

At PPPL  
**THIS WEEK**

**MON. - FRI., JUNE 11-15**

**Plasma Physics Course  
NUF and SULI Interns**

All Day ♦ M.B.G. Auditorium, Labs

Note: NUF and SULI students will be dining in the Cafeteria daily at 12:30 p.m.

**TUESDAY, JUNE 12**

**Theory Seminar**

10:45 a.m. - 12 p.m. ♦ T-169

3D Magnetohydrodynamic Tokamak Equilibria: Helical Core, RMP and Ripple

W. A. Cooper

**WEDNESDAY, JUNE 13**

**GFDL Events and Seminars**

12 p.m. - 1 p.m. ♦ GFDL Smagorinsky Seminar Room

Nighttime Oxidation of Biogenic Hydrocarbons

Steve Brown (ESRL)

[www.gfdl.noaa.gov/events](http://www.gfdl.noaa.gov/events)

(Gov't, Univ. or 2 other forms of I.D. needed)

**FRIDAY, JUNE 15**

**DIII-D Science Meeting**

1 p.m. ♦ B-233



## From Hot Cells to Hot Plasmas

### *Cohen Approaches Science Challenges with Practicality*

By John Greenwald

**A**dam Cohen grew up as the family handyman. “I was the kid who tacked down the carpet, repaired the roof, fixed the toilet and worked on the car,” he said of his youth in northern New Jersey. “I would pull apart batteries and tear apart things and try to make them work again.”

That Mr. Fixit attitude has taken Cohen from nuclear submarine service in the U.S. Navy to chief operations officer at Argonne National Laboratory to senior science adviser at the U.S. Department of Energy. Now as deputy director for operations at the U.S. Department of Energy’s Princeton Plasma Physics Laboratory (PPPL) since 2009, he oversees functions ranging from engineering and project management to finance and communications.



Adam Cohen

Cohen arrived as part of a new top management team at a critical time for the Laboratory. The new leaders included director Stewart Prager, who came from the University of Wisconsin, and PPPL physicist Michael Zarnstorff, who was named deputy director for research. The threesome took office shortly after the DOE had halted construction of an innovative fusion device called the National Compact Stellarator Experiment after costs exceeded estimates. The shutdown dealt a blow to the Laboratory, which is managed by Princeton University.

The incoming leaders responded by focusing on PPPL’s traditional strengths in designing and operating complex experiments. Results of their initiatives have ranged from DOE approval for a \$94 million upgrade of the National Spherical Torus Experiment, the Laboratory’s largest venture, to a step-by-step path for developing projects from proposal to completion. “You can talk about policies and procedures all you want,” said Cohen, “but unless you can deliver a project safely, under cost and on schedule, such talk is meaningless.”

#### **Career Path**

Cohen’s own career path began with a bachelor’s degree in engineering from Columbia University, followed by four years as a junior U.S. Navy officer. The Cold War was near its end, though neither side knew it, and the U.S. and Soviet nuclear-powered submarines routinely played cat-and-mouse trying to detect each other. Cohen’s sea-going duties included electrical engineer and radiation-control manager before his tour ended in 1988. “What attracted me to the Navy was a tinge of

continued on page 2

# Cohen

continued from page 1

patriotism and a desire to see the world and learn about nuclear power," Cohen said. "It was wonderful because I learned a lot and that experience in the nuclear-power field has given me every job since."

Those jobs have seen Cohen juggle work, parenthood and graduate study. After two years of assembling fuel rods for nuclear power plants for Babcock & Wilcox in Virginia, Cohen followed his future wife, Debra, to Chicago, where she took a job in marketing and he began a 20-year career at Argonne National Laboratory. While there he earned a doctorate in materials science from Northwestern University, plus an M.B.A. from the University of Chicago, and helped raise son Josh and daughter Allie; both are now in high school. "I literally was rocking a baby in one arm and holding a textbook in the other hand studying for exams," he said.

At Argonne, Cohen rose from regulatory compliance officer and materials researcher to head of the environment, safety and health division and then to chief operating officer. Along the way he conducted research on nuclear materials and managed a hot cell—a concrete and leaded-glass enclosed facility for handling highly radioactive material by remote control—and even crawled inside to make repairs swathed in protective gear.

## Turning Point

A turning point for Cohen came in 2006 when Argonne sent him on assignment to Washington, D.C. There he served as senior adviser for nuclear energy to Raymond Orbach, who was then Undersecretary for Science and Director of the DOE's Office of Science, which funds basic research for energy and the physical sciences. "I learned a lot about interacting with DOE programs and helping to get things done," Cohen recalled.

The job was also rich in contacts. In Washington, Cohen met the directors of DOE's national laboratories, the department's 17 research and engineering facilities around the country that include PPPL. He helped to organize the National Laboratory Directors' Council, which facilitates communication among the laboratories and between the DOE and Congress and other federal agencies. "The idea all started on a whiteboard in the hallways of the DOE," Cohen said of the council. "Now it's growing and flourishing."

Cohen next moved to PPPL to take up his current post. Working with other managers, he implemented a system of monthly project reviews and color-coded charts to track schedules, costs and technical issues, among other matters. The system ensured that when problems arose, "We identified and worked the problems whether the projects were big or small."

Cohen's vision for PPPL includes increased participation of its experts in collaborations and outside project reviews for other laboratories. Cohen serves on the ITER Manage-

ment Advisory Committee, which advises the council that oversees ITER, a major international fusion experiment that is under construction in Cadarache, France. He sits on the Operations Committee for Brookhaven Science Associates, which runs the Brookhaven National Laboratory in Upton, New York, and has also helped review plans for a project called the Deep Underground Science and Environmental Laboratory that the DOE is sponsoring in a former South Dakota gold mine. Last November he joined a panel that monitors safety and other conditions at the aging Oyster Creek nuclear power plant in Lacey, New Jersey. Exelon Corporation, which owns Oyster Creek, has agreed to shutter the plant by 2019, 10 years before its license expires.

## New Opportunities

Cohen sees new opportunities arising from the Laboratory's mission of developing fusion and other applications for plasma. He has helped push for projects such as using plasma to produce nanomaterials, and for teaming with Princeton in high-energy physics experiments. Cohen advocated for PPPL's involvement in the Energy Innovation Hub, a consortium that is creating technologies to make buildings more efficient, and he perceives prospects for improved fluorescent lighting, which uses plasma gas. The development of new plasma technologies, in tandem with progress toward fusion, "is where I really want to see the Lab going," Cohen said. ☐



## Materials Science Conferences Here Next Week

PPPL next week will host a pair of conferences devoted to materials for experimental fusion facilities. Some 60 scientists from around the country are expected to arrive for meetings of the Plasma Facing Components (PFC) group and the Materials Science Coordinating Organization (MASCO). Leading off the events will be the MASCO meeting June 18-20, followed by the PFC sessions June 20-22.

The meetings will address key aspects of materials research. The MASCO session will discuss general materials for fusion reactors, while the PFC meeting will focus on the plasma facing walls, said physicist Richard Majeski, who is cohosting the events with physicist Robert Kaita. Laboratory speakers at the PFC meeting will include Majeski, physicist Charles Skinner and Daren Stotler, and engineer Charles Kessel. PFC research posters will be on display Thursday afternoon from 1:30 p.m. to 3:30 p.m. in the LSB lobby.



## PPPL Draws the Orange



More than 60 Princeton University alums and friends toured PPPL on Friday, June 1, as part of the University's Reunions activities. PPPL's John DeLooper and Bill Blanchard provided an introduction to fusion and tours of the National Spherical Torus Experiment Control Room and the National Compact Stellarator Experiment components.



## 2012 Introductory Course in Plasma Physics for National Undergraduate Fellowship Participants Summer Undergraduate Laboratory Internship Participants

Monday through Friday, June 11 - 15  
M.B.G. Auditorium and Labs

### SPECIAL NOTE:

NUF AND SULI STUDENTS WILL BE DINING  
IN THE CAFETERIA DAILY AT 12:30 P.M.

## New Restrictions for Tours of the NCSX Components Area

All tours of the NCSX Components area must be pre-approved prior to the visits. Construction activities for the NSTX-Upgrade will occur in this area, restricting access.

Please contact Patti Wieser by email at [pwieser@pppl.gov](mailto:pwieser@pppl.gov) if you plan to take visitors to the area.

Tour guides should adhere to restrictions noted in the signs at the components area. A sign outside the room will note when lifts are in progress. No tour groups are to enter the room when a lift is in progress.

Please do not cross the yellow chain or reach over the chain while giving tours at the components area.



# PPPL Café Menu

BREAKFAST ..... 7 a.m. • 10 a.m.  
CONTINENTAL BREAKFAST ..... 10 a.m. • 11:30 a.m.  
LUNCH ..... 11:30 p.m. • 1:30 p.m.  
SNACK SERVICE ..... until 2:30 p.m.

MONDAY JUNE 11

TUESDAY JUNE 12

WEDNESDAY JUNE 13

THURSDAY JUNE 14

FRIDAY JUNE 15

COMMAND PERFORMANCE  
CHEF'S FEATURE



**FETTUCCINI BOLOGNESE**

XL Spinach, Mushroom, Onion, Tomato Omelet

Hearty Chicken Noodle

The Western Grilled Chicken Wrap w/ Fries

Roast Beef Ranchero Wrap

The Seaside - Fried Cod, Tartar Sauce, Tomato, Cheese



**JAMAICAN BROWN STEW**

Steak, Egg and Cheese on a Bagel

Minestrone

BBQ Bacon Supreme Burger

Tropical Chicken Salad on a Multi Grain Roll

Salami, Swiss, Spicy Mustard and Tomato



**MALAYSIAN COCONUT CHICKEN**

Pork Roll, Egg, Cheese, and more Burrito

Hearty Beef Chili

The Turkey Burger Patty Melt with Onion Rings

Crispy Chicken BLT on a Multi Grain Roll

Turkey, Swiss, Russian Dressing and Cole Slaw



**FRESH CARVED CHIPOTLE ROAST BEEF**

Strawberry and Banana Pancakes, Whipped Cream

Navy Bean

Chick'n Cheese Quesadilla

Corned Beef Reuben

Ham, Turkey, Pepper Jack, Mustard and Tomato Griller



**SANTA FE CHICKEN OVER RICE WITH SALSA**

The XL Smoked Bacon, Ham and Cheese Omelet

Jalapeno, Corn and Cheese

Cajun Cheese Steak with Spiral Fries

Spicy Polynesian Wrap

Pepperoni, Provolone, Red Pepper, Tomato, Balsamic.

MENU SUBJECT TO CHANGE WITHOUT NOTICE

[CLICK HERE FOR A PRINTABLE WEEKLY MENU](#)

## WEEKLY

Editor: **Patti Wieser** ♦ Copy Editor/Graphic Designer: **Gregory Czechowicz**  
Photographer: **Elle Starkman** ♦ Webmaster: **Chris Cane**

PPPL WEEKLY is published by the PPPL Office of Communications on Mondays throughout the year except for holidays.

Deadline for calendar item submissions is noon on Thursday. Other stories should be submitted no later than noon on Wednesday.

Send to: [pwieser@pppl.gov](mailto:pwieser@pppl.gov) ♦ Comments: [comteam@pppl.gov](mailto:comteam@pppl.gov) ♦ PPPL WEEKLY is archived on the web at: <http://www.pppl.gov/ppplweekly.cfm>