

HOTLINE

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

PPPL to Host U.S. ITER Home Office

On July 13, Department of Energy officials announced that PPPL will host the U.S. project office for ITER, a major international fusion experiment. PPPL, in partnership with DOE's Oak Ridge National Laboratory (ORNL), will be responsible for overseeing the U.S. ITER Project Office and providing it with the requisite staffing and facilities.

"The United States and our international partners are in talks to launch ITER, a critically important experiment to test the feasibility of nuclear fusion as a source of electricity and hydrogen," Secretary of Energy Spencer Abraham said.

"Throughout its history, Princeton Plasma Physics Laboratory has earned a reputation for the highest-quality science and top-flight management," Secretary Abraham said. "Ever since fusion research began at Princeton University in 1951, our nation and the world have looked to this facility's researchers for scientific and engineering insights that will enable mankind to realize the benefits of fusion, the energy that powers the stars and the sun."

"That is why I am pleased to announce that, after careful review, we have selected the Princeton Plasma Physics Laboratory/Oak Ridge National Laboratory partnership to run the U.S. ITER Project Office," Secretary Abraham said. "I am confident that our partners in the ITER negotiations will recognize our choice of PPPL/ORNL to manage the U.S. participation in ITER for what it is: the clearest possible indication that our Nation takes ITER – and our role in ITER – very seriously."

PPPL Director Rob Goldston said, "PPPL is very pleased to have been selected to host the U.S. ITER Project Office, in partnership with the Oak Ridge National Laboratory. We had very highly qualified competition, and so we are particularly pleased with the outcome of the selection process. The efforts of the U.S. in support of ITER will be nationwide and we will be drawing on the capabilities of the whole U.S. fusion research community."

The U.S. ITER Project Office at PPPL will be responsible for project management of U.S. activities to support

PPPL'ers,

I have some good news to report. Dr. Ray Orbach, Director of the DOE Office of Science, has selected PPPL, in partnership with the Oak Ridge National Laboratory, to host the US ITER Project Office. Ned Sauthoff will be the Project Manager, and Carl Strawbridge from ORNL will be the Planning Control Manager. Carl currently has responsibility in this area for the very successful \$1.4B Spallation Neutron Source project at ORNL.

We worked very hard to put together an excellent proposal; evidently the quality of our proposal and the commitment of Princeton to the success of fusion allowed us to be selected over first-rate competition. In her letter of support, President Shirley Tilghman said, "Princeton University's motto commits us to 'the nation's service and the service of all nations.' The ITER project allows us to unite two longstanding Princeton commitments—to fusion energy science and to strong international cooperation." This is a major step for PPPL onto the front lines of international fusion research. The next challenge, of course, is for the ITER Partners to settle on a site for the project.

The U.S. ITER Project will be very much of a national effort, which includes not only ourselves and Oak Ridge. We will be involving persons and institutions from all over the U.S. fusion research community. This has to be a truly national effort to succeed.

Please join me in offering strong support to Ned Sauthoff as he takes on this major challenge for the Laboratory, for the nation — and for all nations!

— Rob Goldston
PPPL Director

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construction of this international research facility. These will include securing technical assistance from the U.S. fusion community; procuring and shipping U.S. hardware contributions; arranging for U.S. personnel to work abroad at the ITER site; representing the U.S. with the international ITER organization on construction and preparation for ITER operations; and coordinating and integrating the U.S. fusion community's ITER project activities with the international ITER project.

Sauthoff Named Project Manager

PPPL's Ned Sauthoff has been named Project Manager and ORNL's Carl Strawbridge has been named Planning Control Manager.

Sauthoff said, "Our team is thrilled to be selected to serve. ITER is important not only because of its fusion science and technology, but also for the new paths it will blaze for international collaborations. ITER's success will demand coordination of project activities by six nations or groups of nations, who together will provide components for the assembly and operation of the world's first magnetic fusion burning plasma experiment."

Present activities for the team include technical and organizational action to enable an efficient start of construction. These include:

- Building a multi-institutional U.S. project team.
- Exploring strategies for acquiring the challenging components that the U.S. will provide to ITER.
- Identifying and mitigating risk to ensure ITER's success.
- Engaging industry in prototyping the manufacturing methods and qualifying suppliers of high-tech components and materials.

The PPPL/ORNL proposal was one of three proposals submitted by DOE national laboratories to lead the Project Office. The two other proposals were from Lawrence Livermore National Laboratory and Idaho National Engineering and Environmental Laboratory. The applications were reviewed by a merit review committee, which was appointed



Ned Sauthoff

on April 12 by Dr. Raymond L. Orbach, Director of the Office of Science. The committee was comprised of six members – five current senior DOE federal officials and one retiree, who were selected for their experience overseeing complex projects. The panel included legal advice. The review panel conducted a rigorous, objective and fair review of the three proposals and forwarded their evaluations to Dr. Orbach, who made the final selection.

On January 30, 2003, President Bush announced that the U.S. was joining the negotiations for the construction and operation of the international magnetic fusion experiment ITER. There are two competing sites to host the \$5 billion test bed for harnessing nuclear fusion to generate electricity. The European Union has selected Cadarache, France, as its candidate site; Japan's contender is Rokkasho. The U.S. supports the Japanese site.

The ITER international fusion experiment was priority one in Facilities for the Future of Science: A Twenty-Year Outlook, a proposed portfolio of 28 new facilities and upgrades of current facilities that Secretary Abraham released in November 2003 to serve as a roadmap for future scientific facilities to support DOE's basic science and research mission and to help the Department plan its future scientific investments. ●

Hotline

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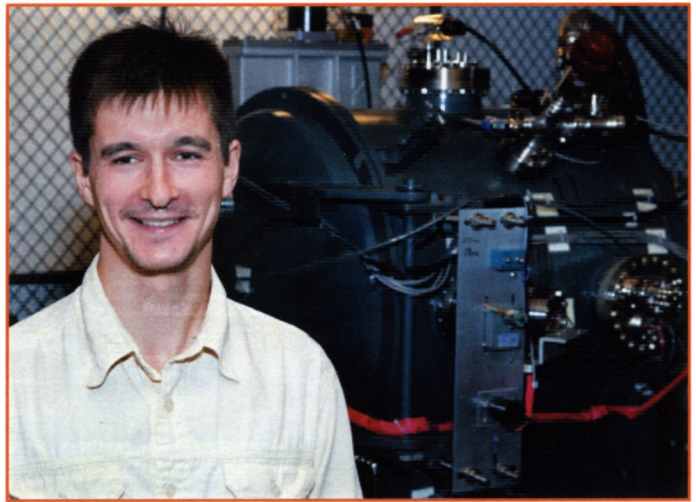
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PPPL Graduate Student Receives Fellowship

PPPPL graduate student Artem N. Smirnov recently was awarded a Harold W. Dodds Fellowship for the 2004-05 academic year. Smirnov is a graduate student in Princeton University's Astrophysical Sciences Department, Program in Plasma Physics. He is involved in research on the Hall Thruster project at PPPL, working with Nat Fisch and Yevgeny Raitses.

Smirnov has been at PPPL since 2000. He received a master's degree in physics from the University of Nizhny Novgorod (Nizhny Novgorod, Russia) in 2000.

Established in 1957 by an anonymous donor in honor of Princeton's 15th president, the Dodds honorific fellowship recognizes Smirnov's distinguished work in the Department of Astrophysical Sciences, Program in Plasma Physics. Honorific fellowships recognize outstanding performance and professional promise, and represent high commendation from the Princeton University Graduate School. ●



Artem N. Smirnov

Welcome



Michael Burin recently came on board as a postdoctoral student at Princeton University's Astrophysical Sciences Department to do research on the new Princeton Magnetorotational Instability (MRI) Experiment at PPPL. He is working with PPPL's Hantao Ji and Princeton University Professor Jeremy Goodman. Burin received a Ph.D. from the University of California at San Diego in October, 2003. ●



Stefan Gerhardt began June 1 as a postdoctoral student at Princeton University's Astrophysical Sciences Department to do research on the Magnetic Reconnection Experiment at PPPL. He is working with PPPL's Masaaki Yamada and Hantao Ji. Gerhardt received a Ph.D. from the University of Wisconsin in 2004. ●



Name: Mike Kalish

Position: Mechanical Engineer with duties on the National Spherical Torus Experiment (NSTX) and the National Compact Stellarator Experiment (NCSX) projects. On NSTX, responsible for the de-ionized chilled water systems that cool the magnetic coils, as well as the helium and hot water bake-out systems that burn off impurities and keep the plasma pure. On NCSX, responsible for the design and procurement of the poloidal field and toroidal field coils.

Quote: I've been a fan of science fiction and was interested in technology since I was a kid. In '91 I read an article in the *New York Times* about the Burning Plasma Experiment (proposed to follow the Tokamak Fusion Test Reactor) and when I learned through a friend that PPPL was interviewing mechanical engineers I jumped at the opportunity. Whenever things get tough at work it helps to remind myself of that early enthusiasm.

Other interests: "I enjoy skiing and listening to live music, but my priority is spending time with my wife, Suzanne, and our two daughters, Jemma and Jessie. The four of us just returned from a camping expedition at Indian Lake in the Adirondacks, where I spent most of my time engineering the tarps over the tent to keep the rain out." Pressed for time Kalish has incorporated his latest hobby into his commute and now wends his way to work on his '82 Kawasaki. He also loves going to hear musical performances — from acoustical guitarists and blues musicians in bars and coffee houses to rock bands at auditoriums and amphitheaters (he won't admit to how many Bruce Springsteen concerts he's attended). Mike also listens to CDs at home, where his daughters often tell him to "turn it down." ●

Send Us Your Story Ideas

Hotline depends on you for tips and story ideas. Joanne Bianco suggested the story about Rob Sheneman bicycling for charity. Please send your ideas via e-mail to pwieser@pppl.gov or call ext. 2757.



Sheneman To Ride for Charity

For PPPL's Rob Sheneman, bicycling is more than an exercise regimen. It's a way for him to help his father — and others who have leukemia — by raising funds for blood cancer research.

In November, Sheneman will support the Leukemia & Lymphoma Society by riding in the 105-mile El Tour de Tucson bicycle race, a one-day charity ride in Tucson, Arizona. He is participating through the society's Team-in-Training program, which recruits volunteers to compete in endurance sport events — marathons, triathlons, and bicycle races — to raise money for the Society's programs.

"I will be riding in honor of friends and family members who are living with leukemia. This includes my father, Lloyd, who has lived with chronic leukemia for 22 years," said Sheneman, Head of PPPL's Materiel and Environmental Services.

To compete in the race, Sheneman must raise \$4,200, but he has set his sights much higher. "My personal goal is to raise \$10,000," he said. As of July 16, he has raised more than half of this goal.

Sheneman is already in training for the race, using a hybrid bicycle that he stores in the back of his vehicle. He rides about four times a week at lunchtime for distances of 10 to 12 miles. On the weekends, he goes much farther, up to 60 miles. To further get him into shape for the bike race that is equivalent to a marathon, he is taking a group of Boy Scouts backpacking for two weeks in New Mexico this summer.

"I've never ridden 100 miles in a day, but I'm confident I can do it with the right training and the right attitude," Sheneman said. "Challenges like these are easier when you believe in what you are doing. If people can live with cancer every day, then I can train and do this for them."

The self-described "solo recreational rider" took up bicycling seven years ago as a way to condition a broken leg, and continued the activity as a hobby. "I really enjoy riding," said Sheneman, who now trains with other cyclists under the direction of various coaches.

Sheneman will be buying a road bike to use in the Tucson race, where he will ride among an estimated 5,000 cyclists. His "honored teammates" in the charity ride are friends — including a fellow Boy Scout leader who has leukemia — and the cyclist's father, a retired Lutheran minister. These teammates are helping with publicity and fund raising for the ride.

Sheneman said his father has benefited from leukemia research, which has yielded new treatments to combat the disease. Much more progress, however, is needed. Since 1988, Team in Training has raised more than \$430 million for blood cancer research, patient support, and outreach programs. At least 75 percent of the funds raised for the



Rob Sheneman trains for the 105-mile charity ride.

program go toward the mission, which is to find a cure for leukemia and to help patients and their families until a cure is found.

For Sheneman, backing this mission by participating in the charity ride takes on a special meaning when he reflects on how his father has supported him throughout life. "You don't often get the chance to show your parents how much you appreciate everything they have done for you. This is my way," said Sheneman. ●

Donations may be mailed to Sheneman at 31 Shields Ave., Flemington, N.J., 08822. Please make checks out to "Leukemia & Lymphoma Society," with a notation that it supports Rob's ride. Or make your pledge on line at <http://www.active.com/donate/tntnonj/RSheneman>. If you donate \$100 or more, Sheneman will add your name to his Team-in-Training jersey as a "Signature Sponsor."

Electronic Photo Drop Box Now Available

Many groups within the Laboratory have their own digital cameras and are taking photos of various work-related activities. To effectively document PPPL research and engineering activities, the Laboratory must maintain a comprehensive, central photographic data base of its work. This database is a major part of PPPL's legacy.

In support of this important goal, PPPL staff are reminded to provide original electronic files of their photography to Elle Starkman. To facilitate this, a photo drop box has been established. Connecting to the server is straightforward:

Mac Users:

You must be running OS X. From your desktop, go to the "Go" menu, and select "Connect To Server." In the connect to server box, enter "smb://pc-datasrv1.pppl.gov/photo-archive/," and click connect. If you're prompted, enter your Windows Domain (same as your email) username and password.

Windows Users:

Go to to your P:\ drive. Open the "Photo Drop" Folder. Staff should then copy pictures into the "Drop Photos Here" folder. Once you've done so, please e-mail Elle Starkman (estarkman@pppl.gov) to identify the pictures you have contributed.

Photo files should be sent to Elle if one or more of the following criteria are met:

1. All photos depicting the fabrication or assembly of components for experimental devices at PPPL or elsewhere by PPPL staff.
2. Photos that might be of value in legal proceedings.
3. Photos that might have historical value, e.g., photos depicting activities in the NSTX control room when a new record is being set.

4. Photos that may possibly be used in a published report or paper.
5. Photos of diagnostic equipment and unusual or novel computer setups, e.g., the PPPL display wall.
6. Photos of unique, remodeled, new, or upgraded facilities.
7. Photos that could be used in PPPL brochures, fact sheets, Lab histories, or PPPL Hotline/News, e.g., photos of people working on equipment or in facilities. These could be candid shots, i.e., the subjects do not have to be posed.
8. Photos that demonstrate safe work practices.
9. Photos of lab-sanctioned events, e.g., receptions following award presentations, the Director's State-of-the Lab address, etc.
10. If you are in doubt about the value of a photo or series of photos, vis-à-vis the above criteria, send them to Elle anyway.

Please contact either Tony DeMeo or Elle Starkman if you have any questions or problems. Your cooperation is genuinely appreciated. ●



Scimeca is Chairwoman of the Board

First-floor LSB travelers in need of a little humor should stop and read the message swirled across the board outside B-141. Computer Account Administrator Lena Scimeca — a.k.a. “Chairwoman of the Board” — dispenses advice and cheer by posting a “saying of the day” by her office door.

Examples of Scimeca’s creativity are: “Shin, a device for finding furniture in the dark” and “Just when I was getting used to yesterday, along came today.”

Scimeca began coming up with witticisms for the board when “In” or “Out” seemed too drab. “That got boring after awhile,” she said. Fellow-workers Chris Minervini and Marc Cohen used to add “trouble” or “hot water” to her “in,” but even that got old so Scimeca started to put up nonsensical, Seinfeld-like sayings each day. Eventually, she needed a larger board and Erik Perry donated one.

Now people stop by regularly to see the saying of the day. “I can’t get over how popular this board has become,” said Scimeca.

Some people answer questions posed, such as “Why doesn’t glue stick to the bottle?” (There is a scientific reason and — you guessed it — a scientist cleared up the query for her.)

The board has been up for about a year. “Good, bad, or indifferent, it makes people think,” she said. She usually comes up with her own sayings — a hobby she began as a child — but occasionally people drop off suggestions, sometimes pages full for her consideration. And there’s never a repeat posting. Well, once there was, and she never heard the end of it.

When she is out, she leaves a straightforward message, “I’m not in today. Please see the Help Desk staff if you need assistance.” Friday nights, the board is usually left



Lena Scimeca posts a saying for the day.

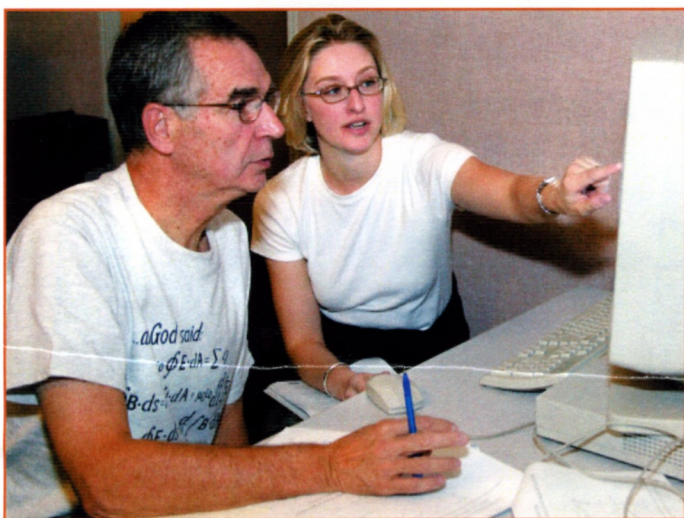
blank, although she has been known to leave a saying up for weekends. “It’s the weekend, what are you doing here?”

“I like to put up silly things. I never meant for it to be a serious board. Folks who stop are from all walks of the Lab, including Human Resources staff, janitors, physicists, techs, engineers, and managers,” Scimeca said.

In many ways, it’s a morale booster,” she added, noting that sometimes she sees a pair of feet stop across the hall and face the board. There is a pause, a chuckle, and the feet move on.

Special days require special touches. On Cinco de Mayo Day, she wrote her message in Spanish. Occasionally she puts up sayings from old TV shows, such as “Here comes the judge, here comes the judge.” Other times, she posts tongue twisters. “I’m just trying to get people to think. It’s gotten so popular that people come by every day to see the latest up on the board. It’s fun,” said Scimeca. ●

Plasma Camp Teachers Participate in Experiments



A group of high school physics teachers involved in PPPL’s Plasma Camp conducted research on the National Spherical Torus Experiment (NSTX) last month. Five of the nine teachers enrolled in Plasma Camp, officially called the Plasma Science and Fusion Energy Institute, worked alongside PPPL scientists, monitoring results and drawing conclusions from data obtained from NSTX. The camp was an intensive one-week summer program of lectures, lab work, and curriculum design. “We used a national collaborative fusion experiment as a teaching tool for some of the returning teachers. The teachers collected data and evaluated experimental results,” said PPPL Science Education Program Head Andrew Post-Zwicker. ●

Plasma Camp teachers Yvon Lapointe (left) and Stephanie Connors evaluate NSTX results at a computer terminal in the Control Room.

Let's Celebrate The Successful Completion of
20 Run Weeks

by



Everyone's invited!

Pizza, Soda, Ice Cream,

Music

Friday, August 6

L.S.B. Lobby and

Cafeteria Courtyard

11:45 AM