DOE Princeton Plasma Physics Laboratory

Vol. 28, No. 7 • April • 2007

HOTLINE

The Princeton Plasma Physics Laboratory is a United States Department of Energy Facility

PPPL Celebrates Earth Week

Several PPPL'ers were honored with Green Machine awards for their contributions to a "Sustainable PPPL." Recipients (from left) are Paul Henderson, Bob Persing, Kevin Ying, Tom Carroll, Mike Viola, Harry Towner, John Bennevich, Lamont Watson, Linda Harmon, and Bill Gervasi with Jack Anderson. Recipients not pictured are Joe Franchino, Sajjad Gilani, Mark Kijek, James Lane, Tony Langella, Tom Steer, and Mike Widdis.

The Laboratory celebrated Earth Day on April 18, with displays, the presentation of Green Machine awards, prizes, and a special colloquium.

"This year's theme, 'Think Globally...Act Locally: Make the Clear Energy Choice Every Day,' encourages each of us individually to consider our own commitment to reducing energy use by selecting energy efficient household and building products; driving fuel efficient cars; changing to compact fluorescent bulbs and other actions that help us choose what's good for our environment," said ES&H and Infrastructure Support Department Head Jack Anderson in an e-mail to staff. "Many of you have dedicated your life's work to developing and advancing clean energy technologies. Earth Day is an opportunity to make smart energy choices in our everyday lives and in our homes, as well as at work." ●

PPPL participated in the Mercer County Improvement Authority Earth Day Celebration on Saturday, April 21, at the Mercer County Park. Thanks to volunteers, from left, Tom McGeachen, Nicole Allen, Brianna King, Mike Gilbert, and Brandon, Brittany, and Margaret King. Not pictured are Joanne Bianco and Chris Ritter.

PPPL's John Bennevich (right) discusses purchasing green products with Emma Torres (left) and Chitra Venkatraman.

New Jersey Department of Environmental Protection Commissioner Lisa P. Jackson discusses "Energy and Climate Change — Planning New Jersey's Future" at the Earth Week Colloquium in the MBG Auditorium April 18.

PPPL's Henry Carnevale picks up a tiny tree to plant at home.

And The Race is on ...

PPPL Hosts Middle School Science Bowl

Model car racing circled the track around science and math on April 14 at PPPL, the site of the New Jersey Regional Competition of the National Middle School Science Bowl®. Sixteen teams from 11 local schools signed up for the bowl that included two portions — a model hydrogen fuel-cell car competition and an academic, fast-paced question-and-answer contest in which students answered questions about earth, physical, life, and general sciences, and math. Each team was made up of four students, a student alternate, and a teacher who served as an advisor and coach.

"We had an exciting day, especially since the number of teams competing have doubled from last year," said PPPL's Christine Ritter, who co-organized the event with PPPL's James Morgan. Special thanks to all the volunteers who made the day happen (see list at right, middle).

Above, PPPL's John Boscoe (far left in blue shirt) and John Lacenere (far right) time a model car race. ●

Science on Saturday Logo Contest

The PPPL Science-on-Saturday (SOS) organizers ar sponsoring a contest for the design of an SOS logo. Send your entries via e-mail to Ronnie Hatcher at **rhatcher@pppl.gov** by June 1. The contest winner will receive gift certificates totaling $50 to a local restaurant and the Plasma Hutch. For more information about the SOS lecture series program, visit the web at http://science-education.pppl.gov/ScienceonSat/Index.html ●

Thank You, Middle School Science Bowl Volunteers!

Jessica Baumgaertel
Laura Berzak
John Boscoe
Joshua Breslau
Patti Bruno
Tiana Dodson
Daniel Fong
Rose Fuchs
Pamela Hampton
Linda Harmon
Ronnie Hatcher
John Lacenere
Kathleen Lukazik
Doug McCune
Linda Moskovitz
Patrick Ross
Skip Schoen
Paul Sichta
Cheryl Such
Kyron Williams
Randy Wilson

Lab Hosts Girls' Tech Conference

The 2007 Young Women's Conference in Science, Mathematics and Technology at PPPL on March 16 drew 153 eighth through 12th graders from 24 school districts throughout New Jersey and New York. Jill Foley, above, was one of several women scientists who made presentations to the attendees. PPPL's Chris Ritter organized the conference, PPPL's Lena Scimeca organized the Lab's volunteers, and Princeton University's Anne Catena managed the exhibits.

Hotline

Editor/Writer: Patti Wieser **Graphic Artist:** Greg Czechowicz
Photographer: Elle Starkman **Layout:** Patti Wieser and Greg Czechowicz

The HOTLINE is issued by the Princeton Plasma Physics Laboratory, a research facility supported by the United States Department of Energy. It is primarily an internal publication. Correspondence and requests to reprint material should be directed to the Editor, PPPL HOTLINE, P.O. Box 451, Princeton, NJ 08543; Interoffice correspondence should be addressed to MS-38, LSB Bldg., C-Site; fax 609-243-2751; telephone 609-243-2757; e-mail pwieser@pppl.gov.

PPPL Engineers Work with Local Students to Build Robot

There's nothing like a robot competition to inspire high school students.

And there's nothing like the chance to help students design and built a robot to draw PPPL engineers into a mentoring project with the local high school.

PPPL's Ray Camp and John Lacenere spent several weeks this winter helping a team of students from West Windsor-Plainsboro High School North complete a project for the FIRST [For Inspiration and Recognition of Science and Technology] Robotics Competition.

The competition is "a unique varsity sport of the mind designed to help high-school-aged young people discover how interesting and rewarding the life of engineers and researchers can be. FIRST Robotics Competition challenges teams of young people and their mentors to solve a common problem in a six-week timeframe using a standard 'kit of parts' and a common set of rules. Teams build robots from the parts and enter them in a series of competitions," according to the FIRST web site (http://www.usfirst.org/).

This was the second year Camp and Lacenere teamed up to mentor West Windsor-Plainsboro students. Other PPPL'ers who have served as mentors to FIRST teams at area schools are Bill Blanchard and Alex Nagy.

"This year we started working with about 10 kids who are the core team on the school's FIRST project," Camp said, adding that a few other students helped occasionally. The after-school meetings took place in a classroom. The school bought the FIRST kit, which included boxes of parts, a video, and a description of the project.

Camp and Lacenere began working with the students in January, meeting with them up to three times a week. "We gave hands-on, conceptual help. The kids were good with ideas, but we emphasized 'keeping it simple,'" Camp said. "We also offered practical help."

For instance, some of the students had never used a drill, and the engineers taught them how. "Some of these kids had never picked up screwdrivers or tools in their lives," Lacenere noted.

In addition to the PPPL engineers, a group of TCNJ engineering students joined the team as mentors. "They helped the kids do machining," Lacenere said.

Lacenere, whose three daughters are present or past students in the school district, said he enjoyed working with the FIRST team, spending two to three afternoons during the design-and-build period.

"It was fun. We provided guidance in terms of direction. We taught them how to write a scope of work," he said. There were restrictions and guidelines such as height and weight limits, and specifications for items to include. Various items were worth designated points, and the team figured out how it wished to score points.

John Lacenere (second from left) and Ray Camp (tan shirt) help West Windsor-Plainsboro High School North students design and build a FIRST robot.

"The students needed help funneling ideas in one direction. This experience taught the kids how to run a project, how to think in advance and come up with a workable solution, and how to work as team," Lacenere said.

The students benefit from their involvement in FIRST, the mentors agreed, even if some of them do not go on to pursue careers in science and engineering. "The project made them feel a part of something and it was defined from beginning to end. It promoted teamwork and encouraged the students to develop new friends," Lacenere said.

He and Camp said the team was made up of students of both genders, some interested in computer science, others in engineering.

"My goal was to be an ambassador and to help them. Ray and I knew most of the answers to their project problems, but the students needed to make their own mistakes before arriving at a solution," Lacenere said. "They needed to go through the process, develop a scope of work, work as a team to build the robot together, and then watch the competitions and compete, seeing how they measured up to others."

Added Camp, "I could see what needed to be done, but sometimes I had to stand back and let them work it out, even if it meant failure."

Camp lauded the FIRST concept, noting that projects similar to FIRST were not available when he was a high school student. "I never got to do this kind of stuff," he said. Added Lacenere, "It is the soap box derby of the 21st century." ●

Going Green with Office Furnishings

PPPL's Keith Rule shows Dana Mastrovito catalogues and furnishings for environmental, ergonomical, and cost-effective solutions for outfitting an office.

If you look hard enough at the gray furnishings in LSB Room B-138, you may begin to see green.

The showcase room displays environmentally friendly Steelcase furniture, which has cradle-to-cradle certification. Products used to manufacture the pieces are clean, made of high recycle content and can be taken apart at the end of use to make another piece of furniture. The furniture is also ergonomical, highly durable, and reasonably priced.

The furniture was chosen when staff representing the Lab's environmental, industrial hygiene, and facilities groups weighed in on the best selections for office furniture when new is needed. Office computers have changed the needs and while some used furniture available through the Warehouse may fit the bill, some new pieces may be required for their ergonomic qualities, including computer stations and chairs.

"We would like people to visit the showroom to see what is available if they need to purchase new office furniture," said Keith Rule. "We want to show PPPL employees their options."

Staff from Rule's group will be available at most lunchtimes to discuss the benefits of the Steelcase furnishings. Rule said the hope is that staff members purchase Steelcase products rather than ordering furniture through a catalogue. The Steelcase Think Chair, a task chair, is now a Stockroom item. The Lab will standardize color selections—charcoal and black for the furniture—as well as fabric choices.

Stop by the model room at noon to try out the "green furniture" during the next few weeks.

PPPL Honors Admin. Professionals

The Laboratory honored its administrative professionals on April 25 at a reception in the LSB Commons. Honorees (from left) are Cynthia Murphy, Joanne Bianco, Rose Fuchs, Marilyn Hondorp, Joanne Savino, Pamela Hampton, Marianne Tyrrell, Jennifer Jones, Kathleen Lukazik, and Barbara Sarfaty. ●

Calling All Volleyball Players

Photo by Mike Kalish

Are you interested in playing volleyball at lunchtime? The PPPL "Volleyball Bunch" invites anyone at the Lab to join the bunch at noon each day on the volleyball court outside the Theory Wing. All skill levels are welcome. For more information, please call Gretchen Zimmer at ext. 3133 or Sterling Smith at ext. 2493, or send an e-mail to spsmith@pppl.gov. Players are encouraged to just show up at the next game. The Volleyball Bunch announces the cancellation of games due to weather and other items through e-mail. To be added to the list, send Sterling an e-mail. ●