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76TH
INTERNATIONAL
ASTRONAUTICAL
CONGRESS
SYDNEY

29.SEP-03.OCT.2025
SYDNEY, AUSTRALIA

TECHNICAL PROGRAMME

FINAL PROGRAMME

SUSTAINABLE SPACE : RESILIENT EARTH

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77TH IAC 2026 ANTALYA

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ANTALYA, TÜRKİYE

5-9 OCTOBER 2026

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Contents

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 76th 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 2025 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 2025 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 2025 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: Speaker Preparation Centre, Ground Floor, International Convention Centre (ICC) Sydney

Opening hours:
Sunday 28 September, 14:00-18:00 AEST
Monday 29 September - Thursday 2 October, 08:30-18:00 AEST
Friday 3 October, 08:30-16:30 AEST

1.4 IAF 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 Floor Plans

ICC CONVENTION CENTRE
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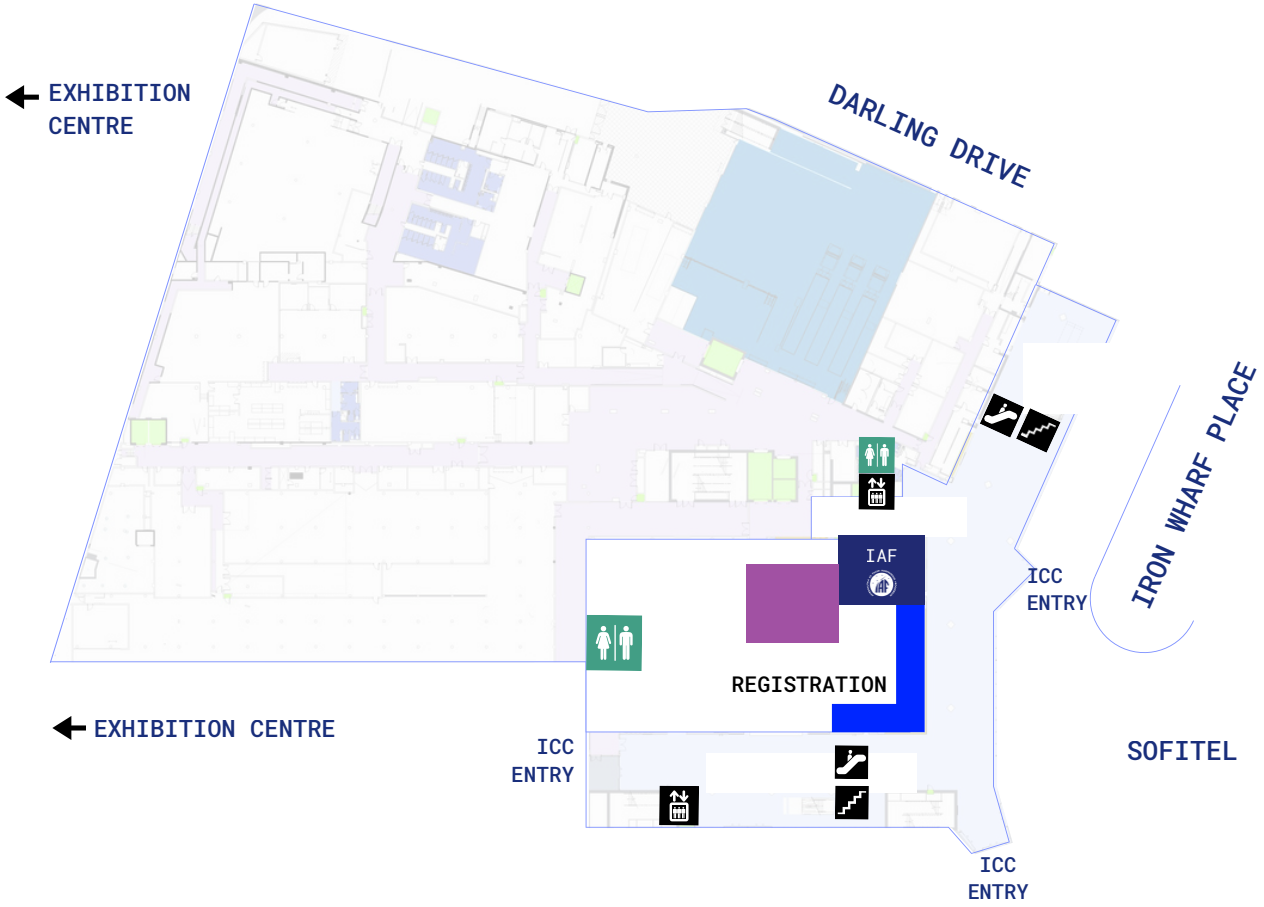
REGISTRATION
STAIRS
TOILETS
IAF SECRETARIAT
SPEAKERS PREPARATION CENTRE



ICC CONVENTION CENTRE
LEVEL 1

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ELEVATORS

ESCALATORS

BUSINESS/MEETING ROOMS

STAIRS

TOILETS

ICC CONVENTION CENTRE LEVEL 2

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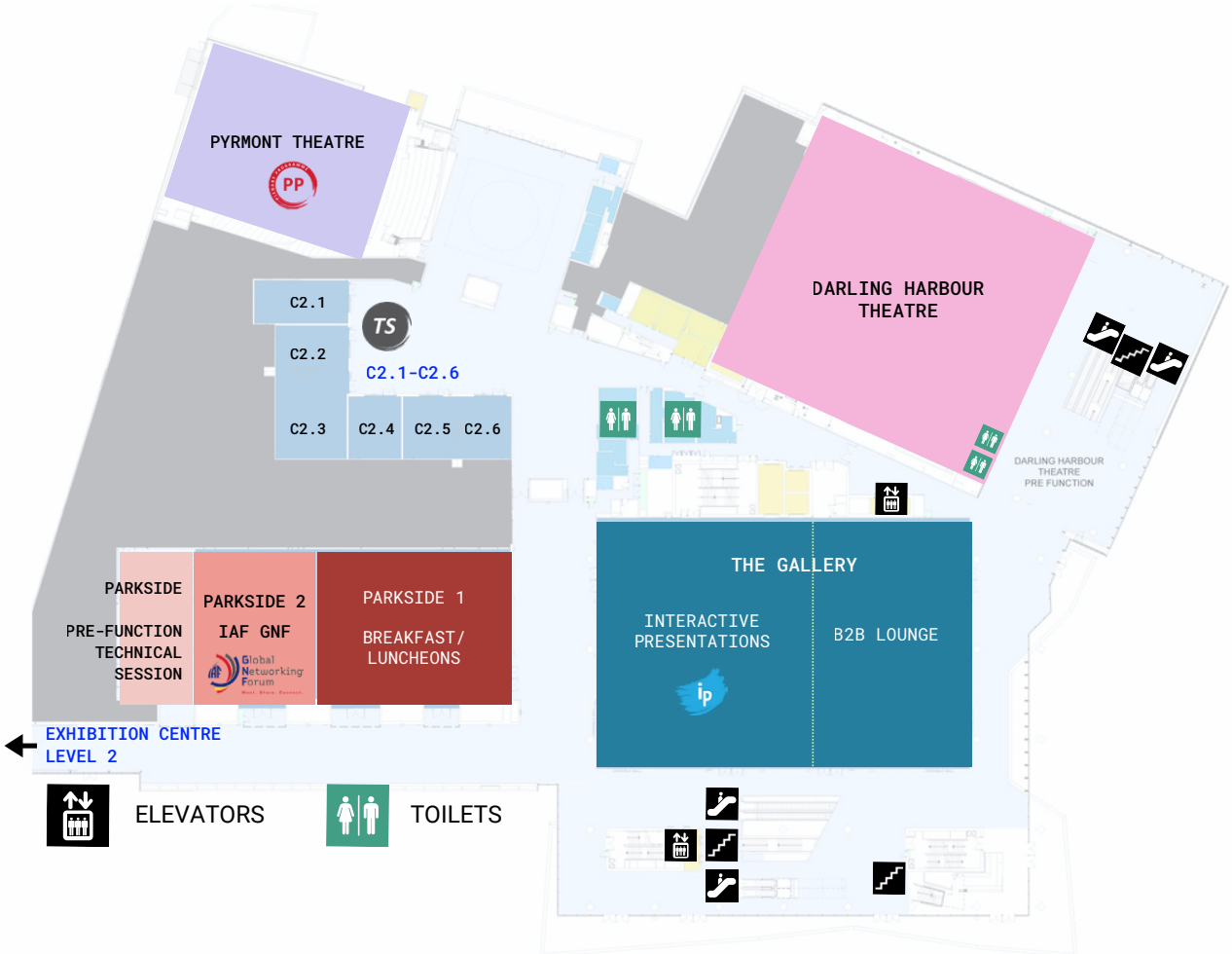
TOILETS
THE GALLERY
PARKSIDE 2
STAIRS
DARLING HARBOUR THEATRE
TECHNICAL SESSION ROOMS
PARKSIDE
ESCALATORS
PYRMONT THEATRE
PARKSIDE 1



ICC CONVENTION CENTRE
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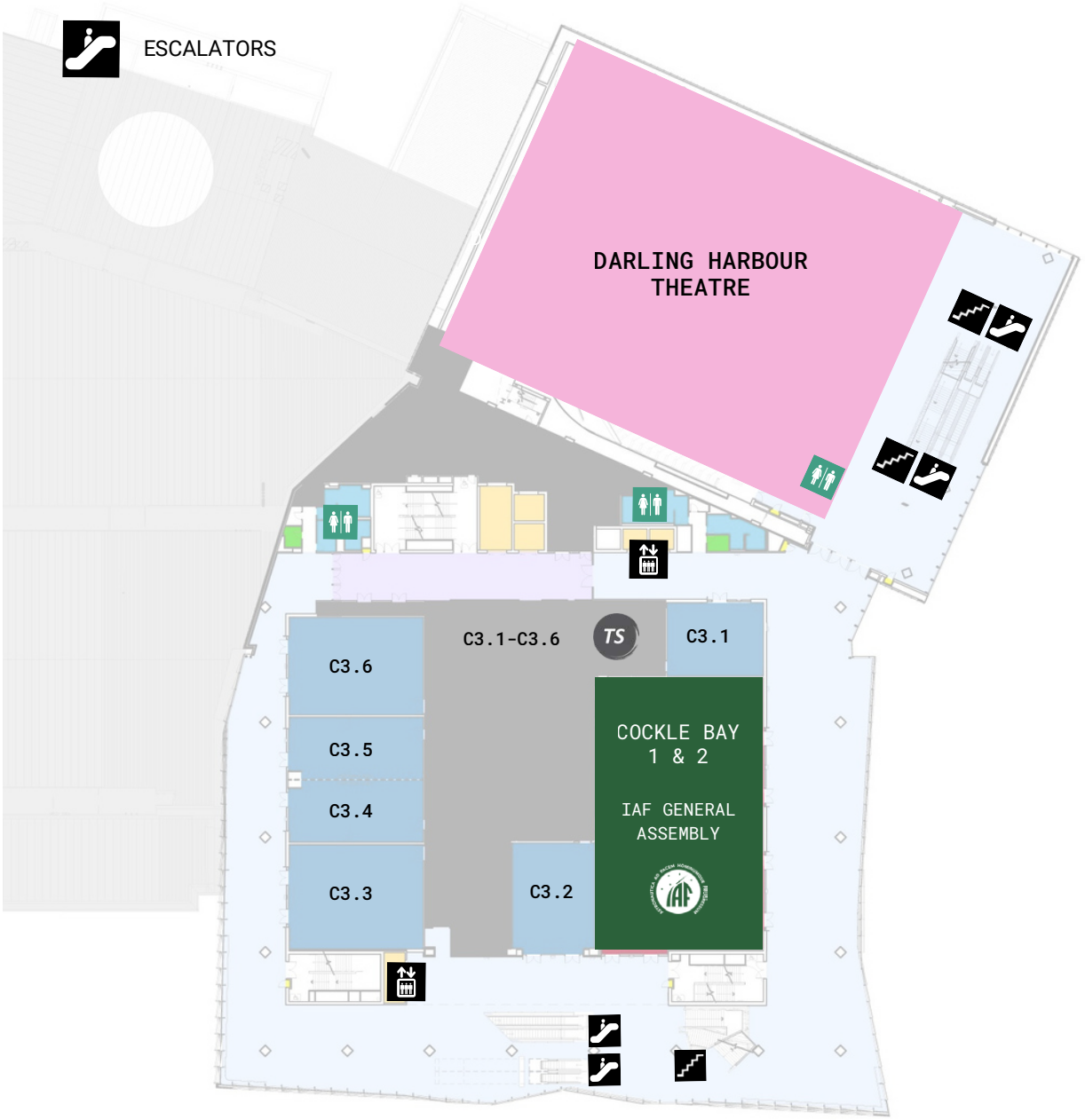
COCKLE BAY 1 & 2
STAIRS
DARLING HARBOUR THEATRE
TECHNICAL SESSION ROOMS
ESCALATORS



ICC CONVENTION CENTRE
LEVEL 4

LEGEND

ELEVATORS
TOILETS
SPECIAL SESSION ROOM
STAIRS
DARLING HARBOUR THEATRE
TECHNICAL SESSION ROOMS
ESCALATORS

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LEVEL 5

LEGEND

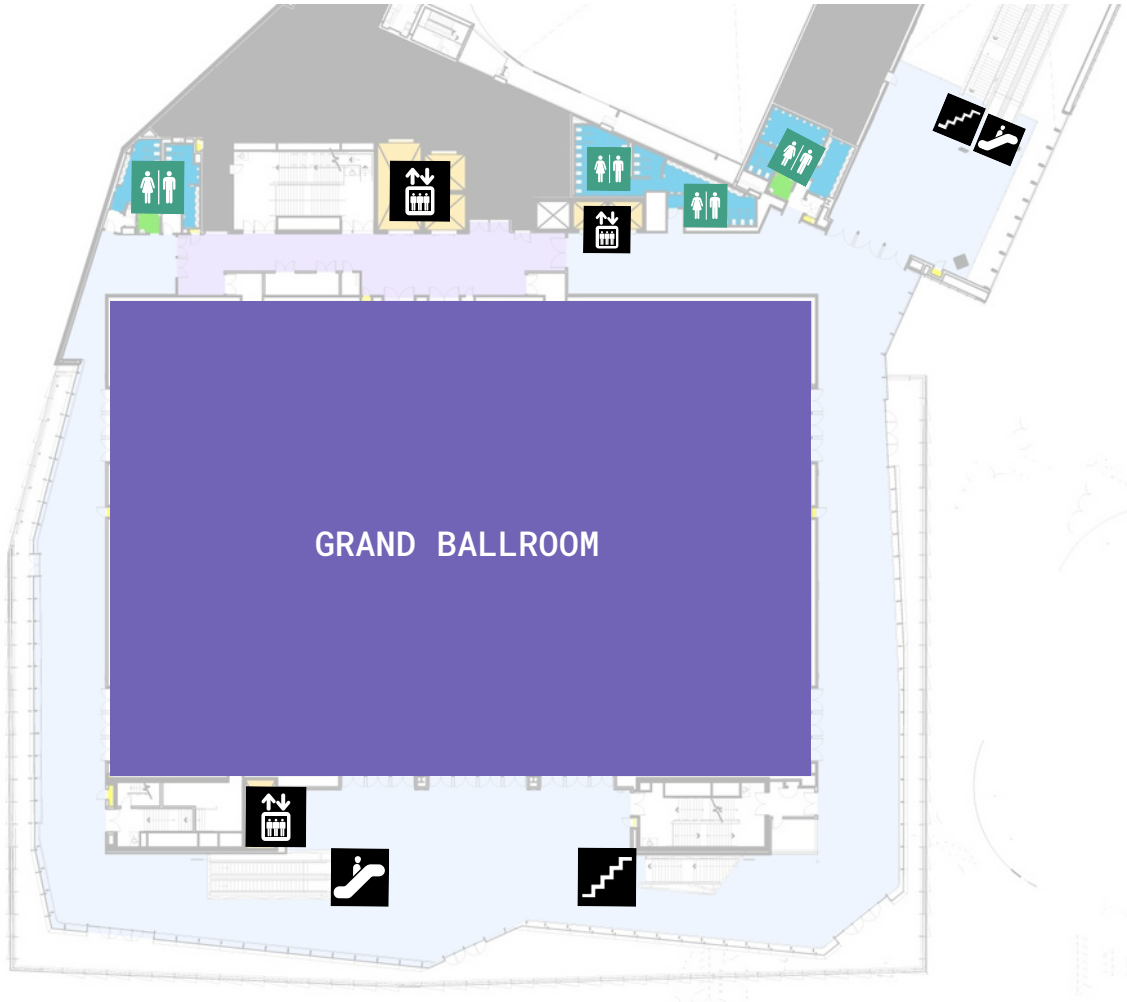
ELEVATORS

TOILETS

STAIRS

GRAND BALLROOM

ESCALATORS



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STAIRS
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ICC EXHIBITION CENTRE
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STAIRS
ESCALATORS
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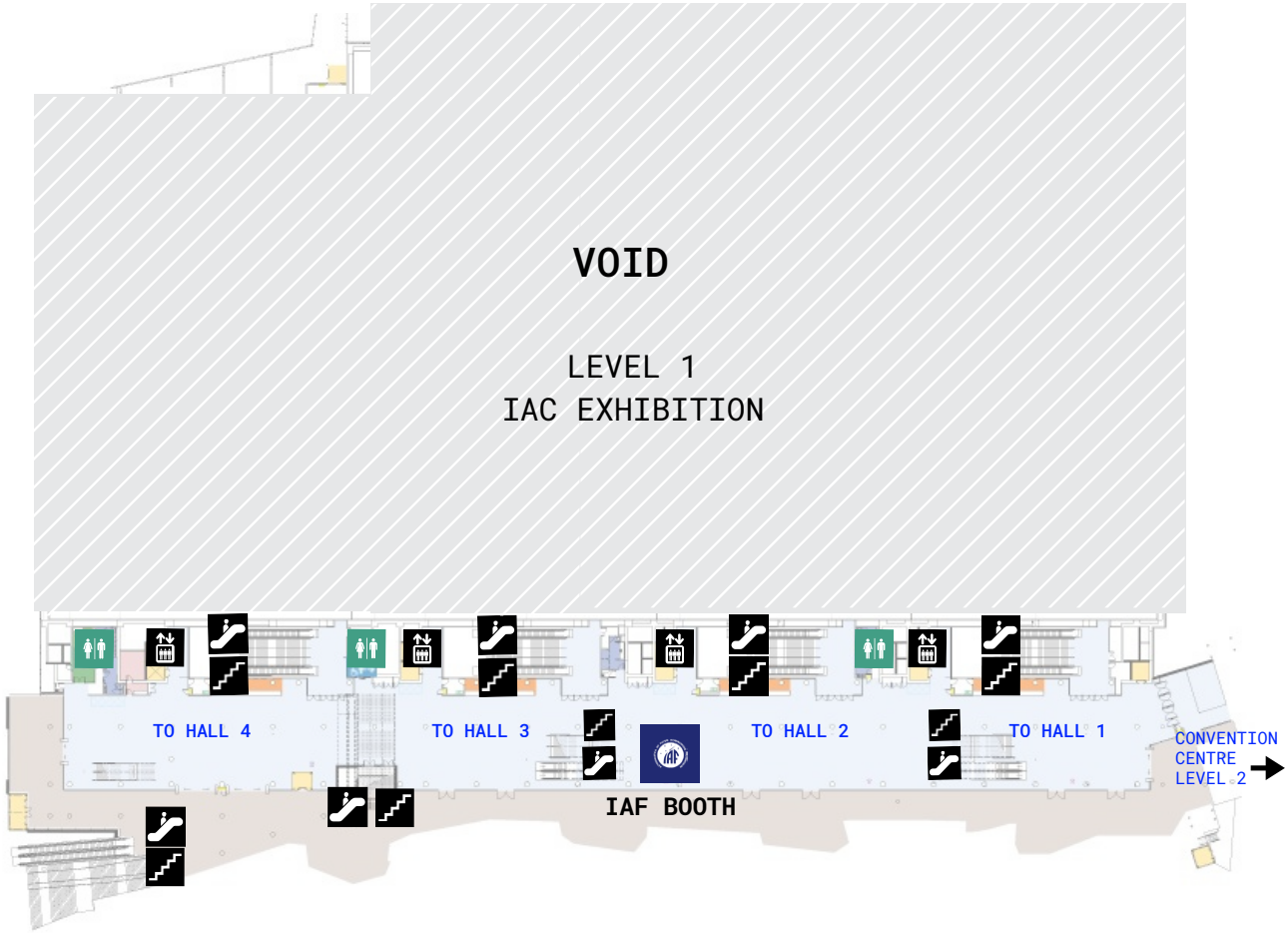

ICC EXHIBITION CENTRE
LEVEL 3

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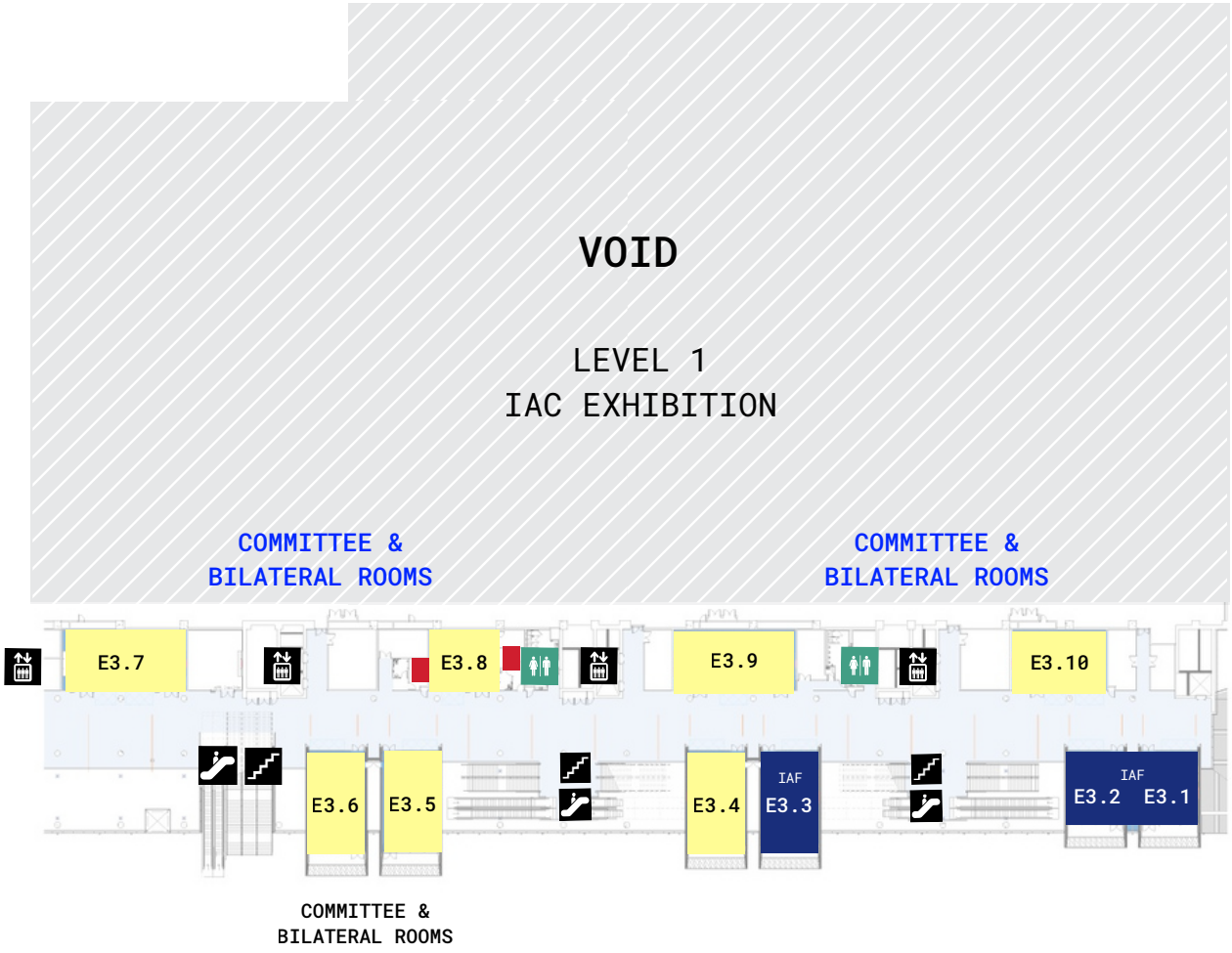
ESCALATORS
PRAYER ROOMS



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PRESS/ MEDIA ROOMS
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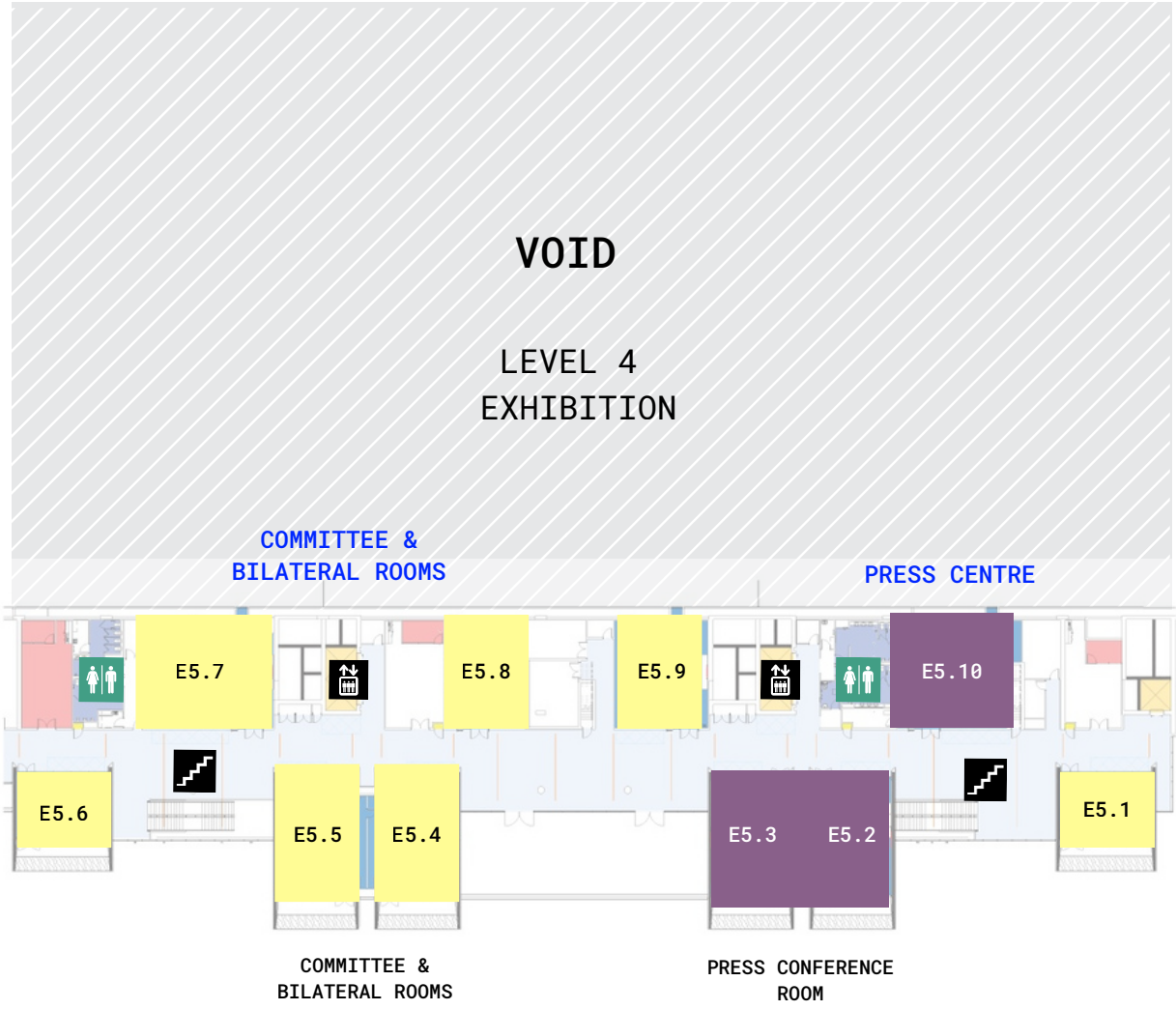


2 Technical Sessions

2.1 Technical Sessions at a Glance

Date	29/09/2025	30/09/2025	30/09/2025	01/10/2025	01/10/2025	02/10/2025	02/10/2025	03/10/2025	03/10/2025
Time / Room Number	15:30-18:00	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
Room C4.5	A3.1	A3.2A	A3.2B	A3.3A	A3.3B	A3.4A	A3.5	A3.4B	A3.2C
Room C4.1	D2.1	D2.3	D2.2	D2.4	D2.5	D2.6	D2.7	D2.8	D2.9/D6.2
Room C4.8	C1.3	C1.4	C1.5	C1.6	C1.7	C1.8	C1.9	C1.1	C1.2
Room C4.10	A6.8/E9.1	A6.1	A6.7	A6.9	A6.4	A6.3	A6.2	A6.5	A6.6
Room C3.3	B3.1	B3.2	B3.3	B3.4/B6.4	B3.7	B3.5	B3.6/A5.3	B3.8	E10.2
Room C3.2	B4.2	B4.1	B4.7	B4.4	B4.5	B4.6A	B4.6B	B4.8	B4.3
Room C2.3	E7.1	E7.2	E7.3	E7.4	E7.5	E7.6/E3.5	E10.1	E7.7	E8.1
Room C3.6	C4.1	C4.3	C4.5	C4.2	C4.6	C4.7	C4.8/B4.5A	C4.9	C4.10/C3.5
Room C3.4	C2.1	C2.2	C2.3	C2.4	C2.5	C2.6	C2.7	C2.8	C2.9
Room C4.11	A1.1	A1.2	A1.3	C4.4	A1.4	A1.5	A1.6	A1.7	A1.8
Room C4.2	A2.1	A4.1	A4.2	A2.2	A2.3	A2.4	A2.5	A2.6	A2.7
Room C3.5	D1.1	D1.2	D1.3	A5.1	A5.2	D1.4	D1.5	D1.6	D1.7
Room C4.9	B1.1	C3.1	B1.2	B1.7	B1.4	B1.5	B1.6	C3.3	C3.4
Room C2.1	E9.2	E3.1	E3.3	E3.6	E3.2	A5.4	E3.4		B1.8
Room C2.2	E5.1	D5.2	E5.2	D5.1	E5.3	D5.3	E5.4	E5.5	E5.6
Room C4.6	C3.2	B2.6	B2.7	B2.1	B2.2	B2.3	B2.4	B2.5	
Room C4.3	E1.1	E1.2	E1.3	E1.4	E1.5	E1.6	E1.7	B1.3	E1.9
Parkside Pre-Function	D4.1	D4.2	D4.3	D3.1	D3.2A	D4.4	D4.5	D3.2B	D3.3
Room C2.4	E2.1	E2.2	B6.1	E2.4	B5.2	B5.3	B6.3	B6.5	B6.2
Room C4.7	B2.8/GTS.3	D6.1	E2.3/GTS.4	B5.1	E6.4/GTS.1	D6.3	B4.9/GTS.5	D5.4	B3.9/GTS.2
Room C2.5	C4.11	E9.5	E6.3	E6.2	E4.1	E4.2	E6.1	E4.3	A6.10/E9.4
Room C2.6	A7.1	A7.2	A2.8	E11.1	A7.3	E9.3	C1.10	E1.8	E1.10
Room C3.1			A6.11	A1.9	D1.8				

Category A: Science & Exploration A1--> A7

Category B: Applications & Operations B1--> B6

Category C: Technology C1--> C4

Category D: Infrastructure D1--> D6

Category E: Space & Society E1--> E11

2.2 Technical Sessions by Day

Monday, 29 September 2025

15:30 Technical Sessions

No.	Title	Room
A1.1	Behaviour, Performance and Psychosocial Issues in Space	Room C4.11
A2.1	Gravity and Fundamental Physics	Room C4.2
A3.1	Space Exploration Overview	Room C4.5
A6.8-E9.1	Policy, Legal, Institutional, Economic and Security Aspects of Debris Mitigation, Debris Remediation and STM	Room C4.10
A7.1	Space Astronomy missions, strategies and plans	Room C2.6
B1.1	International Ventures in Earth Observations	Room C4.9
B2.8-GTS.3	Space Communications and Navigation Global Technical Session	Room C4.7
B3.1	Governmental Human Spaceflight Programmes (Overview)	Room C3.3
B4.2	Small Space Science Missions	Room C3.2
C1.3	Guidance, Navigation and Control (1)	Room C4.8
C2.1	Space Structures I Design, Development and Verification (Launch Vehicles and Space Vehicles, including their Mechanical/Thermal/ Fluidic Systems)	Room C3.4
C3.2	Wireless Power Transmission Technologies and Application	Room C4.6
C4.1	Liquid Propulsion (1)	Room C3.6
C4.11	Future Trends in Space Propulsion	Room C2.5
D1.1	Innovative Systems toward Future Architectures	Room C3.5
D2.1	Launch Vehicles in Service or in Development	Room C4.1
D4.1	Innovative Concepts and Technologies	Parkside Pre-Function
E1.1	Lift Off: Primary and Secondary Education	Room C4.3
E2.1	Student Conference - Part 1	Room C2.4
E5.1	Space Architecture: Habitats, Habitability, and Bases	Room C2.2
E7.1	Young Scholars Session with Keynote Lecture	Room C2.3
E9.1-A6.8	Policy, Legal, Institutional, Economic and Security Aspects of Debris Mitigation, Debris Remediation and STM	Room C4.10
E9.2	Cyber-based security threats to space missions: establishing the legal, institutional and collaborative framework to counteract them	Room C2.1

Tuesday, 30 September 2025

10:15 Technical Sessions

No.	Title	Room
A1.2	Human Physiology in Space	Room C4.11
A3.2A	Moon Exploration – Part 1	Room C4.5
A4.1	SETI 1: SETI Science and Technology	Room C4.2
A6.1	Space Debris Detection, Tracking and Characterization - SST	Room C4.10
A7.2	Science Goals and Drivers for Future Exoplanet, Space Astronomy and Space Physics	Room C2.6
B2.6	Cubesat, Internet of Things, and Mobile Direct Communications	Room C4.6

No.	Title	Room
B3.2	Commercial Human Spaceflight Programmes	Room C3.3
B4.1	26th Workshop on Small Satellite Programmes at the Service of Developing Countries	Room C3.2
C1.4	Guidance, Navigation and Control (2)	Room C4.8
C2.2	Space Structures II Development and Verification (Orbital deployable and dimensionally stable structures, including mechanical and robotic systems and subsystems)	Room C3.4
C3.1	Solar Power Satellite	Room C4.9
C4.3	Solid and Hybrid Propulsion (1)	Room C3.6
D1.2	Technologies that Enable Space Systems	Room C3.5
D2.3	Upper Stages, Space Transfer, Entry & Landing Systems	Room C4.1
D4.2	Contribution of Moon Village to Solving Global Societal Issues	Parkside Pre-Function
D5.2	Emerging trends of knowledge management in organizations	Room C2.2
D6.1	Commercial Spaceflight Safety and Emerging Issues	Room C4.7
E1.2	Space for All: Promoting Inclusive Practices in Space Exploration	Room C4.3
E2.2	Student Conference - Part 2	Room C2.4
E3.1	International cooperation in using space for sustainable development: The “Space2030” agenda	Room C2.1
E7.2	Threat and Use of Force in the Context of Space Activities	Room C2.3
E9.5	Strategic Risk Management for Successful Space & Defence Programmes	Room C2.5

15:00 Technical Sessions

No.	Title	Room
A1.3	Medical Care for Humans in Space	Room C4.11
A2.8	In-Space Manufacturing and Production Applications	Room C2.6
A3.2B	Moon Exploration – Part 2	Room C4.5
A4.2	SETI 2: SETI and Society	Room C4.2
A6.7	Operations in Space Debris Environment, Situational Awareness - SSA	Room C4.10
A6.11	Space Debris Detection, Tracking and Characterization - SST (2)	Room C3.1
B1.2	Earth Observation Systems	Room C4.9
B2.7	Advances in Space-based Communication Technologies	Room C4.6
B3.3	Advancements in Human Space Habitation for Orbital, Transit, and Surface Environments	Room C3.3
B4.7	Constellations and Distributed Systems	Room C3.2
B6.1	Ground Operations - Systems and Solutions	Room C2.4
C1.5	Guidance, Navigation & Control (3)	Room C4.8
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)	Room C3.4
C4.5	Electric Propulsion (1)	Room C3.6
D1.3	Emergent Space Systems	Room C3.5
D2.2	Launch Services, Missions, Operations, and Facilities	Room C4.1
D4.3	The Modern Day Space Elevator as a Permanent Transportation Infrastructure	Parkside Pre-Function
E1.3	On Track: Undergraduate Space Education	Room C4.3
E2.3-GTS.4	Student Team Competition	Room C4.7
E3.3	Economic Resilience and the Space Economic/Industrial Sector	Room C2.1
E5.2	Is Space R&D Truly Fostering A Better World For Our Future?	Room C2.2
E6.3	Innovation: The Academics’ Perspectives	Room C2.5
E7.3	Sustainability and Outer Space Law	Room C2.3

Wednesday, 1 October 2025

10:15 Technical Sessions

No.	Title	Room
A1.9	Space Life Sciences for Exploration	Room C3.1
A2.2	Fluid and Materials Sciences	Room C4.2
A3.3A	Mars Exploration – missions current and future	Room C4.5
A5.1	Human Exploration of the Moon and Cislunar Space	Room C3.5
A6.9	Orbit Determination and Propagation - SST	Room C4.10
B1.7	Earth Observations to Address Earth's Environment and Climate Challenges	Room C4.9
B2.1	Space-based PNT (Position, Navigation, Timing) Architectures, Applications, and Services	Room C4.6
B3.4-B6.4	Flight & Ground Operations aspects of Human Spaceflight - Joint Session of the IAF Human Spaceflight and IAF Space Operations Symposia	Room C3.3
B4.4	Small Earth Observation Missions	Room C3.2
B5.1	Tools and Technology in Support of Integrated Applications	Room C4.7
C1.6	Mission Design, Operations & Optimization (1)	Room C4.8
C2.4	Space Structures Control, Dynamics and Microdynamics	Room C3.4
C4.2	Liquid Propulsion (2)	Room C3.6
C4.4	Solid and Hybrid Propulsion (2)	Room C4.11
D2.4	Future Space Transportation Systems	Room C4.1
D3.1	Strategies & Architectures as the Framework for Future Building Blocks in Space Exploration and Development	Parkside Pre-Function
D5.1	For a successful space program: Quality and Safety!	Room C2.2
E1.4	In Orbit: Postgraduate Space Education	Room C4.3
E2.4	Educational Pico and Nano Satellites	Room C2.4
E3.6	Financial Viability and Profitability of Space Business Models	Room C2.1
E6.2	Public-Private Partnerships: Traditional and New Space Applications	Room C2.5
E7.4	Small Satellites, Public and Private Law Perspectives	Room C2.3
E11.1	Connecting Emerging Space ecoSystems	Room C2.6

15:00 Technical Sessions

No.	Title	Room
A1.4	Medicine in Space and Extreme Environments	Room C4.11
A2.3	Microgravity Experiments from Sub-Orbital to Orbital Platforms	Room C4.2
A3.3B	Mars Exploration – Science, Instruments and Technologies	Room C4.5
A5.2	Human Exploration of Mars	Room C3.5
A6.4	Mitigation - Tools, Techniques and Challenges - SEM	Room C4.10
A7.3	Technology Needs for Future Missions, Systems, and Instruments	Room C2.6
B1.4	Earth Observation Data Systems and Technology	Room C4.9
B2.2	Space-based PNT (Position, Navigation, Timing) Sensors and Systems	Room C4.6
B3.7	Advanced Systems, Technologies, and Innovations for Human Spaceflight	Room C3.3
B4.5	Access to Space for Small Satellite Missions	Room C3.2
B5.2	Integrated Applications End-to-End Solutions	Room C2.4
C1.7	Mission Design, Operations & Optimization (2)	Room C4.8
C2.5	Space Structures and Materials for Extreme Environment (High-temperature and cryogenic-temperature applications including thermal insulation concepts)	Room C3.4

No.	Title	Room
C4.6	Electric Propulsion (2)	Room C3.6
D1.8	D1 - Extra session	Room C3.1
D2.5	Technologies for Future Space Transportation Systems	Room C4.1
D3.2A	Systems and Infrastructures to Implement Sustainable Space Development and Settlement - Systems	Parkside Pre-Function
E1.5	Enabling the Future: Developing the Space Workforce	Room C4.3
E3.2	The future of space exploration and innovation	Room C2.1
E4.1	Memoirs & Organisational Histories	Room C2.5
E5.3	Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach	Room C2.2
E6.4-GTS.1	Entrepreneurship Around the World	Room C4.7
E7.5	Legal Impact of Scientific Investigation on the Protection of Intellectual Property	Room C2.3

Thursday, 2 October 2025

10:15 Technical Sessions

No.	Title	Room
A1.5	Radiation Fields, Effects and Risks in Human Space Missions	Room C4.11
A2.4	Science Results from Ground Based Research	Room C4.2
A3.4A	Small Bodies Missions and Technologies (Part 1)	Room C4.5
A5.4	Deep Space Habitats and Resources	Room C2.1
A6.3	Impact-Induced Mission Effects and Risk Assessments	Room C4.10
B1.5	Earth Observation Societal and Economic Applications, Challenges and Benefits	Room C4.9
B2.3	Advance Higher Throughput Communications and Networks for GEO and LEO satellites	Room C4.6
B3.5	Astronaut Training, Accommodation, and Operations in Space	Room C3.3
B4.6A	Generic Technologies for Small Satellites (1)	Room C3.2
B5.3	Integrated Commercial Satellite Applications for Sustainability and Climate	Room C2.4
C1.8	Orbital Dynamics (1)	Room C4.8
C2.6	Space Environmental Effects and Spacecraft Protection	Room C3.4
C4.7	Hypersonic Air-breathing and Combined Cycle Propulsion, and Hypersonic Vehicle	Room C3.6
D1.4	Cooperative Systems	Room C3.5
D2.6	Future Space Transportation Systems Verification and In-Flight Experimentation	Room C4.1
D4.4	Strategies for Rapid Implementation of Interstellar Missions: Precursors and Beyond	Parkside Pre-Function
D5.3	Prediction, Testing, Measurement and Effects of space environment on space missions	Room C2.2
D6.3	Enabling safe commercial spaceflight: vehicles and spaceports	Room C4.7
E1.6	Calling Planet Earth: Large Engagement and Communications Initiatives	Room C4.3
E4.2	Organizational, Scientific and Technical Histories	Room C2.5
E9.3	Norms and Standards for Safe and Responsible Behaviour in Space	Room C2.6

15:00 Technical Sessions

No.	Title	Room
A1.6	Advancements in Astrobiology and Space Exploration	Room C4.11
A2.5	Facilities and Operations of Microgravity Experiments	Room C4.2
A3.5	Solar System Exploration including Ocean Worlds	Room C4.5
A6.2	Modeling and Risk Analysis	Room C4.10
B1.6	Nowhere to Hide – The impacts on society of Ubiquitous Earth Coverage	Room C4.9
B2.4	Space-based Optical and Quantum Communications	Room C4.6
B3.6-A5.3	Human and Robotic Partnerships in Exploration - Joint session of the IAF Human Spaceflight and IAF Exploration Symposia	Room C3.3
B4.6B	Generic Technologies for Small Satellites (1)	Room C3.2
B4.9-GTS.5	Small Satellite Missions Global Technical Session	Room C4.7
B6.3	Mission Operations, Validation, Simulation and Training	Room C2.4
C1.9	Orbital Dynamics (2)	Room C4.8
C1.10	Astrodynamics beyond the Earth	Room C2.6
C2.7	Manufacturing and industrialization for Launch Vehicle and Space Vehicle Structures and components (High volume production, industrialization, automatization and digitalization)	Room C3.4
C4.8-B4.5A	Joint Session between IAA and IAF for Small Satellite Propulsion Systems	Room C3.6
D1.5	Systems Engineering Modeling and Analysis	Room C3.5
D2.7	Suborbital Rockets and Small Launchers: Concepts and Operations including Student Rocketry	Room C4.1
D4.5	Space Resources, the Enabler of the Earth-Moon Econosphere	Parkside Pre-Function
E1.7	Sending out a Signal: Innovative Outreach and Communications Initiatives	Room C4.3
E3.4	Assuring a Safe, Secure and Sustainable Environment for Space Activities	Room C2.1
E5.4	Space Assets and Disaster Management	Room C2.2
E6.1	Space Entrepreneurship and Investment: The Practitioners' Perspectives	Room C2.5
E10.1	Planetary Defense from Asteroids and Comets	Room C2.3

Friday, 3 October 2025

10:15 Technical Sessions

No.	Title	Room
A1.7	Life Support, habitats and EVA Systems	Room C4.11
A2.6	Microgravity Sciences on board of Space stations	Room C4.2
A3.4B	Small Bodies Missions and Technologies (Part 2)	Room C4.5
A6.5	Post Mission Disposal and Space Debris Removal 1 - SEM	Room C4.10
B1.3	Earth Observation Sensors and Technology	Room C4.3
B2.5	Extra-Terrestrial and Interplanetary Communications, and Regulations	Room C4.6
B3.8	Human Space & Exploration	Room C3.3
B4.8	Small Spacecraft for Deep-Space Exploration	Room C3.2
B6.5	Large Constellations & Fleet Operations	Room C2.4
C1.1	Attitude Dynamics (1)	Room C4.8
C2.8	Advancements in Materials Applications, Additive Manufacturing, and Rapid Prototyping Manufacturing and Rapid Prototyping	Room C3.4

No.	Title	Room
C3.3	Advanced Space Power Technologies	Room C4.9
C4.9	Disruptive Propulsion Concepts for Enabling New Missions	Room C3.6
D1.6	Systems Engineering Approaches, Processes and Methods	Room C3.5
D2.8	In-Space Transportation Solutions and Space Logistics	Room C4.1
D3.2B	Systems and Infrastructures to Implement Sustainable Space Development and Settlement - Technologies	Parkside Pre-Function
D5.4	Cybersecurity in space systems, risks and countermeasures	Room C4.7
E1.8	Show Us Space: Demonstration of Hands On Education and Outreach	Room C2.6
E4.3	History of Australian and Asia-Pacific Contribution to Astronautics	Room C2.5
E5.5	Sharing Space Achievements and Heritage: Space Museums and Societies	Room C2.2
E7.7	Climate Change of the Earth Reflected in Space Law	Room C2.3

13:45 Technical Sessions

No.	Title	Room
A1.8	Biology in Space	Room C4.11
A2.7	Life and Physical Sciences under reduced Gravity	Room C4.2
A3.2C	Moon Exploration – Part 3	Room C4.5
A6.6	Post Mission Disposal and Space Debris Removal 2 - SEM	Room C4.10
A6.10-E9.4	Space Carrying Capacity Assessment and Allocation	Room C2.5
B1.8	The use of EO for maritime and coastal protection: technology, systems, policy and applications	Room C2.1
B3.9-GTS.2	Human Spaceflight Global Technical Session	Room C4.7
B4.3	Small Satellite Operations	Room C3.2
B6.2	Innovative Space Operations Concepts and Advanced Systems	Room C2.4
C1.2	Attitude Dynamics (2)	Room C4.8
C2.9	Smart Materials and Adaptive Structures & Specialized Technologies, Including Nanotechnology	Room C3.4
C3.4	Space Power Systems for Ambitious Missions	Room C4.9
C3.5-C4.10	Joint Session on Nuclear Power and Propulsion Systems, and Propellantless Propulsion	Room C3.6
D1.7	Lessons Learned in Space Systems	Room C3.5
D2.9-D6.2	Sustainable Approaches and Impact of Space Transportation Solutions on Earth + Space Environment and on General Safety	Room C4.1
D3.3	Space Technology and System Management Practices and Tools	Parkside Pre-Function
E1.9	Space Culture: New Processes of Public Engagement in Space through Culture and Art	Room C4.3
E1.10	Learning by Doing: Experiential and Simulation-Based Learning	Room C2.6
E5.6	Simulating Space Habitation: Habitats, Design and Simulation Missions	Room C2.2
E8.1	Multilingual Astronautical Terminology	Room C2.3
E10.2	Informing Planetary Defense	Room C3.3

3 Keynote Speakers

Keynotes

Monday 29 September

A6/E9.	23rd IAA SYMPOSIUM ON SPACE DEBRIS/IAF SYMPOSIUM ON SECURITY, STABILITY AND SUSTAINABILITY OF SPACE ACTIVITIES	Date	Time	Room

Session: 8.1. Policy, Legal, Institutional, Economic and Security Aspects of Debris Mitigation, Debris Remediation and STM

29.09.2025 | 15:30 | C4.10

Darren MCKNIGHT
Senior Technical Fellow,
LeoLabs
United States

KEYNOTE: A6.8-E9.1 The Space Triad – Practical Space Operations Framework

Abstract
The growth of both orbital debris and operational satellites in Earth orbit combine to catalyze the need for a holistic framework for space operations that can provide practical suggestions for more cooperative behavior in space. Space security, space safety, and space sustainability are often treated as independent pillars of space activity, however, increased activity in space is blurring the lines between these three domains. Space safety focuses on short-term collision risk, often to operational satellites, as they attempt to conduct their missions. Many of the best practices for space traffic coordination could reduce tensions related to space security. Further, space sustainability focuses on long-term collision risk to all space objects and means to promote actions that reduce the possibility of deleterious growth of lethal debris. Lastly, space security is a realm that is currently masked with lack of transparency for missions and behaviors of those space systems. More openness and discussions about capabilities that could be interpreted differently depending on the perception of the owner (e.g., the ability to grapple a space object can be seen as both a weapon and an enabler for cleaning up the debris environment) could reduce events that may increase space security tensions. The activities that promote transparency of space activities will likely in turn aid both space safety and space sustainability.

This paper examines scenarios that illustrate the connection between space safety, space sustainability, and space security to promote potential means to enhance all three cooperatively for the global space community. This paper refines previous work by the authors to produce a concise and compelling series of indicators that can lead to more reliable space operations for all.

D4.	23rd IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE	Date	Time	Room

Session: 1. Innovative Concepts and Technologies

29.09.2025 | 15:30 | Parkside Pre-Function

Christer FUGLESANG
Director,
Former Astronaut, KTH Space Center
Sweden

KEYNOTE: D4.1 Ion Thrusters and Diffractive Membranes for Reducing the Mass of the Planetary Sunshade System

Abstract
If global temperatures rise beyond tolerable levels, geoengineering solutions may become necessary. Among these, a space-based approach—specifically, the Planetary Sunshade System (PSS)—offers a potentially safer alternative with fewer unknown side effects compared to Earth-based methods. The PSS would consist of multiple large membranes positioned just beyond the Sun-Earth L1 point, blocking approximately 1% of solar radiation from reaching Earth.

A primary cost driver of the PSS is its total mass, which is largely determined by the optical properties of the membranes. Since sunlight exerts force on the membranes, this force must be counteracted either by the Sun's gravitational pull or by small thrusters. The use of diffractive membranes, which slightly redirect sunlight instead of reflecting or absorbing it, significantly reduces this force. However, unlike reflective membranes, diffractive membranes cannot rely on solar sailing for maneuvering and thus require thrusters.

This study demonstrates that advanced, highly efficient ion thrusters could significantly reduce the total mass of the PSS while enabling its optimal positioning closer to L1. Additionally, the system's operations around this optimal position will be explored.

E7.	IISL COLLOQUIUM ON THE LAW OF OUTER SPACE	Date	Time	Room

Session: 1. Young Scholars Session with Keynote Lecture | 29.09.2025 | 15:30 | C2.3

Steven FREELAND
Emeritus Professor,
Western Sydney University; Professorial Fellow, Bond University; Director, International Institute of Space Law, IISL
Australia

KEYNOTE: E7.1 It's a Complicated Extraterrestrial World Out There: Does Consensus-based Multilateralism of Space Governance Still Work?

Abstract
Almost immediately following the 1957 launch of Sputnik 1, multilateral processes emerged for the negotiation and finalization of the governance instruments that comprise the international legal framework for activities in outer space. These include United Nations Space Treaties, United Nations General Assembly Resolutions and other 'soft law' guidelines and proposed standards for specific aspects associated with the exploration and use of outer space. As new activities are contemplated, multilateral fora, particularly the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS) and its Subcommittees, are tasked to discuss these issues and, as appropriate, agree – by consensus – on applicable outcome instruments.

One current example stems from the renewed global interest regarding possible benefits derived from the future exploration, exploitation, and utilization of the natural resources of the Moon and other celestial bodies. While future "space resource activities" may give rise to such benefits, there are also significant challenges, and many different perspectives to be considered, so as to ensure that they are undertaken in a safe and sustainable manner that also minimizes the risk of misunderstandings, miscalculations and conflicts.

In the context of an increasingly complex operating environment in outer space - rapid developments in technology, more space-faring countries, and the significant involvement of the private sector - this lecture will examine ongoing international discussions about future space resource activities and highlight related issues identified by UNCOPUOS, through its multilateral process.

Tuesday 30 September

B2.	IAF SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM	Date	Time	Room
	**Session:** 6. Cubesat, Internet of Things, and Mobile Direct Communications	30.09.2025	10:15	C4.6

Joan A. RUIZ-DE-AZUA
Director,
Space Communications Research Group, i2CAT
Spain

KEYNOTE: B2.6 Minarió Mission: A testbed for validating NTN NB-IoT connectivity and applications

Abstract
Narrowband IoT (NB-IoT) connectivity using non-terrestrial networks (NTN) is an emerging technology that enables seamless global connectivity through a unified and standardized communication system compliant with the 3GPP standard. To fully assess its capabilities and ensure proper integration it is essential to validate its performance under real in-orbit conditions. Additionally, demonstrating concrete use cases is crucial for understanding the potential applications of NTN NB-IoT technology across various industries. The Minairó Mission is part of the NewSpace strategy promoted by the Generalitat de Catalunya, aiming to boost the space ecosystem in the region while acting as a catalyst for this strategic sector. Led by i2CAT, this mission will enable the validation of new telecommunications services and technologies, with focus on testing a NB-IoT connectivity system based on non-terrestrial networks in low Earth orbit. The mission started in March 2025, leveraging one of the four satellites of the SIC4 constellation deployed by Sateliot in 2024. SIC-4 is a four-satellite constellation of 6U Cubesats that has successfully performed, for first time, end-to-end NTN NB-IoT connectivity tests using the NB-IoT infrastructure onboard the satellites as communication nodes, in conjunction with user equipment devices deployed across the Spanish territory. The primary goal of the Minairó mission is to deploy pilot tests across the Catalan territory utilizing this pioneering NTN NB-IoT technology developed by Sateliot to further validate its performance while demonstrating its potential applications and providing service to various use cases. Another technology under evaluation for this mission is the Flexible Payload, a novel and reconfigurable payload mechanism developed by Fundació i2CAT, where onboard features and functionalities can be dynamically adjusted in real time through software updates. This adaptability enhances operational capability by allowing the satellite to adapt to evolving mission requirements and user demands without necessitating physical hardware modifications. The mission will also incorporate and test the Constellation Management System (CMS), a task scheduling framework developed at Fundació i2CAT for optimizing integrated satellite and network operations scenarios. Finally, the mission will also validate a robust, delay-tolerant communication bundle protocol designed to ensure reliable data transmission in NTN, addressing the intermittency challenges of space-based communication. The final paper will provide a detailed description of the Minairó mission, its primary goals and the payload design. Additionally, it will present the experimental results from the end-to-end NTN NB-IoT test campaign and will highlight the outcomes of the use cases conducted during the initial months of the mission.

C3.	IAF SPACE POWER SYMPOSIUM	Date	Time	Room
	**Session:** 1. Solar Power Satellite	30.09.2025	10:15	C4.9

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

KEYNOTE: C3.1 Final Report from the 2024-2025 NSS-IAA-IAF Space Solar Power Study Project

Abstract
During the 2024-2025, a study project sponsored by the National Space Society (NSS), the International Academy of Astronautics (IAA) Permanent Committee (PC) on Space Solar Power (SSP), and the International Astronautical Federation (IAF) Space Power Committee have conducted a major new systems-technology study project on the subject of SSP. During recent years, there have been quite remarkable changes in the global context for SSP, including increasing concerns regarding climate change, new programs and plans by various countries, and advances in key capabilities (such as low-cost launch).This study project was the most comprehensive examination of the field since the completion of the 2008-2011 Decadal Assessment of Space Solar Power conducted by the IAA, addressing dozens of different SSP concepts and engaging several score subject matter experts in multiple workshops and meetings. A range of some five (5) new concepts were examined and compared to an updated technology version of the 1979 SPS Reference System.

The study concluded that a specific class of systems concepts – involving high levels of modularity and eliminating large, technically-challenging technologies (such as integrated, high-voltage power management and distribution) – present the greatest promise for commercially-viable SSP to be realized before 2040. These approaches may garner support coordinated efforts to realize the goal of large-scale, affordable, sustainable and dispatchable space solar power for humanity.

B2.	IAF SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM	Date	Time	Room

Session: 7. Advances in Space-based Communication Technologies | 30.09.2025 | 15:00 | C4.6

Nicola LINTY
Satellite Communication Systems and Radio-Navigation Engineer,
Telecommunications Unit, Argotec
Italy

KEYNOTE: B2.7 UST-Lite, a small-sat modular transponder for Lunar and Mars Comms

Abstract
Small satellites play a crucial role in developing flexible, cost-effective, and rapid solutions for the development of communication services on other celestial bodies. Thinking for instance at the Moon, recent initiatives such as Moonlight or LunaNet aim at using commercially developed platforms to provide a reliable infrastructure for communication and navigation, eliminating the need for direct-to-Earth links while utilizing Proximity-1 protocols. With growing interest in Mars exploration too, the need for relay satellites becomes essential due to the vast distances and power constraints. To address the need of high-performance telecommunication solutions, Argotec is developing and testing a multi-channel and multi-band transponder, called UST-Lite, as part of the Universal Space Transponders (UST) family. The UST-Lite features a modular design, advanced signal processing capabilities, high-reliability components while keeping a low size, weight and power [1].

This paper highlights the latest technological advancements of UST-Lite: a new revision of the Digital Processor Module (DPM) offers exceptional computational capabilities, supporting up to four simultaneous independent full-duplex channels and direct synthesis up to the X-band; the Radio Frequency Module has been redesigned for improved scalability; a newly designed Power Supply Module (PSM) is capable of distributing power to all internal boards and of providing a stable clock reference from either an internal TCXO or an external ultra-stable oscillator, thus enabling radio science applications. Electrical and functional tests on the prototype demonstrate the radio's ability to meet the demands of deep space small satellite missions, both for telecom and for scientific applications. being capable of processing signals at 150|MHz bandwidth and achieving a short-term clock stability (1 s) as precise as 1 ppb.

The industrialization of the UST-Lite is part of Argotec's plans towards offering end-to-end communication and navigation services on the Moon, on Mars and beyond [2]. The design's flexibility and modularity also allow the radio to be used, alternatively, as a transponder, as a relay asset or as a user terminal with minimal design modifications. The goal is to achieve TRL7 for the PSM and TRL6 for the overall radio by Q3 2025.

[1] M. M. Kobayashi et al., "UST-Lite Direct Waveform Sampling Software-Defined Radio for Spaceflight Applications," 2023 IEEE Aerospace Conference, Big Sky, MT, USA, 2023. [2] A. Balossino and Faramaz Davarian, "The Plan to Give the Moon Decent Wireless Coverage", IEEE Spectrum, Jan 2022.

B4.	IAF SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM	Date	Time	Room

Session: 7. Constellations and Distributed Systems | 30.09.2025 | 15:00 | C3.2

Marco DI CLEMENTE
Head,
Technology Developments and Space Design, Italian Space Agency (ASI)
Italy

KEYNOTE: B4.7 Innovative Space Factory: Transforming Small Satellite Production

Abstract
The National Recovery and Resilience Plan (PNRR) builds upon Italy's strong space economy, which allocates over 1 billion dollars to the sector and stands as the third-largest contributor to the European Space Agency. Italy maintains a complete and integrated supply chain that spans from space access to satellite manufacturing, consumer services, and academic research hubs, with activities spread across the national territory. The country's industrial framework includes key international players, complemented by the emergence of small and medium-sized enterprises, including start-ups and spin-offs, which offer remarkable opportunities for expansion. This dynamic ecosystem is structured into aerospace competence centers and technological districts, ensuring coordination, consultation, and the consolidation of expertise across the sector. Within this thriving national landscape, the development of an advanced Space Factory—leveraging Industry 4.0 technologies—aligns with efforts to enhance national capabilities mostly in Earth observation satellite constellations, particularly in the X-band and optical domains, and in the communication sector, including optical communication. The main purpose of the initiative is to increase manufacturing capabilities reducing the integration time in order to support the deployment of a constellation within a reduced time-frame. The envisioned Space Factory 4.0 could also serve as a hub for testing services tailored to the needs of both industry and research, utilizing a Function-as-a-Service (FaaS) model. This capability is considered particularly important for small and medium enterprises when it's not possibile to invest in infrastracture. The full paper explores the concept, development, and operational framework of this innovative Space Factory, designed for the engineering, manufacturing, integration, and testing (AIT) of space systems, from cubesat to small satellites, providing the status of the project close to the end. Organized as a distributed and collaborative infrastructure across Italy, it aims to optimize the nation's space sector for institutional and commercial applications. A key objective is to streamline satellite production and integration timelines by implementing advanced automation, digital workflows, enhanced efficiency strategies, and multiple production lines. This initiative positions Italy to play a leading role in developing large satellite constellations, primarily composed of small satellites but adaptable to broader applications. Ultimately, this project strengthens the nation's strategic space capabilities while aligning with the goals set by the national strategic plan for space activities.

C4.	IAF SPACE PROPULSION SYMPOSIUM	Date	Time	Room

Session: 5. Electric Propulsion (1)

30.09.2025 | 15:00 | C3.6

Claude Martin BRITO
Project Manager,
Future and Advanced Projects, Safran Aircraft Engines
France

KEYNOTE: C4.5 A Review of the High-Isp / High-Voltage Hall Thrusters

Abstract
For space missions where transit times is not a major constraint, such as comet chasers (Deep Space 1), asteroid rendezvous missions (Psyche's spacecraft), and generally interplanetary missions, a high specific impulse (*Isp*) is crucial. In the near-Earth environment, there are several missions where efficient propulsion systems are also essential from propellant consumption point of view. These include long-term drag compensation in LEO and VLEO (GOCE), long-term formation flight (for space-to-space communications), high-precision missions (LISA Pathfinder), and interferometry missions (LISA). High *Isp* can also benefit commercial space applications, such as orbit corrections, slow plane change, orbit repositioning for commercial space debris removal (ADRAS-J) and potentially for the upcoming OSAM missions.

Despite Hall Effect Thrusters (HET) having been studied since the 1960s and extensively used since the 2000s, a technological barrier appears to be emerging around 3000 seconds of *Isp*. Although theoretically, the potential for increasing the *Isp* in HETs is limitless by raising the discharge voltage or reducing the mass of the propellant species, these adjustments lead to significant impacts on both the thruster (plasma properties) and the system (power supply units capable of handling high voltage levels). This review offers an exhaustive overview of HETs operating at high-voltage / high-*Isp*, by covering a relevant set of thrusters developed over the past 10 years (across all TRLs), data results from characterization tests or partial life-span test campaigns, and Safran Spacecraft Propulsion (SSP) own activities. This state-of-the-art analysis describes the technical solutions proposed for optimizing the magnetic field, managing thermal loads, and optimizing the discharge channel geometry using various materials. Drawing on SSP experience, additional topics are addressed, such as the influence of different channel materials, the homogeneity of the anode mass flow-rate, ceramic bevelling, and thruster aging on maximum critical discharge voltages.

The review study underscore the need to explore new high-voltage tolerant ceramics for the discharge channel, increase the magnetic field intensity without compromising life-span or plasma stability, optimize the geometry of the discharge channel, design thrusters with better thermal management, and develop robust high-voltage wiring, connectors and electronics at PPU level. SSP is actively engaged in these challenges: several technological building blocks are currently being tested through an improved version of the PPSR 5000, and high-voltage dedicated laboratory models are currently under test. These activities will provide significant insights into the functional triad (performance, stability and life-span) of highvoltage HETs and prepare the next steps toward a high-voltage DM thruster.

D4.	23rd IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE	Date	Time	Room

Session: 3. The Modern Day Space Elevator as a Permanent Transportation Infrastructure

30.09.2025 | 15:00 | Parkside Pre-Function

Yoji ISHIKAWA
General Manager,
Obayashi Corporation
Japan

KEYNOTE: D4.3 Jerome Pearson Memorial Lecture - Lessons learned from space elevator research and development and future challenges

Abstract
More than 10 years have passed since Obayashi Corporation announced its space elevator construction concept in 2012. In the meantime, following a long-term roadmap for technological development, we have conducted many research projects on key technologies, including collaborative research with other industries and academia. These included examination of cable materials and space experiments of candidate materials, cable dynamics, climber design and small-scale modeling, examination of energy supply, and interaction with atmospheric electricity. Understanding of the various elements of space elevators has deepened, and now space elevator technology development has entered the next phase toward practical application. As technological development becomes more detailed in the future, design content will need to be updated successively. Realistic responses will be required in technical considerations and social science aspects, such as marketing, business promotion, and legal frameworks. Now, we are facing the perfect opportunity to foster momentum further and promote efforts worldwide toward the innovative utilization of space elevators.

E1.	IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM	Date	Time	Room

Session: 3. On Track: Undergraduate Space Education

30.09.2025 15:00 C4.3

Bernard FOING
CEO
ILEWG LUNEX EuroMoonMars,
President
Space Renaissance International,
Chief Scientist
QOSMOSYS
The Netherlands

KEYNOTE: E1.3 Space Renaissance for All: Workforce Development, Research, Innovation, Entrepreneurship, Astronautics, Diversity and Inclusion with LUNEX

Abstract
In this talk Professor Bernard Foing reviews the initiatives from International Lunar Exploration Working Group (ILEWG) LUNEX EuroMoonMars, EuroSpaceHub Academy and partners contributing to WorkForce Development for Space and Planetary Research and Innovation, building onInterdisciplinarity, Diversity, Access for All, Astronautics and Entrepreneurship. Lunex EuroMoonMars has been organizing a programme of data analysis, instrumentation tests, field work and analog missions for students and researchers in different locations worldwide since 2009, including Hawaii HI-SEAs, Utah MDRS, Iceland, Etna/ Vulcano Italy, Atacama, AATC Poland, ESTEC Netherlands, and Eifel Germany. Analogue missions provide a practical ground in which students can test the notions learnt at the university in a realistic simulation context. Over the course of these missions, students have access to special Space instrumentation, laboratories, Facilities, Science Operations, Human Robotic partnerships.

Wednesday 1 October

C1.	IAF ASTRODYNAMICS SYMPOSIUM	Date	Time	Room
	**Session:** 6. Mission Design, Operations & Optimization (1)	01.10.2025	10:15	C4.8

Josep J. MASDEMONT
Full Professor,
IEEC - Universitat Politècnica de Catalunya
Spain

KEYNOTE: C1.6 Breakwell Lecture - Libration point orbits: a brief journey through fundamental dynamics and applications

Abstract
Libration points, also known as Lagrange points, are positions in a two-body system where the gravitational forces and the centrifugal force balance, allowing a small third object to remain stationary relative to the two larger bodies. First identified by Joseph-Louis Lagrange in 1772 in the context of the restricted three-body problem, these points represent a key milestone in the understanding of celestial mechanics.

Libration point orbits (LPO's), such as halo orbits and Lyapunov orbits, became of practical interest during the second half of the 20th century, particularly with the rise of space exploration. Their first notable application was in the planning of missions like the International Sun–Earth Explorer-3 (ISEE-3) in 1978, which was positioned near the Earth–Sun L1 point. Since then, LPOs have been used extensively for scientific and observational missions. The James Webb Space Telescope, for example, operates around the Earth–Sun L2 point to benefit from thermal and observational stability and the planned Lunar Gateway, which envisions a crewed outpost in a Near-Rectilinear Halo Orbit around the Moon.

Beyond their role in hosting space stations and observatories, the invariant manifolds associated with LPOs offer dynamical pathways in phase space that can be exploited for low-energy transfers. These structures enable efficient interplanetary trajectories and mission designs, minimizing propellant for transfers and station keeping purposes.

The mathematical richness of the problem, involving nonlinear dynamics and chaos theory, makes it a fertile ground for the development of advanced analytical and computational tools in astrodynamics.

In this lecture, we will explore the fundamental dynamical concepts associated with libration points and LPOs, including Lyapunov, halo, and various types of quasi-periodic orbits. We will summarize techniques to present practical representations and the overall structure of these orbit families as well as their transition within broader multi-body dynamical systems.

Particular emphasis will be placed on the geometrical interpretation of phase-space structures, such as invariant manifolds. We will address the associated computational challenges and highlight how these manifolds are essential for designing efficient station-keeping strategies, even with solar sail propulsion. Additionally, we will examine how their intersections enable transfer mechanisms between libration point orbits, creating low-energy pathways that exploit chaotic heteroclinic connections.

Finally, we will consider how these concepts extend to more general astronomical settings, illustrating the universality and richness of libration point dynamics in celestial mechanics.

C2.	IAF MATERIALS AND STRUCTURES SYMPOSIUM	Date	Time	Room

Session: 4. Space Structures Control, Dynamics and Microdynamics | 01.10.2025 | 10:15 | C3.4

Pavel TRIVAILO
Professor,
RMIT University
Australia

KEYNOTE: C2.4 Paolo Santini's Memorial Lecture - Structural Inertial Morphing: A Novel Concept for Designing Next-Generation Autonomous Spacecraft with Enhanced Attitude Dynamics Capabilities

Abstract
The lecture reviews the author's contributions to the development of the Structural Inertial Morphing (IM) - an innovative spacecraft attitude control method, that leverages the deliberate alteration of the spacecraft's inertial properties to manage its motion. IM utilizes simple, low-energy mechanisms to manipulate the spacecraft's inertia.

The fundamental concept of IM involves adjusting the spacecraft's moments of inertia, for example, through "scissors"-type mechanisms that reposition the spacecraft's mass or by deploying appendages that change the inertia properties. These adjustments enable the spacecraft to transition between different motion patterns, such as from tumbling to a regular spin about required axis or from a slow to agile flipping, with minimal control effort. These IM systems can enable spacecraft to perform complex maneuvers, such as 90° and 180° inversions, detumbling, directional coning and agile acrobatic movements, all while using minimal control actions and power. Method is opening up a variety of movement possibilities that can be selected based on mission requirements. For instance, changes in the spacecraft's moments of inertia can directly influence pattern of motion and its period, allowing for tailored agile maneuvering depending on the task at hand.

A key feature of IM is its ability to achieve complex attitude changes with only a small, paltry number of discrete actions. This is done through a process where the non-dimensional angular momentum vector is manipulated by transferring it between different "separatrices" or "polhodes" in the spacecraft's body axes.

The advantages of IM are particularly significant for small and low-cost autonomous spacecraft. These systems can operate with low energy consumption and reduced complexity, making them suitable for long-duration missions where energy efficiency is crucial. Moreover, IM systems can enable spacecraft to perform various critical tasks, such as directional scanning, avoiding space debris by orienting the spacecraft's most vulnerable surfaces away from threats, or efficiently utilizing onboard equipment by optimizing the spacecraft's orientation. Recent studies have demonstrated the feasibility of IM for spacecraft design, showcasing how simple control actions can dramatically enhance directional efficiency. For example, by manipulating the spacecraft's moment of inertia, the directional exposure of various surfaces can be maximized, which is especially important for spacecraft facing potential collisions with space debris or operating in radiation environments.

IM presents a promising concept for spacecraft attitude control. Its ability to enable agile, acrobatic maneuvers with low energy consumption could revolutionize spacecraft design, offering a pathway to more efficient, autonomous, and adaptable space missions.

C4.	IAF SPACE PROPULSION SYMPOSIUM	Date	Time	Room

Session: 4. Solid and Hybrid Propulsion (2) | 01.10.2025 | 10:15 | C4.11

Didier BOURY
Programme Manager,
Research & Technology Department, ArianeGroup SAS
France

KEYNOTE: C4.4 An Overview of Solid Propulsion Application for Space Launchers

Abstract
Large Solid Propulsion has been used since the beginning of space launch activities, benefiting from motor technologies often coming from defense applications. Currently numerouss launcher systems are using large solid rocket motors (SRM) fully adapted to the launch system and mission requirements. Tentatively structuring the large spectrum of SRM applications on space launcher systems, three main missions can be 'identified' for this propulsion mode: o stage one of heavy launchers where large thrust levels, easily achievable at affordable cost with solid propulsion, are required for take-off o strap-on boosters for liquid core stage in order to give some flexibility to the launcher system and adapt its performance to the mission payload o propulsion system for small launchers benefiting from an attractive performance to cost ratio and high availability

This paper presents a review, on the past decade 2015-2025, of applications of large solid propulsion on space launchers. This review intends to give an idea of what is this business in term of volume and type of products. Ongoing motor development activities and motors evolutions, associated to new launcher projects or evolutions of launcher using SRM propulsion mode, are reported to identify long term trends and enlight as far as possible the coming decade. Two specific points are discussed: cohabitation with the concept of reusable liquid propelled core stage and blooming situation on the chinese small launcher market.

E2.	53rd IAF STUDENT CONFERENCE	Date	Time	Room

Session: 4. Educational Pico and Nano Satellites | 01.10.2025 | 10:15 | C2.4

Sabrina CORPINO
Professor,
Politecnico di Torino
Italy

KEYNOTE: E2.4 Hands-on space education and international collaboration: in memory of Prof Pierre Rochus

Abstract
Nanosatellites represent an effective solution for bridging the gap between theory and practice in space education. They can also be a means for fostering collaboration of people in a multicultural and international environment. This is the paradigm at the basis of many initiatives promoted by Prof. Pierre Rochus in his long service at IAF.

B2.	IAF SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM	Date	Time	Room

Session: 2. Space-based PNT (Position, Navigation, Timing) Sensors and Systems | 01.10.2025 | 15:00 | C4.6

Mauro LEONARDI
Assistant Professor,
Tor Vergata University
Italy

KEYNOTE: B2.2 Introducing pseudo-range rates and IMU sensors to improve lunar satellite navigation system performance

Abstract
In recent years, interests in lunar exploration have surged significantly, making accurate and reliable navigation crucial for the success of current and future lunar missions.

Extensive research has been conducted on Moon satellite navigation systems, and, for example, the Moonlight project was launched by the European Space Agency, aimed at developing the first satellite navigation system around the Moon. Recent works investigated different types of constellations and localization methods, with the most promising solution considering ELFO orbits and pseudo-range measurements. Moreover, to overcome the limitations due to the small number of satellites in the initial phase of a constellation deployment, several solutions have been proposed, like adding the use of additional RTD measurements and/or an altimeter on board.

This work investigates the use of other measurements/sensors, i.e. pseudo-range rate and Inertial Measurement Unit (IMU), to further improve the performance of the system and to reach the availability and accuracy needed for demanding applications, such as Moon landing.

An Extended Kalman Filter (EKF) is proposed to integrate all the possible measurements combinations (pseudo-range, pseudo-range rate, altimeter, IMU accelerations) and to estimate position, velocity, and time (PVT) of the user receiver. Two initial operational modes are considered: (a) relying on the traditional pseudo-range localization, and (b) enhanced localization, that is, incorporating RTD and altimeter. These two modes are improved with the addition of pseudo-range rates and IMU and the performances are evaluated to choose the best possible solution.

The performance analysis focuses on minimizing the position and velocity estimation errors and on the evaluation of the improvement of robustness of the overall system. Particular attention is posed near ill-conditions or singularity points, where the two base modes show some limitations. The evaluation uses Montecarlo runs on different trajectories, representing possible spacecraft landing paths or a rover moving on the Moon surface.

The simulation results, show an error reduction of about 25% in terms of position estimation with pseudo-range rate and up to about 60% with the addition of IMU measurements w.r.t. the original performances.

Moreover, the introduction of pseudo-range rates and IMUs reduces the velocity estimation errors by up to 95%, significantly enhancing the velocity estimation accuracy, particularly useful in landing management.

Last but not least, the localization performances are greatly improved near and in ill-condition points or near singularity, improving the robustness of the system also in the initial deployment phase of the navigation system.

Thursday 2 October

E9.	IAF SYMPOSIUM ON SECURITY, STABILITY AND SUSTAINABILITY OF SPACE ACTIVITIES	Date	Time	Room

Session: 3. Norms and Standards for Safe and Responsible Behaviour in Space | 02.10.2025 | 10:15 | C2.6

Serge PLATTARD
Honorary Professor,
University College London (UCL); Visiting Professor, International Space University (ISU)
United Kingdom

KEYNOTE: E9.3 Revisiting Responsible Behaviour in Space

Abstract
While the growing dependence on space for a continuously broadening spectrum of application has demonstrated how beneficial it is, it has also become a factor of vulnerability and fragility. Indeed, the dynamics of space activity and the explosion of new services are such that, if they are to be sustainable, this vulnerability must be acknowledged at the highest level, with the appropriate resources. Intentionally undermining this dependence would have a direct impact on the economy, as well as on security and defence resources. Such unavoidable growing fragility of this space dependence, if not instability, necessitates, more than ever, responsible behaviour in space to become a common practice by every actor, following a set of norms, transparency and confidence building measures. Currently, a number of initiatives within the United Nations, both at the Disarmament Commission and in the Committee on Peaceful Uses of Outer Space (e.g. Open Ended Working Groups on Reducing Space Threats through Norms, Rules, and Principles of Responsible Behaviors), have been launched to reach a consensus on what should be these best practices guaranteeing sustainable space activities, although nothing fully descriptive/operative has been proposed/endorsed so far. National initiatives and private sector engagement should also be acknowledged. In this paper, inspired by well-documented of some borderline behaviours which are common practice in the form of spatial signalling, we propose to draw up a non-exhaustive list of behaviours showing the limit of what would be considered as irresponsible, de facto directing to responsible space operations.

E10.	IAF SYMPOSIUM ON PLANETARY DEFENSE AND NEAR-EARTH OBJECTS	Date	Time	Room

Session: 1. Planetary Defense from Asteroids and Comets | 02.10.2025 | 15:00 | C2.3

Ed KRUZINS
Professor,
University of New South Wales
Australia

KEYNOTE: E10.1 Planetary Defence: The Australian Context within the International Asteroid Warning Network (IAWN)

Abstract
Key asteroids in 2023, 2024 and 2025 gained global media attention upon their first discovery due to their close approach or initial estimates of impact probability with Earth. Most notably asteroid 2024 YR4 recently established an impact probability of 3.6\% with a Torino scale level of 3 during February 2025, the highest in 20 years, only exceeded by asteroid Apophis 99942 at Torino level 4. Now at Torino 0, 2024 YR4 galvanised initial thoughts on Planetary Defence strategies for 2032, its then predicted impact date.

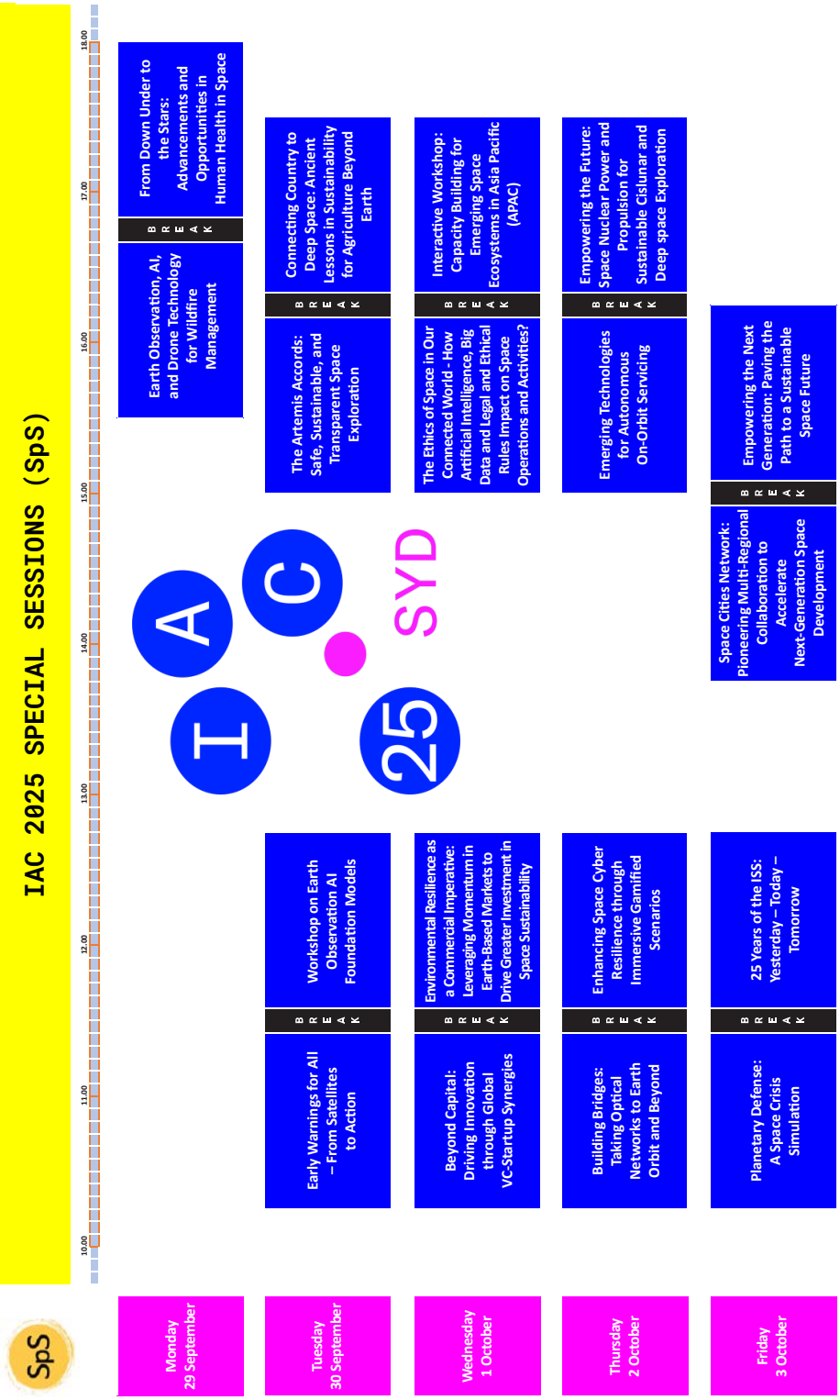
The Southern Hemisphere Asteroid Research Consortium (SHARC) located in Australia is an active and informal entity. SHARC is composed of the Universities of New South Wales, Tasmania, Western Australia and Curtin performing asteroid research with federal agencies, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the NASA Jet Propulsion Laboratory (JPL). Several Australian SHARC members are also International Asteroid Warning Network (IAWN) delegates, contributing astrometric and photometric data on potentially hazardous Earth orbit crossing asteroids, the so-called Apollo and Aten types. The international Space Mission Advisory Planning Group (SMPAG) works with the IAWN on policy formulation and planning for asteroid events but Australian SMPAG membership is yet to be realised. Both IAWN and SMPAG work with the United Nations Office of Outer Space Affairs (UNOOSA) and UN delegations for international coordination.

Australia is no stranger to disaster monitoring and response. In this paper we discuss an indicative approach to linking Australian Government entities to IAWN, SMPAG and first responders noting existing legislations and guidance such as the Australian Government Crisis Management Framework (AGCMF), and how Australia might consider a potential asteroid impact event either on its own soil, regionally or internationally.

The intense media interest about 2004 YR4 early in 2025 underscored the Australian public's curiosity and concern about planetary defence from natural space objects. We discuss experiences and highlight Australia's unique southern geographic location and capabilities to support global asteroid monitoring efforts in both radar and optical observational modes.

4 Special Sessions

4.1 Special Sessions at a Glance



4.2 Special Sessions per Day

Monday 29 September

15:30 - 16:40 Earth Observation, AI, and Drone Technology for Wildfire Management

Room: C4.4, ICC Convention Center, Level 4

Organizer:

Lora KOENIG
Research Scientist,
Lockheed Martin Corporation
United States

Facilitators:

Lora KOENIG
Research Scientist,
Lockheed Martin Corporation
United States

Thomas GRUEBLER
Chief Strategy Officer & Co-Founder,
OroraTech
Germany

Marta YEBRA
Director,
Bushfire Research Centre of Excellence,
The Australian National University
Australia

Anna MOORE
Director,
Institute for Space,
Australian National University
Australia

Join our conference Special Session on Earth Observation, AI, and Drone Technology for Wildfire Management to explore innovative tech solutions for wildfire prevention & response. Discover how Earth Observing satellites, AI, and drones can be leveraged to combat wildfires and save lives. Share your ideas and help shape the future of wildfire management. Be part of the solution!

16:50 - 18:00 From Down Under to the Stars: Advancements and Opportunities in Human Health in Space

Room: C4.4, ICC Convention Center, Level 4

Organizer:

Fay GHANI
Medical Scientist,
Mayo Clinic
New Zealand

Speakers:

Fay GHANI
Medical Scientist,
Mayo Clinic
New Zealand

Abba ZUBAIR
Professor,
Laboratory Medicine and Pathology, Mayo Clinic
United States

Lisa BROWN
Hepatobiliary and General Surgeon,
The Royal Melbourne Hospital and Peter MacCallum Cancer Center
Australia

Siddharth RAJPUT
Advanced Trainee,
Vascular Surgery, Australia and New Zealand Society for Vascular Surgery
Australia

Join us to discover the latest breakthroughs in space life sciences from experts in Australia and NZ. Gain insights from leading Kiwi and Aussie scientists and physicians, learn about cutting-edge research, and explore educational opportunities. Network with experts, discuss future missions, and engage in interactive discussions. Whether you're a student, young professional, or business, this session offers valuable knowledge and connections to propel your space health career forward.

Tuesday 30 September

10:15 - 11:25 Early Warnings for All – From Satellites to Action

Room: C4.4, ICC Convention Center, Level 4

Organizer and Facilitator:

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

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;
Director,
Tsukuba Space Center, Japan Aerospace Exploration Agency (JAXA)
Japan

Simonetta CHELI
Director,
Earth Observation Programmes
Head,
ESRIN, European Space Agency (ESA)
Italy

Thomas GRUEBLER
Chief Strategy Officer & Co-Founder,
OroraTech
Germany

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

Guennadi KROUPNIK
Director General,
Space Utilization, Canadian Space Agency (CSA)
Canada

Hamid MEHMOOD
Scientific Affairs Officer (Head of UN-SPIDER Beijing Office),
United Nations Office for Outer Space Affairs (UNOOSA)
China

EW4A is the audacious goal to ensure that everyone on the planet has access to warnings about severe weather,floods and droughts,geo-hazards and other extreme events. Space agency, commercial space and community leaders will discuss the latest capabilities of global observing systems and the challenges of distributing actionable information to all. Hear how space agencies and commercial partners work together for technical information, while considering the many cultural and practical challenges of getting information to everyone.

11:35 - 12:45 Workshop on Earth Observation AI Foundation Models

Room: C4.4, ICC Convention Center, Level 4

Organizer and Facilitator:

Rafael KARGREN
Head of Future Programs,
European Space Agency (ESA)
Italy

Speakers:

Bihan WEN
Associate Professor,
Nanyang Technological University (NTU)
Singapore

Tat-Jun CHIN
Professor,
Australian Institute for Machine Learning
Australia

Zaheer ALI
Director of Space Programme,
University of Central Florida
United States

Join Our Special Session on Earth Observation AI Foundation Models! Discover how cutting-edge AI foundation models are revolutionising EO, enabling breakthroughs in climate monitoring, disaster response, and sustainability. This session offers a unique multidisciplinary perspective, bridging AI innovation with global challenges. Engage with experts, explore transformative applications, and help shape the future of space and Earth sciences. Don't miss this opportunity to contribute to a groundbreaking discussion at the forefront of AI and EO integration.

15:00 - 16:10 The Artemis Accords: Safe, Sustainable, and Transparent Space Exploration

Room: C4.4, ICC Convention Center, Level 4

Facilitator:

Stéphanie DURAND
Vice President,
Policy, Communications and Strategic Planning, Canadian Space Agency (CSA)
Canada

Speakers:

Karen FELDSTEIN
Associate Administrator,
International and Interagency Relations, National Aeronautics and Space Administration (NASA)
United States

Enrico PALERMO
Head,
Australian Space Agency
Australia

Roberto MELGAR SHEEN
Head,
Peruvian Space Agency (CONIDA)
Peru

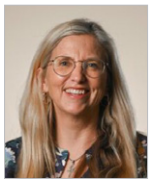
M Ganesh PILLAI
Scientific Secretary,
Indian Space Research Organisation (ISRO)
India

Would you like to know more about the Artemis Accords? Have you heard things about the Accords that cause you pause? This is your opportunity to ask questions to senior leaders from Artemis Accords signatories' Space Agencies. Find out more about conducting safe, sustainable and transparent space operations and how Artemis Accords signatories are working to accomplish those objectives.

16:20 - 17:30 Connecting Country to Deep Space: Ancient Lessons in Sustainability for Agriculture Beyond Earth

Room: C4.4, ICC Convention Center, Level 4

Organizers:



Melissa DE ZWART
Deputy Director,
ARC Centre of Excellence in Plants for Space, University of Adelaide
Australia

Richard HARVEY
Chief Operating Officer,
ARC Centre of Excellence in Plants for Space, University of Adelaide
Australia

Facilitator:

Deen SANDERS
Worimi Giparr;
Special Counsel,
Deloitte Access Economics
Australia

Speakers:

Chris HEWETT
General Manager,
Space Policy, Australian Space Agency
Australia

Matthew GILLIHAM
Director,
ARC Centre of Excellence in Plants for Space, University of Adelaide
Australia

Aude VIGNELLES
Director,
Vignelles Space Pty Ltd
Australia

Jennifer BROMLEY
Chief Scientific Officer,
Vertical Future
United Kingdom

Raymond M. WHEELER
Emeritus Senior Scientist,
National Aeronautics and Space Administration (NASA)
United States

Koichi WAKATA
Astronaut and Chief Technology Officer,
Asia-Pacific, Axiom Space, LLC
Japan

Gather around the campfire for a journey blending cutting-edge research, with ancient wisdom. Explore innovations in plant science, Controlled Environment Agriculture and Space habitats to sustain human health and wellbeing in deep Space, through the storytelling of the world's oldest astronomers. Discover the profound connections between Space and country, and how ancient lessons of fragility and scarcity gathered from the Australian landscape are linked to sustainability, Space travel and resilient food production systems on Earth.

Wednesday 1 October

10:15 - 11:25 Beyond Capital: Driving Innovation through Global VC-Startup Synergies

Room: C4.4, ICC Convention Center, Level 4

Organizer and Facilitator:

Viktor SHPAKOVSKY
General Partner, Beyond Earth Ventures
United States

Speakers:

Martin DUURSMA
Partner,
Main Sequence VC
Australia

Justin CYRUS
Founder and CEO,
Lunar Outpost
United States

Alex VIDYUK
Founder and Chief Editor,
Space Ambition
United States

Jay KIM
CEO and Chairman,
Boryung
Republic of Korea

Sanjeev GORDHAN
General Partner,
Type One Ventures
United States

Tyler BERNSTEIN
Co-Founder and CEO,
Zeno Power
United States

Rob DESBOROUGH
Managing Partner,
Seraphim Space
United Kingdom

Join “Beyond Capital: Driving Innovation through Global VC-Startup Synergies” to engage with leading VCs, startups, and accelerators. Discover how global investments are shaping the future of space tech and deep tech innovations.

11:35 - 12:45 Environmental Resilience as a Commercial Imperative: Leveraging Momentum in Earth-Based Markets to Drive Greater Investment in Space Sustainability

Room: C4.4

Organizers:

Peter MOAR
Head,
Space Instrumentation Engineering, Swinburne University of Technology
Australia

Timo STUFFLER
Director Business Development,
OHB System AG-Munich
Germany

Jenny FRANULOVIC
Principal Advisor,
UFP
Australia

Speakers:

Peter MOAR
Head,
Space Instrumentation Engineering, Swinburne University of Technology
Australia

Timo STUFFLER
Director Business Development,
OHB System AG-Munich
Germany

Jenny FRANULOVIC
Principal Advisor,
UFP
Australia

William CROWE
Co-Founder and CEO,
High Earth Orbit Robotics
Australia

Mark THOMPSON
CEO,
Capricorn Space
Australia

David WATERHOUSE
Deputy Chairman and Co-Founder
Hypersonix Launch Systems,
CEO and Co-Founder,
VeloDX
Australia

Why should industries beyond the space sector care about space sustainability? The risks of an unstable space environment have far-reaching consequences for global markets. So why isn't there greater investment in protecting space? Join us as we explore awareness gaps and strategies to bridge them, uncovering funding opportunities to drive greater action toward a more secure and sustainable space environment.

15:00 - 16:10 The Ethics of Space in Our Connected World - How Artificial Intelligence, Big Data and Legal and Ethical Rules Impact on Space Operations and Activities?

Room: C4.4, ICC Convention Center, Level 4

Organizers and Facilitators:

Lesley JANE SMITH
Professor; Solicitor; Vice-President,
Leuphana University; Weber-Steinhaus & Smith; International Institute of Space Law (IISL)
Germany

Philippe CLERC
Chief Officer,
Compliance & Ethics, Centre National d'Etudes Spatiales (CNES)
France

Speakers:

Ranjana KAUL
Partner; Vice-President,
Dua Associates; International Institute of Space Law (IISL)
India

Adriana MARAIS
Theoretical Physicist, Director,
Foundation for Space Development Africa and Founder Proudly Human
South Africa

Courtenay MCMILLAN
Mission Segment Lead,
Starlab Space LLC
United States

Jairo BECERRA
Director,
Socio-Legal Research Centre, CISJUC, Universidad Católica de Colombia
Colombia

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

Jorge CICCOROSSI
Head,
Space Strategy and Sustainability Division, ITU Radiocommunication Bureau, International Telecommunications Union (ITU)
Switzerland

Josef S. KOLLER
Head of Space Safety and Sustainability,
Amazon, Project Kuiper

The objective is to engender discourse and encourage further insight into potential regulatory and ethical rules for this sphere that are not yet recognized or are being applied in practice. The resulting dialogue should lead to the emergence of innovative solutions to enhance trust, recognition and cooperation between the producers of space systems and data, the Big Tech and AI industries, and the needs of civil society, not to forget those of future generations.

16:20 - 17:30 Interactive Workshop: Capacity Building for Emerging Space Ecosystems in Asia Pacific (APAC)

Room: C4.4, ICC Convention Center, Level 4

Organizers:

Mariam NASEEM
Planetary Science Researcher,
PhD Candidate, University of Maryland, College Park
Canada

Mahhad NAYYER
Co-Lead,
Space Safety and Sustainability Project Group; Purdue University,
Graduate Researcher in Astronautics,
Space Generation Advisory Council (SGAC)
Vice-Chair,
IAF ACCESS Asia-Pacific Subcommittee
Pakistan

Facilitator:

Mariam NASEEM
Planetary Science Researcher,
PhD Candidate, University of Maryland, College Park
Canada

Speakers:

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

Bruce CHESLEY
Senior Associate,
Teaching Science and Technology, Inc (TSTI)
United States

Mahhad NAYYER
Co-Lead,
Space Safety and Sustainability Project Group; Purdue University,
Graduate Researcher in Astronautics,
Space Generation Advisory Council (SGAC)
Vice-Chair,
IAF ACCESS Asia-Pacific Subcommittee
Pakistan

Leonard DE GUZMAN
Regional Lead,
Americas, Maldives Space Research Organisation (MSRO)
United States

Let's Chart the Future of Space in APAC Together at IAC 2025!

Join our Special Session for an interactive workshop tackling crucial capacity-building needs for space in APAC! Collaborate with diverse stakeholders to explore sustainable space solutions and drive impactful initiatives. Don't miss your chance to shape the future of space in APAC—your voice and expertise are essential in creating lasting change! Be part of the conversation. Be part of the future.

Thursday 2 October

10:15 - 11:25 Building Bridges: Taking Optical Networks to Earth Orbit and Beyond

Room: C4.4, ICC Convention Center, Level 4

Organizers:

Kevin SHORTT
Research Project Leader,
Central Research and Technology Function, Airbus Defence and Space GmbH
Germany

Morio TOYOSHIMA
Director,
Wireless Networks Research Center, National Institute of Information and Communications Technology (NICT)
Japan

Speakers:

Ragheed AL DABBAGH
Asia Pacific Head,
Optical Networks Product Management, Network Architecture, Nokia
Australia

Sean LENNON
Senior Technical Specialist,
Satellite and Space Systems, Optus
Australia

Ryota TANAKA
Director,
Engineering of Space DC Business Division, Space Compass Corporation
Japan

Tim PARSLEY
Principal Engineer-Spacecraft Payload and TCR,
Optus
Australia

Come and learn how optical networks are expanding into SPACE! This interactive session brings the world of fiber-based communication technologies together with the space industry to explore how free-space optical communications is changing how we look at networks. With industry leaders from across the entire systems spectrum, the goal of this session will be to explore technology roadmaps that will deliver the innovations needed to one day realize a truly interplanetary Internet.

11:35 - 12:45 Enhancing Space Cyber Resilience through Immersive Gamified Scenarios

Room: C4.4

Organizers and Facilitators:

Amjed Ahmed ARIFEEN
Modelling & Simulations Engineer,
Zendir
Australia

Harrison VERIOS
Simulation Engineer,
Zendir
Australia

Brenton SMITH
Chief Technology Officer (CTO),
Zendir
Australia

Join our workshop and operate your own simulated spacecraft! Face cyber threats, strategize in real-time, and defend critical space assets using digital twin simulations. Strengthen your mission resilience through this unique, hands-on experience!

15:00 - 16:10 Emerging Technologies for Autonomous On-Orbit Servicing

Room: C4.4, ICC Convention Center, Level 4

Organizers:

Teresa VIDAL-CALLEJA
Professor and Research Director,
Robotics Institute, University of Technology Sydney (UTS)
Australia

Donald DANSEREAU
Senior Lecturer,
School of Aerospace, Mechanical and Mechatronic Engineering, The University of Sydney
Australia

Thierry PEYNOT
Associate Professor,
Queensland University of Technology (QUT)
Australia

Miguel Angel OLIVARES-MENDEZ
Associate Professor,
University of Luxembourg
Luxembourg

Julian GUINANE
Space Systems Engineer,
School of Aerospace, Mechanical and Mechatronic Engineering, The University of Sydney
Australia

Nathan WALLACE
Research Fellow,
Agriculture and Environment Group, Australian Centre for Robotics (ACFR), The University of Sydney
Australia

Jack NAYLOR
PhD Candidate,
Australian Centre for Robotics, The University of Sydney
Australia

Minduli WIJAYATUNGA
Incoming Assistant Professor,
Department of Aerospace Engineering, Grainger College of Engineering, University of Illinois Urbana-Champaign
United States

Jennifer WAKULICZ
Postdoctoral Research Associate,
Robotics Institute, University of Technology Sydney
Australia

Facilitators:

Mikhail ASAVKIN
Founder,
ANT61
Australia

Julia MITCHELL
Lead Systems Engineering and Payloads,
Space Machines Company
Australia

Speakers:

Agnès MESTREAU
ESA-ESTEC Head of the Systems Engineering Division,
European Space Agency (ESA)
The Netherlands

Lucinda KING
Mission Concepts Engineer,
Space Business Unit, BAE Systems
United Kingdom

Marco DE STEFANO
Research Associate,
Department for Analysis and Control of Advanced Robotic Systems, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)
Germany

Sho FUJITA
Senior Director,
Space Technologies, Astroscale
Japan

Join leading minds from industry, academia, and policy-making to shape the future of autonomous on-orbit servicing. This special session is a unique forum where diverse perspectives meet to align technological innovation with practical needs and regulatory realities. We will explore how emerging advances in robotics, AI, and computer vision can transform satellite servicing operations. Help bridge the gap between research breakthroughs, policy frameworks and real-world implementation in this critical domain.

16:20 - 17:30 Empowering the Future: Space Nuclear Power and Propulsion for Sustainable Cislunar and Deep space Exploration

Room: C4.4, ICC Convention Center, Level 4

Organizer and Facilitator:

Saroj KUMAR
Research Engineer,
Propulsion Research Center (PRC), University of Alabama in Huntsville
United States

Speakers:

Lindsay KALDON
Senior Advisor for Space Nuclear Systems,
Space Technology Mission Directorate, National Aeronautics and Space Administration (NASA)
United States

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

Mauro AUGELLI
Head of Systems Engineering,
UK Space Agency
United Kingdom

Kate KELLY
President,
Advanced Technologies, BWX Technologies. Inc.
United States

Angelo PASINI
Associate Professor,
University of Pisa
Italy

Join a dynamic discussion on the game-changing capabilities of Space Nuclear Power and Propulsion (SNPP) in sustainable space exploration. This session will explore how SNPP enables long-duration missions, accelerates deep space travel, and inspiring the next-generation space workforce. Connect with experts, industry leaders, and policymakers to discuss opportunities, challenges, and SNPP's broader impact. Don't miss this chance to engage in shaping the future of space exploration and innovation!

Friday 3 October

10:15 - 11:25 Planetary Defense: A Space Crisis Simulation

Room: C4.4, ICC Convention Center, Level 4

Organizers and Facilitators:

Alissa J. HADDAJI
Director,
Boston Space Consortium; Lecturer in Space Law, Policy and Ethics, International Space University (ISU)
United States

Alex KARL
Operations Engineer,
Space Applications Services
Belgium

Patrick MICHEL
Hera Mission Principal Investigator,
Centre National de la Recherche Scientifique (CNRS)
France

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!

11:35 - 12:45 25 Years of the ISS: Yesterday – Today – Tomorrow

Room: C4.4, ICC Convention Center, Level 4

Organizers:

Sai Tarun Prabhu BANDEMEGALA
Industrial PhD Student in Aerospace Engineering,
Politecnico di Torino
Italy

Gary BARNHARD
IAF Space Habitats Committee, Chair;
XISP-Inc,
CEO,
National Space Society
United States

Eszter GULACSI
Astronautical Architect,
Star Helix - Astro
SpArc Dept
Italy

Allen JIANG
Space Habitats Committee, Vice-Chair;
Amelia Space Technologies,
Founder & CEO, National Space Society
United Kingdom

Volker MAIWALD
Ph.D, Researcher,
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)
Germany

Marta ROSSI
PhD Student,
Architecture, History, and Project, Politecnico di Torino
Italy

Justin St. P. WALSH
Associate Professor of Art History and Archaeology,
Chapman University
United States

Speakers:

Michael LOPEZ-ALEGRIA
Chief of the Astronaut Office and Ax-1 Mission Commander,
Axiom Space, LLC
United States

Tim KOPRA
Chief Human Exploration Officer, Retired NASA Astronaut,
Voyager Technologies
United States

Robyn GATENS
Director,
International Space Station;
Acting Director,
Commercial Spaceflight, NASA
United States

Jeffrey MANBER
Special Representative to the Chairman & CEO,
Voyager Technologies
United States

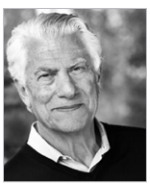
Ken SAVIN
CSO,
SpaceMD
United States

Alice GORMAN
Associate Professor,
Archaeology and Space Studies,
Flinders University
Australia

Maria Antonietta PERINO
Director for Space Economy Exploration and International Network,
Thales Alenia Space Italia
Italy

Sai Tarun Prabhu BANDEMEGALA
Industrial PhD Student in Aerospace Engineering,
Politecnico di Torino
Italy

Roland MILLER
Photographer,
Documentary and Fine Art
United States



Guillermo TROTTI
Professor, Co-founder and Chairman,
Arizona State University, EarthDNA, Trotti Studio
United States

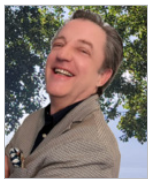
This session will be an extraordinary opportunity to reflect on the International Space Station project - from its conception in the 1980s to its 25 years of continuous occupation. We will bring together agency administrators, ISS astronauts and cosmonauts, scientists, and other veterans of ISS operations to discuss how the space station came to be, what working on it has been like, and what lessons can be learned for future generations of space habitats.

13:45 - 14:55 Space Cities Network: Pioneering Multi-Regional Collaboration to Accelerate Next-Generation Space Development

Room: C4.4, ICC Convention Center, Level 4

Organizers and Facilitators:

Christian CARDINAUX
Space Center,
Ecole Polytechnique Fédérale de Lausanne (EPFL)
Switzerland



Gérald HOWARD
Lausanne Montreux Congrès
Switzerland

Speakers:

Sarah KESSANS
Association Professor,
Space and Health,
University of Canterbury
New Zealand

Grégoire BOURBAN
Head,
Space Exchange Switzerland
Switzerland

David ALEXANDER
Director; Professor, Physics and Astronomy,
Department Ombudsperson,
Rice Space Institute;
Rice University
United States

Anton IVANOV
Executive Director,
Space Propulsion and Space Research Center,
Technology Innovation Institute (TII)
United Arab Emirates

Join us to explore how cities are becoming the new frontier for space sector development. Learn how five global cities are pioneering an innovative collaboration model to accelerate space innovation and industry growth. Discover opportunities to participate in this growing network and understand how your city can benefit from international space sector partnerships.

15:05 - 16:15 Empowering the Next Generation: Paving the Path to a Sustainable Space Future

Room: C4.4, ICC Convention Center, Level 4

Organizers:

Sophie POISEL
Head of Academy,
Powerhouse
Australia

Aude VIGNELLES
Director,
Vignelles Space Pty Ltd
Australia

Speakers and Facilitators:

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

Aude VIGNELLES
Director,
Vignelles Space Pty Ltd
Australia

Tim PARSONS
Board Member,
Space Industry Association of Australia
Australia

Ceridwen DOVEY
Research Fellow,
Macquarie University
Australia

Julia MITCHELL
Lead Systems Engineering and Payloads, Space Machines Company
Australia

Imogen REA
Director and Deputy Chair,
Space Industry Association of Australia
Australia

Mark HARRINGTON
Account Executive,
OroraTech
Australia

Chris BLACKERBY
COO,
Astroscale
Japan

In this Special Session for space education leaders, participants will learn from international leaders in space sustainability, and co-design innovative ways to engage the next generation in STEM and space careers. This interactive session focuses on developing challenges for K-12 students that integrate space sustainability, foster critical thinking, and empower students to create solutions to real-world challenges. Participate in lightning talks from space industry leaders and collaborative workshops, and join an international network shaping a sustainable space future.

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
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 29 September,
12:45 – 13:45 AEST
IP Area, Gallery, Level 2,
International Convention Centre (ICC) Sydney

IP Session
Tuesday 30 September,
12:45 – 13:45 AEST
IP Area, Gallery, Level 2,
International Convention Centre (ICC) Sydney

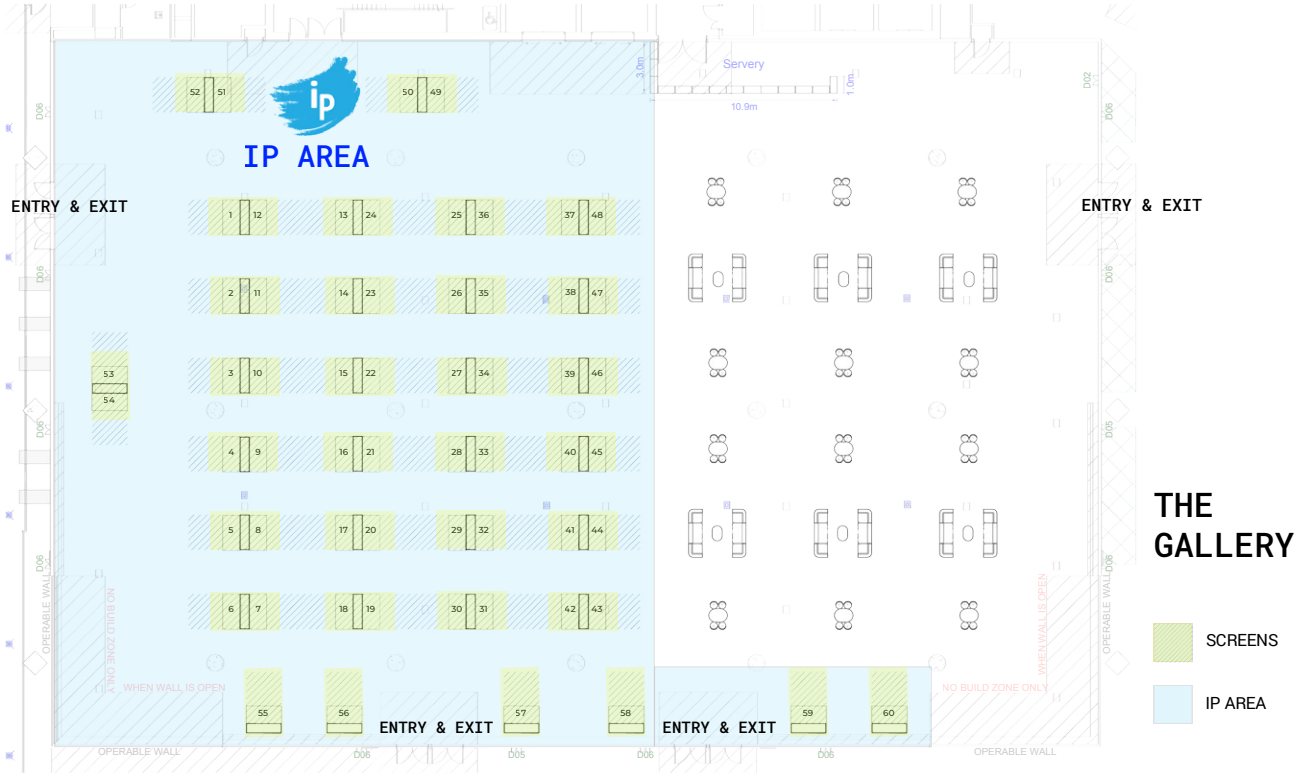
IP Session
Wednesday 1 October,
12:45 – 13:45 AEST
IP Area, Gallery, Level 2,
International Convention Centre (ICC) Sydney

IP Award Ceremony
Thursday 2 October,
13:00 – 13:30 AEST
Cockle bay, Level 3,
International Convention Centre (ICC) Sydney

IP Session & IP Cocktail Reception
Thursday 2 October,
13:30 – 14:50 AEST
IP Area, Gallery, Level 2,
International Convention Centre (ICC) Sydney

IP Session
Friday 3 October,
12:45 – 13:45 AEST
IP Area, Gallery, Level 2,
International Convention Centre (ICC) Sydney

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 29 September 2025

SCREEN #1

12:45-12:55 IAC-25/A1/IPB/103516
NEUROSHIELD: AN OPERATIONAL PROTOCOL FOR ASTRONAUT COGNITIVE PRESERVATION
Jacinda Cottee, Australia

12:55-13:05 IAC-25/A1/IPB/98359
EXPLORING THE IMPACT OF LOW EARTH ORBIT CONDITIONS ON HUMAN DNA: A NUTRIGENETIC PERSPECTIVE RELATED TO HUMAN SPACEFLIGHTS
Barnabás Pásztor, Hungary

13:05-13:15 IAC-25/A1/IPB/103619
DESIGNING ORBITAL EMERGENCY MEDICAL FACILITIES USING IMMERSIVE TECHNOLOGIES AND DIGITAL TWINS
Elena Rocchi, United States

13:15-13:25 IAC-25/A1/IPB/98943
RESULTS FROM POLARIS DAWN: IMPACTS OF SHORT-DURATION SPACE FLIGHT ON HUMAN BRAIN MORPHOLOGY
Rucha Kelkar, United States

13:25-13:35 IAC-25/A1/IPB/97170
PSYCHOLOGICAL RESILIENCE AND MENTAL HEALTH STRATEGIES FOR LONG-DURATION SPACE MISSIONS
Narmina Ibrahimova, Azerbaijan

13:35-13:45 IAC-25/A1/IPB/97519
AIGC-BASED INTELLIGENT SYSTEM FOR ASTRONAUTS' PSYCHOLOGICAL HEALTH MANAGEMENT
Shuo Liu, China

SCREEN #2

12:45-12:55 IAC-25/A1/IPB/98392
DESIGN AND DEPLOYMENT OF A CUSTOM-BUILT REMOTELY OPERATED VEHICLE FOR SIMULATING SPACE EXPLORATION.
Abdalrahman Alshamaileh, Jordan

12:55-13:05 IAC-25/A1/IPB/97519
AIGC-BASED INTELLIGENT SYSTEM FOR ASTRONAUTS' PSYCHOLOGICAL HEALTH MANAGEMENT
Shuo Liu, China

13:35-13:45 IAC-25/A1/IPB/95219
WHY LA PAZ, BOLIVIA SHOULD BE THE NEXT ASTRONAUT PRE-FLIGHT TRAINING SITE
Natalia Agramont Morales, Bolivia

SCREEN #3

12:45-12:55 IAC-25/A1/IPB/103338
EXPLORING THE UNIVERSE AND EXPLORING OUR MINDS: PSYCHOLOGICAL CHALLENGES OF LONG-TERM SPACE MISSIONS
Cecilia Guadalupe Torres Perea, Mexico

13:05-13:15 IAC-25/A1/IPB/97406
ON THE WAY TO MARS: NAVIGATING THE POSSIBLE IMPACTS OF COSMIC RADIATION ON LEUKEMIA RISK
Fay Ghani, United States

13:15-13:25 IAC-25/A1/IPB/103234
WHY SHOULD WE CARE ABOUT ASTROBIOLOGY?
Snehasri Ravishankar, France

SCREEN #4

12:45-12:55 IAC-25/A1/IPB/103877
MINDFULNESS TRAINING TO IMPROVE THE BEHAVIOURAL HEALTH AND PERFORMANCE OF ASTRONAUTS
Karoly Schlosser, Hungary

12:55-13:05 IAC-25/A1/IPB/96848
BONE MARROW
Taja Jafarova, Azerbaijan

13:05-13:15 IAC-25/A1/IPB/100038
FONTURACETAM: A NEW ANALOG OF SYDNOCARB
Leyla Aghayeva, Azerbaijan

13:25-13:35 IAC-25/A1/IPB/95008
UNVEILING TEMPORAL SIGNATURES IN HUMAN URINE: A NOVEL PLATFORM FOR BIOLOGICAL ANALYSIS AND POTENTIAL THERAPEUTIC DISCOVERY
Anar Məmmədov (Mammadov), Azerbaijan

SCREEN #5

12:45-12:55 IAC-25/A1/IPB/102270
INTEGRATING ASSISTIVE ROBOTIC TECHNOLOGY FOR THE NEXT GENERATION OF EVA SPACESUITS.
Marta Cid Lopez, France

13:25-13:35 IAC-25/A1/IPB/103616
PIONEERING NOVEL DRUG DELIVERY PLATFORMS FOR EXTENDED SPACE MISSIONS
Anar Məmmədov (Mammadov), Azerbaijan

13:35-13:45 IAC-25/A1/IPB/103603
MEDICAL RESEARCH ON STRESS COPING SKILLS AND GROUP ADAPTATION FOR THE JAPANESE ANTARCTIC RESEARCH EXPEDITION (JARE) - FIRST REPORT -
AKARI FUJII, Japan

SCREEN #6

12:45-12:55 IAC-25/A1/IPB/103201
SPACE RADIATION CARCINOGENESIS: A COMPUTATIONAL APPROACH TO CANCER RISKS IN LONG-DURATION MISSIONS
Katherinne Herrera-Jordan, Guatemala

12:55-13:05 IAC-25/A1/IPB/99444
SPACEFLIGHT AND RASHES: CURRENT RESEARCH AND COUNTERMEASURES FOR COMBATING A COMMON COMPLAINT OF ASTRONAUTS
Cameron Shetler, Australia

13:05-13:15 IAC-25/A1/IPB/103135
LONG TERM EFFECT OF MICROGRAVITY IN THE ASTRONAUT MICROBIOME AND STRATEGIES FOR MITIGATION: A SYSTEMATIC REVIEW
Ivy Mayor, Sweden

13:15-13:25 IAC-25/A1/IPB/97148
ADVANCEMENTS IN ASTROBIOLOGY AND SPACE EXPLORATION
Majd Alsadi, Jordan

SCREEN #7

12:45-12:55 **IAC-25/A3/IPB/94102**
PIONEERING LUNAR CONNECTIVITY: SOUTH KOREA'S ROLE IN 5G INFRASTRUCTURE FOR SPACE EXPLORATION
GiWon Nam, Korea, Republic of

12:55-13:05 **IAC-25/A3/IPB/96833**
UNDERSTANDING THE NATURE OF PERMANENTLY SHADOWED REGIONS ON THE MOON USING HIGH-SPEED IMPACT EVENTS
Jake Maughan, Australia

13:05-13:15 **IAC-25/A3/IPB/95738**
REGOLITH FLOWABILITY IN LUNAR GRAVITY AND VACUUM
Anastasia Stepanova, United States

13:35-13:45 **IAC-25/A3/IPB/101240**
TECHNICAL MATURATION OF AUSTRALIAN LUNAR EXPLORATION ROBOTIC CAPABILITIES
Katie Doyle, Australia

SCREEN #8

12:45-12:55 **IAC-25/A3/IPB/96156**
LEGAL PRINCIPLE OF NON-APPROPRIATION IN LUNAR STATION CONTEXT
Jiaying YU, China

12:55-13:05 **IAC-25/A3/IPB/95750**
LOW REACTION TRAJECTORY GENERATION FOR A HEXAPOD ROVER ON NON-HORIZONTAL TERRAIN IN MICROGRAVITY
Shilin Zhang, China

13:15-13:25 **IAC-25/A3/IPB/98869**
CONTROLLED COOLING APPARATUS FOR EVALUATING LUNAR HEAT TRANSFER CONDITIONS IN ISRU ALUMINIUM PROCESSING
Belinda Rich, Australia

13:35-13:45 **IAC-25/A3/IPB/99007**
REFINING OF REGOLITH DERIVED FERROSILICON ALLOYS FOR THE LUNAR STEEL PRODUCTION
Surya Pratap Singh, Australia

SCREEN #9

12:45-12:55 **IAC-25/A3/IPB/97210**
A CLUSTERING BASED MULTI-ROBOT COVERAGE PATH PLANNING APPROACH FOR MARTIAN SURFACE EXPLORATION
Sebastian Stelter, United Kingdom

13:05-13:15 **IAC-25/A3/IPB/99970**
GEOCHEMICAL DATA OF THE CURIOSITY ROVER ON MARS IN LITHOSPACE
Gail Iles, Australia

13:15-13:25 **IAC-25/A3/IPB/103493**
ANALYSIS OF THE APPLICATION OF NEW GENERATION NUCLEAR BATTERIES IN RECONNAISSANCE GROUND VEHICLES
Jafar Sadig, Azerbaijan

13:35-13:45 **IAC-25/A3/IPB/101493**
HOPPER-BASED LUNAR-PENETRATING RADAR IMAGING
Changqing Ding, China

SCREEN #10

12:45-12:55 **IAC-25/A3/IPB/101800**
MARSRAD: ALGORITHMIC MODEL FOR MONITORING AND ANALYZING MARS ENVIRONMENTAL EFFECTS ON HUMAN CELLS
Samet Karakas, Türkiye

12:55-13:05 **IAC-25/A3/IPB/100035**
AI-DRIVEN COOPERATIVE PATH PLANNING FOR LUNAR ROVER SWARMS IN POLAR REGIONS
Yaqoob Alqassab, Bahrain

13:05-13:15 **IAC-25/A3/IPB/102574**
HAZARD AVOIDANCE AND SYSTEMATIC AUTONOMOUS LANDING FOR SPACECRAFT ON MARS USING COMPUTER VISION
Akif Mohiuddin, Bangladesh

13:15-13:25 **IAC-25/A3/IPB/98512**
FROM DEEP SEA TO DEEP SPACE: USING DEEP LEARNING APPROACH BY INTEGRATING IMAGE RECOGNITION MODEL INTO REMOTELY OPERATED VEHICLE FOR SPACE INSPECTION SIMULATIONS
Abdalrahman Alshamaileh, Jordan

13:25-13:35 **IAC-25/A3/IPB/102536**
SIMULATION AND CONTROL OF AN UNMANNED LUNAR ROVER AT THE MOON'S SOUTH POLE: LEVERAGING CHALLENGING ILLUMINATION CONDITIONS FOR ENHANCED EXPLORATION
Atakan Durmaz, Türkiye

13:35-13:45 **IAC-25/A3/IPB/101078**
A RAG-ENABLED LARGE LANGUAGE MODEL WITH KNOWLEDGE GRAPH INTEGRATION FOR LIVE TELEMETRY-DRIVEN AI ASSISTANCE OF LUNAR PAYLOAD OPERATIONS
Oliver Bensch, Germany

SCREEN #11

12:45-12:55 **IAC-25/A3/IPB/94927**
ESTABLISHING AN ANALOG RESEARCH FACILITY IN PAKISTAN FOR MARS EXPLORATION & SPACE RESEARCH ADVANCEMENTS
Nasir Rizwan, Pakistan

12:55-13:05 **IAC-25/A3/IPB/98052**
AI-ENHANCED LASER-INDUCED BREAKDOWN SPECTROSCOPY FOR PLANETARY EXPLORATION
Jey Pradeep Arumugam, India

13:05-13:15 **IAC-25/A3/IPB/100339**
A LUNAR SURFACE MULTI-MODE LOCOMOTION SOFT ROBOT BASED ON ASYMMETRIC DESIGN
Shenghao Wang, China

13:15-13:25 **IAC-25/A3/IPB/100348**
ILLUMINATION-ADAPTIVE DISTRIBUTED TASK PLANNING FOR ROBOTIC CLUSTERS IN LONG-TERM LUNAR BASE
Haiyun Su, China

13:25-13:35 **IAC-25/A3/IPB/102996**
GRAVITY COMPENSATION SYSTEM FOR LUNAR ROVERS WITH POINT CLOUD TERRAIN-BASED HEIGHT PREDICTION
Chenhao Ouyang, China

13:35-13:45 **IAC-25/A3/IPB/97174**
MOON EXPLORATION – PART 1
Majd Alsadi, Jordan

SCREEN #12

12:45-12:55 **IAC-25/A3/IPB/95093**
HARNESSING EVOLUTIONARY ALGORITHMS FOR ADAPTIVE MODULAR ROBOTICS DESIGN IN LUNAR MISSIONS
Ashutosh Mishra, Japan

12:55-13:05 **IAC-25/A3/IPB/97988**
DESIGN AND ANALYSIS OF A MARTIAN ASCENT VEHICLE CARRIER WITH A BUILT-IN LAUNCH-SYSTEM
Anish Kumar, India

13:05-13:15 **IAC-25/A3/IPB/101572**
IS SPACE THE NEW WILD WEST OF THE 21ST CENTURY?
Josselin Lavigne, France

Monday 29 September 2025

13:15-13:25 IAC-25/A3/IPB/100260
OMEGA-K ALGORITHM WITH AN IMPROVED STOLT INTERPOLATION STRATEGY FOR SHARAD DATA
Fanyi Liu, China

13:35-13:45 IAC-25/A3/IPB/100898
BLUE GHOST MISSION 1: AUTONOMOUS LUNAR OPERATIONS AND SCIENTIFIC PAYLOAD DEPLOYMENT FOR FUTURE EXPLORATION
Anar Məmmədov (Mammadov), Azerbaijan

SCREEN #13

13:15-13:25 IAC-25/A3/IPB/98355
PROMISES AND CHALLENGES OF ROBOTIC QUADRUPEDS FOR SPACE EXPLORATION
Annika Schmidt, Germany

13:25-13:35 IAC-25/A3/IPB/101786
FLYBY SPACECRAFT ASSISTED OPTICAL NAVIGATION METHOD FOR APPROACH PHASE OF ASTEROID KINETIC IMPACT
Jing Liu, China

SCREEN #14

12:55-13:05 IAC-25/A5/IPB/103535
AN INTEGRATED PROBABILISTIC MULTIDISCIPLINARY 3D MODELLING METHODOLOGY TO ADVANCE LUNAR RESOURCE ASSESSMENTS FOR ISRU EVALUATIONS SUPPORTING MOON-TO-MARS EXPLORATION
Beatrice Jones, New Zealand

13:35-13:45 IAC-25/A5/IPB/94602
THE KOSMOSUIT: NEXT GENERATION END-END SPACESUIT PLATFORM
Kiriti Rambhatla, Australia

SCREEN #15

13:25-13:35 IAC-25/A5/IPB/102089
BASIC DISTRIBUTION OF UNDERGROUND COLONIES ON MARS BASED ON METHODS USED BY ANTS: THE DEVELOPMENT OF 100 MILLION YEARS OF EVOLUTION EMPLOYED IN HUMAN INTERPLANETARY EXPLORATION.
José Fernando Ramos García, Mexico

13:35-13:45 IAC-25/A5/IPB/102708
EXPLORING LUNAR REGOLITH-BASED SHIELDING FOR INFRASTRUCTURE PROTECTION
Nafisa Zian Imam Shafi, United Arab Emirates

SCREEN #16

12:55-13:05 IAC-25/A5/IPB/97952
DEVELOPING SCALABLE LUNAR AGRICULTURE SYSTEMS TO FACILITATE HUMAN EXPLORATION
Thomas Cernev, Australia

13:05-13:15 IAC-25/A5/IPB/94670
ADAPTIVE AI-DRIVEN, EDGE-COMPUTING ROBOTIC PLATFORMS FOR ADVANCED HUMAN-ROBOT COLLABORATION IN EXTRATERRESTRIAL HABITAT CONSTRUCTION
Nijanthan Vasudevan, United States

13:15-13:25 IAC-25/A6/IPB/98362
DEEP LEARNING-BASED SPACECRAFT POSE ESTIMATION WITH A FAIL-SAFE FALLBACK MECHANISM
Roman Prokazov, Italy

13:25-13:35 IAC-25/A6/IPB/102059
ASSUMPTIONS AND UNCERTAINTY IN RE-ENTRY PREDICTION SOFTWARE
Lily Flannery, Australia

13:35-13:45 IAC-25/A6/IPB/94909
A PROPOSAL OF RESPONSIBLE SPACE ACTIVITIES: THE EXPLORATION, GOVERNANCE, AND RESPONSE TOWARDS SPACE DEBRIS EVENTS IN A LEGAL BINDING INSTRUMENT
Farah Diya Yasmine, Indonesia

SCREEN #17

12:45-12:55 IAC-25/A6/IPB/99462
MIXED-FIDELITY LIGHT CURVE SIMULATION FOR CHARACTERIZATION OF RESIDENT SPACE OBJECTS
Girish Narayanan, New Zealand

12:55-13:05 IAC-25/A6/IPB/100066
NEURAL NETWORK-BASED ATTITUDE ESTIMATION OF SPACE DEBRIS USING A MONOCULAR OPTICAL CAMERA
Shun Taguchi, Japan

13:05-13:15 IAC-25/A6/IPB/96907
THE ORBITAL DEBRIS DECISION TREE
Robert Rovetto, United States

13:15-13:25 IAC-25/A6/IPB/97936
A REVIEW OF CONJUNCTION DETECTION AND COLLISION PROBABILITY ASSESSMENT TECHNIQUES FOR THE USE IN A CISLUNAR SIMULATION FRAMEWORK
Pia Lenhardt, Germany

13:25-13:35 IAC-25/A6/IPB/95234
HYBRID CONTROL OF SPACE MANIPULATORS FOR ACTIVE DEBRIS REMOVAL: A COMPREHENSIVE REVIEW
Shabadini Sampath, United Kingdom

13:35-13:45 IAC-25/A6/IPB/99577
ACOUSTIC RAY TRACING OF INFRASOUND FROM RE-ENTERING OBJECTS
George Bowden, Australia

SCREEN #18

12:45-12:55 IAC-25/A6/IPB/99660
COLLISION RISK ASSESSMENT FOR CONSTELLATION SATELLITES BASED ON A MULTIDISCIPLINARY SPACE DEBRIS EVOLUTION MODEL
Yurun Yuan, China

12:55-13:05 IAC-25/A6/IPB/100027
ANALYSIS OF DATA COLLECTION CAPABILITY AND AERODYNAMIC STABILITY DURING UNCONTROLLED ATMOSPHERIC RE-ENTRY
Maria Nepheli Kardassi, United Kingdom

13:05-13:15 IAC-25/A6/IPB/99303
UPDATE ON SPACE SITUATIONAL AWARENESS WITH CSIRO RADIO TELESCOPES
Ken Smart, Australia

13:15-13:25 IAC-25/A6/IPB/94347
ENHANCING SPACE SITUATIONAL AWARENESS (SSA) WITH OPTIMIZED TRAILING SATELLITE FORMATION AND CONJUNCTION ANALYSIS FOR EARTH'S COVERAGE IN LEO.
Rahul Dada Sharmale, India

13:25-13:35 IAC-25/A6/IPB/102518
SYNERGIES BETWEEN PARTICLE-IN-A-BOX METHODS AND HIGH-FIDELITY METHODS FOR LONG-TERM LEO DEBRIS EVOLUTION
Elisa Boccolari, Italy

13:35-13:45 IAC-25/A6/IPB/100604
LONG-TERM FRAGMENTATION RECONSTRUCTION TECHNIQUES LEVERAGING THE DYNAMICS OF DEBRIS CLOUD EXPANSION
Francesca Ottoboni, Italy

SCREEN #19

12:45-12:55 **IAC-25/A6/IPB/99405**
CONFIGURATION OPTIMIZATION DESIGN METHOD FOR SPACECRAFT WITH STABILIZED DRAG-AUGMENTATION SPHERES
Ruonan Zhang, China

12:55-13:05 **IAC-25/A6/IPB/99569**
NEXT-GENERATION TRACKING SYSTEMS FOR ENHANCED SPACE DOMAIN AWARENESS AND OPTIMIZED SPACE TRAFFIC MANAGEMENT
Kathiravan Thangavel, United Arab Emirates

13:05-13:15 **IAC-25/A6/IPB/99780**
SPECS: A FRAGMENTATION ESTIMATION FRAMEWORK FOR SOLAR POWER SATELLITES AND INTEGRATION INTO THE NESSY EVOLUTIONARY MODEL
Pietro De Marchi, United Kingdom

13:15-13:25 **IAC-25/A6/IPB/95022**
COMPOUND POISSION PROCESS AND LAUNCH ACTIVITY
KaiQi Cui, China

13:25-13:35 **IAC-25/A6/IPB/95624**
SPACE OBJECTS CONJUNCTION ANALYSIS VIA ORBITAL ERROR PROPAGATION
Hao Fu, China

13:35-13:45 **IAC-25/A6/IPB/97517**
SIMULATION OF ION DRAG OVER CHARGED DEORBITING DEPLOYABLES IN REALISTIC ORBITAL CONDITIONS
Faun Watson, New Zealand

SCREEN #20

12:45-12:55 **IAC-25/A6/IPB/99362**
AN UNSUPERVISED LEARNING BASED APPROACH FOR GROUND STATION SELECTION FOR SPACE SITUATIONAL AWARENESS
Partha Chowdhury, India

13:05-13:15 **IAC-25/A6/IPB/99898**
GEODESIC INTERSECTION GRIDDING FOR GROUND RISK ASSESSMENT OF SPACE DEBRIS
Matthew Willson, Australia

13:15-13:25 **IAC-25/A6/IPB/99013**
INCENTIVIZING RESPONSIBLE SPACE PRACTICES THROUGH THE DEBRIS OFFSETTING FUND AND SPACE SUSTAINABILITY RATING
Florence Pauline Basubas, The Philippines

13:25-13:35 **IAC-25/A6/IPB/100396**
INVESTIGATING THE FRAGMENTATION OF INTELSAT 33E IN GEO ORBIT
Nicolò Trabacchin, Italy

13:35-13:45 **IAC-25/A6/IPB/100271**
OPTIMIZING MULTI-DEBRIS REMOVAL SEQUENCING UNDER MULTIPLE CONSTRAINTS
Shuming Zhang, China

SCREEN #21

12:55-13:05 **IAC-25/A6/IPB/95762**
RESEARCH ON SPATIAL NON-COOPERATIVE TARGET CAPTURE TRAJECTORY PLANNING METHOD BASED ON MULTI-STRATEGY PARALLELISM
Jinyu Zhang, China

13:15-13:25 **IAC-25/A6/IPB/97719**
DEVELOPING A NATIONAL SPACE TRAFFIC COORDINATION FRAMEWORK: THE NSSA BAHRAIN CASE STUDY
Hesa Al Khalifa, Bahrain

13:35-13:45 **IAC-25/A6/IPB/97243**
HARVESTING SOLAR ENERGY FOR PROPULSION: A BREAKTHROUGH IN GREEN MOBILITY FOR SPACE APPLICATIONS
Andrea Valmorbida, Italy

SCREEN #22

12:45-12:55 **IAC-25/A6/IPB/100659**
MAINTENANCE AND SUSTAINABILITY IN ORBIT: MODULAR STANDARD FOR THE NEW GENERATION OF SATELLITES
Giacomo Govoni, Italy

13:05-13:15 **IAC-25/A7/IPB/103479**
HIGH ACCURACY ACTIVE PIXEL SUN SENSOR (HAPSS): SUCCESS BEHIND ADITYA-L1 MISSION
AMIT MAJI, India

SCREEN #23

13:15-13:25 **IAC-25/A7/IPB/98071**
DETECTING GRAVITATIONAL PHASE SHIFT WITH QUANTUM OPTICAL INTERFEROMETERS
Mikhael Sayat, Singapore, Republic of

13:25-13:35 **IAC-25/A7/IPB/100576**
DESIGN OF A PRECISION FORCE MEASUREMENT SCHEME FOR THE TEST MASS CAGING AND RELEASING MECHANISM
Jun Lyu, China

13:35-13:45 **IAC-25/B1/IPB/101080**
EMPOWERING NON-EXPERTS: THE POTENTIAL OF NLP-BASED AI IN REMOTE SENSING IMAGE INTERPRETATION
Dahyun Lee, Korea, Republic of

SCREEN #24

12:45-12:55 **IAC-25/B1/IPB/100974**
A MACHINE LEARNING APPROACH TO ANALYZE PLANETARY BOUNDARY LAYER HEIGHT FROM GNSS RADIO OCCULTATION OBSERVATIONS
Endrit Shehaj, United States

13:25-13:35 **IAC-25/B1/IPB/95345**
INITIAL PERFORMANCE AND CALIBRATION OF THE NEONSAT SYSTEM: PAVING THE WAY FOR SMALL SATELLITE CONSTELLATIONS
naeun kim, Korea, Republic of

13:35-13:45 **IAC-25/B1/IPB/97611**
AN AUTONOMOUS MISSION PLANNING METHOD FOR EARTH OBSERVATION SATELLITES BASED ON REINFORCEMENT LEARNING
Longwei Xu, China

SCREEN #25

13:25-13:35 **IAC-25/B1/IPB/101015**
CONSTELLATION MANAGEMENT OPTIMISATION FOR RAPID AND SUSTAINED COVERAGE IN EMERGENCY EARTH OBSERVATION
Yifan Cai, Italy

13:35-13:45 **IAC-25/B1/IPB/96881**
A CIRCULAR REPRESENTATION-BASED REMOTE SENSING OBJECT DETECTION METHOD FOR RAPID EARTH OBSERVATION
Lingyun Gu, China

Monday 29 September 2025

SCREEN #26

13:15-13:25 IAC-25/B2/IPB/99681
ESTABLISHING LUNAR OPTICAL COMMUNICATIONS CAPABILITY AT ANU'S QUANTUM OPTICAL GROUND STATION.
Elisa Jager, Australia

13:25-13:35 IAC-25/B2/IPB/99481
QUBE-I MISSION UPDATE: FIRST YEAR OF OPERATION OF A 3U CUBESAT FOR QUANTUM-KEY-DISTRIBUTION EXPERIMENTS
Timon Petermann, Germany

13:35-13:45 IAC-25/B2/IPB/100328
EVALUATING LATTICE-BASED CRYPTOGRAPHY FOR SECURE CUBESAT COMMUNICATIONS IN LEO
Aysha Alharam, Bahrain

SCREEN #27

13:05-13:15 IAC-25/B2/IPB/97544
DEMONSTRATION OF TERRESTRIAL QUANTUM SECURE TIME TRANSFER FOR SATELLITE APPLICATIONS
KENJI SHIMIZU, Australia

13:15-13:25 IAC-25/B2/IPB/97756
RESEARCH ON A SELF-OPTIMIZATION TT&C SCHEME OF GIANT CONSTELLATION BASED ON ISL
Yang Zhao, China

13:35-13:45 IAC-25/B2/IPB/99019
INSTRUMENTATION FOR THE ANU QUANTUM OPTICAL GROUND STATION
Michael Copeland, Australia

SCREEN #28

12:45-12:55 IAC-25/B2/IPB/98044
A VIRTUAL GLOBAL QUANTUM NETWORK PLATFORM
Mikhael Sayat, Singapore, Republic of

12:55-13:05 IAC-25/B2/IPB/95540
NEUROMORPHIC COMPUTING: A BIO-INSPIRED APPROACH TO HIGH-ALTITUDE PLATFORM STABILISATION WITH VISUAL ODOMETRY
Ming Zhu, Australia

13:05-13:15 IAC-25/B2/IPB/97687
THE CHALLENGES OF DEVELOPING DTN PROTOCOL FOR EMBEDDING ON FLIGHT SOFTWARE
SOOYEON KANG, Korea, Republic of

13:25-13:35 IAC-25/B2/IPB/98982
OPTIMIZATION OF RESOURCE ALLOCATION AND ISL COMPRESSION IN IAB-BASED REGENERATIVE LEO NETWORKS
Heejung Yu, Korea, Republic of

13:35-13:45 IAC-25/B2/IPB/102591
STUDENT SATELLITE MISSION PLANNING FOR EARTH IMAGING PAYLOAD APPLICATION
Surya Vaibhav DVR, India

SCREEN #29

12:45-12:55 IAC-25/B2/IPB/94661
FREE: A RESEARCH PROGRAM FOR OPTICAL WIRELESS SUPERHIGHWAYS
Eberhard Gill, The Netherlands

13:05-13:15 IAC-25/B2/IPB/98324
AI POWERED CUBESATS FOR IOT COMMUNICATION
Amal Mirzayev, Azerbaijan

13:35-13:45 IAC-25/B3/IPB/103210
AI AS AN ASTRONAUT? EVALUATING AI-DRIVEN AUTONOMOUS CREWS FOR DEEP-SPACE MISSIONS
Samiksha Raviraja, United Kingdom

SCREEN #30

13:25-13:35 IAC-25/B4/IPB/100137
BEE-1006 CUBESAT: PROTEIN CRYSTALLIZATION CONTROL AND MONITORING IN SPACE
Dooyoung Jeong, Korea, Republic of

13:35-13:45 IAC-25/B4/IPB/94701
DIFFERENTIAL DRAG CONTROL OF THE LILIUM CUBESATS
Jyh-Ching Juang, Taiwan, China

SCREEN #31

12:45-12:55 IAC-25/B4/IPB/98782
SOFTWARE TO ENABLE BATCH ACCEPTANCE TESTING OF ON-BOARD COMPUTERS FOR SMALL SATELLITES
Andrew Barlow, Canada

12:55-13:05 IAC-25/B4/IPB/97512
LESSONS LEARNED FROM THE FLIGHT AND OPERATION OF THE BINAR 2, 3, AND 4 CUBE SATELLITES
Kyle McMullan, Australia

13:05-13:15 IAC-25/B4/IPB/97505
WIRING HARNESS DESIGN AND INTEGRATION FOR FLEXIBLE SMALL SATELLITE MISSIONS
Jacob O'Riordan-Ross, Canada

13:15-13:25 IAC-25/B4/IPB/99119
OPPORTUNISTIC SPACE-BASED SPACE SITUATION AWARENESS USING STAR TRACKERS
Hayley Richardson, Australia

13:25-13:35 IAC-25/B4/IPB/98876
MECHANICAL CHARACTERISTICS OF VARIABLE SHAPE MEMBRANE FOR THERMAL CONTROL DEVICES ON SMALL SPACECRAFT
Shungo Kadonosono, Japan

13:35-13:45 IAC-25/B4/IPB/97230
HIGH INTEGRITY SOFTWARE FOR CUBESATS AND OTHER SPACE MISSIONS
Carl Brandon, United States

SCREEN #32

12:45-12:55 IAC-25/B4/IPB/94700
OPERATIONAL INSIGHTS FROM THE PRETTY CUBESAT MISSION FOR FUTURE SMALL SPACECRAFT OPERATIONS
Andreas Johann Hörmer, Austria

12:55-13:05 IAC-25/B4/IPB/100034
UNCERTAINTY ANALYSIS FOR GRABBING POSITIONING AND RELEASE MECHANISM IN SPACE-BASED GRAVITATIONAL WAVE OBSERVATORY
Qian Wen, China

13:05-13:15 IAC-25/B6/IPB/103389
SMART ON-ORBIT SERVICER MISSION (SOOS-1) FOR SERVICING GEOSYNCHRONOUS SATELLITES
Krishna Kumar, Canada

13:15-13:25 IAC-25/B6/IPB/97743
DEVELOPMENT AND OPTIMIZATION OF AN OPERATIONS CONCEPT FOR A DUAL-LIDAR COMPONENT OF THE EARTH RETURN ORBITER
Andre Kupetz, Germany

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13:25-13:35 IAC-25/B6/IPB/99215
ROBUST CONTROL AND PATH PLANNING FOR MODULAR ON-ORBIT ASSEMBLY BY DUAL-ARM SPACE ROBOTS
Xiaoyi Wang, China

13:35-13:45 IAC-25/B6/IPB/101765
DEVELOPMENT AND VALIDATION OF VERTECS SATELLITE GROUND STATION OPERATION SOFTWARE FOR REAL-TIME TELEMETRY AND MISSION COMMAND EXECUTION
Raihana Shams Islam Antara, Japan

SCREEN #33

12:45-12:55 IAC-25/B6/IPB/99467
RELATIVE RAAN SHIFT USING J2 PERTURBATION WITH FINITE THRUST AND BURN TIME CONSTRAINT
Hangyeol Kim, Korea, Republic of

12:55-13:05 IAC-25/B6/IPB/97553
OPTIMAL SATELLITE TASK ALLOCATION USING SMALL SATELLITE CONSTELLATIONS: INTEGER LINEAR PROGRAM BASED APPROACH
Beomjin Gwon, Korea, Republic of

13:05-13:15 IAC-25/B6/IPB/96057
MACHINE LEARNING APPROACHES FOR ANTENNA SERVO CONTROL SYSTEM FAILURE PREDICTION
Mrudhula Vijayakumar, India

13:15-13:25 IAC-25/B6/IPB/95781
AN INTEGRATED FRAMEWORK BASED ON DEEP AUTOREGRESSIVE MODELS FOR SATELLITE TELEMETRY PARAMETER FORECASTING, IMPUTATION AND ANOMALY DETECTION
Linjian Sun, China

13:25-13:35 IAC-25/C1/IPB/102383
DESIGN OF ELLIPTIC ORBIT CONSTELLATIONS FOR SOLAR REFLECTORS FOR TERRESTRIAL SOLAR ENERGY ENHANCEMENT
Onur Çelik, The Netherlands

13:35-13:45 IAC-25/C1/IPB/94965
AI-ENABLED OPTICAL NAVIGATION AND ANOMALY DETECTION FOR A MOON-ORBITING SPACECRAFT
Murathan Bakır, Türkiye

SCREEN #34

12:45-12:55 IAC-25/C1/IPB/95224
SPACECRAFT RENDEZVOUS AND PROXIMITY OPERATIONS USING COMPUTER VISION AND SE(3) DYNAMICS
Seur Gi Jo, United States

12:55-13:05 IAC-25/C1/IPB/95979
PERFORMANCE ANALYSIS AND DESIGN FRAMEWORK FOR EARTH OBSERVATION SMALL-SATELLITE CONSTELLATIONS
Jaeyoul Ko, Korea, Republic of

13:05-13:15 IAC-25/C1/IPB/97669
ORBIT-PHASING BASED TRANSFER TRAJECTORY TO INCLINED HELIOCENTRIC ORBIT AROUND SUN-EARTH L4
Gunhee Yi, Korea, Republic of

13:15-13:25 IAC-25/C1/IPB/102377
APPLICATIONS OF SPACE TETHERS IN ORBITAL MANOEUVRES
Vladimir Razoumny, Russian Federation

13:25-13:35 IAC-25/C1/IPB/100574
ORBIT DETERMINATION OF CONSTELLATION SATELLITES WITH MANEUVERS BASED ON SPARSE OPTICAL DATA
Shengxian Yu, China

13:35-13:45 IAC-25/C1/IPB/101758
GRAPHICAL SOLUTION TO KEPLER'S TIME EQUATION
Jeremy Partington, Australia

SCREEN #35

12:45-12:55 IAC-25/C1/IPB/95380
OPEN-SOURCE HIGH-FIDELITY ORBIT ESTIMATION FOR PLANETARY SCIENCE AND SPACE SITUATIONAL AWARENESS USING THE TUDAT SOFTWARE
Luigi Gisolfi, The Netherlands

12:55-13:05 IAC-25/C1/IPB/97108
INTELLIGENT SPACECRAFT AVOIDANCE MANEUVER STRATEGIES FOR AN UNCERTAIN NUMBER OF THREAT TARGETS
Wang zhengtao, China

13:05-13:15 IAC-25/C1/IPB/103142
VERIFIED COMPUTATION OF OCEAN TIDE PERTURBATIONS
Stefano Casotto, Italy

13:15-13:25 IAC-25/C1/IPB/98041
CONSISTENCY INTELLIGENCE CONTROL METHOD FOR COORDINATED PURSUIT OF NON-COOPERATIVE TARGETS IN MULTI-SPACECRAFT SYSTEMS
Suyi Liu, China

13:25-13:35 IAC-25/C1/IPB/103096
LOW-COST RENDEZVOUS AND PHASING WITH THE LUNAR GATEWAY LEVERAGING QUASI-PERIODIC TORI
Matteo Santacesaria, Italy

13:35-13:45 IAC-25/C1/IPB/102310
SPACECRAFT CONTROL IN CONSTRAINED ENVIRONMENTS: BARRIER LYAPUNOV FUNCTION-BASED RENDEZVOUS AND DOCKING WITH HYBRID ACTUATOR ASSEMBLY
Tanya Krishna Kumar, India

SCREEN #36

12:45-12:55 IAC-25/C1/IPB/102061
AERODYNAMIC ANALYSIS FOR DRAG-CONTROLLED COLLISION AVOIDANCE FOR THE M2 CUBESATS AND THE FEASIBILITY OF A LEO SPACE CORRIDOR
Shathria Ompragash, Australia

13:05-13:15 IAC-25/C2/IPB/99471
PARACHUTE CANOPY STRESS MEASUREMENTS USING A FLEXIBLE SCREEN-PRINTED STRAIN GAUGE ARRAY
Malwina Bielecka, Poland

13:15-13:25 IAC-25/C2/IPB/98364
DESIGN AND TESTING OF A DUAL-MODE ACTUATION MECHANISM FOR ROCKET RECOVERY SYSTEM
Eliza Łapińska, Poland

13:25-13:35 IAC-25/C2/IPB/103275
A COMPREHENSIVE ANALYSIS OF INTEGRATING ADDITIVE MANUFACTURING AND ORIGAMI MECHANICS THROUGH THEORETICAL, EXPERIMENTAL AND REVIEW BASED ANALYSIS OF MIURA FOLD STRUCTURES FOR ADVANCED AEROSPACE DEPLOYABLE SYSTEMS
Sriram Kumar, United States

13:35-13:45 IAC-25/C2/IPB/95934
DEVELOPMENT AND QUALIFICATION TESTING OF MICROSATELLITE-CLASS DEPLOYABLE DRAG SAILS
Abigail MacGillivray, Canada

SCREEN #37

12:45-12:55 IAC-25/C2/IPB/96193
STUDY ON VIBRATION TEST METHOD OF LARGE SPACECRAFT BASED ON INTEGRATED ANALYSIS SPACECRAFT-VEHICLE AND RESPONSE EQUIVALENCE
LIU MIN, China

Monday 29 September 2025

12:55-13:05 IAC-25/C2/IPB/102779
WOOD-BASED MATERIALS IN SPACE - AN INSIGHT INTO THE DEVELOPMENT AND TESTING FOR AN APPLICATION ON HOT STRUCTURES
Raphaela Guenther, Germany

13:05-13:15 IAC-25/C2/IPB/100293
DESIGN AND TESTING OF A CUBESAT BASED DEPLOYABLE ROBOTIC ARM FOR SMALL SATELLITES SERVICING AND DEBRIS REMOVAL APPLICATIONS
Davide Sorli, Italy

13:15-13:25 IAC-25/C2/IPB/95694
MODELING AND REAL-TIME SIMULATION OF SPACECRAFT BERTHING: ORBITAL DYNAMICS AND LUMPED PARAMETER SYSTEMS IN PROXIMITY OPERATIONS
Martina Ferrauto, Italy

13:25-13:35 IAC-25/C2/IPB/103132
TENSEGRITY-BASED HEAT SHIELDS FOR SPACECRAFT REENTRY SYSTEMS
Leire Roma Rubi, United States

13:35-13:45 IAC-25/C2/IPB/103144
ORIGAMI-TENSEGRITY STRUCTURES FOR PLANETARY SURFACE PROTECTION AND ADAPTIVE DEPLOYMENT
Leire Roma Rubi, United States

SCREEN #38

12:45-12:55 IAC-25/C2/IPB/95455
YSZ COATINGS FOR LUNAR APPLICATIONS: CHARACTERIZING WEAR RESISTANCE AND SURFACE DEGRADATION
Ashley Tirado-Pujols, United States

12:55-13:05 IAC-25/C2/IPB/94312
STUDY ON S-ALE METHOD OF PYROTECHNIC SEPARATION SIMULATION TEST
Peiying Li, China

13:05-13:15 IAC-25/C2/IPB/99194
ELECTROMAGNETIC COMPATIBILITY FOR SPACECRAFT LAUNCHES. AN ANALYSIS AND INTERPRETATION OF THE PHENOMENON USING STATISTICAL CORRELATIONS.
Adriana Barrios Garcia, Colombia

13:25-13:35 IAC-25/C2/IPB/99625
ENABLING SUSTAINABLE SERVING OF GEO SATELLITES THROUGH AN INFLATABLE ROBOTIC MANIPULATOR
Pierpaolo Palmieri, Italy

13:35-13:45 IAC-25/C2/IPB/96590
SELF-HEALING MATERIALS FOR SUSTAINABLE SPACE INFRASTRUCTURE: ENHANCING DURABILITY AND REDUCING MAINTENANCE NEEDS
Anar Hamdullayev, Azerbaijan

SCREEN #39

13:15-13:25 IAC-25/C4/IPB/100403
FEASIBILITY ANALYSIS OF AN INNOVATIVE BIMODAL AMMONIA NUCLEAR THERMAL AND ELECTRIC ROCKET (BANTER)
Elia puccinelli, Italy

13:25-13:35 IAC-25/C4/IPB/99476
APPLICATION OF A NITROGEN GAS DIFFUSER IN THE OXIDIZER TANK OF A BI-PROPELLANT FEED SYSTEM
Lisa Lopez, United States

13:35-13:45 IAC-25/C4/IPB/100534
VALIDATION OF REGENERATIVE COOLING DESIGN TOOL THROUGH DEVELOPMENT AND TEST OF A LIQUID ROCKET ENGINE
Nico von Eckartsberg, United States

SCREEN #40

12:45-12:55 IAC-25/C4/IPB/97981
DEVELOPMENT OF NOVEL SOLID REACTION CONTROL SYSTEM FOR SMALL SATELLITE USING ELECTRICALLY CONTROLLED SOLID PROPELLANT
JINHA HWANG, Korea, Republic of

12:55-13:05 IAC-25/C4/IPB/99695
ENHANCING THROTTLE PERFORMANCE THROUGH MIXTURE RATIO CONTROL IN LIQUID ROCKET ENGINES
Rushabh Pawnikar, United States

13:05-13:15 IAC-25/C4/IPB/96366
TESTING CAMPAIGN OF THE SOLAR ELECTRIC PROPULSION SYSTEM FOR THE EMIRATES MISSION TO THE ASTEROID BELT
Mariam Alhammadi, United Arab Emirates

13:15-13:25 IAC-25/C4/IPB/96794
EFFECTS OF VALVE OPENING SEQUENCES ON STARTUP CHARACTERISTICS OF A 100 TONF-CLASS METHANE GAS-GENERATOR CYCLE ENGINE
Sung Yoon, Korea, Republic of

13:25-13:35 IAC-25/C4/IPB/98731
EXPERIMENTAL VALIDATION OF NUMERICAL METHODOLOGIES IN LIQUID-LIQUID COAXIAL SWIRL INJECTOR DESIGN
Felix Liu, United States

13:35-13:45 IAC-25/C4/IPB/100290
ELECTRICALLY OPERATED AND CONTROLLED SOLID DIVERT AND ATTITUDE CONTROL PROPULSION SYSTEM FOR SMALL SATELLITE
Myoungjin Kim, Korea, Republic of

SCREEN #41

12:45-12:55 IAC-25/C4/IPB/100180
ELECTROHYDRODYNAMIC PLASMA GENERATORS FOR ENHANCED ELECTROSPRAY THRUSTER PERFORMANCE
Joel Eldo, Germany

12:55-13:05 IAC-25/C4/IPB/99126
LSTM-BASED POST-MISSION ASSESSMENT OF REUSABLE ROCKET ENGINES
Tianwen Li, China

13:05-13:15 IAC-25/C4/IPB/96882
STUDY ON CRYOGENIC PROPELLANT RETENTION TECHNOLOGY FOR THE UPPER STAGE OF LAUNCH VEHICLES
Jiaqi Li, China

13:15-13:25 IAC-25/C4/IPB/100881
MODEL-BASED ROCKET HOPPER AND PROPULSION SYSTEM DESIGN OPTIMISATION
Felix Ebert, Germany

13:25-13:35 IAC-25/C4/IPB/96117
LOW-ORDER MODELING AND ANALYSIS OF PROPULSION CONTROL STRATEGIES FOR AUTOGENOUS PRESSURIZATION IN METHANE-OXYGEN ROCKET ENGINES
Sinyoung Park, Korea, Republic of

13:35-13:45 IAC-25/C4/IPB/96109
DEVELOPMENT AND NUMERICAL VALIDATION OF A NOVEL FRACTAL FLAME ARRESTOR FOR FLASHBACK PREVENTION IN PREMIXED NOFB THRUSTERS
Minwoo Lee, Korea, Republic of

SCREEN #42

12:45-12:55 IAC-25/C4/IPB/100624
WATER-BASED INTEGRATED MULTIMODAL PROPULSION: A DISRUPTIVE SOLUTION FOR EFFICIENT IN-ORBIT SERVICING AND SPACE DEBRIS REMOVAL MISSIONS
Chengyu Ma, China

12:55-13:05 IAC-25/C4/IPB/103737
STUDY ON THE COMBUSTION CHARACTERISTICS OF LOX/KEROSENE PINTLE INJECTOR BASED ON THE STATE OF LIQUID OXYGEN
Yaming Zhao, China

13:05-13:15 IAC-25/C4/IPB/97897
NUMERICAL ANALYSIS OF CENTRAL FLUID EFFECTS ON GH2/GO2 COAXIAL INJECTOR
Weiran Li, China

13:15-13:25 IAC-25/C4/IPB/101175
CHARACTERIZING THE IGNITION BOUNDARIES OF A GASEOUS OXYGEN-METHANE AUGMENTED SPARK IGNITER FOR REUSABLE LIQUID-PROPELLANT ROCKET ENGINES
Kelly Ash, United States

13:25-13:35 IAC-25/C4/IPB/102391
COMBUSTION MODELLING AND DESIGN OF MINIATURE PULSED ELECTRIC PROPULSION SYSTEM USING ELECTRICALLY IGNITED SOLID PROPELLANT
Abishek Shrestha, Australia

13:35-13:45 IAC-25/C4/IPB/100071
GROUND TEST OF NITROUS OXIDE/ETHANE PREMIXED THRUSTER FOR SATELLITE FLIGHT MANEUVERING
seungyeop Baek, Korea, Republic of

SCREEN #43

12:45-12:55 IAC-25/C4/IPB/100112
A NOVEL VERSATILE TEST BENCH FOR LIQUID BIPROPELLANT ROCKET TESTING AND NUMERICAL COMBUSTION SIMULATIONS
Stefano Mungiguerra, Italy

12:55-13:05 IAC-25/C4/IPB/96199
OPTIMIZATION OF REGENERATIVE COOLING CHANNEL TOPOLOGY FOR LOX/METHANE ENGINE THROAT SECTION UNDER EXTREME THERMAL CONDITIONS
Bowei Jiao, China

13:05-13:15 IAC-25/C4/IPB/97740
DESIGN AND TESTING OF A VARIABLE THRUST HYDROGEN PEROXIDE/KEROSENE PROPULSION SYSTEM PRESSURIZED BY ELECTRIC PUMPS
Xuesong Guo, China

13:15-13:25 IAC-25/D1/IPB/96605
6-DOF POSE ESTIMATION FOR PLANETARY ROVERS: A SPATIAL ORIENTATION SOLUTION USING VISION TRANSFORMERS AND UNCERTAINTY-AWARE LEARNING
Federico Mustich, Italy

13:25-13:35 IAC-25/D1/IPB/95717
A PHASE 0 FEASIBILITY STUDY OF A COTS GPU-BASED PLATFORM FOR ONBOARD AI IN SPACE MISSIONS
Marco Sewtz, Germany

13:35-13:45 IAC-25/D1/IPB/99982
DISTRIBUTED COOPERATIVE DECISION-MAKING METHODS FOR SPACE NON-COOPERATIVE TARGETS CAPTURE
Yuxin Yu, China

SCREEN #44

12:45-12:55 IAC-25/D1/IPB/98642
HETEROGENEOUS SLAM INTEGRATION IN SATELLITE FORMATION FLYING FOR ORBITAL DOCKING
DongHyeon Nam, Korea, Republic of

12:55-13:05 IAC-25/D1/IPB/98467
EXTENDED REALITY FOR SPACE AND ASTRONAUTICAL ENGINEERING APPLICATIONS
Catello Leonardo Matonti, Italy

13:05-13:15 IAC-25/D1/IPB/101356
NUMERICAL TREATMENT OF AN INVERTED OPERATION CRYOGENIC RELIEF VALVE USING AMESIM AND EXPERIMENTAL VALIDATION IN HIGH ALTITUDE TEST
GAURAV SHARMA, India

13:15-13:25 IAC-25/D1/IPB/100298
A LOW-EARTH ORBIT NARROWBAND COMMUNICATIONS AND NAVIGATION CONSTELLATION STUDY
Emil Ares, United Kingdom

13:25-13:35 IAC-25/D1/IPB/100511
WATER ELECTROLYSIS: A VITAL ENABLING TECHNOLOGY FOR UPCOMING SPACE MISSIONS
Sören Heizmann, Germany

13:35-13:45 IAC-25/D1/IPB/100681
TOWARDS A WATER-BASED SPACE ECONOMY
Tomas Mrazek, Germany

SCREEN #45

12:45-12:55 IAC-25/D1/IPB/100377
MODEL-BASED SYSTEMS ENGINEERING APPROACH FOR REQUIREMENTS DERIVATION IN REUSABLE LAUNCH VEHICLES
Valeria Borio, Italy

12:55-13:05 IAC-25/D1/IPB/98830
ADVANCEMENTS IN SPACECRAFT PROXIMITY OPERATIONS TESTING: A MID-JOURNEY ANALYSIS OF THE SPARTANS FACILITY TOWARD THE NEXT CHALLENGES AHEAD
Giulio Polato, Italy

13:05-13:15 IAC-25/D1/IPB/101694
DEMONSTRATION OF AN FAULT INVESTIGATION USER INTERFACE FOR SUPPORTING EARTH-INDEPENDENT OPERATIONS IN FUTURE CREWED MARS MISSIONS
Jordan Kam, United States

13:15-13:25 IAC-25/D2/IPB/103797
BEYOND BUREAUCRACY: HYBRID AI-DRIVEN CERTIFICATIONS FOR RAPID SPACE TRANSPORTATION
Shreya Ballolli, India

SCREEN #46

13:15-13:25 IAC-25/D2/IPB/97041
OVERCOMING REAL-TIME BARRIERS IN ROCKET LANDING: A HYBRID LCVX-DNN FRAMEWORK WITH DYNAMIC CONSTRAINTS
Zhuo Zhang, China

13:25-13:35 IAC-25/D2/IPB/95249
DEVELOPING A COST EFFECTIVE LAUNCH SOLUTIONS WITH HYBRID ROCKET ENGINES
Mohan Tamang, Nepal

13:35-13:45 IAC-25/D3/IPB/94581
THE IMPACTS OF NEGATIVE PLASMA TREATMENT ON AIRBORNE MICROORGANISMS FOR SPACE ENVIRONMENT APPLICATIONS
Ian Harris, United States

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SCREEN #47

12:45-12:55 IAC-25/D3/IPB/95955
ADAPTIVE EXOSKELETON AND VR SIMULATION FRAMEWORK FOR ENHANCED ASTRONAUT MOBILITY IN PARTIAL-GRAVITY ENVIRONMENTS
Nijanthan Vasudevan, United States

12:55-13:05 IAC-25/D3/IPB/101540
AI-DRIVEN AUTONOMOUS ROBOTICS FOR SCALABLE LUNAR AND MARTIAN INFRASTRUCTURE OPTIMIZING ISRU SWARM CONSTRUCTION AND DECENTRALIZED CONTROL
Nijanthan Vasudevan, United States

13:15-13:25 IAC-25/D3/IPB/99299
THE MINERVA PROGRAM: A CONCEPT OF OPERATIONS FOR SUSTAINABLE LUNAR HABITATION
Aquilia Starling, United States

13:25-13:35 IAC-25/D3/IPB/100422
REINFORCEMENT LEARNING FOR AUTONOMOUS VISUAL INSPECTION OF SPACE TARGETS
Matteo El Hariry, Luxembourg

13:35-13:45 IAC-25/D3/IPB/100272
DESIGNING AN IN-SPACE RECYCLING STATION FOR A SUSTAINABLE CIRCULAR SPACE ECONOMY
Maria Anna Laino, United Kingdom

SCREEN #48

12:55-13:05 IAC-25/D3/IPB/99156
GEOPOLYMER-BASED LUNAR CONSTRUCTION MATERIALS UTILISING IN-SITU LUNAR RESOURCES
Rayhan Md Faysal, Australia

13:25-13:35 IAC-25/D3/IPB/94269
LUNAR CLOUD SERVICES
Axel Núñez Arzola, Mexico

13:35-13:45 IAC-25/E1/IPB/103810
SARI COMPETITION AND INTERNATIONAL COOPERATION FOR EDUCATIONAL AND TECHNOLOGICAL DEVELOPMENT
Matheus Guedes, Brazil

SCREEN #49

12:45-12:55 IAC-25/E1/IPB/99498
LAUNCHING FUTURES: POWERHOUSE ACADEMY SPACE PROGRAMS FOR K-12 STUDENTS
Sophie Poisel, Australia

12:55-13:05 IAC-25/E1/IPB/101393
MELIORA: THE SEED TO INTERCONNECT SOUTH AMERICA SPACE COMMUNITY
Julia Alvarez Vallero, United States

13:05-13:15 IAC-25/E1/IPB/97043
INTRODUCTORY TEACHING OF PLANETARY SCIENCE FROM THE PERSPECTIVE OF INTERDISCIPLINARY INTEGRATION: A CASE STUDY OF STELLAR NUCLEOSYNTHESIS
Raymond Yin, China

13:15-13:25 IAC-25/E1/IPB/100886
ADVANCING SPACE EDUCATION THROUGH THE ZERO ROBOTICS HIGH SCHOOL PROGRAM
Alissa Chavalithumrong, United States

13:25-13:35 IAC-25/E1/IPB/103804
SPACE EDUCATION FOR SOCIAL IMPACT: A PROJECT-BASED LEARNING APPROACH FOR BRAZILIAN PUBLIC HIGH SCHOOLS
Victor Baptista, Brazil

SCREEN #50

12:45-12:55 IAC-25/E1/IPB/97549
LUNAR EXPLORATION AS AN INTERACTIVE NARRATIVE: ENGAGING YOUNG ADULTS THROUGH GAMIFIED ROLE-PLAYING
Erin Rose, Australia

12:55-13:05 IAC-25/E1/IPB/96362
THREE-YEAR EXPERIENCE AND FOLLOW-UP OF THE SPACE CAREER MENTORING PROGRAM FOR UNIVERSITY STUDENTS BY THE KOREA PUBLIC INSTITUTE.
Mi-jin Yoo, Korea, Republic of

13:05-13:15 IAC-25/E1/IPB/94264
THE INTERNATIONAL PRE-UNIVERSITARY SPACE PROGRAM (IPSP)
Axel Núñez Arzola, Mexico

SCREEN #51

12:45-12:55 IAC-25/E1/IPB/99207
THE PLANTS FOR SPACE (P4S) CENTRE OF EXCELLENCE: GROWING A FUTURE IN SPACE AND ON EARTH
frazer thorpe, Australia

13:35-13:45 IAC-25/E1/IPB/98498
SPACE RENAISSANCE EVENT: EXPANDING HUMANITY TO OUTER SPACE (EHTOS)
Ghanim Alotaibi, Kuwait

SCREEN #52

12:45-12:55 IAC-25/E1/IPB/101772
EMPOWERING THE NEXT GENERATION: INSIGHTS FROM THE ACHIEVED COMPETITION SUPPORTING STUDENTS AND YOUNG SPACE PROFESSIONALS
Maria Casanovas Crespo, Spain

12:55-13:05 IAC-25/E1/IPB/96607
FOSTERING DIVERSITY IN SPACE EXPLORATION: ADDRESSING BARRIERS AND ENHANCING OPPORTUNITIES FOR UNDERREPRESENTED GROUPS
Rahil Aghabayli, Azerbaijan

13:05-13:15 IAC-25/E3/IPB/94475
CHALLENGES FACED BY EMERGING SPACE NATIONS IN THE ABSENCE OF SPACE LAW AND POLICY: THE CASE OF NEPAL AND THE NEED FOR SPACE LAW AND POLICY FRAMEWORKS
Ankit Khanal, Nepal

13:15-13:25 IAC-25/E3/IPB/99433
SPACE POLICY CHANGES AND THEIR SIGNIFICANCE SINCE THE ESTABLISHMENT OF KOREA AEROSPACE ADMINISTRATION
Nammi Choe, Korea, Republic of

13:25-13:35 IAC-25/E3/IPB/103453
INTERNATIONAL GOVERNANCE DILEMMAS AND RESPONSES TO ARTIFICIAL INTELLIGENCE APPLICATIONS IN OUTER SPACE
Ruoxin Liu, China

13:35-13:45 IAC-25/E3/IPB/103314
THE NON-PRESCRIPTIVE APPROACH OF THE AUSTRALIAN SPACE (LAUNCHES AND RETURNS) REGULATIONS: ENSURING SAFETY WHILE SUPPORTING SPACE INDUSTRY
Shena Howell, Australia

SCREEN #53

12:45-12:55 **IAC-25/E3/IPB/94534**
LEGAL AND FINANCIAL CHALLENGES IN THE EASTERN EUROPEAN SPACE SECTOR: THE ROLE OF THE SPACE PROTOCOL IN ENHANCING CREDITOR PROTECTION
Anna Hurova, Ukraine

13:15-13:25 **IAC-25/E3/IPB/103729**
FROM VISION TO VELOCITY: STRATEGY-DRIVEN WORKFORCE MODELS FOR SPACE SECTOR SUCCESS
Frank Robert, Australia

13:35-13:45 **IAC-25/E6/IPB/102527**
INNOVATIVE BUSINESS MODELS FOR A CIRCULAR LUNAR ECONOMY: PUBLIC-PRIVATE PARTNERSHIPS
Zuzanna Filipecka, Poland

SCREEN #54

12:45-12:55 **IAC-25/E6/IPB/103488**
COMPARISON OF PUBLIC-PRIVATE PARTNERSHIP IN SPACE DEVELOPMENT AMONG COUNTRIES SUCH AS THE US, EUROPE, AND KOREA
Jong-Bum Kim, Korea, Republic of

13:35-13:45 **IAC-25/E6/IPB/103782**
SPECTRAL ANALYSIS OF MULTIESPECTRAL IMAGENES FOR THE DETECTION OF NB-TA CONCENTRATIONS IN TROPICAL AREAS
Jesus Camacho, Venezuela

SCREEN #55

13:35-13:45 **IAC-25/E6/IPB/100653**
LUNAR FREEPORTS AND ECONOMIC ZONES: THE ROLE OF SPECIAL JURISDICTIONS IN SPACE
Michael Castle-Miller, United States

SCREEN #56

12:45-12:55 **IAC-25/E7/IPB/98124**
THE INTERNATIONAL LEGAL REGULATION OF SPACE OBJECT RE-ENTRY AND CHINA'S POSITION
Yuyao Zhang, China

12:55-13:05 **IAC-25/E7/IPB/98246**
REFLECTIONS ON BRAZIL'S GENERAL LAW ON SPACE ACTIVITIES AND ITS IMPACTS ON THE PRIVATE SPACE SECTOR
Michele Cristina Silva Melo, Brazil

13:35-13:45 **IAC-25/E7/IPB/103762**
COMPARATIVE INSIGHTS ON LIABILITY FOR DAMAGES AND MANDATORY INSURANCE COVERAGE FROM THE PERSPECTIVE OF DOMESTIC LAW: AN ANALYSIS OF THE ITALIAN SPACE BILL AND FRENCH LEGISLATION
Ivan Fino, Italy

SCREEN #57

12:45-12:55 **IAC-25/E7/IPB/103456**
U.N.'S DRAFT PRINCIPLES FOR SPACE RESOURCE ACTIVITIES ARE INCONGRUENT WITH U.S. LAW
Camisha Simmons, United States

12:55-13:05 **IAC-25/E7/IPB/100269**
SKAO DOWN UNDER: A REVIEW OF THE APPLICABILITY AND SUITABILITY OF SPACE SUSTAINABILITY PRINCIPLES TO TERRESTRIAL ASTRONOMY IN AUSTRALIA
Andrew Macpherson, Australia

13:05-13:15 **IAC-25/E7/IPB/101609**
EXAMINING THE POTENTIAL OF DOMESTIC SPACE LEGISLATIONS TO MITIGATE HARM CAUSED BY SPACE TECHNOLOGY: ADMINISTRATIVE VS. CRIMINAL LEGAL APPROACHES
Iva Ramuš Cvetkovič, Slovenia

13:25-13:35 **IAC-25/E10/IPB/97975**
EARTH DEFENSE ORBIT: MULTIPLE FLYBY OF NEAR-EARTH ASTEROID FOR PLANETARY DEFENSE AND RESOURCE INVESTIGATION
Junji Kikuchi, Japan

SCREEN #58

13:15-13:25 **IAC-25/E10/IPB/96825**
TRAJECTORY OPTIMIZATION AND IMPACT STRATEGY FOR ASTEROID DEFENSE: A DUAL-SPACECRAFT MISSION TO DEFLECT ASTEROID 2020 BD11
Yan Shen, China

13:25-13:35 **IAC-25/E10/IPB/97712**
OPTIMAL TRAJECTORY DEFLECTION OF POTENTIALLY HAZARDOUS ASTEROIDS BASED ON KINETIC IMPACT OF INTERMEDIATE ASTEROIDS
Penghao Qiao, China

13:35-13:45 **IAC-25/E10/IPB/98634**
DETECTION AND TRACKING OF NEAR-EARTH OBJECTS (NEOS): AN APPROACH WITH REFINED ASTROMETRY AND DIFFERENTIAL PHOTOMETRY IN PYTHON
Giovane Morais, Brazil

SCREEN #59

12:45-12:55 **IAC-25/E10/IPB/94914**
MODERN-DAY SPACE ELEVATORS' STRENGTHS LEAD TO RAPID RESPONSE PLANETARY DEFENSE
Peter Swan, United States

12:55-13:05 **IAC-25/E11/IPB/96024**
BUILDING BOLIVIA'S SPACE ECOSYSTEM: CHALLENGES, OPPORTUNITIES, AND A PATH FORWARD
Georgina Chavez, Bolivia

SCREEN #60

12:45-12:55 **IAC-25/E11/IPB/99074**
CHARTING THE HISTORY AND ADVANCING FUTURE DIRECTIONS OF SPACE MEDICINE AND BIOLOGY IN THE PHILIPPINES
Florence Pauline Basubas, The Philippines

13:35-13:45 **IAC-25/E11/IPB/94080**
EMERGING SPACE ECOSYSTEMS: CATALYZING INNOVATION AND GLOBAL COLLABORATION
Amina Valiyeva, Azerbaijan

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SCREEN #1

12:45-12:55 IAC-25/A1/IPB/94746
HUMAN PHYSIOLOGY IN SPACE: CHALLENGES AND COUNTERMEASURES
Amina Valiyeva, Azerbaijan

13:35-13:45 IAC-25/A1/IPB/99980
VALIDATING HEMODYNAMICS BEHAVIOUR OF THE CEREBRAL VENOUS SYSTEM IN SIMULATED MICRO-GRAVITY USING COMPUTATIONAL FLUID DYNAMICS
David Kim, Australia

12:55-13:05 IAC-25/A1/IPB/96533
THE SPACE-IMMUNE SYSTEM: HOW LONG-DURATION SPACE TRAVEL ALTERS HUMAN IMMUNITY
Shabnam Ibrahimova, Azerbaijan

13:05-13:15 IAC-25/A1/IPB/102941
SPACE-ENGINEERED BIOMATERIALS: BIOPOLYMER AND NANOPARTICLE STRATEGIES FOR ASTRONAUT BONE HEALTH
Ana Fernanda Bermúdez Monroy, Mexico

13:15-13:25 IAC-25/A1/IPB/94880
SPATIAL THERAPEUTICS IN LONG DURATION SPACEFLIGHT: ADDRESSING PSYCHOLOGICAL CHALLENGES THROUGH MIND MAPPING ENHANCED MEANING-MAKING AND VIRTUAL ENVIRONMENTAL AUGMENTATION
Marc Jurblum, Australia

13:25-13:35 IAC-25/A1/IPB/94883
BIONOMIC FRACTALS AND ENVIRONMENTAL DESIGN: A LOW-COST PASSIVE COUNTERMEASURE APPROACH TO ENHANCING HUMAN PERFORMANCE IN HABITATS AND CLINICAL OUTCOMES IN HEALTHCARE."
Marc Jurblum, Australia

SCREEN #2

12:45-12:55 IAC-25/A1/IPB/102744
TRANSDERMAL BIOMEDICAL PATCH AGAINST RADIATION HAZARD OF DEEP SPACE, A NECESSARY TREATMENT TO REACH SPACE EXPLORATION.
Isaac Arturo Casillas Juárez, Mexico

12:55-13:05 IAC-25/A1/IPB/94055
SPACE TO BREATHE: INVESTIGATING HOW TO PERFORM A CRICOTHYROTOMY IN AN UNDERWATER WATER SIMULATION STUDY FOR LONG-TERM SPACE TRAVEL
Daan Van Den Nieuwenhof, The Netherlands

13:05-13:15 IAC-25/A1/IPB/99730
PHYTOCUBE PROGRAM OF BIOLOGICAL RESEARCH IN SPACE
Vera Mayorova, Russian Federation

13:15-13:25 IAC-25/A1/IPB/98872
MICROFLUIDIC TECHNOLOGIES FOR THE SEARCH FOR LIFE ON ICY MOONS: OPPORTUNITIES AND CHALLENGES.
Leonardo Nicolas Hernandez, Mexico

13:25-13:35 IAC-25/A1/IPB/102900
BIOINSPIRED AI AND EVOLUTIONARY ALGORITHMS FOR SUSTAINABLE SPACE HABITATS: ADVANCING AUTONOMOUS EXPLORATION, LIFE SUPPORT, AND RESOURCE MANAGEMENT – A REVIEW
Mario Emmanuel Gudiño Ortíz, Mexico

13:35-13:45 IAC-25/A1/IPB/103880
RADIATION AND ELECTROMAGNETIC EFFECTS ON EDIBLE PLANTS: FINDINGS FROM THE AURORA 91 MARS ANALOG MISSION
Marisol Ramos Camacho, Peru

SCREEN #3

12:45-12:55 IAC-25/A1/IPB/96754
POSTURE-ADAPTED GARMENT DESIGN FOR IMPROVED FIT AND COMFORT IN MICROGRAVITY ENVIRONMENTS.
Ruth Bunford, Australia

12:55-13:05 IAC-25/A1/IPB/98369
LIMITATIONS OF AQUACULTURE AND MARINE BIOLOGY RESEARCH IN THE SPACE ENVIRONMENT
Jacob Scoccimerra, United States

13:05-13:15 IAC-25/A1/IPB/101047
DEVELOPING A SIMULATED SITUATION ROOM FOR TRAINING MEDICAL AUTONOMY IN DEEP-SPACE MISSIONS
Susana Alves, Portugal

13:15-13:25 IAC-25/A1/IPB/100915
REPRODUCTION & DEVELOPMENT IN SPACE: GATHERING NEW INSIGHTS INTO HUMAN ANALOG REPRODUCTIVE HEALTH, EMBRYONIC DEVELOPMENT, AND CELLULAR ADAPTATION UNDER SPACE CONDITIONS.
Zoe Hughes, France

13:25-13:35 IAC-25/A1/IPB/97357
MICROGRAVITY PLATFORMS AS BIOTECHNOLOGY SCAFFOLDS FOR SOCIO-ECONOMIC BENEFITS: THE HEALTH IMPLICATIONS
Funmilola Oluwafemi, Nigeria

SCREEN #4

12:55-13:05 IAC-25/A1/IPB/98506
DEVELOPMENT OF A DEVICE FOR REGULATING SLEEP AND CIRCADIAN RHYTHM IN MICROGRAVITY
Murad Garamollayev, Azerbaijan

13:05-13:15 IAC-25/A1/IPB/103360
PLASMA-BIOMIMETIC LIFE SUPPORT SYSTEMS FOR EXTRATERRESTRIAL HABITATS
Jahnavi Dangeti, India

13:15-13:25 IAC-25/A1/IPB/98619
MAGNETO-BIO: INTELLIGENT SLEEP & PERFORMANCE OPTIMIZER
Javidan Ashurlu, Azerbaijan

13:35-13:45 IAC-25/A1/IPB/99539
NUTRIENT RECOVERY OF PHILIPPINE CYANOBACTERIAL STRAINS: POTENTIAL APPLICATIONS FOR REGENERATIVE LIFE SUPPORT SYSTEMS
Dolly C. Manic, The Philippines

SCREEN #5

12:45-12:55 IAC-25/A1/IPB/96842
BREWS IN SPACE: MODELLING BEER ACCEPTABILITY IN MICROGRAVITY ENVIRONMENTS USING DIGITAL TECHNOLOGIES AND AI
Claudia Gonzalez Viejo, Australia

12:55-13:05 IAC-25/A1/IPB/99305
HUMAN ADAPTATION AND HEALTH IN LONG-DURATION SPACE MISSIONS
Seymur Shikhalizada, Azerbaijan

13:05-13:15 IAC-25/A1/IPB/100152
NUTRITIONAL CHALLENGES AND INNOVATIONS FOR LONG-DURATION SPACE MISSIONS
Nazrin Jabbarli, Azerbaijan

13:15-13:25 IAC-25/A1/IPB/100177
PHARMACEUTICAL INNOVATIONS IN SPACE: ADDRESSING HEALTH DISORDERS AND RADIATION EFFECTS ON ASTRONAUTS
Nazrin Jabbarli, Azerbaijan

13:35-13:45 IAC-25/A1/IPB/102852
ENHANCING ASTRONAUTS' RESILIENCE THROUGH JAIN MEDITATION (BHAWNA YOG): A NEUROPHYSIOLOGICAL APPROACH FOR SPACE MISSIONS AND BEYOND
Aagam Jain, India

SCREEN #6

13:05-13:15 IAC-25/A1/IPB/98812
BIOSIGNAL ACQUISITION IN HARSH ENVIRONMENT
Miklos Kozlovszky, Hungary

13:15-13:25 IAC-25/A1/IPB/101674
AI FOR SCIENTIFIC DISCOVERY IN SPACE RADIOBIOLOGY: AI-DRIVEN ONTOLOGY-BASED METODOLOGIES
Alessandro Bartoloni, Italy

13:25-13:35 IAC-25/A2/IPB/101517
THE GENERATION OF GOLD NANOSPHERES IN THE MICROGRAVITY ENVIRONMENT OF LOW EARTH ORBIT.
Kenneth Savin, United States

13:35-13:45 IAC-25/A2/IPB/103670
ORBITAL VALIDATION OF PLASTIC-DEGRADING BACTERIA FOR SUSTAINABLE LONG-DURATION SPACE MISSIONS
Kevin Simmons, United States

SCREEN #7

12:55-13:05 IAC-25/A2/IPB/98419
IN-SPACE MANUFACTURING AND PRODUCTION APPLICATIONS: REVOLUTIONIZING THE SPACE ECONOMY
Mansi Bansod, India

13:05-13:15 IAC-25/A2/IPB/96202
MICROGRAVITY-DRIVEN 3D BIOPRINTING FOR ENHANCED VASCULAR TISSUE ENGINEERING IN SPACE
Sai Roshini Kandregula, India

13:15-13:25 IAC-25/A2/IPB/94948
VINE ROBOT INTUBATION DEVICE: DESIGN AND VALIDATION FOR MICROGRAVITY MEDICAL APPLICATIONS
Nathalie Vilchis Lagunes, Mexico

13:25-13:35 IAC-25/A2/IPB/94713
MONITORING VITAL SIGNS IN PRE-, IN-FLIGHT, AND POST-PARABOLIC FLIGHT PHASES: IMPLICATIONS FOR SPACE APPLICATIONS
Avid Roman-Gonzalez, Peru

13:35-13:45 IAC-25/A2/IPB/98023
GROUND-SPACE CONSISTENCY STUDY OF LARGE-APERTURE SPACEBORNE SAR ANTENNAS BASED ON DYNAMICS-DIMENSIONALITY JOINT ANALYSIS METHOD
WEI QIAO, China

SCREEN #8

13:05-13:15 IAC-25/A2/IPB/97592
EFFECTS OF MICROGRAVITY ON COMPOSITE MATERIAL WITH NOPAL FIBERS.
Telsy Itzel Villafuerte-Torres, Mexico

13:15-13:25 IAC-25/A2/IPB/95012
ADVANCING LASER BEAM WELDING FOR IN-SPACE SERVICING, ASSEMBLY, AND MANUFACTURING
Eugene Choi, United States

13:25-13:35 IAC-25/A3/IPB/96173
ANALYTICAL APPROACH OF THE BEHAVIOR OF LUNAR REGOLITH SIMULANT IN A VACUUM ENVIRONMENT
Tadashi Matsuura, Japan

13:35-13:45 IAC-25/A3/IPB/99392
THE NEW CONCEPT OF REGOLITH CLEANING TECHNOLOGY
Mineo TSUSHIMA, Japan

SCREEN #9

12:45-12:55 IAC-25/A3/IPB/98960
DEVELOPMENT OF LUBRICATION AND COOLING SYSTEMS FOR TRANSAXLES IN LUNAR ENVIRONMENTS
Hiroki Yasui, Japan

12:55-13:05 IAC-25/A3/IPB/94455
THE NATURE OF LUNAR COMPETITION AND SECURITY IMPLICATIONS FOR ICE MINING
Andrew Dempster, $

13:05-13:15 IAC-25/A3/IPB/96091
EVALUATING THE ROLES OF SURFACE ENERGY AND ROUGHNESS IN LUNAR DUST ADHESION USING ALUMINIUM AS A TESTBED
Ankush Sookram, Australia

13:15-13:25 IAC-25/A3/IPB/103566
A SPACE DYNAMICS NAVIGATION ROUTES (SDNR) FOR ROBOTIC SOLAR SYSTEM EXPLORATION
Rogelio Morales, Venezuela

13:25-13:35 IAC-25/A3/IPB/99382
ROBUST ESCAPE TRAJECTORY OPTIMIZATION FOR SOLAR SAIL SPACECRAFTS FROM NRHO USING POLYNOMIAL CHAOS EXPANSION: APPLICATIONS TO LUNAR GATEWAY MISSIONS
Shiyu An, China

SCREEN #10

12:45-12:55 IAC-25/A3/IPB/102290
THE COMPLEX ATMOSPHERE OF TITAN FROM GROUND-BASED AND SPACE OBSERVATIONS AND FUTURE MISSIONS
Athena Coustenis, France

12:55-13:05 IAC-25/A3/IPB/103482
TRANSIENT LIQUID WATER AT LOW LATITUDES ON MARS: EVIDENCE FROM THERMAL INERTIA AND ATMOSPHERIC CHLORINE TRACERS
Marta Ciazela, Poland

13:05-13:15 IAC-25/A3/IPB/95859
DEVELOPMENT OF COATINGS FOR PASSIVE MITIGATION OF LUNAR DUST AT CSIRO
Ranya Simons, Australia

13:15-13:25 IAC-25/A3/IPB/101051
LUNAR LANDING SIMULATION PLATFORM FOR LUNAR LANDER PROTOTYPES
Emre Aklan, Türkiye

13:25-13:35 IAC-25/A3/IPB/103482
TRANSIENT LIQUID WATER AT LOW LATITUDES ON MARS: EVIDENCE FROM THERMAL INERTIA AND ATMOSPHERIC CHLORINE TRACERS
Marta Ciazela, Poland

13:35-13:45 IAC-25/A3/IPB/100507
MIRORES: A COMPACT FAR-INFRARED SPECTROMETER FOR LUNAR ORE IDENTIFICATION AND FUTURE ISRU MISSIONS
JAKUB CIAZELA, Poland

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SCREEN #11

12:45-12:55 IAC-25/A3/IPB/97464
DEVELOPMENT OF WATER EXTRACTION SYSTEMS FROM LUNAR REGOLITH FOR IN-SITU RESOURCE UTILIZATION ON THE MOON
Suzuna Okamoto, Japan

12:55-13:05 IAC-25/A3/IPB/99268
POWER SUPPLY SYSTEMS FOR CREWED PRESSURIZED ROVERS ON THE LUNAR SURFACE THAT ENSURE SAFETY AND CONTINUITY.
Shinichiro Minegishi, Japan

13:05-13:15 IAC-25/A3/IPB/98949
MULTI-STEP TRAJECTORY PREDICTION METHOD FOR MARS UAV BASED ON BIDIRECTIONAL GATED RECURRENT UNIT
Fu Zhu, China

13:15-13:25 IAC-25/A3/IPB/100740
ENHANCING AUTONOMOUS OBSTACLE AVOIDANCE IN MARS-LIKE CONDITIONS USING MONTE CARLO LOCALIZATION WITH DOPPLER SENSOR INTEGRATION
Akshayanivasini Ramasamy Saravanaraj, Italy

13:25-13:35 IAC-25/A3/IPB/103452
SENTINEL SMART ORB-SYSTEM: A SCOUT ROBOT FOR SPACE OPERATIONS AND MONITORING
ANA PIRES, Portugal

13:35-13:45 IAC-25/A3/IPB/96990
A REUSABLE LUNAR LANDING—LAUNCHING INFRASTRUCTURE FOR SUSTAINABLE MOON EXPLORATION
Xiangyi Lan, China

SCREEN #12

12:45-12:55 IAC-25/A3/IPB/101091
DESIGN SIMULATION AND LABORATORY TESTING OF 3D MODULAR ROBOTIC ARM FOR LUNAR MISSION
Farha Hassan Priti, Bangladesh

12:55-13:05 IAC-25/A3/IPB/103377
REUSABLE CUBESAT CONSTELLATION FOR (99942) APOPHIS 2029 OBSERVATION AND BEYOND
Harish Vernekar, United States

13:05-13:15 IAC-25/A3/IPB/101870
HYPERSONIC ENTRY FLOW SIMULATION FOR MARS EXPLORATION
Stefano Mungiguerra, Italy

13:15-13:25 IAC-25/A3/IPB/98142
A DIELECTRIC CONSTANT DETECTION METHOD FOR ITERATIVE OPTIMIZATION COMBINED WITH INTERNAL IMAGING QUALITY OF SMALL CELESTIAL BODIES
Haoran You, China

13:25-13:35 IAC-25/A3/IPB/95900
A REVIEW OF SINTERING TECHNIQUES FOR LUNAR REGOLITH SIMULANT
Wenbin Han, China

13:35-13:45 IAC-25/A3/IPB/98264
RF TOMOGRAPHIC IMAGING FOR SUBSURFACE MAPPING OF SMALL BODIES USING A MOBILE SENSOR NETWORK
William Hickmott, United Kingdom

SCREEN #13

12:45-12:55 IAC-25/A3/IPB/94669
MODULAR SELF-RECONFIGURABLE ROBOTIC SYSTEMS FOR AUTONOMOUS MARS EXPLORATION
Nijanthan Vasudevan, United States

12:55-13:05 IAC-25/A3/IPB/94666
ADAPTIVE MECHANICAL ARCHITECTURES AND AI-ENABLED CONTROL STRATEGIES FOR A 4-ROBOT SWARM IN LUNAR RESOURCE UTILIZATION AND LIFE SCIENCES
Nijanthan Vasudevan, United States

13:05-13:15 IAC-25/A3/IPB/94081
GATEWAY TO THE SOLAR SYSTEM
Amina Valiyeva, Azerbaijan

13:15-13:25 IAC-25/A3/IPB/96792
DYNAMIC CONE PENETRATION AS A SEISMIC SOURCE IN LUNAR HIGHLANDS REGOLITH SIMULANT.
Karlis Slumba, Australia

13:35-13:45 IAC-25/A3/IPB/99454
LUX-THERMAL AND ROOVER: A USE-CASE OF A POWER GENERATION SYSTEM FOR LUNAR NIGHT SURVIVAL
Sotirios Zormpas, Luxembourg

SCREEN #14

12:45-12:55 IAC-25/A3/IPB/102784
DESIGN AND ANALYSIS FOR EFFICIENT MOON-BASED COMMUNICATION SATELLITE CONSTELLATION
Hoda Elmegharbel, Egypt

12:55-13:05 IAC-25/A3/IPB/101361
SUN AVOIDANCE STRATEGIES FOR THE EMIRATES MISSION TO THE ASTEROID BELT
Shahad Badri, United Arab Emirates

13:05-13:15 IAC-25/A3/IPB/99364
LESSONS LEARNED FROM THE SIMULATION OF LUNAR ANALOG COLONY 1
Agata Kołodziejczyk, Poland

13:15-13:25 IAC-25/A3/IPB/103384
FAULT-TOLERANT CONTROL OF A LUNAR LANDER USING A HYBRID ARTIFICIAL INTELLIGENCE METHOD
Krishna Kumar, Canada

13:25-13:35 IAC-25/A3/IPB/100960
SYSTEM DESIGN OF MISSION SHAKTHISAT INVOLVING A SEMI-HARD MOON IMPACTOR
Kshitij Mall, United States

13:35-13:45 IAC-25/A3/IPB/102120
EFFECTIVE VERIFICATION SCHEME FOR PLANETARY ROVER LOCALIZATION METHOD UTILIZING LUNAR SIMULANT ENVIRONMENT
Serika Yokoyama, Japan

SCREEN #15

12:45-12:55 IAC-25/A3/IPB/100929
STAR OCCULTATION TEMPLATE MATCHING FOR LUNAR ROVER LOCALIZATION
Kento Mizunuma, Japan

12:55-13:05 IAC-25/A3/IPB/94718
NOVEL APPROACHES TO IN-SITU LOCALIZATION, EXTRACTION, PROCESSING, AND UTILIZATION OF MARTIAN REGOLITHIC IRON
Hunter Moore, France

13:05-13:15 IAC-25/A3/IPB/96426
AN ADAPTIVE MULTI-ROBOT EXPLORATION FRAMEWORK FOR LUNAR LAVA TUBES: REINFORCEMENT LEARNING-DRIVEN SELF-ORGANIZED TASK ALLOCATION AND LOCAL HEURISTIC PATH PLANNING
Yitong Wu, China

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SCREEN #16

12:45-12:55 IAC-25/A6/IPB/96320
ANALYSIS OF A SYSTEMATIC TIME DELAY BETWEEN FRAGMENTATION EVENTS AND DEBRIS CATALOGUING
Teresa Klinner-Teo, Germany

12:55-13:05 IAC-25/A6/IPB/100343
MULTI-TARGET TRACKING METHOD BASED ON IMPROVED SORT FOR SPACE-BASED OBSERVATION OF RESIDENT SPACE OBJECTS USING STAR TRACKER
Katsuki Tashiro, Japan

13:05-13:15 IAC-25/A6/IPB/98835
ENHANCING REENTRY RISK ANALYSIS FOR SPACE OBJECTS: METHODOLOGIES AND IMPROVEMENTS
Christina Dunker, New Zealand

13:15-13:25 IAC-25/A6/IPB/102072
AN AI-BASED FRAMEWORK FOR SPACE DEBRIS DETECTION AND LOCALIZATION IN CISLUNAR SPACE TOWARD ENHANCED SITUATIONAL AWARENESS
Guo Chen, China

13:25-13:35 IAC-25/A6/IPB/102379
A SPACE-BASED OPTICAL RAPID CELESTIAL POSITIONING METHOD FOR SPACE DEBRIS ORBIT DETERMINATION
Silu Xu, China

13:35-13:45 IAC-25/A6/IPB/103634
MULTISCALE MODELLING OF SATELLITE ABLATION AND THEIR ENVIRONMENTAL IMPACTS
Minkwan Kim, United Kingdom

SCREEN #17

12:45-12:55 IAC-25/A6/IPB/95698
DEOS A COMPACT, SCALABLE AND MODULAR DEORBIT SYSTEM FOR CUBESATS
Luca Armani, Italy

12:55-13:05 IAC-25/A6/IPB/97179
MACHINE LEARNING APPROACH FOR ACCURATE AND ROBUST SATELLITE TRACKING IN OPTICAL SPACE-TO-GROUND COMMUNICATION USING TIME-SERIES PREDICTION FOR LEO SATELLITES
Maurice Uteg, Germany

13:05-13:15 IAC-25/A6/IPB/100685
A SWARM-DRIVEN SOLUTION FOR SPACE DEBRIS REMOVAL: INSPECTION, CAPTURING, AND CONTROLLED DE-ORBITING
Fatima Alnaqbi, United Arab Emirates

13:15-13:25 IAC-25/A6/IPB/98237
MINIMUM-TIME SPACECRAFT COLLISION AVOIDANCE USING AERODYNAMIC LIFT AND DRAG VIA REACHABLE SETS
Paul Haufe, Germany

13:25-13:35 IAC-25/A6/IPB/102520
DESIGNING CRITERIA FOR A NET-POSITIVE SPACE DEBRIS CLEAN-UP MISSION.
Carys Thomas, United Kingdom

13:35-13:45 IAC-25/A6/IPB/103375
BILAR (BENCHMARKING AND INVERSION OF LIGHT CURVE FOR ATTITUDE RECONSTRUCTION WITH EXPERT CENTRE SUPPORT)
Saverio Maria Currà, Italy

SCREEN #18

12:45-12:55 IAC-25/A6/IPB/96399
ADVANCING SPACE SUSTAINABILITY: THE UNIVERSITY OF PADOVA'S CONTRIBUTIONS TO SAFER ORBITS AND INNOVATIVE TECHNOLOGIES
Vincenzo Quitadamo, Italy

12:55-13:05 IAC-25/A6/IPB/98997
PRACTICAL GUIDANCE LAWS FOR NON-COOPERATIVE RENDEZVOUS: OVERCOMING ATMOSPHERIC DENSITY PREDICTION CHALLENGES
Takahiro Sasaki, Japan

13:05-13:15 IAC-25/A6/IPB/95959
BREAKING THE SPACE DEBRIS DEADLOCK: A GAME-THEORETIC AND POLICY APPROACH
Olivia Lorenzen, Denmark

13:15-13:25 IAC-25/A6/IPB/97799
LARGE-SCALE DETERMINATION AND ANALYSIS OF AREA-TO-MASS RATIOS FROM ORBITAL FRAGMENTS
Daniel Raphael Wacker, Germany

13:25-13:35 IAC-25/A6/IPB/98630
A NOVEL FRAMEWORK FOR SATELLITE DEBRIS MITIGATION: INTEGRATING BLOCKCHAIN FEDERATED LEARNING WITH HIERARCHICAL DEEP REINFORCEMENT LEARNING
Fatima Alakbarli, Azerbaijan

13:35-13:45 IAC-25/A6/IPB/101024
AI FOR SPACE DEBRIS MONITORING: A CRITICAL REVIEW OF PREDICTIVE MODELS AND THEIR CHALLENGES
Hajar Naghiyeva, Azerbaijan

SCREEN #19

12:45-12:55 IAC-25/A6/IPB/103307
USING DEEP LEARNING FOR AUTOMATED SATELLITE MANEUVER PROCESSING
Atharva Awasthi, United States

12:55-13:05 IAC-25/A6/IPB/102643
SMART SATELLITES AI-DRIVEN PREDICTIVE MAINTENANCE FOR SUSTAINABLE SPACE OPERATIONS
Rithesh Murarishetty, India

13:05-13:15 IAC-25/A6/IPB/96933
INTEGRATION OF RADAR AND OPTICAL SYSTEMS ON CUBESATS FOR ENHANCED SPACE DEBRIS DETECTION IN LEO
Oussema Jouini, Japan

13:15-13:25 IAC-25/A6/IPB/102681
BILAR: A COMPREHENSIVE APPROACH TO SPACE DEBRIS CHARACTERIZATION AND MITIGATION THROUGH A LIGHT CURVE DATABASE
Lorenzo Cimino, Italy

13:25-13:35 IAC-25/A6/IPB/101898
INTERNET-OF-THINGS INTERNATIONAL UNIVERSITY PARTNERSHIP ACTIONS FOR CURRENT AND FUTURE SPACE TRAFFIC MANAGEMENT AND SPACE SUSTAINABILITY RESEARCH: THE SMILE-IOT INITIATIVE
Paolo Marzioli, Italy

13:35-13:45 IAC-25/A6/IPB/98573
EXPLAINABLE MACHINE LEARNING FOR SPACE OBJECT ATTITUDE CLASSIFICATION
Marta Guimaraes, Portugal

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SCREEN #20

12:45-12:55 IAC-25/A6/IPB/99617
SPACE SITUATIONAL AWARENESS AND SPACE DEBRIS MITIGATION: CURRENT STRATEGIES AND FUTURE ADVANCEMENTS
Alev Sönmez, Germany

12:55-13:05 IAC-25/A6/IPB/99177
THE GLOBAL DISTRIBUTION OF UNCONTROLLED RE-ENTRIES: RE-THINKING MISSION-END CONDUCT AND THE CALL FOR GLOBAL COLLABORATION
Marianne Hawthorne, Australia

13:05-13:15 IAC-25/A6/IPB/99812
INSIDER: A SCALABLE SOLUTION FOR ACTIVE DEBRIS REMOVAL
Marcos Eduardo Rojas Ramirez, France

13:15-13:25 IAC-25/A6/IPB/99460
CHARACTERIZING SATELLITE OPERATIONAL MODES VIA UNRESOLVED INFRARED IMAGING
Stephen Catsamas, Australia

13:25-13:35 IAC-25/A6/IPB/100144
MACHINE LEARNING APPROACHES FOR SUB-CATALOGUE SPACE DEBRIS CLUSTERS IDENTIFICATION IN HIGH-ALTITUDE ORBITAL REGIONS
Nicola Cimmino, Switzerland

13:35-13:45 IAC-25/A6/IPB/99714
ASSESSING THE FINANCIAL AND MARKET BARRIERS TO SPACE DEBRIS MONITORING: A POLICY AND ECONOMIC ANALYSIS OF THE EUROPEAN SSA LANDSCAPE
Alev Sönmez, Germany

SCREEN #21

12:45-12:55 IAC-25/A6/IPB/100278
THE SELECTION PROCESS OF REFERENCE MISSIONS FOR A DESIGN FOR DEMISE PROJECT
Bryan Lovrinovic, Germany

12:55-13:05 IAC-25/A6/IPB/102995
NEURAL NETWORK ANALYSIS OF MULTI-CHANNEL LIGHT CURVES FOR THE CHARACTERIZATION OF RESIDENT SPACE OBJECTS
Pasquale Bencivenga, Italy

13:05-13:15 IAC-25/B1/IPB/100273
HIGH-ACCURACY CARBON FLUX MAPPING FOR AGRICULTURAL LAND, WITH HIGH SPATIO-TEMPORAL RESOLUTION
Stephen Petrie, Australia

13:15-13:25 IAC-25/B1/IPB/94971
EVALUATING THE FACTORS INFLUENCING FARMERS' CHOICES OF MAIZE-BASED CROPPING PATTERNS AND ASSESSING THE POTENTIAL OF DESIS HYPERSPECTRAL SATELLITE DATA TO DISCRIMINATE THE CROPPING PATTERNS.
Charlynne Jepkosgei, Kenya

13:25-13:35 IAC-25/B1/IPB/100791
ANALYSIS OF LAND USE EVOLUTION IN PÉREZ ZELEDÓN USING SENTINEL-1 IMAGERY:IMPLICATIONS FOR CONSERVATION AND SUSTAINABLE DEVELOPMENT IN COSTA RICA
María Celeste Alvarado Durán, Russian Federation

13:35-13:45 IAC-25/B1/IPB/96978
ENHANCING SATELLITE IMAGERY THROUGH ADVANCED FOCAL PLANE IN-FLIGHT ACTIVE MOTION CONTROL: THE FOPAC SYSTEM IMPLEMENTATION AND RESULTS
Giovanni Maria Capuano, Italy

SCREEN #22

12:45-12:55 IAC-25/B1/IPB/99096
DISTRIBUTED AUTONOMOUS MISSION PLANNING FOR RESOURCE-CONSTRAINED SATELLITES: IMPLEMENTATION ON THE BUCCANEER MAIN MISSION CUBESAT
Nathan Wallace, Australia

12:55-13:05 IAC-25/B1/IPB/98328
ENHANCING EARTH OBSERVATION SYSTEMS: THE ROLE OF ADVANCED IMAGING TECHNOLOGIES IN ADDRESSING CLIMATE CHANGE
Ali Hasanli, Azerbaijan

13:05-13:15 IAC-25/B1/IPB/102188
SPACEBORNE ARTIFICIAL INTELLGINCE FOR REAL-TIME LAND USE AND LAND CHANGE (LULC) CLASSIFICATIN
Muhammad Rizwan Mughal, Oman

13:15-13:25 IAC-25/B1/IPB/99781
ENHANCING PRISMA SECOND GENERATION MISSION WITH AI-DRIVEN ONBOARD EDGE COMPUTING FOR REAL-TIME CLOUD DETECTION
Ilaria Cannizzaro, Italy

13:25-13:35 IAC-25/B1/IPB/99081
HYPERSPECTRAL IMAGING PAYLOAD FOR AGRICULTURE AND WATER QUALITY ASSESSMENTS: MISSION AND REQUIREMENTS
Micherene Clauzette Lofamia, The Philippines

13:35-13:45 IAC-25/B1/IPB/99001
EARTH OBSERVATION DATA PROCESSING REVOLUTION: TERRANEXUS DGGS PLATFORM FOR DIGITAL TWINS AND FEDERATED SYSTEMS
Matthew Purss, Australia

SCREEN #23

12:45-12:55 IAC-25/B1/IPB/98670
SMALL SATELLITE SAR FOR REMOTE SENSING FROM VERY LOW EARTH ORBIT
José Pedro Ferreira, United States

12:55-13:05 IAC-25/B1/IPB/94706
LEVERAGING REMOTE SENSING FOR DISEASE VECTOR MAPPING TO ENHANCE MALARIA CONTROL STRATEGIES IN ZIMBABWE
Kumbirai Matingo, Zimbabwe

13:05-13:15 IAC-25/B1/IPB/97786
ANALYTICAL DERIVATION OF MAXIMUM ALLOWABLE DRIFT FOR SATELLITE CONSTELLATIONS BASED ON GEOMETRIC EQUIVALENCE
Ming Xu, China

13:15-13:25 IAC-25/B1/IPB/100185
SEMANTIC COMMUNICATION FOR EARTH OBSERVATION SATELLITES – OVERCOMING THE SPACE-TO-GROUND COMMUNICATION BOTTLENECK
Sam Hall, Australia

13:25-13:35 IAC-25/B2/IPB/96020
ADVANCING ACCURACY, RESILIENCE, AND SCALABILITY WITH NEXT-GENERATION SPACE-BASED PNT SENSORS AND SYSTEMS
Muhammad Najeeb Ahmad, Pakistan

13:35-13:45 IAC-25/B2/IPB/95616
THE APPLICATIONS AND DEVELOPMENT TREND OF INTERFEROMETRIC FIBER OPTIC GYROSCOPE IN SPACE
YI Xiao Su, China

SCREEN #24

12:45-12:55 IAC-25/B2/IPB/103012
OPTIMIZATION OF INFORMATION PROCESSING IN SATELLITE COMMUNICATIONS: COMPARATIVE ANALYSIS OF MEDIUM ACCESS PROTOCOLS
Frank Raul Quintana Quispe, Peru

12:55-13:05 IAC-25/B2/IPB/103178
SIMULATING DELIVERY TIMES OF QUANTUM KEY DISTRIBUTIONS IN SATELLITE CONSTELLATIONS
Lucas Scherberger, Germany

13:05-13:15 IAC-25/B2/IPB/96213
SIMULATION OF SATELLITE CONSTELLATIONS FOR LONG-DISTANCE ENTANGLEMENT DISTRIBUTION
Jaspar Meister, Germany

13:15-13:25 IAC-25/B2/IPB/97640
DEVELOPMENT OF A UHF GROUND STATION FOR TELEMETRY AND COMMAND OPERATIONS WITH A SELF-DEVELOPED CUBESAT
Yoonjung Kim, Korea, Republic of

13:25-13:35 IAC-25/B2/IPB/95915
ENCODED EVENT-TRIGGERED CONTROL WITH ADAPTIVE PRESCRIBED PERFORMANCE FOR SPACECRAFT SYSTEMS
Zekun Xu, China

13:35-13:45 IAC-25/B2/IPB/102597
CONFIGURATION AND PLACEMENT STUDY OF A 3U STUDENT SATELLITE, FOR OPTIMIZING MASS AND PACKING EFFICIENCY
Surya Vaibhav DVR, India

SCREEN #25

12:45-12:55 IAC-25/B2/IPB/103599
PROGRAMMABLE RADIO FREQUENCY SYNTHESIZER FOR AOTF OF SHAPE PAYLOAD OF CHANDRAYAAN-3
PRIYANKA DAS, India

12:55-13:05 IAC-25/B2/IPB/97420
DAYTIME TIP-TILT MEASUREMENTS USING AN EVENT-BASED SENSOR.
Monique Cockram, Australia

13:05-13:15 IAC-25/B2/IPB/95459
PRELIMINARY DESIGN AND ANALYSIS OF A 3U STUDENT SATELLITE'S ATTITUDE DETERMINATION AND CONTROL SUBSYSTEM
Surya Vaibhav DVR, India

13:15-13:25 IAC-25/B2/IPB/100020
THE KALMAN FILTER AS A MODULAR TOOL: A VERSATILE SOLUTION FOR AUTONOMOUS SYSTEMS AND BEYOND
Anna Roma, Italy

13:25-13:35 IAC-25/B2/IPB/96789
ROBUST RELATIVE POSE ESTIMATION FOR NON-COOPERATIVE LONG-DISTANCE SPACECRAFT BASED ON SAM2 MODEL
Pengyu Guo, China

13:35-13:45 IAC-25/B2/IPB/100732
SATELLITE-BASED ENTANGLEMENT DISTRIBUTION FOR GLOBAL QUANTUM NETWORKS
Philipp Kleinpaß, Germany

SCREEN #26

12:45-12:55 IAC-25/B2/IPB/99176
ANALYSIS FOR THE OPTIMIZATION OF SIGNAL TRANSMISSION AND PROCESSING ON THE INTERNATIONAL SPACE STATION
Juan Rodolfo Alvarez Huarhua, Peru

12:55-13:05 IAC-25/B2/IPB/97481
GEOLOCATION ANALYSIS OF LEO IN-TRACK FORMATION FLYING SATELLITES USING DYNAMICS-APPLIED LEAST SQUARE METHOD
Jongseo Won, Korea, Republic of

13:05-13:15 IAC-25/B2/IPB/100219
OPTIMAL STAGED DEPLOYMENT STRATEGY FOR LEO MEGA-CONSTELLATIONS WITH ACCELERATED SERVICE CAPABILITY FORMATION
Ming Xu, China

13:15-13:25 IAC-25/B2/IPB/96795
AN STK-BASED SYSTEMATIC ORBIT SIMULATION FOR SPACEBORNE GNSS RECEIVER DESIGN
Zihong Zhou, Hong Kong SAR, China

13:25-13:35 IAC-25/B3/IPB/94925
ARTIFICIAL INTELLIGENCE IN SPACE: INTEGRATION FOR CREW AND ONBOARD SUPPORT
Elton Guliyev, Azerbaijan

13:35-13:45 IAC-25/B3/IPB/100891
EVOLVING HUMAN-ROBOT INTERACTION IN SPACE: LESSONS FROM ASTROBEE AND FUTURE APPLICATIONS
Alissa Chavalithumrong, United States

SCREEN #27

12:55-13:05 IAC-25/B3/IPB/96172
TARGET-TRACKING-BASED MULTI-UAV VISUAL SLAM IN GNSS-DENIED ENVIRONMENTS
Xinyu Fu, China

13:05-13:15 IAC-25/B3/IPB/97017
THE FAI ASTRONAUTIC RECORDS COMMISSION (ICARE) – ACCOMPANYING A NEW ERA OF SPACEFLIGHT ACHIEVEMENTS
Nicolas Bérend, Switzerland

13:25-13:35 IAC-25/B3/IPB/102841
SMART BED SYSTEM FOR ASTRONAUTS IN SPACE: HEALTHCARE, STABILITY, AND RESOURCE RECYCLING
Sona Rustam, Azerbaijan

13:35-13:45 IAC-25/B4/IPB/103094
AMETEUR SPACE EXPLORATION : SPACE KNOWLEDGE YIELDER (SKY)
Nigar Rustam, Azerbaijan

SCREEN #28

12:45-12:55 IAC-25/B4/IPB/100849
REAL-TIME ATMOSPHERIC DRAG ESTIMATION FOR DISTRIBUTED SPACE SYSTEMS VIA INTER-SATELLITE COMMUNICATION
Ryusei Komatsu, Japan

12:55-13:05 IAC-25/B4/IPB/102467
POWER OPTIMIZATION AND THERMAL ANALYSIS OF PRINTED COILS, COMPACT COILS, AND MAGNETIC RODS FOR CUBESAT ATTITUDE CONTROL
Muhammad Rizwan Mughal, Oman

13:15-13:25 IAC-25/B4/IPB/95462
ASSESSMENT OF THE REALIZATION OF VALUE AND BENEFITS OF IMPLEMENTING AGILE MBSE FOR ENTERPRISES IN THE NEWSPACE INDUSTRY
Rehobot Bekele Buruso, France

13:25-13:35 IAC-25/B4/IPB/99237
AERODYNAMIC OPTIMIZATION AND HYBRID NEURO-FUZZY LOGIC CONTROLLER FOR ORBITAL STATION-KEEPING OF CUBESATS IN VLEO
Vishwas Jajpura, India

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13:35-13:45 IAC-25/B4/IPB/99397
PROPOSED CUBESAT SYSTEM FOR AUTONOMOUS STRUCTURAL HEALTH MONITORING: INTEGRATION OF EDGE COMPUTING AND MACHINE LEARNING FOR ANOMALY DETECTION AND ORBITAL SAFETY
Juan Salvador Palacios Bett, Peru

SCREEN #29

12:45-12:55 IAC-25/B4/IPB/102125
IN-SITU POWER SYSTEM MODELING FOR MICRO/NANO SATELLITE AUTONOMOUS OPERATION SYSTEM
Yuma Sato, Japan

12:55-13:05 IAC-25/B4/IPB/102232
PLUG-AND-FLY SPIN-2 MISSION
Saish Sridharan, Germany

13:05-13:15 IAC-25/B4/IPB/95288
OPTIMIZING SATELLITE CONSTELLATIONS FOR MARITIME SECURITY IN AFRICAN REGION, FURTHER SPACE APPLICATIONS ACROSS AFRICA, AND MITIGATING SPACE DEBRIS IN THE SECTOR
WANJIKU KANJUMBA, United States

13:15-13:25 IAC-25/B6/IPB/100526
EVALUATING THE IMPACT OF SOLAR STORMS ON SATELLITE POWER SYSTEMS USING SPACE WEATHER DATA
MOHAMED ALASEERI, Bahrain

13:25-13:35 IAC-25/B6/IPB/103629
SATELLITE MANOEUVRE DETECTION AND ANALYSES BASED ON EPHEMERIDES
Wenze Ma, Australia

13:35-13:45 IAC-25/B6/IPB/100114
AUTONOMOUS SPACE OPERATION PLANNER AND SCHEDULER (ASOPS): ARCHITECTURE AND ONBOARD IMPLEMENTATION IN THE SERANIS MISSION
Francesco Porcelli, Germany

SCREEN #30

12:45-12:55 IAC-25/B6/IPB/100550
A REINFORCEMENT LEARNING AND REACTION NULL-SPACE BASED OBSTACLE AVOIDANCE PLANNING METHOD FOR FREE-FLOATING SPACE MANIPULATORS
Xinhao Miao, China

12:55-13:05 IAC-25/B6/IPB/97571
AN ADVANCED INSTANCE SEGMENTATION FOR NON-COOPERATIVE SPACECRAFT COMPONENTS IN ON-ORBIT SERVICING: DATASET SYNTHESIS AND HYBRID TRANSFORMER-CNN NETWORK
Zhi Xu, China

13:05-13:15 IAC-25/B6/IPB/96785
LINGUISTIC DESCRIPTION GENERATION FOR NON-COOPERATIVE SPACECRAFT TIME-SERIES BEHAVIORS USING TRANSFORMER MODELS
Pengyu Guo, China

13:15-13:25 IAC-25/B6/IPB/103511
COLOGNE MANUAL ON SPACE TRAFFIC MANAGEMENT: A FIRST STEP TOWARD GLOBAL STM?
Jacqueline Reichhold, Germany

13:25-13:35 IAC-25/B6/IPB/97470
RESPONSIVE RPO FOR COMMERCIAL APPLICATION
Sho Fujita, Japan

13:35-13:45 IAC-25/C1/IPB/99715
AN INTEGRATED FRAMEWORK FOR MISSION DESIGN AND GUIDANCE FOR AUTONOMOUS IN-ORBIT SERVICING MISSIONS
Nathan Wallace, Australia

SCREEN #31

12:45-12:55 IAC-25/C1/IPB/100316
LOW-THRUST TRAJECTORY DESIGN WITH POWER CONSTRAINTS AND ATTITUDE DYNAMICS INTEGRATION
Gianni Pecora, Spain

12:55-13:05 IAC-25/C1/IPB/94366
DYNAMIC MODELING AND DUAL-CABIN COORDINATED ATTITUDE ADJUSTMENT OF HIGH-PRECISION DISTURBANCE-FREE PAYLOAD SPACECRAFT
Hanzhou Wang, China

13:05-13:15 IAC-25/C1/IPB/100425
MINIMUM FUEL INDIRECT OPTIMAL CONTROL TRANSFERS ACROSS MULTIPLE REGIMES IN THE EARTH-MOON SYSTEM
Maruthi Akella, United States

13:15-13:25 IAC-25/C1/IPB/100779
DIFFUSION ENHANCED MODEL PREDICTIVE CONTROL FOR AUTONOMOUS SPACECRAFT RENDEZVOUS AND DOCKING WITH OBSTACLE AVOIDANCE
Biyue Pan, China

13:25-13:35 IAC-25/C1/IPB/100872
STOCHASTIC DIFFERENTIAL DYNAMIC PROGRAMMING WITH POLYNOMIAL CHAOS EXPANSION FOR ROBUST TRAJECTORY
Masato Shibukawa, Japan

13:35-13:45 IAC-25/C1/IPB/102537
6-DOF FUEL-OPTIMAL NRHO RENDEZVOUS TRAJECTORIES WITH TIME-VARYING ILLUMINATION CONSTRAINTS
Charlotte Bennett, United States

SCREEN #32

12:45-12:55 IAC-25/C1/IPB/102476
DESIGN OF SAFE TRANSFER TRAJECTORY BETWEEN QUASI-SATELLITE ORBITS
Yusuke Oki, Japan

12:55-13:05 IAC-25/C1/IPB/103704
LOW-THRUST TRAJECTORY DESIGN AND PLANETARY CAPTURE IN MODERN ASTRODYNAMICS
Monica Salunkhe, United States

13:05-13:15 IAC-25/C1/IPB/101623
MISSION DESIGN TECHNIQUES FOR SATELLITES OPERATING IN LOW-LUNAR ORBITS
Mathilda Bolis, Italy

13:15-13:25 IAC-25/C1/IPB/99018
THE SELF-GRAVITATING RING IN THE N-BODY PROBLEM
Rosaura Patricia Delgado Ortiz, Mexico

13:25-13:35 IAC-25/C1/IPB/100428
A FAST EVALUATION METHOD FOR SPACECRAFT LOW-THRUST COLLISION AVOIDANCE MANEUVERS BASED ON DIFFERENTIAL ALGEBRA
Jikai Wang, China

13:35-13:45 IAC-25/C1/IPB/96145
ONBOARD LOW-THRUST SPACECRAFT COLLISION AVOIDANCE STRATEGY DESIGN AND OPTIMIZATION
Yanjun YU, China

SCREEN #33

12:45-12:55 IAC-25/C1/IPB/96146
FEEDBACK LANDING GUIDANCE FOR REUSABLE LAUNCH VEHICLE IN ATMOSPHERE BASED ON HOMING GUIDANCE
Ki-Wook Jung, Korea, Republic of

12:55-13:05 IAC-25/C1/IPB/97511
ORBIT MAINTENANCE STRATEGY INTEGRATED WITH POWER MANAGEMENT FOR ULTRA-LOW EARTH ORBIT SATELLITES
Ming Xu, China

13:05-13:15 IAC-25/C2/IPB/103869
A PROTOTYPE OF A ROBOTIC SWARM FOR AUTONOMOUS ORBITAL INFRASTRUCTURE INSPECTION
Luis Angel Hernandez Laya, Venezuela

13:15-13:25 IAC-25/C2/IPB/99998
ADVANCING ADDITIVE MANUFACTURING FOR IN-SITU RESOURCE UTILIZATION IN HUMAN SPACE EXPLORATION: CHALLENGES AND OPPORTUNITIES
Shravani Tembare, India

SCREEN #34

12:45-12:55 IAC-25/C2/IPB/96185
DESIGN AND COOLING PERFORMANCE EVALUATION OF 3D PRINTED STRUCTURES FOR TRANSPIRATION COOLING IN EXTERNAL FLOW
Jaeseung Heo, Korea, Republic of

12:55-13:05 IAC-25/C2/IPB/99881
A SHAPE MEMORY ALLOY ROTARY-ACTUATED REUSABLE SEPARATION MECHANISM WITH HIGH LOAD-BEARING CAPACITY AND LOW SHOCK
Lei Qu, China

13:05-13:15 IAC-25/C2/IPB/100041
A HIGH - SYNCHRONIZATION AND LOW - SHOCK MULTI - POINT LOCKING SATELLITE - ROCKET SEPARATION DEVICE WITH MECHANICAL LINKAGE
Xiaoyuan Wang, China

13:15-13:25 IAC-25/C2/IPB/94442
DESIGN OF THE WHEELS FOR THE AUSTRALIA'S FIRST LUNAR ROVER
Quentin Michalski, Australia

13:35-13:45 IAC-25/C2/IPB/95871
DEPLOYABLE THERMALLY CONDUCTIVE STRUCTURE FOR A LARGE ACTIVE PHASED ARRAY ANTENNA IN CUBESATS
Delburg Mitchao, Japan

SCREEN #35

12:55-13:05 IAC-25/C2/IPB/102352
FAILURE INDEXES IN ULTRA-THIN DEPLOYABLE STRUCTURES USING 1D STRUCTURAL THEORIES AND 3D HASHIN CRITERIA
Enrico Zappino, Italy

13:15-13:25 IAC-25/C2/IPB/103167
RESULTS FROM ESTONIAN SATELLITE'S SOLAR CELL DEGRADATION IN LEO AND IMPLICATIONS FOR ISRU LUNAR SOLAR CELL TECHNOLOGIES
Marc Heemskerk, Estonia

13:35-13:45 IAC-25/C2/IPB/95195
POLYMERIZATION AND FOAM EXPANSION IN MICROGRAVITY FOR IN-ORBIT SERVICING APPLICATIONS
Léonie Gasteiner, Switzerland

SCREEN #36

12:45-12:55 IAC-25/C2/IPB/96544
DESIGN AND DYNAMIC ANALYSIS OF A MECHANICALLY DEPLOYABLE AEROSHELL FOR MARS ENTRY
ZIJIE CHEN, Italy

12:55-13:05 IAC-25/C2/IPB/99599
NONLINEAR MECHANICS OF A DEPLOYABLE ORIGAMI FLEXIBLE ARM FOR SPACE CAPTURE
mingli liu, China

13:15-13:25 IAC-25/C2/IPB/101499
SELF-ASSEMBLY MODULAR ROBOT FOR IN-SPACE STRUCTURE CONSTRUCTION
Yajie Cheng, China

13:25-13:35 IAC-25/C3/IPB/103136
ORBIT OPTIONS FOR SOLAR REFLECTORS FOR FUTURE SPACE-BASED ENERGY SERVICES AROUND THE MOON
Onur Çelik, The Netherlands

13:35-13:45 IAC-25/C3/IPB/96577
SOLUTIONS TO ISSUES IN WIRELESS POWER TRANSMISSION
Anar Hamdullayev, Azerbaijan

SCREEN #37

12:45-12:55 IAC-25/C3/IPB/95126
MULTIPHASE MAPPING AND HEAT EFFICIENCY OF HYDROGEN BUBBLES IN LIQUID URANIUM FOR A CENTRIFUGAL NUCLEAR THERMAL ROCKET ENGINE
Joshua Naudet, United States

12:55-13:05 IAC-25/C3/IPB/96820
AI DRIVEN LASER WIRELESS POWER TRANSMISSION REVOLUTIONIZING ENERGY SHARING FOR SPACE EXPLORATION
Zaman Kazimov, Azerbaijan

13:05-13:15 IAC-25/C3/IPB/98519
ENHANCING SOLAR PANEL EFFICIENCY ON MARS: AI-DRIVEN DUST ACCUMULATION MONITORING
Azar Valiyev, Azerbaijan

13:15-13:25 IAC-25/C3/IPB/97124
EFFECTIVE USE OF TECHNOLOGY THAT WORKS WITH SEEBECK EFFECT ON THE MOON AND IN SPACE
Sahib İskandarli, Azerbaijan

13:25-13:35 IAC-25/C3/IPB/97651
TERRESTRIAL TECHNOLOGY TRANSFER TO SPACE, SOLAR PANEL DEVELOPMENT AT EXTRATERRESTRIAL POWER AND A REVIEW OF OUR SPACE FLIGHT HERITAGE IN 2025
Benjamin Koschnick, Australia

13:35-13:45 IAC-25/C3/IPB/100577
FAST-CONVERGING AND EFFICIENT DYNAMIC FOCUSING METHOD FOR SPACE-BASED SOLAR POWER USING THE RESONANT BEAM ARCHITECTURE
Charleston Dale Ambatali, The Philippines

SCREEN #38

12:55-13:05 IAC-25/C3/IPB/97164
INNOVATIVE PIEZOELECTRIC ENERGY GENERATION FOR SPACE MISSIONS
Zahra Garibova, Azerbaijan

13:15-13:25 IAC-25/C3/IPB/99609
AUXILIARY POWER GENERATION VIA ELECTRODYNAMIC TETHERS FOR SPACE MISSIONS: A CASE STUDY AT JUPITER
Joel Eldo, Germany

13:25-13:35 IAC-25/C4/IPB/100568
ENHANCEMENT OF THE MAIN SUB-SYSTEMS IN STUDENT RESEARCHED AND DEVELOPED (SRAD) HYBRID ROCKET ENGINE (HRE)
Małgorzata Majda, Poland

Tuesday 30 September 2025

13:35-13:45 IAC-25/C4/IPB/101978
A WEB-BASED SEMI-EMPIRICAL NUMERICAL TOOL FOR ACCESSIBLE LIQUID SWIRL INJECTOR DESIGN
Thitut Uthhalye, United Kingdom

SCREEN #39

12:45-12:55 IAC-25/C4/IPB/98196
INTEGRATING MISSION AND SYSTEM ANALYSES IN THE BANTER PROJECT FOR NUCLEAR BIMODAL PROPULSION
Julia Grill, Germany

12:55-13:05 IAC-25/C4/IPB/94657
DEVELOPMENT OF TURBOPUMPS FOR LE-9, FIRST STAGE ENGINE OF H3 LAUNCH VEHICLE
Taiichi Motomura, Japan

13:05-13:15 IAC-25/C4/IPB/99884
PROSPECTIVE ANALYSIS OF BIOFUEL PRODUCTION FROM WASTE COOKING OIL FOR AVIATION AND SPACE APPLICATIONS IN NORTHERN MEXICO
VANESSA MONTIEL VIRUEL, Mexico

13:15-13:25 IAC-25/C4/IPB/94458
DESIGN, ANALYSIS, AND EXPERIMENTAL EVALUATION OF A COLD GAS THRUSTER SYSTEM FOR MARTIAN DRONE PROPULSION
Akshat Sharma, India

13:25-13:35 IAC-25/C4/IPB/96416
INTEGRATED TORCH IGNITION UNIT OF REUSABLE METHANE/ LOX ROCKET ENGINE
Hanmo Shen, China

13:35-13:45 IAC-25/C4/IPB/101208
CRYOGENIC FEED SYSTEM FLOW OPTIMIZATION THROUGH PRE-CHILL: ANALYSIS OF LIQUID NITROGEN AND LIQUID OXYGEN TESTING
Tolou Pharokhipanah, United States

SCREEN #40

12:45-12:55 IAC-25/C4/IPB/100733
DRY MECHANICAL MIXING AS AN ADDITIVE DISPERSION TECHNIQUE FOR COATING CATALYSTS OVER AMMONIUM PERCHLORATE: A NOVEL TIME-BASED APPROACH TO DETERMINE CATALYTIC PERFORMANCE
Satwik Mohanty, Italy

12:55-13:05 IAC-25/C4/IPB/100400
SMALL-SCALE RESISTOJET THRUSTER PERFORMANCE UTILISING A HEAT EXCHANGER AND GREEN PROPELLANTS
Jeongmoo Huh, United Arab Emirates

13:05-13:15 IAC-25/C4/IPB/100130
ANALYSIS OF HYDROGEN PEROXIDE THERMAL DECOMPOSITION IN SMALL-SCALE MONOPROPELLANT THRUSTERS
Jeongmoo Huh, United Arab Emirates

13:15-13:25 IAC-25/C4/IPB/101411
PRELIMINARY EXPERIMENTAL INVESTIGATION OF A SMALL-SCALE ROTATING DETONATION ENGINE WITH NON-PREMIXED PROPELLANT
Jeongmoo Huh, United Arab Emirates

13:25-13:35 IAC-25/C4/IPB/96343
COMPOSITION INVESTIGATION AND BASIC COMBUSTION RESEARCH OF SUSTAINABLE ROCKET PROPELLANT (SRP) DERIVED FROM PLANTS
Taisei Takaoka, Japan

13:35-13:45 IAC-25/C4/IPB/100369
EFFICIENT MISSION ANALYSIS FOR SMALL SATELLITES: MANEUVER PLANNING, CONSTELLATION DEPLOYMENT, AND PROPULSION OPTIMIZATION
Giuseppe Di Pasquale, Spain

SCREEN #41

12:45-12:55 IAC-25/C4/IPB/101352
RAREFIED GAS SIMULATION IN VACUUM CHAMBERS FOR GAS-JET PROPULSION: TOWARD REALIZING A NUMERICAL VACUUM CHAMBER
Keita Nishii, Japan

12:55-13:05 IAC-25/C4/IPB/97019
INTEGRAL AND PROBE CHARACTERISTICS OF A LABORATORY MODEL OF AN ACCELERATOR WITH CLOSED ELECTRON DRIFT ON A MIXTURE OF REACTIVE GASES
Anastasia Mekh, Russian Federation

13:05-13:15 IAC-25/C4/IPB/100675
PRESSURIZATION ANALYSIS OF CRYOGENIC PROPELLANT TANKS: INVESTIGATING COLLAPSE FACTOR AND L/D RATIO INFLUENCE
Süleyman Kural, Türkiye

13:15-13:25 IAC-25/C4/IPB/103032
RESONANT ORBITAL DYNAMICS AND ELECTROSTATIC CHARGE MANAGEMENT FOR EFFICIENT PROPULSION AND SUSTAINABLE SPACECRAFT OPERATIONS
Sudarsana Nerella, United States

13:25-13:35 IAC-25/C4/IPB/97607
VALIDATION OF COMPUTATIONALLY EFFICIENT CFD MODELS FOR FLOW FIELD ANALYSIS IN HYPERSONIC ENGINES
Kei Fukuzawa, Japan

13:35-13:45 IAC-25/C4/IPB/94963
PERFORMANCE OPTIMIZATION AND ENVIRONMENTAL IMPACT ASSESSMENT OF PARAFFIN-BASED HYBRID ROCKET FUELS WITH ADVANCED ADDITIVES
Shraddha Lamichhane, Nepal

SCREEN #42

12:45-12:55 IAC-25/C4/IPB/95240
FIRST IN - FLIGHT IGNITION OF LINEAR AEROSPIKE ENGINE: CONCEPT TO FLIGHT TESTING
Bhavyashree Janardhana, Germany

12:55-13:05 IAC-25/C4/IPB/101747
SAIL NAVIGATION AS AN ALTERNATIVE TO CONVENTIONAL ROCKETS IN SPACE EXPLORATION
Pedro Campos Domínguez, Mexico

13:05-13:15 IAC-25/D1/IPB/96681
ENHANCING SYSTEMS INTEGRATION THROUGH MODULAR DESIGN: A FRAMEWORK FOR EFFICIENT TESTING AND ASSESSMENT IN COMPLEX SYSTEMS
Tamia Neal, United States

13:15-13:25 IAC-25/D1/IPB/102304
VLEO SATELLITE CONSTELLATIONS FOR GLOBAL COMMUNICATIONS: THE ROLE OF AIR-BREATHING ELECTRIC PROPULSION
Pedro Casau, Portugal

13:25-13:35 IAC-25/D1/IPB/102407
ENHANCING SPACE MECHANISMS WITH FERROFLUID-BASED MAGNETIC GEARS
Manfred Ehresmann, Germany

13:35-13:45 IAC-25/D1/IPB/99673
COOPERANTS: ADVANCING EARLY STAGE PROJECT PHASES BY IMPLEMENTING COLLABORATIVE PROCESSES AND TOOLS IN CONCURRENT ENGINEERING STUDIES
Livia Ordonez Valles, Germany

SCREEN #43

12:45-12:55 IAC-25/D1/IPB/98560
BAYESIAN GAME-THEORETIC APPROACHES FOR CISLUNAR SPACE DOMAIN AWARENESS
John Boh, United States

12:55-13:05 IAC-25/D1/IPB/96999
AMBIENT INTELLIGENCE IN EXTREME ENVIRONMENTS (AMI-EE): RESEARCH ON INTELLIGENT HABITATS AND THE STIMULATION OF SOCIAL INTERACTION FOR CREW FUNCTIONING IN SPACE HABITATS
Florian Grünewald, Germany

13:05-13:15 IAC-25/D1/IPB/98752
AUTOSAR AS UNIVERSAL ROCKET PLATFORM
Mateusz Krajewski, Poland

13:15-13:25 IAC-25/D1/IPB/98649
THE EMIRATES MISSION TO THE ASTEROID BELT: A MODULAR AND SCALABLE SIMULATION FRAMEWORK FOR SPACECRAFT TESTING
Khaled Alnaqbi, United Arab Emirates

13:25-13:35 IAC-25/D1/IPB/99897
ADVANCING LOW-FACET SATELLITE TECHNOLOGY: INFRARED IMAGING FOR ATOMIC OXYGEN PARTICLE CONTROL IN CROWDED LOW EARTH ORBIT
Emira Nur Aslan, Türkiye

13:35-13:45 IAC-25/D1/IPB/95112
DIGITAL TWIN TECHNOLOGY FOR SMALL SATELLITE DEVELOPMENT AND OPERATIONS: A CASE STUDY OF HEAD-2D
Lianxiang Jiang, China

SCREEN #44

12:45-12:55 IAC-25/D1/IPB/99203
A STUDY ON THERMAL VACUUM TEST METHOD FOR MULTI-SATELLITE
Ji-Seok Kim, Korea, Republic of

12:55-13:05 IAC-25/D1/IPB/100921
A SYSTEMATIC REVIEW AND META-ANALYSIS OF OPTIMIZING SWARM ROBOTICS CONTROL STRATEGY FOR SPACE OPERATIONS
Jiaxiang Li, Canada

13:35-13:45 IAC-25/D2/IPB/101760
TETHER BASED PROPULSION - LOW HANGING FRUIT
Jeremy Partington, Australia

SCREEN #45

13:05-13:15 IAC-25/D2/IPB/101426
BUILDING REUSABLE HYPERSONIC SPACEPLANES: TECHNICAL FOUNDATIONS AND DEVELOPMENT ROADMAP
Marcelo Boldt, Germany

13:35-13:45 IAC-25/D3/IPB/99461
ENHANCING THERMAL ENERGY DISSIPATION OF CFRP FOR SMALL SATELLITE APPLICATIONS
Jacinta Richards, Australia

SCREEN #46

12:45-12:55 IAC-25/D3/IPB/103697
FORECASTING WATER SUPPLY SHORTAGES IN SPACE MISSIONS USING SCENARIO-BASED SIMULATION WITHIN ERP SYSTEMS
Victor Raul Huaman Simeon, Peru

13:15-13:25 IAC-25/D3/IPB/93997
MISSION CONCEPTS FOR PSRS IN THE SOUTH LUNAR POLE
Joe Papworth, United Kingdom

13:25-13:35 IAC-25/D3/IPB/98476
A FLEXIBLE THERMOELECTRIC COOLING SYSTEM FOR ASTRONAUT SUITS: A LIGHTWEIGHT ALTERNATIVE TO LIQUID COOLING GARMENTS.
Vishwajith Lal, United Arab Emirates

13:35-13:45 IAC-25/D3/IPB/101012
PREPARING FOR HUMANS TO MARS WITH THE MARS ADVANCED PRECURSOR SYSTEMS PROGRAM
Mollie Johnson, United States

SCREEN #47

12:45-12:55 IAC-25/D3/IPB/95355
QUANTITATIVE INVESTIGATION OF LUNAR SURFACE HABITAT STRUCTURE TECHNOLOGIES
Robert Rochel, United States

12:55-13:05 IAC-25/D5/IPB/98334
IMPLEMENTING RETRIEVAL AUGMENTED GENERATION FOR KNOWLEDGE MANAGEMENT IN LONG-DURATION SPACE MISSIONS
Ilkin Abdullayev, Azerbaijan

13:05-13:15 IAC-25/D5/IPB/94753
AUTOMATED DETECTION AND CLASSIFICATION OF SOLAR RADIO BURSTS USING E-CALLISTO SPECTRUM DATA AND YOLO V11 DEEP LEARNING MODEL
Hassan Nooreldeen, Egypt

13:15-13:25 IAC-25/D5/IPB/99727
ENHANCING SPACE SITUATIONAL AWARENESS TOOL'S HUMAN MACHINE INTERFACE FUNCTIONALITY USING THE LARGE LANGUAGE MODEL-POWERED QUERY SYSTEM
Harsha M, India

13:25-13:35 IAC-25/D5/IPB/94745
ENHANCING SPACE MISSION RELIABILITY THROUGH ADVANCED KNOWLEDGE MANAGEMENT AND CYBERSECURITY FRAMEWORKS
Amina Valiyeva, Azerbaijan

13:35-13:45 IAC-25/D5/IPB/98947
A SOLAR VACUUM ULTRAVIOLET SOURCE FOR SPACE ENVIRONMENT SIMULATIONS
Josef Richmond, Australia

SCREEN #48

12:45-12:55 IAC-25/D5/IPB/98166
PRODUCT ASSURANCE ACTIVITIES FOR PLATO FOCAL PLANE ASSEMBLY
Irene Catalán Fernández, Spain

12:55-13:05 IAC-25/D5/IPB/99607
ESD CONTROL PLAN AND ITS IMPLEMENTATION FOR THE DETECTOR PLANE ASSEMBLY IN THE FRAME OF THE SOFT X-RAY IMAGER INSTRUMENT IN THE SMILE MISSION
Amaia Santiago Pé, Spain

13:05-13:15 IAC-25/D5/IPB/99608
CLEANLINESS AND CONTAMINATION CONTROL PLAN AND ITS IMPLEMENTATION FOR THE DETECTOR PLANE ASSEMBLY IN THE FRAME OF THE SOFT X-RAY IMAGER INSTRUMENT IN THE SMILE MISSION
Maria del Rosario Canchal, Spain

13:15-13:25 IAC-25/D5/IPB/103223
ESTABLISHMENT OF AN ETHICAL FRAMEWORK FOR BRAIN STUDIES UNDER SPATIAL CONDITIONS
Wendy Lucia Sanchez Delgado, United Kingdom

Tuesday 30 September 2025

SCREEN #49

12:45-12:55 IAC-25/E1/IPB/95618
RELAUNCHING AN INTEGRATED UNDERGRADUATE BUSINESS, LAW AND POLITICS SPACE TOPIC
Joel Lisk, Australia

12:55-13:05 IAC-25/E1/IPB/97150
AFFORDABLE ROBOTICS FOR SPACE-THEMED STEM OUTREACH IN IRISH PRIMARY SCHOOLS
Michael Johnson, Ireland

13:05-13:15 IAC-25/E1/IPB/98491
FROM CLASS TO ORBIT: THE NOTTSPACE APPROACH TO UNDERGRADUATE SPACE EDUCATION
Luis Cormier, United Kingdom

13:15-13:25 IAC-25/E1/IPB/98813
SPACE CAREERS WAYFINDER - A NATIONAL ONLINE SPACE CAREERS PROGRAM FOR HIGH SCHOOLS
Robert Hollow, Australia

13:25-13:35 IAC-25/E1/IPB/96722
CHASQUI II IN ACTION:PROMOTING SPACE EDUCATION IN PERU THROUGH STEAM
Angela Maritza Naveda Cosquillo, Peru

13:35-13:45 IAC-25/E1/IPB/102890
GLOBAL YOUTH SPACE CHALLENGE: UNITING YOUNG MINDS FOR A SINGULAR SPACE OBJECTIVE
Arda Kağan Menteş, Türkiye

SCREEN #50

12:45-12:55 IAC-25/E1/IPB/98826
FROM PASSION TO PROFICIENCY: HOW OUR TEAM TRANSFORMS UNDERGRAD ENTHUSIASTS INTO AEROSPACE ENGINEERS
Zofia Antkowiak, Poland

12:55-13:05 IAC-25/E1/IPB/103861
DESIGN OF A MODULAR EDUCATIONAL CUBESAT AS A TOOL FOR AEROSPACE ENGINEERING EDUCATION IN PERU
JOHAN FLORES TORRES, Peru

13:05-13:15 IAC-25/E1/IPB/102113
HAMILTON SECONDARY COLLEGE SPACE SCHOOL - A SPACE EDUCATION LEADER
Sarah Baker, Australia

13:15-13:25 IAC-25/E1/IPB/95245
FROM THE CLASSROOM TO THE STRATOSPHERE: INSPIRING HIGH SCHOOL STUDENTS THROUGH THE EXPLORA BALLOON PROGRAM IN THE ARCTIC
Marie Lambert, Sweden

13:25-13:35 IAC-25/E1/IPB/100756
EMPOWERING THE FUTURE OF SPACE: THE VITAL ROLE OF YOUNG PROFESSIONALS IN INNOVATION, PEACEBUILDING, AND SUSTAINABILITY
Miriam Opazo Mendez, France

13:35-13:45 IAC-25/E1/IPB/101421
SPACE GURION EMPOWERING THE NEXT GENERATION: A STUDENT-LED APPROACH TO SPACE WORKFORCE DEVELOPMENT
Shimrit Maman, Israel

SCREEN #51

12:45-12:55 IAC-25/E1/IPB/102740
THE ROLE OF SPACE ORGANISATIONS IN EXPANDING MULTI-DISCIPLINARY ENGAGEMENT
Chia Tian-Brearne Chen, Australia

12:55-13:05 IAC-25/E1/IPB/100330
BRINGING SPACE TO YOUR COMMUNITY: CONTEXTUALISING SPACE TECHNOLOGIES FOR THE BENEFIT OF LOCAL COMMUNITIES
Darcey Watson, Australia

13:05-13:15 IAC-25/E1/IPB/94647
LAUNCHING THE SPACE WORKFORCE: A FRAMEWORK FOR THE URGENT NEED OF THE US COMMERCIAL SPACE SECTOR
Beatriz Coningham, United States

13:15-13:25 IAC-25/E1/IPB/96987
INCIDENCE OF LOW PATRONAGE OF SPACE SCIENCE EDUCATION IN GHANA
Francis Kudjoe, Ghana

SCREEN #52

12:45-12:55 IAC-25/E1/IPB/97383
SCIACCESS: BEST PRACTICES FOR ACCESSIBILITY IN SPACE EDUCATION AND OUTREACH
Anna Voelker, United States

12:55-13:05 IAC-25/E3/IPB/102050
PROJECTION OF SPACE INDUSTRY GROWTH IN DEVELOPING COUNTRIES: A SYSTEM DYNAMICS MODEL APPLIED TO THE CASE OF PERU
Frank Raul Quintana Quispe, Peru

13:35-13:45 IAC-25/E3/IPB/103642
LEVERAGING PUBLIC–PRIVATE PARTNERSHIPS TO ACCELERATE SPACE SECTOR GROWTH IN EMERGING ECONOMIES
Akshat Johri, India

13:05-13:15 IAC-25/E3/IPB/103776
STATE-SPECIFIC INCENTIVES FOR COMMERCIAL SPACE ACTIVITIES IN INDIA AND LEARNINGS FROM GLOBAL PRECEDENT
Abhishek Dubey, India

13:15-13:25 IAC-25/E3/IPB/102908
GLOBAL NATIONAL SPACE SECTOR GOVERNANCE MODELS – STRATEGIC AND LEGAL APPROACH TO THE ROLE OF SPACE AGENCIES
Katarzyna Malinowska, Poland

13:25-13:35 IAC-25/E3/IPB/102293
ADVANCING DARK AND QUIET SKIES PROTECTION: UPDATES FROM THE IAU CPS POLICY HUB
Giuliana Rotola, Italy

SCREEN #53

12:45-12:55 IAC-25/E3/IPB/94407
ENHANCING SOUTH KOREA'S SPACE ASSET INSURANCE FRAMEWORK: CURRENT CHALLENGES AND FUTURE DIRECTIONS
GiWon Nam, Korea, Republic of

12:55-13:05 IAC-25/E3/IPB/96042
INTERNATIONAL SPACE POLICY: A REVIEW OF EARTH-BASED INITIATIVES AND CURRENT GOVERNANCE TRENDS TO DEVELOP A METHODOLOGICAL FRAMEWORK FOR IMPARTIAL OPPORTUNITIES IN SPACE EXPLORATION
Pepito Thelly, United States

13:05-13:15 IAC-25/E3/IPB/103568
SHORTCOMINGS, OBLIGATIONS AND OPPORTUNITIES: THE ROLE OF INDIGENOUS STAKEHOLDER CONSULTATION IN CONSTRUCTING SUSTAINABLE LAUNCH AND RETURN ECOSYSTEMS
Eamon Lawson, Australia

13:25-13:35 IAC-25/E5/IPB/99858
THE POTENTIAL OF SPACE TECHNOLOGY AS A CATALYST FOR ENHANCING TOURISM AND CULTURAL PRESERVATION IN ASIA PACIFIC REGION
Denis Sindy, Indonesia

13:35-13:45 IAC-25/E5/IPB/101556
CHOICE ARCHITECTURE AS A SUCCESS DETERMINATOR OF AN ANALOG ASTRONAUT TRAINING CENTER IN COSTA RICA
Gabriela Quirós, Costa Rica

SCREEN #54

12:45-12:55 IAC-25/E5/IPB/99275
ECONOMIC ASSESSMENTS FOR AUSTRALIAN SPACE-RELATED RESEARCH AND DEVELOPMENT ACTIVITIES
Pratik Ambani, Australia

13:15-13:25 IAC-25/E5/IPB/97877
LAUNCHING THE FUTURE: HOW YOUNG PROFESSIONALS ARE SHAPING AUSTRALIA'S SPACE INDUSTRY
Alana Liebelt, Australia

12:55-13:05 IAC-25/E5/IPB/101855
ADAPTIVE REINFORCEMENT LEARNING FOR DYNAMIC ENERGY MANAGEMENT IN SELF-RELIANT DEEP SPACE HABITATS: EXTENDING THE CITYLEARN FRAMEWORK
Alexandru Stanciu, Romania

13:05-13:15 IAC-25/E5/IPB/95617
THE ROLE OF INFLATABLE STRUCTURES IN EXTRATERRESTRIAL HABITATION
Zhelun Zhu, China

13:25-13:35 IAC-25/E5/IPB/98950
INNOVATIVE APPROACHES TO SPACE HABITAT DESIGN: INSIGHTS FROM UNIVERSITY OF HAWAI'I SPACE PROGRAMS
Ari Eisenstat, United States

13:35-13:45 IAC-25/E5/IPB/98747
STUDENT-LED ANALOG MISSIONS AS TESTBEDS FOR FUTURE SPACE HABITATS: A COMPARATIVE ANALYSIS OF ASCLEPIOS II AND MDRS CREW 311
Somaya Bennani, France

SCREEN #55

12:45-12:55 IAC-25/E5/IPB/96334
WOVEN HABITAT—SUSTAINABLE LUNAR LAVA TUBE CONSTRUCTION PLAN
Shuqi Li, China

12:55-13:05 IAC-25/E5/IPB/100796
SPACE SOLAR POWER: A SUSTAINABLE SOLUTION OR AN ENVIRONMENTAL DILEMMA?
Camilla ACQUARONE, France

13:25-13:35 IAC-25/E6/IPB/102121
PILOTING SPACE TECH INCUBATION PROGRAMMES IN EAST AFRICA
Maheen Parbhoo, South Africa

13:15-13:25 IAC-25/E6/IPB/94859
ACCELERATING INTO SPACE: STRATEGIES FOR GOVERNMENTS TO LEVERAGE EXISTING PRIVATE ASSETS AND ACHIEVE TECHNOLOGICAL LEAPS
Esha Anura, Australia

13:35-13:45 IAC-25/E6/IPB/100663
FROM THE EAST INDIA COMPANY TO THE SPACE BARONS: THE RETURN OF THE COMPANY-STATE?
Michael Castle-Miller, United States

SCREEN #56

12:45-12:55 IAC-25/E6/IPB/103555
UNLOCKING OPPORTUNITIES IN THE AQUAWATCH-AUK PROGRAM
Geraldine Baca Triveno, Australia

12:55-13:05 IAC-25/E6/IPB/102023
INVESTING IN CHILE'S SPACE FUTURE: A BUSINESS INNOVATION OPPORTUNITY
Logan Philbrick, United States

13:05-13:15 IAC-25/E6/IPB/103606
STRATEGIC APPROACHES TO INVESTMENT READINESS IN THE SPACE INDUSTRY: NAVIGATING MARKET CHALLENGES AND FUNDING OBSTACLES
Logan Philbrick, United States

13:15-13:25 IAC-25/E6/IPB/98767
THE (NEW SPACE) ECONOMICS BEHIND CUBESATS – RETURN ON INVESTMENT CONSIDERATIONS OF GOVERNMENT-FUNDED SPACE R&D PROJECTS, WITH A FOCUS ON A BUSINESS CASE FROM HUNGARY
Péter Kristóf, Hungary

13:25-13:35 IAC-25/E6/IPB/99962
THE STRUCTURE AND CHARACTERISTICS OF THE KOREAN SPACE INDUSTRY FROM THE PERSPECTIVE OF THE INDUSTRIAL NETWORK
Chang Ho LIM, Korea, Republic of

13:35-13:45 IAC-25/E6/IPB/95839
LIMPING CONTRACTS IN AFRICA'S SPACE SECTOR: ADDRESSING RISK TRANSFER, INFORMATION ASYMMETRY, AND INNOVATION BARRIERS IN INVESTOR-START-UP AGREEMENTS
king kumire, United Kingdom

SCREEN #57

12:45-12:55 IAC-25/E6/IPB/95296
NEXT FRONTIER OF ECONOMIC SYSTEMS FOR THE NEW SPACE AGE: MODELS FOR A MULTI-PLANETARY SOCIETY
WANJIKU KANJUMBA, United States

12:55-13:05 IAC-25/E6/IPB/101624
COST-EFFECTIVENESS AND COMPETITION: IMPLEMENTING PARALLEL DEVELOPMENT IN SPACE AGENCIES PROJECTS
Valentina Zancan, Italy

13:05-13:15 IAC-25/E6/IPB/101251
THE REGULATORY STRUGGLES OF SPACE STARTUPS IN NAVIGATING EXPORT CONTROLS
Lisa Kucher, France

13:15-13:25 IAC-25/E6/IPB/103726
REAL OPTIONS VALUATION FOR SPACE STARTUPS: A FRAMEWORK ALIGNING FINANCIAL VALUE WITH SYSTEMS ENGINEERING MILESTONES
Ivan Lee, Hong Kong SAR, China

13:25-13:35 IAC-25/E7/IPB/99795
LEX PRIVATA FOR SPACE RESOURCES: HARMONIZING APPROPRIATION AND PROPERTY RIGHTS IN OUTER SPACE
Lucillien Denoyelle, France

13:35-13:45 IAC-25/E7/IPB/94225
A NEW INTERNATIONAL ORDER OF OUTER SPACE?
Ana Soliz de Stange, Germany

Tuesday 30 September 2025

SCREEN #58

12:45-12:55 IAC-25/E7/IPB/97474
SHIFTING SPACE SECURITY NARRATIVES AND JUS AD BELLUM IN OUTER SPACE
Rebecca Connolly, Australia

13:35-13:45 IAC-25/E7/IPB/94765
SOCIAL JUSTICE, SUSTAINABILITY AND OUTER SPACE: SAFEGUARDING ACCESS TO THE NIGHT SKY FOR INDIGENOUS PEOPLES
Anna Marie Brennan, New Zealand

12:55-13:05 IAC-25/E7/IPB/102323
CHALLENGES OF THE APPLICATION OF THE LAW OF THE ARMED CONFLICT TO CYBERWARFARE IN OUTER SPACE
Zamara Rodriguez, Australia

13:05-13:15 IAC-25/E7/IPB/98204
(RE)CLAIMING DAMAGE: CAN FEAR AND ANXIETY RELATED TO SPACE TECHNOLOGY BE RECOVERED UNDER THE 1972 LIABILITY CONVENTION?
Iva Ramuš Cvetkovič, Slovenia

13:15-13:25 IAC-25/E7/IPB/97875
INTELLECTUAL PROPERTY PROTECTION FOR REMOTE SENSING (AI-GENERATED) DATA: CHALLENGES, SOLUTIONS THROUGH MAP-BASED ANALOGIES, AND THE OVERARCHING OUTER SPACE TREATY'S SHARING DILEMMA.
Giulia Priotti, Italy

13:25-13:35 IAC-25/E7/IPB/99523
SPACE-BASED SOLAR POWER - BASELOAD POWER OF THE FUTURE?
Connie Ye, Singapore, Republic of

SCREEN #59

12:45-12:55 IAC-25/E7/IPB/101100
CHARTING A PATH TOWARDS A MULTI-HOMININ EXISTENCE: IMPLICATIONS OF SPACE EXPLORATION FOR HUMAN RIGHTS
Henry Feng, Australia

12:55-13:05 IAC-25/E7/IPB/100990
AI-DRIVEN CYBERSECURITY FOR SATELLITE SYSTEMS: SIMULATING ATTACKS, LEGAL ACCOUNTABILITY, AND STRATEGIC STABILITY IN SPACE
Hallam Burnapp, United Kingdom

13:05-13:15 IAC-25/E11/IPB/95774
THE STATE OF THE LATIN AMERICAN SPACE SECTOR: GAPS AND OPPORTUNITIES BETWEEN THE EAGLE AND THE DRAGON
Vinicius Guedes Gonçalves de Oliveira, Australia

13:35-13:45 IAC-25/E11/IPB/103313
OPERATIONALIZING TRUST – THE FOUNDATION OF AGILE, MULTINATIONAL SPACE ECOSYSTEMS
Allison Nicholls, United States

SCREEN #60

12:55-13:05 IAC-25/E11/IPB/95194
LESSONS FROM THE AFRICAN UNION'S SPACE POLICY: BRIDGING THE GAP BETWEEN ASPIRATION AND IMPLEMENTATION
Beverley Chelsea Saungweme, Russian Federation

13:05-13:15 IAC-25/E11/IPB/99279
INTERNATIONAL BUSINESS POLICY FOR SUSTAINABLE SPACE
Arpit Raswant, Australia

13:15-13:25 IAC-25/E11/IPB/102205
THE ROLE OF MTCIT-SQU SPACE ENGINEERING LAB INITIATIVE IN CAPACITY BUILDING FOR SPACE INNOVATION
Muhammad Rizwan Mughal, Oman

13:25-13:35 IAC-25/E11/IPB/99632
INTERNATIONAL SECURITY PERSPECTIVE ON SPACE COMMERCIALIZATION ECOSYSTEM
Arpit Raswant, Australia

13:35-13:45 IAC-25/E11/IPB/94104
ANALYSIS OF NEW STAKEHOLDERS IN THE BRAZILIAN SPACE PROGRAM IN NEW SPACE AND THE NEED FOR NEW GOVERNANCE
José Vagner Vital, Brazil

Wednesday 1 October 2025

SCREEN #1

12:55-13:05 **IAC-25/A1/IPB/96813**
OTOACOUSTIC EMISSIONS AND VISUAL EVOKED POTENTIALS- AN EARLY DETECTOR OF SPACEFLIGHT ASSOCIATED NEURO- OCULAR SYNDROME.
Rubiya Shaikh, India

13:05-13:15 **IAC-25/A1/IPB/96505**
RADIATION, MICROGRAVITY, AND MEDICINE: PROTECTING HUMAN LIFE IN SPACE
Kamal Pashayev, Azerbaijan

12:45-12:55 **IAC-25/A1/IPB/96033**
FOOD LAB: TEMPCRUNCH
Gerardo Rodríguez, Mexico

SCREEN #2

12:55-13:05 **IAC-25/A1/IPB/95069**
SYSTEMATIC REVIEW OF MICROGRAVITY INDUCED ALTERATIONS IN IRON ABSORPTION AND GUT MOTILITY: IMPLICATIONS FOR ASTRONAUTS HEALTH AND SPACE NUTRITION STRATEGIES
Rita Ajuh, Nigeria

13:05-13:15 **IAC-25/A1/IPB/102948**
MELANIN-BASED RADIATION SHIELDING: A BIOENGINEERED SOLUTION FOR SPACE EXPLORATION
Ana Fernanda Bermúdez Monroy, Mexico

SCREEN #3

12:45-12:55 **IAC-25/A1/IPB/101098**
BIOLOGICAL EVOLUTION AND SPACE EXPLORATION: INSIGHTS ON FUTURE SPECIATION AND ADAPTATION TO EXTRATERRESTRIAL ENVIRONMENTS
Henry Feng, Australia

SCREEN #4

12:45-12:55 **IAC-25/A1/IPB/95432**
THE STABILITY OF RADIOPROTECTIVE COMPOUNDS IN SPACE: A 32-MONTH EXPERIMENT ON THE INTERNATIONAL SPACE STATION
One Mikulskyte, Lithuania

12:55-13:05 **IAC-25/A1/IPB/101715**
SPACE TOURISM: SUSTAINABLE APPAREL
Jarim Bonilla Santiago, Peru

13:05-13:15 **IAC-25/A1/IPB/103661**
SATELLITE-BASED AI MENTAL HEALTH SUPPORT IN SPACE: INTRODUCING FRIENDER
Shabnam Ibrahimova, Azerbaijan

13:15-13:25 **IAC-25/A1/IPB/103569**
A MULTIMODAL ANALOGUE FRAMEWORK FOR INVESTIGATING EATING EXPERIENCE UNDER SIMULATED SPACEFLIGHT CONDITIONS
Thejani Prabodha, Australia

13:25-13:35 **IAC-25/A1/IPB/103110**
IN FUTURE SPACE MISSIONS, A FOOD PRODUCTION SYSTEM UTILIZING 3D PRINTING TECHNOLOGY FOR MEAT PRODUCTION IN SPACE ENVIRONMENTS COULD BE DEVELOPED
Dilara SATIL, Türkiye

13:35-13:45 **IAC-25/A1/IPB/102540**
INCREASING PHYTOALEXIN SYNTHESIS TO ENHANCE AGRICULTURAL SUSTAINABILITY IN SPACE
Sabiha Melek Arı, Türkiye

SCREEN #5

12:45-12:55 **IAC-25/A1/IPB/100973**
ADVANCING NON-INVASIVE HEALTH MONITORING: THE ROLE OF RADAR TECHNOLOGY IN ASTRONAUT HEALTH MONITORING
Alev Sönmez, Germany

13:25-13:35 **IAC-25/A1/IPB/95155**
DEEP LEARNING FOR DETECTING SPACEFLIGHT-INDUCED BRAIN CHANGES
Arjun Dabas, India

13:35-13:45 **IAC-25/A1/IPB/102272**
INFLUENCE OF ANATOMICAL VARIATIONS OF VERTEBRAL ARTERIES ON CEREBRAL HEMODYNAMICS IN MICROGRAVITY: A COMPUTATIONAL ANALYSIS
Anastasiya Liankova, Belarus

SCREEN #6

12:45-12:55 **IAC-25/A1/IPB/98952**
PREDICTIVE DEVICE FOR MONITORING MUSCULOSKELETAL HEALTH IN MICROGRAVITY: INTEGRATION OF DYNAMOMETRY AND ELECTROMYOGRAPHY FOR ASTRONAUTS
Evelyn Pérez Gómez, Mexico

13:05-13:15 **IAC-25/A1/IPB/103214**
IN-SITU CONVERSION OF URINE INTO POLYELECTROLYTIC HYDROGELS FOR RADIOLOGICAL PROTECTION AND RESOURCE OPTIMIZATION IN SPACE ENVIRONMENTS
Nataly Andrea Rojas Barnett, Peru

SCREEN #7

13:15-13:25 **IAC-25/A2/IPB/100962**
MICROGRAVITY SYNTHESIS OF LASER-INDUCED GRAPHENE
Cadré Francis, United States

SCREEN #8

13:15-13:25 **IAC-25/A2/IPB/98914**
MICROGRAVITY MANUFACTURING: PIONEERING INNOVATIONS IN SPACE
Ronak Madkaikar, India

13:35-13:45 **IAC-25/A3/IPB/100132**
EXP 91 AURORA MISSION: ASSESSMENT OF HUMAN ADAPTATION IN A MARS ANALOG ENVIRONMENT
Romildo Genaro Silva Cuadros, Peru

SCREEN #9

12:45-12:55 **IAC-25/A3/IPB/99975**
EVALUATING THE VALUE AND FEASIBILITY OF LUNAR ISRU PLANTS INCLUDING POWER SUPPLY FACILITIES BY JAPANESE PLANT ENGINEERING COMPANY.
Yoshitoki Tanaka, Japan

Wednesday 1 October 2025

12:55-13:05 IAC-25/A3/IPB/98309
MOONDB: A DATA-DRIVEN INVESTIGATION OF PAST, PRESENT, AND FUTURE LUNAR MISSIONS FOR SUSTAINABLE EXPLORATION
Paolo Guardabasso, France

13:35-13:45 IAC-25/A3/IPB/102630
CONCEPTUAL DESIGN OF A TOROIDAL SPACE STATION FOR LARGE-SCALE HUMAN TRANSPORTATION TO MARS
Arda Kağan Menteş, Türkiye

SCREEN #10

12:45-12:55 IAC-25/A3/IPB/95818
CREATING A LUNAR PARTNER GROUND STATION NETWORK
Martin Krynitz, Norway

12:55-13:05 IAC-25/D3/IPB/94456
DEVELOPMENT OF VIBRATORY COMPACTION METHODS FOR REGOLITH BLOCKS AND TRIAL LUNAR ROAD CONSTRUCTION
Tatsuya Nukushina, Japan

13:05-13:15 IAC-25/A3/IPB/102500
WINGS OVER VENUS: THE CONCEPT BEHIND V-FLARE
SHAMBHAVI A S, India

13:35-13:45 IAC-25/A3/IPB/96532
CAN EUROPA SUPPORT LIFE?
Fidan Shiralizada, Azerbaijan

SCREEN #11

12:45-12:55 IAC-25/A3/IPB/98987
DESIGN AND DEVELOPMENT OF THE YAOKI ROVER AND RESULTS FROM THE LUNAR SOUTH POLE ON IM-2
Louis Burtz, Japan

12:55-13:05 IAC-25/A3/IPB/98969
MISSION OPERATIONS OF THE YAOKI LUNAR MICRO-ROVER ON INTUITIVE MACHINES MISSION 2: DEVELOPMENT, SURFACE OPERATIONS AND LESSONS LEARNED
Louis Burtz, Japan

13:05-13:15 IAC-25/A3/IPB/101108
VALIDATION OF LUNAR LANDER TEST VEHICLE SIMULATION USING TEST DATA AND RESULTS
Yiğit Serçeoğlu, Türkiye

13:15-13:25 IAC-25/A3/IPB/102060
FAULT-TOLERANT ALTITUDE AND ATTITUDE ESTIMATION FOR LUNAR LANDER TEST VEHICLE USING SENSOR FUSION AND ANOMALY DETECTION
Ahmet Berk Eser, Türkiye

13:35-13:45 IAC-25/A3/IPB/101989
LUNAR SMALL-ROVER DESIGN REFERENCE MISSION TO A HIGH PRIORITY SCIENTIFIC SITE: IRREGULAR MARE PATCH
Robayet Hossain, United States

SCREEN #12

12:45-12:55 IAC-25/A3/IPB/103489
MICRO PLANETARY SAMPLING SYSTEM FOR PLANETARY LOW PAYLOAD EXPLORATIONS
Tze Chuen NG, Hong Kong SAR, China

12:55-13:05 IAC-25/A3/IPB/97913
MARS CERIA REDOX OXYGEN SYSTEM FOR IN-SITU OXYGEN GENERATION
Sakshyam Prabhat Adhikari, Nepal

13:05-13:15 IAC-25/A3/IPB/100445
THE CONCEPT OF TRANSFORMING LUNAR LANDER
Georgy Shcheglov, Russian Federation

13:35-13:45 IAC-25/A3/IPB/102345
FROM MINES TO MOON: LEVERAGING A DECENTRALIZED MULTI-ROBOT AUTONOMY PLATFORM FROM TERRESTRIAL MINERAL EXPLORATION FOR LUNAR RESOURCE PROSPECTING
Pradyumna Nanda Vyshnav, India

SCREEN #13

12:45-12:55 IAC-25/A3/IPB/103767
INVESTIGATING HUMAN FACTORS IN ANALOG ASTRONAUT MISSIONS: HOW ISOLATION AND DARKNESS SHAPE CREW INTERACTIONS AND TIME PERCEPTION
Pauline ROBLIN, France

12:55-13:05 IAC-25/A3/IPB/103590
SPACE RENAISSANCE 4 ALL GALLERY LAUNCHED WITH NYX CARGO MISSION POSSIBLE !
Bernard Foing, The Netherlands

13:05-13:15 IAC-25/A3/IPB/96988
EDUCATIONAL MOON EARTH CUBESAT - EMEC: REMOTE SENSING OF EARTH AND LUNAR SURFACE
Mojtaba Raouf, The Netherlands

13:35-13:45 IAC-25/A3/IPB/103854
LUNARLEAPER: FROM SIMULATION TO HARDWARE FOR LUNAR LEGGED LOCOMOTION
Joseph Church, Switzerland

SCREEN #14

12:45-12:55 IAC-25/A3/IPB/103538
DESIGN AND SIMULATION OF CAPSULE RELEASE FROM VENUS ORBIT FOR SCIENTIFIC BALLOON DEPLOYMENT
Michael Vincent Quispe Mendoza, Russian Federation

SCREEN #15

12:45-12:55 IAC-25/A3/IPB/101045
HYDROAUTONOMOUS ROBOTIC EXPLORERS: SELF-ASSEMBLING INTELLIGENT SUBMERSIBLES
Devansh Bhatia, India

12:55-13:05 IAC-25/A3/IPB/102166
WATER DEMAND FORECASTING IN CISLUNAR SPACE USING SYSTEM DYNAMICS APPROACH
Tsuyoshi Shikida, Japan

13:05-13:15 IAC-25/A6/IPB/101590
FUEL-OPTIMAL TRAJECTORY PLANNING FOR MULTI-DEBRIS ACTIVE REMOVAL MISSIONS USING HIERARCHICAL REINFORCEMENT LEARNING
He Ren, China

13:15-13:25 IAC-25/A6/IPB/102666
DESIGN AND SIMULATION OF 3-D PRINTING PROCESS TO RECYCLE SPACE DEBRIS
Sumedh Deshpande, India

13:35-13:45 IAC-25/A6/IPB/100435
A FRAMEWORK FOR AUTONOMOUS SPACECRAFT DE-ORBITING TAKING INTO ACCOUNT UNCERTAINTIES
Paul Pinteau, France

SCREEN #16

12:45-12:55 IAC-25/A6/IPB/100843
APPLICATION OF SUB-PIXEL MAPPING IN SPACE-BASED SATELLITE IDENTIFICATION FOR SPACE SITUATIONAL AWARENESS
Yan Chun Fu, Canada

13:05-13:15 IAC-25/A6/IPB/100908
OPERATIONAL IMPACTS OF INTERNATIONAL AGREEMENTS AND REGULATIONS IN SPACE TRAFFIC MANAGEMENT AND PROPOSED SOLUTIONS
Seda AYDIN, Türkiye

13:15-13:25 IAC-25/A6/IPB/95550
ANALYSIS OF THE OCCUPATION STATUS OF EARTH'S ORBIT BY IN-ORBIT AND PLANNED SATELLITES
Dan Hu, France

13:25-13:35 IAC-25/A6/IPB/96548
SAFEGUARDING SPACE ASSETS: A NOVEL METHOD FOR COLLISION RISK ESTIMATION
Benedetta Margrethe Cattani, Italy

13:35-13:45 IAC-25/A6/IPB/100514
QUANTIFYING THE THREAT OF LOCALIZED FRAGMENTATION EVENTS IN LOW EARTH ORBIT: SIMULATION-BASED ASSESSMENT OF DEBRIS EVOLUTION AND OPERATIONAL DISRUPTIONS
Jakub Leś, Poland

SCREEN #17

12:45-12:55 IAC-25/A6/IPB/99690
DYNAMIC TOPOLOGY AND RISK-AWARE ATTENTION OF SPACE DEBRIS PREDICTION FOR MEGA-CONSTELLATION NETWORKS
Xukang Xie, China

12:55-13:05 IAC-25/A6/IPB/95256
OPERATIONAL ENVELOPE ANALYSIS AND CONOPS COMPARISONS FOR SMALL DEBRIS REMEDIATION USING PROGRAMMABLE DUST
Joseph Ivarson, United States

13:05-13:15 IAC-25/A6/IPB/102558
NOVEL APPROACHES TO COMPUTATION OF STATE ERROR COVARIANCE MATRIX FOR NEAR-EARTH OBJECTS
Ilya Fukin, Russian Federation

13:15-13:25 IAC-25/A6/IPB/96219
DEVELOPING AN ORBITAL CLASSIFICATION FRAMEWORK FOR LOW EARTH ORBIT: MODELING INSIGHTS AND COMMUNITY ENGAGEMENT
Ruth Stilwell, United States

13:35-13:45 IAC-25/A6/IPB/96964
ASSESSING THE ENVIRONMENTAL CONSEQUENCES OF SATELLITE REENTRY: IMPACT ON OZONE LAYER DEPLETION
Raphael Eyiram Soglo, Ghana

SCREEN #18

12:45-12:55 IAC-25/A6/IPB/102172
SYSTEM VIEW ON SPACE SUSTAINABILITY SOLUTIONS
Kuang-Han Ke, Taiwan, China

13:05-13:15 IAC-25/A6/IPB/99865
DETECTION AND TRACKING OF SPACE OBJECTS AND DEBRIS USING PASSIVE RADAR
Daniel Finch, Australia

13:15-13:25 IAC-25/A6/IPB/95210
TOWARDS EFFECTIVE SPACE SITUATIONAL AWARENESS IN CISLUNAR SPACE: ORBITAL CHARACTERISATION AND ELECTRO-OPTICAL SENSOR DESIGN.
Nicolò Trabacchin, Italy

SCREEN #19

12:45-12:55 IAC-25/A6/IPB/96951
ATTITUDE DYNAMICS OF SMALL SATELLITES DEORBITED BY AN INFLATABLE BALLOON
Vladimir S. Aslanov, Russian Federation

13:05-13:15 IAC-25/A6/IPB/99888
RSO-SAM: A ZERO-SHOT SEGMENTATION FRAMEWORK FOR RESIDENT SPACE OBJECTS USING THE SEGMENT ANYTHING MODEL
Zhihao Zhang, China

13:15-13:25 IAC-25/A6/IPB/99825
PERIODIC DEDUCTION METHOD FOR LOW EARTH ORBIT SPACECRAFT BREAKUP DEBRIS POPULATION
Jing Yu, China

13:35-13:45 IAC-25/A6/IPB/100635
COLLISION RISK FROM SPACECRAFT BREAKUPS IN CISLUNAR SPACE: A CASE STUDY ON THE LUNAR GATEWAY
Aldo Tonnini, France

SCREEN #20

12:45-12:55 IAC-25/A6/IPB/102956
PROJECTIONS OF THE LUNAR DEBRIS ENVIRONMENT: LUNAR POPULATION AND LONG-TERM ORBIT MODELING
Patrick Kelly, United States

12:55-13:05 IAC-25/A6/IPB/102946
ANALYSIS OF SATELLITE PERFORMANCE REQUIREMENTS FOR ORBITAL SLOT MAINTENANCE
Pietro Russo, Italy

13:05-13:15 IAC-25/A6/IPB/100451
VERIFICATION AND VALIDATION OF AN OPTICAL CUBESAT PAYLOAD FOR STRATOSPHERIC AND ORBITAL MISSIONS
Lovejivan Sidhu, Canada

13:15-13:25 IAC-25/A6/IPB/99253
ACTIVE DEBRIS REMOVAL MISSION PLANNING: AN INTEGRATED DEEP REINFORCEMENT LEARNING AND GENETIC ALGORITHM APPROACH
Shuanghong Wu, China

SCREEN #22

13:05-13:15 IAC-25/B1/IPB/94834
MULTI-CITY DUST STORM FREQUENCY PREDICTION USING SATELLITE DATA AND ENVIRONMENTAL FEATURES
Reem Alshammari, Saudi Arabia

13:15-13:25 IAC-25/B1/IPB/100352
ADVANCING SCIENTIFIC COLLABORATION: A HYPERSPECTRAL DATA SHARING IN THE ARAB SATELLITE 813 MISSION
Mohammed Altamimi, United Arab Emirates

13:25-13:35 IAC-25/B1/IPB/95082
HARNESSING DEEP LEARNING TECHNIQUES AND OPEN-SOURCE DATASETS TO ANALYZE POSSIBLE EFFECTS OF FLOODING ON LAND-COVER, POPULATION AND CRITICAL FACILITIES OF THE NAM NGUM RIVER BASIN, LAO PDR
Sackdavong MANGKHASEUM, Japan

Wednesday 1 October 2025

SCREEN #23

13:05-13:15 IAC-25/B2/IPB/100994
DEVELOPING DISTRIBUTED ORBIT AND TIMING APPLICATION FOR CONSTELLATION SYNCHRONIZATION IN GNSS-DENIED ENVIRONMENTS
Kalia Crowder, United States

13:15-13:25 IAC-25/B2/IPB/100651
AEROMULE: ON-CHIP PROTECTION AGAINST ELECTROMAGNETIC INTERFERENCE IN SPACE: DEVELOPMENT AND FIRST RESULTS
Lucas Nöller, Germany

SCREEN #24

12:45-12:55 IAC-25/B2/IPB/102560
DESIGN AND EVALUATION OF A MINIATURE OPTICAL DOWNLINK TERMINAL FOR SECURE, HIGH-SPEED LEO-TO-GROUND COMMUNICATION
Yaagyanika Gehlot, India

13:05-13:15 IAC-25/B2/IPB/96996
BLOCKCHAIN FOR SECURE SATELLITE DATA INTEGRITY: A DECENTRALIZED APPROACH TO SPACE COMMUNICATION SECURITY
Toghrul Guluzade, Azerbaijan

13:15-13:25 IAC-25/B2/IPB/94524
CUBE1G: A FULL-HEMISPHERICAL, HIGH-SPEED OPTICAL COMMUNICATION TERMINAL FOR CUBESATS
Jorge Rosano, Germany

13:25-13:35 IAC-25/B2/IPB/96750
COOPERATIVE OPTICAL NAVIGATION FOR ASTEROID EXPLORATION
Yuan Zhang, China

13:35-13:45 IAC-25/B2/IPB/100595
SATELLITE COMPUTING NETWORKS FOR DATA-CENTRIC MASSIVE DEVICE MANAGEMENT
Florian Zeiger, Germany

SCREEN #25

12:45-12:55 IAC-25/B2/IPB/97700
ASSESSING NEURAL NETWORK PREDICTED AMPLITUDE SCINTILLATION FOR MISSING AUTUMN 2014 DATA AT UKM STATION USING SIMULATION
Nasser AL Hashimi, Oman

13:15-13:25 IAC-25/B2/IPB/103607
OPPORTUNITIES AND CHALLENGES IN FREE SPACE OPTICAL COMMUNICATION FOR SATELLITES
Sandeep Garg, India

13:25-13:35 IAC-25/B2/IPB/96228
PLASMA ANTENNAS FOR SATELLITE COMMUNICATIONS: ONGOING ACTIVITIES
Mirko Magarotto, Italy

13:35-13:45 IAC-25/B2/IPB/99963
EAGLE-1: QUALIFICATION, CALIBRATION, AND TESTING OF THE TRANSMITTER FOR EUROPE'S FIRST QKD SYSTEM
Gabriela Calistro Rivera, Germany

SCREEN #26

12:55-13:05 IAC-25/B2/IPB/95460
SATELLIGHT: WIRELESS LIFI CAN INTRA-SATELLITE COMMUNICATION IN A REALISTIC NANO-SATELLITE MODEL
Benjamin Palmer, Germany

13:15-13:25 IAC-25/B3/IPB/95338
THE DESIGN CONCEPT OF AN ULTRAHAPTIC GLOVE FOR EXTRAVEHICULAR SPACE SUITS
Dona Beatrix Marabe, The Philippines

SCREEN #27

12:55-13:05 IAC-25/B3/IPB/97542
DESIGN IDEAS AND ADVANTAGES OF LUNAR EXOSKELETON SPACESUIT
Raymond Yin, China

13:15-13:25 IAC-25/B4/IPB/98413
FEASIBILITY STUDY OF A MULTI-FUNCTIONAL CUBESAT FOR COMPREHENSIVE SOLAR OBSERVATIONS AND SPACE WEATHER MONITORING
Maria Mattiello, Italy

13:25-13:35 IAC-25/B4/IPB/95473
A LOW-COST CUBESAT MISSION FOR MONITORING SEA LEVEL RISE IN COASTAL REGIONS
Helen Haile, United Kingdom

13:35-13:45 IAC-25/B4/IPB/100098
SOUNDING BALLOONS AS A LOW-COST PLATFORM FOR CUBESAT SUBSYSTEM VALIDATION: INSIGHTS FROM THE CLOUDVIEW MISSIONS
Theo Fitch, United Kingdom

SCREEN #28

12:45-12:55 IAC-25/B4/IPB/102683
A FUEL-EFFICIENT APPROACH TO MULTI-TARGET VISITING FOR A GEO SENTINEL SATELLITE
Marco Rigamonti, Italy

12:55-13:05 IAC-25/B4/IPB/97960
DISTRIBUTED GAME-THEORETIC CONTROL FOR ATTITUDE ALIGNMENT IN LEO SATELLITES TO MAINTAIN LASER COMMUNICATION
Jiaqi Min, China

13:05-13:15 IAC-25/B4/IPB/98797
GAMALINK: AN ENABLER FOR AUTONOMOUS SATELLITE SWARMS AND ENHANCED COLLISION AVOIDANCE THROUGH INTER-SATELLITE COMMUNICATION
Bruno Correia, Portugal

13:15-13:25 IAC-25/B4/IPB/98840
PROMOTING SPACE SCIENCE THROUGH SMALL SATELLITES: INNOVATIONS, DISCOVERIES, AND FUTURE PROSPECTS
Huseyn Huseynov, Azerbaijan

13:25-13:35 IAC-25/B4/IPB/99707
SATPLOT: AN OPEN SOURCE SATELLITE MISSION VISUALISATION TOOL.
Robert Mearns, Australia

13:35-13:45 IAC-25/B4/IPB/102053
ARE PRESEISMIC IONOSPHERIC DISTURBANCES PRECURSORS OF EARTHQUAKES?—DESIGNING A CUBESAT MISSION FOR PHENOMENON VERIFICATION
Masashi Kamogawa, Japan

SCREEN #29

12:55-13:05 IAC-25/C1/IPB/103828
ANALYZING THE STABILITY AND QUALITY OF SERVICE OF A PNT SPACECRAFT CONSTELLATION IN AREOCENTRIC ORBIT PERTURBED BY GRAVITY FIELD HARMONIC AND THIRD BODY EFFECTS
Benjamin Kopriva, United States

SCREEN #30

12:45-12:55 **IAC-25/C1/IPB/97790**
CONTINGENCY TRAJECTORY DESIGN FOR THE LAUNCH-PHASE FAILURE OF CISLUNAR MISSIONS
Shuhao Cui, China

12:55-13:05 **IAC-25/C1/IPB/96731**
STOCHASTIC TRAJECTORY OPTIMIZATION FOR SATELLITE SWARM RECONFIGURATION VIA CONVEX OPTIMIZATION
LIXIANG WANG, China

13:05-13:15 **IAC-25/C1/IPB/96389**
DIMENSIONALITY REDUCTION IN ANGLES-ONLY\\ OPTIMAL ORBIT DETERMINATION
Edgar Kirchner, Germany

13:25-13:35 **IAC-25/C1/IPB/102774**
SAFE REINFORCEMENT LEARNING FOR AUTONOMOUS RENDEZVOUS AND PROXIMITY OPERATIONS: BALANCING SAFETY AND PERFORMANCE IN CUBESAT DOCKING MISSIONS
Valentina Becchetti, Italy

13:35-13:45 **IAC-25/C1/IPB/99239**
ENGINEERING EXCELLENCE ON OPTICAL HEAD SYSTEM DEVELOPMENT: A LEAP FOR LUNAR LANDINGS
Lee Spitler, Australia

SCREEN #31

12:45-12:55 **IAC-25/C1/IPB/96551**
ROBUST TLE OUTLIER DETECTION ALGORITHM WITH MANOEUVRE DETECTION CAPABILITIES
Louis Bruninx, Belgium

13:15-13:25 **IAC-25/C1/IPB/101909**
VISUAL-HAPTIC ASSISTED MOTION PLANNING FOR PRECISE RENDEZVOUS AND DOCKING OF SATELLITES
Rakesh Kumar Sahoo, India

13:25-13:35 **IAC-25/C1/IPB/97792**
PRECISE CONTROL OF SATELLITE RENDEZVOUS AND DOCKING MANEUVER USING PHYSICS-INFORMED MODEL PREDICTIVE CONTROLLER
Paridhi Choudhary, India

13:35-13:45 **IAC-25/C1/IPB/99002**
EFFICIENT LOW-THRUST TRAJECTORY DESIGN USING A MULTI-DNN FRAMEWORK
Ruida Xie, Australia

SCREEN #33

12:45-12:55 **IAC-25/C1/IPB/102207**
MONET: AN INDUSTRY-ORIENTED SOFTWARE SUITE FOR MISSION ANALYSIS
Simone Proietti, Italy

12:55-13:05 **IAC-25/C1/IPB/97832**
ROBUST TRAJECTORY OPTIMIZATION SOFTWARE USING DIFFERENTIAL DYNAMIC PROGRAMMING
Shun Kodama, Japan

13:25-13:35 **IAC-25/C1/IPB/103076**
A CONSTRAINED TASK ALLOCATION-BASED ALGORITHM FOR MULTI-SATELLITE COMMUNICATION ROUTING
Konstantinos Platanitis, United Kingdom

SCREEN #34

12:45-12:55 **IAC-25/C2/IPB/94786**
XGS SPACE WASTE RECYCLING STATION: A SUSTAINABLE RESOURCE MANUFACTURING IN ORBIT
Gülseren SAKARYA, Türkiye

13:15-13:25 **IAC-25/C2/IPB/102259**
EVALUATING THE STRUCTURAL INTEGRITY OF HAND-LAID BENZOXAZINE COMPOSITE JOINTS FOR HIGH-TEMPERATURE SOLID ROCKET MOTOR CASINGS
Aayush Thapa, Australia

13:25-13:35 **IAC-25/C2/IPB/96110**
ADVANCEMENTS IN ADDITIVE MANUFACTURING TECHNIQUES FOR AEROSPACE APPLICATIONS: A COMPREHENSIVE REVIEW ON PERFORMANCE-DRIVEN MATERIAL INNOVATIONS, PROCESS OPTIMIZATION, AND FUTURE PROSPECTS
Sriram Kumar, United States

SCREEN #35

12:45-12:55 **IAC-25/C2/IPB/99304**
IMPLEMENTATION OF A CLOUD-BASED ERP SYSTEM FOR OPTIMIZED INVENTORY AND SUPPLY MANAGEMENT IN SPACE STATIONS AND LONG-DURATION MISSIONS
Victor Raul Huaman Simeon, Peru

12:55-13:05 **IAC-25/C2/IPB/98119**
CHALLENGES AND FUTURE PROSPECTS OF INNOVATIVE MATERIALS AND TECHNOLOGIES IN SPACECRAFT DEVELOPMENT
Khanim Azimova, Azerbaijan

13:05-13:15 **IAC-25/C2/IPB/101727**
DETECTION OF MATERIAL LIFE IN SPACECRAFT USING AN AI-SUPPORTED GROUND CONTROL STATION
Muhammed Mustafa KARAKAŞ, Türkiye

13:15-13:25 **IAC-25/C2/IPB/94638**
IN-SPACE AUTOGENOUS WELDING OF ALUMINUM ALLOY MODULAR STRUCTURES FOR SPACE INFRASTRUCTURE CONSTRUCTION
Rogelio Morales, Venezuela

13:25-13:35 **IAC-25/C2/IPB/102815**
REDEFINING SATELLITE STRUCTURES: THE IMPACT OF ADVANCED MANUFACTURING, MATERIAL SELECTION, AND ON-ORBIT ASSEMBLY
Rumeysa Bağlan, Türkiye

13:35-13:45 **IAC-25/C2/IPB/97887**
MARIO-LAND: A MULTI ARM ROBOT FOR IN-ORBIT OPERATIONS AT LABORATORY FOR AUTONOMOUS NAVIGATION DEMONSTRATIONS
Praveen Elavazhagan, United Kingdom

SCREEN #36

12:45-12:55 **IAC-25/C2/IPB/103815**
THERMALLY ACTIVATED DEPLOYMENT OF SPACE STRUCTURES USING GRAPHENE-INFUSED SHAPE MEMORY POLYMER COMPOSITES
Vishrutha Thyagarajan, India

13:15-13:25 **IAC-25/C2/IPB/99260**
EVALUATING THE SURFACE QUALITY AND OPTICAL PERFORMANCE OF ADDITIVELY MANUFACTURED MIRRORS
Cheryl Chan, Australia

13:25-13:35 **IAC-25/C2/IPB/101258**
EXPERIMENTS ON MOLTEN REGOLITH EXTRUSION (MREX) UNDER VACUUM CONDITIONS
Simon Stapperfend, Germany

Wednesday 1 October 2025

13:35-13:45 IAC-25/C2/IPB/102502
DESIGN AND ANALYSIS OF A LIGHTWEIGHT DIFFERENTIAL-BAR-BASED SYSTEM FOR A FOUR-WHEEL ROVER
Damiano Carra, Italy

SCREEN #37

12:45-12:55 IAC-25/C2/IPB/102009
EVALUATION OF SIMULATION METHODS FOR FRACTURE DETECTION IN ROCKET FUSELAGES USING COMPUTER VISION.
Angélica Gutiérrez Sánchez, Mexico

13:15-13:25 IAC-25/C4/IPB/103785
GROUND TESTING OF HIGH-THRUST SEMI-CRYOGENIC ENGINE IN ISRO: MECHANICAL DESIGN CHALLENGES AND SOLUTIONS
Vivek S, India

13:25-13:35 IAC-25/C4/IPB/103826
EFFECTS OF SEEDED HYDROGEN ON ZIRCONIUM ALLOYS FOR THERMAL PROPULSION
Phylis Makurunje, United Kingdom

13:35-13:45 IAC-25/C4/IPB/95811
IMPACT OF ETHANOL DROPLET SIZE AND METHANE ADDITION ON THE COMBUSTION PERFORMANCE OF ETHANOL/LOX BIPROPELLANT SYSTEMS: INSIGHTS FROM REACTIVE MOLECULAR DYNAMICS SIMULATIONS
Rene Gonçalves, Brazil

SCREEN #38

13:05-13:15 IAC-25/C3/IPB/97651
TERRESTRIAL TECHNOLOGY TRANSFER TO SPACE, SOLAR PANEL DEVELOPMENT AT EXTRATERRESTRIAL POWER AND A REVIEW OF OUR SPACE FLIGHT HERITAGE IN 2025
Benjamin Koschnick, Australia

SCREEN #39

12:45-12:55 IAC-25/C4/IPB/97619
THERMAL SHROUD DESIGN FOR HALL-EFFECT THRUSTER THERMAL PERFORMANCE VERIFICATION TEST
Mustafa Turkmenoglu, Türkiye

13:15-13:25 IAC-25/C4/IPB/98219
GEOMETRICAL STRUCTURE DESIGN AND OPTIMIZATION ON AN AIR-AUGMENTED SOLID ROCKET COMBUSTOR
Zhaoyang Tian, China

13:35-13:45 IAC-25/C4/IPB/103504
ENHANCING IGNITION PERFORMANCE AND SELF-SUSTAINED COMBUSTION VIA WIRE VIBRATION IN A WATER–METAL MICROPROPULSION SYSTEM
Minwoo Han, Japan

SCREEN #40

12:45-12:55 IAC-25/C4/IPB/94400
CHARACTERIZATION OF BIOPOLYMERS FOR ALTERNATIVE PROPELLANTS IN MEDIUM-THRUST PROPULSION SYSTEMS
Carlos Alejandro Martínez Núñez, Mexico

12:55-13:05 IAC-25/C4/IPB/103108
SUPERMAGDRIVE: NEXT GENERATION PROPULSION FOR LARGER SPACECRAFT
Alex Chandler, United Kingdom

13:15-13:25 IAC-25/C4/IPB/103302
MODULAR AUTOMATED TEST EQUIPMENT FOR PROPULSION AND SATELLITE SUBSYSTEMS BASED ON NI COMPACTDAQ: A LOW-COST DATA ACQUISITION APPROACH
abderrahim Nabi, United Arab Emirates

13:25-13:35 IAC-25/C4/IPB/100283
GREEN PROPULSION TECHNOLOGIES FOR SUSTAINABLE SPACE OPERATION ADVANCEMENTS, APPLICATIONS, AND FUTURE PROSPECTS
Abdullah Algharrash, Saudi Arabia

13:35-13:45 IAC-25/C4/IPB/100110
QUANTUM SPACE THRUSTER
Han Shiang-Yi, Taiwan, China

SCREEN #41

12:45-12:55 IAC-25/C4/IPB/94305
WATERCUBE PROPULSION SYSTEM ENGINEERING MODEL MAIT CAMPAIGN AND FLIGHT MODEL DESIGN CDR
Francesco Marino, Italy

12:55-13:05 IAC-25/C4/IPB/98317
FEASIBILITY OF A SPRING-BASED SUSTAINABLE LAUNCH SYSTEM FOR SPACE EXPLORATION.
Romildo Genaro Silva Cuadros, Peru

13:35-13:45 IAC-25/C4/IPB/102913
COMPARATIVE ANALYSIS OF NUCLEAR THERMAL AND NUCLEAR ELECTRIC PROPULSION SYSTEMS FOR ENHANCED SPACE MISSIONS
Saroj Kumar, United States

SCREEN #42

12:45-12:55 IAC-25/C4/IPB/94417
SUSTAINABLE PROPULSION IN LOW EARTH ORBIT: ALGAE AND SEAWEED BASED BIOFUELS FOR SPACE EXPLORATION APPLICATIONS
Anchal Bhupal, India

12:55-13:05 IAC-25/C4/IPB/96668
SIMULATION OF PLASMA PROCESSES CAUSED BY ELECTROMAGNETIC FIELD OSCILLATIONS IN HALL ION SOURCES
Victoria Kulikova, Russian Federation

13:05-13:15 IAC-25/C4/IPB/95098
EXPERIMENTAL INVESTIGATION OF GREEN HYPERGOLIC PROPELLANTS FOR UPPER-STAGE PROPULSION: DROP TEST RESULTS AND PERFORMANCE ANALYSIS
Prakhar Jindal, The Netherlands

13:15-13:25 IAC-25/D1/IPB/103732
TOWARDS HIGH-FIDELITY EARTH IMAGING: AN INTEGRATED HARDWARE APPROACH TO MOTION COMPENSATION AND SUPER RESOLUTION
Ankur Singhai, India

13:35-13:45 IAC-25/D1/IPB/97134
FAILURE-TOLERANT AUTONOMOUS CONTROL METHOD FOR SPACECRAFT CLUSTERS: RESEARCH AND GROUND-BASED PARALLEL SYSTEM DESIGN
Xuyang Cao, China

SCREEN #43

12:45-12:55 IAC-25/D1/IPB/103097
MUSHROOMS: MODULAR UNITS FOR SPACECRAFT HARDWARE-IN-THE-LOOP ROBOTICS OPERATIONS AND ORBITAL MOTION SIMULATIONS
Konstantinos Platanitis, United Kingdom

Wednesday 1 October 2025

12:55-13:05 IAC-25/D1/IPB/103125
DEEP LEARNING AND REINFORCEMENT LEARNING APPLICATIONS FOR RE-ENTRY TRAJECTORY OPTIMIZATION
Paula Gutierrez, United Kingdom

13:05-13:15 IAC-25/D1/IPB/95587
TSN ETHERNET: A NEW STEP TOWARDS FULLY UNIFIED SATELLITE ON-BOARD COMMUNICATION NETWORKS?
Pierre BOAN, France

13:15-13:25 IAC-25/D1/IPB/96339
VOYAGER'S NEL PLATFORM ON ISS - THE NANORACKS EXTERNAL FACILITY
Michael Lewis, United States

13:35-13:45 IAC-25/D1/IPB/96438
A MODIFIED PROPORTIONAL NAVIGATION ALGORITHM FOR GEO AUTONOMOUS ROBOTIC IN-ORBIT SERVICING MISSION
Marco Sabatini, Italy

SCREEN #44

12:45-12:55 IAC-25/D1/IPB/100480
AUTONOMOUS TRAJECTORY PLANNING OF FREE-FLOATING SPACE MANIPULATORS: A DIVERSITY-ENHANCED EVOLUTIONARY REINFORCEMENT LEARNING APPROACH
Cong Yu, China

13:05-13:15 IAC-25/D2/IPB/101705
MITIGATION OF REENTRY BLACKOUT: CURRENT TECHNIQUES AND FUTURE DIRECTIONS
David Rivera-Lopez, Peru

13:15-13:25 IAC-25/D2/IPB/103753
IMPROVING SAFETY SYSTEM RELIABILITY THROUGH AUTONOMOUS NEUTRALIZATION FOR NEXT-GENERATION LAUNCH VEHICLES
Hernan Giannetta, Italy

13:25-13:35 IAC-25/D2/IPB/103871
DEVELOPMENT AND GROUND DEMONSTRATION OF A GREEN-PROPELLANT ORBITAL TRANSFER VEHICLE FOR REUSABLE IN-SPACE LOGISTICS
Myungbo Shim, Korea, Republic of

13:35-13:45 IAC-25/D2/IPB/94163
GEOCOSMIC GENERAL PLANETARY VEHICLE FOR NEAR SPACE INDUSTRIALIZATION
Denis Isaev, Belarus

SCREEN #45

12:45-12:55 IAC-25/D2/IPB/96141
MULTI-OBJECTIVE OPTIMIZATION OF REENTRY VEHICLE DESIGN: AERODYNAMICS, HEAT TRANSFER, AND STRUCTURAL DURABILITY
Arjun Dabas, India

12:55-13:05 IAC-25/D2/IPB/95162
STUDYING THE EFFECTS OF BUOYANCY ON A SEMI-RIGID VACUUM AIRSHIP IN THE MARTIAN ATMOSPHERE
Arjun Dabas, India

13:05-13:15 IAC-25/D4/IPB/96088
IMPACT OF EARTH-SUN ORBITAL VARIATIONS ON CLIMATE CHANGE AND MAGNETIC POLARITY OF EARTH
ASLIPINAR TAN, Türkiye

13:15-13:25 IAC-25/D4/IPB/103692
ASSESSING LUNAR RARE EARTH ELEMENT (REE) RESOURCES
Laszlo Kestay, United States

13:25-13:35 IAC-25/D4/IPB/102106
HARNESSING GEN Z'S VISION AND NAVIGATING THE FUTURE OF AEROSPACE
Vitale Diamandis, United States

SCREEN #46

12:45-12:55 IAC-25/D4/IPB/94095
HOOK TO THE STARS
Fidan Shiralizada, Azerbaijan

12:55-13:05 IAC-25/D4/IPB/102432
DIAMOND QUANTUM TECHNOLOGIES FOR SPACE APPLICATIONS IN MAGNETOMETRY, GEODESY: ASIF IRRADIATION CAMPAIGNS.
Monia Vadrucci, Italy

13:35-13:45 IAC-25/D5/IPB/95067
GROUND-BASED SATELLITE AND STAR PHOTOMETRY USING GAUSSIAN SPLATS
Kimmy Chang, United States

SCREEN #47

12:45-12:55 IAC-25/D5/IPB/102006
RISK ANALYSES OF MEGA-CONSTELLATIONS BASED ON PERCOLATION THEORY
Zongfu Luo, China

12:55-13:05 IAC-25/D5/IPB/94837
GALVANIZE FSO NETWORK TO ASSIST WITH RADIATION MONITORING AND BLOOD TRANSFUSIONS
Naomi McGill, United Kingdom

13:05-13:15 IAC-25/D5/IPB/101808
ENHANCING SPACECRAFT SAFETY: A REVIEW OF SPACECRAFT CONTROL SYSTEM FAILURES, THEIR IMPACT, AND FAULT-TOLERANT SOLUTIONS
Raja Munusamy, India

13:35-13:45 IAC-25/D5/IPB/100764
ENHANCING RESILIENCE IN SPACE SYSTEMS: A FUNCTIONAL DECOMPOSITION APPROACH
Rashi Jain, United States

SCREEN #48

13:35-13:45 IAC-25/E1/IPB/98725
ENABLING THE FUTURE OF THE SPACE LEGAL WORKFORCE
Ryan Scott, United States

SCREEN #49

12:45-12:55 IAC-25/E1/IPB/97667
INTEGRATING EARTH OBSERVATION INTO CLIMATE CHANGE EDUCATION
Ravil Mursalov, Azerbaijan

13:05-13:15 IAC-25/E1/IPB/100669
LEVERAGING GENERATIVE AI FOR SPACE EDUCATION AND PUBLIC ENGAGEMENT
Ayako Kurono, Japan

13:15-13:25 IAC-25/E1/IPB/100688
EMMA-CHAN LIGHT: A HANDS-ON EDUCATIONAL CUBESAT MODEL WITH MORSE CODE LED COMMUNICATION
Ayako Kurono, Japan

Wednesday 1 October 2025

13:25-13:35 IAC-25/E1/IPB/94685
EMPOWERING EDUCATION: IMPLEMENTING CANSAT COURSES FOR CHILDREN TO FOSTER EARLY ENGAGEMENT IN SPACE TECHNOLOGY
Avid Roman-Gonzalez, Peru

13:35-13:45 IAC-25/E1/IPB/103131
EMPOWERING THE NEXT GENERATION OF THE SPACE WORKFORCE THROUGH TARGETED SCHOLARSHIPS AND INDUSTRY INTERNSHIPS
Daniel Sors Raurell, Spain

SCREEN #50

13:05-13:15 IAC-25/E1/IPB/94430
COMBINING SATELLITE DATA AND PUBLIC SAFETY IN SPACE EDUCATION
Marcin Giza, Poland

13:15-13:25 IAC-25/E1/IPB/94345
INSPIRING ETHICAL MINDS: INTEGRATING SPACE EXPLORATION ETHICS INTO EARLY-STAGE EDUCATION
Winnie Tang, Australia

13:25-13:35 IAC-25/E1/IPB/94712
SUPPORTING PRIVATE SPACE COMPANIES AND DEVELOPING SPACE TECHNOLOGY EDUCATION
Cheulwoong Kim, Korea, Republic of

SCREEN #51

13:05-13:15 IAC-25/E1/IPB/102794
INTEGRATED TEACHING OF CHEMISTRY WITH SPACE TO SECONDARY SCHOOL STUDENTS
Gamza Yahyayeva, Azerbaijan

13:15-13:25 IAC-25/E1/IPB/94839
DEMOCRATIZING SPACE EDUCATION THROUGH GAMIFICATION
Shameer Zeeshan, Pakistan

13:25-13:35 IAC-25/E1/IPB/101457
COSMIC NARRATIVES: ARC CENTRE OF EXCELLENCE IN PLANTS FOR SPACE (P4S) INNOVATIONS IN COMMUNITY ENGAGEMENT IN SPACE RESEARCH
frazer thorpe, Australia

SCREEN #52

12:45-12:55 IAC-25/E3/IPB/95908
GREAT AMBITIONS BUT LACK OF REGULATION: THE CHALLENGES OF REGULATING NUCLEAR POWER SOURCES IN THE LIGHT OF TECHNOLOGICAL DEVELOPMENTS AND SAFETY REASONS IN OUTER SPACE
Zsófia Biró, Hungary

12:55-13:05 IAC-25/E3/IPB/101585
A LEGAL APPROACH SHAPING AUSTRALIAN POLICY FOR IN-SITU LUNAR MINING
Claire Wilson, Australia

13:05-13:15 IAC-25/E3/IPB/103650
FROM THE ANDES TO ORBIT: APPLYING CHILEAN LABOR STANDARDS TO SPACE EXPLORATION
Margarita Herrera, Chile

13:15-13:25 IAC-25/E3/IPB/98260
THE ITALIAN SPACE AGENCY AND THE MATTEI PLAN: A NEW FRONTIER FOR DIPLOMACY AND GLOBAL GOVERNANCE IN AFRICA
Giada Spinelli, Italy

13:25-13:35 IAC-25/E3/IPB/98928
UN SUMMIT OF THE FUTURE SPACE TECHNOLOGY SEMINAR OUTCOMES
Ari Eisenstat, United States

13:35-13:45 IAC-25/E3/IPB/96063
TRENDS IN SPACE POLICY, REGULATIONS AND ECONOMICS: THE SEARCH FOR NEW COMPETITIVENESS IN EUROPE, FROM THE EU TO THE CASE OF ITALY.
Luisa Santoro, Italy

SCREEN #53

12:45-12:55 IAC-25/E3/IPB/100477
THE HISTORICAL DEVELOPMENT OF SPACE ACTIVITIES AND GLOBALIZATION
Medeni Soysal, Türkiye

13:05-13:15 IAC-25/E5/IPB/94121
A NEW ERA OF SPACE: TECHNOLOGICAL, ETHICAL, AND GLOBAL PERSPECTIVES.
Erick Villa Okeyo, Kenya

13:35-13:45 IAC-25/E5/IPB/99910
DESIGN FOR LUNAR REGOLITH ARCHITECTURE REPAIRABILITY: LESSONS LEARNT FROM PRELIMINARY PARAMETRIC INVESTIGATIONS
Monika Stankiewicz, Australia

SCREEN #54

12:45-12:55 IAC-25/E5/IPB/100215
SPACE4OCEAN, AN INTERNATIONAL ALLIANCE BETWEEN THE SPACE SECTOR AND MARINE AND MARITIME STAKEHOLDERS FOR THE PROTECTION AND SUSTAINABLE USE OF THE OCEAN AND COASTAL AREAS
Selma CHERCHALI, France

13:05-13:15 IAC-25/E5/IPB/95076
MODULAR INTERLOCKING PANELS FOR LUNAR HABITATS
Maëlle Mathieu, Canada

13:15-13:25 IAC-25/E5/IPB/102037
EXPLORE TO REALIZE SUSTAINABLE FUTURE: JAXA'S SDGS STRATEGY AND INITIATIVES FOR PROMOTING INNOVATION TO SOLVE SOCIAL ISSUES
Ikuko Kuriyama, Japan

13:35-13:45 IAC-25/E5/IPB/96906
RESEARCH ON THE DESIGN OF ASTRONAUTS' WORK LOAD INDEX WARNING INTERFACE BASED ON MULTIVARIATE PHYSIOLOGICAL DATA UNDER THE HUMAN-BUILDING INTERACTION FRAMEWORK
XiangYu Zhang, China

SCREEN #55

13:25-13:35 IAC-25/E6/IPB/97282
IMPLEMENTING AGILE MANAGEMENT IN SPACE ROBOTICS UNIVERSITY PROJECT: THE ARDITO ROVER CASE STUDY
Gianmarco Polvani, Italy

13:35-13:45 IAC-25/E6/IPB/95805
CHALLENGES AND INCENTIVES IN DEVELOPING SUSTAINABLE COMMERCIAL SPACE PROJECTS: THE STRATEGIC ROLE OF PPPS
Alessandro Paravano, Italy

SCREEN #56

13:05-13:15 IAC-25/E6/IPB/95906
WHY SPACE COMPANIES SHOULD UNDERSTAND MORE ABOUT PLATFORM MODELS
Riccardo Bernocchi, Italy

12:45-12:55 IAC-25/E6/IPB/103644
NEUROMARKETING IN SPACE DEEP TECH: LEVERAGING EMOTIONAL AND COGNITIVE RESPONSES TO ACCELERATE TECH ADOPTION
Michele Rosari, Italy

13:15-13:25 IAC-25/E6/IPB/94054
LOW-COST OPEN-CIRCUIT SUBSONIC WIND TUNNEL: ACHIEVING BALANCE BETWEEN REPRODUCIBILITY, AFFORDABILITY, AND PERFORMANCE
Keri Arango, Mexico

13:25-13:35 IAC-25/E6/IPB/102114
ESTABLISHING AN AFRICAN SPACE FINANCE LAB: PIONEERING FINANCIAL MECHANISMS AND INVESTMENT STRATEGIES FOR THE CONTINENT'S SPACE SECTOR
Maheen Parbhoo, South Africa

SCREEN #57

12:45-12:55 IAC-25/E6/IPB/102146
BUILDING AN AFRICAN SPACE TECH FUND: CATALYSING INNOVATION AND INVESTMENT THROUGH PUBLIC-PRIVATE PARTNERSHIPS
Maheen Parbhoo, South Africa

13:15-13:25 IAC-25/E7/IPB/102898
CUSTOMARY BEHAVIOR IN SPACE: THE IMPLICATIONS OF JAMMING AND SPOOFING OF SMALL SATELLITES ON INTERNATIONAL LAW AND STATE PRACTICE
Christina Almonte, Canada

13:25-13:35 IAC-25/E7/IPB/102317
HOW SPACE DEBRIS IMPACTS THE IMPLEMENTATION OF IHL IN OUTER SPACE
Jacqueline Reichhold, Germany

13:35-13:45 IAC-25/E7/IPB/100968
ADDRESSING FRAGMENTED SPACE GOVERNANCE: ENFORCING APPROPRIATE AND EVOLVING STANDARDS FOR SPACE SAFETY
David Eagleson, United Kingdom

SCREEN #58

12:45-12:55 IAC-25/E7/IPB/102424
LIABILITY REGIMES AT THE INTERSECTION OF OUTER SPACE AND CYBER SPACE
Marie-Claire Najjar, Italy

13:25-13:35 IAC-25/E7/IPB/94288
ARMED CONFLICTS IN OUTER SPACE: INTERACTION BETWEEN SPECIAL REGIMES DURING INTERNATIONAL CRISES
Sima Moradinasab, Iran

13:15-13:25 IAC-25/E7/IPB/102191
PRIVATE SECTOR GROWTH AND SPACE LAW IN AFRICA: LEGAL CHALLENGES IN REGULATING COMMERCIAL SPACE ACTIVITIES
Beauler Wozhele, Zimbabwe

SCREEN #59

12:45-12:55 IAC-25/E11/IPB/96760
UNDERSTANDING THE GLOBAL SHIFT IN COMMERCIALIZATION IN LEO AND BEYOND WHAT IS THE USE OF COMMERCIALIZATION IN EXPLORATION AND WHAT ROLES DO AGENCIES PLAY
Kimal Hiralall, Australia

13:05-13:15 IAC-25/E11/IPB/102958
SUCCESSFUL INITIATIVES TO CONNECT AND INTERACT WITH EMERGING SPACE ECOSYSTEMS
Daniel Sors Raurell, Spain

13:15-13:25 IAC-25/E11/IPB/100472
K-STAR: A CATALYST FOR KUWAIT'S GROWING PRESENCE IN THE GLOBAL SPACE SECTOR
Dalia Alrudaini, Kuwait

13:35-13:45 IAC-25/E11/IPB/102179
EXPLORING THE AUSTRALIAN SPACE INDUSTRY CAPABILITY DATABASE: INITIAL FINDINGS AND VISUALIZATION
Li Qiao, Australia

SCREEN #60

12:45-12:55 IAC-25/E11/IPB/95597
GOVERNMENT AS AN INNOVATION CATALYST: THE ROLE OF GRANTS AND PRIZES IN EMERGING SPACE ECOSYSTEMS
Ioana Petrescu, Romania

13:05-13:15 IAC-25/E11/IPB/99502
SPINNING UP A SPACE ECONOMY: A DELIBERATE APPROACH TO SURPASS NASCENCY
Tim Parsons, Australia

13:15-13:25 IAC-25/E11/IPB/103122
THE ROLE AND CREATION OF DIRECTION IN GROWING AN EMERGING SPACE NATION
Luke Heffernan, Australia

13:35-13:45 IAC-25/E11/IPB/99164
SPACE SUSTAINABILITY: A CATALYST FOR SOCIO-ECONOMIC DEVELOPMENT IN EMERGING SPACE NATIONS
Michael Kio, United States

Thursday 2 October 2025

SCREEN #1

13:40-13:50 IAC-25/A1/IPB/96747
ENHANCING GRAVITY-LOADING AND MOBILITY IN COUNTERMEASURE SKINSUITS: A MULTI-PANEL PATTERNMAKING APPROACH FOR IVA APPLICATIONS.
Ruth Bunford, Australia

13:50-14:00 IAC-25/A1/IPB/94824
POSITIVE SPIN: SPECTROSCOPIC ANALYSIS OF IBUPROFEN DEGRADATION DUE TO HEAVY IONISING RADIATION EXPOSURE AND ITS IMPACT ON PHARMACEUTICAL VIABILITY IN FUTURE SPACE EXPLORATION AND HABITATION
Gordon Carroll, Australia

14:00-14:10 IAC-25/A1/IPB/102904
MICROBIAL RESILIENCE IN SPACE: ENGINEERING PROBIOTICS FOR ASTRONAUT HEALTH.
Ana Fernanda Bermúdez Monroy, Mexico

SCREEN #2

14:00-14:10 IAC-25/A1/IPB/97704
SPACE LIFE SCIENCES RESEARCH WITHIN THE AUSTRALIAN ANTARCTIC PROGRAM – SUPPORTING LONG DURATION SPACEFLIGHT
John Cherry, Australia

14:30-14:40 IAC-25/A1/IPB/97729
EVALUATION OF AUTONOMY-ENABLING SOLUTIONS FOR HANDHELD ULTRASOUND USE IN AN ANTARCTIC SPACEFLIGHT ANALOG
John Cherry, Australia

SCREEN #3

13:30-13:40 IAC-25/A1/IPB/102978
QUANTUM NEUROTECHNOLOGY FOR ASTRONAUT BRAIN HEALTH: ADVANCING COGNITIVE MONITORING AND ADAPTATION IN SPACEFLIGHT
Eugene Li, Australia

13:50-14:00 IAC-25/A1/IPB/96273
OLFACTORY ODYSSEY: COGNITIVE CONSEQUENCES IN ZERO-G
BVS Madhavi, India

SCREEN #4

14:40-14:50 IAC-25/A1/IPB/95665
OPERATIONS OF THE SPACE RADIOBIOLOGICAL EXPOSURE FACILITY ONBOARD THE CHINA SPACE STATION
Binquan Zhang, China

SCREEN #5

13:50-14:00 IAC-25/A2/IPB/103483
TITANS SPACE INDUSTRIES SPACEPLANE: A NOVEL PLATFORM FOR ORBITAL MICROGRAVITY RESEARCH
Neal Lachman, United States

14:00-14:10 IAC-25/A2/IPB/100626
INVESTIGATING THE EFFECTS OF CENTRIFUGAL FORCES ON THE POROSITY OF SOLDER JOINTS FORMED IN MICROGRAVITY
Devshi Perera, Canada

14:10-14:20 IAC-25/A2/IPB/98161
EFFECTS OF GRAVITY AND VACUUM CONDITIONS ON PROPERTIES OF 3D PRINTED PARTS BY FUSED DEPOSITION MODELING
Yanyan Zhao, Canada

14:20-14:30 IAC-25/A2/IPB/94575
RANDOM MOTION MACHINE FOR THE SIMULATION OF MICROGRAVITY CONDITIONS AND ITS APPLICATIONS IN SPACE TECHNOLOGY
Avid Roman-Gonzalez, Peru

SCREEN #7

13:30-13:40 IAC-25/A3/IPB/101454
BIO-INSPIRED FLIGHT FOR MARTIAN EXPLORATION
Nathan Widdup, Australia

13:40-13:50 IAC-25/A3/IPB/97632
PIONEERING AUTONOMOUS EARTH-BAGGING CONSTRUCTION FOR A SUSTAINABLE LUNAR FUTURE
Clyde Webster, Australia

14:00-14:10 IAC-25/A3/IPB/96764
MOTION PLANNING FOR LUNAR SURFACE PERSON TRACKING ROBOT VIA FLATNESS-BASED SAFE-MPC WITH VIRTUAL DISTURBANCES
Shengze Yuan, China

14:30-14:40 IAC-25/A3/IPB/99671
INNOVATIVE DEPLOYMENT AND OPTIMIZATION OF LUNAR FEMTOSATELLITE SWARMS FOR ADVANCED SPACE WEATHER MONITORING
Juan Salvador Palacios Bett, Peru

SCREEN #8

13:30-13:40 IAC-25/A3/IPB/100471
SAMPLE RETURN MISSIONS TO HYGIEA: A STRATEGIC RESOURCE HUB FOR DEEP SPACE EXPLORATION AND HUMAN PRESENCE BEYOND EARTH
Atharva Pawar, India

14:00-14:10 IAC-25/A3/IPB/103464
ONBOARD LUNAR ORBITER MISSION: A MINIATURISED RADIO OCCULTATION BASED PAYLOAD FOR LUNAR ATMOSPHERIC STUDY AND FUTURE PROSPECTS
Harshit Kumar, India

14:20-14:30 IAC-25/A3/IPB/98063
LUNAR VITALIS: UNLOCKING RESOURCES FOR SUSTAINED EXPLORATION
Gagana Y, India

14:40-14:50 IAC-25/A3/IPB/97770
RHEOLOGICAL LUNAR REGOLITH SIMULANTS
Léonie Gasteiner, Switzerland

SCREEN #9

13:30-13:40 IAC-25/A3/IPB/98790
ANALYSIS OF APPROACHES TO ENSURE REUSABILITY OF HEAT SHIELDING OF CARGO DESCENT VEHICLES RETURNING FROM THE MOON
Victor Leonov, Russian Federation

Thursday 2 October 2025

14:00-14:10 **IAC-25/A3/IPB/102927**
DEVELOPMENT AND CHARACTERIZATION OF MUCUNDU-01: A NOVEL MARTIAN REGOLITH SIMULANT DERIVED FROM VENEZUELAN ROCKS
Jesus Camacho, Venezuela

14:40-14:50 **IAC-25/A3/IPB/103824**
SWORB: SIMULATION-BASED MOTION PLANNING AND RECONFIGURABLE ARCHITECTURE WITH SPHERICAL SWARM ROBOTS
Takashi Mizuguchi, Japan

SCREEN #10

13:30-13:40 **IAC-25/A3/IPB/102220**
THE ROLE OF GROUND SEGMENT AS A SERVICE IN SUPPORTING LUNAR EXPLORATION
Giovanni Zanotti, Italy

14:40-14:50 **IAC-25/A3/IPB/103850**
A NOVEL COSMOLOGICAL MODEL: THE INTERSTELLAR HUB THEORY AND SOLAR LASI DYNAMICS - AN ALTERNATIVE TO DARK MATTER PARADIGMS
Mahinda Pathegama, Sri Lanka

SCREEN #11

14:20-14:30 **IAC-25/A3/IPB/103079**
SUPER-EFFICIENT UNMANNED AGRICULTURE FOR LUNAR COLONIZATION
Arda Kağan Menteş, Türkiye

14:30-14:40 **IAC-25/A4/IPB/100154**
THE ROLE OF CONSCIOUSNESS IN DEFINING REALITY: A PHILOSOPHICAL AND SCIENTIFIC INQUIRY
Khadija Bayramova, Azerbaijan

SCREEN #12

13:30-13:40 **IAC-25/A4/IPB/103175**
ARTIFICIAL HUMAN EVOLVED INTELLIGENCE VS. NATURALLY EVOLVED BIOLOGICAL INTELLIGENCE: INTERACTION BETWEEN THE TWO AND GAME THEORY
Samiksha Raviraja, United Kingdom

14:00-14:10 **IAC-25/A4/IPB/102255**
EARTH'S FIRST ENCOUNTER. WILL MAKING CONTACT STRENGTHEN HUMANITY OR CAUSE MORE HARM THAN GOOD, AND IF SO, WHO MAKES THE FIRST MOVE?
Ellie Fox, Australia

14:10-14:20 **IAC-25/A4/IPB/100861**
FIVE YEARS OF SETI AT THE INCOSMICON RESEARCH CENTER
Paolo Musso, Italy

SCREEN #13

14:40-14:50 **IAC-25/A5/IPB/98486**
"SUSTAINABLE HYDROPONIC FARMING FOR LONG DURATION SPACE MISSIONS: RESULTS FROM THE ANALOG ASTRONAUT TRAINING CENTER, EUROPE - AN ISOLATED LUNAR HABITAT SIMULATION
Iniya Pragati, India

13:30-13:40 **IAC-25/A5/IPB/103760**
FIELD SPECTROMETER MEASUREMENTS IN ANALOGUE SPACE ENVIRONMENTS: BRIDGING HUMAN FACTORS, ASTROBIOLOGY, AND PLANETOLOGY
Johanna Chevalier, France

13:40-13:50 **IAC-25/A5/IPB/99393**
A CASE STUDY FOR DEVELOPING A LUNAR RESEARCH OUTPOST FUNDED BY COMMERCIAL SCIENCE OPERATIONS.
Gabriel Houston, United States

13:50-14:00 **IAC-25/A5/IPB/103712**
ENHANCING MISSION LONGEVITY IN SPACE ROBOTICS: A RECONFIGURABLE 2U CUBESAT WITH HYBRID AERIAL-LEGGED LOCOMOTION
Alejandro José Agapito Quiñones, Peru

14:00-14:10 **IAC-25/A5/IPB/103699**
INTELLIGENT CONTROL SYSTEM FOR LIFE SUPPORT AND ENERGY MANAGEMENT IN MOONAL HABITATS USING TINYML AND DUAL MICROCONTROLERS
Julio Cesar Tello Rojas, Peru

14:10-14:20 **IAC-25/A5/IPB/103157**
SUSTAINABLE LUNAR MINING: EXPLORATION, EXTRACTION, AND FEASIBILITY ANALYSES
Yasin Yetgin, Türkiye

14:20-14:30 **IAC-25/A5/IPB/101695**
DESIGN PROPOSAL FOR AN ANALOG RESEARCH STATION IN THE PAMPAS DE LA JOYA DESERT, PERU
Rodrigo Martinez Chavez, Peru

14:30-14:40 **IAC-25/A5/IPB/94065**
CHARTING THE UNKNOWN: APPLYING AMUNDSEN'S ANTARCTIC MASTERCLASS TO MARS EXPLORATION
Erik Seedhouse, United States

SCREEN #14

13:30-13:40 **IAC-25/A5/IPB/98993**
VAPOR DEPOSITION OF ICY LUNAR REGOLITH USING THE SWINBURNE DUSTY THERMAL VACUUM CHAMBER
Daniel Ricardo, Australia

13:40-13:50 **IAC-25/A5/IPB/95868**
RECONSTRUCTION OF LUNAR GRAVITY ANOMALIES AND HETEROGENEOUS DENSITY DISTRIBUTION BASED ON OPTICAL GUIDANCE INFORMATION
Yuying Liang, China

13:50-14:00 **IAC-25/A5/IPB/103070**
NEUROMORPHIC AI FOR AUTONOMOUS SPACECRAFT: A LOW-POWER ALTERNATIVE FOR REAL-TIME DECISION-MAKING IN DEEP SPACE MISSIONS
Saira O. Williams, Costa Rica

14:00-14:10 **IAC-25/A5/IPB/103777**
TOWARDS EMBODIED ROBOTIC COACHING FOR SKILL TRAINING IN SPACEFLIGHT
Katia Bourahmoune, Australia

14:10-14:20 **IAC-25/A5/IPB/95166**
ENGINEERING A HABITABLE DOME FOR VENUSIAN ATMOSPHERE COLONISATION
Arjun Dabas, India

14:20-14:30 **IAC-25/A5/IPB/99485**
A TELEOPERATION PLANETARY SURFACE WALKING ROBOT BASED ON FORCE FEEDBACK HUMAN-ROBOT INTERACTION SYSTEM
Yizhuang Zhang, China

14:30-14:40 **IAC-25/A5/IPB/100664**
MODULAR WASTE RECYCLING AND MANUFACTURING SYSTEM ARCHITECTURE FOR THE MOON AND BEYOND
Lilly Etzenbach, United States

14:40-14:50 **IAC-25/A5/IPB/94586**
TRANSFORMATION AND ADAPTATION OF A HABITAT FOR PARASTRONAUTS : A PARASTRONAUT FEASIBILITY STUDY ON AN EXISTING SPACE ANALOGUE HABITAT AND ITS IMPLICATIONS FOR MARS HABITATS
Eleonore Poli, Switzerland

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SCREEN #15

13:30-13:40 IAC-25/A6/IPB/95059
ASTROBEAT 2: ADVANCING SPACE DEBRIS MITIGATION AND SPACECRAFT REPAIR TECHNOLOGIES
Leonardo Barilaro, Malta

14:00-14:10 IAC-25/A6/IPB/97911
LISA-ODISEE: A CUBESAT COMPATIBLE AND HYPER-REDUNDANT ROBOT FOR IN-ORBIT INSPECTION, SERVICING AND ASSEMBLY
Stefan Lobas, Germany

14:40-14:50 IAC-25/A6/IPB/102000
TUNA CAN STANDARD DEORBIT SYSTEM: A COST-EFFECTIVE SOLUTION FOR CUBESAT END-OF-LIFE DISPOSAL
Walaa Mahmoud, Egypt

SCREEN #16

13:40-13:50 IAC-25/A6/IPB/99300
STAR TRACKERS AS DUAL-USE SENSORS: OPTIMISATION FOR SIMULTANEOUS RESIDENT SPACE OBJECT DETECTION AND ATTITUDE DETERMINATION
Julian Guinane, Australia

SCREEN #17

13:30-13:40 IAC-25/A6/IPB/95762
RESEARCH ON SPATIAL NON-COOPERATIVE TARGET CAPTURE TRAJECTORY PLANNING METHOD BASED ON MULTI-STRATEGY PARALLELISM
Jinyu Zhang, China

13:40-13:50 IAC-25/A6/IPB/96851
PRACTICAL ORIGIN IDENTIFICATION OF ON-ORBIT SATELLITE FRAGMENTATION FROM IN-SITU SUB-MILLIMETER-SIZED DEBRIS MEASUREMENTS
Keijiro Hattori, Japan

14:30-14:40 IAC-25/A6/IPB/95842
INVESTIGATING ELECTRODYNAMIC TETHERS FOR SUSTAINABLE SPACE DEBRIS MITIGATION
David Rossa, Germany

SCREEN #19

13:40-13:50 IAC-25/A7/IPB/101379
STUDY OF STELLAR ACTIVITY AND STELLAR CYCLE OF M-DWARF HOST STARS USING K2 AND TESS OBSERVATIONS
Deepanshu Mathur, India

13:50-14:00 IAC-25/A7/IPB/100081
CONCEPT OF A SPACE TELESCOPE WITH A PETAL-SHAPED CORONOGRAPH FOR EXOPLANET STUDIES
Vera Mayorova, Russian Federation

14:10-14:20 IAC-25/A7/IPB/101503
MICROLENSING SEARCHES FOR EXOPLANETS
Henri Roviera, France

SCREEN #20

13:30-13:40 IAC-25/A7/IPB/101810
ORBITAL CHARACTERISTICS OF PERIODIC COMETS: ORBITAL PERIOD, INCLINATION, AND SEMI-MAJOR AXIS DISTRIBUTION
Atilla Muradli, Azerbaijan

14:00-14:10 IAC-25/B1/IPB/95434
INTEGRATION OF DRONE AND STRATOSPHERIC BALLOON PLATFORMS FOR AGRICULTURAL MONITORING AND SATELLITE DATA VALIDATION
Federico Toson, Italy

SCREEN #21

14:00-14:10 IAC-25/B1/IPB/95724
OPERATIONAL INNOVATIONS AND STRATEGIC PATHWAYS IN EARTH OBSERVATION FOR SUSTAINABILITY
Mirvari Alimova, Italy

13:30-13:40 IAC-25/B1/IPB/95903
THE TILT ADAPTER DESIGN FOR OPTICAL PAYLOAD IN THEOS-3 SMALL SATELLITE THAILAND.
Phuwamest Sonsiri, Thailand

13:50-14:00 IAC-25/B1/IPB/97068
DESIGN OF THE STRUCTURE OF AN EARTH OBSERVATION 3U CUBESAT FOR HYPERSPECTRAL IMAGING
Pratheek Ranjan Mitra, The Netherlands

14:10-14:20 IAC-25/B1/IPB/101115
A REVIEW OF CLASS-INCREMENTAL LEARNING FOR SAR DATA
Anonnya Ghosh, Australia

14:20-14:30 IAC-25/B1/IPB/100372
LIGHTWEIGHT ONBOARD REALTIME SHIP DETECTION IN SAR IMAGERY USING AN ADJUSTED NANODETPLUS FRAMEWORK
Pretha Sur, Australia

SCREEN #22

14:10-14:20 IAC-25/B2/IPB/96491
INVESTIGATING THE LIMITS OF FREE SPACE BELL-STATE SYNCHRONIZATION
Ákos Uzonyi, Hungary

14:20-14:30 IAC-25/B2/IPB/94714
SPACE QKD SYSTEMS AND NETWORKS: A REVIEW AND TECHNOLOGY LANDSCAPE
Tanya Scalia, Italy

14:30-14:40 IAC-25/B2/IPB/97495
INSTRUMENT AND OPERATION CONCEPT OF INTER-FREQUENCY BIAS CALIBRATION
Hee Seob Kim, Korea, Republic of

SCREEN #23

13:30-13:40 IAC-25/B2/IPB/103581
LEVERAGING GEO SATELLITE VIRTUALIZATION FOR ENHANCED REAL-TIME SECURITY IN HYBRID SATELLITE NETWORKS
Khurram Malik, Australia

14:00-14:10 IAC-25/B2/IPB/96834
COMMISSIONING THE SINGAPORE OPTICAL GROUND STATION FOR SPACE-BASED QUANTUM COMMUNICATION
Moritz Mihm, Singapore, Republic of

14:10-14:20 IAC-25/B2/IPB/102989
LEO CONSTELLATION ANALYSIS FOR EMERGENCY SERVICES IN EUROPE IN A 6G 3D NETWORK
Marten Berlin, Germany

14:30-14:40 IAC-25/B2/IPB/94514
SATELLITE COMMUNICATIONS AND IOT IN MEXICO AND LATIN AMERICA: PROPOSING A MODEL TOWARDS DIGITAL INCLUSION IN MARGINALIZED AREAS
Celia Chavez Virgen, Mexico

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SCREEN #24

13:40-13:50 IAC-25/B2/IPB/95258
COMPENSATING FOR DOPPLER SHIFT IN NANOSATELLITE COMMUNICATIONS: A CASE STUDY WITH REAL SIGNALS
NAHIRI LEILA, Morocco

13:30-13:40 IAC-25/B2/IPB/100305
RESEARCH AND DEVELOPMENT STATUS OF NICT'S HIGH-SPEED LASER COMMUNICATIONS MISSION, "HICALI" ON ENGINEERING TEST SATELLITE 9 (ETS-9)
Yasushi MUNEMASA, Japan

13:50-14:00 IAC-25/B2/IPB/99810
LUCAS: JAXA'S NEW OPTICAL DATA RELAY SYSTEM-THE RESULT OF ON-ORBIT TECHNOLOGY DEMONSTRATION AND ACHIEVED PERFORMANCE
Takamasa Itahashi, Japan

14:10-14:20 IAC-25/B2/IPB/94265
USE OF MODIFIED SUBMARINE CABLING IN SPACE ENVIRONMENTS: SOLUTIONS FOR TELECOMMUNICATIONS ON THE MOON
Axel Núñez Arzola, Mexico

14:40-14:50 IAC-25/B2/IPB/99841
TAIAHO OBSERVATORY: NEW ZEALAND CONTRIBUTIONS TO THE AUSTRALASIAN OPTICAL GROUND STATION NETWORK
Joseph Ashby, New Zealand

SCREEN #25

14:30-14:40 IAC-25/B3/IPB/103050
BRIDGING MIND AND MACHINE IN SPACE: QUANTUM NEUROTECH FOR HUMAN-ROBOT COLLABORATION
Eugene Li, Australia

14:40-14:50 IAC-25/B3/IPB/102939
INCLUSIVE DESIGN, ALL ASTRONAUTS AT THE HEART OF DESIGN - FUTURE-PROOFING HUMAN SPACEFLIGHT FOR ALL
Saira O. Williams, Costa Rica

SCREEN #26

13:50-14:00 IAC-25/B4/IPB/96203
INTELLIGENT OPTIMIZATION ALGORITHM FOR THE PAYLOAD LAYOUT OF SMALL SPACE DEBRIS REMOVAL SATELLITES CONSIDERING MULTIPLE CONSTRAINTS
Cai Yingkai, China

14:00-14:10 IAC-25/B4/IPB/96949
LOW-COST STANDARDIZED CUBESAT PLATFORM FOR BIOMEDICAL EXPERIMENTS
Youhua Ye, China

SCREEN #27

13:30-13:40 IAC-25/B4/IPB/100378
SYSTEMATIC INTEGRATION OF SAT813 SPACECRAFT SUBSYSTEMS: A COMPREHENSIVE OVERVIEW OF DESIGN AND INTEGRATION
Mohammed Altamimi, United Arab Emirates

14:30-14:40 IAC-25/B4/IPB/101863
UNISEC GLOBAL'S NANO-SATELLITE IOT CONSTELLATION PROGRAM BY INTERNATIONAL COLLABORATION: FROM ESTABLISHMENT TO PLANNED OPERATIONS
Maximilien Berthet, Japan

SCREEN #28

13:30-13:40 IAC-25/B4/IPB/101173
INTERSTELLAR SMALL SATELLITE STUDY WITH INSERTION INTO AN EXOPLANET ATMOSPHERE TO PERFORM COMPOSITION ANALYSIS
Howard Hall, United States

13:50-14:00 IAC-25/B5/IPB/97917
PREVENTION OF POLLUTION IN THE CASPIAN SEA AND ITS MAJOR INFLOWING RIVERS USING SAR TECHNOLOGY
Khadija Huseynli, Azerbaijan

14:10-14:20 IAC-25/B5/IPB/103274
ADVANCED ROCKET SIMULATION AND MISSION PREDICTION PLATFORM
Leman Safarli, Azerbaijan

14:20-14:30 IAC-25/B5/IPB/102224
SYNERGISING THE DATA-DRIVEN DIGITAL TWIN (D3T): PREDICTING THE REMAINING USEFUL LIFE (RUL) OF SPACECRAFT BATTERY MODULES
DAVE FURTADO, Australia

14:30-14:40 IAC-25/B5/IPB/94032
SPACE DATA APPLICATIONS IN MITIGATING ENVIRONMENTAL DEGRADATION AND RELATED DISASTERS IN THE SAHEL REGION OF AFRICA
Babagana BABAGANA, Nigeria

14:40-14:50 IAC-25/B5/IPB/98108
STUDY ON ENHANCEMENT OF TRANSMISSION PERFORMANCE OF LOW ORBIT SATELLITE INTERNET STAR-GROUND LINK BASED ON HYBRID PSO-SA
fei teng, China

SCREEN #29

13:30-13:40 IAC-25/B5/IPB/94267
EHECATL: ENVIRONMENTAL MONITORING NETWORK USING IOT AND AI TO FORECAST AIR QUALITY USING REMOTE SENSING.
Axel Núñez Arzola, Mexico

13:40-13:50 IAC-25/B5/IPB/96667
THE ANALYSIS OF SPACE DATA AND INNOVATIVE SOLUTIONS WITH BIG DATA AND DATA SCIENCE METHODS: DISCOVERY OF THE SECRETS OF THE UNIVERSE AND APPLICATIONS FOR SUSTAINABLE LIVING ON THE EARTH
Bextiyar Novruzov, Azerbaijan

13:50-14:00 IAC-25/B6/IPB/102438
A SPACE ROBOTICS DESIGN CHALLENGE IN A HIGH-FIDELITY VIRTUAL ENVIRONMENT
Alexandr Sein, United States

14:00-14:10 IAC-25/B6/IPB/99071
SCALABLE MULTI-TYPE, MULTI-SATELLITE SCHEDULING FOR HETEROGENEOUS CONSTELLATIONS
Harrison Steyn, Australia

14:20-14:30 IAC-25/B6/IPB/103334
AUTOMATING KA-BAND GROUND SEGMENT RESOURCE MANAGEMENT FOR LEO SATELLITES: ENHANCING COMMUNICATION ROBUSTNESS AND ADDRESSING CHALLENGES
Stefan-Vlad Tudor, Italy

14:30-14:40 IAC-25/B6/IPB/100232
SATELLITE PARAMETRIC ANALYSIS COMPUTING ENVIRONMENT (SPACE) - A RAPID ORBITAL AI VALIDATION PLATFORM.
Sam Hall, Australia

Thursday 2 October 2025

SCREEN #30

13:30-13:40 IAC-25/B6/IPB/94556
AGENTIC AI WORKFLOW ANALYSIS FOR A ROBOTIC DEBRIS REMOVAL MISSION
Javier Maldonado-Romo, Mexico

13:40-13:50 IAC-25/B6/IPB/102470
VOYAGER'S 'NANORACKS EXTERNAL LABORATORY (NEL)' - THE NEXT GENERATION PAYLOAD HOSTING PLATFORM ON THE ISS
Michael Lewis, United States

13:50-14:00 IAC-25/B6/IPB/97557
TRIGNN-DRL: A GRAPH REINFORCEMENT LEARNING-BASED METHOD OF INFORMATION DISSEMINATION FOR MEGA-CONSTELLATION NETWORKS
Haohua Niu, China

14:00-14:10 IAC-25/B6/IPB/102154
ANALYZING WEATHER IMPACT ON SIGNAL QUALITY OF S BAND GROUND STATION
SAIAH BEKKAR DJELLOUL SAIAH, Algeria

SCREEN #31

13:30-13:40 IAC-25/C1/IPB/102062
MULTI-OBJECTIVE OPTIMIZATION OF LUNAR NAVIGATION SATELLITE SYSTEM USING GENETIC ALGORITHM
Rameez Ahmed Malik, Australia

13:40-13:50 IAC-25/C1/IPB/96854
AN ANALYTICAL FRAMEWORK FOR HYBRID SPIRAL-ELLIPSE TRAJECTORIES UNDER ATMOSPHERIC DRAG
Kenta Nakajima, Japan

13:50-14:00 IAC-25/C1/IPB/96497
MODELLING AND ANALYSIS OF LOCAL TOROIDAL COORDINATES FOR LARGE-RANGE QUASI-PERIODIC RELATIVE MOTION WITHIN MEGA CONSTELLATION SATELLITES
Yun Xu, China

14:10-14:20 IAC-25/C1/IPB/103749
NONLINEAR CONTROL WITH FEEDBACK LINEARIZATION FOR ADCS IN 2U CUBESAT: LQR-BASED CONTROL STRATEGY
Raúl Gianmarco Chávez Chávez, Peru

14:40-14:50 IAC-25/C1/IPB/102631
HIGH-RESOLUTION IMAGING IN VLEO: PRELIMINARY MISSION ANALYSIS AND GNC DESIGN FOR THE HORUS MISSION
Andrea Jimmy Pacursa, Italy

SCREEN #32

14:20-14:30 IAC-25/C2/IPB/100846
BIOMIMETIC AERODYNAMIC ENHANCEMENTS AND AI INTEGRATION FOR ROCKET VEHICLE PERFORMANCE
Alejandro Hernandez Gonzalez, Mexico

SCREEN #33

14:00-14:10 IAC-25/C2/IPB/95463
BIO-BASED STRATEGIES FOR LUNAR CONSTRUCTION: EVALUATING SODIUM ALGINATE AS A SUSTAINABLE REGOLITH BINDER
Victoria de León, Mexico

SCREEN #34

14:00-14:10 IAC-25/C2/IPB/99185
ANALYTICAL BEHAVIOUR OF REGOLITH-RESIN-COMPOSITE (RRC) MATERIAL FOR LUNAR CONSTRUCTION
Tafsir Tafsirojjaman, Australia

SCREEN #36

14:30-14:40 IAC-25/C4/IPB/98117
REDUCED-ORDER MODELS FOR RADIATIVE HEAT LOADS ESTIMATION IN LIQUID ROCKET ENGINES
Marco Fabiani, Italy

SCREEN #37

13:30-13:40 IAC-25/C4/IPB/96699
SOLID HYDROCARBON PROPELLANTS FOR ELECTROTHERMAL PLASMA MICRO-THRUSTERS
Thimthana Lee, Australia

14:10-14:20 IAC-25/C4/IPB/98214
VALVE DESIGN FOR THE PRESSURIZATION SYSTEM OF LARGE LIQUID ROCKET
Hongwei Lou, China

14:20-14:30 IAC-25/C4/IPB/98195
POGO ANALYSIS AND ACCUMULATOR DESIGN FOR THE PR-2 LAUNCH VEHICLE
Hongwei Lou, China

SCREEN #38

13:30-13:40 IAC-25/C4/IPB/103809
DESIGN AND EXPERIMENTAL VALIDATION OF A MASS-EFFICIENT PANCAKE HYBRID ROCKET MOTOR WITH VORTEX-INDUCED FLOW FOR IN-SPACE APPLICATION
Beste Boybasi, Türkiye

13:40-13:50 IAC-25/C4/IPB/102942
OPTIMIZATION AND PERFORMANCE ANALYSIS OF LIQUID BIPROPELLANT INJECTORS FOR ADVANCED PROPULSION SYSTEMS
Mehmet Kemal Ergin, Türkiye

13:50-14:00 IAC-25/C4/IPB/103811
HYBRID ROCKET DEVELOPMENT WITH NYTROX BLENDS THROUGH REAL-GAS MODELING AND PLANNED HOT-FIRE TESTING FOR IN-SPACE APPLICATIONS
Mehmet Kemal Ergin, Türkiye

14:00-14:10 IAC-25/C4/IPB/102858
ADDITIVELY MANUFACTURED ABS/AL HYBRID ROCKET FUELS: INVESTIGATING ADVANCED GRAIN GEOMETRY EFFECTS ON COMBUSTION
Özgür Mert Küçük, Türkiye

SCREEN #39

13:30-13:40 IAC-25/C4/IPB/103721
STUDY ON THE INFLUENCE OF DIFFERENT METHANE INJECTION STRATEGIES ON THE COMBUSTION CHARACTERISTICS OF RBCC ENGINES
Hui Liu, China

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14:20-14:30 IAC-25/D1/IPB/96719
THE ONTOLOGICAL CHARACTERIZATION OF SYSTEM RESILIENCE, RELIABILITY, ROBUSTNESS, AND ANTI-FRAGILITY FOR USE IN SOCIO-TECHNICAL SYSTEMS
Michael Halvorson, United States

14:40-14:50 IAC-25/D1/IPB/103740
QUALIFICATION OF FLOW PROPORTIONING VALVE FOR DYNAMIC ENVIRONMENT
Manojkumar P, India

SCREEN #40

13:40-13:50 IAC-25/D1/IPB/103672
DEVELOPMENT OF A COMMERCIAL SPACE FOOD SYSTEM TO ENABLE LOW-EARTH-ORBIT (LEO) HABITABILITY
Zack Rosenthal, United States

13:50-14:00 IAC-25/D1/IPB/102393
OPTIMISING SPACE SYSTEMS CHANGE MANAGEMENT THROUGH MBSE
Kaylee Li, Australia

14:10-14:20 IAC-25/D2/IPB/96926
DESIGN AND VALIDATION OF A LOW-COST NAVIGATION SYSTEM FOR PRECISE LANDING POINTS OF ROCKET'S CORE STAGE
Jiuqi Liu, China

14:20-14:30 IAC-25/D2/IPB/96920
PRECISION LANDING POINT CONTROL TECHNOLOGY FOR ROCKET CORE STAGE
Yu Zhou, China

14:30-14:40 IAC-25/D2/IPB/95861
APPLICATION OF SYSTEMS ENGINEERING INNOVATION IN THE GNC TECHNOLOGY OF THE CONTROLLED RECOVERY FOR A REUSABLE LAUNCHER
Jian Kang, China

SCREEN #41

13:50-14:00 IAC-25/D2/IPB/95449
PRELIMINARY LIFE CYCLE ASSESSMENT AND ECO-DESIGN PROSPECTS FOR AUTOPHAGE LAUNCHERS: CASE STUDY OF THE COMBUSTIBLE FUSELAGE.
Martin Gros, France

13:30-13:40 IAC-25/D2/IPB/101267
SIMULATIONS OF MULTI-THRUSTER PLUME INTERACTIONS WITH LUNAR SURFACE FOR CHANDRAYAAN-3 LANDER
ANANT SINGHAL, India

14:00-14:10 IAC-25/D2/IPB/95559
TITAN: DEVELOPMENT OF A RESEARCH AND TEST CENTER
Antoine ARVEILLER, France

SCREEN #42

13:30-13:40 IAC-25/D3/IPB/95585
IN-SPACE ECONOMY IN 2025 – ANALYSIS AND DEEP DIVES INTO IN-SPACE TRANSPORTATION AND REENTRY VEHICLES
Erik Kulu, Estonia

14:00-14:10 IAC-25/D3/IPB/94982
THE LUNAR-MAGWAY: PHASE 0/A STUDY OF A SUSTAINABLE HIGH-SPEED TRANSPORTATION SYSTEM FOR LUNAR INFRASTRUCTURES
Denis Michael Acker, Germany

14:40-14:50 IAC-25/D3/IPB/94273
ADVANCING SPACE EXPLORATION THROUGH TECHNOLOGY: THE KENYAN PERSPECTIVE
Erick Villa Okeyo, Kenya

SCREEN #43

13:40-13:50 IAC-25/D3/IPB/103780
FROM COMPONENTS TO ECOSYSTEMS: BUILDING BLOCKS FOR SUSTAINABLE LUNAR INFRASTRUCTURE
Ekaterina Faber, Russian Federation

14:00-14:10 IAC-25/D3/IPB/95513
SPACE INFRASTRUCTURE WILL BE THE KEY DIFFERENTIATOR IN A COMMODITIZED SPACE ECONOMY
Dharshun Sridharan, Australia

SCREEN #44

13:30-13:40 IAC-25/D4/IPB/103784
THE ROLE OF OPEN SOURCE FOR LUNAR BASE 2042: PATHWAY TO GLOBAL INTEROPERABILITY
Ekaterina Faber, Russian Federation

13:40-13:50 IAC-25/D4/IPB/98915
TRANSFORMATIONAL ASTROFUTURES WORKSHOP
Ari Eisenstat, United States

14:20-14:30 IAC-25/D5/IPB/102907
ADVANCED TECHNOLOGIES FOR COLLISION AVOIDANCE IN OUTER SPACE : BRIDGING THE TECHNOLOGICAL DIVIDE AND ESTABLISHING MINIMUM STANDARDS
Upasana Dasgupta, India

SCREEN #45

13:50-14:00 IAC-25/D5/IPB/98606
DECENTRALIZED REAL-TIME INTRUSION DETECTION AND ADAPTIVE RESPONSE IN INTER-SATELLITE COMMUNICATIONS USING FEDERATED LEARNING AND DEEP REINFORCEMENT LEARNING
Amil Jamilov, Azerbaijan

14:20-14:30 IAC-25/D5/IPB/100983
SPACE SAFETY FOR THE MOON: EVALUATING SPACE WEATHER FORECAST SOLUTIONS FOR LUNAR EXPLORATION AND HABITABILITY
Enzo FERREC, France

14:40-14:50 IAC-25/D5/IPB/97447
CASE STUDIES ON SAFETY CRITICALITY REVIEW IN LAUNCH VEHICLE TEST INFRASTRUCTURE
EUNGWOO LEE, Korea, Republic of

SCREEN #46

13:30-13:40 IAC-25/D6/IPB/96441
IMPACT DISPERSION AREA ESTIMATION FOR STATE UNCERTAINTY USING NUMERICAL APPROXIMATION
Won-Gi Kim, Korea, Republic of

13:40-13:50 IAC-25/D6/IPB/96247
SECURITY AND SAFETY OF COMMERCIAL LAUNCH OPERATIONS IN RAPID PROTOTYPING ACTIVITIES
Paola Breda, Germany

13:50-14:00 IAC-25/D6/IPB/96301
INCAPACITY, DEATH AND INHERITANCE – SPACE AND SOCIETY
Gerard Basha, Australia

14:00-14:10 IAC-25/D6/IPB/99753
COSMOS :INTEGRATED PLATFORM FOR SUSTAINABLE SPACE TRAFFIC MANAGEMENT
Sungwoo Park, Korea, Republic of

Thursday 2 October 2025

SCREEN #47

13:30-13:40 IAC-25/D6/IPB/99130
RANSOMWARE THREATS IN SPACE MISSIONS: VULNERABILITIES AND PREVENTION STRATEGIES
Daniel Estephano Venturi Calero, Peru

13:40-13:50 IAC-25/D6/IPB/101809
ADVANCED FAULT-TOLERANT SPACECRAFT FLIGHT CONTROL SYSTEMS: A COMPARATIVE ANALYSIS OF ADAPTIVE AND NONLINEAR CONTROL TECHNIQUES
Raja Munusamy, India

13:50-14:00 IAC-25/D6/IPB/100980
GEO-BIO SYNERGISTIC SPACEPORT DESIGN
Devansh Bhatia, India

SCREEN #48

13:30-13:40 IAC-25/E1/IPB/94525
A DATA-DRIVEN APPROACH TO INCLUSION IN SPACE AND STEAM: WOMEN AND INDIGENOUS REPRESENTATION IN TLAXCALA, MEXICO
Celia Chavez Virgen, Mexico

13:50-14:00 IAC-25/E1/IPB/102760
SEEDS OF DISCOVERY: EXOLAB'S GLOBAL INQUIRY PEDAGOGY CONNECTING K-12 STUDENTS WITH SPACE RESEARCH
Theodore Tagami, United States

14:00-14:10 IAC-25/E1/IPB/101107
EMPOWERING THE NEXT GENERATION: THE IMPACT OF THE POLSA STUDENT COUNCIL ON POLAND'S SPACE ACADEMIA ECOSYSTEM (2020–2025)
Karol Kołacz, Poland

SCREEN #50

13:50-14:00 IAC-25/E2/IPB/100832
IMPLEMENTATION OF WINGLET STRUCTURES IN HIGH-POWER EXPERIMENTAL ROCKETS FOR THE NATIONAL MEETING OF SPACE RESEARCH AND EXPERIMENTATION (ENMICE) COMPETITION.
Alejandro Hernandez Gonzalez, Mexico

14:00-14:10 IAC-25/E2/IPB/96547
DESIGN, TEST, AND INTEGRATION OF A WIRELESS TELEMETRY AND CONTROL SYSTEM FOR COLLEGIATE LIQUID PROPULSION LAUNCH VEHICLES
Ashley Perez, United States

14:10-14:20 IAC-25/E2/IPB/100803
CANSAT MISSION: DESING, IMPLEMENTATION, AND REAL-TIME DATA COMMUNICATION FOR CONTROLLED DESCENT
Peter Perez, Peru

14:20-14:30 IAC-25/E2/IPB/102141
SUNFLOWER PROJECT: AUTONOMOUSLY ADAPTIVE THERMAL AND LIGHT CONTROL FOR SPACE AGRICULTURE IN STRATOSPHERIC CONDITIONS
Alice Maddalon, Italy

14:30-14:40 IAC-25/E2/IPB/97990
SPECIALISED ENGINEERING AND OPTIMISATION IN HIGH-POWERED STUDENT COMPETITION ROCKETRY
Lachlan Whitehead, Australia

14:40-14:50 IAC-25/E2/IPB/95242
DEVELOPMENT OF A 3U CUBESAT SATELLITE DISPENSER THROUGH ADDITIVE MANUFACTURING IN NEUQUÉN, ARGENTINA
Lucas Mitidieri, Argentina

SCREEN #51

14:20-14:30 IAC-25/E3/IPB/101270
LUNAR DEVELOPMENT COOPERATIVE: TRANSNATIONAL FRAMEWORK FOR SUSTAINABLE LUNAR ECONOMY
Michael Castle Miller, United States

14:30-14:40 IAC-25/E3/IPB/103492
BUILDING THE GROUND LAYER: LOCAL GOVERNMENT'S ROLE IN THE FUTURE OF SPACE POLICY AND INNOVATION
Jamara Green, United States

SCREEN #53

14:30-14:40 IAC-25/E5/IPB/101216
OFFWORLD.VOYAGE: A SPACE ANALOG RESEARCH PROJECT FOCUSING ON ECOLOGICAL SUSTAINABILITY & CLOSED LOOP SYSTEMS
Elizabeth Cole, United States

13:30-13:40 IAC-25/E4/IPB/103082
FROM ANALOG OBSERVATION TO DIGITAL PARTICIPATION: REMEMBERING OPERATION MOONWATCH TO ESTABLISH A PUBLIC ENGAGEMENT FRAMEWORK FOR WILDFIRE TRACKING
Audrey Medaino-Tardif, Canada

14:20-14:30 IAC-25/E5/IPB/94546
STAR ANALOG NAVIGATION DEVICE (SAND): A LOW-TECH BACK-UP NAVIGATION SYSTEM FOR FUTURE LUNAR MISSIONS
Harry Espiloy, United States

14:40-14:50 IAC-25/E5/IPB/97958
HAPTILE – HAPTIC ASSISTED PERFORMANCE FOR TACTILE INTERACTION IN LUNAR EVAS
Abir Belkhair, France

SCREEN #54

13:30-13:40 IAC-25/E5/IPB/96360
IMPLEMENTING INDIGENOUS KNOWLEDGES-INFORMED EXTENDED REALITY TO ENHANCE PSYCHOLOGICAL RESILIENCE IN SPACE R&D AND EARTH-BASED APPLICATIONS: A FOLLOW-UP STUDY
Anay Ashwin, Australia

SCREEN #55

13:30-13:40 IAC-25/E6/IPB/103790
OPEN INNOVATION FOR SUSTAINABILITY AND INCLUSION: ACCELERATING GENDER-INFORMED SPACE VENTURES IN LATIN AMERICA.
Natalí Vigil Martinez, Mexico

14:40-14:50 IAC-25/E6/IPB/103189
NO-FAULT LIABILITY INSURANCE: A MARKET-DRIVEN SOLUTION FOR RISK AND INVESTMENT STABILITY IN SPACE
Kenza Tarek, Canada

SCREEN #56

14:10-14:20 IAC-25/E9/IPB/103512
SPACE TRAFFIC MANAGEMENT 3.0: A NEW SPACE AGE IN TIME OF GEO-POLITICAL TENSIONS
Katja Grünfeld, Slovenia

13:40-13:50 IAC-25/E9/IPB/97394
THE ROLE OF SATELLITE CONSTELLATIONS IN GLOBAL DIGITALIZATION: CHALLENGES AND OPPORTUNITIES FOR A CONNECTED SOCIETY
Sebastian Tello Adame, Mexico

13:50-14:00 IAC-25/E9/IPB/98845
CONSEQUENCES OF CYBERATTACKS ON COLLISION AVOIDANCE MECHANISMS
Mark Sturza, United States

14:00-14:10 IAC-25/E9/IPB/99489
REVITALISING THE DUTY TO CONSULT UNDER ARTICLE IX OST : STRENGTHENING EXISTING LAW TO FACILITATE ACTIVE DEBRIS REMOVAL
Mila Spence, United Kingdom

14:40-14:50 IAC-25/E9/IPB/94510
A CRIME IS A CRIME: ENSURING LEGAL CONSISTENCY ACROSS THE COSMOS
Arti Sangar, Australia

SCREEN #57

13:30-13:40 IAC-25/E9/IPB/98627
SOS! SAVE OUR SATELLITE: A SPACE DEBRIS REMEDIATION ARCHITECTURE FOR LOW EARTH ORBIT
Charlotte Houser, United States

13:40-13:50 IAC-25/E10/IPB/101653
ESTABLISHMENT OF A COMMUNICATION PROTOCOL WITH BRAZILIAN GOVERNMENT AGENCIES FOR DISASTER MANAGEMENT CAUSED BY POTENCIALLY HARZADOUS OBJECTS FROM SPACE: A SMALL STEP TOWARDS A PLANETARY DEFENSE INITIATIVE
ANA LUCIA PEGETTI, Brazil

13:50-14:00 IAC-25/E10/IPB/101131
SOUTHERN HEMISPHERE ASTEROID RADAR PROGRAM (SHARP)
Shinji Horiuchi, Australia

SCREEN #59

13:30-13:40 IAC-25/E11/IPB/93989
FOSTERING A SUSTAINABLE SPACE ECOSYSTEM IN BRAZIL: INSIGHTS FROM MILITARY AND COMMERCIAL INTEGRATION
Bruno Nunes Vaz, Brazil

Friday 3 October 2025

SCREEN #6

13:35-13:45 IAC-25/A3/IPB/97538
MARS LIGHTHOUSE: AN INTEGRATED SUSTAINABLE MARS EXPLORATION SYSTEM BASED ON CO_2 COMPRESSED ENERGY STORAGE AND INTELLIGENT NAVIGATION
Zihan Yin, China

SCREEN #7

13:05-13:15 IAC-25/A3/IPB/99666
PRELIMINARY DESIGN AND MANUFACTURE OF PLANETARY EXPLORATION ROVERS BASED ON MISSION SCENARIOS
JeongWon Park, Korea, Republic of

SCREEN #8

13:05-13:15 IAC-25/A3/IPB/99665
DEVELOPMENT OF 2-WHEEL ROVER TEST MODEL FOR LUNAR CAVE EXPLORATION
Janghyun Bae, Korea, Republic of

13:35-13:45 IAC-25/A3/IPB/103073
MARS LINK: MULTI-LAYERED MARS EXPLORATION FRAMEWORK TO SUPPORT HUMAN SETTLEMENT AND RESOURCE UTILIZATION
Saeed Vahdani, Iran

SCREEN #10

13:15-13:25 IAC-25/A3/IPB/99556
INTERPLANETARY TRAJECTORY STUDY AND SPACE TRAJECTORY DEMONSTRATOR (STD 1.0) DEVELOPMENT FOR DEEP SPACE EXPLORATION
SangRyool LEE, Korea, Republic of

13:35-13:45 IAC-25/A3/IPB/97857
THE INITIAL STUDY OF KOREAN MARS DRONE CONCEPT FOR MARS EXPLORATION
Deog-Kwan Kim, Korea, Republic of

SCREEN #11

13:05-13:15 IAC-25/A3/IPB/101305
ADVANCED PLANETARY PROTECTION MEASURES FOR MARS AND BEYOND
Dasuni Hewawasam, Sri Lanka

SCREEN #12

13:35-13:45 IAC-25/A3/IPB/94636
MANAR GATE: ILLUMINATING THE FUTURE OF SUSTAINABLE LUNAR EXPLORATION
Raghad Nedal Al-Issa, Jordan

SCREEN #13

13:25-13:35 IAC-25/A6/IPB/99319
PREDICTIVE FRAMEWORK FOR SPACE DEBRIS TRAJECTORY FORECASTING AND COLLISION AVOIDANCE
Aidan Correa, Australia

SCREEN #14

13:35-13:45 IAC-25/A6/IPB/102877
MATHEMATICAL MODELING OF MULTIPLE-ARM FREE-FLOATING SPACE ROBOT FOR SPACE TARGET DETUMBLING
Gabriel Rodrigues, Brazil

SCREEN #16

12:45-12:55 IAC-25/A6/IPB/102452
GENETIC ALGORITHM-BASED DESIGN OPTIMIZATION OF 3D DRAG SAILS
Aza Elyamani, Egypt

SCREEN #17

13:15-13:25 IAC-25/A6/IPB/102342
INSTITUTIONALIZING PROACTIVE DEBRIS MITIGATION: POLICY AND TECHNOLOGICAL IMPERATIVES FOR EMBEDDING PMD (POST MISSION DISPOSAL) DEVICES IN ROCKET SYSTEMS
Masaaki Kawamura, Japan

SCREEN #20

13:15-13:25 IAC-25/B1/IPB/98238
ELASTIC TIME SLOT COMPACT SCHEDULING METHOD FOR MULTI-TYPE OBSERVATION TASKS IN LARGE-SCALE SATELLITE CONSTELLATIONS
Peiran Mu, China

SCREEN #21

13:15-13:25 IAC-25/B1/IPB/101094
EVALUATING THE FEASIBILITY OF SOFTWARE-EMULATED HIGH-SPEED SYNCHRONOUS COMMUNICATION FOR ONBOARD SATELLITE SYSTEMS USING COTS HARDWARE
David Woodside, Singapore, Republic of

13:25-13:35 IAC-25/B1/IPB/99705
PROCESSING SATELLITE IMAGES FOR REMOTE SENSING OF EARTH'S SURFACE LOCATED OBJECTS
Yashar Hajiyev, Azerbaijan

SCREEN #24

12:45-12:55 IAC-25/B2/IPB/99118
MITIGATING SPOOFING ATTACKS IN METEOROLOGICAL NANOSATELLITE TELEMETRY: A ROS-GAZEBO SIMULATION APPROACH
Daniel Estephano Venturi Calero, Peru

SCREEN #25

13:25-13:35 IAC-25/B3/IPB/101345
THE ROLE OF MODULAR SPACE STATIONS IN THE FUTURE OF HUMAN SPACEFLIGHT
Dasuni Hewawasam, Sri Lanka

SCREEN #26

13:25-13:35 **IAC-25/B4/IPB/101997**
A MULTI-STAGE DEEP NEURAL NETWORK APPROACH FOR ANGULAR POSE ESTIMATION IN NANOSATELLITE CAPTURE.
Daniel Pagliaricci, Brazil

SCREEN #27

12:45-12:55 **IAC-25/B4/IPB/101032**
EVOLVABLE BIO-COMPUTATIONAL SWARMS: A PARADIGM SHIFT IN AUTONOMOUS DEEP SPACE EXPLORATION
Devansh Bhatia, India

13:35-13:45 **IAC-25/B5/IPB/101735**
DATA-DRIVEN ASSISTIVE ROBOTICS IN NURSING CARE FOR ANALOG MISSION APPLICATION (DARNAA)
Joannes Paulus Hernandez, United States

SCREEN #29

13:15-13:25 **IAC-25/B6/IPB/97502**
A TEMPORAL UNCERTAINTY-ORIENTED MISSION PLANNING METHOD FOR AUTONOMOUS DEEP SPACE PROBES
Shizhen Li, China

SCREEN #31

13:35-13:45 **IAC-25/C1/IPB/94151**
AN ANALYTICAL GEOMETRIC APPROACH FOR DETERMINING SATELLITE OCCULTATION EVENTS
Vladislav Zubko, Russian Federation

SCREEN #32

13:15-13:25 **IAC-25/C2/IPB/100947**
DESIGN OF MONOLITHIC IMAGER PAYLOAD MOUNT WITH TARGETED MODAL AND DAMPING CHARACTERISTICS OBTAINED BY METAL LATTICE STRUCTURES AND UNFUSED ALSI10MG METAL POWDER USING SLM
Victor Soh, Singapore, Republic of

SCREEN #33

12:45-12:55 **IAC-25/C2/IPB/103735**
HYBRID MULTILAYER THERMAL INSULATION DESIGN FOR LUNAR MICRO ROVERS BASED ON SILICA AEROGEL
Jeremy Hanks Reyes Huaman, Peru

SCREEN #34

13:15-13:25 **IAC-25/C2/IPB/101344**
SELF-HEALING MATERIALS FOR SPACECRAFT AND PLANETARY HABITATS: ENHANCING DURABILITY AND LONGEVITY
Dasuni Hewawasam, Sri Lanka

SCREEN #36

13:25-13:35 **IAC-25/C3/IPB/98816**
BATTERY PACK LIFETIME TESTING CAMPAIGNS FOR MICROSATELLITES
Abhishek Risbud, Canada

SCREEN #37

13:35-13:45 **IAC-25/C4/IPB/101706**
ATMOSPHERE-BREATHING ELECTRIC PROPULSION (ABEP) TO EXTEND SPACECRAFT LIFESPAN IN VERY-LOW EARTH ORBITS (VLEOS)
Rivaldo Carlos Duran-Aquino, Peru

SCREEN #41

13:25-13:35 **IAC-25/D1/IPB/102331**
AUTOMATING RELIABILITY ESTIMATIONS FOR INTEGRATED CIRCUITS DURING COMMERCIAL SPACEFLIGHT
Keerthana Srinivasan, Canada

SCREEN #42

12:45-12:55 **IAC-25/D1/IPB/98332**
IMPLEMENTING MODEL-BASED DESIGN REVIEWS—LESSONS LEARNED FROM THE FIRESAT NOVA PROJECT
Jerry Sellers, United States

SCREEN #45

12:45-12:55 **IAC-25/E1/IPB/99402**
GROW YOUR FOOD! USING 'SENSORY PLAY' IN SPACE-BASED EDUCATIONAL OUTREACH TO UNDERSTAND CHILDREN'S EATING BEHAVIOURS
Julia Low, Australia

SCREEN #46

13:35-13:45 **IAC-25/E1/IPB/103814**
DESIGN AND DEVELOPMENT OF A LOW-COST SEMI-AUTONOMOUS LUNAR ROVER AS AN EDUCATIONAL PLATFORM FOR SPACE SYSTEMS TRAINING
Fidel Castro Suazo, Peru

SCREEN #47

12:45-12:55 **IAC-25/E1/IPB/94779**
BRIDGING THE GAP IN SPACE EDUCATION AND OUTREACH: A COMPARATIVE ANALYSIS OF URBAN AND RURAL SCHOOLS IN KENYA
Dennis nganga, Kenya

SCREEN #48

12:45-12:55 **IAC-25/E1/IPB/95605**
SPACE AWARENESS IN SMART TOURISM EVOLUTION
Giacomo Primo Sciortino, Italy

13:25-13:35 **IAC-25/E3/IPB/103048**
ITALY'S LEADERSHIP IN LONG-TERM SUSTAINABILITY OF OUTER SPACE: POLICY, INNOVATION, INTERNATIONAL COOPERATION AND CAPACITY-BUILDING FOR EMERGING SPACE NATIONS
Luna Panei, Italy

Friday 3 October 2025

SCREEN #49

12:55-13:05 IAC-25/E3/IPB/96883
LAW REFORM TO CONSIDER SPACE SCIENCES AS AN OPTIONAL SUBJECT IN UPPER SECONDARY EDUCATION LEVELS IN THE STATE OF OAXACA-MEXICO
Mónica Ortiz Álvarez, United Kingdom

13:35-13:45 IAC-25/E6/IPB/103710
FOURTH SPACES: INNOVATING PUBLIC ENGAGEMENT TO UNLOCK INCLUSIVE SPACE BUSINESS MODELS
reetunjai dutta, India

SCREEN #50

12:45-12:55 IAC-25/E6/IPB/103715
A BILATERAL SPACE INDUSTRY START UP COOPERATION FRAMEWORK: AUSTRALIAN AND EUROPEAN SPACE SECTOR PARTNERSHIPS
Isobel Haddow, Australia

SCREEN #52

12:55-13:05 IAC-25/E7/IPB/103172
NO-FAULT LIABILITY INSURANCE & SPACE SUSTAINABILITY: A MARKET-DRIVEN LEGAL MECHANISM FOR RISK MITIGATION
Kenza Tarek, Canada

13:05-13:15 IAC-25/E7/IPB/100774
THE ONGOING WORK OF THE WORKING GROUP ON THE STATUS AND APPLICATION OF THE FIVE UNITED NATIONS TREATIES ON OUTER SPACE OF THE COPUOS LEGAL SUBCOMMITTEE ON THE IMPLEMENTATION OF ARTICLE XI OF THE OUTER SPACE TREATY
Franziska Knur, Germany

12:45-12:55 IAC-25/E7/IPB/100051
REGULATORY CONSIDERATIONS OF LAGRANGE POINTS FOR TIMES OF CONFLICT
Thomas Green, Australia

SCREEN #53

13:25-13:35 IAC-25/E9/IPB/102993
IMPLEMENTATION OF A SIEM FOR THE PROTECTION OF CONFIDENTIAL INFORMATION IN SPACE INDUSTRIES
Frank Raul Quintana Quispe, Peru

SCREEN #54

12:45-12:55 IAC-25/E9/IPB/95188
ORBITAL TERRORISM - LOW-COST FEASIBLE SCENARIOS AND THREAT ASSESSMENTS
Erik Kulu, Estonia

13:35-13:45 IAC-25/E11/IPB/103422
SATELLITE OBSERVATION TECHNIQUES AS PART OF AN EMISSION TRADING SCHEME: REVIEW OF THE AUSTRALIAN CARBON CREDITS SCHEME AND EMERGING GOVERNANCE TECHNIQUES
Thomas Green, Australia

SCREEN #56

13:05-13:15 IAC-25/E11/IPB/94881
IRELAND'S SPACE ODYSSEY - THE JOURNEY AND AMBITION OF IRELAND'S SPACE SECTOR
Ulrike Nostitz, Ireland

6 Technical Papers by Symposium

Technical Papers as of September 2025.
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

September 29 2025, 15:30 — Room C4.11

Co-Chair(s): Jancy C. McPhee, National Aeronautics and Space Administration (NASA), Johnson Space Center, United States; Alain Maillet, MEDES - IMPS, France;

IAC-25.A1.1.2
VIRTUAL REALITY AND ARTIFICIAL INTELLIGENCE AS PSYCHOLOGICAL COUNTERMEASURES FOR LONELINESS IN SPACE AND OTHER ISOLATED AND CONFINED ENVIRONMENTS.
Ms. Jennifer Sharp, Charles Sturt University, Bathurst, Australia;

IAC-25.A1.1.3
TRUST IN EXTREME ENVIRONMENTS: INSIGHTS FROM A SIMULATED LUNAR MISSION
Ms. Lauren Fell, Queensland University of Technology, Kenmore, Australia;

IAC-25.A1.1.4
SIMULATING CIRCADIAN RHYTHM DISRUPTIONS AND COGNITIVE PERFORMANCE ON ASTRONAUTS USING MACHINE LEARNING MODELS
Mr. Raahil Sheikh, Chandigarh University, Mumbai, India;

IAC-25.A1.1.5
SPACE CROP PRODUCTION AND STRESS MITIGATION: ANALYZING HUMAN FACTORS FOR SUSTAINABLE LONG-DURATION HABITATION
Dr. Keith Crisman, Department of Space Studies, University of North Dakota, Grand Forks, United States;

IAC-25.A1.1.6
DETECTING POSSIBLE STRESS SIGNS ON EVA OPERATIONS VIA MOTOR BEHAVIOUR ASSESSMENT
Mr. Giuseppe Scavo, CNAM (National Conservatory of Arts and Crafts), Paris, France;

IAC-25.A1.1.7
INVESTIGATION OF HEART ACTIVITY ON SUBJECTIVE TIME PERCEPTION
Mr. Bartłomiej Adamczyk, AGH University of Krakow, Złota, Poland;

IAC-25.A1.1.8 (unconfirmed)
NEURO2FLIGHT-THE INTERACTION OF HYPOXIA AND WEIGHTLESSNESS ON NEUROCOGNITIVE PERFORMANCE
Ms. Constance Badali, German Sports University Cologne, Cologne, Germany;

A1.2. Human Physiology in Space

September 30 2025, 10:15 — Room C4.11

Co-Chair(s): Alain Maillet, MEDES - IMPS, France;

IAC-25.A1.2.1
ASSESSMENT OF HUMAN RETINAL ARTERIAL AND VENOUS BLOOD FLOW RESPONSES TO PASSIVE HEATING AND HEATED EXERCISE
Dr. Harrison Caddy, The University of Western Australia (UWA), Perth, Australia;

IAC-25.A1.2.4 (unconfirmed)
A COMPUTER-VISION MODEL FOR MEASURING FAT FRACTION CHANGES IN SPACE RESEARCH
Dr. Vienna Tran, The University of Adelaide, Adelaide, Australia;

IAC-25.A1.2.5
IMPACT OF SIMULATED MICROGRAVITY ON FOOD BEHAVIOR AND ENERGY BALANCE: PRESENTATION OF THE BRACE BEDREST STUDY
Dr. Audrey Bergouignan, Centre National de La Recherche Scientifique (CNRS), Strasbourg, France;

IAC-25.A1.2.6 (unconfirmed)
THERE ARE RUMOURS: MICROGRAVITY MAKES YOU SMARTER
Prof. Dr. Stefan Schneider, German Sports University Cologne, Köln, Germany;

IAC-25.A1.2.7 (unconfirmed)
OIL-BASED LYMPHATIC MASSAGE IN SPACE: TECHNIQUES AND CHALLENGES IN MICROGRAVITY ENVIRONMENTS
Ms. Maiko Kato, Tokyo, Japan;

IAC-25.A1.2.8
COOLFLY: ENHANCING CARDIOVASCULAR RESILIENCE IN DYNAMIC GRAVITY ENVIRONMENTS
Dr. Tomas Bothe, Charité Universitätsmedizin Berlin, Berlin, Germany;

A1.3. Medical Care for Humans in Space

September 30 2025, 15:00 — Room C4.11

Co-Chair(s): Jancy C. McPhee, National Aeronautics and Space Administration (NASA), Johnson Space Center, United States;

IAC-25.A1.3.1
ICG IN SPACE: AI-ENHANCED CONTINUOUS CUFFLESS BLOOD PRESSURE MONITORING FOR MICROGRAVITY MISSIONS
Dr. Tomas Bothe, Charité Universitätsmedizin Berlin, Berlin, Germany;

IAC-25.A1.3.2
EXPERIENCE AND PROSPECTS OF THE BIOIMPEDANCE ANALYSIS APPLICATION IN SPACE MEDICINE
Dr. Galina Vassilieva, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-25.A1.3.3
NEXT-GENERATION HEMOSTASIS: SYNTHETIC HEMORRHAGE CONTROL SOLUTIONS FOR LONG-DURATION SPACEFLIGHT
Mr. Tugcag DUMLUPINAR, INPE - National Institute for Space Research, Sao Paulo, Brazil; Dr. Marvic Alcantara, Basco, Batanes, Thevv vPhilippines;

IAC-25.A1.3.4
DRUG PREDICTION FOR SPACEFLIGHT-INDUCED IMMUNE DYSREGULATION FROM THE INSPIRATION4 MISSION
Mr. Anurag Sakharkar, New York-Presbyterian Hospital / Weill Cornell Medical Center, Saskatoon, Canada;

IAC-25.A1.3.6
INTERVENTIONAL RADIOLOGY IN SPACE, A NEW AND PROMISING CURE
Dr. Farah Cadour, University of Toronto, Toronto, Canada; Dr. Guillaume Braye, Valenciennes, France;

IAC-25.A1.3.7
PUPILLOMETRY IN A GYRO SIMULATOR DURING THE LUNAR ANALOG COLONY 1 MISSION.
Ms. Julia Bańcik, AGH University of Krakow, Pszenno, Poland;

IAC-25.A1.3.8
INVESTIGATION OF SPINAL ANESTHESIA DYNAMICS IN SIMULATED MICROGRAVITY
Mr. Adrian Tabari, University of British Columbia, Vancouver, Canada;

IAC-25.A1.3.9
A COMPREHENSIVE SPACE MEDICINE PROGRAM TO MEET THE EVOLVING NEEDS OF HUMAN SPACEFLIGHT
Dr. Kris Lehnhardt, University of Texas Health Science Center at Houston, Houston, TX, United States;

IAC-25.A1.3.10
INNOVATIVE MEDICAL CARE SOLUTIONS WITH ORALLY DISSOLVABLE NANOSTRIPS FOR SPACE MISSIONS
Dr. Gülseren SAKARYA, Ministry of Industry and Technology of Türkiye, Istanbul, Türkiye;

IAC-25.A1.3.11
INSITE: A BIOPRINTING SYSTEM FOR FULL-THICKNESS SKIN WOUND REPAIR ON EARTH AND IN SPACE
Mr. Sushant Singh, University of Toronto, Toronto, Canada;

IAC-25.A1.3.12
PROOF-OF-CONCEPT AUTONOMOUS WEARABLE ULTRASOUND PLATFORM FOR ENHANCED MEDICAL IMAGING IN SPACE MISSIONS
Dr. Maria Antico, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Brisbane, Australia;

IAC-25.A1.3.13
SPATIAL CONSIDERATIONS FOR EMERGENCY SURGICAL CARE (ESC) IN LUNAR MISSIONS : DESIGN OF TRAINING ANALOGUES AND SIMULATION FOR LUNAR HEALTH MAINTENANCE FACILITY (HMF)
Mr. Souktik Bhattacherjee, University of Adelaide, Adelaide, Australia;

IAC-25.A1.3.14
SUSTAINING HUMAN HEALTH IN SPACEFLIGHT - ETHICAL CHALLENGES
Dr. SIDDHARTH RAJPUT, International Space University (ISU)/ University of South Australia, Neutral Bay, Australia;

A1.4. Medicine in Space and Extreme Environments

October 1 2025, 15:00 — Room C4.11

Rapporteur(s): Alain Maillet, MEDES - IMPS, France;

IAC-25.A1.4.1
U.S. AND AUSTRALIAN RESEARCHERS TEAM TO TEST NEW PHYSICAL AND MENTAL HEALTH TECHNOLOGIES FOR SAFEGUARDING THE HEALTH OF ANTARCTIC EXPEDITIONERS AND ASTRONAUTS
Dr. Rihana Bokhari, Center for Space Medicine, Baylor College of Medicine, Houston, United States;

IAC-25.A1.4.2
THE AUSTRALIAN ANTARCTIC SPACE ANALOGUE – A MEDICAL MODEL FOR LONG DURATION SPACEFLIGHT
Dr. John Cherry, Australian Antarctic Division, Kingston, Australia;

IAC-25.A1.4.3
EFFECTS OF SPACE ADAPTATION SYNDROME AND STUDY OF BIOPHYSICAL CHANGES IN ANALOGOUS ASTRONAUTS DURING A SIMULATION MISSION TO MARS: IMPLICATIONS FOR ASTRONAUT HEALTH ON SPACE MISSIONS.
Ms. Diana Karen Hernández Araujo, Universidad de Valle de México Campus Coyoacán, Mexico City, Mexico;

IAC-25.A1.4.4
THE CORNELL AEROSPACE MEDICINE BIOBANK: INCREASING ACCESSIBILITY TO HUMAN SPACE MEDICINE SAMPLES AND ENABLING A COLLABORATIVE, MULTI-OMIC SPACE MEDICINE RESEARCH ECOSYSTEM.
Mr. Jeremy Wain Hirschberg, New York-Presbyterian Hospital / Weill Cornell Medical Center, New York City, United States;

IAC-25.A1.4.5
ASTRONAUTS' HEALTH AMONG THE STARS: CHALLENGES AND SOLUTIONS IN SPACE MEDICINE
Ms. Ivy Mayor, Space Generation Advisory Council (SGAC), Stockholm, Sweden;

IAC-25.A1.4.6
DEVELOPMENT OF THE NEW ZEALAND SPACE HEALTH RESEARCH NETWORK
Dr. Lisa Brown, University of Auckland, Auckland, New Zealand;

IAC-25.A1.4.7
FEMALE ADAPTATIONS TO MICROGRAVITY AND EXTREME ENVIRONMENTS: IMPLICATIONS FOR AEROSPACE MEDICINE AND HUMAN SPACEFLIGHT.
Ms. Dorely Medina Leal, ITESM, Nayarit, Mexico;

IAC-25.A1.4.8
MODELING OF HUMAN THERMAL AND VASCULAR RESPONSES CONSIDERING VARIABLE PHYSIOLOGY AND ENVIRONMENTS
Ms. Maddie Haas, Texas A&M University, College Station, United States;

IAC-25.A1.4.9
HUMAN AND ENVIRONMENTAL RESEARCH MATRIX FOR EXPLORATION OF SPACE (HERMES) PROJECT
Mr. Jimmy Wu, Baylor College of Medicine, Houston, United States;

IAC-25.A1.4.10
RESEARCHER'S GUIDE TO DATA ANALYSIS FROM THE COMMERCIAL SPACEFLIGHT BIOMEDICAL RESEARCH PROGRAM ENHANCED EXPLORATION PLATFORMS AND ANALOG DEFINITION (EXPAND)
Mr. Jimmy Wu, Baylor College of Medicine, Houston, United States;

IAC-25.A1.4.11
SPACE-BASED STEM CELL RESEARCH AND ITS POTENTIAL FOR TRANSFORMING EARTHBOUND CELLULAR THERAPIES
Ms. Fay Ghani, Mayo Clinic, Jacksonville, United States;

IAC-25.A1.4.12
THE EFFECT OF ISOLATION AND HYPODYNAMIA ON THE HEMOSTASIS STATE IN TEST SUBJECTS DURING A 1-YEAR ISOLATION (SIRIUS-23 EXPERIMENT)
Mr. Ivan Vasilev, Institute of Biomedical Problems (IBMP), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

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

October 2 2025, 10:15 — Room C4.11

Co-Chair(s): Fathi Karouia, NASA Ames Research Center, United States;

IAC-25.A1.5.1
START1: MODULAR PAYLOAD TO FACILITATE GROUND-BASED GALACTIC COSMIC RAY RESEARCH
Ms. Hadia Mahmood, University of Toronto, Mississauga, Canada;

IAC-25.A1.5.2
IDENTIFYING BIOMARKERS FOR SUSCEPTIBILITY TO HIGH-LET RADIATION-INDUCED CARCINOGENESIS
Ms. Rina Choudhary, University of Delhi, Jaipur, India;

IAC-25.A1.5.3
LIDAL: MORE THAN 5 YEARS OF RADIATION MONITORING IN ISS-COLUMBUS INCLUDING TOF MEASUREMENTS AND SPES EFFECTS IN THE ISS
Prof. Livio Narici, University of Rome - Tor Vergata, Rome, Italy;

IAC-25.A1.5.5
RADIATION-INDUCED NEUROINFLAMMATORY AND SYNAPTIC PLASTICITY ALTERATIONS IN THE TRIGEMINAL PATHWAY: IMPLICATIONS FOR HUMAN SPACEFLIGHT
Dr. Cyrine Ben Dhaou, Shreveport, United States;

IAC-25.A1.5.6
EVALUATING AQUATIC BRYOPHYTES AS RADIATION-RESISTANT BIOFILTERS FOR SPACE HABITATS: THE MOSS ON MARS PROJECT
Dr. Chiara Amitrano, University of Naples "Federico II", Napoli, Italy;

IAC-25.A1.5.7
RADIATION SHIELDING STRATEGIES FOR LUNAR ACTIVITIES: INSIGHTS FROM REGOLITH BAG UTILIZATION
Mr. Seiichiro Tanaka, Hazama Ando Corporation, Tsukuba-City, Japan;

IAC-25.A1.5.8
MODELLING HUMAN RADIATION EXPOSURE IN SPACE USING ELECTRICITY TRANSMISSION NETWORKS AND SUBSTATION ENVIRONMENTS
Mr. King Kumire, University of South Africa - UNISA, Aylesford, United Kingdom;

IAC-25.A1.5.9
``MOLECULARDNA": A SIMULATION PLATFORM FOR MODELLING THE INDUCTION OF DNA DAMAGE AND EARLY STAGE BIOLOGICAL RESPONSE OF CELLULAR SYSTEMS FROM IONISING/ SPACE RADIATION
Dr. Jeremy Brown, Swinburne University of Technology, Hawthorn, Australia;

IAC-25.A1.5.10
GUARDING ASTRONAUTS: PROTECTING AGAINST SOLAR PARTICLE EVENTS IN SPACE EXPLORATION
Ms. Carlotta Achille, Fondazione E. Amaldi, Rome, Italy;

A1.6. Advancements in Astrobiology and Space Exploration

October 2 2025, 15:00 — Room C4.11

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-25.A1.6.1
SINGLE CELL HETEROGENEITY OF SLOW GROWING MICROBIAL POPULATIONS INFLUENCES PREDICTIONS OF PLANETARY HABITABILITY
Dr. Devan Nisson, NASA Ames Research Center, Moffett Field, United States;

IAC-25.A1.6.3
MINERAL-DRIVEN PROTOCELL FORMATION IN HYDROTHERMAL VENT ANALOGUES: IMPLICATIONS FOR EARLY LIFE AND ICY WORLD EXPLORATION
Ms. Selene Cannelli, Tokyo Institute of Technology, Shinagawa, Tokyo, Japan;

IAC-25.A1.6.4
MICROBES IN SPACE: FRIENDS OR FOES IN THE JOURNEY TO LONG-TERM SPACE HABITATION
Ms. Katherinne Herrera-Jordan, Verne Technologies S.A., Guatemala, Guatemala;

IAC-25.A1.6.6
BIOENGINEERED MICROBIAL TERRAFORMING: ETHICAL AND PRACTICAL CONSIDERATIONS
Ms. Samiksha Raviraja, Airbus Defence and Space, Hitchin, United Kingdom;

IAC-25.A1.6.7
EFFICIENCY OF M9 MEDIUM IN THE ISOLATION OF BACTERIA FROM THE LAVA FIELD OF THE PARACUTIN-SAPICHU VOLCANIC SYSTEM
Ms. Katya Hassel Vázquez Rodríguez, Guanajuato, Mexico;

A1.7. Life Support, habitats and EVA Systems

October 3 2025, 10:15 — Room C4.11

Co-Chair(s): Gisela Detrell, Technical University of Munich (TUM), Germany; Lucie Poulet, Université Clermont Auvergne (UCA), France;

IAC-25.A1.7.1
SELF-SUSTAINING LUNAR OPERATIONS: ECLSS WITH INTEGRATED ISRU STRATEGIES FOR THE DIANA BASE
Mr. Prishit Modi, Stuttgart, Germany;

IAC-25.A1.7.2
OUTLOOK ON RESEARCH ON LIFE SUPPORT SYSTEMS TOGETHER WITH DIGITAL TWIN MODELLING
Mr. Christian Mayer, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-25.A1.7.3
ALGAE-BASED LIFE SUPPORT FOR SPACE
Mr. Dennis Terry Trevino, Department of Space Studies, University of North Dakota, San Francisco, United States;

IAC-25.A1.7.4
GROWING FOOD WITHOUT LIGHT, A 'SWISS ARMY KNIFE'- STYLE YEAST AND THE FUTURE OF SPACE EXPLORATION
Dr. Philip Bell, MicroBioGen Pty Ltd, Macquarie Park, Australia;

IAC-25.A1.7.5
MORPHO-ANATOMICAL AND BIOCHEMICAL RESPONSES OF GREEN AND RED SALANOVA® LETTUCE TO HIGH-LET RADIATION EXPOSURE FOR SPACE CULTIVATION
Dr. Sara De Francesco, University of Naples "Federico II", Portici, Italy;

IAC-25.A1.7.6
WIRELESS AND AUTONOMOUS MODULAR AGRICULTURAL SYSTEM FOR MICROGREENS IN EXTREME ENVIRONMENTS: ADVANCING LIFE SUPPORT FOR SPACE EXPLORATION
Mr. Subhrajit Barua, Space Generation Advisory Council (SGAC), St. Petersburg, Russian Federation;

IAC-25.A1.7.7
DIGITAL AGRICULTURAL STRATEGIES AND AI FOR ASTRONAUT FOOD SELF-SUFFICIENCY IN SPACE EXPLORATION
Prof. Dr. Sigfredo Fuentes, University of Melbourne, Parkville, Australia;

IAC-25.A1.7.8
DESIGN OF A RESCUE SYSTEM FOR LUNAR EVA EMERGENCY TRANSPORT
Ms. Kaylee Li, Space Generation Advisory Council (SGAC), Sydney, Australia; Ms. Shreya Ballolli, VIT Bhopal University, Bengaluru, India;

IAC-25.A1.7.9
UTILITY OF A NEXT GENERATION SPACE ANTIMICROBIAL: ASSESSING MICROBIAL POPULATIONS AND THEIR REDUCTION ACROSS TWO ISS MISSIONS
Ms. Olivia Jessop, Boeing, Brisbane, Australia;

IAC-25.A1.7.10
ISPACESUIT: INTELLIGENT SPACESUIT FOR ENHANCED THERMAL AND MOISTURE MANAGEMENT
Prof. Dahua SHOU, Hong Kong Polytechnic University, Kowloon, Hong Kong SAR, China;

A1.8. Biology in Space

October 3 2025, 13:45 — Room C4.11

Co-Chair(s): Fathi Karouia, NASA Ames Research Center, United States; Jancy C. McPhee, National Aeronautics and Space Administration (NASA), Johnson Space Center, United States;
Rapporteur(s): Matthew Gilliham, The University of Adelaide, Australia; Jenny Mortimer, The University of Adelaide, Australia;

IAC-25.A1.8.2
EVALUATION OF THE IMPACT OF INDEPENDENT IN-SPACE TESTING OF PAYLOADS FOR ENHANCING RELIABILITY OF BIOLOGY CUBESAT MISSIONS
Prof. Marcos Díaz, University of Chile, Santiago, Chile;

IAC-25.A1.8.3
WORMS IN SPACE: A LOW-COST, COMPACT PLATFORM SUPPORTING BIOLOGICAL EXPERIMENTS
Mr. Sedat Izcan, University of Nottingham, Nottingham, United Kingdom;

IAC-25.A1.8.4
CAMBRIAN DEFENCE & SPACE SUBORBITAL FLIGHT: MICROGRAVITY RESEARCH ON DLR SOUNDING ROCKET, LAUNCHED BY SWEDISH SPACE CORPORATION, TO INVESTIGATE VIABILITY OF ESCHERICHIA COLI K12, SACCHAROMYCES BOULARDII SACCHAROMYCES CEREVISIAE POST LAUNCH
Ms. Tiffany Sharp, Seacombe Heights, Australia;

IAC-25.A1.8.5
COMPUTER VISION ENABLED ANALYSIS OF MEDICAGO TRUNCATULA IN MICROGRAVITY AND CLASSROOMS AROUND THE WORLD (EXOLAB 11 ON THE ISS)
Mr. Gilbert Cauthorn, Department of Space Studies, University of North Dakota, Osaka, Japan;

IAC-25.A1.8.6
SCIENCE ENTERPRISE TO INFORM EXPLORATION LIMITS (SENTINEL): THE VALUE OF TISSUE CHIPS IN SPACEFLIGHT
Dr. Rihana Bokhari, Center for Space Medicine, Baylor College of Medicine, Houston, United States;

IAC-25.A1.8.7
HYPOTHETICAL LOC GENES AS BIOMARKERS OF SPACEFLIGHT ADAPTATION: A COMPARATIVE STUDY FROM ISS, SUBORBITAL, AND EARTH-BASED EXPERIMENTS
Dr. Cihan TAŞTAN, Üsküdar University, İstanbul, Türkiye; Ms. Beyza AYDIN, Üsküdar University, Istanbul, Türkiye;

IAC-25.A1.8.8
MICROGRAVITY INDUCES DIFFERENTIAL RESPONSE TO RHINOVIRUS INFECTION IN LUNG CELLS
Ms. Michaela Smith, University of Technology Sydney (UTS), Sydney, Australia;

IAC-25.A1.8.9
MICROGRAVITY REGULATES ENDOTHELIAL CELL INFLAMMATION AND PYROPTOSIS THROUGH METABOLIC TURNOVER MEDIATED BY THE SIRT3-PDH-NLRP3 SIGNALING PATHWAY
Dr. Min Jiang, Chinese PLA General Hospital, Beijing, China;

IAC-25.A1.8.10
PROTEIN CRYSTALLIZATION IN MICROGRAVITY: A SYSTEMATIC REVIEW AND DATA-DRIVEN COMPARATIVE ANALYSIS WITH EARTH-BASED STUDIES
Mr. RAVITEJA DUGGINENI, Adelaide, Australia;

IAC-25.A1.8.11
INTEGRATIVE MULTI-OMICS ANALYSIS OF SPACEFLIGHT-INDUCED PHYSIOLOGICAL ADAPTATIONS: INSIGHTS FROM ASTRONAUTS, THE SOMA INITIATIVE, AND IN-FLIGHT EXPERIMENTS
Dr. JangKeun Kim, New York-Presbyterian Hospital / Weill Cornell Medical Center, New York, United States;

IAC-25.A1.8.12
ALGAE AS A FEEDSTOCK FOR SPACE CROP CULTIVATION
Mr. Dennis Terry Trevino, Department of Space Studies, University of North Dakota, San Francisco, United States;

A1.9. Space Life Sciences for Exploration

October 1 2025, 10:15 — Room C3.1

Co-Chair(s): Alain Maillet, MEDES - IMPS, France;

IAC-25.A1.9.1
MULTI-OMIC PROFILING OF EXTREME PHENOTYPES TO BETTER UNDERSTAND AND ENHANCE ASTRONAUT HEALTH AND PERFORMANCE
Mr. Anurag Sakharkar, New York-Presbyterian Hospital / Weill Cornell Medical Center, Saskatoon, Canada;

IAC-25.A1.9.2
ISS4MARS: USING LOW EARTH ORBIT STATIONS TO ENABLE HUMAN EXPLORATION OF MARS
Dr. Jancy C. McPhee, National Aeronautics and Space Administration (NASA), Johnson Space Center, Houston, TX 77058, United States;

IAC-25.A1.9.3
EXPRESS ASSESSMENT OF PHYSICAL PERFORMANCE AFTER SPACEFLIGHTS OF DIFFERENT DURATION AND AFTER THE EXPERIMENT WITH 12-MONTH ISOLATION "SIRIUS-23"
Ms. Anna Ganicheva, SSC RF Institute for bio-medical problems RAS, Moscow, Russian Federation;

IAC-25.A1.9.4
EXPLORING THE COMBINED EFFECTS OF HEAD-DOWN TILT AND VIRTUAL REALITY SIMULATION AS GROUND-BASED SPACE ANALOGUES FOR FOOD SENSORY EVALUATION
Mrs. Grace Loke, RMIT University, Australia, GLENROY, Australia;

IAC-25.A1.9.5
SENSORY ADAPTATIONS IN ISOLATED, CONFINED, AND EXTREME ENVIRONMENTS: A LONGITUDINAL STUDY OF OLFACTORY AND GUSTATORY FUNCTIONS IN ANTARCTICA
Prof. Isabelle Mack, University of Tübingen, Tübingen, Germany;

IAC-25.A1.9.6
COULD HIBERNATION HELP HUMANS TRAVEL TO MARS?
Mr. Anay Ashwin, University of Southern Queensland, Melbourne, Australia;

IAC-25.A1.9.7
LEAF – LUNAR EFFECTS ON AGRICULTURAL FLORA, AN ARTEMIS III DEPLOYED INSTRUMENT
Ms. Christine Chamberlain, Boulder, United States;

A2. IAF MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM

Coordinator(s): Angelika Diefenbach, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Remi Canton, Centre National d'Etudes Spatiales (CNES), France; Qiu-Sheng Liu, Institute of Mechanics, Chinese Academy of Sciences, China;

A2.1. Gravity and Fundamental Physics

September 29 2025, 15:30 — Room C4.2

Co-Chair(s): Thomas Driebe, DLR (German Aerospace Center), Germany; Vladimir Pletser, Blue Abyss, United Kingdom;

IAC-25.A2.1.1
BECCAL – THE BOSE-EINSTEIN CONDENSATE AND COLD ATOM LABORATORY
Mr. Holger Ahlers, DLR (German Aerospace Center), Hannover, Germany;

IAC-25.A2.1.2
LASER SYSTEM FOR THE BECCAL QUANTUM GAS EXPERIMENT ABOARD THE ISS
Mr. David Latorre Bastidas, Johannes Gutenberg University of Mainz, Mainz, Germany;

IAC-25.A2.1.3 (unconfirmed)
ORKA - TOWARDS A CAVITY ENHANCED DIPOLE TRAP FOR ULTRA COLD ATOMS IN SPACE
Mr. Jan Eric Stiehler, ZARM University of Bremen, Bremen, Germany;

IAC-25.A2.1.4
EXPLORING GRAVITY AND FUNDAMENTAL PHYSICS IN MICROGRAVITY: ADVANCES AND FUTURE PROSPECTS
Mr. Parikshit Pakhare, Dapoli, India; Ms. Inchara Nataraj, Bangalore, India;

IAC-25.A2.1.5 (unconfirmed)
FUNDAMENTAL PHYSICS WITH THE MOON
Prof. Claus Lämmerzahl, ZARM Fab GmbH, Bremen, Germany;

IAC-25.A2.1.6
PROGNOSING HOW TIME PASSES IN A BLACK HOLE, WORMHOLES.
Ms. Tunzala Mammadova, Azerbaijan State Pedagogical University (ASPU), Baku, Azerbaijan;

A2.2. Fluid and Materials Sciences

October 1 2025, 10:15 — Room C4.2

Co-Chair(s): Nickolay N. Smirnov, Lomonosov Moscow State University, Russian Federation; Satoshi Matsumoto, Japan Aerospace Exploration Agency (JAXA), Japan;
Rapporteur(s): Qi Kang, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., China;

IAC-25.A2.2.2
STUDY OF SEEPAGE FLOWS IN POROUS MEDIA UNDER MICROGRAVITY AND TERRESTRIAL GRAVITY CONDITIONS.
Ms. Evgeniya Skryleva, Lomonosov Moscow State University, Moscow, Russian Federation;

IAC-25.A2.2.3
SYSTEM DESIGN, CONSTRUCTION AND VIBRATION SPACE FLIGHT QUALIFICATION TESTS OF BARIDI-SANA FLIGHT MODEL, A TWO-PHASE FLOW COOLING SYSTEM FOR MICROGRAVITY CONDITIONS
Dr. Paolo Marzioli, Sapienza University of Rome, Rome, Italy;

IAC-25.A2.2.4
INVESTIGATION OF SLOSHING AND PRESSURE DROP BEHAVIOR DURING THE STAGE SEPARATION PROCESS OF A LOX/CH4 ROCKET WITHOUT ULLAGE ROCKET
Ms. Shibo Yang, LandSpace Technology Corporation Ltd., beijing, China;

IAC-25.A2.2.5
“NUMERICAL INVESTIGATION OF MICROGRAVITY SLOSHING BEHAVIOR IN CONFINED LIQUID STORAGE USING VOF METHOD”
Mr. Muhammed Mustafa KARAKAŞ, Malatya, Türkiye;

IAC-25.A2.2.6
SOLUTION OF THE FLAPPING FLIGHT PROBLEM AT LOW REYNOLDS NUMBERS
Ms. Anastasia Shamina, Lomonosov Moscow State University, Moscow, Russian Federation;

IAC-25.A2.2.7
UNSTEADY AERODYNAMIC CHARACTERISTICS OF LOW REYNOLDS NUMBER AIRFOILS IN TITAN’S ATMOSPHERE
Dr. Rajesh Yadav, G D Goenka University, GURUGRAM, India;

IAC-25.A2.2.8
PROPELLANT SLOSHING AND TANK PRESSURE COLLAPSE IN A LOX/LCH4 VTVL TEST FLIGHT
Ms. Lingqi Zhao, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-25.A2.2.9
TESTING A MAGNETOHYDRODYNAMIC PHOTOBIOREACTOR CONCEPT IN MICROGRAVITY - THE MVIPER EXPERIMENT
Prof. Gisela Detrell, Technical University of Munich (TUM), Ottobrunn, München, Germany;

IAC-25.A2.2.10
MODELING OF MICROGRAVITY CONDITIONS IN THE STUDY OF MULTIPHASE FLOWS IN THE HELE-SHAW CELL
Ms. Evgeniya Skryleva, Lomonosov Moscow State University, Moscow, Russian Federation;

IAC-25.A2.2.12
ANALYTICAL AND NUMERICAL APPROACHES TO THE DROPLET HEAD-ON COLLISION PROBLEM
Ms. Evgeniya Skryleva, Lomonosov Moscow State University, Moscow, Russian Federation;

IAC-25.A2.2.13
RESEARCH ON RECONFIGURABLE LIQUID-BASED SOFT METAMATERIALS IN SPACE
Prof. Yuren Wang, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., Beijing, China;

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

October 1 2025, 15:00 — Room C4.2

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-25.A2.3.1
THE SUBORBITAL EXPRESS PROGRAM:\\ ADVANCING MICROGRAVITY RESEARCH THROUGH INTERNATIONAL COLLABORATION
Mr. Stefan Krämer, Swedish Space Corporation, Solna, Sweden;

IAC-25.A2.3.2
OPPORTUNITIES FOR HYPERGRAVITY AND MICROGRAVITY EXPERIMENTATION UNDER THE UNITED NATIONS ACCESS TO SPACE FOR ALL INITIATIVE: ACHIEVEMENTS IN 2024-2025
Ms. Mami Sasamura, United Nations Office for Outer Space Affairs, Vienna, Austria;

IAC-25.A2.3.3
DROP TOWER-BASED GENE DELIVERY TECHNOLOGY COMBINING GRAVITY CHANGES AND ELECTROPORATION FOR CELL THERAPY
Dr. Younghoon Lee, Space LiinTech, Yongin, Korea, Republic of;

IAC-25.A2.3.4
STATUS UPDATE OF THE FERMIUM PROJECT
Dr. Benny Rievers, ZARM, University of Bremen, Bremen, Germany;

IAC-25.A2.3.5
VIABILITY OF ACTIVE ENTANGLEMENT GRIPPER TECHNOLOGY IN MICROGRAVITY
Mr. Jacek Grzegorzewski, Wroclaw University of Science and Technology, Wrocław, Poland;

IAC-25.A2.3.6
HEMERA: OVERVIEW AND FIRST RESULTS OF IN-ORBIT EXPERIMENTS OF THE HIVER ROVER FOR FUTURE LUNAR MOBILITY
Mr. Lin-Yu Oei, NEUROSPACE GmbH, Berlin, Germany;

IAC-25.A2.3.7
DESIGN AND DEVELOPMENT OF A CENTRIFUGAL CASTING EXPERIMENT FOR THE ON-ORBIT MANUFACTURING OF WAX-BASED PROPELLANTS
Dr. Scott Dorrington, Massachusetts Institute of Technology (MIT), Somerville, United States;

IAC-25.A2.3.8
APPLIED BUBBLE PHYSICS UNCOVERED IN MICROGRAVITY
Prof. Danail Obreschkow, The University of Western Australia (UWA), Crawley, Australia;

IAC-25.A2.3.9
PARABOLIC FLIGHT INVESTIGATION OF FLUID TRANSFER, SLOSHING, AND DOCKING FOR IN-SPACE REFUELING
Mr. Divyam Paliwal, OrbitAID Aerospace Private Limited, Chennai, India;

A2.4. Science Results from Ground Based Research

October 2 2025, 10:15 — Room C4.2

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-25.A2.4.1
APPLICATION OF SIMILARITY THEORY METHODS TO DETERMINING THE CAPILLARY RETENTION CAPACITY OF SCREEN PHASE SEPARATORS
Mr. Oleksandr Minai, Yuzhnoye State Design Office, Dnipro, Ukraine;

IAC-25.A2.4.2
FLAME PROPAGATION ON A SURFACE
Ms. Elena Mikhalchenko, Lomonosov Moscow State University, Moscow, Russian Federation;

IAC-25.A2.4.3
HEAT RELEASE AND SOOTING PROPENSITY OF DIFFUSION FLAMES SPREADING OVER A SOLID FUEL IN MICROGRAVITY
Ms. Feng Zhu, NML, Institute of Mechanics, Chinese Academy of Sciences, Beijing, China;

IAC-25.A2.4.4
HIGH TEMPERATURE MATERIALS RACK AND MICROGRAVITY CRYSTAL GROWTH IN CHINA SPACE STATION
Prof. Xuechao Liu, Shanghai Institute of Ceramics, Chinese Academy of Science (CAS), Shanghai, China;

IAC-25.A2.4.5 (unconfirmed)
GROWTH AND THERMOELECTRIC PROPERTIES OF GESE CRYSTALS BY USING THE GROUND SIMULATION APPARATUS OF CHINA SPACE STATION
Dr. Siqi Lin, Shanghai, China;

IAC-25.A2.4.6
ENHANCING PROTEIN CRYSTALLIZATION WITH NANOMATERIALS IN THERMAL VACUUM SYSTEM (TVAC) : A NEW FRONTIER
Ms. Salma S Syed, Khalifa University of Science and Technology (KUST), Abu Dhabi, United Arab Emirates;

IAC-25.A2.4.7
HIGH-ENTROPY CERAMIC COMPOSITES FOR THERMOMECHANICAL RESILIENCE IN EXTREME SPACE ENVIRONMENTS
Mr. Riyabrata Mondal, TU Bergakademie Freiberg (TUBAF), Freiberg, Germany;

IAC-25.A2.4.8
MATHEMATICAL SIMULATION OF A DROPLET BREAKUP UNDER THE EFFECT OF A LASER PULSE
Ms. Elena Mikhalchenko, Lomonosov Moscow State University, Moscow, Russian Federation;

IAC-25.A2.4.9
PRELIMINARY STUDY ON THE METHODS OF SUPPLEMENT, CORRECTION AND PREDICTION TO RESULTS OF FLUID FLOW EXPERIMENTS BY MACHINE LEARNING METHODS
Prof. Li DUAN, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., Beijing, China;

A2.5. Facilities and Operations of Microgravity Experiments

October 2 2025, 15:00 — Room C4.2

Co-Chair(s): Qiu-Sheng Liu, Institute of Mechanics, Chinese Academy of Sciences, China; Remi Canton, Centre National d'Etudes Spatiales (CNES), France;

IAC-25.A2.5.1
STARLAB – AN AI-DRIVEN, NEXT-GENERATION PLATFORM FOR MICROGRAVITY RESEARCH AND COMMERCIAL UTILIZATION
Dr. Florian Strigl, Airbus Defence & Space, Space Systems, Friedrichshafen, Germany;

IAC-25.A2.5.2
AN INNOVATIVE PAYLOAD-TO-PLATFORM INTERFACE DESIGN FOR THE STARLAB SPACE STATION
Mr. Nick Gomori, The Ohio State University, Columbus, United States;

IAC-25.A2.5.3
THE GRAVITOWER – A GUIDED DROP TOWER PROVIDING LUNAR AND MARTIAN GRAVITY CONDITIONS
Dr. Merle Cornelius, ZARM Fab GmbH, Bremen, Germany;

IAC-25.A2.5.4
RESULTS OF DUAL CAPSULE DROP TEST WITH IMPROVED FLIGHT STABILITY
Dr. I SANG YU, Korea Aerospace Research Institute (KARI), daejeon, Korea, Republic of;

IAC-25.A2.5.5
GRAVIIT 2.0: FEASIBILITY STUDY FOR A MULTI-ENVIRONMENTAL SIMULATION SYSTEM FOR SPACE RESEARCH
Ms. Wendy Lucia Sanchez Delgado, University of Leeds, Leeds, United Kingdom;

IAC-25.A2.5.6
ADAPTATION OF A PERUVIAN AIR FORCE AIRCRAFT FOR PARABOLIC FLIGHTS: A PROPOSAL FOR MICROGRAVITY RESEARCH AND TRAINING
Prof. Avid Roman-Gonzalez, Asociacion Civil Universidad de Ciencias y Humanidades, Lima, Peru;

IAC-25.A2.5.7
AUTOMATED BIOREACTOR PLATFORM FOR IN-SPACE STEM CELL EXPANSION
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-25.A2.5.9 (unconfirmed)
DEVELOPMENT OF AN AUTOMATED DNA SEQUENCER FOR RAPID SCIENCE IN LEO
Mr. Jacob Scoccimerra, Helogen Corporation, New York, United States;

IAC-25.A2.5.10
DEVELOPMENT OF A THREE-DOF RANDOM POSITIONING MACHINE FOR POLE-FREE MICROGRAVITY SIMULATION IN SPACE MEDICINE
Mr. Woojin Jeong, Seoul National University, Seoul, Korea, Republic of;

A2.6. Microgravity Sciences on board of Space stations

October 3 2025, 10:15 — Room C4.2

Co-Chair(s): Angelika Diefenbach, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany; Yang Yang, Technology and Engineering Center for Space Utilization, Chinese Academy of Sciences, China;
Rapporteur(s): Thomas Driebe, DLR (German Aerospace Center), Germany;

IAC-25.A2.6.1 (unconfirmed)
CRYSTAL GROWTH AND MICROSTRUCTURE OF INSE CRYSTALS UNDER MICROGRAVITY CONDITIONS IN CHINA SPACE STATION
Prof. Min Jin, Shanghai, China;

IAC-25.A2.6.2
MICROGRAVITY EXPERIMENTS OF SOOT FORMATION IN LAMINAR GASEOUS DIFFUSION FLAMES ONBOARD CHINA SPACE STATION
Prof. Shuang-Feng Wang, NML, Institute of Mechanics, Chinese Academy of Sciences, Beijing, China;

IAC-25.A2.6.3
MULTI-RESOLUTION SCANNER EXPERIMENTS ON BOARD THE INTERNATIONAL SPACE STATION
Dr. Marc Elmouttie, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Brisbane, Australia;

IAC-25.A2.6.4
STUDY ON BIDIRECTIONAL PROPELLANT TRANSPORT OF SURFACE TENSION TANKS ABOARD THE CHINESE SPACE STATION
Prof. Qi Kang, National Microgravity Laboratory, Institute of Mechanics, Chinese Academy of Sciences., Beijing, China;

IAC-25.A2.6.5
SPACE STATION HAS A UNIQUE AND EXTREME MICROBIAL AND CHEMICAL ENVIRONMENT DRIVEN BY USE PATTERNS
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-25.A2.6.6
DESIGN, MANUFACTURE AND DEGRADATION OF FLUOROSILICONE MECHANISM DUE TO SPACE EXPOSURE ON THE MISSE MODULE AT THE INTERNATIONAL SPACE STATION.
Ms. Myrna Cosette Valenzuela Beltran, Rice University, Hermosillo, Mexico;

IAC-25.A2.6.7
BHARATIYA ANTARIKSHA STATION INDIA'S FUTURE IN MICROGRAVITY RESEARCH AND DEEP SPACE EXPLORATION
Mr. Gourav Mohanan, Dayananda Sagar University, Bangalore, India;

IAC-25.A2.6.8 (unconfirmed)
COMBUSTION EXPERIMENTS IN SPACE
Mr. Shahin Abdullayev, Azercosmos, Space Agency of Republic of Azerbaijan, Baku, Azerbaijan;

IAC-25.A2.6.9
ARTIFICIAL RAIN IN MICROGRAVITY: ISS EXPERIMENT
Dr. Ashraf Farahat, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia;

A2.7. Life and Physical Sciences under reduced Gravity

October 3 2025, 13:45 — Room C4.2

Co-Chair(s): Angelika Diefenbach, Deutsches Zentrum für Luft- und Raumfahrt e.V. (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-25.A2.7.2
YPSAT-2: ADVANCING SCIENCE AND TRAINING THE NEXT GENERATION OF SPACE EXPLORERS
Ms. Julia Stankiewicz, European Space Agency (ESA), Noordwijk, The Netherlands;

IAC-25.A2.7.3
PREVENTİNG MUSCLE ATROPHY BY CREATİNG ARTİFİCİAL GRAVİTY İN SPACE
Ms. Samira Shahverdiyeva, Azerbaijan State Academy of Physical Education and Sport, Baku, Azerbaijan;

IAC-25.A2.7.4
ARTHROSPIRA-C: THE TECHNOLOGY BEHIND A BIOREACTOR PROVIDING OXYGEN TO CREW FOR OVER TWO MONTHS
Dr. Jeroen Peeters, Redwire Space, Kruibeke, Belgium;

IAC-25.A2.7.5
BEHAVIOR OF MARINE ACTINOBACTERIA IN THE ISS
Ms. Marialina Tsinidis, University of Glasgow, Glasgow, United Kingdom;

IAC-25.A2.7.6
DESIGN, PROTOTYPING, AND PERFORMANCE ASSESSMENT OF THE ANGIOLOGY IN MICROGRAVITY (AIM) EXPERIMENTAL PLATFORM FOR ESA SPACE RIDER'S MAIDEN FLIGHT
Ms. Julia Stankiewicz, European Space Agency (ESA), Noordwijk, The Netherlands;

IAC-25.A2.7.8
DESIGN OF A SMALL BIOREACTOR FOR ORBITAL STATIONS TO TEST A BONE TISSUE MODEL IN MICROGRAVITY
Ms. Barbara Szaflarska, AGH University of Krakow, Krakow, Poland;

IAC-25.A2.7.10
IRMA PROJECT – STANDARDIZATION OF PROTOCOLS FOR MICROBIOLOGY RESEARCH DURING SPACEFLIGHT
Mr. Roberto Adolfo Ubidia Incio, Federico Villarreal National University, Lima, Peru;

A2.8. In-Space Manufacturing and Production Applications

September 30 2025, 15:00 — Room C2.6

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-25.A2.8.1
LESSONS LEARNED FROM A $112M UNITED STATES SPACE FORCE INVESTMENT IN FUTURE SPACE MARKET NEEDS
Mrs. Charlene Jacka, United States Space Force, Albuquerque, United States;

IAC-25.A2.8.2
STRESS UNDER STARS: A PRINTABLE BIOSENSOR FOR SPACEFLIGHT HEALTH MONITORING
Ms. Soojeong (Amy) Park, NASA Ames Research Center, Mountain view, United States;

IAC-25.A2.8.3
FLUID PHOTOPOLYMER EXTRUSION UNDER HIGH VACUUM ENVIRONMENT: ENABLING IN-SPACE MANUFACTURING OF SOLAR ARRAYS
Mr. Jannik Pimpi, Munich University of Applied Sciences, Munich, Germany;

IAC-25.A2.8.4
THE PHARMACEUTICAL IN-SPACE LABORATORY FOR MAKING BETTER DRUGS IN SPACE
Dr. Kenneth Savin, Redwire Space, Indianapolis, United States;

IAC-25.A2.8.5
DEMONSTRATION AND ANALYSIS OF VOLUMETRIC ADDITIVE MANUFACTURING VIA SUB-ORBITAL SPACEFLIGHT TESTING
Mr. Taylor Waddell, University of California, Berkeley, Berkeley, United States;

IAC-25.A2.8.6
ASTROPHARMACY: IN-SPACE PHARMACEUTICAL MANUFACTURING FOR DEEP SPACE MISSIONS
Dr. Alina Kunitskaya, NASA Ames Research Center, San Jose, United States;

IAC-25.A2.8.7
FEASIBILITY ASSESSMENT AND PROCESS VALIDATION FOR LARGE FORMAT FABRICATION OF METALLIC TRUSS STRUCTURES IN SPACE
Mr. Niklas Kyriazis, TU Braunschweig, Institute of Space Systems, Braunschweig, Germany;

IAC-25.A2.8.8
CREWED AND AUTONOMOUS PLATFORMS: BUILDING THE FUTURE TOGETHER
Mr. Eric Lasker, Varda Space Industries, El Segundo, United States;

IAC-25.A2.8.10
FROM LEO TO LUNAR: ADVANCED PROCESSES AND SYSTEMS FOR THE IMPLEMENTATION OF SPACE-BASED MANUFACTURING SUPPLY CHAINS
Ms. Danielle Rosales, Space Tango, Lexington, United States;

IAC-25.A2.8.11
WINDOW TO THE FUTURE - CHALLENGES AND SUCCESSES OF GLASS FIBRE FABRICATION IN SPACE
Dr. Hubert Anton Moser, Flawless Photonics Sarl, Wecker, Luxembourg ;

IAC-25.A2.8.12
STARBASE MICROBREW-1: IMPACT OF MICROGRAVITY ON BEER PRODUCTION IN SPACE AND OTHER APPLICABLE FERMENTATION PROCESSES
Mr. Nate Argroves, Starbase Brewing, Austin, United States;

IAC-25.A2.8.13
LASER SINTERING DEVELOPMENT FOR DIRECT INK WRITE MATERIALS FOR PRINTED ELECTRONICS MANUFACTURED IN SPACE
Ms. Ellie Schlake, Corvallis, United States;

A3. IAF SPACE EXPLORATION SYMPOSIUM

Coordinator(s): Vincenzo Giorgio, Thales Alenia Space Italia, Italy; Pierre W. Bousquet, Centre National d'Etudes Spatiales (CNES), France; Keyur Patel, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States;

A3.1. Space Exploration Overview

September 29 2025, 15:30 — Room C4.5

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-25.A3.1.1
THE ROAD TO THE MOON: 'ROOVER', AUSTRALIA'S FIRST LUNAR ROVER
Mr. Ben Sorensen, Spring Hill, Australia;

IAC-25.A3.1.2
UNDERSTANDING THE IMPACT OF SPACE RADIATION AND MICROGRAVITY ON ASTRONAUT HEALTH IN DEEP SPACE
Ms. Debasmita Senapati, Navi Mumbai, India;

IAC-25.A3.1.4
TYRANNY OF THE MAP: THE IMPACT OF GEOGRAPHY ON SPACE EXPLORATION AND OPERATIONS
Mr. David Marsh, Washington, United States;

IAC-25.A3.1.5
MISSION DESIGN FOR NEO EXPLORATION AND MINING AT LAGRANGE POINTS L4 AND L5: SUPPORTING TRANS-LUNAR SPACE OPERATIONS
Mr. Aman Kumar Panda, G D Goenka University, Bolangir, India;

IAC-25.A3.1.6
INTERSTELLAR HITCHHIKING: USING ROGUE PLANETS AND COMETARY HIGHWAYS FOR DEEP SPACE TRAVEL
Ms. Samiksha Raviraja, Airbus Defence and Space, Hitchin, United Kingdom;

IAC-25.A3.1.8
THE COSPAR POLICY ON PLANETARY PROTECTION : THE QUEST FOR HABITATS IN THE OUTER SOLAR SYSTEM AND HOW TO PROTECT EXOTIC PRISTINE ENVIRONMENTS
Dr. Athena Coustenis, Observatoire de Paris, MEUDON, France;

IAC-25.A3.1.9
REVOLUTIONIZING SPACE EXPLORATION: THE ROLE OF ARTIFICIAL INTELLIGENCE AND COMPUTER VISION IN AUTONOMOUS MISSIONS
Mr. Ahmeed Etti-Balogun, Federal University of Technology Akure, Akure, Nigeria;

IAC-25.A3.1.10
THE ROLE OF ARTIFICIAL INTELLIGENCE IN THE ADVANCEMENT OF SPACE EXPLORATION AND ITS IMPACT ON HUMAN INVOLVEMENT
Ms. Sara Altrawneh, Jordan University of Science & Technology, Azzarqa'a, Jordan;

A3.2A. Moon Exploration – Part 1

September 30 2025, 10:15 — Room C4.5

Co-Chair(s): Bernard Foing, ILEWG "EuroMoonMars", The Netherlands; David Korsmeyer, National Aeronautics and Space Administration (NASA), Ames Research Center, United States;
Rapporteur(s): Pierre-Alexis Joumel, Airbus Defence and Space, Germany; Nadeem Ghafoor, Avalon Space, Canada;

IAC-25.A3.2A.1
ISPACE MISSION 2 & TENACIOUS: THE FIRST EUROPEAN ROVER
Mr. Antoine Bocquier, PLABENNEC, France;

IAC-25.A3.2A.2
TENACIOUS: LESSONS FROM ISPACE'S MISSION 2 ROVER OPERATION
Ms. Sophia Casanova, ispace, inc., Luxembourg, Luxembourg ;

IAC-25.A3.2A.3
VIPER SCIENCE OPERATIONS: OPTIMIZING LUNAR EXPLORATION RETURN THROUGH REAL-TIME SCIENCE DECISIONING SYSTEMS
Dr. Darlene Lim, NASA Ames Research Center, Moffett Field, United States;

IAC-25.A3.2A.4
ROVER DEVELOPMENT PROGRESS FOR THE LUNAR VULKAN IMAGING AND SPECTROSCOPY EXPLORER MISSION TO GRUITHUISEN DOMES
Dr. Justin Lawrence, Honeybee Robotics, ALTADENA, United States;

IAC-25.A3.2A.5
RUSSIAN LUNAR SCIENCE PROGRAM: MISSIONS, EXPERIMENTS AND INTEGRATION APPROACH.
Prof. Anatoli Petrukovich, Space Research Institute (IKI), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-25.A3.2A.6
ILOA MOON MISSION UPDATE OCTOBER 2025: PIONEERING WORK TOWARD LUNAR OBSERVATORY AND COMMUNICATIONS FLAGSHIP ILO-1 AND BACKUP ILO-2
Mr. Steve Durst, International Lunar Observatory Association (ILOA), Kamuela, United States;

IAC-25.A3.2A.7
ENABLING EXPLORATION WITH GNSS: RESULTS OF THE LUNAR GNSS RECEIVER EXPERIMENT (LUGRE)
Mr. Joel Parker, NASA, Greenbelt, MD, United States;

IAC-25.A3.2A.8
UPDATE ON TAIWAN'S LUNAR PAYLOAD DEVELOPMENT AND ITS OUTSOURCED TRANSPORTATION SERVICES
Dr. Shin-Fa Lin, Taiwan Space Agency (TASA), Hsinchu, Taipei;

IAC-25.A3.2A.9
QOSMOSYS ZEUS-X, A LUNAR-BASED MULTIPURPOSE PLATFORM FOR IN SITU RESEARCH
Mr. Francois Dubrulle, Qosmosys, Singapore, Singapore, Republic of;

IAC-25.A3.2A.11
AUSTRALIA'S MOON TO MARS INITIATIVE- TECHNICAL OUTCOMES AND LESSONS LEARNED
Mr. Arvind Ramana, Australian Space Agency, Canberra, Australia;

IAC-25.A3.2A.12
VALIDATION AND VERIFICATION OF THE MINIATURE X-RAY FLUORESCENCE PAYLOAD (MINIXRF) FOR ISRU
Ms. Molly Kirkpatrick, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Warrawong, Australia;

IAC-25.A3.2A.13
JAXA'S STUDY AND TECHNOLOGY DEVELOPMENT WHICH ENABLES LUNAR ISRU ACTIVITY
Mr. Jun Shimada, Japan Aerospace Exploration Agency (JAXA), Tokyo, Japan;

IAC-25.A3.2A.14
ON ORBIT EXPERIENCE AND CHALLENGES OF OPERATING CHANDRAYAN-3 ROVER NAVIGATION CAMERA
Mr. JAYANTA LAHA, Laboratory for Electro-Optics Systems (LEOS)-ISRO, bangalore, India;

A3.2B. Moon Exploration – Part 2

September 30 2025, 15:00 — Room C4.5

Co-Chair(s): Bernard Foing, ILEWG "EuroMoonMars", The Netherlands; David Korsmeyer, National Aeronautics and Space Administration (NASA), Ames Research Center, United States;
Rapporteur(s): Pierre-Alexis Joumel, Airbus Defence and Space, Germany; Nadeem Ghafoor, Avalon Space, Canada;

IAC-25.A3.2B.1
LATEST DEVELOPMENT STATUS ON LUNAR POLAR EXPLORATION (LUPEX)
Mr. Dai Asoh, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

IAC-25.A3.2B.2
INITIAL DESIGN FOR SMART MICRO LUNAR EXPLORATION ROVERS FOR INTELLIGENT COLLABORATIVE TASKING
Dr. Halil Ersin Soken, Middle East Technical University, Ankara, Türkiye;

IAC-25.A3.2B.3
LOCOMOTION OF SMALL HOPPING ROVER LEV-1 AND APPLICATION FOR FUTURE LUNAR LAVA TUBE EXPLORATION
Dr. Takao Maeda, Tokyo University of Agriculture and Technology, Tokyo, Japan;

IAC-25.A3.2B.4
COMPOUNDING LUNAR SCIENCE ENABLED BY COMMERCIAL MOBILITY PLATFORMS
Mr. Hunter Williams, Lunar Outpost Inc., Arvada, Colorado, United States;

IAC-25.A3.2B.6
HIGHLIGHTS FROM EUROMOONMARS AND EUROSPACEHUB 2024-2025: RESEARCH, TECHNOLOGY, ASTRONAUTICS, INNOVATION
Prof. Bernard Foing, ILEWG "EuroMoonMars", Wassenaar, The Netherlands;

IAC-25.A3.2B.7
EARTH-MOON OBSERVATION CUBESAT: PAYLOAD SYSTEM DEVELOPMENT AND INTEGRATION
Mr. Ulrich Ny Aina N'Tchougan Sonou, ILEWG "EuroMoonMars", Delft, The Netherlands;

IAC-25.A3.2B.9
FFLD EVERYDAY HARDWARE FABRICATION TO SUPPORT LUNAR ACTIVITIES: ADVANCING SUSTAINABLE LUNAR EXPLORATION THROUGH FUSED FIBER LAYER DEPOSITION 3D PRINTING USING LUNAR REGOLITH
Dr. Anna Barbara Imhof, Liquifer Systems Group (LSG), Vienna, Austria;

IAC-25.A3.2B.10
GROUNDBREAKING APPROACH TO IN-SITU MEASUREMENTS ON THE MOON'S SURFACE
Prof. Pawel Knapkiewicz, Wroclaw University of Science and Technology, Wroclaw, Poland;

IAC-25.A3.2B.12
LEAPS AND BOUNDS: ROO-VER, AUSTRALIA'S FIRST LUNAR ROVER MISSION
Dr. Samuel Webster, EPE Oceania Pty Ltd., Brisbane, Australia;

IAC-25.A3.2B.13
EFFORTS TOWARD REALIZATION OF LUNAR INFRASTRUCTURE AND LOGISTICS OPERATION
Mr. Takeshi Kai, Mitsubishi Heavy Industries, Ltd., Nagoya, Japan;

IAC-25.A3.2B.14
LUNAR LAVA-TUBE EXPLORATION MISSION AND TECHNOLOGIES WITH SMALL AI ROBOTS UNDER JAPAN'S MOONSHOT R&D PROGRAM
Prof.Dr. Yasuharu Kunii, Chuo University, Tokyo, Japan;

IAC-25.A3.2B.15
VERTICAL LANDING SIMULATION OF A LEGGED DRONE SYSTEM FOR LAVA TUBE EXPLORATION
Ms. Irene Terlizzi, University of Padova, CISAS – "G. Colombo" Center of Studies and Activities for Space,, PADOVA, PD, Italy;

A3.2C. Moon Exploration – Part 3

October 3 2025, 13:45 — Room C4.5

Co-Chair(s): Bernard Foing, ILEWG "EuroMoonMars", The Netherlands; David Korsmeyer, National Aeronautics and Space Administration (NASA), Ames Research Center, United States;
Rapporteur(s): Sylvie Espinasse, European Space Agency (ESA), The Netherlands; Nadeem Ghafoor, Avalon Space, Canada;

IAC-25.A3.2C.2
STUDY OF THE LUNAR SOUTH POLE RESOURCES THROUGH REMOTE SENSING IN SUPPORT OF THE UPCOMING MISSIONS
Ms. Roksana Sheikholmolouki, University of Sherbrooke, Sherbrooke, Canada;

IAC-25.A3.2C.3
CONCEPTUAL DESIGN OF COMMUNICATION SYSTEM FOR THE PRESSURIZED ROVER "LUNAR CRUISER"
Ms. Aya Asamura, TOYOTA MOTOR CORPORATION, Tokyo, Japan;

IAC-25.A3.2C.4
TIME: TIMELINE FOR IMMEDIATE MOON EXPEDITIONS [TIME]
Mr. Madhu Thangavelu, University of Southern California, ROLLING HILLS ESTATES, United States;

IAC-25.A3.2C.5
EXPLORING LUNAR LAVA TUBES WITH LEGGED ROBOTICS (ASAGUMO): TESTING IN ICELAND FOR STEM, SPACE EXPLORATION, AND MOON MISSIONS
Mr. Pavlo Tanasyuk, Spacebit Global Ltd, London, United Kingdom;

IAC-25.A3.2C.6
ADVANCING PROJECT VAYUSATHI A SUSTAINABLE INFLATABLE LUNAR HABITAT FOR LONG-DURATION MISSIONS
Mr. Gourav Mohanan, Dayananda Sagar University, Bangalore, India;

IAC-25.A3.2C.7
AUTONOMOUS SWARM ROBOTICS FOR THE RECYCLING OF LUNAR SPACE DEBRIS: A SUSTAINABLE APPROACH TO IN-SITU RESOURCE UTILIZATION
Mr. Harsh Kumar, Politecnico di Torino, Torino, Italy;

IAC-25.A3.2C.8
A FLOWER IN SPACE FOR THE MOON
Prof. Bernard Foing, ILEWG "EuroMoonMars", Wassenaar, The Netherlands;

IAC-25.A3.2C.9
AUSTRALIAN LUNAR EXPERIMENT PROMOTING HORTICULTURE: FIRST MISSION AND PAYLOAD DESCRIPTION
Dr. Graham Dorrington, RMIT University, Australia, Melbourne, Australia;

IAC-25.A3.2C.10
ADVANCING REGOLITH-BASED AGRICULTURE THROUGH SIMULANT CHARACTERIZATION AND HYDRAULIC MODELING
Ms. Cassidy Brozovich, The Ohio State University, Columbus, United States;

IAC-25.A3.2C.11
AFRICA'S LUNAR RADIO ASTRONOMY MISSION: AFRICA2MOON
Dr. Adriana Marais, Foundation for Space Development South Africa, Johannesburg, South Africa;

IAC-25.A3.2C.12
LUNAR SURFACE CIVIL ENGINEERING AND MISSION OPS REHEARSAL – THE EXTRATERRESTRIAL ENVIRONMENT SIMULATION (EXTERRES) FACILITIES AT THE UNIVERSITY OF ADELAIDE
Mr. John Culton, DPO, United States;

IAC-25.A3.2C.13
CONSTRUCTING SHUTTLE-MODE ARCHITECTURE IN CISLUNAR SPACE FOR REUSABLE FLIGHT VEHICLES
Mr. Chenyu Zhang, Beihang University (BUAA), Beijing, China;

IAC-25.A3.2C.14
COSTA RICAN LABORATORY FOR SPACE SYSTEMS OPERATIONS WITH GROUND SIMULATOR IN SUPPORT OF ROVER MOBILITY EVALUATION (LABCOS)
Ms. Nicolle Gamboa Mena, Descubre Robótica, San José, Costa Rica;

IAC-25.A3.2C.15
ADVANCING ICEE.SPACE I-S1 ANALOGUE SPACE SUIT TECHNOLOGY
Mrs. Charlotte Pouwels, International Space University (ISU), De Lier, The Netherlands;

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

October 1 2025, 10:15 — Room C4.5

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, Lockheed Martin Corporation, United States;

IAC-25.A3.3A.1
PREPARING FOR A POTENTIAL FUTURE MARS SAMPLE RETURN – THE DESIGN, CERTIFICATION, AND CONSTRUCTION OF THREE FORKS SAMPLE DEPOT
Dr. Sydney Do, NASA Jet Propulsion Laboratory, Pasadena, United States;

IAC-25.A3.3A.2
BLUE ORIGIN'S NEW GLENN AND THE NASA ESCAPADE MISSION TO MARS
Mrs. Laura Maginnis, Blue Origin LLC, Denver, United States;

IAC-25.A3.3A.3
M-MATISSE MISSION CONCEPT TRADE-OFF – A NOVEL APPROACH TO COMPREHENSIVE TECHNICAL AND PROGRAMMATIC EVALUATION IN EARLY DESIGN PHASES OF SCIENCE SPACECRAFT
Mr. Alvaro Sanz Casado, OHB System AG, Bremen, Germany;

IAC-25.A3.3A.4
EARTH2MARS: A SHARED INTERNATIONAL CONCEPT FOR LOWER COST MARS MISSIONS
Mr. LIKHIT WARANON, Geo-Informatics and Space Technology Development Agency (Public Organization), Chaeng Wattana Road, Lak Si, Thailand;

IAC-25.A3.3A.5
THE INTERNATIONAL MARS EXPLORATION WORKING GROUP (IMEWG) ANNUAL REPORT
Dr. Claire E. Parfitt, European Space Agency (ESA-ESTEC), Noordwijk, The Netherlands;

IAC-25.A3.3A.6
MARS EXPLORATION: AN APPROACH FOR INTERNATIONAL PARTNERSHIPS WITH EMERGING SPACE NATIONS
Mr. Nick Carter, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Perth, Australia;

IAC-25.A3.3A.7
A PROPOSED MISSION DESIGN FOR A FUTURE SUBSURFACE DESTINATION ON MARS
Dr. Jennifer Blank, National Aeronautics and Space Administration (NASA), Ames Research Center /Blue Marble Space Institute of Science, Livermore, United States;

IAC-25.A3.3A.9
AUTONOMOUS AI-ENHANCED UAV SYSTEM FOR HIGH-RESOLUTION GRAVIMETRIC SURVEYING ALONG MARS' EQUATORIAL ZONE: DESIGN AND MISSION IMPLEMENTATION
Dr. Hao Liu, Tsinghua University, Beijing, China;

IAC-25.A3.3A.10
ENVIRONMENTAL AND LEGAL CHALLENGES OF MARS COLONIZATION: A GOVERNANCE PERSPECTIVE
Ms. Shrawani Shagun, National Law University, Delhi, noida, India;

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

October 1 2025, 15:00 — Room C4.5

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, Lockheed Martin Corporation, United States;

IAC-25.A3.3B.1
MINERALOGICAL VARIATIONS OF DEPOSITS IN THE UTOPIA PLANITA REGION OF MARS MEASURED BY CRISM: INSIGHTS INTO PAST WATER ACTIVITY AND PERMAFROST DYNAMICS
Ms. Ekaterina Faber, Moscow Institute of Electronics and Mathematics of National Research University Higher School of Economics (MIEM NRU HSE), Moscow, Russian Federation;

IAC-25.A3.3B.2
PRODUCING HIGH-RESOLUTION MARTIAN SURFACE TEMPERATURE MAPS USING VIR – TIR RELATIONSHIPS
Mr. Michael Frazer, Curtin University, Perth, Australia;

IAC-25.A3.3B.4
CONTROL, MONITORING AND OPERATION SOFTWARE OF A MINIATURIZED LIDAR FOR MARS ATMOSPHERIC RESEARCH
Mr. Juan Samblas Iglesias, Instituto Nacional de Tecnica Aeroespacial (INTA), Torrejón de Ardoz, Spain;

IAC-25.A3.3B.5
EVALUATION OF NUMERICAL INTEGRATION TECHNIQUES IN ORBIT PROPAGATION FOR A MARTIAN GRAVITY FIELD SATELLITE MISSION
Mr. Marvin Bredlau, DLR (German Aerospace Center), Hannover, Germany;

IAC-25.A3.3B.6
EXOGEOCONSERVATION OF MARS
Ms. Clare Fletcher, University of New South Wales, Kingsford, Australia;

IAC-25.A3.3B.7
EXPLORING TRANSIENT PHENOMENA IN THE MARTIAN ATMOSPHERE
Prof. Hakan Kayal, Julius Maximilians Universität Würzburg, Würzburg, Germany;

IAC-25.A3.3B.8
ICE-EXPOSING IMPACT CRATERS AND PROPERTIES OF THE SUBSURFACE ICE ON MARS
Ms. Namishka Mendonca, Curtin University, Mumbai, Australia;

IAC-25.A3.3B.9
ELECTROMAGNETIC NOISE ASSOCIATED WITH THE DYNAMICS OF CHARGED DUST PARTICLES IN MARTIAN PLASMA-DUST ENVIRONMENTS: IMPLICATIONS FOR SCIENCE AND INSTRUMENTATION
Dr. Mohamad Abdelaal, Moscow Institute of Physics and Technology (MIPT), Moscow, Russian Federation;

IAC-25.A3.3B.10
CANADARM4 : A FIRST CONCEPT STUDY OF THE NEXT-GENERATION ROBOTIC MANIPULATOR SYSTEM FOR HUMAN MARS EXPLORATION
Mr. Yianni Hudon-Castillo, Polytechnique Montreal, Montréal, Canada;

IAC-25.A3.3B.11
AI-DRIVEN AUTONOMY AND ROBOTICS FOR ENHANCING MARS EXPLORATION EFFICIENCY AND SUSTAINABILITY
Ms. Sreemedha Ankam, Hanamkonda, India;

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

October 2 2025, 10:15 — Room C4.5

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-25.A3.4A.1
A YEAR TO GO: MARTIAN MOONS EXPLORATION (MMX)'S JOURNEY TO THE MARTIAN MOONS
Dr. Yasuhiro Kawakatsu, Japan Aerospace Exploration Agency (JAXA), ISAS, Sagamihara, Kanagawa, Japan;

IAC-25.A3.4A.2
IDEFIX - THE MMX ROVER: ONE YEAR BEFORE LAUNCH
Dr. Stephan Ulamec, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Cologne, Germany;

IAC-25.A3.4A.3
INSIGHTS INTO THE STRENGTH AND COLLISIONAL EVOLUTION OF BENNU'S SURFACE FROM CRATERS ON CENTIMETER-SCALE SAMPLES TO DECAMETER-SCALE BOULDERS
Dr. Ronald Ballouz, Johns Hopkins University Applied Physics Laboratory, Laurel, United States;

IAC-25.A3.4A.4
DESTINY+ TRAJECTORY DESIGN FOR MULTI SMALL BODIES FLYBY AND ITS FLYBY OBSERVATION
Dr. Takayuki Yamamoto, Japan Aerospace Exploration Agency (JAXA), Chuo-Ku, Sagamihara, Kanagawa, Japan;

IAC-25.A3.4A.5
THE ESA HERA MISSION TO THE BINARY ASTEROID (65803) DIDYMOS: ONE YEAR AFTER LAUNCH
Dr. Patrick Michel, University of Nice-Sophia Antipolis, CNRS, Observatoire de la Cote d'Azur, Nice, France;

IAC-25.A3.4A.6
EMIRATES MISSION TO THE ASTEROID BELT 2028 - OVERVIEW
Mr. Abdulla Alshehhi, UAE Space Agency, Abu Dhabi, United Arab Emirates;

IAC-25.A3.4A.7
EMIRATES MISSION TO THE ASTEROIDS LANDER: JUSTITIA EXPLORATION, DESCENT AND IMAGING
Mr. Muhammad Taha Ansari, Technology Innovation Institute (TII), Abu Dhabi, United Arab Emirates;

IAC-25.A3.4A.8
THE OSIRIS-APEX MISSION: NASA'S NEW-FRONTIERS-CLASS APOPHIS EXPLORER
Dr. Ronald Ballouz, Johns Hopkins University Applied Physics Laboratory, Luarel, United States;

IAC-25.A3.4A.9
THE ESA RAMSES MISSION: RENDEZVOUS WITH THE ASTEROID APOPHIS DURING ITS CLOSE ENCOUNTER WITH EARTH IN 2029
Dr. Patrick Michel, University of Nice-Sophia Antipolis, CNRS, Observatoire de la Cote d'Azur, Nice, France;

IAC-25.A3.4A.11
FRENCH INVOLVEMENT IN HERA AND IN MISSIONS TO APOPHIS
Mr. Pierre W. Bousquet, Centre National d'Etudes Spatiales (CNES), Toulouse, France;

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

October 3 2025, 10:15 — Room C4.5

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-25.A3.4B.1
EMIRATES MISSION TO THE MAIN ASTEROID BELT'S TECHNICAL RESOURCE MANAGEMENT FOR DEEP SPACE ELECTRIC PROPULSION MISSIONS
Mr. Mohammed Alameri, UAE Space Agency, Abu Dhabi, United Arab Emirates;

IAC-25.A3.4B.2 (unconfirmed)
THE EMIRATES MISSION TO THE ASTEROID BELT: AN OVERVIEW OF THE PAYLOADS
Ms. Khadija Alshemeili, UAE Space Agency, Abu Dhabi, United Arab Emirates;

IAC-25.A3.4B.3
PHOTOMETRIC ANALYSIS FOR EMA OPTICAL NAVIGATION DURING ASTEROID FLYBYS
Ms. Reem Klaib, Technology Innovation Institute (TII), Duabi, United Arab Emirates;

IAC-25.A3.4B.4
USING TIDALLY-DRIVEN SEISMICITY TO PROBE THE INTERIORS OF NEAR-EARTH ASTEROIDS
Dr. Ronald Ballouz, Johns Hopkins University Applied Physics Laboratory, Laurel, United States;

IAC-25.A3.4B.5
MORPHING ROBOT WITH DUAL LOCOMOTION FOR ASTEROID EXPLORATION
Ms. Gloria Mellinand, California Institute of Technology, Pasadena, United States;

IAC-25.A3.4B.6
SPECIALIZED TEST METHODS FOR FAILURE DETECTION AND MITIGATION IN SHUTTER SUBSYSTEM DEVELOPMENT
Mr. Kai Temmen, DLR (German Aerospace Center), Bremen, Germany;

IAC-25.A3.4B.8
AUTONOMOUS SPACECRAFT LANDING ON ASTEROIDS VIA REINFORCEMENT LEARNING-DRIVEN GUIDANCE
Dr. Fahimeh Barzamini, K. N. Toosi University of Technology, Tehran, Iran;

A3.5. Solar System Exploration including Ocean Worlds

October 2 2025, 15:00 — Room C4.5

Co-Chair(s): Mariella Graziano, GMV Aerospace & Defence SAU, Spain; Junichiro Kawaguchi, Australian National University (ANU), Australia;
Rapporteur(s): Charles E. Cockrell Jr., National Aeronautics and Space Administration (NASA), United States; Gabriel Pont, Centre National d'Etudes Spatiales (CNES), France;

IAC-25.A3.5.2
ENABLING BIOSIGNATURE DETECTION AT EXTREMELY LOW CONCENTRATIONS ON OCEAN WORLDS AND MARS USING IN-SITU PHOTOACTIVATED SURFACE ENHANCED RAMAN SPECTROSCOPY
Dr. Aria Vitkova, Jet Propulsion Laboratory - California Institute of Technology, Pasadena, United States;

IAC-25.A3.5.3
REVIEW AND PROSPECT OF SATURNIAN SYSTEM EXPLORATION MISSIONS
Mr. Yang Du, Shanghai Institute of Satellite Engineering, Shanghai, China;

IAC-25.A3.5.4
AI-DRIVEN SWARM INTELLIGENCE FOR AUTONOMOUS METHANE PLUME DETECTION AND MAPPING ON TITAN'S CRYOGENIC SURFACE
Ms. Akanksha Bhagat, University of Mumbai, Mumbai, India;

IAC-25.A3.5.5
STATUS ON THE DEVELOPMENT OF A GAS CHROMATOGRAPH FOR THE DRAGONFLY MISSION
Mr. Gabriel Pont, Centre National d'Etudes Spatiales (CNES), Toulouse, France;

IAC-25.A3.5.6
THE FUTURE EUROPEAN LARGE-CLASS SCIENCE MISSION WITH THE THEME "MOONS OF THE GIANT PLANETS"
Ms. SILVIA BAYON, European Space Agency (ESA), Noordwijk, The Netherlands;

IAC-25.A3.5.7
PRELIMINARY DESIGN OF PRIMAVERA: PRELIMINARY INVESTIGATION MISSION TO ACHIEVE VENUSIAN RECONNAISSANCE IN ATMOSPHERE
Mr. Michael Nicoll, University of Glasgow, Inverurie, United Kingdom; Mr. Nilavan Thipaharan, University of Warwick, Hanwood, Shrewsbury, United Kingdom; Mr. Samuel Leader, University of Alberta, Edmonton, Canada; Ms. Alicia Garcia Garcia, Isdefe, Madrid, Spain; Mr. Alexander Björn Kerff Nielsen, University of Southern Denmark, Odense, Denmark; Mr. Enrique Piqueras Moralejo, Alma Mater Studiorum - University of Bologna, Madrid, Spain;

IAC-25.A3.5.8
FLARE+: UNVEILING ENCELADUS – A FORMATION-FLYING MISSION FOR OCEAN, PLUME AND DUST SCIENCE
Mr. Karthik R Varma, Space Generation Advisory Council (SGAC), Thrissur, India;

IAC-25.A3.5.9
IMPACT CRATERING ON THE SATURNIAN MOON TETHYS: A COMPLETE POPULATION MAP AND GEOLOGIC ANALYSIS.
Ms. Emma Stanton, Western Sydney University, Kingswood, Australia;

IAC-25.A3.5.10
VENUS AERIAL PLATFORMS: LONG-LIVED BALLOONS WITH ISRU FOR BUOYANT GAS REPLACEMENT
Mr. Kyle Horn, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-25.A3.5.11
ENCELADUS EXPLORATION WITH ORBITER AND LANDER: PHASE 0 MISSION AND SPACECRAFT DESIGN AND CHALLENGES
Mr. Alvaro Sanz Casado, OHB System AG, Bremen, Germany;

A4. 54th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The Next Steps

Coordinator(s): Carol Oliver, University of New South Wales, Australia; Michael Albert Garrett, University of Manchester, United Kingdom;

A4.1. SETI 1: SETI Science and Technology

September 30 2025, 10:15 — Room C4.2

Co-Chair(s): Chenoa Tremblay, SETI Institute, United States; Danny Price, Square Kilometre Array Observatory (SKAO), Australia;

IAC-25.A4.1.1
ENHANCING THE BREAKTHROUGH LISTEN TECHNOSIGNATURE SEARCH WITH ADVANCES IN ANOMALY DETECTION
Dr. Steve Croft, University California Berkeley, Berkeley, United States;

IAC-25.A4.1.2
TECHNOSIGNATURE SEARCHES WITH VERY LONG BASELINE INTERFEROMETRY (VLBI)
Dr. Dong-Jin Kim, CSIRO Space and Astronomy, Marsfield, Australia;

IAC-25.A4.1.3
BREAKTHROUGH LISTEN SEARCH FOR INTELLIGENT LIFE TOWARDS THE GALACTIC CENTER AND PLANE
Dr. Vishal Gajjar, SETI Institute, Berkeley, United States;

IAC-25.A4.1.4
FIRST RESULTS OF THE LOW FREQUENCY PULSAR, FRB, AND TECHNOSIGNATURE SURVEY
Mr. Owen Johnson, Trinity College Dublin, Dublin, Ireland;

IAC-25.A4.1.5
SETI SEARCH WITH SERENDIPVI AT MEDICINA (I) RADIO TELESCOPE.
Dr. Nicolò Antonietti, INAF - IRA, san Maurizio canavese, Italy;

IAC-25.A4.1.6
THE VLA AND HIGH-FREQUENCY SETI: EXPANDING THE SEARCH FOR LIFE
Mr. Talon Myburgh, Cape Town, South Africa;

IAC-25.A4.1.7
HIGH-FREQUENCY TARGETED SETI WITH THE NEW MEERKAT BAND 5 RECEIVERS
Dr. Andrea Melis, INAF - Istituto Nazionale di AstroFisica, Selargius, Italy;

IAC-25.A4.1.8
RESEARCH INTO UNIDENTIFIED ANOMALOUS PHENOMENA (UAP) AS AN OFFICIAL ACADEMIC RESEARCH TOPIC AT A UNIVERSITY
Prof. Hakan Kayal, Julius Maximilians Universität Würzburg, Würzburg, Germany;

IAC-25.A4.1.9
QUANTIFYING STELLAR ACTIVITY EFFECTS ON NARROWBAND ETI SIGNALS
Dr. Vishal Gajjar, SETI Institute, Berkeley, United States;

IAC-25.A4.1.10
GRAVITATIONAL WAVE COMMUNICATIONS: THE FUTURE OF INTERSTELLAR MESSAGING?
Ms. Samiksha Raviraja, Airbus Defence and Space, Hitchin, United Kingdom;

IAC-25.A4.1.11
MOON RACE, FARSIDE PROTECTION, UNITED NATIONS.
Dr. Nicolò Antonietti, INAF - IRA, san Maurizio canavese, Italy;

IAC-25.A4.1.12 (unconfirmed)
MACHINE LEARNING APPLICATIONS IN THE SEARCH FOR EXTRATERRESTRIAL SIGNALS
Mr. Abbos Madmurotov, Tashkent, Uzbekistan;

A4.2. SETI 2: SETI and Society

September 30 2025, 15:00 — Room C4.2

Co-Chair(s): Kate Genevieve, Victoria University of Wellington, New Zealand; Rebecca Charbonneau, National Radio Astronomy Observatory, United States;

IAC-25.A4.2.1
THE CASE OF THE EQ PEG HOAX 25 YEARS AGO: WOULD A REPLAY IN TODAY'S MEDIA LANDSCAPE HAVE THE SAME RESULT?
Dr. Carol Oliver, University of New South Wales, Kensington, Australia;

IAC-25.A4.2.2
THE HISTORY OF THE IAA SETI PERMANENT COMMITTEE - 2000 TO 2009
Ms. Lori Walton, Consultant, Edmonton, Alberta, Canada;

IAC-25.A4.2.3
PATTERNS IN PERCEPTION OF A SIMULATED MESSAGE FROM SPACE
Ms. Daniela De Paulis, SETI Institute, Mountain View, United States;

IAC-25.A4.2.4
SETI POST-DETECTION PROTOCOLS: PROGRESS TOWARDS A NEW VERSION
Prof. Michael Garrett, University of Manchester, Manchester, United Kingdom;

IAC-25.A4.2.5
THE INTERNATIONAL INSTITUTE OF SPACE LAW SETI WORKING GROUP: INTRODUCTION, OVERVIEW, AND FINDINGS SO FAR
Prof. Andrea Harrington, Institute of Air and Space Law, McGill University, Montreal, QC, Canada;

IAC-25.A4.2.7
REFIGURING COMMUNICATION IN SETI: CYBERNETICS, ANALOGY, AND IMPROVISATION IN THE SEARCH FOR EXTRATERRESTRIAL LIFE
Ms. Kate Genevieve, Victoria University of Wellington, Wellington, New Zealand;

IAC-25.A4.2.8
SPACE AND INTERSTELLAR TRAVEL AND WHAT WE WANT TO BE REMEMBERED FOR – THE CASE FOR INDIGENOUS KNOWLEDGES FOR COMMUNICATION WITH PROSPECTIVE ET'S AND FOR HUMAN SPACEFLIGHT PURPOSE AND A COLLECTIVE EARTH MESSAGE
Dr. Sasha Alexander, Western Sydney University, Penrith NSW, Australia;

IAC-25.A4.2.9
A FIRST CONTRIBUTION TO THE HISTORY OF ITALIAN SETI
Dr. Paolo Musso, InCosmiCon Research Center, Torino, Italy;

IAC-25.A4.2.10
NEW COSMIC PERSPECTIVES: INDIGENOUS KNOWLEDGE AND SETI
Dr. Alvin D. Harvey, Massachusetts Institute of Technology (MIT), Cambridge, MA, United States;

IAC-25.A4.2.11
SUSTAINABILITY PUZZLES AND THE EXTRATERRESTRIAL TURN
Dr. Chelsea Haramia, University of Bonn, Bonn, Germany;

A5. 28th 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 1 2025, 10:15 — Room C3.5

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-25.A5.1.3
WOULD A CONCEPT OF MOON 'ENVIRONMENTALISM' FACILITATE SAFER AND MORE SUSTAINABLE HUMAN ACTIVITIES ON THE MOON?
Prof. Melissa de Zwart, University of Adelaide, Adelaide, Australia;

IAC-25.A5.1.4
SELENE: A COLOR-BASED LUNAR DISTRESS CODE
Mr. Jerry Ji, Monash University, Melbourne, Australia; Mr. Vincent Ytarri, Swinburne University of Technology, Bentleigh East, Australia; Mr. Anderson Liew, International Space University (ISU), Strasbourg, France;

IAC-25.A5.1.5
SPACE RENAISSANCE INTERNATIONAL: ENGAGING CITIZENS FOR EXPLORATION
Prof. Bernard Foing, ILEWG "EuroMoonMars", Wassenaar, The Netherlands;

IAC-25.A5.1.6
GATEWAY TO COMMERCIALIZATION: HOW CANADARM IS EXTENDING ITS REACH INTO THE FUTURE OF COMMERCIAL SPACE
Dr. Seamus Tuohy, MDA SPACE INC., Houston, United States;

IAC-25.A5.1.7
THREE-PHASE EVOLUTION OF HIGH-SPEED CISLUNAR COMMUNICATION NETWORKS FOR CISLUNAR SPACE STATION: FROM KA-BAND TO LASER-BASED HYBRID ARCHITECTURE
Dr. Bin Sun, Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology (CAST), Beijing, China;

IAC-25.A5.1.8
WHY RETURNING TO THE MOON TAKES LONGER DESPITE 50 YEARS OF ADVANCEMENT - FOSTERING EXTRAORDINARY PROJECTS
Mr. Antoine Faddoul, Tony Sky Designs Group, New York, United States;

IAC-25.A5.1.9
POLICY GRADIENT REINFORCEMENT LEARNING FOR OPTIMIZED EXTRAVEHICULAR ACTIVITY SCHEDULING IN LUNAR MISSIONS
Mr. Naghi Naghiyev, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

IAC-25.A5.1.10
INDIVIDUALIZED RADIATION RISK PROFILING FOR HUMAN SPACEFLIGHT: LINKING HEALTH IMPACTS TO MISSION DESIGN FROM LOW EARTH ORBIT TO LUNAR MISSIONS
Ms. Lauren Savage, The John Hopkins University, Ennis, United States;

IAC-25.A5.1.11
DUST GENERATION AND CONTAMINATION SEVERITY DURING ROBOTIC LUNAR POLAR EXPLORATION
Dr. Michelle Dunn, Swinburne University of Technology, Hawthorn, Australia;

IAC-25.A5.1.13
LUNAR DUST MITIGATION VIA A GECKO ROLLER: DEMONSTRATIONS OF FUNCTIONALITY
Dr. Mary Pat Reiter, University of Maryland - College Park, College Park, United States;

IAC-25.A5.1.14
PROTOTYPING MICROBIAL FUEL CELLS AND AUTONOMOUS CULTIVATION SYSTEMS FOR THE DEVELOPMENT OF BIOREGENERATIVE SYSTEMS PROTOTYPES FOR LUNAR LAVA TUBE HUMAN SETTLEMENTS: THE BEATRICE PROJECT
Dr. Paolo Marzioli, Sapienza University of Rome, Rome, Italy;

A5.2. Human Exploration of Mars

October 1 2025, 15:00 — Room C3.5

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-25.A5.2.1
ADAPTING A LUNAR SPECTRUM ARCHITECTURE FOR THE MARS VICINITY
Ms. Jena Garrahy, NASA, Washington, D.C., United States;

IAC-25.A5.2.3
SHAPING THE FUTURE OF HUMAN MARS EXPLORATION: A PERSPECTIVE FROM THE NEXT GENERATION
Ms. Miriam Opazo Mendez, Space Generation Advisory Council (SGAC), Toulouse, France;

IAC-25.A5.2.4
HUMAN EXPLORATION OF MARS: CHALLENGES, STRATEGIES, AND MISSION ARCHITECTURES
Mr. KETAN AGARWAL, Siliguri, India;

IAC-25.A5.2.6
RED PLANET MOBILITY: A COMPREHENSIVE STUDY OF POWERTRAIN DESIGN FOR MARTIAN EXPLORATION VEHICLES
Mr. Ashish P. Rao, Technical University of Munich (TUM), München, Germany;

IAC-25.A5.2.7
REDPLANETOS: AN INTEGRATED SATELLITE COMMUNICATION FRAMEWORK FOR MARS EXPLORATION
Mr. Mohamed Jassar, RAMANATHAPURAM, India;

IAC-25.A5.2.9
MARS EXERCISE COUNTERMEASURE DESIGN CONCEPT
Mr. Kory Menke, University of Houston, Seabrook, United States;

IAC-25.A5.2.11
A SCIENCE STRATEGY FOR THE HUMAN EXPLORATION OF MARS
Prof. Dava J. Newman, Massachusetts Institute of Technology (MIT), Cambridge, MA, United States;

IAC-25.A5.2.12
DEVELOPMENT OF DIGITAL TWINS FOR THE SIMULATION AND EXPLORATION OF MARS IN TERRESTRIAL ENVIRONMENTS: A PROPOSAL
Prof. Avid Roman-Gonzalez, Asociacion Civil Universidad de Ciencias y Humanidades, Lima, Peru;

A5.4. Deep Space Habitats and Resources

October 2 2025, 10:15 — Room C2.1

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 Houston, United States;

IAC-25.A5.4.1
HUMAN EXPANSION INTO THE SOLAR SYSTEM REQUIRES ENGINEERED SPACE HABITATS, NOT PLANETARY BASES
Dr. Harry Jones, National Aeronautics and Space Administration (NASA), Ames Research Center, Moffett Field, United States;

IAC-25.A5.4.2
LARGE SPACESHIP FOR DEEP SPACE MISSION
Prof. Alexey Kondyurin, The University of Sydney, Ewingar, Australia;

IAC-25.A5.4.3
RADIATION SHIELDING INNOVATIONS: MAGNETIC FIELDS AND ADVANCED MATERIALS FOR DEEP SPACE MISSIONS
Ms. Ilaha Karimova, Azerbaijan Technical University, Baku, Azerbaijan;

IAC-25.A5.4.5
HELIOS ARK - A MULTIGENERATIONAL INTERSTELLAR SPACESHIP FOR HUMANITY'S NEXT FRONTIER
Mr. Tharshan Maheswaran, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany; Mrs. Jovana Stojković, Novi Sad, Serbia;

IAC-25.A5.4.6
FOLDING GEOMETRIES FOR THE DEPLOYMENT FROM CYLINDRICAL PAYLOAD BAYS OF COMPLEX SHAPED INFLATABLE HABITATS
Mrs. Lucia Nicotera, montevideo, Uruguay;

IAC-25.A5.4.8
RESEARCH AND PROSPECTS OF CAVE-BASED SPACE FARMS
Dr. RuoAn Wang, Center of Space Exploration, Ministry of Education (COSE), ChongQing, China;

IAC-25.A5.4.9
SELF-ASSEMBLING INFLATABLE HABITATS: A COMPACT AND MODULAR SOLUTION FOR LUNAR AND MARTIAN LONG-TERM HUMAN PRESENCE
Mr. Alan Hernández Martínez, Universidad La Salle, Mexico City, Mexico;

IAC-25.A5.4.10
SELF-RELIANT EXPLORATION (SERENE) LUNAR BASE CONCEPT
Mr. Kory Menke, University of Houston, Seabrook, United States;

IAC-25.A5.4.11
THE CONCEPT OF ARCHITECTURE FOR THE REALIZATION OF SUSTAINABLE LUNAR SOCIETY BASED ON WATER ISRU PLANT
Mr. Kiho Fukaura, JGC Corporation, Kanagawa, Japan;

A6. 23rd IAA SYMPOSIUM ON SPACE DEBRIS

Coordinator(s): Christophe Bonnal, European Conference for Aero-Space Sciences (EUCASS), France; Mark A. Skinner, The Aerospace Corporation, United States; Pierre Omaly, Astroscale France SAS, France; Noelia Sanchez Ortiz, Arribes Enlightenment, Spain;

A6.1. Space Debris Detection, Tracking and Characterization - SST

September 30 2025, 10:15 — Room C4.10

Co-Chair(s): Mark A. Skinner, The Aerospace Corporation, United States; Fabrizio Piergentili, Sapienza University of Rome, Italy;
Rapporteur(s): Thomas Schildknecht, SwissSpace Association, Switzerland;

IAC-25.A6.1.1
ADVANCED SURVEY RADARS FOR SPACE SURVEILLANCE AND TRACKING APPLICATIONS
Dr. Pierluigi Di Lizia, Politecnico di Milano, Milan, Italy;

IAC-25.A6.1.2
LEVERAGING UNCONVENTIONAL, PASSIVE DATASETS FOR FULL TRAJECTORY CHARACTERISATION OF RE-ENTERING SPACE DEBRIS
Ms. Isabella Hatty, Curtin University, Perth, Australia;

IAC-25.A6.1.3
DARK AND QUIET SKIES: OBSERVATIONAL TESTS OF A PREDICTIVE TECHNIQUE TO MITIGATE OPTICAL INTERFERENCE ON ASTRONOMICAL OBSERVATORIES
Dr. Mark A. Skinner, The Aerospace Corporation, United States;

IAC-25.A6.1.4
UNCONVENTIONAL OBSERVATIONS: USING ASTRONOMICAL OBSERVATORIES FOR SATELLITE AND DEBRIS CHARACTERISATION
Dr. Aishling Dignam, NSF - NOIRLab, La Serena, Chile;

IAC-25.A6.1.5
DEMONSTRATING GROUND-BASED PHOTOMETRIC ELECTRO-OPTICAL INSIGHTS WITH NASA'S ACS-3 SOLAR SAIL MISSION
Mr. Max Geissbuhler, Slingshot Aerospace, Edwards, United States;

IAC-25.A6.1.7
PRECISION DETECTION AND COLLISION WARNING OF CENTIMETER-LEVEL SPACE DEBRIS BASED ON HIGH-POWER LASER RANGING SYSTEM
Dr. Gongqiang Li, National Astronomical Observatories, Chinese Academy of Sciences, Beijing, China;

IAC-25.A6.1.8
DEVELOPMENT OF A SUB-MILLIMETER SPACE DEBRIS SENSOR FOR CUBESAT APPLICATIONS
Mr. Stefano Lopresti, CISAS "G. Colombo" - University of Padova, Padova, Italy;

IAC-25.A6.1.9
LIGHTSHEET ANOMALY RESOLUTION AND DEBRIS OBSERVATION (LARADO): TEST RESULTS AND PRE-LAUNCH UPDATE
Mr. Andrew Nicholas, Naval Research Laboratory, Washington DC, United States;

IAC-25.A6.1.10
DETECTING RESIDENT SPACE OBJECTS IN FAST-CADENCED, WIDE-FIELD, OPTICAL TRANSIENT ASTRONOMICAL SURVEYS
Ms. Tallulah Waterson, Swinburne University of Technology, Melbourne, Australia;

A6.2. Modeling and Risk Analysis

October 2 2025, 15:00 — Room C4.10

Co-Chair(s): Carmen Pardini, ISTI-CNR, Italy; Dan Oltrogge, COMSPOC Corp., United States;
Rapporteur(s): Marlon Sorge, The Aerospace Corporation, United States; Noelia Sanchez Ortiz, Arribes Enlightenment, Spain;

IAC-25.A6.2.1
ADVANCING RE-ENTRY EVENT CHARACTERIZATION: ASTROS SOLUTIONS' CONTRIBUTIONS TO SPACE SAFETY AND RE-ENTRY RISK ASSESSMENT
Dr. Matej Zigo, Astros Solutions s.r.o., Bratislava, Slovak Republic;

IAC-25.A6.2.2
THE RISK ON THE GROUND AND IN THE AIRSPACE POSED BY UNCONTROLLED RE-ENTRIES: SHOULD THE GROWTH OBSERVED IN RECENT YEARS BE CONSIDERED WORRYING?
Dr. Carmen Pardini, ISTI-CNR, Pisa, Italy;

IAC-25.A6.2.4
A PARAMETRIC SIMULATION OF A SPACECRAFT FRAGMENTATION: EFFECT OF MASS, VELOCITY, AND IMPACT POINT
Dr. Lorenzo Olivieri, University of Padova - DII/CISAS, Padova, Italy;

IAC-25.A6.2.5
NAVIGATING THE SKYFALL: ASSESSING THE RISK OF SPACE DEBRIS RE-ENTRIES ON AVIATION
Dr. Noelia Sanchez Ortiz, Arribes Enlightenment, Villanueva de la Cañada, Spain;

IAC-25.A6.2.6
EFFICIENT ANALYTICAL PROPAGATION AND CHAIN REACTION MODELING FOR LONG-TERM ANALYSIS OF FRAGMENTATION EVENTS
Dr. Emmanuel Delande, Centre National d'Etudes Spatiales (CNES), Toulouse, France;

IAC-25.A6.2.7
INTEGRATING DEBRIS MITIGATION STANDARDS: THE EVOLUTION AND CAPABILITIES OF ESA'S DRAMA 4.0
Mr. Esfandiar Farahvashi, Braunschweig, Germany;

IAC-25.A6.2.8
A STUDY OF RISK ASSESSMENT METRICS OF NON-OPERATIONAL OBJECTS IN GEOSYNCHRONOUS ORBIT
Mr. Ryusuke Harada, Japan Aerospace Exploration Agency (JAXA), Chofu-shi, Tokyo, Japan;

IAC-25.A6.2.9
RISK TO LUNAR-SURFACE AND ORBITAL ASSETS FROM A HIGH-ENERGY BREAKUP IN LOW LUNAR ORBIT
Mr. Carter Franz, The Aerospace Corporation, Chantilly, United States;

IAC-25.A6.2.10
SPACE DEBRIS RISKS FROM DERELICT SPACECRAFT
Mr. Harry She, LeoLabs, Menlo Park, United States;

IAC-25.A6.2.11
ADDRESSING UNADDRESSED LAUNCH RISK WITH A TOPOLOGY-BASED LCOLA APPROACH
Mr. Burton Catledge, Cocoa Beach, United States;

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

October 2 2025, 10:15 — Room C4.10

Co-Chair(s): Zizheng Gong, Beijing Institute of Spacecraft Environment Engineering, China Academy of Space Technology (CAST), China; Ysolde PREVEREAUD, ONERA - The French Aerospace Lab, France;
Rapporteur(s): Yukihito Kitazawa, Japan Aerospace Exploration Agency (JAXA), Japan;

IAC-25.A6.3.1
ANALYSIS OF FRAGMENTS VELOCITY DISTRIBUTION DURING HYPERVELOCITY IMPACTS
Mr. Alberto Abiti, University of Padua, Mogliano Veneto, Italy;

IAC-25.A6.3.2
SURVIVABILITY TO DEBRIS IMPACTS OF 3D PRINTED SHIELDS FOR RAPID PROTOTYPING OF SATELLITES
Mr. Alberto Abiti, University of Padua, Mogliano Veneto, Italy;

IAC-25.A6.3.3
POTENTIAL DEBRIS GENERATION FROM CFRP FRAGMENTATION
Ms. Tabitha Patrick, University of Florida, Gainesville, United States;

IAC-25.A6.3.6
INVESTIGATION OF MULTI-LAYER DEBRIS PROTECTION MATERIALS FOR SCIENTIFIC SPACECRAFT MISSIONS
Dr. Kumi Nitta, Japan Aerospace Exploration Agency (JAXA), Tsukuba-shi, Japan;

IAC-25.A6.3.7
ASSESSING THE IMPACT OF SPACE DEBRIS ON THE LEO ENVIRONMENT
Dr. Aishling Dignam, NSF - NOIRLab, La Serena, Coquimbo, Chile;

IAC-25.A6.3.8
SPACE DEBRIS AS AN ATMOSPHERIC POLLUTANT: ASSESSING RISKS AND IMPACTS ON EARTH'S UPPER ATMOSPHERE
Ms. Wendy Lucia Sanchez Delgado, University of Leeds, Leeds, United Kingdom;

A6.4. Mitigation - Tools, Techniques and Challenges - SEM

October 1 2025, 15:00 — Room C4.10

Co-Chair(s): Stijn Lemmens, European Space Agency (ESA), The Netherlands; Satomi Kawamoto, Japan Aerospace Exploration Agency (JAXA), Japan;
Rapporteur(s): Pierre Omaly, Astroscale France SAS, France; J.-C. Liou, National Aeronautics and Space Administration (NASA), United States;

IAC-25.A6.4.1
50 YEARS OF ARIANE LAUNCHES: ANALYSIS OF ORBITAL LIFETIMES FOR NON-DEORBITED ELEMENTS
Dr. Melissa Zemoura, Centre National d'Etudes Spatiales (CNES), Paris, France;

IAC-25.A6.4.2
RESULTS OF THE BETA TESTING BY SPACECRAFT OPERATORS FOR THEMIS SOFTWARE FOR TRACKING THE HEALTH OF THE ENVIRONMENT AND MISSIONS IN SPACE
Prof. Camilla Colombo, Politecnico di Milano, Milano, Italy;

IAC-25.A6.4.3
FRENCH SPACE OPERATIONS ACT IMPLEMENTATION TO DEVELOP SAFE AND SUSTAINABLE IN-ORBIT SERVICING OPERATIONS
Mr. Florent Lacomba, Centre National d'Etudes Spatiales (CNES), TOULOUSE, France;

IAC-25.A6.4.4
FEASIBILITY STUDY OF A MICRO-DEBRIS COLLECTION SATELLITE
Ms. Sarah Corbet, Loganholme, Australia;

IAC-25.A6.4.5
DESTRUCTIVE RE-ENTRY ASSESSMENT CONTAINER OBJECT (DRACO)
Mr. Lorenzo Tarabini-Castellani, Deimos Space SLU, Tres Cantos, Spain;

IAC-25.A6.4.6
A PARAMETRIC POLYNOMIAL SURFACE FIT METHOD FOR EVALUATING LONG-TERM CLEARANCE OF GEO FOR ECCENTRIC DISPOSAL ORBITS
Mr. David Emmert, The Aerospace Corporation, Colorado Springs, United States;

IAC-25.A6.4.7
MANEUVER INTENT ESTIMATION FOR SPACE SITUATIONAL AWARENESS USING NONLINEAR KALMAN FILTERING, RELATIVE ORBITAL ELEMENTS, AND GAME THEORY STRATEGIES
Dr. Josué Cardoso dos Santos, University of Colorado Colorado Springs, Colorado Springs, CO, United States;

IAC-25.A6.4.8
DEBRIS TO DELTA-V: FEASIBILITY OF THE METAL PROPELLANT ECOSYSTEM
Mrs. Lee Steinke, CisLunar Industries, Golden, United States;

IAC-25.A6.4.9
EFFECTIVENESS EVALUATION OF THE DRAG AUGMENTATION IN POST-MISSION DISPOSAL
Mr. Keijiro Hattori, Kyushu University, Fukuoka, Japan;

IAC-25.A6.4.10
END-OF-LIFE DISPOSAL DESIGN FOR NEAR-RECTILINEAR HALO ORBITS
Ms. Mathilda Bolis, Politecnico di Milano, Entratico, Italy;

IAC-25.A6.4.11
APPLICATION OF CERN TESTING FACILITIES AND RADIATION MONITORING SOLUTIONS TO SPACE SUSTAINABILITY CHALLENGES AND DEBRIS REDUCTION
Dr. Enrico Chesta, European Organization for Nuclear Research (CERN), Geneva, Switzerland;

A6.5. Post Mission Disposal and Space Debris Removal 1 - SEM

October 3 2025, 10:15 — Room C4.10

Co-Chair(s): Nicolas Bérend, ONERA - The French Aerospace Lab, France; Roberto Opromolla, University of Naples "Federico II", Italy;
Rapporteur(s): Balbir Singh, Manipal Institute of Technology, Manipal Academy of Higher Education, India;

IAC-25.A6.5.1
CAT-IOD: NOVEL ADR MISSION PAVING THE WAY TO A SUSTAINABLE FUTURE IN SPACE
Dr. Jason Forshaw, Astroscale Ltd, Harwell, United Kingdom;

IAC-25.A6.5.2
TOP 50 LIST FOR 2025
Dr. Darren McKnight, LeoLabs, Chantilly, VA, United States;

IAC-25.A6.5.3
FMCW DIGITAL STEERING LIDAR FOR ACTIVE DEBRIS REMOVAL
Dr. Toshinori Kuwahara, Tohoku University, Sendai, Japan;

IAC-25.A6.5.4
VISION-BASED MULTI-STEP APPROACH FOR ESTIMATING INERTIA PARAMETERS OF SPACE DEBRIS IN THE PRESENCE OF GRAVITY GRADIENT TORQUE
Ms. Moeko HIDAKA, Japan Aerospace Exploration Agency (JAXA), Tsukuba-shi, Ibaraki, Japan;

IAC-25.A6.5.5
SAFE AND ROBUST MANEUVERING FOR SHAPE RECONSTRUCTION OF NON-COOPERATIVE TARGETS
Mr. Taisei Nishishita, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

IAC-25.A6.5.6
LASER-BASED ACTIVE DEBRIS REMOVAL: A SATELLITE CONSTELLATION APPROACH FOR MITIGATING SMALL-SIZED SPACE DEBRIS IN LOW EARTH ORBIT
Ms. Anna Mauro, Politecnico di Torino, Torino, Italy;

IAC-25.A6.5.7
A FLIGHT MODEL AND IN-ORBIT DEMONSTRATION MISSION OF AN AUTONOMOUS DEORBIT DEVICE BASED ON ELECTRODYNAMIC TETHER TECHNOLOGY
Dr. Jesús Manuel Muñoz Tejeda, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, Rivas-Vaciamadrid, United States;

IAC-25.A6.5.8
EVALUATION OF NEW CANDIDATE DISPOSAL ORBITS FOR LUNAR AND CISLUNAR MISSIONS
Mr. Carter Franz, The Aerospace Corporation, Chantilly, United States;

IAC-25.A6.5.9
END-OF-LIFE CISLUNAR DISPOSAL ORBITS: EVALUATING THE EFFECTIVENESS AND SUSTAINABILITY OF LUNAR IMPACTS
Dr. Aaron J. Rosengren, University of California, San Diego, La Jolla, United States;

IAC-25.A6.5.10
HORN: THE IN-ORBIT DEMONSTRATION MISSION OVERVIEW AND ITS RESULTS OF DRAG SAIL FOR PMD WITH JAPANESE H3 LAUNCH VEHICLE
Dr. Yasuho Ataka, BULL Co., ltd., Utsunomiya-shi, Japan;

A6.6. Post Mission Disposal and Space Debris Removal 2 - SEM

October 3 2025, 13:45 — Room C4.10

Co-Chair(s): Dmitriy Grishko, Bauman Moscow State Technical University, Russian Federation; Jason Forshaw, Astroscale Ltd, United Kingdom;
Rapporteur(s): Marko Jankovic, Airbus Defence and Space, Germany; Laurent Francillout, Centre National d'Etudes Spatiales (CNES), France;

IAC-25.A6.6.1
ESA'S CAT-IOD MISSION: IN-ORBIT DEMONSTRATION OF ROBOTIC CAPTURE TECHNOLOGIES FOR ACTIVE DEBRIS REMOVAL VIA STANDARDIZED D4R INTERFACES
Mr. Daniel Wischert, European Space Agency (ESA), Noordwijk, The Netherlands;

IAC-25.A6.6.2
ON THE RATIONAL DESIGN FOR A GEOSTATIONARY WRECKER SPACECRAFT
Dr. Georgy Shcheglov, Bauman Moscow State Technical University, Moscow, Russian Federation;

IAC-25.A6.6.3
ACTIVE DEBRIS REMEDIATION AND SPACE OBJECT MOBILITY USING ELECTROADHESIVE TECHNOLOGY
Ms. Kalia Crowder, Cambrian Works, Inc., Austin, United States;

IAC-25.A6.6.4
END EFFECTORS FOR ROBOTIC SPACE DEBRIS MITIGATION
Mr. Lennart Fox, Fraunhofer IPK, Berlin, Germany;

IAC-25.A6.6.5
FEASIBILITY OF A PRESTRESSED WOVEN STRUCTURE AS AN IMPACT MITIGATION DEVICE IN ACTIVE DEBRIS REMOVAL
Mr. Eun-Ho Jung, Korea Advanced Institute of Science and Technology (KAIST), Sejong-si, Korea, Republic of;

IAC-25.A6.6.7
CONFIGURATION OPTIMIZATION AND FOLDING SCHEME DESIGN FOR MEMBRANE DRAG-AUGMENTATION DEVICES
Ms. Ruonan Zhang, Beijing Institute of Technology, Beijing, China;

IAC-25.A6.6.8
SPACE REMOVAL WITHOUT THE ARMS: NON-CONTACT DETUMBLING OF SPACE DEBRIS USING AN EDDY CURRENT TORQUE DEMONSTRATION RIG
Mr. Iqbal Grewal, Cranfield University, UK, Slough, United Kingdom;

IAC-25.A6.6.9
REVISITING HIGHER-ORDER TESSERAL RESONANCES FOR COLLISION AVOIDANCE IN LOW-EARTH ORBITS
Dr. Jerome Daquin, University of Namur (FUNDP), Namur, Belgium;

IAC-25.A6.6.10
ADVANCED IBVS ALGORITHM OF ROBOT ARM FOR DYNAMIC TRACKING IN CONSTRAINED ENVIRONMENT
Mr. Du Hao, Beihang University (BUAA), Beijing, China;

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

September 30 2025, 15:00 — Room C4.10

Co-Chair(s): A. K. Anil Kumar, Indian Space Research Organization (ISRO), India; Andrew Monham, EUMETSAT, Germany; Christopher Kunstadter, Triton Space LLC, United States;
Rapporteur(s): Melissa Zemoura, Centre National d'Etudes Spatiales (CNES), France; Rachit Bhatia, West Virginia University, United States;

IAC-25.A6.7.1
UNDERSTANDING AND MITIGATING DATA LIMITATIONS FOR CONJUNCTION ASSESSMENTS
Dr. T.S. Kelso, CelesTrak, Wailuku, HI, United States;

IAC-25.A6.7.2
AUSTRALIAN MULTI-SENSOR ORBIT DETERMINATION TO ENABLE DISTRIBUTED SPACE OPERATIONS
Dr. Kruger White, Defence Science and Technology Group (DST Group), Edinburgh, Australia;

IAC-25.A6.7.3
ESA ACTIVITIES AND VISION TO ENABLE SPACE CIRCULAR ECONOMY
Mr. Antonio Caiazzo, ESA - European Space Agency, Leiden, The Netherlands;

IAC-25.A6.7.4
A SPACE-BASED DEBRIS CATALOGUING SYSTEM FOR THE NEW SPACE ERA
Ms. Núria Escursell i Serra, Cranfield University, UK, Ripollet, Spain; Ms. Lara Schweighöfer, Cranfield University, Thônex, Switzerland;

IAC-25.A6.7.5
A FRAMEWORK FOR INNOVATIVE SAFETY MULTI-LAYER NETWORKS: BRIDGING SPACE SUSTAINMENT AND MARITIME DOMAINS
Dr. Vincent CAPIZZI, SYSTRA ANZ, Sydney, Australia;

IAC-25.A6.7.6
CNES INITIATIVES TO FOSTER SSA INNOVATION
Mr. Vincent Morand, Centre National d'Etudes Spatiales (CNES), Toulouse, France;

IAC-25.A6.7.7
ADVANCING THE SATPING INITIATIVE FOR SAFER SPACE OPERATIONS
Prof. Roberto Armellin, The University of Auckland, Auckland, New Zealand;

IAC-25.A6.7.8
ANALYZING DATA QUALITY AND DECAY IN MEGA-CONSTELLATIONS: A PHYSICS-INFORMED MACHINE LEARNING APPROACH
Ms. Katarina Dyreby, Faculdade de Ciências e Tecnologia - UNL, Setúbal, Portugal;

IAC-25.A6.7.9
PRIORITIZED SENSOR TASKING FOR AUTOMATED COLLISION RISK ASSESSMENT
Dr. Steve Gehly, Delft University of Technology, Delft, The Netherlands;

IAC-25.A6.7.10
DISTRIBUTED CONSTELLATION TASK SCHEDULING FOR COLLABORATIVE OBSERVATION OF SPACE TARGETS BASED ON DEEP REINFORCEMENT LEARNING
Mr. Lu Li, Innovation Academy for Microsatellites, Chinese Academy of Sciences, Shanghai, China;

A6.8-E9.1. Policy, Legal, Institutional, Economic and Security Aspects of Debris Mitigation, Debris Remediation and STM

September 29 2025, 15:30 — Room C4.10

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, The Netherlands; 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-25.A6.8-E9.1.1
KEYNOTE: THE SPACE TRIAD – PRACTICAL SPACE OPERATIONS FRAMEWORK
Dr. Darren McKnight, LeoLabs, Chantilly, VA, United States;

IAC-25.A6.8-E9.1.3
AN ANALYSIS OF APPROACHES THAT CAN EFFECTIVELY PROMOTE THE INTERNATIONAL SHARING OF SPACE SITUATIONAL AWARENESS INFORMATION: LESSONS LEARNED FROM EARTH OBSERVATION INITIATIVES
Dr. Ikuko Kuriyama, Institute for Future Initiatives (IFI), The University of Tokyo, Tokyo, Japan;

IAC-25.A6.8-E9.1.10
REVIVING SATELLITES, RESHAPING ORBITS: INTEGRATING ISAM INTO LICENSING FOR A SUSTAINABLE SPACE FUTURE
Mr. Nicolas Moraitis, Space Generation Advisory Council (SGAC), London, United Kingdom;

IAC-25.A6.8-E9.1.12
THE K-FACTOR: DETERMINING THE VALUE OF SPACE ASSETS
Mr. Christopher Kunstadter, Triton Space LLC, Arlington, VA, United States;

A6.9. Orbit Determination and Propagation - SST

October 1 2025, 10:15 — Room C4.10

Co-Chair(s): Darren McKnight, LeoLabs, United States; Paolo Marzioli, Sapienza University of Rome, Italy;
Rapporteur(s): Juan Carlos Dolado Perez, Centre National d'Etudes Spatiales (CNES), France; Jan Siminski, ESA - European Space Agency, Germany;

IAC-25.A6.9.1
AN ANALYSIS OF BOUNDS AND STABILITY IN LUNAR DEBRIS DESTINATIONS
Mr. Patrick Miga, Advanced Space, Westminster, Colorado, United States;

IAC-25.A6.9.2
MAINTAINING THE RESONANCE MODE TO ENSURE ORBIT DEGRADATION FOR AN OBJECT BELONGING TO THE GLOBAL POSITIONING SYSTEM
Dr. Dmitriy Grishko, Bauman Moscow State Technical University, Moscow, Russian Federation;

IAC-25.A6.9.3
ORBITAL DECAY PREDICTION FOR LOW EARTH ORBIT SATELLITES USING A SINGLE TWO LINE ELEMENT
Mr. MINSUP JEON, UZURO Tech Inc., Seoul, Korea, Republic of;

IAC-25.A6.9.4
INTERPOLATION OF THE GRAVITATIONAL FIELD AND ATMOSPHERE OF THE EARTH IN THE PROBLEM OF ORBIT REFINEMENT
Mr. Ivan Khripunov, Moscow Institute of Physics and Technology (MIPT), Moscow region, Dolgoprudniy, Russian Federation;

IAC-25.A6.9.5
PROBABILISTIC TRACKLET CLUSTERING AND INITIAL ORBIT DETERMINATION
Dr. Yang Yang, UNSW Australia, Sdyney, Australia;

IAC-25.A6.9.6
CONSTRAINED ADMISSIBLE REGION MULTI HYPOTHESIS FILTER FOR INITIAL ORBIT DETERMINATION USING OPTICAL OBSERVATIONS
Dr. Simone Varanese, Sapienza University of Rome, Rome, Italy;

IAC-25.A6.9.7
DEEP EXTENDED KALMAN FILTER FOR STATE ESTIMATION FOR SATELLITE CONSTELLATIONS
Mr. Francisco Caldas, Faculdade de Ciências e Tecnologia - UNL, Lisboa, Portugal;

IAC-25.A6.9.8
DATA-DRIVEN ORBIT DETERMINATION FOR LOW-EARTH ORBIT SPACE DEBRIS USING GROUND-BASED MEASUREMENTS
Mr. Hanyu Liu, Beihang University, Beijing, China;

IAC-25.A6.9.9
DATA FUSION FOR A SPACE CATALOG WITH HETEROGENEOUS SENSOR DATA RATE
Dr. Emmanuel Delande, Centre National d'Etudes Spatiales (CNES), Toulouse, France;

IAC-25.A6.9.10
CHARACTERISING SATELLITE CONJUNCTION "WALK-INS" FOR ENHANCED COLLISION PREDICTION AND SPACEFLIGHT SAFETY
Dr. Anne Bettens, Deneb Space, Eveleigh, Australia;

A6.10-E9.4. Space Carrying Capacity Assessment and Allocation

October 3 2025, 13:45 — Room C2.5

Co-Chair(s): Camilla Colombo, Politecnico di Milano, Italy; Didier Alary, International Academy of Astronautics (IAA), France;
Rapporteur(s): Peter Martinez, Secure World Foundation, United States; Alessandro Rossi, IFAC-CNR, Italy;

IAC-25.A6.10-E9.4.1
SPACE SUSTAINABILITY AND RISKS FROM SMALL ORBITAL DEBRIS
Dr. J.-C. Liou, National Aeronautics and Space Administration (NASA), Houston, United States;

IAC-25.A6.10-E9.4.2
COMPARISON OF METHODOLOGIES FOR ASSESSING SPACE CAPACITY AND RANKING ORBITAL REGION RISKS
Dr. Andrea Muciaccia, Politecnico di Milano, Milano, Italy;

IAC-25.A6.10-E9.4.3
DEBRIS INDEX FOR VARYING DEBRIS MITIGATION REQUIREMENTS TO ACCOUNT FOR LARGE CONSTELLATIONS AND ORBITAL CAPACITY
Dr. Satomi Kawamoto, Japan Aerospace Exploration Agency (JAXA), Tokyo, Japan;

IAC-25.A6.10-E9.4.4
SUSTAINABILITY OF COMMERCIAL SPACE OPERATIONS AND THE INTEGRATION OF SPACE AND AIR TRAFFIC MANAGEMENT
Dr. Paola Breda, International Space University (ISU), Illkirch-Graffenstaden, Germany;

IAC-25.A6.10-E9.4.5
SPACE CARRYING CAPACITY ASSESSMENT BASED ON A MULTIDISCIPLINARY SPACE DEBRIS ENVIRONMENT EVOLUTION MODEL
Ms. Yurun Yuan, Beijing Institute of Technology, Beijing, China;

IAC-25.A6.10-E9.4.6
LET'S TALK GUIDANCE TARGETS: CONSTELLATION CONTROL BOXES FOR SAFETY BY DESIGN
Mr. Ryan W. Shepperd, Iridium, Leesburg, VA, United States;

IAC-25.A6.10-E9.4.7
HOLISTIC APPROACH TO SPACE CARRYING CAPACITY
Mr. Mark Sturza, ViaSat Inc., Encino, United States;

IAC-25.A6.10-E9.4.8
IMPACT OF TRACKING UNCERTAINTIES ON ORBITAL SLOTTING STRATEGIES AND ORBITAL CAPACITY
Mr. Mahhad Nayyer, Purdue University, West Lafayette, United States;

IAC-25.A6.10-E9.4.9
ADVANCING THE SPACE FOOTPRINT: A MATHEMATICAL FRAMEWORK FOR IMPACT-BASED ORBITAL SUSTAINABILITY ASSESSMENT
Mr. Lovejivan Sidhu, York University, Toronto, Canada;

IAC-25.A6.10-E9.4.10
RESOLVING THE BYPRODUCTS FROM SPACE DEBRIS DEMISE IN THE ATMOSPHERE FOR CARRYING CAPACITY ASSESSMENTS
Mr. José Pedro Ferreira, Viterbi School of Engineering, USC, Los Angeles, United States;

IAC-25.A6.10-E9.4.11
AN UPDATED STUDY OF OPERATIONAL SUSTAINABILITY IN LOW EARTH ORBIT (LEO) IN A CONGESTED FUTURE
Mr. Gregory Henning, The Aerospace Corporation, Albuquerque, United States;

A6.11. Space Debris Detection, Tracking and Characterization - SST (2)

September 30 2025, 15:00 — Room C3.1

IAC-25.A6.11.2
USING A QUANTUM OPTICAL GROUND STATION AS OPTICAL SENSOR FOR SPACE SITUATIONAL AWARENESS
Dr. Doris Grosse, Australian National University (ANU), Weston Creek, Australia;

IAC-25.A6.11.3
THE DESERT FIREBALL NETWORK: USING A CONTINENTAL SCALE OF PASSIVE SENSORS FOR SPACE SITUATIONAL AWARENESS
Ms. Eleanor Sansom, Curtin University, Bentley, Australia;

IAC-25.A6.11.4
ENHANCING SPACE SITUATIONAL AWARENESS: ARCA DYNAMICS' INNOVATIVE SPACE-BASED SOLUTIONS
Mr. Daniele Luchena, ARCA Dynamics, Lecce, Italy;

IAC-25.A6.11.5
DETECTION CAPABILITIES ASSESSMENT AND SURVEY STRATEGY IMPLEMENTATION FOR SPACE-BASED MONITORING OF LUNAR TARGETS: A NEW ESA TECHNOLOGY DEMONSTRATION MISSION
Dr. Pierluigi Di Lizia, Politecnico di Milano, Milan, Italy;

IAC-25.A6.11.6
PERFORMANCE EVALUATION OF CMOS AND NEUROMORPHIC-BASED SENSORS FOR GROUND-BASED SPACE SITUATIONAL AWARENESS
Dr. Anton Ivanov, Technology Innovation Institute (TII), Abu Dhabi, United Arab Emirates;

IAC-25.A6.11.7
LABORATORY TESTING OF LARID: PAVING THE WAY FOR IN-SITU QUANTIFICATION OF MILLIMETER-SIZED SPACE DEBRIS
Mr. Noah Ledford, Fraunhofer EMI, Freiburg, Germany;

IAC-25.A6.11.8
SPACE-BASED SENSOR FUSION FOR REFINED SPACE DEBRIS CATALOGUING
Mr. Matteo Dodero, Cranfield University, milan, Italy;

IAC-25.A6.11.9
SPACE OBJECT OPTICAL DETECTION WITH REAL-TIME, HIGH-RESOLUTION VIDEO
Dr. Nathan Ré, Advanced Space, Westminster, CO, United States;

IAC-25.A6.11.10
MICRO-DOPPLER SIGNATURES AND OBJECT CHARACTERIZATION OF SPACE DEBRIS WITH RADIO TELESCOPES
Dr. Guifre Molera Calves, University of Tasmania, Hobart, Australia;

A7. IAF SYMPOSIUM ON ONGOING AND NEAR FUTURE SPACE ASTRONOMY AND SOLAR-SYSTEM SCIENCE MISSIONS

Coordinator(s): Andrew Court, TNO, The Netherlands; 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

September 29 2025, 15:30 — Room C2.6

Co-Chair(s): Eric Wille, ESA, The Netherlands; Alessandra Di Cecco, Agenzia Spaziale Italiana (ASI), Italy;
Rapporteur(s): Andrew Court, TNO, The Netherlands;

IAC-25.A7.1.1 (unconfirmed)
WHICH FUTURE FOR HIGH ENERGY ASTROPHYSICS FROM SPACE IN EUROPE?
Prof. Pietro Ubertini, INAF, Roma, Italy;

IAC-25.A7.1.2
OBSERVING THE NEAR-INFRARED EXTRAGALACTIC SKY WITH THE EUCLID SATELLITE
Dr. Gianluca Polenta, Italian Space Agency (ASI), Roma, Italy;

IAC-25.A7.1.3
THE ARIEL MISSION \\ A MISSION OF THE EUROPEAN SPACE AGENCY FOR THE CHARACTERIZATION OF EXOPLANETS
Mr. Anders Svedevall, ESA, Noordwijk, The Netherlands;

IAC-25.A7.1.4
THE BLACK HOLE EXPLORER MISSION: SPACE-VLBI FOR THE STUDY OF SUPERMASSIVE BLACK HOLES
Dr. Hannah Rana, Harvard-Smithsonian Center for Astrophysics (CfA), Cambridge, MA, United States;

IAC-25.A7.1.5
TRANSLATING ASTRONOMY INTO SPACE TECHNOLOGY IN A REGIONAL QUEENSLAND
Prof. Brad Carter, Toowoomba, Australia;

IAC-25.A7.1.6
STEP-02: A NARROW-ANGLE PRECISION ASTROMETRY MISSION PREPARING FOR SERVICE
Mr. Heqing Wang, Shanghai Aerospace Control Technology Institute (SACTI), Shanghai Academy of Spaceflight Technology (SAST), shanghai, China;

IAC-25.A7.1.7
L1 OPTICAL LENSING (LOL): USING THE EARTH AS AN ATMOSPHERIC LENS
Mr. Giorgio Abbate, Politecnico di Torino, Modica, Italy;

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

September 30 2025, 10:15 — Room C2.6

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-25.A7.2.1
INTERSTELLAR PROBE: US DECADAL SURVEY RECOMMENDATIONS AND STRATEGIC NEXT STEPS
Dr. Pontus Brandt, Johns Hopkins University Applied Physics Laboratory, Laurel, United States;

IAC-25.A7.2.2
THE TOLIMAN MISSION – THE SEARCH FOR A HABITABLE PLANET AROUND ALPHA CENTAURI A AND B
Prof. Peter Tuthill, The University of Sydney, Sydney, Australia;

IAC-25.A7.2.3
THE QUEST FOR PLANET NINE: INVESTIGATING THE OUTER SOLAR SYSTEM'S HIDDEN MASS
Mr. Mehdi Lali, Capitol Technology University, Madison, United States;

IAC-25.A7.2.4
PREDICTIONS OF THE NANCY GRACE ROMAN SPACE TELESCOPE GALACTIC EXOPLANET SURVEY IV: BOUND PLANET MASS AND DISTANCE MEASUREMENTS USING PYLIMASS
Ms. Carissma McGee, Massachusetts Institute of Technology (MIT), Cambridge, MA, United States;

IAC-25.A7.2.5
LEVERAGING AI TO EXPLORE GALAXY MORPHOLOGY AND EVOLUTION ACROSS THE AGES
Ms. Neha Upadhyay, Bhopal, India;

IAC-25.A7.2.6
AGENT-DRIVEN DISCOVERY: A LARGE LANGUAGE MODEL FOR AUTONOMOUS ANALYSIS OF BLACK HOLE OBSERVATION DATA
Ms. Anushree Maligehalli Shadaksharaiah, Tumkur, India;

IAC-25.A7.2.7
STUDYING NEUTRINO PRODUCTION MODELS IN NGC 1068 WITH INTEGRAL
Dr. James Rodi, INAF-IAPS, Roma, Italy;

IAC-25.A7.2.9
UTILISING LATENT DIRICHLET ALLOCATION (LDA) FOR ANALYSING EXOPLANETARY ATMOSPHERES IN THE SEARCH FOR HABITABILITY AND EXTRA-TERRESTRIAL LIFE
Mr. King Kumire, University of South Africa - UNISA, Aylesford, United Kingdom;

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

October 1 2025, 15:00 — Room C2.6

Co-Chair(s): Eric Wille, ESA, The Netherlands; Andrew Court, TNO, The Netherlands;
Rapporteur(s): Maria Cristina Falvella, Italian Space Agency (ASI), Italy;

IAC-25.A7.3.1
STRUCTURAL SUPPORTS AND SYSTEMS ENGINEERING FOR SPACE TELESCOPES: A REVIEW
Mr. Dillon OReilly, Southeast Technological University of Ireland, Kildare, Ireland;

IAC-25.A7.3.2 (unconfirmed)
DEVELOPMENTS IN UPSCALING X-RAY SILICON PORE OPTICS MIRROR MODULE ASSEMBLY FOR THE NEWATHENA TELESCOPE
Mr. James Harpur, Cosine Remote Sensing B.V., Leiden, The Netherlands;

IAC-25.A7.3.3
DARK AND QUIET SKIES: USING NEW SPACE SURVEILLANCE NETWORK DATA TYPES TO PREDICT SATELLITE OPTICAL INTERFERENCE
Mr. Carson Coursey, The Aerospace Corporation, Cambridge, United States;

IAC-25.A7.3.4
LISA: A SPACECRAFT DESIGNED TO OBSERVE THE UNIVERSE VIA GRAVITATIONAL WAVES
Mr. Andrea Sacchetti, OHB System AG, Wessling, Germany;

IAC-25.A7.3.5
REANALYSIS OF CASSINI SUPERIOR SOLAR CONJUNCTION EXPERIMENT FOR FUNDAMENTAL PHYSICS TESTS
Dr. Paolo Cappuccio, Aurora Technology B.V., Villanueva de la Cañada, Spain;

IAC-25.A7.3.6
ANALYSIS OF THE INFLUENCE OF FUEL CONSUMPTION AND USAGE ON SELF-GRAVITY OF SPACE GRAVITATIONAL WAVE DETECTION
Ms. Keqin Zhang, Innovation Academy for Microsatellites, Chinese Academy of Sciences, SHANGHAI, China;

IAC-25.A7.3.7 (unconfirmed)
ADAPTIVE OPTICS AND ITS APPLICATION IN DEEP SPACE EXPLORATION
Mr. Sebastián Sala Baltazar, Universidad Nacional Autónoma de México (UNAM), Naucalpan de Juárez, Estado de México, Mexico;

IAC-25.A7.3.9
SPACE DUST AND MICRO-DEBRIS MEASUREMENTS: FUTURE MISSION CONCEPTS AND LESSONS LEARNED FROM THE PAST
Dr. Veerle Sterken, ETHZ, Bern, Switzerland;

IAC-25.A7.3.10
THE ATNF RADIO FACILITIES – MORE THAN ASTRONOMY
Dr. Chris Phillips, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Marsfield, Australia;

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

September 29 2025, 15:30 — Room C4.9

Co-Chair(s): Mukund Kadursrinivas Rao, Independent consultant, India; Kyriaki Minoglou, European Space Agency (ESA), The Netherlands;
Rapporteur(s): José Gavira Izquierdo, International Space Consultant, The Netherlands; Cristian Bank, EUMETSAT, Germany;

IAC-25.B1.1.1
KANYINI MISSION: METHODOLOGY, APPROACH, AND INSIGHTS FROM AUSTRALIA'S FIRST STATE-FUNDED EO MISSION
Mr. Peter Nikoloff, Nova Systems Pty Ltd, Adelaide, Australia;

IAC-25.B1.1.2
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-25.B1.1.3
OVERVIEW OF THE ARAB SATELLITE 813: A SMALL SATELLITE FOR EARTH OBSERVATION WITH HYPERSPECTRAL IMAGING CAPABILITIES
Mrs. Eiman Al Shamsi, The National Space Science and Technology Center (NSSTC), Abu Dhabi, United Arab Emirates;

IAC-25.B1.1.4
STATUS AND EVOLUTION OF COPERNICUS, THE MOST AMBITIOUS EARTH OBSERVATION PROGRAMME
Mr. Pierre Potin, European Space Agency (ESA), Frascati, Italy;

IAC-25.B1.1.6
THE JOINT SPACE-BASED EO SYSTEM SIASGE: ACCESS TO SAOCOM DATA OVER THE ASI ZONE OF EXCLUSIVITY
Dr. Patrizia Sacco, Italian Space Agency (ASI), Roma, Italy;

IAC-25.B1.1.7
SPACEEYE-T: A NEW ERA IN SATELLITE LEASING
Mr. Byung Joon Ahn, Satrec Initiative, Daejeon, Korea, Republic of;

IAC-25.B1.1.8
AUSCALVAL – A NATIONALLY COORDINATED APPROACH TO EARTH OBSERVATION CALIBRATION AND VALIDATION INFRASTRUCTURE AND DATA.
Mr. Andy Allen, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Canberra, Australia;

IAC-25.B1.1.9
EO4CEA PROJECT: AN INITIATIVE TO ENCOURAGE THE ADOPTION OF SATELLITE IMAGERY-BASED PRODUCTS AND SERVICES IN CENTRAL AND EASTERN AFRICA
Dr. Giancarlo Santilli, Italian Space Agency (ASI), Rome, Italy;

IAC-25.B1.1.10
CYANOSAT: AN INTERNATIONAL PARTNERSHIP TOWARDS A SPACE MISSION FOR WATER QUALITY
Mr. Craig Ingram, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Adelaide, Australia;

B1.2. Earth Observation Systems

September 30 2025, 15:00 — Room C4.9

Co-Chair(s): Annamaria Nassisi, Thales Alenia Space Italia, Italy; Timo Stuffler, OHB System AG - Munich, Germany;
Rapporteur(s): Harry A. Cikanek, National Oceanic and Atmospheric Administration (NOAA), United States; Erick Lansard, Satellite Research Center, Nanyang Technological University (NTU), Singapore, Republic of;

IAC-25.B1.2.1
ENMAP-PRISMA COORDINATED MULTI-MISSION ACQUISITIONS: OVERVIEW AND FIRST OUTPUTS
Mr. Giancarlo Varacalli, Italian Space Agency (ASI), Roma, Italy;

IAC-25.B1.2.2 (unconfirmed)
PRISCAV: SCIENTIFIC FRAMEWORK OF THE CAL/VAL OF PRISMA MISSION
Mr. Lorenzo Genesio, Consiglio Nazionale delle Ricerche (CNR), Florence, Italy;

IAC-25.B1.2.3
INFRARED ATMOSPHERIC SOUNDING INTERFEROMETER NEW GENERATION PROGRAM: PERFORMANCES AND POST LAUNCH STATUS
Mr. Francisco BERMUDO, Centre National d'Etudes Spatiales (CNES), Toulouse, France;

IAC-25.B1.2.4
TAIWAN'S ADVANCEMENTS IN GNSS REMOTE SENSING - TRITON FOLLOW-ON MISSION
Dr. Yung-Fu Tsai, Taiwan Space Agency (TASA), Hsinchu, Taipei;

IAC-25.B1.2.5
EVALUATING MICROSATELLITE-BASED GHG MONITORING: COVERAGE AND OBSERVATION PERFORMANCE
Ms. Jinyoung Shin, Nara Space, Yeongdeungpo-gu, Seoul,, Korea, Republic of;

IAC-25.B1.2.6
OZFUEL-1: TOWARDS AND IMAGING SPECTROMETER TO MONITOR FOREST FUEL FLAMMABILITY FROM SPACE
Dr. Marta Yebra, Australian National University (ANU), Canberra, Australia;

IAC-25.B1.2.7
THE DEVELOPMENT OF A COMPREHENSIVE EARLY WARNING SYSTEM TO MITIGATE THE RISK OF GLACIAL LAKE OUTBURST FLOODS (GLOFS)
Ms. Ritambhara Ganesh, Sydney, Australia;

IAC-25.B1.2.8
OVERVIEW OF MISSION SCENARIOS FOR A VERY LOW EARTH ORBIT (VLEO) MISSION
Mr. Jan-Christian Meyer, Berlin Space Technologies GmbH, Berlin, Germany;

IAC-25.B1.2.9
SYSTEMS MODELING OF A QUANTUM LIDAR CONSTELLATION FOR OCEANIC MONITORING IN VLEO
Mr. Sankalp Jain, Hyderabad, India;

IAC-25.B1.2.11
AIX-1P LIFT-OFF: THE PATHFINDER MISSION FOR THE TRANSFORMATION OF THE EARTH OBSERVATION PARADIGM
Dr. Cristoforo Abbattista, Planetek Italia, Bari, Italy;

IAC-25.B1.2.12
HIERARCHICAL MULTI-OBJECTIVE REINFORCEMENT LEARNING FOR AGILE SATELLITE OBSERVATION SEQUENCING
Mr. Chenhao Ouyang, Northwestern Polytechnical University;National Key Laboratory of Aerospace Flight Dynamics, Xi'an, China;

B1.3. Earth Observation Sensors and Technology

October 3 2025, 10:15 — Room C4.3

Co-Chair(s): Andrew Court, TNO, The Netherlands; Taryn Tomlinson, Canadian Space Agency, Canada;
Rapporteur(s): Camilo Andres Reyes, , Colombia;

IAC-25.B1.3.1
ADVANCING SATELLITE OPTICS: CAPABILITIES, ACHIEVEMENTS, AND FUTURE PROSPECTS OF THE CSIRO SPACE OPTICS TEAM
Mr. Craig Ingram, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Adelaide, Australia;

IAC-25.B1.3.2
OPTOMECHANICAL RESONATORS FOR NEXT-GENERATION SPACE MISSIONS: A COLLABORATIVE APPROACH TO ENHANCE PRECISION SENSING
Mr. Tim Gust, Hochschule Bremen, Augsburg, Germany;

IAC-25.B1.3.3
CHARACTERIZATION OF THE NEXT GENERATION OF ULTRA-WIDEBAND UNCOOLED MICROBOLOMETER ARRAYS
Mr. Jean-François Lavigne, INO, Québec, Canada;

IAC-25.B1.3.4
MISSION ANALYSIS AND CONCEPT OF OPERATIONS FOR AN EARTH OBSERVATION HYPERSPECTRAL IMAGER
Dr. Imène TALEB, Agence Spatiale Algérienne (ASAL), Oran, Algeria;

IAC-25.B1.3.5
PALE POLARIZED DOTS: SPECTROPOLARIMETRY OF THE EARTH AS AN EXOPLANET WITH LOUPE AND PEARL
Dr. Chris van Dijk, Cosine Remote Sensing B.V., Sassenheim, The Netherlands;

IAC-25.B1.3.6
ADAPTING LASER HETERODYNE RADIOMETRY FOR SPACE-BASED GREENHOUSE GAS MONITORING
Dr. James Bevington, North Sydney, Australia;

IAC-25.B1.3.7
MINIATURE MEMS-BASED MASS SPECTROMETER FOR SPACE WEATHER MONITORING IN LOW EARTH ORBIT
Dr. Piotr Szyszka, Wroclaw University of Science and Technology, Wrocław, Poland;

IAC-25.B1.3.8
DEVELOPMENT OF E-FIELD/PLASMA HYBRID MEASUREMENT PAYLOADS FOR CUBESAT
Mr. Yusei Honjo, Nihon University, Chiba, Funabashi, Japan;

IAC-25.B1.3.9
MULTI-RESOLUTION LINEAR VARIABLE FILTER FOR TAILORED HYPERSPECTRAL IMAGING APPLICATIONS
Mr. Craig Ingram, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Adelaide, Australia;

IAC-25.B1.3.10
OZFUEL-1: A BUSHFIRE RISK REDUCTION SPACE TELESCOPE
Dr. Israel Vaughn, Australian National University (ANU), Stromlo, Australia;

B1.4. Earth Observation Data Systems and Technology

October 1 2025, 15:00 — Room C4.9

Co-Chair(s): Ana-Mia Louw, Simera Sense, South Africa; James Graf, Jet Propulsion Laboratory, United States;
Rapporteur(s): Frank Webb, Jet Propulsion Laboratory - California Institute of Technology, United States; Agnieszka Lukaszczyk, Andart Global, Poland;

IAC-25.B1.4.1
OPTIMIZING THEOS-2 SATELLITE IMAGERY : A NOVEL APPROACH TO SUPER RESOLUTION USING UNPAIRED DATA SET
Mr. Minsik Kim, Nara Space, Seoul, Korea, Republic of;

IAC-25.B1.4.2
DATASET-CENTRIC ANALYSIS OF OBJECT DETECTION MODELS FOR TINY OBJECTS IN SATELLITE IMAGERY
Mr. Malaya Kumar Biswal M, Grahaa Space, Bangalore, India;

IAC-25.B1.4.4
SYNTHESIS OF A MULTISPECTRAL IMAGE DATASET FOR ML-BASED SPACE SURVEILLANCE
Dr. Jordan Kildare, University of South Australia, Devon Park, Australia;

IAC-25.B1.4.5
RAPID ENVIRONMENTAL DATA EXTRACTION FOR REMOTE SENSING USING LIGHTWEIGHT DEEP LEARNING ALGORITHMS ONBOARD SPACECRAFT
Prof. Tanya Vladimirova, University of Leicester, Leicester, United Kingdom;

IAC-25.B1.4.6
TOWARDS STANDARDIZING GRSS FOR ENHANCED SPACE-BASED DISASTER MANAGEMENT
Mr. Hassan Abouseada, Egyptian Space Agency (EgSA), Cairo, Egypt;

IAC-25.B1.4.7
EVALUATING TIME SERIES MODELS AND DEEP LEARNING TECHNIQUES FOR SPACE WEATHER PREDICTION IN LOW EARTH ORBIT SATELLITE MISSION PLANNING
Ms. Divya Rao, Carnegie Mellon University, Pittsburgh, United States;

IAC-25.B1.4.8
MAXIMISING HAPS DATA ACQUISITION AND PROCESSING THROUGH DYNAMIC IMAGING AND INTEGRATED ONBOARD AND WEB-BASED SYSTEMS
Dr. Therese Anne Rollan, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Adelaide, Australia;

IAC-25.B1.4.9
AN ONBOARD ANALYSIS MODEL FOR ADAPTIVE REMOTE SENSING OF TROPICAL CYCLONES
Ms. Allegra Farrar, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-25.B1.4.10
AGILE SATELLITE INTELLIGENT AREA PARTITIONING FOR AUTONOMOUS TASK PLANNING
Prof. Qingrui Zhou, China Academy of Space Technology (CAST), Beijing, China;

IAC-25.B1.4.11
SUPER-RESOLUTION RECONSTRUCTION OF KAUST CUBESAT HYPERSPECTRAL DATA FROM LOW-RESOLUTION THUMBNAILS
Mr. Victor Angulo, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia;

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

October 2 2025, 10:15 — Room C4.9

Co-Chair(s): Na Yao, Qian Xuesen Laboratory of Space Technology, China Academy of Space Technology (CAST), China; Luís Ferreira, Airbus Defence and Space, Germany;
Rapporteur(s): Masami Onoda, Japan Aerospace Exploration Agency (JAXA), Japan; Michael Kern, ESA, France;

IAC-25.B1.5.1
KANYINI R&D: INNOVATIVE EO APPLICATIONS ADDING SOCIO-ECONOMIC IMPACT TO AN AUSTRALIAN CUBESAT
Dr. Carl Seubert, SmartSat CRC, Adelaide, Australia;

IAC-25.B1.5.2
SHOWCASING EO'S IMPACT THROUGH INNOVATIVE STORYTELLING
Dr. Emma Gatti, Milan, Italy;

IAC-25.B1.5.3
IGNIS: MONITORING LIGHTING AND FIRES FROM THE GROUND, AIR AND SPACE
Prof.Dr. Paulo de Souza, Joondalup, Australia;

IAC-25.B1.5.6
ETHIOPIA'S EARTH OBSERVATION SERVICES: APPLICATIONS, CHALLENGES, AND BENEFITS FOR SUSTAINABLE DEVELOPMENT
Mr. ESHET TESFAYE TAFES, Ethiopian Space Science and Technology Institute (ESSTI), Addis Ababa, Ethiopia;

IAC-25.B1.5.7
ASSESSMENT OF SURFACE ECOLOGICAL CONDITIONS OF HUMAN SETTLEMENTS USING REMOTE SENSING DATA
Ms. Naledzani Mudau, South African National Space Agency (SANSA), Pretoria, South Africa;

IAC-25.B1.5.8
A MACHINE LEARNING FRAMEWORK FOR PREDICTING MINING-DRIVEN LAND USE CHANGES: A CASE STUDY FOR SUSTAINABLE RESOURCE MANAGEMENT IN SHURUGWI, ZIMBABWE
Ms. Muongeni Tamara Manda, Space Generation Advisory Council (SGAC), Shurugwi, Zimbabwe;

IAC-25.B1.5.9
HARNESSING EARTH OBSERVATION CAPABILITIES TO ADVANCE GLOBAL HEALTH
Ms. Ivy Mayor, Space Generation Advisory Council (SGAC), Stockholm, Sweden;

IAC-25.B1.5.10
SCALING AI-DRIVEN EARTH OBSERVATION FOR GLOBAL HEALTH: BRIDGING DATA GOVERNANCE AND INTEROPERABILITY FOR IMPACT
Ms. Renata Prôa, Harvard University, Boston, United States;

IAC-25.B1.5.11
USING SATELLITE IMAGERY FOR PROPERTY TAX ASSESSMENT - A CASE STUDY OF LUANDA PROVINCE, ANGOLA
Mr. Luciano Costa Dembue Lupedia, Angolan National Space Program Management Office (GGPEN), Luanda, Angola;

IAC-25.B1.5.12
EVALUATING SATELLITE CONSTELLATION DESIGNS FOR EARTH OBSERVATION DATA UTILITY IN SUPPORT OF THE UN SDGS
Mr. John Mackintosh, University of Manchester, Manchester, United Kingdom;

B1.6. Nowhere to Hide – The impacts on society of Ubiquitous Earth Coverage

October 2 2025, 15:00 — Room C4.9

Co-Chair(s): Krystal Azelton, Secure World Foundation, United States; Mariel Borowitz, , United States;
Rapporteur(s): Chen Xiaoli, Beijing Institute of Space Mechanics & Electricity, China Academy of Space Technology (CAST), China;

IAC-25.B1.6.1
EARTH OBSERVATION FOR FACT-CHECKING: HARNESSING SPACE TECHNOLOGIES TO COUNTER DISINFORMATION AND STRENGTHEN POLICY DECISION-MAKING
Dr. Lorenzo Scatena, Fondazione E. Amaldi, Roma, Italy;

IAC-25.B1.6.2
SATELLITES AS A PUBLIC GOOD OR TOOL FOR SURVEILLANCE? RESPONSIBLE EARTH OBSERVATION FOR SUSTAINABLE DEVELOPMENT
Dr. Christina Griffin, Australian National University (ANU), Canberra, Australia;

IAC-25.B1.6.3
CRIME SCENE TO COURTROOM: EVALUATING EO AS FORENSIC EVIDENCE IN CRIMINAL JUSTICE
Mrs. Seonaid Rapach, University of Strathclyde / Mechanical and Aerospace Engineering, Glasgow, United Kingdom;

IAC-25.B1.6.4
"WE'LL HAVE TO LET CLOVA BURN!": THE POWER DYNAMICS OF CONTINUOUS SATELLITE SURVEILLANCE IN CLIMATE DISASTERS
Mrs. Audrey Medaino-Tardif, University of Toronto, Morin Heights, Canada;

IAC-25.B1.6.5
CYBERNETIC TERRITORIAL INTELLIGENCE - BEYOND OBSERVATION
Ms. Amy Wardrop, Australian National University (ANU), Canberra, Australia;

IAC-25.B1.6.7
LEVERAGING SPACE-BASED INTELLIGENCE TO TRACK RARE EARTH AND CRITICAL MINERAL SUPPLY CHAINS IN THE DRC'S CONTESTED REGIONS
Ms. Selina Hayes, Washington, United States;

IAC-25.B1.6.9
WITNESSING WAR WITH EARTH OBSERVATION: USING SENTINEL-2 DATA TO ASSESS ENVIRONMENTAL DESTRUCTION IN GAZA
Dr. Sahba El-Shawa, Jordan Space Research Initiative (JSRI), Amman, Jordan;

IAC-25.B1.6.10
SAFEGUARDING RADIO ASTRONOMY AND SPACE NAVIGATION: CSIRO'S OBSERVATIONAL DATA SHARING SYSTEM FOR MITIGATING SATELLITE INTERFERENCE
Dr. Balthasar Indermuehle, CSIRO Australia Telescope National Facility, Epping NSW, Australia;

B1.7. Earth Observations to Address Earth's Environment and Climate Challenges

October 1 2025, 10:15 — Room C4.9

Co-Chair(s): Ole Morten Olsen, Norwegian Space Agency (NOSA), Norway; Shimrit Tirosh Maman, Israel Space Agency, Israel;
Rapporteur(s): Patrick Castillan, Centre National d'Etudes Spatiales (CNES), France; Pilar Zamora, , Colombia;

IAC-25.B1.7.1
ADDRESSING CLIMATE AND ENVIRONMENTAL CHALLENGES WITH A LIDAR SATELLITE CONSTELLATION
Mr. Bipul Neupane, Sydney, Australia;

IAC-25.B1.7.2
TROPICAL DISEASE SURVEILLANCE USING SATELLITES
Mr. Aditya Ishaan Talamudipi, Nanyang Technological University (NTU), Singapore, Singapore, Republic of;

IAC-25.B1.7.3
THE CIRCLE: FUTURE EARTH OBSERVATION SYSTEM ARCHITECTURE SYSTEM OF SYSTEMS ANALYSIS FROM A SCIENCE NEED PERSPECTIVE
Mr. Leonardo Amoruso, Planetek Italia, Bari, Italy; Dr. Cristoforo Abbattista, Planetek Italia, Bari, Italy;

IAC-25.B1.7.4
RECENT ADVANCES AND FUTURE PROSPECTIVES OF GNSS CLIMATOLOGY: CLIMATE CHANGE ANALYSIS AND CLIMATE RISKS ASSESSMENT
Dr. Haobo Li, RMIT University, Melbourne, Australia;

IAC-25.B1.7.5
NARSHA - THE KOREAN FIRST SPACEBORNE METHANE MONITORING PROJECT FOR ACHIEVING NET ZERO
Dr. Geuk-Nam Kim, Nara Space, Seoul, Korea, Republic of;

IAC-25.B1.7.6
USE OF SATELLITE DATA FOR CLIMATE CHANGE ADAPTATION AND RESILIENCE STRATEGIES
Ms. Elizabeth Hyatt, International Space University (ISU), Parkgate, United Kingdom;

IAC-25.B1.7.7
DAILY GLOBAL COVERAGE: A NEW PARADIGM FOR CLIMATE RESILIENCE IN THE ASIA-PACIFIC REGION
Ms. Rylea McGlusky, Canberra, Australia;

IAC-25.B1.7.8
DAILY URBAN LAND SURFACE TEMPERATURE MEASUREMENT AND MODELLING USING MULTIPLE PASSIVE TIR SATELLITE SENSORS.
Dr. Carl Seubert, SmartSat CRC, Adelaide, Australia;

IAC-25.B1.7.10
EXAMINING THE UTILITY OF CYGNSS SATELLITE DATA FOR DECISION-MAKING NEEDS
Dr. Md Sariful Islam, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-25.B1.7.11
ASSESSING CLIMATE CHANGE IMPACTS ON WATER ACCESSIBILITY IN IBADAN, NIGERIA: A GEOSPATIAL ANALYSIS (2014–2024)
Ms. Muongeni Tamara Manda, Space Generation Advisory Council (SGAC), Shurugwi, Zimbabwe;

IAC-25.B1.7.13
IMPACTS AND DRIVERS OF SUMMER WILDFIRES IN THE CAPE PENINSULA, SOUTH AFRICA: A REMOTE SENSING APPROACH
Ms. Kanya Xongo, South African National Space Agency (SANSA), Pretoria, South Africa;

IAC-25.B1.7.14
EYES IN THE SKY, INTELLIGENCE ON EARTH: AI-POWERED EARTH OBSERVATION FOR A CHANGING PLANET
Ms. Ericka Martin, Planet, Tokyo, Japan;

B1.8. The use of EO for maritime and coastal protection: technology, systems, policy and applications

October 3 2025, 13:45 — Room C2.1

Co-Chair(s): Agnieszka Lukaszczyk, Andart Global, Poland; Alexandra Jercaianu, Nara Space, Korea, Republic of;

IAC-25.B1.8.1
THE TAKAHE MISSION CONCEPT - MONITORING THE SOUTHERN INDO-PACIFIC OCEAN FROM SPACE
Dr. Carl Seubert, SmartSat CRC, Adelaide, Australia;

IAC-25.B1.8.2
OPTIMIZED COVERAGE ANALYSIS OF DISTRIBUTED SAR CONSTELLATIONS FOR ENHANCED MARITIME SURVEILLANCE
Dr. Kathiravan Thangavel, Khalifa University of Science and Technology (KUST), Abu Dhabi, United Arab Emirates;

IAC-25.B1.8.3
WAKE-DRIVEN MOTION COMPENSATION FOR SAR SHIP IMAGING: ENHANCING MARITIME SURVEILLANCE IN EARTH OBSERVATION
Dr. Changqing Ding, School of Aerospace, Tsinghua University, Beijing, Beijing, China;

IAC-25.B1.8.5
LAYING THE FOUNDATION FOR AI-BASED TIP AND CUE: ENABLING HIGH SPATIAL AND TEMPORAL RESOLUTION IN REMOTE SENSING
Mrs. Nadine Duursma, Delft University of Technology (TU Delft), The Netherlands, Hoofddorp, The Netherlands;

IAC-25.B1.8.6
OPTIMAL WAY TO SURVEIL THE KOREAN PENINSULA WITH ULTRA HIGH RESOLUTION LOW EARTH ORBIT OPTICAL SATELLITE
Dr. Gyusun KIM, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

IAC-25.B1.8.7
AN AIS-INTEGRATED COSMO-SKYMED IMAGE DATASET FOR SHIP DETECTION
Dr. Maria Daniela Graziano, University of Naples "Federico II", Naples, Italy;

IAC-25.B1.8.8 (unconfirmed)
ALOS-4: THE LATEST L-BAND SAR AND ENHANCED AIS WITH HIGH SPEED DATA DOWNLINK SYSTEM – EARLY ORBIT OPERATION AND INITIAL CALIBRATION/VERIFICATION RESULT
Mr. Yoshihisa Arikawa, Japan Aerospace Exploration Agency (JAXA), Tsukuba-shi, Japan;

IAC-25.B1.8.9
NOVADIP - NOVASAR DATA INTEGRATION AND INSIGHTS PLATFORM
Mr. Shubham Tayade, Dfy Graviti Technologies Pvt. Ltd., Bangalore, India;

IAC-25.B1.8.10
ENHANCING OIL SPILL DETECTION IN SAR IMAGERY: GAN-BASED DATA AUGMENTATION FOR DEEP LEARNING SEGMENTATION MODELS
Mr. Dario Scilla, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia;

IAC-25.B1.8.11
COMBINED RETRIEVAL OF SEA SURFACE WIND AND OIL SLICK DISTRIBUTION USING POLARIMETRY FROM THE HARBIN SATELLITE
Mr. Ducheng Jin, Harbin Institute of Technology, Harbin, China;

IAC-25.B1.8.12
TRACKING MICROPLASTICS & OCEAN HEALTH VIA SATELLITES
Mr. Dennis Terry Trevino, Department of Space Studies, University of North Dakota, San Francisco, United States;

B2. IAF SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM

Coordinator(s): Laszlo Bacsardi, Hungarian Astronautical Society (MANT), 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 1 2025, 10:15 — Room C4.6

Co-Chair(s): Giovanni B. Palmerini, Sapienza University of Rome, Italy; Raj Thilak Rajan, Delft University of Technology (TU Delft), The Netherlands;
Rapporteur(s): Rania Toukebri, Space Generation Advisory Council (SGAC), Germany; Stephanie Wan, Space Generation Advisory Council (SGAC), United States;

IAC-25.B2.1.1
A NEW CONSOLIDATED SIMULTANEOUS RANGE MEASUREMENT AND CLOCK SYNCHRONIZATION METHOD WITH CARRIER PHASE TRACKING – PRECISION ASSESSMENT TO ERROR SOURCES AND APPLICATIONS
Dr. Junichiro Kawaguchi, Australian National University (ANU), Canberra, Australia;

IAC-25.B2.1.4
NAVIGATING IN SPACE AND ON THE MOON USING GNSS: THE DEMONSTRATION BY THE LUGRE PROJECT
Prof. Fabio Dovis, Politecnico di Torino, Turin, Italy;

IAC-25.B2.1.5
ENHANCING PNT IN LUNAR SPACE VIA CO-ORBITAL WEAK SIGNAL SOURCES
Mr. Luis Cormier, University of Nottingham, Nottingham, United Kingdom;

IAC-25.B2.1.6
EVALUATION OF POSITIONING ACCURACY BY SATELLITE BASED CORRECTION INFORMATION
Dr. YOOLA HWANG, Electronics and Telecommunications Research Institute (ETRI), Daejeon, Korea, Republic of;

IAC-25.B2.1.7
SPACE-BASED MULTILATERATION SYSTEM FOR A GNSS-INDEPENDENT AIRCRAFT LOCALIZATION
Mr. Giulio Sidoretti, University of Rome "Tor Vergata", Roma, Italy;

IAC-25.B2.1.8
WAVEFORM DESIGN FOR INTEROPERABLE LEO-PNT SYSTEMS
Dr. Sanat K Biswas, IIIT Delhi, New Delhi, India;

IAC-25.B2.1.9
CGI SECURE AND INTELLIGENT SPACE GNSS SOFTWARE SYSTEMS
Mrs. Charlotte Pouwels, International Space University (ISU), De Lier, The Netherlands;

IAC-25.B2.1.10
RESEARCH ON THE DESIGN AND IMPLEMENTATION OF MULTI-SENSORS INERTIAL MEASUREMENT UNIT HEALTH MANAGEMENT SYSTEM
Ms. Wenrui Zhang, CAS Space, Beijing, China;

IAC-25.B2.1.11
DESIGN, IMPLEMENTATION AND VERIFICATION OF GNSS CONTINUOUSLY OPERATING REFERENCE STATIONS USING COMMERCIAL OFF THE SHELF RECEIVERS
Dr. Najam Naqvi, Institute of Space Technology (IST), Islamabad, Pakistan;

IAC-25.B2.1.12
OTFS-BASED INTER-SATELLITE RANGING SYSTEM
Mr. Zhilin Liu, Harbin Institute of Technology, Harbin, China;

B2.2. Space-based PNT (Position, Navigation, Timing) Sensors and Systems

October 1 2025, 15:00 — Room C4.6

Co-Chair(s): Sanat K Biswas, IIIT Delhi, India; Peter Buist, European Union Agency for the Space Programme (EUSPA), The Netherlands;
Rapporteur(s): Chris Rizos, University of New South Wales, Australia; Christopher Vasko, European Space Agency (ESA), The Netherlands;

IAC-25.B2.2.1
KEYNOTE: INTRODUCING PSEUDO-RANGE RATES AND IMU SENSORS TO IMPROVE LUNAR SATELLITE NAVIGATION SYSTEM PERFORMANCE
Prof. Mauro Leonardi, University of Rome "Tor Vergata", Rome, Italy;

IAC-25.B2.2.2
LOW-COST PNT FOR NANO-SPACECRAFTS IN CISLUNAR SPACE USING A HYBRID NAVIGATION DEVICE
Mr. Shingo Nishimoto, Australian National University (ANU), ACTON, Australia;

IAC-25.B2.2.3
LUNA: PRECISION NAVIGATION FOR LUNAR AND PLANETARY EXPLORATION
Mr. Patrick Wiltshire, Advanced Navigation, Sydney, Australia;

IAC-25.B2.2.4
AN AUSTRALIAN GNSS RECEIVER FOR REMOTE SENSING AND SPACE APPLICATIONS
Dr. Eamonn Glennon, University of New South Wales, Sydney, Australia;

IAC-25.B2.2.6
A REVIEW OF THE CURRENT STATE OF SATELLITE NAVIGATION IN AFRICA
Mr. Alvin Michael Mulumba, International Space University (ISU), Illkirch Graffenstaden, France;

IAC-25.B2.2.7
RESEARCH AND ANALYSIS OF AI-ASSISTED LANDING ON CELESTIAL BODIES AND AUTONOMOUS NAVIGATION WITHOUT LIDAR
Ms. Shukufa Hasanova, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-25.B2.2.8
PNT FOR REMOTE AREAS VIA 6G-NTN: A SIMULATION-BASED APPROACH
Dr. Joan F. Munoz-Martin, i2CAT, Barcelona, Spain;

IAC-25.B2.2.9
AUTONOMOUS FAULT DIAGNOSIS AND ADAPTIVE MULTI-SOURCE FUSION FOR ROBUST SPACECRAFT NAVIGATION
Dr. Chen Meng, Beihang University (BUAA), Beijing, China;

B2.3. Advance Higher Throughput Communications and Networks for GEO and LEO satellites

October 2 2025, 10:15 — Room C4.6

Co-Chair(s): Norbert Frischauf, TU Graz, Austria; Dunay Badirkhanov, Azercosmos, Space Agency of Republic of Azerbaijan, Azerbaijan;
Rapporteur(s): Debra Emmons, The Aerospace Corporation, United States; Otto Koudelka, Graz University of Technology (TU Graz), Austria;

IAC-25.B2.3.1
HYBRID GEO-LEO SATELLITE NETWORK FOR MULTI-SERVICE 5G/6G NTN CONNECTIVITY IN AUSTRALIA
Mr. Muawia Tirmizey, Queensland University of Technology, Brisbane, Australia;

IAC-25.B2.3.2
OPTIMIZATION OF MULTI-BEAM SATELLITE CONSTELLATIONS FOR BEYOND 5G TERAHERTZ COMMUNICATIONS IN LEO ENVIRONMENTS
Ms. Mansi Gupta, Space Generation Advisory Council (SGAC), DELHI, India;

IAC-25.B2.3.3
FUNDAMENTAL STUDY ON L/KA DUAL-BAND PLANAR ANTENNAS FOR NON-TERRESTRIAL NETWORKS
Dr. Takuya Okura, National Institute of Information and Communications Technology (NICT), Koganei, Japan;

IAC-25.B2.3.4
DESIGN AND IMPLEMENTATION OF NEW MULTIPROTOCOL COMMUNICATION TECHNOLOGIES
Dr. Valentin Olenev, Saint Petersburg State University of Aerospace Instrumentation, St. Petersburg, Russian Federation;

IAC-25.B2.3.5
CLOSING THE FINAL GAP TO A FULLY AGILE, ON-DEMAND SPACE OPTICAL COMMUNICATIONS NETWORK BY MAKING EACH GROUND NODE RESPONSIVE TO INCOMING LASER BEAMS, AS EXPLORED FOR DIRECT-TO-EARTH LEO MISSIONS
Mr. Andreas Hornig, AerospaceResearch.net, Jena, Germany;

IAC-25.B2.3.6
HIGH THROUGHPUT OPTICAL COMMUNICATION NETWORK SYSTEM FOR LEO CONSTELLATION SYSTEM USING TERRESTRIAL COMMUNICATION TECHNOLOGIES
Mr. Toshiaki Ogawa, NEC, Fuchu, Tokyo, Japan;

IAC-25.B2.3.7
DEVELOPMENT OF A LOW-COST, COMPACT AND PORTABLE OPTICAL GROUND STATION FOR HIGH BANDWIDTH LEO DOWNLINKS
Ms. Yaagyanika Gehlot, Astrogate Labs, Bengaluru, India;

IAC-25.B2.3.8
THE OUTERNET – A LEO CONSTELLATION PROVIDING A HIGHLY SECURE GLOBAL COMMUNICATION NETWORK IN THE SKY
Dr. Clemens Kaiser, Munich, Germany;

IAC-25.B2.3.9
BLOCKCHAIN & QUANTUM DATA PROCESSING FOR SECURE SATELLITE CONSTELLATIONS
Ms. Samiksha Raviraja, Airbus Defence and Space, Hitchin, United Kingdom;

IAC-25.B2.3.10
IMPLEMENTATION PROCESS OF THE SKY SCAN FEATURE AS A SOFTWARE MICROSERVICE
Ms. Manuela Zapata Quirós, Clapiers, France;

IAC-25.B2.3.11
UNLOCKING THE POTENTIAL OF HIGH-FREQUENCY BANDS: CHALLENGES AND OPPORTUNITIES IN KA, Q/V, AND W SPECTRUM COMMUNICATIONS
Ms. Latifa BENAMEUR, Clapiers, France;

IAC-25.B2.3.12
ENHANCING DOWNLINK EFFICIENCY FOR 6G USING RIS-ASSISTED BEAMFORMING IN LEO SATELLITE NETWORKS
Ms. Aysha Alharam, Bahrain Space Agency (BSA), Alhidd, Bahrain;

IAC-25.B2.3.13
MATHEMATICAL MODELING FOR NETWORK OPTIMIZATION
Mrs. Tofiga Rahimli, Baku State University, Baku, Azerbaijan;

B2.4. Space-based Optical and Quantum Communications

October 2 2025, 15:00 — Room C4.6

Co-Chair(s): Laszlo Bacsardi, Hungarian Astronautical Society (MANT), Hungary; Kevin Shortt, Airbus Defence & Space, Germany;
Rapporteur(s): Nader Alagha, ESA, The Netherlands;

IAC-25.B2.4.1
PROGRESS TOWARDS AN AUSTRALASIAN OPTICAL COMMUNICATIONS GROUND STATION NETWORK FOR NEXT GENERATION SATELLITE COMMUNICATIONS
Prof. Craig Smith, University of South Australia, Jerrabomberra, Australia;

IAC-25.B2.4.2
COMMISSIONING OF THE TERANET OPTICAL COMMUNICATIONS GROUND STATION NETWORK
Dr. Sascha Schediwy, The University of Western Australia, Perth, Australia;

IAC-25.B2.4.3
A DEEP SPACE OPTICAL COMMUNICATION DEMONSTRATION ON THE 3.9M ANGLO-AUSTRALIAN TELESCOPE
Ms. Elisa Jager, Australian National University (ANU), Mt Stromlo, Australia;

IAC-25.B2.4.4
DEVELOPMENT AND VERIFICATION OF VERSATILE LASER SATELLITE LINK EMULATOR FOR LASER SATELLITE COMMUNICATIONS
Dr. Hideaki Kotake, National Institute of Information and Communications Technology (NICT), Koganei city, Tokyo, Japan;

IAC-25.B2.4.5
OPTICAL MULTI USER SERVICE (OPTIMUS): CONNECTING OPTICAL GROUND STATIONS AND SATELLITE OPERATORS WITH DATA MANAGEMENT AS A SERVICE.
Mr. Adam Santifaller, DLR-GfR, Munich, Germany;

IAC-25.B2.4.6
OPTICAL COMMUNICATION FOR LUNAR SERVICES: FEASIBILITY, PERFORMANCE, AND ADVANTAGES
Ms. Hoda Elmegharbel, Egyptian Space Agency (EgSA), Cairo, Egypt;

IAC-25.B2.4.7
DEVELOPMENT OF THE OPTICAL GROUND STATION AS A SERVICE
Mr. Ryan Proffitt, Infostellar, Tokyo, Japan;

IAC-25.B2.4.8
QUALIFICATION OF LASER DIODES FOR SATELLITE-BASED QUANTUM COMMUNICATION APPLICATIONS
Mr. Marco Taffarello, ThinkQuantum Srl, Padova, Italy;

IAC-25.B2.4.9
SOLID-STATE QUANTUM MEMORIES IN SPACE: PRACTICAL CONSIDERATIONS AND CHALLENGES
*Dr. Mikhael Sayat, Agency for Science, Technology and Research (A*STAR), Singapore, Singapore, Republic of;*

IAC-25.B2.4.10
MULTI-MODE QUANTUM MEMORIES FOR HIGH-THROUGHPUT SATELLITE ENTANGLEMENT DISTRIBUTION
Mr. Connor Casey, University of Massachusetts Amherst, Leominster, United States;

IAC-25.B2.4.11
THE HYBRID QUANTUM-CLASSICAL SECURE NETWORKING (HQCSN) MODEL: A NEXT-GENERATION FRAMEWORK FOR QUANTUM-SECURED SPACE COMMUNICATIONS
Mr. Rasul Ibrahimli, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.B2.4.12
SITE CHARACTERIZATION FOR SATELLITE QUANTUM KEY DISTRIBUTION AT THE ABU DHABI QUANTUM OPTICAL GROUND STATION
Mr. GIANLUCA DE SANTIS, Technology Innovation Institute (TII), Abu Dhabi, United Arab Emirates;

B2.5. Extra-Terrestrial and Interplanetary Communications, and Regulations

October 3 2025, 10:15 — Room C4.6

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;

IAC-25.B2.5.2
VAMEX3-MARSSYMPHONY COMMUNICATION SYSTEM - A LOW MARS ORBIT CUBESAT TO LANDER LINK
Dr. Thomas Kühne, IQ Technologies for Earth and Space GmbH, Berlin, Germany;

IAC-25.B2.5.3
BEPICOLOMBO "MMO": ON-OFF KEYING COMMUNICATION AND NAVIGATION CHALLENGES WITH LIMITED TRACKING DATA
Ms. Chikako Hirose, Japan Aerospace Exploration Agency (JAXA), Sagamihara Kanagawa, Japan;

IAC-25.B2.5.4
EVALUATION OF GROUND WAVE HF EMERGENCY COMMUNICATIONS INTERFERENCE ON RADIO ASTRONOMY SATELLITES ON THE LUNAR FAR SIDE
Mr. Mier Tai, Harbin Institute of Technology, Harbin City, Heilongjiang Province, China;

IAC-25.B2.5.5
SINGLE-STATION-BASED INTEGRATED COMMUNICATION-POSITIONING SYSTEM FOR MARS DRONES
Mr. Mier Tai, Harbin Institute of Technology, Harbin City, Heilongjiang Province, China;

IAC-25.B2.5.6
DESIGN OF A SCALABLE COMMUNICATIONS INFRASTRUCTURE FOR THE FIRST LUNAR CITY
Ms. Nasira Espejo, Universidad Nacional Mayor de San Marcos, Jauja, Peru;

IAC-25.B2.5.7
FORGING DTN INTO EXISTING OPERATIONAL NETWORKS
Mr. Marcin Gnat, DLR (German Aerospace Center), Wessling, Germany;

IAC-25.B2.5.8
DESIGNING CUSTODY TRANSFER FOR INTERPLANETARY NETWORKS
Dr. Edward Birrane, The Johns Hopkins University Applied Physics Laboratory, Laurel, United States;

IAC-25.B2.5.9
INTERNET PROTOCOL STACK IN DEEP SPACE: ARCHITECTURE AND SIMULATION RESULTS
Mr. Marc Blanchet, Viagenie, Quebec, Canada;

IAC-25.B2.5.10
UNLOCKING POTENTIAL: SPECTRUM ACCESS FOR SMALL-SCALE OPERATORS
Mrs. Nihan Yalcin, Plan-S Satellite and Space Technologies, Ankara, Türkiye; Ms. Laurene Colin, HEO Robotics, London, United Kingdom;

IAC-25.B2.5.11
QUANTUM SIGNALS FOR DEEP-SPACE COMMUNICATION AND ALIEN LIFE DETECTION
Ms. Samiksha Raviraja, Airbus Defence and Space, Hitchin, United Kingdom;

IAC-25.B2.5.12
ABSTRACT: EXTRA-TERRESTRIAL AND INTERPLANETARY COMMUNICATIONS AND REGULATIONS
Dr. Massimo Angelucci, Agenzia Spaziale Italiana (ASI), Milano, Italy;

B2.6. Cubesat, Internet of Things, and Mobile Direct Communications

September 30 2025, 10:15 — Room C4.6

Co-Chair(s): Debra Emmons, The Aerospace Corporation, United States; Giuseppe D'Amore, Agenzia Spaziale Italiana (ASI), Italy;
Rapporteur(s): Amane Miura, National Institute of Information and Communications Technology (NICT), Japan; Enrique Pacheco Cabrera, Incomspace, Mexico; Yuma Abe, National Institute of Information and Communications Technology (NICT), Japan;

IAC-25.B2.6.1
KEYNOTE: MINARIÓ MISSION: A TESTBED FOR VALIDATING NTN NB-IOT CONNECTIVITY AND APPLICATIONS
Dr. Joan Ruiz-de-Azua, i2CAT, Barcelona, Spain;

IAC-25.B2.6.2
CUBESOTA MISSION: INTEGRATING NEXT-GENERATION LASERCOM SYSTEMS INTO A COMPACT 6U PLATFORM
Dr. Alberto Carrasco-Casado, National Institute of Information and Communications Technology (NICT), Tokyo, Japan;

IAC-25.B2.6.3
TOWARDS AN OPEN IN-ORBIT 6G LABORATORY: INTEGRATING FLEXIBILITY IN RADIO-FREQUENCY IN 6GSTARLAB MISSION
Dr. Joan F. Munoz-Martin, i2CAT, Barcelona, Spain;

IAC-25.B2.6.4
SMILE-IOT: RESULTS FROM A GLOBAL UNIVERSITY PARTNERSHIP PROJECT FOR JOINT INTERNET-OF-THINGS IN-ORBIT DEMONSTRATIONS RESULTS EVALUATION
Dr. Paolo Marzioli, Sapienza University of Rome, Rome, Italy;

IAC-25.B2.6.5
OPTIMIZING UE CONTEXT DISSEMINATION IN SPARSE LEO CONSTELLATIONS FOR CELLULAR IOT SERVICES IN 5G/6G NETWORKS
Mr. Timo Kellermann, i2CAT, Barcelona, Spain;

IAC-25.B2.6.6
ANALYSIS OF FLEXIBLE CU/DU FUNCTIONAL SPLIT TOWARDS OPTIMAL UTILIZATION OF REGENERATIVE PAYLOADS IN FUTURE 6G NTN
Mr. Oscar Baselga, i2CAT, Barcelona, Spain;

IAC-25.B2.6.7
A GLOBAL CONCEPT FOR COOPERATION IN SATELLITE-IOT SYSTEMS
Dr. Martin von der Ohe, Lacuna Space, Einbeck, Germany;

IAC-25.B2.6.8
DECENTRALIZED AI-DRIVEN SWARM SATELLITES FOR DISASTER RESPONSE: ADVANCING LIDAR AND THERMAL IMAGING INTEGRATION
Dr. Raja Munusamy, Chennai, India;

IAC-25.B2.6.9
AN NB-IOT PAYLOAD FOR SPACE COMMUNICATIONS AND NAVIGATION
Mr. Emil Ares, Cranfield University, London, United Kingdom;

IAC-25.B2.6.10
A MULTI-TECHNOLOGY SUSTAINABLE APPROACH FOR SPACE-BASED IOT CONNECTIVITY
Dr. Andre Guerra, SIMPLYCONNECTED Lda (CONNECTED), Matosinhos, Portugal;

IAC-25.B2.6.11
PERFORMANCE COMPARISON OF DTN-INSPIRED APPROACHES FOR STORE-AND-FORWARD NTNS
Dr. Joan Adrià Ruiz de Azúa Ortega, i2CAT, Barcelona, Spain;

B2.7. Advances in Space-based Communication Technologies

September 30 2025, 15:00 — Room C4.6

Co-Chair(s): Enrique Pacheco Cabrera, Incomspace, Mexico; Eva Fernandez Rodriguez, Netherlands Organisation for Applied Scientific Research (TNO), Spain;
Rapporteur(s): Elemer Bertenyi, Canadian Aeronautics and Space Institute, Canada;

IAC-25.B2.7.1
KEYNOTE: UST-LITE, A SMALL-SAT MODULAR TRANSPONDER FOR LUNAR AND MARS COMMS
Mr. Alessandro Balossino, Argotec, Torino, Italy;

IAC-25.B2.7.2
NEXT GENERATION CONNECTIVITY: AUTONOMOUS CUBESAT SWARM FOR DYNAMIC AND ADAPTIVE COMMUNICATION
Mrs. Chiara Lughi, NPC/Spacemind, Imola, Italy;

IAC-25.B2.7.3
MULTI-BAND AND MULTI-PROTOCOL COMMUNICATION WITH AN AGILE SMALL SATELLITE RADIO PLATFORM
Mr. Mathias Reibe, IQ Technologies for Earth and Space GmbH, Berlin, Germany; Mr. Lukas Felderhoff, IQ Technologies for Earth and Space GmbH, Berlin, Germany;

IAC-25.B2.7.4
A NOVEL FREQUENCY HOPPING COMMUNICATION SYSTEM AND ITS SIGNAL DETECTION METHOD
Mr. Zhiqiang Tang, Jiuquan, China;

IAC-25.B2.7.5
THE IMPACT OF GROUND NON-DTN SYSTEM ON TRANSMISSION TIME IN KPLO DTN FLIGHT TEST.
Dr. Inkyu Kim, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

IAC-25.B2.7.6
PROCESS EVALUATION OF LOW-EFFORT, SHORT-TERM GROUND STATION AS A SERVICE ONBOARDING
Mr. Kaito Tomita-McLeod, Infostellar, Fujimino, Japan;

IAC-25.B2.7.7
PAVING THE WAY FOR NEXT-GENERATION RADIO COMMUNICATION: HOW TU BERLIN'S SALSAT, CYBEESAT, AND RACCOON MISSIONS ARE ADDRESSING TOMORROW'S SPECTRUM CHALLENGES
Mr. Jens Freymuth, Technische Universität Berlin, Berlin, Germany;

IAC-25.B2.7.8
DESIGN AND OPTIMIZATION OF MIMO ANTENNAS WITH DEFECTED GROUND STRUCTURES FOR HIGH-PERFORMANCE C AND X-BAND SATELLITE COMMUNICATION
Mr. Navdeep Singh, Kurukshetra, India;

IAC-25.B2.7.9
AUTHENTICATED ENCRYPTION FOR SPACE TELEMETRY
Mr. Andrew Savchenko, University of Technology Sydney (UTS), Adelaide, Australia;

IAC-25.B2.7.10
DETERMINISTIC PASSIVE OPTICAL NETWORKS FOR AEROSPACE COMMUNICATION
Dr. Tiziana Fiori, Sapienza University of Rome, Roma, Italy;

IAC-25.B2.7.12
METAMATERIAL APPROACHES FOR PATCH ANTENNAS
Mr. Mateusz Kłosiński, Wroclaw University of Science and Technology, Wroclaw, Poland;

IAC-25.B2.7.14
LOW COST TECHNICAL PROPOSAL FOR SATELLITE OPERATION OF THE K'OTO NANOSATELLITE IN COLLABORATION WITH ACADEMY, GOVERNMENT AND BUSINESS
Ms. Zhara Ixel Tavares Ramirez, Universidad Nacional Autónoma de México (UNAM), Queretaro, Mexico;

IAC-25.B2.7.15
ARTIFICIAL INTELLIGENCE-DRIVEN ANTENNA BEAMFORMING FOR MULTI-USER MIMO IN SATELLITE BROADBAND SYSTEMS
Ms. Mansi Gupta, Space Generation Advisory Council (SGAC), DELHI, India;

B2.8-GTS.3. Space Communications and Navigation Global Technical Session

September 29 2025, 15:30 — Room C4.7

Co-Chair(s): Eric Wille, ESA, The Netherlands; Eleonora Lombardi, Fondazione E. Amaldi, Italy; Joshua Critchley-Marrows, ArkEdge Space Inc., Australia;
Rapporteur(s): Behnoosh Meskoob, École de technologie supérieure, Canada; Manish Saxena, Indian Space Research Organization (ISRO), India;

IAC-25.B2.8-GTS.3.1
A COMPARATIVE STUDY OF MODIFIED RNN AND TRANSFORMER NETWORKS FOR SNR MUTATION PREDICTION IN GNSS RECEIVERS
Dr. Hua Zhang, Jiuquan, China;

IAC-25.B2.8-GTS.3.2
AN AUTONOMOUS NAVIGATION METHOD FOR LUNAR SATELLITE FORMATION BASED ON INTER-SATELLITE MEASUREMENT
Mr. Lu Li, Innovation Academy for Microsatellites, Chinese Academy of Sciences, Shanghai, China;

IAC-25.B2.8-GTS.3.3
EXPERIMENTAL RESEARCH OF THE ADJUSTMENT DEVICE OF THE RADIO-REFLECTING NET OF THE SPACE REFLECTOR WITH SWITCHABLE THRUST VECTOR
Mr. Fedor Mitin, Baltic State Technical University VOENMEH, St. Petersburg, Russian Federation;

IAC-25.B2.8-GTS.3.4
EXPLORING THE ECONOMIC VIABILITY OF SPACE-TO-EARTH/ EARTH-TO-SPACE FREE SPACE OPTICAL COMMUNICATIONS AND POTENTIAL ROLES FOR AUSTRALIA
Mr. William Barrett, Asia Pacific Aerospace Consultants Pty Ltd, St Ives, NSW, Australia;

IAC-25.B2.8-GTS.3.5
FIELD TRIAL OF LUNASAR: EVALUATING A RESILIENT EMERGENCY COMMUNICATIONS SYSTEM FOR FUTURE LUNAR SEARCH AND RESCUE SERVICE
Dr. Mark Rice, Safety from Space, Kensington Park, Australia;

IAC-25.B2.8-GTS.3.6
FULLY NEUROMORPHIC STAR TRACKING FOR SPACECRAFT JITTER MITIGATION
Mr. Ashwin Subramaniam, The University of Adelaide, Adelaide, Australia;

IAC-25.B2.8-GTS.3.9
ON-BOARD ADAPTIVE PPP-BASED ULTRA-TIGHT INTEGRATION FOR GNSS RECEIVERS IN LAUNCHERS
Dr. Inigo Cortés, Fraunhofer - Institut für Integrierte Schaltungen IIS, Nuremberg, Germany;

IAC-25.B2.8-GTS.3.10
SATELLITE COMPUTING NETWORKS FOR INDUSTRIAL IOT MQTT DATA BUSSES
Dr. Florian Zeiger, Siemens AG, Munich, Germany;

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)

September 29 2025, 15:30 — Room C3.3

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-25.B3.1.1
SPACE OPERATIONS MISSION DIRECTORATE PROGRESS AND ROLE IN ENABLING EXPLORATION IN AND BEYOND LOW EARTH ORBIT ABSTRACT
Mr. Ken Bowersox, National Aeronautics and Space Administration (NASA), Washington, DC, United States;

IAC-25.B3.1.2
JAXA'S TECHNOLOGY DEVELOPMENT FOR HUMAN SPACEFLIGHT PROGRAMS AND SPACE EXPLORATION
Ms. Mayumi Matsuura, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

IAC-25.B3.1.3 (unconfirmed)
THE 2024 GLOBAL EXPLORATION ROADMAP: A COORDINATED VISION FOR SPACE EXPLORATION
Dr. Elyse Allender, Australian Space Agency, Hobart, Australia;

IAC-25.B3.1.4
NASA'S PROGRESS TOWARD A COMMERCIAL LOW EARTH ORBIT
Mrs. Angela Hart, National Aeronautics and Space Administration (NASA), Houston, United States;

IAC-25.B3.1.5
WHY MOON TO MARS: HOW NASA'S MOON THE MARS ARCHITECTURE PAVES THE WAY TO MARS
Ms. Nujoud Merancy, National Aeronautics and Space Administration (NASA), Houston, United States;

IAC-25.B3.1.6
A STUDY ON SOUTH KOREA'S MANNED SPACE LAUNCH VEHICLE DEVELOPMENT STRATEGY
Dr. Keum-Oh Lee, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

IAC-25.B3.1.7
UPDATE ON NASA'S HUMAN LANDING SYSTEM (HLS) PROGRAM: PUBLIC-PRIVATE PARTNERSHIP ADVANCING ARTEMIS SUSTAINABLE LUNAR EXPLORATION
Mr. Steve Creech, National Aeronautics and Space Administration (NASA), Huntsville, AL, United States;

IAC-25.B3.1.8
HALO DELIVERY: THE FIRST PILLAR OF THE LUNAR GATEWAY STATION
Dr. Annamaria Piras, Thales Alenia Space Italia, Torino, Italy;

IAC-25.B3.1.9
GATEWAY PROGRAM PROGRESS: PREPARING FOR LAUNCH WITH ASSEMBLY, INTEGRATION, AND TESTING
Mrs. Tiffany Travis, Barrios Technology Inc., Houston, United States;
Mr. Sean Fuller, National Aeronautics and Space Administration (NASA), Johnson Space Center, Houston, Texas, United States;

B3.2. Commercial Human Spaceflight Programmes

September 30 2025, 10:15 — Room C3.3

Co-Chair(s): Sergey K. Shaevich, Khrunichev State Research & Production Space Center, Russian Federation; Kevin D. Foley, The Boeing Company, United States; Michael E. Lopez Alegria, MLA Space, LLC, United States;

IAC-25.B3.2.2
STARLAB - A NEXT-GENERATION SPACE STATION TO TRANSFORM SPACE-BASED RESEARCH AND HUMAN PRESENCE IN LOW-EARTH ORBIT.
Dr. John M. Horack, The Ohio State University College of Engineering, Columbus,OH, United States;

IAC-25.B3.2.3
VIEWS FROM THE FIRST COMMERCIAL SPACE STATION
Ms. Molly McCormick, Vast, El Segundo, United States;

IAC-25.B3.2.4
CROSS-FERTILIZATION IN COMMERCIAL SPACE STATION ECOSYSTEMS: A CATALYST FOR INNOVATION AND GROWTH
Dr. Alessandro Paravano, Politecnico di Milano, Cislago, Italy;

IAC-25.B3.2.5
ANCHORING LAW IN ORBIT: TREATY OBLIGATIONS, MISSION AUTHORIZATION, AND INVESTMENT STRUCTURES FOR COMMERCIAL SPACE STATIONS
Ms. Neha Dagley, Coral Gables, United States;

IAC-25.B3.2.6
UPDATES FROM THE IIAS FLIGHT OPPORTUNITIES PROGRAM ONE YEAR ON
Dr. Shawna Pandya, International Institute for astronautical Sciences (IIAS), Sherwood Park, Canada;

IAC-25.B3.2.7
NAVIGATING THE RISKS: LIFE INSURANCE FRAMEWORKS FOR HABITATS ON THE MOON
Mr. Bennett Torrance, Boeing, Hermosa Beach, United States;

IAC-25.B3.2.8
NEW SOLUTIONS TO FINANCE AND COMMERCIALIZE LUNAR MISSIONS
Mr. Grant Blaisdell, Woodland Hills, United States;

IAC-25.B3.2.9
BUILDING A COMMERCIAL TRAINING ECOSYSTEM FOR THE EMERGING HUMAN SPACEFLIGHT MARKET
Mr. Ugo Bonnet, Spaceflight Institute, Toulouse, France;

B3.3. Advancements in Human Space Habitation for Orbital, Transit, and Surface Environments

September 30 2025, 15:00 — Room C3.3

Co-Chair(s): Eleanor Morgan, Lockheed Martin Space Systems, United States; Kavya K. Manyapu, NASA, United States; Thomas A.E. Andersen, Danish Aerospace Company A/S, Denmark;

IAC-25.B3.3.1
ASTROACCESS: ENHANCING SPACE HABITATS THROUGH ACCESSIBLE DESIGN AND ZERO-GRAVITY RESEARCH
Ms. Caitlin O'Brien, The Ohio State University, Columbus, United States; Mrs. Sheila Xu, Las Vegas, United States;

IAC-25.B3.3.2
MYCELIUM-BASED COMPOSITES FROM SPACE FARMING WASTE: A PROOF-OF-CONCEPT FOR BIO-FABRICATION IN SPACE HABITATS
Dr. Kumar Biswajit Debnath, University of Technology Sydney (UTS), Sydney, Australia;

IAC-25.B3.3.3
UMIC: AN INNOVATIVE UNDERWATER HABITAT TEST PLATFORM THAT IS MODULAR, PORTABLE AND EXPANDABLE AND USE FOR TRAINING ANALOG AQUANAUTS
Dr. Susan Jewell, Lancaster, United States;

IAC-25.B3.3.4
AI-DRIVEN GENERATIVE DESIGN FOR ADAPTIVE SPACE HABITATS IN EXTREME ENVIRONMENTS
Mr. Vishnurat Kadagadakai, Ramaiah Institute of Technology, Bangalore, India;

IAC-25.B3.3.5
COMPOSITE HABITAT EVOLUTION FROM PROPELLANT TANK TO CREWED HABITAT
Mr. Matthew Ziglar, Boeing Defense Space & Security, Pasadena, United States;

IAC-25.B3.3.6
DECODING THE ARCHETYPES: TRACING THE HISTORICAL EVOLUTION OF HUMAN ARCHITECTURAL MORPHOLOGY AND THEIR IMPLICATIONS FOR PHASED LUNAR CONSTRUCTION STRATEGIES
Dr. Liu Yang, Tsinghua University, Beijing, China;

IAC-25.B3.3.8
SUSTAINABLE MARTIAN APPARELS: A SYSTEMS ENGINEERING APPROACH
Ms. Chloe Allen, Virginia Commonwealth University, Burke, United States;

IAC-25.B3.3.9
IMPACT OF ELEVATED CO2 ON CREW ADAPTATION IN CONFINED ANALOG HABITATS
Mr. Anay Ashwin, University of Southern Queensland, Melbourne, Australia;

IAC-25.B3.3.11
MICROALGAE BIOREACTORS FOR CLOSED-LOOP LIFE SUPPORT IN SPACE HABITATS
Mr. Krithik M, Bengaluru, India;

B3.4-B6.4. Flight & Ground Operations aspects of Human Spaceflight - Joint Session of the IAF Human Spaceflight and IAF Space Operations Symposia

October 1 2025, 10:15 — Room C3.3

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;

IAC-25.B3.4-B6.4.1
AXIOM-4 MISSION PREPARATION AND EXECUTION AT COL-CC
Mr. Adrian Mora Boluda, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Wessling, Germany;

IAC-25.B3.4-B6.4.2
ENHANCING OPERATIONS AT THE COLUMBUS CONTROL-CENTER: A HYBRID APPROACH UTILIZING LARGE LANGUAGE MODELS, KNOWLEDGE GRAPHS, AND RETRIEVAL-AUGMENTED GENERATION
Mr. Carsten Hartmann, German Aerospace Center (DLR), Wessling, Germany;

IAC-25.B3.4-B6.4.3
AI-DRIVEN ASSISTANCE FOR ASTRONAUTS: ENHANCING DECISION-MAKING AND MISSION EFFICIENCY
Mr. Pavlo Tanasyuk, Spacebit Global Ltd, London, United Kingdom;

IAC-25.B3.4-B6.4.4
DRONE AND AI BASED NEW CONCEPTS FOR ENSURING THE SAFETY OF ASTRONAUTS.
Ms. Ulkar Habibullayeva, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-25.B3.4-B6.4.5
SYSTEMATIC RESEARCH ON TYPICAL CONTROL PROBLEMS FOR THE CONSTRUCTION OF CHINA SPACE STATION
Prof. Qiao Zhang, China Academy of Space Technology (CAST), Beijing, China;

IAC-25.B3.4-B6.4.6
SUITING UP FOR SURVIVAL: CARDIOVASCULAR DEMANDS OF FLIGHT SUITS VS. PRESSURE SUITS IN EMERGENCY SPACECRAFT EGRESS
Dr. Erik Seedhouse, Embry-Riddle Aeronautical University, Daytona Beach, United States;

IAC-25.B3.4-B6.4.7
CHALLENGES IN LAUNCH, DEPLOYMENT, AND OPERATION OF SPACE STATIONS: A HISTORICAL REVIEW
Ms. Srishti Bansal, Space Generation Advisory Council (SGAC), New Delhi, India;

IAC-25.B3.4-B6.4.8
INTEGRATING ORBITAL MECHANICS AND NEURAL ARCHITECTURES FOR PRECISE SPACECRAFT FUEL PREDICTION
Mr. Uday Kiran Elemasetty, Ryerson University, Toronto, Canada;

IAC-25.B3.4-B6.4.9
ESA CONCEPT OF OPERATIONS FOR ACES AND PRELIMINARY LESSONS LEARNED
Mr. Joao Lousada, GMV GmbH, Gilching, Germany;

IAC-25.B3.4-B6.4.10
DEVELOPMENT OF PROCEDURES FOR TESTING EVA TOOLS IN THE LUNA ANALOGUE FACILITY
Ms. Aileen Rabsahl, DLR (German Aerospace Center), Oberpfaffenhofen, Germany;

IAC-25.B3.4-B6.4.11
OPTIMIZING FLIGHT AND GROUND OPERATIONS FOR HUMAN SPACEFLIGHT: ENHANCING SAFETY, EFFICIENCY, AND MISSION SUCCESS
Ms. Fatima Ziaularifeen Syeda, Hyderabad, India;

IAC-25.B3.4-B6.4.12
DEVELOPMENT OF ASTRAX SPACE MISSION SUPPORT CONTROL CENTER 2025
Mr. Taichi Yamazaki, ASTRAX, Inc., Kamakura, Japan;

B3.5. Astronaut Training, Accommodation, and Operations in Space

October 2 2025, 10:15 — Room C3.3

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, European Space Agency (ESA), Germany;

IAC-25.B3.5.1
ASTRONAUT ROUNDTABLE
Dr. Igor V. Sorokin, S.P. Korolev Rocket and Space Corporation Energia, Korolev, Moscow Region, Russian Federation;

IAC-25.B3.5.2
JAXA BASIC TRAINING FOR ASTRONAUT CANDIDATES: DEVELOPMENT, IMPLEMENTATION, AND LESSONS LEARNED
Mr. Ryusei Otsuka, Japan Manned Space Systems Corporation (JAMSS), Tsukuba, Ibaraki, Japan;

IAC-25.B3.5.3
JAXA GENERIC ROBOTICS TRAINING (GRT): INSIGHTS GAINED FROM THE DEVELOPMENT OF JAPAN'S FIRST ROBOTICS TRAINING PROGRAM FOR JAXA ASTRONAUT CANDIDATES
Mr. Koya Takemoto, Japan Manned Space Systems Corporation (JAMSS), Tsukuba, Ibaraki, Japan;

IAC-25.B3.5.4
ZERO GRAVITY, ZERO MISTAKES: VR TRAINING FOR SUBORBITAL ASTRONAUTS
Dr. Erik Seedhouse, Embry-Riddle Aeronautical University, Daytona Beach, United States;

IAC-25.B3.5.5
INNER ENGINEERING- A PREVENTATIVE COUNTERMEASURE FOR ASTRONAUT WELL-BEING IN LONG DURATION SPACEFLIGHT
Dr. Kavya K. Manyapu, NASA, Friendswood, TX, United States;

IAC-25.B3.5.6
HOLOCONNECT AI: AUTONOMOUS HOLOGRAPHIC AGENTS FOR SPACEFLIGHT AND MARS MISSION SUPPORT
Dr. Fernando De la Pena Llaca, Aexa Aerospace LLC, Houston, TX, United States;

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

October 2 2025, 15:00 — Room C3.3

Co-Chair(s): Mark Hempsell, The British Interplanetary Society, United Kingdom;
Rapporteur(s): Jan Marius Bach, DLR (German Aerospace Center), Germany; Scott Ritter, International Space University (ISU), France;

IAC-25.B3.6-A5.3.1 (unconfirmed)
A NOVEL ROBOTIC GAS LEAK SOURCE LOCALIZATION METHOD IN LUNAR BASE USING DEEP REINFORCEMENT LEARNING ALGORITHM
Mr. Jiaqi Min, School of aeronautics and astronautics, Sun Yat-Sen University Guangzhou, Shenzhen, China;

IAC-25.B3.6-A5.3.2
ICHIBAN – INT-BALL2 AND CIMON HOVERING INTELLIGENCES BUILDING FIRST AI NETWORK IN THE ISS
Mr. Tatsuya Yamamoto, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

IAC-25.B3.6-A5.3.3
HUMANISE: ROBOTIC TELEOPERATION ACROSS THREE ANALOGUE MISSIONS
Ms. Katherine Mulry, Asclepios, Toulouse, France;

IAC-25.B3.6-A5.3.4
ROBOTS SUPERVISING HUMANS AND HUMANS SUPERVISING ROBOTS – A CALL FOR NEW CONCEPTS IN HUMAN-ROBOT TEAMING FOR SPACE
Prof. Anna Ma-Wyatt, The University of Adelaide, Adelaide, Australia;

IAC-25.B3.6-A5.3.5
KNOWLEDGE-DRIVEN USER INTERFACE DESIGN FOR SCALABLE AUTONOMY IN MULTI-ROBOT COMMAND
Mr. Peter Schmaus, German Aerospace Center (DLR), Wessling, Germany;

IAC-25.B3.6-A5.3.6
DEVELOPMENT AND ORBITAL OPERATION CONSIDERATIONS OF A FREE-FLYER ROBOT FOR MONITORING AND TELEOPERATION ABOARD A SPACE STATION
Mr. Yuki Ikeda, SpaceData Inc., Tokyo, Japan;

IAC-25.B3.6-A5.3.8
USING EXTENDED REALITY TO STUDY HUMAN-ROBOT COLLABORATION FOR LUNAR HABITAT CONSTRUCTION: A PILOT STUDY ON BLOCK DESIGN AND DISRUPTION MANAGEMENT
Mr. Albert Rajkumar, University of Adelaide, Richmond, Australia;

IAC-25.B3.6-A5.3.9
COMPUTER-VISION INTEGRATED ROBOTIC ARM FOR AUTONOMOUS SPACE OPERATIONS
Ms. Marisol Ramos Camacho, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-25.B3.6-A5.3.11
VETRA: AN EXTENDED REALITY TRAINING TOOL FOR ROBOTIC ARMS AND REMOTE MANIPULATORS
Mr. Valery Kirensky, European Space Agency (ESA/ECSAT), London, United Kingdom;

B3.7. Advanced Systems, Technologies, and Innovations for Human Spaceflight

October 1 2025, 15:00 — Room C3.3

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), Korea, Republic of;

IAC-25.B3.7.1
TOWARDS INCLUSIVE SPACE EXPLORATION: ADAPTED SPACESUITS FOR SPECIALLY-ABLED PARASTRONAUTS
Dr. Eleonore Poli, Centre Suisse d'Electronique et de Microtechnique SA (CSEM), Lausanne, Switzerland;

IAC-25.B3.7.2
SPACER: THE FIRST ON-ORBIT EMERGENCY ROOM REVOLUTIONIZING SPACE MEDICINE FOR LONG-DURATION MISSIONS
Ms. Ayumi Tsuyuki, Northrop Grumman Corporation, Sterling, United States;

IAC-25.B3.7.3
MOBILE MEDICAL MODULE PROJECT (PROJECT MMM): USING ATMED RESTRAINT SYSTEM (ARS) FOR TRANSPORTING PATIENTS DURING RESUSCITATION IN SIMULATED MICROGRAVITY - TESTS ON THE GROUND, IN NEUTRAL BUOYANCY AND AT ZERO-G IN HUMAN TRAINING CENTRIFUGE
Dr. Arkadiusz Trzos, Jagiellonian University, Krakow, Poland;

IAC-25.B3.7.4
SUPER-ANTIBACTERIAL & SELF-CLEANING FABRICS FOR EXTENDED SPACE MISSIONS
Dr. Aya Hesham, Sigma Fit, Chicago, IL, United States;

IAC-25.B3.7.5
HUMAN-CENTERED PROTOCOL INNOVATIONS FOR BIOMEDICAL AND ENVIRONMENTAL MONITORING IN HUMAN SPACEFLIGHT: LESSONS FROM AN ANALOG SPACE MISSION
Mrs. Abir Belkhair, Asclepios, Bourg-la-reine, France;

IAC-25.B3.7.7
ENHANCING SPACEFLIGHT AUTONOMY WITH MACHINE LEARNING: FAULT DETECTION IN LIFE SUPPORT SYSTEMS
Mr. Christian Mayer, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-25.B3.7.8
SMALL SIZE DECENTRALIZED AUTONOMOUS ENVIRONMENT SENSORS TO REALIZE MULTI-POINT ASSESS OF MANNED SPACE SYSTEM
Prof. Shinichi Kimura, Tokyo University of Science, Chiba, Japan;

IAC-25.B3.7.9
AI-DRIVEN MULTI-ARM ROBOTIC PLATFORM FOR AUTONOMOUS BIOREACTOR SERVICING IN SUSTAINABLE SPACE LIFE SUPPORT SYSTEMS
Mr. Nijanthan Vasudevan, Drexel University, Philadelphia, United States;

IAC-25.B3.7.10
MISSION MUSHVROOM: PUSHING THE BOUNDARIES OF SPACE NUTRITION WITH THE FIRST MUSHROOMS TO FRUIT IN SPACE
Dr. Flavia Fayet-Moore, The University of Newcastle Australia, Sydney, Australia;

IAC-25.B3.7.11
VEGANAUT SPACE NUTRITION: ADVANCED BIOSYSTEMS AND STRATEGIES TO ENABLE PLANT-BASED DIETS FOR SUSTAINABLE SPACE EXPLORATION
Mr. Matthew Devlen, Veganaut, Inc., Austin, United States;

IAC-25.B3.7.12
TEXAS -HOLD'EM HAPTIC ORIENTATION FOR LANDING OR DOCKING ENGINEERING MECHANISM
Ms. Ayumi Tsuyuki, Northrop Grumman Corporation, Sterling, United States;

IAC-25.B3.7.13
CLOSED-LOOP DOCKING AND UNDOCKING QUALIFICATION TESTS OF THE EUROPEAN INTERNATIONAL BERTHING AND DOCKING MECHANISM (IBDM) USING AN INDUSTRIAL ROBOT SETUP
Mr. Lennert Jans, Redwire Space, Kruibeke, Belgium;

B3.8. Human Space & Exploration

October 3 2025, 10:15 — Room C3.3

Co-Chair(s): Dan King, MDA Space, Canada; Joost van Tooren, ALATYR, France;
Rapporteur(s): Joao Lousada, GMV GmbH, Germany;

IAC-25.B3.8.1
ONE YEAR OF LUNA ANALOG FACILITY: STATUS AND UTILIZATION
Dr. Andrea Emanuele Maria Casini, German Aerospace Center (DLR), Cologne, Germany;

IAC-25.B3.8.2
COSMIC CHALLENGES: MITIGATING SPACE WEATHER RISKS FOR DEEP SPACE ASTRONAUTS
Dr. Joe Westlake, NASA, Washington, DC, United States;

IAC-25.B3.8.3
FROM THE ICE TO THE RED PLANET: APPLYING ANTARCTIC RESILIENCE TO MARS MISSIONS
Dr. Erik Seedhouse, Embry-Riddle Aeronautical University, Daytona Beach, United States;

IAC-25.B3.8.4
STEP-BY-STEP EXPANSION OF HUMAN EXPLORATION FRONTIER – DEEP SPACE PORT IN MOON TO MARS INITIATIVE
Dr. Junichiro Kawaguchi, Australian National University (ANU), Canberra, Australia;

IAC-25.B3.8.5
NEURAL IMPLANTS AND THE EXPANSION OF HUMAN COGNITION FOR SPACE TRAVEL: THE ROLE OF NEURALINK AND NEXT-GEN BRAIN-COMPUTER INTERFACES
Ms. Samiksha Raviraja, Airbus Defence and Space, Hitchin, United Kingdom;

IAC-25.B3.8.7
THE VERIFICATION OF THE LUNAR GATEWAY NETWORK
Mrs. Svetlana Hanson, NASA, Houston, United States;

IAC-25.B3.8.8
INCLUSIVE INNOVATION & ADAPTIVE SCIENCES FOR SAFETY ENHANCEMENT AND RISK REDUCTION FOR CRITICAL SPACE EXPLORATION - TOWARDS A MORE INCLUSIVE SPACE FUTURE THROUGH THE PARASTRONAUT PROGRAMME
Dr. S.W. Chiu, Viterbi School of Engineering, USC, Exeter, United Kingdom;

IAC-25.B3.8.9
NUMERICAL AND EXPERIMENTAL INVESTIGATIONS OF ELECTRIC SPARK DISCHARGE ON DUSTY SPACESUIT: IMPLICATIONS FOR ASTRONAUT SAFETY ON LUNAR SURFACE
Prof. JOSEPH WANG, University of Southern California, Los Angeles, United States;

IAC-25.B3.8.10
ENHANCING SPACE CREW INTERACTIONS AND COGNITIVE PERFORMANCE: INVESTIGATING OXYTOCIN INHALATION IN MICROGRAVITY THROUGH A NEUROSCIENCE PERSPECTIVE.
Dr. Shaijumon C.S, Indian Institute of Space Science and Technology (IIST), Trivandrum, India;

B3.9-GTS.2. Human Spaceflight Global Technical Session

October 3 2025, 13:45 — Room C4.7

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, Germany;

IAC-25.B3.9-GTS.2.1
INTERNATIONAL SPACE STATION RESEARCH: HIDDEN TREASURES IN OPEN DATA PORTALS
Dr. Jennifer Buchli, NASA, Houston, United States;

IAC-25.B3.9-GTS.2.2
THE ROLE OF OF SPACE TOURISM AND SUBORBITAL FLIGHT EXPERIENCES IN FUTURE ASTRONAUT SELECTION CRITERIA
Ms. Saira O. Williams, Space Generation Advisory Council (SGAC), San Rafael, Costa Rica;

IAC-25.B3.9-GTS.2.4
XAS: EXTENDED AEROSPACE SUIT - A MODERNIZED TECHNOLOGY INTEGRATING ADVANCED SUIT SYSTEMS FOR COMPREHENSIVE ASTRONAUT HEALTH PROTECTION
Mr. Kanan Rasulov, Azerbaijan State Oil and Industry University (ASOIU), Bakı, Azerbaijan;

IAC-25.B3.9-GTS.2.5
COSMIC FERMENTATION: USING MICROBIAL BIOREACTORS FOR SPACE NUTRITION
Ms. Ilaha Karimova, Azerbaijan Technical University, Baku, Azerbaijan;

IAC-25.B3.9-GTS.2.6
ANALOG ASTRONAUT TRAINING EXPERIENCES: A STATISTICAL APPROACH TO ASTRONAUT READINESS
Ms. Saira O. Williams, Space Generation Advisory Council (SGAC), San Rafael, Costa Rica;

IAC-25.B3.9-GTS.2.7
THEORETICAL ANALYSIS OF USING MELANIN INSTEAD OF ALUMINUM BASED MATERIALS FOR PROTECTING ASTRONAUTS FROM HARMFUL SOLAR RADIATION
Mr. Abdurrahman Demir CAN, Üsküdar / İSTANBUL, Türkiye;

IAC-25.B3.9-GTS.2.8
EARTH AND SPACE SCIENCE ON SPACE STATIONS: IKI EXPERIMENTS AND PERSPECTIVES.
Prof. Anatoli Petrukovich, Space Research Institute (IKI), Russian Academy of Sciences (RAS), Moscow, Russian Federation;

IAC-25.B3.9-GTS.2.9
ASTROTREK BOOTS ADVANCED ORTHOPEDIC HIKING BOOTS FOR SPACE EXPLORATION A NECESSITY FOR SAFETY AND COMFORT NATAUSHA CHOHAN MARS DONE RIGHT NEXUS AURORA
Ms. Natausha Chohan, Nexus Aurora, Douglasville, United States;

B4. 32nd 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), The Netherlands;
Support(s): Rhoda Shaller Hornstein, , United States;

B4.1. 26th Workshop on Small Satellite Programmes at the Service of Developing Countries

September 30 2025, 10:15 — Room C3.2

Co-Chair(s): Sias Mostert, Space Commercial Services Holdings (Pty) Ltd, South Africa; Nathalie RICARD, United Nations Office for Outer Space Affairs, Austria; Taiwo Raphael Tejumola, International Space University, France;
Rapporteur(s): Danielle Wood, Massachusetts Institute of Technology (MIT), United States; Pierre Molette, , France;

IAC-25.B4.1.1
A REGIONAL SMALL SATELLITE CONSTELLATION FOR AGRICULTURAL RESILIENCE IN WEST AFRICA
Ms. Sairaksha Kesarla Venkatesh, San Francisco, United States;

IAC-25.B4.1.3
EFFORT ON THE SUSTAINABLE SPACE PROGRAM FOR THE DISSEMINATION OF SPACE TECHNOLOGY
Prof. Tetsuhito Fuse, Kyushu Institue of Technology, Kitakyushu, Japan;

IAC-25.B4.1.5
EXPLORING MANY-CORE PROCESSORS FOR ONBOARD IMAGE PROCESSING IN NANOSATELLITES: A PROPOSAL
Prof. Avid Roman-Gonzalez, Asociacion Civil Universidad de Ciencias y Humanidades, Lima, Peru;

IAC-25.B4.1.6
FEASIBILITY STUDY OF A POCKETQUBE SATELLITE CONSTELLATION TO CONNECT COLOMBIAN REMOTE AREAS
Mr. David Andres Diaz Alvarez, University of Luxembourg, Rionegro, Colombia;

IAC-25.B4.1.7
FILLING THE ENVIRONMENTAL KNOWLEDGE GAPS ABOVE THE TROPICS W CUBESATS/MICROSATS: HOW THE "EQUATORIAL SENTINELS" CONCEPT MIGHT DISRUPT THE TRADITIONAL NORTH-SOUTH COOPERATION PARADIGM
Prof. Erick Lansard, Satellite Research Center, Nanyang Technological University (NTU), Singapore, Singapore, Republic of;

IAC-25.B4.1.8
GHANA'S FIRST LOCALLY DESIGNED POCKETQUBE: XAVSAT-1
Mr. Jake Kwaayisi Yawson, Xavier Space Solutions, Accra, Ghana;

IAC-25.B4.1.9
HANDS-ON SATELLITE TRAINING PROGRAM FOR FUTURE SPACE ENGINEERS: THE SKYTECH PROJECT
Ms. Raihana Shams Islam Antara, Kyushu Institue of Technology, Kitakyushu, Japan;

IAC-25.B4.1.10
INDUSTRY CAPACITY BUILDING PLANNING FOR THAILAND'S SATELLITE PROGRAM
Mr. Atipat Wattanuntachai, Geo-Informatics and Space Technology Development Agency (GISTDA), Bangkok, Thailand;

IAC-25.B4.1.11 (unconfirmed)
ON THE DESIGN OF NATIONAL SMALL SATELLITE MISSIONS
Dr. DIMITRIOS CHRISTOPOULOS, Hellenic Space Centre, Athens, Greece;

IAC-25.B4.1.12
OPPORTUNITIES FOR CUBESAT-RELATED CAPACITY-BUILDING UNDER THE UNITED NATIONS ACCESS TO SPACE FOR ALL INITIATIVE: ACHIEVEMENTS IN 2024-2025
Ms. Mami Sasamura, United Nations Office for Outer Space Affairs, Vienna, Austria;

IAC-25.B4.1.13
STAKEHOLDER EXPECTATIONS FOR LONG-TERM SATELLITE TECHNOLOGY POLICY IN PERU: A SYSTEM ENGINEERING PERSPECTIVE
Mr. George Steve Fajardo Soria, Agencia Espacial del Peru (CONIDA), Chimbote, Peru;

IAC-25.B4.1.14
UTILIZING CUBESATS FOR ENVIRONMENTAL AND CLIMATE MONITORING IN THE GAMBIA: A TOOL FOR SUSTAINABLE DEVELOPMENT
Ms. Fama Jallow, Banjul, Gambia;

B4.2. Small Space Science Missions

September 29 2025, 15:30 — Room C3.2

Co-Chair(s): Larry Paxton, The Johns Hopkins University Applied Physics Laboratory, United States; Norbert M.K. Lemke, OHB System AG - Oberpfaffenhofen, Germany;
Rapporteur(s): Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom; Oana van der Togt, Netherlands Aerospace Centre (NLR), The Netherlands;

IAC-25.B4.2.1
THE DEEP SPACE RADIATION PROBE: DEVELOPMENT AND FIRST RESULTS FROM A FIRST LUNAR SCIENCE PAYLOAD FOR SPACE ENVIRONMENT STUDIES AND CAPACITY BUILDING
Prof. Loren Chang, National Central University, Department of Space Science and Engineering, Taoyuan City, Taiwan, China;

IAC-25.B4.2.2
AN ASSEMBLY, INTEGRATION, AND TESTING METHODOLOGY FOR ENABLING NEXT GENERATION MICROSATELLITE MISSIONS
Mr. Alexander Leaf, Space Flight Laboratory (SFL), Toronto, Canada; Mr. Benjamin Nero, Space Flight Laboratory (SFL), Toronto, Canada; Mr. Sean Tedesco, Space Flight Laboratory (SFL), Toronto, Canada;

IAC-25.B4.2.5
THE SPIRIT MISSION: NOVEL SPACE TELESCOPE TECHNOLOGY
Mr. Simon Barraclough, University of Melbourne, Melbourne, Australia;

IAC-25.B4.2.6
MISSION CONCEPT FOR THE STUDY OF CISLUNAR SPACE WEATHER AND LUNAR OCCULTATIONS FROM STABLE EARTH-MOON L4 ORBITS
Mr. Franco Criscola, Embry-Riddle Aeronautical University, Daytona Beach, United States;

IAC-25.B4.2.7
NEUROMORPHIC VISION SENSOR NOISE CHARACTERIZATION AND DETECTION FOR CUBESAT TECHNOLOGY DEMONSTRATION MISSION
Ms. Lara Schuberth, Technische Universität München, München, Germany;

IAC-25.B4.2.8
CUBESAT MISSION DESIGN TO MEASURE LOCALIZED MAGNETIC FIELDS ON MARTIAN SURFACE UTILIZING ARTIFICIAL INTELLIGENCE AND ATMOSPHERE BREATHING ELECTRIC PROPULSION
Ms. Jessica Sillus, The Ohio State University, Westerville, United States; Mr. Ian Harris, The Ohio State University, Westervile, United States;

IAC-25.B4.2.10
CONSTRUCTION OF A NUMERICAL OPTICAL SIMULATOR OF A FORMATION FLYING INFRARED SPACE INTERFEROMETER AND EVALUATION OF OBSERVABLE CONDITION
Mr. Takumi Ogawa, Department of Engineering, The University of Tokyo, Yokohama, Kanagawa, Japan;

IAC-25.B4.2.11
DEVELOPMENT THE SPACECRAFT SYSTEM OF VERTECS: OBSERVING EXTRAGALACTIC BACKGROUND LIGHT IN THE NEAR-INFRARED
Dr. Ryo Hashimoto, Kyushu Institue of Technology, Kitakyushu, Japan;

IAC-25.B4.2.12
SPNEX: A COST-EFFECTIVE 6U CUBESAT FOR SPACE PLASMA CHARACTERIZATION AND EARTH OBSERVATION
Mr. Hassan Nooreldeen, Egyptian Space Agency (EgSA), New Cairo, Egypt;

B4.3. Small Satellite Operations

October 3 2025, 13:45 — Room C3.2

Co-Chair(s): Andreas Hornig, AerospaceResearch.net, Germany; Nijin Jose Thykkathu, Science and Technology Facilities Council, United Kingdom; Stephan Roemer, OHB, Germany;
Rapporteur(s): Lynette Tan, Space Faculty, Singapore, Republic of;

IAC-25.B4.3.1
PROBA-3: OPERATING A DUAL SATELLITES MISSION FOR AUTONOMOUS PRECISION FORMATION-FLYING
Mr. Domenico Scopelliti, Redwire Space, Bruxelles, Belgium;

IAC-25.B4.3.2
MULTIPLE IMAGING SATELLITE MISSION PLANNING VIA DISTRIBUTED LEARNING IN GAMES
Dr. Changhao Sun, China Academy of Space Technology (CAST), Beijing, China;

IAC-25.B4.3.3
A CONCEPT FOR SPECTRUM SHARING THROUGH SCHEDULING AND COLLABORATIVE PLANNING
Dr. Martin von der Ohe, Lacuna Space, Einbeck, Germany;

IAC-25.B4.3.4
SAFETY CONCEPT OF PROXIMITY OPERATIONS IN LOW EARTH ORBIT: THE SPEYE CUBESAT MISSION
Dr. Giacomo Borelli, Politecnico di Milano, Milan, Italy;

IAC-25.B4.3.5
DEMONSTRATION OF AN AUTOMATED OPERATION PLANNING SYSTEM FOR ONGLAISAT CUBESAT
Mr. Riki Nakamura, University of Tokyo, Tokyo, Japan;

IAC-25.B4.3.6
DEVELOPMENT OF AN AUTOMATED TOOL FOR EXECUTING SAFE ORBIT ADJUSTMENT CAMPAIGNS FOR FORMATION FLYING SATELLITES
Mr. Saksham Jain, Space Flight Laboratory (SFL), Toronto, Canada;

IAC-25.B4.3.7
FLIGHT FORMATION STRATEGY AND EXECUTION FOR 3GPP REL-17 5G NB-IOT NTN USING CUBESATS IN THE SATELIOT CONSTELLATION
Mr. Dídac Cabús, Sateliot, Barcelona, Spain;

IAC-25.B4.3.8
OPTIMAL SELECTION AND MODELING OF THRUSTERS DURING SEQUENTIAL FIRING USING AUTOMATED THRUSTER MODEL ALGORITHM FOR SPACE DOCKING EXPERIMENT
Ms. Pranavika Mandarapu, Indian Space Research Organization (ISRO), bengaluru, India;

IAC-25.B4.3.9
CAMERA VIEWPOINTS OPTIMIZATION FOR FULLY IMAGING A RESIDENT SPACE OBJECT
Mr. Moshe Landon, University of Cincinnati, Cincinnati, United States;

IAC-25.B4.3.10
ANALYSIS AND VALIDATION OF GAS-SURFACE INTERACTION MODELS FOR VLEO SPACECRAFT USING ADBSAT FRAMEWORK
Mr. Tahir Çebi, Samsun University, Balikesir, Türkiye;

IAC-25.B4.3.11
IN-ORBIT RESULTS AND LESSONS LEARNED FROM THE 6U+ CUBESAT MISSION SONATE-2
Mr. Clemens Riegler, Julius Maximilians Universität Würzburg, Würzburg, Germany;

B4.4. Small Earth Observation Missions

October 1 2025, 10:15 — Room C3.2

Co-Chair(s): Carsten Tobehn, European Space Agency (ESA), The Netherlands; Larry Paxton, The Johns Hopkins University Applied Physics Laboratory, United States; Eugene D Kim, Satrec Initiative, Korea, Republic of;
Rapporteur(s): Werner R. Balogh, European Space Agency (ESA), France; Marco Gomez Jenkins, , United Kingdom;

IAC-25.B4.4.1
USING A NANOSATELLITE FOR MONITORING ATMOSPHERIC FIELD DISTORTIONS AND REMOTE SENSING DATA AS PRECURSORS TO SEISMIC EVENTS
Dr. Ugur Guven, UN CSSTEAP, London, United Kingdom;

IAC-25.B4.4.2
PROPOSAL FOR A CUBESAT MISSION TO STUDY THE INFLUENCE OF EARTHQUAKES ON ENERGETIC PARTICLE PRECIPITATION IN SOUTH AMERICA
Mr. Nil Andy Armillon Huaman, Universidad Nacional de Ingeniería (Lima, Perù), Lima, Peru;

IAC-25.B4.4.3
FEASIBILITY STUDY OF VLEO SMALLSAT PLATFORM BASED ON ON-ORBIT ACHIEVEMENTS OF SUPER LOW ALTITUDE TEST SATELLITE (SLATS)
Mr. Tomotaka Yamamoto, Japan Aerospace Exploration Agency (JAXA), TSUKUBA-SHI, Japan;

IAC-25.B4.4.4
AQUAWATCH: AUSTRALIA-UNITED KINGDOM – A BILATERAL SMALL SATELLITE PROJECT FOR COST EFFECTIVE WATER QUALITY MONITORING
Ms. Stephanie Mottershead, Surrey Satellite Technology Ltd (SSTL), Guildford, United Kingdom;

IAC-25.B4.4.5
HARDWARE DESIGN AND TESTING OF THE UAE GNSS-R PAYLOAD (SEASTAR)
Dr. Yasir ABBAS, United Arab Emirates University (UAEU), Al Ain, United Arab Emirates;

IAC-25.B4.4.6
FLIGHT MODEL DESIGN AND DEVELOPMENT OF THE W6U-SIZE PRELUDE FOR INVESTIGATING IONOSPHERIC EARTHQUAKE PRECURSOR PHENOMENA
Ms. Nagisa Sone, Nihon University, Funabashi, Japan;

IAC-25.B4.4.7
GROUND MOTION COMPENSATION DEMONSTRATION AND ASSESSMENT – KANYINI CUBESAT IN-ORBIT RESULTS
Dr. Robin Georg, Inovor Technologies, Adelaide, Australia;

IAC-25.B4.4.8
TOWARDS VERY-HIGH RESOLUTION EARTH OBSERVATION FROM VLEO WITH SMALL SATELLITES
Mr. Daniel Garbe, Fraunhofer - Institut für Kurzzeitdynamik, Ernst-Mach-Institut (EMI), Freiburg, Germany;

IAC-25.B4.4.9
GALASSIA 5 - DEVELOPMENT OF A 6U EDGE AI EARTH OBSERVATION SATELLITE WITH DIRECT TO USER DOWNLINK CAPABILITY
Mr. Tristan Voon, National University of Singapore, Singapore, Singapore, Republic of;

IAC-25.B4.4.10
DETECTION OF SEISMO-ELECTROMAGNETIC WAVES USING NON-BOOM QUAD-MAG TECHNOLOGY ON NEPAL'S 1U SLIPPERS2SAT CUBESAT
Mr. Rishav Adhikari, Nepal Space Foundation, Kathmandu, Nepal;

IAC-25.B4.4.11
SENSORIS: USING CONSUMER ELECTRONICS TO REVOLUTIONIZE EARTH OBSERVATION MISSIONS
Mr. Tim Gust, Hochschule Bremen, Augsburg, Germany;

IAC-25.B4.4.12
IOT ENABLED NANO SATELLITE RESPONSE SYSTEM FOR REAL-TIME OIL SPILL MONITORING IN THE NIGER DELTA BY ONWUAMA CHUKWUWEIKE IHUNANYA.
Mr. Ihunanya Onwuama, National Space Research and Development Agency (NASRDA), Abuja, Nigeria;

IAC-25.B4.4.13
KONSAT-1: MULTISENSOR SYSTEM FOR DETECTING OIL POLLUTION FROM SHIPS USING OPTICAL AND AIS TECHNOLOGIES
Mr. Juan Salvador Palacios Bett, Universidad Nacional de Ingeniería (Lima, Perù), Lima, Peru;

IAC-25.B4.4.14
HORUS: A HIGH-RESOLUTION EARTH OBSERVATION MISSION IN VERY LOW EARTH ORBIT
Mr. Lorenzo Cesarini, Politecnico di Milano, Milano, Italy;

IAC-25.B4.4.15
PAYLOAD DESIGN WITH ONBOARD ARTIFICIAL VISION CAPABILITIES FOR A 1U CUBESAT USING COTS CAMERAS
Mr. Misael Landero, National Autonomous University of Honduras (UNAH), Tegucigalpa, Honduras;

B4.5. Access to Space for Small Satellite Missions

October 1 2025, 15:00 — Room C3.2

Co-Chair(s): Yves Gerard, Airbus Defence & Space, France; Philip Davies, Surrey Satellite Technology Ltd (SSTL), United Kingdom;
Rapporteur(s): Jeff Emdee, The Aerospace Corporation, United States; Carlos Niederstrasser, Northrop Grumman Corporation, United States;

IAC-25.B4.5.1
UTILIZING SMALL SATELLITE LAUNCH VEHICLE - A CROSS-BORDER COLLABORATION FOR SPACE MISSION AUSTRALIA INDIA TECHNOLOGY RESEARCH AND INNOVATION (SPACE MAITRI) BY SPACE MACHINES COMPANY AND NEW SPACE INDIA LIMITED
Mr. Nhat Nguyen, Space Machines Company, Sydney, Australia;
Mr. Sai Prasanna Gautam Aleti, NewSpace India Limited (NSIL), Bengaluru, India;

IAC-25.B4.5.2
ENABLING ON-DEMAND LAUNCHES AND REENTRIES
Mr. Zheng Tao, Falls Church, United States;

IAC-25.B4.5.3
LEVERAGING INNOVATIVE LAUNCH OPPORTUNITIES FOR LOW-COST SPACE ACCESS
Dr. SANDhYA RAO, NEW DELHI, India;

IAC-25.B4.5.4
VERY LOW EARTH ORBIT NANOSATELLITE PLATFORM WITH INNOVATIVE, RESOURCE-SAVING ORBIT KEEPING STRATEGY
Mr. Georg Langer, Technische Universität Dresden (DTU), Dresden, Germany;

IAC-25.B4.5.6
LOW COST CLUSTER SELF RECONFIGURABLE MODULAR SPACECRAFT FOR MULTIMODAL SPACE AND GROUND OBSERVATION MISSIONS
Mr. Tongshu Zhang, Northwestern Polytechnical University;National Key Laboratory of Aerospace Flight Dynamics, Xi'an, China;

IAC-25.B4.5.7
LESSON LEARNED FROM TRACKING & IDENTIFICATION FOR RIDESHARE LEOP SUPPORT
Mr. Robert Arthur, NeuraSpace, SA, Lincolnshire, United Kingdom;

IAC-25.B4.5.9
CONSTELLATION RECONFIGURATION AND TASK SCHEDULING OPTIMIZATION FOR EMERGENCY EARTH OBSERVATION RESPONSE USING LOW-THRUST
Mr. Zhengqing Fang, Tsinghua University School of Aerospace, Beijing, China;

IAC-25.B4.5.10
A FAST-RESPONSE LAUNCH PLANNING METHOD FOR SMALL SATELLITES
Ms. YAN LYU, China Academy of Launch Vehicle Technology (CALT), Beijing, China;

IAC-25.B4.5.11
BALLISTIC COEFFICIENT CHARACTERIZATION OF THE 3U CUBESAT IGNIS MISSION
Mr. Corrado D'Urso, University of Naples "Federico II", Quarto (NA), Italy;

IAC-25.B4.5.12
IN-SPACE AND ATMOSPHERIC REENTRY ENERGY GENERATION WITH AMALTHEA – A CUBESAT-BASED TECHNOLOGY DEMONSTRATION
Ms. Maria Chytka, University of Alabama in Huntsville, Huntsville, AL, United States; Ms. Cailin Bain, University of Alabama in Huntsville, Huntsville, AL, United States; Mr. Anthony Shipp, University of Alabama in Huntsville, Huntsville, AL, United States;

IAC-25.B4.5.13
ORBITAL DOCKING AND INTEGRATION NEXUS (ODIN): A SCALABLE AND SUSTAINABLE IN-ORBIT PLATFORM FOR SPACE RESEARCH
Mr. Oliver Legon, University of Nottingham, Nottingham, United Kingdom;

B4.6A. Generic Technologies for Small Satellites (1)

October 2 2025, 10:15 — Room C3.2

Co-Chair(s): Philip Davies, Surrey Satellite Technology Ltd (SSTL), United Kingdom; Joost Elstak, ICEYE, The Netherlands;
Rapporteur(s): Jian Guo, Delft University of Technology (TU Delft), The Netherlands; Thomas Terzibaschian, Astro- und Feinwerktechnik Adlershof GmbH, Germany;

IAC-25.B4.6A.1
ADVANCES IN SPACE-BASED BEIDOU/GNSS REMOTE SENSING TECHNOLOGY AND ITS SMALL SATELLITE APPLICATIONS IN CHINA
Prof.Dr. Yueqiang Sun, National Space Science Center (NSSC), Chinese Academy of Sciences, Beijing, China;

IAC-25.B4.6A.2
JAMSAIL: A 3U CUBESAT FOR GNSS INTERFERENCE MAPPING, IONOSPHERIC SCINTILLATION ANALYSIS, AND ADCS RESEARCH
Ms. Tasneem Yousif, University of Nottingham, Nottingham, United Kingdom; Mr. Luis Cormier, University of Nottingham, Nottingham, United Kingdom;

IAC-25.B4.6A.3
FLIGHT DEMONSTRATION OF AN ELECTRO-PERMANENT MAGNETORQUER FOR ENERGY-EFFICIENT SMALL SATELLITE ATTITUDE CONTROL
Dr. Anne Bettens, Deneb Space, Eveleigh, Australia;

IAC-25.B4.6A.4
EVALUATION AND MITIGATION OF REACTION WHEEL DISTURBANCES IN A MICRO-SATELLITE FORMATION FLYING INFRARED INTERFEROMETER MISSION
Ms. Kuna Shitara, University of Tokyo, Tokyo, Japan;

IAC-25.B4.6A.7
PRELIMINARY DESIGN AND TESTING OF MULTI-SENSOR RELATIVE NAVIGATION ARCHITECTURES FOR THE SPEYE CUBESAT MISSION
Prof. Roberto Opromolla, University of Naples "Federico II", Naples, Italy;

IAC-25.B4.6A.8
MODULAR CIRCUIT BOARD DESIGN FOR SMALL SATELLITES: OPTIMIZING POWER, THERMAL, AND EMI PERFORMANCE
Mr. Abhinav Dhar, Planet Labs Inc., San Francisco, United States;

IAC-25.B4.6A.9
UTILISING SPACECHIPEXPLORER TO BENCHMARK DATA REDUCTION PERFORMANCE ON FPGAS IN SPACE
Mr. Ric Dengel, University of Tartu, Tõravere, Estonia;

IAC-25.B4.6A.11
CONTINUOUS LOW-THRUST MANEUVER DETECTION OF MEGA CONSTELLATION SATELLITES BASED ON CONDITIONAL DIFFUSION MODEL
Mr. Kun Zhang, hefei, China;

IAC-25.B4.6A.12
MULTI-AGENT DEEP REINFORCEMENT LEARNING FOR COOPERATIVE CONTROL OF SMALL SATELLITE FORMATIONS UNDER COMPLEX CONSTRAINTS
Dr. Yingkai Cai, Tsinghua University, Beijing, China;

IAC-25.B4.6A.13
MAGNETHRUSTER: A PROPULSION SYSTEM FOR SATELLITES BASED ON LORENTZ FORCE
Dr. Luca Armani, GAUSS S.r.l., ROMA, Italy;

IAC-25.B4.6A.14
ENHANCING SMALL EARTH OBSERVATION SATELLITES WITH SPACE GRADE COMMERCIAL-OFF-THE-SHELF (SCOTS) TELESCOPE PAYLOADS
Mr. Henrik Øvrebø, Norwegian University of Science and Technology, Trondheim, Norway;

B4.6B. Generic Technologies for Small Satellites (1)

October 2 2025, 15:00 — Room C3.2

Chairman(s): Andy Vick, RAL Space, United Kingdom;
Co-Chair(s): Zeger de Groot, Innovative Solutions in Space BV, The Netherlands;
Rapporteur(s): Martin von der Ohe, Lacuna Space, Germany; Paolo Marzioli, Sapienza University of Rome, Italy;

IAC-25.B4.6B.1
MULTI-PURPOSE DEPLOYABLE SYSTEMS AND CAPABILITY DEVELOPMENT PLATFORM: PREPARATION AND EARLY OPERATIONS OF THE TPA-1 CUBESAT
Dr. Ben Taylor, University of Auckland, Auckland, New Zealand;

IAC-25.B4.6B.2
DEFIANT-XL: A CONFIGURABLE HIGH-PERFORMANCE MICROSATELLITE PLATFORM FOR MODERN SATELLITE MISSIONS
Mr. Suraj Sridharan, Space Flight Laboratory (SFL), Toronto, Canada;

IAC-25.B4.6B.3
WARATAH SEED-1: AUSTRALIA'S FIRST COMMERCIAL RIDE SHARE SATELLITE
Mr. Patrick Oppel, The University of Sydney, Wollstonecraft, Australia;

IAC-25.B4.6B.4
OPERATIONAL LESSONS FROM THE CUAVA-2 SATELLITE: RADIATION COUNTER EXPERIMENT AND MISSION RESILIENCE
Dr. Xueliang Bai, The University of Sydney, Artarmon, Australia;

IAC-25.B4.6B.5
BRIDGING SPACE AND COMMUNITY: NEPAL'S INDIGENOUS YOUTH PIONEERING CUBESAT TECHNOLOGY FOR FLOOD, DROUGHT, AND EARTHQUAKE RESILIENCE
Mr. Rishav Adhikari, Nepal Space Foundation, Kathmandu, Nepal;

IAC-25.B4.6B.6
DELFI-PQ: IN-ORBIT PERFORMANCE AND LESSONS LEARNED IN DEVELOPING A 3P POCKETQUBE
Mr. Mehmet Şevket Uludağ, Delft University of Technology (TU Delft), Delft, The Netherlands;

IAC-25.B4.6B.7
DEVELOPMENT OF CUBESAT SYSTEMS AND ALGORITHMS FOR ARTIFICIAL GRAVITY VALIDATION AND VERIFICATION-SIMULATIONS AND EXPERIMENTAL TESTING
Mr. Samuele Enzo, University of Padua, Padova, Italy;

IAC-25.B4.6B.8
COSMIC – IN SPACE TECHNOLOGY DEMONSTRATION CUBESAT FOR POST MISSION DISPOSAL AND KOREAN LUNAR ROVER
Mr. Dae-Eun Kang, Yonsei University, Seoul, Korea, Republic of;

IAC-25.B4.6B.9
ADVANTAGES AND CAPABILITIES OF PRECURSOR MISSIONS ON CUBESATS IN PREPARATION OF COMMERCIALIZATION AND LARGE-SCALE MISSIONS
Mr. Benjamin Rödiger, German Aerospace Center (DLR), Wessling, Germany;

IAC-25.B4.6B.10
ADVANCING CUBESAT THERMAL MANAGEMENT: IN-ORBIT DEMONSTRATION OF A TPMS-PCM HEAT SINK ON WARATAH SEED-1
Prof. Nick Bennett, University of Technology Sydney (UTS), NSW, Australia;

IAC-25.B4.6B.11
ADVANCED DUAL-HINGE SMA-BASED SOLAR PANEL DEPLOYMENT MECHANISM FOR A 3U CUBESAT: STRUCTURAL OPTIMIZATION AND MULTI-THICKNESS PCB INTEGRATION UNDER JAXA CONSTRAINTS
Mr. Hery Steven Mindarno, Laboratory of Spacecraft Environment Interaction Engineering, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-25.B4.6B.12
QUALIFICATION ACTIVITIES OF RAFTI TOWARDS AN ORBITAL REFUELLING SOLUTION FOR ALL COMMON STORABLE SPACECRAFT PROPELLANTS
Mr. Sebastian Hill, Orbit Fab Ltd, Oxford, United Kingdom;

IAC-25.B4.6B.13
AMDROHPSAT – A 3U CUBESAT TO TEST AN ADDITIVELY MANUFACTURED DEPLOYABLE RADIATOR WITH OSCILLATING HEAT PIPES
Mr. Benjamin Gillette, California Polytechnic State University, Portland, United States;

IAC-25.B4.6B.15
CYBEESAT: DEMONSTRATING ADVANCED TECHNOLOGIES FOR NEXT-GENERATION SMALL SATELLITE MISSIONS
Mr. Jens Freymuth, Technische Universität Berlin, Berlin, Germany;

B4.7. Constellations and Distributed Systems

September 30 2025, 15:00 — Room C3.2

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;

IAC-25.B4.7.1
KEYNOTE: INNOVATIVE SPACE FACTORY: TRANSFORMING SMALL SATELLITE PRODUCTION
Dr. Marco Di Clemente, Italian Space Agency (ASI), rome, Italy;

IAC-25.B4.7.2
DEFINITION OF A SMALL SATS CONSTELLATION GEOMETRY FOR THE DETECTION AND LOCALIZATION OF RADIO-FREQUENCY INTERFERENCE SIGNALS
Mrs. Lucrezia Lovaglio, Politecnico di Torino, Torino, Italy;

IAC-25.B4.7.3
COLLISION RISK ASSESSMENT AND AVOIDANCE METHODS FOR SAFE AUTONOMOUS PROXIMITY OPERATIONS
Dr. Giacomo Borelli, Politecnico di Milano, Milan, Italy;

IAC-25.B4.7.4
VERTICAL FEDERATED LEARNING IN SATELLITE CONSTELLATIONS FOR LOWER EARTH ORBIT
Mr. Francisco Freitas, Faculdade de Ciências e Tecnologia - UNL, Torres Novas, Portugal;

IAC-25.B4.7.5
CLUSTER FLYING ALGORITHM FOR SPARSELY CONNECTED SATELLITE SWARMS
Prof. Zhaokui Wang, Tsinghua University, Beijing city, China;

IAC-25.B4.7.6
UNLOCKING SPACE: THE IMPACT OF STANDARDIZATION IN LAUNCH SERVICES ON ACCESSIBILITY AND INNOVATION
Ms. Nageswara Saieswara Nidhi Mayurika Alapati Kameswara, Monash University, Melbourne, Australia;

IAC-25.B4.7.7
USING PASSIVE AERODYNAMIC FORCES FOR THE FORMATION FLYING CONTROL OF THE ANSER CLUSTER
Dr. Iván Castro Fernández, Instituto Nacional de Tecnica Aeroespacial (INTA), Torrejón de Ardoz, Spain;

IAC-25.B4.7.8
HIGH AVAILABILITY APPLICATIONS BY APPLYING FUNCTION AS A SERVICE (FAAS) IN SATELLITE COMPUTING NETWORKS
Dr. Markus Sauer, Siemens AG, Munich, Germany;

IAC-25.B4.7.9
ANSER CLUSTER - ACHIEVEMENTS OF A CUBESAT DISTRIBUTED SYSTEM AFTER MORE THAN ONE YEAR IN ORBIT
Mr. Cesar Arza, Instituto Nacional de Tecnica Aeroespacial (INTA), Torrejon de Ardoz (Madrid), Spain;

IAC-25.B4.7.10
IN-ORBIT DEMONSTRATION OF PROPELLANT-LESS FORMATION FLIGHT THROUGH SEPARATION OF JOINTED TWO CUBESATS IN THE MAGNARO-II MISSION
Dr. Takaya Inamori, Nagoya University, Nagoya, Japan;

IAC-25.B4.7.11
SPACE EYE (SPEYE): PRELIMINARY DESIGN OF AN ON-ORBIT INSPECTION AND FORMATION-FLYING DEMONSTRATION
Dr. Vincenzo Capuano, Techno System Developments S.R.L., Pozzuoli, Italy;

IAC-25.B4.7.12
FOCUS X-BAND SAR CONSTELLATION: AODCS FEASIBILITY ANALYSIS
Mr. Egon Travaglia, ECyT, National University of San Martin (UNSAM), Buenos Aires, Argentina;

IAC-25.B4.7.13
ULTRA-HIGH PRECISION CONTROL METHOD USING AN EXTENDED SOURCE IMAGE FOR THE FORMATION FLYING SYNTHETIC APERTURE TELESCOPE AND ITS APPLICATION FOR TELESCOPE-POINTING CONTROLS
Mr. Kai Nakamura, University of Tokyo, Tokyo, Japan;

IAC-25.B4.7.14
ADVANCES IN THE REALIZATION OF A FEDERATED LABORATORIES NETWORK FOR TESTING FORMATION FLYING TECHNOLOGIES
Mr. David Paolo Madonna, Sapienza University of Rome, Rome, Italy;

B4.8. Small Spacecraft for Deep-Space Exploration

October 3 2025, 10:15 — Room C3.2

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; Jaime Esper, National Aeronautics and Space Administration (NASA), United States;

IAC-25.B4.8.1
USING CAPSTONE'S MISSION EXTENSION TO NAVIGATE THE FUTURE OF CISLUNAR TECHNOLOGY
Mr. Alec Forsman, Advanced Space, Boulder, United States;

IAC-25.B4.8.2
SMALL SATELLITES FOR LUNAR OPTICAL AND THERMAL IMAGING.
Mr. Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), Guildford, Surrey, United Kingdom;

IAC-25.B4.8.3 (unconfirmed)
DESIGN OF LUNAR RESONANT ORBITAL MISSIONS TO INVESTIGATE SPACE CISLUNAR WEATHER AND HYPERSPECTRAL LUNAR SURFACE IMAGING DATA
Mr. Abdulaziz Alareedh, Industrial Institute, Public Authority for Applied Education (PAAET), Sabahiya, Kuwait;

IAC-25.B4.8.4 (unconfirmed)
LUNAR LANDING NAVIGATION USING EVENT CAMERAS AND SPIKING NEURAL NETWORKS
Mr. Ondřej Dvořák, Delft University of Technology (TU Delft), Prague, Czech Republic;

IAC-25.B4.8.5
FROM CUBESAT TO LUNAR ROVER: OVERVIEW AND INSIGHTS OF NEUROSPACE'S FIRST 12U SATELLITE TACHELES ON NASA'S ARTEMIS 2 MISSION AS A TECHNOLOGY DEMONSTRATOR FOR THE HIVER ROVER
Mr. Lin-Yu Oei, NEUROSPACE GmbH, Berlin, Germany;

IAC-25.B4.8.6 (unconfirmed)
SPINSAT: A NOVEL VARIABLE-GRAVITY-AND-RADIATION-EXPOSURE PLATFORM FOR DEEP-SPACE SCIENCE
Dr. Jay Bookbinder, NASA Ames Research Center, Mountain View, United States;

IAC-25.B4.8.7
CONCEPTUAL DESIGN STUDY OF CUBESAT-BASED EARTH TROJAN ASTEROID EXPLORATION ACCOMPANYING WITH KOREAN SUN-EARTH L4 MISSION
Prof. Gwanghyeok Ju, Yonsei University, Seoul, Korea, Republic of;

IAC-25.B4.8.8
ASSESSING CONTROL ROBUSTNESS OF CUBESAT PROPULSION SYSTEMS FOR (99942) APOPHIS PROXIMITY OPERATIONS
Mr. Carmine Buonagura, Politecnico di Milano, Milan, Italy;

IAC-25.B4.8.9
DEEP-SPACE PROSPECTING: A COMPACT MULTI-SENSOR SPACECRAFT FOR M-TYPE ASTEROIDS
Dr. Gerrit Olivier, Beverley, Australia;

IAC-25.B4.8.10
RADIO-FREQUENCY RELATIVE NAVIGATION FOR MULTI-SPACECRAFT DEEP-SPACE EXPLORATION
Dr. Ahmed Kiyoshi Sugihara El Maghraby, Japan Aerospace Exploration Agency (JAXA), Sagamihara City, Japan;

IAC-25.B4.8.12
EXPLORING NEW FRONTIERS: THE ITALIAN SPACE AGENCY'S CUBESAT MISSIONS TO DEIMOS AND NEAR-EARTH ASTEROIDS
Dr. Raffaele Mugnuolo, Italian Space Agency (ASI), MATERA, Italy;

B4.9-GTS.5. Small Satellite Missions Global Technical Session

October 2 2025, 15:00 — Room C4.7

Co-Chair(s): Matthias Hetscher, DLR (German Aerospace Center), Germany; Norbert M.K. Lemke, OHB System AG - Oberpfaffenhofen, 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-25.B4.9-GTS.5.1
ENHANCING THE RESILIENCE AND EVOLUTION OF THE EUROPEAN SPACE SUPPLIERS THROUGH A SPACE PRODUCT QUALIFICATION (ESPQ) PROGRAM
Mrs. Anastasia Pesce, ESA, Noordwijk, The Netherlands;

IAC-25.B4.9-GTS.5.2
CUBESAT MISSION ASSURANCE THROUGH EARLY-PHASE CONSULTATION AT THE CUBESAT SALON
Prof. MENGU CHO, Kyushu Institute of Technology, Kitakyushu-shi, Japan;

IAC-25.B4.9-GTS.5.3
THE STUDY OF NEW TECHNIQUE APPROACH TO IDENTIFY THE CRITICAL AREA OF AOCS SYSTEM FROM ADDING PROPULSION IN THE THEOS-3
Ms. Tucksaporn Ruanghiranwong, Geo-Informatics and Space Technology Development Agency (GISTDA), Chonburi, Thailand;

IAC-25.B4.9-GTS.5.4
PRELIMINARY ON-ORBIT RESULTS OF THE DRAGONFLY 2U CUBESAT: INSIGHTS FROM THE BIRDS-X MISSION
Dr. Jorge Rubén Casir Ricaño, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-25.B4.9-GTS.5.5
BIRDS-RPM: INTERNATIONAL COLLABORATION PROJECT FOR EMERGING-SPACE COUNTRIES' CAPACITY BUILDING.
Ms. Hanadi Abdalla, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-25.B4.9-GTS.5.6
BUCCANEER MAIN MISSION CUBESAT LESSONS LEARNED
Mrs. Monique Hollick, Defence Science and Technology Group (DST Group), Williamstown, Australia;

IAC-25.B4.9-GTS.5.7
DESIGN AND OPERATIONAL FEASIBILITY STUDY OF QUASI-RECURRENT ORBIT OF NANO-SATELLITES RELEASED FROM THE ISS
Ms. Sachika Takeshita, Japan Manned Space Systems Corporation (JAMSS), Tsukuba, Japan;

IAC-25.B4.9-GTS.5.8
FEASIBILITY STUDY OF THE SOURCE-2 CUBESAT MISSION FOR THE DEMONSTRATION AND ANALYSIS OF CRITICAL TECHNOLOGIES FOR FUTURE SERVICING MISSIONS
Ms. Marlin Kanzow, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-25.B4.9-GTS.5.9
ASSEMBLY, QUALIFICATION AND OPERATIONS PLAN FOR THE DEMONSTRATION OF INTERNET-OF-THINGS INTER-SATELLITE DISTRIBUTED TELEMETRY SYSTEMS: THE CORAL MISSION
Dr. Fabrizio Piergentili, Sapienza University of Rome, Roma, Italy;

IAC-25.B4.9-GTS.5.10
PARTICLE SWARM OPTIMIZATION TUNED NON-SINGULAR SATELLITE ATTITUDE CONTROL USING FUZZY SLIDING MODE CONTROLLER
Mr. Habtamu Minale, Addis Ababa, Ethiopia;

IAC-25.B4.9-GTS.5.12
NASA'S SMALL SPACECRAFT TECHNOLOGY STATE-OF-THE-ART REPORT: AN INTERACTIVE WEB-APP AUTOMATED SYSTEMS ENGINEERING TOOL FOR RAPID S/C ALTERNATIVES DESIGN
Dr. Craig Burkhard, NASA Ames Research Center, Moffett Field, United States;

IAC-25.B4.9-GTS.5.13
DEVELOPING A NEAR-EQUATORIAL LOW-COST SMALL SATELLITE TO DRASTICALLY IMPROVE AIR QUALITY MONITORING OVER THE TROPICS
Mr. Christian Lim, Nanyang Technological University (NTU), Singapore, Singapore, Republic of;

IAC-25.B4.9-GTS.5.14
POCKETQUBE WITH LASER-INTERROGATED CORNER CUBE REFLECTORS (CCRS)
Mr. Solomon Appekey, LEEDS, United Kingdom;

B5. IAF SYMPOSIUM ON INTEGRATED APPLICATIONS

Coordinator(s): Jeanne Holm, City of Los Angeles, United States; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;

B5.1. Tools and Technology in Support of Integrated Applications

October 1 2025, 10:15 — Room C4.7

Co-Chair(s): Jeanne Holm, City of Los Angeles, United States; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;
Rapporteur(s): Marion Allayioti, European Space Agency (ESA), United Kingdom;

IAC-25.B5.1.1
THE POTENTIAL OF DIGITAL TWIN TECHNOLOGIES FOR ENHANCED LUNAR OPERATIONS
Mr. KangSan Kim, ispace, inc., Incheon, Korea, Republic of;

IAC-25.B5.1.2
SIMULATION OF HIGH RESOLUTION SATELLITE ORBITS TO MAXIMIZE FREQUENCY AND QUALITY OF METHANE EMISSION DETECTION OVER A SOLID WASTE LANDFILL IN RIO DE JANEIRO, BRAZIL
Mr. Frederick Ajisafe, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-25.B5.1.3
S.O.N.İ.A(SPACE OBSERVATION AND NAVIGATION İNTELLIGENCE ASSISTANT)
Mr. Safarali Safarli, Azerbaijan Technical University, Xırdalan, Azerbaijan; Ms. Sona Rustam, Azerbaijan State Pedagogical University (ASPU), Baku, Azerbaijan;

IAC-25.B5.1.4
MODULAR IOT-SATELLITE SOLUTIONS FOR REMOTE SENSING AND REAL-TIME DATA INTEGRATION
Dr. FATIMAH ZAHARAH ALI, Universiti Teknologi MARA (UITM), SHAH ALAM, Malaysia;

IAC-25.B5.1.5
HUMAN-CENTERED AI IN INTEGRATED APPLICATIONS: OPTIMIZING USER EXPERIENCE AND EFFICIENCY
Mr. Ilham Suleymanov, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.B5.1.6
INFORMATION ANALYTICS FOR SPACE ENTITIES USING 3D MODELS AND ARTIFICIAL INTELLIGENCE
Dr. Jun Heo, Defence Science and Technology Group (DST Group), Edinburgh, Australia;

IAC-25.B5.1.7
PAYLOAD-AWARE REINFORCEMENT LEARNING FOR MISSION PLANNING IN 6G LEO SATELLITE CONSTELLATIONS FOR SAFE UAM AND DRONE OPERATIONS
Dr. Uihwan Choi, Electronics and Telecommunications Research Institute (ETRI), Daejeon, Korea, Republic of;

IAC-25.B5.1.8
A DIGITAL TWIN-ENABLED FRAMEWORK FOR INTEGRATED DATA FUSION IN SPACE-BASED APPLICATIONS
Mr. Karam Safarli, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.B5.1.9
ENERGY-OPTIMIZED UAV PACKAGE DELIVERY SYSTEM: INTEGRATING BAROMETRIC SENSING AND GPS FOR REDUCED HOVERING TIME AND ENHANCED OPERATIONAL EFFICIENCY
Mr. Akif Mohiuddin, BRAC University, DHAKA, Bangladesh;

IAC-25.B5.1.10
DEMOCRATIZING INTEGRATED APPLICATIONS: BRIDGING THE GAP FOR UNIVERSAL ACCESS
Mr. Uri Greisman Ran, Elbit Systems, Electro Optics, ELOP Ltd., Tel Aviv, Israel;

IAC-25.B5.1.11
QUANTUM TOOLS FOR INTEGRATED SPACE APPLICATIONS: OPPORTUNITIES AND LEGAL CHALLENGES
Mr. Nishith Mishra, Institute of Air and Space Law, McGill University, Montréal, Canada;

IAC-25.B5.1.12
TERRANEXUS: A PARADIGM SHIFT AND DIGITAL NEXUS BETWEEN TERRESTRIAL AND SPACE-DERIVED DATA SYSTEMS
Dr. Matthew Purss, Murrumbateman, Australia;

IAC-25.B5.1.13
GENERATIVE AI FOR DATA DISCOVERY: A TELESPAZIO SERVICE FOR DIGITAL GROUND SEGMENTS
Mr. Simone Giannattasio, Telespazio S.p.A., Rome, Italy;

IAC-25.B5.1.14
ENHANCING THE NATIONAL GLOBAL SPATIAL DATA PROCESSING SYSTEM THROUGH MACHINE LEARNING INTEGRATION
Prof. Sevda R. Ibrahimova, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

B5.2. Integrated Applications End-to-End Solutions

October 1 2025, 15:00 — Room C2.4

Co-Chair(s): Marcello Romano, Technical University of Munich (TUM), Germany; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;
Rapporteur(s): Marion Allayioti, European Space Agency (ESA), United Kingdom;

IAC-25.B5.2.1
AI-DRIVEN WILDFIRE SEVERITY AND EXPOSURE MAPPING: FROM SATELLITE DATA TO ACTIONABLE INSIGHTS
Dr. Alexandre Bandini-Maeder, Geoneon, Hobart, Australia;

IAC-25.B5.2.2
ANYVAULT: LOOKING BEYOND PRIME APPLICATIONS OF PNT DATA
Prof. Marek Košuda, Technical University Košice;

IAC-25.B5.2.3
COMMERCIAL VENTURES IN THE EUROPEAN SPACE SECTOR: RETURN OVER INVESTMENT FOR ACHIEVING SUSTAINABILITY TARGETS
Ms. Agnes Mestreau, European Space Agency (ESA-ESTEC), Noordwijk, The Netherlands;

IAC-25.B5.2.4
DIGITAL EARTH MALDIVES: AN INTEGRATED PLATFORM TO SUPPORT ENVIRONMENTAL DECISION-MAKING
Dr. Nashwan Matheen, Maldives Space Research Organisation (MSRO), Male', Maldives;

IAC-25.B5.2.5
UEIKAP PROJECT: FINAL RESULTS, MAIN OUTCOMES AND FUTURE ADVANCES
Dr. Maria Daniela Graziano, University of Naples "Federico II", Naples, Italy;

IAC-25.B5.2.6
NON-TERRESTRIAL SYSTEMS DESIGN AND OPERATION SUPPORTED BY NETWORK DIGITAL TWINS
Dr. Florian Zeiger, Siemens AG, Munich, Germany;

IAC-25.B5.2.7
THE RIVEINS INITIATIVE: A CROSS-DISCIPLINARY SPACETECH APPROACH TO FLOOD MITIGATION
Ms. Priyanka Das Rajkakati, Karman Project, TOULOUSE, France;

IAC-25.B5.2.8
SATELLITE-ENABLED INTERNET OF MILITARY THINGS: A RESILIENT INTEGRATED SOLUTION FOR CRITICAL INFRASTRUCTURE AND STRATEGIC OPERATIONS
Mr. Jawad A. Alnaimat, Jordan Design and Development Bureau (JODDB), Amman, Jordan;

IAC-25.B5.2.10
SUSTAINABLE BUSINESS MODEL FOR INTEGRATING SPACE AND TERRESTRIAL INDUSTRIES
Mr. Satoru Kurosu, Cross Space & Sustainability, LLC, Saitama, Japan;

IAC-25.B5.2.11
SATELLITE COMPUTING NETWORKS ENABLING INDUSTRIAL USE CASES - A CASE STUDY ACROSS TIME HORIZONS
Dr. Markus Sauer, Siemens AG, Munich, Germany;

IAC-25.B5.2.12
FEEDING THE FINAL FRONTIER: LESSONS AND ACTIONS DERIVED FROM THE DEEP SPACE FOOD CHALLENGE
Mr. Ralph Fritsche, Orlando, United States;

IAC-25.B5.2.13
EXPLORING THE FEASIBILITY OF SPACE-BASED DATA CENTERS FOR BAHRAIN: BRIDGING TERRESTRIAL AND SPACE TECHNOLOGIES FOR SUSTAINABLE DATA STORAGE SOLUTIONS
Mrs. Rasha Al-Amad, Bahrain Space Agency (BSA), Manama, Bahrain;

IAC-25.B5.2.14
CUAIMA: AN INTELLIGENT AUTONOMOUS UNIVERSAL BOX FOR ARTIFICIAL MONITORING
Prof. Hermin Sosa, Bolivarian Agency for Space Activities (ABAE), Caracas, Venezuela;

B5.3. Integrated Commercial Satellite Applications for Sustainability and Climate

October 2 2025, 10:15 — Room C2.4

Co-Chair(s): John M. Horack, The Ohio State University College of Engineering, United States; Bruce Chesley, Teaching Science and Technology, Inc (TSTI), United States;
Rapporteur(s): Marcello Romano, Technical University of Munich (TUM), Germany;

IAC-25.B5.3.1
PROTECTING GLOBAL AQUACULTURE THROUGH VHR EARTH OBSERVATION AND IA-DRIVEN INSIGHTS
Mr. Emile Jäger, Bremen, Germany;

IAC-25.B5.3.2
SATELLITE-ENABLED FIREBREAKS FOR CYBER RESILIENCE TO PROTECT CRITICAL UTILITIES & SERVICES
Mr. Stephen Kines, NATO, Wolverhampton, United Kingdom;

IAC-25.B5.3.3
SUSTAINABILITY MATURITY ASSESSMENT TOOL – A QUALITATIVE ASSESSMENT TO UNDERPIN SUSTAINABILITY BENEFITS OF SATELLITE APPLICATIONS
Mrs. Marta Caterina Salieri Lopez, European Space Agency (ESA), PARIS, France;

IAC-25.B5.3.4
A COST-BENEFIT ANALYSIS OF A TETHERED SATELLITE SYSTEM FOR CLIMATE CHANGE MONITORING IN VERY LOW EARTH ORBIT
Mr. Stefano Aliberti, Politecnico di Torino, Turin, Italy;

IAC-25.B5.3.5
ADVANCING CARBON FARMING INITIATIVES WHILE SAFEGUARDING BIODIVERSITY, WATER RESOURCES, AND SOIL HEALTH THROUGH EARTH OBSERVATION AND EMERGING TECHNOLOGIES: THE INNO4CFIS PROJECT
Mrs. Eleonora Lombardi, Fondazione E. Amaldi, Rome, Italy;

IAC-25.B5.3.6
COMMERCIAL APPLICATION FRAMEWORK FOR SPACE SUSTAINABILITY: IMPROVE LIFE ON EARTH AND CUSTODIAL CARE OF SPACE
Dr. Peter Swan, Space Elevator Development Corporation, Paradise Valley, United States;

IAC-25.B5.3.7
INTEGRATED SPACE AND TERRESTRIAL SYSTEMS FOR QUANTUM COMMUNICATIONS: ENCRYPTION AND ENTANGLEMENT FOR A SUSTAINABLE FUTURE
Dr. Bruce Chesley, Teaching Science and Technology, Inc (TSTI), Georgetown, TX, United States;

IAC-25.B5.3.8
MULTI-SENSOR DATA ASSIMILATION FOR SATELLITE-GROUND HYDROLOGICAL COUPLING AND PREDICTIVE WATER BUDGETING
Mr. Nijanthan Vasudevan, Drexel University, Philadelphia, United States;

IAC-25.B5.3.9
SPACE DATA MEETS GAMIFICATION: ENGAGING THE PUBLIC IN CLIMATE ACTION THROUGH INTERACTIVE EXPERIENCES
Mr. Nurlan Abdullayev, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

B6. IAF SPACE OPERATIONS SYMPOSIUM

Coordinator(s): Andreas Rudolph, European Space Agency (ESA), Germany; Otfrid G. Liepack, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States; Zeina Mounzer, Telespazio VEGA Deutschland GmbH, Germany; Andreas Lyder Pedersen, ESA - European Space Agency, The Netherlands;
Secretary(s): Claude Audouy, Centre National d'Etudes Spatiales (CNES), France;

B6.1. Ground Operations - Systems and Solutions

September 30 2025, 15:00 — Room C2.4

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-25.B6.1.1
FLEX-CONSOLE - MORE THAN JUST A FURNITURE FOR SPACE OPERATIONS - EXPERIENCES FROM LUNA PROJECT
Mr. Marcin Gnat, DLR (German Aerospace Center), Wessling, Germany;

IAC-25.B6.1.2
FUTURE-PROOFING: EVOLVING OPERATIONS TO MEET UNCERTAIN FUTURE MISSION NEEDS
Mr. Gareth Williams, EUMETSAT, Darmstadt, Germany;

IAC-25.B6.1.3
FEEDBACK ON THE NEW WAY OF OPERATING THE CNES NETWORK OPERATIONS CENTER AND PRESENTATION OF NEW DIFFERENT LEVELS OF SERVICES OF CNES MULTI-MISSION NETWORK
Mrs. Julie GUIRAUD, Centre National d'Etudes Spatiales (CNES), TOULOUSE, France;

IAC-25.B6.1.4
STUDY ON GROUND SEGMENT AUTOMATION CONCEPTS FOR PAST AND PRESENT VLEO SATELLITE MISSIONS
Mr. Markus Kranz, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-25.B6.1.5
ENHANCING GROUND CONTROL FACILITY MAINTENANCE WITH A Z-DEMATEL AND Z-VIKOR BASED DSS
Mr. Alish Nazarov, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.B6.1.7
FULL FUNCTIONAL TEST, DATA MANAGEMENT, MACHINE LEARNING AND AUTOMATIZATION OF THE CUBESAT CONTROL CENTRE: MOVING TOWARDS THE OPERATIONS PHASE OF AN EDUCATIONAL GROUND STATION.
Mr. Giorgio Abbate, Politecnico di Torino, Modica, Italy;

IAC-25.B6.1.8
CHALLENGES, THREATS, AND SOLUTIONS IN ENHANCING CYBERSECURITY IN SPACE MISSION GROUND OPERATIONS
Ms. Mehriban Karimova, Azerbaijan State University of Economics, Baku, Azerbaijan;

IAC-25.B6.1.9
IN-ORBIT SERVICING MISSION: THE GROUND SEGMENT ARCHITECTURE AND THE ROLE OF THE BSC-MALINDI STATION
Dr. Giancarlo Santilli, Italian Space Agency (ASI), Rome, Italy;

IAC-25.B6.1.10
GRAND (GERMAN RESPONSIVE APERTURE NETWORK DEVELOPMENT) – A GROUND STATION NETWORK TO FULFILL RESPONSIVE SPACE REQUIREMENTS
Mr. Pierre-Alexis Lagadrilliere, DLR (German Aerospace Center), Wessling, Germany;

IAC-25.B6.1.11
HOW TO USE THE DEEP SPACE NETWORK
Mr. Sami Asmar, Jet Propulsion Laboratory - California Institute of Technology, Pasadena, United States;

IAC-25.B6.1.12
FOGATA – INTEGRATING OPTICAL GROUND STATIONS INTO COMMON RF GROUND STATIONS NETWORKS
Mr. Pierre-Alexis Lagadrilliere, DLR (German Aerospace Center), Wessling, Germany;

B6.2. Innovative Space Operations Concepts and Advanced Systems

October 3 2025, 13:45 — Room C2.4

Co-Chair(s): Mario Cardano, Thales Alenia Space France, Italy; Andreas Ohndorf, DLR (German Aerospace Center), Germany;
Rapporteur(s): Jackelynne Silva-Martinez, NASA, United States; Yuichiro Nogawa, Japan Manned Space Systems Corporation (JAMSS), Japan;

IAC-25.B6.2.1
ADVANCED MISSION OPERATIONS AND COLLABORATIVE INNOVATION IN THE OTTER CUBESAT MISSION
Mr. Sacha Tholl, German Aerospace Center (DLR), Trauen, Germany;

IAC-25.B6.2.2
CONTINGENCY OPERATIONS PLANNING AND CHALLENGES IN THE PINPOINT LUNAR LANDING SEQUENCE OF THE SLIM MISSION
Mr. Satoshi Ueda, Japan Aerospace Exploration Agency (JAXA), Sagamihara-shi, Kanagawa, Japan;

IAC-25.B6.2.4
UTILISATION OF DIGITAL ASSISTANTS TO AUGMENT NEXT GENERATION MISSION OPERATIONS
Mr. Mahesh Nidugala, Telespazio Germany GmbH, Darmstadt, Germany;

IAC-25.B6.2.5
REMOTE DIAGNOSTICS OF AEROSPACE GROUND AND FLIGHT TESTING
Prof. Fabian Zander, University of Southern Queensland, Darling Heights, Australia;

IAC-25.B6.2.6
EXPLAINABLE DECISION SUPPORT FOR CONJUNCTION RISK ANALYSIS AND THE DESIGN OF ROBUST COLLISION AVOIDANCE MANOEUVRES
Mr. Paul Darm, University of Strathclyde / Mechanical and Aerospace Engineering, Glasgow, United Kingdom;

IAC-25.B6.2.7
PREPARING THE ISPACE TENACIOUS ROVER FOR THE MOON: MOBILITY, NAVIGATION, AND OPERATOR TRAINING IN MULTI-SITE ROVING TRIALS
Ms. Sophia Casanova, ispace, inc., Luxembourg, Luxembourg ;

IAC-25.B6.2.8
EXPLORING SCALE MODEL ON-ORBIT SPACE SITUATIONAL AWARENESS WITH EVENT BASED SENSORS
Mr. David McAfee, Defence Science and Technology Group (DST Group), Prospect, South Australia, Australia;

IAC-25.B6.2.9
HOW TO APPROACH EARLY OPERATIONS IN A CHALLENGING ENVIRONMENT
Mrs. Katherine Gilliam, ispace, inc., Tokyo, Japan;

IAC-25.B6.2.10
OPS-SAT-1 MISSION PLANNING, SCHEDULING AND AUTOMATION CONCEPTS OF OPERATIONS
Dr. Nuno Carvalho, ESA - European Space Agency, Darmstadt, Germany;

IAC-25.B6.2.11
INVESTIGATION ON BOUNDARY CONDITIONS FOR VLEO SATELLITE MISSIONS AND THEIR OPERATIONAL IMPACT
Mr. Markus Kranz, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-25.B6.2.12
OPTIMIZING MISSION OPERATIONS FOR THE ALTAIR-1 CONSTELLATION: A SIMULATION-DRIVEN APPROACH TO ENHANCING MARITIME SURVEILLANCE, EARTH IMAGING AND IOT CONNECTIVITY IN ASEAN
Dr. Muhammad Hasif bin Azami, Universiti Teknologi MARA (UITM), Shah Alam, Malaysia; Mr. Zulkifli Abdul Aziz, Altair Research Lab Sdn. Bhd., Selangor, Malaysia; Mr. Nik Amirul Aiman Rahmat, Universiti Sains Malaysia, Nibong Tebal, Malaysia;

B6.3. Mission Operations, Validation, Simulation and Training

October 2 2025, 15:00 — Room C2.4

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-25.B6.3.1
ATTITUDE ANALYSIS AND OPERATIONAL PREPARATIONS FOR DEPLOYMENT OF BEPICOLOMBO MMO
Mr. Kentaro Yokota, Japan Aerospace Exploration Agency (JAXA), Sagamihara, Japan;

IAC-25.B6.3.2
DLITE: DIFFERENTIABLE LIGHTING-INFORMED TRAJECTORY EVALUATION FOR ON-ORBIT INSPECTION
Mr. Jack Naylor, The University of Sydney, Pennant Hills, Australia;

IAC-25.B6.3.3
REE-CON: REAL-TIME EXTRATERRESTRIAL EXCAVATION AND CONSTRUCTION OPERATIONS USING SPACE TEAMS PRO
Mr. Neil McHenry, Texas A&M University, Bryan, United States;

IAC-25.B6.3.4
AUTONOMOUS FLYBY OPERATIONS FOR COMET INTERCEPTOR PROBE B1: GUIDANCE, NAVIGATION, AND CONTROL STRATEGY
Dr. Takahiro Sasaki, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

IAC-25.B6.3.5
OPERATIONAL CHALLENGES DURING THE KAUST HYPERSPECTRAL CUBESAT MISSION
Mr. Dario Scilla, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia;

IAC-25.B6.3.6
HOW WE LOST A SATELLITE FOR 48 HOURS - FIRST WEEKS OF HYPE OPERATIONS FROM THE PERSPECTIVE OF THE FLIGHT DIRECTOR.
Mr. Jakub Kopeć, AGH University of Krakow, Kraków, Poland;

IAC-25.B6.3.7
MISSION OPERATION: SANSA HBK SATELLITE GROUND STATION, OPERATIONS, VERIFICATION AND TRAINING.
Ms. Senelisiwe Gladys Magagula, South African National Space Agency (SANSA), Krugersdorp, South Africa;

IAC-25.B6.3.8
SIMULATION-DRIVEN DEVELOPMENT: TRAINING, TESTING, AND MISSION PLANNING FOR PLANETARY ROVERS
Mr. Stefano Giulianelli, Politecnico di Torino, Torino, Italy;

IAC-25.B6.3.9
AUTONOMOUS FAULT DETECTION AND RECOVERY SYSTEM FOR CUBESATS
Mr. Uzeyir Alirzayev, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

IAC-25.B6.3.10
HOUSTON, WE HAVE NO (TRAINING) PROBLEM: THE ROLE OF COMPUTER-BASED TRAINING IN SATELLITE OPERATIONS
Mr. Philipp Bonin, Telespazio Germany GmbH, Darmstadt, Germany;

IAC-25.B6.3.11
ADVANCED TRAINING IN ADVANCE
Mr. Michael Schmidhuber, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), München, Germany;

IAC-25.B6.3.12
ENHANCING SPACE OPERATOR READINESS WITH CYBER-PHYSICAL SPACE MISSION TRAINING
Dr. Brenton Smith, Canberra, Australia;

B6.5. Large Constellations & Fleet Operations

October 3 2025, 10:15 — Room C2.4

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-25.B6.5.2
REAL-TIME COLLISION AVOIDANCE ALGORITHMS FOR SATELLITE CONSTELLATIONS USING DEEP LEARNING
Mr. Yaqoob Alqassab, Bahrain Space Agency (BSA), Hidd, Bahrain;

IAC-25.B6.5.5
DYNAMIC TASK ALLOCATION FOR HETEROGENEOUS SATELLITE CONSTELLATIONS IN MULTI-STAGE WILDFIRE MONITORING
Ms. Keqin Zhang, Innovation Academy for Microsatellites, Chinese Academy of Sciences, SHANGHAI, China;

IAC-25.B6.5.6
D3QN-BASED TT&C MISSION PLANNING METHOD FOR MEGA-CONSTELLATIONS UNDER LIMITED GROUND STATIONS
Mr. Jiadao He, Beijing Institute of Technology, Beijing, China;

IAC-25.B6.5.8
GALILEO CONSTELLATION OPTIMISATION: EFFICIENT AND AUTONOMOUS ROUTINE HOUSEKEEPING
Mr. Andrea Maderi, DLR-GfR, Weßling, Germany; Mr. Marvin BARNIER, DLR-GfR, Fürstenfeldbruck, Germany;

IAC-25.B6.5.9
BLOCKCHAIN & QUANTUM DATA PROCESSING FOR SECURE SATELLITE CONSTELLATIONS
Ms. Samiksha Raviraja, Airbus Defence and Space, Hitchin, United Kingdom;

IAC-25.B6.5.10
NEURAL-TURING ORBITAL INTELLIGENCE
Mr. Devansh Bhatia, Indian Institute of Technology, Madras, Panipat, India; Ms. Preksha Choudhury, Indian Institute of Technology, Madras, Guwahati, India;

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 3 2025, 10:15 — Room C4.8

Co-Chair(s): Marcello Romano, Technical University of Munich (TUM), Germany; Zhanfeng Meng, China Academy of Space Technology (CAST), China;
Rapporteur(s): Robert G. Melton, Pennsylvania State University, United States;

IAC-25.C1.1.1
AUTONOMOUS MAGNETIC ATTITUDE CONTROL OF RESOURCE-CONSTRAINED FEMTOSATELLITES
Mr. Satyam Bhatti, University of Glasgow, Glasgow, United Kingdom;

IAC-25.C1.1.2
A GEOMETRIC APPROACH TO NEAR-OPTIMAL FEEDBACK SPACECRAFT REORIENTATION WITH EXCLUSION CONES
Mr. David Paolo Madonna, Sapienza University of Rome, Rome, Italy;

IAC-25.C1.1.3
COMPARATIVE ANALYSIS OF ROBUST AND PREDICTIVE CONTROL APPROACHES FOR SOUNDING ROCKET ATTITUDE CONTROL
Mr. Andrzej Rafalski, Poznan University of Technology, Gniezno, Poland;

IAC-25.C1.1.4
ROBUST ATTITUDE ESTIMATION FOR NANOSATELLITES WITH DEPLOYABLE PANELS SHADOWING THE SUN SENSORS
Mr. Mehmet Esit, Kyushu Institute of Technology, Kitakyushu, Fukuoka, Japan;

IAC-25.C1.1.5
LQR ATTITUDE CONTROL DESIGN FOR AN ON-ORBIT ASSEMBLED SPACECRAFT
Mr. David Bacher, Viterbi School of Engineering, USC, Los Angeles, United States;

IAC-25.C1.1.6
DEVELOPMENT OF ADAPTIVE CONTROL AND CENTER-OF-MASS ESTIMATION LAWS WITH CONCURRENT LEARNING MODIFICATIONS FOR A 3-DEGREE-OF-FREEDOM SPACECRAFT TESTBED
Mr. Pol Fontdegloria Balaguer, Embry-Riddle Aeronautical University, Daytona Beach, United States;

IAC-25.C1.1.7
ENERGY-OPTIMAL ATTITUDE CONTROL OF ULTRA-LARGE-SCALE SPACECRAFT: AN OFF-POLICY ACTOR-CRITIC APPROACH
Ms. Jieyu Zhang, Harbin Institute of Technology, Harbin, China;

IAC-25.C1.1.8
VEKTOR-FDA: ADVANCEMENTS IN THE DEVELOPMENT AND IMPLEMENTATION OF A FLUID DYNAMIC ATTITUDE CONTROL ACTUATOR WITH MULTIPLE DEGREES OF FREEDOM BASED ON LIQUID METAL FOR SMALL SATELLITES
Mr. Huu Quan Vu, Technical University of Berlin, Berlin, Germany;

IAC-25.C1.1.9
DEVELOPMENT OF A CONTROL AND PREDICTION METHOD FOR THE ATTITUDE OF A 3.5 U CUBESAT OPTIMIZED WITH ARTIFICIAL NEURAL NETWORKS FOR SUSTAINABLE USE IN LOW-EARTH ORBIT MISSIONS
Mr. Leonardo David Medina Ortiz, Universidad Nacional de Ingenieria, Peru, Lima, Peru;

IAC-25.C1.1.10
ON-ORBIT EXPERIMENT OF ANGULAR MOMENTUM CONTROL BY EXTERNAL TORQUE CHANGES USING VARIABLE SHAPE FUNCTION
Mr. Yuki Amaki, Tokyo Institute of Technology, Meguro-ku, Tokyo, Japan;

C1.2. Attitude Dynamics (2)

October 3 2025, 13:45 — Room C4.8

Co-Chair(s): Krishna Dev Kumar, Toronto Metropolitan University, Canada; Mikhail Ovchinnikov, Keldysh Institute of Applied Mathematics, RAS, Russian Federation;
Rapporteur(s): Bang Hyochoong, Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of;

IAC-25.C1.2.1
OPTIMAL BIAS-MOMENTUM CONTROL FOR INDEPENDENTLY TUNABLE SPIN RATE AND NUTATION PERIOD
Mr. Koki Kimura, Japan Aerospace Exploration Agency (JAXA), ISAS, Sagamihara, Japan;

IAC-25.C1.2.3
CONTROLLABILITY ANALYSIS AND SPIN-AXIS POINTING CONTROL OF A NON-COOPERATIVE SATELLITE VIA LASER ABLATION
Ms. Yui Kawano, Kyushu University, Fukuoka, Japan;

IAC-25.C1.2.4
RESULTS OF ON-ORBIT DEMONSTRATION OF CONTINUOUS ATTITUDE MANEUVER FOR MULTI-POINT EARTH OBSERVATION WITH VARIABLE SHAPE ATTITUDE CONTROL USING MICROSATELLITES HIBARI
Mr. Ozeki Yusaku, Tokyo Institute of Technology, Tokyo, Japan;

IAC-25.C1.2.5
CONTROL STRATEGIES FOR LARGE SPACE STRUCTURES: APPLICATION TO ORBITING SOLAR REFLECTORS
Dr. Iain Moore, University of Glasgow, Glasgow, United Kingdom;

IAC-25.C1.2.6
DISCRITE-TIME LARGE-ANGLE ATTITUDE MANEUVER OF SPACECRAFT BY REACTION CONTROL SYSTEM
Dr. Yuichi Ikeda, Shonan Institute of Technology, Fujisawa, Japan;

IAC-25.C1.2.7
HIERARCHICAL COORDINATION-BASED DISTRIBUTED PREDEFINED-TIME STABILIZATION FOR MULTI-ARM COOPERATIVE CONTROL IN SPACE ROBOTIC SYSTEMS
Mr. Lang Lu, Harbin Institute of Technology Shenzhen Graduate School, Shenzhen, China;

IAC-25.C1.2.8
ADVANCED SPACECRAFT SIMULATION: HIGH-FIDELITY AOCS SIMULATION WITH CFD INTEGRATION AND FLIGHT DATA VALIDATION
Mr. Andrea Sacchetti, OHB System AG, Munich, Germany;

IAC-25.C1.2.9
AGILE MANEUVERING CONTROL FOR A LARGE NON-CONTACT SATELLITE WITH FLEXIBLE SOLAR PANELS
Dr. Zhuo Li, Shanghai Academy of Spaceflight Technology (SAST), China Aerospace and Technology Corporation (CASC), Shanghai, China;

IAC-25.C1.2.10
ATTITUDE ESTIMATION USING AI-BASED HYPERSPECTRAL TECHNOLOGY FOR AUTONOMOUS CLOSE-PROXIMITY OPERATIONS
Dr. Feng Jinglang, University of Strathclyde, Glasgow, United Kingdom;

C1.3. Guidance, Navigation and Control (1)

September 29 2025, 15:30 — Room C4.8

Co-Chair(s): Guo Linli, Institute of Manned Space System Engineering,China Academy of Space Technology (CAST), China; Shinichiro Sakai, ISAS/JAXA, Japan;
Rapporteur(s): Steve Ulrich, Canadian Aeronautics & Space Institute (CASI), Canada;

IAC-25.C1.3.2
AUTOMATED INTERFEROMETER ESTABLISHMENT AND ITS ON-GROUND VALIDATION FOR HIGH-PRECISION TWO-SPACECRAFT FORMATION FLIGHT CONTROL
Dr. Takuya Iwaki, Japan Aerospace Exploration Agency (JAXA), Sagamihara, Japan;

IAC-25.C1.3.3
REAL-TIME TRAJECTORY OPTIMIZATION AND GUIDANCE FOR THE FINAL APPROACH PHASE OF IN-ORBIT SERVICING MISSIONS
Dr. Minduli Wijayatunga, The University of Sydney, Sydney, Australia;

IAC-25.C1.3.4
NANO-SATELLITE SWARM USING FLOCKING ALGORITHM WITH ONLINE BAYESIAN OPTIMIZATION
Mr. Sohta Katoh, Kyushu University, Fukuoka-city,Fukuoka, Japan;

IAC-25.C1.3.5
LOW-THRUST TRAJECTORY OPTIMIZATION VIA COVECTOR MAPPING PRINCIPLE: BRIDGING DIRECT AND INDIRECT METHODS FOR SPACECRAFT AUTONOMOUS GUIDANCE
Mr. Niccolò Michelotti, Politecnico di Milano, Vicenza, Italy;

IAC-25.C1.3.6
TWO-PHASE DIRECTIONAL LOW THRUST OPTIMAL CONTROL FOR SPACECRAFT PROXIMITY OPERATIONS
Mr. Chuncheng Zhao, Politecnico di Milano, Milano, Italy;

IAC-25.C1.3.7
ADVANCED OPTIMIZATION TECHNIQUES FOR CNN-BASED VISUAL NAVIGATION IN RENDEZVOUS AND DOCKING OPERATIONS
Mrs. Lucrezia Lovaglio, Politecnico di Torino, Torino, Italy;

IAC-25.C1.3.8
SEMI-ANALYTICAL OPTIMAL FORMATION RECONFIGURATION VIA DATA-DRIVEN LYAPUNOV-FLOQUET TRANSFORMATION AND DIFFERENTIAL-ALGEBRA EXPANSION
Mr. Junfeng Yuan, Beihang University, Beijing, China;

IAC-25.C1.3.9
TOWARDS VISION-BASED NAVIGATION OF NON-COOPERATIVE TARGETS USING SEMI-RESOLVED IMAGERY
Dr. Tae Ha Park, Nara Space, Seoul, Korea, Republic of;

C1.4. Guidance, Navigation and Control (2)

September 30 2025, 10:15 — Room C4.8

Co-Chair(s): Mai Bando, Kyushu University, Japan; Eberhard Gill, Delft University of Technology, The Netherlands;
Rapporteur(s): Hanspeter Schaub, Colorado Center for Astrodynamics Research, University of Colorado, United States;

IAC-25.C1.4.1
OBSERVABILITY ANALYSIS OF SATELLITES PERTURBED BY SOLAR RADIATION PRESSURE IN ANGLES-ONLY NAVIGATION
Dr. Yasuhiro Yoshimura, Kyushu University, Fukuoka, Japan;

IAC-25.C1.4.2
ROBUST STOCHASTIC LAUNCH GUIDANCE FROM LUNAR AND PLANETARY SURFACES
Ms. Kristen Ahner, University of Colorado Boulder, Westminster, United States;

IAC-25.C1.4.3
ASSESSMENT OF THE PRACTICALITY OF OPTIMAL AERODYNAMIC ORBIT CONTROL IN VLEO
Dr. Constantin Traub, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-25.C1.4.4
ORBIT CONTROL OF SPACECRAFT BY ON-LINE OPTIMIZATION OF THRUSTER INJECTION TIMING
Dr. Yuichi Ikeda, Shonan Institute of Technology, Fujisawa, Japan;

IAC-25.C1.4.5
AERODYNAMIC-INTEGRATED TRAJECTORY OPTIMIZATION FOR REUSABLE LAUNCH VEHICLES: A SUCCESSIVE CONVEXIFICATION APPROACH TRANSFORMING NONLINEAR PROBLEMS INTO LINEAR PROGRAMMING
Mr. Shuzhao Chen, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-25.C1.4.6
INVESTIGATION INTO THE APPLICATION OF VARIABLE-SHAPE AERODYNAMIC RELATIVE ORBIT CONTROL FOR EARTH STEREO OBSERVATION
Mr. Keito Otsubo, Tokyo Institute of Technology, Tokyo, Japan;

IAC-25.C1.4.7
RELATIVE REACHABLE DOMAIN FOR SPACECRAFT UNDER UNCERTAINTY OF TIME-VARYING ATMOSPHERIC DENSITY
Ms. Nayu Nonomiya, Kyushu University, Fukuoka, Japan;

IAC-25.C1.4.8
DEEP LEARNING-ENHANCED ROLLING SHUTTER CORRECTION FOR STAR TRACKERS IN HIGH ANGULAR VELOCITY ENVIRONMENTS
Mr. Yongjun Park, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of;

IAC-25.C1.4.9
EFFECTIVE LEARNING OF NEURAL ODE-BASED TRAJECTORY CONTROL LAWS BY ADAPTIVE REFINEMENT OF RESERVOIR COMPUTING ARCHITECTURE
Mr. Satoshi Ueda, Japan Aerospace Exploration Agency (JAXA), Sagamihara-shi, Kanagawa, Japan;

IAC-25.C1.4.10
RESONANT CONTROL OF MANY-REVOLUTION LOW-THRUST TRANSFER BETWEEN CIRCULAR ORBIT AND ELLIPTICAL ORBIT
Mr. Yue Dong, Beijing Institute of Technology (BIT), Beijing, China;

C1.5. Guidance, Navigation & Control (3)

September 30 2025, 15:00 — Room C4.8

Co-Chair(s): Yung Fu Tsai, Taiwan Space Agency (TASA), ; Paolo Teofilatto, Sapienza University of Rome, Italy;
Rapporteur(s): Bernard Lübke-Ossenbeck, OHB System AG-Bremen, Germany;

IAC-25.C1.5.1
FMASND: AN ENHANCED FLOQUET MODES APPROACH FOR EFFICIENT STATION-KEEPING OF LIBRATION POINT ORBITS
Mr. Junfeng Yuan, Beihang University, Beijing, China;

IAC-25.C1.5.2
OPTIMIZATION OF LUNAR VERTICAL DESCENT WITH HORIZONTAL HAZARD AVOIDANCE VIA NONLINEAR MODEL PREDICTIVE CONTROL
Dr. Chit Hong Yam, ispace, Inc, Tokyo, Japan;

IAC-25.C1.5.3
INTEGRATED RELATIVE NAVIGATION BASED ON DEEP VISUAL ODOMETRY AND ONE-WAY RANGING FOR PLANETARY LANDINGS
Mr. Michele Ceresoli, Politecnico di Milano, Nave, (BS), Italy;

IAC-25.C1.5.4
HYBRID-TRIGGERED ATTITUDE-ORBIT CONTROL FOR A SPACECRAFT WITH A SINGLE THRUSTER NEAR AN ASTEROID
Mr. Chuncheng Zhao, Politecnico di Milano, Milano, Italy;

IAC-25.C1.5.5
VERTICAL PLANETARY LANDING ON SLOPED TERRAIN USING OPTICAL FLOW DIVERGENCE ESTIMATES
Dr. Hann Woei Ho, Universiti Sains Malaysia, Nibong Tebal, Malaysia;

IAC-25.C1.5.6
REFERENCE TRAJECTORY-AIDED REINFORCEMENT LEARNING FOR AUTONOMOUS EXTERIOR CISLUNAR TRANSFERS
Mr. Claudio Toquinho Campana, Politecnico di Milano, Milano, Italy;

IAC-25.C1.5.7
RESEARCH ON JOINT ORBIT DETERMINATION OF LUNAR FROZEN ORBIT FORMATION SATELLITES USING INTER-SATELLITE MEASUREMENT
Mr. Hexu Wu, Harbin Institute of Technology, Harbin, China;

IAC-25.C1.5.8
REINFORCED TARGET PHASE APPROACH FOR AUTONOMOUS ORBITAL MAINTENANCE AROUND AN ASTEROID
Dr. Xiaoyu Fu, University of Liverpool, LIVERPOOL, United Kingdom;

IAC-25.C1.5.9
PERFORMANCE ASSESSMENT OF CRATER-BASED NAVIGATION FOR AUTONOMOUS MOON LANDING
Mr. Jean-Francois Hamel, NGC Aerospace Ltd., Sherbrooke, Canada;

IAC-25.C1.5.10
PERIODIC MOTION ABOUT ASTEROIDS VIA LOW-THRUST FEEDBACK CONTROL
Dr. Mauro Pontani, Sapienza University of Rome, Rome, Italy;

C1.6. Mission Design, Operations & Optimization (1)

October 1 2025, 10:15 — Room C4.8

Co-Chair(s): Erick Lansard, Satellite Research Center, Nanyang Technological University (NTU), Singapore, Republic of; Mauro Pontani, Sapienza University of Rome, Italy;
Rapporteur(s): Stéphanie Lizy-Destrez, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), France;

IAC-25.C1.6.1
KEYNOTE: BREAKWELL LECTURE - LIBRATION POINT ORBITS: A BRIEF JOURNEY THROUGH FUNDAMENTAL DYNAMICS AND APPLICATIONS
Prof. Josep J. Masdemont, Universitat Politecnica de Catalunya (UPC), Barcelona, Spain;

IAC-25.C1.6.2
REINFORCEMENT LEARNING FOR MULTIPLE GRAVITY ASSIST TRAJECTORY OPTIMIZATION
Mr. Sungmoon Choi, Iowa State University, Ames, United States;

IAC-25.C1.6.3
ROBUST MISSED THRUST DESIGN UTILIZING REACHABLE SETS
Ms. Robyn Natherson, University of Colorado Boulder, Boulder, United States;

IAC-25.C1.6.4
OPTIMIZED LONG-TERM STABILITY AND TRANSFER TRAJECTORY DESIGN IN THE SATURN-TITAN SYSTEM
Mr. Sedat Izcan, University of Nottingham, Nottingham, United Kingdom;

IAC-25.C1.6.5
ROBUST GUIDANCE FOR SURFACE CHARACTERIZATION OF MINOR BODIES
Mr. Alban Beshaj, Politecnico di Milano, Milan, Italy;

IAC-25.C1.6.6
DESIGN OF A FAST INTERSTELLAR MEDIUM EXPLORATION MISSION REACHING 200 AU IN 25 YEARS
Mr. Christophe KOPPEL, KopooS Consulting Ind, Dolmayrac, France;

IAC-25.C1.6.7
ROBUST TRAJECTORY OPTIMIZATION FOR MARS ASCENT VEHICLES USING POLYNOMIAL CHAOS EXPANSION AND PICARD ITERATION
Mr. Kun Li, Harbin Institute of Technology, Harbin, China;

IAC-25.C1.6.8
FEASIBILITY ANALYSIS OF A CUBESAT LANDING ON APOPHIS PRIOR TO THE EARTH CLOSE APPROACH
Dr. Tomohiro Ishizuka, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, toulouse, France;

IAC-25.C1.6.9
LOW-ENERGY ROUND-TRIP TRAJECTORIES TO NEAR-EARTH OBJECTS USING SOLAR ELECTRIC PROPULSION
Mr. Alessandro Beolchi, Khalifa University of Science and Technology (KUST), Abu Dhabi, United Arab Emirates;

C1.7. Mission Design, Operations & Optimization (2)

October 1 2025, 15:00 — Room C4.8

Co-Chair(s): Diane Davis, National Aeronautics and Space Administration (NASA), Johnson Space Center, United States; Richard Epenoy, Centre National d'Etudes Spatiales (CNES), France;
Rapporteur(s): Liang Tang, Beijing Institute of Control Engineering, CAST, China;

IAC-25.C1.7.1
TRAJECTORY STRATEGIES AND ARCHITECTURES TO SUPPORT EFFICIENT ON-ORBIT SERVICING OPERATIONS IN CISLUNAR SPACE
Mr. Cody Waldecker, Purdue University, West Lafayette, United States;

IAC-25.C1.7.2
CISLUNAR TRAFFIC MANAGEMENT: LOITERING IN THE GATEWAY NRHO
Dr. Diane Davis, National Aeronautics and Space Administration (NASA), Johnson Space Center, Houston, TX, United States;

IAC-25.C1.7.3
USING MOTION PRIMITIVES TO DESIGN THRUST-ENABLED TRAJECTORIES IN THE EARTH-MOON SYSTEM
Dr. Natasha Bosanac, University of Colorado Boulder, Boulder, United States;

IAC-25.C1.7.4
CONNECTING A DIRECT TRANSFER TO A LOW ENERGY TRANSFER VIA LUNAR FLYBY
Mr. Alejandro Sanchez Duran, ispace, inc., Tokyo, Japan;

IAC-25.C1.7.5
END-OF-LIFE DISPOSAL OF LUNAR SATELLITES IN ELLIPTICAL FROZEN ORBITS
Prof. Anna Guerman, Centre for Mechanical and Aerospace Science and Technologies (C-MAST), Covilha, Portugal;

IAC-25.C1.7.6
NEURAL ORDINARY DIFFERENTIAL EQUATIONS FOR DATA-INDEPENDENT LOW-THRUST TRAJECTORY OPTIMIZATION
Ms. Yi Zhou, Tsinghua University School of Aerospace, Beijing, China;

IAC-25.C1.7.7
DATABASE APPROACH FOR SYNTHESIZING A BALLISTIC OTV FLIGHT SEQUENCE CONNECTING LUNAR NRHO TO SEL2 SMALL HALO ORBIT
Dr. Kenta Oshima, Tokyo University of Science, Suwa, Chino, Japan;

IAC-25.C1.7.8
TRAJECTORY OPTIMIZATION FOR LOW-THRUST MULTI-PLATFORM SERVICING MISSIONS IN ELLIPTICAL ORBITS: A FOURIER-BASED APPROACH
Mr. Riccardo Apa, Politecnico di Torino, CATANIA, Italy;

IAC-25.C1.7.9
HIGH-FIDELITY CONSTELLATION ARCHITECT FOR THE OPERATIONAL DEPLOYMENT AND MAINTENANCE OF CO-PLANAR MULTI-SATELLITE SYSTEMS
Dr. Luigi Mascolo, Planet Labs Inc., Cupertino, United States;

IAC-25.C1.7.10
EFFICIENT ON-ORBIT-SERVICING VIA ROUTING OPTIMIZATION AND LOW-THRUST PROPULSION
Dr. Mauro Pontani, Sapienza University of Rome, Rome, Italy;

C1.8. Orbital Dynamics (1)

October 2 2025, 10:15 — Room C4.8

Co-Chair(s): Yuichi Tsuda, Japan Aerospace Exploration Agency (JAXA), Japan; Anna Guerman, Centre for Mechanical and Aerospace Science and Technologies (C-MAST), Portugal;
Rapporteur(s): Kathleen Howell, Purdue University, United States;

IAC-25.C1.8.1
ATMOSPHERIC DENSITY ESTIMATION FROM ACCELEROMETER DATA AND NON-GRAVITATIONAL FORCE MODELING APPLIED TO REPLACE GRACE-FO'S BROKEN ACCELEROMETER IN GRAVITY FIELD DETERMINATION.
Dr. Benny Rievers, ZARM, University of Bremen, Bremen, Germany;

IAC-25.C1.8.2
TRANSITIONING PERIODIC ORBITS IN CISLUNAR SPACE FROM LOWER TO HIGHER FIDELITY DYNAMICS REPRESENTATIONS
Mr. Robert Bennett, The University of Texas at Austin, Austin, United States;

IAC-25.C1.8.3
CONSTRUCTING HIGH-FIDELITY SPACECRAFT TRAJECTORY BASELINES WITH HIGHER-DIMENSIONAL INVARIANT TORI
Dr. Gavin Brown, University of Colorado Boulder, Boulder, United States;

IAC-25.C1.8.5
MISSION DESIGN USING RESONANT TERMINATOR ORBITS AROUND A SMALL BODY
Dr. Spencer Boone, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), Toulouse, France;

IAC-25.C1.8.6
PERIODIC DISTANT SPHERICAL ORBIT WITH VARIOUS INCLINATIONS IN CISLUNAR SPACE FOR STATION-KEEPING
Mr. Junji Kikuchi, Japan Aerospace Exploration Agency (JAXA), ISAS, Sagamihara, Japan;

IAC-25.C1.8.7
SEMI-ANALYTICAL METHODS IN ORBITAL DYNAMICS: LEVERAGING COMPUTATIONAL ADVANCES FOR IMPROVED DYNAMICAL ANALYSIS
Mr. Ruilong Li, Northwestern Polytechnical University, Barcelona, China;

IAC-25.C1.8.8
ON THE SUN-DRIVEN LONG-LASTING TEMPORARY CAPTURE\\ IN THE EARTH-MOON SYSTEM
Dr. Elisa Maria Alessi, Consiglio Nazionale delle Ricerche (CNR), Milano, Italy;

IAC-25.C1.8.9 (unconfirmed)
SEMI-ANALYTICAL ESTIMATION OF THE PROBABILITY OF CAPTURE INTO 2:3 GROUND-TRACK RESONANCE OF DAWN AROUND VESTA.
Mr. Wail Boumchita, University of Strathclyde, Glasgow, United Kingdom;

IAC-25.C1.8.10
ANALYSIS AND DESIGN OF BALLISTIC ESCAPE TRAJECTORIES IN THE SUN-PERTURBED EARTH-MOON SYSTEM
Mr. Shuya Sano, Kyushu University, Fukuoka City, Japan;

C1.9. Orbital Dynamics (2)

October 2 2025, 15:00 — Room C4.8

Co-Chair(s): Othon Winter, UNESP - São Paulo Sate University, Brazil; Josep J. Masdemont, Universitat Politecnica de Catalunya (UPC), Spain;
Rapporteur(s): David C. Folta, National Aeronautics and Space Administration (NASA), Goddard Space Flight Center, United States;

IAC-25.C1.9.1
THE ASTRODYNAMICS OF LUNAR MEAN-MOTION RESONANCES: FROM THE PERTURBED FORMULATION TO THE RESTRICTED PROBLEM
Dr. Aaron J. Rosengren, University of California, San Diego, La Jolla, United States;

IAC-25.C1.9.2
STABILITY AND BIFURCATION ANALYSIS OF RESONANT TRANSITION PERIODIC ORBITS IN CISLUNAR REGION
Mr. Arimoto Mahiro, Kyushu University, Hukuokashi Hukuoka prefecture, Japan;

IAC-25.C1.9.3
UNDERSTANDING CHAOTIC MOTION IN THE CISLUNAR REGION WITH GHRIST'S UNIVERSAL TEMPLATE
Mr. Seur Gi Jo, Embry-Riddle Aeronautical University, Daytona Beach, United States;

IAC-25.C1.9.4
HIGH-FIDELITY EXPLORATION TOUR OF SATURNIAN MOONS USING MANIFOLD DYNAMICS
Ms. Chiara Pozzi, Khalifa University of Science and Technology (KUST), Abu Dhabi, United Arab Emirates;

IAC-25.C1.9.5
CHARTING THE MULTISCALE ASTRODYNAMICS AROUND ENCELADUS FOR LONG-TERM MISSION PLANNING AND EFFECTIVE END-OF-LIFE DISPOSAL
Dr. Josué Cardoso dos Santos, University of Colorado Colorado Springs, Colorado Springs, CO, United States;

IAC-25.C1.9.6
ANALYSIS OF UNSTABLE RESONANT ORBITS FOR SATURN TOUR DESIGN: BETWEEN TITAN AND RHEA
Dr. Bhanu Kumar, University of Michigan, Alpharetta, United States;

IAC-25.C1.9.7
OPTIMAL ANALYTICAL SOLUTION FOR THE SINGLE-LAUNCH DEPLOYMENT OF LUNAR CONSTELLATIONS BASED ON THE CR3BP
Mr. Alee Obeid, Gran Sasso Science Institute, L'Aquila, Italy;

IAC-25.C1.9.8
A SEMI-ANALYTICAL STABLE FORMATION CONFIGURATION SCREENING METHOD BASED ON POINCARÉ CONTRACTION MAP
Ms. Jixin Ding, School of Astronautics, Beihang University, Beijing, China;

IAC-25.C1.9.9
FORMATION-FLYING FOR ORBITAL REFLECTOR SWARMS
Dr. Robert Gordon, University of Glasgow, Glasgow, United Kingdom;

IAC-25.C1.9.10
A CONSTELLATION-VOLUME-PRESERVED APPROACH FOR FORMATION FLYING DESIGN NEAR TRIANGULAR LIBRATION POINTS
Ms. Lei Peng, Beihang University, Beijing, China;

C1.10. Astrodynamics beyond the Earth

October 2 2025, 15:00 — Room C2.6

Co-Chair(s): Elena Fantino, Khalifa University of Science and Technology (KUST), United Arab Emirates; Marcello Romano, Technical University of Munich (TUM), Germany;
Rapporteur(s): Jinglang Feng, , China;

IAC-25.C1.10.1
ENHANCING ORBIT DETERMINATION USING OPTICAL NAVIGATION FOR LUNAR MISSIONS
Ms. Sae Ogoshi, The University of TOKYO, Graduate school, Tokyo, Japan;

IAC-25.C1.10.2
ANALYTICAL DESIGN OF LOW-THRUST V-INFINITY LEVERAGING
Mr. Rundao Li, Tsinghua University, Beijing, China;

IAC-25.C1.10.3
EMIRATES MISSION TO ASTEROIDS JUSTITIA LANDER MISSION CONCEPT AND FLIGHT DYNAMICS
Dr. Shamil Biktimirov, Technology Innovation Institute (TII), Abu Dhabi, United Arab Emirates;

IAC-25.C1.10.4
OPTIMAL LOW-THRUST AND GRAVITY ASSIST TRAJECTORY DESIGN FOR ULTRA-DISTANT GAS GIANT EXPLORATION
Mr. Hailiao Wang, Beihang University (BUAA), Beijing, China;

IAC-25.C1.10.5
A TRADEOFF STUDY ON THE MOON TO MARS ORBITAL TRANSFER VEHICLE FLIGHT ARCHITECTURE OPERATED BETWEEN SEL2 AND SML2
Ms. Saki Komachi, Australian National University (ANU), ACT, Australia;

IAC-25.C1.10.6
ANALYSIS OF FUEL-OPTIMAL PERIODIC ORBITS IN THE EARTH-MOON SYSTEM
Dr. Shanshan Pan, Kyushu University, Fukuoka, Japan;

IAC-25.C1.10.7
STUDY OF L4 QUASI-PERIODIC TORI AND THEIR STABILITY FOR SOLAR CORONOGRAPHY
Mr. Franco Criscola, Embry-Riddle Aeronautical University, Daytona Beach, United States;

IAC-25.C1.10.8
DYNAMIC AND IMPULSIVE TRANSFER DESIGN OF CRTBP VIA KOOPMAN OPERATOR-INFORMED NEURAL NETWORKS
Dr. Yiyu Wang, Harbin Institute of Technology, harbin, China;

IAC-25.C1.10.9
REAL-TIME LANDING GUIDANCE FOR LUNAR PIT EXPLORATION: OPTIMIZING MULTI-POINT SCIENTIFIC OBSERVATIONS
Mr. Tatsuya Narumi, The University of TOKYO, Graduate school, Kanagawa, Japan;

IAC-25.C1.10.10
MAPPING AND NAVIGATING THE WORLD OF STAR TRACKERS: A SNAPSHOT SURVEY OF THE CURRENT STATE OF THE ART, AND A PROPOSED CATEGORISATION FRAMEWORK FOR FUTURE RESEARCH
Mr. Shaun Kenyon, Starbound Space Solutions, Gold Coast, Australia;

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)

September 29 2025, 15:30 — Room C3.4

Co-Chair(s): Alwin Eisenmann, Deutsche Gesellschaft für Luft- und Raumfahrt, Lilienthal-Oberth e.V. (DGLR), Germany; Jochen Albus, ArianeGroup, Germany;
Rapporteur(s): Zijun Hu, China Academy of Launch Vehicle Technology (CALT), China; Coraline Dalibot, Rutherford Appleton Laboratory, United Kingdom;

IAC-25.C2.1.1
DISCOVERING THE APPLICATIONS OF THE NEGLECTED CLASSIFICATION SURROGATE FOR ROCKET DESIGN OPTIMIZATION
Mr. Said Mouhaiche, The University of Sydney, Sydney, Australia;

IAC-25.C2.1.2
INTERNALLY FASTENED MANHOLE COVER FOR LIGHTWEIGHT COMPOSITE PROPELLANT TANKS
Dr. Youngha Yoon, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

IAC-25.C2.1.3
STUDY OF AXIAL COMPRESSION BEARING CAPACITY OF STAINLESS STEEL TANKS IN REUSABLE LAUNCH VEHICLE
Mr. Shuzhao Chen, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-25.C2.1.4 (unconfirmed)
ADVANCING OPTICAL PAYLOAD QUALIFICATION: PLANET'S OPTICAL TEST LAB AND THE DEVELOPMENT OF STATE-OF-THE-ART GROUND SUPPORT EQUIPMENT
Mr. Farbod Akhavan Niaki, Planet, San Francisco, United States;

IAC-25.C2.1.5
THERMAL AND STRUCTURAL ANALYSIS OF SPACE-BASED SOLAR POWER SATELLITES (SBSP) IN GEOSTATIONARY ORBIT
Mr. Fawzan Mohamed Kareem Navaz, Amity University, Dubai, Dubai, United Arab Emirates;

IAC-25.C2.1.6
ANALYTICAL FRAMEWORK FOR ASSESSMENT OF FATIGUE LIFE IN ADDITIVE MANUFACTURING BASED SUPERALLOYS FOR PROPULSION APPLICATIONS AND ITS IMPLEMENTATION IN A MODEL-BASED ENVIRONMENT
Mr. Shreyas Lakshmipuram Raghu, University of Alabama in Huntsville, Huntsville, United States;

IAC-25.C2.1.7
DESIGN, ANALYSIS AND COMPARISON OF BIOMIMETIC HIERARCHICAL HONEYCOMB SANDWICH COMPOSITES FOR AEROSPACE APPLICATIONS
Mr. DINENDRA ARCOT VISWANATH, Politecnico di Milano, CHENNAI, TAMIL NADU, India;

IAC-25.C2.1.8
DEVELOPMENT OF A THERMAL VACUUM OPTICAL SYSTEM FOR TESTING EARTH OBSERVATION IMAGERS
Mr. Nicolaas Vlok van Jaarsveld, Simera Sense, Cape Town, South Africa;

IAC-25.C2.1.9
COMPOSITE MATERIALS AND MANUFACTURING METHODS FOR HYDROGEN STORAGE FOR SPACE SYSTEMS
Ms. Zuleyha Savci, Ankara Yıldırım Beyazıt University, ankara, Türkiye;

IAC-25.C2.1.10
MULTIFUCTIONAL ENERGY DENSE STRUCTURAL COMPOSITES FOR ADVANCED SATELLITE SYSTEMS
Mr. Shryas Bhurat, U.C. Berkeley, Berkeley, United States;

IAC-25.C2.1.11
STRUCTURAL DESIGN AND SIMULATION ANALYSIS OF ALTER: A HIGH-MOBILITY ROVER FOR MULTI-TERRAIN LOCOMOTION AND MISSION SUPPORT
Ms. Farha Hassan Priti, BRAC University, Dhaka, Bangladesh;

IAC-25.C2.1.12
NUMERICAL MODELING AND ANALYSIS OF THE COMBINED EFFECTS OF THERMAL, DYNAMIC, AND SHOCK LOADINGS ON THE RELIABILITY AND LIFETIME PREDICTION OF SPACE ELECTRONIC BOARDS
Prof. Seyed Mohammad Navid Ghoreishi, Satellite Research Institute, Iranian Space Research Center, Tehran, Iran;

C2.2. Space Structures II Development and Verification (Orbital deployable and dimensionally stable structures, including mechanical and robotic systems and subsystems)

September 30 2025, 10:15 — Room C3.4

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;

IAC-25.C2.2.1
PASSIVELY DEPLOYABLE TELESCOPIC BAFFLE FOR ENHANCED LEO MONITORING CAMERA
Mr. Mattia Marcello Longato, University of Auckland, Auckland, New Zealand;

IAC-25.C2.2.2
A STOWAGE-EFFICIENT DEPLOYABLE BOOM STRUCTURE FOR HIGH PERFORMANCE HELICAL ANTENNAS IN SMALL SATELLITES
Mr. Junhyoung YM, Korea Advanced Institute of Science and Technology (KAIST), DAEJEON, Korea, Republic of;

IAC-25.C2.2.3
DEVELOPMENT OF A SOLID REFLECTOR STRUCTURE THAT CAN BE ROLLED UP FOR STORAGE.
Dr. Hiroaki Tanaka, National Defense Academy, Yokosuka, Japan;

IAC-25.C2.2.4
DISTRIBUTED FAULT–TOLERANT ATTITUDE–VIBRATION CONTROL OF A SATELLITE WITH AN ULTRA–LARGE FLEXIBLE ANTENNA VIA STACKELBERG GAMES
Prof. Paolo Gasbarri, University of Rome "La Sapienza", Rome, Italy;

IAC-25.C2.2.6
HIGH-ORDER MULTISCALE MODELING FOR THE THERMO-ELASTIC ANALYSIS OF LARGE-SCALE PHASED ARRAY ANTENNAS
Prof. Alfonso Pagani, Associazione Italiana di Aeronautica e Astronautica (AIDAA), Torino, Italy;

IAC-25.C2.2.7
DEFORMATION AND BUCKLING ANALYSIS OF CFRP BISTABLE DEPLOYABLE BOOM FOR APPLICATION TO SOLAR ARRAY PADDLE SUPPORT MEMBERS ON LUNAR PRESSURIZED ROVER
Dr. Sho Kajihara, University of Tokyo, Tokyo, Japan;

IAC-25.C2.2.8
DEPLOYMENT AND PERFORMANCE EVALUATION OF A DEPLOYABLE ROLLED-UP COMPOSITE SAR ANTENNA AFTER EXTENDED STOWAGE PERIODS
Prof. Guglielmo Aglietti, University of Auckland, Auckland, New Zealand;

IAC-25.C2.2.9
IMPROVING PRECISION METROLOGY FOR SPACE MATERIALS AND STRUCTURES
Mr. James Tucker, American Astronautical Society (AAS), Birmingham, United States;

IAC-25.C2.2.10
PARAMETRIC STUDIES OF HOBERMAN TOPOLOGY FOR THE DESIGN OF SCALABLE AND DEPLOYABLE STRUCTURES
Prof. Yuling Shen, Soochow University, Suzhou, China;

IAC-25.C2.2.11
COORDINATED PLANNING METHODOLOGY FOR SEMI-FREE-FLOATING DUAL-ARM SPACE ROBOTS
Mr. Hongxu Wang, Harbin Institute of Technology, Harbin, China;

IAC-25.C2.2.12
STRUCTURAL PERFORMANCE STUDY OF A PASSIVE DEPLOYABLE VOLUTE BAFFLE FOR SPACE CAMERAS
Mr. Shunxing Shi, The University of Auckland, Auckland, New Zealand;

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)

September 30 2025, 15:00 — Room C3.4

Co-Chair(s): Andreas Rittweger, DLR (German Aerospace Center), Germany; Oleg Alifanov, MAI, Russian Federation;
Rapporteur(s): Ijar Da Fonseca, ITA-DCTA, Brazil;

IAC-25.C2.3.1
ACCELERATING THE DEPLOYMENT OF INNOVATIVE SPACE CAPABILITIES: A GOVERNANCE FRAMEWORK AND PATHFINDER APPROACH
Dr. Debra Emmons, The Aerospace Corporation, Arlington, United States;

IAC-25.C2.3.3
CAPTURE AND ATTITUDE TAKEOVER CONTROL SIMULATION FOR ON-ORBIT SERVICING BY SPACE ROBOT
Mr. Keon-Ik Jang, Korea Advanced Institute of Science and Technology (KAIST), Dajeon, South Korea, Korea, Republic of;

IAC-25.C2.3.4
CONTROL MOMENT GYROS FOR ATTITUDE CONTROL OF BHARATIYA ANTARIKSHA STATION(BAS)
Dr. Abhilash Mony, Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram, India;

IAC-25.C2.3.5
DEEP REINFORCEMENT LEARNING FOR DOCKING OPERATIONS OF FLEXIBLE SPACECRAFT
Dr. Federica Angeletti, University of Rome "La Sapienza", Rome, Italy;

IAC-25.C2.3.6
DEVELOPMENT AND APPLICATION OF INTERCHANGEABLE TOOLS FOR MODULAR IN-ORBIT ASSEMBLY SCENARIOS
Mr. Jonas Eisenmenger, DFKI GmbH, Robotics Innovation Center, Bremen, Germany;

IAC-25.C2.3.7
DEVELOPMENT, INTEGRATION AND TESTING OF A MULTIFUNCTIONAL SATELLITE CAPTURE INTERFACE
Mr. Giovanni Buonconsiglio, University of Padova - DII, Padova, Italy;

IAC-25.C2.3.8
ENHANCING ANTENNA CONSTRUCTION WITH AMOCSIS ON-ORBIT MANUFACTURING
Mr. David Schäfer, German Aerospace Center (DLR), Braunschweig, Germany;

IAC-25.C2.3.10
RECOVERY OF INFORMATION ABOUT THE THERMAL PROTECTION OF A RE-ENTRY VEHICLE USING THE INVERSE PROBLEMS METHODOLOGY AND MACHINE LEARNING GAPPY POD
Mr. Yang Tianyang, Moscow Aviation Institute (National Research University, MAI), Moscow, Russian Federation;

IAC-25.C2.3.11
SOFT ROBOTICS FOR SPACE APPLICATIONS
Mr. William Foster-Hall, The University of Adelaide, Adelaide, Australia;

IAC-25.C2.3.12
THICK-PANEL ORIGAMI INSPIRED SINGLE-LOOP 7R MECHANISM FOR RECONFIGURATION SATELLITE SYSTEMS
Mr. Yuhang He, Harbin Institute of Technology, Harbin, China;

C2.4. Space Structures Control, Dynamics and Microdynamics

October 1 2025, 10:15 — Room C3.4

Co-Chair(s): Federica Angeletti, University of Rome "La Sapienza", Italy; Élcio Jeronimo de Oliveira, Associazione Italiana di Aeronautica e Astronautica (AIDAA), Brazil;
Rapporteur(s): Harijono Djojodihardjo, Bandung Institut of Tecnology, Indonesia;

IAC-25.C2.4.1
KEYNOTE: PAOLO SANTINI'S MEMORIAL LECTURE - STRUCTURAL INERTIAL MORPHING: A NOVEL CONCEPT FOR DESIGNING NEXT-GENERATION AUTONOMOUS SPACECRAFT WITH ENHANCED ATTITUDE DYNAMICS CAPABILITIES
Prof. Pavel M. Trivailo, RMIT University, Australia, Melbourne,VIC, Australia;

IAC-25.C2.4.2
EXPERIMENTAL EVALUATION OF ROBOTIC GRASPING STRATEGIES FOR ON-ORBIT SERVICING
Mr. David Paolo Madonna, Sapienza University of Rome, Rome, Italy;

IAC-25.C2.4.3
DESIGN AND EXPERIMENTAL RESULTS OF A DUAL-ARM PLANAR AIR-BEARING PLATFORM FOR ISAM MISSIONS
Mr. Jiashu (George) Wu, The University of Sydney, Balmain, Australia;

IAC-25.C2.4.4
TOWARDS ROBUST INPUT SYNTHESIS FOR MULTI-AXIS VIBRATION TESTING
Prof. Guglielmo Aglietti, University of Auckland, Auckland, New Zealand;

IAC-25.C2.4.5
A LINKAGE DRIVEN FAST STEERING MIRROR FOR OPTICAL IMAGING PAYLOADS
Dr. Lee Spitler, Macquarie University, Macquarie University, Australia;

IAC-25.C2.4.6
VIBRATION ANALYSIS AND TESTING OF THE FIN CANISTER OF A HYPERSONIC ROCKET
Mr. Sofiane Ferrani, Concordia University, Laval, Canada;

IAC-25.C2.4.7
TEST CAMPAIGN ON THE DOCKING SYSTEM DOCKS FOR SMALL SATELLITE
Ms. Martina Imperatrice, CISAS – "G. Colombo" Center of Studies and Activities for Space, Padova, Italy;

IAC-25.C2.4.8
CONTROL SYSTEM FOR A TORQUE-SENSITIVE SPACE ROBOTIC ARM
Mr. Maximilian Mühlbauer, TU Muenchen, Garching, Germany;

IAC-25.C2.4.9
SHOCK DYNAMICS AND BUFFER ANALYSIS OF PYROTECHNIC BOLT SEPARATION IN LAUNCH VEHICLE FAIRINGS
Mr. Guangming Liu, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-25.C2.4.10
WIRELESS VIBRATION MONITORING IN NATURAL FIBER COMPOSITE MATERIALS USING AN OPEN SOURCE DEVELOPMENT PLATFORM.
Mr. Leonardo Bruno Ramirez Regino, Instituto Politécnico Nacional, gto, Mexico;

C2.5. Space Structures and Materials for Extreme Environment (High-temperature and cryogenic-temperature applications including thermal insulation concepts)

October 1 2025, 15:00 — Room C3.4

Co-Chair(s): David E. Glass, National Aeronautics and Space Administration (NASA), United States; Thierry Pichon, ArianeGroup, France;
Rapporteur(s): Zijun Hu, China Academy of Launch Vehicle Technology (CALT), China; James Tucker, American Astronautical Society (AAS), United States;

IAC-25.C2.5.1
ADVANCEMENTS IN ULTRA-HIGH TEMPERATURE CERAMIC MATRIX COMPOSITES FOR EXTREME ENVIRONMENTS
Dr. Antonio Vinci, CNR - ISSMC, Faenza, Italy;

IAC-25.C2.5.2
HYBRID STRUCTURES FOR EXTRATERRESTRIAL BASES
Prof. Arcady Dyskin, The University of Western Australia (UWA), Crawley, Australia;

IAC-25.C2.5.3
EVALUATION OF LOW-DENSITY ABLATIVE TPS BASED ON THE FOAMING TECHNIQUE
Mr. Jaesung Shin, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

IAC-25.C2.5.4
CUTTING EDGE EPOXY BASED CARBON FIBER AND TITANIUM ALUMINUM ALLOYS, FOR ANALOG MISSION MARS MISSIONS.
Ms. Dania Qazaq, Irbid, Jordan;

IAC-25.C2.5.5
DEVELOPMENT AND MECHANICAL TESTING OF REGOLITH-RESIN-COMPOSITE (RRC) BRICK FOR LUNAR APPLICATIONS
Mr. MOHAMMAD ALTAF HOSSAIN, The University of Adelaide, Adelaide, Australia;

IAC-25.C2.5.6
PHASE-CHANGE MATERIAL THERMAL MANAGEMENT FOR EXTREME SPACE ENVIRONMENTS
Prof. Nick Bennett, University of Technology Sydney (UTS), NSW, Australia;

IAC-25.C2.5.7
MULTILAYER ANISOTROPIC HEAT SHIELD: ANALYSIS OF THE STRUCTURE AND THERMAL STRESS STATE IN CASE OF A SEMI-TRANSPARENCY OF THERMAL INSULATION LAYER
Dr. Victor Leonov, Bauman Moscow State Technical University, Moscow, Russian Federation;

IAC-25.C2.5.8
DESIGN SPACE EXPLORATION AND CAPABILITIES OF OXIDE CERAMIC MATRIX COMPOSITES (OCMC)
Dr. Tristan Shelley, Darling Heights, Australia;

IAC-25.C2.5.9
ADVANCING ZIRCONATE-BASED THERMAL SPRAY COATINGS FOR EXTREME AEROSPACE ENVIRONMENTS
Dr. Niroj Maharjan, Swinburne University of Technology, Melbourne, Australia;

IAC-25.C2.5.10
DIAGNOSIS OF PROGRESSIVE FAILURE LEADING TO SPACE SHUTTLE TRAGEDY
Dr. Javid Bayandor, University at Buffalo, Amherst, United States;

IAC-25.C2.5.11
HEAT TRANSFER ANALYSIS OF ULTRA HIGH TEMPERATURE CERAMIC IN HIGH ENTHALPY SUPERSONIC FLOWS
Prof. Anselmo Cecere, Università degli Studi di Napoli "Federico II", NAPOLI, Italy;

IAC-25.C2.5.12
SPRAY-ON NANO-DIAMOND THERMAL COATINGS FOR ENHANCED SPACECRAFT HEAT MANAGEMENT AND POWER SAVING
Mr. Denys Dolynskyi, Warsaw University, Warsaw, Poland;

IAC-25.C2.5.13
TECHNOLOGIES AND MATERIALS FOR OBTAINING RESOURCES ON OTHER PLANETS
Dr. Iryna Husarova, Yuzhnoye State Design Office, Dnipro, Ukraine;

C2.6. Space Environmental Effects and Spacecraft Protection

October 2 2025, 10:15 — Room C3.4

Co-Chair(s): Antonio Del Vecchio, CIRA Italian Aerospace Research Centre, Italy; Anatolii Lohvynenko, Yuzhnoye State Design Office, Ukraine;
Rapporteur(s): Kyeum-rae Cho, Pusan National University, Korea, Republic of;

IAC-25.C2.6.1
IMPACT PERFORMANCE OF FIBRE-REINFORCED POLYMER BASED PANELS FOR PROTECTION OF LUNAR STRUCTURES AGAINST MICROMETEOROID STRIKES
Mr. Md Abdur Rakib, The University of Adelaide, Adelaide, Australia;

IAC-25.C2.6.2
A FRAMEWORK FOR DESIGNING PROTECTIVE PANELS TO WITHSTAND MICROMETEOROIDS, RADIATION AND TEMPERATURE EXTREMES FOR LUNAR INFRASTRUCTURE APPLICATIONS
Prof. Scott Smith, The University of Adelaide, Adelaide, Australia;

IAC-25.C2.6.3
SPACE RADIATION TESTING OF FIRST AUSTRALIAN PAYLOAD BRINGING PLANTS TO THE MOON: AN RMIT-ANSTO JOINT-VENTURE
Dr. Stefania Peracchi, Australian Nuclear Science and Technology Organisation, Lucas Heights, Australia;

IAC-25.C2.6.4
SHIELDING PROPERTIES AGAINST ALPHA, BETA, AND GAMMA RADIATION OF LDPE NANOCOMPOSITES WITH PORTLAND CEMENT-BASED NANOCRYSTALS AND THEIR EVALUATION IN THE MISSE MODULE
Mr. Ricardo Rosas Esquivel, International Space University (ISU), Monterrey, Mexico; Mr. Andres Garcia Rivera, Universidad Iberoamericana, Mexico City, Mexico;

IAC-25.C2.6.5
ENHANCING RADIATION-RESISTANT COATINGS FOR SATELLITE ELECTRONICS
Ms. Emira Nur Aslan, INFINIA, Ankara, Türkiye;

IAC-25.C2.6.6
THE EFFECTS OF NEAR-SPACE CONDITIONS ON THE MECHANICAL PROPERTIES AND UV CURING OF COMPOSITE MATERIALS
Mrs. Dominika Pytlak, Warsaw University of Technology (WUT), Warszawa, Poland; Mr. Jakub Czerniej, Warsaw University of Technology (WUT), Warsaw, Poland;

IAC-25.C2.6.8
RADIATION ANALYSIS AND PRACTICAL SHIELDING STRATEGIES FOR SMALL SATELLITES IN LEO: RESULTS FROM TWO YEARS ON-ORBIT
Mr. Nathan Paes, Space Flight Laboratory (SFL), North York, Canada;

IAC-25.C2.6.9
AGEING AND SPACE QUALIFICATION OF ULTRA-HIGH TEMPERATURE CERAMIC MATRIX COMPOSITES FOR NEXT-GENERATION THERMAL PROTECTION SYSTEMS: FROM GROUND TESTING TO LOW EARTH ORBIT ENVIRONMENT
Dr. Luca Zoli, CNR - ISSMC, Faenza, Italy;

IAC-25.C2.6.11
MODELING ATOMIC OXYGEN EROSION-INDUCED SURFACE ROUGHENING AND ITS IMPACT ON DRAG EVOLUTION FOR VERY LOW EARTH ORBIT (VLEO) SATELLITES
Mr. Kaan Demiralay, Koc University, İstanbul, Türkiye;

IAC-25.C2.6.12
THERMAL VACUUM TESTING OF SMALL SATELLITES: ENSURING PERFORMANCE IN THE SPACE ENVIRONMENT
Mr. Arthur Descamps, Planet, Sunnyvale, United States;

C2.7. Manufacturing and industrialization for Launch Vehicle and Space Vehicle Structures and components (High volume production, industrialization, automatization and digitalization)

October 2 2025, 15:00 — Room C3.4

Co-Chair(s): Oliver Kunz, Beyond Gravity, Switzerland; Aicke Patzelt, MT Aerospace AG, Germany;
Rapporteur(s): Elizabeth Barrios, Blue Origin LLC, United States;

IAC-25.C2.7.2
DEEP LEARNING-DRIVEN STRUCTURAL HEALTH MONITORING USING HIGH-VOLUME OPERATIONAL DATA
Dr. Federica Angeletti, University of Rome "La Sapienza", Rome, Italy;

IAC-25.C2.7.3
DATA FUSION – THE NEXT STEP IN DIGITAL TRANSFORMATION
Mr. Michael Klas, Airbus Defence and Space, London, United Kingdom;

IAC-25.C2.7.4
MITIGATION OF EXCESSIVE PROFILE DEVIATION AND BEND LINES DURING ROLLING OF CYLINDRICAL SHELL PANELS OF A LAUNCH VEHICLE PROPELLANT TANK
Mr. Jayesh P, Indian Space Research Organization (ISRO), Liquid Propulsion Systems Centre (LPSC), Trivandrum, India;

IAC-25.C2.7.5
AI-DRIVEN INNOVATION IN THE SPACE CONTEXT FOR SOFTWARE MODULARIZATION AND DIGITALIZATION OF THE MAIT PROCESSES
Prof. Michele Pasquali, Sapienza University of Rome, Roma, Italy;

IAC-25.C2.7.6 (unconfirmed)
A NEW MANUFACTURE PROCESS ON CRYOGENIC PROPELLANT TANK FOR LARGE-SCALE REUSABLE LAUNCH VEHICLE ZQ-3 BASED ON STAINLESS STEEL (SUS301) MATERIAL VIA LASER WELDING
Mr. Yu Yuan, LandSpace Technology Corporation Ltd., Peking, China;

IAC-25.C2.7.7
REFRACTORY HIGH ENTROPY ALLOYS (RHEAS)
Mr. Asad Ullah, Aerospace, Stevenage, United Kingdom;

IAC-25.C2.7.8
AUTOMATION OF ACCEPTANCE TESTING PROCESS OF LIQUID ROCKET ENGINE INJECTORS FOR HIGH THROUGHPUT AND COST EFFECTIVE LAUNCH VEHICLE DEVELOPMENT
Mr. RAFEEQUE T A, LPSC, ISRO, TRIVANDRUM, India;

IAC-25.C2.7.9
THE ROLE OF SOFTWARE ARCHITECTURES IN PROGRAMMING
Mr. Tabriz Latifov, Baku Engineering University, Baku, Azerbaijan;

IAC-25.C2.7.10
HAWK PLUS: A STANDARDIZED AND SCALABLE PLATFORM FOR INDUSTRIALIZED SMALL SATELLITE PRODUCTION
Mr. Marco Giolo, Argotec, San Mauro Torinese, Italy;

C2.8. Advancements in Materials Applications, Additive Manufacturing, and Rapid Prototyping Manufacturing and Rapid Prototyping

October 3 2025, 10:15 — Room C3.4

Co-Chair(s): Pierre Rochus, CSL (Centre Spatial de Liège), Belgium; Raymond G. Clinton, NASA Marshall Space Flight Center, United States;
Rapporteur(s): Bangcheng Ai, China Aerospace Science and Industry Corporation, China; Mario Marchetti, Sapienza University of Rome, Italy;

IAC-25.C2.8.1
HIGH-PERFORMANCE POLYMERS VIA ADDITIVE MANUFACTURING AS A NEWSPACE PROTOTYPING TOOL
Mr. Henrik Øvrebø, Norwegian University of Science and Technology, Trondheim, Norway;

IAC-25.C2.8.2
ADVANCED MANUFACTURING FOR SPACE: STRUCTURAL VERIFICATION OF A TOPOLOGY-OPTIMIZED DMLS 3U NANOSATELLITE
Mr. Renzo Wee, Philippine Space Agency (PhilSA), Quezon City, The Philippines;

IAC-25.C2.8.3
DESIGN OF AN ADDITIVELY MANUFACTURED REACTION WHEEL FOR THE ARCTICSAT CUBESAT
Mr. Ricky Gill, University of Manitoba, Winnipeg, Canada;

IAC-25.C2.8.4
A BIOINSPIRED CONTINUOUS FIBER FLOATING 3D PRINTING METHOD FOR IN SPACE LARGE-SCALE STRUCTURE MANUFACTURING
Dr. Hao Liu, Tsinghua University, Beijing, China;

IAC-25.C2.8.5
TI6AL4V MONOLITHIC HIGH PRESSURE GAS BOTTLE USING LPBF FOR SPACE APPLICATION
Dr. Anil Kumar Jain, Vikram Sarabhai Space Centre (VSSC), Trivandrum, India;

IAC-25.C2.8.6
DESIGN FOR AM OF SMALL SPACECRAFT PROPELLANT TANKS: FDM 3D PRINTING OF POLYMERS AND COMPOSITES
Dr. Angelo Pasini, University of Pisa, Pisa, Italy;

IAC-25.C2.8.7
PRINTED PLATFORMS FOR FAST ACCESS TO SPACE
Mr. Lorenzo Tarabini-Castellani, Deimos Space SLU, Tres Cantos, Spain;

IAC-25.C2.8.8
FUSED GRANULAR FABRICATION OF CF/PEEK-PEI HYBRID JOINTS FOR DEMISE OF SATELLITE STRUCTURES
Mr. Lukas Raps, German Aerospace Center (DLR), Stuttgart, Germany;

IAC-25.C2.8.9
MULTI-MATERIAL LASER POWDER BED FUSION OF LIQUID ROCKET NOZZLE WITH REGENERATIVE COOLING CHANNEL WALL
Dr. Ling Chen, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Clayton, Australia;

IAC-25.C2.8.10
INVESTIGATION OF PRESSURE DROPS IN ADDITIVELY MANUFACTURED IN625 ROCKET NOZZLE CHANNELS: ROLE OF BUILD ORIENTATION, AND SURFACE ROUGHNESS
Dr. Aashna Raj, Royal Institute of Technology (KTH), Stockholm, Sweden;

IAC-25.C2.8.11
THE DESIGN OF A ROBOTIC COLD WELDING AND DEFORMATION SYSTEM FOR IN-SPACE MANUFACTURING
Mr. Edward Lui, The Ohio State University College of Engineering, Columbus, United States;

IAC-25.C2.8.12
ORIGAMI-INSPIRED DEPLOYABLE STRUCTURES FOR SPACE EXPLORATION: INTEGRATING ARTIFICIAL INTELLIGENCE, ROBOTICS, AND ADVANCED MATERIALS
Mr. Nijanthan Vasudevan, Drexel University, Philadelphia, United States;

C2.9. Smart Materials and Adaptive Structures & Specialized Technologies, Including Nanotechnology

October 3 2025, 13:45 — Room C3.4

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-25.C2.9.2
VIBRATION-ENABLED ORIGAMI PROBOSCIS FOR PARTICULATE TRANSPORT IN SPACE ENVIRONMENTS
Ms. Vatasta Koul, Space Generation Advisory Council (SGAC), New Delhi, India; Mr. Dennis Babu, Morley, Australia;

IAC-25.C2.9.3
NEXT-GENERATION POLYMER COATINGS AND FLEXIBLE ELECTRONICS FOR SUSTAINABLE SPACE SYSTEMS
Dr. Guler Kocak, SPACELIS Space Technologies, Ankara, Türkiye;

IAC-25.C2.9.4
TABS : THERMALLY ADVANCED BIMETALLIC SUBSTRATES ADVANCED HEAT MITIGATION/UTILIZATION TECHNIQUES
Mr. Hunter Singh, Northrop Grumman Corporation, Houston, United States;

IAC-25.C2.9.5
MICROCAPSULE-BASED SELF-HEALING COMPOSITES FOR CRITICAL SPACECRAFT APPLICATIONS
Ms. Rishika Awasthi, Collins Aerospace, Bengaluru, India;

IAC-25.C2.9.6
DEVELOPMENT OF CYANATE ESTER-BASED GLASS FIBRE REINFORCED SHAPE MEMORY POLYMER COMPOSITE FOR MANUFACTURING LOW EARTH ORBIT SATELLITE COMPONENTS– A COMPREHENSIVE DURABILITY STUDY.
Mr. Eduardo Trifoni, Australian National University (ANU), Canberra, Australia;

IAC-25.C2.9.7
SPACE APPLICATION OF A MECHANICAL METAMATERIAL FABRICATED VIA BI-METALLIC ADDITIVE MANUFACTURING FOR DIMENSIONAL STABILITY
Mrs. Isabel Prestes, Universität der Bundeswehr München, Neubiberg, Germany;

IAC-25.C2.9.8
SHAPE MEMORY ALLOY-BASED SEAL ASSEMBLY FOR LEAKAGE CONTROL IN EXTREME SPACE ENVIRONMENTS
Mr. Navdeep Singh, kurukshetra, India;

IAC-25.C2.9.9
MAC AND DPR-BASED EMBEDDED OPTICAL FIBER SHAPE SENSING FOR THIN FLEXIBLE SPACE MEMBRANES USING MODAL SHAPES SUPERPOSITION
Dr. PIETRO ACETI, Politecnico di Milano, Milano, Italy;

IAC-25.C2.9.10
COMPACT MONOLITHIC STAR TRACKER SYSTEM
Dr. Kamil Zuber, University of South Australia, Mawson Lakes, Australia;

IAC-25.C2.9.11
DESIGN OF IN-ORBIT DEMONSTRATION EXPERIMENT OF AUTONOMOUS PROGRAMMABLE THERMOSTAT
Mr. Jakub Mašek, Brno University of Technology, Brno, Czech Republic;

IAC-25.C2.9.12
ELECTRODYNAMIC DUST SHIELDING FOR LUNAR DUST MITIGATION USING A COMPOSITE ELECTRODE OF AROMATIC THERMOSETTING COPOLYESTERS, MULTI-WALL CARBON NANOTUBES, AND POLYTETRAFLUOROETHYLENE VIA SPRAY DEPOSITION
Ms. Keerthana Srinivasan, Burlington, Canada;

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

September 30 2025, 10:15 — Room C4.9

Co-Chair(s): John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States; Ming Li, China Academy of Space Technology (CAST), China;
Rapporteur(s): Leopold Summerer, European Space Agency (ESA), The Netherlands; Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan;

IAC-25.C3.1.1
KEYNOTE: FINAL REPORT FROM THE 2024-2025 NSS-IAA-IAF SPACE SOLAR POWER STUDY PROJECT
Mr. John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, SANTA MARIA, United States;

IAC-25.C3.1.2
SPACE SOLAR POWER FOR AUSTRALIA AND THE ASIA-PACIFIC REGION
Mr. Serdar Baycan, Solar Space Technologies Pty Ltd, Melbourne, Australia; Mr. John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, SANTA MARIA, United States; Prof. Brian Falzon, Western Sydney University, Sydney, Australia;

IAC-25.C3.1.3
SPACE SOLAR POWER - STATE OF THE INDUSTRY REPORT 2025
Mr. Kevin Barry, XISP-Inc, Stillwater, United States;

IAC-25.C3.1.4
GEO HIGH POWER WPT DEMONSTRATION MISSION-THE PROPOSED SECOND STEP TO DEVELOP SPACE SOLAR POWER
Dr. Xinbin Hou, CAST, Beijing, China;

IAC-25.C3.1.5
THE SSPS DEVELOPMENT RESULTS AND THE CURRENT OHISAMA PROJECT PROGRESS STATUS
Dr. Koichi Ijichi, Japan Space Systems, Tokyo, Japan;

IAC-25.C3.1.6
FEASIBILITY AND COST-BENEFIT ANALYSIS OF SPACE-BASED SOLAR POWER FOR CRYPTOCURRENCY MINING IN LOW EARTH ORBIT
Prof. Joon-Min Choi, HanSeo University, Daejeon, Korea, Republic of;

IAC-25.C3.1.7
SIMULATING THE IN-ORBIT CONSTRUCTION OF SPACE BASED SOLAR POWER SATELLITES
Mr. Rajan Rana, University of Bristol, Swindon, United Kingdom;

IAC-25.C3.1.8
META-PROMETHEUS: A NOVEL SOLAR POWER SATELLITE CONCEPT FOR SPACE-BASED POWER GENERATION
Haroon B. Oqab, Space Canada Corporation, Canada;

IAC-25.C3.1.9
ZEUS: A SPACE-BASED SOLAR POWER CONSTELLATION FOR SECURE AND SUSTAINABLE ENERGY TRANSMISSION
Mrs. Carmen Guintrand, Sciences Po Paris, Le Vésinet, France;

IAC-25.C3.1.10
THE ARCHITECTURE OF A SOLAR POWER SATELLITE WITH GRAVITY GRADIENT STABILIZATION AND ITS PERFORMANCE CONFIRMATION BY THEORETICAL ANALYSIS
Prof. Tadashi Takano, Nihon University, Funabashi, Japan;

IAC-25.C3.1.11
DYNAMICS AND CONTROL ASPECTS OF FUROSHIKI SATELLITE DEMONSTRATION IN LOW EARTH ORBIT FOR FUTURE SOLAR POWER SATELLITE
Mr. Makoto Ito, Hitachi, Ltd., Kokubunji-shi, Japan;

IAC-25.C3.1.12
A NOVEL DISPENSER-BASED ASSEMBLY CONCEPT FOR A HEXAGONAL SBSP ARRAY
Ms. Chayada Thidrasamee, University of Bristol, Bristol, United Kingdom;

IAC-25.C3.1.13
THERMAL MODELS COMPARISON FOR SPS-ALPHA MARK IV AND SPS-ALPHA MARK III
Prof. Massimiliano Vasile, University of Strathclyde, Glasgow, United Kingdom;

C3.2. Wireless Power Transmission Technologies and Application

September 29 2025, 15:30 — Room C4.6

Co-Chair(s): Ming Li, China Academy of Space Technology (CAST), China;
Rapporteur(s): Massimiliano Vasile, University of Strathclyde, United Kingdom; Haroon B. Oqab, Space Canada Corporation, Canada; Nobuyuki Kaya, Kobe University, Japan;

IAC-25.C3.2.1
MICROWAVE BEAM CONTROL EXPERIMENT FOR LONG-RANGE WPT USING AIRCRAFT TOWARDS SOLAR POWER SATELLITE
Dr. Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Sagamihara, Japan;

IAC-25.C3.2.2
HYPERION - A WIRELESS POWER TRANSFER SYSTEM FOR LUNAR APPLICATIONS
Mr. Davide Russo, Politecnico di Milano, Viareggio, Italy;

IAC-25.C3.2.3
HIGH-EFFICIENCY AND LONG-TERM STABLE LASER POWER CONVERTERS FOR HIGH-POWER WIRELESS TRANSMISSION APPLICATIONS
Dr. Xiaoxu Huang, Chinese Academy of Sciences, Ganzhou, China;

IAC-25.C3.2.4
COHERENT AND SPECTRAL BEAM COMBINING APPROACHES TO LUNAR WIRELESS POWER TRANSMISSION
Ms. Anna Mauro, Politecnico di Torino, Torino, Italy;

IAC-25.C3.2.5
CISLUNAR ORBITAL POWER BEAMING SYSTEM DESIGN CONCEPTS
Mr. Timothy Cichan, Lockheed Martin Corporation, Littleton, United States;

IAC-25.C3.2.6
ENHANCEMENTS TO COST-EFFECTIVE TECHNIQUES FOR LONG RANGE WIRELESS POWER TRANSMISSION: A SIMULATION STUDY ON SPACE-BASED SOLAR POWER
Prof. Joon-Min Choi, HanSeo University, Daejeon, Korea, Republic of;

IAC-25.C3.2.7
ARRAYED MICROWAVE BEAMER'S POWER TRANSMISSION EXPERIMENTS ON THE GROUND
Dr. Sang-Hwa Yi, Korea Electrotechnology Research Institute (KERI), Ansan, Korea, Republic of;

IAC-25.C3.2.8
LUNAR LINK-UP: DEMONSTRATING SPACE-BASED SOLAR POWER AND COMMUNICATION SERVICES FOR THE MOON
Ms. Kaylee Li, Space Generation Advisory Council (SGAC), Sydney, Australia;

IAC-25.C3.2.9
MICROWAVE-BASED WIRELESS POWER TRANSMISSION FOR MODULAR LUNAR ROBOTS: RECTENNA PROTOTYPE DESIGN AND EXPERIMENTAL VALIDATION
Ms. A. Sejal Jain, Tohoku University, Sendai, Japan;

IAC-25.C3.2.10
2025 INTERNATIONAL SPACE SOLAR POWER STUDENT COMPETITION PAPER NO. 1
Mr. George B. Dietrich, Space Canada Corporation, Kitchener, ON, Canada;

IAC-25.C3.2.11
2025 INTERNATIONAL SPACE SOLAR POWER STUDENT COMPETITION PAPER NO. 2
Mr. George B. Dietrich, Space Canada Corporation, Kitchener, ON, Canada;

IAC-25.C3.2.12
2025 INTERNATIONAL SPACE SOLAR POWER STUDENT COMPETITION PAPER NO. 3
Mr. Pietro De Marchi, University of Strathclyde, Glasgow, United Kingdom;

C3.3. Advanced Space Power Technologies

October 3 2025, 10:15 — Room C4.9

Co-Chair(s): Gary Barnhard, National Space Society, United States; Lisa May, Lockheed Martin Corporation, United States;
Rapporteur(s): Lee Mason, National Aeronautics and Space Administration (NASA), Glenn Research Center, United States; Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan;

IAC-25.C3.3.1
DUAL-FUNCTION LUNAR ENERGY RECEIVER: LASER-SOLAR POWER HARVESTING AND THERMAL WADIS FOR ENERGY STORAGE
Mr. Francesco Lopez, Politecnico di Torino, Trinitapoli, Italy;

IAC-25.C3.3.2
MULTI-ENERGY COMPLEMENTARY SYSTEM FOR MARS BASE AND FUTURE MARS COLONIZATION
Mr. Xiang Wang, Chinese Society of Astronautics (CSA), Hefei, China;

IAC-25.C3.3.3
NEXT-GENERATION TANDEM SOLAR CELLS FOR SPACE APPLICATIONS: ENHANCING EFFICIENCY, DURABILITY, AND COST-EFFECTIVENESS
Dr. Shinyoung Noh, Flexell Space Co., Ltd., Uiwang-si, Korea, Republic of;

IAC-25.C3.3.4
OPTIMAL SCHEDULING OF ROVER CHARGING FOR LUNAR POWER SYSTEMS
Dr. Diptish Saha, Aalborg University, Aalborg, Denmark;

IAC-25.C3.3.5
AI-DRIVEN PREDICTIVE MAINTENANCE FOR NANOSATELLITE POWER SYSTEMS: ENHANCING RELIABILITY THROUGH MACHINE LEARNING
Prof.Dr. Amina Daghouri, Rabat, Morocco;

IAC-25.C3.3.6
SPACE SQUARED: AN END-TO-END INTEGRATED MICROGRID CONTROLLER FOR DYNAMIC SHARED CONTROL OF DISPATCHABLE MISSION-CRITICAL POWER AND ANCILLARY SERVICES
Mr. Gary Barnhard, National Space Society, Cabin John, United States;

IAC-25.C3.3.7
ON THE FEASIBILITY OF POWER EXTRACTION FROM LUNAR MINI-MAGNETOSPHERES
Prof. Justin Little, University of Washington, Seattle, United States;

IAC-25.C3.3.8
PERFORMANCE AND DEGRADATION ANALYSIS OF POLYCRYSTALLINE PHOTOVOLTAIC PANELS IN NEAR-SPACE ENVIRONMENTS
Mrs. Dominika Pytlak, Warsaw University of Technology (WUT), Warszawa, Poland;

IAC-25.C3.3.9
DEEP LEARNING-BASED MPPT APPROACH TO ENHANCE CUBESAT POWER GENERATION
Mr. Abdulazez Abagero, addis ababa, Ethiopia;

IAC-25.C3.3.10
DUST MITIGATION ON MARTIAN SOLAR PANELS: A SYNERGISTIC APPROACH USING AEROGEL COATINGS AND ENVIRONMENTAL DYNAMICS
Mr. Ahmad Yu, Amman, Jordan;

IAC-25.C3.3.11
EMIRATES MISSION TO THE ASTEROID BELT: ELECTRICAL POWER SYSTEMS DESIGN AND ARCHITECTURE
Ms. Jawaher Alhaj, Technology Innovation Institute (TII), Abu Dhabi, United Arab Emirates;

IAC-25.C3.3.12
DEVELOPMENT OF 25KW POWER SYSTEM FOR GEO ALL-ELECTRIC SATELLITE BUS IN ETS-9 PROJECT
Dr. Shunichiro Ide, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Ibaraki Pref., Japan;

C3.4. Space Power Systems for Ambitious Missions

October 3 2025, 13:45 — Room C4.9

Co-Chair(s): Massimiliano Vasile, University of Strathclyde, United Kingdom; Lisa May, Lockheed Martin Corporation, United States;
Rapporteur(s): Xinbin Hou, CAST, China; Koji Tanaka, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan;

IAC-25.C3.4.1
ADVANCED CHEMICAL SOURCES FOR HEAT AND POWER TO ENABLE DEEP SPACE MISSIONS
Prof. Subith Vasu, University of Central Florida (UCF), orlando, United States;

IAC-25.C3.4.2
VALIDATION OF THE SPACE NANOGRID CONCEPT FOR SPACECRAFT POWER SYSTEMS
Dr. Jesus Gonzalez-Llorente, École de technologie supérieure, Montréal, Canada;

IAC-25.C3.4.3
DEVELOPMENT OF AN SDR-BASED DIRECTION-FINDING SYSTEM FOR THE WPT EXPERIMENTS OF THE OHISAMA PROJECT
Mr. Simon Maillot, The Graduate Universty for Advanced Studies (SOKENDAI), Sainte-Clotilde, Japan;

IAC-25.C3.4.4
OPTIMIZED SATELLITE CONSTELLATION WITH PRECISION NAVIGATION AND LASER BEAM STEERING FOR WIRELESS POWER TRANSMISSION IN THE FUTURE LUNAR ECONOMY.
Mr. Domenico Edoardo Sfasciamuro, Politecnico di Torino, Venaria Reale, Italy;

IAC-25.C3.4.5
ADVANCED THERMAL MANAGEMENT: PRE-DESIGN OF A MECHANICALLY PUMPED FLUID LOOP FOR WIRELESS POWER TRANSMISSION SATELLITES
Mr. Francesco Lopez, Politecnico di Torino, Trinitapoli, Italy;

IAC-25.C3.4.6
LUX-THERMAL: A POWER GENERATION SYSTEM FOR LUNAR NIGHT SURVIVAL
Mr. Sotirios Zormpas, Lunar Outpost EU, Foetz, Luxembourg ;

IAC-25.C3.4.7
SOLID OXIDE FUEL CELLS FOR SPACE EXPLORATION: ENABLING HIGH-EFFICIENCY POWER GENERATION IN EXTREME ENVIRONMENTS
Dr. Christian Bach, Technische Universität Dresden (DTU), Dresden, Germany;

IAC-25.C3.4.8
STARDUST TO ENERGY: THE UPCYCLING OF SOLAR WINDS FOR POWER GENERATION
Mr. Rishikesh G, Manipal Institute of Technology, Manipal Academy of Higher Education, bangalore, India;

IAC-25.C3.4.10
VANADIUM REDOX FLOW BATTERIES FOR SUSTAINABLE ENERGY STORAGE IN SPACE APPLICATIONS
Ms. Tekkiya Larkins, Queensland University of Technology, Yarrabilba, Australia;

IAC-25.C3.4.11
DEVELOPING RESILIENT LUNAR ENERGY SYSTEMS TO FACILITATE HUMAN EXPLORATION
Mr. Thomas Cernev, The University of Adelaide, Adelaide, Australia;

IAC-25.C3.4.12
MAGDRIVE'S NEXT GENERATION POWER SYSTEM FOR SPACE AND EARTH APPLICATIONS INSPIRED BY HIGH POWER PLASMA PROPULSION.
Ms. Donya Naz Divsalar, Magdrive Ltd, Los Angeles, United States;

C3.5-C4.10. Joint Session on Nuclear Power and Propulsion Systems, and Propellantless Propulsion

October 3 2025, 13:45 — Room C3.6

Co-Chair(s): Leopold Summerer, European Space Agency (ESA), The Netherlands; Saroj Kumar, Propulsion Research Center, University of Alabama in Huntsville, United States; Lisa May, Lockheed Martin Corporation, United States;
Rapporteur(s): Paolo Gessini, Universidade de Brasília, Brazil; Jamila Mansouri, European Space Agency (ESA), The Netherlands;

IAC-25.C3.5-C4.10.1
PUMPS RELIABILITY INCREMENT AS A RESULT OF AUTOGENOUS PRESSURIZATION APPLIED TO A NUCLEAR THERMAL PROPULSION SYSTEM
Ms. Samantha Rawlins, University of Alabama in Huntsville, Huntsville, United States;

IAC-25.C3.5-C4.10.2
UNITED KINGDOM'S ADVANCES IN NUCLEAR POWER TECHNOLOGY FOR SPACE EXPLORATION
Dr. Mauro Augelli, UK Space Agency, Harwell, United Kingdom;

IAC-25.C3.5-C4.10.3
ENERGY OPTIMIZATION IN NUCLEAR ELECTRIC PROPULSION: SOLAR-NUCLEAR INTEGRATION FOR MARS MISSIONS
Mr. Haniel Castellano Guarachi, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-25.C3.5-C4.10.4
COLD FUSION IN SPACE: A GAME-CHANGER FOR DEEP SPACE PROPULSION?
Ms. Samiksha Raviraja, Airbus Defence and Space, Hitchin, United Kingdom;

IAC-25.C3.5-C4.10.5
ADVANCED NUCLEAR THERMAL PROPULSION : A HYBRID APPROACH
Mr. Aykhan Mammadov, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.C3.5-C4.10.6
DEVELOPMENT OF A PROPELLANT-FREE SOLENOID THRUSTER DRIVEN BY GEOMAGNETIC FIELD
Prof. Kuo-Long Pan, National Taiwan University, Taipei, Taipei;

IAC-25.C3.5-C4.10.7
QUANTITATIVE ANALYSIS OF SOLAR SAIL THRUST UNCERTAINTY UNDER MULTI-FACTOR COUPLING
Mr. Zilong Cheng, Changsha City, China;

IAC-25.C3.5-C4.10.8
ADVANCING RADIOISOTOPE-BASED TECHNOLOGIES FOR SUSTAINED LUNAR AND DEEP-SPACE OPERATIONS: RHU AND RTG DEVELOPMENT BY ENTX, UNISA, AND UNISQ.
Prof. Drew Evans, University of South Australia, Adelaide, Australia;

IAC-25.C3.5-C4.10.10
REDUCED-ORDER MODEL OF AMMONIA DECOMPOSITION REACTION FOR INCREASING NUCLEAR THERMAL ROCKET PERFORMANCE
Mr. Elia Puccinelli, University of Pisa, Massarosa, Italy;

IAC-25.C3.5-C4.10.11
NUCLEAR THERMAL ROCKET (NTR) FUEL DEGRADATION IN DEEP SPACE CONDITIONS
Ms. Maryam Abuqtaish, Amman city, Jordan;

IAC-25.C3.5-C4.10.12
EXPERIMENTAL ANALYSIS OF A CENTRIFUGAL FUEL ELEMENT FROM A CENTRIFUGAL NUCLEAR THERMAL PROPULSION ENGINE
Mr. Spencer Christian, The Ohio State University College of Engineering, Dayton, United States;

IAC-25.C3.5-C4.10.13
ESTE4SPACE: TOOL FOR SAFETY ANALYSES OF FUTURE SPACE MISSIONS WITH NUCLEAR POWER SOURCE, WITH THE POTENTIAL TO SUPPORT RESPONSE TO REAL EVENTS.
Dr. Eva Fojcikova, Abmerit-nuclear and space, Ltd., TRNAVA, Slovak Republic;

IAC-25.C3.5-C4.10.14
MISSION BURN CHARACTERIZATION USING A CENTRIFUGAL NUCLEAR THERMAL ROCKET
Mr. Mitchell Schroll, Propulsion Research Center, University of Alabama in Huntsville, Huntsville, United States;

IAC-25.C3.5-C4.10.15
THREE DIMENSIONAL MODELING OF HYDROGEN BUBBLE TRAJECTORIES IN A CENTRIFUGAL FUEL ELEMENT FOR ADVANCED PROPULSION
Dr. Jason Cassibry, University of Alabama in Huntsville, Huntsville, United States;

C4. IAF SPACE PROPULSION SYMPOSIUM

Coordinator(s): Angelo Cervone, Delft University of Technology (TU Delft), The Netherlands; 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)

September 29 2025, 15:30 — Room C3.6

Co-Chair(s): Christophe Bonhomme, Centre National d'Etudes Spatiales (CNES), France; Justin Hardi, German Aerospace Center (DLR), Germany;
Rapporteur(s): Ozan Kara, Technology Innovation Institute (TII), United Arab Emirates; Mario Kobald, HyImpulse Technologies GmbH, Germany;

IAC-25.C4.1.1
DEVELOPMENT STRATEGY AND EARLY TEST RESULTS OF A 250 N GREEN PROPELLANT THRUSTER
Dr. Carmine Carmicino, Technology Innovation Institute (TII), Abu Dhabi, United Arab Emirates;

IAC-25.C4.1.2
DEVELOPMENT STATUS OF A 420 N LIQUID BIPROPELLANT ENGINE USING 98% HTP AND TMPDA
Dr. Pawel Surmacz, Łukasiewicz Research Network – Institute of Aviation (ILOT), Warsaw, Poland;

IAC-25.C4.1.3
DESIGNING FOR REUSE: TECHNICAL CHALLENGES AND PERFORMANCE TRADE-OFFS FOR REUSABLE LIQUID PROPELLANT ROCKET ENGINES
Mrs. Lilly Etzenbach, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-25.C4.1.4
THE EMIRATES MISSION TO THE ASTEROID BELT: CHEMICAL PROPULSION SYSTEM ARCHITECTURE AND USAGE IN EMA
Ms. Nourah Alyammahi, UAE Space Agency, Abu Dhabi, United Arab Emirates;

IAC-25.C4.1.5
TRANSIENT CONJUGATE HEAT AND MASS TRANSFER ANALYSIS OF CRYOGENIC PROPELLANT TANK DURING GROUND SERVICING OPERATIONS FOR A MANNED SPACE MISSION
Mr. Vishnu Viswanath, Liquid Propulsion System centre, Trivandrum, India;

IAC-25.C4.1.6
TANK HEAD START APPROACH FOR A 80 TON-CLASS GAS-GENERATOR CYCLE METHANE/LOX ROCKET ENGINE
Mr. Hanmo Shen, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-25.C4.1.7
INTEGRATED DEVELOPMENT OF AN EXPANDER CYCLE LIQUID ROCKET ENGINE AND UPPER STAGE PROPULSION SYSTEM
Dr. Cheulwoong Kim, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

IAC-25.C4.1.8
INVESTIGATION OF HIGH FREQUENCY COMBUSTION INSTABILITY DURING CRYOGENIC ROCKET ENGINE START TRANSIENT
Mr. M VISWAJITH, Liquid Propulsion System centre, THIRUVANATHAPURAM, India;

IAC-25.C4.1.9
H3 LAUNCH VEHICLE LAUNCH RESULT AND LE-9 TYPE2 ENGINE DEVELOPMENT STATUS
Mr. Shogo Ozaki, JAXA, Ibaraki, Japan;

IAC-25.C4.1.10
RECENT IMPROVEMENTS IN THE LUMEN TEST BED FOR OXYGEN-METHANE ROCKET ENGINE TECHNOLOGIES
Dr. Justin Hardi, German Aerospace Center (DLR), Hardthausen, Germany;

IAC-25.C4.1.11
PROGRESS IN THE DEVELOPMENT OF SOUTH AFRICA'S SAFFIRE LIQUID ROCKET ENGINE
Prof. Jean Pitot, University of KwaZulu-Natal (UKZN), Durban, South Africa;

C4.2. Liquid Propulsion (2)

October 1 2025, 10:15 — Room C3.6

Co-Chair(s): Angelo Cervone, Delft University of Technology (TU Delft), The Netherlands; Christian Bach, Technische Universität Dresden (DTU), Germany;
Rapporteur(s): Adam Okninski, Łukasiewicz Research Network – Institute of Aviation (ILOT), Poland; Elizabeth Jens, Jet Propulsion Laboratory - California Institute of Technology, United States;

IAC-25.C4.2.2
DEVELOPMENT AND TEST RESULTS OF AN ADDITIVELY PRINTED 250N CLASS MONOPROPELLANT THRUSTER
Mr. Ulrich Gotzig, ArianeGroup, Lampoldshausen, Germany;

IAC-25.C4.2.3
EFFECT OF SURFACE ROUGHNESS ON COOLING CHANNEL FOULING IN METHANE FUELED ROCKET ENGINES
Mr. Jules Heldens, Royal Institute of Technology (KTH), Stockholm, Sweden;

IAC-25.C4.2.4
INFLUENCE OF FUEL PROPERTIES ON THE IGNITION BEHAVIOR OF NABH4-PROMOTED HYPERGOLIC FUELS WITH HYDROGEN PEROXIDE
Prof. Jongkwang Lee, Hanbat National University, Daejeon, Korea, Republic of;

IAC-25.C4.2.5
DEVELOPMENT AND PERFORMANCE TESTING OF A "GREEN" HYDROXYLAMMONIUM NITRATE-BASED MONOPROPELLANT IN A LAB-SCALE THRUSTER
Mr. Jordan Silver, University of KwaZulu-Natal (UKZN), Durban, South Africa;

IAC-25.C4.2.6
EXPERIMENTAL STUDIES ON IGNITION PERFORMANCE OF TEA-TEB
Mr. Avinash Chandra, Indian Space Research Organization (ISRO), Liquid Propulsion Systems Centre (LPSC), Thiruvananthapuram, India; Mr. Manu Varrier, Indian Space Research Organization (ISRO), Liquid Propulsion Systems Centre (LPSC), Thiruvananthapuram, India; Dr. K. S. Bijukumar, Indian Space Research Organization (ISRO), Liquid Propulsion Systems Centre (LPSC), Thiruvananthapuram, India;

IAC-25.C4.2.7
NUMERICAL SIMULATION OF THE DLR LUMEN THRUST CHAMBER: IMPACT OF SMALL INJECTION ASYMMETRY
Ms. Clara Morris, DLR (German Aerospace Center), Hardthausen, Germany;

IAC-25.C4.2.8
PYROLYSIS STABILITY OF DIFFERENT METHANE FUEL QUALITIES FOR REGENERATIVE COOLING ROCKET ENGINES USAGE
Mr. Jules Heldens, Royal Institute of Technology (KTH), Stockholm, Sweden;

IAC-25.C4.2.9
HIGH-SPEED MULTISPECTRAL VISUALIZATION OF BUBBLY SPRAY COMBUSTION IN HYPERGOLIC ROCKET PROPELLANTS
Prof.Dr. Fabio Antonio da Silva Mota, Universidade Federal do ABC - UFABC, Santo Andre, Brazil;

IAC-25.C4.2.10
EXPERIMENTAL INVESTIGATION OF A 10N CLASS VORTEX-COOLED METHANE/OXYGEN BIPROPELLANT THRUSTER
Mr. Mousa Aqailan, United Arab Emirates University (UAEU), Al Ain (AE), United Arab Emirates;

IAC-25.C4.2.11
OVERVIEW OF VALVE DEVELOPMENTS AT ŁUKASIEWICZ-ILOT
Mr. Krzysztof Pietrzak, Łukasiewicz Research Network – Institute of Aviation (ILOT), Warszawa, Poland;

IAC-25.C4.2.12
DESIGN, MANUFACTURING AND TEST OF CHINA'S LARGEST NIOBIUM ALLOY ROCKET NOZZLE
Mr. Hanmo Shen, LandSpace Technology Corporation Ltd., Beijing, China;

C4.3. Solid and Hybrid Propulsion (1)

September 30 2025, 10:15 — Room C3.6

Co-Chair(s): Adam Okninski, Łukasiewicz Research Network – Institute of Aviation (ILOT), Poland; Mario Kobald, HyImpulse Technologies GmbH, Germany;
Rapporteur(s): Yen-Sen Chen, American Institute of Aeronautics and Astronautics (AIAA), United States; Yuji Saito, Tohoku University, Japan;

IAC-25.C4.3.1
RED KITE SOLID ROCKET MOTOR
Mr. Markus Kuhn, Bayern Chemie, Aschau am Inn, Germany;

IAC-25.C4.3.2
DESIGN AND TESTING OF A HYBRID ROCKET MOTOR USING PARAFFIN BASED SOLID FUEL BLENDED WITH BIO ADDITIVES FOR PERFORMANCE ENHANCEMENT
Mr. Ankit Khanal, University of Luxembourg, Luxembourg, Luxembourg ;

IAC-25.C4.3.3
PIONEERING INDONESIA'S FIRST ACADEMIC SOLID ROCKET: A SUSTAINABLE AND LOW-COST PROPELLANT FOR FUTURE SPACE ENDEAVORS
Mr. Afiq Sulistya, PSN, Jakarta Selatan, Indonesia;

IAC-25.C4.3.4
NITROUS OXIDE/POLYETHYLENE BASED SOUNDING ROCKET DEVELOPMENT IN UAE
Dr. Ozan Kara, Technology Innovation Institute (TII), Masdar City, United Arab Emirates;

IAC-25.C4.3.5
STATIC FIRE TEST OF A PISTON-FED HYBRID AUTOPHAGE ENGINE
Mr. Martin Gros, Alpha Impulsion, Toulouse, France;

IAC-25.C4.3.6
A QUEST TO INDIGENOUS LAUNCH CAPABILITY VIA HYBRID ROCKET PROPULSION – LESSONS LEARNED FROM DEVELOPMENT OF PESCADORE ENGINE
Mr. Tzu Yu Lin, Taiwan Space Agency (TASA), HsinChu City, Taipei;

IAC-25.C4.3.7
PERFORMANCE TESTING OF A 7 KN HYBRID ROCKET MOTOR UNDER VARYING PROPELLANT CONDITIONS
Mr. Bernard Genevieve, University of KwaZulu-Natal (UKZN), Durban, South Africa;

IAC-25.C4.3.8
DESIGN AND TESTING OF A VORTEX FLOW PANCAKE HYBRID ROCKET ENGINE WITH A GREEN, SELF-STORABLE LIQUID OXIDIZER
Mr. Valerio Santolini, Politecnico di Milano, Milan, Italy;

IAC-25.C4.3.9
RAVEN: INSIGHTS FROM THE FIRST YEAR TESTING CAMPAIGN OF A HYBRID PROPULSION SYSTEM
Mrs. Moa Kihlbaum, Luleå University of Technology, Kiruna, Sweden;

IAC-25.C4.3.10
DESIGN METHODOLOGY FOR HYBRID ROCKET ENGINES IN STUDENTS' SPACE ASSOCIATION
Mr. Bartosz Hyży, Warsaw University of Technology (WUT), Warsaw, Poland;

IAC-25.C4.3.11
DESIGN AND EXPERIMENTAL TESTING OF A LAB-SCALE GOX-PARAFFIN-BASED HYBRID ROCKET ENGINE
Mr. Mohan Tamang, Mach24 Orbitals, Kathmandu, Nepal;

C4.4. Solid and Hybrid Propulsion (2)

October 1 2025, 10:15 — Room C4.11

Co-Chair(s): Didier Boury, ArianeGroup SAS, France; Ozan Kara, Technology Innovation Institute (TII), United Arab Emirates;
Rapporteur(s): Stefano Mungiguerra, Università degli Studi di Napoli "Federico II", Italy; Arif Karabeyoglu, Koc University, Türkiye;

IAC-25.C4.4.1
KEYNOTE: AN OVERVIEW OF SOLID PROPULSION APPLICATION FOR SPACE LAUNCHERS
Mr. Didier Boury, ArianeGroup SAS, Saint Medard en Jalles, France;

IAC-25.C4.4.2
EFFECT OF PORT GEOMETRIES ON ADDITIVELY MANUFACTURED HYBRID ROCKET FUEL GRAINS
Mr. Andreas Bonitz, RMIT University, Australia, St Kilda, Australia;

IAC-25.C4.4.3
ENHANCING COMBUSTION EFFICIENCY THROUGH INJECTOR DESIGN IN HYBRID ROCKET ENGINES
Mr. Mauricio Vicencio Molina, Space Generation Advisory Council (SGAC), Naucalpan, Mexico; Ms. Ilse Rodríguez Bolaños, Universidad Nacional Autónoma de México (UNAM), Ciudad de México, Mexico; Mr. Eduardo Navarro, Universidad Nacional Autónoma de México, Ciudad de México, CDMX, Mexico, Mexico;

IAC-25.C4.4.4
STUDY OF POTENTIAL USE OF MAGNESIUM/TEFLON/VITON PYROTECHNIC COMPOSITION AS AN IGNITOR FOR SOLID ROCKET MOTORS THROUGH COMPUTATIONAL SIMULATIONS USING MOLECULAR DYNAMICS (MD).
Prof. Rene Gonçalves, Aeronautic Institute of Technology (ITA), São José dos Campos, Brazil;

IAC-25.C4.4.5
MICROWAVE DISCHARGE IGNITION OF METALIZED FUEL FOR HYBRID ROCKETS
Dr. Keita Nishii, Tokyo Metropolitan University, Hino, Tokyo, Japan;

IAC-25.C4.4.6
NUMERICAL AND EXPERIMENTAL DEMONSTRATION OF RESIDUAL THRUST PHENOMENON IN HYBRID ROCKET THRUSTERS UNDER VACUUM ENVIRONMENT
Mr. Hinata Kariya, Tohoku University, Sendai, Japan;

IAC-25.C4.4.8
PERFORMANCE IMPROVEMENT BY VORTEX COMBUSTION FOR A MAGNESIUM-LOADED HTPB/N2O HYBRID ROCKET FOR SMALL SPACECRAFT
Mr. Tomoya Kanda, Tokyo Metropolitan University, Fujimi, Japan;

IAC-25.C4.4.9
FLIGHT TEST DATA FROM THE PHOENIX-1D AND -1E HYBRID ROCKETS
Dr. Sarisha Harrylal, University of KwaZulu-Natal (UKZN), Durban, South Africa;

IAC-25.C4.4.11
SCALABLE ANOMALY DETECTION IN HIGH-SPEED COMBUSTION IMAGING
Dr. Hakan Akdag, German Aerospace Center (DLR), Köln, Germany;

IAC-25.C4.4.12
TNT SYNTHESIS BYPRODUCTS IN SOLID PROPELLANTS
Prof. Rene Gonçalves, Aeronautic Institute of Technology (ITA), São José dos Campos, Brazil;

C4.5. Electric Propulsion (1)

September 30 2025, 15:00 — Room C3.6

Co-Chair(s): Jamila Mansouri, European Space Agency (ESA), The Netherlands; Andrei Shumeiko, Bauman Moscow State Technical University, Russian Federation;
Rapporteur(s): Marco Di Clemente, Italian Space Agency (ASI), Italy; Arnau Pons Lorente, Space Generation Advisory Council (SGAC), United States;

IAC-25.C4.5.1
KEYNOTE: A REVIEW OF THE HIGH-ISP / HIGH-VOLTAGE HALL THRUSTERS
Mr. Claude-Martin Brito, SAFRAN, Vernon, France;

IAC-25.C4.5.2
INSIGHTS INTO THE DYNAMIC BEHAVIOUR OF ABEP SPACECRAFT IN VLEO
Dr. Constantin Traub, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-25.C4.5.3
MULTI-POINT DESIGN OPTIMISATION OF MICROWAVE ELECTROTHERMAL THRUSTER NOZZLES FOR ROBUST IN-SPACE OPERATION
Prof. Gail Iles, RMIT University (Royal Melbourne Institute of Technology), Melbourne, Australia;

IAC-25.C4.5.4
EXPERIMENTAL VALIDATION OF A POWER PROCESSING UNIT FOR HALL THRUSTER APPLICATIONS
Mr. Joseph Pawelski, CisLunar Industries, Fort Collins, United States;

IAC-25.C4.5.5
PERFORMANCE AND BEAM CHARACTERISTICS OF ULTRASONIC ATOMIZATION THRUSTER: EXPERIMENT AND SIMULATION
Dr. Weiguo HE, Shanghai University, Shanghai, China;

IAC-25.C4.5.6
NOVEL NON-INTRUSIVE DIAGNOSTICS FOR INDUCTIVELY COUPLED PLASMA THRUSTER
Dr. Robin Georg, Inovor Technologies, Adelaide, Australia;

IAC-25.C4.5.7
HIGH-SPEED PHOTOGRAPHY INVESTIGATION ON PLASMA PLUME OF THE ABLATIVE PULSED PLASMA THRUSTER
Dr. Hua Zhang, Jiuquan, China;

IAC-25.C4.5.8
IN-ORBIT DEMONSTRATION OF ELECTRODELESS PLASMA THRUSTER WITH MAGNETIC THRUST-VECTORING (MTVEPT)
Dr. Andrei Shumeiko, Bauman Moscow State Technical University, Krasnogorsk, Russian Federation;

IAC-25.C4.5.9
SUPERCONDUCTING APPLIED-FIELD MAGNETOPLASMADYNAMIC THRUSTER DEVELOPMENT AND TEST FACILITIES AT ROBINSON RESEARCH INSTITUTE
Dr. Ben Mallett, Victoria University of Wellington, Lower Hutt, New Zealand;

IAC-25.C4.5.10
ROGUE PULSED PLASMA THRUSTER IN-ORBIT DEMONSTRATION PROJECT
Dr. Thomas Clayson, Harwell, United Kingdom;

IAC-25.C4.5.11
COMPUTATIONAL AND EXPERIMENTAL CHARACTERISATION OF WATER-FUELLED HALL EFFECT THRUSTERS
Dr. Jesús Manuel Muñoz Tejeda, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, Rivas-Vaciamadrid, United States;

IAC-25.C4.5.12
ENHANCED FLYBACK CONVERTER FOR PULSED PLASMA THRUSTERS IN CUBESATS: COMPREHENSIVE EXPERIMENTAL AND SIMULATION STUDIES OF ADVANCED SWITCHING TECHNOLOGIES
Mr. Dillon OReilly, Southeast Technological University of Ireland, Kildare, Ireland;

IAC-25.C4.5.13
ADVANCEMENTS IN THE AF-MPD DEVELOPMENT WITHIN THE EU PROJECT SUPREME
Ms. Julia Grill, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

C4.6. Electric Propulsion (2)

October 1 2025, 15:00 — Room C3.6

Co-Chair(s): Davina Di Cara, European Space Agency (ESA), The Netherlands; Paolo Gessini, Universidade de Brasília, Brazil;
Rapporteur(s): Angelo Cervone, Delft University of Technology (TU Delft), The Netherlands; Lahib Balika, Thales Alenia Space, United Kingdom;

IAC-25.C4.6.2
INFLUENCE OF DIELECTRIC MATERIALS AND ACTUATOR LENGTH ON DBD ACTUATOR PERFORMANCE
Mrs. Gema Esmeralda Martinez Gonzalez, Instituto Politécnico Nacional, Ciudad de México, Mexico;

IAC-25.C4.6.5
DEVELOPMENT AND CHARACTERIZATION OF A MINIATURIZED HALL-EFFECT THRUSTER FOR SMALL SATELLITES
Mr. Yulian Protsan, Berlin Space Consortium GmbH, Berlin, Germany;

IAC-25.C4.6.6
MAGDRIVE DEEP LAB: ENABLING THRUSTERS FOR CONSTELLATIONS
Dr. Thomas Clayson, Magdrive Ltd, Harwell Innovation Campus, United Kingdom;

IAC-25.C4.6.7
EXAMINING 300 W HALL EFFECT THRUSTER WITH DIFFERENT POWERS
Ms. İLKSEN BURAT, TUBITAK Uzay, Space Technologies Research Institute, ANKARA, Türkiye;

IAC-25.C4.6.8
INFLUENCE OF PROPELLANT PROPERTIES ON THE PERFORMANCE OF PULSED PLASMA THRUSTERS
Dr. Hua Zhang, Jiuquan, China;

IAC-25.C4.6.9
STARGATE: AN EXPERIMENTAL CORONA DISCHARGE GRIDDED ION THRUSTER UNDERGRADUATE STUDENT RESEARCH PROJECT
Ms. Claude Blue, University of Alabama in Huntsville, Huntsville, United States;

IAC-25.C4.6.10
STUDY ON DISCHARGE CHARACTERISTICS OF N2/AR MIXTURES BASED ON OPTICAL EMISSION SPECTROSCOPY
Mr. Li Mengtian, Institute of Mechanics, Chinese Academy of Sciences, Beijing, China;

C4.7. Hypersonic Air-breathing and Combined Cycle Propulsion, and Hypersonic Vehicle

October 2 2025, 10:15 — Room C3.6

Co-Chair(s): Yen-Sen Chen, American Institute of Aeronautics and Astronautics (AIAA), United States; Riheng Zheng, Beihang University, China;
Rapporteur(s): Lahib Balika, Thales Alenia Space, United Kingdom; Didier Boury, ArianeGroup SAS, France;

IAC-25.C4.7.1
AIR TURBO ENGINE GAS GENERATOR FOR VERTICAL TAKE-OFF AND LANDING DEMONSTRATOR VEHICLE
Dr. Yuki Sakamoto, Japan Aerospace Exploration Agency (JAXA), ISAS, Sagamihara, Japan;

IAC-25.C4.7.3
COMBUSTION PERFORMANCE AND COOLING/DRAG REDUCTION CHARACTERISTICS OF SUPERSONIC FILM COOLING USING FUEL AS COOLANT
Dr. Jingying Zuo, Harbin Institute of Technology, Harbin, China;

IAC-25.C4.7.4
STUDY OF FUEL-OXIDISER MIXTURE AND DETONATION WAVE DYNAMICS FOR ROTATION DETONATION ENGINE
Mr. Abishek Shrestha, Campsie, NSW, Australia;

IAC-25.C4.7.5
CRITICAL CRITERION MODELING OF LOCAL FLAME GENERATION AND GLOBAL FLAME ESTABLISHMENT IN LARGE-SCALE SCRAMJET COMBUSTOR USING TORCH IGNITION
Dr. Mengcheng Yuan, Northwestern Polytechnical University, Xi'an City, Shaanxi Province, China;

IAC-25.C4.7.6
IMAGING AND CHARACTERISATION OF SHEAR LAYER INSTABILITIES IN TRANSVERSE JETS IN SUPERSONIC CROSSFLOW
Mr. Erik Mueller, UNSW Australia, Sydney, Australia;

IAC-25.C4.7.7
EFFECTS OF CONTAMINATED HEATING COMPONENT ON THE IGNITION AND COMBUSTION OF RAMJET ENGINE IN DIRECT-CONNECT TESTS
Ms. Xue Yang, Northwestern Polytechnical University, Xi'an, China;

IAC-25.C4.7.8
INLET-ENGINE MATCHING CONTROL OF ROCKET BASED COMBINED CYCLE ENGINE UNDER ROCKET-RAMJET MODE
Dr. Wenhui Ma, College of Astronautics, Northwestern Polytechnical University, Xi'an, China;

IAC-25.C4.7.10
EXPERIMENTAL STUDY ON FUNCTIONAL VERIFICATION OF HEAT-RESISTANT AND INSULATION SYSTEMS FOR AIR TURBO ROCKET ENGINE SECONDARY COMBUSTORS
Mr. Motoki Ida, The Graduate Universty for Advanced Studies[SOKENDAI], Sagamihara, Japan;

IAC-25.C4.7.11
DESIGN AND TESTING OF A RAMJET AS A SECOND STAGE FOR SMALL SCALE ROCKET MODELS
Dr. Francesco Margani, GAUSS S.r.l., Rome, Italy;

IAC-25.C4.7.12
HYBRID ROTATING DETONATION ROCKET ENGINE WITH INTEGRATED THERMAL BUFFERING FOR ENHANCED EFFICIENCY AND DURABILITY
Ms. Kavya Dichwalkar, VIT Bhopal University, Mumbai, India;

C4.8-B4.5A. Joint Session between IAA and IAF for Small Satellite Propulsion Systems

October 2 2025, 15:00 — Room C3.6

Co-Chair(s): Arnau Pons Lorente, Space Generation Advisory Council (SGAC), United States; Jeff Emdee, The Aerospace Corporation, United States;
Rapporteur(s): Elena Toson, T4i, Italy; Ulrich Gotzig, ArianeGroup, Germany;

IAC-25.C4.8-B4.5A.1
THE DESIGN, DEVELOPMENT AND IN-ORBIT APPLICATION OF WATER RESISTOJET PROPULSION SYSTEMS FOR SMALL SATELLITES
Mr. Alex da Silva Curiel, Surrey Satellite Technology Ltd (SSTL), Guildford, United Kingdom;

IAC-25.C4.8-B4.5A.2
OPTIMIZATION OF THE OXIDANT SUPPLY SYSTEM FOR A MICRO WATER MAGNESIUM HYBRID THRUSTER VIA THERMAL ANALYSIS OF SOLID MIXED COMBUSTION GAS
Mr. SANGUK JEONG, The University of TOKYO, Graduate school, Tokyo-to, Japan;

IAC-25.C4.8-B4.5A.3
DEVELOPMENT AND TESTING OF WATER RESISTOJET PROTOTYPES FOR CUBESATS
Dr. Mario Tindaro Migliorino, Sapienza University of Rome, Rome, Italy;

IAC-25.C4.8-B4.5A.4
ADVANCEMENT OF 1N HYDROGEN-OXYGEN THRUSTER DESIGN AND PERFORMANCE
Dr. Jeni Vilag, COMOTI, Bucharest, Romania;

IAC-25.C4.8-B4.5A.6
NOVEL INSIGHTS ON FLUID DYNAMICS AND PERFORMANCE OF 10N-CLASS HTP-BASED HYBRID THRUSTERS
Mr. Riccardo Guida, Scuola Superiore Meridionale, Napoli, Italy;

IAC-25.C4.8-B4.5A.7
1 N MONOPROPELLANT THRUSTER PROPELLED BY 98% HYDROGEN PEROXIDE – COST EFFECTIVE ALTERNATIVE FOR HYDRAZINE
Dr. Adrian Parzybut, Łukasiewicz Research Network – Institute of Aviation (ILOT), Warsaw, Poland;

IAC-25.C4.8-B4.5A.8
INVESTIGATION OF NOVEL REGENERATIVELY COOLED CERAMIC THRUSTER FOR WATER ELECTROLYSIS PROPULSION SYSTEMS
Mr. Jérôme Hildebrandt, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-25.C4.8-B4.5A.9
INNOVATIVE PROPULSION SOLUTIONS FOR SMALL SATELLITES: RESEARCH AND DEVELOPMENT AT THE SMALL SATELLITES LABORATORY, KHALIFA UNIVERSITY.
Dr. Djamal DARFILAL, Khalifa University of Science and Technology (KUST), Abu Dhabi, United Arab Emirates;

IAC-25.C4.8-B4.5A.10
EXPERIMENTAL STUDY ON FLAME POSITION STABILIZATION IN A WATER MICRO-HYBRID PROPULSION SYSTEM USING WIRE-SHAPED FUEL
Mr. Masaki Fujii, The University of TOKYO, Graduate school, Tokyo, Japan;

IAC-25.C4.8-B4.5A.11
DEVELOPMENT AND EXPERIMENTAL VERIFICATION OF ASYMMETRICAL CAPACITOR THRUSTER (ACT) FOR MICRO-PROPULSION SYSTEMS
Mr. Eknath Dinesh Thirunavukarasu, The University of Sydney, Sydney, Australia;

IAC-25.C4.8-B4.5A.12
INITIAL FLIGHT TEST RESULTS FOR A CENTRE-TRIGGERED PULSED CATHODIC ARC THRUSTER
Dr. Patrick Neumann, Adelaide, Australia;

C4.9. Disruptive Propulsion Concepts for Enabling New Missions

October 3 2025, 10:15 — Room C3.6

Co-Chair(s): Elena Toson, T4i, Italy; Sabrina Corpino, Politecnico di Torino, Italy;
Rapporteur(s): Giorgio Saccoccia, European Space Agency (ESA), France; Christian Bach, Technische Universität Dresden (DTU), Germany;

IAC-25.C4.9.1
WATER ELECTROLYSIS PROPULSION THRUSTERS: RECENT ADVANCEMENTS AND TECHNOLOGY DEVELOPMENT ROADMAP WITHIN THE ICE2THRUST PROJECT AND BEYOND
Mr. Sascha Dengler, Technical University of Munich (TUM), Ottobrunn, Germany;

IAC-25.C4.9.2
FROM WATER AND SUNLIGHT TO THRUST: NEW PROPULSION TECHNOLOGIES WITHIN THE GREEN SWAP PROJECT
Dr. Angelo Pasini, University of Pisa, Pisa, Italy;

IAC-25.C4.9.3
OPTIMIZATION OF ROTATING DETONATION ENGINES: A NOVEL INJECTION TECHNIQUE AND COMBUSTION GEOMETRY ENHANCEMENT FOR IMPROVED PERFORMANCE
Mr. ABHISHEK AS, VIT Bhopal University, kollam, India;

IAC-25.C4.9.4
KINETIC SLINGSHOT LAUNCH SYSTEM FOR SUSTAINABLE LUNAR INFRASTRUCTURE: FEASIBILITY AND DESIGN CONSIDERATIONS
Ms. Noor Hureirat, Jordan Design and Development Bureau (JODDB), amman, Jordan;

IAC-25.C4.9.5
ARTIFICIAL EQUILIBRIUM POINTS FOR ELECTROSTATIC FLIGHT IN AIRLESS MOON ENVIRONMENTS (E-GLIDER TECHNOLOGY)
Dr. Jesús Manuel Muñoz Tejeda, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, Rivas-Vaciamadrid, United States;

IAC-25.C4.9.6
SUPERCONDUCTORS IN SPACE: THEORETICAL MODELS FOR ENERGY TRANSMISSION, SHIELDING, AND MAGNETIC SAILS
Mr. Sayan Ray, Kokata, India;

IAC-25.C4.9.7
ON-ORBIT DEMONSTRATION PLAN FOR AN AUTONOMOUS HEALTH MONITORING TECHNOLOGY TOWARDS REALIZATION OF RESILIENT SPACECRAFT PROPULSION SYSTEM
Dr. Kaname Kawatsu, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

IAC-25.C4.9.8
ANALYSIS OF A LAUNCH VEHICLE UPPER STAGE AS A MOMENTUM EXCHANGE TETHER DEPLOYER
Mr. Ben Campbell, University of Alabama in Huntsville, Huntsville, United States;

IAC-25.C4.9.9
THE IMPACT OF HIGH ENTROPY ENVIRONMENTS ON ADVANCED PROPULSION SYSTEMS IN SPACE
Mr. Yash Thaker, Vadodara, India;

IAC-25.C4.9.10
ADVANCING PROPULSION SYSTEMS THROUGH IN-SITU RESOURCE UTILIZATION (ISRU): A COMPUTATIONAL APPROACH FOR SUSTAINABLE INTERPLANETARY MISSIONS
Mr. Yuvraj Pagare, University of Hertfordshire, Hatfield, United Kingdom;

C4.11. Future Trends in Space Propulsion

September 29 2025, 15:30 — Room C2.5

Co-Chair(s): Angelo Cervone, Delft University of Technology (TU Delft), The Netherlands; Andrei Shumeiko, Bauman Moscow State Technical University, Russian Federation;
Rapporteur(s): Heji Huang, Institute of Mechanics, Chinese Academy of Sciences, China;

IAC-25.C4.11.1
AEROSPIKE NOZZLE THRUST ARGUMENTATION THROUGH ENHANCED FLOW TECHNIQUES
Mr. Juan Sebastian Serrato, RMIT University, Australia, Flemington, Australia;

IAC-25.C4.11.2
FAULT DETECTION AND IDENTIFICATION ANALYSIS FOR ROCKET PROPULSION SYSTEMS
Mr. Jan Kayser, TU Muenchen, München, Germany;

IAC-25.C4.11.3
LIQUID PROPULSION FOR FUTURE EUROPEAN LAUNCHERS: RESEARCH, TECHNOLOGY MATURATION AND CURRENT ENGINE DEVELOPMENTS
Mr. Giuseppe Fiore, CNES, Paris, France;

IAC-25.C4.11.4
PREDICTION OF DYNAMIC PRESSURE MEASUREMENT IN A LIQUID ROCKET ENGINE USING CHAMBER PRESSURE AS PREDICTOR USING ARTIFICIAL INTELLIGENCE.
Mrs. PRIYA ESTHER DAVID RAVI`, ISRO Propulsion Complex, Mahendragiri, India, NAGERCOIL, India;

IAC-25.C4.11.5
PREPARATION AND ELECTROLYTIC COMBUSTION PERFORMANCE EVALUATION OF HIGH - DENSITY HAN BASED PROPELLANT
Ms. CHANSONG KIM, Chosun University, Gwangju, Korea, Republic of;

IAC-25.C4.11.6
FUSION PROPULSION FOR A NEW SPACE AGE.
Mr. Cameron Ikin, Capricorne Spatial Agence, Brisbane, Australia;

IAC-25.C4.11.7
APPLICATION OF AUTOPHAGE ROCKET PROPULSION TO HIGH THRUST IN-SPACE TRANSPORTATION: A PERFORMANCE AND FEASIBILITY ANALYSIS
Mr. Martin Gros, Alpha Impulsion, Toulouse, France;

IAC-25.C4.11.8
OPTIMIZATION OF THE SPECIFIC IMPULSE OF ETHANOL BASED GEL PROPELLANT
Mr. Gabriel Oliveira, Instituto Tecnológico de Aeronáutica (ITA), São José dos Campos, Brazil;

IAC-25.C4.11.9
DUAL-SOURCE PROPULSION FOR VLEO SATELLITES: COMBINING ATMOSPHERIC-BREATHING ELECTRIC PROPULSION (ABEP) WITH ONBOARD PROPELLANT FOR EXTENDED MISSION LIFETIME
Mr. Kaan Demiralay, Koc University, İstanbul, Türkiye;

IAC-25.C4.11.10
BIOMIMETIC ELECTROAERODYNAMIC PROPULSION: SUSTAINABLE ADVANCEMENTS FOR SILENT AIRCRAFT
Mrs. Karolina Gocyk, Uppsala University, Uppsala, Sweden;

IAC-25.C4.11.11
BIMODAL AMMONIA NUCLEAR THERMAL AND ELECTRIC ROCKET (BANTER): PROJECT OVERVIEW
Mr. Elia Puccinelli, University of Pisa, Massarosa, Italy;

IAC-25.C4.11.12
CENTRIFUGAL NUCLEAR THERMAL ROCKET ENGINEERING CHALLENGES AND RESEARCH PROGRESS
Dr. Dale Thomas, University of Alabama in Huntsville, Huntsville, United States;

D1. IAF SPACE SYSTEMS SYMPOSIUM

Coordinator(s): Reinhold Bertrand, European Space Agency (ESA), Germany; Tibor S. Balint, Jet Propulsion Laboratory, United States; Jill Prince, National Aeronautics and Space Administration (NASA), United States;

D1.1. Innovative Systems toward Future Architectures

September 29 2025, 15:30 — Room C3.5

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): Mamatha Maheshwarappa, UK Space Agency, United Kingdom; Marcos Eduardo Rojas Ramirez, Space Generation Advisory Council (SGAC), France;

IAC-25.D1.1.1
SUSTAINABLE ENGINEERING IN SPACE: INTEGRATING ADR INTO FUTURE MISSION ARCHITECTURES
Mr. Marcos Eduardo Rojas Ramirez, Space Generation Advisory Council (SGAC), Issy-les-Moulineaux, France;

IAC-25.D1.1.2
3XE: ENERGY, ECONOMY, ENVIRONMENT. A SPACE PERSPECTIVE CASE: BIG DATA FARMS IN SPACE
Mr. Alberto Cavallo, Space Renaissance International, Torino, Italy;

IAC-25.D1.1.3
LEVERAGING MULTI-MODAL LARGE LANGUAGE MODELS FOR AUTONOMOUS EARTH OBSERVATION SCHEDULING IN EMBODIED INTELLIGENT SATELLITE
Dr. Jiahao Qin, Beihang University (BUAA), Beijing, China;

IAC-25.D1.1.4
DESIGN OF AN INTEROPERABLE INTERFACE FOR IN-SPACE OPERATIONS AND SERVICES OF MODULAR SPACECRAFT
Dr. Mathieu Deremetz, Space Applications Services, Sint-Stevens-Woluwe, Belgium;

IAC-25.D1.1.6
EUROPEAN SCALABLE "MEGA-HEAVY" LAUNCHER: A KEY ENABLER FOR EUROPE'S SPACE AMBITIONS
Mr. Chanjeev Jeyecumar, University of Stuttgart, Kirchheim unter Teck, Germany;

IAC-25.D1.1.7
REPURPOSING LUNAR MISSION ARTEFACTS: A FEASIBILITY STUDY FOR FUTURE LUNAR SURFACE DEVELOPMENT
Mr. Enzo FERREC, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), LAUNAGUET, France; Mr. Matheo Perrochaud, ISAE-Supaero University of Toulouse, Toulouse, France;

IAC-25.D1.1.8
SHADING THE FUTURE: A MULTIDIMENSIONAL READINESS ASSESSMENT OF THE INTERNATIONAL PLANETARY SUNSHADE (IPSS) SYSTEM
Mr. Tharshan Maheswaran, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-25.D1.1.9
AOCS/GNC DESIGN AND DEVELOPMENT FOR RISE MISSION
Mr. Marco Giannini, D-Orbit SpA, Lomazzo (CO), Italy;

IAC-25.D1.1.10
TOWARDS AN IN-ORBIT CUBESAT FACTORY
Mr. Maximilian Mühlbauer, TU Muenchen, Garching, Germany;

IAC-25.D1.1.11
A HOLISTIC FRAMEWORK FOR ASSESSING THE SUSTAINABILITY OF SPACE ACTIVITIES: INTEGRATING LIFE CYCLE ASSESSMENT WITH SPACE ENVIRONMENT MODELLING
Ms. Cecilia Lanfredi Alberti, University of Strathclyde, Glasgow, United Kingdom;

IAC-25.D1.1.12
DESIGN, DEVELOPMENT, AND EXPERIMENTAL VALIDATION OF A DOCKING INTERFACE FOR ORBITAL SPACECRAFT REFUELLING
Ms. Dominika Folta, Carleton Univeristy, Ottawa, Canada;

D1.2. Technologies that Enable Space Systems

September 30 2025, 10:15 — Room C3.5

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), The Netherlands; Sybren De Jong, Netherlands Aerospace Centre (NLR), The Netherlands;

IAC-25.D1.2.1
STEP: SPACE TECHNOLOGY DEVELOPMENT PROGRAM AT ITALIAN SPACE AGENCY
Dr. Marco Di Clemente, Italian Space Agency (ASI), rome, Italy;

IAC-25.D1.2.2
EXPLORING COLLISION AVOIDANCE NEEDS FOR SPACECRAFT FORMATIONS THROUGH GUIDANCE OPTIMISATION
Mr. Angus Manning, Defence Science and Technology Group (DST Group), Fishermans Bend, Australia;

IAC-25.D1.2.3
INNOVATIVE CONFIGURATION OF EXTERNAL CONTROL SURFACES FOR ATTITUDE AND ORBIT KEEPING OF NANOSATELLITES IN VERY LOW EARTH ORBIT
Mr. Valentin Petzold, Technische Universität Dresden (DTU), Dresden, Germany;

IAC-25.D1.2.4
DESIGN AND TEST OF SHARP: A MONOCULAR VISUAL-BASED ALGORITHM FOR CLOSE-RANGE RELATIVE NAVIGATION, DEVELOPED WITHIN THE RISE MISSION FRAMEWORK
Mr. Marco Mangialardo, D-Orbit SpA, Rome, Italy;

IAC-25.D1.2.5
INTERACTIVE SATELLITE AUTONOMOUS DATA ANALYSIS AND DIAGNOSIS VIA LOW-COST REASONING PAYLOAD ENABLED BY DEEPSEEK DISTILLATION MODEL
Mr. Zeyu Gong, Beihang University, Beijing, China;

IAC-25.D1.2.6
DESIGN AND IMPLEMENTATION OF AN AI-BASED SYSTEM FOR LIGHT POLLUTION MITIGATION IN GROUND-BASED ASTRONOMICAL IMAGES
Ms. Neha Upadhyay, Bhopal, India;

IAC-25.D1.2.7
PROBA-3: FUNCTIONAL DESIGN AND ARCHITECTURE OF AN AUTONOMOUS SUB-MILLIMETRE FORMATION FLYING MISSION
Mr. Daniel Serrano, SENER Ingenieria y Sistemas, S.A., Tres Cantos, Spain;

IAC-25.D1.2.9
PACKING FLAGSHIP SCIENCE INTO A CUBESAT BUDGET
Mr. Connor Langford, The University of Sydney, Sydney, Australia;

IAC-25.D1.2.10
IN-FLIGHT DEEP LEARNING FOR SATELLITE APPLICATIONS AND BARRIERS TO ADOPTION: FROM EARTH OBSERVATION DATA PROCESSING TO PERCEPTION FOR IN-SPACE IMAGING AND PROXIMITY OPERATIONS
Mr. Kaizad Raimalwala, Mission Control Space Services Inc., Ottawa, Canada;

IAC-25.D1.2.11
FREQUENCY-SELECTIVE PROTECTION AGAINST ELECTROMAGNETIC INTERFERENCE ON SATELLITES: FIRST LAB AND SPACE-BASED RESULTS
Dr. Tino Schmiel, Technische Universität Dresden (DTU), Dresden, Germany;

IAC-25.D1.2.12
BALANCING FOCUS AND DEFOCUS: OPTIMIZED CAMERA-ONLY IMAGING FOR IN-ORBIT SATELLITE SERVICING
Dr. Jasprabhjit Mehami, The University of Sydney, Sydney, Australia;

D1.3. Emergent Space Systems

September 30 2025, 15:00 — Room C3.5

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;

IAC-25.D1.3.1
AUTONOMOUS GUIDANCE AND CONTROL OF VLEO SATELLITE SWARMS
Prof. Giovanni B. Palmerini, Sapienza University of Rome, Rome, Italy;

IAC-25.D1.3.2
ENABLING RESILIENT DISASTER MANAGMENT AND PRECISION AGRICULTURE THROUGH VLEO EARTH OBSERVATION CONSTELLATION
Mr. Shreyas Dubey, Birla Institute of Technology and Science(BITS), Hyderabad, India;

IAC-25.D1.3.4
FUTURE ASTRONAUT-AGENT MEDICAL COLLABORATION OPPORTUNITIES FOR LONG-DURATION HUMAN SPACEFLIGHT
Ms. Anna Wojdecka, Royal College of Art, London, United Kingdom;

IAC-25.D1.3.5
HUMAN TECHNOLOGICAL CENTERED DESIGN (HTCD): HUMAN-TECHNOLOGY SYMBIOSIS FOR LIFE IN SPACE.
Mr. Ricardo Garcia Nuñez, Instituto Politécnico Nacional, Estado de Mexico, Mexico;

IAC-25.D1.3.7
CONSIDERATIONS ON THE DESIGN FOR SPACE COMPUTING SYSTEMS AND FUTURE APPLICATIONS
Dr. Yi Yuan, Zhejiang Lab, Hangzhou, China;

IAC-25.D1.3.8
AI4CE UPDATE: A COMPARATIVE STUDY OF AI-BASED CUBESAT DESIGN GENERATION AGAINST REAL-WORLD SYSTEMS
Mr. Jan-Peter Ceglarek, TU Darmstadt, Bickenbach, Germany;

IAC-25.D1.3.9
AI-DRIVEN EDGE COMPUTING AND INTERSATELLITE NETWORKING: ENABLING AUTONOMOUS AND SCALABLE SPACE SYSTEMS
Mr. Rama Afullo, Satlyt Inc., Sunnyvale, United States;

IAC-25.D1.3.10
APPLYING AI TO SPACE EXPLORATION: ENHANCING MISSION SUCCESS THROUGH PREDICTIVE TECHNOLOGIES
Mr. Albert Nicolás López, Institut d'Estudis Espacials de Catalunya (IEEC), Castelldefels (Barcelona), Spain; Dr. Sofia del Pozo Rodriguez, International Space University, Cambridge, United Kingdom;

IAC-25.D1.3.11
NOVEL ON-ORBIT-SERVICING SPACE STATION CONCEPT
Mr. Aiden Napier, University of Queensland, Brisbane, Australia;

IAC-25.D1.3.12
FACTORY IN SPACE: IDENTIFICATION OF ENABLERS AND BARRIERS
Mr. Farouk Abdulhamid, Politecnico di Milano, Milan, Italy;

D1.4. Cooperative Systems

October 2 2025, 10:15 — Room C3.5

Co-Chair(s): Otfrid 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, The Netherlands; Avid Roman-Gonzalez, Asociacion Civil Universidad de Ciencias y Humanidades, Peru;

IAC-25.D1.4.1
TOWARDS SUSTAINABLE SPACE ECOSYSTEM: A STATE OF THE ART SURVEY ON STANDARDIZING SPACECRAFT SERVICE INTERFACES FOR MODULAR ORBITAL SYSTEMS
Mr. Raphaël Boissonnade, Thales Alenia Space France, Cannes la Bocca, France;

IAC-25.D1.4.4
DEVELOPING AND TESTING IN-ORBIT SERVICING OPERATIONS THROUGH SCALABLE SIMULATION
Dr. Brenton Smith, Canberra, Australia;

IAC-25.D1.4.5
SYSTEM DESIGN AND HARDWARE-IN-THE-LOOP TESTBED DEVELOPMENT FOR AN AUSTRALIAN ISAM DEMONSTRATOR MISSION
Mr. Julian Guinane, The University of Sydney, Darlington, Australia;

IAC-25.D1.4.6
MASCOT: A NOVEL ELECTRODYNAMIC SUSPENSION-BASED TEST FACILITY FOR SPACECRAFT CLOSE PROXIMITY OPERATIONS
Ms. Nitika Jaggi, Indian Institute of Technology Kanpur, Kanpur, Uttar Pradesh, In..., India;

IAC-25.D1.4.7
DISTRIBUTED CORRELATORS FOR SPACE-BASED INTERFEROMETRY
Dr. Raj Thilak Rajan, Delft University of Technology (TU Delft), Delft, The Netherlands;

D1.5. Systems Engineering Modeling and Analysis

October 2 2025, 15:00 — Room C3.5

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;

IAC-25.D1.5.1
INTEGRATING CONCURRENT ENGINEERING WITH DATA-DRIVEN AND MODEL-BASED SYSTEMS ENGINEERING FOR END-TO-END SMALL-SATELLITE DESIGN
Ms. Serena Campioli, Politecnico di Torino, Torino, Italy;

IAC-25.D1.5.2
LUNAR HABITAT: MODELING AND EVALUATING RESILIENCE USING CONTROL-ORIENTED DYNAMIC COMPUTATIONAL MODELING
Ms. Rashi Jain, Purdue University, West Lafayette, United States;

IAC-25.D1.5.3
MINIMUM VIABLE MODELS - A UNIQUE APPROACH TO ACCELERATING ADOPTION OF MODEL-BASED SYSTEMS ENGINEERING
Dr. Jerry Sellers, Teaching Science and Technology, Inc., Manitou Springs, United States;

IAC-25.D1.5.4
AN ADVANCED SIMULATION FRAMEWORK FOR SAIL-DRIVEN SPACECRAFT DYNAMICS AND CONTROL
Prof. Jorge Pomares, University of Alicante, Alicante, Spain;

IAC-25.D1.5.5
APPLICATIONS OF DATA-BASED SYSTEM ENGINEERING PRINCIPLES TO THE SOFTWARE LIFECYCLE TRACKING DURING TESTING PROCEDURES ON SPACE SYSTEMS
Mr. Samuele Enzo, University of Padua, Padova, Italy;

IAC-25.D1.5.6
MODEL-BASED SYSTEMS ENGINEERING APPROACH IN CAPELLA FOR CONCEPT OF OPERATIONS AND OPERATING MODES: METHODOLOGY COMPARISON ACROSS SPACE SYSTEMS DOMAINS
Mr. Giacomo Luccisano, Politecnico di Torino, Torino, Italy;

IAC-25.D1.5.7
EVALUATING THE FEASIBILITY AND IMPACT OF MODEL-BASED SYSTEMS ENGINEERING IN A STUDENT-LED LUNAR ROVER TEAM
Mr. Arukshan Pavalachandran, The University of Sydney, Bungarribee, Australia;

IAC-25.D1.5.8
AGENTIC ARCADIA: FACILITATING ARCHITECTURAL DECISION MAKING IN SPACE MISSION DESIGN USING AGENTIC AI.
Mr. Shaun Kenyon, Starbound Space Solutions, Gold Coast, Australia;

IAC-25.D1.5.9
ADVANCING CUBESAT RELIABILITY: A MODEL-BASED SYSTEMS ENGINEERING APPROACH FOR FAULT-TOLERANT, REAL-TIME SOFTWARE
Mr. Moritz Heimbach, Julius Maximilians Universität Würzburg, Würzburg, Germany;

IAC-25.D1.5.10
DESIGN, DEVELOPMENT, FLIGHT VALIDATION AND MATHEMATICAL MODELING OF 100N CLASS GN2 GAS ROLL CONTROL THRUSTER FOR LAUNCH VEHICLE APPLICATION
Mr. GAURAV SHARMA, Indian Space Research Organization (ISRO), Liquid Propulsion Systems Centre (LPSC), KERALA, India;

IAC-25.D1.5.11
POPULATING SPACE SYSTEM MODELS FROM DESIGN DOCUMENTS USING LARGE LANGUAGE MODELS
Dr. Johannes Norheim, University of Strathclyde, Glasgow, United Kingdom;

IAC-25.D1.5.12
A MODEL-BASED SYSTEMS ENGINEERING FRAMEWORK FOR SITE-DIVERSE OPTICAL GROUND STATION NETWORK
Mr. Deep Anand, Astrogate Labs, New Delhi, India;

D1.6. Systems Engineering Approaches, Processes and Methods

October 3 2025, 10:15 — Room C3.5

Co-Chair(s): Geilson Loureiro, Instituto Nacional de Pesquisas Espaciais (INPE), Brazil; Timothy Cichan, Lockheed Martin Corporation, United States;
Rapporteur(s): Norbert Frischauf, TU Graz, Austria;

IAC-25.D1.6.1
SHAPING THE FUTURE OF NASA SYSTEMS ENGINEERING: LEVERAGING VOICE OF THE CUSTOMER INSIGHTS FOR AGILITY, INNOVATION, AND PARTNERSHIP
Dr. Jackelynne Silva-Martinez, NASA, Houston, United States;

IAC-25.D1.6.2
SPACECRAFT SYSTEMS ENGINEERING APPROACH ON EMIRATES MISSION TO THE ASTEROID BELT (EMA)
Ms. Razan Alkaabi, UAE Space Agency, Abu Dhabi, United Arab Emirates;

IAC-25.D1.6.3
A SYSTEMS ENGINEERING APPROACH TO SATELLITE DATA BUDGETING
Dr. Christie Maddock, University of Strathclyde, Glasgow, United Kingdom;

IAC-25.D1.6.4
ROSELLA SYSTEM: A SYSTEMS ENGINEERING APPROACH TO DEVELOPING A DETECTOR CONTROLLER SOLUTION FOR SMALL SATELLITE MISSIONS
Ms. Hana Benhizia, Advanced Instrumentation and Technology Centre - ANU, Australian Capital Territory, Australia;

IAC-25.D1.6.5
VALIDATING THE INTEGRATION OF SAT813 SPACECRAFT SUBSYSTEMS: A COMPREHENSIVE OVERVIEW OF PLATFORM TESTING AND VALIDATION PROCEDURES
Mr. Mohammed Altamimi, The National Space Science and Technology Center (NSSTC), Alain, United Arab Emirates;

IAC-25.D1.6.6
GENERATING HIGH-QUALITY REQUIREMENTS FOR SPACE MISSIONS USING RAG AND KNOWLEDGE GRAPHS
Mr. Shaun Kenyon, Starbound Space Solutions, Gold Coast, Australia;

IAC-25.D1.6.7
A MULTIPARAMETRIC PROGRAMMING APPROACH TO SENSITIVITY ANALYSES OF EXPLORATION CAMPAIGN INFRASTRUCTURE DEPLOYMENT AND LOGISTICS
Mr. Nick Gollins, Georgia Institute of Technology, Atlanta, United States;

IAC-25.D1.6.8
A NEW SATELLITE LAYOUT OPTIMIZATION DESIGN APPROACH BASED ON GENETIC ALGORITHMS
Dr. Salvatore Dario Dell'Aquila, Nurjana Technologies, Elmas, Italy;

IAC-25.D1.6.9
VOLUME GROWTH ANALYSIS TOOL FOR SPACECRAFT DESIGN WITHIN A PHASE 0 CDF STUDY
Mr. Salvatore Vivenzio, Starion Group, Noordwijk, The Netherlands;

IAC-25.D1.6.10
UNCERTAINTY PROPAGATION THROUGH A SIZING AND COSTING TOOL FOR LUNAR LANDER MISSIONS
Mr. Conall de Paor, ISAE-Supaero University of Toulouse, Toulouse, France;

IAC-25.D1.6.11
SET-BASED DESIGN FOR LUNAR LANDER DEVELOPMENT: A STRUCTURED APPROACH TO EARLY-STAGE SPACE SYSTEMS ENGINEERING
Ms. Cecilia Filosa, ISAE-Supaero University of Toulouse, Toulouse, France; Ms. Maria Pereira Gaspar, ISAE-Supaero University of Toulouse, Toulouse, France;

IAC-25.D1.6.12
APPLIED ONTOLOGY DEVELOPMENT OF WIRING HARNESS OF SPACE SYSTEM
Mr. Guilherme Venticinque, Instituto Nacional de Pesquisas Espaciais (INPE), São José dos Campos, Brazil;

IAC-25.D1.6.13
AI IN ORBIT: MANAGING RISK, RELIABILITY, AND INNOVATION IN SPACE SYSTEMS
Prof. Peter Moar, Swinburne University of Technology, Hawthorn, Australia;

IAC-25.D1.6.14
AIMING AT A COMPREHENSIVE SUSTAINABILITY IMPACT ANALYSIS FOR SPACE ACTIVITIES OVER ALL PHASES
Ms. Livia Ordonez Valles, German Aerospace Center (DLR), Bremen, Germany;

IAC-25.D1.6.15 (unconfirmed)
A COMPREHENSIVE OVERVIEW AT THE ITALIAN SPACE AGENCY'S CONCURRENT ENGINEERING FACILITY
Dr. Luigi Ansalone, Italian Space Agency (ASI), Rome, Italy;

D1.7. Lessons Learned in Space Systems

October 3 2025, 13:45 — Room C3.5

Co-Chair(s): Yoshihisa Arikawa, Japan Aerospace Exploration Agency (JAXA), Japan; Giuseppe Guidotti, Deimos Space SLU, Italy;
Rapporteur(s): Dapeng Wang, China HEAD Aerospace Technology Co., China; Hamed Gamal, Mynaric, Germany;

IAC-25.D1.7.1 (unconfirmed)
GEOMETRIC BIAS CALIBRATION OF THE INSTRUMENTS LINE-OF-SIGHT FRAME AND ITS APPLICATION IN SCIENTIFIC OBSERVATION IN THE SVOM MISSION
Ms. Qingyun Mao, Innovation Academy for Microsatellites, Chinese Academy of Sciences, Shanghai, China;

IAC-25.D1.7.2
INFORMING LARGE SPACE SCIENCE MISSIONS FROM SMALLSAT/CLASS-D MISSION LESSONS LEARNED
Dr. Charles Norton, Jet Propulsion Laboratory - California Institute of Technology, Pasadena, United States;

IAC-25.D1.7.3 (unconfirmed)
LESSONS LEARNED AND RISK POSTURE IN SHIELDED HARNESS DESIGN FOR SMALL SATELLITES: BALANCING EMI PERFORMANCE, WEIGHT, AND RELIABILITY
Mr. Carlos Nunez, Planet Labs Inc., San Francisco, United States;

IAC-25.D1.7.4
LESSONS LEARNED FROM EARTHCARE/CPR DEVELOPMENT AND IN-ORBIT OPERATIONS
Mr. Kenta MARUYAMA, Japan Aerospace Exploration Agency (JAXA), Ibaraki, Japan;

IAC-25.D1.7.6
LESSONS LEARNED IN SYSTEMS ENGINEERING WITH RESPECT TO PROGRAMMATICS (COST AND SCHEDULE)
Mr. Charles Baker, NASA Goddard Space Flight Center (USRA), Greenbelt, United States;

IAC-25.D1.7.7
PROBA-3 PRECISE FORMATION FLYING: AN IN-FLIGHT REALITY NOW
Mr. Daniel Serrano, SENER Ingenieria y Sistemas, S.A., Tres Cantos, Spain;

IAC-25.D1.7.8
TAILORED CAPACITY BUILDING FOR CUBESAT INNOVATION: LESSONS LEARNED FROM NATIONAL PROGRAMS AND PATHWAYS TO SPACE ACCESS FOR ALL
Ms. Moervica Anushree Prashant, University of Toronto Aerospace Team (UTAT), Toronto, Canada;

IAC-25.D1.7.9
THE RESILIENCE OF THE DEVELOPMENT PROCESS: STRUCTURAL DESIGN, OPTIMIZATION, MANUFACTURING, AND TESTING OF A 1U CUBESAT STRUCTURE FOR MORAZÁN SATELLITE (MRZ-SAT) IN A NON-SPACEFARING COUNTRY
Mr. Reynel Josué Galindo Rosales, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-25.D1.7.10
THE STUDY ON HIGH LINKAGE OF NEWLY DEVELOPED SPACE KEY TECHNOLOGY
Dr. SANGSOON YONG, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

D1.8. D1 - Extra session

October 1 2025, 15:00 — Room C3.1

Co-Chair(s): Matteo Emanuelli, Airbus Defence and Space, Germany; Jill Prince, National Aeronautics and Space Administration (NASA), United States; Mamatha Maheshwarappa, UK Space Agency, United Kingdom;

IAC-25.D1.8.1
AI-DRIVEN APPROACHES TO ADAPTIVE DERATING FOR SPACE SYSTEMS
Ms. Divya Rao, Carnegie Mellon University, Pittsburgh, United States;

IAC-25.D1.8.2
FOCAL PLANE ASSEMBLY FOR PLATO MISSION
Mr. Miriam Pajas Sanz, Instituto Nacional de Tecnica Aeroespacial (INTA), Madrid, Spain;

IAC-25.D1.8.3
FOCAL PLANE ASSEMBLY FOR PLATO 2.0 CAMERAS: VIBRATION TEST RESULTS COMPARISON IN SERIALLY PRODUCED FLIGHT MODELS
Mr. Andrés Manjón, Instituto Nacional de Tecnica Aeroespacial (INTA), Torrejón de Ardoz, Spain;

IAC-25.D1.8.4
STRUCTURAL ANALYSIS AND OPTIMISATION OF THE MACRO INSTRUMENT ONBOARD M-MATISSE MISSION
Mr. Manohar Karnal, Universität der Bundeswehr München, Munich, Germany;

IAC-25.D1.8.5
THERMAL DYNAMICS ANALYSIS AND DESIGN ADAPTATIONS OF THE MACRO INSTRUMENT FOR THE M-MATISSE MISSION: APPROACHES IN PHASE A STUDY
Mr. Andrei Constantin, Universität der Bundeswehr München, München, Germany;

IAC-25.D1.8.6
OPTIMIZING POINTING ACCURACY FOR LASER INTER-SATELLITE LINKS IN LEO CONSTELLATIONS USING ADAPTIVE BEAM STEERING
Mr. Yaqoob Alqassab, Bahrain Space Agency (BSA), Hidd, Bahrain;

IAC-25.D1.8.7
TOWARDS AUTOROTATION LANDERS FOR COMMUNICATION AND SENSOR NETWORKS ON MARS
Mr. Clemens Riegler, Julius Maximilians Universität Würzburg, Würzburg, Germany;

IAC-25.D1.8.8
DYNAMICS AND ANALYSIS OF LARGE SPATIAL STRUCTURES ASSISTED BY STAY-CABLE
Mr. Zhan Wang, Beijing Institute of Technology (BIT), Beijing, China;

IAC-25.D1.8.9
DEEP POSE UNCERTAINTY LEARNING BASED ON A LOG LIKELIHOOD LOSS FOR LOW-QUALITY SATELLITE IMAGES
Dr. Zilong Chen, Beihang University, Beijing, China;

IAC-25.D1.8.11
CHALLENGES AND LESSONS LEARNED OF ACCOMPLISHING THE ROVER LOCOMOTION SOFTWARE LOCO
Ms. Juliane Skibbe, German Aerospace Center (DLR), Wessling, Germany;

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

September 29 2025, 15:30 — Room C4.1

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-25.D2.1.1
AN ASSESSMENT OF AUSTRALIAN LAUNCH CAPABILITIES AND THE NEED FOR SOVEREIGN SPACE ACCESS
Mr. Ravijay Gampala, Australian Government, RAAF Edinburgh, Australia; Mr. Khuong Nguyen, Australian Government, Pennington, Australia;

IAC-25.D2.1.2
H3 UPGRADE PROGRESS AND R&D FOR NEXT GENERATION LAUNCH VEHICLE
Dr. Shoyo Hyodo, Mitsubishi Heavy Industries, Ltd., Nagoya city, Japan;

IAC-25.D2.1.3
MEDIUM LAUNCH VEHICLE: EXPANDING ACCESS TO SPACE
Mr. Aaron Prescott, Firefly Aerospace Inc., Seattle, United States;

IAC-25.D2.1.4
ARIANE 6: EXPLOITATION RAMP-UP PHASE AND EVOLUTIONS
Ms. Sylvie MARZOCCHI POLIZZI, ArianeGroup, Les Mureaux, France;

IAC-25.D2.1.5
ESTIMATION OF FLIGHT PARAMETERS OF THE FIRST STAGE OF THE ELECTRON LAUNCH VEHICLE BASED ON OPEN DATA
Dr. Dmitriy Grishko, Bauman Moscow State Technical University, Moscow, Russian Federation;

IAC-25.D2.1.6
DESIGN AND TEST OF A MULTI-LAYER INSULATION INTEGRATED HEAT SHIELD FOR THE SECOND-STAGE BASE OF A REUSABLE LAUNCH VEHICLE
Mr. Ning Dongpo, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-25.D2.1.7
SMALL LAUNCHERS - 2025 SURVEY AND COMPETITIVE LANDSCAPE
Mr. Erik Kulu, Tallinn, Estonia;

IAC-25.D2.1.8
THE TECHNOLOGICAL INNOVATIONS AND DEVELOPMENT PROSPECTS OF KINETICA-2 LAUNCH VEHICLE
Mr. Ye Wang, CAS Space, Beijing, China;

IAC-25.D2.1.9
YQ-1 REUSABLE LAUNCH VEHICLE DEVELOPMENT: LOX/LCH4 PROPULSION SYSTEM INTEGRATION WITH TOWER-BASED CAPTURE MECHANISM FOR LEO CONSTELLATION DEPLOYMENT
Dr. Lu Tanwei, Shanghai Cosmoleap Aerospace Science and Technology Co., Ltd., Beijing, China;

IAC-25.D2.1.10
A REUSABLE AND RECONFIGURABLE HEAVY LAUNCHER FOR SPACE CENTRE AUSTRALIA
Mr. Adarsh Rajguru, University of Southern California, Altadena, United States;

D2.2. Launch Services, Missions, Operations, and Facilities

September 30 2025, 15:00 — Room C4.1

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-25.D2.2.1
GLOBAL LAUNCH SERVICE INDUSTRY LANDSCAPE AND OPPORTUNITIES: A NETWORK ANALYSIS APPROACH
Mr. Jung Ho Park, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

IAC-25.D2.2.2
MOBILE MISSION OPERATIONS: A NEW AUSTRALIAN FACILITY SUPPORTING ACCESS TO SPACE IN REMOTE AND REGIONAL LOCATIONS
Mr. Craig James, Commonwealth Scientific and Industrial Research Organisation (CSIRO), St Lucia, Australia;

IAC-25.D2.2.3
LAUNCHERSCANNER: AN INNOVATIVE APPROACH TO MATCHMAKING PAYLOADS AND LAUNCH SYSTEMS
Mr. David Perillo, Politecnico di Milano, Milano, Italy;

IAC-25.D2.2.4
GROUND FACILITIES AND OPERATIONS FOR H3 LAUNCH VEHICLE AT TANEGASHIMA SPACE CENTER
Mr. Hideto Kawashima, JAXA, Tsukuba, Japan;

IAC-25.D2.2.5
DEVELOPMENT AND RESULTS OF THE MOVABLE LAUNCHER 5 (ML5) FOR THE H3 ROCKET
Mr. Wataru Sarae, Japan Aerospace Exploration Agency (JAXA), Ibaraki, Japan;

IAC-25.D2.2.6
ENABLING LAUNCH MANIFEST AGILITY
Mr. Akhil Gujral, The Aerospace Corporation, El Segundo, United States;

IAC-25.D2.2.7
RESEARCH AND ENGINEERING EXPERIMENTAL APPLICATION OF LIQUID OXYGEN/LIQUID METHANE PARALLEL FULL SUBCOOLING FUELLING PROCESS
Mr. Yawei Xu, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-25.D2.2.8
TWINPAD: REAL-TIME VALIDATION OF DESIGNS AND CONTROL SYSTEMS FOR LAUNCH PADS AND ROCKET ENGINE TEST FACILITIES
Mr. Fadi Hajar, Palaiseau, France;

IAC-25.D2.2.9
A HYBRID DSS FOR LAUNCH PAD MAINTENANCE OPTIMIZATION USING Z-AHP AND Z-TOPSIS
Mr. Alish Nazarov, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.D2.2.10
OPTIMIZING MOBILE LAUNCH PLATFORM MAINTENANCE VIA A DSS INTEGRATING Z-DEMATEL AND Z-VIKOR
Mr. Alish Nazarov, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.D2.2.11
AN INTEGRATED NETWORK FOR COMMERCIAL SPACEPORTS: ENHANCING GLOBAL SPACE ACCESS AND COLLABORATION
Ms. Wanjiku Chebet Kanjumba, University of Florida, Vicillion, Gainesville, United States;

IAC-25.D2.2.12
OPTIMIZING AND ENHANCING COMMERCIAL CONSTELLATIONS: COST-EFFECTIVE DEPLOYMENT, CONFIGURATION, AND LIFECYCLE MANAGEMENT WITH RESPONSIVE LAUNCH TECHNOLOGIES
Mr. Asmamaw Esayas, Space Generation Advisory Council (SGAC), vienna, Austria; Mr. Mikayel Grigoryan, American University of Armenia, Yerevan, Armenia; Mr. Jesse Mikelberg, Reaction Dynamics, Canada, Canada; Mr. Chad English, Reaction Dynamics, Canada, Canada;

D2.3. Upper Stages, Space Transfer, Entry & Landing Systems

September 30 2025, 10:15 — Room C4.1

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-25.D2.3.1 (unconfirmed)
PHASE D OF THE SPACE RIDER FLIGHT SEGMENT: ADVANCING FROM COMPREHENSIVE TESTING TO FLIGHT-READY HARDWARE
Mr. Aldo Scaccia, ESA - European Space Agency, Frascati, Italy;

IAC-25.D2.3.2
TECHNICAL CHARACTERISTICS OF FUTURE IN-SPACE-TRANSPORTATION INFRASTRUCTURES
Dr. Martin Sippel, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), BREMEN, Germany;

IAC-25.D2.3.4
AERODYNAMIC ANGLE CONTROL OF FLEXIBLE PAYLOAD FAIRING WITH RCS-ONLY
Mr. Victor Covasan, Deimos Space SLU, Tres Cantos, Spain;

IAC-25.D2.3.5
IN-ORBIT REUSABLE KICK-STAGE ENABLED BY A SUSTAINABLE SPACE MOBILITY SOLUTION HARVESTING SOLAR ENERGY FOR ONBOARD FUEL PRODUCTION
Mr. Riccardo Cambertoni, Delft University of Technology (TU Delft), Delft, The Netherlands;

IAC-25.D2.3.6
DESIGN OF A REUSABLE SUBORBITAL ROCKET PAYLOAD MODULE BASED ON PARACHUTE RECOVERY TECHNOLOGY
Mr. Hang Hu, CAS Space, Beijing, China;

IAC-25.D2.3.7
AERODYNAMIC AND AEROTHERMODYNAMIC INVESTIGATION OF (UN)DEFORMED INFLATABLE HEAT SHIELD FOR UPPER-STAGE RECOVERY - EFESTO 1&2 AND ICARUS PROJECTS
Dr. Ysolde PREVEREAUD, ONERA - The French Aerospace Lab, Toulouse, France;

IAC-25.D2.3.8
THE ACHIEVEMENTS OF THE ICARUS PROJECT: THE EUROPEAN FLIGHT-DEMONSTRATION INITIATIVE TO ENABLE INFLATABLE HEAT SHIELDS TOWARD REUSABLE LAUNCHERS' APPLICATIONS.
Dr. Ysolde PREVEREAUD, ONERA - The French Aerospace Lab, Toulouse, France;

IAC-25.D2.3.9
AEROCAPTURE INNOVATION FOR EFFICIENT MARS ORBITAL INSERTION: ENHANCING MISSION CAPABILITIES
Mr. Rodrigo Augusto Martinez Chavez, University of California, Berkeley, Berkeley, United States;

IAC-25.D2.3.10
NUMERICAL ANALYSIS OF RETRO-PROPULSION FLOW CHARACTERISTICS BASED ON LOW-ALTITUDE DECENT MACH NUMBERS
Dr. Chaehyoung Kim, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

IAC-25.D2.3.11
EB-FVM ANALYSIS OF ORION CREW CAPSULE ATMOSPHERIC RE-ENTRY DYNAMICS
Mr. Oluwatosin Kolade, Obafemi Awolowo University, Lagos, Nigeria;

IAC-25.D2.3.12
NUMERICAL ANALYSIS OF A BLUNT NOSE CONE WITH PERFORATED AERODISK FOR EARTH'S RE-ENTRY
Dr. Rajesh Yadav, G D Goenka University, GURUGRAM, India;

D2.4. Future Space Transportation Systems

October 1 2025, 10:15 — Room C4.1

Co-Chair(s): José Gavira Izquierdo, International Space Consultant, The Netherlands; Pier Michele Roviera, SAFRAN, United States;
Rapporteur(s): Nicolas Bérend, ONERA - The French Aerospace Lab, France; Geovian Stower, Kenya Space Agency (KSA), Kenya;

IAC-25.D2.4.1
EUROPEAN SUPER HEAVY REUSABLE LAUNCH SYSTEM PATHFINDER ACTIVITIES STATUS
Mr. Giorgio Tumino, European Space Agency (ESA), Paris, France;

IAC-25.D2.4.2 (unconfirmed)
CONCEPTUAL DESIGN OF A MULTIFUNCTIONAL MODULAR LUNAR TRANSPORTATION SYSTEM
Mr. Xiyu Wang, Tsinghua University, Beijing, China;

IAC-25.D2.4.3
SUPER HEAVY-LIFT LAUNCH TECHNOLOGIES AND THEIR IMPACT ON THE SPACE SECTOR
Mr. Akhil Gujral, The Aerospace Corporation, El Segundo, United States;

IAC-25.D2.4.4
PRELIMINARY ANALYSIS OF A DREAM CHASER MISSION FROM THE US TO AUSTRALIA
Mr. Eduardo Trifoni, Australian National University (ANU), Weston Creek, Australia;

IAC-25.D2.4.6
ESA SPACE RIDER INNOVATION FOR REUSABLE UNMANNED IN-ORBIT SERVICE
Mr. Fabio Caramelli, European Space Agency (ESA), Frascati (RM), Italy;

IAC-25.D2.4.7
THE CASE FOR OTV-ENABLED DEPOTS AND SHUTTLES IN A REFUELLABLE SPACE ECONOMY
Mr. Daniel Faber, Orbit Fab Ltd, Santa Clara, United States;

D2.5. Technologies for Future Space Transportation Systems

October 1 2025, 15:00 — Room C4.1

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-25.D2.5.1
A DATA-DRIVEN ONLINE AUTONOMOUS FLIGHT DECISION-MAKING METHOD FOR REUSABLE LAUNCH VEHICLE
Dr. Chunlin Gong, Northwestern Polytechnical University NPU, Xi'an, China;

IAC-25.D2.5.2
ON THE ROAD TO EUROPEAN REUSABLE LAUNCHERS
Mr. Franck Koebel, ArianeGroup, Les Mureaux Cedex, France;

IAC-25.D2.5.3
HYPERDART: ADVANCEMENTS IN RESEARCH AND DEVELOPMENT OF FAST AEROSPACE'S HYPERSONIC TECHNOLOGY FOR ITS SMALLSAT AIR-LAUNCHER
Mr. Alessandro Castelvetri, FAST Aerospace Srl, Milano, Italy;

IAC-25.D2.5.4
RESEARCH ON STRUCTURE-TRAJECTORY COUPLED OPTIMIZATION METHOD FOR REUSABLE AIRCRAFT
Dr. Chunlin Gong, Northwestern Polytechnical University NPU, Xi'an, China;

IAC-25.D2.5.5
UNCERTAINTY ESTIMATION IN THE AERODYNAMIC DATABASE OF REFEX USING BAYESIAN INFERENCE
Mr. Sven Krummen, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Bremen, Germany;

IAC-25.D2.5.6
OPTIMIZING SPACE TRANSPORTATION EFFICIENCY WITH AI-DRIVEN AUTONOMOUS NAVIGATION.
Mr. Abhijeet Thore, Ahilyanagar, India;

IAC-25.D2.5.7
NUMERICAL AND EXPERIMENTAL ANALYSIS OF GRID FIN AERODYNAMIC PERFORMANCE FOR CHINA'S NEXT GENERATION LOX/LCH4 REUSABLE LAUNCH VEHICLE "ZQ-3"
Dr. Qian Wan, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-25.D2.5.8
ADVANCED TECHNOLOGIES FOR FUTURE SPACE TRANSPORTATION SYSTEMS: ENABLING NEXT-GENERATION ACCESS TO SPACE
Mr. Siddhant Lal, ghaziabad, India;

IAC-25.D2.5.9
RESEARCH ON A MULTI-STAGE GUIDANCE METHOD FOR AEROSPACE PLANE EMERGENCY RETURN DURING ASCENT PHASE
Mr. AOXUAN WU, Northwestern Polytechnical University, Xi'an, China;

D2.6. Future Space Transportation Systems Verification and In-Flight Experimentation

October 2 2025, 10:15 — Room C4.1

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-25.D2.6.1
THE EXPLORATION COMPANY'S MISSION POSSIBLE FLIGHT
Mr. Mark Kirasich, The Exploration Company GmbH, Houston, United States;

IAC-25.D2.6.2
REAL-TIME SIMULATION SYSTEM AUTOMATED INTERACTION ARCHITECTURE: DESIGN AND IMPLEMENTATION
Mr. Jingyu Pei, CAS Space, BeiJing, China;

IAC-25.D2.6.3
MULTI-PHASE LANDING TRAJECTORY OPTIMIZATION FOR STARSHIP-LIKE VEHICLES
Dr. Cong Zhou, Zhejiang University, Hangzhou, China;

IAC-25.D2.6.4
TOWARDS A REFUELLING SERVICE FOR TELECOMMUNICATIONS SPACECRAFT THROUGH AN ORBITAL DEVELOPMENT PLAN
Mr. Sebastian Hill, Orbit Fab Ltd, Oxford, United Kingdom;

IAC-25.D2.6.5
THE REUSABILITY FLIGHT EXPERIMENT – REFEX: DETAILS OF THE PROTO-FLIGHT-MODEL INTEGRATION CAMPAIGN AND A FINAL UPDATE PRIOR TO FLIGHT
Dr. Peter Rickmers, German Aerospace Center (DLR), Bremen, Bremen, Germany;

IAC-25.D2.6.6
VESTA: REUSABLE TECHNOLOGY DEMONSTRATOR
Mr. DONGJUN LEE, Hanwha Aerospace, Daejeon, Korea, Republic of;

IAC-25.D2.6.7
STUDY ON REBURNING PHENOMENON OF THE BOTTOM OF A LIQUID ROCKET DURING ITS ASCENT PHASE
Mr. Hanmo Shen, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-25.D2.6.8
ACCELERATED FLIGHT VERIFICATION FOR NEXT-GENERATION PROPULSION AND LAUNCH SYSTEMS
Mr. Karam Safarli, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.D2.6.9
IN-FLIGHT DEMONSTRATION OF GUIDANCE, NAVIGATION, AND CONTROL SYSTEM FOR PINPOINT-LANDING OF REUSABLE LAUNCH VEHICLES
Mr. Qingzhong Gan, Shanghai Aerospace Control Technology Institute (SACTI), Shanghai Academy of Spaceflight Technology (SAST), Shanghai, China;

D2.7. Suborbital Rockets and Small Launchers: Concepts and Operations including Student Rocketry

October 2 2025, 15:00 — Room C4.1

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-25.D2.7.1
SMALLSATS BY THE NUMBERS 2024: GROWING SMALLSAT ACTIVITY AND ITS IMPLICATIONS FOR THE SMALL LAUNCH
Ms. Carissa Christensen, Bryce Space and Technology, Alexandria VA, United States;

IAC-25.D2.7.2
DESIGN AND OPTIMIZATION OF PROPELLER-BASED THRUST VECTOR CONTROL MECHANISM USING PID AND SENSOR FUSION TECHNIQUES
Ms. Muntaha Majed Chowdhury, BRAC University, Dhaka, Bangladesh;

IAC-25.D2.7.3
HARNESSING SUBORBITAL CAPABILITIES: KEY TAKEAWAYS FROM THE ILR-33 AMBER 2K TEST FLIGHT
Mr. Michal Pakosz, Łukasiewicz Research Network – Institute of Aviation (ILOT), Warsaw, Poland;

IAC-25.D2.7.4
MULTISTAGE ROCKET: TECHNOLOGICAL VALIDATION FOR SPACE ACCESS IN MEXICO
Mr. Julio Alberto Cardenas Hernandez, Universidad Nacional Autónoma de México (UNAM), Mexico City, Mexico;

IAC-25.D2.7.5
PREDICTING THE FLIGHT PATHS AND APOGEE OF A SOUNDING ROCKET
Ms. Tamzin Magyar, RMIT University (Royal Melbourne Institute of Technology), Nilma, Australia;

IAC-25.D2.7.6
SYSTEM-LEVEL OPTIMIZATION AND VALIDATION OF A SMALL SUBORBITAL LAUNCH VEHICLE WITH ROCKET AND JET PROPULSION
Mr. Shinhyung Kim, Chosun University, Gwangju, Korea, Republic of;

IAC-25.D2.7.7
THE ALDUINA HYBRID UPPER STAGE: PROPULSION SYSTEM DESIGN AND SUPPORT INFRASTRUCTURE
Mr. Andrija Dabanovic, German Aerospace Center (DLR), Braunschweig, Germany;

IAC-25.D2.7.8
PIONEERING THE SKIES: THE FUTURE OF SUBORBITAL ROCKETS AND SMALL LAUNCHERS
Ms. Raneem Alazzam, Jordan University of Science & Technology, Irbid, Jordan;

IAC-25.D2.7.9
FLEXIABLE NANO LAUNCH VEHICLE SYSTEM
Mr. Mehmet Fatih Engin, University of Turkish Aeronautical Association, Ankara, Türkiye;

IAC-25.D2.7.10
ADVANCING SUBORBITAL ROCKETS AND SMALL LAUNCHERS: CONCEPTS, OPERATIONS, AND STUDENT ROCKETRY
Mr. Dheerajprabhu S, Chennai, India;

D2.8. In-Space Transportation Solutions and Space Logistics

October 3 2025, 10:15 — Room C4.1

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), Brazil;

IAC-25.D2.8.1
INTRODUCING THE EXPLORATION COMPANY'S SPACECRAFT NYX EARTH
Dr. Erika Wagner, The Exploration Company GmbH, Seattle, United States;

IAC-25.D2.8.3
ASSURING SUCCESS OF SERVICING MISSIONS DRIVEN BY COMMERCIAL CAPABILITIES
Mr. Akhil Gujral, The Aerospace Corporation, El Segundo, United States;

IAC-25.D2.8.4
AUTONOMOUS CLUSTER AGGREGATION FOR LEO SATELLITE RECOVERY VIA DISTRIBUTED CONSENSUS-BASED LAMBERT TRANSFER METHOD
Mr. Shalin Ye, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-25.D2.8.5
NASA DEEP SPACE LOGISTICS ORBITAL TRANSFER VEHICLES FOR RIDESHARE OPPORTUNITIES TO THE MOON, MARS AND BEYOND
Mr. Benjamin Asher, Merritt Island, United States;

IAC-25.D2.8.6
ON-ORBIT REFUELING DEMONSTRATION TO SUPPORT EXPANDED MISSION OPERATIONS
Mr. Daniel Faber, Orbit Fab Ltd, Santa Clara, United States;

IAC-25.D2.8.7
ORBITAL AND SURFACE SUPPLY CHAIN COORDINATION FOR LARGE-SCALE SPACE INFRASTRUCTURE DEVELOPMENT
Ms. HUDA MOHAMMAD, North Carolina State University, Bangalore, United States;

IAC-25.D2.8.8
REPURPOSING SPENT ROCKET STAGES FOR IN-ORBIT PROPELLANT STORAGE: A PATH TO SUSTAINABLE SPACE OPERATIONS
Ms. Prisha Asher, Space Generation Advisory Council (SGAC), Thane, India;

IAC-25.D2.8.9
ROBUST DECISION MAKING FOR TECHNOLOGY ROADMAPPING OF ORBITAL TRANSFER VEHICLES
Dr. Shunichiro Nomura, University of Tokyo, Tokyo, Japan;

IAC-25.D2.8.10
SUSTAINABLE EARTH-MOON LOGISTICS FOR FUTURE SURFACE OPERATIONS
Mr. Kimonas Poyiadjis, Cranfield University, Cranfield, United Kingdom;

IAC-25.D2.8.11
CONVERTING WATER TO PERFORMANT PROPELLANTS FOR IN-SPACE PROPULSION: THE GREENSWAP PROJECT
Dr. Angelo Pasini, University of Pisa, Pisa, Italy;

IAC-25.D2.8.12
LEVERAGING MULTIMODAL PROPULSION FOR TIME-CONSTRAINED FUEL-OPTIMAL MULTI-VEHICLE TRANSPORT ARCHITECTURES
Mr. Shanmurugan Selvamurugan, Georgia Institute of Technology, San Jose, United States;

D2.9-D6.2. Sustainable Approaches and Impact of Space Transportation Solutions on Earth + Space Environment and on General Safety

October 3 2025, 13:45 — Room C4.1

Co-Chair(s): Shana Diez, SpaceX, United States; Charles E. Cockrell Jr., National Aeronautics and Space Administration (NASA), United States;
Rapporteur(s): Francesco Santoro, Altec S.p.A., Italy;

IAC-25.D2.9-D6.2.1
ECO-DESIGN IN SPACECRAFT DEVELOPMENT - ENVIRONMENTAL CONSIDERATIONS FOR NYX
Ms. Dana Baki, The Exploration Company GmbH, Dubai, United Arab Emirates;

IAC-25.D2.9-D6.2.2
ASSESSING THE ENVIRONMENTAL IMPACTS OF REUSABILITY AND THE STARSHIP SPACE TRANSPORTATION SYSTEM
Ms. Shana Diez, SpaceX, Brownsville, TX, United States;

IAC-25.D2.9-D6.2.3
STATE OF PLAY OF ECODESIGN PRACTICES WITHIN THE EUROPEAN SPACE SECTOR. A SURVEY.
Mr. Chanjeev Jeyecumar, University of Stuttgart, Kirchheim unter Teck, Germany;

IAC-25.D2.9-D6.2.4
DLR GLOBAL LAUNCH EMISSION INVENTORY 2024: OVERVIEW AND INITIAL RESULTS
Mr. Moritz Herberhold, DLR (German Aerospace Center), Bremen, Germany;

IAC-25.D2.9-D6.2.5 (unconfirmed)
BALANCING SPACEPORT AMBITIONS WITH REGIONAL ECONOMIC AND ENVIRONMENTAL CONCERNS
Ms. Karen Jones, The Aerospace Corporation, Arlington, United States;

IAC-25.D2.9-D6.2.6
PROPULSIVE AND EMISSION MODELLING OF A LIQUID ROCKET ENGINE TO SUPPORT ENVIRONMENTAL IMPACT ESTIMATION IN CONCEPTUAL DESIGN
Mr. Fabrizio Borgna, Politecnico di Torino, Turin, Italy;

IAC-25.D2.9-D6.2.7
UNDERSTANDING THE ATMOSPHERIC EFFECTS OF SPACECRAFT RE-ENTRY
Prof. Kai-Uwe Schrogl, International Institute of Space Law (IISL), Paris, France;

IAC-25.D2.9-D6.2.8
ADVANCING LIFE CYCLE ASSESSMENT AND ECODESIGN FOR SUSTAINABLE SPACE TRANSPORTATION: LESSONS LEARNED, INDUSTRY COLLABORATION, AND THE PATH FORWARD
Prof. Kai-Uwe Schrogl, International Institute of Space Law (IISL), Paris, France;

IAC-25.D2.9-D6.2.9 (unconfirmed)
MITIGATING ENVIRONMENTAL IMPACT OF LAUNCH VEHICLES THROUGH PRELIMINARY SYSTEM DESIGN STAGING OPTIMIZATION
Mr. Guillermo J. Dominguez Calabuig, Technische Universität Dresden (DTU), Auckland, New Zealand;

D3. 23rd 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 1 2025, 10:15 — Parkside Pre-Function

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-25.D3.1.1
NOVEL BUILDING BLOCKS FOR CIS-LUNAR INFRASTRUCTURE: SOLVING THE CHICKEN-AND-THE-EGG CONUNDRUM
Mr. John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, SANTA MARIA, United States;

IAC-25.D3.1.2
ARCHITECTING THE FUTURE OF SPACE SYSTEMS: MODULARITY EVOLUTION IN SATELLITE DESIGN
Ms. Victoria Krivova, Politecnico di Milano, Milano, Italy;

IAC-25.D3.1.3
MANNED MARS MISSION DESIGN AND ISRU PROPELLANT PRODUCTION SYSTEM ARCHITECTURE: A FEASIBILITY STUDY
Ms. Chiara Leopardi Dittaiuti, ISAE-Supaero University of Toulouse, Roma, Italy;

IAC-25.D3.1.4
ZERO WASTE IRON PRODUCTION PROCESS ON MARS
Dr. Deddy Nababan, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Melbourne, Australia;

IAC-25.D3.1.5
BUILDING BLOCKS FOR THE DARK AGE EXPLORER (DEX): ENABLING A LUNAR RADIO TELESCOPE AND ADVANCING MULTI-PURPOSE INFRASTRUCTURE FOR SUSTAINABLE LUNAR PRESENCE
Dr. Jasmina Lazendic-Galloway, Eindhoven University of Technology, Eindhoven, The Netherlands;

IAC-25.D3.1.6
ADVANCING LARGE SPACE STRUCTURE ASSEMBLY: INSIGHTS FROM EARTH.
Mr. George Burns, The University of Bristol, Bristol, United Kingdom;

IAC-25.D3.1.7
DATA DRIVEN SPACE – ENABLING SYSTEMS AND ARCHITECTURES
Dr. Ayodele Periola, French south african Institute of Tehnology(F'SATI), Cape Town, South Africa;

IAC-25.D3.1.8
AURORA - LUNAR SURFACE POWER PLANT
Ms. Regina Amirova, University of Houston, Houston, United States;

IAC-25.D3.1.9
THE CONCEPT STUDY OF THE MOON ELECTRIC POWER SYSTEM
Dr. Koichi Ijichi, Japan Space Systems, Tokyo, Japan;

IAC-25.D3.1.11
BUILDING A SUSTAINABLE FRAMEWORK FOR LUNAR MISSIONS: A PROPOSAL FOR AN INTEGRATED DATA REPOSITORY
Mr. Hassan Abouseada, Egyptian Space Agency (EgSA), Cairo, Egypt;

IAC-25.D3.1.12
BEYOND EARTH'S BOUNDARIES: BLOCKCHAIN-DRIVEN AUTONOMY FOR SATELLITES AND PROBES
Mr. Harsh Kumar, Politecnico di Torino, Torino, Italy;

D3.2A. Systems and Infrastructures to Implement Sustainable Space Development and Settlement - Systems

October 1 2025, 15:00 — Parkside Pre-Function

Co-Chair(s): Frank Preud'homme, Redwire Space, Belgium; Gary Barnhard, National Space Society, United States; Julie Patarin-Jossec, Spartan Space, France;
Rapporteur(s): Paivi Jukola, Aalto University, Finland;

IAC-25.D3.2A.1
ADVANCING ADAPTIVE AUTONOMY THROUGH PROCEDURAL SPACE ENVIRONMENTS
Mr. Andrej Orsula, University of Luxembourg, Esch-Sur-Alzette, Luxembourg ;

IAC-25.D3.2A.2
CHARTING A PATH TO PERSISTENT LUNAR POWER
Dr. Francesco Bordi, The Aerospace Corporation, Arlington, United States;

IAC-25.D3.2A.3
COMBINED COMMUNICATION AND NAVIGATION SYSTEMS TO EXPLORE CELESTIAL BODIES
Prof. Giovanni B. Palmerini, Sapienza University of Rome, Rome, Italy;

IAC-25.D3.2A.4
DESIGN AND DEVELOPMENT OF A MULTIFUNCTIONAL AND SCALABLE MODULE FOR FUTURE HABITABILITY IN THE LUNAR REGION MARIUS HILLS
Ms. Karla Fabiola Mayo Sánchez, Mexico City, Mexico;

IAC-25.D3.2A.5
FEASIBILITY OF A SWARM OF HYBRID ROBOTS FOR THE CONSTRUCTION AND MAINTENANCE OF SUSTAINABLE INFRASTRUCTURES IN LUNAR AND MARTIAN LAVA TUNNELS
Ms. Yuritzi Elena Ordaz Huerta, CDMX, Mexico;

IAC-25.D3.2A.6
FROM LUNAR BASE TO LUNAR CITY: TRANSPORT SOLUTIONS FOR THE NEXT SPACE AGE
Mr. Denis Michael Acker, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-25.D3.2A.7
SUSTAINABLE LUNAR INFRASTRUCTURE DEVELOPMENT
Mr. Samuel Will, Warradale, Australia;

IAC-25.D3.2A.8
SUSTAINABLE LUNAR SETTLEMENT DESIGN: HOW SYSTEM ENGINEERING REQUIREMENTS DRIVE SUSTAINABLE LUNAR HABITAT DESIGN
Mr. Gary Barnhard, National Space Society, Cabin John, United States;

IAC-25.D3.2A.9
GANYMEDE'S CHALICE: A SYSTEM FOR LUNAR REGOLITH ICE WATER PURIFICATION
Mr. Philip Baldock, British Interplanetary Society, London, United Kingdom;

IAC-25.D3.2A.11
MAKING IN SITU RESOURCE UTILIZATION (ISRU) A REALITY ON THE MOON: THE INTERNATIONAL LUNAR RESOURCE PROSPECTING CAMPAIGN (ILRPC)
Prof. Clive Neal, University, Notre Dame, United States;

IAC-25.D3.2A.12
METHOD FOR COST OPTIMIZATION AND BREAKEVEN ANALYSIS OF A LUNAR IN-SITU RESOURCE UTILIZATION OXYGEN GENERATION SYSTEM AND SUPPORTING MISSION ARCHITECTURE.
Ms. Ireland Brown, Massachusetts Institute of Technology (MIT), Orlando, United States;

D3.2B. Systems and Infrastructures to Implement Sustainable Space Development and Settlement - Technologies

October 3 2025, 10:15 — Parkside Pre-Function

Co-Chair(s): Raymond G. Clinton, NASA Marshall Space Flight Center, United States;
Rapporteur(s): Gary Barnhard, National Space Society, United States;

IAC-25.D3.2B.1
PRESSURE-ENERGY-MOBILITY TRIFECTA: THREE KEY TECHNOLOGIES FOR LUNAR SETTLEMENT DEVELOPMENT
Ms. Xiangyi Lan, Tsinghua University, Beijing, Beijing, China;

IAC-25.D3.2B.2
COMEJÉN 2.0: A PROTOTYPE OF AN INTELLIGENT AUTONOMOUS GEOLOGICAL SURVEYOR AND REGOLITH PROCESSOR FOR LUNAR INFRASTRUCTURE CONSTRUCTION
Mr. Rogelio Morales, Bolivarian Agency for Space Activities (ABAE), Caracas, Venezuela;

IAC-25.D3.2B.3
ROBOTIC EXPLORATION NEAR TERM VISION OF THE ITALIAN SPACE AGENCY (ASI) IN THE FRAMEWORK OF THE TECHNOLOGICAL DEVELOPMENT PROGRAM (STEP)
Dr. Raffaele Votta, ASI - Italian Space Agency, Roma, Italy;

IAC-25.D3.2B.4
"..AND FOR THE PRECIOUS THINGS PUT FORTH BY THE MOON:" TOWARD FOUNDATIONAL INFRASTRUCTURE IN CIS-LUNAR SPACE.
Mr. John Scott, National Aeronautics and Space Administration (NASA), Houston, United States;

IAC-25.D3.2B.5
ADVANCING SUSTAINABLE SPACE EXPLORATION: INSIGHTS FROM AN ISECG GAP ASSESSMENT ON ISRU SYSTEM AND TECHNOLOGY DEVELOPMENT
Dr. Jonathon Ralston, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Pullenvale, Australia;

IAC-25.D3.2B.6
BUILDING PROFITABLE CISLUNAR INTEROPERABLE NETWORK COMMUNICATIONS ARCHITECTURE (INCA) APPLICATIONS INFRASTRUCTURE TODAY!?
Mr. Gary Barnhard, National Space Society, Cabin John, United States;

IAC-25.D3.2B.7
BUILDING AUSTRALIA'S ENDURING SPACE CAPABILITY WITH ILAUNCH
Ms. Kavanna Trewavas, University of Southern Queensland, Springfield Central, Australia;

IAC-25.D3.2B.8
DUSTY THERMAL VACUUM CHAMBER SET TO ADVANCE SUBSYSTEM TESTING IN EUROPE
Dr. Emma Cooney, Luxembourg Institute of Science and Technology (LIST), Esch-sur-Alzette, Luxembourg ;

IAC-25.D3.2B.9
DESIGN OF A LUNAR REGOLITH BASED ADDITIVE MANUFACTURING PRINTER FOR LUNAR HABITATION
Ms. Eman Rashid, Heriot-Watt University, Northampton, United Kingdom;

IAC-25.D3.2B.10
PROTECTIVE COVERING FOR LUNAR ROBOTIC SYSTEMS: ENHANCING FUNCTIONALITY, DURABILITY AND FASHION OF ROBOTS
Mr. Pavlo Tanasyuk, Spacebit Global Ltd, London, United Kingdom;

IAC-25.D3.2B.11
EVALUATION OF ALUMINUM ALLOY COMPOSITION AND PROPERTIES DERIVED FROM MOLTEN REGOLITH ELECTROLYSIS PROCESS
Prof. Craig Brice, Colorado School of Mines, Golden, United States;

IAC-25.D3.2B.12
CULTIVATING MARS: TESTING CROP AND MICROBIAL GROWTH IN OPTIMIZED REGOLITH ABOARD THE ISS
Mr. Harrison Coker, Texas A&M University, College Station, United States;

IAC-25.D3.2B.13
MODELING OF LUNAR HIGHLANDS MOLTEN REGOLITH ELECTROLYSIS WITH CONSIDERATIONS FOR USE OF ALUMINUM PRODUCT
Dr. Craig Brice, Colorado School of Mines, Golden, CO, United States;

D3.3. Space Technology and System Management Practices and Tools

October 3 2025, 13:45 — Parkside Pre-Function

Co-Chair(s): John C. Mankins, ARTEMIS Innovation Management Solutions, LLC, United States; Maria Antonietta Perino, Thales Alenia Space Italia, Italy;
Rapporteur(s): Paivi Jukola, Aalto University, Finland;

IAC-25.D3.3.1
REVOLUTIONARY EVOLUTIONS OF SYSTEM ENGINEERING MANAGEMENT FROM OLD TO NEW SPACE ERA
Prof. Eva Yi-Wei Chang, Minghsin University of Science & Technology, Xinfeng Village, Hsinchu County;

IAC-25.D3.3.2
EXPLORING THE INTERPLAY BETWEEN TECHNICAL AUTHORITY AND PROJECT MANAGEMENT TO REDUCE THE COST OF SPACECRAFT
Dr. Shunichiro Ide, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Ibaraki Pref., Japan; Dr. Nathan Schilling, self, El Segundo, United States; Ms. Raihana Shams Islam Antara, Kyushu Institue of Technology, Kitakyushu, Japan; Mr. Arthur Lacombe, CNES, Kourou, French Guiana; Ms. Isobel Haddow, Space Industry Association of Australia, Sydney, Australia;

IAC-25.D3.3.3
COST PLANNING FOR SUSTAINABLE SPACE EXPLORATION: INSIGHTS FROM THE S.C.A.M.P.I. PROJECT
Mr. Sai Tarun Prabhu Bandemegala, Politecnico di Torino - Thales Alenia Space Italia, Torino, Italy;

IAC-25.D3.3.4
RISK MANAGEMENT FOR OUTER SPACE ACTIVITIES
Dr. Maria A Pozza, Christchurch, New Zealand;

IAC-25.D3.3.5
SPACE ORGANIZATIONS BALANCING INNOVATION AND RISK - TURNING RISK INTO PROGRESS
Mr. Alejandro Guerra Mentruit, GTD, Barcelona, Spain;

IAC-25.D3.3.6
AN INNOVATIVE SEMI-QUANTITATIVE APPROACH TO RISK MANAGEMENT IN SPACE ROBOTICS: APPLICATION TO A ROVER DEVELOPMENT PROJECT
Mr. Gianmarco Polvani, Politecnico di Torino, Torino, Italy;

IAC-25.D3.3.7
BEST PRACTICES TAILORED FOR RESEARCH TEAMS HANDLING DIVERSE PROJECTS IN PARALLEL
Ms. Suditi Chand, German Aerospace Center (DLR), Bremen, Bremen, Germany;

IAC-25.D3.3.8
RIKER & LAFORGE : ENABLING SCALABLE AND EFFICIENT SATELLITE MANUFACTURING THROUGH INTEGRATED INFORMATION MANAGEMENT
Mr. Sam Phillips, Planet, Oakland, United States;

IAC-25.D3.3.9
A MODELING SOFTWARE TOOLCHAIN FOR ADVANCED SATELLITE MISSION DESIGN AND MANAGEMENT
Ms. Suditi Chand, German Aerospace Center (DLR), Bremen, Bremen, Germany;

IAC-25.D3.3.10
PREDICTIVE MODELING OF SATELLITE LIFESPAN USING SURVIVAL ANALYSIS TECHNIQUES
Mr. Tural Salmanov, Azercosmos, Space Agency of Republic of Azerbaijan, Baku, Azerbaijan;

IAC-25.D3.3.11
TEST BEDS AND PROVING GROUNDS – AUSTRALIAN PILOT STUDY WITH SPACE ISAC
Mr. Darin Lovett, University of Southern Queensland, Toowoomba, Australia;

IAC-25.D3.3.12
SPACE RESOURCES AND THINKING LIKE THE MINERS
Mr. Kirby Ikin, Asia Pacific Aerospace Consultants Pty Ltd, St Ives, Australia;

D4. 23rd IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE

Coordinator(s): Giuseppe Reibaldi, Moon Village Association (MVA), Austria; Gongling Sun, International Space University, France;

D4.1. Innovative Concepts and Technologies

September 29 2025, 15:30 — Parkside Pre-Function

Co-Chair(s): Alessandro Bartoloni, National Insitute of Nuclear Physics - INFN, Italy; Timothy Cichan, Lockheed Martin Corporation, United States;
Rapporteur(s): Xiaowei WANG, China Academy of Launch Vehicle Technology (CALT), China;

IAC-25.D4.1.1
KEYNOTE: ION THRUSTERS AND DIFFRACTIVE MEMBRANES FOR REDUCING THE MASS OF THE PLANETARY SUNSHADE SYSTEM
Prof. Christer Fuglesang, stockholm, Sweden;

IAC-25.D4.1.4
AI-DRIVEN COGNITIVE AND PHYSICAL REHABILITATION TECHNOLOGIES FOR CREWED SPACE EXPLORATION: A REVIEW OF INNOVATIONS AND FUTURE DIRECTIONS
Dr. Alessandro Bartoloni, National Insitute of Nuclear Physics - INFN, Roma, Italy;

IAC-25.D4.1.5 (unconfirmed)
AEROSPACE PROPULSION FOR SUPRA-KÁRMÁN AND SUB-KÁRMÁN FLIGHTS: APPLICATIONS ON MARS, THE MOON, AND THE SPACE ERA.
Ms. Sara Carbajal Hernandez, Facultad de Ingeniería-UNAM, Mexico City, Mexico;

IAC-25.D4.1.6 (unconfirmed)
TRANSFORMATIONAL TECHNOLOGIES FOR FUTURE SPACE EXPLORATION AND RESOURCE UTILIZATION
Ms. Nuray Nazarli, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.D4.1.7
SPACEWALK AS A CATALYST: RESHAPING HUMAN POTENTIAL AND SPACEFARING TECHNOLOGY
Ms. KOMAL PANCHAL, Vadodara, India;

IAC-25.D4.1.8
SIMULATION OF PARTICLE NUMBER DENSITY DISTRIBUTION IN THE WAKE REGION OF A FOLDABLE-WING ORBITAL MOLECULAR SCREEN UNDER VARIED WING-FOLDING ANGLES
Dr. Yifan Wang, Bauman Moscow State Technical University, Beijing, Russian Federation;

IAC-25.D4.1.9
CONVENTIONAL AND REINFORCEMENT LEARNING CONTROL OF MXER TETHER DYNAMICS FOR EXTENDED PAYLOAD RENDEZVOUS
Mr. Zander du Toit, Delft University of Technology (TU Delft), The Netherlands, Delft, The Netherlands;

IAC-25.D4.1.10
“VENUS PROJECT” IMPLEMENTATION WITH 3×3 APPROACH IN SPACE
Ms. Nilufar Samadova, Azerbaijan Architecture and Construction University (SABAH groups), Baku, Azerbaijan;

IAC-25.D4.1.11
MARS EXPLORATION SYSTEM BASED ON FLAPPING WING DRONES
Mr. Yongcun Zhao, Northwestern Polytechnical University, Xi’an, China;

IAC-25.D4.1.12
SPACE-BASED SOLAR POWER: OPPORTUNITIES, CHALLENGES, AND FUTURE PROSPECTS
Ms. Pratiksha Gaddigimath, R V College of Engineering, Bengaluru, Bengaluru, India;

IAC-25.D4.1.13
BEYOND EARTH: BUILDING A SUSTAINABLE SPACE ECONOMY FOR THE FUTURE OF HUMANITY
Mr. Ali Bagirov, Azerbaijan Sports Academy, Baku, Azerbaijan;

IAC-25.D4.1.14
COSMIC RENAISSANCE: UNLEASHING TOMORROW'S FRONTIERS THROUGH AVANT-GARDE TECHNOLOGIES AND TRAILBLAZING SYSTEM CONCEPTS IN SPACE EXPLORATION AND RESOURCE MASTERY
Mr. Sudarsana Nerella, Virginia Tech, Blacksburg, United States;

D4.2. Contribution of Moon Village to Solving Global Societal Issues

September 30 2025, 10:15 — Parkside Pre-Function

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-25.D4.2.1
THE FUTURE OF HUMANITY IN SPACE - RELIES ON THE ANCIENT PAST OF HUMANITY IN SPACE.
Prof.Dr. Deen Sanders OAM, Sydney, Australia;

IAC-25.D4.2.3 (unconfirmed)
LUNAR GOVERNANCE IN THE 21ST CENTURY: A FRAMEWORK FOR LONG-TERM AND COORDINATED EXPLORATION
Dr. Botezatu Ulpia Elena, Moon Village Association (MVA), Bucharest, Romania;

IAC-25.D4.2.4
ACHIEVEMENTS AND INNOVATION: THE 4TH PROMOMOON INITIATIVE FOR THE MOON VILLAGE GENERATION
Dr. Iryna Husarova, Yuzhnoye State Design Office, Dnipro, Ukraine;

IAC-25.D4.2.5
ADVANCED LUNAR BASE CONCEPTS: PAVING THE PATH TO A PERMANENT HUMAN PRESENCE ON THE MOON
Mr. Enzo FERREC, Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), LAUNAGUET, France;

IAC-25.D4.2.6
STANDARDIZATION AND COMMON GUIDELINES FOR LUNAR SPACE STATION DESIGN AND OPERATION
Dr. Paola Breda, International Space University (ISU), Illkirch-Graffenstaden, Germany;

IAC-25.D4.2.7
LUNAR AND MARTIAN SPACE DEBRIS PREVENTION STRATEGIES
Ms. Samiksha Raviraja, Airbus Defence and Space, Hitchin, United Kingdom;

IAC-25.D4.2.8 (unconfirmed)
DESIGNATING AND PROTECTING SITES OF SPECIAL SCIENTIFIC INTEREST (SSSI)
Dr. Botezatu Ulpia Elena, Moon Village Association (MVA), Bucharest, Romania;

IAC-25.D4.2.9
STRATEGIC SUSTAINABILITY FRAMEWORK FOR MOONBASE RESILIENCE AND REVITALISING THE LUNAR VALUE CHAIN BY LEVERAGING EARTH-BASED CIRCULAR ECONOMY LEARNINGS TOWARDS GREATER INTERDISCIPLINARITY AND STRENGTHENED EARTH-MOON INTERDEPENDENCY
Dr. Sasha Alexander, Western Sydney University, Penrith NSW, Australia;

IAC-25.D4.2.10 (unconfirmed)
ASSESSING THE INTERACTION OF SPACE RADIATION WITH LUNAR REGOLITH TO EXAMINE THE POSSIBILITY OF AGRICULTURAL SET UP ON THE MOON
Ms. Ena Goel, New Delhi, India;

IAC-25.D4.2.11 (unconfirmed)
ENABLING IN-SITU PRODUCTION OF WATER AND OXYGEN MOLECULES ON LUNAR REGOLITH TO SUSTAIN FUTURE LUNAR BASE MISSION OPERATIONS
Ms. Ena Goel, New Delhi, India;

IAC-25.D4.2.12
ASTRAX LUNAR CITY PROJECT 2025
Ms. Taiko Kawakami, ASTRAX, Inc., Bunkyo-ku, Tokyo, Japan;

IAC-25.D4.2.13
TECHNOLOGY PARKS, OR, MOON VILLAGES - THE MOON 2025 (WORKING TITLE)
Ms. Paivi Jukola, Aalto University, Helsinki, Finland;

IAC-25.D4.2.14
SYNCHRO-CYCLOTRON BASED ACCELERATOR-DRIVEN SUBCRITICAL REACTOR(SCADSR) WITH BETA MINUS PARTICLE FEEDBACK FOR NUCLEAR POWERED SETTLEMENT ON MOON.
Mr. Abhishek Singh, National Space Society (USA) -Mumbai chapter, Thane, India;

IAC-25.D4.2.15
GALVANIZE LOVE NUMBERS AND MOON GOO AND THE IMPACT TO LUNAR COMMUNICATIONS PLATFORMS
Ms. Naomi McGill, London, United Kingdom;

D4.3. The Modern Day Space Elevator as a Permanent Transportation Infrastructure

September 30 2025, 15:00 — Parkside Pre-Function

Co-Chair(s): Peter Swan, Space Elevator Development Corporation, United States; Yoji Ishikawa, Obayashi Corporation, Japan;
Rapporteur(s): Daniel Griffin, Royal Institute of Technology (KTH), Sweden;

IAC-25.D4.3.1
KEYNOTE: JEROME PEARSON MEMORIAL LECTURE - LESSONS LEARNED FROM SPACE ELEVATOR RESEARCH AND DEVELOPMENT AND FUTURE CHALLENGES
Dr. Yoji Ishikawa, Obayashi Corporation, Tokyo, Japan;

IAC-25.D4.3.2
GALACTIC HARBOURS DEFINE PERMANENT SPACE ACCESS TRANSPORTATION INFRASTRUCTURES
Dr. Peter Swan, Space Elevator Development Corporation, Paradise Valley, United States;

IAC-25.D4.3.3
DEVELOPMENT OF INITIAL SPACE ELEVATOR DESIGNED FOR SPACE ENVIRONMENT AND CONSIDERATION OF EFFICIENT OPERATION PLAN FOR CLIMBER DRIVE SYSTEM
Prof. Fumihiro Inoue, Shonan Institute of Technology, Kanagawa, Japan;

IAC-25.D4.3.4
DEVELOPMENT OF HYBRID SPACE ELEVATOR CLIMBER WITH CONTINUOUSLY ADJUSTABLE ROLLER DRIVE ARRANGEMENT
Ms. Momoe Terata, Shonan Institute of Technology, Kanagawa, Japan;

IAC-25.D4.3.5
DYNAMIC STRUCTURAL ANALYSIS OF A CLIMBER FOR SPACE ELEVATORS
Mr. Oluwatosin Kolade, Obafemi Awolowo University, Lagos, Nigeria;

IAC-25.D4.3.6
SPACE ELEVATOR APPLICATION ON HABITAT CONSTRUCTION AT LAGRANGE POINTS
Mr. Akinari OGAWA, Tohoku University, Sendai, Japan;

IAC-25.D4.3.7
FUELING THE (NEAR) FUTURE: THE CASE FOR EARTH-BASED SPACE ELEVATOR SUPPLY TO L1
Ms. Chi Lan Huynh, University of Houston Clear Lake, Albuquerque, United States;

IAC-25.D4.3.8
THE SPACE ELEVATOR: UNLOCKING A NEW ERA OF SPACE ACCESS
Ms. Ritwika Maiti, Kolkata, India;

IAC-25.D4.3.9
HEXAGONAL PRISMS STRUCTURE FOR TETHER USED FOR SPACE ELEVATOR.
Mr. Abhishek Singh, National Space Society (USA) -Mumbai chapter, Thane, India;

IAC-25.D4.3.10
LIFTING THE FUTURE: UNDERSTANDING THE IMPACT OF MATERIALS AND ENERGY ON SPACE ELEVATOR
Ms. Ayla Malikova, Azerbaijan State University of Economics, Baku, Azerbaijan;

IAC-25.D4.3.11
CANDIDATE LOCATIONS FOR THE INSTALLATION OF EARTH PORTS ON SPACE ELEVATORS TO MINIMIZE LIGHTNING DAMAGE AS CONSIDERED FROM THE GLOBAL LIGHTNING ACTIVITY DATA
Prof. Masashi Kamogawa, Shizuoka, Japan;

IAC-25.D4.3.12
STUDY OF POTENTIAL LOW ALTITUDE STATION ATTACHED TO SPACE ELEVATORS
Dr. Peter Swan, Space Elevator Development Corporation, Paradise Valley, United States;

D4.4. Strategies for Rapid Implementation of Interstellar Missions: Precursors and Beyond

October 2 2025, 10:15 — Parkside Pre-Function

Co-Chair(s): Mae Jemison, 100 Year Starship, United States; Giancarlo Genta, Politecnico di Torino, Italy;
Rapporteur(s): Les Johnson, , United States;

IAC-25.D4.4.1
NUCLEAR ELECTRIC PROPULSION FOR FAST INTERSTELLAR PRECURSOR MISSIONS: PHYSICAL LIMITS ON PERFORMANCE
Dr. Ralph L. McNutt, The John Hopkins University, Laurel, MD, United States;

IAC-25.D4.4.2
A PRECURSOR INTERSTELLAR MISSION BEYOND THE HELIOPAUSE USING ADVANCED GASEOUS CORE NUCLEAR PROPULSION TECHNOLOGY AS A PATHWAY TO AN ALPHA CENTAURI MISSION
Dr. Ugur Guven, UN CSSTEAP, London, United Kingdom;

IAC-25.D4.4.3
ANTIMATTER:SCIENCE FICTION OR THE KEY TO INTERSTELLAR TRAVEL?
Ms. Aytaj Mammadli, Azerbaijan State University of Economics, Baku, Azerbaijan;

IAC-25.D4.4.4
META-STARWISP: AN AUTOPHAGIC INTERSTELLAR PROBE
Haroon B. Oqab, Space Canada Corporation, Canada;

IAC-25.D4.4.6
DESIGN OF A SELF-SUFFICIENT GENERATION FOR INTERSTELLAR TRAVEL: PROJECT HYPERION
Mr. Saeed Vahdani, Space Generation Advisory Council (SGAC), Mashhad, Iran;

IAC-25.D4.4.7
THE COSMIC DEVELOPMENT GOALS
Ms. Tessa Rankin, International Space University (ISU), Illkirch-Graffenstaden, France;

D4.5. Space Resources, the Enabler of the Earth-Moon Econosphere

October 2 2025, 15:00 — Parkside Pre-Function

Co-Chair(s): Roger X. Lenard, LPS, United States; Mark Sundhal, Cleveland State University, ;
Rapporteur(s): Peter Swan, Space Elevator Development Corporation, United States;

IAC-25.D4.5.1
ADVANCING AUSTRALIA'S SPACE RESOURCE CAPABILITIES: LEVERAGING 100 YEARS OF EXPLORATION AND MINING INNOVATION
Dr. Jonathon Ralston, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Pullenvale, Australia;

IAC-25.D4.5.3
HOW SHOULD POTENTIAL SPACE RESOURCES MARKETS BE EVALUATED?
Dr. Ben McKeown, UNSW Australia, Sydney, Australia;

IAC-25.D4.5.4
MAGPIE: A EUROPEAN LUNAR ROVER CONCEPT FOR INVESTIGATING ICE STABILITY AND REGOLITH PROPERTIES
Ms. Sophia Casanova, ispace, inc., Luxembourg, Luxembourg ;

IAC-25.D4.5.5
SIMPLE REGOLITH-BASED BUILDING MATERIALS FOR LUNAR BASES
Mr. Huseyn Israfilov, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

IAC-25.D4.5.6
FROM METALLURGY TO ASTROMETALLURGY: ADAPTING TERRESTRIAL RESOURCE CAPABILITIES FOR SPACE INNOVATION
Dr. Matthew Shaw, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Clayton South, Vic, Australia;

IAC-25.D4.5.7
LEGAL ISSUES OF OUTER SPACE RESOURCE EXPLOITATION FROM THE PERSPECTIVE OF INTERNATIONALIZATION OF AEROSPACE INDUSTRY
Mr. Raymond Yin, Chengdu University of Technology, Chengdu, China;

IAC-25.D4.5.10
LEGAL LIABILITY FOR THE MOON BASE: INTERNATIONAL ARBITRATION AND COMPENSATION FOR DAMAGES
Ms. Weiwei Deng, Chengdu University of Technology, Chengdu, China;

IAC-25.D4.5.11
WHITE COLLAR CRIMES REACHING NEW HEIGHTS: THE REGULATORY ISSUES OF MONEY LAUNDERING IN THE OUTER SPACE INDUSTRY.
Ms. Judith Jahnke, Institute of Air and Space Law, McGill University, Montreal, Canada;

IAC-25.D4.5.12
DIMINISHING BARRIERS: TECHNOLOGICAL CONVERGENCE FOR SPACE RESOURCE ACCESSIBILITY
Mr. Eric Dahlstrom, SpaceBase Limited, Christchurch, New Zealand;

IAC-25.D4.5.13
HELIUM-3 AS A STRATEGIC RESOURCE ON THE MOON FOR ADVANCED AND EFFICIENT FUSION: A LIMITLESS ENERGY SOURCE IN THE EARTH-MOON ECOSYSTEM
Dr. Ugur Guven, UN CSSTEAP, London, United Kingdom;

IAC-25.D4.5.14
LUNAR HELIUM-3: POWERING THE FUTURE OF FUSION ENERGY AND QUANTUM COMPUTING
Dr. Chris Salvino, Scottsdale, United States;

IAC-25.D4.5.15
SOVEREIGNTY BEYOND BORDERS: GOVERNING RESOURCE EXTRACTION IN LUNAR AND ASTEROID MINING FOR SUSTAINABLE SPACE EXPLORATION
Ms. Aspasia Marinaki, KU Leuven – University of Leuven, Athens, Greece;

D5. 58th IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE ACTIVITIES

Coordinator(s): Jeanne Holm, City of Los Angeles, United States; Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom;

D5.1. For a successful space program: Quality and Safety!

October 1 2025, 10:15 — Room C2.2

Co-Chair(s): Alexander S. Filatyev, Lomonosov Moscow State University, Russian Federation; Kaitlyn Holm, University of Pennsylvania, United States;

IAC-25.D5.1.1
DISCUSSION ON LEANSAT MISSION ASSURANCE STRATEGY BASED ON LESSONS LEARNED UTILIZATION
Dr. Kikuko Miyata, Meijo University, Nagoya, Japan;

IAC-25.D5.1.2
ENSURING MISSION SUCCESS: A PA-QA APPROACH IN THE AIV-T OF THE ELECTRA CUBESAT
Mr. Alessio Taretto, Politecnico di Torino, Grugliasco, Italy;

IAC-25.D5.1.3
IMPROVING SATELLITE SOFTWARE QUALITY WITH MODERN PRACTICES FROM LARGE-SCALE CLOUD SOFTWARE DEVELOPMENT
Mr. Matt Ryall, Eveleigh (Sydney), NSW, Australia;

IAC-25.D5.1.4
INTEGRATED SAFETY FRAMEWORK FOR AUTONOMOUS SPACECRAFT: A COMPREHENSIVE APPROACH TO RISK ASSESSMENT, DECISION-MAKING, AND AUTOMATED RESPONSES
Mr. Sudarsana Nerella, Virginia Tech, Blacksburg, United States;

IAC-25.D5.1.5
INTELLIGENT HEALTH MANAGEMENT SYSTEM FOR AEROSPACE SOLID-STATE STORAGE: AN ENSEMBLE MACHINE LEARNING APPROACH FOR ENHANCED FAULT PREDICTION
Dr. Yuanhong Mao, Xi'an Microelectronics Technology Institute, CASC, Xi'an, China;

IAC-25.D5.1.6
MULTI-OBJECTIVE FAULT-TOLERANT TRAJECTORY PLANNING FOR SPACE MANIPULATORS: A QUALITY-DIVERSITY BASED APPROACH AND VALIDATION
Ms. Xinyang Li, Tsinghua University, Shenzhen, China;

IAC-25.D5.1.8
TOWARDS A BLOCKCHAIN- AND AI-ENABLED SPACE BATTLE MANAGEMENT SYSTEM
Dr. Tat-Jun Chin, University of Adelaide, Adelaide, Australia;

IAC-25.D5.1.9
SCALING SMALL SATELLITE MANUFACTURING – ACHIEVING QUALITY AND EFFICIENCY IN HIGH-CADENCE PRODUCTION
Ms. Sairaksha Kesarla Venkatesh, San Francisco, United States;

IAC-25.D5.1.10
SMALL SATELLITE RADIO SYSTEM TESTING AT THE LAUNCH SITE WHILE RESPECTING RADIO FREQUENCY EMISSIONS LIMITS
Mr. Jacob von Chorus, Space Flight Laboratory, University of Toronto, North York, Canada;

IAC-25.D5.1.11
PROACTIVE MAINTENANCE AND RISK MANAGEMENT IN SPACE STATIONS: AN INDUSTRIAL ENGINEERING APPROACH
Mr. Muhammed Mustafa KARAKAŞ, Malatya, Türkiye;

IAC-25.D5.1.12
ASTRORAD RADIATION PROTECTION VEST: ENHANCING HUMAN SAFETY IN DEEP SPACE
Ms. Nuray Safarli, Baku State University, Baku, Azerbaijan;

D5.2. Emerging trends of knowledge management in organizations

September 30 2025, 10:15 — Room C2.2

Co-Chair(s): Roberta Mugellesi-Dow, European Space Agency (ESA), United Kingdom; Jeanne Holm, City of Los Angeles, United States;
Rapporteur(s): Daniel Galarreta, Centre National d'Etudes Spatiales (CNES), France;

IAC-25.D5.2.1 (unconfirmed)
ASK ESA : ENHANCING KNOWLEDGE MANAGEMENT IN THE EUROPEAN SPACE AGENCY THROUGH A RAG-BASED SOLUTION
Ms. Maureen Allanic, ESA, Combrit, France;

IAC-25.D5.2.2
EFFECTIVE KNOWLEDGE DISCOVERY AND MANAGEMENT USING LLMS WITH SPECIFIC APPLICATION IN LUNAR DUST RESEARCH
Mrs. Svetlana Hanson, NASA, Houston, United States;

IAC-25.D5.2.3
INNOVATIVE KNOWLEDGE MANAGEMENT IN INTERNATIONAL SPACE MISSION COLLABORATION
Mr. Nhat Nguyen, Space Machines Company, Sydney, Australia; Mr. Mayank Aggarwal, Space Machines Company, Bengaluru, India;

IAC-25.D5.2.4
PYTHIA: ONE YEAR ON (PART 2) – ADVANCING INTERNAL KNOWLEDGE CAPTURE
Mr. Shaun Kenyon, Starbound Space Solutions, Gold Coast, Australia;

IAC-25.D5.2.5
ABSTRACT KNOWLEDGE REPRESENTATIONS OF SPACECRAFT
Mr. Robert Rovetto, American Institute of Aeronautics and Astronautics (AIAA), New York, United States;

IAC-25.D5.2.6
AI IN SPACE PROJECT MANAGEMENT: CURRENT APPLICABILITY AND FUTURE ROADMAP
Dr. Nathan Ré, Advanced Space, Westminster, CO, United States; Ms. Tasneem Yousif, University of Nottingham, Nottingham, United Kingdom; Mr. Abdulla Hil Kafi, Kyushu Institue of Technology, Kitakyushu, Japan;

IAC-25.D5.2.7
INTEGRATING KNOWLEDGE MANAGEMENT IN STRATEGIC IMPLEMENTATION FOR EMERGING SPACE NATIONS: A CASE STUDY OF BAHRAIN'S NATIONAL SPACE SCIENCE AGENCY (NSSA) AND THE EGYPTIAN SPACE AGENCY (EGSA)
Mrs. Rasha Al-Amad, Bahrain Space Agency (BSA), Manama, Bahrain;

IAC-25.D5.2.8
LANGUAGE MODELING AND RETRIEVAL-AUGMENTED GENERATION FOR INTEGRATION IN SPACE OPERATION DECISION SUPPORT TOOLS
Mr. Ruben Belo, FCT-UNL, Fundão, Portugal;

IAC-25.D5.2.9
THE INTEGRAL ROLE OF KNOWLEDGE MANAGEMENT IN ADVANCING SPACE TECHNOLOGIES
Prof.Dr. Katarina Pavlovic, Serbian office for Space sciences, research and development (SERBSPACE), Belgrade, Serbia;

IAC-25.D5.2.10
USE OF CULTURAL TRADITIONAL KNOWLEDGE AND INTELLECTUAL PROPERTY MANAGEMENT IN EXTRATERRESTRIAL HUMAN CREATED ENVIRONMENTS FOR KNOWLEDGE MANAGEMENT
Ms. Sharon Clark, Australian Space Agency, Hobart, Australia;

IAC-25.D5.2.12
EMERGING TRENDS OF KNOWLEDGE MANAGEMENT IN ORGANIZATIONS
Mr. Mutshutshu Nephiphidi, South African National Space Agency (SANSA), District Krugersdorp, South Africa;

IAC-25.D5.2.13
LEVERAGING DIGITAL TRACEABILITY TO ENHANCE KNOWLEDGE MANAGEMENT IN SPACE CYBER OPERATIONS; A STEP TOWARD IMPROVED SAFETY AND QUALITY
Mr. Jonathan Wotton, The MITRE Corporation, Adelaide, Australia;

D5.3. Prediction, Testing, Measurement and Effects of space environment on space missions

October 2 2025, 10:15 — Room C2.2

Co-Chair(s): Carlos Soares, NASA Jet Propulsion Laboratory, United States; Teppei Okumura, Japan Aerospace Exploration Agency (JAXA), Japan;

IAC-25.D5.3.1
ASSESSING THE RISKS OF SOLAR ACTIVITY ON SUBORBITAL SPACEPLANE OPERATIONS
Dr. Christina Dunker, Nova Systems Pty Ltd, Wellington, New Zealand;

IAC-25.D5.3.2
A NOVEL METHODOLOGY FOR SIMULATING RADIATION EFFECTS ON IN-ORBIT CONVOLUTIONAL NEURAL NETWORKS
Mr. Eden Delmont, Swinburne University of Technology, Melbourne, Australia;

IAC-25.D5.3.3
AI-POWERED SPACE MISSION RISK PREDICTION: REAL-TIME FAILURE DETECTION AND ADAPTIVE CONTINGENCY PLANNING
Mr. Samrat Chakraborty, Visva-Bharati, Santiniketan, India;

IAC-25.D5.3.4
EFFECT OF SURFACE COATING OF SOLAR ARRAY PANEL AGAINST LEVITATING LUNAR DUST
Dr. Teppei Okumura, Japan Aerospace Exploration Agency (JAXA), Tsukuba, Japan;

IAC-25.D5.3.5
CUBESAT ORBITAL DECAY DURING THE MAY 2024 GEOMAGNETIC STORMS
Prof. Necmi Cihan Örger, Kyushu Institute of Technology, Fukuoka, Japan;

IAC-25.D5.3.6
LUNAR REGOLITH CONSOLIDATION CAUSED BY THE THAWING OF WATER ICE
Mr. Nick Barnett, UNSW Australia, Singapore, Singapore, Republic of;

IAC-25.D5.3.7
MASS OF LUNAR VOLATILES REQUIRED TO REACH SPACECRAFT EXPOSURE LIMITS - A SIMULATION ANALYSIS
Mr. Nick Barnett, UNSW Australia, Singapore, Singapore, Republic of;

IAC-25.D5.3.8
THE PROOF IN HERITAGE - LONG-TERM PERFORMANCE ANALYSIS OF THE ASTRO APS STAR TRACKER & LESSONS LEARNED FROM ON-ORBIT DATA
Mr. Andrew Murphy, Singtel Optus, Sydney, Australia; Mr. Lucas Rümmler, Jena-Optronik GmbH, Jena, Germany;

IAC-25.D5.3.10
AUS-SPARQ: A PORTABLE DOSIMETRY SYSTEM TO STANDARDISE AUSTRALIA'S SPACE RADIATION QUALIFICATION
Dr. Jeremy Brown, Swinburne University of Technology, Hawthorn, Australia;

D5.4. Cybersecurity in space systems, risks and countermeasures

October 3 2025, 10:15 — Room C4.7

Co-Chair(s): Julien Airaud, Centre National d'Etudes Spatiales (CNES), France; Stefano Zatti, University of Rome "La Sapienza", Italy;

IAC-25.D5.4.1
RACCOON OS - TOWARDS A CYBER SECURE OPEN-SOURCE OPERATING SYSTEM FOR SPACE APPLICATIONS
Mr. Jens Freymuth, Technische Universität Berlin, Berlin, Germany;

IAC-25.D5.4.2
NAVIGATING THE COSMOS: BALANCING INNOVATION AND CYBERSECURITY IN THE ERA OF EMERGING TECHNOLOGIES
Dr. Antonio Carlo, Tallinn University of Technology, Tallinn, Estonia;

IAC-25.D5.4.3
HOMOMORPHIC ENCRYPTION FOR SECURE MODEL UPDATES IN FEDERATED SATELLITE CONSTELLATIONS
Dr. Rizka Purwanto, Monash University, Tangerang, Indonesia;

IAC-25.D5.4.4
DEEPFAKES AND GENERATIVE AI: AN OLD THREAT TO THE SPACE ECONOMY IS NEW AGAIN
Dr. Tim Parsons, Sydney, Australia;

IAC-25.D5.4.5
A NOVEL SIMULATION PLATFORM FOR SPACE SYSTEMS CYBERSECURITY R&D
Mr. Julien Airaud, Centre National d'Etudes Spatiales (CNES), Toulouse, France;

IAC-25.D5.4.6
CYBERSECURITY INNOVATION AND REGULATION FOR MOBILE LAUNCH SYSTEMS: LESSONS ON RESILIENCE AND THREATS
Mr. Scott Schneider, Adelaide, Australia;

IAC-25.D5.4.7
THE ADVANCEMENT OF CYBERSECURITY IN SPACE THROUGH ARTIFICIAL İNTELLIGENCE: ADVANTAGES AND RISKS
Mr. Khalig Ganbarli, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.D5.4.8
EVALUATION OF A CYBERSECURITY SYSTEM APPLIED \\TO SMALL SATELLITE MISSIONS
Dr. Isai Fajardo-Tapia, Deloitte Tohmatsu Cyber LLC., Tokyo, Japan;

IAC-25.D5.4.9
A CYBER-FUNCTIONAL ARCHITECTURE FRAMEWORK FOR SPACE SYSTEMS: BALANCING SECURITY AND MISSION SUCCESS
Dr. Bruce Chesley, Teaching Science and Technology, Inc (TSTI), Georgetown, TX, United States;

IAC-25.D5.4.10
CYBERATTACK IN SPACE: TOWARDS A SUSTAINABLE DATA GOVERNANCE FRAMEWORK FOR OUTER SPACE
Ms. Alexandra Sidiropoulou, University of Oslo, Voula, Greece;

IAC-25.D5.4.11
AN EVOLVING REGULATORY FRAMEWORK IN EUROPE IN THE FIELD OF CYBERSECURITY
Dr. Christina Giannopapa, Eindhoven University of Technology, Eindhoven, The Netherlands;

IAC-25.D5.4.12
CYBERSECURITY IN LIFE SUPPORT SYSTEMS FOR LONG-TERM SPACE HABITABILITY
Ms. Karla Fabiola Mayo Sánchez, Mexico City, Mexico;

IAC-25.D5.4.13
DISTRIBUTED LEARNING-DRIVEN DESIGN FOR CYBER SECURE SPACE CONSTELLATION NETWORK
Dr. Rabbia Saleem, UNSW Canberra, Canberra, Australia;

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

September 30 2025, 10:15 — Room C4.7

Co-Chair(s): John Sloan, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States; Francesco Santoro, Altec S.p.A., Italy;
Rapporteur(s): Gennaro Russo, Associazione Italiana di Aeronautica e Astronautica (AIDAA), Italy;

IAC-25.D6.1.1
AUSTRALIAN SPACE REGULATION AND COMMERCIAL SPACE TRANSPORTATION: THE POTENTIAL BENEFITS OF DEVELOPING CLEARER REGULATORY POLICY
Ms. Shena Howell, Shoal Group, Adelaide, Australia;

IAC-25.D6.1.2
ADVANCING SAFETY STANDARDS IN COMMERCIAL SPACEFLIGHT: CHALLENGES AND INNOVATIONS
Mr. Ayaz Damirov, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.D6.1.3
FROM THE TIANLONG-3 INCIDENT, WE CAN SEE THE REGULATORY GUARANTEE OF COMMERCIAL SPACE LAUNCH ACTIVITIES
Mr. Raymond Yin, Chengdu University of Technology, Chengdu, China;

IAC-25.D6.1.4
SAFETY DEORBIT DISPOSAL AS A METHOD TO IMPROVE PUBLIC SAFETY FOR LARGE REENTRY VEHICLES
Mr. Henry Steiner, SpaceX, Los Angeles, United States;

IAC-25.D6.1.5
ISSUES IN THE APPLICATION OF CONDITIONAL EXPECTED CASUALTY CRITERIA TO REENTRY OPERATIONS
Ms. Jillian Yuricich, SpaceX, Washington, United States;

IAC-25.D6.1.6
ANDØYA SPACEPORT: CONTINENTAL EUROPE'S FIRST OPERATIONAL SPACEPORT
Mr. Jerome Wiertz, Andøya Space AS, ANDENES, Norway;

IAC-25.D6.1.8
AVIATION SAFETY IN SPACE: RISKS AND REGULATION OF SUBORBITAL FLIGHT
Ms. Lamiya Gubatova, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-25.D6.1.9
THE WIND WEIGHTING SYSTEM: HIGH-FIDELITY WIND COMPENSATION SOFTWARE FOR LAUNCH OPERATIONS
Mr. Matthew Willson, Adelaide, Australia;

IAC-25.D6.1.10
NEW GLENN'S FAA COMMERCIAL VEHICLE OPERATOR LICENSE EXPERIENCE
Mrs. Laura Maginnis, Blue Origin LLC, Denver, United States;

D6.3. Enabling safe commercial spaceflight: vehicles and spaceports

October 2 2025, 10:15 — Room C4.7

Co-Chair(s): John Sloan, Federal Aviation Administration Office of Commercial Space Transportation (FAA/AST), United States; Francesco Santoro, Altec S.p.A., Italy;
Rapporteur(s): Gennaro Russo, Associazione Italiana di Aeronautica e Astronautica (AIDAA), Italy;

IAC-25.D6.3.1
DISCERNMENT OF RISKS AND SAFETY CONSIDERATIONS FOR OVERLAND SPACE LAUNCHES IN AUSTRALIA: A CEC APPROACH
Mr. Mustapha Chahine, Nova Systems, Hallett Cove, Australia;

IAC-25.D6.3.2
DESIGN FRAMEWORK OF A SUSTAINABLE SPACEPORT FOR AFRICA: THE RAS NGOMENI SPACEPORT CASE STUDY
Mr. Geovian Stower, Kenya Space Agency (KSA), Nairobi, Kenya;

IAC-25.D6.3.3
FEASIBILITY ANALYSIS OF SUBORBITAL VEHICLE OPERATIONS AT GROTTAGLIE SPACEPORT: SIMULATION OF NOMINAL AND OUT-OF-NOMINAL SCENARIOS
Dr. Oscar Gori, Politecnico di Torino, Turin, Italy;

IAC-25.D6.3.4
SPACEPORT FEASIBILITY ANALYSIS FOR DOHA AS A GATEWAY TO LOW EARTH ORBIT
Dr. Ugur Guven, UN CSSTEAP, London, United Kingdom;

IAC-25.D6.3.5
ENABLING SAFE COMMERCIAL SPACEFLIGHT THROUGH TECHNOLOGY: VEHICLES AND SPACEPORTS
Mrs. Julia Alvarez Vallero, University of Texas at Arlington, Arlington, United States;

IAC-25.D6.3.6
OMEGA SPACEPORT: ESTABLISHING KENYA AS A GLOBAL HUB FOR EQUATORIAL SPACE ACCESS AND COMMERCIAL SPACE SECTOR GROWTH
Ms. Wanjiku Chebet Kanjumba, University of Florida, Vicillion, Gainesville, United States;

IAC-25.D6.3.7
APPLICATION OF THE ASTRA SOFTWARE TOOL TO SUPPORT LAUNCH SITE FEASIBILITY AND SAFETY ASSESSMENT.
Mr. Liam Ewen, Redland Bay, Australia;

IAC-25.D6.3.8
SPACE LICENSING COMPLEXITIES AND KEY SELECTION FACTORS: LESSONS FROM LAUNCH OPERATORS AND SPACEPORTS
Dr. Paola Breda, International Space University (ISU), Illkirch-Graffenstaden, Germany;

IAC-25.D6.3.9
THE SPACEPORT COMPETITIVENESS EVALUATION FRAMEWORK: THE METHODOLOGY AND CASE STUDIES
Mr. Jungho Yang, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

IAC-25.D6.3.10
PRE-MISSION PHASE SERVICE AND PRE-MISSION PHASE CLIENT IN THE CONTEXT OF OFFSHORE SPACEPORT SOLUTIONS FOR ORBITAL LAUNCHES
Mr. Tobias Rabus, DLR (German Aerospace Center), Braunschweig, Germany;

E1. IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM

Coordinator(s): Remco Timmermans, International Space University (ISU), United Kingdom; Seyed Ali Nasseri, Space Generation Advisory Council (SGAC), Canada;

E1.1. Lift Off: Primary and Secondary Education

September 29 2025, 15:30 — Room C4.3

Co-Chair(s): Kaori Sasaki, Japan Aerospace Exploration Agency (JAXA), Japan; Seyed Ali Nasseri, Space Generation Advisory Council (SGAC), Canada;
Rapporteur(s): Kerrie Dougherty, , Australia; Alina Vizireanu, Space Generation Advisory Council (SGAC), United Kingdom;

IAC-25.E1.1.1
SPACE ENGINEERS FOR A DAY: THE POTENTIAL OF SYSTEMS-THINKING TO TRANSFORM STEM EDUCATION THROUGH CONCURRENT DESIGN
Ms. Nina van Tent, ATG Europe B.V., Leiden, The Netherlands; Ms. Elsa Maria Alfonso Sanchez, Aurora Technology B.V., Noordwijk, The Netherlands;

IAC-25.E1.1.2
ADDITIONAL PRACTICAL CLASSES AT THE UNIVERSITY FOR SPACE-ORIENTED SCHOOL STUDENTS: EXPERIENCE AND TYPICAL PROBLEMS
Dr. Dmitriy Grishko, Bauman Moscow State Technical University, Moscow, Russian Federation;

IAC-25.E1.1.3
ASSESSING THE METHODS, IMPACT, AND EFFECTIVENESS OF SATELLITE-BASED STEM INTERVENTION ON PRIMARY AND SECONDARY LEVEL IN NEPAL
Mr. Rishav Adhikari, Nepal Space Foundation, Kathmandu, Nepal;

IAC-25.E1.1.4
CATCH THEM YOUNG: DEVELOPING CONTEXTUALLY RELEVANT SPACE EDUCATION RESOURCES - LESSONS FROM BUILDING A SPACE EDUCATION STARTUP IN AFRICA
Mr. Thando Mathe, Harare, Zimbabwe;

IAC-25.E1.1.5
EXPANDING STEM ENGAGEMENT THROUGH SPACE RESEARCH: THE AVA CHALLENGE
Ms. Khushi Daga, Northmead, Australia;

IAC-25.E1.1.7
WHAT DOES "SPACE EDUCATION" MEAN FOR TEACHERS?
Dr. Naomi Kagawa, Shimane University, Matsue, Japan;

IAC-25.E1.1.8
EMPOWERING FUTURE SCIENTISTS: THE IMPACT OF EARLY CHILDHOOD SPACE EDUCATION ON STEM DEVELOPMENT
Ms. Ariadna Celeste Pillaca Llanos, LLP Foundation, San Martin de Porres, Peru;

IAC-25.E1.1.9
FROM THE CLASSROOM TO ORBIT: A PEDAGOGICAL FRAMEWORK FOR SPACE LIFE SCIENCES IN PRIMARY EDUCATION
Mrs. Azizova Narmin, Azerbaijan State Academy of Physical Education and Sport, Baku, Azerbaijan;

IAC-25.E1.1.10
EMPOWERING THE FUTURE: A PROGRAM TO INSPIRE YOUNG GIRLS IN SPACE AND STEM
Ms. Esra Şahin, Bursa Technical University, Istanbul, Türkiye;

E1.2. Space for All: Promoting Inclusive Practices in Space Exploration

September 30 2025, 10:15 — Room C4.3

Co-Chair(s): Nelly Ben Hayoun-Stépanian, Karman Project, United Kingdom; Asanda Ntisana, South African National Space Agency (SANSA), South Africa;
Rapporteur(s): Valerie Anne Casasanto, NASA Goddard/ University of Maryland, Baltimore County (UMBC), United States;

IAC-25.E1.2.1
TOWARD CULTURAL COMPETENCY IN SPACE: ADDRESSING LAND ACQUISITION, INDIGENOUS RIGHTS, AND THE NEED FOR INCLUSIVE FRAMEWORKS IN ROCKET INFRASTRUCTURE DEVELOPMENT
Ms. Casey Domingo, Melbourne, Australia;

IAC-25.E1.2.3
THE SKY'S NO LIMIT: THE DISABILITY COMMUNITY'S BOUNDLESS CONTRIBUTIONS TO SPACEFLIGHT
Dr. Sheyna Gifford, Mayo Clinic, Rochester, United States;

IAC-25.E1.2.4
MAKING SPACE ACCESSIBLE: A SPACE EDUCATION PROGRAM FOR NEURODIVERSE STUDENTS
Ms. Darcey Watson, The Andy Thomas Space Foundation, Adelaide, Australia; Ms. Sharon Morris, Makers Empire, Adelaide, Australia;

IAC-25.E1.2.6
HOW A GOVERNMENT AGENCY SUPPORTS THE RESEARCH, EDUCATION, AND WORKFORCE DEVELOPMENT OF A MINORITY SERVING INSTITUTION IN THE UNITED STATES: DATA RESULTS FROM A YEAR ONE EVALUATION
Dr. Tonisha Lane, Virginia Tech, Farmington Hills, United States; Dr. Shawna Patterson-Stephens, Mount Pleasant, United States;

IAC-25.E1.2.7
COSMETHICS : THE MAKING OFF
Dr. Jacques Arnould, Centre National d'Etudes Spatiales (CNES), Paris, France;

IAC-25.E1.2.9
MISSION SHAKTHISAT: A 108-NATION COLLABORATIVE STEM INITIATIVE FOR LUNAR EXPLORATION
Dr. Srimathy Kesan, Chennai, India;

IAC-25.E1.2.10
ADVANCING INCLUSION IN SPACE: THE AUSTRALIAN SPACE DIVERSITY ALLIANCE'S MISSION FOR A MORE EQUITABLE SECTOR
Dr. Sheila Gough Kenyon, Starbound Space Solutions, Gold Coast, Australia;

IAC-25.E1.2.11
EARTH OBSERVATION FOR ENVIRONMENTAL JUSTICE IN GAZA: TECHNICAL, ETHICAL, AND LEGAL IMPLICATIONS
Dr. Sahba El-Shawa, Jordan Space Research Initiative (JSRI), Amman, Jordan;

IAC-25.E1.2.12
INCLUSIVE ASTRONOMY MAPS: UNIVERSAL DESIGN FOR ACCESS TO SPACE
Mr. TAHA ARBEN VURGUN, Turkish Technology Team Foundation, BERGAMA, Türkiye;

IAC-25.E1.2.13
ADVANCING TRIBAL NATIONS' ROLE IN U.S. SPACE GOVERNANCE
Dr. Alvin D. Harvey, Massachusetts Institute of Technology (MIT), Cambridge, MA, United States;

IAC-25.E1.2.14
BETWEEN LAWS AND STARS: REGULATORY CHALLENGES FOR THE INCLUSION OF LATIN AMERICAN TALENT IN THE SPACE INDUSTRY
Ms. Katya Hassel Vázquez Rodríguez, Guanajuato, Mexico;

IAC-25.E1.2.15
PRIVATE SECTOR INITIATIVES TO ENHANCE PHILIPPINE SPACE SCIENCE EDUCATION:A META-SYNTHESIS STUDY.
Mr. Gene Aaron Osorio, Lliloan, The Philippines;

IAC-25.E1.2.16
EMPOWERING THE NEXT GENERATION OF WOMEN IN SPACE: THE CASE OF AZERBAIJAN
Ms. Aytan Zeynalli, Azercosmos, Space Agency of Republic of Azerbaijan, Baku, Azerbaijan;

IAC-25.E1.2.20
EXPANDING ACCESS TO SPACE: A MULTI-PLATFORM APPROACH TO EMPOWERING UNDERREPRESENTED COMMUNITIES THROUGH EDUCATION, POLICY, AND OUTREACH
Ms. Emebet Mehabaw Tegegne, BAHIR DAR, Ethiopia;

IAC-25.E1.2.21
CELESTIAL DECOLONIALISM: INDIGENOUS KNOWLEDGE AS A CATALYST FOR ASTRONOMICAL INNOVATION
Ms. Kashish Makhija, Montreal, Canada;

E1.3. On Track: Undergraduate Space Education

September 30 2025, 15:00 — Room C4.3

Co-Chair(s): Seyed Ali Nasseri, Space Generation Advisory Council (SGAC), Canada; Christopher Vasko, European Space Agency (ESA), The Netherlands;
Rapporteur(s): Alev Sönmez, , Germany; Ozan Kara, Technology Innovation Institute (TII), United Arab Emirates;

IAC-25.E1.3.1
KEYNOTE: SPACE RENAISSANCE FOR ALL: WORKFORCE DEVELOPMENT, RESEARCH, INNOVATION, ENTREPRENEURSHIP, ASTRONAUTICS, DIVERSITY AND INCLUSION WITH LUNEX EUROMOONMARS & EUROSPACEHUB ACADEMY
Prof. Bernard Foing, ILEWG "EuroMoonMars", Wassenaar, The Netherlands;

IAC-25.E1.3.2
AI, HUMANITIES, AND COMMUNICATION: NEW FRONTIERS FOR EDUCATING PROSPECTIVE SPACE PROFESSIONALS
Ms. Kayla Taylor, Embry-Riddle Aeronautical University, Port Orange, United States;

IAC-25.E1.3.3
AN UPDATED ANALYSIS OF MEXICAN STEM STUDENTS MOTIVATIONS POST-PANDEMIC
Mr. Jesús Camilo Álvarez Valenzo, Instituto Politécnico Nacional, Ciudad de México, Mexico;

IAC-25.E1.3.4
CANDY THRUST: A HANDS-ON TECHNICAL WORKSHOP ON SUGAR ROCKETS
Mr. Aman Jaiswal, SEDS, BITS Hyderabad, Hyderabad, India;

IAC-25.E1.3.5
CSAT: INTEGRATING HANDS-ON CUBESAT DEVELOPMENT INTO UNDERGRADUATE EDUCATION FOR STEM AND LEADERSHIP SKILL ENHANCEMENT
Dr. Rehan Mahmood, Institute of Space Technology (IST), Islamabad, Pakistan;

IAC-25.E1.3.6
FROM CLASS TO SPACE: A CAPSTONE COURSE FOR 4TH YEAR SPACE ENGINEERING STUDENTS
Mr. Julian Guinane, The University of Sydney, Camperdown, NSW, Australia;

IAC-25.E1.3.8
CUBESAT IN AUGMENTED REALITY FOR UNDERGRADUATE EDUCATION
Mr. Omar Blas, Universidad Nacional de Ingeniería (Lima, Perù), Lima, Peru;

IAC-25.E1.3.9
GENDER-FOCUSED CAPACITY BUILDING THROUGH SATELLITE AND CAREER DEVELOPMENT TRAINING - SHESAT GHANA
Mr. Jake Kwaayisi Yawson, Xavier Space Solutions, Accra, Ghana;

IAC-25.E1.3.10
CULTIVATING SKILLS FOR REALIZING DIVERSE SATELLITE MISSIONS IN UNDERGRADUATE STUDENTS THROUGH COLLABORATIVE 2U CUBESAT DEVELOPMENT BETWEEN UNIVERSITIES
Prof.Dr. Kentaro Kitamura, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-25.E1.3.11
THE AUSTRALIAN ROVER CHALLENGE – TEAMWORK DOES MAKE THE DREAM WORK
Dr. David Harvey, The University of Adelaide, Adelaide, Australia;

IAC-25.E1.3.12
USING CANSATS FOR SPACE-THEMED STEM EDUCATION - ESA STANDARD VS. BESPOKE CONFIGURATIONS
Dr. Michael Johnson, University of Limerick (UL), Limerick, Ireland;

IAC-25.E1.3.13
THE BACHELOR OF SPACE SCIENCE DEGREE AT RMIT UNIVERSITY, AUSTRALIA
Prof. Gail Iles, RMIT University (Royal Melbourne Institute of Technology), Melbourne, Australia;

E1.4. In Orbit: Postgraduate Space Education

October 1 2025, 10:15 — Room C4.3

Co-Chair(s): Manuela Aguzzi, Space Applications Services, Belgium; Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Austria; David Spencer, The Aerospace Corporation, United States;
Rapporteur(s): Victor Baptista, Ideia Space, Brazil;

IAC-25.E1.4.1
SPACE MEDICINE WITHIN MEDICAL EDUCATION: SURVEY FINDINGS FROM RECENT AUSTRALIAN MEDICAL SCHOOL GRADUATES
Dr. Daniel Heng-En Wo, Brisbane, Australia; Dr. Henry Feng, Space Generation Advisory Council (SGAC), Sydney, Australia;

IAC-25.E1.4.2
BRIDGING THE GAP: PRACTICAL APPLICATION IN SPACE LAW EDUCATION FOR FUTURE PRACTITIONERS
Ms. Lauren Bydalek, University of Nebraska, College of Law, Lincoln, United States;

IAC-25.E1.4.3
THE CYBERPRO TRAIN PROGRAMME: A SCALABLE VOCATIONAL MODEL FOR ENHANCING THE EUROPEAN CYBERSECURITY SPACE ECOSYSTEM
Mrs. Eleonora Lombardi, Fondazione E. Amaldi, Rome, Italy;

IAC-25.E1.4.4
THE PINK ROVER INITIATIVE: LAUNCHING THE NEXT GENERATION OF SPACE INNOVATORS
Ms. Chloe Chang, Lunar Outpost, Melbourne, Australia;

IAC-25.E1.4.4
OCULUS - A UNIFIED VISUAL SOLVER FOR OPTIMAL CONTROL PROBLEMS VIA INDIRECT METHODS
Dr. Luigi Mascolo, Politecnico di Torino, Torino, Italy;

IAC-25.E1.4.5
ATHENE: AUTONOMOUS TERRAIN HANDLING AND ENVIRONMENTAL NAVIGATION EXPERIMENT – AN INTERDISCIPLINARY EDUCATION PROJECT ON MOBILE ROBOTICS FOR SPACE EXPLORATION AT THE UNIVERSITY OF STUTTGART
Mr. Phillip Wolff, KSat e.V., Stuttgart, Germany;

IAC-25.E1.4.6
ADVANCING AFRICAN IONOSPHERIC RESEARCH AND SPACE WEATHER MONITORING: THE NORISK PROJECT
Dr. Giancarlo Santilli, Italian Space Agency (ASI), Rome, Italy;

IAC-25.E1.4.7
ESSENTIALSAT: LESSONS LEARNED FROM A SPACE SYSTEMS ENGINEERING LEARNING LABORATORY
Dr. Jerry Sellers, Teaching Science and Technology, Inc., Manitou Springs, United States;

IAC-25.E1.4.8
THE SPACE STATION DESIGN WORKSHOP AS A PLATFORM FOR STUDENTS TO DEVELOP A LARGE-SCALE HUMAN SPACEFLIGHT MISSION CONCEPT
Ms. Anastasia Natascha Bonidis, Institute of Space Systems, University of Stuttgart, Stuttgart, Germany;

IAC-25.E1.4.9
ESA ACADEMY ENGAGEMENT PROGRAMME: INSPIRING AND EMPOWERING TOMORROW'S SPACE GENERATION
Mrs. Laetitia Delhaze, SES, Transinne, Belgium;

IAC-25.E1.4.10
ABGRAD JAPAN: A CONFERENCE MADE BY STUDENTS FOR STUDENTS TO INCREASE COOPERATION IN JAPAN AND ASIA PACIFIC
Ms. Selene Cannelli, Tokyo Institute of Technology, Shinagawa, Tokyo, Japan;

IAC-25.E1.4.11
ARCSSTEE: PROVIDING POSTGRADUATE SPACE EDUCATION FOR AFRICA AS A STRATEGIC TOOL FOR SUSTAINABLE DEVELOPMENT
Dr. Felix Buba, African Regional Center for Space Science and Technology Education in English (ARCSSTE-E), Ile-Ife, Nigeria;

IAC-25.E1.4.12
FLEXIBLE AI-DESIGNED CURRICULA FOR INTERGENERATIONAL EDUCATION IN SPACE COLONIES
Ms. Sakina Babayeva, Azerbaijan State Academy of Physical Education and Sport, Baku, Azerbaijan;

E1.5. Enabling the Future: Developing the Space Workforce

October 1 2025, 15:00 — Room C4.3

Co-Chair(s): Kathleen Coderre, Lockheed Martin (Space Systems Company), United States; Kathryn Robison, The University of Sydney, Australia;

IAC-25.E1.5.2
SCALING MOROCCO'S SPACE AMBITIONS: PUBLIC-PRIVATE PARTNERSHIPS AS A CATALYST FOR WORKFORCE DEVELOPMENT
Mr. Iliass Tanouti, Je M'Engage Pour L'Afrique, Marseille, France;

IAC-25.E1.5.3
ENHANCING EMOTIONAL INTELLIGENCE FOR PROJECT SUCCESS TO MAXIMIZE COLLABORATION ETIQUETTE IN 21ST-CENTURY GLOBAL SPACE INVOLVEMENT
Ms. Farah Diya Yasmine, Space Generation Advisory Council (SGAC), Bangkalan, Indonesia;

IAC-25.E1.5.5
A ROADMAP TO WORKFORCE INCLUSIVITY IN SPACE: CHALLENGES, SOLUTIONS, AND A FRAMEWORK FOR ACTION
Ms. SHRUSHTI PATIL, Gondia, India;

IAC-25.E1.5.6
BEYOND TECHNICAL EXPERTISE: REAL-WORLD EXPERIENCE ADVANCING SPACE WORKFORCE DEVELOPMENT THROUGH VERTICAL LEADERSHIP AND HANDS-ON TRAINING
Dr. Julie Chesley, Teaching Science and Technology, Inc (TSTI), Georgetown, United States;

IAC-25.E1.5.7
LADAKH LAUNCHPAD: A DECADE OF TRAINING THE NEXT GENERATION OF EXPLORERS IN SCIENCE, ENGINEERING AND MISSION PLANNING IN A HIGH-VALUE TERRESTRIAL ANALOGUE REGION.
Dr. Siddharth Pandey, Fugro Australia Marine Pty Ltd, Perth, Australia;

IAC-25.E1.5.8
EMPOWERING TAIWAN'S FUTURE SPACE WORKFORCE: TAIWAN SPACE GENERATION AS A YOUTH-LED MODEL FOR INTERDISCIPLINARY ENGAGEMENT
Ms. Andie Wang, Taipei, Taipei;

IAC-25.E1.5.9
IMPACT OF ARCSSTE-E'S CAPACITY DEVELOPMENT EFFORTS IN SPACE SCIENCE TECHNOLOGY EDUCATION WITHIN THE ANGLOPHONE AFRICAN COUNTRIES
Dr. Oladosu Olakunle, African Regional Center for Space Science and Technology Education in English (ARCSSTE-E), Ile-Ife, Nigeria;

IAC-25.E1.5.10
TOWARDS A FUTURE-READY SPACE WORKFORCE
Mr. Frederick Guanzon, Epping, Australia;

IAC-25.E1.5.11
HANDS-ON S&MA TRAINING WITH EMBEDDED ANOMALIES USING HEPTA-SAT: A RAPID-INTENSIVE PROGRAM TO ACCELERATE GLOBAL SPACE WORKFORCE DEVELOPMENT
Dr. Masahiko Yamazaki, Nihon University, Chiba, Japan;

IAC-25.E1.5.12
SPACEKIND - JEDI TRAINING FOR THE SPACE COMMUNITY
Mr. Alex Karl, Space Applications Services, Ukkel, Belgium;

IAC-25.E1.5.13
ACADEMIA MEETS INDUSTRY: A FRAMEWORK FOR SUSTAINABLE SPACE INNOVATION
Dr. Najam Naqvi, Institute of Space Technology (IST), Islamabad, Pakistan;

E1.6. Calling Planet Earth: Large Engagement and Communications Initiatives

October 2 2025, 10:15 — Room C4.3

Co-Chair(s): Remco Timmermans, International Space University (ISU), United Kingdom; Alina Vizireanu, Space Generation Advisory Council (SGAC), United Kingdom;
Rapporteur(s): Chloé Carrière, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Milica Milosev, Econnects, Serbia;

IAC-25.E1.6.1
BRIDGING SCIENTIFIC RESEARCH AND PUBLIC ENGAGEMENT THROUGH A DIGITAL PLATFORM AND STEM PODCAST NETWORK.
Mr. Leonardo Bruno Ramirez Regino, Instituto Politécnico Nacional, gto, Mexico;

IAC-25.E1.6.2
BRINGING SPACE CLOSER: A PROPOSAL FOR A CITIZEN-LED SPACE MEDIA PLATFORM IN JAPAN INSPIRED BY NASA SOCIAL
Ms. Ayako Kurono, Ibaraki, Japan;

IAC-25.E1.6.3
CITIZEN SCIENCE FOR SPACE: ENGAGING THE PUBLIC IN EXPLORATION AND DISCOVERY
Ms. Milica Milosev, Econnects, Novi Sad, Serbia;

IAC-25.E1.6.4
ASTRONAUT CHALLENGE: ANALOG ASTRONAUT TRAINING SIMULATION AS AN ACCESSIBLE METHOD OF INSERTION INTO THE AEROSPACE AREA TO THE GENERAL PUBLIC
Ms. Gabriela Quirós, BioMechanics Expedition Technologies (BioMechaX), El Guarco, Costa Rica;

IAC-25.E1.6.5
HARNESSING EXHIBIT DATA FROM AN AUSTRALIAN INTERACTIVE SCIENCE CENTRE TO EXPLORE PUBLIC ATTITUDES TOWARD PERMISSIBLE SPACE ACTIVITIES
Ms. Madeline Parks, Australian Space Agency, Adelaide, Australia;

IAC-25.E1.6.6
LEVERAGING SOCIAL MEDIA AND DIGITAL INFLUENCERS TO ENHANCE SPACE AWARENESS IN DEVELOPING COUNTRIES
Mrs. MJ Akter, Eveleigh, Australia;

IAC-25.E1.6.7
SPACE, CLIMATE AND THE NEXT GENERATION: LESSONS FROM WORLD SPACE WEEK 2024.
Mrs. Alma Okpalefe, World Space Week Association, Houston, United States;

IAC-25.E1.6.8
STAR-STUDDED GATHERINGS: HOW MSRO'S EVENTS ARE LAUNCHING SPACE PASSION IN THE MALDIVES
Ms. Raushan Ali Firaq, Maldives Space Research Organisation (MSRO), Male, Maldives;

IAC-25.E1.6.9
WHY EVERYONE WILL WANT TO GO TO SPACE: COMMUNICATION TECHNIQUES AND LONG-TERM STRATEGIES TO MAKE OUTER SPACE A WIDELY DESIRABLE EXPERIENCE
Ms. Chiara Limardi, Space Generation Advisory Council (SGAC), Viterbo, Italy;

E1.7. Sending out a Signal: Innovative Outreach and Communications Initiatives

October 2 2025, 15:00 — Room C4.3

Co-Chair(s): Vera Mayorova, Bauman Moscow State Technical University, Russian Federation; Olga Zhdanovich, Modis, The Netherlands;
Rapporteur(s): Carol Christian, STScI, United States; Kaori Sasaki, Japan Aerospace Exploration Agency (JAXA), Japan;

IAC-25.E1.7.1
ANALOG MISSIONS AS A CATALYST FOR INCLUSIVE SPACE OUTREACH: HYPATIA MARS
Mrs. Laura Gonzalez, Barcelona, Spain;

IAC-25.E1.7.2
PROMOTING ANALOG SPACE MISSIONS THROUGH STUDENTS FOR THE EXPLORATION AND DEVELOPMENT OF SPACE PHILIPPINES (SEDSPH) UPSKILLS GROUP MENTORSHIP PROGRAM
Ms. Kristine Jane Atienza, Space Generation Advisory Council (SGAC), Manila, The Philippines;

IAC-25.E1.7.3
POSTCARDS FROM BRUNEI TO SPACE – A PUBLIC ENGAGEMENT INITIATIVE FOR SPACE AWARENESS
Mrs. Siti Nuraazzah Abdul Aziz, Bandar Seri Begawan, Brunei Darussalam;

IAC-25.E1.7.4
SCALING SPACE OUTREACH: THE ROLE OF PODCASTS AND SHORT-FORM MEDIA IN REACHING NON-TRADITIONAL AUDIENCES
Mr. Brenden Swanik, Voyager Technologies, Moorestown, United States;

IAC-25.E1.7.6
DEMOCRATISING SPACE SCIENCE: THE AUSTRALIAN LUNAR EXPERIMENT PROMOTING HORTICULTURE (ALEPH) MISSION
Ms. Lauren Fell, Queensland University of Technology, Kenmore, Australia;

IAC-25.E1.7.7
IGNITING CURIOSITY: ROCKETS FOR TOMORROW, AN INNOVATIVE EDUCATIONAL LAUNCH KITS FOR ENGAGING RURAL SENEGALESE YOUTH IN SPACE SCIENCE
Mrs. Rosso K. DIENG, Dakar, Senegal;

IAC-25.E1.7.8
SPACEHUBS AFRICA WEBINAR SERIES: A NEW MODEL FOR SPACE OUTREACH IN AFRICA
Ms. Nelly-helen Ebruka, Calabar, Nigeria;

IAC-25.E1.7.9
THE USE OF NATIONAL VOLUNTEERING PROGRAMS TO GENERATE SPACE COMMUNICATION METHODS AND SHAPE PUBLIC OPINIONS; LEARNINGS FROM THE ASTRA PROGRAM IN AUSTRALIA
Mr. Luke Basile, Brisbane, Australia; Ms. Kelly Chen, Sydney, Australia; Ms. Claudia Ghosn, Sydney, Australia; Ms. Marnie Kenderes, Sydney, Australia;

IAC-25.E1.7.10
FROM EARTH TO ORBIT: ASTROBEAT'S INTERDISCIPLINARY APPROACH TO SPACE EXPLORATION AND PUBLIC ENGAGEMENT
Dr. Leonardo Barilaro, Paola, Malta;

IAC-25.E1.7.11
FROM PLAYERS TO PROTECTORS: GAMIFICATION FOR PUBLIC SPACE SAFETY AWARENESS
Mr. Simon Burgis, TU Darmstadt, Darmstadt, Germany;

E1.8. Show Us Space: Demonstration of Hands On Education and Outreach

October 3 2025, 10:15 — Room C2.6

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): Remco Timmermans, International Space University (ISU), United Kingdom; Marcos Eduardo Rojas Ramirez, Space Generation Advisory Council (SGAC), France;

IAC-25.E1.8.1
AN EFFECTIVE TOOL FOR SPACE AWARENESS:HANDS-ON ACTIVITY WITH TARDIGRADES
Mr. Akın Karahasan, Gokmen Space and Aviation Training Center (GUHEM), Bursa, Türkiye;

IAC-25.E1.8.3
INTRODUCING THE PAN-AFRICAN CITIZEN SCIENCE E-LAB PROJECTS
Mr. Miracle Chibuzor Chibuzor, Abuja, Nigeria;

IAC-25.E1.8.4
ENGAGING THE NEXT GENERATION THROUGH HANDS-ON SPACE EDUCATION AND OUTREACH IN NEW PART OF THE WORLD (MENA REGION)
Mrs. SALAM ABUALHAYJA'A, Irbid, Jordan;

IAC-25.E1.8.5
VIRTUAL REALITY DEVELOPMENT FOR VISUALIZATION OF LARGE, COMPLEX SYSTEMS IN AEROSPACE TEACHING APPLICATIONS
Ms. Mollie Johnson, Massachusetts Institute of Technology (MIT), Cambridge, United States;

IAC-25.E1.8.6
EXPANDING SPACE EDUCATION: ENGAGING LOCAL COMMUNITIES THROUGH INTERACTIVE VR EXPERIENCES (LUMARNITY VR)
Mr. Takuya Yokoyama, JGC Corporation, Yokohama, Japan;

IAC-25.E1.8.7
SELF-SUFFICIENCY IN A LUNAR HABITAT IN A COMMUNITY — URSA MINOR INTERSTELLAR CITIZEN (UMIC) LUNAR FARM
Ms. Amy Wang, Innovaspace UK, Chengdu, China; Ms. Yingtong Shen, Innovaspace UK, Shanghai, China; Mr. Yuxuan Wei, Innovaspace UK, Nanjing, China; Mr. Louis Li, Innovaspace UK, Shanghai, China; Mr. Yuxuan Wei, Innovaspace UK, Chrngdu, China; Mr. Leon Li, Innovaspace UK, Shanghai, China;

E1.9. Space Culture: New Processes of Public Engagement in Space through Culture and Art

October 3 2025, 13:45 — Room C4.3

Co-Chair(s): Nelly Ben Hayoun-Stépanian, Karman Project, United Kingdom; Daniela De Paulis, SETI Institute, United States;
Rapporteur(s): Aoife van Linden Tol, European Space Policy Institute (ESPI), United Kingdom; Kerrie Dougherty, , Australia; Swetha Kotichintala, Exobotics Ltd, United Kingdom;

IAC-25.E1.9.1
PROSE AT PERIHELION: POETRY AS A MEDIUM FOR SPACE ACCESSIBILITY, VISIBILITY, AND INCLUSIVITY
Ms. Kayla Taylor, Embry-Riddle Aeronautical University, Port Orange, United States;

IAC-25.E1.9.2
PALE BLUE DOT: AN INTERDISCIPLINARY MOBILE GAME ON SPACE FOR SUSTAINABILITY
Ms. Casey Domingo, Melbourne, Australia;

IAC-25.E1.9.3
A SIGN IN SPACE AS OPTICAL SETI: LASER TRANSMISSION OF A SIMULATED EXTRATERRESTRIAL MESSAGE
Ms. Daniela De Paulis, SETI Institute, Mountain View, United States;

IAC-25.E1.9.4
TRADITIONAL PERFORMING ARTS IN DELIVERING SPACE EDUCATION: A CASE STUDY IN MALAYSIAN SOCIETY
Mr. Ahmad Syukran Mohd Idris, DAMANSARA, Malaysia;

IAC-25.E1.9.5
CELESTIAL ADORNMENTS: INTEGRATING SPACE AND LOCAL CONSTELLATIONS INTO MALDIVIAN TRADITIONAL JEWELRY
Mrs. Aishath Mohamed Rasheed, Maldives Space Research Organisation (MSRO), Male', Maldives;

IAC-25.E1.9.6
COLONIZING THE FUTURE: ETHICAL AND GOVERNANCE CHALLENGES IN OUTER SPACE EXPLORATION
Ms. Giuliana Rotola, Scuola Superiore Sant'Anna, Bari, Italy;

IAC-25.E1.9.7
HERITAGE SPACE FOOD: PRESERVING CULINARY CULTURE FOR EXTENDED MISSIONS
Dr. Newton Campbell, Everything Lives LLC, Washington, United States;

IAC-25.E1.9.8
THE COSMIC NEW MATERIALISMS READING GROUP: A COSMIC COLLECTIVE CARTOGRAPHY
Dr. Jennifer Crouch, London, United Kingdom;

IAC-25.E1.9.9
FILLING THE SPACE GAP: THE NATIONAL LIBRARY OF AUSTRALIA AND THE WOMEN IN THE SPACE INDUSTRY PROJECT
Mrs. Louise Whelan, Avalon Beach, Australia;

IAC-25.E1.9.11
ASTRONOMY IN THE AYMARA CULTURE
Dr. Georgina Chavez, Universidad Catolica Boliviana San Pablo, La Paz, Bolivia;

IAC-25.E1.9.12
IMPLEMENTING A RURAL REVITALIZATION PROJECT TO TURN MY HOMETOWN, KOMONO TOWN, INTO A "SPACE TOWN
Mr. HIKARU OTSUKA, Mie-ken, Japan;

IAC-25.E1.9.13
CONNECTING THE COMMUNITY: NOVEL APPROACHES TO SPACE EDUCATION
Ms. Harriet Hurley, Melbourne, Australia;

IAC-25.E1.9.14
CATALYZE THE PUBLIC IMAGINATION WITH SCIENCE FICTION EXHIBITION A NEW PATHWAY FOR SPACE CULTURE AND EDUCATION
Ms. Chen Yu, Tsinghua University, Beijing, Beijing, China;

IAC-25.E1.9.15
INCLUSIVE SPACE EXPLORATION: OVERCOMING BARRIERS TO PARTICIPATION IN THE GLOBAL SPACE ECOSYSTEM
Ms. Shrawani Shagun, National Law University, Delhi, noida, India;

IAC-25.E1.9.16
TASK ETERNAL: A MAJOR NEW AEROSPACE EXHIBITION AT POWERHOUSE PARRAMATTA, CO-CURATED WITH INDUSTRY AND COMMUNITY
Ms. Jaklyn Babington, Powerhouse Museum, Sydney, Australia;

IAC-25.E1.9.17
CARLOS NORIEGA: THE FIRST AND ONLY PERUVIAN ASTRONAUT'S LEGACY IN SPACE EXPLORATION AND ITS IMPACT ON FUTURE GENERATIONS
Mr. Jeremy Hanks Reyes Huaman, Universidad Nacional Mayor de San Marcos, LIMA, Peru;

IAC-25.E1.9.18
ESTABLISHING A CULTURE OF DRINKING IN SPACE: REALIZING A BEER EXPERIENCE IN SPACE EQUIVALENT TO THAT ON EARTH
Ms. Taiko Kawakami, ASTRAX, Inc., Bunkyo-ku, Tokyo, Japan;

IAC-25.E1.9.19
BEYOND THE BLUE: PAKISTAN'S FIRST SPACE-THEMED SHORT FILM INITIATIVE FOR SPACE OUTREACH AND AWARENESS
Dr. Najam Naqvi, Institute of Space Technology (IST), Islamabad, Pakistan;

E1.10. Learning by Doing: Experiential and Simulation-Based Learning

October 3 2025, 13:45 — Room C2.6

Co-Chair(s): Seyed Ali Nasseri, Space Generation Advisory Council (SGAC), Canada; Remco Timmermans, International Space University (ISU), United Kingdom;

IAC-25.E1.10.1
A GAMIFIED WEB PLATFORM FOR AEROSPACE EDUCATION IN PERU: A PILOT STUDY FOR SECONDARY AND UNDERGRADUATE STUDENTS
Mr. Frank Raul Quintana Quispe, Universidad Nacional Tecnológica de Lima Sur, Lima, Peru;

IAC-25.E1.10.3
DEMOCRATIZING SPACE: HOW CITIZEN-LED CUBESAT PROJECTS IN JAPAN PROMOTE INCLUSION IN SPACE DEVELOPMENT
Ms. Ayako Kurono, Ibaraki, Japan;

IAC-25.E1.10.5
EMPOWERING EMERGING SPACE NATIONS: A PROJECT-BASED LEARNING APPROACH TO CUBESAT AND ROVER DEVELOPMENT USING COTS COMPONENTS
Dr. Ramson Nyamukondiwa, International Space University (ISU), Illkirch-Graffenstaden, Strasbourg, France;

IAC-25.E1.10.6
EMPOWERING THE NEXT GENERATION THROUGH SPACE STATION EXPERIMENTATION AND SPACE TECHNOLOGY EDUCATION.
Dr. Sara Webb, Swinburne University of Technology, Melbourne, Australia;

IAC-25.E1.10.7
HANDS-ON SPACE LEARNING: ENGAGING STUDENTS THROUGH EXPERIENTIAL EDUCATION
Mr. Sourabh Kaushal, SMARTCIRCUITS INNOVATION Private Limited, Jagadhri, India;

IAC-25.E1.10.8
IMPLEMENTING CAN SATELLITE AND ROCKET COMPETITION TO BOLSTER SPACE EDUCATION IN THE PHILIPPINES
Mr. Jeremy Bajado, Lapu-Lapu City, The Philippines;

IAC-25.E1.10.9
QL-SAT: A MALAYSIAN CUBESAT EDUCATIONAL KIT FOR STEM PROGRAMME
Dr. Muhammad Hasif bin Azami, Universiti Teknologi MARA (UITM), Shah Alam, Malaysia;

IAC-25.E1.10.10
SLIPPERS2SAT MIDDLE SCHOOL CUBESAT PROJECT: EMPOWERING NEPAL'S MARGINALIZED YOUTH FOR A SPACEFARING FUTURE
Mr. Rishav Adhikari, Nepal Space Foundation, Kathmandu, Nepal;

IAC-25.E1.10.11
STARLAB EXPERTLINK - INTERSECTING GLOBAL SPACE EXPERTS WITH PRE-COLLEGE CLASSROOMS IN A SUSTAINABILITY-THEMED SPACE STATION DESIGN CHALLENGE
Ms. Abigail Harrison, The Ohio State University, Columbus, United States;

IAC-25.E1.10.12
TEACHING ASTRONAUTICS THROUGH SIMULATIONS AND IMMERSIVE PRACTICES: A CASE STUDY OF THE WOGEL INSPACE CAMP
Mrs. Nicole Victory, Cabo de Santo Agostinho, Brazil; Ms. Samara Lima, Paulista, Brazil; Ms. Giovanna Veronez Alves Pedro, São Paulo, Brazil; Prof.Dr. Paola Barros-Delben, Universidade Federal de Santa Catarina UFSC, Florianópolis, Brazil; Prof. Daniel Lima, Education, Natal, Brazil; Mr. Henrique Souza, Senador Canedo - GO, Brazil; Ms. Gabrielle Penha, Belford Roxo, Brazil; Mr. Luca Paolini, Curitiba, Brazil; Ms. Camilla Mendes, Ribeirão Pires, Brazil; Mr. ANTONY DE SENA, Belém, Brazil;

IAC-25.E1.10.13
MUSIC, POETRY & SPACE TO EXPAND SPACE FRONTIERS.
Ms. Diana Aponte, Villavicencio, Colombia;

IAC-25.E1.10.15
GAMIFYING CUBESAT KNOWLEDGE: LEARNING LESSONS FOR AVOIDING THE KESSLER CASCADE
Prof. Brian Yecies, University of Wollongong (UOW), Wollongong, Australia;

E2. 53rd 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

September 29 2025, 15:30 — Room C2.4

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): Jeong-Won Lee, Korea Aerospace Research Institute (KARI), Korea, Republic of;

IAC-25.E2.1.1
SUPERSONIC INLET UNSTART PREVENTION USING NANOSECOND PULSE DIELECTRIC BARRIER DISCHARGE PLASMA ACTUATOR
Mr. JingChong Ning, Carleton Univeristy, Ottawa, Canada;

IAC-25.E2.1.2
PHOTOELECTRIC REMOVAL OF CHARGED REGOLITH DUST FROM CONTAMINATED SURFACES
Mr. Josef Richmond, Australian National University (ANU), Canberra, Australia;

IAC-25.E2.1.3
DISTRIBUTED SENSOR TASKING METHOD FOR SEARCHING AND TRACKING CISLUNAR SPACE OBJECTS
Mr. Xuxin Lu, Beijing Institude of technology, Beijing, China;

IAC-25.E2.1.4
MANUFACTURING 3D HOLLOW STRUCTURES WITH EXTRA-TERRESTRIAL SOIL SIMULANTS
Mr. Rohan Kulkarni, Indian Institute of Science, Bengaluru, India;

IAC-25.E2.1.5
EARTH AEROBRAKING STUDY FOR MARS SAMPLE RETURN (MSR) MISSION: CRUISE TO 400 KM EARTH SCIENTIFIC ORBIT
Mr. M. Khawariz Andaristiyan, Institut Teknologi Bandung, Bandung, Indonesia;

IAC-25.E2.1.6
A NOVEL ALGORITHM FOR FAULT DETECTION AND RECOVERY OF FPGA IN SATELLITE ATTITUDE ESTIMATION
Mr. George Wakim, The University of Sydney, Bankstown, Australia;

IAC-25.E2.1.7
RESCUE SYSTEM FOR AN INCAPACITATED ASTRONAUT ON THE MOON
Ms. Diana ALjbour, Space Generation Advisory Council (SGAC), Amman, Jordan;

IAC-25.E2.1.8
PERFORMANCE ENHANCEMENT OF A CRYOGENIC SHUT-OFF VALVE FOR LIQUID ROCKET ENGINES THROUGH ADDITIVE MANUFACTURING DESIGN
Ms. Min Eom, University of Science and Technology (UST), Daejeon, Korea, Republic of;

IAC-25.E2.1.9 (unconfirmed)
HIGH-ACCURACY PRESSURE MEASUREMENTS IN STUDENT SOUNDING ROCKETS: METHODS, APPLICATIONS, AND CHALLENGES
Mr. Paweł Sucharzewski, Wroclaw University of Science and Technology, Bierawa, Poland;

IAC-25.E2.1.10
TIDAL MEASUREMENTS IN LIMAY, BATAAN, PHILIPPINES USING GNSS INTERFEROMETRIC REFLECTOMETRY (GNSS-IR)
Ms. Leila Micahella Cruz, University of the Philippines Diliman, QUEZON CITY, The Philippines;

IAC-25.E2.1.11
AUTOMATED MAPPING OF GALE CRATER'S STRATIGRAPHY USING HIRISE IMAGERY
Mr. Jared Landau, Monash University, Melbourne, Australia;

IAC-25.E2.1.12
DETERMINATION OF MECHANICAL PARAMETERS OF A SOUNDING ROCKET FIN IN A COMPLEX STRESS STATE USING NUMERICAL METHODS AND EXPERIMENTAL STUDIES
Mr. Dominik Korzeniowski, Wroclaw University of Science and Technology, Pieszyce, Poland;

E2.2. Student Conference - Part 2

September 30 2025, 10:15 — Room C2.4

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-25.E2.2.1
ALCANTARA X CAPE CANAVERAL: AN ANALYSIS OF PROPELLANT CONSUMPTION IN LAUNCHES TO GEOSTATIONARY ORBIT
Mr. Gabriel Garcia, Universidade Federal de Minas Gerais - UFMG, Belo Horizonte, Brazil;

IAC-25.E2.2.2
OIL-BASED GRANULAR JAMMING FOR ADAPTIVE ROBOTIC GRIPPING IN MICROGRAVITY AND VACUUM ENVIRONMENTS
Mr. Sam Rogers, The University of Sydney, Darlington, Australia;

IAC-25.E2.2.3
OPERATIONAL SUSTAINABILITY OF GEOSYNCHRONOUS EQUATORIAL ORBIT: ANALYZING THE IMPACT OF LOCALIZED FRAGMENTATION EVENTS ON SPACE OPERATIONS IN GEO
Mr. Jakub Leś, University of Wrocław (UWr), Katowice, Poland;

IAC-25.E2.2.4
CISLUNAR ORBIT DETERMINATION USING CNN-BASED CONSTRAINED ADMISSIBLE REGION
Ms. Jiayi Li, Beihang University, beijing, China;

IAC-25.E2.2.7 (unconfirmed)
RAPID DESIGN OF REGENERATIVE COOLING SYSTEM IN A STUDENT LIQUID ENGINE
Mr. Wiktor Boltrukiewicz, Gdansk University of Technology, Gdansk, Poland;

IAC-25.E2.2.8
CHARACTERIZATION OF THE STATIONARITY OF AN INDUCTIVELY COUPLED PLASMA FOR SPACE APPLICATIONS
Mr. Alexandre Bouraoui, ISAE-Supaero University of Toulouse, Toulouse, France;

IAC-25.E2.2.9
FEASIBILITY ASSESSMENT OF LOW-THRUST MULTI-TARGET TRAJECTORIES VIA SIMS-FLANAGAN TRANSCRIPTION
Mr. Yago Castilla Lamas, ISAE-Supaero University of Toulouse, Toulouse, France;

IAC-25.E2.2.10
EVOLUTION OF THE BIDIRECTIONAL VORTEX IN A CAPPED ELLIPSOIDAL CYCLONIC ROCKET ENGINE
Mr. Patrick Eid, Auburn University, United States;

IAC-25.E2.2.11
CUBESAT CONSTELLATIONS FOR DISASTER MANAGEMENT IN THE CARIBBEAN
Ms. Laura Hole, University of Nottingham, Nottingham, United Kingdom;

E2.3-GTS.4. Student Team Competition

September 30 2025, 15:00 — Room C4.7

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-25.E2.3-GTS.4.1
BARCELONA ZERO-GRAVITY CHALLENGE 2024 EDITION WINNING STUDY: SHEAR-THICKENING FLUID AS A CUSHION FOR FORCE ABSORPTION IN MICROGRAVITY
Ms. Florence Pauline Basubas, Space Generation Advisory Council (SGAC), Mandaue City, The Philippines;

IAC-25.E2.3-GTS.4.2
PIONEERING IN-SITU SPACE DEBRIS MONITORING: A PROOF OF CONCEPT CUBESAT
Ms. Emily Sacks, The University of Sydney, Sydney, Australia;

IAC-25.E2.3-GTS.4.3
TOWARDS A CIRCULAR SPACE ECONOMY: SUSTAINABLE STRATEGIES FOR SPACE DEBRIS MANAGEMENT
Mr. Matheo Perrochaud, ISAE-Supaero University of Toulouse, Toulouse, France;

IAC-25.E2.3-GTS.4.4
CUSTOM-BUILT ON-BOARD COMPUTER FOR METUCUBE SATELLITE
Mr. Burak Toy, Middle East Technical University, Ankara, Türkiye;

IAC-25.E2.3-GTS.4.5
A DESCENT CONTROL SYSTEM FOR PRECISE LANDING USING BIOMIMETIC AUTOGYRO BLADE PITCH CONTROL
Mr. Mountashiour Rahman, BRAC University, Dhaka, Bangladesh;

IAC-25.E2.3-GTS.4.6
DEVELOPMENT AND TESTING OF DALAN: A ROTARY-WING MODULAR SPACE DRONE FOR MARS SIMULANT MISSIONS
Mr. Altuğ Parlak, Yeditepe University, İstanbul, Türkiye;

IAC-25.E2.3-GTS.4.7
IMPLEMENTATION AND VERIFICATION OF AN AUTONOMOUS FAILURE DETECTION AND RECOVERY SYSTEM ON THE CUBESAT SOURCE
Mr. Mario Spahr, KSat e.V., Stuttgart, Germany;

IAC-25.E2.3-GTS.4.8
AN INTEGRATED TEST AND ANALYSIS FRAMEWORK FOR SOLID PROPULSION: FROM EXPERIMENTAL SOUNDING ROCKETS TO EMERGING SPACE APPLICATIONS
Mr. Junghyeon Yun, Seoul National University, Seoul, Korea, Republic of;

IAC-25.E2.3-GTS.4.9
BEYOND ABLATION: INTEGRATING ACTIVE COOLING INTO HYBRID HEATSHIELDS FOR NEXT-GEN SPACECRAFT PROTECTION
Mr. Lukáš Hudáček, Technical University Košice, Košice, Slovak Republic;

IAC-25.E2.3-GTS.4.11
REAL-TIME RSSI-BASED ANTENNA TRACKING: LEVERAGING MACHINE LEARNING FOR LUNAR AND MARTIAN ROVER COMMUNICATION
Mr. Will Middlewick, Monash University, Pascoe Value South, Australia;

IAC-25.E2.3-GTS.4.12
OUROBOROS, AN UNDERGRADUATE DESIGN AND ANALYSIS OF A HALL THRUSTER FOR SMALL-SAT APPLICATIONS
Mr. Chris Shiffer, University of Alabama in Huntsville, Montgomery, United States;

E2.4. Educational Pico and Nano Satellites

October 1 2025, 10:15 — Room C2.4

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-25.E2.4.1
KEYNOTE: HANDS-ON SPACE EDUCATION AND INTERNATIONAL COLLABORATION: IN MEMORY OF PROF PIERRE ROCHUS
Prof. Sabrina Corpino, Politecnico di Torino, Torino, Italy;

IAC-25.E2.4.2
AN EDUCATIONAL 3U CUBESAT MISSION AT POLITECNICO DI TORINO: THE ELECTRA MISSION FOR TEC RESEARCH AND MICRO THRUSTER IN-ORBIT TESTING
Mr. Alessio Taretto, Politecnico di Torino, Grugliasco, Italy;

IAC-25.E2.4.3
ON-BOARD COMPUTER (OBC) HARDWARE PROTOTYPE FOR A 1U CUBESAT
Mr. Misael Landero, National Autonomous University of Honduras (UNAH), Tegucigalpa, Honduras;

IAC-25.E2.4.4
VALIDATION OF ALBA CUBESAT'S THERMAL MODEL: FROM SIMULATIONS TO EXPERIMENTAL TESTING
Mr. Stefano Lopresti, CISAS "G. Colombo" - University of Padova, Padova, Italy;

IAC-25.E2.4.5
UWE-5: DESIGN AND DEVELOPMENT OF AN EDUCATIONAL COMMUNICATIONS SATELLITE MISSION
Mr. Moritz Heimbach, Julius Maximilians Universität Würzburg, Würzburg, Germany;

IAC-25.E2.4.6
PLUG-AND-PLAY ENABLED MODULAR NANOSATELLITE PLATFORM ARCHITECTURE: DESIGN, IMPLEMENTATION, AND ON-ORBIT PERFORMANCE VALIDATION
Mr. Ziang Cui, Tsinghua University, Beijing, China;

IAC-25.E2.4.8
DESIGN, ASSEMBLY AND TESTING OF THE ENGINEERING MODEL OF 3U BIRDS-RPM CUBESAT INTEGRATION TO STRUCTURAL AND VIBRATION ANALYSIS
Mr. Kouki Terada, LaSEINE, Kyushu Institute of Technology, Fukuoka, Japan;

IAC-25.E2.4.9
ROBUST H-INFINITY CONTROLLER DESIGN FOR 3-AXIS ATTITUDE CONTROL OF CANSAT UNDER UNCERTAINTIES
Mr. Partha Chowdhury, IIIT Delhi, New Delhi, India;

IAC-25.E2.4.10
DESIGN AND DEVELOPMENT OF A CUSTOM-BUILT ADCS FOR METUCUBE SATELLITE
Ms. Gülce Tuzcu, Middle East Technical University, Ankara, Türkiye;

IAC-25.E2.4.11
DEVELOPMENT OF A MINIATURIZED ANTENNA DEPLOYMENT MECHANISM FOR POCKETQUBE APPLICATIONS
Mr. Federico Toson, CISAS "G. Colombo" - University of Padova, Padova, Italy;

E3. 38th IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS

Coordinator(s): Jacques Masson, European Space Agency (ESA), The Netherlands; Pieter Van Beekhuizen, Stichting Space Professionals Foundation (SSPF), The Netherlands;

E3.1. International cooperation in using space for sustainable development: The "Space2030" agenda

September 30 2025, 10:15 — Room C2.1

Co-Chair(s): Ikuko Kuriyama, Institute for Future Initiatives (IFI), The University of Tokyo, Japan; Pieter Van Beekhuizen, Stichting Space Professionals Foundation (SSPF), The Netherlands;

IAC-25.E3.1.1
WHO REPRESENTS SPACE? AND WHAT DO THEIR EXPERIENCES MEAN FOR THE SPACE2030 AGENDA?
Dr. Elise Stephenson, Australian National University (ANU), New South Wales, Australia;

IAC-25.E3.1.2
FROM FLOODS TO THE FUTURE: SPACE COOPERATION FOR SUSTAINABLE WATER MANAGEMENT
Ms. Chioma Ezeigbo, Abuja, Nigeria;

IAC-25.E3.1.3
THE SPACE 2030 AGENDA – A CRITICAL REVIEW BY SPACE RENAISSANCE INTERNATIONAL
Mr. Alberto Cavallo, Space Renaissance International, Torino, Italy;

IAC-25.E3.1.4
HUMAN RIGHTS AND HUMAN SPACEFLIGHT: ALIGNING SPACE POLICY WITH SUSTAINABLE DEVELOPMENT
Mr. Ari Eisenstat, University of Hawaii, Honolulu, United States;

IAC-25.E3.1.5
A NOVEL FRAMEWORK FOR MEASURING AND PROMOTING EQUITABLE ACCESS TO SPACE RESOURCES AND OPPORTUNITIES
Mr. Emmanuel Githinji, Technical University of Kenya, Nairobi, Kenya;

IAC-25.E3.1.6
SPACE – A NEW FRONTIER FOR INTERNATIONAL BUSINESS
Dr. Arpit Raswant, The University of Newcastle Australia, Newcastle, Australia;

IAC-25.E3.1.7
EQUALITY IN OUTER SPACE: A COMPREHENSIVE REGULATORY FRAMEWORK TOWARDS A COLLECTIVE CONTRIBUTION TO SPACE SUSTAINABILITY
Ms. Evridiki Lilitsi, National and Kapodistrian University Of Athens, Athens, Greece;

IAC-25.E3.1.9
STRENGTHENING AUSTRALIA'S TIES WITH PACIFIC NATIONS THROUGH CLIMATE AND SPACE COLLABORATION
Ms. Mannan Wilkinson, The University of Sydney, mulgoa, Australia;

IAC-25.E3.1.10 (unconfirmed)
INTERNATIONAL COOPERATION IN USING SPACE FOR SUSTAINABLE DEVELOPMENT: THE "SPACE2030" AGENDA
Ms. Ritwika Maiti, Kolkata, India;

IAC-25.E3.1.11
EXTRATERRESTRIAL MINERAL RIGHTS: WHO OWNS THE ASTEROIDS? CASE TO CREATE A NEW VIABLE PRIVATE MARKET
Ms. Samiksha Raviraja, Airbus Defence and Space, Hitchin, United Kingdom;

E3.2. The future of space exploration and innovation

October 1 2025, 15:00 — Room C2.1

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-25.E3.2.2
HUMANITY'S FUTURE IN SPACE: THE CASE FOR COSMIC DEVELOPMENT GOALS
Ms. Marta Cid Lopez, International Space University (ISU), Strasbourg, France; Ms. Tessa Rankin, International Space University (ISU), Illkirch-Graffenstaden, France;

IAC-25.E3.2.3
EXPLORING THE FINAL FRONTIER: GEOPOLITICS, SPACE DIPLOMACY, AND ITALY'S GLOBAL ENGAGEMENT IN SPACE EXPLORATION
Mrs. Alessandra Vernile, Agenzia Spaziale Italiana (ASI), Rome, Italy;

IAC-25.E3.2.4
PROPOSAL FOR THE DIRECTION OF SOUTH KOREA'S SPACE EXPLORATION ROADMAP
Dr. Hyoung Joon An, Science and Technology Policy Institute, Incheon, Korea, Republic of;

IAC-25.E3.2.6
TRENDS IN SPACE EXPLORATION POLICIES : TOWARDS RESPONSIBLE HUMAN EXPANSION?
Dr. Aurélie Trur, International Space University (ISU), Illkirch-Graffenstaden (Strasbourg), France;

IAC-25.E3.2.7
EXPANSION OF INVOLVEMENT IN THE SPACE SECTOR
Ms. Fidan Hajiyeva, Azerbaijan State University of Economics, Baku, Azerbaijan;

IAC-25.E3.2.8
ADAPTIVE STRATEGIES FOR MULTI-STAKEHOLDER LUNAR ACTIVITY AREAS
Ms. Christine Tiballi, Open Lunar Foundation, sausalito, United States;

IAC-25.E3.2.9
LUNAR DECENTRALIZED AUTONOMOUS ORGANIZATION: AN INNOVATIVE FRAMEWORK PAVING THE WAY TOWARDS FUTURE MOON GOVERNANCE
Ms. Giulia Priotti, University of Trento, Turin, Italy;

IAC-25.E3.2.10
ENSURING SAFETY OF PEOPLE ON AND AROUND THE MOON: A PRELIMINARY SET OF PRINCIPLES
Mr. Hui Du, Institute of Spacecraft System Engineering,China Academy of Space Technology (CAST), Beijing, China;

IAC-25.E3.2.11
POWERING THE MOON: LEGAL SUGGESTIONS REGARDING THE REGULATION OF ENERGY PRODUCTION, SHARING, AND STORAGE FOR LUNAR SURFACE EXPLORATION
Dr. Zsófia Biró, University of Pécs and SGAC, Pécs, Hungary;

IAC-25.E3.2.12
PROTECTING HUMAN HERITAGE ON THE MOON: LEGAL, POLICY AND ETHICAL CONSIDERATIONS FOR HERITAGE PRESERVATION
Ms. Martina Murudzwa, Embry-Riddle Aeronautical University, Daytona, United States;

E3.3. Economic Resilience and the Space Economic/Industrial Sector

September 30 2025, 15:00 — Room C2.1

Co-Chair(s): Pieter Van Beekhuizen, Stichting Space Professionals Foundation (SSPF), The Netherlands; Henry Hertzfeld, Space Policy Institute, George Washington University, United States;
Rapporteur(s): Luigi Scatteia, PricewaterhouseCoopers Advisory (PwC), France; Bhavya Lal, National Aeronautics and Space Administration (NASA), United States;

IAC-25.E3.3.1 (unconfirmed)
NON-MATHEMATICAL APPLICATION OF POLITECONOMETRICS TO ENHANCE THE ECONOMIC RESILIENCE OF SPACE GOVERNANCE FRAMEWORKS
Mr. Dexter Baño, City of San Jose del Monte, The Philippines;

IAC-25.E3.3.2
TOWARDS THE BUILDING-UP OF A SPACE ECONOMY THEMATIC ACCOUNT. THE COLLABORATION BETWEEN ITALIAN SPACE AGENCY AND THE ITALIAN NATIONAL STATISTICS INSTITUTE TO ASSESS THE IMPACT OF THE SPACE ECONOMY IN THE ITALIAN BUSINESS SYSTEM.
Dr. Matteo Coletta, ASI - Italian Space Agency, rome, Italy;

IAC-25.E3.3.3
SPACE ARBITRATION AS A FACTOR IN RESILIENCE OF THE SPACE ECONOMY: LEGAL CHALLENGES STEMMING FROM INCREASING MILITARY INVOLVEMENT
Ms. Anna Hurova, International Institute of Space Law (IISL), Kyiv, Ukraine;

IAC-25.E3.3.4
ENHANCING ECONOMIC RESILIENCE - INTEGRATING CYBER I&W INTO SPACE SITUATIONAL AWARENESS – A CASE STUDY OF INTELSAT 33E
Dr. Nathaniel Dailey, The MITRE Corporation, McLean, VA, United States;

IAC-25.E3.3.5
THE COMMERCIAL SATELLITE INDUSTRY: KEY INDICATORS AND GLOBAL TRENDS IN AN ERA OF GLOBAL ECONOMIC UNCERTAINTY AND DISRUPTION
Ms. Carissa Christensen, Bryce Space and Technology, Alexandria VA, United States;

IAC-25.E3.3.6
ASSESSING THE MARKET VIABILITY OF SPACE BIO-MANUFACTURING: A STRATEGIC STUDY FOR INDIA'S BIO-ECONOMY
Ms. SHRUSHTI PATIL, Gondia, India;

IAC-25.E3.3.7
THE EMERGING MARKET OF SPACE-BASED SURVEILLANCE AND TRACKING TO ENHANCE THE RESILIENCE OF THE SPACE ECONOMY
Dr. Ada Ranieri, ARCA Dynamics, Rome, Italy;

IAC-25.E3.3.8
THE COMPOSITION AND STRUCTURE OF EVOLVING STATE ACTOR TRADING CLUSTERS WITHIN SPACE-RELATED INTERNATIONAL TRADE NETWORKS
Ms. Linn Mattsson, FOI Swedish Defence Research Agency, Kista, Sweden;

IAC-25.E3.3.9
BUILDING ECONOMIC RESILIENCE IN THE SPACE SECTOR: LEVERAGING VENTURE CAPITAL, ENDOWMENTS, AND PUBLIC-PRIVATE INVESTMENT MODELS
Ms. Alexandra Vidyuk, Wilmington, United States;

IAC-25.E3.3.10
ECONOMIC RESILIENCE OF THE SPACE INDUSTRY IN AUSTRALIA – A CASE FOR SPACE BASED SOLAR POWER (SBSP)
Ms. Zeina Shaheen, The University of Sydney, Chippendale, Australia;

IAC-25.E3.3.11
THE ECONOMIC VIABILITY OF SPACE MINING OPERATIONS
Mr. Abdullah Algharrash, Space Generation Advisory Council (SGAC), Riyadh, Saudi Arabia;

E3.4. Assuring a Safe, Secure and Sustainable Environment for Space Activities

October 2 2025, 15:00 — Room C2.1

Co-Chair(s): Peter Stubbe, German Aerospace Center (DLR), Germany; Jana Robinson, The Prague Security Studies Institute, Czech Republic;
Rapporteur(s): Gina Petrovici, German Space Agency, Germany;

IAC-25.E3.4.1
AI-POWERED SPACE POLICY ANALYSIS: AUTOMATING COMPLIANCE, RISK ASSESSMENT, AND REGULATORY FORECASTING
Mr. T Chow, Santiniketan, India;

IAC-25.E3.4.3 (unconfirmed)
SECURING THE FUTURE OF EUROPEAN REUSABLE ROCKET TECHNOLOGIES: POLICY, REGULATION, AND SUSTAINABLE DEVELOPMENT IN THE EUROPEAN PRIVATE SPACE SECTOR
Mr. Sam Arne Whalley, Isar Aerospace Technologies GmbH, München, Germany;

IAC-25.E3.4.4
CHARACTERIZING UNCERTAINTIES IN PREDICTIVE SPACE SAFETY METRICS
Mr. Yash Chandramouli, Amazon, Virginia, United States;

IAC-25.E3.4.5
COSPAR'S PLANETARY PROTECTION GUIDELINES FOR SAFE AND SUSTAINABLE SCIENTIFIC INVESTIGATIONS ON THE EMERGENCE AND EVOLUTION OF LIFE IN THE SOLAR SYSTEM
Dr. Athena Coustenis, Observatoire de Paris, MEUDON, France;

IAC-25.E3.4.6
INDUSTRIAL REVISION OF NORMS, STANDARDS, AND BEST PRACTICES FOR ON-ORBIT SERVICING
Dr. Inesa Kostenko, University of Leicester, Leicester, United Kingdom;

IAC-25.E3.4.7
EXAMINING THE ROLE OF COMMERCIAL STAKEHOLDERS IN CISLUNAR GOVERNANCE
Dr. Mariel Borowitz, Atlanta, GA, United States;

IAC-25.E3.4.8
A UNIFIED APPROACH TO SPACE TRAFFIC MANAGEMENT: ENSURING SAFE AND SUSTAINABLE OPERATIONS IN EARTH'S ORBITS AND BEYOND
Ms. Wanjiku Chebet Kanjumba, University of Florida, Vicillion, Gainesville, United States;

IAC-25.E3.4.9
ITU FILING ON THE MOON: ADDRESSING REGULATORY CHALLENGES FOR EMERGING LUNAR RADIO SPECTRUM MANAGEMENT
Ms. Veronica Roman Ruiz, International Telecommunication Union (ITU), Geneva, Switzerland; Ms. Veronica Roman Ruiz, International Telecommunication Union (ITU), Geneve, Switzerland;

IAC-25.E3.4.10
POSSIBLE APPROACHES TO ESTABLISH INTERNATIONAL FRAMEWORK AND AUTONOMY ON SPACE SITUATIONAL AWARENESS (SSA): ANALOGY FROM GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS)
Mr. Kota Umeda, Institute of Geoeconomics (IOG), Tokyo, Japan;

IAC-25.E3.4.11
STATEMENT FOR A RESPONSIBLE SPACE SECTOR – A COLLECTIVE EFFORT TO DRIVE SUSTAINABLE CHANGE ON EARTH, IN EARTH'S ORBIT AND BEYOND
Prof. Kai-Uwe Schrogl, International Institute of Space Law (IISL), Paris, France;

IAC-25.E3.4.12
THE ROLE OF INTERNATIONAL COOPERATION IN ENSURING SUSTAINABLE SPACE: A FOCUS ON DEVELOPING COUNTRIES
Mr. Javid Huseynov, Azerbaijan State University of Economics, Baku, Azerbaijan;

E3.6. Financial Viability and Profitability of Space Business Models

October 1 2025, 10:15 — Room C2.1

Co-Chair(s): Christine Klein, European Space Agency (ESA), France; Henry Hertzfeld, Space Policy Institute, George Washington University, United States;
Rapporteur(s): Karina Miranda Sanchez, ESA, The Netherlands;

IAC-25.E3.6.1
FROM HYPE AND BUBBLES TO SUSTAINABLE INDUSTRIES IN NEWSPACE - CASES IN LAUNCH, CONSTELLATIONS, IN-SPACE TRANSPORTATION, SPACE SUSTAINABILITY & MORE
Mr. Erik Kulu, Tallinn, Estonia;

IAC-25.E3.6.2 (unconfirmed)
THE FINANCIAL FUTURE OF TELECOM MERGERS IN THE SPACE ERA: WILL TELECOM COMPANIES AND SATELLITE OPERATORS MERGE?
Ms. Ulkar Orujova, Azercosmos, Space Agency of Republic of Azerbaijan, Baku, Azerbaijan;

IAC-25.E3.6.3
RETHINKING FINANCIAL VIABILITY AND PROFITABILITY OF NEW SPACE BUSINESS MODELS AND PROJECTS: THE MEASUREMENT OF INTANGIBLE VALUE
Dr. Alessandro Paravano, Politecnico di Milano, Cislago, Italy;

IAC-25.E3.6.4
BULLS FUEL ROCKETS, BEARS CRASH LAND: SPACE INVESTING EXPLAINED
Mr. Gabriel Kirchler, Universidad Nacional de Ingeniería (Lima, Perù), Lima, Peru;

IAC-25.E3.6.5
COMPARING FINANCIAL VIABILITY OF VARIOUS ORBITAL REGIMES
Mr. Mark Sturza, ViaSat Inc., Encino, United States;

IAC-25.E3.6.6
DEVELOPING A SUSTAINABLE BIOFUEL INDUSTRY FOR AEROSPACE AND AVIATION: A ROADMAP TO MARKET VIABILITY
Ms. VANESSA MONTIEL VIRUEL, Universidad Autónoma de Baja California, Tijuana, Mexico;

IAC-25.E3.6.7
START-UP SPACE: INVESTMENT LANDSCAPE AND TRENDS FOR 2024
Ms. Carissa Christensen, Bryce Space and Technology, Alexandria VA, United States;

IAC-25.E3.6.8
E3.6 PANEL DISCUSSION
Ms. Karina Miranda Sanchez, ESA, The Netherlands;

E4. 59th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM

Coordinator(s): A. Ingemar Skoog, , Germany; Otfrid G. Liepack, National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States; Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Austria; Kerrie Dougherty, , Australia;

E4.1. Memoirs & Organisational Histories

October 1 2025, 15:00 — Room C2.5

Co-Chair(s): Kerrie Dougherty, , Australia; Niklas Reinke, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany;
Rapporteur(s): Klaus Schilling, Zentrum für Telematik, Germany; Philippe Cosyn, Independent scholar, Belgium;

IAC-25.E4.1.1
A BRIEF HISTORY OF SPACE ACTIVITY AT CSIRO, AUSTRALIA'S NATIONAL SCIENCE AGENCY
Dr. Kimberley Clayfield, CSIRO, Brisbane, QLD, Australia;

IAC-25.E4.1.2
EDWARD A. NEU, JR. EDWARD A. NEU, JR. (1930-1963)---THE CREATOR OF THE "SPAGHETTI" ROCKET COMBUSTION CHAMBER, A BIOGRAPHICAL SKETCH
Ms. Kerrie Dougherty, Broadway, NSW, Australia; Mr. Philippe Cosyn, Independent scholar, Brugge Belgium, Belgium;

IAC-25.E4.1.4
UNCOPUOS AFTER 65 YEARS
Mr. Hannes Mayer, Karl Franzens Universität Graz, Bierbaum am Auersbach, Austria;

IAC-25.E4.1.6
SERGEI KOROLEV THE WORLD'S FIRST AND GREATEST SPACE ENTREPRENEUR
Dr. Andrew Aldrin, Embry-Riddle Aeronautical University Worldwide, Littleton, United States;

IAC-25.E4.1.7
GOVERNANCE IN OUTER SPACE: INSIGHTS FROM ASTRONAUT MEMOIRS
Dr. Darshan Vigneswaran, University of Amsterdam, AMSTERDAM, The Netherlands;

IAC-25.E4.1.8
IAA INTERNATIONAL ACADEMY OF ASTRONAUTICS 65 - MEMOIRS FROM 1960 COLD WAR TO 2025
Ms. Paivi Jukola, Aalto University, Helsinki, Finland;

E4.2. Organizational, Scientific and Technical Histories

October 2 2025, 10:15 — Room C2.5

Co-Chair(s): Vera Pinto Gomes, European Commission, Belgium; Randy Liebermann, , United States;
Rapporteur(s): Hannes Mayer, Karl Franzens Universität Graz, Austria; Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Austria;

IAC-25.E4.2.1
50 YEARS AGO SYMPHONIE 1, A REVOLUTIONARY TELECOM SATELLITE
Mr. Philippe Jung, Airbus SAS, Grasse, France;

IAC-25.E4.2.2
CANADA AND THE HUBBLE SPACE TELESCOPE
Dr. Christopher Gainor, Sidney BC, Canada;

IAC-25.E4.2.3
FROM A SPUTNIK I TO SPACE X: HOW THE GOVERNANCE OF SPACE ACTIVITIES IS EVOLVING FROM A STATE-CENTERED LEGAL ORDER TO ACTOR-CENTERED NORMS OF BAHAVIOR
Dr. Maria Manoli, University of Aberdeen, Aberdeen, United Kingdom;

IAC-25.E4.2.4
COMPARATIVE STUDY OF THE HISTORIC HABITABLE VOLUME ESTIMATIONS OF APOLLO SPACECRAFT AND THE EXPERIENCED VOLUMES OF THE APOLLO 11 MISSION
Mr. Michael Ford, University of Technology Sydney (UTS), Ultimo, Australia;

IAC-25.E4.2.6
HISTORY OF ASTRONAUTICS AND ROCKETRY
Mr. Ilham Mammadli, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

IAC-25.E4.2.7
THE HISTORY OF SPACE EXPLORATION: A JOURNEY TOWARD A SUSTAINABLE AND RESILIENT EARTH
Ms. Solmaz Maharammova, Azerbaijan University of Languages (AUL), Baku, Azerbaijan;

E4.3. History of Australian and Asia-Pacific Contribution to Astronautics

October 3 2025, 10:15 — Room C2.5

Co-Chair(s): Kerrie Dougherty, , Australia; Otfrid 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-25.E4.3.1
AUSTRALIA AND THE MANNED SPACE FLIGHT NETWORK: FROM MERCURY TO SKYLAB
Ms. Kerrie Dougherty, Broadway, NSW, Australia;

IAC-25.E4.3.2
AUSTRALIAN APPROACHES TO SPACE: PUBLIC OPINION AND POLICY IN AUSTRALIA'S SPACE HISTORY
Dr. Tristan Moss, University of New South Wales, Canberra, Australia;

IAC-25.E4.3.3
ASIA-PACIFIC ASTRONAUTS AND THEIR IMPACT ON SPACE ACTIVITIES IN THE REGION PRIOR TO THE 2000S
Dr. Maximilien Berthet, University of Tokyo, Tokyo, Japan;

IAC-25.E4.3.4
THE SEARCH FOR THE APOLLO 11 SSTV TAPES
Mr. John Sarkissian, CSIRO, Parkes, NSW, Australia;

IAC-25.E4.3.5
CREATING A LAW – THE HISTORICAL, POLITICAL AND COMMERCIAL PATH TO AN AUSTRALIAN SPACE LAW
Dr. Joel Lisk, Flinders University, Mawson Lakes, Australia;

IAC-25.E4.3.6
THE ENDEAVOUR SPACE TELESCOPE: AN UNSUNG HERO OF AUSTRALIAN SPACE AMBITIONS
Ms. Kerrie Dougherty, Broadway, NSW, Australia;

E5. 36th IAA SYMPOSIUM ON SPACE AND SOCIETY

Coordinator(s): Olga Bannova, University of Houston, United States;

E5.1. Space Architecture: Habitats, Habitability, and Bases

September 29 2025, 15:30 — Room C2.2

Co-Chair(s): Olga Bannova, University of Houston, 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-25.E5.1.1
REIMAGINING HUMAN HABITATION IN LOW EARTH ORBIT: ADAPTIVE DESIGN STRATEGIES FOR FUTURE SPACE STATIONS
Ms. Marta Nowak, The Ohio State University College of Engineering, Columbus, United States;

IAC-25.E5.1.2
INVESTIGATION OF HOW ARTIFICIAL LIGHTING AND BIOPHILIC DESIGN FOR A SPACE ENVIRONMENT AFFECT HUMAN MOOD AND EMOTION
Ms. Tika Hanjani, The University of Adelaide, Adelaide, Australia;

IAC-25.E5.1.3
ESTABLISHING A PERMANENT LUNAR PRESENCE THROUGH HABITAT CLASS EVOLUTION
Ms. Paula Drozdowska, University of Houston, Houston, United States;

IAC-25.E5.1.4
ADVANCING HABITABILITY IN SPACE: TRANSFORMABLE SPATIAL SYSTEMS FOR ADAPTIVE SPACE HABITATS
Ms. Christina Balomenaki, Technical University of Crete, Chania, Greece;

IAC-25.E5.1.5
PROTOTYPE TESTING OF AN INFLATABLE LUNAR HABITAT IN HIGHLANDS REGOLITH SIMULANT
Dr. Brendan Scott, University of Adelaide, Adelaide, Australia;

IAC-25.E5.1.6
PSYCHOLOGY OF ISOLATION AND ARCHITECTURE OF LUNAR HABITATS: LESSONS FROM SPACE ANALOGS, ANTARCTIC MISSIONS, AND SECURE FACILITIES DESIGN
Ms. Meriem Allani, The University of Adelaide, Adelaide, Australia;

IAC-25.E5.1.7
DESIGN OF A SCALABLE FRAMEWORK FOR LUNAR HABITATS
Mr. Xavier De Kestelier, London, United Kingdom;

IAC-25.E5.1.8
A HUMAN-CENTERED FEASIBILITY ANALYSIS OF LUNAR LAVA TUBE ARCHITECTURES
Prof. Olga Bannova, University of Houston, Houston, TX, United States;

IAC-25.E5.1.9
MYCOTECTURE: HARNESSING FUNGAL MYCELIUM FOR SUSTAINABLE EXTRATERRESTRIAL HABITATS
Prof. Adriene Soares, Brazilian Ministry of Education - MEC, rio, Brazil;
Mr. Daniel Leeb, Iceland Space Agency, Reykjavik, Iceland;

IAC-25.E5.1.10
CONCEPTUAL DESIGN FRAMEWORK FOR AG ELONGATED TORUS HABITATS: OPTIMIZING COMFORT UNDER CORIOLIS EFFECTS
Mr. Debashish Roy, Dhaka, Bangladesh;

IAC-25.E5.1.12
DESIGN OF A MODULAR 3D PRINTING SYSTEM FOR IN-SPACE MANUFACTURING MODULES
Mr. Vittorio Netti, Axiom Space, Houston, United States;

IAC-25.E5.1.13
DESIGNING SUSTAINABLE FOOD SYSTEMS FOR SPACE TRAVEL, FROM CISLUNAR TO EXTENDED TRAVEL
Mr. Antoine Faddoul, Tony Sky Designs Group, New York, United States;

E5.2. Is Space R&D Truly Fostering A Better World For Our Future?

September 30 2025, 15:00 — Room C2.2

Co-Chair(s): Olga Bannova, University of Houston, United States; Nona Cheeks, Retired NASA, United States;
Rapporteur(s): Kerry Leonard, National Aeronautics and Space Administration (NASA), Goddard Space Flight Center, United States;

IAC-25.E5.2.1
MAXIMISING SOCIETAL BENEFITS FROM SPACE R&D: A SUSTAINABILITY-DRIVEN APPROACH
Prof. Kai-Uwe Schrogl, International Institute of Space Law (IISL), Paris, France;

IAC-25.E5.2.2
SPACE BEYOND THE STARS: IMPACTS OF SPACE R&D ON EVERYDAY LIFE
Ms. Shrutika Agarwal, Airbus Defence & Space, Portsmouth, United Kingdom;

IAC-25.E5.2.3
SPACE CALLS EARTH: SPACE DISCOVERIES AT THE SERVICE OF HUMAN BEINGS.
Dr. ALFONSO LAMANNA, Italian Space Agency (ASI), ROMA, Italy;

IAC-25.E5.2.4
ADVANCING SPACE R&D THROUGH COLLABORATION: THE ROLE OF THE NSW SPACE RESEARCH NETWORK
Dr. Dushmantha Thalakotuna, University of Technology Sydney (UTS), Ultimo, Australia;

IAC-25.E5.2.5
BRIDGING SPACE R&D AND SOCIETY: ADVANCING INNOVATION, EDUCATION, AND STEM OUTREACH FOR A BETTER FUTURE
Dr. Sarath Raj Nadarajan Syamala, Amity University, Dubai, Dubai, United Arab Emirates;

IAC-25.E5.2.6
A COMPREHENSIVE ASSESSMENT OF SPACE R&D ACTIVITIES AND THEIR PERVASIVENESS IN OTHER DOMAINS
Mr. Riccardo Bernocchi, Politecnico di Milano, Vescovato (CR), Italy;

IAC-25.E5.2.7
BEYOND THE SLOT MACHINE: UNCOVERING THE SOCIETAL GAINS FROM SPACE R&D
Dr. Billy Bryan, UK Space Agency, London, United Kingdom;

IAC-25.E5.2.8
A PATH TO RESOURCE OPTIMIZATION AND TECHNOLOGICAL INNOVATION: ADVANCING SPACE AND CLIMATE RESEARCH WITH DUAL-USE TECHNOLOGY
Mr. Yixuan Cheng, University of Toronto Aerospace Team (UTAT), Toronto, Canada; Ms. Ying Cong Zuo, University of Toronto Aerospace Team (UTAT), Toronto, Canada;

IAC-25.E5.2.9
HARNESSING SPACE R&D TO ADDRESS GLOBAL CHALLENGES: INNOVATIONS IN WATER, EMISSIONS, AND SUSTAINABLE URBAN DEVELOPMENT
Mr. Ali Mammadov, Baku, Azerbaijan;

IAC-25.E5.2.10
BRIDGING SPACE AND SOCIETY: MAXIMIZING THE BENEFITS OF SPACE R&D
Mr. Zaid Alqudah, Ajloun, Jordan;

E5.3. Contemporary Arts Practice and Outer Space: A Multi-Disciplinary Approach

October 1 2025, 15:00 — Room C2.2

Co-Chair(s): Richard Clar, Art Technologies, United States; Sasha Alexander, Western Sydney University, Australia;
Rapporteur(s): Kerrie Dougherty, , Australia;

IAC-25.E5.3.2
ART & ENGINEERING COLLABORATION 1960-2000
Ms. Anna Shaposhnik, San Jose, United States;

IAC-25.E5.3.3
ARTISTIC PERSPECTIVES ON SPACE EXPLORATION: HOW PROJECTS LIKE DEARMOON AND CINEMA SHAPE OUR VISION OF THE UNIVERSE
Mrs. Aydan Aliyeva, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-25.E5.3.4
ART AND SCIENCE OF THE MOONHOUSE PROJECT
Prof. Christer Fuglesang, stockholm, Sweden;

IAC-25.E5.3.5
SORAURUSHI: HIGH-ALTITUDE BALLOON ART EXPERIMENT WITH URUSHI LACQUER PURSUES THE SENSE OF IMMERSION IN SPACE
Mr. Taiga Yamamoto, Nagoya University, Miyoshi, Japan;

IAC-25.E5.3.6
BEYOND THE EXPLICIT: TACIT KNOWLEDGE AT THE INTERSECTION OF ART AND DESIGN
Dr. Tibor Balint, International Academy of Astronautics (IAA), Pasadena, United States;

IAC-25.E5.3.7
BLENDING SCIENTIFIC AND ARTISTIC INSIGHTS AND CREATIVE PRACTICE – TWO CASE STUDIES PRESENTED BY ARTIST AND SCIENTIST COLLABORATORS
Dr. Ceridwen Dovey, Macquarie University, Sydney, Australia; Dr. Benjamin Pope, Macquarie University, Sydney, Australia;

IAC-25.E5.3.8
FUSION OF NATURE AND OUTER SPACE IN CONTEMPORARY ART
Ms. Lisa Kucher, International Space University (ISU), Strasbourg, France;

IAC-25.E5.3.9
GAMIFIED ART-BASED VIRTUAL REALITY FOR MITIGATING STRESS AND ANXIETY IN ISOLATED ENVIRONMENTS
Mrs. Tjasa Savoric, Deakin University, Ocean Grove, Australia;

IAC-25.E5.3.12 (unconfirmed)
ANALOG MISSIONS AND ARTS INITIATIVE
Mr. Ghanim Alotaibi, Space Renaissance International, Kuwait City, Kuwait;

E5.4. Space Assets and Disaster Management

October 2 2025, 15:00 — Room C2.2

Co-Chair(s): Jillianne Pierce, Space Florida, United States;

IAC-25.E5.4.1
USING SATELLITE IMAGES TO INVESTIGATE THE CAUSE-AND-EFFECT RELATIONSHIP OF WILDFIRES AND FLASH FLOODS
Ms. Marialina Tsinidis, University of Glasgow, Glasgow, United Kingdom;

IAC-25.E5.4.2
SATELLITE IMAGES SPOTLIGHTING FIRE EVENTS IN BOLIVIA AS A WAY OF FOSTERING SUSTAINABILITY AND ENVIRONMENTAL AWARENESS
Dr. Georgina Chavez, Universidad Catolica Boliviana San Pablo, La Paz, Bolivia;

IAC-25.E5.4.4
LESSONS LEARNED AND TAKEAWAYS AFTER ORGANIZING A WORKSHOP ON SATELLITE-BASED SERVICES FOR DISASTER RISK MANAGEMENT IN SPAIN
Mr. Daniel Sors Raurell, Institut d'Estudis Espacials de Catalunya (IEEC), Tona, Spain;

IAC-25.E5.4.5
IMPROVING EMERGENCY RESPONSE WITH SATELLITES: ADDRESSING COMMUNICATION AND DATA CHALLENGES
Ms. Samruddhi Bhute, Pune, India;

IAC-25.E5.4.6
APRS-BASED VOLCANO MONITORING GROUND SENSOR TERMINAL FOR THE STORE-AND-FORWARD MISSION WITH BIRDS-X DRAGONFLY CUBESAT
Dr. Jorge Rubén Casir Ricaño, Kyushu Institute of Technology, Kitakyushu, Japan;

IAC-25.E5.4.7
HUMANITARIAN RESPONSE FROM ORBIT: HUMAN RIGHTS OBLIGATIONS FOR SPACE-BASED DISASTER MANAGEMENT
Mr. Jonathan Lim, Jus Ad Astra, Richmond, Australia;

IAC-25.E5.4.8
AN OPEN SOURCE UNIFIED DISASTER ASSISTANCE AND INFORMATION (UDAI) PLATFORM FOR BRICS+ COUNTRIES
Mr. Anand Nagesh, Bengaluru, India;

IAC-25.E5.4.9
INTERPLANETARY LEGAL SYSTEMS: CRAFTING LAWS FOR EARTH-MOON-MARS SOCIETIES
Ms. Samiksha Raviraja, Airbus Defence and Space, Hitchin, United Kingdom;

E5.5. Sharing Space Achievements and Heritage: Space Museums and Societies

October 3 2025, 10:15 — Room C2.2

Co-Chair(s): Jean-Baptiste Desbois, SEMECCEL Cité de l'Espace, France; Ines Prieto, SEMECCEL Cité de l'Espace, France;

IAC-25.E5.5.1
THE PEDRO E. PAULET MOSTAJO PERUVIAN AEROSPACE MUSEUM THROUGH YOUTUBE
Mr. David Villanueva, Universidad Nacional Mayor de San Marcos, Lima, Peru;

IAC-25.E5.5.2
THE COSMUSEUM: PRESERVING CULTURAL AND SPIRITUAL HERITAGE IN SPACE
Mr. Yusif Orujov, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

IAC-25.E5.5.3
PRESERVING SPACEFLIGHT FILMS THROUGH HIGH QUALITY DIGITIZATION FOR PUBLIC ACCESS - A LOW COST APPROACH
Mr. Dmitri Tsahelnik, University of Alabama in Huntsville, Pinckney, United States;

IAC-25.E5.5.4
FROM PHYSICAL MODULES TO VIRTUAL ENVIRONMENTS: ADVANCING SPACE STATION SCIENCE POPULARIZATION THROUGH IMMERSIVE TECHNOLOGIES
Prof. Rong Guo, Beijing Institute of Space Science and Technology Information, Beijing, China;

IAC-25.E5.5.5
RESEARCH ON PROMOTING CHINESE SPACE SCIENCE POPULARIZATION FOR YOUTH
Ms. Daling Jia, China Academy of Launch Vechicle Technology, Beijing, China;

IAC-25.E5.5.6 (unconfirmed)
ISAM: THE CASE FOR AN INTERNATIONAL SPACE ARTIFACTS MUSEUM
Mr. Madhu Thangavelu, University of Southern California, ROLLING HILLS ESTATES, United States;

IAC-25.E5.5.7
ESTABLISHING LOW COST MICRO SPACE INCUBATION/RESEARCH CENTERS IN RURAL INDIA: INTEGRATING INDIGENOUS WISDOM WITH SPACE EXPLORATION
Mr. Abhishek Kanodia, Jaipur, India;

IAC-25.E5.5.8
SPACE HERITAGE AND HUMAN RIGHTS: THE ROLE OF MUSEUMS IN PROMOTING INCLUSIVE NARRATIVES
Mr. Jonathan Lim, Jus Ad Astra, Richmond, Australia;

IAC-25.E5.5.9
WHO GOVERNS SPACE MUSEUMS? LEGAL AND POLICY CHALLENGES IN THE NEW SPACE ERA
Ms. Ayako Kurono, Ibaraki, Japan;

IAC-25.E5.5.11
THE ROLE OF ETHICS AND SOCIETY IN THE DEVELOPMENT OF SPACE SCIENCE EDUCATION IN AFRICA
Mr. Babagana BABAGANA, KANURI DEVELOPMENT ASSOCIATION, Maiduguri, Nigeria;

E5.6. Simulating Space Habitation: Habitats, Design and Simulation Missions

October 3 2025, 13:45 — Room C2.2

Co-Chair(s): Anna Barbara Imhof, Liquifer Systems Group (LSG), Austria; Sandra Haeuplik-Meusburger, Technische Universität Wien (TU Wien), Austria;
Rapporteur(s): Amit Srivastava, University of Adelaide, Australia;

IAC-25.E5.6.1
DESIGNING AN INTELLIGENT, ADAPTABLE ANALOG SPACE MEDICINE AND RESEARCH HABITAT: SMMAARTE SPACE MEDICINE, MEDTECH-BIOTECH ANALOG ASTRONAUTICS RESEARCH, TRAINING, AND EDUCATION
Dr. Susan Ip-Jewell, Lancaster, United States;

IAC-25.E5.6.2
NATURE SHOULD BE COLORFUL! WHEN BIONOMIC ENHANCEMENTS TRIGGER THE DESIRE FOR MORE: PRELIMINARY RESULTS FROM SIRIUS-23
Prof. Olga Bannova, University of Houston, Houston, TX, United States;

IAC-25.E5.6.3
INDIGENOUS KNOWLEDGE AND SPACE ANALOGS: ETHICAL AND SUSTAINABLE RESEARCH PARTNERSHIPS FOR OFF-EARTH LIVING
Ms. Nicole McGaa, Massachusetts Institute of Technology (MIT), Pittsburgh, United States;

IAC-25.E5.6.4
ASTROSTRENGTH: DEVELOPMENT AND IMPLEMENTATION OF A THREE-STAGE PROGRAM FOR THE PHYSICAL PRE-MISSION PREPARATION OF ANALOGUE ASTRONAUTS DURING ASCLEPIOS MISSION V.
Ms. Kaya Weissert, Nieuwegein, The Netherlands;

IAC-25.E5.6.5
ENHANCING PSYCHOLOGICAL WELL-BEING IN EXTREME ENVIRONMENTS: CUSTOMIZED ENVIRONMENTAL PROJECTION SYSTEM APPLIED AT THE "ST. KLIMENT OHRIDSKI" BULGARIAN BASE IN ANTARCTICA
Ms. Christina Balomenaki, Technical University of Crete, Chania, Greece;

IAC-25.E5.6.6
BUILDING INDIA'S FIRST SPACE ANALOGUES : LESSONS FOR SPACE HABITATION DESIGN
Prof. Aloke Kumar, Indian Institute of Science, Bangalore, India;

IAC-25.E5.6.7
DREAMING IN SPACE ANALOG MISSIONS: THE HABITAT MARTE DREAMING PROTOCOL FOR ENHANCING CREW PSYCHOLOGICAL ADAPTATION AND WELL-BEING
Dr. Julio Rezende, Federal University of Rio Grande do Norte (UFRN), Natal, Brazil;

IAC-25.E5.6.8
IMPLEMENTING CREW ROTATIONS IN A LUNAR ANALOG MISSION
Ms. Katherine Mulry, Asclepios, Toulouse, France;

IAC-25.E5.6.9
SPACE ANALOGS AS A MEANS TO ENGAGE SCHOOL CHILDREN IN STEM SUBJECTS
Dr. Michaela Musilova, XtremeFrontiers, Winchester, United States;

IAC-25.E5.6.10
FRAMEWORK AND DESIGN FOR HABITAT DRIVEN BY ILLUMINATION UTILIZATION AT LUNAR SOUTH POLE
Mr. Jixian Wang, Harbin Institute of Technology, Harbin, China;

IAC-25.E5.6.11
ADVANCEMENTS IN THE IMMERSIVE DESIGN AND VALIDATION SPACE (IDES) MIXED REALITY (MR) FRAMEWORK
Mr. Vittorio Netti, Axiom Space, Houston, United States;

IAC-25.E5.6.12
GENERAL ASPECTS OF THE INTERDISCIPLINARY AND TRANSDISCIPLINARY ANALOG SPACE EXPEDITION IN ANTARCTICA – SHADOWS OF SHACKLETON
Mrs. Lorrane Olivlet, Belo Horizonte, Brazil; Prof.Dr. Paola Barros-Delben, Universidade Federal de Santa Catarina UFSC, Florianópolis, Brazil; Dr. Priscilla Barros-Delben, Universidade Federal de Santa Catarina UFSC, Florianópolis, Brazil;

IAC-25.E5.6.13
DEVELOPMENT OF A VIRTUAL REALITY SPACECRAFT ENVIRONMENT AS A SPACE SIMULATION FOR SENSORY AND FOOD RESEARCH 'FOOD IN SPACE'
Dr. Julia Low, RMIT University, Melbourne, Australia;

IAC-25.E5.6.14
A GAME ENGINE-DRIVEN APPROACH FOR CONSTRUCTION OF MANNED LUNAR RESEARCH STATION DIGITAL TWINS
Ms. Naisi Hua, Harbin Intitute of Technology, Harbin, China;

E6. IAF BUSINESSES AND INNOVATION SYMPOSIUM

Coordinator(s): Ken Davidian, , United States; Nancy C. Wolfson, American Institute of Aeronautics and Astronautics (AIAA), United States;

E6.1. Space Entrepreneurship and Investment: The Practitioners' Perspectives

October 2 2025, 15:00 — Room C2.5

Co-Chair(s): Joerg Kreisel, JOERG KREISEL International Consultant (JKIC), Germany; Daria Stepanova, , Germany; Michele Cristina Silva Melo, Ideia Space, Brazil;

IAC-25.E6.1.1
CAPITAL STRUCTURES OUT OF THIS WORLD: CONSIDERATIONS FOR ENTREPRENEURS AND INVESTORS IN SPACE ACTIVITIES
Mr. Scott Schneider, Adelaide, Australia;

IAC-25.E6.1.2
ALIGNING INVESTOR EXPECTATIONS AND REALITIES OF SPACE STARTUPS IN EMERGING MARKETS
Mr. Kunal Naik, Navsari, India;

IAC-25.E6.1.3
PROPOSAL FOR AN AEROSPACE INNOVATION ECOSYSTEM: STRATEGIC INTEGRATION OF STARTUPS AND RESEARCH CENTERS OF THE NATIONAL ENGINEERING UNIVERSITY OF PERU TO TAKE ADVANTAGE OF THE PIURA SPACEPORT
Mr. Alejandro José Agapito Quiñones, Universidad Nacional de Ingeniería (Lima, Perù), Lima, Peru;

IAC-25.E6.1.4
REDEFINING SPACE INVESTMENT: LEVERAGING JUGAAD INNOVATION AND SOCAL INVESTMENT APPROACH FOR A SUSTAINABLE SOUTH AMERICAN SPACE ECONOMY
Mr. Marcelo Boldt, Space Generation Advisory Council (SGAC), Bremen, Germany;

IAC-25.E6.1.5
FOSTERING GROWTH, SPACE ENTREPRENEURSHIP AND INVESTMENT INTO AN EMERGING SPACE ECOSYSTEM
Mr. Albert Nicolás López, Institut d'Estudis Espacials de Catalunya (IEEC), Castelldefels (Barcelona), Spain;

IAC-25.E6.1.6
SPACE TECH REPORT: EVOLVING METHODOLOGIES FOR A COMPREHENSIVE SPACE SECTOR ANALYSIS
Mrs. Eleonora Lombardi, Fondazione E. Amaldi, Rome, Italy;

IAC-25.E6.1.7
MIND THE GAP: QUANTIFYING AND ADDRESSING EUROPE'S SPACE GROWTH FUNDING SHORTFALL
Ms. Lea Kablitz, Leiden, The Netherlands;

IAC-25.E6.1.8
SPACE INVESTMENT TO BUILD THE NEXT STEP FOR SUSTAINABLE SPACE INDUSTRY
Ms. Misuzu Onuki, Space Access Corporation, Tokyo, Japan;

IAC-25.E6.1.9
VENTURE CAPITAL EVOLUTION IN NEW SPACE: INVESTMENT STRATEGIES FOR SUSTAINABLE COMMERCIAL SPACE VENTURES
Ms. Alexandra Vidyuk, Wilmington, United States;

IAC-25.E6.1.10
INNOVATION & INVESTMENT: HOW EARTH OBSERVATION (EO) CAN DELIVER ON INVESTOR EXPECTATIONS
Mr. Sebastian Chaoui, Haymarket, Australia;

IAC-25.E6.1.11
TOKENIZED INVESTMENT MODELS FOR ACCELERATING SPACE INNOVATION
Mr. Sidney Nakahodo, Seldor Capital, New York, United States;

IAC-25.E6.1.12
SPACE: THE NEW FDI (FOREIGN DIRECT INVESTMENT) DESTINATION FOR VISIONARY INVESTORS WORLDWIDE
Ms. Camila Erazo Gonzalez, Quadrian VC, Envigado, Colombia;

E6.2. Public-Private Partnerships: Traditional and New Space Applications

October 1 2025, 10:15 — Room C2.5

Co-Chair(s): Nancy C. Wolfson, American Institute of Aeronautics and Astronautics (AIAA), United States; Kenneth Bruce Morris, Sierra Space, United States; Andrea Cabello, University of Brasilia, Brazil;

IAC-25.E6.2.1
BOOSTING THE START-UP ECOSYSTEM TO HARNESS NEW SPACE ECONOMY OPPORTUNITIES. THE SYSTEM OF STRATEGIC ITALIAN INITIATIVES DEDICATED TO SPACE START-UPS AND NEW SPACE ENTREPRENEURSHIP PROJECTS.
Dr. Matteo Coletta, ASI - Italian Space Agency, rome, Italy;

IAC-25.E6.2.2
AGROSPACE BUSINESS: A NEW FRONTIER FOR ECONOMIC AND ENVIRONMENTAL REGENERATION THROUGH SPACE AND OCEANIC TECHNOLOGIES IN GLOBAL AGRIBUSINESS
Mr. Johnny Hsu, Universidade do Minho, Braga, Portugal;

IAC-25.E6.2.3
FROM TERRASAR AND PAZ TO A NEXT-GEN SAR MISSION: A BLUEPRINT FOR PUBLIC-PRIVATE COLLABORATION AND CORPORATE PARTNERSHIP?
Mr. Matteo Emanuelli, Airbus Defence and Space, Friedrichshafen, Germany;

IAC-25.E6.2.4
INSTITUTIONAL LOGICS IN EUROPEAN SPACE SECURITY AND DEFENSE: A THEORETICAL PERSPECTIVE
Dr. Christina Giannopapa, Eindhoven University of Technology, Eindhoven, The Netherlands;

IAC-25.E6.2.6
THE ITALY-KENYA AGREEMENT FOR INNOVATION AND SUSTAINABLE PUBLIC-PRIVATE GOVERNANCE IN EARTH OBSERVATION
Dr. Antonio Pallotti, Agenzia Spaziale Italiana (ASI), Roma, Italy;

IAC-25.E6.2.7
ESA PHILABNET SPAIN: A NEW PUBLIC-PRIVATE MODEL FOR ADVANCING SPACE INNOVATION IN CLIMATE RESILIENCE
Mr. Daniel Sors Raurell, Institut d'Estudis Espacials de Catalunya (IEEC), Tona, Spain;

IAC-25.E6.2.8
SPACE DEBRIS TO SPACE ASSETS: MONETIZING SUSTAINABLE SOLUTIONS FOR SMALL SATELLITES
Ms. Aza Elyamani, Tobata, Kitakyushu, Fukuka, Japan, Japan;

IAC-25.E6.2.9
RURAL BROADBAND ACCESS, ADOPTION, BARRIERS, AND EXPERIENCE: THE ROLE OF LOW EARTH ORBIT (LEO) SATELLITE INTERNET IN BRIDGING THE DIGITAL DIVIDE
Ms. Joanna Quan, Virginia Tech, Herndon, United States;

IAC-25.E6.2.10
OVERCOMING THE VALLEYS OF DEATH: R&D COLLABORATION MODELS FOR PUBLIC-PRIVATE PARTNERSHIPS IN SPACE COMMERCIALIZATION
Mr. Sultan Al Zeidi, United Arab Emirates Space Agency, Al Ain, United Arab Emirates;

IAC-25.E6.2.11
LUNAR HABITABILITY BUSINESS MODEL STUDY: DEVELOPMENT BASED ON ANALOGOUS APPLICATIONS IN LATIN AMERICA (MEXICO AND PERU)
Ms. Liliana Gómez Falcón, Universidad Autónoma de Baja California, Tijuana, Mexico;

IAC-25.E6.2.12
EVALUATING THE MARKET FIT OF INSTITUTIONAL PROGRAMMES AND MISSIONS IN THE POST-NEWSPACE ERA: INSIGHTS INTO THE DEVELOPMENT OF A HOLISTIC TOOL AT THE EUROPEAN SPACE AGENCY.
Ms. Lea Kablitz, Leiden, The Netherlands;

E6.3. Innovation: The Academics' Perspectives

September 30 2025, 15:00 — Room C2.5

Co-Chair(s): Ken Davidian, , United States; Michele Cristina Silva Melo, Ideia Space, Brazil;

IAC-25.E6.3.1
ANALYSIS OF THE CURRENT SITUATION OF CHINA'S PRIVATE COMMERCIAL CARRIER ROCKET COMPANIES BASED ON MICHAEL PORTER'S FIVE FORCES MODEL
Prof. Xiao Hui Wang, LandSpace Technology Corporation Ltd., Beijing, China;

IAC-25.E6.3.2
ANALYSIS OF THE SPACE INDUSTRY ECOSYSTEM BASED ON THE ACTIVITIES AND TRANSACTION RELATIONSHIPS OF SPACE FIRMS: FOCUSING ON THE CASE OF SOUTH KOREA
Ms. Kyoungae Lee, Korea Development Institute, Sejong-si, Korea, Republic of;

IAC-25.E6.3.3
BRIDGING INNOVATION AND SOCIETY: EUROSPACEHUB'S ROLE IN FOSTERING SPACE ENTREPRENEURSHIP, RESEARCH, AND EDUCATION
Ms. Vilma Puriene, Vilnius Gediminas Technical University, Vilnius, Lithuania;

IAC-25.E6.3.4
EXPLORING BUSINESS MODELS FOR COMMERCIAL EARTH OBSERVATION SERVICES
Dr. Oguz Karasu, University of Oxford, London, United Kingdom;

IAC-25.E6.3.6
INSTRUMENTS FOR PROMOTING INNOVATION AIMED AT SPACE STARTUPS: CHALLENGES AND BOTTLENECKS IN BRAZIL
Prof.Dr. Andrea Cabello, University of Brasilia, Brasilia, Brazil;

IAC-25.E6.3.7
NEW SPACE BUSINESS AND BLUE ECONOMY IN THE ATLANTIC: A STRATEGIC FRAMEWORK FOR INNOVATION, INVESTMENT, AND SUSTAINABLE GROWTH ACROSS IBERIA-AMERICA
Mr. Johnny Hsu, Universidade do Minho, Braga, Portugal;

IAC-25.E6.3.8
FINANCIAL SUPPORT, CONSTRAINTS, AND INNOVATION IN THE SME SPACE INDUSTRY
Prof. Marleen Willekens, KULeuven, Leuven, Belgium;

IAC-25.E6.3.9
INNOVATION MANAGEMENT IN HIGH-TECH SPACE RESEARCH: THE CASE OF VERY LOW EARTH ORBIT SATELLITES
Mr. Ali Burak Özel, Fraunhofer Alliance Space, München, Germany;

IAC-25.E6.3.10
THE BERKELEY SPACE CENTER: AN INNOVATION CLUSTER FOR SHAPING THE FUTURE OF THE NEWSPACE ECONOMY
Mr. Trent Pagan, Oakley CA, United States;

IAC-25.E6.3.11
THE WAVES OF SPACE COMMERCIALIZATION
Dr. Andrew Aldrin, Embry-Riddle Aeronautical University Worldwide, Littleton, United States;

IAC-25.E6.3.12
TRADITIONAL SPACE PROJECT PLANNING NO LONGER WORKS: A NEW VALUE-BASED THEORETICAL PERSPECTIVE
Dr. Alessandro Paravano, Politecnico di Milano, Cislago, Italy;

IAC-25.E6.3.13
SPACE BROKERS ON THE LOOKOUT - REGULATING SPACE ACTIVITIES IN CHANGING VALUE CHAINS
Mrs. Salomé Paradis, Laval University, Montréal, Canada;

E6.4-GTS.1. Entrepreneurship Around the World

October 1 2025, 15:00 — Room C4.7

Co-Chair(s): Susana Fornies Rodriguez, ISAE - Institut Supérieur de l'Aéronautique et de l'Espace, France; Samuel Peterson, Embry-Riddle Aeronautical University Worldwide, United States; Eleonora Lombardi, Fondazione E. Amaldi, Italy; Nancy C. Wolfson, American Institute of Aeronautics and Astronautics (AIAA), United States;
Rapporteur(s): Michele Cristina Silva Melo, Ideia Space, Brazil;

IAC-25.E6.4-GTS.1.1
WHAT IT TAKES TO START A SUCCESSFUL SPACE COMPANY : A DATA-DRIVEN ANALYSIS OF ENTREPRENEURS IN THE SPACE INDUSTRY
Ms. Savri Gandhi, Georgia Institute of Technology, Mountain View, United States;

IAC-25.E6.4-GTS.1.2
ANALYSIS OF SPACE ENTREPRENEUR BUSINESS KNOWLEDGE GAPS AND INSTITUTIONAL BARRIERS IN EUROPE
Mr. Don Koulaouzos, Skytrek Limited, London, United Kingdom;

IAC-25.E6.4-GTS.1.3
THE ROLE OF GLOBAL ENTREPRENEURSHIP IN ADVANCING THE COMMERCIAL SPACE ECONOMY
Mr. Dheerajprabhu S, Chennai, India;

IAC-25.E6.4-GTS.1.4
THE ROLE OF INTERNATIONAL COLLABORATION IN OVERCOMING ISOLATION FOR SPACE ENTREPRENEURS IN THE GAMBIA AND THE REPUBLIC OF CONGO
Ms. Fama Jallow, Banjul, Gambia;

IAC-25.E6.4-GTS.1.5
MAPPING THE SPACETECH STARTUP AND VENTURE CAPITAL ECOSYSTEM IN SOUTHEAST ASIA
Ms. Faith Tng, Space Generation Advisory Council (SGAC), Singapore, Singapore, Republic of;

IAC-25.E6.4-GTS.1.7
SPACE ENTREPRENEURSHIP IN EMERGING MARKETS: A COMPARATIVE ANALYSIS OF AZERBAIJAN
Mr. Zaur Asgarov, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

IAC-25.E6.4-GTS.1.8
INTERNATIONAL SPACE STARTUPS DEVELOPING A COMMERCIAL FOOTPRINT IN THE US MARKETPLACE
Mr. Luke Davis, Berlin Space Technologies, Albuquerque, United States;

IAC-25.E6.4-GTS.1.9
GLOBAL SPACE ENTREPRENEURSHIP AND INVESTMENT: A COMPARATIVE ANALYSIS
Mr. Murathan Kagan Bayram, Karabük University, Ankara, Türkiye;

E7. 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; Tanja Masson-Zwaan, International Institute of Air and Space Law, Leiden University, The Netherlands;

E7.1. Young Scholars Session with Keynote Lecture

September 29 2025, 15:30 — Room C2.3

Co-Chair(s): Lesley Jane Smith, Leuphana University of Lüneburg/Weber-Steinhaus & Smith, Germany; Melissa de Zwart, University of Adelaide, Australia;

IAC-25.E7.1.1
KEYNOTE: IT'S A COMPLICATED EXTRATERRESTRIAL WORLD OUT THERE: DOES CONSENSUS-BASED MULTILATERALISM OF SPACE GOVERNANCE STILL WORK?
Prof. Steven Freeland, Western Sydney University, Sydney, Australia;

IAC-25.E7.1.2
LIGHT POLLUTION REGULATION IN CHILE: A GLOBAL STANDARD FOR THE CONSERVATION OF THE NIGHT SKIES?
Mr. Felipe Martínez Corte, Santiago, Chile;

IAC-25.E7.1.3
THE THUCYDIDES TRAP ON THE MOON: HOW TO MAINTAIN PEACE ON THE EIGHTH CONTINENT?
Dr. Josselin Lavigne, University of Adelaide, La Frette, France;

IAC-25.E7.1.4
EXAMINATION OF LEGAL ISSUES FOR PRACTICAL APPLICATION OF SUB-ORBITAL FLIGHT
Ms. Ayana Wako, Japan Aerospace Exploration Agency (JAXA), Ibaraki, Japan;

IAC-25.E7.1.5
DECOLONIZING SPACE LAW: RETHINKING GOVERNANCE THROUGH LEGAL PLURALISM
Ms. Giuliana Rotola, Scuola Superiore Sant'Anna, Bari, Italy;

IAC-25.E7.1.6
COMBATTING MEGACONSTELLATIONS AND ASTROCOLONIALISM: RECOGNIZING AN ABORIGINAL RIGHT TO THE UNOBSCURED NIGHT SKY UNDER CANADIAN CONSTITUTIONAL LAW
Mr. Gregory Radisic, For All Moonkind Inc., Hamilton, Canada;

IAC-25.E7.1.7
CYBERATTACKS AND SPACE SECURITY: EXPLORING THE LEGAL CHALLENGES BELOW THE THRESHOLD OF USE OF FORCE
Dr. Vinicius Guedes Gonçalves de Oliveira, European Space Policy Institute (ESPI), Adelaide, Australia;

IAC-25.E7.1.8
ARTIFICIALLY ALIGNED: NAVIGATING JURISDICTIONAL TENSIONS REGARDING AI FOR THE SPACE SECTOR
Mr. Thomas Graham, Swinburne University of Technology, Williamstown, Australia;

IAC-25.E7.1.9
REIMAGINING SPACE CULTURAL HERITAGE: A GOVERNANCE FRAMEWORK FOR SUSTAINABLE EXPLORATION
Ms. Yashashvini Jodha, Dhruva Space Private Limited, Hyderabad, India;

IAC-25.E7.1.10
FROM SLAUGHTERBOTS TO SLAUGHTERSATS- ANALYSING THE LEGALITY OF LETHAL AUTONOMOUS WEAPON SATELLITES (LAWSATS) UNDER INTERNATIONAL SPACE LAW.
Mr. Tejas Bharadwaj, Chennai, India;

IAC-25.E7.1.11
RETHINKING LIABILITY OF OUTER SPACE ACTIVITIES IN THE AGE OF AI
Ms. Jingyi Liu, Beijing Institute of Technology, Institute of Space Law, Beijing, China;

IAC-25.E7.1.12
THE MOON AS A LEGAL PERSON: GRANTING RIGHTS TO CELESTIAL BODIES
Mrs. Camille Bitton, University of Adelaide, westbourne park, Australia;

IAC-25.E7.1.13
SPACE TERMINATOR AND HOBBESIAN CORPORATIONS: RULE OF LAW AND LIBERTY IN SPACE SETTLEMENTS?
Ms. Katja Grünfeld, Ljubljana, Slovenia;

IAC-25.E7.1.14
A COMPARISON BETWEEN CHINESE AND AMERICAN APPROACHES TO LAW-MAKING REGARDING CONFLICTS IN SPACE
Ms. Louisa Handel-Mazzetti, PhD Cand. Air & Space Law (Leiden), Nieuwegein, The Netherlands;

IAC-25.E7.1.15
CYBERSECURITY AT THE FINAL FRONTIER: DOES EXISTING REGULATION ADEQUATELY ADDRESS THE CHALLENGE IN OUTER SPACE?
Mrs. Anna Blechova, Masaryk University, Brno, Czech Republic;

E7.2. Threat and Use of Force in the Context of Space Activities

September 30 2025, 10:15 — Room C2.3

Co-Chair(s): Dale Stephens, University of Adelaide, Australia; Duncan Blake, UNSW Canberra, Australia;
Rapporteur(s): Ciara Finnegan, , Ireland;

IAC-25.E7.2.2
THE GEOPOLITICS OF CISLUNAR COUNTERSPACE: HOW TO PREVENT A LUNAR BLOCKADE
Dr. Diego Guerra, Blue Origin LLC, Seattle, United States;

IAC-25.E7.2.3
THE USE OF RADIO FREQUENCIES AND SATELLITE ORBITS FOR MILITARY PURPOSES FROM THE ITU PERSPECTIVE: CURRENT STATUS, PRESSING ISSUES AND PROSPECTS FOR SOLUTION
Ms. Elina Morozova, Intersputnik International Organization of Space Communications, Moscow, Russian Federation;

IAC-25.E7.2.4
WHEN DOES A STATE BECOME A PARTICIPANT IN AN ARMED CONFLICT DUE TO THEIR PRIVATE SPACE ACTIVITIES? FOR THE ANSWER, LOOK TO INTERNATIONAL HUMANITARIAN LAW RATHER THAN SPACE LAW
Prof. Andrea Harrington, Institute of Air and Space Law, McGill University, Montreal, QC, Canada;

IAC-25.E7.2.5
IS THERE A FUTURE FOR THE ICRC RECOMMENDATION TO SEPARATE MILITARY AND CIVILIAN USES OF SATELLITES TO REDUCE THE 'HUMAN COST' OF MILITARY OPERATIONS IN OUTER SPACE?
Dr. Ciara Finnegan, Co. Cavan, Ireland;

IAC-25.E7.2.6
EXPLORING THE MILITARY-CIVILIAN DICHOTOMY IN DUAL-USE SATELLITES
Ms. Rhea Sideris, University of London, London, United Kingdom;

IAC-25.E7.2.7
FOUNDATIONAL LEGAL CONCEPTS AND PRINCIPLES GOVERNING RPO
Mr. Christopher Johnson, Secure World Foundation, Washington, DC, United States;

IAC-25.E7.2.8
RETHINKING THE MOVEMENT AGAINST THE WEAPONIZATION OF OUTER SPACE AND POSSIBLE WAYS OUT
Prof. YONGLIANG YAN, Beijing Jiaotong University, Beijing, China;

IAC-25.E7.2.9
OUTER SPACE AS A MILITARY DOMAIN, THE LAW AND THE WOOMERA MANUAL
Prof. Frans G. Von der Dunk, University of Nebraska, College of Law, Leiden, The Netherlands;

IAC-25.E7.2.10
PREVENTING THE WEAPONIZATION OF SPACE: RESPONSIBLE BEHAVIORS AND THE PATH TO GLOBAL CONSENSUS
Dr. Nayoung Youn, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

IAC-25.E7.2.11
LEGITIMATE TARGETS AND MEANS OF ATTACK IN JUS IN BELLO SPACIALIS: WHEN AND HOW COULD DUAL-USE SPACE OBJECTS BE ATTACKED?
Mr. Arpit Gupta, Agra, India;

IAC-25.E7.2.12
STATE RESPONSIBILITY IN ORBITAL CONFLICTS-LEGAL IMPLICATIONS OF CYBER-ENABLED COUNTERSPACE OPERATIONS UNDER THE OUTER SPACE TREATY
Dr. Diane Howard, International Institute of Space Law (IISL), Daytona Beach, United States;

IAC-25.E7.2.13
HARMFUL INTERFERENCE,INTERVENTION AND USE OF FORCE IN SPACE ACTIVITIES
Prof. Setsuko Aoki, Keio University, Tokyo, Japan;

E7.3. Sustainability and Outer Space Law

September 30 2025, 15:00 — Room C2.3

Co-Chair(s): Catherine Doldirina, International Institute of Space Law (IISL), Italy; Frans G. Von der Dunk, University of Nebraska, College of Law, The Netherlands;
Rapporteur(s): Josselin Lavigne, University of Adelaide, France;

IAC-25.E7.3.1
NORMS FORMATION FOR SPACE SUSTAINABILITY
Prof. Yu Takeuchi, Keio University, Saitama, Japan;

IAC-25.E7.3.2
PROTECTING SUSTAINABILITY BY NATIONAL LAW: THE 2024/25 SPACE ACT OF THE SLOVAK REPUBLIC
Prof. Mahulena Hofmann, University of Luxembourg, Luxembourg, Luxembourg ;

IAC-25.E7.3.3
CHALLENGES AND OPPORTUNITIES ON SPACE SUSTAINABILITY: ENHANCING LIFE CYCLE ASSESSMENT IN EUROPEAN SPACE ACTIVITIES
Mr. Claudiu Mihai Taiatu, International Space University (ISU), Illkirch-Graffenstaden, France;

IAC-25.E7.3.4
HOW ITU ENGAGEMENT IN SPACE SUSTAINABILITY EFFORTS CAN FACILITATE SUCCESSFUL OUTCOMES
Ms. Audrey Allison, The Aerospace Corporation, Arlington, VA, United States;

IAC-25.E7.3.5
THE KEY ROLE OF INFORMATION SHARING FOR SPACE SUSTAINABILITY: RECENT DEVELOPMENTS ON ARTICLE XI OST AND A CASE STUDY ON LUNAR ACTIVITIES
Dr. Antonino Salmeri, Lunar Policy Platform, Las Palmas De Gran Canaria, Italy;

IAC-25.E7.3.6
ENABLING RESPONSIBLE ON-ORBIT SERVICING AND ISAM THROUGH LEGAL FRAMEWORKS BY ADDRESSING SALVAGE RIGHTS, LIABILITY, AND ECONOMIC INCENTIVES
Dr. Diane Howard, International Institute of Space Law (IISL), Daytona Beach, United States;

IAC-25.E7.3.8
ENGINEERING PLANTS FOR SUSTAINABILITY IN SPACE: LEGAL AND ETHICAL IMPLICATIONS
Prof. Melissa de Zwart, University of Adelaide, Adelaide, Australia;

IAC-25.E7.3.9
EXPLORING THE NEED OF A LEGAL FRAMEWORK FOR THE USE OF NUCLEAR POWER IN SPACE EXPLORATION: BALANCING GLOBAL SECURITY AND SCIENTIFIC ADVANCEMENT
Ms. Zamara Rodriguez, Space Industry Association of Australia, CBD, Australia;

IAC-25.E7.3.10
FORMATION OF INTERNATIONAL AND DOMESTIC LEGAL FRAMEWORKS FOR SUSTAINABLE INTERNATIONAL SPACE COOPERATION - INFLUENCE OF SPACE COOPERATION BETWEEN JAPAN AND U.S. IN THE FORMATION OF SPACE LAW -
Prof. Masahiko Sato, Gakushuin University, Tokyo, Japan;

IAC-25.E7.3.11
SUSTAINABILITY FOR SPACE ACTIVITIES IN THE EUROPEAN INDIGENOUS ARCTIC
Prof. Lotta Viikari, University of Lapland, Rovaniemi, Finland;

IAC-25.E7.3.12
USING INDIGENOUS STEWARDSHIP PRINCIPLES TO INFORM ORBITAL GOVERNANCE POLICY FRAMEWORKS
Mr. Sandeep Dhaliwal, York University, Brampton, Canada;

IAC-25.E7.3.14
A CALL FOR FURTHER DFI INVOLVEMENT IN THE SPACE SECTOR. THE CASE FOR A 'WORLD FREE OF POVERTY ON A LIVABLE PLANET' THROUGH SPACE: LEGAL AND POLICY PERSPECTIVES OF DEVELOPMENT FINANCE INSTITUTIONS.
Dr. Simona Spassova, Washington, United States; Ms. Ute Reisinger, Washington DC, United States;

E7.4. Small Satellites, Public and Private Law Perspectives

October 1 2025, 10:15 — Room C2.3

Co-Chair(s): Maria A Pozza, , New Zealand; Upasana Dasgupta, OP Jindal Global University, India;
Rapporteur(s): Vinicius Guedes Gonçalves de Oliveira, European Space Policy Institute (ESPI), Australia;

IAC-25.E7.4.1
ACCOUNTABILITY OF NON-STATE ACTORS FOR SPACE POLLUTION CAUSED BY SMALL SATELLITES
Ms. Katja Grünfeld, Ljubljana, Slovenia;

IAC-25.E7.4.2
PRIVATE SPACE ENTITIES, SATELLITE CONSTELLATIONS, AND THE PUBLIC-PRIVATE DIVIDE IN INTERNATIONAL STATE RESPONSIBILITY FOR SPACE ACTIVITIES: TOWARDS A PARADIGM SHIFT?
Dr. Maria Manoli, University of Aberdeen, Aberdeen, United Kingdom;

IAC-25.E7.4.3
REASSESSMENT OF ARTICLE VI OF THE OUTER SPACE TREATY IN THE LIGHT OF NEW DEVELOPMENTS IN THE MILITARY USE OF OUTER SPACE
Ms. Fei Ge, Shenzhen University, Shenzhen, China;

IAC-25.E7.4.4
REGULATORY CHALLENGES IN THE DEVELOPMENT OF SMALL SATELLITES: THE CASE OF COLOMBIA AND LATIN AMERICA
Mr. David Gomez-Rincon, UNIVERSIDAD SERGIO ARBOLEDA, Bogotá D.C., Colombia;

IAC-25.E7.4.6
CUBESATS DEVELOPMENT IN EMERGING SPACE FARING NATIONS: UNLOCKING OPPORTUNITIES THROUGH EFFECTIVE REGULATION. THE AFRICAN EXAMPLE
Mrs. Alessandra Vernile, Agenzia Spaziale Italiana (ASI), Rome, Italy; Dr. Maria Chiara Noto, Italian Space Agency (ASI), Rome, Italy;

IAC-25.E7.4.7
FOSTERING SMALL SATELLITE ECOSYSTEM IN JAPAN: NEED TO UPDATE THE REGULATORY FRAMEWORK
Prof. Manami Sasaoka, Yokohama National University, Yokohama, Japan;

IAC-25.E7.4.8
LAUNCHING COOPERATION: LEGAL PERSPECTIVES ON SMALL SATELLITE DEPLOYMENTS FROM JAXA'S KIBO MODULE
Dr. Nayoung Youn, Korea Aerospace Research Institute (KARI), Daejeon, Korea, Republic of;

IAC-25.E7.4.9
ENVIRONMENTAL OVERSIGHT IN U.S. SPACE LICENSING
Dr. Erika Isabella Scuderi, University of Florida, Gainesvile, United States;

IAC-25.E7.4.10
LEGAL FRAMEWORKS FOR THE SECURITISATION AND TRANSFER OF SMALL SATELLITES
Mr. Hamza Hameed, Access Partneship, Singapore, Singapore, Republic of;

IAC-25.E7.4.11
SHAPING THE FUTURE OF AUTHORISATION AND SUPERVISION FOR INNOVATIVE MISSIONS: INSIGHT FROM THE UK REGULATORY SANDBOX ON RENDEZVOUS AND PROXIMITY OPERATIONS
Ms. Lauren Payne, D-Orbit SpA, Deal, United Kingdom;

IAC-25.E7.4.12
TRANSFORMATIVE DYNAMICS IN SPACE EXPLORATION: THE ROLE OF SMALL SATELLITES AND THE INSURANCE SECTOR IN RISK MITIGATION AND SUSTAINABLE DEVELOPMENT
Dr. Ivan Fino, Sant'Anna School of Advanced Studies, Turin, Italy;

E7.5. Legal Impact of Scientific Investigation on the Protection of Intellectual Property

October 1 2025, 15:00 — Room C2.3

Co-Chair(s): Antonino Salmeri, Lunar Policy Platform, Italy; Hisako Moriguchi, , Japan;
Rapporteur(s): Thomas Graham, Swinburne University of Technology, Australia;

IAC-25.E7.5.1
LEVERAGING IP AND PATENT PROTECTIONS TO EXPAND SPACE MARKETS AND EXPLORATION: A VISION TO SCALE SELF-SUSTAINING COMMERCIAL SPACE ECOSYSTEMS AND ADVANCE A GLOBAL SPACE-FARING CIVILIZATION
Mr. Steven Wood, Vela Wood, Salisbury Center, United States;

IAC-25.E7.5.2
BALANCING INNOVATOR AND GOVERNMENT OWNERSHIP OF IP IN TECHNOLOGY DEVELOPED IN SPACE CONSIDERING MIXED FUNDING SOURCES AND INNOVATOR INCENTIVES; JESSICA'S VERSION.
Mrs. Jessica Noble, International Institute of Space Law (IISL), Silver Spring, United States;

IAC-25.E7.5.3
THE CHASE: BALANCING SPACE LAW PRINCIPLES AND INTELLECTUAL PROPERTY RIGHTS
Ms. Chioma Ezeigbo, Abuja, Nigeria;

IAC-25.E7.5.4
PROTECTION OF INTELLECTUAL PROPERTY IN SPACE EXPLORATION
Ms. Arti Sangar, Baulkham Hills, Australia;

IAC-25.E7.5.5
HUMAN RIGHTS AND SPACE IP: COUNTERING QUASI-TERRITORIAL CLAIMS UNDER THE OUTER SPACE TREATY
Mr. Jonathan Lim, Jus Ad Astra, Richmond, Australia;

IAC-25.E7.5.6
THE DEFINITIONAL AND CONCEPTUAL ISSUES ON THE "SCIENTIFIC RESEARCH" AND ITS IMPLICATION ON INTELLECTUAL PROPERTY RIGHTS ON OUTER SPACE LAW.
Mr. Hugo Lopez, Centre National d'Etudes Spatiales (CNES), Paris, France;

IAC-25.E7.5.8
KEY CONCEPTS OF SPACE LAW ON OWNERSHIP SITUATIONS: PROPERTY FROM A CIVIL AND COMPARATIVE PERSPECTIVE
Mr. Giorgio Cardile, AMIStaDeS Research Center APS, Milano, Italy;

IAC-25.E7.5.9
NEW IDEAS AND OWNERSHIP IN OUTER SPACE: THE OPPORTUNITY FOR EFFECTIVE AND MORAL MANAGEMENT OF INTELLECTUAL PROPERTY RIGHTS FOR SPACE OBJECTS AND CREATIVITY IN OUTER SPACE
Mr. Scott Schneider, Adelaide, Australia;

IAC-25.E7.5.10
MADE IN LUNA: GEOGRAPHICAL INDICATORS FOR SPACE ACTIVITIES
Ms. Martina Elia Vitoloni, Institute of Air and Space Law, McGill University, Montreal, Argentina;

IAC-25.E7.5.11
WE NEED A SPACE PATENT SYSTEM...DO WE REALLY?
Ms. Hisako Moriguchi, Shinagawa, Tokyo, Japan;

E7.7. Climate Change of the Earth Reflected in Space Law

October 3 2025, 10:15 — Room C2.3

Co-Chair(s): Steven Freeland, Western Sydney University, Australia; Martha Mejia-Kaiser, International Institute of Space Law (IISL), Germany;
Rapporteur(s): Laetitia Cesari, , France;

IAC-25.E7.7.1
OPEN DATA EXCHANGE OR FREE FLOW OF INFORMATION? – THE DIFFERENT MEANINGS OF 'DATA' AND 'INFORMATION' IN THE CONTEXT OF EARTH OBSERVATION
Mr. Martin Reynders, German Space Agency, Bonn, Germany;

IAC-25.E7.7.2
THE ABSENCE OF SPACE LAW IN THE 2024 ITLOS ADVISORY OPINION ON "CLIMATE CHANGE AND INTERNATIONAL LAW" AND LESSONS FOR FUTURE CASES
Dr. S. Hadi Mahmoudi, Shahid Beheshti University, Tehran, Iran;

IAC-25.E7.7.3
IN NEED OF REGULATION: REMOTE SENSING AND DEVELOPING COUNTRIES.
Ms. Judith Jahnke, Institute of Air and Space Law, McGill University, Montreal, Canada;

IAC-25.E7.7.4
THE ROLE OF 'TIME' IN SPACE LAW AND POLICY-MAKING: NAVIGATING CHALLENGES FOR SUSTAINABLE DEVELOPMENT
Mr. Nishith Mishra, Institute of Air and Space Law, McGill University, Montréal, Canada;

IAC-25.E7.7.5
APPLICATION OF SPACE TECHNOLOGY TO COMBAT CLIMATE CHANGE IN CHINA: A LEGAL APPROACH
Prof. YONGLIANG YAN, Beijing Jiaotong University, Beijing, China;

IAC-25.E7.7.6
LEGAL PERSPECTIVE ON SPACE-BASED TECHNOLOGY'S ROLE IN ADDRESSING CLIMATE CHANGE: CHINA'S EVOLVING CONCEPTIONS OF SPACE-BASED CLIMATE GOVERNANCE
Ms. Yuqi Shen, Beijing Institute of Technology, Beijing, China;

IAC-25.E7.7.7
SPACE LAW IN A CLIMATE CRISIS AND THE ROLE OF LEGAL FRAMEWORKS IN CLIMATE MONITORING AND DISASTER MANAGEMENT IN SOUTH AFRICA
Ms. Lulu Makapela, CSIR – South African Council for Scientific and Industrial Research, Pretoria, South Africa;

IAC-25.E7.7.8
THE ITALY-KENYA AGREEMENT AND THE LEGAL FRAMEWORK FOR EARTH OBSERVATION REGULATION
Dr. Antonio Pallotti, Agenzia Spaziale Italiana (ASI), Roma, Italy;

IAC-25.E7.7.9
HOW WE REGULATE THE PROTECTION OF PERSONAL DATA EXTRACTED FROM SATELLITE IMAGERY: IMPLICATION FROM NATIONAL REGULATIONS OF DRONE OPERATION
Ms. Marina Tainaka, Japan Aerospace Exploration Agency (JAXA), Tsukuba-shi, Ibaraki, 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 3 2025, 13:45 — Room C2.3

Co-Chair(s): Susan McKenna-Lawlor, Space Technology (Ireland) Ltd., Ireland; Tetsuo Yoshimitsu, Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency, Japan;
Rapporteur(s): Fabrice Dennemont, International Academy of Astronautics (IAA), France;

IAC-25.E8.1.1
AI LIMITATIONS AND MISUNDERSTANDINGS IN MULTILINGUAL ASTRONAUTICAL TERMINOLOGY
Mrs. Shabnam Huseynova, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-25.E8.1.2
SPACEGPT: AI-DRIVEN STANDARDIZATION OF MULTILINGUAL SPACE SCIENCE LEXICONS
Mr. Riyabrata Mondal, TU Bergakademie Freiberg (TUBAF), Freiberg, Germany;

IAC-25.E8.1.3
THE COST OF MISCOMMUNICATION IN SPACE: WHY WE MUST STANDARDIZE MULTILINGUAL TERMINOLOGY IN SPACE ?
Ms. Turana Omarova, Azerbaijan State University of Economics, Baku, Azerbaijan;

IAC-25.E8.1.4
PRECISION IN TRANSLATION: THE IMPACT OF STANDARDIZED SPACE TERMINOLOGY ON INTERNATIONAL MISSIONS
Mrs. Karla Melisa Vargas Palacios, Instituto Politécnico Nacional, Estado de México, Mexico;

IAC-25.E8.1.5
PALE BLUE DOT HISTORY AND NAMING LESSONS FOR SPACE
Ms. Sharon Wangechi Muriuki, Vaxjo, Sweden;

IAC-25.E8.1.6
LETRIVIA
Ms. Matanat Ahmadova, Baku, Azerbaijan;

IAC-25.E8.1.7
INNOVATING COMMUNICATION IN OUTER SPACE: BUILDING A GLOBAL COMMON LANGUAGE THROUGH SIGN LANGUAGE AND BRAILLE
Ms. Maiko Kato, Tokyo, Japan;

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

September 29 2025, 15:30 — Room C4.10

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, The Netherlands; 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-25.E9.1-A6.8.2
FROM A POLICY QUAGMIRE TO REGULATORY COHERENCE: COMMON ENGINEERING GUIDELINES FOR SPACE SAFETY AND SUSTAINABILITY READY FOR REGULATION
Mr. Vinicius Aloia, Astroscale Ltd, Didcot, United Kingdom;

IAC-25.E9.1-A6.8.4
MIDDLE POWER STRATEGIES FOR SPACE SITUATIONAL AWARENESS: FOUR SSA SYSTEM MODELS FOR THE STABLE USE OF OUTER SPACE
Mr. Kota Umeda, Institute of Geoeconomics (IOG), Tokyo, Japan;

IAC-25.E9.1-A6.8.6
SUPPORTING STC IN THE ERA OF LEO MEGA-CONSTELLATIONS: CHINA'S PROSPECTIVE
Ms. Yuqi Shen, Beijing Institute of Technology, Beijing, China; Dr. Kuan Yang, Beijing Institute of Technology, Institute of Space Law, Beijing, China;

IAC-25.E9.1-A6.8.7
AN INTEGRATED SIMULATION TOOLBOX FOR THE SPACE SUSTAINABILITY TRIFECTA: POLICY, TECHNOLOGY, AND OPERATIONS
Ms. Qian Shi, Purdue University, West Lafayette, United States;

IAC-25.E9.1-A6.8.8
CARROTS AND STICKS: GOVERNMENT STRATEGIES FOR PROMOTING SUSTAINABLE PRIVATE SPACE EXPLORATION
Mr. Hamza Hameed, Access Partneship, Singapore, Singapore, Republic of;

IAC-25.E9.1-A6.8.9
ADVANCING CONCEPTS FOR GLOBAL COORDINATION ON SSA
Dr. Mariel Borowitz, Atlanta, GA, United States;

IAC-25.E9.1-A6.8.11
INSURANCE RESPONSE TO SPACE DEBRIS: REVIEW AND REVISIONS OF CONTEMPORARY SOLUTIONS
Prof. Katarzyna Malinowska, European Space Foundation, Warsaw, Poland;

E9.2. Cyber-based security threats to space missions: establishing the legal, institutional and collaborative framework to counteract them

September 29 2025, 15:30 — Room C2.1

Co-Chair(s): Julien Airaud, Centre National d'Etudes Spatiales (CNES), France; Stefano Zatti, University of Rome "La Sapienza", Italy;

IAC-25.E9.2.1
SAME SAME, BUT DIFFERENT: THE NECESSITY OF A SPECIFIC LEGAL FRAMEWORK TAILORED FOR SPACE CYBERSECURITY
Dr. Vinicius Guedes Gonçalves de Oliveira, European Space Policy Institute (ESPI), Adelaide, Australia;

IAC-25.E9.2.2
FORTIFYING SPACE MISSIONS: A LEGAL, INSTITUTIONAL, AND COLLABORATIVE APPROACH TO CYBERSECURITY THREATS
Mr. Orkhan Jabbarzade, Baku, Azerbaijan;

IAC-25.E9.2.3
SECURING SPACE ECOSYSTEMS AGAINST DUAL-USE AND CYBERSECURITY RISKS
Mr. David Eagleson, Northumbria University, Newcastle-upon-Tyne, United Kingdom;

IAC-25.E9.2.5
HIJACKING THE COSMOS: THE IMPACT OF GNSS ATTACKS ON CRITICAL SPACE SYSTEMS
Mr. Arnold Chan, University of South Australia, Penshurst, Australia; Mr. Andrew Savchenko, University of Technology Sydney (UTS), Adelaide, Australia;

IAC-25.E9.2.7
BLOCKCHAIN-POWERED SPACE GOVERNANCE: SECURITY, PRIVACY, AND TOKENIZATION
Mr. Sanan Gasimzada, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.E9.2.8
SECURING THE FINAL FRONTIER: A UNIFIED CYBERSECURITY FRAMEWORK FOR SPACE OPERATIONS
Mr. Rasul Ibrahimli, Azerbaijan State Oil and Industry University (ASOIU), Baku, Azerbaijan;

IAC-25.E9.2.9
SECURING SPACE MISSIONS AGAINST EMERGING AI THREATS: AN INSTITUTIONAL FRAMEWORK FOR CROSS-BORDER COLLABORATION
Mr. Ben Kereopa-Yorke, UNSW Australia, Brisbane, Australia;

IAC-25.E9.2.10
NAVIGATING THE CYBER COSMOS: BESPOKE THREAT INTELLIGENCE FOR SPACE OPERATIONS
Mr. Pak Ho CHAN, Melbourne, Australia;

IAC-25.E9.2.11
DIGITAL INFRASTRUCTURES FOR THE FUTURE OF SPACE: ENHANCING SECURITY, INTELLIGENCE, AND RESILIENCE
Dr. Ulpia Elena Botezatu, Romanian Space Agency (ROSA), Bucuresti, Romania;

IAC-25.E9.2.12
BLOCKCHAIN FOR SPACE CYBERSECURITY: A DECENTRALIZED APPROACH TO SECURING SPACE ASSETS
Ms. Habizat Abbasova, Baku Engineering University, Baku, Azerbaijan;

IAC-25.E9.2.13
PROACTIVE CELESTIAL HUNTER FOR ARTIFICIAL INTELLIGENCE-DRIVEN CYBER THREAT HUNTING IN SPACE (A.I.C.T.H.S)
Mr. Teymur Novruzov, Azerbaijan State Oil and Industry University (SABAH Groups), Baku, Azerbaijan;

IAC-25.E9.2.14
ETHICAL CONSIDERATIONS OF AI-DRIVEN DECISION-MAKING IN SPACE EXPLORATION
Mr. KangSan Kim, ispace, inc., Incheon, Korea, Republic of;

IAC-25.E9.2.16
DECODING THE COSMOS - AN INTRODUCTION TO SATELLITE FORENSICS
Mr. Paul Coggin, Huntsville, United States;

IAC-25.E9.2.17 (unconfirmed)
CYBERSECURITY IN SPACE: TAXONOMY OF CYBER INCIDENTS AND THE NEED FOR EXPERTISE DEVELOPMENT
Ms. Anna Mandrenko, Tallinn University of Technology, Tallinn, Estonia;

E9.3. Norms and Standards for Safe and Responsible Behaviour in Space

October 2 2025, 10:15 — Room C2.6

Co-Chair(s): Peter Martinez, Secure World Foundation, United States; Annamaria Nassisi, Thales Alenia Space Italia, Italy;
Rapporteur(s): Rachel Venn, Astroscale Ltd, United Kingdom;

IAC-25.E9.3.1
KEYNOTE: REVISITING RESPONSIBLE BEHAVIOUR IN SPACE
Prof. Serge Plattard, University College London (UCL), London, United Kingdom;

IAC-25.E9.3.2
GOVERNANCE OF LARGE-SCALE LEO SATELLITE CONSTELLATIONS: CHALLENGES, COMPARATIVE APPROACHES, AND POLICY RECOMMENDATIONS
Ms. Yunping Liu, Alma Mater Studiorum - University of Bologna, Bolonga, China;

IAC-25.E9.3.3
LEVERAGING NON-TRADITIONAL SENSORS FOR ENHANCED RE-ENTRY TRACKING AND IMPACT PREDICTION: A COLLABORATIVE APPROACH
Mr. Edwin Betar, Australian Space Agency, Alderley, Australia; Dr. Mariel Borowitz, Atlanta, GA, United States;

IAC-25.E9.3.4
FROM EARTH TO ORBIT AND BEYOND: APPLYING MINING VALUE CHAIN EXPERTISE TO SPACE CIRCULARITY
Dr. Jonathon Ralston, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Pullenvale, Australia;

IAC-25.E9.3.5
DEVELOPING NORMS OF BEHAVIOUR FOR RENDEZVOUS AND PROXIMITY OPERATIONS THROUGH SCALABLE SIMULATION
Dr. Brenton Smith, Canberra, Australia;

IAC-25.E9.3.6
QUAD AND CIS-LUNAR SECURITY
Prof. Aaron Pereira, The University of Adelaide, Adelaide, Australia;

IAC-25.E9.3.7
CLUTTERED COSMOS: THE URGENT NEED FOR GLOBAL SPACE TRAFFIC MANAGEMENT AND REGULATION
Mr. Kanan Taghiyev, National Aviation Academy - Azerbaijan, Baku, Azerbaijan;

IAC-25.E9.3.8
APPLICATION OF DEBRIS MITIGATION STANDARDS TO ACTIVE DEBRIS REMOVAL MISSIONS: FINDINGS AND RECOMMENDATIONS FROM CONFERS
Dr. Timothy Maclay, Celestial Insight, Inc., Lincoln, United States;

IAC-25.E9.3.9
BRIDGING NORMS OF RESPONSIBLE BEHAVIOR: FROM CYBERSPACE TO OUTER SPACE GOVERNANCE
Dr. Ulpia Elena Botezatu, Romanian Space Agency (ROSA), Bucuresti, Romania;

IAC-25.E9.3.10
T-AI-LOR MADE FOR SPACE: ADOPTING AI STANDARDS IN THE SPACE SECTOR
Mr. Thomas Graham, Swinburne University of Technology, Williamstown, Australia;

IAC-25.E9.3.11
DEFINING RIGHT-OF-WAY ON ORBIT: LESSONS FROM AUTONOMOUS VEHICLE STANDARDS TRANSLATED TO SPACE TRAFFIC MANAGEMENT
Ms. Katherine Melbourne, The Aerospace Corporation, Arlington, VA, United States;

E9.5. Strategic Risk Management for Successful Space & Defence Programmes

September 30 2025, 10:15 — Room C2.5

Co-Chair(s): Maria-Gabriella Sarah, European Space Agency (ESA), France; Katarzyna Malinowska, European Space Foundation, Poland; Christopher Geiger, Lockheed Martin Corporation, United States;
Rapporteur(s): Andrew Court, TNO, The Netherlands;

IAC-25.E9.5.2
MANAGING STRATEGIC RISK AS A COMMERCIAL SPACE COMPANY
Mr. Nick Saunders, ViaSat Inc., Carlsbad, CA, United States;

IAC-25.E9.5.3
STRATOSPHERIC BALLOONS IN MODERN RECONNAISSANCE: A COMPARATIVE ANALYSIS BALANCING INNOVATION WITH NATIONAL SECURITY
Ms. Nashide Pelin Kurtaran, Space Generation Advisory Council (SGAC), London, United Kingdom;

IAC-25.E9.5.4
NEW TRAJECTORIES OF WARFARE IN SPACE: AN ANALYSIS OF STRATEGIC AND LEGAL DYNAMICS REGARDING SOVEREIGN SATELLITE SYSTEMS IN THE MILITARY DOMAIN
Mr. Martino Fascendini, AMIStaDeS Research Center APS, Abbadia Lariana, Italy;

IAC-25.E9.5.6
THE INFLUENCE OF RISK LANDSCAPE DYNAMICS ON PROGRAM GOVERNANCE: AN INVESTIGATION ON ARTEMIS
Prof. Paolo Trucco, Politecnico di Milano, Milan, Italy;

IAC-25.E9.5.7
LAUNCHING STATES COOPERATION IN THE FIELD OF RISK MANAGEMENT - HOW TO GOVERN AND COORDINATE PUBLIC AND PRIVATE SPACE ACTIVITIES ON INTERNATIONAL AND NATIONAL LEVEL? THE CASE OF FALCON 9 FALLING FROM THE POLISH SKY
Prof. Katarzyna Malinowska, European Space Foundation, Warsaw, Poland;

IAC-25.E9.5.8 (unconfirmed)
SECURING SPACE: RESILIENCE STRATEGIES FOR CRITICAL INFRASTRUCTURE IN CRISIS SCENARIOS
Ms. Ilenia Bruseghello, Noventa Padovana, Italy;

IAC-25.E9.5.9
PIONEERING THE FINAL FRONTIER: ETHICS AND LEGALITIES OF HUMAN EXPANSION INTO DEEP SPACE
Ms. Riddhi Malhotra, Collins Aerospace, Benagaluru, India;

IAC-25.E9.5.11
RISK MANAGEMENT OF POTENTIAL HAZARDS IN SPACE
Ms. Fatima Hasanova, Azerbaijan State Academy of Physical Education and Sport, Baku, Azerbaijan;

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 2 2025, 15:00 — Room C2.3

Co-Chair(s): Daniel Mazanek, National Aeronautics and Space Administration (NASA), Langley Research Center, United States; Aurélie Moussi, Centre National d'Etudes Spatiales (CNES), France;
Rapporteur(s): Alejandro J. Roman Molinas, Paraguayan Space Agency, Paraguay; Alex Karl, Space Applications Services, Belgium;

IAC-25.E10.1.1
KEYNOTE: PLANETARY DEFENCE: THE AUSTRALIAN CONTEXT WITHIN THE INTERNATIONAL ASTEROID WARNING NETWORK (IAWN)
Prof. Ed Kruzins, University of New South Wales, Canberra, Australia;

IAC-25.E10.1.2
THE SYSTEM FOR HAZARDOUS ASTEROIDS RISK PREDICTION (SHARP) AND ITS APPLICATION
Dr. Shujuan Geng, National Space Science Center (NSSC), Chinese Academy of Sciences, Beijing, China;

IAC-25.E10.1.3
PLANETARY DEFENSE ACTIVITIES IN JAXA
Dr. Makoto Yoshikawa, Japan Aerospace Exploration Agency (JAXA), Sagamihara, Japan;

IAC-25.E10.1.4
THE HYPERSCOUT-H HYPERSPECTRAL IMAGER FOR THE ESA HERA MISSION
Dr. Chris van Dijk, Cosine Remote Sensing B.V., Sassenheim, The Netherlands;

IAC-25.E10.1.5
HERA'S PLATFORM POTENTIAL: ENABLING PLANETARY DEFENSE AND DIVERSE SPACE MISSIONS
Mr. Alvaro Sanz Casado, OHB System AG, Bremen, Germany;

IAC-25.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;

IAC-25.E10.1.8
COMMUNICATIONS LESSONS LEARNED FROM AN INTERACTIVE PLANETARY DEFENCE WORKSHOP
Mr. Alex Karl, Space Applications Services, Ukkel, Belgium;

IAC-25.E10.1.9
THE DAY AFTER. FORWARD-LOCKING ETHICAL LESSONS FROM APOPHIS' PASSAGE
Dr. Jacques Arnould, Centre National d'Etudes Spatiales (CNES), Paris, France;

E10.2. Informing Planetary Defense

October 3 2025, 13:45 — Room C3.3

Co-Chair(s): Daniel Mazanek, National Aeronautics and Space Administration (NASA), Langley Research Center, United States; Alissa J. Haddaji, Massachusetts Institute of Technology (MIT), United States;
Rapporteur(s): Philipp Maier, Institute of Space Systems, University of Stuttgart, Germany;

IAC-25.E10.2.1
SPACE TO LAB ASTEROID STUDIES WITH IMMINENT IMPACTORS IN THE RUBIN ERA
Dr. Hadrien Devillepoix, Curtin University, BENTLEY, Australia;

IAC-25.E10.2.3
CHARACTERIZATION OF SUPER-FAST ROTATING NEAR-EARTH ASTEROIDS
Mr. Marko Gavrilovic, Belgrade, Serbia;

IAC-25.E10.2.6
INSIGHTS FROM HYPERVELOCITY IMPACTS ON POROUS GEOMATERIALS
Ms. Shachi Singh, The Johns Hopkins University, Baltimore, United States;

IAC-25.E10.2.8
STUDY ON THE REGULARITIES OF KINETIC IMPACT DEFLECTION FOR VIRTUAL ASTEROIDS IMPACTING EARTH
Dr. Kaiduo Wang, 1: National Space Science Center, Chinese Academy of Sciences; 2:University of Chinese Academy of Sciences, Beijing, China;

IAC-25.E10.2.9
A MODEL-BASED SYSTEMS ENGINEERING APPROACH FOR DESIGNING A NEO RENDEZVOUS MISSION: THE FIRST STEP IN ACTIVE PLANETARY DEFENSE
Ms. Dhanisha Sateesh, Space Generation Advisory Council (SGAC), Chennai, India;

E11. IAF SYMPOSIUM ON EMERGING SPACE ECOSYSTEMS

Coordinator(s): Matias Campos, Astralintu Space Technologies, Ecuador;

E11.1. Connecting Emerging Space ecoSystems

October 1 2025, 10:15 — Room C2.6

Co-Chair(s): Matias Campos, Astralintu Space Technologies, Ecuador; Alejandro J. Roman Molinas, Paraguayan Space Agency, Paraguay;
Rapporteur(s): Marlene Losier, Space Renaissance International, United States;

IAC-25.E11.1.1
PIONEERING SPACE IN THE MALDIVES: MSRO'S JOURNEY AND KEY TAKEAWAYS
Ms. Raushan Ali Firaq, Maldives Space Research Organisation (MSRO), Male, Maldives;

IAC-25.E11.1.3
ADVANCING THE PARTNERSHIP MOTIVATION INDEX (PMI) FOR SDG 17: A DATA-DRIVEN APPROACH TO SUSTAINABLE SPACE COLLABORATION.
Mrs. Aisha Ndahi, Arizona State University, Phoenix, United States;

IAC-25.E11.1.4
ASSESSING SPACE ECOSYSTEM MATURITY THROUGH CASE STUDIES: LEVERAGING THE SPACE INNOVATION ECOSYSTEM MATURITY RUBRIC FOR STRATEGIC DEVELOPMENT
Ms. Vedika Latchman, Exotopic, Indooroopilly, Australia;

IAC-25.E11.1.5
MUTUAL PROSPERITY THROUGH SPACE: EUROPE AND THE GLOBAL SOUTH IN A NEW ERA
Mr. Marco Aliberti, European Space Policy Institute (ESPI), Vienna, Austria;

IAC-25.E11.1.6
ASEAN MULTINATION COLLABORATION PROJECT: ADVANCING A HOLISTIC AND SUSTAINABLE SPACE ECOSYSTEM
Prof.Dr. MOHAMAD HUZAIMY JUSOH, Universiti Teknologi MARA (UITM), SHAH ALAM, Malaysia;

IAC-25.E11.1.8
DEFINING THE CRITERIA FOR EMERGING SPACE COUNTRIES WITHIN THE INTERNATIONAL ASTRONAUTICAL FEDERATION (IAF): A FRAMEWORK FOR COST REDUCTION AND INCLUSION
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