



## SPACE POLICY INSTITUTE

### SPRING 2011 NEWSLETTER

#### Space Policy Institute hosts symposia throughout semester

The Space Policy Institute held three major symposia centering on diverse space topics in February, March, and April.

"Target NEO: Providing a Resilient NEO Accessibility Program for Human Exploration Beyond Low Earth Orbit" took place on February 22 and was co-sponsored with Ball Aerospace. This workshop focused on what information is known and what needs to yet be determined in order to enable human exploration to near-Earth objects as called for in the current national space policy. Attendees were internationally recognized government, industry, and academic experts on asteroids from the robotic and human spaceflight communities, and thirty speakers formed six panels throughout the day. More information on this event and copies of presentations can be found at the workshop website, <http://www.targetneo.org>.

SPI and the Universities Space Research Association co-sponsored the second symposium of the semester on March 31, entitled "U.S. Export Controls and Space Science." U.S. export controls, particularly those that categorize virtually all space technologies as "munitions," have been criticized as a barrier to both international cooperation and commercial competitiveness that has weakened rather than aided the U.S. defense industrial base. Less discussed has been the impact of export controls on space science and university innovation, which was the topic of this symposium. Attendees were primarily from universities with major space science interests, and the event drew speakers from the National Security Council, State Department, and NASA, as well as export control officials from Stanford and Caltech to share their experiences. Copies of presentations can be found on the SPI website [Events page at http://www.gwu.edu/~spi/events.cfm](http://www.gwu.edu/~spi/events.cfm).

With the completion of the International Space Station, attention is turning to how to use this facility as a test bed for future human exploration missions, including to Mars. This was the focus



**NASA Administrator Charles Bolden gives the keynote address at the ISSMars-DC conference on April 6 in the GWU Jack Morton Auditorium.**

of the ISSMars-DC conference April 6-7, co-sponsored with Explore Mars Inc. NASA Administrator Charles Bolden kicked off the two-day conference with a keynote address that was followed by panels on the many challenges for human missions to Mars, as well as the opportunities for medical research, international cooperation, and commercial partnerships. Speakers included NASA Chief Medical Officer Rich Williams, NASA Goddard Chief Scientist James Garvin, and NASA Deputy Associate Administrator for Space Operations Lynn Cline. Videos of select presentations are available at <http://www.youtube.com/user/ExploreMarsinc?feature=mhee>. ♦

#### SPI testifies before the House Science Committee, U.S.-China Commission

Space Policy Institute professors were asked to testify on several occasions this semester. On March 30, SPI Director Scott Pace testified before the U.S. House of Representatives Committee on Science, Space and Technology, Space and Aeronautics Subcommittee at the "Human Space Exploration" Hearing. Dr. Pace spoke on "A Review of NASA's Exploration Program in Transition: Issues for Congress and Industry," and focused on the damage caused to

NASA and the space industry by recent volatility in space budgets and policies.



**SPI Director Scott Pace testifies before the House Space and Aeronautics Subcommittee. Other witnesses were Doug Cooke, NASA, and Jim Maser, AIAA and Pratt & Whitney Rocketdyne.**

SPI Professor Henry Hertzfeld testified May 5 before the House Space and Aeronautics Subcommittee at the "Commercial Spaceflight's FY12 Budget" Hearing. He addressed the many uncertainties and alternate approaches to regulating new commercial space ventures, including human spaceflight.

On May 11, Dr. Pace and SPI Visiting Scholar Alanna Krolikowski testified before the U.S.-China Economic and Security Review Commission at a hearing entitled, "The Implications of China's Military and Civil Space Programs." Dr. Pace and Ms. Krolikowski were two of the three witnesses on the "China's Civil Space Programs and Their Implications" panel.

Written testimonies and recordings of these events are available on the SPI website News page at <http://www.gwu.edu/~spi/news.cfm>. ♦

## **Space Policy Institute hosts international guests and events**

SPI hosted numerous events featuring international speakers this semester. The European Union-proposed Draft Code of Conduct for Space Activities has been a major topic of discussion in recent months. On February 23, SPI convened a gathering of leaders of Washington-based NGOs concerned with space and security with Annalisa Giannella,

Director for Non-proliferation and Disarmament in the European External Action Service, to discuss the EU draft proposal.

SPI Professor Pascale Ehrenfreund serves as the Chair of the Committee on Space Research (COSPAR) Panel on Exploration, which held a workshop to kick off an *"International Earth-based research program as stepping stone for global space exploration"* March 2-4 at the Space Policy Institute. The workshop focused on structures and stepping stones necessary to create an international program that pursues compelling science goals for future robotic and human exploration of Earth, the Moon, Mars, and other targets in space. Participants gathered from the international science expert community, national science foundations, national and international field research programs and space exploration working groups, space agencies, astrobiology networks, and successfully established international programs. Further information and all session presentations are available in the COSPAR section of the SPI website at <http://www.gwu.edu/~spi/pexworkshop.cfm>. A report of the workshop is forthcoming at this site.

On April 29, SPI held an event entitled "Making Germany's space sector fit for the future: The space strategy of the German Federal Government." The featured speaker was Wolfgang Schneider, Deputy Head, Space Technologies Division, Aerospace Policy Directorate, German Federal Ministry of Economics and Technology, who discussed the recently released German space strategy and potential areas of cooperation with the U.S. Mr. Schneider's presentation is available on the News portion of the SPI website at <http://www.gwu.edu/~spi/News.cfm>. ♦

## **The George Washington Space Society fosters new connections between students, alumni, and supporters**

The student group affiliated with SPI, the George Washington Space Society (GWSS), continued to be active this semester. Several happy hours were organized where current students, alumni, and other DC space community members made connections and

continued to enhance the strong network among DC-based space policy professionals. GWSS also has a role in reaching out to incoming SPI students to make them aware of opportunities and to seek their contributions to SPI and the broader space community.

GWSS organized a trip to the Lockheed Martin Global Vision Center on March 11. The group was given a tour of the green technologies showroom, followed by a tour of the Space Experience Center. Included in the tour were briefings on existing and forthcoming technologies, simulator time, and a reception to conclude the event. ♦



**GWSS members learn about Lockheed Martin's sustainable technology R&D at its Global Vision Center.**



**GWSS members get a hands-on feel for the Orion simulator at the Lockheed Martin Space Experience Center.**

## **SPI Visiting Scholars contribute work in multiple sectors**

As part of its Visiting Scholars program, the Space Policy Institute hosted three international guests throughout the course of this semester.

Mr. Koji Umehara, previously a Deputy Director in the Space Development and Utilization Division of the Japanese Ministry of Education, Culture, Sports, Science and Technology, concluded his time at SPI in March by presenting the results of his research on U.S.-Japan space cooperation to a group of students and faculty.



**SPI Visiting Scholar Koji Umehara accepts a token of appreciation following his presentation to students and faculty.**

Ms. Alanna Krolikowski, University of Toronto, will conclude her time at SPI in June. She has focused this time on research for her dissertation, which compares U.S.-China relations since 1989 in two high-tech sectors: civil-commercial air and space. Since arriving in Washington after two years of research in Beijing, Ms. Krolikowski has conducted the U.S.-based phase of her doctoral research with the support of a Fulbright grant. Joining SPI has allowed her to interview and consult officials involved in aviation and space policymaking, attend conferences in these areas, share the results of her findings in various fora, and draw upon the unique documentary resources available in Washington DC.

Ms. Krolikowski was able to attend the launch of STS-133 in February, and volunteered at The Space Foundation's National Space Symposium in April as an assistant to Chinese delegations.

Mr. Edwin Tachian of the Sergio Arboleda University Research Group on Public, International and Space Law is spending May through August at SPI. He is focusing on space procurement law and policy and public-private partnerships, including issues such as risk management and sharing, project financing and competition in space procurement. ♦



## **SPI faculty teach courses and provide service to the community**

The spring semester saw a range of courses taught by SPI faculty and guest lecturers, as well as strong faculty involvement in activity beyond the Institute.

SPI Director Scott Pace taught “Issues in Space Policy,” a three-credit course focused on a range of issues including cost estimation, spectrum management, export controls, orbital mechanics, and case studies of the Columbia accident and a space-related war game scenario.

SPI Professor Henry Hertzfeld taught Space Law, which included both SPI students and GW Law School students. The course reviewed the underlying principles of international space law, with a focus on issues that will be at the fore in coming years in the realms of exploration, commerce, and security. Particular emphasis was placed on U.S. laws and regulations including recent developments in commercial human spaceflight.

In addition to teaching this course, Dr. Hertzfeld traveled to Strasbourg, France in March to lecture at the International Space University’s Executive MBA program. He provided Congressional testimony (see article above), and coached the GW Moot Court team to third place in the national Manfred Lachs Space Law competition.

In addition to these three-credit courses, SPI offered two one-credit courses. A new course on “Spatial Law and Policy” was taught by Kevin Pomfret of the Centre for Spatial Law and Policy, and focused on issues such as privacy, data ownership, liability and national security as they relate to spatial technology development (e.g., geographic information systems).

SPI Professor Colleen Hartman taught “Case Studies in Space Science,” in which students conducted detailed analyses of recent cases such as NASA’s announcement of a microorganism that thrives on arsenic and the Congressionally mandated report on the James Webb Space Telescope. The class visited the Department of Commerce to hear the perspectives of the NOAA Comptroller after discussing inter-agency management issues between NASA and NOAA.



**SPI Professor Colleen Hartman addresses media and the public at a NASA press conference discussing the science results of the Gravity Probe B mission on May 4.**

In addition to teaching this course, Dr. Hartman presented at the International Space University 15<sup>th</sup> annual symposium, serves as Ph.D. advisor for an SPI alum, and worked to bring the excitement of space and Earth sciences to schools and local women’s groups. Dr. Hartman helped develop the 2011 charter and is a panel member of the American Meteorology Society’s newly developed “Committee to Improve Climate Change Communication” and she continues to co-chair the domestic and international groups on the next decade of Mars Exploration for NASA and ESA. She was one of the highlighted speakers at the May 4 NASA press conference discussing the newly released Physics Review Letters results on a spacecraft built to measure two predictions of Einstein’s General Theory of Relativity. ♦

## **Dr. John Logsdon promotes new book at SPI signing event and on the road**

Most of Emeritus Professor John Logsdon’s activities during the first months of 2011 were related to his new book *John F. Kennedy and the Race to the Moon*. On January 21 SPI hosted a book signing at which Dr. Logsdon was introduced by NASA Deputy Administrator (and former student) Lori Garver. Dr. Logsdon spoke and signed copies of his book at MIT, Brevard Community College in Cocoa, FL, the spring meeting of the International Astronautical

Federation in Paris, NASA's Ames Research Center, Jet Propulsion Laboratory, Goddard Space Flight Center, and Johnson Space Center. He also gave a public lecture about his book in JPL's von Karman lecture series.



**Dr. John Logsdon takes a break from signing books to pose with current SPI students Dan Hendrickson, Connie Spittler, Jason Callahan, and Megan Ansdell during a book-signing event at the Elliott School on January 21.**

Dr. Logsdon was part of a panel discussing the legacy of Apollo at the American Association for the Advancement of Science, spoke and signed books at the U.S. Space & Rocket Center and the International Space Development Conference, both in Huntsville, AL. On the 50th anniversary of President Kennedy's May 25, 1961 speech, Dr. Logsdon joined the last man to walk on the Moon (so far), Apollo 17 astronaut Gene Cernan, in a ceremony at the Smithsonian National Air and Space Museum Udvar-Hazy facility near Dulles airport, and a few days later spoke and signed books at the Museum's facility on the Washington Mall.

Dr. Logsdon discussed his book on various radio shows and webcasts, including NPR's "Science Friday", and he continued to be consulted by the electronic and print media. *Aerospace America*, the magazine of the American Institute of Aeronautics and Astronautics, published a four-page "conversation" with Dr. Logsdon in its May issue. Dr. Logsdon attended the STS-133 launch on February 24 with a small delegation from the Space Policy Institute. He remains an active member of the Exploration Committee of the NASA Advisory Council and the Board of Directors of The Planetary Society. ♦

## Director's Activities

SPI Director Scott Pace kept busy this spring with domestic and international travel, writing, and speaking engagements in addition to his other duties as SPI Director and GW Professor.



Dr. Pace traveled to Tokyo University in March to discuss U.S. and Japanese space cooperation as part of a workshop with Japanese space and legal experts. He was in Berlin later that month as part of a non-government U.S. delegation meeting with members of the North Korean foreign ministry to discuss denuclearization and missile proliferation issues on the Korean Peninsula. This was followed by a trip to Brussels to discuss verification of space agreements in an event hosted by the Secure World Foundation.

Dr. Pace contributed a chapter on "Merchant and Guardian Challenges in the Exercise of Power," in *Toward a Theory of Space Power* by National Defense University Press, and was interviewed by "Aerospace America", the magazine of the American Institute of Aeronautics and Astronautics in its April issue.

In addition to travel and writing, Dr. Pace gave numerous talks and participated in a wide variety of symposia and conferences in the U.S., including at the National Reconnaissance Office, NASA, the Industrial College of the Armed Forces, the U.S. Institute of Peace, the Aerospace Corporation, TechAmerica, the Marshall Institute, and the Commercial Space Transportation Advisory Committee. He provided Congressional testimony (see above article) and spoke at the Ball Aerospace-SPI Target NEO workshop, the Explore Mars Inc.-SPI ISSMars-DC conference, and the USRA-SPI Export Controls symposium.

Dr. Pace also provided extensive support to NASA on policy and regulatory issues related to the Global Positioning System, including international discussions with Europe and Japan. ♦

## Extra! Extra! Space Policy Institute in the News

SPI is cited extensively as an expert source in television, radio, and print media. In recent months SPI professors were seen on television (WJLA, Fox News, Ria Novosti, and CBS Sunday Morning), heard on radio (NPR Morning Edition, China Radio International, BBC Radio, WMFE-FM Orlando, Marketplace Tech Report, and the Space Show), and on the web (Space.com, foxnews.com, msnbc.com, ABC News, CNN.com, and Bloomberg). They were quoted in magazines (*Discover*, *Chemical & Engineering News*, *New Scientist*, *Scientific American*, *National Journal*, *Tech Review*, *Time*, *Science*, *Congressional Quarterly*), U.S. newspapers (*Space News*, *Houston Chronicle*, *New York Times*, *Huntsville Times*, *Wall Street Journal*, *USA Today*, *Washington Times*, *Fiscal Times*, *Scripps Howard News Service*, *Associated Press*, and the *Washington Post*) and foreign sources (*London Times*, *Guardian*, *Xinhua*, and *Agence France-Presse*). ♦

### Please visit us on the web at:

[www.gwu.edu/~spi](http://www.gwu.edu/~spi)

**Alumni:** We are looking to update our records. Please contact the Space Policy Institute at:

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Donations to the institute can be made through the website.

## Congratulations to SPI Graduates



2011 SPI graduates celebrate with faculty and staff at a dinner held to mark their accomplishments at the conclusion of the spring semester. This year's graduates are Noelle Miliard, Jason Callahan, Debbie Mayer, Nicole Herrmann, Laura Delgado, Megan Ansdell, Dan Hendrickson, Connie Spittler, Kirk Woellert, and Matthew Isokowitz.

### SPECIAL THANKS to SPI SPONSORS:

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