

HOTLINE

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

PPPL Awarded for Sustainability Efforts

Saving Energy, Protecting the Environment

PPPL's Lyman Spitzer Building has earned an ENERGY STAR — the national mark of excellence in energy performance. Federal, local, and Lab officials marked the unveiling of the ENERGY STAR label during a PPPL breakfast meeting for local representatives on October 27. The plaque is mounted in the Spitzer Building Lobby. ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy helping us all save money and protect the environment through energy efficient products and practices. In 2008, PPPL became an ENERGY STAR partner; this year, the Spitzer Building became an ENERGY STAR qualified facility. As an ENERGY STAR building, it meets strict energy performance standards set by EPA and uses less energy, is less expensive to operate, and causes fewer greenhouse gas emissions than its peers. <http://www.energystar.gov>

During the breakfast briefing hosted by PPPL for 22 county, state, and local officials, PPPL Director Stewart Prager presented an overview about PPPL and fusion research, U.S. EPA Senior Energy Policy Advisor Edward Linky discussed the ENERGY STAR program, PPPL Materiel and Environmental Services Division Head Rob Sheneman gave a talk about the Laboratory's sustainability efforts, and PPPL Best Practices and Outreach Head John DeLooper discussed PPPL's outreach into the community and led a tour of the experimental areas. Also, DOE Princeton Site Office Manager Jerry Faul presented an Environmental Sustainability Award to PPPL Materiel and Environmental Services Division Head Rob Sheneman for PPPL's Bio-based Products Purchasing. The award is from the DOE Office of Science. ●



During the ENERGY STAR unveiling are, from left, DOE Princeton Area Office Manager Jerry Faul, Plainsboro Township Mayor Peter Cantu, PPPL Materiel and Environmental Services Division Head Rob Sheneman, U.S. EPA Senior Energy Policy Advisor Edward Linky, PPPL Director Stewart Prager, and PPPL Deputy Director for Operations Adam Cohen.



DOE's Jerry Faul (right) presents an Environmental Sustainability Award to PPPL's Rob Sheneman.

PPPL Director Stewart Prager (standing at left) discusses fusion at the breakfast briefing.

What's Happening @ PPPL?



Gates Named Stellarator Leader

PPPL physicist David Gates (left) has been appointed the Stellarator Physics Leader in the Advanced Projects Department. In this position, David is responsible for leading PPPL's experimental stellarator physics activities, including collaboration on off-site stellarator experiments and providing physics input to stellarator engineering tasks. He will have a key role in shaping PPPL's stellarator program and exploring the important scientific connections between stellarators and tokamaks. David has been a key member of the NSTX team since joining PPPL 12 years ago, acquiring skills and research experience that will serve the stellarator program well. Congratulations, David!



Don't Get Burned

Photo by John Bennewich

PPPL's Site Protection Division offered fire fighting demonstrations and fire prevention and safety tips to staff on Friday, October 9, outside the LSB as part of Fire Prevention Week. Above, PPPL ESU Captain Kevin Rhoades trains PPPL's Barbara Sobel how to extinguish flames using the PASS method - Pull, Aim, Squeeze, and Sweep. ESU Driver/Operator Susan Thiel is the coordinator of the annual program, which also included using a fire hose to quell fabricated flames in the windows of a house front set. "It was a cool experience operating the fire hose. I had no idea that the water pressure was that high - 80 to 100 pounds," said James Morgan." Stay Fire Smart!



New Webmaster

Please welcome PPPL's new webmaster, Chris Cane. Chris joins PPPL with more than twenty years of experience in software and website development, and was previously employed at Dow Jones, Merrill Lynch, and the Institute for Advanced Study. Chris is working in the Lab's Information Services Office. For instruction and guidance in website development, please contact Chris at ccane@pppl.gov, ext. 2107, or stop by his office, B-346.



PPPL engineer Craig Priniski (left facing crowd) leads a tour of the Lab's experiments for a group of Princeton University freshmen and their parents on Friday, October 16. The Laboratory hosted about 175 parents and students for tours on October 16 and 17 as part of the University's Freshmen Parents Weekend activities. Other tour guides were Mike Bell, John DeLooper, Ray Camp, Charlie Gentile, Ben LeBlanc, Masa Ono, and Hans Schneider.

HOTLINE

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Spotlight



Name: **Raffi Nazikian**

Position: Nazikian, a Principal Research Physicist, is the Head of the DIII-D collaboration for PPPL's ITER and Tokamak Department. DIII-D is a tokamak at General Atomics (GA) in San Diego. Nazikian manages PPPL's research and engineering activities for the DIII-D program, spending roughly half his time in San Diego, and also conducts his own research in energetic particle physics at PPPL. "Much of my managing work entails working with the DIII-D program leaders and PPPL management to identify activities that are mutually beneficial to both organizations and then facilitate communication among the technical experts in order to move projects forward," Nazikian says.

"In the past year, our budget increased by about 50 percent in our engineering activities focused on the next DIII-D facility upgrade planned for FY10," he explains. "That activity has consumed most of my time for the past year, but I still find time to do my own research and have managed to present several invited talks in the last couple of years."

Nazikian joined PPPL in 1989 after receiving a Ph.D. in plasma physics from the Australian National University in Canberra, where he conducted research on imaging turbulence in the now defunct LT-4 tokamak. "Australia has a long tradition of engaging in fusion-related research, going back to the discovery of helium-3 and tritium by Sir Mark Oliphant," Nazikian says. Oliphant was an Australian physicist who was involved in developing the atomic bomb and later started the Institute in Canberra, where he was instrumental in creating the plasma physics lab.

Quote: "I became interested in plasma physics when I walked into a lab and found they were doing a lot of cool laser diagnostic work," says Nazikian, who has always been drawn to science. "Since I was 4 years old I knew I wanted to be a scientist. I was watching a TV program on living cells and I suddenly realized all of us are surrounded by living things that are too small to see with our eyes. I was so surprised I wanted to run and tell everybody. The first person I told was my dad, but he informed me that everyone knew this. I distinctly remember admonishing him as to why he had not informed me of this."

Currently, his professional life revolves around scientific collaborations. "What I really enjoy about collaborating is constantly meeting people from outside the Lab and from different organizations and countries," Nazikian says. "The most challenging aspect of collaborating is navigating the cross-cultural issues in getting research done in a different environment. And the most rewarding aspect is meeting new and interesting people who see the world and the fusion program from different perspectives."

And while his research and management efforts have primarily focused on tokamaks, he remains coy about which fusion configuration he prefers. "Fusion is too complex to find any configuration attractive. The good point about a tokamak is its con-



finement. The bad point is its stability, but it makes for interesting science," says Nazikian.

Hobbies: When I'm not doing research, I'm reading Rich Hawryluk's e-mails at all hours of the day," says Nazikian with a wink.

His other hobbies are hiking in the Sierras, listening to books on tape, and surf fishing (fishing off the beach). "The best time I ever had with the kids (Toshiki, 15, and Tomoki, 17) is when I caught a 26-pound striped bass and we reeled it in together," he recalls. "Less than five minutes before the catch, my kids thought I couldn't catch anything. Then the pole snapped back."

Nazikian, his wife, Fumiko, and their sons live in Princeton. "I met my wife, who is from Japan, when we were both graduate students in Canberra."

His hiking adventures include staying in cabins in the more remote parts of the Sierras and hitting the trails with his boys.

Less strenuous relaxation involves listening to audio books, which Nazikian particularly enjoys during long drives. His two favorite authors are Thomas Mann and Tolstoy. "Mann has a beautiful logical mind that he uses to approach existential issues with scientific disinterest. In contrast, Tolstoy has very strong religious beliefs that he uses to organize and make sense of human nature and history. Both are magnificent big thinkers, but the two could not be any more different from each other."

Nazikian was born in London to Armenian parents and moved to Australia with his family at the age of two. "Raffi" is the pen name of a leading Armenian author at the turn of the 20th century. "My mother was quite literary and she named all of her children after her favorite Armenian authors," Nazikian notes.

The cheeky Nazikian brims with exuberance and optimism as he walks down the halls of PPPL, often with a coffee cup in hand. "Who wouldn't be happy here, surrounded by so many 'can-do' people?" ●



2009

United Way Campaign PPPL Kickoff

Thursday, November 12

9:30 A.M. - M.B. GOTTLIEB AUDITORIUM

Presentations – Refreshments – Door Prizes

Guest Speaker

Princeton University contributes an additional 15% for all gifts made through payroll deduction or 10% for all gifts made by cash or check.



PPPL and Princeton University • UNITED WAY CAMPAIGN • November 11 to December 2