

## Director's Matters

Guest column by Gary White, Director, Society of Physics Students

### Summer interns share their work

Staff at ACP who stopped to peer into the large conference room on Friday, July 22, could see that it was not a business-as-usual day. Hot

Wheels tracks adorned the floor with gold-colored mystery boxes adjacent; college students paced excitedly, busy with last minute preparations; tables were filled with a variety of demonstration equipment and colored flyers: the stage was set for the 2011 SPS Intern presentations. Covering topics from government hearings about NASA funding to reliability-testing of solid state devices to introducing the discoveries of Rutherford to the public, this year's crop of interns captivated the audience with brief summaries of their activities and accomplishments of the summer.



SPS 2011 interns, from the left: Anish Chakrabarti, Erin Grace, Amanda Palchak, Fidele Bingwa, Mahmuda Afrin Badhan, Cabot Zabriskie, Courtney Lemon, Binayak Kandel, Heather Petroccia, and Moriel Schottlender.



Intern Heather Petroccia and NIST mentor John Suehle attempt to determine what's inside a "mystery box" by observing how marbles enter and exit the box. The activity illustrates aspects of Rutherford's gold foil experiment.

The National Institute of Standards and Technology (NIST) continued to show its strong support of the intern program (despite the federal budget uncertainties of late!), with five representatives making the trip to ACP from Gaithersburg, MD, to hear Heather Petroccia and Binayak Kandel talk about their work determining breaking points for electronic devices. Other highlights of the morning were several hands-on science activities prepared for the 2011 SPS SOCK (Science Outreach Catalyst Kit) and for APS PhysicsQuest. Interns introduced large-scale mock-ups of Rutherford's gold foil experiment (Erin Grace, Amanda Palchak) and an

interesting thermodynamics demonstration in which a glass is placed over a lit candle surrounded by a pool of water (Moriel Schottlender). Fidele Bingwa revisited the Rutherford theme by sharing details of his work on a new web exhibit that will



Intern Moriel Schottlender

be featured on the AIP Center for the History of Physics website.

While regaling the group with tales of their adventures on Capitol Hill, the Mather policy interns (Courtney Lemon and Cabot Zabriskie) admitted being surprised at how hard members of Congress work, and how seriously they take their jobs. These positions are funded by the John and Jane Mather Foundation for Science and the Arts, having been initiated by his Nobel Prize winnings and sustained now for a second year. Courtney worked in Congressman Rush Holt's office (the only physicist currently in Congress) and Cabot worked for the U.S. House Committee on Science, Space, and Technology. Capitol Hill was also on Mahmuda Badhan's mind as she revealed exciting new ideas for Physics Success Stories, one page leave-behinds for scientists making visits to Congress.

The final presentation of the day was a report by Anish Chakrabarti about organizing "science cafés," in partnership with WGBH and NOVA, centered around a new NOVA series to air in the fall called Fabric of the Cosmos," based on Brian Greene's new book. A science café is an informal presentation and Q&A session by a practicing scientist held in a relaxed setting, like a restaurant, coffeehouse, bar, or bookstore. SPS has

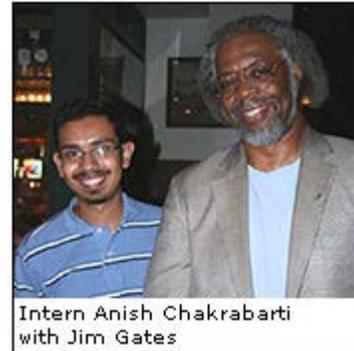


SPS staff and interns interact with Gates and his wife Dianna at the science café.

garnered support to assist 30+ local SPS chapters, many in rural areas, to host their own cafes. The science café kick-off occurred just the evening before (Thursday, July 21), and featured physicist and science spokesperson James Gates of the University of Maryland. Gates addressed the theme "String theory...the universe...and

the theory of everything" to a full house at the R.F.D. Washington bar in downtown D.C.

Thanks go to Kendra Rand, SPS program coordinator, for making the intern program a continued success. The interns have just a few more days to wrap up their summer projects. The SPS staff and I thank them for their hard work and wish them the best in their continued education.



Intern Anish Chakrabarti with Jim Gates



Sigma Pi Sigma recognizes Gates by inducting him as an honorary member. Intern Courtney Lemon attaches the honor society's pin to Gates' lapel.

## PUBLISHING MATTERS

### ***Physics of Plasmas* publishes first article with 3D media**

A large number of phenomena in plasma physics are inherently three-dimensional, but these phenomena often are not studied because the computational power for 3-D is not generally available. Now *Physics of Plasmas* has published an article that reviews several experiments in which full 3-D data was acquired. The article by Walter Gekelman and his colleagues, "The many faces of shear Alfvén waves," and was first presented to an enthusiastic audience at the 2010 APS Division of Plasma Physics

Meeting.



*Physics of Plasmas* is pleased to present the article both in print and online. So that more people can view the impressive 3-D media in this article, AIP has made the [article freely available on its website](#). In addition to movies, the online version contains a host of supplemental images, including stereo images, not included in the print version.

For more than 50 years, *Physics of Plasmas* has published research from the leading edge of this critical field. Now, with this move into 3-D publishing, the journal is also at the forefront of online publishing technology.

## PHYSICS RESOURCES CENTER MATTERS

### Reaching reporters with newsworthy research

AIP has launched a new media relations tool, a twice-monthly tip sheet for reporters called "Physics News Highlights." This tip sheet will augment AIP's current practice of issuing news releases on compelling journal research. By providing a platform for shorter summaries, Physics News Highlights will expand the number of papers AIP can highlight to reporters. It also will include other important information for reporters, such as upcoming meetings, AIP Science Communication Awards, and the latest features in *Physics Today*. You can access the [inaugural issue](#) on the [AIP News site](#), under Research News.

## AROUND AIP

### AIP supports successful education

Both Melville and College Park locations will be holding school supply drives to benefit low-income families. The Publishing Center's drive is through the [Family Service League of Bay Shore](#). Staff members are requested to bring donations of new backpacks, notebooks, pens, pencils, crayons, erasers, glue, scissors, file folders, rulers, etc., to Human Resources through August 12. ACP's drive supports students of Ridgecrest Elementary School. See the pantries for the list of requested supplies; the donation box is located in the ACP lobby. Monetary contributions are also welcome and can be handed to any member of the ACP events committee. The ACP drive runs through August 29.

## MEMBER SOCIETY SPOTLIGHT

### U.S. Physics Team excels at the 42nd International Physics Olympiad

From the recent AAPT press release:  
The traveling members of the U.S.  
Physics Team competed against 393 of



the most talented young physics students from 84 countries during the 42nd International Physics Olympiad, held mid-July in Bangkok, Thailand. They brought



home two gold and three silver medals. The gold medalists are [Brian Zhang](#) of Henry M. Gunn High School in Palo Alto, CA, and [Ante Qu](#) of West Windsor-Plainsboro High School South in Princeton Junction, NJ. Zhang placed 8th in the overall competition. The silver medalists are [Lucy Chen](#) of Ames High School in Ames, IA; [Andrew Das Sarma](#) of Montgomery Blair High School in Silver Spring, MD; and [Eric Speiglan](#)

of Naperville North High School in Naperville, IL. Thanks to the Member Societies for their financial support, and congratulations to AAPT for running this successful program! For more information, read the [full release](#).

## WHAT'S HAPPENING THIS WEEK

### Member Society Events

July 30 – August 3

- AAPT Summer Meeting (Omaha, NE)

July 31 – August 4

- 2011 Joint AAPM/COMP Meeting (Vancouver, BC, Canada)

We invite your feedback to this newsletter via email to [aipmatters@aip.org](mailto:aipmatters@aip.org).

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