IAC 2023 Next Generation Plenary Proposal

74th INTERNATIONAL ASTRONAUTICAL CONGRESS

Baku, Azerbaijan

2-6 October 2023

Students and Young Professionals, We Want Your Input!

Apply to be part of one of the NextGen Plenary panels during the International Astronautical Congress (IAC) 2023, in Baku. Come and showcase your ideas and work in front of an audience of senior space leaders in government, industry and academia! *The two proposed panels will cover these topics:*

1) ***The 21st century's Moonshot: Critical Technologies, Policies, and Business Models to thrive on the Moon***
2) ***The Open-Source Revolution and Space Data Accessibility***

Is your work, research, or activities related to any of the two? Read on and apply!

The NextGen Plenary - An Overview

The International Astronautical Congress (IAC), the premiere international space event, displays successes and trends of the sector through its Plenary Programme with proposals selected via competition. The NextGen Plenary (NGP) gives students and young professionals from around the world the opportunity to showcase their work and projects in front of the international space community. The plenary is moderated in a format similar to a talk show, interweaving clips from the panellists with questions and comments from the moderator, other panelists, and the audience. The video clips will be used to enhance the audience's understanding of the ideas of the plenary participants. This is an exciting opportunity that you do not want to miss!

How does the NGP Process work?

- This current document is a call for **applicants to be selected as panelists for one of the two plenary proposals**, being drafted by the NGP Steering Committee for submission to the IAF.
- Panelists will be selected via a **global competitive process** (see **Application Process** below) by subject matter experts to identify the best candidates and showcase the diversity of successful efforts related to the two proposal topics.
- Though both plenaries are still in the application stage, if approved, one of the proposed panels will be selected by the IAF as the Next Generation Plenary to take place during the week of **2-6 October 2023, in Baku, Azerbaijan** at IAC2023. We will be notified of the selected topic following the IAF Spring Meetings in March 2023.
- The Next Generation Plenary Steering Committee is committed to the success of both our proposed panels and in the event the plenary application process for either is unsuccessful, we will find an appropriate alternative venue for the panels during IAC2023 as we have done since IAC 2019.

The 2023 NextGen Plenary Topics

TOPIC 1 - The 21st century's Moonshot: Critical Technologies, Policies, and Business Models to thrive on the Moon

With the renewed interest of governments and companies from established, rising and aspiring spacefaring nations, this topic highlights the building blocks and enabling factors that will lead to a sustainable presence on and around the Moon. Institutional programmes and commercial ambitions are in full march to reach the Moon as new off-the-planet endeavours and businesses are being envisioned in cislunar space and on the lunar surface. These efforts are encouraged and energized by the growing number of humans spending time in space, the deployment of new space stations, and the most powerful launch vehicles in history taking shape and finally soaring into the sky. Aiming for the Moon poses many questions and the Next Generation is called to the drawing board to address them!

This session asks you to explore:

- What improved and new technologies and infrastructures will we need to enable the establishment of a sustainable cislunar presence and lunar economy?
- What developments in physical, engineering and health sciences are necessary for humans to thrive on the Moon or cis-lunar space?
- What policies and/or business models could foster sustainable human and robotic activities in cislunar space and on the lunar surface?
- How are we expanding the definition of "life in cis-lunar space and the Moon" beyond just science, to art and philosophy?

This proposed Next Generation Plenary will focus on how students and young professionals are innovating for and contributing to the building blocks of a thriving spacefaring civilization, enabling a sustainable and long-term presence across the solar system, with the Moon being the next step. Are you researching policies that will enable commercial human spaceflight activities on the Moon? Are you contributing to the deployment of space infrastructures and the growth of the in-space, lunar economy? Come showcase your contributions to extend humanity's reach to cislunar space and beyond!

QUALIFICATION FOR TOPIC 1:

The plenary serves to:

- Highlight significant contributions from the next generation towards efforts shaping the present and future of space systems and infrastructures, human spaceflight, and the sustainable and long-term expansion of humanity beyond Earth, with a focus on lunar activities.
- Showcase unique ways and fields of expertise in which students and young professionals have contributed to this goal

Panelists will be selected who demonstrate outstanding existing contributions to one or more of the following categories:

- Researching/studying/working on the next steps and enabling factors in space exploration and the long-term expansion of human activities in cislunar space and on the lunar surface
- Demonstrating/advocating to decision-makers for technical, scientific, legal, policy, ethical, humanities, business and financial matters relating to a sustainable, consistent and ever more widespread human presence in cis-lunar space and on the lunar surface

TOPIC 2 - The Open-Source Revolution and Space Data Accessibility

This topic aims to highlight how the increasing accessibility of data, software, and other tools have revolutionized space, planetary and Earth science research over the last decade. This move towards accessibility means that opportunities to contribute to scientific discoveries are open to a much larger international audience. Researchers are no longer reliant on large amounts of funds for data collection–all that is needed is a good research question. The open-source revolution is moving the scientific community beyond just sharing the results of science to the open sharing of software, data, and knowledge (algorithms, papers, documents, ancillary information) as early as possible in the scientific process. The importance of openness and accessibility has been highlighted by IAF member organizations like NASA, which has designated 2023 as The Year of Open Science.

Open science is especially important in helping young researchers advance their careers because they can get their professional start by using openly-available data and software from space agencies such as NASA and ESA. For example, the US government now mandates open access to data collected on federal grants, which includes many thousands of terabytes of images from Martian rovers, lunar orbiters, or deep space satellites. The open-source paradigm is driving the community towards accessible research and accelerating new technologies and projects.

Are you currently using open-source data, software, or other tools for your space or Earth-science research, or to help solve challenges here on Earth? Have you worked to make datasets more accessible? Have you benefited from open-source practices? Do you have fresh ideas for increasing accessibility to space research, especially in emerging space nations? Do you have perspectives on the implications of more equitable access to space data and research opportunities? We would love to share your work with the wider community, showcasing you and your ideas on the 2023 NextGen Plenary stage–please consider applying!

QUALIFICATION FOR TOPIC 2:

This plenary serves to:

- Highlight significant contributions to the space sector from the next generation of young professionals who are leveraging open-source data or tools
- Showcase unique ways in which students and young professionals leverage open-source space data, software, tools, and scientific processes.

Panelists will be selected based on the demonstration of outstanding existing contributions to one or more of the following categories:

- Actively using or developing open-source datasets and software for novel space-related projects
- Contributing to an accessible space research culture by improving open access to space data or software, including through policy, regulatory, and/or legal research

Application Process

To apply, applicants must be students or young professionals between 21 and 35 years old, as of January 1st, 2023.

Round One

To take part in round one:

- Create a 15-second video telling us very briefly the subject of the project you are working on that you would speak about on the panel, and why you should be selected to address the IAC. You must be on screen and must speak for the full 15 seconds. We will only watch/listen for 15 seconds, so be sure to not exceed this amount of time! Post your video to YouTube as an unlisted video (NOT private).

In addition to uploading your video, **you must complete the Plenary Panelist Application by the deadline by filling out one of the two following forms** (you cannot apply to both plenaries).
Deadline for Round 1 submissions: 9 January 2023 (11:59 pm GMT)

1. ***Topic 1: The 21st century's Moonshot: Critical Technologies, Policies, and Business Models to thrive on the Moon*** - **Apply Here**!
2. ***Topic 2: The Open-Source Revolution and Space Data Accessibility*** - **Apply Here!**

Round Two

We will select the Round Two subset of candidates from the above and notify all entrants by **30 January 2023.** Specific details of Round Two requirements will be sent to the candidates in the notification. Selected candidates will be asked to create and post a three-minute video on YouTube as an unlisted video (NOT private). **Deadline for Round 2 submissions: 20 February 2023 (11:59 pm GMT).**

Application Guidelines

Video Details

Please record your video in a high-quality audio and video format: make sure to have your video in a Landscape Orientation (Horizontal), with a minimum resolution of 720p. If you are selected as a panelist, we will require the rights of your submitted videos: segments of your submissions will be used during the plenary and to promote the plenary in advance. Evaluators are looking for videos that are aligned with the theme of the plenary and that incite curiosity and interest among the viewer. Please limit special effects and do not use music. The video is about you, not your video editing skills. Please do not use copyrighted video, images, or music. Make sure to publish your video on YouTube as an unlisted video (NOT private) (see How to set a video as "Unlisted")

Final Selection

We will select the finalists from these entries based on their impact, efficacy of messaging, and relevance to the plenary topics; we also take into consideration the IAF's 3G (Geography, Gender, Generation)

diversity criteria. We will be looking for concrete descriptions of how you are actively engaged with ***Topic 1: The 21st century's Moonshot: Critical Technologies, Policies, and Business Models to thrive on the Moon*** OR ***Topic 2: The Open-Source Revolution and Space Data Accessibility***, and why this area is vital to your work or studies. The IAF will make the final selection of plenaries for the IAC in Baku by the end of March. If you are selected for a panel, you will be coached on public speaking in preparation for the plenary including monthly meetings with the other panellists and moderator. **We will notify applicants of the final outcome by April 1 2023.**

Application Timeline

When	What
09 January 2023	Application Deadline for Round 1
30 January 2023	Outcome Notification to Round 1 Applicants
20 February 2023	Submission Deadline for Round 2
End of March 2023	Plenary Proposal Outcome announced by IAF
01 April 2023	Final Outcome Notification to Applicants

Funding your IAC2023 attendance

Plenary participants will be responsible for finding their own sponsor(s) to cover for travel, accommodation, and conference tickets to attend IAC2023 in Baku. In addition to the obvious sources of sponsorship – yourself, your family, employer or school, and industry contacts – we want to share with you some programs applicable for students and young professionals (typically awarded through selection processes starting in **January/February 2023)**:

- The IAF Emerging Space Leaders Grant Programme. See http://www.iaf-grant-programme.org/
- The Space Generation Advisory Committee(SGAC) provides travel scholarship opportunities for students and young professionals to attend the Space Generation Congress (SGC) and International Astronautical Congress (IAC). The SGC event is held prior to the IAC in Baku. Visit spacegeneration.org, and their scholarship page spacegeneration.org/scholarships for more information.
- Your national space agency and its space agency education programme. National Space Agencies provide scholarships to attend events at the IAC. You can check available scholarships here: https://iseb.space/student-sponsorship-opportunities/ or contact your national space agency. In particular, students from Europe, Japan, Korea, Canada and the United States are encouraged to contact their national space agency: ESA, JAXA, KARI, CSA and NASA respectively.
- The Future Space Leaders Foundation offers grants to students and young professionals in the United States. More information can be found at https://futurespaceleaders.org/#grant.

Contact

If you have any questions, please do not hesitate to contact nextgenplenary.iaf [at] gmail.com