



Director's Matters

Guest column by Jack Hehn, Director, and Kendra Redmond, SPS Program Coordinator, Education

The inaugural USA Science and Engineering Festival

Science buffs and fun seekers alike flocked to the Washington, DC, National Mall on October 23–24 for an extravagant exposition—the culminating event of the inaugural [USA Science and Engineering Festival](#). The expo, hosted by Lockheed Martin, enabled thousands of citizens to experience science and engineering as pure fun, interactive "edutainment." Hundreds of volunteer scientists, engineers, students, and others ran [1500 exciting hands-on science activities](#) and put on [75 shows and performances](#) on four stages. The festival, a result of months of planning, was a grassroots collaboration; more than [500 of the nation's leading science organizations](#) participated. It had strong support in Congress from both sides of the aisle, including the bipartisan [Honorary Congressional Host Committee](#).



AIP's Society of Physics Students (SPS) worked closely with APS, AAPT, and OSA to draw several thousand people to a Laser Haunted House at the festival, in celebration of [LaserFest](#)—the 50th anniversary of the demonstration of the laser. *Physics Today* provided additional support for the booth.



Volunteer Jareth Arnold from New York University leads a laser fountain demonstration for a group of (very) early career scientists. More than 7,500 people visited the Laser Haunted House.

SPS and the collaborating organizations covered the entire inside of a 10' x 30' tent with black fabric, creating the allure of spook and mystery to showcase the properties and pizzazz of laser light. Staff and volunteers, including many members of SPS and Sigma Pi Sigma from the surrounding area, engaged attendees with demos including a laser fountain (highlighting total internal reflection), a homemade laser scanning system that produced 3D images of a skull, laser tattoo removal, a hologram of a pumpkin, a mini laser light show, and

more.



Staff and volunteers from SPS, APS, AAPT, and OSA in front of the Laser Haunted House.

A constant stream of visitors kept staff and volunteers on their toes, and even required crowd control when the long line became a fire hazard. The experience was inspiring and humbling. By the end, we had gone through well over 75 AAA batteries, 6 lbs. of Halloween candy, 30 cups of coffee, several dozens of donuts, 25 volunteers, and a power outage. It was exhausting, but energizing at the same time.

One highlight was talking to the younger attendees on their way out of the haunted house. A girl about eight years old remarked that her favorite part was the pumpkin hologram. "I was looking and I saw a pumpkin, so I looked over to see if there was actually a pumpkin, and there was no pumpkin...I could probably trick my brother with it," she said mischievously.



Several other AIP Member and Affiliated Societies also ran booths. Pictured at the National Society of Hispanic Physicists exhibit are Juan Burciaga (left) of Denison University and Juan Arvelo (right) of the Applied Physics Laboratory with science enthusiast Luke Caron.

Physics Today's Jermev Matthews attended the festival and will share his experiences in a Points of View column, which will appear on *Physics Today's* website later this week.

By its nature, the festival did not provide many opportunities for in-depth teaching or follow-up. Instead, the festival provided a unique opportunity for science organizations of all types to come together and host an engaging and fun celebration of science for the country. Our hope is that even though the tents and experiments have been packed away, the feelings of excitement, possibility, and wonder will linger with participants.

The Science and Engineering community and the many organizations that support this community find more and more important the concept of engaging the public in science and engineering. We were pleased to do our part.

Where would physics be without Σ or μ ?

Greece was only recently saved from bankruptcy by European Union funds, and the country has had to impose massive cuts in government funding, including upward of 20% to public universities—where AIP journals have many users. AIP is committed to our customers in the Greek research community as they weather a financial crisis that has far surpassed our own. AIP has a national license agreement with HEAL-Link (Hellenic Academic Libraries Link), the government-funded consortium of universities and research institutes. This agreement, which includes APS, AVS, ASA, AAPT, AAPM, and SOR, establishes us as publishers of "core content" for higher education in Greece. Yet, the Greek government has not released the HEAL-Link budget for the last two years—so we are still awaiting payment for this year and last.



On his way home from the Frankfurt Book Fair, Doug LaFrenier, Director of Publication Sales and Market Development, visited Greece to meet with librarian Claudine Xenidou-Dervou at Aristotle University in Thessaloniki. Dervou, a physicist who appreciates the value of the AIP and Member Society journals, is the coordinator of the HEAL-Link steering committee for journals and a member of the HEAL-Link governing board. She assured LaFrenier that we would



Doug LaFrenier and physics librarian Claudine Xenidou-Dervou meet at the central library at Aristotle University in Thessaloniki, Greece.

receive payment soon and expressed her gratitude to AIP and its Member Societies for keeping access open to the Greek research community. By doing so, we further our mission to support the physicists who rely on our journals and to move the science of physics forward.

Journal of Chemical Physics makes a Big Bang

A large *Journal of Chemical Physics* poster appears in the cafeteria on the television program *The Big Bang Theory*. Check out the [video clip](#).

PHYSICS RESOURCES CENTER MATTERS

Outreach clearinghouse launches on the Nucleus

Groups specializing in physics and astronomy outreach efforts are active across the United States. Finding such a group to present demonstrations for a school, club, or other organization can sometimes be a challenge, however, especially in rural areas. The new [SPS Outreach Clearinghouse](#) on the [Nucleus](#) seeks to bridge this divide with a searchable database and interactive map that links to profiles of outreach groups across the country. Outreach providers can register and populate a detailed profile that

lists target groups, availability, topical focuses, and more. Outreach seekers—whether interested in viewing laser light shows, acquiring rainbow glasses, riding on a homemade hovercraft, learning about the wonders of the universe in a planetarium, or making ice cream with liquid nitrogen—can find groups that specialize in such activities in the database. Since deployment of the SPS Outreach Clearinghouse in September 2010, nearly 50 groups have registered with this new free service.

Physics Outreach Groups

Groups specializing in physics and astronomy outreach efforts are active across the United States.



The Nucleus is part of the national science digital library [ComPADRE](#) collection designed specifically as an informational touch point and online community for undergraduate physics and astronomy students. Collaborating institutions include NSF, AAPT, APS, AIP, and SPS.

WHAT'S HAPPENING THIS WEEK

Tuesday, November 2

- The National Cancer Institute's Office of Physical Sciences-Oncology invites AIP and Member Society staff to a [presentation by Dr. Leroy Hood](#), "Systems Approaches to Medicine and Cancer," at the National Institutes of Health in Bethesda, MD.

Thursday, November 4

- Nobel Prize winner Anthony Leggett will speak at Delaware State University—an event made possible by AIP, through a grant funded by Research Corporation for Science Advancement.

We invite your feedback to this newsletter via email to aimatters@aip.org.

For past issues of this newsletter, visit the [AIP Matters archives](#).

