

# HOTLINE

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

## New Team Leader for ITER

**D**L, from DOE PPPL, is the BIPT for ITER, directly serving the IO. *Hub?*

**Translation:** Doug Loesser, an engineer at the U.S. Department of Energy's Princeton Plasma Physics Laboratory (PPPL), is the Blanket Integrated Product Team Leader (BIPT) for ITER, the international fusion experiment. Loesser directly serves the international ITER Organization (IO), coordinating the efforts of the blanket team.

"A blanket module is basically a block of actively cooled stainless steel with a copper heat sink and beryllium layer facing the plasma. Its function is to absorb heat from the plasma and provide nuclear shielding," says Loesser, who began his role as team leader in December.

"I'm responsible for this large component, totaling about 2 million pounds of stainless steel. It has close to 460 modules – each weighing 4 tons. The approximate cost to the project is about \$500 million," he says. There are 440 wall-mounted modules and about 20 port-mounted modules. The blanket team jointly designs the component and splits the tasks. Its fabrication parties each build a piece of the component and get credit for producing those parts.

The blanket team includes six of the seven ITER parties — China, the European Union, Japan, Russia, South Korea, and the U.S. The seventh ITER party is India, which is not involved in the blankets. Loesser's team includes about 30 engineers and 30 designers, half working at the ITER site in Cadarache, France. "My job is to make sure that the work going on in each domestic agency and the blanket section of the IO are all organized toward a common goal," he says.

Initially, each of the six parties involved in the blankets were responsible for one-sixth of the component, but the team decided to consolidate their efforts and save money. "Three parties are fabricating the blanket modules instead of six par-



ties producing identical fabrications. This eliminates duplicate tooling and designs," Loesser says.

The blanket team leader concedes there will be some minor variations in the final products. But having more than one fabricator makes the process competitive, which can be a plus.

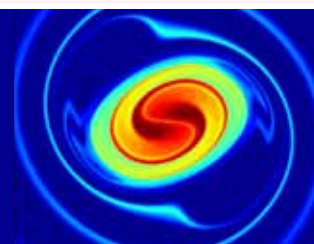
While Loesser works for ITER at the international level, he is paid by PPPL. "The U.S. offered my services to IO. Rather than being tied to one domestic agency, I'm a neutral person responsible for coordinating all the blanket efforts of the domestic agencies and within the IO," Loesser says. He reports to Gary Johnson, a former Oak Ridge National Laboratory employee who is now IO director in charge of the tokamak systems.

continued on page 2

**INSIDE**

**Art of Science**

see page 7



## Loesser

continued from page 1

Loesser has 30 years of experience in engineering fusion-related components and an international reputation for his knowledge and contribution to the development of in-vessel technologies, especially plasma facing components and blankets. For many years he was involved in the design of ITER, supported the earlier ITER Conceptual Design Activity during a three-year relocation to Germany, and more recently supported the ITER diagnostics integration.

“Doug has been instrumental in developing the design of ITER first-wall components dating back to the original Engineering Design Activity. His intimate knowledge of the ITER design and technical requirements make him an ideal choice to lead the Blanket Integrated Product Team,” said Mike Williams, PPPL Associate Laboratory Director for Engineering and Infrastructure.

Much of Loesser’s job entails travel, especially to the ITER site in France, where he leads monthly team meetings. The key is to have clear agendas and keep the meetings on track. “I probably go over there about half the time, making frequent shorter trips instead of month-long trips. The rest of the time, my work gets done over the phone — often conference calls — and through e-mails,” he explains.

Loesser oversees weekly conference calls with participants from each domestic agency, as well as from the IO blanket section. “Our team tries to bring everyone up to speed during these calls,” he says. “One issue is to better communicate between the IO and the domestic agencies. Sometimes the domestic agencies have out-of-date drawings or are working on tasks that are obsolete. One of the biggest benefits to these meetings and calls is improving communications, and making sure partners are spending their time on relevant work.”

As the leader, he often addresses more than technical competency. “You have to work at understanding the various cultures when you are conducting the meetings, as well as how politics influence each ITER party,” Loesser notes. “I am the liaison between the different domestic agencies and the IO, and I try to resolve conflicts. I try to meet the project goals at the same time, striking a balance.”

When he’s at PPPL, he shows up at 3 a.m. at least two days a week to participate in a conference call with his ITER partners. “It’s nice that the working language is English, although accents are a little difficult at times,” he says, adding that he doesn’t speak French.

Loesser says his job is easy for one reason: “I like all the people I’m working with.”

At home and at PPPL, his life revolves around packing and unpacking, writing trip reports, and preparing for the next trip, as well as the conference calls and e-mails. His hobbies, besides soccer and bicycling, are his family — including one child in college and two who have graduated from college. “Paying for college is my hobby,” he says. ●

## McCune to Bike in Charity Ride

For the 15th time, PPPL’s Doug McCune will participate in the seven-day, 500-mile Anchor House Ride for Runaways. McCune, Co-head of the Lab’s Computational Plasma Physics Group, will join more than 200 other bicyclists in Oswego, New York, on July 12, to begin the cycling marathon to Trenton.

Their goal: To raise funds and awareness for Anchor House, a multi-service agency in Trenton for runaway, homeless, abused, and at-risk youth and their families. “The Ride supports a worthy cause. Anchor House serves hundreds of clients every year. It provides runaways with temporary shelter away from their families, helps past clients become independent adults, and addresses social needs associated with families in trouble, like drug abuse and poverty,” McCune says.

McCune, a cyclist since high school, bumps up his cycling efforts every March to get in shape for the Ride. “You can’t just do the Ride without preparation. You need to train,” he says. He covers between 1,000 and 1,500 miles of area roads — hilly and flat — each spring. During his first experience on the Ride 16 years ago (he rode 14 years in a row and then took last year off), McCune had an old 50-pound Schwinn touring bike christened “The Lead Sled” by other Anchor House riders. “I was like a surfer going out with a Styrofoam® board.”

Then his wife bought him a better bike. Now he rides a 20-pound titanium frame bike with various carbon fiber components. The participants ride a bus to Oswego and have their bikes transported to the starting point. The event organizers provide lodging throughout the adventure, as well as rest stops with refreshments and encouragement along the route.

For McCune, the Ride is a sojourn. “We socialize and have plenty of relaxation time. After a day’s ride, I can lounge by the hotel pool with a book, dine, and then sleep soundly because of the exercise,” he says. “I have a lot of technical software issues at work. The Ride week is a real break from the daily routine — a thorough vacation. Much of the route is through farm country. Sometimes the early mornings are misty, and the view is just beautiful.”

PPPL friends support his charitable endeavors. “Their generosity in sponsoring my annual ride has resulted in approximately \$65,000 in contributions to Anchor House over the past 16 years,” says McCune. E-mail [dmcune@pppl.gov](mailto:dmcune@pppl.gov). ●





*The new PPPL Deputy Director for Research talks about research challenges, his experimental and project management experience, and how he relaxes outside of work*



**Did you envision a path that would take you from bootstrap current research to the Deputy Director for Research position?**

I did not expect this, but I've had a number of positions over the years with growing responsibilities, so this is likely part of a progression. If NCSX [National Compact Stellarator Experiment] had continued, I probably would not have gone in this direction now. Becoming Deputy Director for Research was enabled by Stewart's [Prager] coming and by my being available because of NCSX.

I came to PPPL in 1984 [after receiving a B.S. in physics, mathematics, and computer science and a Ph.D. in physics, both from the University of Wisconsin-Madison] during the early days of the Tokamak Fusion Test Reactor (TFTR) and its physics development. After reading and learning about tokamaks — I had not studied them before I came — I immediately got involved in analyzing data for the IEA [International Energy Agency] meeting.

**What do you see as the largest challenge (s) in your new position?**

There are a lot of challenges, some of which we're mapping to new initiatives. The Laboratory's been quite successful in being engaged in more than fusion research and in a much broader set of activities than we were during the TFTR era, but in doing so, we have become somewhat fragmented. One of the challenges is just plain communicating across the Laboratory — the departments, divisions, research activities, and projects — so that everybody is aware of the developments and the successes in other parts of the organization and can contribute their knowledge.

Another set of challenges comes from fusion being at a crossroads as a field, and precisely which way it's heading is not clear. But with ITER and the increased emphasis on energy, there are potential opportunities for fusion and plasma physics. We must all become engaged in international collaborations. We're certainly committed to ITER. We must figure out as a Lab and as the U.S. community how we are going to transition to having our biggest research facility overseas. Near-term stepping stones are KSTAR [in Korea], EAST [in China], JET [in UK], JT-60SA [in Japan], LHD [in Japan], and W7-X [in Germany]. They have unique capabilities that we don't have at PPPL or in the U.S. We must use these facilities to prepare for ITER, while maintaining communication and acting as a unified laboratory.

Another challenge is how to better integrate with the University and with the resources that are around us, and defining the roles that we can play to enable fusion, plasma physics, and engineering education to train the next generation. ITER will start in about 10 years and will finish in 20-plus years. Most of us at PPPL will be retired by then. We must mentor and prepare the next generation, and transfer our knowledge so that the overall fusion enterprise is successful. We are actively trying to bring in a large number of young physicists, engineers, and other staff.

We need to look beyond ITER by preparing for the devices to follow it. Future research must address issues not addressed by ITER, including higher performance burning plasmas, steady-state operation and reliability. ITER is a huge step, but there will be many scientific and engineering issues pending. Along with our collaborators and partners in ITER, we must craft a broad program and propose ideas to carry out the research needed to go beyond ITER.

**How is managing and deciding research directives different from conducting research? How has your experience prepared you for this role?**

Throughout my career at PPPL, I've had many management and organizational responsibilities, including on NCSX and as Deputy Head of the TFTR Physics Division. Being Deputy Director is similar to both, but on a larger scale. For the NCSX experiment, I was responsible for setting research goals, managing the design process and developing the physics mission.

Since becoming Deputy Director, I've had to change some of my work habits, like trying to be more punctual. And my days are largely made up of meetings.

**How do you relax?**

I enjoy spending time with my wife, Sally, and our 10-year-old son, Jonathan. I'm attempting to ensure that I make time every day for them and devote a large chunk of my weekends to family time. Ten is a pretty important age and I am engaged in Jonathan's activities, like the Cub Scouts. I am also the treasurer of his pack. Also, my family enjoys bicycling and canoeing. Most days I bike to work during reasonable weather. And Sally and I are both from Wisconsin, so we go there twice a year to visit family and friends.

**What would you do if the Laboratory established a new policy that outlawed sandal wearing?**

I'm flexible. Sandals are a matter of being comfortable. I wear them year-round since New Jersey doesn't have real winter. If we had temperatures significantly below zero or large snowfalls, I would wear something else.

Interview conducted and edited by Patti Wieser. Photo by Elle Starkman.

# Engineering Drawings Go Digital

## Online Site of All PPPL Engineering Drawings Created

**B**yond the second floor L-wing experiments and around a bend, there is a large room full of beautiful drawings — engineering works depicting tokamaks and spherical torii and other fusion experiment configurations — carefully catalogued and stored in flat files.

Drawings two inches deep rest on a table near the entrance. On top is the “NSTX Test Cell Plan.” Nearby, rows of flat files filled with hand-drawn and computer-generated engineering designs crowd the Blue Print and Drawing Files Room. There are drawings from 1977 until now, and from past projects like TFTR, PLT, and PDX to present experiments such as NSTX and LTX.

Someday soon, the room may become empty, its 34 by 44 scrolls defunct.

PPPL Senior Program Analyst Jim MacTaggart and Design Group Supervisor Jerry Siegel developed a system about two years ago to make all the Lab’s engineering drawings available on line. Now, nearly one-third of the room’s contents are available as PDFs on PPPL’s internal web site.

“The engineers, technicians, and anyone else can retrieve a drawing online instead of coming to the file room and looking for it. It saves time,” says Siegel. “We’ve made PDFs for both Macs and PCs.”

MacTaggart, of the Business Computing Division, and Siegel, of the Engineering Division, developed the system for digitalizing the drawings and placing them on the web for easy retrieval. Here’s how the system works: A designer sends a PDF of a completed drawing to Siegel, who opens it, stamps it in red with “Released for fabrication and installation,” and saves it to the storage area for the engineering drawings web site. By the next morning, the software system developed by MacTaggart adds the new content to the site. Older manual drawings are in the process of being scanned and made into PDFs for the site.

“The red stamp means the drawing is an official drawing,” Siegel explains. “No one can modify these drawings. They are for print only. Every drawing that is released comes through me.”

When the project began, Siegel had a database of the drawing numbers and titles on his PC. MacTaggart developed software that would read through the database and develop the menus for the web pages. Now the software system runs by itself to add any new drawings from Siegel.

Before the new system was launched, Siegel’s access database was the only place where the drawing numbers and descriptions of the drawings existed. He’d kept track of the drawings and IDs for years. “No one knew what was available. Someone would go to Jerry to see if something was available and he would look,” MacTaggart says. “We’d thought about this and were asked earlier, but didn’t have the technology. Once



**Surrounded by engineering prints in the Lab’s Blue Print and Drawing Files Room, Jerry Siegel (left) and Jim MacTaggart review PPPL’s on-line engineering drawings site.**

the technology became available, I moved Jerry’s database to the server.”

The database is always up to date and includes the drawing number, title, and the PDF of the file name for each entry. While Siegel is the only one who can add to the database, anyone from PPPL can access it for reading and printing.

Those seeking electronic drawings — mostly engineers and technicians — can go to the Lab’s local home page and select Project Engineering Drawings under Frequently Accessed Information. This takes them to a list of valid project and system selections, from AC Power and Fire Alarm System Drawings to NSTX and U.S. ITER Project Drawings. For instance, someone wishing to retrieve an NSTX drawing could go to the site, find the “NSTX Project Drawings” list, and select the desired drawing. Researchers at out-of-town meetings could call up drawings electronically and print them remotely once they have logged into PPPL’s local network using their SecurID Token. Those looking for a specific category, such as lithium, can do a search to find drawings related to lithium research.

“This type of online access to drawings makes everyone who needs this information more efficient, which of course saves legwork, time, and money. And the design group does not have to make as many reference prints for people, which saves time, money, and paper. It is all good,” says Tim Stevenson, Head of PPPL’s Heating Systems and Neutral Beams.

Ray Jeanes, PPPL Fire Protection and Security Systems Engineer, adds, “In the course of maintaining the Laboratory fire alarm system it is frequently necessary to refer to a drawing. Having them available online is very convenient and helps us work more efficiently.”

continued on page 5



# Princeton University PPPL Advisory Board Meets

The Princeton University PPPL Advisory Board met at the Laboratory on May 13 and 14. The Board includes two segments, a committee for science and a committee for operations. PPPL Department Heads gave presentations at the meeting, which also included substantive discussions and tours of the Laboratory.

"We are grateful to these talented individuals for sharing their insights and expertise with us," said Princeton University President Shirley Tilghman. "They have an important role to play in helping PPPL achieve its critical research and operational goals on the frontiers of fusion and plasma science." Committee members are appointed by, and advise, a new seven-member PPPL Board of Directors chaired by President Tilghman.

In an e-mail to staff, PPPL Director Stewart Prager said, "The committees praised the overall functioning of the Lab, and provided extremely useful, frank, constructive recommendations regarding the major challenges that lie ahead." ●



*Above is the science committee with members of PPPL's management during a tour of NSTX. From left are science committee members Ned Sauthoff, Dave Anderson, Sibylle Günter, Steve Cowley, Patricia McBride, Ron Parker, Tony Taylor, and James Stone, PPPL's Jon Menard, science committee member William Dorland, PPPL Director Stewart Prager, and PPPL Deputy Director for Research Mike Zarnstorff. Missing in the photo is science committee member Robert Rosner.*

*Below is the operations committee with members of PPPL's management. From left are PPPL Deputy Director for Operations Adam Cohen, operations committee members Don Rej, William Madia, Judy Jackson, Chris McCrudden, Betty Leydon, and Carol Parnell, PPPL's Masa Ono, operations committee members Roy Whitney, Kem Robinson, and Jack Anderson, and PPPL's Mike Williams. Missing in the photo is operations committee member Jay Marx.*



## Engineering Drawings

continued from page 4

The drawings available are the most current, but all the revisions are kept offline and available for retrieval by Siegel. "We keep everything, from Revision 1 to 20," he says.

The Print and Drawing Room presently stores thousands of drawings. About half are in digital form. The manual drawings — those hand drawn before computer-assisted drawing was available — must first be scanned into PDFs. Newer drawings that have been created electronically are sent to Siegel in the original file, such as CADD [Computer-Aided Design and

Drafting], and as a PDF. Siegel's group continues to scan the older manual drawings and save them as PDFs for the site.

"One of the intentions is to get every drawing scanned and placed into the system, emptying out the file room," MacTaggart says. "All the old drawings would be preserved electronically. Once the drawing is in the electronic system, it is no longer kept as a hard copy in the file room."

Siegel notes that every single drawing from the print and file room will eventually be included in the paperless system. Adds MacTaggart, "This is our effort at going green." ●

# What's Happening @ PPPL?



Please welcome Dr. Siddiq Faisal, the new Medical Director of the PPPL Occupational Medical Office (OMO). Dr. Faisal is available Mondays, Wednesdays, and Thursdays from 9 a.m. to 12:30 p.m. He replaces Dr. Howard Lu, who has accepted a position at another institution.

Dr. Faisal received Family Medicine and Occupational Medicine training at UMDNJ-Robert Wood Johnson Medical

School and Environmental and Occupational Health Sciences Institute in New Jersey. He has been in practice since 2005 and is part of the Occupational Medicine Services at Princeton Healthcare Systems. To schedule an appointment with Dr. Faisal, contact the OMO at ext. 3200.



PPPL Industrial Hygienist Neil Gerrish is stationed in Iraq. Neil, a member of the Connecticut Army National Guard, is a Flight Engineer on the H-47 Chinook Helicopters. If you would like to drop him a line, below is his address; if you'd like to donate items (see list below), you may give them to Cassandra Pugh in AD-107 or drop them in the box near Dorothy Strauss's cube in Mod VI; and if you'd like to be added to the distribution list for updates about Neil, please send an e-mail to cpugh@pppl.gov.

**List of Donations Needed:** Unscented baby wipes, Q-tips®, MACH3® razor blades, granola bars, instant soup, microwave popcorn, ChapStick®, sunblock (spf 45 or higher), and Crest® multi-care toothpaste. Also, you may contribute money for shipping costs to Cassandra.

**Address:**

Ssg Neil Gerrish  
B Co 2/104th AVN (GSAB)  
COB Adder T-1  
APO AE 09331



PPPL's Bill Tang has been appointed by Energy Secretary Steven Chu to serve as a member of the Advanced Scientific Computing Advisory Committee. The term is for three years. The Committee, established in 1999, provides advice and recommendations on scientific, technical, and programmatic issues relating to the Advanced Scientific Computing Research program. The Committee reports to the Director of the DOE Office of Science. Congratulations, Bill!



PPPL's Cassandra Pugh (in pink) and Patti Bruno presented the results of employee safety discussions during the 2009 Safety Forum at PPPL on April 28. The Forum began in the Auditorium with safety award presentations, and a talk on lessons learned and new ideas implemented to enhance safety. The staff then split up into groups to talk about safety situations observed every day at PPPL.



Please welcome Carol Ann Austin, who recently joined PPPL as the Executive Assistant to Deputy Director for Research Michael Zarnstorff and Deputy Director for Operations Adam Cohen.

Carol Ann has more than 10 years of experience working as an administrator in the financial services industry. She can be reached at ext. 2484 or by e-mail at caustin@pppl.gov.



PPPL's Mark Cropper provided cryogenic demonstrations to Wicoff Elementary School students in Plainsboro on May 1 during Math and Science Day. PPPL's John Lacenere and Ninaad Desai also provided hands-on science demos.



## Art of Science Exhibit Includes Four Works by PPPL'ers

**F**our pieces produced by PPPL researchers, staff, and graduate students are among 48 selected for the 2009 Art of Science gallery at Princeton University's Friend Center. The juried show features works chosen from more than 200 submissions to the Art of Science competition. The theme of this year's competition was "found art... scientific images created during the course of an actual research project, rather than art inspired by science." The winners were announced at an opening reception May 8 in the Friend Center, where images selected from the competition will remain on display for a year.

The four works from PPPL in the exhibit, along with the title and the names of those who produced them, are below.

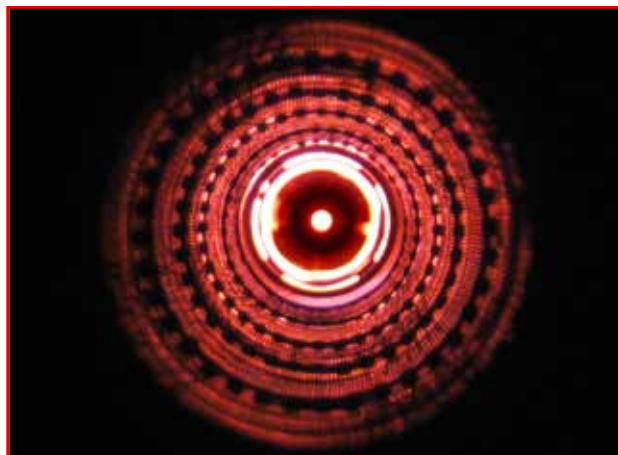
The Art of Science exhibit is supported by the following departments at Princeton University: the Office of the President, the Office of the Dean of the Faculty, the School of Engineering and Applied Science, PPPL, the Center for Information Technology Policy, and the Lewis Center for the Arts. PPPL's Head of Science Education Andrew Zwicker co-organized the competition and PPPL photographer Elle Starkman was on the committee. PPPL Science Education Senior Program Leader James Morgan hung the exhibition. "This show exuberantly supports the idea that im-

ages produced in the pursuit of science can have an aesthetic value that is on a par with art created for art's sake," said Zwicker, who is also a lecturer in the University's Writing Program.

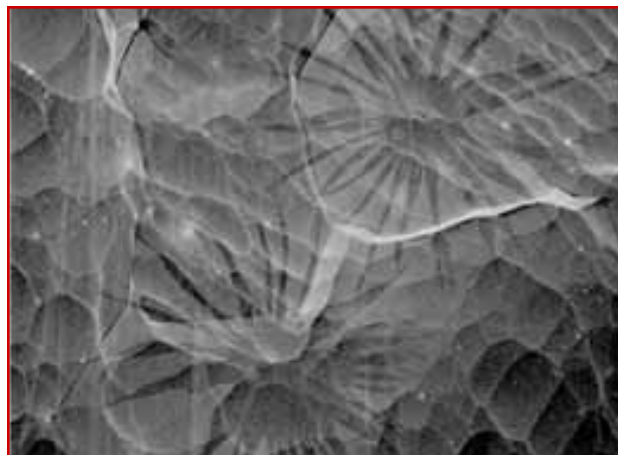
The jurors were Shirley M. Tilghman, president of Princeton University and a renowned molecular biologist; the acclaimed photographer Emmet Gowin, who is a professor in the Program in Visual Arts at Princeton; David Dobkin, dean of faculty and a professor of computer science at Princeton whose research focuses on computer graphics, and the Pulitzer Prize-winning poet Paul Muldoon, chair of Princeton's Lewis Center for the Arts.

First prize went to Celeste Nelson, assistant professor chemical engineering, for *baby squid*, an image of squid embryos taken using bright field microscopy. Second prize went to Pat Watson, Mike Gaevski, Joe Palmer, and Conrad Sylvestre of Princeton's Micro/Nanofabrication Laboratory (MNFL) for their entry *Desert Butte*, a scanning electron microscope image. Third Prize went to Maria Ciocca, a 2005 alumna now at the University of Pennsylvania School of Medicine, for *Worm Love*, an image taken using immunofluorescence microscopy.

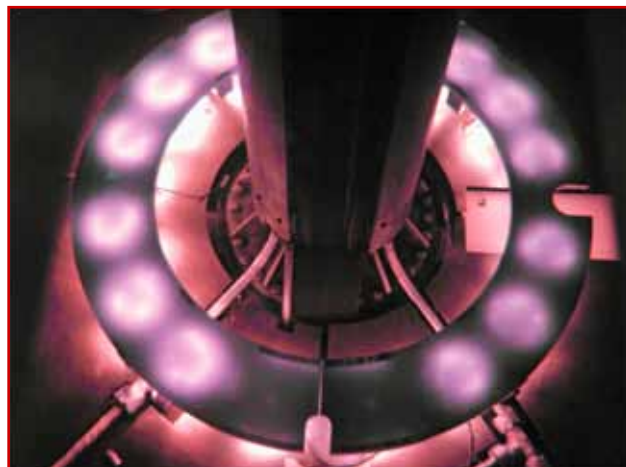
An on-line gallery is available at [www.princeton.edu/artof-science/2009/](http://www.princeton.edu/artof-science/2009/). You may also vote for your favorite at this site. ●



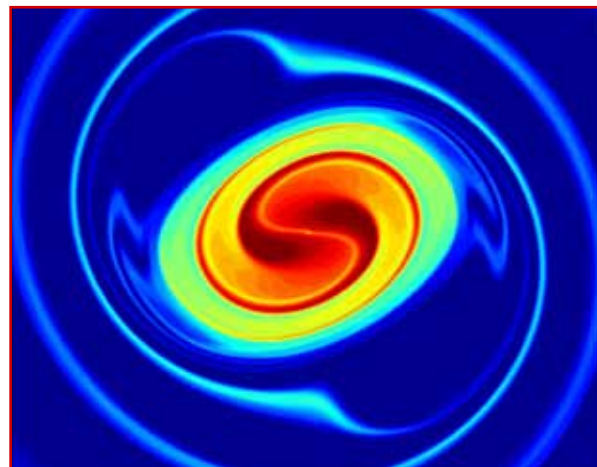
**Meter-long Plasma Source**  
Erik Gilson, PPPL



**Starburst Left on Surface by High Voltage Breakdown**  
Daniel Lundberg (grad student), Program in Plasma Physics



**Heaters Glowing in Argon Discharge**  
Robert Kaita, John Timberlake, and the LTX Group, PPPL



**Vortex Waltz**  
Luc Peterson (grad student) and Greg Hammett (faculty), PPPL

## Spotlight



Name: **Ninaad Desai**

**Position:** Staff engineer with PPPL's Electrical Engineering Division. Desai spends half her time carrying out short-circuit analysis of the Lab's power equipment, and the other half overseeing the controls of the experimental power systems for the National Spherical Torus Experiment (NSTX). She has done analysis work for the Lithium Tokamak Experiment (LTX) and the Magnetic Reconnection Experiment, and has worked to maintain power systems for LTX. She recently began power simulation work for the NSTX upgrade. The largest AC power project she has worked on was a complete short-circuit study of the entire PPPL site. Desai also evaluates the associated arc flash hazards on the system equipment, and has worked with the AC Power team to generate arc flash labels. These labels specify the safety controls for the arc flash hazards on the Lab's electrical equipment rated from 13.8kV to 480V.

In the NSTX Control Room, Desai maintains configuration control for the tokamak power systems. "My job is to control and configure the power supplies using software. When something does not work right, I troubleshoot," she says. She has written a code for plotting NSTX shot summaries.

The electrical engineer also participates in outreach for the Lab. Annually she accompanies PPPL's John Lacenere, Ray Camp, and Mark Cropper at a local elementary school to do electromagnetism demonstrations.

Desai received a bachelor's degree in electrical engineering with a major in power systems from ADIT, S.P. University, in India in 2005 and a master's in electrical engineering with a major in Very-Large-Scale-Integration design from NJIT in 2007. After working as an intern at PPPL beginning in 2006, she applied for an open position. "I had my fingers crossed," Desai recalls. She was hired in the spring of 2007.

**Quote:** "I'm glad that I get to work on so many projects because it keeps me motivated and interested. Here there are many unique system configurations. I get to learn so much at PPPL through fieldwork and with people," Desai says. "Six years of a bachelor's and master's are equivalent to one year here."

She continues to learn on-the-job and insists she's never bored. "I've never done the same thing a second day. I really enjoy the fieldwork and the troubleshooting," she says, noting a sense of accomplishment when she checks an item off her list.



Desai describes PPPL as a cordial environment filled with supportive staff. "I've always had support and encouragement, and everyone gives me time to learn, study, and flourish," she says. "I am supported the best way anybody can imagine. It is amazing. I've never felt funny about asking how to do something."

And the Lab has a family feel. "I have my four fathers — John Lacenere, Ray Camp, Art Wise, and Dick DeBonis. If they would form a cricket team, I could coach them."

**Hobbies:** Desai paints, primarily using oils, but sometimes tempera. She produces a variety of works, from landscapes to abstracts (see below). She enjoys giving her pieces as gifts to friends and plans to install one of her creations in the hallway near her first-floor Engineering Wing office. "I do art on my own. Everyday I paint. Colors fascinate me." Desai also makes comic strips for the engineering board outside her office, specializing in engineering and procedures humor.

In addition, every Wednesday she volunteers at the Reading for the Blind & Dyslexic, which is housed at St. Joseph's Seminary in Plainsboro.

Desai, who grew up in India, became interested in engineering her final year of high school. "I enjoyed physics, math, and chemistry. If you're good at these three, you're good at engineering," she notes. Her choices were either electrical or computer engineering. She picked the first based on her school choice and its course options. "I started out blank, and luckily this was my field."



## HOTLINE

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