALIZED CYBER DEFENSE FOR SPACE SYSTEMS USING BLOCKCHAIN TECHNOLOGY
Mr. Khalig Ganbarli, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-26.D5.4.7

DYNAMICS OF CYBER CONFLICT AGAINST THE SPACE SECTOR: A CASE STUDY FROM THE GAZA WAR
Ms. Clémence Poirier, The Center for Security Studies (CSS) at ETH Zurich, Zurich, Switzerland;

IAC-26.D5.4.8

INTELLIGENT ON-ORBIT INTRUSION DETECTION FRAMEWORK FOR SMALL SATELLITE CONSTELLATION.
Dr. Rabbia Saleem, UNSW Canberra, Canberra, Australia;

IAC-26.D5.4.9

JAMMING RESILIENT MULTI-APERTURE RECEIVER SYSTEM FOR SATELLITE OPTICAL NETWORKS
Mr. Louis-Frédéric Racicot, Polytechnique Montreal, Montréal, Canada;

IAC-26.D5.4.10

ORBITAL CYBER RESILIENCE: INTEGRATING CYBER INTELLIGENCE AND AI-DRIVEN RISK DETECTION FOR SPACE INFRASTRUCTURE
Ms. Ambericent Cornett, MS, MPH, MBA-HCM, MSTI-CIDA, Washington, United States;

IAC-26.D5.4.11

LIFESAT: A FORENSIC-READY DIGITAL TWIN FRAMEWORK FOR FULL-LIFECYCLE CYBERSECURITY IN LEO CUBESATS
Mr. Efe Çam, Firat University, Elazığ, Türkiye;

IAC-26.D5.4.12

SECURING MULTI-TENANT GROUND STATIONS: A THREAT MODEL AND SHARED RESPONSIBILITY FRAMEWORK FOR GROUND STATION AS A SERVICE
Mr. Tobias Rahloff, Hamburg, Germany;

IAC-26.D5.4.13

SECURING NEWSPACE: ALIGNING CYBERSECURITY STANDARDS WITH THE OPERATIONAL REALITIES OF COMMERCIAL SPACE OPERATORS
Ms. Arzu Mirzabayova, Azerbaijan Technical University, Baku, Azerbaijan;

D6. IAF SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUES

Coordinator(s): Francesco Santoro, Altec S.p.A., Italy;

D6.1. Commercial Spaceflight Safety and Emerging Issues

October 6 2026, 10:15 — Hall 28

Co-Chair(s): Francesco Santoro, Altec S.p.A., Italy; Gennaro Russo, Associazione Italiana di Aeronautica e Astronautica (AIDAA), Italy; Shoyo Hyodo, Mitsubishi Heavy Industries, Ltd., Japan; Danilo Sakay, Brazilian Space Agency (AEB), Brazil;
Rapporteur(s): Robert Veldhuyzen, European Space Agency (ESA), retired, Netherlands (Kingdom of the);

IAC-26.D6.1.1

SAFETY GOVERNANCE FOR COMMERCIAL HUMAN SPACEFLIGHT
Ms. Laura Morelli, European Space Agency (ESA), Loreto (AN), Italy;

IAC-26.D6.1.3

LEGAL CHALLENGES FOR IMPROVING INTERNATIONAL LIABILITY REGIME IN COMMERCIAL SPACE ACTIVITIES AND CHINA'S APPROACH
Ms. Siyuan Mu, Beijing Institute of Technology (BIT), Beijing, China;

IAC-26.D6.1.5

LAUNCHING SMALL SATELLITE LAUNCH VEHICLES FROM ANDØYA SPACEPORT: LICENSING AND SAFETY
Dr. Øyvind Lossius Borthne, Andøya Space AS, Oslo, Norway;

IAC-26.D6.1.6

IMPROVING NOTAM PROCEDURES FOR SAFE COORDINATION OF SPACE FLIGHTS
Ms. Lamiya Gubatova, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-26.D6.1.7

NEW SPACE MESSAGE FOR SPACEFLIGHT ACTIVITY-BASED AIRSPACE CLOSURE DETERMINATION
Mr. Antonio Depardon, Technische Universität Braunschweig, Institute of Space Systems, Braunschweig, Germany;

IAC-26.D6.1.8

STARLINK FLIGHT EXPERIENCE ON THE NEED FOR EPHEMERIS SHARING BY SATELLITE OPERATORS
Mr. Alexander Petrov, SpaceX, Seattle, United States;

IAC-26.D6.1.9

ETHICAL BOUNDARIES BETWEEN SPACE TOURISM AND SPACEFLIGHT
Mr. Gianluca Borgo, Poole, United Kingdom;

IAC-26.D6.1.10

AI-DRIVEN PREDICTIVE SAFETY MONITORING FOR REUSABLE LAUNCH VEHICLES AND COMMERCIAL HUMAN SPACEFLIGHT
Mrs. SALAM ABUALHAYJA'A, MENA ENGINEERING EDUCATION AND TRAINING, Irbid, Jordan;

D6.3. Enabling safe commercial spaceflight: vehicles and spaceports

October 8 2026, 10:15 — Hall 28

Co-Chair(s): Francesco Santoro, Altec S.p.A., Italy; Gennaro Russo, Associazione Italiana di Aeronautica e Astronautica (AIDAA), Italy; Jilian Wang, China Academy of Space Technology (CAST), China;

Rapporteur(s): Robert Veldhuyzen, European Space Agency (ESA), retired, Netherlands (Kingdom of the);

IAC-26.D6.3.1

GLOBAL SPACEPORT ALLIANCE + INTEGRATED NETWORK FOR COMMERCIAL SPACEPORTS: A COLLABORATIVE MODEL FOR GLOBAL SPACEPORT COORDINATION

Ms. Wanjiku Chebet Kanjumba, University of Florida, Vicillion, Gainesville, United States;

IAC-26.D6.3.2

A SAFETY AND REGULATORY FRAMEWORK FOR COMMERCIAL SPACEPORT DEVELOPMENT IN EMERGING SPACE NATIONS: A CASE STUDY OF KENYA'S RAS NGOMENI-KIPINI

Mr. Geovian Stower, Kenya Space Agency (KSA), Nairobi, Kenya;

IAC-26.D6.3.3

WHAT MAKES SAFE, SUSTAINABLE SPACEPORTS A REALITY IN THE ASIA-PACIFIC REGION?

Dr. Ikuko Kuriyama, Japan Aerospace Exploration Agency (JAXA), Tokyo, Japan;

IAC-26.D6.3.4

INTEGRATED NETWORK FOR COMMERCIAL SPACEPORT 2.0: ENHANCING GLOBAL ACCESS, STANDARDIZATION, AND COLLABORATION

Ms. Wanjiku Chebet Kanjumba, University of Florida, Vicillion, Gainesville, United States;

IAC-26.D6.3.5

A RISK ASSESSMENT OF THE FUTURE TURKISH SPACEPORT IN SOMALIA

Ms. Clémence Poirier, The Center for Security Studies (CSS) at ETH Zurich, Zurich, Switzerland;

IAC-26.D6.3.6

LOCAL PRACTICE AT BRITISH SPACEPORTS

Mr. Robert Lynn, University of Edinburgh, Musselburgh, United Kingdom;

IAC-26.D6.3.7

FLIGHT AND GROUND SAFETY INTEGRATION IN ORBITAL LAUNCHES FOR EMERGING LAUNCH VEHICLES

Mr. Arthur Bahdur, Bizu Space, São José dos Campos, Brazil;

IAC-26.D6.3.8

SMART SPACEPORT INFRASTRUCTURE AND AUTONOMOUS SAFETY MANAGEMENT FOR HIGH-CADENCE COMMERCIAL LAUNCH OPERATIONS

Mrs. SALAM ABUALHAYJA'A, MENA ENGINEERING EDUCATION AND TRAINING, Irbid, Jordan;

IAC-26.D6.3.9

SPACEPORT FEASIBILITY ANALYSIS: ORBITAL MECHANICS, IMPACT ASSESSMENT, INFRASTRUCTURE REQUIREMENT AND ECONOMIC VIABILITY

Dr. Ugur Guven, UN CSSTEAP, London, United Kingdom;

IAC-26.D6.3.10

RISK MANAGEMENT IN THE ASCENT PHASE OF LAUNCH VEHICLE OPERATIONS: INNOVATIVE METHODOLOGIES FOR FLIGHT SAFETY

Mr. Rodrigo Avila de Luis, Centre National d'Etudes Spatiales (CNES), Kourou, France;

E1. IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM

Coordinator(s): Remco Timmermans, International Space University (ISU), Luxembourg ; Alina Vizireanu, International Space University (ISU), United Kingdom;

E1.1. Lift Off: Primary and Secondary Education

October 5 2026, 16:30 — E1

Co-Chair(s): Alina Vizireanu, International Space University (ISU), United Kingdom; Ozan Kara, Technology Innovation Institute (TII), United Arab Emirates;

Rapporteur(s): Marcos Eduardo Rojas Ramirez, Space Generation Advisory Council (SGAC), France;

IAC-26.E1.1.1

ASTRO-SENSE: A SONIFICATION-BASED LEARNING PLATFORM FOR TEACHING EXOPLANET DETECTION THROUGH MULTISENSORY DATA INTERACTION

Ms. Nehir Yurtsever, University of Exeter, Exeter, United Kingdom;

IAC-26.E1.1.2

ASSESSING THE DEGREE OF ALIGNMENT OF THE EARTH AND SPACE SCIENCE CURRICULUM FOR SECONDARY EDUCATION IN SAUDI ARABIA WITH THE NEXT GENERATION SCIENCE STANDARDS (NGSS)

Mr. Abdullah Algharrash, Saudi Space Community (SSC), Riyadh, Saudi Arabia;

IAC-26.E1.1.4

ENHANCING SPACE SCIENCE CONCEPTUAL UNDERSTANDING THROUGH AUGMENTED REALITY: A QUASI-EXPERIMENTAL STUDY ON CORRECTING MISCONCEPTIONS AMONG MIDDLE SCHOOL STUDENTS

Ms. Aysha Alharam, Univeristy of Strathclyde, Glasgow, United Kingdom;

IAC-26.E1.1.5

DEMOCRATIZING AEROSPACE EDUCATION: A "GLASS BOX" PEDAGOGICAL FRAMEWORK FOR SECONDARY SPACE SYSTEMS ENGINEERING USING VYOMSAT ALPHA

Mr. Ojas Jha, Dubai, United Arab Emirates;

IAC-26.E1.1.6

THE WOLFPACK CUBESAT DEVELOPMENT TEAM: ENHANCING THE STEM PIPELINE (2015-PRESENT)

Mr. Kevin Simmons, BLUECUBE Aerospace, Palm Beach Gardens, United States;

IAC-26.E1.1.7

EMPOWERING FEMALE STUDENTS IN SPACE SCIENCE THROUGH APPLIED REMOTE SENSING RESEARCH: OUTCOMES FROM THE KOREAN PARTICIPATION IN SHE SPACE INTERNATIONAL

Dr. Guenho Song, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

IAC-26.E1.1.8

SPACE SCIENCES FOR ANDEAN RESILIENCE: A CONTEXTUALIZED, PROJECT-BASED STEM EDUCATION MODEL FOR RURAL COMMUNITIES IN PERU

Mr. Andres Zelada, Universidad Nacional de Ingeniería (Lima, Perú), Los Olivos, Peru;

IAC-26.E1.1.9

ENGAGING THE NEXT GENERATION: SPACE EDUCATION STRATEGIES FOR YOUTH

Mr. Aminul Goldar, Montreal, Canada;

IAC-26.E1.1.10

ASTRO PI AND CANSAT IN SPACE MISSION EDUCATION

Ms. Nuriye Bengü Sarıkoca, Manisa, Türkiye;

IAC-26.E1.1.11

BIOMIMICRY-INSPIRED DESIGN-BASED LEARNING FOR MIDDLE SCHOOL SPACE EDUCATION
Mrs. Melis Altun, Manisa, Türkiye;

IAC-26.E1.1.12

SKY DIARY: STARS BENEATH THE CLOUDS - A LOW-COST MULTI-SENSOR SYSTEM FOR PREDICTING OPTIMAL STARGAZING CONDITIONS THROUGH CITIZEN SCIENCE
Ms. Zeynep Bilge Karakaş, Denizli, Türkiye;

IAC-26.E1.1.13

ENHANCING SPACE SCIENCE LITERACY IN MIDDLE SCHOOL: THE IMPACT OF MODEL-BASED TEACHING ON ACADEMIC ACHIEVEMENT AND MENTAL MODELS
Dr. Semra Ddemirçali, Denizli, Türkiye;

IAC-26.E1.1.14

FROM AN INDIGENOUS COMMUNITY TO THE SPACE SECTOR: BUILDING PATHWAYS FOR RURAL STUDENTS INTO SPACE STEM
Ms. Julietth Fernanda Contreras Venegas, ITESM, Hermosillo, Mexico;

IAC-26.E1.1.15

HOW AI HAS CHANGED HIGH SCHOOL SPACE ROBOTICS PROGRAMMING
Ms. Alissa Chavalithumrong, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.E1.1.16

IMPLEMENTATION AND EVALUATION OF AN OFFLINE-FIRST SPACE DATA-BASED STEAM MICROCURRICULUM IN DIGITALLY UNEQUAL CLASSROOMS
Mrs. Zemfira Aleskerova, Baku State University, Baku, Azerbaijan;

IAC-26.E1.1.17

AEROSPACE EDUCATION AS A CATALYST FOR STEAM LEARNING THROUGH PARTICIPATORY EXPERIENCES AND METHODOLOGIES AIMED AT DEVELOPING TECHNICAL COMPETENCIES AND SOFT SKILLS IN COSTA RICAN YOUTH
Mr. Álvaro Pérez Mora, Starlogics, Cartago, Costa Rica;

E1.2. Space for All: Promoting Inclusive Practices in Space Exploration

October 6 2026, 10:15 — E1

Co-Chair(s): Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Austria; Laszlo Bacsardi, Budapest University of Technology and Economics, Hungary;

Rapporteur(s): Sumbal Mushtaq, Space Generation Advisory Council (SGAC), United Kingdom;

IAC-26.E1.2.1

BEYOND UNIVERSAL ACCESS: A DATA-DRIVEN FRAMEWORK FOR DIFFERENTIATED LEARNING IN SPACE SCIENCE EDUCATION – LESSONS FROM THE KONYA MODEL
Mr. MEHMET OĞUZHAN ERTURAN, KONYA, Türkiye;

IAC-26.E1.2.2

TOWARD A MORE INCLUSIVE AEROSPACE SECTOR: IDENTIFYING BARRIERS FOR WOMEN
Ms. Sri Venkata Vathsala Musunuri, Polytechnique Montreal, Montreal, Canada; Ms. Yekta Shabani, Polytechnique Montreal, Saint-Hubert, Canada;

IAC-26.E1.2.3

DEMOCRATIZING SPACE ACCESS AND STEM EDUCATION IN THE GLOBAL SOUTH: A RETROSPECTIVE OF THE BRAZILIAN SATELLITE OLYMPIAD (OBSAT)
Prof. Dr. Tatiana Pazelli, Federal University of São Carlos (UFSCar - Universidade Federal de São Carlos), São Carlos, Brazil;

IAC-26.E1.2.5

EVALUATION OF TÜBİTAK 4004 “BEYOND EARTH: A BİLSEM: IN THE FOOTSTEPS OF THE RED PLANET” PROJECT ACTIVITIES FROM THE PERSPECTIVE OF INNOVATIVE APPROACHES IN EDUCATION
Ms. Hanife Kılıç, Hacettepe University, karabük, Türkiye;

IAC-26.E1.2.7

HIDDEN FIGURES OF THE COSMOS: EMPOWERING DIVERSITY THROUGH THE STORIES OF PERSIAN WOMEN ASTRONOMERS
Ms. Gita Naderi, Concordia University, Montreal, Canada;

IAC-26.E1.2.8 (unconfirmed)

PRODUCING A KNOWLEDGE-BASED ECONOMY THROUGH THE SPACE INDUSTRY: THE CASE OF VANUATU.
Mr. Kevin Smith HINGE, Port Vila, Vanuatu;

IAC-26.E1.2.9

SPACE MAPS FOR ALL: A MULTISENSORY ATLAS FROM STARS TO PLANETS AND EARTH FROM SPACE
Mr. TAHA ARBEN VURGUN, Turkish Technology Team Foundation, BERGAMA, Türkiye;

E1.3. On Track: Undergraduate Space Education

October 6 2026, 15:00 — E1

Co-Chair(s): Alejandro J. Roman Molinas, Paraguayan Space Agency, Paraguay; Sona Guliyeva, Politecnico di Torino, Italy;

Rapporteur(s): Ioana-Roxana Perrier, Institute of Polytechnic Science and Aeronautics (IPSA), France; Natasha Isloor, Canadian Space Agency, Canada;

IAC-26.E1.3.1

LIFE IN SPACE: TEACHING AND OUTREACH
Prof. Amri Wandel, Hebrew University of Jerusalem, Jerusalem, Israel;

IAC-26.E1.3.2

IMPROVING THE AEROSPACE SECTOR ORIENTATION OF ENGINEERING GRADUATES
Ms. Hacer Durmus, Faculty of Aviation and Space Sciences, Necmettin Erbakan University, Konya, Türkiye;

IAC-26.E1.3.3

TECHNICAL AND SOFT SKILLS REQUIREMENTS FOR SATELLITE ENGINEERS: EVIDENCE FROM THAILAND’S SPACE INTERNSHIP PROGRAM UNDER THE THEOS-3 SATELLITE PROJECT
Ms. Paripat Pairat, Geo-Informatics and Space Technology Development Agency (GISTDA), Nakhonpathom, Thailand;

IAC-26.E1.3.4

A 4-PILLAR MANAGEMENT STRATEGY FOR STUDENT ROCKET TEAMS
Ms. Büşra Bayrak, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.E1.3.5

IMPLEMENTATION OF STUDENTS-TO-STUDENTS CONCEPT IN ADDITIONAL AEROSPACE EDUCATION: THEORY, EXAMPLES, RESULTS
Dr. Dmitriy Grishko, Bauman Moscow State Technical University, Moscow, Russian Federation;

IAC-26.E1.3.6

THE RSPIN-SAT-1 SUMMER SCHOOL: AN APPLIED MODEL FOR SPACE WORKFORCE AND ECOSYSTEM DEVELOPMENT
Mr. Sebastian Severin, Romanian Space Initiative, Constanta, Romania;

IAC-26.E1.3.7

LEARNING ASTRODYNAMICS THROUGH CODE: A COMPUTER SCIENCE STUDENT’S JOURNEY TO UNDERSTANDING TÜRKİYE’S AYAP MISSION
Mrs. Maryam Akhundova, Azerbaijan State Oil and Industry University (SABAH Groups), Sumgait, Azerbaijan;

IAC-26.E1.3.8

A QUALITATIVE STUDY ON THE EFFECT OF ACADEMIC SUPPORT ON YOUNG UNIVERSITY STUDENTS’ AWARENESS ABOUT SPACE TECHNOLOGIES
Dr. Yunus Doğan, Bağlar, Türkiye;

IAC-26.E1.3.9

FIVE YEARS OF HANDS-ON SATELLITE OPERATIONS TRAINING: EDUCATIONAL OUTCOMES FROM KARI'S UNDERGRADUATE SPACE SYSTEMS PRACTICUM PROGRAM

Dr. Guenho Song, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

IAC-26.E1.3.11

AN EDUCATIONAL AND EXPERIMENTAL QO-100 GROUND STATION: THE ISTASYOF INFRASTRUCTURE IN THE EASTERN BLACK SEA

Mrs. Ayşenur Naldöğen, Karadeniz Technical University, Trabzon, Türkiye;

IAC-26.E1.3.12

BRIDGING THE GAP IN SPACE LAW EDUCATION: SPACE LAW CAMP AS A MODEL STUDENT-LED ACADEMIC INITIATIVE

Ms. Natalia Plekanić, AGH University of Krakow, Krakow, Poland;

IAC-26.E1.3.13

ITERATION OVER PERFECTION: A SYSTEMS-INTEGRATED APPROACH TO UNDERGRADUATE CUBESAT DESIGN

Dr. Sarath Raj Nadarajan Syamala, Amity University, Dubai, Dubai, United Arab Emirates;

IAC-26.E1.3.14

A HANDS-ON EDUCATIONAL KIT AND PROGRAM FOR LEARNING THE SATELLITE SYSTEM LIFECYCLE WITH A GROUND-BASED WEATHER OBSERVATION MISSION

Ms. Nagisa Sone, Nihon University, Funabashi, Japan;

IAC-26.E1.3.15

RECREATING OLE RØMER'S SPEED OF LIGHT EXPERIMENT: AN UNDERGRADUATE PLANETARY SCIENCE RESEARCH USING STELLARIUM PLANETARIUM SOFTWARE

Mr. Anay Ashwin, University of Southern Queensland, Melbourne, Australia;

E1.4. In Orbit: Postgraduate Space Education

October 7 2026, 10:15 — E1

Co-Chair(s): Olga Zhdanovich, Modis, Netherlands (Kingdom of the); Vera Mayorova, Bauman Moscow State Technical University, Russian Federation;

Rapporteur(s): Kaori Sasaki, Japan Aerospace Exploration Agency (JAXA), Japan; Carol Christian, STScl, United States;

IAC-26.E1.4.1

KEYNOTE: REFLECTIONS ON SPACE EDUCATION IN THE "SPACE FOR ALL" ERA

Prof. Franco Bernelli-Zazzera, Politecnico di Milano, Milano, Italy;

IAC-26.E1.4.2

DESIGNING THE CIVILIAN ORBITAL WORKFORCE: A RESEARCH-BASED MASTER'S PROGRAM IN SPACE ARCHITECTURE AND EXTREME ENVIRONMENTS

Dr. Elena Rocchi, Arizona State University, Phoenix, United States;

IAC-26.E1.4.3

EDUCATING THE SPACE BUSINESS LEADERS – FROM THUNDERBIRD TO UCF'S SPACE MBA

Prof. Zaheer Ali, University of Central Florida (UCF), Walnut Creek, United States;

IAC-26.E1.4.5

EVALUATING THE IMPACT OF A VIRTUAL AEROSPACE MEDICINE ELECTIVE ON U.S. GRADUATE MEDICAL EDUCATION

Mr. Sachin Pillai, Icahn School of Medicine at Mount Sinai, New York, United States;

IAC-26.E1.4.6

GNSS-SIM: A WEB-BASED INTERACTIVE LEARNING ENVIRONMENT FOR GNSS EDUCATION

Ms. Hira Tassadaq, Institute of Space Technology (IST), Rawalpindi, Pakistan;

IAC-26.E1.4.7

AI-DRIVEN COMPETENCY ALIGNMENT ANALYTICS IN AEROSPACE HIGHER EDUCATION

Mr. Khagani Abdullayev, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-26.E1.4.8

IMPLEMENTATION OF INNOVATIVE SOLUTIONS BASED ON UNIVERSITY SMALL SCIENTIFIC AND EDUCATIONAL SATELLITES IN THE INTERESTS OF HUMAN RESOURCES FOR THE RUSSIAN SPACE INDUSTRY

Ms. Valeriia Potylitsyna, Bauman Moscow State Technical University, Tula, Russian Federation;

IAC-26.E1.4.9

SPACE LAW APPLICABLE TO PRIVATE ACTIVITIES - LESSONS FROM ELECTIVE COURSE OFFERED IN INDIA

Dr. Upasana Dasgupta, OP Jindal Global University, Sonapat, India;

IAC-26.E1.4.10

THE CESRIC MODEL: FRUGAL INNOVATION AND INTERNATIONAL COLLABORATION IN POSTGRADUATE SPACE RESEARCH THROUGH A DISTRIBUTED PEROVSKITE SOLAR CELL EXPERIMENT

Dr. Claire Nelson, The Futures Forum, Jamaica;

IAC-26.E1.4.11

THE PROFETAS-1 ORBITAL POCKETQUBE AS A HANDS-ON TOOL FOR STEM VOCATIONAL GUIDANCE

Mr. João Pedro Polito Braga, Federal University of São João Del-Rei, Cataguases, Brazil;

E1.5. Enabling the Future: Developing the Space Workforce

October 7 2026, 15:00 — E1

Co-Chair(s): Kathleen Coderre, Lockheed Martin (Space Systems Company), United States; Kathryn Robison, The University of Sydney, Australia;

Rapporteur(s): Natasha Isloor, Canadian Space Agency, Canada;

IAC-26.E1.5.1

WHY THEY LEAVE AND WHY THEY STAY: LEADERSHIP, CULTURE, AND ATTRITION ACROSS THE INTERNATIONAL SPACE SECTOR

Dr. Julie Chesley, Teaching Science and Technology, Inc (TSTI), Georgetown, United States;

IAC-26.E1.5.2

A COMPETENCY-BASED TRANSDISCIPLINARY EDUCATION PROGRAM FOR NEXT-GENERATION SPACE PROFESSIONALS: DESIGN, DELIVERY, AND INITIAL OUTCOMES

Dr. Mina Fukudome, Ibaraki, Japan;

IAC-26.E1.5.3

A GOVERNANCE MODEL FOR NATIONAL STUDENT SPACE ECOSYSTEM INTEGRATION

Mr. Freider Fløan, Norwegian University of Science and Technology, Trondheim, Norway;

IAC-26.E1.5.4

TRANSFORMING THE EUROPEAN SPACE RESEARCH AND WORKFORCE LANDSCAPE BY DRIVING ORGANIZATIONAL CHANGE, PROMOTING WELL-BEING AND PROFESSIONAL DEVELOPMENT: THE ARCOE CASE

Mrs. Eleonora Lombardi, Fondazione E. Amaldi, Rome, Italy;

IAC-26.E1.5.5

A QUANTITATIVE EVALUATION FRAMEWORK FOR MEASURING THE WORKFORCE IMPACT OF A 7-YEAR UNIVERSITY SPACE TEAM MODEL: THE CASE OF THE GRIZU-263 UNIVERSITY SPACE TEAM

Mrs. Ceyda Sevinç, Zonguldak Bülent Ecevit University, İstanbul, Türkiye;

IAC-26.E1.5.6

ADVANCING SOUTH AFRICA'S SPACE ECONOMY THROUGH YOUTH AND WOMEN EMPOWERMENT

Ms. Raesibe Pertunia Makgoale, Simera Sense, Cape Town, South Africa;

IAC-26.E1.5.8

FROM AL AIN TO SPACE: DEVELOPING A GLOBALLY CONNECTED SPACE WORKFORCE THROUGH INTEGRATED EDUCATION, MISSION-BASED LEARNING, AND INTERNATIONAL COLLABORATION.

Ms. Aysha Alblooshi, The National Space Science and Technology Center (NSSTC), Al Ain, United Arab Emirates;

IAC-26.E1.5.9

DEVELOPING SPACE MISSION WORKFORCE CAPABILITY: THE LASP ASTRO ACADEMY MODEL FOR EMERGING SPACE ECOSYSTEMS

Mr. Nicolas Ferrington, Laboratory for Atmospheric and Space Physics (LASP) at University of Colorado, Boulder, United States;

IAC-26.E1.5.10

AZTLAN LABS: A COLLABORATIVE ENGINEERING METHODOLOGY FOR BUILDING ROCKETRY WORKFORCE COMPETENCE IN AN EMERGING SPACE NATION

Mr. Angel Vázquez, High Technology Unit (UAT) Faculty of Engineering - UNAM, Mexico City, Mexico;

IAC-26.E1.5.11

BEYOND THE AGENCY: A VERTICAL INTEGRATION FRAMEWORK FOR WORKFORCE DEVELOPMENT IN EMERGING AFRICAN SPACE ECONOMIES

Ms. Eunice Olubayo, Space Generation Advisory Council (SGAC), Abuja, Nigeria;

IAC-26.E1.5.12

SPACE TRADIES: DEVELOPING THE SKILLED LABOUR WORKFORCE FOR THE SPACE INDUSTRY

Mr. Joshua Kassulke, International Space University (ISU)/University of South Australia, Toowoomba, Australia;

IAC-26.E1.5.13

CONSTRUCTING A GRADUATE EDUCATION ECOSYSTEM FOR THE DEVELOPMENT OF SPACE BUSINESS CHIEF TECHNOLOGY OFFICERS

Prof. Dr. Kentaro Kitamura, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-26.E1.5.14

EMBEDDING THE SOCIAL PILLAR OF SUSTAINABILITY IN GLOBAL SPACE WORKFORCE DEVELOPMENT: AN INTERDISCIPLINARY DEGREE APPRENTICESHIP CASE STUDY

Dr. Juliana Rinaldi-Semione, University of Nottingham, Nottingham, United Kingdom;

E1.6. Calling Planet Earth: Large Engagement and Communications Initiatives

October 8 2026, 10:15 — E1

Co-Chair(s): Ozan Kara, Technology Innovation Institute (TII), United Arab Emirates; Milica Milosev, Econnects, Serbia;

Rapporteur(s): Danilo Sakay, Brazilian Space Agency (AEB), Brazil; Alissa J. Haddaji, Massachusetts Institute of Technology (MIT), United States;

IAC-26.E1.6.1

CURATING THE SCIENCE MUSEUM'S NEW SPACE GALLERY

Ms. Abbie MacKinnon, Science Museum Group, London, United Kingdom;

IAC-26.E1.6.2

CITIZEN SCIENCE FOR SPACE: ENGAGING THE PUBLIC IN EXPLORATION AND DISCOVERY

Ms. Milica Milosev, Econnects, Novi Sad, Serbia;

IAC-26.E1.6.4

A SUSTAINABLE MODEL FOR ASTRONOMY OUTREACH AND PUBLIC ENGAGEMENT IN EMERGING SPACE NATIONS

Mr. Yawar Abbas, Institute of Space Technology (IST), Islamabad, Pakistan;

IAC-26.E1.6.5

BUILDING A STATEWIDE SPACE OUTREACH FESTIVAL: LESSONS LEARNED FROM MASSACHUSETTS SPACE WEEK

Prof. Alissa J. Haddaji, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.E1.6.6

BUILDING SPACE CAPACITY IN UNDERSERVED REGIONS: THE CASE OF CYPRUS

Mr. Ufuk Balkan, New Horizon Cyprus – Space and Science Initiative, İskele, Cyprus;

IAC-26.E1.6.7

CONNECTING COMMUNITIES TO THE COSMOS: STRATEGIC ASTRONOMY OUTREACH BEYOND FORMAL EDUCATION

Mr. Roshan Nadeem, Institute of Space Technology (IST), Lahore, Pakistan;

IAC-26.E1.6.8

BURSTING THE BUBBLE: HOW ROSPIN TURNED SPACE AWARENESS FROM A NICHE TOPIC INTO A NATIONAL PHENOMENON

Ms. Maria Alexandra Nita, Romanian Space Initiative, Bucharest, Romania;

IAC-26.E1.6.9

FROM SPECTATORS TO STORYTELLERS: A CITIZEN PARTICIPATION MODEL FOR SPACE ENGAGEMENT IN JAPAN

Ms. Ayako Kuroko, Ibaraki, Japan;

IAC-26.E1.6.10

BRIDGING SPACE AND SOCIETY: ANALOG ASTRONAUT STUDIES, K-12 INITIATIVES, AND FIELD INTEGRATION OF THE MARS ON EARTH PROJECT (MOEP)

Ms. Hanife Kılıç, Hacettepe University, Karabük, Türkiye;

IAC-26.E1.6.11

INFLUENCERS AS A STRATEGIC COMMUNICATION LAYER FOR THE SPACE ECONOMY

Mrs. Ksenia Ozkok, Istanbul, Türkiye;

IAC-26.E1.6.12

LARGE-SCALE MODELS OF ATMOSPHERIC LAYERS OF EARTH, VENUS, AND MARS FOR HANDS-ON VISUAL SCIENCE COMMUNICATION

Ms. Mariam Haidar, KU Leuven, Leuven, Belgium;

E1.7. Sending out a Signal: Innovative Outreach and Communications Initiatives

October 8 2026, 15:00 — E1

Co-Chair(s): Darcey Watson, The Andy Thomas Space Foundation, Australia; Alev Sönmez, Fraunhofer Alliance Space, Germany;

Rapporteur(s): Gillian Chin, International Space University (ISU), France; Guenho Song, Korea Aerospace Research Institute (KARI), Republic of Korea;

IAC-26.E1.7.2

DEMOCRATIZING SPACE EDUCATION THROUGH LOCAL APPLICATIONS IN EMERGING SPACE NATIONS: INSIGHTS FROM YOUTH-DRIVEN GRASSROOTS OUTREACH IN THE PHILIPPINES

Mr. Dave Loui Gumarang, Iloilo Science and Technology University, Iloilo City, Philippines;

IAC-26.E1.7.3

FROM DEBRIS TO DIPLOMACY: WHAT PLAYERS LEARN WHEN SPACE SUSTAINABILITY BECOMES A GAME

Dr. Anna Hurova, École Normale Supérieure, Kyiv, France;

IAC-26.E1.7.4

FROM ORBIT TO CLASSROOM: EVALUATING THE IMPACT OF IGNIS MISSION ON POLISH STEM EDUCATION LANDSCAPE

Mr. Hubert Nowak, Gdansk University of Technology, Gdańsk, Poland;

IAC-26.E1.7.5

FROM VIEWERS TO CONTRIBUTORS: A PROGRESSIVE MODEL FOR SPACE OUTREACH AND ENGAGEMENT

Mr. Veyssel Aksu, Erciyes University, Kayseri, Türkiye;

IAC-26.E1.7.8

REMOTE OBSERVING AS A BRIDGE BETWEEN PUBLIC ENGAGEMENT AND PROFESSIONAL ASTRONOMY: LESSONS FROM INTERNATIONAL OUTREACH COLLABORATIONS

Ms. Lucinda Offer, Abingdon, United Kingdom;

IAC-26.E1.7.9

SPINNING THE BIRTH OF STARS: A CONCRETE, LOW-COST OUTREACH MODEL FOR EARLY ASTRONOMY EDUCATION

Ms. Ayşe Nur ORDUKAYA, KONYA, Türkiye;

IAC-26.E1.7.10

THE SPACEAG SERIES: A WEBINAR-BASED INITIATIVE ADVANCING PUBLIC ENGAGEMENT AND AWARENESS IN SPACE AGRICULTURE

Mr. Davi Souza, Independent Researcher, Harpenden, United Kingdom;

IAC-26.E1.7.11

THE USE OF MICROGRAVITY AS A PLATFORM TO EDUCATE AND INSPIRE THE NEXT GENERATION OF STEM INNOVATORS AND PROFESSIONALS IN EMERGING SPACE NATIONS.

Dr. Norah Patten, International Institute for Astronautical Sciences (IIAS), Dublin 4, Ireland;

IAC-26.E1.7.12

TRANSFORMING CUBESAT ENGINEERING INTO INTERACTIVE PUBLIC EXPERIENCES: OUTREACH FROM THE AL-RHIM SAT 1U MISSION

Ms. Sumaya Abu Mailesh, Al Hussein Technical University, Amman, Jordan;

IAC-26.E1.7.13

TWENTY YEARS OF SPACE EDUCATION, OUTREACH, AND CAPACITY BUILDING: LESSONS LEARNED FROM SAMARA UNIVERSITY

Prof. Igor V. Belokonov, Samara National Research University (Samara University), Samara, Russian Federation;

IAC-26.E1.7.14

ORBITAL REFRACTIONS: DATA-DRIVEN PERFORMANCE AS A MEDIUM FOR COMMUNICATING ORBITAL SUSTAINABILITY

Prof. Leonardo Barilaro, New York University Abu Dhabi, Abu Dhabi, United Arab Emirates;

IAC-26.E1.7.15

GALAXY FILM FESTIVAL – UNDERWATER EDITION (2026) EXTREME ENVIRONMENT FILM SYSTEM FOR SPACE CIVILIZATION

Mr. Chris Yi Yuan, Innovaspace UK, Shanghai, China;

E1.8. Show Us Space: Demonstration of Hands On Education and Outreach

October 9 2026, 10:15 — E1

Co-Chair(s): Lyn Wigbels, American Astronautical Society (AAS), United States; Valerie Anne Casasanto, NASA Goddard/University of Maryland, Baltimore County (UMBC), United States;

Rapporteur(s): Alev Sönmez, Fraunhofer Alliance Space, Germany; Kaori Sasaki, Japan Aerospace Exploration Agency (JAXA), Japan;

IAC-26.E1.8.1

GUHEM ASTRONAUT TRAINING PROGRAM

Ms. Yağmur Karan, Gokmen Space and Aviation Training Center (GUHEM), Bursa, Türkiye; Ms. ARIFE OZDEMIR, Gokmen Space and Aviation Training Center (GUHEM), BURSA, Türkiye; Mrs. Sena Ferah, Gokmen Space and Aviation Training Center (GUHEM), Bursa, Türkiye;

IAC-26.E1.8.2

HANDS-ON POCKETQUBE SATELLITE TRAINING INSPIRED BY THE SANOSAT-1 MISSION

Mr. Rakesh Chandra Prajapati, Zurich, Switzerland;

IAC-26.E1.8.3

HANDS-ON SPACE EDUCATION: INTERACTIVE STEAM ACTIVITIES FOR ENGAGING DIVERSE LEARNERS

Mr. Sourabh Kaushal, SMARTCIRCUITS INNOVATION Private Limited, Jagadhri, India;

IAC-26.E1.8.4

HUMAN FACTOR WORKSTATIONS: EXPERIENTIAL LEARNING ACTIVITIES EXPLORING THE PHYSICAL CHALLENGES OF LIVING AND WORKING IN SPACE

Ms. Lucinda Offer, Abingdon, United Kingdom;

IAC-26.E1.8.5

IMPLEMENTATION OF A MULTI-STAGE ORBITAL LAUNCHER ASSEMBLY SIMULATION USING VIRTUAL REALITY: PRACTICAL LESSONS LEARNED FOR HANDS-ON OUTREACH

Mr. Krishnadas M, Vikram Sarabhai Space Centre, ISRO, Thiruvananthapuram, Thiruvananthapuram, India;

IAC-26.E1.8.6

MARS ON EARTH IN THE CLASSROOM: A HANDS-ON WORKSHOP ON ESTABLISHING K12 ANALOG STATIONS FOR CITIZEN SCIENCE

Ms. Hanife Kılıç, Hacettepe University, karabük, Türkiye; Ms. Öykü Nida Danacı, Karabük, Türkiye; Mr. Osman Yigit Akyol, Karabuk, Türkiye;

E1.9. Space Culture: Public Engagement in Space through Culture and Art

October 9 2026, 13:45 — E1

Co-Chair(s): Alissa J. Haddaji, Massachusetts Institute of Technology (MIT), United States; Marlene Losier, For All Moonkind Inc., United States;

Rapporteur(s): Arno Geens, Space Renaissance International, Belgium; Sabine Heinz, SRI International, Germany; Alina Vizireanu, International Space University (ISU), United Kingdom;

IAC-26.E1.9.1

MAPPING THE FUTURE: A LONGITUDINAL STUDY OF SPACE FUTURISM FROM VERNIAN IMAGINATION TO SUSTAINABLE ORBITAL REALITY

Mr. Alim Erdem Başar, Independent Researcher, Adana, Türkiye;

IAC-26.E1.9.2

CHARTING THE ANCIENT SKIES: AN EXPLORATION OF CULTURAL ASTRONOMY PARADIGMS THROUGH THE LENSES OF INCA COSMOVISION AND JAIN COSMOLOGY

Ms. Pragya Jain, International Space University (ISU), Rotterdam, Netherlands (Kingdom of the);

IAC-26.E1.9.3

FOLDED SPACE: A CULTURAL MECHANISM FOR EMBODIED PUBLIC ENGAGEMENT IN SPACE FUTURES

Ms. Jiaxuan Xu, Tsinghua University, Beijing, China;

IAC-26.E1.9.4

ICELAND ECLIPSE FESTIVAL AS A SPACE-CULTURE LIVING LAB: ARTS-LED PUBLIC ENGAGEMENT AND AN EARTH-BASED ANALOG FOR FUTURE SPACE EVENTS

Mr. Ari Eisenstat, University of Hawaii, Honolulu, United States;

IAC-26.E1.9.5

IMAGINING INCLUSIVE SPACE FUTURES: PARTICIPATORY PUBLIC ENGAGEMENT INSPIRED BY BHUTAN'S GROSS NATIONAL HAPPINESS FRAMEWORK

Ms. Elzbieta Jablonska, Torun, Poland;

IAC-26.E1.9.6

MOON RUNNINGS: STORYTELLING AND PARTICIPATORY FUTURES THEATRE FOR IMAGINING LIFE ON THE MOON

Dr. Claire Nelson, The Futures Forum, Jamaica;

IAC-26.E1.9.7

SATELLITE MISSION MASTERCLASS: CREATIVE APPROACHES TO TEACHING SPACE POLICY

Ms. Anastasiia Posnova, European Space Policy Institute (ESPI), Vienna, Austria;

IAC-26.E1.9.8

ASTRONOMY THROUGH THE HERSCHEL: SCIENTIFIC HERITAGE AS A GATEWAY FOR CULTURAL ENGAGEMENT WITH SPACE SCIENCE

Ms. Lucinda Offer, Abingdon, United Kingdom;

IAC-26.E1.9.9

COSMIC FUTURES: BRINGING SPACE TO GLASTONBURY FESTIVAL

Mr. Sebastian Hill, Orbit Fab Ltd, Oxford, United Kingdom;

IAC-26.E1.9.10

EARTH SEEDS FOR SPACE: CONSIDERING CULTURE AND ASTROBOTANY AS ALTERNATIVES TO MANNED MISSION IN SPACE EXPLORATION.

Dr. Franck Marchis, SETI Institute, Mountain View, United States;

E1.10-E11.2. Space Education and Outreach in Developing Space Nations

October 8 2026, 10:15 — Hall 35

Co-Chair(s): Alma Okpalefe, World Space Week Association, United States; Remco Timmermans, International Space University (ISU), Luxembourg ;

Rapporteur(s): Alvin Michael Mulumba, International Space University (ISU), France; Charles-aimé Nzeussi Mbouendeu, International Space University (ISU), France;

IAC-26.E1.10-E11.2.1

A COMMUNITY-DRIVEN INTERACTIVE SPACE PLATFORM AS A CATALYST FOR EMERGING SPACE ECOSYSTEMS

Mr. Abdullah Harun Büyükarıslan, İstanbul, Türkiye;

IAC-26.E1.10-E11.2.2

FROM PORTUGAL TO THE WORLD: DESIGNING YOUTH-CENTRED PARTICIPATORY AND EXPERIENTIAL LEARNING FOR EMERGING SPACE COMMUNITIES

Ms. Alice Pais de Castro, Space Generation Advisory Council (SGAC), CBranco, Portugal;

IAC-26.E1.10-E11.2.4

DEVELOPMENT OF A TRAINING CURRICULUM TO SUPPORT EARLY ENGAGEMENT IN ROCKETRY AND AEROSPACE ENGINEERING AT APU SPACE

Mr. Gerardo Caballero Morales, Universidad Nacional de Ingeniería (Lima, Perú), Lima, Peru;

IAC-26.E1.10-E11.2.5

BUILDING REGIONAL SPACE CAPACITY: AN IMPLEMENTATION FRAMEWORK FROM AFRICA MIDDLE EAST SPACE CONFERENCE 2025

Mr. El Hassan Bouaghad, MISI - MOROCCAN INITIATIVE FOR SPACE INDUSTRY, Rabat, Morocco;

IAC-26.E1.10-E11.2.7

CONNECTING EL SALVADOR TO SPACE: A COMMUNITY-DRIVEN GROUND SEGMENT ENABLING EARLY SPACE ACCESS

Mr. Alonso Umaña, IoT Hub SV (El Salvador), San Salvador, El Salvador;

IAC-26.E1.10-E11.2.8

THE ROMANIAN SPACE DESIGN COMPETITION (ROSDC): THE ROMANIAN HIGH SCHOOL STUDENTS' GATEWAY TO NASA

Ms. Ștefania Solomon, Romanian Space Initiative, Bucharest, Romania;

IAC-26.E1.10-E11.2.9

FROM MOBILITY TO CAPABILITY: HOW INTERCULTURAL TALENT AND FLEXIBLE CONSULTING MODELS STRENGTHEN SPAIN'S SPACE ECOSYSTEM

Ms. Karen Nicole Pirazan Villanueva, Ad Maiorem, Madrid, Spain;

IAC-26.E1.10-E11.2.10

LEVERAGING NATIONAL YOUTH SERVICE FOR GRASSROOTS SPACE EDUCATION: A WORLD SPACE WEEK CASE STUDY FROM RURAL NIGERIA

Ms. Chidera Ikeh, National Space Research and Development Agency (NASRDA), Abuja Nigeria, Surulere, Nigeria;

IAC-26.E1.10-E11.2.11

LOW-COST AEROSPACE RESEARCH PLATFORMS IN PUBLIC UNIVERSITIES: A SCALABLE MODEL FROM PERU

Mr. Juan Rodolfo Alvarez Huarhua, Universidad Nacional Tecnológica de Lima Sur, Lima, Peru;

IAC-26.E1.10-E11.2.12

WORDS TO WORLDS: A NIGHT SKY OUTREACH PROTOCOL BRIDGING CULTURAL MEMORY AND SCIENTIFIC UNDERSTANDING

Mr. Ebubekir Şark, Istanbul University, AVCILAR, Türkiye;

IAC-26.E1.10-E11.2.13

SPACE TALENT INCUBATION AND POLICY DESIGN FOR TAIWAN: A COMPARATIVE STUDY OF EAST ASIAN SPACE ECONOMIES

Mr. Byung Joon (Bryan) Ahn, Space Generation Advisory Council (SGAC), Daejeon, Republic of Korea;

IAC-26.E1.10-E11.2.14

THE ARIZONA STATE UNIVERSITY MILO SPACE SCIENCE INSTITUTE: AN INNOVATIVE MODEL TO INCREASE GLOBAL SPACE SCIENCE ACCESS AND EXPERIENCE THROUGH WORKFORCE DEVELOPMENT PROGRAMS, PAYLOAD EXPERIMENTS, AND DEEP SPACE MISSION OPPORTUNITIES

Prof. James Bell, Arizona State University, Tempe, United States;

IAC-26.E1.10-E11.2.15

ADVANCING AEROSPACE INTEREST IN AN EMERGING SPACE NATION THROUGH STUDENT-LED INITIATIVES: A PHILIPPINE UNIVERSITY CASE STUDY

Mr. Dave Loui Gumarang, Iloilo Science and Technology University, Iloilo City, Philippines;

E2. 54th IAF STUDENT CONFERENCE

Co-Chair(s): Emmanuel Zenou, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France;

Coordinator(s): Franco Bernelli-Zazzera, Politecnico di Milano, Italy; Marco Schmidt, University Wuerzburg, Germany;

E2.1. Student Conference - Part 1

October 5 2026, 16:30 — Hall 1

Co-Chair(s): Franco Bernelli-Zazzera, Politecnico di Milano, Italy; Emmanuel Zenou, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France;

Rapporteur(s): Ioana-Roxana Perrier, Institute of Polytechnic Science and Aeronautics (IPSA), France;

IAC-26.E2.1.1

DIGITAL TWIN AND HARDWARE-IN-THE-LOOP SIMULATION PLATFORM FOR PROPELLANT LOADING AND PRESSURIZATION GROUND SUPPORT EQUIPMENT IN SATELLITE LAUNCH OPERATIONS

Mr. Ahmet Cihan ÇOKA, Kocaeli University, Kocaeli, Türkiye;

IAC-26.E2.1.2

DEPLOYMENT DYNAMICS AND STRUCTURAL SAFETY OF LARGE-SCALE INFLATABLE MEMBRANE DRAG SPHERES FOR END-OF-LIFE DEORBITING

Mr. ZHIHAN YANG, Beijing Institute of Technology, School of Aerospace Engineering, Beijing, China;

IAC-26.E2.1.3

FEASIBILITY STUDY OF MATERIAL OUTGASSING AS A PASSIVE NANO-THRUST PHENOMENON FOR CUBESAT

Ms. Sarah Abedi-Boafo, University of Nottingham, Surbiton, United Kingdom;

IAC-26.E2.1.4

MODELING AND DEVELOPMENT OF GROUND SIMULATED FLIGHT TEST ENVIRONMENT FOR MINIMAL-CONFIGURATION SPINNING LANDER WITH SOLID ROCKET MOTORS

Ms. Kaho Nakagawa, The University of TOKYO, Graduate school, Sagami-hara, Japan;

IAC-26.E2.1.5

HIGH-DATA-RATE S-BAND TRANSMITTER DESIGN FOR HIGH-THROUGHPUT CUBESAT DOWNLINK IN LEO

Mr. Diego Sinche, Pontifical Catholic University of Peru, Lima, Peru;

IAC-26.E2.1.7

A COMPLEX-VALUED TRANSFORMER ARCHITECTURE FOR DOPPLER MITIGATION IN LEO CUBESAT COMMUNICATIONS

Mr. Abdullah Yahya Şirin, KTO Karatay University, Konya, Türkiye;

IAC-26.E2.1.8

A DISTRIBUTED "MOTHERSHIP-SWARM" AIRSHIP ARCHITECTURE FOR LONG-DURATION SCIENTIFIC EXPLORATION OF VENUS.

Mr. Makar Kladinov, Saint-Petersburg, Russian Federation;

IAC-26.E2.1.9

INDEPENDENT ORBIT DETERMINATION OF A SATELLITE IN LUNAR ORBIT USING ECLIPSE MEASUREMENTS

Mr. Petrus Marais, Stellenbosch University, Bloemfontein, South Africa;

IAC-26.E2.1.10

DEVELOPMENT OF HIGH-TEMPERATURE RESISTANT POLYMER MATERIALS USED IN SPACE APPLICATIONS

Ms. Merve Sehle KIZILTEPE, Istanbul Technical University, Fatih, Istanbul, Türkiye;

IAC-26.E2.1.11

BURNBACK ANALYSIS AND OPTIMIZATION OF STAR GRAINS USING THE LEVEL SET METHOD

Mr. Hossam Adel, Auburn University, Auburn, United States;

IAC-26.E2.1.12

CR3BP-BASED REACHABILITY ANALYSIS FOR THE COMET INTERCEPTOR MISSION

Mr. Erwan Ramanantsoavina, ISAE-Supaero University of Toulouse, Toulouse, France;

E2.2. Student Conference - Part 2

October 6 2026, 10:15 — Hall 1

Co-Chair(s): Marco Schmidt, University Wuerzburg, Germany; Ioana-Roxana Perrier, Institute of Polytechnic Science and Aeronautics (IPSA), France;

Rapporteur(s): Emmanuel Zenou, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France;

IAC-26.E2.2.1

SWARM-BASED MODULAR DE-ORBIT MICROSERVICES FOR MULTI-TARGET ACTIVE DEBRIS REMOVAL IN LOW EARTH ORBIT

Ms. Begüm Atli, Ataturk University, erzurum, Türkiye;

IAC-26.E2.2.2

A MULTI-SCALE FRAMEWORK FOR PREDICTING PERFORMANCE OF HYBRID ROCKET ENGINES WITH A PASSIVE MIXING DEVICE

Ms. Girisha Puri, The University of Sydney, Sydney, Australia;

IAC-26.E2.2.3

ACCESSIBLE, CYCLE-ACCURATE PROCESSOR-IN-THE-LOOP CHARACTERIZATION OF SPACECRAFT GUIDANCE, NAVIGATION & CONTROL ALGORITHMS

Ms. Asmi Gujral, University of Waterloo, Waterloo, Canada;

IAC-26.E2.2.4

A COMPARATIVE ANALYSIS OF NEAR SPACE IN THE EU AND CHINA IN THE CONTEXT OF AIR-SPACE INTEGRATION

Ms. Jiahe Zhao, Beijing Institute of Technology (BIT), Beijing, China;

IAC-26.E2.2.5

PRIVACY-PRESERVING CONJUNCTION ASSESSMENT USING SECURE MULTIPARTY COMPUTATION AND LAGRANGE INTERPOLATION

Ms. Kätryn Varkel, Cybernetica AS, Tallinn, Estonia;

IAC-26.E2.2.6

AN INTEGRATED NUMERICAL AND EXPERIMENTAL APPROACH FOR THE DYNAMIC VALIDATION OF A TOPOLOGY-OPTIMIZED SATELLITE BRACKET

Mr. Michal Zawadzki, Politecnico di Milano, Milan, Italy;

IAC-26.E2.2.7

DEVELOPMENT AND TERRESTRIAL VALIDATION OF A RASPBERRY PI-BASED STAR TRACKER PROTOTYPE USING NOISE-RESILIENT ALGORITHMS

Mr. Alvaro Aranibar Roque, Pontifical Catholic University of Peru, Lima, Peru;

IAC-26.E2.2.8

DESIGN AND SIMULATION OF A COMPUTATIONALLY EFFICIENT STAR TRACKER ALGORITHM FOR SMALL SATELLITES

Mr. İbrahim Doğa Ergin, TUBITAK Uzay, Space Technologies Research Institute, Çankaya, Türkiye;

IAC-26.E2.2.9

ONBOARD SUPER-RESOLUTION-ENHANCED SHIP DETECTION FOR SMALL SATELLITES: ACCURACY-EFFICIENCY TRADE-OFFS ON EMBEDDED HARDWARE

Mr. Chang min Lee, Korea Aerospace University, Goyang-si, Republic of Korea;

IAC-26.E2.2.10

BIOMIMETIC RADIATION SHIELDING: INVESTIGATION AND DEVELOPMENT OF THE PERFORMANCE OF MELANIN-DOPED CARBON COMPOSITES FOR DEEP SPACE HABITATS

Mr. Özcan Gülcan, Zonguldak Bülent Ecevit University, Zonguldak, Türkiye;

IAC-26.E2.2.11

REDUCTION SPOTS IN THE GEOLOGICAL RECORD AT THE LITTLEHAM MUDSTONE FORMATION: IMPLICATIONS FOR INTERPRETING POTENTIAL BIOSIGNATURES IDENTIFIED BY THE PERSEVERANCE ROVER AT JEZERO CRATER

Ms. Ahlam Abdi, Birkbeck, University of London, London, United Kingdom;

E2.3-GTS.4. Student Team Competition Global Technical Session

October 8 2026, 15:00 — Hall 28

Co-Chair(s): Emmanuel Zenou, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France; Franco Bernelli-Zazzera, Politecnico di Milano, Italy; Eleonora Lombardi, Fondazione E. Amaldi, Italy;

Rapporteur(s): Kathleen Coderre, Lockheed Martin (Space Systems Company), United States;

IAC-26.E2.3-GTS.4.1

CIRCE: A STUDENT-LED MISSION CONCEPT TO INVESTIGATE ACTIVITY BEYOND THE WATER ICE LINE AT CENTAUR 29P/SCHWASSMANN-WACHMANN

Mr. Robin Bonny, University of Bern, Bern, Switzerland;

IAC-26.E2.3-GTS.4.2

DESIGN AND EXPERIMENTAL VALIDATION OF A COOPERATIVE ROVER-UAV SYSTEM FOR PLANETARY SURFACE EXPLORATION

Mrs. Cansu Türüt, Gebze Technical University, Kocaeli, Türkiye;

IAC-26.E2.3-GTS.4.3

DESIGN AND RELIABILITY ENGINEERING OF THE ACUBESAT ADCS SOFTWARE

Mr. Kyriakos Georgantais, Aristotle University of Thessaloniki, Thessaloniki, Greece;

IAC-26.E2.3-GTS.4.4

DEVELOPMENT AND CONTROL OF A LAUNCH VEHICLE OPERATING UNDER INCOMPLETE AERODYNAMIC KNOWLEDGE
Mr. Dongkyu Kim, Seoul National University, seongnam-si, Republic of Korea;

IAC-26.E2.3-GTS.4.5

DEVELOPMENT OF A NEURAL NETWORK-BASED FLIGHT COMPUTER FOR HIGH-POWER ROCKETRY
Ms. Audrey Campos, Instituto Politécnico Nacional, Silao de la Victoria, Mexico; Mr. José Luis Mejía Villeda, Instituto Politécnico Nacional, Guadalajara, Mexico;

IAC-26.E2.3-GTS.4.6

EFFICIENT ONBOARD PROCESSING: AN AI-ENABLED ONBOARD PRE-PROCESSING AND COMPRESSION METHODOLOGY FOR WILDFIRE RISK ASSESSMENT ON SMALL SATELLITES
Mr. Begli Saparaliev, School of Computing Science, University of Glasgow, Glasgow, United Kingdom;

IAC-26.E2.3-GTS.4.7

GECO CUBESAT: STUDENT-LED SUSTAINABLE ALUMINIUM-ALTERNATIVE 1U CUBESAT DEVELOPMENT AND TESTING
Mr. Ashwin Regi, University of Southampton, Reading, United Kingdom;

IAC-26.E2.3-GTS.4.8

KALMAN – A MODULAR ROBOTIC PLATFORM FOR INSITU RESOURCE UTILIZATION AND PLANETARY EXPLORATION
Mr. Jakub Bubak, AGH University of Krakow, Zielonki, Poland;

IAC-26.E2.3-GTS.4.9

LIFETIME ANALYSIS OF SABATIER REACTOR CATALYSTS FOR MARTIAN METHALOX PRODUCTION
Ms. Ryza Rueda, University of British Columbia, Vancouver, Canada;

IAC-26.E2.3-GTS.4.10

DESIGN AND EXPERIMENTAL VALIDATION OF AN ACTIVE LANDING GUIDED MECHANICAL ACTUATOR (SIGMA) FOR PRECISION RECOVERY OF SMALL SATELLITE TESTBEDS
Mr. Cem Adil Öncü, Erciyes University, Kayseri, Türkiye;

IAC-26.E2.3-GTS.4.11

STEP-UP: TURNING ASTRONAUT FOOTSTEPS INTO ENERGY
Mr. Eytan Martiano, Institut Polytechnique des Sciences Avancées (IPSA), Louvres, France;

IAC-26.E2.3-GTS.4.12

SCALABLE GRAPH NEURAL NETWORK FRAMEWORK FOR SYSTEM-LEVEL COLLISION RISK PROPAGATION IN MEGA-CONSTELLATIONS
Ms. Stefania-Cristina Mozacu, Technical University of Cluj-Napoc, Sibiu, Romania;

E2.4. Educational Pico and Nano Satellites

October 7 2026, 10:15 — Hall 1

Co-Chair(s): Xiaozhou Yu, Dalian University of Technology (DUT), China; Franco Bernelli-Zazzera, Politecnico di Milano, Italy; Anna Guerman, Centre for Mechanical and Aerospace Science and Technologies (C-MAST), Portugal; Igor V. Belokonov, Samara National Research University (Samara University), Russian Federation;

IAC-26.E2.4.1

S³SAT: A 1U STUDENT-IN-THE-LOOP CUBESAT FOR DUST AND COASTAL TURBIDITY EVENT DETECTION WITH SMART DOWNLINK
Mr. Abdullah AlSalmani, United Arab Emirates University (UAEU), Al Ain, United Arab Emirates;

IAC-26.E2.4.2

LIQUA-SAT: LME-BASED CUBESAT DE-ORBITING
Ms. Beren Nisa Iğdır, MERKEZ, Türkiye;

IAC-26.E2.4.3

RESEARCH ON A MODULAR CUBESAT PLATFORM FOR HIGH-PERFORMANCE APPLICATIONS
Mr. Yugeng Liu, Tsinghua University, Beijing, China;

IAC-26.E2.4.4

RESOURCE-EFFICIENT NO-GPS STATE AWARENESS ARCHITECTURE FOR CUBESATS: GROUND PROPAGATION, ON-BOARD POSITION AWARENESS STRATEGY, AND RELATIVISTIC TIME SYNCHRONIZATION
Mr. Lorenzo Giomi, Politecnico di Milano, Firenze, Italy;

IAC-26.E2.4.5

DESIGN AND INITIAL VERIFICATION OF PASSIVE DEPLOYABLE SOLAR WINGS FOR A 3P POCKETQUBE
Ms. Büşra Dobur, TU Berlin, Berlin, Germany;

IAC-26.E2.4.6

FEASIBILITY STUDY OF AN IODINE HALL THRUSTER CONCEPT FOR 3U CUBESAT PROPULSION
Ms. Sheccid Orihuela Arias, Moscow Aviation Institute (National Research Institute, MAI), Cusco, Peru, Russian Federation;

IAC-26.E2.4.7

LESSONS LEARNED IN INTERFACE MANAGEMENT AND SUBSYSTEM DEVELOPMENT FOR A UNIVERSITY 2U CUBESAT
Mr. Jos Weidema, Delft University of Technology (TU Delft), Delft, Netherlands (Kingdom of the);

IAC-26.E2.4.8

FROM TEST DATA TO MODEL TUNING: THERMAL MODEL CORRELATION OF THE 6S CUBESAT AND THE ENGINEERING SOLUTIONS ENABLING ECSS COMPLIANCE OF THE 1U PLATFORM
Mr. Diego Fascendini, Politecnico di Milano, Verceia, Italy;

IAC-26.E2.4.9

POWER: CONCEPTUAL DESIGN OF A DEPLOYABLE 3U CUBESAT FOR MICROWAVE-BASED WIRELESS ENERGY RECHARGE
Mr. Pierluca De Felice, University of Naples "Federico II", Naples, Italy;

IAC-26.E2.4.10

BIRDS-RPM: SYSTEM ARCHITECTURE AND DEVELOPMENT STATUS OF A MULTI-PAYLOAD 3U CUBESAT
Mr. Ernesto Cortes, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-26.E2.4.11

BITFLIP: A STUDENT-BUILT CUBESAT PAYLOAD TO VISUALIZE RADIATION-INDUCED MEMORY UPSETS THROUGH IMAGE DEGRADATION
Mr. Bora Menekşe, Delft University of Technology (TU Delft), The Hague, Netherlands (Kingdom of the);

IAC-26.E2.4.12

EVALUATION OF POWER GENERATION OF Z-THOMSON SPIN MODE FOR THE ACUBESAT MISSION
Ms. Alexandra Tsela, Aristotle University of Thessaloniki, Kastoria, Greece;

E3. 39th IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS

Coordinator(s): Jacques Masson, European Space Agency (ESA), Netherlands (Kingdom of the); Bhavya Lal, RAND, United States;

E3.1. International Cooperation in Using Space for Sustainable Development: The "Space2030" Agenda and Beyond

October 6 2026, 10:15 — Hall 34

Co-Chair(s): Ikuko Kuriyama, Japan Aerospace Exploration Agency (JAXA), Japan; Werner R. Balogh, European Space Agency (ESA), France;

IAC-26.E3.1.1

SPACE FOR HUMAN WELL-BEING: INTEGRATING EARTH OBSERVATION AND GLOBAL HEALTH IN THE SPACE2030 AGENDA
Ms. Renata Prôa, Harvard University, Boston, United States;

IAC-26.E3.1.2

ADVANCING SUSTAINABLE DEVELOPMENT THROUGH SPACE: ITALY'S CONTRIBUTION TO THE SPACE2030 AGENDA
Mrs. Alessandra Vernile, Agenzia Spaziale Italiana (ASI), Rome, Italy;

IAC-26.E3.1.3

SPACE GOVERNANCE, ECONOMIC DEVELOPMENT, AND INTERNATIONAL COOPERATION: A STRATEGIC FRAMEWORK FOR SMALL COUNTRIES
Mr. Francesco Ventre, ispace, inc., Luxembourg, Luxembourg ;

IAC-26.E3.1.4

MAPPING SOUTHEAST ASIA'S SPACE FUTURE: REGIONAL INNOVATION, COLLABORATION, AND THE SPACE2030 AGENDA
Dr. Karryl Kim Trajano, Nanyang Technological University (NTU), Singapore, Singapore;

IAC-26.E3.1.6

ENVIRONMENTAL IMPACTS OF SPACE ACTIVITIES IN THE EUROPEAN SPACE SECTOR
Mr. Chanjeev Jeyecumar, ArianeGroup, Kirchheim unter Teck, Germany;

IAC-26.E3.1.8

THE OUTER SPACE AND ARCTIC NEXUS: THE IMPORTANCE OF INCORPORATING THE SPACE2030 AGENDA IN THE ARCTIC
Ms. Judith Jahnke, Institute of Air and Space Law, McGill University, Montreal, Canada;

IAC-26.E3.1.9

TOWARD IMPLEMENTING THE "SPACE2030" AGENDA THROUGH A COMPREHENSIVE NATIONAL SPACE LAW FRAMEWORK FOR TÜRKİYE, INCLUDING SUSTAINABILITY, GOVERNANCE, AND INTERNATIONAL COOPERATION
Ms. Yildiz Tugce Erduran, Istanbul, Türkiye;

IAC-26.E3.1.11

SPACE FOR HUMANITY AND UNOOSA AS A COOPERATION MODEL FOR SPACE2030 AND THE SDGS FROM INSPIRATION TO MEASURABLE PUBLIC VALUE
Mr. Ari Eisenstat, University of Hawaii, Honolulu, United States;

IAC-26.E3.1.12

AN ENGINEERING-BASED METHODOLOGY AND INDEX FRAMEWORK FOR QUANTIFYING THE CONTRIBUTION OF SPACE MISSIONS TO THE UN SUSTAINABLE DEVELOPMENT GOALS
Mr. Achraf Mizmizi, Politecnico di Milano, Milano, Italy;

E3.2. The Future of Space Exploration and Innovation

October 6 2026, 15:00 — Hall 34

Co-Chair(s): Marc Haese, DLR, German Aerospace Center, Germany; Nicolas Peter, European Space Agency (ESA), France;
Rapporteur(s): Claudiu Mihai Taiatu, International Space University (ISU), France;

IAC-26.E3.2.1

UNDERSTANDING THE GLOBAL SHIFT IN COMMERCIALIZATION IN LEO AND BEYOND
Mr. Bob Lamboray, Luxembourg Space Agency, Luxembourg, Luxembourg ;

IAC-26.E3.2.2

FROM OPEN SKIES TO OPEN SPACE: THE POLITICS OF COOPERATION IN SPACE EXPLORATION
Prof. Mai'a Cross, Northeastern University, Canton, MA, United States;

IAC-26.E3.2.3

THE MOON AS A STRATEGIC NON-RENEWABLE RESOURCE: GOVERNANCE PATHWAYS FOR LUNAR ENVIRONMENTAL PROTECTION AND SYSTEMIC STABILITY.
Mrs. Victoria Valdivia, European Space Policy Institute (ESPI), Santiago, Chile;

IAC-26.E3.2.4

LEGAL CHALLENGES AND REGULATORY FRAMEWORKS FOR THE CONSTRUCTION OF LUNAR STATIONS AND CHINA'S STANCE
Mr. Yunfan Guo, Beijing Institute of Technology (BIT), Beijing, China;

IAC-26.E3.2.5

WHY STATES CHOOSE ARTEMIS OR ILRS: A COMPARATIVE FRAMEWORK FOR LUNAR PROGRAM ALIGNMENT DECISIONS
Dr. Neslihan Topcu Alparslan, Konya, Türkiye;

IAC-26.E3.2.6

DESIGNING PROGRAM GOVERNANCE FOR FUTURE SPACE EXPLORATION: LESSONS FROM ARTEMIS
Ms. Camilla Airoidi, Politecnico di Milano, Cernusco Lombardone (Lc), Italy;

IAC-26.E3.2.8 (unconfirmed)

ASTEROID MINING REIMAGINED: REASSESSING ECONOMIC FEASIBILITY IN THE ERA OF EMERGING REUSABLE SPACE ARCHITECTURES
Mr. Shri Hari Satheeshkumar, Technical University of Munich (TUM), Munich, Germany;

IAC-26.E3.2.9

ECONOMIC VIABILITY AND MULTI-AGENCY GOVERNANCE FRAMEWORKS FOR HUMAN-ROBOT PLANETARY LAVA TUBE EXPLORATION
Mr. Florian DURIX, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, Toulouse, France;

IAC-26.E3.2.10

THE COGNITIVE SPACE AGE: ARTIFICIAL INTELLIGENCE AS THE NEXT INFRASTRUCTURE LAYER OF HUMAN EXPANSION BEYOND EARTH
Mr. Lars R. "Jones" Vadjina, University of Tübingen, Rottenburg, Germany;

E3.3. Economic Resilience and the Space Economic/Industrial Sector

October 7 2026, 10:15 — Hall 34

Co-Chair(s): Henry Hertzfeld, Space Policy Institute, George Washington University, United States; Alessandro Paravano, Politecnico di Milano, Italy;
Rapporteur(s): Luigi Scatteia, Novaspace, France; Bhavya Lal, RAND, United States;

IAC-26.E3.3.1

A STRATEGIC FRAMEWORK FOR EMERGING SPACE ECONOMIES
Dr. Nicola Garzaniti, Cranfield University, Cranfield, United Kingdom;

IAC-26.E3.3.2

BEYOND THE BUZZ: MAPPING ISAM'S ECONOMIC DOMAINS AND BUSINESS LOGICS
Ms. Victoria Carter-Cortez, Astroscale Ltd, Washington, Bolivia;

IAC-26.E3.3.3

CRITICAL MINERALS FOR THE SPACE INDUSTRY - RESILIENCE AND GEOPOLITICS
Mr. Federico Bonarota, Rome, Italy;

IAC-26.E3.3.4

ECONOMIC RESILIENCE OF THE SPACE SECTOR: EVIDENCE FROM GLOBAL SHOCKS AND EMERGING SPACE ECONOMIES
Mr. Suleyman Asadzada, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-26.E3.3.5

FROM CONSTELLATIONS TO INDUSTRIAL ECOSYSTEMS: A MEASURABLE FRAMEWORK FOR ECONOMIC RESILIENCE IN THE EMERGING SPACE ECONOMY

Mr. Muhammad Naveed, Pakistan Space and Upper Atmosphere Research Commission (SUPARCO), Islamabad, Pakistan;

IAC-26.E3.3.6

INCENTIVE STATE MODEL, ECONOMIC RESILIENCE AND SUSTAINABLE GROWTH IN THE HUNGARIAN SPACE SECTOR

Dr. Péter Kristóf, Obuda University, Keszü, Hungary;

IAC-26.E3.3.8

MEASURING SPACE DEVELOPMENT CONTINUITY AND RESILIENCE THROUGH CONSTRUCTION-IN-PROGRESS: A QUANTITATIVE ANALYSIS FROM THE JAXA CASE

Mr. Kohei Shibutani, Japan Aerospace Exploration Agency (JAXA), Chiyoda-ku, Tokyo, Japan;

IAC-26.E3.3.9

POLICY, BLACK SWANS, AND THE ECONOMIC RESILIENCE OF THE SPACE SECTOR

Ms. Allison Nicholls, Aligned Orbits, Springfield, United States;

IAC-26.E3.3.11

RETHINKING GLOBAL SOURCING IN THE SPACE SECTOR: TOWARD A RESILIENCE-FIRST SUPPLY CHAIN MODEL

Mr. Patrick Berghäuser, ArianeGroup, Heilbronn, Germany;

IAC-26.E3.3.12

SPACE DIPLOMACY AS AN ECONOMIC ENABLER FOR INDUSTRIAL RESILIENCE

Ms. Elif Yüksel, Space Policy Institute, George Washington University, Washington, D.C., United States;

IAC-26.E3.3.13

SPACE-SECTOR RESILIENCE AS A REMEDIATION POLICY CHALLENGE: DESIGNING OPERABLE ADR-TAX REGIMES FOR SATELLITE-SERVICE CONTINUITY

Mr. Yokei Yamaguchi, Ritsumeikan University, Ibaraki, Japan;

IAC-26.E3.3.14

STRATEGIC COMPETITIVENESS AND ECONOMIC RESILIENCE OF THE EUROPEAN UNION'S SPACE SECTOR IN THE NEW GEOPOLITICAL CONTEXT

Mr. Oscar Adrian Robalino Florett, SDA Bocconi School of Management, Bocconi University, MILAN, Italy; Mr. Nicola Carraro, SDA Bocconi School of Management, Bocconi University, Rome, Italy;

IAC-26.E3.3.15

THE ECONOMICS OF EUROPE'S SMALL-SATELLITE LAUNCH MARKET

Mr. Daniel Vrankar, TU Dresden, Dresden, Germany;

IAC-26.E3.3.16

A METHOD FOR CALCULATING GPS'S ECONOMIC IMPACT: EVIDENCE FROM AIRLINE DELAYS POST SELECTIVE AVAILABILITY

Mr. Lev Ricanati, Chicago, United States;

IAC-26.E3.3.17

THE BLUE OCEAN OF CHINA'S SPACE INDUSTRY: A REVIEW OF THE DEVELOPMENT OF COMMERCIAL SPACE INDUSTRY

Ms. Jia Daling, China Academy of Launch Vehicle Technology, Beijing, China;

E3.4. Policy and Regulatory Approaches for Governing Safety, Security and Sustainability in Space

October 7 2026, 15:00 — Hall 34

Co-Chair(s): Peter Stubbe, German Aerospace Center (DLR), Germany; Blake Karasek, Prague Security Studies Institute, Czech Republic;

Rapporteur(s): Gina Petrovici, German Space Agency, Germany;

IAC-26.E3.4.2

BEYOND LIABILITY: BUILDING ANTICIPATORY SPACE GOVERNANCE THROUGH INTERNATIONAL AND INDUSTRY COORDINATION

Prof. Katarzyna Malinowska, Space Entrepreneurship Institute, Warsaw, Poland;

IAC-26.E3.4.4

CHINA'S SATELLITE NETWORK IN THE GLOBAL SOUTH: IMPLICATIONS FOR WESTERN COUNTRIES?

Dr. Ana Soliz de Stange, Hamburg, Germany;

IAC-26.E3.4.5

DERIVING POLICY AGENDAS FOR SPACE TRAFFIC MANAGEMENT (STM) THROUGH REVERSE-ENGINEERING ON-ORBIT ACCIDENT SCENARIOS

Mr. Taejin Chang, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

IAC-26.E3.4.6

ECODIVERSITY DAMAGE IN OUTER SPACE: RETHINKING ENVIRONMENTAL HARM BEYOND ECONOMIC LOSS

Prof. Dr. Paula Silveira, Lisboa, Portugal;

IAC-26.E3.4.7

MODELS FOR GLOBAL SPACE TRAFFIC COORDINATION

Dr. Mariel Borowitz, Georgia Tech Space Research Institute, Atlanta, GA, United States;

IAC-26.E3.4.8

REGULATORY BALANCE IN A COMMERCIALIZED SPACE ERA

Dr. Ruth Stilwell, Aerospace Policy Solutions, LLC, Lauderdale by the Sea, United States;

IAC-26.E3.4.9

WHO IS BEARING THE COST OF MEGA CONSTELLATIONS? MODELING GEOGRAPHIC INEQUALITY IN SATELLITE LIGHT POLLUTION AND IMPLICATIONS FOR INTERNATIONAL SPACE POLICY

Ms. Isabel Cristina Bennassar Wojtowicz, Gdansk University of Technology, Gdansk, Poland; Ms. Karolina Ząbczyńska, Gdansk University of Technology, Ostróda, Poland; Ms. Kalina Banaszek, Gdansk University of Technology, Kielno, Poland;

IAC-26.E3.4.10

TOWARD WRC-27: PERSPECTIVES ON INTEGRATING DIVERSE CISLUNAR SPECTRUM REQUIREMENTS INTO THE ITU RADIOCOMMUNICATION AGENDA

Ms. Veronique Glaude, International Telecommunication Union (ITU), Geneva, Switzerland; Ms. Veronica Roman Ruiz, International Telecommunication Union (ITU), Geneva, Switzerland;

E3.6. Industrialization as a Catalyst for Competitiveness

October 8 2026, 15:00 — Hall 34

Co-Chair(s): Christine Klein, European Space Agency (ESA), France; Henry Hertzfeld, Space Policy Institute, George Washington University, United States; Péter Kristóf, Obuda University, Hungary;

Rapporteur(s): Karina Miranda Sanchez, ESA, Netherlands (Kingdom of the);

IAC-26.E3.6.1

THE POLITICAL ECONOMY OF SPACE INDUSTRIALIZATION IN EUROPE: HOW GOVERNANCE AND BUDGETARY DYNAMICS SHAPE MANUFACTURING CAPACITY

Dr. Ioana Petrescu, European Space Policy Institute (ESPI), Bucharest, Romania;

IAC-26.E3.6.2

STRATEGIC INDUSTRIALIZATION PATHWAYS FOR EMERGING ECONOMIES IN THE GLOBAL SPACE VALUE CHAIN

Mr. arda peker Turgut, Koc University, Istanbul, Türkiye;

IAC-26.E3.6.3

ASIMOV: HOW TO BUILD THOUSAND SATELLITES

Dr. Antonio Accettura, OHB System AG, Bremen, Germany;

IAC-26.E3.6.4

FROM BESPOKE TO BASELINE: STANDARDIZED ASSEMBLY LINES AS THE ENGINE OF GLOBAL SPACE COMPETITIVENESS

Ms. Buket Ak, Cukurova University, Adana, Türkiye;

IAC-26.E3.6.5

GOVERNMENT-ENABLED INDUSTRIALIZATION FOR SMALL-TO-MEDIUM ENTERPRISE COMPETITIVENESS: LESSONS FROM THE INDUSTRY-LED KANYINI SMALL-SATELLITE MISSION

Dr. Catherine Grace, Australian Space Agency, Adelaide, Australia;

IAC-26.E3.6.6

PLATFORMS AS DRIVERS OF SPACE INDUSTRY TRANSFORMATION: FROM PRACTICE INVESTIGATION TO FRAMEWORK DEVELOPMENT

Mr. Riccardo Bernocchi, Politecnico di Milano, Vescovato (CR), Italy;

IAC-26.E3.6.7

INTEROPERABILITY BARRIERS IN THE CASE FOR AN OPEN ROVER STANDARDS

Mr. Aleksa Djurdjevic, LunCo, Belgrade, Serbia;

IAC-26.E3.6.8

DESIGNING INSTITUTIONAL ARCHITECTURES FOR SPACE INDUSTRIALIZATION: REGIONAL COORDINATION AND INDUSTRIAL POLICY AS DRIVERS OF COMPETITIVENESS IN AFRICA

Mr. Federico Bonarota, Rome, Italy;

IAC-26.E3.6.9

PANEL DISCUSSION

Ms. Karina Miranda Sanchez, ESA, Netherlands (Kingdom of the);

E4. 60th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM

Coordinator(s): A. Ingemar Skoog,, Germany; Otfried G. Liepack, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States; Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Austria; Karlheinz Rohrwild,, Germany;

E4.1. Memoirs & Organisational Histories

October 7 2026, 15:00 — Hall 29

Co-Chair(s): Kerrie Dougherty,, Australia; Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Austria; Karlheinz Rohrwild,, Germany;

Rapporteur(s): Klaus Schilling, Zentrum für Telematik, Germany; Olga Dubrovina, Università degli studi di Trieste, Italy;

IAC-26.E4.1.1

A "DIRECT LINE" CONNECTING HOUSTON, BETHPAGE, AND TORONTO: UNSUNG CONTRIBUTIONS ENABLING APOLLO 13'S "LUNAR LIFEBOAT" RESCUE

Dr. Andrew Erickson, Naval War College/Harvard University, Newport, United States;

IAC-26.E4.1.2

LIN HUABAO(1931–2003): PIONEER OF CHINA'S SATELLITE RECOVERY TECHNOLOGY AND HIS PIVOTAL ROLE IN DEVELOPING RECOVERABLE SATELLITES

Prof. Rong Guo, Beijing Institute of Space Science and Technology Information, Beijing, China;

IAC-26.E4.1.3

MEMOIRS AS SOURCES ON THE POLITICAL ECONOMY OF OUTER SPACE

Dr. Darshan Vigneswaran, University of Amsterdam, Amsterdam, Netherlands (Kingdom of the);

IAC-26.E4.1.5

HISTORY OF AFRICAN SPACE ACTIVITIES: FROM EARLY FOUNDATIONS TO THE AFRICAN SPACE AGENCY

Mr. Zelalem Bogale, Ethiopian Space Science and Technology Institute (ESSTI), Addis Ababa, Ethiopia;

IAC-26.E4.1.8

THE DYNAMICS OF ASEAN SPACE ACTIVITIES: HISTORY, IDEOLOGIES, IMPACT, AND THE FUTURE

Ms. Runggu Prilia Ardes, National Research and Innovation Agency (BRIN), Jakarta, Indonesia;

IAC-26.E4.1.9

THE REMOTE SENSING PRINCIPLES IN THE 40TH YEAR

Mr. Hannes Mayer, Karl Franzens Universität Graz, Bierbaum am Auersbach, Austria;

IAC-26.E4.1.10

SMALL NATIONS IN SPACE: HISTORICAL TRAJECTORIES AND STRATEGIC PERSPECTIVES OF THE BALKAN PENINSULA

Ms. Oriana Coku, Ludovika University of Public Service, Berlin, Germany;

IAC-26.E4.1.11

PATHS AND MODES OF TECHNOLOGICAL INNOVATION FOR FUTURE AEROSPACE DEVELOPMENT-- PRACTICE AND REFLECTION BASED ON CHINA'S AEROSPACE

Dr. Xuemei Ma, China Academy of Aerospace System and Innovation, Beijing, China;

E4.2. Organizational, Scientific and Technical Histories

October 8 2026, 10:15 — Hall 29

Co-Chair(s): Vera Pinto Gomes, European Commission, Belgium; Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Austria;

Rapporteur(s): Hannes Mayer, Karl Franzens Universität Graz, Austria; Randy Liebermann,, United States; Steve Salmon, The British Interplanetary Society, United Kingdom;

IAC-26.E4.2.1

MAKING SPACE WALKS SUCCESSFUL: THE NEUTRAL BUOYANCE SIMULATOR

Dr. James Green, Space Science Endeavors, Silver Spring, United States;

IAC-26.E4.2.2

WORLD'S FIRST ICBM AND SPACE LAUNCHER: EARLY YEARS OF R-7 ROCKET

Prof. Mike Gruntman, Viterbi School of Engineering, USC, Los Angeles, United States;

IAC-26.E4.2.3

60TH ANNIVERSARY OF THE "INTERCOSMOS" INTERNATIONAL PROGRAM: HISTORICAL FACTS, KEY STAGES AND RESULTS.

Ms. Maria Shikhanova, Space Research Institute (IKI), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-26.E4.2.4

VE 231 SAPHIR, A STEPPING STONE TO THE FRENCH DETERRENCE FORCE & DIAMANT

Mr. Philippe Jung, 3AF, Grasse, France;

IAC-26.E4.2.6

THE AMBITIOUS STAR-H AEROSPACE TRANSPORTER PROJECT

Mr. Philippe Coué, Dassault Aviation, Saint Cloud, France;

IAC-26.E4.2.7

FROM MEGASTRUCTURES TO MODULAR HABITATS: ARCHITECTURAL IMPLICATIONS OF IN-SPACE ASSEMBLY AND CONSTRUCTION (1975–2009)

Dr. Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Gumpoldskirchen, Austria;

IAC-26.E4.2.8

FROM ORBITAL SPACE REFLECTORS TO PLANETARY SUNSHADES: HISTORICAL ROADMAP, MISSION CONCEPTS AND PUBLIC OUTREACH

Ms. Marina Coco, Politecnico di Torino, cefalù, Italy;

IAC-26.E4.2.9

CREATION OF A CROWDSOURCED CENTRALIZED ONLINE REPOSITORY FOR HISTORIC SPACEFLIGHT MEDIA

Mr. Dmitri Tshelnik, University of Alabama in Huntsville, Huntsville, United States;

E4.3. History of Türkiye and West Asia Contribution to Astronautics

October 9 2026, 10:15 — Hall 29

Co-Chair(s): Karlheinz Rohrwild,, Germany; Otfried G. Liepack, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States;

Rapporteur(s): Philippe Cosyn, Independent scholar, Belgium; Gurbir Singh, The British Interplanetary Society, United Kingdom;

IAC-26.E4.3.1

AN ARAB SCIENTIST AT THE CENTER OF APOLLO: FAROUK EL BAZ AND THE HISTORICAL MAKING OF LUNAR LANDING SITE SELECTION

Mr. Amer Khan, Dubai, United Arab Emirates;

IAC-26.E4.3.3

THE EVOLVING HISTORY OF TÜRKİYE'S CONTRIBUTIONS TO SPACE INDUSTRY

Ms. Tarana Karimova, Baku Engineering University, Baku, Azerbaijan;

IAC-26.E4.3.4

ENGINEERING FAILURE AS A CATALYST: ACCIDENTS, DESIGN ERRORS, AND THE EVOLUTION OF EARLY SPACEFLIGHT SYSTEMS

Mrs. Sezin Irmak Gümüş, MoEP - Mars on Earth Project, İstanbul, Türkiye; Mr. Orkun Zengin, Koc University, İstanbul, Türkiye;

IAC-26.E4.3.5

TRACES OF ASTRONOMY IN TURKISH CULTURE: AN AWARENESS STUDY BASED ON A DIGITAL MAP APPLICATION

Ms. Cansu Miray Çelik, samsun, Türkiye;

IAC-26.E4.3.6

BEYOND THE HORIZON: THE EVOLUTION OF TÜRKİYE'S SPACE JOURNEY FROM TÜRKSAT 1B TO MARTIAN ARCHITECTURES

Mr. Heydar Abdullazada, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-26.E4.3.7

A COMPUTATIONAL HISTORY-BASED PHYSICAL FEASIBILITY ANALYSIS OF LAGARI HASAN CELEBI'S ROCKET EXPERIMENT

Mr. TAHA ARBEN VURGUN, Turkish Technology Team Foundation, BERGAMA, Türkiye;

IAC-26.E4.3.8

FROM SYMBOL TO STRATEGY: STS51G, PRINCE SULTAN'S 1985 FLIGHT, AND THE LONG ROAD TO SAUDI SPACE GOVERNANCE

Mr. Amer Khan, Dubai, United Arab Emirates;

E5. 37th IAA SYMPOSIUM ON SPACE AND SOCIETY

Coordinator(s): Olga Bannova, University of Texas at San Antonio, United States; Randy Liebermann,, United States;

E5.1. Space Architecture: Habitats, Habitability, and Bases

October 5 2026, 16:30 — G2

Co-Chair(s): Olga Bannova, University of Texas at San Antonio, United States; Anna Barbara Imhof, Liquifer Systems Group (LSG), Austria;

Rapporteur(s): Anne-Marlene Rüede, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Mich Lin, Massachusetts Institute of Technology (MIT), United States;

IAC-26.E5.1.2

SUSTAINABLE DESIGN FOR CONFINED AND EXTREME ENVIRONMENTS: AN EEG AND ECG EXPERIMENTAL STUDY OF THE EFFECTS OF VIRTUAL 'BLUE SPACES' ON STRESS CONDITIONS.

Ms. Klea Biniakou, Technical University of Crete, Athens, Greece;

IAC-26.E5.1.3

DEVELOPMENT OF AN INCREMENTAL CREW QUARTER PRODUCT FOR BOTH COMMERCIAL AND INSTITUTIONAL SPACE STATIONS

Ms. Alessia Corradi, Thales Alenia Space Italia, Turin, Italy;

IAC-26.E5.1.4

RESEARCH ON ARCHITECTURAL ADAPTIVE DESIGN BASED ON THE SPATIAL MORPHOLOGY OF LUNAR LAVA TUBES

Mr. Pengqi Sun, Harbin Institute of Technology, Harbin, China;

IAC-26.E5.1.5

ROBOTIC LUNAR TUNNEL BORER (LTB) SYSTEM FOR HUMAN OUTPOST CONSTRUCTION

Dr. A. Scott Howe, Beaverton OR, United States;

IAC-26.E5.1.6

RESEARCH ON COMMON DIMENSIONS FOR LUNAR ARCHITECTURAL DESIGN BASED ON THE ANALYSIS OF ASTRONAUTS BEHAVIOR CHARACTERISTICS AND BIOMECHANICS UNDER THE INFLUENCE OF LUNAR GRAVITY

Prof. Dr. Chenping Han, China University of Mining and Technology, Xuzhou, China;

IAC-26.E5.1.7

A MULTI-SCENARIO FRAMEWORK FOR IDENTIFYING MAINTAINABILITY ISSUES AND MAPPING DESIGN RESPONSES IN LUNAR PROTECTIVE SHIELDING SHELLS

Mr. Menghao Wu, Harbin Institute of Technology, Harbin, China;

IAC-26.E5.1.9

FOR PLUM: A HOME TO CARRY MATERIALIZING BONDS AND ETHICAL FUTURES THROUGH WEARABLE TEXTILE ARCHITECTURES

Ms. Kelsey Leuenberger, Arizona State University, Tempe, AZ, United States;

IAC-26.E5.1.10

DESIGNING FOR THE NERVOUS SYSTEM: A BIOPHILIC HABITAT FRAMEWORK TO MEASURE PHYSIOLOGICAL ACTIVATION AND ENHANCE HABITABILITY IN SPACE

Mrs. Melanie Tinhof, Technische Universität Wien (TU Wien), Vienna, Austria;

E5.2. Is Space R&D Truly Fostering A Better World For Our Future?

October 6 2026, 15:00 — G2

Co-Chair(s): Olga Bannova, University of Texas at San Antonio, United States; Nona Cheeks, Retired NASA, United States;

Rapporteur(s): Joseph Grant, Retired NASA, United States;

IAC-26.E5.2.1

SPACE-LINK: A BRIDGE OF INNOVATION FROM SPACE RESEARCH TO SOCIETY

Mr. Ali Huseynli, Baku Higher Oil School, Baku, Azerbaijan;

IAC-26.E5.2.2

ALIGNING SPACE R&D INVESTMENTS WITH TERRESTRIAL SUSTAINABILITY

Mr. Hamza AKSİN, Marmara University, Maltepe, Türkiye;

IAC-26.E5.2.4

SPACE TECHNOLOGY AND SOCIAL INEQUALITY: WHO REALLY BENEFITS?

Ms. Khadija Bayramova, Garabagh University, Khankendy, Azerbaijan;

IAC-26.E5.2.7

EXERCISE COUNTERMEASURES IN SPACE MISSIONS: ADAPTING NASA AND ESA PROTOCOLS FOR CLINICAL REHABILITATION

Dr. Emine Nur Demircan, Istanbul, Türkiye;

IAC-26.E5.2.8

BIOFILM PREVENTION TECHNOLOGIES IN SPACE AND THEIR COMMERCIAL SPIN-OFF POTENTIAL

Ms. Emma Holling, University of Leicester, Crowthorne, Berkshire, United Kingdom;

IAC-26.E5.2.9

EXPLORING HOW WAX-BASED SPACE PROPELLANT RESEARCH GENERATES BENEFITS FOR BEEKEEPING COMMUNITIES

Ms. Cecilia Marsicovetere Fanjul, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.E5.2.10

"A PRAGUE THERE IS SPACE": A PODCAST SERIES FOR A COMPREHENSIVE AND INCLUSIVE UNDERSTANDING OF SPACE

Ms. Alessia Pia Pellicanò, Ghedi (BS), Italy;

E5.3. Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach

October 7 2026, 15:00 — G2

Co-Chair(s): Richard Clar, Art Technologies, United States; Yuri Tanaka, European Organization for Nuclear Research (CERN), Switzerland;

Rapporteur(s): Tibor Balint, International Academy of Astronautics (IAA), United States;

IAC-26.E5.3.1

LUNAR ECHOS: A RETROSPECTIVE OF THE SPACE ART OF RICHARD CLAR

Prof. Olga Bannova, University of Texas at San Antonio, Houston, United States;

IAC-26.E5.3.2

DESIGNING AN AESTHETIC EXPERIENCE – AN INTERDISCIPLINARY COLLABORATIVE INSTALLATION THROUGH DETECTING COMIC MUONS

Dr. Yuri Tanaka, European Organization for Nuclear Research (CERN), Geneva, Switzerland;

IAC-26.E5.3.3

THE WORLD NEEDS MORE SPACE—AND MORE ETHICS: ART AS A CATALYST FOR RESPONSIBLE SPACE DEVELOPMENT

Mrs. Roberta Gregori, European Space Agency (ESA), Paris, France;

IAC-26.E5.3.4

ART IN SPACE: A SYSTEMS FRAMEWORK FOR INTEGRATING ART-ENABLING TECHNOLOGIES INTO SPACE HABITATS

Mrs. Edmy Cruz-Reyes, Sasakawa International Center for Space Architecture, Pasadena, United States;

IAC-26.E5.3.5

DESIGNING IMMERSIVE BIOPHILIC EXPERIENCES TO SUPPORT MOTIVATION AND RESILIENCE IN EXTENDED CONFINEMENT: LESSONS FROM HUMAN SPACEFLIGHT AND ANALOGUE ENVIRONMENTS

Ms. Cleo Marie Nyborg, Imperial College London, Oslo, Norway;

IAC-26.E5.3.6

THE FOUNDRY ORBITAL LAB: THE FIRST PERMANENT ORBITAL LABORATORY FOR ARTISTIC PRACTICES

Mr. Luis Guzman, Northumbria University, Newcastle, United Kingdom;

IAC-26.E5.3.7

IONOGRAM BUTTERFLY: AN ART-SCIENCE APPROACH TO VISUALIZING IONOSPHERIC SPACE WEATHER DATA

Ms. Noora Alameri, Sharjah Academy for Astronomy, Space Sciences and Technology (SAASST), Sharjah, United Arab Emirates;

IAC-26.E5.3.8

FLOWING NARRATIVES: A SPACE DATALED CINEMATIC DIALOGUE BETWEEN TWO RIVERS

Ms. Priyanka Das Rajkakati, Karman Project, TOULOUSE, France;

IAC-26.E5.3.11

BEYOND THE ISOLATED ASTRONAUT: DESIGNING MULTISPECIES LIFE SUPPORT IN MICROGRAVITY

Ms. Mehrta Shirzadian, University of Applied Arts, Vienna, Vienna, Austria;

IAC-26.E5.3.12

MOON GALLERY AND MOON BOUND: ARTS MISSIONS FOR THE LUNAR SURFACE

Dr. Barbara Brownie, Royal College of Art, London, United Kingdom;

E5.4. Space Assets and Disaster Management

October 8 2026, 15:00 — G2

Co-Chair(s): Tibor Balint, International Academy of Astronautics (IAA), United States;

IAC-26.E5.4.1 (unconfirmed)

A SCALABLE PLAYBOOK FOR SPACE-ENABLED DISASTER INTELLIGENCE: COST MODELS AND OPERATIONAL

ARCHITECTURES FOR REAL-TIME FLOOD AND STORM RESPONSE
Prof. Zaheer Ali, University of Central Florida (UCF), Walnut Creek, United States;

IAC-26.E5.4.2

INTEGRATING SPACE-BASED EARTH OBSERVATION INTO DISASTER MANAGEMENT: THE CASE OF THE 2023 EMILIA-ROMAGNA FLOOD

Ms. Claudia Barbetti, Roma, Italy;

IAC-26.E5.4.3

A SATELLITE-AIDED EMERGENCY COMMUNICATION NETWORK INTEGRATED WITH SMART LIGHTING SYSTEMS FOR POST-DISASTER RESILIENCE

Mr. Firat Canpolat, Firat University, ELAZIG, Türkiye;

IAC-26.E5.4.4

COMPARATIVE ANALYSIS OF EARTHQUAKE-INDUCED GROUND DEFORMATION USING MULTI-TEMPORAL INSAR: CASE STUDIES FROM TÜRKİYE

Dr. Matus Bakon, Presov, Slovakia;

IAC-26.E5.4.5

SPACE FOR HUMANITY: OPTIMIZING GLOBAL FOOD SECURITY AND HUMANITARIAN AID NETWORKS USING OPEN-SOURCE EARTH OBSERVATION

Mr. Ferhat Aytimur AHISKA, Turkish Technology Team Foundation, Istanbul, Türkiye;

IAC-26.E5.4.6 (unconfirmed)

BRIDGING THE LAST MILE: ANTICIPATORY ACTION AND EARLY WARNING SYSTEMS IN LEAST DEVELOPED COUNTRIES
Mr. JOAO VALENTIM, *Space Generation Advisory Council (SGAC), Hortolândia, Brazil;*

IAC-26.E5.4.7

DISASTER MANAGEMENT FOR LUNAR AND MARTIAN COLONIES: MASS CASUALTY INCIDENT (MCI) TRIAGE AND NURSING INTERVENTION PROTOCOL IN CLOSED HABITATS
Ms. Rukiye Gozde KAPLAN, *Selçuk University, Konya, Türkiye;*

IAC-26.E5.4.8

CONNECTING COMMUNITIES IN CRISIS: THE HUMANITARIAN PROMISE OF LEO SATELLITE INTERNET
Ms. Gita Naderi, *Concordia University, Montreal, Canada;*

IAC-26.E5.4.9

INTEGRATING SPACE ASSETS AND GROUND-BASED SYSTEMS FOR ENHANCED DISASTER MANAGEMENT
Ms. Govher Orucova, *Azerbaijan University of Languages (AUL), Baku, Azerbaijan;*

IAC-26.E5.4.10

SPACE INNOVATIONS FOR EARTH'S RESILIENCE: LESSONS FROM THE 2015 NEPAL EARTHQUAKE AND AURELIA'S VISION A SOCIO-TECHNOLOGICAL SPACE POLICY RESEARCH PAPER
Ms. Jagriti Luitel, *Kathmandu, Nepal;*

E5.5. Sharing Space Achievements and Heritage: Space Museums and Societies

October 9 2026, 10:15 — G2

Co-Chair(s): Jean-Baptiste Desbois, SEMECCEL Cité de l'Espace, France; Ines Prieto, SEMECCEL Cité de l'Espace, France;

IAC-26.E5.5.1

THE SOCIETAL AND STRATEGIC ROLE OF SCIENCE CENTERS IN THE DEVELOPMENT OF SPACE AWARENESS AND SCIENTIFIC ATTITUDES: THE CASE OF GUHEM
Mr. Ahmet Fazıl Şemet, *Gökmen Space and Aviation Training Center (GUHEM), BURSA, Türkiye;*

IAC-26.E5.5.2

REFRAMING SPACE AS SOCIAL HERITAGE: PUBLIC ENGAGEMENT MECHANISMS OF CHINESE MUSEUMS AFTER 2023
Ms. Meili Vergnolle, *Tsinghua University, Beijing, China;*

IAC-26.E5.5.3

PRESERVING INTERNATIONAL SPACE STATION HERITAGE BEFORE ITS DEMISE
Dr. Todd Mosher, *Morrison, United States;*

IAC-26.E5.5.4

FROM DARK SKIES TO PUBLIC ENGAGEMENT: ASTROTOURISM INITIATIVES IN THE BOLIVIAN ANDES
Dr. Georgina Chavez, *Universidad Catolica Boliviana San Pablo, La Paz, Bolivia;*

IAC-26.E5.5.5

SCIENCE CENTERS AS INSTITUTIONAL CATALYSTS OF NATIONAL SPACE ECOSYSTEMS: PREPARING EMERGING SPACE NATIONS FOR THE SPACE AGE
Mr. B. Abdullah Karalar, *Müzeyyen Erkul Gaziantep Science Center, Gaziantep, Türkiye;*

IAC-26.E5.5.6

DESIGN AND PRACTICE OF INTERACTIVE STEM PROJECTS BASED ON FRONTIER SPACE MISSIONS
Prof. Rong Guo, *Beijing Institute of Space Science and Technology Information, Beijing, China;*

IAC-26.E5.5.7

CIVIL SOCIETY AS A CATALYST FOR NATIONAL SPACE DEVELOPMENT: THE ETHIOPIAN EXPERIENCE, FROM GRASSROOTS ADVOCACY TO INSTITUTIONAL SPACE GOVERNANCE
Mrs. Beza Tesfaye Zewdie, *Addis Ababa, Ethiopia;*

IAC-26.E5.5.8

GUYASPACE EXPÉRIENCE, THE NEW SPACE SCIENCE CENTRE OF EUROPE'S SPACE PORT
Mrs. Ines Prieto, *SEMECCEL Cité de l'Espace, Toulouse, France;*

IAC-26.E5.5.10

MOON BOUND EXHIBITION: GLOBAL COOPERATION TO STAGE CONTEMPORARY SPACE ART
Mr. Luis Guzman, *Northumbria University, Newcastle, United Kingdom;* Dr. Barbara Brownie, *Royal College of Art, London, United Kingdom;*

E5.6. Simulating Space Habitation: Habitats, Design and Simulation Missions

October 9 2026, 13:45 — G2

Co-Chair(s): Anna Barbara Imhof, Liquefier Systems Group (LSG), Austria; Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Austria;

Rapporteur(s): Amit Srivastava, University of Adelaide, Australia;

IAC-26.E5.6.1

A DECENTRALIZED OPEN SOURCE HARDWARE BIOSENSOR AND COMMUNICATIONS SYSTEMS ARRAY DESIGNED FOR SPACE ANALOG RESEARCH MISSION SIMULATIONS
Ms. Elizabeth Cole, *Philadelphia, United States;*

IAC-26.E5.6.2

A SELF DEPLOYABLE MODULAR HABITAT FOR SPACE ANALOG MISSIONS IN ANTARCTICA AS A POTENTIAL COMPONENT OF AN EMERGENCY RESPONSE SYSTEM.
Prof. Gastón Ibarburu, *Montevideo, Uruguay;*

IAC-26.E5.6.3

AQUA ORBIT: UNDERWATER HABITAT ARCHITECTURE VALIDATION FACILITY (UHAFV)
Dr. Anna Xygykou-Tsiomoulou, *University of Kent, Canterbury, United Kingdom;*

IAC-26.E5.6.4

BRIDGING ARCHITECTURE AND SYSTEMS ENGINEERING: AN INTERDISCIPLINARY SIMULATION ENVIRONMENT FOR LUNAR HABITAT DESIGN
Mr. Aleksa Djurdjevic, *LunCo, Belgrade, Serbia;*

IAC-26.E5.6.5 (unconfirmed)

COMPARING CREW COMPOSITIONS IN SPACE ANALOG MISSIONS: INSIGHTS FROM ALL-FEMALE AND MIXED-GENDER STUDIES FOR FUTURE SPACE HABITATION
Ms. Anggun Oktafiyana, *Ondokuz Mayıs University, Samsun, Türkiye;*

IAC-26.E5.6.6

FUXI SPACE STATION - A TRIAXIAL GYROSCOPIC HABITAT THAT GENERATES ARTIFICIAL GRAVITY, REGULATES TIME, AND NURTURES SUSTAINABLE LIFE
Dr. Zhelun Zhu, *Xi'an Jiaotong - Liverpool University, Suzhou, China;*

IAC-26.E5.6.7

REDESIGN AND RELOCATION OF THE HADEES-C ANALOG STATION: EXPANDED CAPABILITIES AND OPERATIONAL LESSONS LEARNED
Mr. Oscar Ojeda, *Cydonia Foundation, Bogota, Colombia;*

IAC-26.E5.6.9

SAME TEAM, NEW HABITAT: A CASE STUDY IN ANALOGUE TRAINING TRANSFERABILITY
Mr. Sungyoon Joseph Hong, *Imperial College London, Seoul, Republic of Korea;*

IAC-26.E5.6.10

THE POTENTIAL OF UNDERWATER HABITATS AS HIGH-FIDELITY SPACE MISSION SIMULATIONS
Dr. Michaela Musilova, *XtremeFrontiers, Winchester, United States;*

IAC-26.E5.6.11

TIME-DELAYED COMMUNICATIONS: AN ANALOG CASE STUDY ON THE VALUE OF PRIOR CREW EXPERIENCE FOR THE CAPCOM ROLE
Mr. Matthew Acevski, Imperial College London, London, United Kingdom;

IAC-26.E5.6.12

TRUST WITH A HUMANOID ROBOT DURING ANALOG
Mr. Théo LEREUIL, ILEWG "EuroMoonMars", IS-sur-Tille, France;

IAC-26.E5.6.13 (unconfirmed)

YOU CANNOT LITIGATE YOUR WAY OUT OF A BAD FLOOR PLAN: DESIGNING GOVERNANCE INTO COMMERCIAL DEEP SPACE HABITATS
Ms. Neha Dagley, Coral Gables, United States;

E6. IAF BUSINESSES AND INNOVATION SYMPOSIUM

Coordinator(s): Nancy C. Wolfson, American Institute of Aeronautics and Astronautics (AIAA), United States;

E6.1. Space Entrepreneurship and Investment: The Practitioners' Perspectives

October 8 2026, 15:00 — Hall 29

Co-Chair(s): Joerg Kreisel, JOERG KREISEL International Consultant (JKIC), Germany; Daria Stepanova,, Germany;
Rapporteur(s): Michele Cristina Silva Melo, Ideia Space, Brazil;

IAC-26.E6.1.1

BLOCKCHAIN-BASED SATELLITE IMAGE TRADING PLATFORM AND SECONDARY MARKET MODEL
Mr. Ökkeş Enes Kaymaz, Kilis, Türkiye;

IAC-26.E6.1.2

FINANCING THE VALLEY OF DEATH: CREDIT INTELLIGENCE AS THE MISSING INFRASTRUCTURE FOR INSTITUTIONAL CAPITAL IN THE SPACE ECONOMY
Ms. Hauwa Umaru, Waldstetten, Germany;

IAC-26.E6.1.3

NEW TREND FOR SUSTAINABLE SPACE INVESTMENT IN JAPAN
Ms. Misuzu Onuki, Space Access Corporation, Tokyo, Japan;

IAC-26.E6.1.4

THE FIRST PRIVATE BRAZILIAN EDUCATIONAL CONSTELLATION: TECHNICAL DEVELOPMENT, IN-ORBIT OPERATIONS, AND BUSINESS VIABILITY
Mr. Leonardo Souza, Ideia Space, Brasilia, Brazil;

IAC-26.E6.1.5

BUILDING AFRICA'S SPACE ENTREPRENEURSHIP PIPELINE THROUGH THE AFRICA EARTH OBSERVATION CHALLENGE'S 5-STAGE INNOVATION FUNNEL
Ms. Nandi Mtethwa, The Research Institute for Innovation and Sustainability (RIIS), Johannesburg, South Africa;

IAC-26.E6.1.6

ANALYSIS OF OPTIMISM BIAS IN BUSINESS PLAN PROJECTIONS FOR SPACE STARTUPS AND ITS EFFECT ON SURVIVAL RATES FOLLOWING THE SEED INVESTMENT PHASE
Ms. Melany Margarita Garro Velasquez, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.E6.1.7

A CAPITAL ALLOCATION FRAMEWORK FOR ROADMAP-DRIVEN SPACE INNOVATION: UNLOCKING PRIVATE CAPITAL THROUGH STAGED INVESTMENT AND MULTIDIMENSIONAL READINESS
Mr. Giulio Marano, Space Generation Advisory Council (SGAC), Copenhagen, Denmark;

IAC-26.E6.1.9

VENTURE CAPITAL FUNDING OF LUNAR TECHNOLOGY ENTREPRENEURSHIP
Mr. Jonas Tobiassen, International Space University, Kristiansand S, Norway;

IAC-26.E6.1.10

SPACE POSTMAN AND ATLAS: ENABLING STARTUP PARTICIPATION IN THE ORBITAL LOGISTICS ECONOMY
Mr. Kaan Göktürk, Istanbul Technical University, Istanbul, Türkiye;

IAC-26.E6.1.11

SPACE DATA CENTRES VS EDGE COMPUTING - 2026 LANDSCAPE SURVEY OF CLAIMS, PLAYERS, AND ECONOMICS
Mr. Erik Kulu, Tallinn, Estonia;

IAC-26.E6.1.12

COUNTING WHAT COUNTS: A COMPARATIVE ANALYSIS OF SPACE STARTUP INVESTMENT, TECHNOLOGY READINESS OUTCOMES, AND COMMERCIAL RETURNS ACROSS US AND EUROPEAN ACCELERATOR MODELS
Mr. Gigi Dinut, Stevenage, United Kingdom;

IAC-26.E6.1.13

FROM INCEPTION TO IPO: QUANTIFYING THE HIDDEN PRIVATE SECTOR IN THE GLOBAL SPACE ECONOMY
Ms. Meagan Crawford, Houston, United States;

E6.2. Government and Industry Perspectives on the Future of Space Commerce

October 7 2026, 10:15 — Hall 29

Co-Chair(s): Rose Croshier, National Oceanic and Atmospheric Administration (NOAA), United States; Nancy C. Wolfson, American Institute of Aeronautics and Astronautics (AIAA), United States; Jim Keravala, [unlisted], United States;

IAC-26.E6.2.1

KEYNOTE: THE U.S. DEPARTMENT OF COMMERCE AND THE IAF SPACE ENTREPRENEURSHIP & INVESTMENT COMMITTEE ON: FOUNDATIONS FOR A SAFE AND PROFITABLE IN-SPACE ECONOMY
Mr. Taylor Jordan, Office of Space Commerce, U.S. Department of Commerce, United States;

IAC-26.E6.2.2

WRITING THE RULES AND GRADING THE HOMEWORK? SPACE COMMERCE AND THE LIMITS OF DELEGATED SUPERVISION
Ms. Robin J Frank, ARLINGTON, United States;

IAC-26.E6.2.3

L-INCOTERMS: STANDARDIZED TRADE TERMS FOR CISLUNAR AND LUNAR LOGISTICS
Mr. Takuya Yokoyama, JGC Corporation, Yokohama, Japan;

IAC-26.E6.2.4

TURNING SPACE DIPLOMACY INTO A MARKET CATALYST: A COMPARATIVE LOOK AT TÜRKİYE AND THE UAE
Ms. Elif Yüksel, Space Policy Institute, George Washington University, Washington, D.C., United States;

IAC-26.E6.2.5

ENABLING THE EMERGING DOWN-MASS INDUSTRY THROUGH EFFECTIVE AIRSPACE MODELING
Dr. Ruth Stilwell, Aerospace Policy Solutions, LLC, Lauderdale by the Sea, United States;

IAC-26.E6.2.6

GOVERNANCE AND LEGITIMACY OF THE ASTEROID MINING ECONOMY
Ms. Leana Brown, Washington, DC, United States;

IAC-26.E6.2.7

THE NEW SPACE DEAL FOR IP BEYOND EARTH
Mr. Ulisse Saverio Bassi, Belvaux, Luxembourg ;

IAC-26.E6.2.8

MOBILIZING THE NEW ECONOMIC FRONTIER - CREATING THE LARGEST INFRASTRUCTURE PROGRAM IN HISTORY
Mr. Jim Keravala, OffWorld, Austin, United States;

IAC-26.E6.2.9

SPIN-IN AS A COMMERCIALIZATION PATHWAY: ENABLING NON-SPACE COMPANIES TO ENTER LUNAR AND Cislunar VALUE CHAINS
Ms. Ekaterina Seltikova, Lille, France;

IAC-26.E6.2.10

BEYOND SETTLEMENT: GOVERNANCE AS MARKET INFRASTRUCTURE IN THE MOON VILLAGE ECOSYSTEM
Mr. Bruno Nunes Vaz, Instituto Tecnológico de Aeronáutica (ITA), São José dos Campos, Brazil;

IAC-26.E6.2.11

BRIDGING THE PARTICIPATION GAP: INTEGRATING MULTIDISCIPLINARY EXPERTISE INTO THE FUTURE OF SPACE COMMERCE
Prof. Edythe Weeks, Webster University, Webster Groves, United States;

IAC-26.E6.2.12

CLOSING THE LAST MILE OF EARTH OBSERVATION: HOW MUNICIPAL GOVERNMENTS ACTUALLY ADOPT SATELLITE SOLUTIONS
Dr. Federica Mezzani, Bip Group, Rome, Italy;

IAC-26.E6.2.13

THE SPACE IT UP! ECOSYSTEM: A STRATEGIC FRAMEWORK FOR TECHNOLOGY TRANSFER AND SOCIO-ECONOMIC IMPACT IN EARTH OBSERVATION
Dr. Margherita Righini, Space It Up S.C.a r.l., Torino, Italy;

IAC-26.E6.2.14

THE ITALIAN WAY TO THE NEW SPACE ECONOMY: EVOLUTION AND IMPACT OF PUBLIC-PRIVATE PARTNERSHIPS.
Dr. Silvia Ciccarelli, Italian Space Agency (ASI), Rome, Italy;

E6.3. Innovation: The Academics' Perspectives

October 6 2026, 15:00 — Hall 29

Co-Chair(s): Michele Cristina Silva Melo, Ideia Space, Brazil; Andrea Cabello, University of Brasilia, Brazil;

Rapporteur(s): Nancy C. Wolfson, American Institute of Aeronautics and Astronautics (AIAA), United States;

IAC-26.E6.3.1 (unconfirmed)

A BIBLIOMETRIC ANALYSIS OF SPACE STUDIES AT A GLOBAL LEVEL (1979-2026)
Dr. Rukiye Can Yalçın, National Defense University, Ankara, Türkiye;

IAC-26.E6.3.2

ALIGNING PUBLIC-PRIVATE MODELS WITH INNOVATION PATHWAYS: EVIDENCE FROM COMMERCIAL SPACE SYSTEMS
Dr. Robert Edgell, State University of New York, Utica, United States;

IAC-26.E6.3.3

BUILDING SPACE INNOVATION ECOSYSTEMS IN EMERGING SPACE NATIONS: ORGANIZATIONAL MODELS AND INVESTMENT PATHWAYS
Mrs. SALAM ABUALHAYJA'A, MENA ENGINEERING EDUCATION AND TRAINING, Irbid, Jordan;

IAC-26.E6.3.4

DETERMINANTS OF SUCCESS AMONG SPACE INDUSTRY SMES: FINANCIAL CONSTRAINTS, FUNDING SOURCES, AND COMPLEMENTARY CAPABILITIES
Prof. Marleen Willekens, KULeuven, Leuven, Belgium;

IAC-26.E6.3.5

FROM GOVERNMENT PROJECTS TO COMMERCIAL ECOSYSTEMS: A DUAL-LADDER THEORY OF SPACE INDUSTRY DEVELOPMENT IN EMERGING NATIONS
Prof. Tetsuhito Fuse, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-26.E6.3.6

FROM ORBIT TO OCEAN: MULTI-SOURCE SATELLITE INTEGRATION FOR MARITIME DOMAIN AWARENESS IN EMERGING SPACE ECONOMIES, A CASE STUDY FROM THE SULTANATE OF OMAN
Mr. Zaid Balushi, Muscat, Oman;

IAC-26.E6.3.7

COMMUNICATING ORGANIZATIONAL RESTRUCTURING IN THE SPACE SECTOR: PRACTICES FOR MANAGING RESISTANCE AND LEADERSHIP FOR SUSTAINING CHANGE
Ms. Valentina Zancan, Politecnico di Milano, Milan, Italy;

IAC-26.E6.3.8

HYBRID FINANCING ARCHITECTURES IN UPSTREAM SPACE VENTURES: STRUCTURAL DIVERGENCE FROM CONVENTIONAL DEEP TECHNOLOGY FUNDING MODELS
Ms. Filiz Emirli, NTNU, Trondheim, Norway;

IAC-26.E6.3.10

QUALITY ASSURANCE AS A SUPPLY CHAIN RESILIENCE MECHANISM: THE MEDIATING ROLE OF PREVENTION-ORIENTED CAPABILITIES IN SPACE SECTOR VALUE CHAINS
Prof. Katarzyna Malinowska, Space Entrepreneurship Institute, Warsaw, Poland;

E6.4-GTS.1. Entrepreneurship Around the World Global Technical Session

October 7 2026, 15:00 — Hall 28

Co-Chair(s): Eleonora Lombardi, Fondazione E. Amaldi, Italy; Samuel Peterson, Embry-Riddle Aeronautical University Worldwide, United States; Susana Fornies Rodriguez, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, France; Nancy C. Wolfson, American Institute of Aeronautics and Astronautics (AIAA), United States;

IAC-26.E6.4-GTS.1.1

CONNECTING YOUTH TO SPACE DATA FOR EARTH AND SOCIETY: AN EXPERIENTIAL LEARNING FRAMEWORK SUPPORTING EMERGING SPACE CAREERS AND ENTREPRENEURSHIP – THE PIKALI EXPERIENCE
Ms. Fanny AYAT, Vienne, Austria;

IAC-26.E6.4-GTS.1.2

CREATING AN ENTREPRENEURS PARADISE WITH OPEN DATA
Dr. Jeanne Holm, University of California, Los Angeles (UCLA), Sierra Madre, CA, United States;

IAC-26.E6.4-GTS.1.3

EMERGING SPACE ECONOMIES: LEVERAGING INNOVATION FOR COMPETITIVE ADVANTAGE
Mr. Girinath Anandhan, Vilnius, Lithuania;

IAC-26.E6.4-GTS.1.4

FROM ORBIT TO EARTH: HOW SPACEAG ENTREPRENEURS NAVIGATE RISK AND GLOBAL MARKETS
Mr. Davi Souza, Independent Researcher, Harpenden, United Kingdom;

IAC-26.E6.4-GTS.1.5

BUILDING NORDIC ADVANTAGE IN SPACE: INDUSTRIAL REPURPOSING, COMMERCIALIZATION, AND COORDINATION WITH SWEDEN IN FOCUS
Mr. Gabor Tatar, Ålta, Sweden;

IAC-26.E6.4-GTS.1.6

CATALYZING SPACE COMMERCE THROUGH INNOVATION-ORIENTED PUBLIC PROCUREMENT: EVIDENCE FROM BRAZIL'S INERTIAL NAVIGATION SYSTEM PROGRAM
Mr. Erik Busnello Imbuzeiro, Brazilian Space Agency (AEB), Brasília, Brazil;

IAC-26.E6.4-GTS.1.7

SPACE ENTREPRENEURSHIP MODELS FOR DEVELOPING ECONOMIES: MALAYSIA, BRAZIL, NIGERIA

Ms. Priyadarshni Ramesh Raju, University of Southampton, Southampton, United Kingdom;

IAC-26.E6.4-GTS.1.8

STRATEGIC INNOVATION IMPERATIVES FOR SUSTAINING LEADERSHIP IN THE COMMERCIAL SPACE ERA

Mr. Philip Hover-Smoot, San Francisco, United States;

IAC-26.E6.4-GTS.1.9

FROM LAUNCHPADS TO LONG-TERM PROSPERITY: DERIVING A TERRESTRIAL SOCIAL DIVIDEND IN REGIONAL AUSTRALIA

Mr. Hamish McNamara, Southern Launch, Adelaide, Australia;

IAC-26.E6.4-GTS.1.10

GLOBAL PERSPECTIVES ON LUNAR EXPLORATION AND DEVELOPMENT

Mr. Issei Mamiya, Mitsubishi Research Institute, Inc., Tokyo, Japan;

IAC-26.E6.4-GTS.1.11

SERVITIZATION UNDER INSTITUTIONAL LOCK-IN: GOVERNMENT DEMAND SIGNALS AND THE FEASIBILITY OF UPSTREAM SPACE COMMERCE IN EUROPE

Mr. Leon Kreisel, Aachen, Germany;

IAC-26.E6.4-GTS.1.12

AN INTERACTIVE WEB PLATFORM FOR SPACE SITUATIONAL AWARENESS AND ORBITAL DATA VISUALIZATION

Ms. Hatice Acar, TUBITAK Uzay, Space Technologies Research Institute, ÇANKAYA, Türkiye;

IAC-26.E6.4-GTS.1.13

ESG MANAGEMENT STATUS AND EVALUATION OF KOREAN SPACE COMPANIES FOR SUSTAINABLE SPACE DEVELOPMENT

Dr. Chang Ho Lim, Korea Aerospace Research Institute (KARI), Daejeon, Republic of Korea;

IAC-26.E6.4-GTS.1.14

COMPETING BEFORE THE RESOURCE: RESOURCE-ADVANTAGE THEORY AND CONSTITUTIVE COMPETITION IN THE EMERGING SPACE ECONOMY

Mr. Ahmet Can Şenlik, İstanbul Gelişim University, İstanbul, Türkiye;

IAC-26.E6.4-GTS.1.15

A COMPARATIVE ANALYSIS OF GOVERNMENT AND INDUSTRY PERSPECTIVES ON SOUTH AFRICA'S SPACE COMMERCE DEVELOPMENT: STRATEGIC INNOVATIONS FOR COMMERCIAL ACCELERATION.

Mr. Mutshutshu Nephithidi, South African National Space Agency (SANS), District Krugersdorp, South Africa;

E7. 69th IISL COLLOQUIUM ON THE LAW OF OUTER SPACE

Coordinator(s): Lesley Jane Smith, Leuphana University of Lüneburg/Weber-Steinhaus & Smith, Germany; Catherine Doldirina, International Institute of Space Law (IISL), Italy;

E7.1. Young Scholars Session

October 5 2026, 16:30 — Hall 3

Co-Chair(s): Merve ERDEM BURGER, Swiss Space Law Forum, Switzerland; Nomfuneko Irene Majaja, Kenya Space Agency, Kenya;

Rapporteur(s): Shrawani Shagun, National Law University of Delhi, India; Thomas Graham, Swinburne University of Technology, Australia;

IAC-26.E7.1.1

KEYNOTE: CONSTELLATIONS AT SCALE: LAW, ETHICS AND STEWARDSHIP IN A WORLD THAT NEEDS MORE SPACE

Dr. Elina Marozova, Intersputnik International Organization of Space Communications, Moscow, Russian Federation;

IAC-26.E7.1.2

FROM SPACE HARDWARE TO CLOUD SERVICES IN ORBIT: LEGAL IMPLICATIONS OF SPACE-BASED DATA CENTERS

Ms. Roser Almenar, University of Valencia, Valencia, Spain;

IAC-26.E7.1.3

RECONCEPTUALIZING THE "THREAT OF FORCE" IN OUTER SPACE: A BEHAVIOR-BASED FRAMEWORK FOR NON-COOPERATIVE RPO

Ms. Seoyeon Kim, Waseda University, Gwangmyeong-si, Republic of Korea;

IAC-26.E7.1.4

BALANCING TRANSPARENCY AND SECURITY: LEGAL CHALLENGES OF EXTRATERRESTRIAL LIFE DISCLOSURE

Ms. Aure Allexandre, International Institute of Air and Space Law, Leiden University, Geneva, Switzerland;

IAC-26.E7.1.5

LIABILITY FOR AI-BASED COGNITIVE ERRORS IN AUTONOMOUS LUNAR OPERATIONS UNDER INTERNATIONAL SPACE LAW

Ms. Ayşegül Aslan, Social Sciences University of Ankara, Ankara, Türkiye;

IAC-26.E7.1.6

ALTERNATIVE FINANCIAL GUARANTEES IN OUTER SPACE: THE DEMOCRATIZATION POTENTIAL OF SPACE RISK SWAPS

Mr. Francesco Pugno, University of Turin, Torino, Italy;

IAC-26.E7.1.7

INSURANCE OF ON-ORBIT SERVICING OPERATIONS: RISK MANAGEMENT AND LEGAL CHALLENGES

Mr. Mertcan Arslantas, Institut du Droit de l'Espace et des Telecommunications (IDEST), Cachan, France;

IAC-26.E7.1.9

DECOLONIZING THE COSMOS: A THIRD WORLD APPROACHES ANALYSIS OF INDIGENOUS RIGHTS PROTECTION IN INTERNATIONAL SPACE LAW.

Mr. David Kasibante, Space Generation Advisory Council (SGAC), Kampala, Uganda;

IAC-26.E7.1.10

APPLICATION OF THE ICJ'S CLIMATE CHANGE ADVISORY OPINION TO SPACE LAW ACTIVITIES: LEGAL OBLIGATIONS BEYOND TREATY REGIMES

Mr. Nedko Radev, Sofia, Bulgaria; Ms. Nikoleta Vasileva, Kardzhali, Bulgaria;

IAC-26.E7.1.11

LESSONS FROM THE ICAO REGIME FOR SPACE WEATHER HAZARDS: AN INCREASINGLY FORESEEABLE RISK

Mrs. Charline Coudry, Institut du Droit de l'Espace et des Telecommunications (IDEST), Sceaux, France;

IAC-26.E7.1.12

LAW-BASED ORDER OR STRATEGIC SOFT LAW? CHINA'S APPROACH TO SPACE GOVERNANCE

Ms. Katerina Fialova, Beijing, China;

IAC-26.E7.1.13

EU VS. US APPROACHES TO CYBERSECURITY REGULATION IN SPACE: ARE WE ON THE SAME REGULATORY SPACESHIP TOWARD RESILIENCE?

Mrs. Anna Blechova, Masaryk University, Brno, Czech Republic;

E7.2. Information Sharing in Outer Space: Theory and Practice

October 6 2026, 10:15 — Hall 3

Co-Chair(s): Joan Chesoni,, Kenya; George (Georgios) D. Kyriakopoulos, National and Kapodistrian University Of Athens, Greece;

Rapporteur(s): Beyza Eravci, University of Luxembourg, Türkiye; Giuliana Rotola, Scuola Superiore Sant'Anna, Italy;

IAC-26.E7.2.1

THE ROLE OF THE UNITED NATIONS AND ITS SPACE LAW INSTRUMENTS IN PROMOTING INFORMATION SHARING ON SPACE ACTIVITIES

Dr. Franziska Knur, German Aerospace Center (DLR), Bonn, Germany;

IAC-26.E7.2.2

SHARING INFORMATION SOLVES (NEARLY) EVERYTHING

Prof. Mark Sundahl, Cleveland State University, Cleveland, OH, United States;

IAC-26.E7.2.3

WHAT COUNTS AS AN "ACTIVITY IN OUTER SPACE"? A SYSTEMIC LENS ON TRANSPARENCY AND INFORMATION-SHARING UNDER ARTICLE XI OF THE OUTER SPACE TREATY

Dr. Scarlet O'Donnell, BHO Legal, Ismaning, Germany;

IAC-26.E7.2.4

INFORMATION SHARING IN THE COMMERCIAL SPACE AGE: TECHNOLOGICAL CONCENTRATION AND FUNCTIONAL APPROPRIATION AS CHALLENGES TO THE OUTER SPACE TREATY.

Mr. Felipe Martínez Corte, Santiago, Chile;

IAC-26.E7.2.6

A DIGITAL SPACECRAFT PASSPORT FOR TRANSPARENCY IN SPACE ACTIVITIES: STAKEHOLDER INFORMATION REQUIREMENTS AND A PROTOTYPE REPOSITORY

Dr. Bernd M. Weiss, Luleå University of Technology, Luleå, Sweden;

IAC-26.E7.2.7

THE LIMITS OF TRANSPARENCY: A PRELIMINARY STUDY OF TRADE SECRET PROTECTION IN SPACE OPERATIONS

Mr. Marco Franzoso, Thales Alenia Space France, Toulouse, France;

IAC-26.E7.2.8

TRANSPARENCY BY DESIGN? COMMERCIAL SECRECY AND THE ARCHITECTURE OF INFORMATION GOVERNANCE IN OUTER SPACE

Ms. Idil Muge Ak, ASELSAN, Ankara, Türkiye; Mr. And Surekcigil, ASELSAN, Ankara, Türkiye;

IAC-26.E7.2.9

BUILDING OF INFORMATION SHARING SYSTEM FOR THE LUNAR ACTIVITIES: FROM INTERNATIONAL AGREEMENTS TO MAPS

Ms. Irina Chernykh, Peoples' Friendship University of Russia (RUDN University), Moscow, Russian Federation;

IAC-26.E7.2.10

SPACE SITUATIONAL AWARENESS AND COLLECTIVE DEFENCE: NATO'S INFORMATION-SHARING MODEL IN OUTER SPACE SECURITY

Mr. EGEMEN DEMİRER, Student, Istanbul, Türkiye;

IAC-26.E7.2.11

FRAGMENTED LEGAL ORDER GOVERNING LUNAR INFORMATION SHARING

Dr. Sima Moradinasab, Shahid Beheshti University, Tehran, Iran;

IAC-26.E7.2.12

INFORMATION SHARING AND THE RISK OF PSEUDO-SOVEREIGNTY IN LUNAR ACTIVITIES

Prof. Güneş Ünüvar, University of Exeter, Exeter, United Kingdom;

IAC-26.E7.2.13

INFORMATION SHARING FOR OUTER SPACE ACTIVITIES: PROPOSED PRINCIPLES FOR THE SHARING OF ACTIONABLE DATA

Prof. Christopher Johnson, International Institute of Air and Space Law, Leiden University, Leiden, Netherlands (Kingdom of the);

E7.3. Legal and Regulatory Opportunities and Challenges in the Evolving Low Earth Orbit (LEO) Economy

October 6 2026, 15:00 — Hall 3

Co-Chair(s): OLAVO DE OLIVEIRA BITTENCOURT NETO, Catholic University of Santos, Brazil; Upasana Dasgupta, OP Jindal Global University, India;

Rapporteur(s): Gurur Gaye Günel, Günel Law Firm, Luxembourg ; Gregory Radisic, The Centre for Space, Cyberspace and Data Law, Canada;

IAC-26.E7.3.1

FROM SOFT LAW TO COMPLIANCE: A LICENSING-LINKED FRAMEWORK FOR SPACE DEBRIS PREVENTION, VERIFICATION, AND LIABILITY IN THE LEO ECONOMY

Mr. Bekir Ersoz, Turkish Technology Team Foundation, Istanbul, Türkiye;

IAC-26.E7.3.2

THE EMERGENCE OF A CUSTOMARY INTERNATIONAL LAW DUTY TO DE-ORBIT DEFUNCT SATELLITES

Mr. David Eagleson, Northumbria University, Newcastle-upon-Tyne, United Kingdom;

IAC-26.E7.3.3

ACTIVE DEBRIS REMOVAL AND INTENTIONAL AMBIGUITY: LEGAL RESPONSIBILITY AND ECONOMIC STABILITY IN THE EMERGING LEO ECONOMY

Mr. Oscar Adrian Robalino Florett, SDA Bocconi School of Management, Bocconi University, MILAN, Italy; Mr. Nicola Carraro, SDA Bocconi School of Management, Bocconi University, Rome, Italy;

IAC-26.E7.3.4

LAUNCHING SOFTWARE? DYNAMIC SPACE OBJECTS AND THE DETERMINATION OF FAULT FOR AI-DRIVEN SATELLITES IN LOW EARTH ORBIT

Mr. Gregory Radisic, The Centre for Space, Cyberspace and Data Law, Hamilton, Canada;

IAC-26.E7.3.5

COLLISION-AVOIDANCE COMPENSATION RULES (CACR) FOR SPACE TRAFFIC MANAGEMENT: A SAFETY-FIRST, RISK-WEIGHTED COST-SHARING FRAMEWORK

Ms. Yunping Liu, Alma Mater Studiorum - University of Bologna, Bologna, China;

IAC-26.E7.3.6

ENABLING MULTI-JURISDICTION IN-ORBIT SERVICING: TOOLS AND PROCESSES DEVELOPED IN THE UK RPO SANDBOX

Mr. Romain Buchs, ClearSpace SA, Renens, Switzerland;

IAC-26.E7.3.7

OPERATIONALIZING ARTICLE VI TOWARD EFFECTIVE STM - A PUBLIC CERTIFICATION FRAMEWORK FOR COMMERCIAL SSA SERVICES-

Prof. Yu Takeuchi, Keio University, Saitama, Japan;

IAC-26.E7.3.8

ORBITAL DATA CENTERS AS CRITICAL INFRASTRUCTURE: ASTRO-DIGITAL SOVEREIGNTY AND THE NEED FOR A NEW GOVERNANCE FRAMEWORK

Mr. Rodrigo Furtado, Independent Researcher, Brasilia, Brazil;

IAC-26.E7.3.9

LEGAL AND REGULATORY PATHWAYS TO SUSTAINABLE LOW EARTH ORBIT AND THE EXPANDING ROLE OF THE INTERNATIONAL TELECOMMUNICATION UNION

Dr. Elina Morozova, Intersputnik International Organization of Space Communications, Moscow, Russian Federation;

IAC-26.E7.3.10

LEGAL ASPECTS OF LASER USE IN LOW-EARTH ORBIT SUSTAINABILITY MISSIONS

Ms. Katja Grünfeld, Ljubljana, Slovenia;

IAC-26.E7.3.11

LEAVE EU OUT OR LET EU OFFICIATE? THE DRAFT EU SPACE ACT AND THE EVOLVING LEO ECONOMY

Prof. Frans G. Van der Dunk, University of Nebraska, College of Law, Leiden, Netherlands (Kingdom of the);

IAC-26.E7.3.12

WHEN UK SPACE MEETS THE EU SPACE ACT: REGULATORY FRAGMENTATION AND ITS IMPACT ON LEO OPERATIONS

Mr. Vinicius Aloia, Astroscale Ltd, Didcot, United Kingdom;

IAC-26.E7.3.13

TOWARDS A NEW ETHICS FOR SPACE MISSIONS AND SPACE LAW A EUROPEAN INITIATIVE FOR LOW EARTH ORBIT (LEO) AND GIGA SYSTEMS AND SERVICES

Mr. Philippe Clerc, Centre National d'Etudes Spatiales (CNES), Paris, France;

E7.4. Planetary Defence: Legal Issues in the Deflection of Hazardous Asteroids and Comets

October 7 2026, 10:15 — Hall 3

Co-Chair(s): Alissa J. Haddaji, Massachusetts Institute of Technology (MIT), United States; Irmgard Marboe, University of Vienna, Austria;

Rapporteur(s): Anil Akyol, MoEP - Mars on Earth Project, Türkiye; Jingyi Liu, Beijing Institute of Technology, Institute of Space Law, China;

IAC-26.E7.4.1

INTERNATIONAL LEGAL GOVERNANCE OF PLANETARY DEFENCE MISSIONS

Ms. Yule Zhao, Beijing Institute of Technology, Institute of Space Law, Beijing, China;

IAC-26.E7.4.2

PROVIDING INFORMATION AND A DISCLAIMER IN PLANETARY DEFENSE: PERSPECTIVES FROM JAPAN

Mr. Hajime Shinomiya, Japan Aerospace Exploration Agency (JAXA), Tokyo, Japan;

IAC-26.E7.4.3

DEFLECTING ASTEROIDS, DEFINING WEAPONS: LEGAL UNCERTAINTY IN PLANETARY DEFENSE OPERATIONS

Ms. Laura Morelli, European Space Agency (ESA), Loreto (AN), Italy;

IAC-26.E7.4.4

MULTI-ACTION KINETIC DEFLECTION IN PLANETARY DEFENCE: LEGAL CHALLENGES OF TESTING, APPLICATION AND MISSION OUTCOMES UNDER THE CONTEMPORARY REGIME OF SPACE GOVERNANCE

Mr. Adrian Kaczmarek, Adam Mickiewicz University, Borówiec, Poland;

IAC-26.E7.4.5

NAVIGATING THE BOUNDARY BETWEEN "SALVATION" AND "HARM": THE LEGITIMACY DILEMMA OF NUCLEAR EXPLOSIVE DEVICES IN ASTEROID IMPACT MITIGATION AND THE NEED FOR RECONSTRUCTING INTERNATIONAL LIABILITY REGIMES

Prof. Yongliang Yan, Beijing Jiaotong University, Beijing, China;

IAC-26.E7.4.6

THE INVOCATION OF STATE OF NECESSITY IN PLANETARY DEFENCE MISSIONS: A LEGAL ANALYSIS

Dr. Tugrul Cakir, Ankara Yıldırım Beyazıt University, Ankara, Türkiye;

IAC-26.E7.4.7

STATE RESPONSIBILITY AND THE ALLOCATION OF CROSS-BORDER DAMAGE IN PLANETARY DEFENCE MISSIONS

Ms. Jingyi Liu, Beijing Institute of Technology, Institute of Space Law, Beijing, China;

IAC-26.E7.4.8

CONCURRENT MISSIONS TO ASTEROID 99942 APOPHIS: PLANETARY DEFENSE LEGAL QUESTIONS EXAMINED BY THE SMPAG LEGAL WORKING GROUP

Prof. Alissa J. Haddaji, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-26.E7.4.9

PLANETARY DEFENCE, SCIENCE FICTION, AND THE LAW: HOW FICTIONAL PORTRAYALS OF PLANETARY DEFENCE RAISE DIFFERENT LEGAL QUESTIONS

Prof. Andrea Harrington, Institute of Air and Space Law, McGill University, Montreal, QC, Canada;

E7.5. Space Stations: Legal Framework

October 7 2026, 15:00 — Hall 3

Co-Chair(s): Mahulena Hofmann, University of Luxembourg, Luxembourg ; NAZLI CAN, Istanbul Technical University, Türkiye;

Rapporteur(s): Safwene El Khaira, ECSL, France; Simona Spassova, University of Luxembourg, Luxembourg ;

IAC-26.E7.5.2

CREWED SPACE STATIONS ON THE MOON AND OTHER CELESTIAL BODIES

Prof. Christopher Johnson, International Institute of Air and Space Law, Leiden University, Leiden, Netherlands (Kingdom of the);

IAC-26.E7.5.3

EVOLUTION OF INTERNATIONAL GOVERNANCE CONCEPTS AND RULE-MAKING BASED ON THE INTERNATIONAL COOPERATION MODEL OF THE CHINA SPACE STATION

Ms. Fei Ge, Shenzhen University, Shenzhen, China;

IAC-26.E7.5.5 (unconfirmed)

FROM LEO TO THE LUNAR GATEWAY: AUTHORIZATION AND CONTINUOUS SUPERVISION OF NON-GOVERNMENTAL ACTORS IN DEEP SPACE HABITATS

Mr. Sethu Nandakumar Menon, University of Vienna, Ras Al Khaimah, United Arab Emirates;

IAC-26.E7.5.6

FROM NEAR-EARTH TO DEEP SPACE: LEGAL CHALLENGES OF INTERNATIONAL COOPERATION UNDER CHINA'S SPACE STATION AND INTERNATIONAL LUNAR RESEARCH STATION

Dr. Luping Zhang, China University of Political Science and Law, Beijing, China;

IAC-26.E7.5.7

LEGAL FOUNDATIONS OF THE INTERNATIONAL SPACE STATION: LESSONS FROM THE IGA FOR FUTURE INTERNATIONAL SPACE COOPERATION

Prof. Masahiko Sato, Gakushuin University, Tokyo, Japan;

IAC-26.E7.5.8

LEGAL FRAMEWORK FOR LUNAR SURFACE EXPLORATION OF ARTEMIS -- THE U.S. - JAPAN FRAMEWORK AGREEMENT AND ITS IMPLEMENTING ARRANGEMENT CONCERNING LUNAR SURFACE EXPLORATION USING THE PRESSURIZED ROVER --

Mr. Daisuke Saisho, Japan Aerospace Exploration Agency (JAXA), Tokyo, Japan;

IAC-26.E7.5.9

SAFETY ZONES FOR SPACE STATIONS: A NEAR-TERM LEGAL ISSUE

Mr. David Eagleson, Northumbria University, Newcastle-upon-Tyne, United Kingdom;

IAC-26.E7.5.11

WHEN CONTRACTS ARE NOT ENOUGH: THE CASE FOR A MASTER GOVERNANCE DOCUMENT IN COMMERCIAL SPACE STATIONS

Ms. Neha Dagley, Coral Gables, United States;

E7.7. Recent Developments in Space Law – National and Regional Space Legislation

October 9 2026, 10:15 — Hall 3

Co-Chair(s): Güneş Ünüvar, University of Exeter, United Kingdom; Philippe Clerc, Centre National d'Etudes Spatiales (CNES), France;
Rapporteur(s): Theodora Liameti, Eutelsat, France;

IAC-26.E7.7.1

BLUEPRINTING NATIONAL SPACE LAW: U.S. REGULATORY BENCHMARKS FOR EMERGING SPACE NATIONS IN LIGHT OF THE SOFIA GUIDELINES AND UNGA RESOLUTION 68/74
Dr. Zsófia Biró, University of Pécs and SGAC, Pécs, Hungary;

IAC-26.E7.7.2

THE NEED FOR A MUTUALISTIC COMPENSATION MECHANISM FOR DAMAGE CAUSED BY SPACE OBJECTS: THE PROPOSAL FOR A VICTIM COMPENSATION FUND
Dr. Ivan Fino, Sant'Anna School of Advanced Studies, Turin, Italy;

IAC-26.E7.7.3

URSO – THE UNION REGISTER OF SPACE OBJECTS
Prof. Mahulena Hofmann, University of Luxembourg, Luxembourg, Luxembourg ;

IAC-26.E7.7.4

DISCUSSION OF SWITZERLAND'S DRAFT FEDERAL LAW ON SPACE OPERATIONS AND ANALYSIS WITHIN THE BROADER REGIONAL CONTEXT
Dr. Merve Erdem Burger, Swiss Space Law Forum, Morges, Switzerland;

IAC-26.E7.7.5

EXPLORATION OR EXPLOITATION? BRAZIL'S EMERGING LEGAL FRAMEWORK FOR SPACE RESOURCES
Mr. Hamish McNamara, Southern Launch, Adelaide, Australia;

IAC-26.E7.7.6

ESTONIA'S NATIONAL SPACE LAW: BALANCING INNOVATION, SUSTAINABILITY AND COMPLIANCE
Ms. Gloria Kõgel, Ministry of Economic Affairs and Communications for Estonia, Tallinn, Estonia;

IAC-26.E7.7.7

FROM POLICY TO STATUTORY LAW: EVALUATING INDIA'S EMERGING NATIONAL SPACE LEGISLATIVE ARCHITECTURE
Mr. Abhishek Dubey, Trilegal, Gurgaon, India;

IAC-26.E7.7.8

SPACE OPERATION LICENCE: DRIVING ACROSS THE EU SPACE ACT FOR LICENSING HARMONISATION
Mrs. Camilla ACQUARONE, AVIO S.p.A., PARIS, France;

IAC-26.E7.7.9

ONE GOVERNANCE LOGIC, DIFFERENT NORMATIVE INSTRUMENTS: CHINA'S MODEL OF NATIONAL SPACE REGULATION
Mr. Yaoyao Lu, The University of Hong Kong, Hong Kong, Hong Kong SAR, China;

IAC-26.E7.7.10

REGULATORY SANDBOXING FOR SPACE: THE SAUDI APPROACH
Dr. Olga Volynskaya, Prince Sultan University, Riyadh, Saudi Arabia;

IAC-26.E7.7.11

THE AFRICAN SPACE AGENCY AND THE GOVERNANCE OF SPACE ACTIVITIES: INSTITUTIONAL DIVERSITY, SECURITY IMPLICATIONS, AND THE CHALLENGE OF CONTINENTAL COORDINATION
Dr. Arnold Agaba, Institute of Air and Space Law, McGill University, Montreal, Canada;

IAC-26.E7.7.12

RECONSIDERING SPACE ACTIVITIES ACT OF JAPAN: LEGAL CHALLENGES AND POLICY ISSUES IN THE REGULATION OF EMERGING SPACE ACTIVITIES
Mr. Hinata Oshima, Nakamura Tsunoda & Matsumoto, Tokyo, Japan;

E8. IAA MULTILINGUAL ASTRONAUTICAL TERMINOLOGY SYMPOSIUM

Coordinator(s): Susan McKenna-Lawlor, Space Technology (Ireland) Ltd., Ireland; Tetsuo Yoshimitsu, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan;

E8.1. Multilingual Astronautical Terminology

October 9 2026, 13:45 — Hall 30

Co-Chair(s): Tetsuo Yoshimitsu, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan; Susan McKenna-Lawlor, Space Technology (Ireland) Ltd., Ireland;

IAC-26.E8.1.1

TOWARDS SUBJECT-BASED LANGUAGE TRAINING FOR SPACE RESEARCH: CORPUS STUDIES OF DISCIPLINE-SPECIFIC TEXTS FOR ASTRODYNAMICS LANGUAGE ANALYSIS
Dr. Olga Ovchinnikova, Keldysh Institute of Applied Mathematics of RAS, Moscow, Russian Federation;

IAC-26.E8.1.2

CONCEPT OF ADAPTIVE SPACE LAW TERMINOLOGY
Ms. Maryna Myklush, Université de Toulouse 1 Capitole, Toulouse, France;

IAC-26.E8.1.3

LOST IN TRANSLATION: THE CHALLENGES OF MULTILINGUAL TREATY ANALYSIS
Ms. Martina Elia Vitoloni, Institute of Air and Space Law, McGill University, Montreal, Argentina;

IAC-26.E8.1.4

TERMINOLOGICAL DIVERGENCE IN MARS MISSION ARCHITECTURE: INSTITUTIONAL FRAMING AND MULTILINGUAL IMPLICATIONS OF CORE MISSION CONCEPTS
Mrs. Sefa Çiçek, İstanbul, Türkiye;

E9. IAF SYMPOSIUM ON SECURITY, STABILITY AND SUSTAINABILITY OF SPACE ACTIVITIES

Coordinator(s): Serge Plattard, University College London (UCL), United Kingdom; Stefano Zatti, University of Rome "La Sapienza", Italy;

E9.1-A6.8. Policy, Legal, Institutional, Economic and Security Aspects of Debris Mitigation, Debris Remediation and STM

October 5 2026, 16:30 — E2

Co-Chair(s): David Spencer, The Aerospace Corporation, United States; Serge Plattard, University College London (UCL), United Kingdom; Tanja Masson-Zwaan, International Institute of Air and Space Law, Leiden University, Netherlands (Kingdom of the); Andrea Capurso, LUISS Guido Carli University, Italy;
Rapporteur(s): Emma Kerr, Defence Science and Technology Laboratory (DSTL), United Kingdom; Victoria Samson, Secure World Foundation, United States;

IAC-26.E9.1-A6.8.10

IDENTIFYING AND CATEGORIZING CHALLENGES POSED BY DUAL-USE SPACE SYSTEMS TO INTERNATIONAL SPACE TRAFFIC MANAGEMENT

Ms. Anca Agachi, RAND, Washington, United States;

E9.2. Cyber-based security threats to space missions: establishing the legal, institutional and collaborative framework to counteract them

October 5 2026, 16:30 — Hall 34

Co-Chair(s): Julien Airaud, Centre National d'Etudes Spatiales (CNES), France; Stefano Zatti, University of Rome "La Sapienza", Italy;

IAC-26.E9.2.1

BEYOND PHYSICAL PERIMETERS: RECALIBRATING STATE RESPONSIBILITY UNDER ARTICLE VI OF THE OUTER SPACE TREATY FOR CYBER-INTERVENTION IN CLOUD-INTEGRATED SPACE SEGMENTS

Mr. Zhuoming Xu, Beijing Institute of Technology, Beijing, China;

IAC-26.E9.2.2

TESTING SPACE CYBER RESILIENCE IN PRACTICE: THE SPACE CYBER RANGE AS AN OPERATIONAL ENABLER

Mrs. Maria Bušujeva, CybExer Technologies, Tallinn, Estonia;

IAC-26.E9.2.3

CYBER SECURITY AND BIG DATA: MYSTERY OF DATA IN THREAT DETECTION ON SPACE SYSTEMS

Mr. Sanan Gasimzada, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-26.E9.2.4

CYBER THREAT INTELLIGENCE, MISSION ASSURANCE AND LEGAL GREY ZONES IN ORBIT

Mr. Nicola Carraro, SDA Bocconi School of Management, Bocconi University, Rome, Italy; Mr. Oscar Adrian Robalino Florett, SDA Bocconi School of Management, Bocconi University, MILAN, Italy;

IAC-26.E9.2.5

CYBER-BASED SECURITY THREATS TO SPACE MISSIONS: ESTABLISHING THE LEGAL, INSTITUTIONAL AND COLLABORATIVE FRAMEWORK TO COUNTERACT THEM

Ms. Sarah Al-Shaqi, Sana'a, Yemen;

IAC-26.E9.2.6

CYBERSECURITY AS A REQUIREMENT FOR COMMERCIAL SPACE APPLICATIONS: FROM VULNERABILITIES TO LEGAL OBLIGATIONS

Ms. Clémence Richardeau, Université de Toulouse 1 Capitole, Toulouse, France;

IAC-26.E9.2.7

FROM JAMMING TO CYBER FORCE: LEGAL RESPONSES TO HARMFUL INTERFERENCE WITH SPACE INFRASTRUCTURE

Ms. Effrosyni Koukoufilippou, National and Kapodistrian University Of Athens, Athens, Greece;

IAC-26.E9.2.8

INTERNATIONAL COOPERATION MECHANISMS FOR GOVERNING CYBERSECURITY INCIDENTS IN COMMERCIAL SPACE ACTIVITIES

Mr. Azar Valiyev, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

IAC-26.E9.2.9

LIABILITY ISSUES ARISING FROM CYBERSECURITY BREACHES IN THE CONTEXT OF SPACE OPERATIONS UTILIZING AI SYSTEMS

Mr. GEORGIOS CHATZICHARALAMPOUS, Université Paris Pantheon-Assas, Paris, France;

IAC-26.E9.2.10

MATRIX OF EUROPEAN LEGISLATION ON SPACE CYBERSECURITY: ASSESSING THE FEASIBILITY OF THE EU REGULATORY APPROACH

Mrs. Anna Blechova, Masaryk University, Brno, Czech Republic;

IAC-26.E9.2.11

NAVIGATING THE INVISIBLE THREAD: LEGAL IMPLICATIONS OF GNSS RELIANCE AND VULNERABILITY IN THE GLOBAL FINANCIAL SECTOR

Mrs. Sirine Asfour, Swiss Space Law Forum, CHENS SUR LEMAN, France;

IAC-26.E9.2.12

NEUTRALITY IN-ORBIT; EXAMINING THE RESPONSIBILITY OF NEUTRAL, SATELLITE-PROVIDING STATES IN THE CONTEXT OF CYBER ARMED CONFLICTS

Mr. GEORGIOS CHATZICHARALAMPOUS, Université Paris Pantheon-Assas, Paris, France;

IAC-26.E9.2.13

SPACE DATA GOVERNANCE ACROSS THE LIFECYCLE OF HARM: LIABILITY, ACCOUNTABILITY, AND INFORMATION SHARING

Ms. Lydia Veronica (Lilliana) Fan, Space Generation Advisory Council (SGAC), New York, United States;

IAC-26.E9.2.14

SUPPLY CHAIN SANCTITY: MITIGATING SUB-COMPONENT LEVEL CYBER-PHYSICAL ATTACKS IN COMMERCIAL-OFF-THE-SHELF (COTS) SATELLITES

Ms. Mehpara Heydarova, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

IAC-26.E9.2.15

THE FRAGMENTATION OF EU GOVERNANCE IN AI-DRIVEN SPACE CYBERSECURITY SYSTEMS

Mr. Luca Ricci, University of Trento, Rome, Italy;

IAC-26.E9.2.17

WHEN SATELLITES DECIDE: AUTONOMOUS CYBER-PHYSICAL SPACE SYSTEMS AND THE RECALIBRATION OF STATE RESPONSIBILITY

Dr. Nebile Pelin Manti, TOBBUYUM, Istanbul, Türkiye;

E9.3. Norms and Standards for Safe and Responsible Behaviour in Space

October 8 2026, 10:15 — Hall 30

Co-Chair(s): Peter Martinez, Secure World Foundation, United States; Annamaria Nassisi, Thales Alenia Space Italia, Italy;

Rapporteur(s): Rachel Venn, Space Generation Advisory Council (SGAC), United Kingdom;

IAC-26.E9.3.1

ACTIVE DEBRIS REMOVAL AND POWER POLITICS: WHO DEFINES RESPONSIBLE BEHAVIOR IN ORBIT?

Ms. Sofia Motta, Perugia, Italy;

IAC-26.E9.3.2

CYBERSECURITY AS A DIMENSION OF RESPONSIBLE BEHAVIOR IN OUTER SPACE

Ms. Effrosyni Koukoufilippou, National and Kapodistrian University Of Athens, Athens, Greece;

IAC-26.E9.3.3

DUAL-USE NEUTRALISATION AND RESPONSIBLE BEHAVIOUR NORMS IN LUNAR INFRASTRUCTURE GOVERNANCE

Ms. Risa Koyanagi, University of Cambridge, Tokyo, Japan;

IAC-26.E9.3.4

FROM DESIGN CONSTRAINTS TO OPERATIONAL NORMS: ENGINEERING SAFE BEHAVIOUR IN CONGESTED ORBITAL ENVIRONMENTS

Mr. Baladitya Rane, Vellore Institute of Technology, Indore, India;

IAC-26.E9.3.5

FROM POLITICAL COMMITMENT TO OPERATIONAL CLARITY: STRENGTHENING ACCOUNTABILITY IN RESPONSIBLE BEHAVIOUR NORMS

Ms. Paola Alejandra Zamudio Torres, Universidad Nacional Autónoma de México (UNAM), MEXICO CITY, Mexico;

IAC-26.E9.3.6

NORMALIZING STANDARDS AND STANDARDIZING NORMS
Dr. PJ Blount, Durham University, Durham, United Kingdom;

IAC-26.E9.3.7

NORMS, DEPENDENCY, AND DUE REGARD: AFRICAN PERSPECTIVES ON SAFE AND RESPONSIBLE BEHAVIOR IN OUTER SPACE
Prof. Andrea Harrington, Institute of Air and Space Law, McGill University, Montreal, QC, Canada;

IAC-26.E9.3.9

PERCEPTIONS AND TRUST: HOW DUAL-USE SYSTEMS COMPLICATE NORMS OF BEHAVIOR ON ORBIT
Ms. Georgia Vogt, RAND, Davidsonville, United States;

IAC-26.E9.3.10

FROM PORTS TO ORBITS: WHAT SPACE SECURITY GOVERNANCE CAN LEARN FROM THE ISPS CODE
Prof. Dr. Paula Silveira, Lisboa, Portugal;

IAC-26.E9.3.11

STRENGTHENING NORMS AND STANDARDS FOR RESPONSIBLE BEHAVIOUR IN SPACE ACTIVITIES
Ms. Nikar Mamedovi, Baku State University, Baku, Azerbaijan;

IAC-26.E9.3.12

THE DEBATE ON NORMATIVE PATHS TO CURB THE WEAPONIZATION OF OUTER SPACE: STRUCTURAL LIMITATIONS OF "RESPONSIBLE BEHAVIOUR NORMS" AND THE NECESSITY OF A HARD LAW APPROACH
Mr. Yuyao Zhang, Beijing Institute of Technology, Institute of Space Law, Beijing, China;

IAC-26.E9.3.14

WHO WRITES "RESPONSIBLE BEHAVIOR"? DRAFTING POWER AND PHRASE LINEAGE IN UN SPACE SECURITY AFTER ASAT DEBRIS EVENTS
Ms. Sofia Motta, Perugia, Italy;

IAC-26.E9.3.15

UNMASKING INTENT: ESTABLISHING BEHAVIORAL NORMS FOR DUAL USE TECHNOLOGY TO DETER GREY ZONE THREATS IN SPACE DOMAIN
Ms. Ruchira Huchgol, International Space University (ISU), Pune, India;

E9.4. Strategic Risk Management for Successful Space & Defence Programmes

October 6 2026, 10:15 — Hall 29

Co-Chair(s): Maria-Gabriella Sarah, European Space Agency (ESA), France; Katarzyna Malinowska, Space Entrepreneurship Institute, Poland; Christopher Geiger, Lockheed Martin Corporation, United States;

Rapporteur(s): Andrew Court, TNO, Netherlands (Kingdom of the);

IAC-26.E9.4.1

SECURITIZING ADVANCED TECHNOLOGY DEVELOPMENT: HOW ECONOMIC SECURITY DISCOURSE INFLUENCED JAPAN'S SPACE STRATEGY FUND
Dr. Keita Hashimoto, Kobe Gakuin University, Kobe, Japan;

IAC-26.E9.4.2

LIFECYCLE COST ANALYSIS OF RAPID-RESPONSE STRATEGIES FOR GEO SATELLITE REPLACEMENT
Mrs. Evangelina Evans, University of Colorado Boulder, Boulder, United States;

IAC-26.E9.4.3

THE POLISH SPACE ACTIVITY ACT AS A MODERN STATE TOOL OF SPACE ENTERPRISE RISK MANAGEMENT
Dr. Szymon Szmak, Torun, Poland;

IAC-26.E9.4.4 (unconfirmed)

BRIDGING THE GAP: ADAPTING ENTERPRISE RISK MANAGEMENT FOR DEFENCE SPACE PROGRAMMES IN AN ERA OF STRATEGIC COMPETITION
Mr. Parviz Jafarov, Other, Baku, Azerbaijan;

IAC-26.E9.4.5

SPACE RESILIENCE AND RESPONSIBLE AI: INTEGRATING GOVERNANCE, RISK MANAGEMENT, AND SPACE PRINCIPLES
Prof. Katarzyna Malinowska, Space Entrepreneurship Institute, Warsaw, Poland;

IAC-26.E9.4.6

SHIFT IN SPACE INSURANCE REGULATIONS AMID DUAL-USE, COMMERCIAL AND POLYCENTRIC SPACE ACTIVITY
Dr. Anna Hurova, École Normale Supérieure, Kyiv, France;

IAC-26.E9.4.7

SUPPLY CHAINS: RISK AND OPPORTUNITIES FOR THE SPACE SECTOR
Ms. Dorottya Milánkovich, HPS GmbH, Munich, Germany;

IAC-26.E9.4.8

USING ERM FRAMEWORKS TO PRESERVE SPACE AND GROUND INFRASTRUCTURES IN TIMES OF CONFLICTS
Ms. Maria-Gabriella Sarah, European Space Agency (ESA), Paris, France;

IAC-26.E9.4.9

AI AND EMERGING TECHNOLOGIES AS RISK MULTIPLIERS IN SPACE SECURITY
Ms. Shabnam Abbasova, Dost Digital Innovations Center, Baku, Azerbaijan;

IAC-26.E9.4.10

AI AND AUTOMATION SUPPORT TO DUAL-USE POLICIES AND NORMS
Dr. Krista Langeland, RAND, Santa Monica, United States;

IAC-26.E9.4.11

AI-BASED RISK ASSESSMENT SYSTEM FOR AIRSPACE SECURITY
Dr. Seda Sahin, University, Çankırı, Türkiye;

IAC-26.E9.4.12

A RISK ASSESSMENT OF PUBLIC-PRIVATE SECTOR SPACE COLLABORATION: A CASE STUDY FROM THE NATO HEIST PROJECT
Ms. Clémence Poirier, The Center for Security Studies (CSS) at ETH Zurich, Zurich, Switzerland;

IAC-26.E9.4.13

SECURING SPACE-BASED COMMUNICATIONS: AN ENTERPRISE RISK MANAGEMENT APPROACH IN AN ERA OF STRATEGIC COMPETITION
Ms. Lucia Adele Savatteri, Student, Rome, Italy;

E9.5. Mitigating threatening actions in orbit: How to enhance and strengthen space security

October 9 2026, 13:45 — Hall 4

Co-Chair(s): Victoria Samson, Secure World Foundation, United States; Guoyu Wang, Beijing Institute of Technology (BIT), China;

Rapporteur(s): Agnieszka Lukaszczyk, Hialtitude Space, Poland;

IAC-26.E9.5.1

FROM SPACE INTERFERENCE TO NUCLEAR ESCALATION: STRATEGIC STABILITY RISKS AND MITIGATION PATHWAYS IN THE GOLDEN DOME ERA
Mr. Raoul Cardellini Leipertz, CENTRE FOR HIGHER DEFENCE STUDIES (CASD)- SCHOOL OF ADVANCED DEFENCE STUDIES (SSUOS), Perugia, Italy;

IAC-26.E9.5.2

CRITERIA FOR DETERMINING WHETHER OUTER SPACE OPERATIONS CONSTITUTE "USE OF FORCE"

Dr. YU LU, Beijing Institute of Technology, Beijing, China;

IAC-26.E9.5.3

CONFLICT IN SPACE AND CLASSIC INTERNATIONAL LAW CASES

Ms. Denitza Petrounova, University of Vienna, Vienna, Austria;

IAC-26.E9.5.4

BEHIND THE CURVE: HOW EUROPEAN MIDDLE POWERS ARE TRAINING FOR A CONTESTED SPACE DOMAIN

Dr. Aleix Nadal, RAND, London, United Kingdom; Ms. Marissa Martin, RAND, Cambridge, United Kingdom;

IAC-26.E9.5.5

A REVERSE LOGISTICS-BASED DECISION SUPPORT MODEL FOR PLANNING SPACE DEBRIS CLEANUP OPERATIONS IN LOW EARTH ORBIT

Ms. Rabia Çok, Ankara Yıldırım Beyazıt University, Ankara, Türkiye;

IAC-26.E9.5.6

UNDERSTANDING THREATS AND COUNTERSPACE: THE LEGAL IMPLICATIONS OF STATE RESPONSIBILITY IN ORBITAL CONFLICTS

Dr. Diane Howard, International Institute of Space Law (IISL), Daytona Beach, United States;

IAC-26.E9.5.7

INSPECT TO PROTECT: ADAPTING ANTARCTIC CROSS-INSPECTION PRINCIPLES TO MITIGATE ESCALATION RISKS IN OUTER SPACE

Mrs. Victoria Valdivia, European Space Policy Institute (ESPI), Santiago, Chile;

IAC-26.E9.5.8

A QUANTITATIVE FRAMEWORK FOR DISTINGUISHING OFFENSIVE AND DEFENSIVE CAPABILITIES IN OUTER SPACE

Mr. Milan Pathak, Universität der Bundeswehr München, Neubiberg, Germany;

IAC-26.E9.5.9

HUMAN PSYCHOLOGY AND THE ASAT-DILEMMA

Mr. István Arnócz, Hungarian Astronautical Society (MANT), Budapest, Hungary;

IAC-26.E9.5.10

SPACE DIPLOMACY AS A TOOL FOR MANAGING ESCALATION AND SECURITY IN ORBIT

Ms. Elif Yüksel, Space Policy Institute, George Washington University, Washington, D.C., United States;

IAC-26.E9.5.11

MITIGATING ESCALATION IN OUTER SPACE THROUGH EXISTING INTERNATIONAL LAW

Dr. Erin Pobjie, The International Institute for Strategic Studies, IISS-Europe, Berlin, Germany;

IAC-26.E9.5.12

PRACTICAL OPTIONS FOR TCBMS AND NORMS TO REDUCE THE RISK OF ESCALATION ASSOCIATED WITH DUAL-USE SPACE SYSTEMS

Mr. Bruce McClintock, RAND, Monument, United States;

IAC-26.E9.5.13

PEACE IN THE VOID: PERSPECTIVES FROM A CROSS NATIONAL SAMPLE OF SPACE PROFESSIONALS

Ms. Isabelle Mierau, Berlin, Germany;

IAC-26.E9.5.14

ADDRESSING THE SECURITY CHALLENGES OF THE MILITARIZATION SHIFT OF LOW EARTH ORBIT MEGA-CONSTELLATIONS: CONSTRUCTING A LEGAL INTERPRETATION FRAMEWORK FROM THE PERSPECTIVE OF COMMON INTEREST THEORY

Mr. Tao Zhang, Xiamen University, Shenzhen, China;

IAC-26.E9.5.15

EMERGING DISRUPTIVE TECHNOLOGIES FOR SPACE SECURITY

Dr. Antonio Carlo, Tallinn University of Technology, Tallinn, Estonia;

E10. IAF SYMPOSIUM ON PLANETARY DEFENSE AND NEAR-EARTH OBJECTS

Coordinator(s): Alex Karl, Space Applications Services, Belgium; Alissa J. Haddaji, Massachusetts Institute of Technology (MIT), United States;

E10.1. Planetary Defense from Asteroids and Comets

October 8 2026, 15:00 — Hall 3

Co-Chair(s): Alex Karl, Space Applications Services, Belgium; Alissa J. Haddaji, Massachusetts Institute of Technology (MIT), United States;

IAC-26.E10.1.1

KEYNOTE: PROGRESSES OF JAXA'S PLANETARY DEFENSE ACTIVITIES

Dr. Makoto Yoshikawa, Japan Aerospace Exploration Agency (JAXA), Sagami, Japan;

IAC-26.E10.1.2

SUMMARY AND HIGHLIGHTS OF THE 2025 IAA PLANETARY DEFENSE CONFERENCE

Mr. Alex Karl, Space Applications Services, Ukkel, Belgium;

IAC-26.E10.1.3

RAPID RECONNAISSANCE OF ASTEROID 2024 YR4: A PLANETARY DEFENSE MISSION STUDY

Mr. Ethan Kayser, Advanced Space, Westminster, United States;

IAC-26.E10.1.4

NEOMIR "NEAR EARTH OBJECT MISSION IN THE INFRA-RED": AN ESA-LED MISSION AS AN EARLY WARNING SYSTEM FOR HAZARDOUS NEOS

Dr. Daniel Villegas Pinto, OHB System AG, Bremen, Germany;

IAC-26.E10.1.5

OPTIMIZING PLANETARY DEFENSE: A HARDWARE-AGNOSTIC TWO-STAGE DEEP LEARNING ARCHITECTURE FOR NEO DETECTION VIA MULTI-SURVEY CROSS-VALIDATION

Ms. Lucero Lidia Ventura Cruz, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-26.E10.1.6

POST-IMPACT THERMOPHYSICAL-DYNAMICAL EVOLUTION OF THE DIDYMOS-DIMORPHOS SYSTEM UNDER COUPLED YARKOVSKY-YORP EFFECTS

Mr. Yixuan Wu, Tsinghua University, Beijing, China;

IAC-26.E10.1.7

LESSONS LEARNED FROM A PLANETARY DEFENSE MODEL UN EXERCISE: INSIGHTS FROM A SPACE CRISIS SIMULATION

Prof. Alissa J. Haddaji, Massachusetts Institute of Technology (MIT), Cambridge, United States;

E10.2. Informing Planetary Defense

October 9 2026, 13:45 — E5

Co-Chair(s): Alissa J. Haddaji, Massachusetts Institute of Technology (MIT), United States; Alex Karl, Space Applications Services, Belgium;

IAC-26.E10.2.1

KEYNOTE: INTRODUCING THE MOUC SCORE: A QUANTITATIVE METRIC TO SYSTEMATICALLY CHARACTERIZE UNDER-DETECTED NEA POPULATIONS

Ms. Selina Marie Machnitzky, Cranfield University, Cranfield, United Kingdom;

IAC-26.E10.2.2

OPTIMIZING NEOCP TARGET SELECTION AND OBSERVABILITY WINDOWS: A PRACTICAL IMPLEMENTATION AT THE ONDOKUZ MAYIS UNIVERSITY OBSERVATORY

Mr. Mirkan Yusuf Kalkan, Ondokuz Mayıs University, Samsun, Türkiye;

IAC-26.E10.2.4

PROJECT PATHFINDER: A DUAL-TARGET CHARACTERISATION & ION BEAM DEFLECTION ARCHITECTURE FOR PLANETARY DEFENCE

Mr. James Beioley, Cranfield University, UK, London, United Kingdom;

IAC-26.E10.2.5

NUMERICAL MODELING OF THE YARKOVSKY EFFECT IN TUMBLING ASTEROIDS

Mr. Marko Gavrilovic, Belgrade, Serbia;

IAC-26.E10.2.6

WHO DECIDES? OPPORTUNITIES AND THREATS FOR GOVERNANCE AND DECISION AUTHORITY IN PLANETARY DEFENCE

Mr. Marco Menchini, Roma, Italy;

IAC-26.E10.2.7

THE 2029 INTERNATIONAL YEAR OF ASTEROID AWARENESS AND PLANETARY DEFENCE (ASTEROIDS2029)

Mr. Alex Karl, Space Applications Services, Ukkel, Belgium;

E11. IAF SYMPOSIUM ON EMERGING SPACE ECOSYSTEMS

Coordinator(s): Matias Campos, Astralintu Space Technologies, Ecuador; Ian Grosner, Brazilian Space Agency (AEB), Brazil;

E11.1. Connecting Emerging Space ecoSystems

October 7 2026, 10:15 — Hall 30

Co-Chair(s): Matias Campos, Astralintu Space Technologies, Ecuador; Ian Grosner, Brazilian Space Agency (AEB), Brazil;

IAC-26.E11.1.2

BHUTAN'S EMERGING SPACE PROGRAM: A CASE STUDY IN STRATEGY-DRIVEN SPACE ECOSYSTEM DEVELOPMENT

Mr. Niraj Koirala, Thimphu, Bhutan;

IAC-26.E11.1.3

AN OVERVIEW OF BRAZIL'S EMERGING NEW SPACE ECOSYSTEM

Mr. José Vagner Vital, ITA-DCTA, Jacarei, Brazil;

IAC-26.E11.1.4

BUILDING A RESILIENT SPACE ECOSYSTEM IN EMERGING NATIONS: A SYSTEMS PERSPECTIVE METHODOLOGY APPLIED TO THE COLOMBIAN CASE

Mr. Oscar Ojeda, Cydonia Foundation, Bogota, Colombia;

IAC-26.E11.1.5

BUILDING SUSTAINABLE EMERGING SPACE ECOSYSTEMS: POLICY, CAPACITY BUILDING, AND MARKET ENABLEMENT IN AFRICA

Mr. Charles-aimé Nzeussi Mbouendeu, International Space University (ISU), Strasbourg, France;

IAC-26.E11.1.6

THE POTENTIAL AND IMPORTANCE OF THE CITY OF HONG KONG AS AN EMERGING GLOBAL SPACE SUSTAINABILITY HUB

Prof. Quentin Parker, The University of Hong Kong, PokFuLam, Hong Kong SAR, China;

IAC-26.E11.1.7

BUILDING A SUSTAINABLE SPACE ECOSYSTEM IN EMERGING SPACE NATIONS: A SYSTEMS THINKING APPROACH

Ms. Helen Haile, University of Nottingham, London, United Kingdom;

IAC-26.E11.1.8

SPACE DIPLOMACY IN ACTION: THE ROLE OF THE INTERNATIONAL SPACE FORUM AT MINISTERIAL LEVEL IN EMERGING SPACE REGIONS

Mrs. Alessandra Vernile, Agenzia Spaziale Italiana (ASI), Rome, Italy;

IAC-26.E11.1.9

BEYOND THE PRIZE: SYSTEMIC IMPACT OF SPACE CHALLENGES ON EMERGING ENTREPRENEURIAL ECOSYSTEMS

Mr. Eric Dahlstrom, SpaceBase Limited, Christchurch, New Zealand.

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