

IAF SPACE ENTREPRENEURSHIP AND INVESTMENT COMMITTEE (SEIC)

1. Introduction

The IAF Space Entrepreneurship and Investment Committee (SEIC), previously known as the EIC, was inaugurated in 2007, promotes dialogue among entrepreneurs, established companies, government, and academia, focusing on space economic innovation and PPP. Coordinates E6 Symposium that addresses traditional space industry applications (e.g., satellite-based services involving Earth observation, navigation, and communications) and new space industry applications (e.g., space tourism, space-industrialization, space resource utilization). We want to congratulate our distinguished SEIC member Clayton Mowry (Voyager Space and former Blue Origin), who is the new IAF President. Clay officially took over from Pascale Ehrenfreund in October 2022. We also want to welcome our new SEIC leadership. Warm thanks to Ken Davidian (FAA), our former Chair, welcome the new elected Chair, Nancy C. Wolfson (AIAA), and our new Vice-Chairs, Gary Martin (AIAA), Ken Davidian (Former-FAA, Current-ISU), and Joerg Kreisel (AIAA).

Our IAF-SEIC Page: <https://www.iafastro.org/about/iaf-committees/technical-committees/entrepreneurship-and-investment-committee-eic.html>

2. Summary

In 2022 the space industry is experiencing exciting new developments that seek to foster the commercialization of space, sustainability, and public-private cooperation. **NASA's Artemis 1 mission** on the Space Launch System (SLS) rocket shows the importance of public-private partnerships as we see NASA and its industry partners, such as Boeing and Lockheed Martin, collaborating in another launch attempt scheduled for Nov 2022. **The International Space Station (ISS)** is expected to retire after 2030. Besides being a platform for ground-breaking research impossible to replicate on Earth's surface, the ISS will be remembered as an example of public-

private cooperation and international collaboration. In **2021-2022 Blue Origin** unveiled plans for a commercial space station. **Astroscale Company** aims to support the sustainable use of space with satellite end-of-life services and active removal of space debris. Australian startup **High Earth Orbit Robotics** combines intelligent control with space-based cameras to acquire high-quality imagery of satellites, space debris, and resource-rich asteroids.

3. Highlights

A) - THE SEIC BUSINESS PLAN COMPETITION (BPC) AT THE IAC 2022, PARIS, FRANCE: The NewSpace Business Plan Competition (BPC) was a cooperation between The Space Entrepreneurship and Investment Committee (EIC), The Center for Space Commerce and Finance (CSCF), World Space Week Association and Space Generation Advisory Council-Commercial Space Project Group (SGAC-CSPG). During our three-day event, experts Candace Johnson, Dennis Stone, Joerg Kreisel, Thomas A Olson, Nancy C. Wolfson, and Nicholas Florio explored innovative approaches for public-private partnerships (PPP) for space exploration, satellites, resource utilization-asteroid mining, space debris solutions, and more. The BPC was especially valuable for young professionals considering entrepreneurship paths, early-stage startup founders, and investors. The judges mentor our finalists during the **BPC's Entrepreneur Boot-Camp on Sept 18-19**. The grand finale was **The BPC's Panel-Pitch Session on 20 September**. Our finalists were Celestial (Germany), KMI (USA), Progresja (Poland), Spin (Luxembourg), and Astralintu Space Technology (Ecuador); they competed for the grand prize of USD 10,000! Special thanks to IAF Bureau and IAF Secretariat for their fantastic job assisting the BPC. We also wish to thank Thomas A. Olson (main proposer), the past SEIC Chair Ken Davidian, to whom this initiative was first introduced and proposed in 2020, and the current SEIC Chair Nancy C. Wolfson, for her leadership in managing the project development, partnership

coordination, and for obtaining the IAF Bureau approval for the BPC implementation at the 73rd IAC 2022, Paris, France! Thanks to our On-Site Lead Coordinator Alina Vizireanu and our Promotion Co-Coordinator KangSan. Contact the BPC Project Managers: Thomas A Olson at tao@cscf.space and Nancy C. Wolfson at NancyPlanetaryDefense@gmail.com



B) – THE SEIC AT THE SPACE RESOURCES WEEK CONFERENCE IN LUXEMBOURG: Luxembourg adopted the Act on the Exploration and Use of Space Resources, and The Minister of Economy of Luxembourg, Franz Fayot, signed the Artemis Accords (The Artemis Accords support that space resource extraction and utilization goes accordingly with the Outer Space Treaty-Articles II, VI, and XI). In 2022 The Luxembourg Space Agency had another fantastic “Space Resources week Conference.” SEIC members attended the “Space Resources Week Conference,” and our SEIC Chair Nancy C. Wolfson was invited to take the ISU “Professional Space Resources Course” in person and received her certification at the Space Resources Week Conference.

C) – THE SEIC AT THE ARTEMIS 1 LAUNCH, FLORIDA, UNITED STATES: The Artemis missions are critical to the space economy, fueling new industries and technologies as we establish a sustainable human presence on the Moon. Our NASA associates invited various SEIC members to join the launch of Artemis 1 in-person on-site in Florida-United States, including Chair Nancy C. Wolfson; she traveled to Florida for the second Artemis 1 launch attempt; unfortunately, the launch was scrubbed again and moved to November 2022. We will keep you posted.

4. Committee activities

We are moving forward with a new exciting term! The newly elected Chair, Nancy C. Wolfson’s Management Agenda, lays out a long-term vision for the committee to participate in the larger international conversation on the new trends in space commercialization, public-private partnership (PPP), along with new space industry applications, including space tourism, space- industrialization, space resource utilization-asteroid mining, solutions and commercialization of orbital debris, and similar activities with emphasis on increasing young professional involvement in the field. In 2023 the SEIC leadership and members will be working on: **ACTION 1**-The SEIC Working Groups (WG) in cooperation with various institutions and organizations. WG#1-SUSTAINABILITY AND SPACE RESOURCES UTILIZATION, WG#2-SPACE PUBLIC & PRIVATE PARTNERSHIP FOR MANNED-UNMANNED MISSIONS, WG#3- SPACE INVESTMENTS & NEW BUSINESS MODELS. **ACTION 2**-New term’s agenda includes strategic steps to increase attendance and abstract submission for the E6 Symposium in 2023. She started this new approach in 2022 by developing closer communication with the IAF network, WD-YPP, and others. **ACTION 3**-To develop a strategic plan for the “Award for Small Enterprises” proposed by Gary Martin in collaboration with Ken Davidian, Lisa Labonte, and Nancy C. Wolfson. **ACTION 4**-Proposal by Christian Sallaberger to connect the ISU and the EIC to support each other’s activities.

The SEIC annual events at the IAC 2022 were successful, thanks to the great SEIC teamwork! **The SEIC-E6 “Business and Innovation” Symposium**, which includes technical Sessions E 6.1, E 6.2, E 6.3. We noted the high quality of abstracts received, and the attendance exceeded our expectations. Our E6 Symposium got 127 abstracts submitted from 34 countries to the 5 different EIC-E6 Sessions.

Symposium Keynote Speakers, Rainer Horn and Nancy C. Wolfson presented: “New Economy for Commercial sustainability Driving Space Resources Utilization and PPP” <https://www.iafastro.org/events/iac/iac-2022/technical-programme/symposium-keynotes/e62-new-economy-for-commercial-sustainability-driving-space-resources-utilization-and-ppp.html>

We conducted our annual “**Space Is Business” Paper-Writing Competition** in conjunction with the Space Generation Advisory Council (SGAC). To join our SEIC email list please email: NancyPlanetaryDefense@gmail.com