

IAF Committee Briefs

November 2021

IAF SPACE EDUCATION AND OUTREACH COMMITTEE (SEOC)

1. Introduction

The IAF Space Education and Outreach Committee (SEOC) promotes the development and delivery of quality learning and outreach opportunities for students, educators, and members of the IAF so that space, science, and technology become better known and are more accessible to the global community. We also help recognize activities by students and educators at the IAC through our competitions and Honours and Awards programme.

2. Highlights

New approaches to outreach and science communication within the space sector are growing, particularly with engagements involving artists and strong emphasis in the use of social media. As part of these initiatives, mentorship focused programs are also on the rise, the IAF Launchpad Mentorship Programme and SGAC's Mentorship Programme being among the successful ones. Outside of the IAF and its partners, several industrial mentorship programs have been developed in the US and Canada to help students enter the industry in an easier manner. The implications of these trends on the work of the committee is one of the focuses of the committee's 2022 activities.

3. Future Outlook

SEOC welcomed its new leadership this month, and the new vice-chairs are currently scoping their vision for the next 3 years. In the meantime, we are continuing preparations for the 73rd IAC, which will be held in Paris in 2022. Our call for papers for the Space Education and Outreach Symposium and the Student Competition have been updated with lessons learned from this year's IAC and are now available online. SEOC also plans to continue its honours and awards programme, contributions to the Next Generation Plenary and mentorship programmes at the IAF.

One of the trends that the committee is interested in exploring and bringing into its programmes include the rise of novel science communication techniques through arts and social media. These trends, while somewhat covered by our technical symposia, could be engaged within the context of other platforms within the IAF. In addition, we have observed that most speakers at SEOC activities are scientists and engineers that are active in education; K-12 educators and teachers have not engaged with the committee as much. SEOC wishes to engage with these communities more, either by inviting them as keynote speakers at the IAC, or as part of special sessions and other online activities to be planned in the coming year.

4. Committee Activities

The SEOC worked throughout 2021 to plan for excellent support to the 72nd International Astronautical Congress (IAC), where we hosted two symposia:

- The Space Education and Outreach Symposium (E1) showcased over 90 papers (selected from over 180 submissions) in 10 sessions around various topics in space education and outreach, workforce development and culture
- The 29th Student Competition Symposium (E2) showcased 45 papers from around the world in 4 sessions, one of which was broadcast online as part of the Global Technical Symposium
- While both symposia were impacted by the uncertainties of the COVID-19 pandemic, the end result was comparable to past years.
- SEOC Honours and Awards continued its great work this year, by awarding the following three titles:
- The Frank J. Malina Astronautics Medal was awarded to Filippo Graziani, President of the Italian company Group of Astrodynamics for the Use of Space Systems (G.A.U.S.S. srl), and Senior Professor of Astrodynamics at University of Roma "La Sapienza". This award recognizes an educator

who has demonstrated excellence in taking the fullest advantage of the resources available to him/her to promote the student of astronautics and related space sciences. Professor Graziani was also a keynote speaker at the SEOC E1 Symposium.

- The Luigi G. Napolitano Award was awarded to Federica Angeletti, School of Aerospace Engineering (SIA), Sapienza University of Rome. This award is presented annually to a young scientist (below 30 years of age) who contributed significantly to the advancement of aerospace sciences and presents a paper on this contribution at the IAC.
- The IAF Student Awards were presented to Sam Bunka, Hugo Lévy, Harika Pothina, Nadia Weronika Brzostowicz and Jaroslav Hruby. These awards recognize the best papers presented by students at the IAC in the undergraduate, graduate and student team categories.

SEOC members contributed to the selection of the IAF Emerging space Leaders Grantees and the IAF Young Space Leaders Award programme as well. We are happy to see two SEOC members and contributors (Kat Robinson and Elizabeth Barrios) among the awardees of the YSL this year.

SEOC members (alongside the IAF WD-YPP and other committees) also supported the Next Generation Plenary (NGP) program as steering committee members. The NGP this year focused on Next Generation Impact on Social Responsibility in Space and was a great success, while the program also planned an additional plenary this year focused on the role of space in combating climate change.

Throughout 2021, SEOC also supported other initiatives, such as the IAF Abstract Mentor Programme and IAF Launchpad Mentorship programme, with SEOC members acting as mentors in both programmes. We also revamped its webpage this year, providing a broad description of its activities and highlighting the new procedure for joining the committee in a clear manner. We have also created a new means for those interested to reach out to SEOC vice chairs directly, and have updated our terms of reference to reflect new definitions and election procedures used by the committee.