

At PPPL THIS WEEK

WEDNESDAY, FEBRUARY 8

GFDL Events and Seminars

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

Stratified Mixing Processes &
Energetics of Global Ocean Circulation

Graham Hughes
(Australia National University)

THURSDAY, FEBRUARY 9

GFDL Events and Seminars

2 p.m. - 3 p.m. ♦ GFDL
Smagorinsky Seminar Room

Seismic Imaging Based on Spectral-
element and Adjoint Methods

Jeroen Tromp (Princeton University)
www.gfdl.noaa.gov/events

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

FRIDAY, FEBRUARY 10

DIII-D Science Meeting

1 p.m. - 2:30 p.m. ♦ B-233

PPPL Colloquium

1:30 p.m. ♦ M.B. Gottlieb Auditorium

Imaging the Antikythera Mechanism
Tom Malzbender (Hewlett Packard)

[CLICK HERE FOR ABSTRACT](#)

SATURDAY, FEBRUARY 11

Science on Saturday

9:30 a.m. ♦ M.B. Gottlieb Auditorium

All Tied Up In Knots

Lisa Traynor (Bryn Mawr College)



What's Happening on the Princeton University Campus?

[CLICK HERE](http://www.princeton.edu/main/news/events/)
www.princeton.edu/main/news/events/

Director's Corner

Globalization of PPPL Research

By Stewart Prager — Director, Princeton Plasma Physics Laboratory



Fusion energy research has been internationally collaborative since its onset. Throughout the cold war, fusion researchers from the Soviet Union, Europe, and the U.S. collaborated, shared data at workshops and conferences, and performed joint experiments. As Japan's fusion program grew, it joined the international club. Fusion research, including PPPL, was globalized ahead of its time.

We are in a new era of ever-increasing opportunity for international collaboration for two reasons — ITER and the increase in fusion research across the world, extending to China and South Korea. The European Union and Asia have entered the era of superconducting fusion facilities, offering an opportunity to explore plasma behavior in steady state.

PPPL is benefitting from these opportunities. Work with our international partners extends to all corners of the Lab. We are designing ITER in-vessel coils, which will be built in China, building trim coils for the W7-X stellarator in Germany (a prelude to research collaboration), and participating in experiments in the EAST tokamak in China, the KSTAR tokamak in South Korea, the LHD stellarator in Japan, and the JET tokamak in England. These endeavors are aimed toward a unified research program related to steady-state physics relevant to ITER and beyond.

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Keeping the Prices Down

PPPL Saves with Innovative Purchasing System

By Patti Wieser

It's like *eBay* since it employs electronic bidding. It's similar to a regular auction, only in reverse, since the award goes to the lowest bidder rather than to the highest. And for PPPL, it means an increase in savings and quality, along with a stronger ability to draw in small businesses as suppliers. The "it" is FedBid, an online reverse auction. Through this electronic "marketplace," procure-



Arlene White with sheets of steel procured for PPPL projects. Some of these raw metals were purchased from small and small, disadvantaged businesses. ▶

Keeping Prices Down

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ment professionals at federal organizations can purchase commodities and services from U.S. businesses.

And that's what Arlene White, a principal buyer and small business liaison at PPPL, is doing. Last year she used FedBid on a tryout basis and on Oct. 1, the Procurement Division began using the system daily as a standard practice, with positive results.

"Using FedBid, we're experiencing definite savings and new resources for our unique, extraordinary customized items," said White.

Some of these "unique, customized" items are the inconel bellows for the National Spherical Torus Experiment-Upgrade (NSTX-U). The bellows allow technicians to move parts within the machine's vacuum vessel while keeping the vacuum intact. Inconel is a nickel-based alloy suitable for high-temperature applications.

White used FedBid to find a company to make the formed bellows, saving more than \$23,000 in the process. The estimated cost was \$35,000. "The bellows job was extraordinary. We got in below the cost and ahead of time," she said. "We paid \$11,500 for the job." PPPL awarded the job to the Connecticut-based company Faxon Engineering in December.

Through FedBid, White feeds in the specifications for a needed item and the delivery deadline, and indicates the preferred community of businesses — such as small, disadvantaged businesses. The system then issues an electronic notice to an appropriate group of companies. More than 2,000 companies received the notice for the bellows. "PPPL received 51 responses and, out of that number, four bidders," White said.

The system allows bidders to view all the competing bids online and adjust their bids to get the jobs, often resulting in increased savings for the purchasers. It also allows the purchasers to select from a larger pool of qualified companies. Once the bidders are narrowed to a top few, White

conducts a conference call with the lowest bidder. If she and the job requester are satisfied, they move forward with the company. If not, they interview the next bidder on the list, continuing the interview and selection process until they find the best company.

Using FedBid was one strategy the Procurement Division — and White — implemented to better respond to PPPL employees' concerns that the best companies be selected for goods and services, White said. "Using innovative tools, we are able to get the best price, reliable suppliers, on-time delivery, and qualified parts," she explained.

The bonus is that the Lab is able to contract with more small businesses — helping small business owners — since the FedBid tool can identify more small business bidders. PPPL's goal in FY2011 was to award at least 52 percent of its goods and services contracts to small businesses. The Lab exceeded that goal by 5 percent.

"The strategies and tools we are using are within the confines of the small business compound," White said. "We developed a plan for how to make our small business program more functional, appealing, and successful. One way we're doing that now is through FedBid."

The system gives PPPL a better ability to select the best companies, meet the Lab's small business goals, and still see tremendous cost savings.

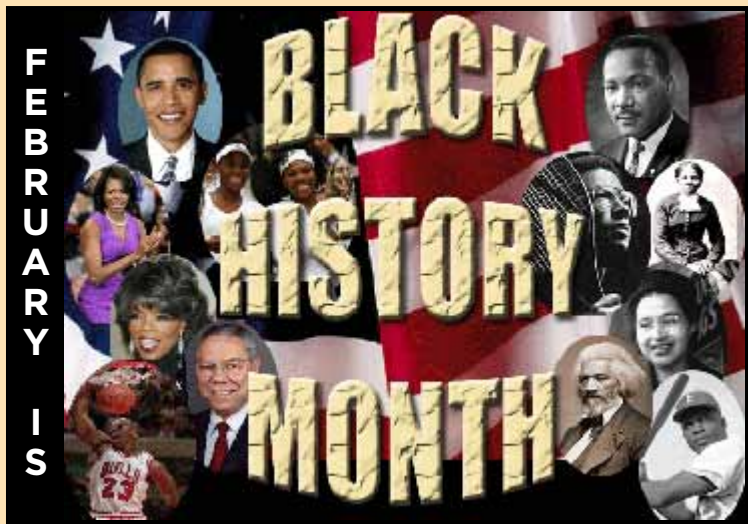
"FedBid has become a valuable tool while doing business — not just for attracting more small businesses, but also for attracting the best businesses for manufacturing unusual, exotic parts that we so often need in fusion research," White said. "It helps us find critical suppliers and support. One of these suppliers is Martinez & Turek, Inc., of California. In October, we awarded this small, disadvantaged business \$600,000 to manufacture the center stack inconel casing for the NSTX-Upgrade. That is one of the most critical items for the upgrade." ■

Globalization of PPPL Research

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We have also begun a joint center in plasma physics in collaboration with the Max Planck Society in Germany. The center spans plasma astrophysics and fusion plasma physics, involving both PPPL and the Department of Astrophysical Sciences at Princeton and three Max Planck Institutes in Germany. To enhance research in space plasma physics, we recently signed a memorandum of understanding with the Harbin Institute of Technology in China. And we are even interacting in laboratory safety, participating in joint safety working groups with Japan and China. As the world gets smaller, scientific opportunities get larger.

However, robust international collaboration has to be balanced so that it doesn't tip from scientific collaboration to scientific "outsourcing." We do not desire a one-way flow of scientific talent and resources. This requires forefront scientific facilities in the U.S. that will attract our international colleagues to the U.S., thereby maintaining scientific trade balance. PPPL is in great shape in this balance, a result of NSTX being upgraded. We will then have a new, unique facility that attracts our partners to the U.S., while we benefit from the new facilities abroad — a globalized, and balanced PPPL research program. ■



COLLOQUIUM

Imaging the Antikythera Mechanism

TOM MALZBENDER

Hewlett Packard

Friday, February 10

1:30 p.m. (Coffee/Tea at 1:15 p.m.)

M.B. Gottlieb Auditorium, Lyman Spitzer Building

Printed Copies of PPPL Weekly

A limited number of printed copies of the PPPL Weekly are available every Monday morning in the LSB Lobby and at the Lower Parking Lot entrance.



2012 Science on Saturday

Princeton University Plasma Physics Laboratory Lecture Series

All Tied Up In Knots

LISA TRAYNOR

(BRYN MAWR COLLEGE)

Saturday, February 11, 2012

9:30 a.m.

M.B. Gottlieb Auditorium, Lyman Spitzer Building

PPPL CAFÉ MENU

MONDAY, FEB. 6

TUESDAY, FEB. 7

WEDNESDAY, FEB. 8

THURSDAY, FEB. 9

FRIDAY, FEB. 10

COMMAND PERFORMANCE
CHEF'S FEATURE



Sausage, Peppers Parmesan Pasta



Turkey Meatloaf



Baked Tilapia and Cous Cous



Chicken Florentine over Rice



Roast Top Round w/ Mashed Potatoes

EARLY RISER

Walnut Raisin Pancakes

Breakfast Sandwich on an Oversized Biscuit

Breakfast Pizza

Sausage, Onion and Pepper Omelet

Breakfast Cupcakes (2)

COUNTRY KETTLE

Tomato Florentine

Chicken and Corn Chowder

Texas Beef Chili

Beef Barley

Old Fashioned Potato and Ham Chowder

GRILLE SPECIAL

Double Bacon Cheeseburger w/ Fries

Teriyaki Chicken Sandwich with Spiral Fries

The Classic Fat Boy Hoagie

Pizza Steak Sandwich w/ Onion Rings

Chili Burger w/ Fries

DELI SPECIAL

Classic Italian Hoagie

BBQ Crispy Chicken and Cheddar on a Croissant

The Napoli Vegetable Sandwich

Turkey, Swiss, Bacon, Lettuce and Tomato

The Super BLT

PANINI

Eggplant Parm

Crispy Chicken Ranch Griller

BBQ Pulled Chicken with Provolone Cheese

The Texas Tuna Melt

Ham and 3 Cheese

MENU SUBJECT TO CHANGE WITHOUT NOTICE

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

WEEKLY

Editor: **Patti Wieser** ♦ Copy Editor /Graphic Design: **Gregory Czechowicz**
Photography: **Elle Starkman** ♦ Web: **Chris Cane**

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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 ♦ Comments: commteam@pppl.gov ♦ PPPL WEEKLY is archived on the web at: <http://www.pppl.gov/ppplweekly.cfm>