

At PPPL
THIS WEEK

MONDAY, SEPT. 16

Andlinger Center for Energy and the Environment Highlight Seminar Series

4 p.m. ♦ Computer Science 104, Princeton University

Water Implications of Biofuels in the U.S.

Jerald Schnoor, University of Iowa

WEDNESDAY, SEPT. 18

TIAA-CREF Seminar

10:30 a.m. ♦ MBG Auditorium

Your Retirement Income Options

Helena Gaffney, TIAA-CREF

PPPL Colloquium

4:15 p.m. ♦ MBG Auditorium

The Formation of Stellar Groups

Steven Stahler, University of California-Berkeley

Refreshments at 4 p.m. in the LSB Lobby

UPCOMING EVENTS

September 25

PPPL Colloquium

4:15 p.m. ♦ MBG Auditorium

Consciousness and the Social Brain
 Michael Graziano, Princeton University

September 26

Carebridge Seminar

11:30 a.m. ♦ Room A-104

Keeping Safe in Today's Cyber-world

Sept. 30 - Oct. 4

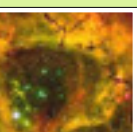
66th Annual Gaseous Electronics Conference

Westin Hotel, Princeton

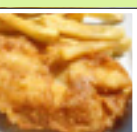
INSIDE...



New Hires page 4



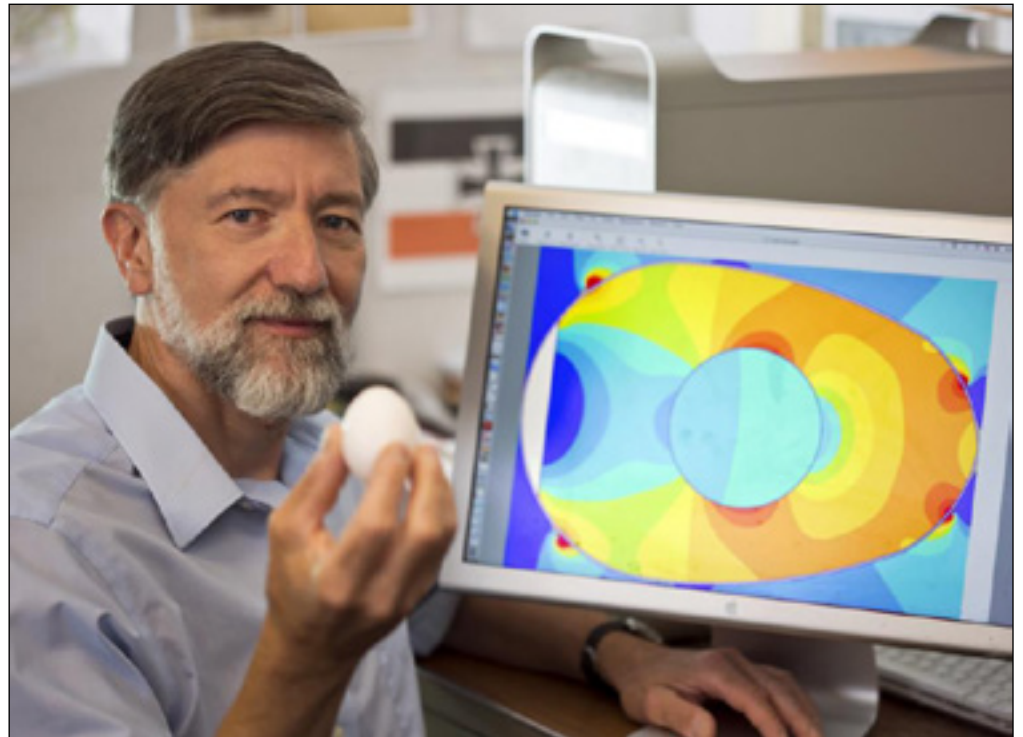
Colloquia page 5



Cafe@PPPL Menu page 5

Researchers at PPPL & USDA hatch a new way to pasteurize eggs

By John Greenwald



PPPL engineer Chris Brunkhorst displays an egg while a computer image simulates the levels of RF power that different parts of an egg absorbed during an experiment.

Researchers at PPPL and the U.S. Department of Agriculture (USDA) have developed a novel technique and device for rapidly pasteurizing eggs in the shell without damaging the delicate egg white. The process could lead to a sharp reduction in illnesses caused by egg-borne salmonella bacteria, a widespread public health concern.

The new method uses radio frequency (RF) energy to transmit heat through the shell and into the yolk while the egg rotates. Streams of cool water simultaneously flow over the egg to protect the white. Researchers then bathe the egg in hot water to pasteurize the white and finish pasteurizing the yolk.

continued on page 2

Austin brings proactive approach to new role in Director's Office

By Jeanne Jackson DeVoe

Carol Ann Austin seems to relish jumping into whatever task is before her – whether she's working with the Colloquium Committee, welcoming VIPs or acting as a timekeeper at the DOE National Science Bowl ®. Now she'll put that zeal for taking on new challenges to work in her position as the Director's executive assistant.

Austin began work in August in a new position in which she will assist Director Stewart Prager and continue supporting Deputy Director for Research Michael Zarnstorff after serving as Zarnstorff's executive assistant for the past four years.

"It's challenging and I'm up for the task," said Austin. "I think my skills are going to help me perform successfully. In the four years I've been here I was

continued on page 3

Pasteurization

continued from page 1

The aim is to produce a pasteurized egg that is "hardly discernible from a fresh, nonpasteurized egg," said David Geveke, lead scientist, at the USDA Agricultural Research Service in Wyndmoor, Pa. His laboratory teamed up with PPPL engineer Christopher Brunkhorst, an expert in RF heating, to develop the device.

The roughly shoebox-size prototype can pasteurize shell eggs in about one-third of the time that current methods require, Geveke said. Such methods place the eggs in heated water for about an hour and visibly change the appearance of the egg white. The RF process, by contrast, maintains the egg white's transparency.

Federal regulations require pasteurization of raw liquid egg products used in commercially sold dishes such as ice cream, eggnog, sauces and dressings, but no similar rule covers eggs in the shell. Fewer than one-half of 1 percent of all shell eggs produced for retail sale in the United State are pasteurized, according to an estimate by the Food Safety and Inspection Service of the USDA.

Public health risk

While only a small fraction of shell eggs may harbor salmonella, the public health risk posed by consumption of raw or undercooked eggs stems from the fact that millions of eggs are eaten each day. The hazard is greatest for people with weakened immune systems, including the very young, the very old and hospital patients. The USDA estimates that pasteurizing all U.S.-produced shell eggs could reduce the number of egg-borne salmonella illnesses by up to 85 percent, or more than 110,000 cases a year.

Brunkhorst, a 30-year veteran of PPPL and member of the lab's engineering and scientific staff, has helped design large RF heating systems for fusion energy experiments. He began assisting the Wyndmoor-based project in 2010 after working with the USDA on previous ventures. "It's turned out to be a really good fit," said Brunkhorst, who co-invented the pasteurization device with Geveke and USDA engineering technician Andrew Bigley.

They benefited from joining forces because pasteurizing shell eggs can be a tricky task. "You have to raise the temperature high enough to kill bacteria, but not high enough to cook the egg," Brunkhorst said. "You're really threading the needle on this."

Further complicating the process is the fact that the egg white is more sensitive to overheating than the yolk is. But the RF energy must pass through the white in order to reach the yolk, which requires a higher temperature to pasteurize.

Ohmic heating

The system works through what is known as "ohmic heating," in which the RF energy creates an electric current that produces heat inside the egg. Food-processing firms employ a similar system for heating, baking and drying a wide range of products.

Brunkhorst brought test equipment into his own kitchen to experiment with RF frequencies that the researchers then tried out in the Wyndmoor laboratory.

The USDA prototype, which the agency has applied to patent, couples RF energy through the shell by placing electrodes against opposite sides of the egg. The egg rests on rollers that turn it to distribute the heat and cooling water evenly.

"The goal is to reach a certain temperature for a certain time," Brunkhorst said.

Researchers then take a sample of the egg and do a bacteria count. "We've proven the effectiveness analytically," Brunkhorst said.

The USDA is seeking a licensee to commercialize the product. Potential partners include egg producers and manufacturers of egg-processing equipment.

"We have received quite a bit of interest from industry," Geveke said. "We expect to have a partner in the next few months." 📧



USDA researchers David Geveke, left, and Andrew Bigley in the USDA's Wyndmoor, Pa., research center.

Austin

continued from page 1

able to get the lay of the land, understand how DOE operates and also just get to know the Directorate. I know its members well and they're terrific to work with."

Austin replaces Barbara Sobel, who retired on June 1, after working at PPPL for 34 years.

Zarnstorff said Austin's work with him on a wide variety of committees and administrative activities helped free him up to concentrate on other matters. "She's been extremely valuable to the Director's office because of her proactivity, because she can take over these areas and see that they're accomplished. This is the real meaning of a valuable assistant," Zarnstorff said. "It's worked out as a very healthy partnership."

Austin also excels at working with the numerous researchers and high-profile visitors who come to the Laboratory by aiding them in arranging their visits, said Zarnstorff. "She's very professional in her approach and she's very professional in her presentation," he said. "She's studiously professional and this is a good thing."

A reconfigured position

It made sense to reconfigure the position to have the executive assistant work with both himself and Prager because they share many responsibilities, Zarnstorff said. Austin's ability to find ways to take on additional tasks will be key, he said. "The role is definitely important because there's a large number of activities where Stewart and I will now depend on her to carry out various tasks."

Prager agreed. "It's fantastic that Carol is able to move into this position," he said. "She'll be key to serving the whole Laboratory by making the Director's office run smoothly and effectively and serving as a liaison between the Director's office and the entire Lab."

As the new executive assistant, Austin will not only manage the complex day-to-day operations of the Director's office, she also will serve as the contact person between the Director's office and the Lab. The job entails planning and coordinating key meetings by the Director's Office with the PPPL Advisory Council, DOE officials, and other officials. The responsibilities also include working with senior managers at the Lab and planning special projects. The job description calls for someone who can handle "sensitive and confidential situations" with "poise, tact, and diplomacy."

Austin said she's looking forward to tackling all the dimensions of the job. "I really like that every day something is different," she said. "I like being able to think out-of-the-box and provide solutions as needed and again, I like to volunteer and help out other parts of our organization."

She is used to juggling many tasks at once. Through her job as executive assistant to Zarnstorff and Cohen, she worked not only as their assistant but also as the administrator for the Colloquium Committee, the Research Meeting Committee, and the Promotions Committee and compiled the weekly PPPL Highlights. Austin's successor will work with Deputy Director for Operations Adam Cohen and PPPL Vice President A.J. Stewart Smith and also will assist CFO Kristen Fischer and John DeLooper, head of Best Practices and Outreach. That person also will produce the weekly Highlights.

Several years of experience at Wall Street firms

Austin comes to the job with several years of experience working as an administrative manager in the finance industry for Citigroup on Wall Street in New York and previously for Credit Suisse First Boston, also in New York, and Morgan Stanley Dean Witter.



*Carol Ann Austin
New executive assistant to Director Stewart Prager*

She was working in the World Trade Center Complex at 7 World Trade Center on the day of the 9-11 attacks and was on her way to work when she saw first one and then a second plane crash into the two towers across the street from her office building. She was among many people who had to walk back to Brooklyn across the Brooklyn Bridge that day. The event prompted her to move to Franklin Park, N.J. For several years she commuted into New York where she worked long hours, often until past midnight.

She said she didn't know about PPPL when she answered an ad for the administrative assistant position but she learned quickly by volunteering at various PPPL events. "If I had just sat here, I never would have known what was going on in the Laboratory," she said. "That was an opportunity to get to know people and help support different parts of the organization here."

Austin grew up in Huntington, Long Island, as one of five children, including a twin sister, Helen, a senior project manager at AT&T in Washington, D.C., another set of twin sisters and a brother. She has one niece and three nephews, with whom she is very close.

She graduated from New York University with a degree in political science. A lifelong learner, she also trained as a paralegal at NYU and has a human resources certificate from Cornell University. She received a management certificate from Princeton University in May and has taken courses in Web management. She was awarded a certificate for administrative excellence from the American Management Association.

A passion for volunteering with young people

Austin's passion for volunteering extends beyond PPPL. In her off hours, she works as a child advocate for CASA, serving as a representative of children in foster care in the court system. She also chairs the Juvenile Conference Committee in Somerset, a program that provides guidance to juveniles who have committed minor offenses. "It's just helping people who are our future be successful -- that's the most important thing for me -- that's what I get out of it," she said.

When she has time to spare, she is an accomplished jewelry maker. She belongs to the Beading Society of Greater New York. She also enjoys reading and riding her bicycle.

Right now, she's busy moving her office and digging into her new job. "I think my skill set has provided me with the opportunity to support the mission here and to continue to contribute to the goals of the directorate here," she said, "so I'm honored to be able to continue to contribute." 📧

Chemical Disposal

Inspect containers for bulges, rust, cracks, or concavity.
If damaged, do not handle – contact Environmental Services.

Be aware of changes in state.
Liquids becoming solid? Solids separating?

Wear proper PPE & handle items with care.
Never pick up a jar by its lid.

Note the item's shelf-life.
If it's not on the label, contact the manufacturer.

Promote active ownership – know who owns what.

Don't need it? Get rid of it!

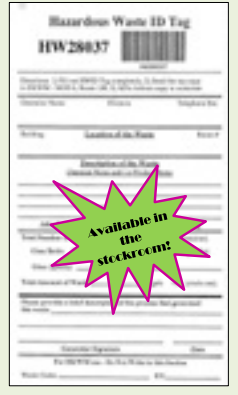
If you don't know what it is, contact Environmental Services!
 x3380

Disposal Process

Obtain a Hazardous Waste ID Tag from the stockroom

Return the top copy to Environmental Services.

Place tag on item(s) to be removed.



Household Waste Disposal Day in Local Counties:

Mercer County: Sept. 21, 8 a.m. to 2 p.m., the John T. Dempster Fire School, Bakers Basin/Lawrence Station Road, Lawrence Township, www.mcianj.org.

Middlesex County: Sept. 21 from 8 a.m. to 2 p.m., Woodbridge Public Works Yard/Recycling Center, 225 Smith St., Keasbey, <http://co.middlesex.nj.us/planningboards/solid-waste.asp>.

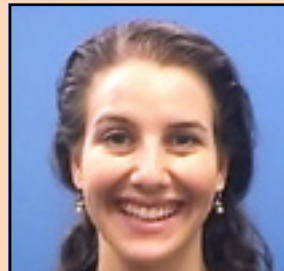
Monmouth County: Open all year by appointment, Mon. – Fri. 7:30 a.m. to 11:15 a.m. and 12:45 p.m. to 3:15 p.m., Sat. 7:30 a.m. to 1:45 p.m., Monmouth County Permanent Household Hazardous Waste Facility, 3211 Shafto Road, Tinton Falls, <http://co.monmouth.nj.us>.

Somerset County: Oct. 26, 9 a.m. to 2 p.m., South County Public Works Garage, 410 Roycefield Road, Hillsborough, <http://www.co.somerset.nj.us>.

Hunterdon County: Nov. 19, 9 a.m. to 1 p.m., 314 State Route 12, Hunterdon County Complex, Flemington, <http://co.hunterdon.nj.us/recycling.html>.

Welcome PPPL New Hires

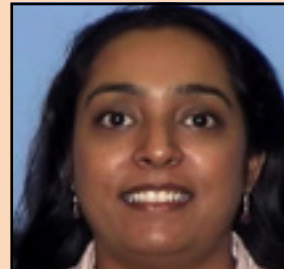
PPPL welcomes the employees pictured below who have recently joined our staff.



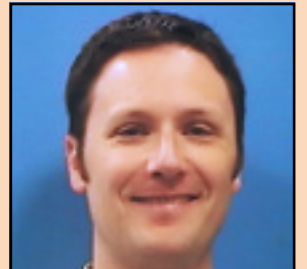
DANA ECKSTEIN
 Administrative Assistant
 Facilities



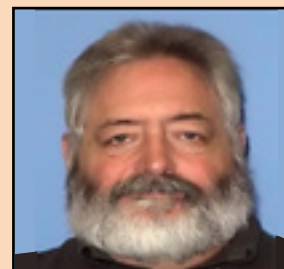
CHARLES GREENSTEIN
 Janitor
 F&EM



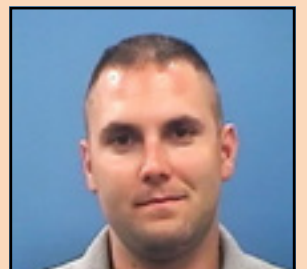
ANKITA JAIRWALA
 Mechanical CAD designer
 Engineering & Infrastructure



SEAN LYNCH
 Software Analyst
 Information Technology



ANDREW MORRISON
 Best Practices Analyst
 Best Practices & Outreach



JASON NILON
 Emergency Services Officer
 Site Protection Division

Travel Office requests list of conferences for Fiscal Year 2014

The Travel Office is requiring that anyone planning to travel for conferences in Fiscal Year 2014 (between Oct. 1, 2013 and Sept. 30, 2014) send the office a list of all conferences you plan to attend by Friday, Sept. 27. The information will be used to compile a list required by the U.S. Department of Energy of all PPPL conferences for Fiscal Year 2014, including dates, locations, who is attending and estimated costs. Please see the Travel Office's recent "Conference Data Call Response" email for additional details.

Please review the PPPL list of conferences and if your conference is on the list inform the Travel Office of your plans to go and your role at the conference (i.e. attendee, presenter, participant, etc.) If your conference is not on the list you will need to fill out a form with the following information: The title of the conference (no acronyms), names of attendees, the date the conference will start and end, the sponsor, the location, a description of the conference, the purpose and objective a conference link if available, and your role at the event (presenter, participant, etc.). If you are an attendee, you must provide additional information explaining why you would like to attend.

The information must be sent to travel@pppl.gov by Sept. 27 or you will not be able to attend.

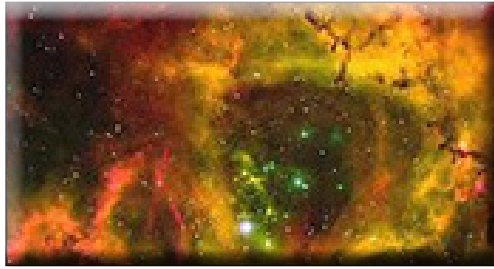
For additional information, visit the Travel Office's internal website at travel.pppl.gov.

New grad students get training and tour PPPL



A new group of graduate students received safety training during a tour of PPPL, including LTX, on Tuesday, Sept. 10, as part of their introduction to the Laboratory. From left to right: Jeffrey Lestz, Eugene Evans, Matthias Knolker (rear), Scott Keller, Ge Dong, Qian Teng, Denis St-Onge, and Matt Lucia, far right, a fifth-year graduate student.

COLLOQUIUM



The Formation of Stellar Groups

STEVEN STAHLER
University of California-Berkeley

Wednesday, September 18

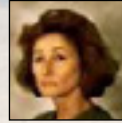
4:15 p.m. (Coffee/Tea at 4 p.m.) • MBG Auditorium

Retirements at PPPL

PPPL bids a fond farewell to the following employees who retired as of Sept. 1:



Linda Harmon
Staff assistant, Facilities,
36 years



Christiane Ludescher-Furth
Senior engineer, Engineering,
37 years



Randy Wilson
Head, ITER and Tokamaks,
32 years

COLLOQUIUM



Consciousness and the Social Brain

MICHAEL GRAZIANO
Princeton University

Wednesday, September 25

4:15 p.m. (Coffee/Tea at 4 p.m.) • MBG Auditorium

Shop online at the redesigned Plasma Hutch web page

The PLASMA HUTCH web page has a new design by HR's Kim Mastromarino that lets you easily look at all the merchandise before placing your online order. Go to <http://hr.pppl.gov/web-site/Plasma%20Hutch/PHIndex.html> to do your shopping! (You can also still shop in person on Fridays between 11:30 a.m. and 12:30 p.m.).



Brock Café at PPPL Menu

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

— MARK GAZO, Chef Manager

COMMAND PERFORMANCE
CHEF'S FEATURE

	MON. 16 SEPT.	TUE. 17 SEPT. NAT'L APPLE DUMPLING DAY	WED. 18 SEPT.	THU. 19 SEPT. NAT'L BUTTERSCOTCH PUDDING DAY	FRI. 20 SEPT.
EARLY RISER	 LINGUINE WITH BROCCOLI & MORE Pork Roll, Egg & Cheese Croissant	 BAKED HAM, YAMS & VEGETABLE Huevos Rancheros	 ENGLISH STYLE FISH & CHIPS Portobello, Mozzarella & Sundried Tomato Omelet	 SHRIMP PARMESAN WITH SPAGHETTI French Toast with Bananas	 SMOKY PORK LOIN Greek Omelet
COUNTRY KETTLE	Maryland Crab	Curried Sweet Potato Soup	Chicken Barley	Ham & Lentil Soup	Turkey Chili
GRILLE SPECIAL	Sloppy Joe served with Fries	Beef Gyro	Double Decker Bacon Cheese Burger	Classic Tuna Melt	Patty Melt (Swiss Cheese Burger with Fried Onions on Rye)
DELI SPECIAL	Thanksgiving Dinner Sub	Breaded Chicken Cutlet Sandwich	Chicken Waldorf Salad Sandwich	Chicken Sliders served with Chipolte Mayonnaise	Pesto Chicken Salad Pita
PANINI	Balsamic Chicken with Mushrooms, Peppers Ciabatta	Vegetable Quesadilla	Chicken Ciabatta with Melted Provolone	Caribbean Grilled Chicken with Pineapple Ham & Carib. Mayo	Grilled Chicken Breast with Ham, Swiss and Sweet Peppers
BROCK VALUE MEAL ★\$6.25	½ Sandwich, Small Soup or Salad, Chips, 12 oz. Soda	2 Slices Pizza, Bag of Chips, 12 oz. Soda	Cheeseburger, French Fries, 12 oz. Soda	2 Hot Dogs, French Fries, 12 oz. Soda	Meatball Sandwich, Potato Chips, 12 oz. Soda

MENU SUBJECT TO CHANGE WITHOUT NOTICE

VEGETARIAN OPTION

CLICK HERE FOR A PRINTABLE WEEKLY MENU

WEEKLY

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