CONTENTS

1. Students and Young Professionals Events .......................................................... 9
   1.1 2023 IPMC Young Professional Workshop ............................................... 9
   1.2 2023 Young Professional Events ............................................................. 10
   1.3 IAF Grant and Recognition Programmes for Students and YPs .............. 11
       1.3.1 IAF Young Space Leaders (YSL) Recognition Programme ........... 11
       1.3.2 IAF Emerging Space Leaders (ESL) Grant Programme ............... 13
       1.3.3 Future Space Leaders (FSL) Grant Programme ......................... 25
   1.4 IAF/ISEB Educators Professional Development Workshop ............... 27
   1.5 Cross-Cultural Communications and Presentation Workshop ............. 29

2. Associated Events ________________________________________________________ 30
   2.1 IAF IDEA “3G+” Diversity Programme ................................................ 30
       2.1.1 IAF IDEA “3G” Diversity Breakfast ......................................... 30
       2.1.2 IAF IDEA Excellence in “3G” Diversity Award Luncheon ............ 31
   2.2 13th IAF International Meeting for Members of Parliaments ............ 33
   2.3 IAC Hosts Summit .................................................................................. 35
   2.4 UN/IAF 30th Workshop on Space Technology for Socio-Economic Benefits 37
   2.5 21st Space Generation Congress (SGC) ............................................. 42

3. Social Events __________________________________________________________________________________ 44

4. IAF Awards ____________________________________________________________________________________ 45
   4.1 IAF World Space Award ....................................................................... 45
   4.2 IAF Excellence in International Cooperation Award ............................ 46
   4.3 IAF Excellence in “3G” Diversity Award ............................................. 46
   4.4 IAF Excellence in Industry Award ....................................................... 48
   4.5 IAF Hall of Fame .................................................................................. 49
   4.6 Frank J. Malina Astronautics Medal ...................................................... 50
   4.7 IAF Interactive Presentations Competition Award ............................ 51

5. International Astronauts Chapter ____________________________________________________________________ 52
1 Students and Young Professionals Events

1.1 2023 IPMC Young Professional Workshop

Date: Sunday 1 October 2023
Time: 09:00 - 16:45
Venue: Room BCC B6, Baku Convention Center

The IPMC Young Professional Workshop is a one-day event dedicated to YPs, including Team Work, talks by Expert Speakers, and debate in a Plenary Session open to the general IAC audience. Based on their first-hand experience, Young Professionals will be asked to explore topics related to key Project Management competencies: Stakeholders Management, Risks Management, Data Management, Human Capital Management, Knowledge Management. Young Professionals will have the opportunity to discuss their findings with Experts from the IAF Community, and engage in Q&A with them.

The morning session is a closed-door event reserved for pre-enrolled Young Professionals. The afternoon session is open to the entire IAC audience.

Young Professionals attending the workshop shall arrive 15 minutes earlier, to ensure a timely kick-off, and commit to actively take part in the activities for the entire day.

<table>
<thead>
<tr>
<th>Time</th>
<th>Morning Session, closed doors (registered attendees only)</th>
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<tbody>
<tr>
<td>09:00 – 09:15</td>
<td>Welcome and Introduction</td>
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<tr>
<td>09:15 – 10:00</td>
<td>Expert Speakers</td>
</tr>
<tr>
<td>10:00 – 13:00</td>
<td>YP Teamwork</td>
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<td>13:00 – 14:00</td>
<td>Lunch &amp; Group Photo</td>
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</tbody>
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<tr>
<th>Time</th>
<th>Afternoon Session, Plenary (general audience allowed)</th>
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<tr>
<td>14:00 – 15:00</td>
<td>Expert Speakers</td>
</tr>
<tr>
<td>15:00 – 16:30</td>
<td>Panel, Q&amp;A</td>
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<tr>
<td>16:30 – 16:45</td>
<td>Wrap-up</td>
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1.2 IAF Young Professionals Events

Sunday 1 October 2023

08:30 – 13:30 Cross Cultural Communications and Presentation Workshop – Room BCC A5
09:00 – 18:00 IPMC Young Professional Workshop –
19:00 – 21:00 YPP opening reception – Room HAC Hall (For Young Professionals Only)

Come mix and mingle with fellow YPs as the IAF’s Young Professionals Programme welcomes you to IAC 2023.

Tuesday 3 October 2023

19:00 – 21:00 Reception for Launchpad Mentorship Programme – Room BCC Auditorium (For Young Professionals Only)

Sponsored by:
Astroscale

Wednesday 4 October 2023

19:00 – 21:00 YPP/ISU/SGAC presents NGP Moonshot Panel – Room BCC Auditorium (For Young Professionals Only)

Sponsored by:
TII

1.3 IAF Grant and Recognition Programmes for Students and YPs

1.3.1 IAF Young Space Leaders (YSL) Recognition Programme

The IAF Young Space Leaders Recognition Programme is awarded to exceptional students and young professionals, who contribute to astronautics in their academic or early careers, reach out to other young people and their communities to share knowledge and experiences, have been engaged with the international space community and contribute to IAF activities.

The 2023 IAF Young Space Leaders were chosen by a selection committee during the IAF Spring Meetings in March. They will be presented with their award during the Closing Ceremony of the 74th International Astronautical Congress (IAC) - IAC 2023, in Baku, Azerbaijan which will take place from 2-6 October 2023. Awardees also attend the IAC Gala Dinner as guests of the IAF President and enjoy a free IAC registration.

Tensae Alemayehu Ali
Regional Coordinator - Africa, Space Generation Advisory Council - SGAC

Tensae Alemayehu Ali is a pioneering figure in African Space Science and Engineering, driven by a lifelong passion for exploration and a commitment to making a lasting impact. As a Mechanical Engineering graduate from Mekelle University, Tensae’s visionary leadership and outstanding achievements have set him apart.

Currently the Regional Coordinator for Africa at the Space Generation Advisory Council (SGAC), Tensae plays a crucial role in nurturing the next generation of space professionals. Alongside his role at SGAC, he recently joined CubeSpace ADCS as a Sales Engineer, a world-leading Satellite ADCS manufacturing company, where he contributes his technical expertise and exceptional communication skills to drive business growth.

Tensae’s involvement expands beyond his positions at SGAC and CubeSpace. He has held key roles within SGAC, including the Regional and Local Events Coordination Team and the National point of contact for Ethiopia. His leadership skills were recognized by the International Astronautical Federation (IAF), electing him to co-chair Africa Subcommittee of the IAF Administrative Committee on Connecting Emerging Space ecosystems (IAF-ACCESS).

Passionate about raising awareness for the space sector, Tensae has organized impactful outreach activities in Addis Ababa and Mekelle. As part of the Executive Mekelle Branch office at the Ethiopian Space Science Society (ESSS), he inspires and engages young minds.

Tensae’s exceptional contributions have earned him prestigious awards, including the Emerging Space Leaders award from the International Astronautical Federation (IAF) in 2022, the Top 10 Under 30 African Space Industry Award - Class of 2021 by Space in Africa, and the Global Grants Programme award by SGAC. His outstanding achievements and dedication continue to drive advancements in space science and engineering.

Driven by a boundless passion for exploration, innovation, and leaving a lasting legacy, Tensae Alemayehu Ali stands as a true trailBlazer and a beacon of inspiration for aspiring space professionals worldwide. His technical expertise, exceptional leadership, and unwavering commitment continue to reshape the landscape of the space industry.

Harriet BRETTLE
Head of Market Analysis and Business Intelligence, European Space Agency

Harriet Brettle is the Head of Market Analysis and Business Intelligence at the European Space Agency in the Telecoms & Integrated Applications (TIA) directorate. In this role, Harriet is responsible for the analysis of markets relevant to satellite communications and space solutions. Prior to joining ESA, Harriet was Head of Business Analysis at Astroscale and was Chair of the Space Generation Advisory Council. With a background in finance as well as degrees in planetary science and mathematics, Harriet is passionate about commercial sustainability and emerging market opportunities within the space ecosystem.
Matías F. CAMPOS ABAD
CEO & Founder, AstraTriton Space Technologies
Matías is an Ecuadorian Aerospace Engineer and Educator who returned home to Ecuador after earning his Bachelor's and Master's degrees in the United States and beginning his career in the European industry. Under his leadership as Founder & CEO, he established his country's first space startup. AstraTriton Space Technologies is growing rapidly and catalyzing the emergence of a dynamic space ecosystem not only in Ecuador but also in Latin America. AstraTriton provides space services that make space more accessible to emerging countries worldwide. Its innovative business model positions it as a first-place winner in multiple international pitch competitions. AstraTriton looks to connect the Global South to the benefits of space by deploying its signature project, the Equatorial Ground Station Network (EGSN) with its first ground station AST-GSL "Initiative" already operating and tracking satellite constellations from Lattitude 0°.

Bethany DOWNER
Chief Science Communications Officer for the Hubble and James Webb Space Telescopes European Space Agency
Bethany Downer, of Newfoundland and Labrador, Canada, specializes in science and technology communication for the space industry. She is the Chief Science Communications Officer for the Hubble and James Webb Space Telescopes for the European Space Agency, and she is the Director of Communications for STAR HARBOR—the world’s first publicly accessible spaceflight training facility and R&D campus for space. Bethany is a member of the IAF Space Education and Outreach Committee (SEOC) and the Workforce Development-Young Programme Committee (WD-YPD). She also supports science outreach to over 10,000 Canadian students and is actively supporting students and young professionals in Atlantic Canada who want to pursue careers in the space domain. Bethany has twice been named one of Canada’s Top 30 under 30, and is a recipient of the Canadian Sovereign’s Medal for the country’s Governor General.

Adewale ADELANIWA
Senior Analyst and consultant at Space in Africa, specialising in research and market intelligence within the African space industry. With a strong focus on data-driven analysis and industry landscapes, he develops comprehensive reports that uncover new opportunities for private and public space organisations. Adewale’s expertise extends to consulting services for satellite development programs, where he advises on cutting-edge technology, launch opportunities, and satellite commercialisation.

Recognising the importance of international cooperation in space, Adewale sees it as a powerful force that unites nations towards a common goal. Drawing inspiration from the successful International Space Station program, he recognises the transformative potential of collaborative efforts across borders. He emphasises the opportunities that offer non-spacefaring nations, such as developing African countries. Through diverse initiatives, Adewale has witnessed firsthand how these collaborations empower governments to kickstart their space journeys.

Adewale’s dedication to advancing the African space industry and belief in the power of international cooperation has shaped his career as a respected analyst and consultant. His contributions have opened doors for clients, enabled space infrastructure development, and unlocked access to vital space resources. Through his work, Adewale continues to drive progress and opportunities in space applications and technology.

Yaqoob ALQASSAB
Senior Engineer at the NASA, with a master’s degree in mechanical engineering with Space System Technology from Khalifa University and a bachelor’s degree in mechanical engineering from the University of Bahrain. Developed the first Bahraini software in space which was related to the Attitude Determination and Control Subsystem (ADCS). Specialized in satellite development engineering, ADCS programming, structural analysis, system analysis, mission analysis and thermal analysis. Worked on many satellites, namely LightSat: 1. 3U CubeSat to detect Terrestrial Gamma-ray Flashes, DhabibSat: a 2U CubeSat to test novel ADCS algorithms and Almumeer: a 3U CubeSat to take medium resolution images of Bahrain and to test Bahraini innovations in space related to Artificial Intelligence (AI) and cyber security. Published 15 research papers in the field of space system technology. Won the first round of the Payload Hosting Initiative (PHI) organized by the United Nations Office of Outer Space Affairs (UNOOSA) and the Mohammed Bin Rashid Space Center (MBRSC). International collaborations in the space field hold immense importance for us. A never-ending flow of human knowledge and exploration. By working together, we can use our collective expertise, and technological capabilities, leading to more efficient and cost-effective missions. Collaboration allows for the sharing of scientific data, research findings, and technological innovations, enabling a deeper understanding of space and the universe. Additionally, international partnerships in space foster diplomatic relations, promote peaceful cooperation, and build trust among nations.

Manny SHAR
Managing Director for UK & Europe, OrbitFab
Manny Shar is the Managing Director for UK & Europe at OrbitFab, supporting the development of an in-space propellant and materials supply chain. Manny is focused on technology development, commercialisation, and international growth for this leading space startup. Manny previously helped develop Bryleich's international consulting presence into a revenue generating and profitable business, managed the analysis of a multi-billion-dollar portfolio of assets at Imanet, and executed on cross-functional initiatives at top-tier investment banks. Manny sits on multiple advisory boards and committees, including the UK’s Space Technology Advisory Committee, Spaceflight Safety and Regulatory Council, and the International Astronautical Federation’s Industry Relations Committee. He is a recipient of the 2019 and 2020 SSP 20 under 35, SGAC’s Space Generation Leadership award, and the William S. Ball Award for Entrepreneurship.

He holds a master’s degree in space studies from the International Space University and a bachelor’s in computer science from the University of Kent.

Julia ALVAREZ VALLERO
My name is Julia Alvarez Vallero and I have always worked towards my desire to become a part of the aerospace sector. In order to achieve this goal, I have published articles and attended to conferences since I was a degree student, because my objective was to, eventually, get a job in the industry. I can also add that it is not a mere desire or wishful thinking. I work hard every day to achieve the objectives that are demanded of me on time and with the highest quality. Moreover, I am always learning from those who are more experienced, because I look forward to work with them in the near future. My professional and academic background connects perfectly with the organization's goals. I am an electronic engineer, with two years of experience in the aerospace field as a power design engineer, developing tasks as a subsystem engineer. As part of my daily activities, I have to solve problems in coordination with other subsystems, trying to arrive to the best possible approach dialoguing with my superior and the rest of my team. To enhance the knowledge I could bring to the sector, I decided to take a Master’s degree in Renewable Energies, Climate Change and Sustainability. I have been awarded a scholarship from Xunta de Galicia to do it. My idea is that the aerospace sector will play an important role in the pursuit of a clean environment in order to guarantee good Earth conditions for future generations. Currently, together with my work on the company, I keep making efforts to increase my knowledge and skills to make my contribution to the sector.
Suraj Aranha is currently a PhD candidate from RMIT University, Melbourne, Australia. Has 5 years of technical Engineering work experience.

Suraj Graduated in 2014 with a Bachelor of Engineering (Mechanical) from Manipal, India before joining a ship building company as a Design Engineer. There he was part of the design team that built two Geo Technical Research Vessels (GTRV) capable of drilling and seabed sampling in depths of up to 300m, a Multipurpose offshore vessel (MPSV) and several smaller vessels for the Indian Navy and Coast Guard. After working for 3 years designing ships, Suraj joined the small but highly skilled team of Indo-Dutch artist duo “Pons and Fao” at their studio in Bangalore. Here Suraj was involved in building Hi-tech structures that was designed to move and react in life like ways which involved complex mechanical systems. To develop his interests in the state-of-the-art modern intelligent engineering applications, Suraj completed his Masters in Robotics and Mechatronics from RMIT in 2021. Working on the Intermediate axis theorem as his master’s research interest, Suraj developed working interest in Space technologies and explorations which led him to continuing his research as a PhD candidate. As an engineer who loves to find creative solutions, space offers opportunity to solve some of the most complex, massive problems with a lot of unknowns. If all the countries have common goals and unite to develop technologies, we could accelerate space exploration at a rapid pace and dedicate the best human achievements to the global peace and global prosperity.

Valeria DITTEL TORTOS

Valeria is an Electromechanical Engineer, co-founder and Chief Product Officer at Orbital Space Technologies, a space startup that seeks to provide end to end mission services for experimentation in microgravity for Latin America and the world. The first project of Orbital Space Technologies is under development, a mission that studies the fundamental causes Panama Disease, a disease that threatens banana plantations around the world, in a microgravity environment to develop an effective treatment or a possible cure. The first stage of this project, under Valeria’s administration, was successfully launched in November 2022, from Esrange, Sweden. This is the second ever Costa Rican space mission and the first one developed by a company.

She is passionate about making space more accessible and works around that goal by creating and promoting opportunities in developing countries to make the space sector grow in diversity. Valeria has been involved in space promoting organizations since 2018, where she joined and became part of the directive board of TECSpace, the largest aerospace student group, which provides hands-on experience in a country where there is no aerospace engineering as a career. She has also a commitment to encourage women in STEM. She has worked in projects such as the Gender Equality Committee of TECSpace, promoting anti-harassment policies and co-founded the Costa Rican chapter of the global network of Women in Aerospace Costa Rica, focusing more involvement, visibility, and leadership of women in the aerospace sector.

Imane EL KHANOUTI

Imane El Khansouti is a Space project manager at working on space application for sustainable development in Tunisia. She holds an Aerospace engineering degree from the International University of Rabat, Morocco. She is also one of the core members of the Moroccan Initiative for the Space Industry (MISI) aiming to promote and sustain the space industry in the kingdom of Morocco.

Imane served as the National Point of Contact for Morocco for Space Generation Advisory Council since 2018 and as Commercial Space Project Group Co-lead since late 2021 until February 2023. She has played an organizing role for the Global Conference on Space for Emerging Countries on the Space Generation Advisory Council – IAF (SGAC-IAF) youth workshop. Imane is one of the 10 under 30 best Africans in the Space industry in 2020 and 6 most young innovative Arabs in 2021. Her aim is to find solutions for the socio-economic issues through space applications, entrepreneurship and make the African market space fairing.

Sabha EL-SHAWA

Sabha El-Shewa is a Jordanian-Canadian interdisciplinary researcher and social entrepreneur originally from Palestine. She is the founder of the Jordan Space Research Initiative (JSRI), which aims to bridge sustainable development with space exploration and establish an analog research facility in Jordan. Sabha holds several roles in the Space Generation Advisory Council, including National Point of Contact for Jordan, as well as Co-Lead of the Ethics & Human Rights project group and the Space for Climate action policy division. She is also a National Coordinator in the Moon Village Association and its Participation of Emerging Space Countries program, as well as the implementation Support Officer for its Global Expert Groups on Sustainable Lunar Activities (EGGLA). Sabha has won numerous awards, including the Space Generation Leadership Award and the Women in Aerospace Europe Young Professional Award.

Sabha holds a BSc in Mechanical Engineering, an MSc in Space Studies, and is currently pursuing her PhD in Sustainable Development and Climate Change. Her PhD research centers around the neuropsychological basis of the Overview Effect, and how making it more accessible using Virtual Reality can help drive sustainability on Earth. During her studies, she collaborated with the German Aerospace Centre (DLR) on robotics research and completed an internship at the European Space Agency’s Clean Space initiative focusing on the environmental impacts of space activities. Sabha is a vocal advocate for decoupling defense and space. She is committed to creating opportunities for underrepresented communities and helping guide the industry towards a more equitable, ethical, and sustainable future.

Eden ABESELOM HABTEHLASIE

Habtehlase, Eden Abeselom graduated with a Bachelor of Electrical and Computer Engineering with industrial control stream (Honors) at the Dely Ibrahim University and a Master of Science in Space Engineering at Addis Ababa Science and Technology University, Ethiopia. She is an Assistant Researcher in the Department of Aerospace Engineering Research and Development Directorate at the Space Science and Geospatial Institute. She’s a coordinator at the Ethio Space Kids Club (ESKC) program coordinator for the Women in Space and Engineering Network project, and an event coordinator of space technology for the earth application (STEA) voluntary project group of the Space Generation Advisory Council (SGAC). The Women Behind SGAC 2022 webinar was part of the series hosted by her for Giant Leap. She also actively participated in the Women in GEMS and Africa workshop in Benin in 2022, the UNIF 29th Workshop in Paris, France (2022), and the 5th African Space Generation Workshop Stellenbosch-South Africa (2021).

Akanksha HALE

Akanksha Hale is a third-year Mechanical Engineering student at the MIT Institute of Engineering, Nashik. Akanksha’s research interests predominantly lie in space exploration. With an insatiable curiosity and an analytical mind, she conducts in-depth research on various aspects of space missions, including spacecraft design, mission planning, and space propulsion. Her research endeavors are motivated by a desire to push the boundaries of space exploration and contribute to the scientific and technological advancements that will shape the future of humanity’s journey to the stars. Her recent research paper was selected for presentation at the esteemed AIAA International Space Planes and Hypersonic Systems and Technologies Conference in 2023. Akanksha is grateful to the International Astronautical Federation committee for choosing her as one of just 30 individuals globally to participate in the prestigious 2023 Emerging Space Leaders Grant Programme.
Mohammad IRANMANESH

Mohammad Iranmanesh is a Space Systems Engineer with a passion for innovation and entrepreneurship. Currently serving as Projects and Operations Manager at constell, he leads the development and implementation of high-precision smart farming services using proprietary space infrastructure and data. With a background in Space Systems Engineering and technical leadership, Mohammad has previously worked on complex projects at renowned organizations such as RAL SPACE and THALES ALTEA SPACE, focusing on satellite hardware and software development.

He holds engineering degrees in Mechanical Engineering and Space Systems Engineering, and his leadership in the Space Generation Advisory Council (SGAC) in Belgium. Mohammad firmly believes that international cooperation manages to transcend political and geographical boundaries only when there are goals that are genuinely shared by all of humanity. The pursuit of pushing the frontier of space and science exploration exemplifies such a goal, uniquely fostering a spirit of global collaboration to achieve groundbreaking advancements that positively impact the entire global community both in outer space and on Earth.

Saroj KUMAR

Saroj Kumar is a mission designer for advanced propulsion systems at the Propulsion Research Center and a Ph.D. candidate in the Department of Mechanical and Aerospace Engineering at the University of Alabama in Huntsville (UAH). His current research focuses on mission analysis and high-fidelity trajectory design for Nuclear Thermal Propulsion (NTP) systems along with integrated system modeling to determine optimum NTP engine parameters and mission architectures using Model Based Systems Engineering (MBSE). In his current role, he performs critical mission analysis for deep-space robotic missions for NASA's Space Nuclear Propulsion program. Saroj's other experience in the industry includes, working as a research affiliate for the NASA Jet Propulsion Laboratory for a New Frontiers-class prephase A mission concept study and as a manager and team leader for a small satellite mission in India during which he developed MEMS based dual axis sun sensors and holds a patent for the development of reaction wheel actuator system. Over the years, Saroj has more than 25 high-impact research papers or advanced in space propulsion and spacecraft control systems. For his accomplishments, Saroj has received numerous awards, including Global top 20 outstanding young space and satellite professionals ‘20 Under 35’ by Space and Satellite Professionals International, the best IP award at the 73rd International Astronautical Congress, the AIAA Gordon Robson Young Engineer award at Nuclear and Emerging Technologies for Space, Outstanding Researcher award, Propulsion Research Center Service Award to name a few.
Nur AWATIFF MOHAMAD RIZAL

Nur Awatiff currently as one of the directors for startup company named Spaceln Sdn Bhd. Spaceln is a space-based company that aims to spearhead space exploration activity in Malaysia. Nur Awatiff was appointed as a manager for Spaceln with the responsibility of carrying out the ‘Inspire’ missions to spread inspiration towards Space Education to the next space generation. Many Space Education activities had been conducted such as Space Camp, Cansat Competition, and Space Tours. Nur Awatiff is also currently a Ph.D. student in Aerospace Engineering at Universiti Sains Malaysia. Her research is focusing on the behavior of the ionosphere layer during seismic activity using space-borne data. Starting to involve actively in aerospace activity right after finishing her bachelor’s degree in aerospace engineering, USM. Started as research assistant for USM Space System Lab (USLL) by joining and helping to manage various types of space activities such as Space Camp, Space Connect, and participating in the Global Space Balloon Challenge. As her passion and interest in the ‘SPACE’ started to grow, Nur Awatiff decided to stay with USLL by persuading her master’s in aerospace engineering. Throughout the journey, Nur Awatiff had the chance to be more active and able to follow the space sector activity outside of Malaysia such as an opportunity to join APSSAF (Asia-Pacific Regional Space Agency Forum) and as a delegate from Malaysia to participate in the APSGW (Asia-Pacific Space Generation Generation Workshop 2019). Attending these events widens her perspective of space and inspired to continue her journey.

Sumbal MUSHTAQ

Dr. Sumbal Mushtaq is a medical doctor with a unique blend of specialties. While she is specializing in Emergency Medicine, her curiosity led her to explore the fascinating fields of Extreme and Wilderness medicine. However, it is her research background in Space Medicine that has truly ignited her passion.

Currently seeking a Ph.D. in reproductive studies, Dr. Mushtaq is focused on understanding human reproductive development in the space environment. Collaborating with Spacebom United, she seeks to unravel the mysteries of human reproduction beyond the confines of Earth.

Dr. Mushtaq’s journey began with an ambitious dream—to become a Physician Astronaut. As a Citizen Scientist-Astronaut Candidate at the International Institute of Astronautical Sciences, she is training to achieve her objective. She believes that the era of commercial spaceflight holds promise for her aspirations. But she is not content with personal success alone.

Driven by a deep sense of purpose, Dr. Mushtaq strongly advocates for the Space for All mission. She recognized a lack of awareness in her home country about the immense prospects of space exploration. This realization sparked her ambition to bridge the gap and make space education more accessible to young students, fostering their scientific knowledge and igniting their curiosity. She aims to educate young professionals in the space sector, especially women from underdeveloped nations.

With each step she takes, she strives to contribute to the frontiers of space medicine and education, leaving a lasting impact on both the scientific community and the aspiring scientists she empowers along the way.

Ahmed E S NOSSEIR

Ahmed E. S. Nossier, (Dottore Magistrale) is a PhD candidate in the Italian national doctoral program of Space Science and Technology (Dottorato Nazionale in Spazio e Scienza e Tecnologia), where he is dully affiliated to the Scuola Universitaria Superiore Sant’Anna di Pisa and the University of Trento. Ahmed is a member of his PhD program board as a representative to the doctoral students. He carries an engineering degree from the German University in Cairo (GUC) where he studied Engineering and Materials Science majoring in Mechatronics. Then he received his MSc. degree in Aerospace Engineering from the University of Pisa in Italy where he graduated with Honours (Cum Laude). He is fond of scientific research and development with record number of publication of three journal articles and four conference papers out of his master’s research study period in TU Delft under the supervision of Prof. Angelo Cerone and Prof. Angelo Pasini. Ahmed is a qualified ‘Expert on the Subject’ (i.e., cultura della materia) in the course of ‘Rocket Propulsion’ taught in the master’s program of Aerospace Engineering in Unipi assisting Prof. Luca D'Agostina. Currently, he is working on developing innovative space systems by employing optical fibre sensors and integrated photonic sensor systems for rocket propulsion condition-monitoring and space systems applications, focusing on applications in LEO satellites, interplanetary spacecraft, and reusable launch vehicles.

After previously holding several positions as teaching assistant and lab instructor, he wishes to transfer the knowledge he acquired in the field of Rocket Science from Europe back to Egypt and Africa.

Didumulowe OBIWANDE

Didum is from Wales, UK, having been born in Nigeria. He is a Doctoral student at Luleå University of Technology researching Design and Qualification of Additive Manufacturing (AM) for Space Applications. He holds an MSc in Astronautics and Space Engineering from Cranfield University, having read General Engineering at Grey College, Durham University. Didum received the Royal Academy of Engineering and RAaS MSc Award and obtained a joint UKSA-ESA scholarship to attend the International Space University’s Space Studies Program; hosted by NASA Glenn Research Centre in Ohio, USA. Didum recently published his Licentiate thesis, “Surface Roughness Considerations in Design for Additive Manufacturing: A Space Industry Case Study.”

He has previously attended IAC and SSC as a UK delegate, most recently in 2019, where he worked as the NASA Space Exploration Working Group moderator. Additionally, he received the “Young ESA - ISAC Diversity Scholarship 2017” for his essay and spoken word poem “Space 4.0: A United Europe.”

Before his PhD, Didum was the Programme Manager for the Board of the UK Government’s Aerospace Growth Partnership. He also worked on Design for AM for aerospace structures at the GKN Aerospace AM Centre in Bristol, UK. Through his passion for the space industry, Didum has worked worldwide. Through this global experience, he believes that international cooperation within the industry can bring long-lasting solutions to the global issues of sustainability, climate change and inequality.

Sebasthian ALEJANDRO OGADE CASTRO

Sebasthian is a Chilean analog astronaut, embedded systems engineer, entrepreneur and aspiring astronaut. He graduated from both Pontificia Universidad Católica de Chile and Politecnico di Torino. Before taking on a position as an automotive engineer in Turin, Italy, he contributed to the testing and integration of European Space Agency’s Euclid space telescope for several years. He aspires to become the first Chilean in space.

As the CEO and Co-Founder of the pioneer company Andes Aerospace, he is leading a team of interdisciplinary professionals to bring space technologies to strategic industries such as Mining, Defence and Emergency Handling in Latin America and Europe. Through his leadership, Andes Aerospace brings and implements advancements in these sectors, propelling them towards a future infused with innovation, and allowing them to integrate space-for-space technologies into their processes and services.

Sebasthian firmly believes that the most effective approach to harnessing the potential of the space sector in Chile and Latin America lies in fostering collaboration among relevant industry stakeholders. To this end, he has founded the Chilean Space Hub, a platform that serves as a nexus for space actors to seamlessly connect and establish mutually beneficial relationships.

Beyond his professional endeavors, Sebasthian possesses a strong interest in science outreach through both social and formal media platforms, recognizing the profound impact of science on education in South America. In 2022, he organized and led the First Space Conference in Antofagasta, Chile, alongside being the Event Manager of the 4th Italian Space Startup Competition, an event hosted by the Space Generation Advisory Council (SGAC).

Sebasthian’s diverse range of interests extends beyond aerospace. He is an scuba diver, a skilled private pilot, and a polyglot. These additional pursuits speak to his dedication to personal growth and space exploration. To learn more about his space career visit: http://astro-ogale.de [in Spanish].
Matej POLIČEK

Matej is currently working in the ISS Flight Operations, as a member of the Columbus Flight Control team, responsible for the commanding and monitoring of the Columbus systems and payloads, as well as providing support to the astronaut crew and other flight control positions in regards to technical aspects of the module. This includes supporting payload operators from NASA and Europe performing science runs in the Columbus module, either purely from the ground, or with the involvement of the crew. In addition, Matej and the team prepare, plan and execute projects and specialist activities such as on-board hardware and software upgrades, or maintenance and module upgrades in collaboration with the astronauts. Previously, Matej was active in the spacesuit ecosystem, working in a mobility robotics company Robototec s.r.o, developing and field testing solutions for a variety of autonomous applications, including space. He also collaborated with a cubestat integrator company SpaceMicrom, developing mission simulations and conducting mission analysis. He is a co-founder of a group that works on a ground segment oriented space startup Groundspin, which was incubated by the European Space Agency, and helps secure private funding.

His professional experience in the space industry started with a young graduate traineeship at the European Space Agency, specialising in software engineering, and data and system modelling.

His wide variety of contributions was recognised by Forbes Slovakia by a 30 under 30 award in the Science & Education.

Hasel RAMÍREZ CORTÉS

Hasel is a Mexican space enthusiast currently pursuing her bachelor’s degree in Aeronautical Engineering at the Instituto Politécnico Nacional in Mexico City. She has been involved in university engineering projects such as aeromodelism and high-power rocketry. She has led the structural and aerodynamics sounding rockets for national and international rocketry competitions. Furthermore, she has launched level 1 and level 2 rockets to obtain high-power rocketry certification from the Tripoli Rocketry Association.

Her areas of interest are rocket propulsion, aerodynamics, materials, and structures. She has collaborated in the structural design of solid rocket motors. She has also conducted research on structures and new materials for small satellites. Currently, she is working on composite and smart materials for aerospace applications. Hasel was selected by the Mexican Space Agency to participate in the International Space Education Board at the 74th International Astronautical Congress in 2022.

She is a conference speaker on aerospace topics, her main purpose is to share the importance of space technology development and inspire new generations, especially encouraging Mexican girls to get interested in STEM fields by giving them mentoring.

She hopes that opportunities for accessing space for all increase. Therefore, she is collaborating on initiatives to contribute to the regulation of space activities, such as launch vehicles and rocket motors in her country. Hasel firmly believes that space exploration has the potential to address global challenges that transcend national borders through international cooperation. By working together, nations can achieve greater scientific discoveries. However, this cooperation truly needs to include all countries, as each of them possesses brilliant minds that, together, can develop the required technology to reach outer space.

Anurag SARKHKAR

Anurag is currently an undergraduate student at the University of Saskatchewan in Canada, as well as a space biologist at Yuri, a startup space bioscience company currently headquartered in Germany. Anurag has been involved in biomedical research since high school, and his multidisciplinary background in neuroscience, cancer research, and bioinformatics, has provided an important foundation for his research so far, allowing for unique insights that defy current approaches to space health.

As a young scientist, Anurag’s first research paper was recently published in Life. His passion for research has been instrumental in driving his learning and work so far, and will continue to be an important impetus in his future in space research. He has presented his research at multiple international space conferences, and is committed to broadening international cooperation in space.

Anurag believes that space is humanity’s future, and that collaborative efforts are essential for the future of space exploration, allowing us to pursue more and more complex challenges, and share the intellectual and physical resources of the global community to address our future in space.

With each new project, Anurag is driven by a sense of responsibility to contribute to the advancement of our understanding of life on and beyond Earth. Anurag knows that his research truly does have cosmic potential, and is excited for his future in space biosciences!
Bader SHIRAH

Bader Shirah is a physician and an eminent researcher from Saudi Arabia. Dr. Shirah built the field of space medicine in Saudi Arabia from scratch. He was initially selected to contribute to the strategic plans of the Saudi Space Commission following the establishment of the Saudi Space Commission on December 27, 2018. He then had many meaningful contributions and represented the Kingdom in international scientific activities. Dr. Shirah achieved several important milestones that were the building blocks for the futuristic field of space medicine in Saudi Arabia. These include publishing the first set of papers from Saudi Arabia, publishing the first book on space medicine in the Arabic language, and conducting workshops to educate Saudi students and scientists on the emerging field of space medicine. He also founded the first Saudi company specializing in space medicine research and development. He is currently working on taking his contributions to the next level and conducting in-space research to better understand the effects of microgravity and radiation on the human body.

Dr. Shirah displays sincere commitment and a real interest in continuing research productivity and advancing science and space medicine for the betterment of humanity. He is seriously keen and intense to leverage with exquisite interest in novel research projects that have a major impact on science. His numerous publications have been well-received and have made a significant impact to establish and develop the field of space medicine in Saudi Arabia. His work has been cited more than a thousand times by top-notch scientists around the world.

Liberty SHOCKLEY

Liberty Shockley is an independent consultant providing research services on satellites, ground operations, and space policy to small businesses, government teams, and those interested in learning more about the field. Liberty spent her early career as an engineer with NASA and then became an Officer in the U.S. Air Force, where she spent time developing alternative navigation techniques for air and spacecraft. She holds a Bachelor’s in Aerospace and a Master’s in Astronautical Engineering, where she was first exposed to space law. She worked with various early-stage projects, advising on international space law, strategic uses, and geopolitical perspectives. Later, as one of the first officers in the U.S. Space Force, she worked on the launch, operation, and demise of experimental satellites. She served as the lead for a Mobile RF Range, commanding a team of 15 soldiers with 6 rapid-deployable antennas. She helped found the New Mexico Chapter, Society of Flight Test Engineers, and has been a member of the European Centre for Space Law. Liberty is a specialist for South Asian language and cultural studies, and has been developing her space law and policy expertise for the past 4 years, which she is excited to continue full-time.

Liberty believes that we must work diligently toward a solution for peaceful and fair governance in space, learning from our often-excluded partners and non-Western perspectives. She believes she can serve the community by bridging the “language barrier” between lawyers and engineers as we move toward a new world in space.

Salman ALI THEPDAWALA

Salman Ali Thepdawala is a Pakistani aerospace engineer currently pursuing his PhD as a Munich Aerospace Scholar at the Universität der Bundeswehr – Munich, Germany, specializing in AI-based Onboard Collision Avoidance in Large Multi-Satellite Systems. With a passion for space exploration, mission design, and AI applications, he actively engages in projects that leverage his knowledge of systems engineering.

Beyond academia, Salman Ali consults for Neutron Star Systems, contributing to projects and representing the space start-up. His dedication to advancing the space ecosystem extends further as he actively contributes to various space sector NGOs. He currently serves as the National Coordinator for Germany at the Moon Village Association and plays a vital role as the Partnerships Lead for the Space Safety and Sustainability Project Group at the Space Generation Advisory Council (SGAC).

Salman Ali’s dedication earned him the 2023 European Space Leaders Award at the 7th European Space Generation Workshop. He also led his team to first place across Pakistan in both the NASA Space Apps and ArchiSpace competitions, showcasing his leadership and technical skills. He holds a Master’s degree in Space & Engineering Systems from the Skolkovo Institute of Science & Technology in Moscow, Russia, and a Bachelor’s degree in Aerospace Engineering from the Institute of Space Technology in Islamabad, Pakistan. He also completed an exchange semester at the University of Missouri-Columbia, U.S.A., further solidifying his foundation in the field of aerospace.

Salman Ali firmly believes in the importance of international collaboration for safe space operations. He advocates for concepts such as secure decentralized space systems and autonomous orbit organizations, which will foster cooperation, innovation, and ensure sustainability in the global space community.

Danny TOIKROSSETIO

Danny Tjokrossetio is an Indonesian aerospace engineering Master’s student specializing in space structures at the Delft University of Technology. Currently based in the Netherlands, he believes that there is no better way to prepare for the Moon than living in the land of cheese.

Passionate about bringing space to the general public, Danny is an avid space communicato who thinks he’s funny. He is known as @plactic.groser on social media, capturing a global audience with his engaging and humorous content on space and engineering topics. Between 2021 and 2022, he was an education officer at Da Vinci Satellite, a student team developing an educational Cubesat. There, he performed outreach activities and created space educational materials for elementary schools. He currently volunteers at Anteunex Space Global, an Indonesian startup focused on raising space talents from emerging nations.

Danny is a coordinator of the Space Generation Advisory Council’s DREAM project, an initiative to improve the efficiency of analog missions. In addition, he is a member of Team Tumbleweed’s science division, whose name, to his delight, aligns with his love for country music. The organization’s goal of sending wind-driven rovers to Mars also allows him to participate in the revolution of deep space exploration access.

To Danny, the pursuit of passion is a primary principle, having chased his space dreams established in early childhood after a (false) revelation that he might be an alien. His other passions include standup comedy, writing and performing music, dancing, and microdosing Wikipedia pages.

Victoria VALDIVIA CERDA

Victoria Valdivia Cerda is a political scientist from Chile, she holds a Magister degree in International Relations. Victoria has been worked as space policy advisor contributing to the formulation of Chile defense whitepaper (2017)and to the National Defense policy (2020). Currently she is Senior Analyst at the Center for Strategic and Military Studies (CESIM) at the Army of Chile and lecturer on “Space policies” at the National Academy of Strategic and Politics Studies (ANEPE) from 2019.

Ministry of Defense in Chile. Asa volunteer, Victoria is a mentor at the initiative of “Space4women”, National Coordinator of WSW, and Chair for Chile of GI100 “Space & Technology” wing.

James XIE

James is a Chemical Engineering and Chemistry professional with four years of experience in the manufacturing sector across various industries worldwide. His involvement in the space sector began during his undergraduate studies at Queen’s University, where he led student teams in competing in rover design challenges by the Mars Society and co-founded a Cubesat design team at Queen’s.

While working as an operations consultant at Stroud International, James actively contributed to the Canadian space sector through his volunteer work with SEDS-Canada. He has been involved with managing and supporting SEDS-Canada’s projects, including the stratospheric balloon experiment design challenge. Additionally, he has been involved in the international space community as the engineering team lead for the SGAC Domi Inter Astra lunar settlement design project.

Currently, James is pursuing a Master of Space Studies degree at the International Space University. He is beginning his career in the space industry as a systems engineer at AAC Clyde Space where he aims to continue promoting the accessibility of space.

James holds a strong dedication to space and STEM education. He is actively involved in expanding the reach of SEDS-Canada projects to more students and improving the effectiveness of programs aimed at teaching students the necessary skills for success in the space sector. He firmly believes that space, in particular, offers a unique platform for interdisciplinary and international collaboration among students that is critical to helping them develop the skills and mindset for today’s challenges in the world.
1.3.3 Future Space Leaders (FSL) Grant Programme

The Future Space Leaders Foundation (FSLF) is pleased to announce the 2023 Future Space Leaders Grant Program. Intended for U.S. graduate students and young professionals who are pursuing space- and satellite-related careers, the program will provide grants for participation in the 74th International Astronautical Congress (IAC) to be held in Baku, Azerbaijan, October 2 - 6 2023. In addition to attending the IAC, Grant Recipients will also be involved in supplementary career development activities in Baku. These IAC-associated events include the Cross-Cultural Presentation Workshop, the United Nations/International Astronautical Federation (IAF) Workshop and the Young Professionals Workshop. These additional activities will necessitate Grantees’ presence in Baku, Azerbaijan, beginning on September 27.

Elizabeth BARRIOS is an avionics materials failure analyst at NASA's Marshall Space Flight Center. Working in the Avionics Division of the Space Systems Department, Elizabeth’s work focuses on the failure analysis of avionics components for NASA & its commercial partners, the DoD, and the FAA. She is also a co-founder of the 2ZMPERES Lab at MSFC where multiple researchers are focusing on the development of Advanced Avionics and Materials for Energy Research and Environmental Sensing. The work ongoing in this lab encompasses efforts for the in-space manufacturing efforts for printed electronics and sensors. Previously, she was a Materials Research Engineer with the National Institute of Aerospace focusing on the development of in-situ monitoring tools for the surface preparation of carbon fiber polymer composites for adhesive bonding and the atomistic modeling efforts for the development of all solid-state lithium ion batteries.

Shravan HARIHARAN is an avionics engineer working at Blue Origin, working on integration and development of human spaceflight vehicles. He currently works as an integrator on the Blue Moon lander project selected by NASA’s Artemis program, as well as supporting flight operations of the New Shepard vehicle as a crew systems chair; he has also worked on other human spaceflight programs at Blue, including the New Shepard program. Aditya brings valuable research experience in systems engineering, astrobiology, and planetary science, with a keen interest in working across interdisciplinary and international boundaries. He was a National Science Foundation Graduate Fellow and a recent graduate of the International Space University’s Space Studies Program. Aditya holds a B.S. in Mechanical Engineering from Caltech and an M.S. in Aeronautics and Astronautics from MIT.

Julia DI is a Ph.D. candidate at Stanford University, studying sensing and perception for robotic manipulation. She hopes that one day her robots will enable scientific exploration and improve the lives of many for the better. She has received a NASA Space Technology Graduate Research Fellowship, National Science Foundation Fellowship, Women in Aerospace Scholarship, and an Aviation Week Twenty20s Award. She is also a Class of 2018 Brooke Owens Fellow, and a young professional mentor for the 2Ed Factor Fellowship and Patti Grace Smith Fellowship. She graduated with a B.S. in Electrical Engineering from Columbia University and an M.S. in Mechanical Engineering with a focus on Mechatronics at Stanford University.

Emma LOUDEN is an astrophysicist, strategist, and speaker. She is a Ph.D. candidate in astrophysics at Yale University. She is passionate about future-focused strategy for astrophysics, engaging the public with space exploration, & philanthropic work focused on applying evidence-based solutions to solve the world’s most pressing problems. When not working on her Ph.D., she focuses on my STEM workforce project, Space to Sparkle, her podcast, & supporting the next generation of astronomers through the Summer Science Program.
Owen Marr is a Systems Engineer at Blue Origin working on the New Shepard program. He is dedicated to improving the accessibility of space through human exploration and commercial development. Owen works on several aspects of New Shepard including payload integration, astronaut devices, and mission development. He also works with the University Relations team at Blue to promote university collaborations and student recruitment. Outside of Blue, Owen is the Chair of SEDS USA’s Young Professionals Advisory Board where he advises and assists the student leaders of SEDS. Owen holds a BSE in Aerospace Engineering (2020) and a MSE in Space Engineering (2021) from the University of Michigan. As a student he was heavily involved with SEDS as the SEDScast host and as President of the Michigan chapter. Owen served as a graduate instructor for the Aerospace MSSE course during his grad studies. Outside of space, Owen enjoys boating, snowboarding, and playing soccer.

TOBIAS NIEDERWIESER is an Assistant Research Professor at BioServe Space Technologies within the University of Colorado Boulder where he serves as Principal Investigator on several grants for space life science experiments. Of particular focus is the in-space manufacturing of human pluripotent stem cells for regenerative therapy applications on Earth. Previously, he led the development of several novel facilities operating continuously onboard the ISS including science incubators, centrifuges, life support systems, as well as crew galley refrigerators and is currently developing similar facilities for commercial and lunar space stations. Additionally, Tobias was involved in a radiation biology experiment onboard Artemis-I conducting the furthest active biology experiment with sample return ever performed. He is honored to have been named a NASA Group Achievement Award recipient, an AIAA Orrive and Wilbur Wright Graduate Award fellow, and an Aviation Week Twenty20s awardee. Originally born in Austria, Tobias received his bachelor’s degree from the Technical University of Munich in Germany before moving to the United States for his master’s and doctorate degrees in bioastronautics and taking part in the International Space University’s Space Studies Program in Israel. In his free time, Tobias performs outreach for human spaceflight and enjoys using his Private Pilot Certificate.

### 1.4 IAF/ISEB Educators Professional Development Workshop

**Date:** Saturday 30 September 2023

**Time:** 11:00 – 17:00

**Venue:** Azerbaijan National STEAM Innovation Center

The “STEAM Azerbaijan” project started from the 2019-2020 academic year with the initiative of First Vice President Mehriban Aliyeva and the support of the Education Institute of the Ministry of Education.

STEAM education method is a combined organization of 5 main disciplines. It is based on the idea of teaching Science, Technology, Engineering, Art, and Mathematics in a joint and integrated manner. The main goal of the STEAM project is to develop 21st century skills - creativity, critical thinking, cooperation in the students studying in the general education schools of the Republic, to show students the application of scientific and technical knowledge in everyday life through practical exercises, to teach them engineering skills, to use modern ICT equipment by applying various programming languages. To increase their ability to use.

The project is taught in STEAM schools starting from the 6th grade.


From the 2021-2022 academic year the number of students covered by the STEAM project in the Republic is expected to be 50,000–100,000 from 302 general education schools. As part of the scope expansion, it is planned to create 15 STEAM Centers across the country.

#### Saturday 30 September 2023

**Time:** 11:00 – 17:00

**Programme:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Programme</th>
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<tbody>
<tr>
<td>11:00 – 11:30</td>
<td>Arrival of Participants and Registration</td>
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<tr>
<td>11:30 – 12:30</td>
<td>STEAM Integrated Group Teambuilding for Participants</td>
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<tr>
<td>12:30 – 13:00</td>
<td>Lunch</td>
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<tr>
<td>13:30 – 13:35</td>
<td>Introduction of today’s seminar</td>
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<td>13:35 – 13:45</td>
<td>Welcome Remarks</td>
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<td>Mr. Dunay Badirkhanov Deput Chairman of the Board of the Space Agency of the Republic of Azerbaijan</td>
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<td>13:45 – 14:15</td>
<td>Keynote remarks</td>
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<td>Mr. Igrar Nazarov National STEAM Innovation Center</td>
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<td>The Ministry of Science and Education of the Republic of Azerbaijan</td>
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<td>14:15 – 14:30</td>
<td>Coffee and tea break</td>
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<tr>
<td>14:30 – 14:50</td>
<td>Introduction to JAXA</td>
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<td>Provides overview of JAXA’s space programs Mr. Shingo Maruoka</td>
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<td>JAXA Space Education Center</td>
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<tr>
<td>14:50 – 15:20</td>
<td>Lecture 1: Introduction to Space Education and ISEB</td>
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<td>Dr. Kate Kitagawa Director of JAXA Space Education Center</td>
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15:20 - 15:40 Workshop 1: Space education material related to moon exploration introduces educational materials from JAXA and ISEB/Artemis. JAXA Space Education Center

15:40 - 15:50 Coffee and tea break

15:50 - 16:20 Lecture 2: Gender equality in STEAM Education Ms. Sitara Mehdiyeva Head of Spectrum Management Division

16:20 - 16:40 Discussion and Closing Remarks Official Certificate Ceremony and Group Photo

17:00 Adjourn

1.5 Cross-Cultural Communications and Presentation Workshop

Date: Sunday 1 October 2023
Time: 08:15 - 13:30
Venue: BCC AS

The Cross-Cultural Communications and Presentation Workshop is organized for Emerging Space Leader grant recipients and Next Generation Plenary speakers to provide them with the opportunity to improve their oral skills for their presentations and to sensitize them to the issues of speaking at large multi-cultural events.

Session presenters:

Ken DAVIDIAN
Dr. Ken Davidson has worked for the FAA’s Office of Commercial Space Transportation (AST) in Washington, DC since 2008 and is currently the AST Director of Research and Program Manager for the FAA Center of Excellence for Commercial Space Transportation. Dr. Davidson currently serves as a member of the Ohio State University Aerospace Engineering External Advisory Board, Associate Editor of the New Space Journal, Chair of the IAF Entrepreneurial & Investment Committee, and Vice Chair of the IAF Space Economy Committee. Dr. Davidson is a corresponding member of the International Academy of Astronautics, and an Advisor to the Space Generation Advisory Committee’s Commercial Space Project Group. Prior to FAA AST, Dr. Davidson worked for the NASA Lewis Research Center, International Space University, Paragon Space Development Corporation, A PRIZE Foundation, and NASA Headquarters. Dr. Davidson received his BS degree in Aeronautical and Astronautical Engineering from the Ohio State University in 1983, and an MS degree in Mechanical Engineering from Case Western Reserve University in 1987. He attended the International Space University Summer Session Program in 1989. Dr. Davidson received his PhD in Business Administration from the University of Cape Town, Graduate School of Business, in 2018. His thesis focuses on innovation management, and understanding the processes of emerging and evolving markets.

Bernard FOING

Matias CAMPOS
Matias is an Ecuadorian engineer and space enthusiast. He graduated from Worcester Polytechnic Institute (USA), where he obtained his Bachelor and Master of Science degrees in Aerospace Engineering. Matias is the founder and CEO of Astrolintu Space Technologies, a startup focused on providing in-orbit services for emerging countries. Additionally, Matias volunteers as the STEM Program Director for the Sideralis Foundation acts as the SGAC’s National Point of Contact for Ecuador, and is the current Vice-Chair of the IAF Administrative Committee for Developing Countries and Emerging Communities. Matias has been recognized as an Emerging Space Leader by the International Astronautical Federation.
2 Associated Events

2.1 IAF IDEA “3G+” DIVERSITY PROGRAMME

“Brilliant minds don’t have Age, Gender, Nationality or Handicap. Take the best of all and give diversity a chance!” Jean-Yves Le Gall, IAF President

With the aim of promoting and advancing the principles of “3-G+” (Geography, Generation, and Gender) Diversity amongst a global space community the IAF has established an International Platform for Diversity and Equality in Astronautics (IDEA).

The IAF welcomes delegates to participate in the IAC Diversity Activities and benefit from an intensive and open exchange on diversity and equality aspects within the IAF, amongst IAF member organizations as well as other organizations promoting diversity.

2.1.1 IAF IDEA “3G” Diversity Breakfast

Date: Wednesday 4 October
Time: 08:00 – 08:45
Venue: Baku Convention Centre
Location: Federation’s Terrace

As an important element of the IAF “3G” Diversity Day the IAF welcomes all delegates to the IAF IDEA “3G” Diversity Breakfast sponsored by Jet Propulsion Laboratory (JPL).

The event will be opened with a welcome by the IAF President, Clay Mowry, followed by an introduction from Mishaal Ashemimry, IAF VP for Diversity Initiatives, and Aerospace Consultant & Special Advisor to CEO at the Saudi Space Agency.

Larry D. James, NASA Jet Propulsion Laboratory Deputy Director, will then take the floor to present how diversity is promoted within his organization and how much the space community might benefit from a more diverse environment.

To further deepen the topic discussed questions from the public are welcomed.

Sponsored by:
Jet Propulsion Laboratory

2.1.2 IAF Excellence in “3G” Diversity Award Luncheon & “Modern Space Leaders” Panel

(Upon invitation only)

Date: Wednesday 4 October
Time: 12:30 – 13:30
Venue: Baku Convention Centre
Location: Federation’s Terrace

The IAF Excellence in “3G” Diversity Awards recognize IAF member organizations (industry, government, academia) worldwide for outstanding contributions to the fostering of “3G” (Geography, Generation, Gender) Diversity within the space sector.

The highest standards in “3G” Diversity can be achieved both by organizations and within teams’ activities. To correctly represent this the IAF Honours and Awards Committee (HAC) decided to divide the IAF Excellence in “3G” Diversity Awards in two corresponding categories.

This Luncheon is dedicated to the award ceremony for the 2022 IAF Excellence in “3G” Diversity Awards, bestowed to the Colegio Federado de Ingenieros y Arquitectos de Costa Rica (CFIA) and the L’SPACE NASA Proposal Writing and Evaluation Experience (NPWEES) Project.

Colegio Federado de Ingenieros y Arquitectos de Costa Rica (CFIA)

“Joining Central American young, women, and indigenous peoples in Space through first Central American space project”
L'SPACE NASA Proposal Writing and Evaluation Experience (NPWEE) Project

"For recruiting and preparing a multigenerational and diverse space sector workforce while innovating over 100 new technologies"

2.2 13th IAF International Meeting for Ministers and Members of Parliaments (Closed Meeting)

Date: Sunday 1 October 2023
Venue: The Milli Majlis (Parliament) of the Republic of Azerbaijan
1, Parliament Avenue, AZ 1152 Baku, Azerbaijan

Including Space Solutions in the Political Agenda – A Must for Policy Makers

Programme:

Sunday 1 October 2023

08:30 Welcome Coffee
09:00 Welcome Remarks
• Clay Mowry, President, International Astronautical Federation (IAF)
• TBD, Parliament of Azerbaijan, IAC 2023 Host Country
• Dominique Tilmans, Special Advisor to the IAF President on Parliamentarian and Ministerial Relations and Master of Ceremony of the 13th IAF MMoP Meeting, International Astronautical Federation (IAF)
• TBD, Italian Representative, IAC 2024 Host Country
09:45 Session 1: Space Solutions Enhancing Public Services
Space data and applications can have a direct impact on the challenges faced by policy makers both in cities and in rural areas. In particular, they can provide information that can be used to tailor public services such as public transportation, viability, healthcare, waste management but also urban planning and culture.
Presentation and Moderation by TBD
Intervention by Ministers and Members of Parliaments
Roundtable Discussion
10:45 Session 2: Space Solutions for Disasters and Risk Management
With the increase of extreme natural phenomena, the capability of monitoring large areas, of forecasting weather, and assessing damages after a natural disaster became a core element of every administration. Luckily, space data can provide fast and reliable instruments to counteract and prevent disasters. For this reason, understanding space’s key role for risk management and developing forms of cooperation to access space data is now a must for policy makers.
Presentation and Moderation by TBD
Intervention by Ministers and Members of Parliaments
Roundtable Discussion
11:45 Session 3: Space Solutions for Resources Management
The proficient management of natural resources has an incredible impact on states’ economies. Space technologies and application can support decision makers in mapping their resources, identifying the best ways of handling them for the benefit of the whole society, and protecting the environment.
Presentation and Moderation by TBD
Intervention by Ministers and Members of Parliaments
Roundtable Discussion
12:45 Closing Remarks
2.3 IAC Hosts Summit – Tenth "Anniversary" Session

Date: Sunday 1 October 2023
Time: 10:30 - 13:00
Venue: Heydar Aliyev Center (HAC), HAC Hall C, Baku, Azerbaijan

**Time:** Programme

Opening
10:30
- Welcome Address by IAF President
- Opening Remarks by Master of Ceremony
- Pascale EHRENREUN, IAF Past President (2019-2022), President of International Space University (ISU), President of Committee on Space Research (COSPAR)

**Keynote**

The challenges of developing a winning IAC Bid strategy

Bidding for hosting an IAC is difficult and the heightened competition makes the whole process even more challenging. Is there really a win strategy? Here are the main critical success factors to improve and maximize your chances of standing out from the IAC Bid competition and who wins, great race to host the world's premier global space event.

- Christian FEICHTINGER, Executive Director, International Astronautical Federation (IAF)

**Debate**

A collective responsibility in theory and practice: ethical standards for selecting an IAC Host

The International Astronautical Federation (IAF) is recognized as the most powerful, diverse and cohesive space advocacy organization worldwide. In the context of dynamic and increasingly complex geopolitical landscapes and broadened globalization discourses, can we consider the Call for Hosting an IAC as an equalizer for IAF Members? Let’s recall that space-related processes relevant to the UN’s broader human rights recognize the urgent need to “Pay equal attention to the realization of cultural, social, economic, political, and rights, including the right to development”. While major events such as the IAC create a platform for unification and cooperation across political and government boundaries, can we claim that everyone is ready to give space a chance? Can space play the role of a cultural catalyst for unifying nations? Join us for a great debate dealing with the intersection of the IAC Bid process and ethics in an open, critical, and interdisciplinary manner.

**Moderator:**
- Adnan AL RAIS, Assistant DG - Space Operations and Exploration Sector, Mohammed Bin Rashid Space Centre (MBRSC)

**Panellists**
- Pascale EHRENREUN, IAF Past President (2019-2022), President of International Space University (ISU), President of Committee on Space Research (COSPAR)
- Steve EISENHART, Senior Vice President, Space Foundation / IAF VP for Technical Activities
- Rene JAFAROVA, IAC 2023 Project Manager, Azercosmos Space Agency of the Republic of Azerbaijan
- Agnieszka ŁUKASZCZYK, Vice President, EU Government Affairs, Planet / IAF Task Force Leader on Sustainability
- Michael H. MOLONEY, CEO, American Institute of Physics (AIP)
- Lionel SUCHET, Chief Operating Officer, Centre National d’Études Spatiales (CNES) / IAF VP for Technical Activities

**Coffee break**
2.4 UN/IAF 30th Workshop on Space Technology for Socio-Economic Benefits: “Challenges and Capacity-building Opportunities for Emerging Space Nations”

Date: 29 September - 1 October 2023
Time: 08:00 - 18:00
Venue: Baku Convention Centre, Heydar Aliyev Avenue, Baku

INTRODUCTION
The United Nations, through its Programme on Space Applications implemented by the United Nations Office for Outer Space Affairs (UNOOSA), and the International Astronautical Federation (IAF) (https://www.iafastro.org/) are co-organizing the Workshop on Space Technology for Socio-Economic Benefits on the theme “Challenges and Capacity-building Opportunities for Emerging Space Nations”.

The purpose of the Workshop is to bring together people who are conducting capacity-building activities, from either government, space agencies, research institutes, academia, non-governmental organizations, and those who are interested in building partnerships to accelerate capacity-building in developing nations about using space technologies and applications for sustainable economic, social and environmental development.

The Workshop will be hosted by Azercosmos (https://azercosmos.az/en?lang=en), held in Baku, Azerbaijan, from 29 September to 1 October 2023 in conjunction with the 74th International Astronautical Congress (IAC) (https://www.iac2023.org/), and it will be the 30th in its series.

WORKSHOP OBJECTIVES
The Workshop will provide a platform for discussion about how to increase capabilities in space technologies and space applications within developing countries, as well as to increase awareness of the benefits they offer. The main objectives of the Workshop are to:

1. Raise awareness of the various capacity-building efforts that are currently done in various countries and regions of the world, in particular efforts carried out through regional or international cooperation;
2. Share challenges and success stories of capacity-building efforts, to discuss what methods are the most effective and what synergies could be applied between initiatives of different stakeholders;
3. Bring together stakeholders from various governments, space agencies, academia, and industries to promote partnerships;

Presentations made during the Workshop will be published on the website of the Office for Outer Space Affairs, while the report of the Workshop and its recommendations will be distributed to the participants and to the UN Committee on the Peaceful Uses of Outer Space.
Day 1: Friday 29 September 2023

09:00 - 09:15  1. Opening Ceremony
Opening remarks by Aart Holla-Maini  Director, UN Office for Outer Space Affairs (UNOOSA)
Opening remarks by Clay Mowry  President, International Astronautical Federation (IAF)
Opening remarks by Samaddin Asadov  Chairman, Space Agency of the Republic of Azerbaijan (Azercosmos)

09:15 - 10:00  2. Setting the scene
Nathalie Ricard  Scientific Affairs Officer, United Nations Office for Outer Space Affairs (UNOOSA)
Christian Feichtinger  Executive Director, International Astronautical Federation (IAF)
Rena Jafarova  IAC2023 Project Manager, Space Agency of the Republic of Azerbaijan (Azercosmos)
Masami Onoda  Chair, IAF Committee for Liaison with International Organisations and Developing Nations (CLIOOD)
Matias Campos  Vice-Chair, IAF Committee on Connecting Emerging Space Ecosystems (ACCESS)

10:00 - 10:30  Coffee Break

10:30 - 12:00  3. Panel "Needs of new space-faring nations or of non-space-faring nations to develop and obtain space-related knowledge and skills"
Moderator: Hazuki Mori, United Nations Office for Outer Space Affairs (UNOOSA)
Panelists:
Eelectdom Matandirotya  Zimbabwe National Geospatial and Space Agency (GINGSA)
Behnam Sabouri  Iran space Agency (ISA), Iran
Solomon Kwaku Appekey  Xavier Space Solutions, Ghana
Asinta Ntida Manyele  Dar es Salaam Institute of Technology, United Republic of Tanzania
Mensah Edoo Fernand  Institut National Polytechnique Houphouet Boigny, Côte d’Ivoire
Matieu Henry  Food and Agriculture Organization

12:00 - 12:30  Networking

12:30 - 13:30  Lunch break

13:30-14:30  4. Panel "Needs of new space-faring nations or of non-space-faring nations to develop an industry and space ecosystem"
Moderator: Nathalie Ricard, United Nations Office for Outer Space Affairs (UNOOSA)
Panelists:
Anna Ebheita Akohi  Space in Africa, Nigeria

14:30 - 15:15  Coffee break

15:15 - 16:30  5. Session "University-level education in space engineering"
Chair: Vugar Bayramov, Azercosmos
Fostering space education in Azerbaijan through small satellite design program for undergraduate students  Nadir Atayev, Azercosmos
The dual educational model at Mexican Space Agency (AEM): one year of challenges and lessons learned  Rogelberto Reyes Morales, Mexican Space Agency (AEM)
Empowering the future: building a national educational space engineering program  Diana AlJbour, Jordan University of Science and Technology
UNISCEC-Global’s capacity-building programs  Rei Kawashima, University Space Engineering Consortium-Global (UNISCEC-Global), Japan
Space engineering education programs in Kazakhstan  Abdulkhalil Ashurov, L. N. Gumilyov Eurasian National University, Kazakhstan
Developing an integral space education program, based on robotics and AI, to advance the Venezuelan space education system  Rogelio Morales García, Bolivarian Agency for Space Activities (ABAE), Venezuela

16:30 - 17:30  6. Panel "The United Nations Access to Space for All initiative"
Moderator: Hazuki Mori, United Nations Office for Outer Space Affairs (UNOOSA)
Panelists:
Merle Cornelius  Center of Applied Space Technology and Microgravity (ZARM), Germany
Tetsuhiyo Fuse  European Space Agency
Charles Maina Mwangi  Kenya Space Agency (KSA)
Georgina Aurelia Chávez Lizárraga  Universidad Católica Boliviana "San Pablo", Bolivia

Day 2: Saturday 30 September 2023

09:00 - 09:15  7. Keynote by Anil Kumar, IAF Vice President for Relations with International Organizations

09:15 - 10:45  8. Session "University-level education about developing and using space applications"
Chair: Pieter van Beehuizen, IAF Committee for Liaison with International Organisations and Developing Nations (CLIOOD)
European Union Agency for the Space Programme space academy  TBD, European Union Agency for the Space Programme
Capacity-building activities in OIC Region through ISNET fora  Sadaf Sajjad, Inter-Islamic Network on Space Science and Technology (ISNET)
<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>10:45 - 11:15</td>
<td>Coffee Break</td>
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<tr>
<td>11:15 - 12:30</td>
<td>9. Session &quot;University-level education in space policy and law&quot;</td>
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<tr>
<td>Chair: Nayoung Youn, Korea Aerospace Research Institute (KARI), Republic of Korea</td>
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<tr>
<td>ISIL’s capacity building activities for the global space law community</td>
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<td>Kai-Uwe Schrogl, International Institute of Space Law</td>
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<td>The relaca espacio network and the Latin American round of the Manfred Lachs space law moot court competition</td>
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<td>Jairo Andres Becerra Ortsa, Universidad Católica de Colombia</td>
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<td>The first postgraduation course in space law &amp; policy of Brazil</td>
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<td>Ian Groener, Brazilian Space Agency (AEB)</td>
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<td>Filling the gaps in space policy, strategy and law in Africa</td>
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<td>Etim Okon Offong, African Space Leadership Institute, Nigeria</td>
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<td>Developments in Space Policy and Law in the South Caucasus</td>
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<td>Tatta Nikashvili, Georgian National Competition Agency</td>
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<td>12:30 - 13:30</td>
<td>Lunch Break</td>
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<tr>
<td>13:30 - 15:15</td>
<td>10. Session &quot;Lessons learnt in building education opportunities&quot;</td>
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<tr>
<td>Chair: Matias Campos, IAF Committee on Connecting Emerging Space ecSystems (ACCESS)</td>
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<tr>
<td>Developing a framework for space education and capacity-building in Tunisia: lessons learned and best practices for other non-space-faring nations</td>
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<td>Karem Saad, National School of Engineering Sfax, Tunisia</td>
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<tr>
<td>Evaluating the effectiveness of space education programs</td>
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<td>Mohamed Ibrahim, Egyptian Space Agency (EgSA)</td>
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<td>Insights gained from Nepal’s space infrastructure development and satellite projects from the past three years</td>
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<td>Anuja Shrestha, Antarikshya Pratishthan Nepal</td>
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<td>Hybrid online and hands-on training framework for space emerging nation: Thailand case study and follow up</td>
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<td>Paripat Prait, Geo-Informatics and Space Technology Development Agency (GISSTDAA), Thailand</td>
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<td>Building knowledge and skills for space-faring nation - Poland’s example</td>
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<td>Aleksandra Maria Bukala, Polish Space Agency (POLSA)</td>
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<td>Space beyond sciences, technology, engineering, and mathematics - building a truly inclusive space industry</td>
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<td>Remco Timmermans, International Space University</td>
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<td>International best practices in enabling capacity</td>
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<td>Hannah Ashford, The Karman Project, Australia</td>
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<td>15:15 - 15:45</td>
<td>Coffee Break</td>
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<td>15:45 - 17:00</td>
<td>11. Panel &quot;Lessons learnt in building a space ecosystem&quot;</td>
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<td>Moderator: Nathalie Ricardo, United Nations Office for Outer Space Affairs (UNOOSA)</td>
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<td>Panelists:</td>
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<td>Tidiane Ouattara, African Union Commission</td>
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<td>Michal Brichta, Slovak Space Office, Slovakia</td>
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<td>Poosha Lepecha, Government Technology Agency, Bhutan</td>
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<td>Nikentso Catherine Mamatee Ledimo, Impact School, Lesotho</td>
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<td>Nunzia Maria Paradiso, Italian Space Agency (ASI)</td>
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<td>Hamza Hameed, Space Generation Advisory Council</td>
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<td>17:00 - 18:00</td>
<td>12. Building partnerships</td>
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<tr>
<td>18:00 - 19:00</td>
<td>Reception hosted by the International Astronautical Federation (IAF)</td>
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**Day 3: Sunday 1 October 2023**

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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>09:00 - 10:30</td>
<td>13. Session: &quot;Education on space technology and applications at a level below university&quot;</td>
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<tr>
<td>Chair: Wenbin Zhang, United Nations Office for Outer Space Affairs (UNOOSA)</td>
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<tr>
<td>The Zero Robotics program: training secondary school students to code robots on the International Space Station</td>
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<td>Danielle Renee Wood, Massachusetts Institute of Technology, United States of America</td>
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<td>Developing a novel space camp model to inspire the next generation of space professionals</td>
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<td>Maria Carolina Velasco Molina, Astralintu Space Technologies, Ecuador</td>
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<td>Stellar Lab: astronomy and space technologies educational platform sensitive to our Planet</td>
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<td>Halil Baliş, Stellar Lab, Türkiye</td>
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<td>Education level on space technologies and applications at schools in Sri Lanka</td>
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<td>Dulani Chamika Withanage, Kyushu Institute of Technology, Japan</td>
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<td>African girls/women in space robotics</td>
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<td>Udi Philippa, National Space Research and Development Agency (NASRDA), Nigeria</td>
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<td>Building capacity: lessons learned in developing educational opportunities</td>
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<td>Shelli Brunowick, Space Foundation, United States of America</td>
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<tr>
<td>10:30 - 11:00</td>
<td>Coffee Break</td>
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<td>11:00 - 11:30</td>
<td>14. Wrap-up</td>
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<td>11:30 - 11:45</td>
<td>15. Closing ceremony</td>
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<td>Closing remarks by Samaddin Asadov, Chairman, Azersкосmos</td>
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<td>Closing remarks by Anil Kuma, VP for International Relations, International Astronautical Federation (IAF)</td>
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<td>Closing remarks by Aarti Holla-Maini, Director, United Nations Office for Outer Space Affairs (UNOOSA)</td>
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<tr>
<td>11:45 - 12:00</td>
<td>Group photo</td>
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<td>12:00</td>
<td>END OF THE WORKSHOP</td>
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THE GLOBAL SPACE CONGRESS FOR UNIVERSITY STUDENTS AND YOUNG PROFESSIONALS INTERESTED IN TODAY’S KEY SPACE ISSUES

The Space Generation Congress (SGC) is the annual meeting of the Space Generation Advisory Council always held in conjunction with the International Astronautical Congress (IAC) at the same hosting country. Every year, the SGC event receives about 150 outstanding students and young professionals who share a passion for space. Through the SGC, SGAC aims to give a voice to the young generation of space leaders so that they can share their opinions and perspectives concerning international space development. They are selected with a highly competitive application process open to our Space Generation international network. With SGC, SGAC aims to promote the voice of the next generation of space sector leaders on the topic of international space development.

The 21st edition of the Space Generation Congress (SGC) aims to celebrate the role of SGAC as a catalyst for the next generation of space professionals worldwide. With the theme “Building a space community to inspire, connect, and support humankind,” we aim to highlight the role of space as an enabler for socio-economic development, inspiring new generations and connecting the world. Read more about the event theme page.

SGC 2023 Programme
The below schedule is a snapshot of what to expect at the SGC 2023. The schedule is in Baku local time (GMT+4). Please note that the schedule is subject to change.

Please refer to the official SGC Website for the most updated version: https://spacegeneration.org/sgc2023

Wednesday 27 September 2023
19:30 - 23:00 Casual Opening Dinner

Wednesday 14 September 2022
08:00 - 08:30 Registration + Morning Coffee
08:30 - 09:00 Welcoming Speech + Working Group Overviews
09:00 - 09:30 Keynote Speech
09:30 - 10:00 Keynote Speech
10:00 - 12:30 Working Group Time
12:30 - 14:00 Lunch Break
14:00 - 15:45 Working Group Time
15:45 - 16:30 Coffee Break + Interactive Activity
16:30 - 17:30 Fireside Chat / Short Panel
17:30 - 18:00 Keynote Speech
18:00 - 18:30 Keynote Speech
18:30 - 19:00 SGC Day 1 Closing Remarks + Awards Ceremony
19:00 - 20:00 Travel to Venue for Evening Event

Thursday 28 September 2023
10:00 - 10:30 Welcoming + Morning Coffee
10:30 - 11:00 NASA SCAN Intro + Workshop Description
11:00 - 12:30 Workshop (Speakers + Activity Prep)
12:30 - 14:00 Lunch
14:00 - 15:45 Workshop (Activity)
15:45 - 16:00 NASA SCAN Closing Remarks
16:30 - 17:30 Skype Session
17:30 - 18:00 Fireside Chat / Short Panel
18:30 - 20:00 SGC Day 1 Closing Remarks + Awards Ceremony
19:00 - 20:00 Space Night

Friday 29 September 2023
08:15 - 08:45 Registration + Morning Coffee
08:45 - 09:00 SGC Day 3 Welcome
09:00 - 09:30 Keynote Speech
09:30 - 10:00 Keynote Speech
10:00 - 11:00 Career Development Panel / Special Track Session
11:00 - 12:30 Working Group Time
12:30 - 14:00 Lunch
14:00 - 15:45 Working Group Time
15:45 - 16:30 Coffee Break + Interactivity Activity
16:30 - 17:30 Speed Mentoring
17:30 - 18:30 Fireside Chat / Short Panel
18:30 - 19:00 SGC Day 2 Closing Remarks + Photos
19:00 - 20:00 Travel to Venue for Evening Event
20:00 - 23:00 Closing Dinner

Saturday 30 September 2023
08:15 - 08:45 Registration + Morning Coffee
08:45 - 09:00 SGC Day 3 Welcome
09:00 - 09:30 Keynote Speech
09:30 - 10:00 Keynote Speech
10:00 - 11:15 Space for Climate Panel
11:15 - 12:30 Emerging Space Agencies Panel
12:30 - 14:00 Lunch
14:00 - 15:45 Working Group Time
15:45 - 16:30 Coffee Break + Interactivity Activity
16:30 - 18:00 Working Group Presentations
18:00 - 18:30 SGC Day 2 Closing Remarks + Closing Speech
18:30 - 20:00 SGC Day 2 Closing Remarks + Photos
19:00 - 20:00 Travel to Venue for Evening Event
20:00 - 23:00 Closing Dinner

Sunday 1 October 2023
10:00 - 10:30 Welcoming + Morning Coffee
10:30 - 11:00 NASA SCAN Intro + Workshop Description
11:00 - 12:30 Workshop (Speakers + Activity Prep)
12:30 - 14:00 Lunch
14:00 - 15:45 Workshop (Activity)
15:45 - 16:00 NASA SCAN Closing Remarks

Venue: Hyatt Regency Baku

Date: 28 - 30 September 2023
3 Social Events

Welcome Reception
Date: Monday 2 October 2023
Time: 19:30 - 22:00
Location: Heydar Aliyev Center

Starts at 19:30 and will be held at the Heydar Aliyev Center ground floor. The programme includes speeches by Azercosmos and IAF, musical performances, cultural showcases by different performers, as well as appetizers and beverages service.

Sponsored by:

Gala Dinner
Date: Friday 6 October 2023
Time: 19:00 to 22:00
Location: Gulustan Palace
Cost:

The dinner starts at 19:00 and will be held at Gulustan Palace. The programme includes speeches by IAF, Azercosmos and the Gala Dinner sponsor (Northrop Grumman), promotional video presentations, national Azerbaijani musical performances, classical music performances, national dances, as well as contemporary music. At the dinner, a variety of delicious dishes pertaining to Azerbaijani cuisine will be served.

Sponsored by:

4 IAF Awards 2023

4.1 IAF World Space Award

The IAF World Space Award is presented for an outstanding contribution or contributions in space science, space technology, space medicine, space law or space management of exceptional impact to the world’s progress in astronautics.

The IAF World Space Award for 2023 (for individuals) is bestowed to:

Elon MUSK
Founder, CEO, CTO
SpaceX

"Mr. Elon Reeve Musk has shown a visionary understanding of the role and importance of astronautics to humanity’s future combined with a willingness to commit his own resources, life and drive and ability to make it happen through Space Exploration Technologies Corporation (SpaceX), a company that has matched the achievements of the Space Agencies in the fields of launch systems and human spaceflight, making space affordable and building space for all."

The IAF World Space Award for 2023 (for teams) is bestowed to:

NASA, ESA, CSA James Webb Space Telescope Team

"This nomination of the NASA, ESA, CSA James Webb Space Telescope Team for the World Space Award Category B for Teams is based on the following exceptional merits:

- Webb is the world’s premier space science observatory that has already transformed our understanding of the universe in its first year of operation.
- Led by NASA, ESA and CSA, more than 20,000 team members from 14 countries have contributed to mission success.
- Scientific opportunities and data from Webb are available globally, with several papers being submitted daily for scientific peer review and publication.
- In addition to the science, Webb has demonstrated the benefits of international cooperation, practical applications from cutting edge technological development, and global inspiration from discovery."
4.2 IAF Excellence in International Cooperation Award

The IAF Excellence in International Cooperation Award is presented annually to an individual who has demonstrated excellence in their efforts to promote and facilitate global engagement and cooperation in the space sector.

The IAF Excellence in International Cooperation Award for 2023 is bestowed to:

Thomas ZURBUCHEN
Former Associate Administrator for Science
National Aeronautics and Space Administration (NASA)
United States

For almost a decade Dr. Zurbuchen not only led NASA’s space science program, but also contributed to the consolidation of NASA’s reputation as a reliable international partner by building internal and external alliances. He looked for opportunities to build partnerships across disciplines, with industry, and other space agencies to advance the frontiers of knowledge and exploration.

All these efforts led to the consolidation of the relationships with ESA, JAXA and other space agencies culminating in the cooperation of a set of missions on Mars. More recently, Dr. Zurbuchen also spearheaded a collaboration with ESA and JAXA to use their respective geospatial intelligence resources to collect data on the impacts of the COVID-19 pandemic.

Few leaders from NASA have had as profound an impact on international collaboration in space science and solar system exploration as Dr. Thomas Zurubuchen, who contributed greatly to the development of NASA’s international relations.

Amongst many other additional initiatives, it is worth noting: his role in overseeing operations of the international partnership that successfully developed, assembled, tested, and launched the JWST telescope; his active participation in the Space Agency roundtable of space agency leaders; his advocacy for NASA’s participation in international forums; and collaboration with emerging space agencies.

4.3 IAF Excellence in “3G” Diversity Award

The IAF Excellence in “3G” Diversity Award is intended to recognize IAF member organizations (industry, government, academia) worldwide for outstanding contributions to the fostering of “3G” (Geography, Generation, Gender) Diversity within the space sector. The highest standards in “3G” Diversity can be achieved both by organizations and within teams’ activities. To correctly represent this, the IAF Honours and Awards Committee (HAC) decided to divide the IAF Excellence in “3G” Diversity Awards in two corresponding categories.

The recipient of this year’s award are:

Colegio Federado de Ingenieros y Arquitectos de Costa Rica (CFIA)

"Joining Central American young, women, and indigenous peoples in Space through first Central American space project".

The Colegio Federado de Ingenieros y Arquitectos de Costa Rica (CFIA) is the professional association responsible for controlling and regulating professional practice in engineering and architecture in Costa Rica. This 120 year-old organization works in different areas of the profession, but inclusion, youth and gender are a horizontal front in its projects, not only for its Gender and Young Professionals Commissions specifically but for its Aerospace Commission too.

With more than 10 years in the aerospace field giving technical support in the development of projects in science and technology in aerospace topics in Costa Rica and the Central American region, the commission has played a key leading role in several capacity building projects, for example the first Central American satellite, Irazú. Much of the work is focused on training and capacity building. Educating young students and children in STEAM topics throughout the country is one of the main aims of the organization as well as the search for new professional opportunities and their linkage with the aerospace sector.

The organization annually holds “Technical Encounters” and webinars. These “encounters” are part of the initiatives undertaken in the field of gender and youth to promote the scientific and technological vocations of girls and adolescents. The objective of these activities is to promote the participation and recognition of women, girls, and adolescents in different fields of science and technology, evidencing the importance of investing in women’s education for the socioeconomic development of the country.

In the aerospace field, recently CFIA has participated in promoting STEAM participation within different population groups in the country. For example:

- Plane modelling competition in Mexico
- “Mission Activation” brings stimulation talks to schoolgirls and boys in vulnerable areas
- Aerospace talks for young children to stimulate their interest in technical topics
- Student Support: Aerospace webinars and talks
- Support for groups of professionals and students
- Support to graduation thesis projects

Priority has been given to vulnerable areas of the country, mainly to young people and women, who normally have less chance of accessing technological careers in the country.

L'SPACE NASA Proposal Writing and Evaluation Experience (NPWEE) Project

"For recruiting and preparing a multigenerational and diverse space sector workforce while innovating over 100 new technologies"

The L’SPACE NASA Proposal Writing and Evaluation Experience (NPWEE) started in 2019 as an opportunity for high value engagement between next generation space entrepreneurs, NASA and the larger space sector. The project is a team-based 12-week virtual course that teaches the principles to identify aerospace technology needs and solutions, how to write selectable competitive proposals, and bring awareness of opportunities within the space sector. The course serves as a successful model for both outstanding and sustained contributions to foster “3G” Diversity within the space sector.

Geography: as of 2023, the NPWEE class has reached over 3,000 students from 563 US colleges and universities, including 189 small community colleges and 224 minority serving institutions, large cities, rural areas, and international students representing dozens of nations.

Gender: recognizing a traditional gender gap within the aerospace community, NPWEE has intentionally engaged and brought in female Science Technology Engineering and Math (STEM) students and introduced them to opportunities within the space sector. The NPWEE project has achieved 44% female participation.
Generation: three generations are engaged in the project; undergraduate students are matched with early career professionals and each team is also required to engage with senior space sector subject matter experts (SME).

In addition, NPWEE has again achieved sustained and unprecedented results of racial representation with thousands of students completing the course, the alumni are 27% Caucasian, 28% Asian and more than 40% Black, African American, Hispanic, Pacific Islander and Indigenous Americans.

Finally, economically diverse participation is granted by the gratuity of the NPWEE classes.

4.4 IAF Excellence in Industry Award

The IAF Excellence in Industry Award is intended to distinguish commercial industry organizations, members or non-members of the IAF, worldwide for introducing innovative space technologies to the global marketplace and are recognized throughout space industry for successfully executing landmark space missions.

The IAF Excellence in Industry Award for 2023 will be awarded to:

Northrop Grumman Corporation

Throughout the James Webb Space Telescope’s (Webb) development, NASA and Northrop Grumman leveraged strong relationships with the European Space Agency, Canadian Space Agency, Association of Universities for Research in Astronomy (AURA), subcontractors, and ultimately with communities around the world to execute a near-flawless final integration and testing phase prior to launch.

Thousands of engineers and hundreds of scientists worked to make Webb a reality, along with 300 universities, organizations, and companies from 29 U.S. states and 14 countries, including over 800 small businesses.

Webb’s successful mission has enabled astrophysicists to take the deepest, sharpest infrared image of a distant galaxy, probe previously unseen regions of space, and detect carbon dioxide in an exoplanet’s atmosphere, and these accomplishments are only the beginning. The Deployment of Webb was executed on the journey to its final orbit (a million miles from Earth), included 344 single-point failures, and required hundreds of components to perform flawlessly. The global team orchestrated the process seamlessly.

As the world’s largest, most powerful, and technologically challenging space telescope, Webb is a major accomplishment in the field of astrophysics. Webb features many cutting-edge innovations, and is a game changer for global astronomers, looking back in time over 13 billion years to the first stars and galaxies forming in the early universe.

The IAF Excellence in Industry Award - SMEs Category for 2023 will be awarded to:

Astroscale Holdings Inc.

Astroscale is the first private company with a vision for the safe and sustainable development of space for the benefit of future generations and is solely dedicated to on-orbit servicing across all orbits. The company is developing innovative and scalable solutions across the spectrum of on-orbit servicing, including life extension, in space situational awareness, end-of-life services, and active debris removal, to create sustainable space systems and mitigate the growing and hazardous buildup of debris in space.

On March 22, 2021, Astroscale successfully launched their ELSA-d mission. This was the world’s first commercial mission to prove the core technologies necessary for space debris removal in Low-Earth orbit (LEO), an unprecedented demonstration for a commercially funded mission in LEO. The demonstration proved key technologies such as capture via magnetic arm and docking plate, tracking of an object from a great distance, rendezvous with an uncontrolled object, and handover from absolute navigation to relative navigation for a LEO servicing spacecraft.

In addition, a key aspect of the success of the ELSA-d mission is the various partnerships it has with ground station providers and space situation awareness (SSA) service providers. These partnerships are crucial for managing the most complex maneuvers and ensuring critical mission safety operations and transparency.

The technologies validated through the ELSA-d mission mark the initial steps toward Astroscale’s vision of achieving routine on-orbit servicing by 2030.

4.5 IAF Hall of Fame

The IAF Hall of Fame is intended to create a standing forum of personalities that have contributed substantially to the progress of space science, technology, and space benefits to mankind. It will consist of a permanent gallery of these personalities, including a citation, biographical information, and a picture, in a special part of the IAF web presence.

The recipients of this year’s award are:

UESUGI Kuninori
Professor Emeritus, Japan Aerospace Exploration Agency, Director General, Hokkaido Aerospace Science and Technology Incubation Center (HASTIC), Japan

Professor UESUGI is undoubtedly one of the world’s most experienced specialists in space engineering and mission management, and his capabilities have been essential in ensuring the success of the Japanese and international planetary exploration programs. Thanks to his unique talents, Japan has been a pioneer in several areas of exploration and has attained a most justified world reputation in...
this domain. Professor UESUGI’s abilities embrace a vast domain, be it in the development of the “L” and “Mu” series rockets, or the extremely ambitious and cost-effective missions such as the “Sakigake” and “Suisen” missions to Halley’s Comet, or the most impressive “Hayabusa” mission, which returned the best pictures ever of an asteroid and samples of its soil, making this mission another “premiere” in space science.

Professor UESUGI is also well known for his work on the swing-by technology applied to the “Hitin” lunar mission which accomplished 13 swing-bys of the Moon, an accomplishment which earned him the Nikkei BP Technology Award and the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) Minister Award for Research on Science and Technology. He has also received many international awards such as the NASA Group Achievement Award, the Frontier Award and the Werner von Braun Award from the National Space Society, USA, the Space Operations and Support Award from the AIAA and IAF’s most prestigious award, the Allen D. Emil Award in 2022.

Besides his scientific and engineering contributions, he was very instrumental in international coordination on various occasions, such as the Inter Agency Consulting Group that was established to coordinate space science missions worldwide, leading to great success in cooperation between the U.S. and Japan on the “Geotail” project that has been providing unique observations of the tail of the Earth’s magnetosphere and is still in operation 30 years after its launch.

His contribution to major international academic societies is remarkable. Professor UESUGI was a member of the Board of Trustees of the International Academy of Astronautics (IAA) from 2005 to 2011. He worked as Chairman of the Organizing and Programming Committee of IAA/CLCPM (International Conference of Low-Cost Planetary Missions) and was an editor of Advances in the Astronautical Sciences several times.

He is still active as Director General of Hokkaido Aerospace Science and Technology Incubation Center (HASTIC), a nonprofit organization based in Hokkaido Island of Japan, with the aim of creating innovative industries and supporting start-ups in the aerospace business arena. He was a member of the Special Committee for Space Policy, Cabinet Office, Government of Japan from 2010 to 2021.

4.6 Frank J. Malina Astronautics Medal

The Frank J. Malina Astronautics Medal is presented annually to an educator who has demonstrated excellence in using his/her available resources to promote the study of astronautics and related space sciences.

The Frank J. Malina Astronautical Medal for 2023 is bestowed to:

Klaus SCHILLING
President, Zentrum für Telematik
Germany

“Professor Schilling has built up space research degrees. He enabled students to get hands-on experience in satellite construction and was involved in many leading space research activities like ESA projects and ERC grants.”

Prof. Schilling has taken the fullest advantages of the resources available to him to promote the study of astronautics and related space sciences.

During his entire career he was engaged in visionary aerospace guidance and control problems (in interplanetary missions like Cassini/ Huygens or Rosetta, but also for small satellites and satellite formations). He significantly contributed to advance the scientific state-of-the-art. This resulted in an outstanding international career.

By his enthusiasm for space, he was able to motivate students to exceptional achievements (like in UWE-1 or NetSat), which led to outstanding professional careers in aerospace industry and in academia. Particularly his very practical approach to engage students into exciting space research projects with tangible results and actual space satellite launches let him stand out in his field.

During his career he has also made great commitments to the international space community within the framework of the IAF as proven by his long-term engagement in different forums and the awarding of the IAF “Distinguished Service Award”.

4.7 IAF Interactive Presentations Competition Award

To be announced on Thursday 5 October during the IP Award Ceremony at 13:10 in the room BCC A6. The five best Interactive Presentations of the IAC 2023 will be awarded during a dedicated ceremony to be held just before the Interactive Presentation Session. A dedicated jury has chosen one winner for each of the five categories:

- A. Science and Exploration
- B. Explorations and Operations
- C. Technology
- D. Infrastructure
- E. Space and Society

This event will kick-off the IP Session and the IP cocktail reception, so do not miss your chance to mingle with the presenters and make sure to join us in the IP Hall!
The International Astronautical Federation (IAF) together with its partners - the Association of Space Explorers (ASE) and the IAC 2023 Host - Azercosmos, are co-organizing the IAC 2023 International Astronauts Chapter, inviting astronauts and cosmonauts from around the world to participate in the 74th International Astronautical Congress that will take place in Baku, Azerbaijan from 2 – 6 October 2023.

As part of this special programme, IAC 2023 will offer a broad spectrum of opportunities during which all astronauts and cosmonauts will give their tribute to the congress theme “Give Space a Chance” and will showcase diversity of role models and experiences especially in the context of global cooperation and outreach activities. On Friday 6 October, there will be a dedicated Astronauts IAF Global Networking Forum (IAF GNF) featuring an international panel of astronauts and cosmonauts, sharing their perspectives and updates on human activities in space.

Do not miss the autograph session with astronauts on Friday 6 October which is also the Public Day! Astronauts and cosmonauts will be signing a dedicated IAF Photo Album to be collected at the IAF booth (a limited number of copies will be available and on a first-come, first-served basis).
Join the IAF, the world leading space advocacy body!

Become an IAF Member

- Download the Application Form on www.iafastro.org
- Participate in the IAF Committees in charge of defining the Technical Programme
- Propose to host a Plenary Event during the IAC
- Propose a Global Networking Forum (GNF) Event to showcase your organization's latest achievements or to discuss the most interesting topics about Space
- Participate and vote in the General Assembly and nominate IAF Officers
- Host one of our events!

JOIN US

1. Download the Application Form on our website (www.iafastro.org) or request it to the Secretariat.
2. Complete the Application Form and attach the requested documents.
3. Send everything to our Secretariat. (info@iafastro.org)
4. We will review your application and ask in case of missing information.
5. Once reviewed, your application will be recommended by the IAF General Counsel.
6. Final approval by the General Assembly during the IAC.

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