

Space Policy Institute

THE GEORGE WASHINGTON UNIVERSITY

Fall 2018 Newsletter

Recent SPI Events

During this past fall the Space Policy Institute had an active involvement in a number of important events.

First, we signed a new agreement with the Bocconi School of Management Space Economy Evaluation Lab in Milan, Italy to discuss joint projects on topics involving commercial and economic space issues. To celebrate that agreement, in September, the Embassy of Italy here in Washington hosted an event entitled, "Space Economics: Challenges and Opportunities for Investment, Innovation, and International Partnerships." Bocconi, SPI, and the Italian Space Agency organized the event. The Italian Ambassador to the United States, Armando Varricchio, presented remarks, as did the Executive Secretary of the U.S. National Space Council, Scott Pace. Following were panel discussions, with one on the international aspects of the space economy and the other on the importance of international cooperation and partnerships.



Prof. Hertzfeld and Sommariva at the Italian Embassy in Washington, D.C.

The event ended with a formal signing of the partnership agreement by SPI Director Hertzfeld and Professor Sommariva of Bocconi.

The International Astronautical Conference was held in Bremen, Germany in early October. We had a large presence there with well over 20 SPI faculty, students, and alumni, participating in committee meetings and delivering research papers.



Faculty, Students, and Alumni at the IAC, Bremen, Germany, 2018

In December SPI hosted the first showing of a new movie, *First to the Moon*, produced by Paul Hildebrandt. The film commemorated the 50th anniversary of the Apollo 8 flight with the U.S. astronauts, Frank Borman, William Anders, and

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Jim Lovell's dramatic journey to and around the Moon. This was the first time humans had viewed the Moon at close range and observed the side of the Moon that is not visible from the Earth. The movie was very well received by our audience and the discussion following the showing reflected the interest and importance of the Apollo 8 flight.

Faculty and Staff News

Professor Henry Hertzfeld

In addition to the events described above, Prof. Hertzfeld also worked on a number of interesting projects. The most important one was a joint study with the European Space Policy Institute on Trans-Atlantic Cooperation and Space Security. The study highlighted the changing environment and issues involving the security of assets in space. (ESPI Report 66, Security in Outer Space: perspectives on Transatlantic Relations, October 2018.) Professor Hertzfeld delivered a keynote speech on *Economics and National Security* at the ESPI Autumn Conference in Vienna, Austria in late September.

He also presented a paper on fragmentation of space law at an International Institute of Space Law session as part of the IAC in Bremen in October.

Prof. Hertzfeld moderated a panel on space policy at a space law colloquium here in Washington at the Reed-Smith law firm in late October. In addition, he co-hosted a panel in New York at the American Branch of the International Law Association's Student Weekend event.

In December he was a member of a panel discussion at an U.S. Chamber of Commerce event on emerging opportunities for the space industry.

Finally, he was interviewed and quoted in a number of media including Time Magazine, The Guardian, and an NPR program on space mining.

Prof. Hertzfeld continues to be actively involved in many different professional committees. Recently he was appointed to a 2-year term (2018-2020) on the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) Advisory Committee on Commercial Remote Sensing (ACCRES). And he continues to act as Chairman of the Space Law Committee, American Branch of the International Law Association (ABILA), and Chairman of the Economics Technical Committee, International Astronautics Federation.

Professor Emeritus John M. Logsdon had a very busy past few months. His new book, The Penguin Book of Outer Space Exploration, was published in September. It contains a narrative by Professor Logsdon and over 100 primary documents tracing the history of the U.S. civilian space program. A number of radio interviews, a talk at Kramerbooks in Washington and a joint book talk with astronaut Scott Kelly at the American Museum of Natural History in New York City were some of the venues where Prof. Logsdon publicized the book. He also attended the International Astronautical Congress in Bremen, Germany in October and in November traveled to Madrid, Spain to participate in a forum on space commercialization. He was named a member of the Regulatory and Policy Committee of the NASA Advisory Council. He published two articles in the AIAA magazine Aerospace America: "*Once We Went to the Moon*" (October 2018) and "*What to Call the Moon*" (November 2018). In December, he participated in a discussion of the status of the history of the Apollo program organized by NASA and the National Air and Space Museum. In mid-December, he was featured in "*Moonshot at 50*," an insert that was included in 46 newspapers. Logsdon attended Apollo 8 commemorative celebrations in Washington at the National Cathedral with astronaut Jim Lovell and at the San Diego Air and Space Museum with astronaut Bill Anders. To cap off the year, his book "Ronald Reagan and the Space Frontier" was published in late December 2018.

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Professor Pascale Ehrenfreund is on leave from the SPI, and has been serving as Chair of the German Aerospace Centre (DLR) Executive Board.

In her function as IAF Vice-President for Communications, Publications and Global Conferences she has contributed to the success of the International Astronautical Congress (IAC) 2018, in Bremen, Germany in October 2018. At the IAC 2018 she was also elected as the Incoming President of the International Astronautical Federation (IAF).

It is notable that she is the first woman to hold that position and she will be very busy during the coming year with the planning of the 2019 IAC to be held here in Washington, D.C. next October.



Prof. Ehrenfreund accepting the position of President of the IAF.

In October 2018 Pascale Ehrenfreund was elected as Chancellor of the International Space University. In fall of 2018 she published several peer-reviewed papers in the journals "Astronomy and Astrophysics", "FEMS Letter" and "Current Issues Molecular Biology" which focused on Mars analog research, Martian habitability and the results of the Rosetta Mission.

She continues to travel extensively and participate in SPI events when in Washington, D.C.

Adjunct Professor Peter Hays has delivered a number of talks on national security space. These have included one at the ABILA International Law Weekend, in New York in late October titled

"National Security Space Organizational Challenges." Also in October at the 7th Annual Space and Satellite Colloquium in Washington, D.C., he spoke on the topic of "Issues and Challenges for Creating a Space Force."

Finally, at the Advanced Operational Law Conference in September 2018, Bellevue, Nebraska Prof. Hays spoke on the topic of "New Approaches to U.S. Space Organization; Defense Planning and Legal Practice in 21st Century Domains."

Adjunct Professor Dr. John. J. Klein in October, 2018, supported the U.S. Air Force Space Command annual Schriever Wargame Capstone event in Montgomery, Alabama. He completed a monograph "Understanding Space Strategy: The Art of War in Space" which will be published by Routledge in April 2019. Dr. Klein also has authored an article, "Rethinking Requirements and Risk in the New Space Age," through the Center for a New American Strategy which is forthcoming in January 2019.

Student News

During the Fall 2018 semester, our students held internships and jobs many different organizations. These included U.S. Government agencies such as the Department of Defense, and the Federal Aviation Administration as well as companies such as Virgin Orbit, Bryce Space, Booz Allen, The Aerospace Corporation and Nanoracks. Also we had students located in various think-tanks and associations including, the Satellite Industry Association and the Secure World Foundation.

As part of our students internships and jobs they have not only contributed to many internal space policy issues, but also have co-authored published papers. The most recent was one by 2nd year student Jay Alver who interned at the Aerospace Corporation last summer and was co-author of *Space Policy Primer: Key Concepts, Issues and Actors*, with Michael Gleason (who earned his Ph.D.

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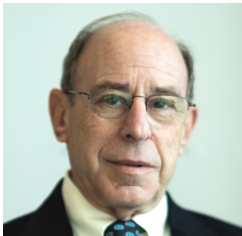
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from GW while a visiting scholar at SPI a number of years ago.)

In the fall the students went on a tour and visited the Eisenhower Executive Office Building within the White House compound and the offices of the National Space Council. Scott Pace, now Executive Director of the National Space Council (and currently on leave from the Space Policy Institute) arranged this tour.

Our students also hosted and participated in an interesting panel/roundtable discussion with students in space science from many parts of the country attending the American Society for Gravitational and Space Research (ASGSR) meeting here in Washington in late October.

Message From the Director



This academic year began with a record number of 20 new and returning students in space policy. Clearly, the many recent exciting space events in the United States and in the world have brought renewed interest in the space sector and in being part of the present and future space policy issues. We welcome both our new students and the new opportunities that both our nation and the global space community will have to deal with as this growth in space activities continues.

We continue to offer a full complement of space policy courses and are, as described above, active in the community and have been involved nationally and internationally in interesting and important areas of space policy.

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