

SPACE POLICY INSTITUTE SPRING 2015 NEWSLETTER

The Space Policy Institute Hosts Events for the Washington, D.C. Space Community

The Space Policy Institute (SPI) hosted a number of events for the local space community. Further information on the events and presentations can be found on the SPI website.

February 13. The **Mitsubishi Research Institute**, the **University of Tokyo Policy Alternatives Research Institute** and the Space Policy Institute held a symposium on "U.S. - Japan Relations and Space Cooperation in the Asia Pacific Region" Assistant Secretary of State Frank Rose and Takao Imafuku of the Japanese Ministry of Foreign Affairs, Space Policy Division provided keynote remarks.

February 17. **NanoRacks** held their first annual International Space Station workshop at the Elliott School of International Affairs. The workshop included members of government, industry and education to discuss topics on maximizing ISS utilization for science and education.

March 23. **Secure World Foundation** and the **George Washington Military Law Society** held an event at the Elliott School on *International Law and Military Activities in Space*. Panelists discussed the role of and impact that international law has on military activities in outer space.

March 26. **The Universities Space Research Association (USRA)** and the Space Policy Institute held their annual joint symposium at the Capitol Hill

Holiday Inn. The theme of this year's symposium was on *Asteroids, NEOs and Small Bodies in the Solar System – Emerging Opportunities for Science, Security and International Cooperation*.

April 7. **Professor Emeritus John Logsdon** discussed and autographed his new book *After Apollo? Richard Nixon and the American Space Program* at the Elliott School.

May 5-7. **Explore Mars, Inc.** held their third annual Humans to Mars Summit at the George Washington University. The conference provided an overview of and discussions from prominent guest speakers and experts on the challenges and issues in sending humans to Mars.

The Space Policy Institute Hosts Distinguished Speakers

The Space Policy Institute welcomed a number of notable experts who spoke to students and members of the local space community. Presentations can be found on the SPI website.

February 26. **Ms. Deganit Paikowsky**, Research Associate at the Space Policy Institute and Senior Researcher at the Yuval Neeman Workshop for Science, Technology and Security at Tel Aviv University, presented her current research on "Can Space Promote Nuclear Non-proliferation?"

April 7. **Mr. Guoyu Wang**, Deputy Dean, Institute of Space Law, Beijing Institute of Technology and **Mr. Brian Weeden**, Technical Advisor, Secure World Foundation, led a roundtable discussion on the topic of "Resource Utilization in

Space: Individual National Ventures or Cooperative Joint Ventures.”

George Washington University space policy students heard from several guest speakers in their classes including former NASA Administrator Mike Griffin; Chris Shank, Deputy Chief of Staff for Rep. Lamar Smith (R-TX); Damon Wells, Director of the Office of Policy and Strategy at the National Reconnaissance Office, Senate and House staff concerned with space issues, and attorneys specializing in space law.



SPI Students

SPI welcomed two new Masters students into the program, Kentaro Tanaka and William West. Over the winter and spring, SPI graduate students secured internships at the Commercial Spaceflight Federation, the Department of Defense, Smithsonian Institution, and the Department of State. Brittany Balcom’s article on the use of games and gaming techniques for “citizen science” projects was accepted into *New Space* journal. Many graduate students also received acceptance letters to present at the next International Astronautical Congress in Israel this fall. SPI sponsored four

Master’s candidates to participate in the 2015 *Space Security Index* Work Group at McGill University in Canada. In May, seven students graduated from the Space Policy Institute.

SPI Affiliated Faculty News

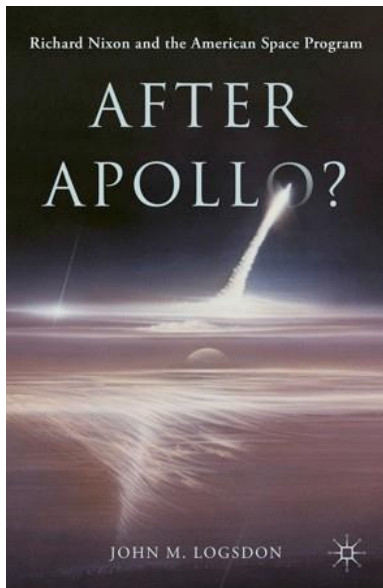
Professor Pascale Ehrenfreund currently serves on board of many organizations including the National Research Council Committee on Astrobiology and Planetary Science (CAPS), the Horizon2020 Space Advisory Group (SAG) of the European Commission and, since September 2013, has served as the president of the Austrian Science Fund FWF. Dr. Ehrenfreund is part of a team that launched experiments on the EXPOSE-R2 facility to the International Space Station on July 24th, 2014. Experiments were successfully activated in November 2014 and will remain in LEO for 12-18 months with a projected retrieval date of 2016. In 2014/2015 she published several peer-reviewed papers in *Planetary and Space Sciences*, *Space Policy*, *Langmuir* and *Life*.

Professor Henry Hertzfeld produced several publications and articles on legal and regulatory issues in the area of on-orbit space operations. He also completed a book chapter on “Economic Challenges of Financing Planetary Defense” for a new publication, *Handbook of Cosmic Hazards and Planetary Defense*. In addition, Dr. Hertzfeld delivered papers at many conferences including one on “Dispute Resolution in Space Activities” at McGill University, and a paper on “United States Space Regulatory Issues” at the IISL Galloway Symposium in Washington, D.C. In April 2015, Dr. Hertzfeld traveled to Vienna as a Private Sector Advisor to the United States Delegation for the yearly UN COPUOS Legal Subcommittee session. In addition, Dr. Hertzfeld participated in many panel sessions at prominent think

tanks, such as the New America Foundation, in the Washington, DC community.

Professor Zoe Szajnfarber's continues to lead a research group (known as the Szajnlab) in the GWU Department for Engineering Management and Systems Engineering that focuses on innovation in the space sector. In the spring, Szajnlab's "Open Innovation Methods" research include outreach work such as participation on a South by Southwest Interactive (SXSWi) festival panel and the release of a graphic novel representation of the research. Dr. Szajnfarber continues to lead a group of energetic doctoral students at the University.

Professor Peter Hays participated and directed many events and programs on space security. Dr. Hays continued to serve on the governance board for the 2015 Space Security Index effort by Project Ploughshares



Professor Emeritus John Logsdon celebrated the launching of his new book *After Apollo? Richard Nixon and the American Space Program*, published by Palgrave MacMillan in March 2015. The book is a detailed account of the 1969-1972 decisions made by the Nixon administration that occurred with the

end of the Apollo lunar missions to the approval of the space shuttle. Professor Logsdon has given talks based on his new book at the Smithsonian National Air and Space Museum, the International Space University in Strasbourg, France, Rice University, the California Institute of Technology, NASA's Jet Propulsion Laboratory and Kennedy Space Center, and the Griffith Observatory in Los Angeles.

SPI Hosts Visiting Scholars

The Space Policy Institute continued to host international scholars. The scholars came to study and to conduct research on various aspects of international space policy.

This spring the Institute hosted **Takehito Morishima** from Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT). Mr. Morishima's work focused on enhancing cooperation and innovation in space. Before leaving SPI in April, Mr. Morishima gave a presentation on "U.S.-Japan Outer Space Cooperation."

The Institute also held presentations from **Captain Daeweon Kim and Major Simon Kim** of the Republic of Korea Air Force. Their research while at the Space Policy Institute focused on Space Situational Awareness and potential roles for South Korea.

The Space Policy Institute welcomed **Dr. Nammi Choe**, from the Korean Aerospace Research Institute (KARI). Her research focuses on U.S. non-proliferation policies and the effects of missile technology transfer restrictions on space launcher development.

The Space Policy Institute also welcomed **Mr. Zaahid Hussain**, who is visiting from the Physics Department of Quaid-i-Azam University in Islamabad. His research primarily focused on the impact of anti-satellite weapons and

nuclear non-proliferation on regional stability in South Asia.

Space Policy in the News

The Space Policy Institute hosted many events this spring and over the course of the past few months you may have heard a member from the Space Policy Institute in the media. The Institute was cited extensively as an expert source in television, radio, and print media such as the *New York Times*, *Washington Post*, *Associated Press*, *Bloomberg News*, *Space News*, *Discovery Channel*, *Foreign Policy*, *CSPAN*, *National Geographic*, *Slate Magazine*, and *SpaceRef*.

News from the Director

In June 2015, I served again on the US delegation in UN meetings of the Committee on the Peaceful Uses of Outer Space in Vienna, Austria. Meeting topics included development of guidelines on the long-term sustainability of space activity. In addition, I have continued to work with NASA on issues related to the Global Positioning System. A continuing challenge has been regulatory protection of the radio frequency spectrum used by GPS, as well as similar systems operated by Europe, China, and Russia, from interference by commercial sources such as mobile broadband providers.



I was invited to speak to the Senate

Subcommittee on Science, Space, and Competitiveness on February 24, 2015 on “U.S. Human Exploration Goals and Commercial Space Competitiveness.” I also testified on May 20, 2015 before the House Committee on Science, Space and Technology regarding commercial data purchases by NOAA to meet gaps in weather satellite coverage.

My research interests continue to focus on aligning U.S. civil, commercial, and national security space policies. In particular, I have focused on space cooperation with Japan. I met this past year with senior Japanese Diet Members, including Takeo Kawamura, chairman of the budget committee and Yoshitaka Shindo, a former minister for internal affairs and communication, as well as Takao Imafuku, the Director of the Space Policy Division at the Japanese Ministry of Foreign Affairs. I was also part of a Mansfield Foundation effort, termed the Japan Space Forum, to recommend specific measures to improve U.S.-Japan space cooperation in light of regional security and economic challenges.

I continue to be a member of the Department of Commerce’s Federal Advisory Committee on Commercial Remote Sensing. I am also a member of a National Research Council committee on space protection and defense that it working on a study of “space resilience” in response to a congressional mandate.

I gave numerous invited talks and participated in a wide variety of symposium and conferences in the United States and overseas. Presentations were made to NASA, the Aerospace Corporation, the Department of State, and the Institute for Defense Analysis, the Secure World Foundation, the US Telecommunications Training Institute, the Stimson Center, the Marshall Institute, the Atlantic Council, the Mansfield Foundation, and St.

Mary's College, Maryland. International presentations were made to the European Space Agency's "High Level Forum" with industry in Noordwijk, the Netherlands as well as informally at meetings in Vienna, Austria on the margins of the plenary meeting of the UN Committee on the Peaceful Uses of Outer Space.

Dean Michael Brown of the Elliott School stepped down this spring after ten years, making him one of the longer serving deans at the George Washington University. With the help of my former NASA colleague, Dr. Mike Hawes, now with Lockheed Martin, we were pleased to present Dean Brown with a U.S. flag and Elliott School luggage tags that had been flown as "auxiliary payload" aboard the first Orion test flight, EFT-1.



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