



INTERNATIONAL
ASTRONAUTICAL
FEDERATION

Sustainable Space - IAF initiatives

focusing on student and academic communities

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Connecting @ll Space People



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Safe and Sustainable Space Operations

Satellites are pivotal to the quality of human life and the world's economy & space is a valuable resource - both contested and congested

Increasing investments are resulting in growing number of launches into the highly productive but crowded orbits

Currently ~ 27,000 catalogued objects in orbit of size more than 10 cm. Objects under 10 cm size could exceed 100 million

Higher risk of collision due to higher density of space traffic driven by commercial or scientific reasons

With Large constellations in LEO, the sustainability, safety and security of space are complex and questioned



Realities, Practicalities and Outlook

In future, catastrophic collisions might occur - Decisive actions needed to reduce this risk

The current processes will be insufficient to protect the space infrastructure

Investment towards increasing space object observations necessary to provide a impetus to safeguard space resources

A sustained effort towards secured and sustainable space operations will have a huge impact on commercial viability of space operations and the quality of human life.



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IAF SIS Agenda 2022-2025

Sustainability

Underlines the viability of future space exploration

Need to influence conversations around sustainability on the space environment

Secure orbits, spacecraft frequencies and other related resources

Investment

Government and private funding is expected to grow and foster expansion

Major push towards commercialisation of LEO and reignited interest in lunar orbit regimes are major challenges

Growing investment will result in new challenges for space operators

Security

Safe operations in space are a prerequisite for continued development of space based assets

Good practices for safe space operations need to be promoted

Need to involve all space actors for shared use of assets and resources



IAF Initiatives for Academia

IAF/ISEB Educators Professional Development Workshop

- Introduces educators to latest research, instructional strategies and fundamentals of space environment
- Theme based interactive workshops, delivered by IAF/ISEB selected, sponsored and trained PhD students.
- Wonderful opportunity to interact with some of the brightest contributors to the space domain

IAF Abstract Mentor Programme

- Brings together an experienced mentor and mentees having a common interest in space matters.
- Pairs communicate and exchange ideas and help each other on articles to write and submit an extract for the IAC.



IAF Initiatives for Students

IAF CSA Space Universities Cubesat Challenge

- A platform for university students to present their creative ideas and gain attention internationally
- The challenge aims at fostering innovative thinking and ability to combine theory with practice to solve practical engineering problems
- Provides an opportunity of a free cubesat launch

IAF Public Speaking and Presentations Skill Lab

- Focuses on improving presentation skills of graduate students and newcomers in an international scientific context such as the IAC
- Provides an introduction to the concept of culture and its role in international activities participation
- Tips and techniques shared to improve confidence when presenting to audience from various cultures



IAF Initiatives for Workforce Development

IAF Science and Academic Day

- Celebrates the role of science and academia in global space effort
- Completes the “3G” initiative (Geography-Generation-Gender equities)
- IAF with ISU support brings discussions between space sector experts, students and young professionals to inspire and motivate the future representatives of the space sector.

IAF Launchpad Mentorship Programme

- Focused on career development and leadership capabilities of recent graduates and early to mid-career professionals
- Selected mentees will gain from independent perspective, advice and insights from some of the most notable leaders within the industry
- Mentees will have ability to take part in professional development designed specifically for the programme.
- Opportunity to develop new skills and expertise along with enhanced networking opportunities



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IAF - Brings up a motivated Young Space Enthusiasts with the vision for Sustainability, Investment & Security



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Thanks for your attention !



Be Part of the Conversation **@iafastro**

