

## At PPPL THIS WEEK

WEDNESDAY, OCTOBER 5

### PPPL Colloquium

4:15 p.m. ♦ MBG Auditorium

Neuromechanics of Insect Locomotion:  
How Cockroaches Run Fast and  
Stably Without Much Thought

Prof. Phillip Holmes  
(Princeton University)

[CLICK HERE FOR ABSTRACT](#)

THURSDAY, OCTOBER 6

### GFDL Events and Seminars

2:00 p.m. ♦ GFDL

Smagorinsky Seminar Room

NJ State Climatologist providing  
climate services at the local level

David Robinson (Rutgers University)

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

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

### MacLean House Lecture

3:00 p.m. - 4:00 p.m.

101 McCormick Hall, Princeton Univ.

Nuclear Fission Power: Some  
Motivations

M.V. Ramana (Woodrow Wilson School)

[http://alumni.princeton.edu/learntravel/events/  
macleanhouse](http://alumni.princeton.edu/learntravel/events/macleanhouse)

FRIDAY, OCTOBER 7

### PPPL Google Info Class

10:00 a.m. - 11:00 a.m. ♦ B-318

### Princeton University

#### SPIN Meeting at PPPL

12:00 noon - 1:00 p.m. ♦ B-318

### DIII-D Science Meeting

1:00 p.m. - 2:30 p.m. ♦ B-233

## Boozer Named Interim Theory Head

by Kitta MacPherson



**A**llen Boozer, a professor of applied physics at Columbia University and an internationally recognized expert in plasma science, has agreed to serve as interim head of PPPL's Theory Department.

Boozer is best known for his contributions to the theory of 3-D plasmas, for which he received the 2010 Alfvén prize, the highest award of the European Physical Society for plasma physics.

"We are very fortunate to have someone with Allen's scientific depth and breadth lead the Theory Department during the next year," said Stewart Prager, director of PPPL. "His leadership will be crucial in guiding change."

Members of the Theory Department at the Laboratory solve the complex equations that describe a plasma, either "by hand" or by computer, thereby providing insights into how plasmas behave and how they can be controlled. They seek to understand complex characteristics of plasmas, from instabilities to turbulence to interactions with materials.

The position of permanent head is not currently filled.

Boozer is looking forward to his new role. "The Theory Department should be a center of scientific guidance and invention at PPPL and a source of theory leadership for the world," Boozer said. "Great theorists pose questions that make a difference, have not been answered, but can be answered. When a critical question cannot be answered, they ask whether anything can be said. And they determine the constraints of physics, remembering that what is not constrained is available for inventions of fundamental importance."

In addition to the Alfvén prize, Boozer has earned numerous awards and honors, including election to scientific membership in the German Max Planck Society and selection as the first U.S.-Japan visiting professor. He has published more than 200 articles in refereed journals.

Boozer has been a professor of applied physics at Columbia since 1994. Previously, he was a professor of physics at the College of William and Mary from 1986 to 1994. He was a member of the PPPL research staff from 1974 to 1986. He served as an officer in the U.S. Air Force from 1970 to 1974. He earned his PhD in physics in 1970 from Cornell University. ■

## Guest Corner

### New Provider for PPPL Café

By **Ed Jenkins** - PPPL Project Facilities Manager

**A** new food services provider, Brock and Company, Inc., has been chosen to operate the PPPL Cafeteria and begins by serving breakfast today, Monday, October 3.

The Malvern, Penn.-based company, which has been in business since 1927, was eager to get started and worked through this past weekend to prepare for serving breakfast today beginning at 7 a.m. Brock brings in a new staff of four, including Chef-Manager Keith M. Leder.

We thank Whitsons for six years of great service and wish the group the best in the future.



## New Café Vendor

continued from page 1

Come down to the Cafeteria to meet and greet Keith and his staff, as well as other Brock associates. The festive environment will include balloons and free cupcakes, beginning at noon.

With the advent of this new contract, PPPL will intensify its efforts to reduce landfill waste. Beginning immediately, 95 percent of the items used in the Cafeteria will be either compostable or recyclable. Plates, cups, lids, utensils, napkins, trays, and soup bowls are compostable and should be disposed of in the compostable bins. Cans, bottles, and recyclables with recyclable numbers 1 through 7 remain the same. We must do a better job at the Lab regarding our waste stream. This is a perfect way to start. Please make every effort to comply with the posted

bin markers. There will still be items such as chip bags, snack wraps, plastic bags, etc., that should be disposed of in the regular trash but these should be minimal. Those who bring their lunches should dispose of their waste in the appropriate bins.

So let's do a few things today - meet and greet Chef Keith and his associates, enjoy free cupcakes, and make a personal choice to better the environment by composting, recycling, and minimizing waste. I'd like to offer a special thanks to my fellow selection committee members, who included Larry Sutton, Susan Murphy-LaMarche, Maria Pueyo and John Lacenere. In addition, Andy Carpe, Rose Fuchs-Smith, Ceil O'Brien, Barbara Sarfaty, Barbara Sobel, and Mike Viola provided additional input. ■



## DOE Officials Visit Lab, Tour NSTX

Brian Quirke, Director of Communications at DOE's Chicago Office, delivered a Lunch-n-Learn talk, "Inspiring Nationwide Support for Science," on September 21 to about 50 staff members in the MBG Auditorium. Quirke has been gathering support for science for more than 30 years. He presently works with five of the 10 DOE national laboratories to assure the right people understand the value of research and support it.

Photos by Elle Starkman



DOE officials toured the NSTX Test Cell on September 22 during a visit to PPPL. From left are PPPL's Adam Cohen and John DeLooper, DOE's John Carter and Brian Quirke, and PPPL's Kitta MacPherson.

# ART OF SCIENCE

**P**rinceton University is sponsoring its fifth “Art of Science” competition, open to all members of the Princeton community. Submissions are limited to digital images and the deadline for entries is 11:59 p.m., October 17, 2011. There is no cost to enter the competition.

PPPL’ers have won two of the four previous competitions and numerous PPPL-created images have been in the annual show, according to the contest organizers.

The theme this year is “intelligent design.”

“In recent years, the phrase ‘intelligent design’ has taken on a polarizing meaning,” said Art of Science co-organizer Andrew Zwicker, who is the head of Science Education at the Princeton Plasma Physics Laboratory (PPPL) and a lecturer in the Princeton Writing Program. “But in the broadest sense, beautiful objects, both natural and the manufactured, have an intelligence to their form, their function, and thus, their design.”

Zwicker said that the term “intelligent design” encompasses a wide range of potential images: a field rabbit regulating its body temperature through its posture; a simulation of the birth of a galaxy; an electron micrograph of a computer chip created with novel materials.

“We are seeking images that capture the exquisite harmony of such systems,” said Art of Science co-organizer Adam Finkelstein, professor of computer science and a co-organizer of the competition.

“Regardless of the field of science or the mechanism that created it, this year’s competition comes from a desire to reframe the phrase ‘intelligent design’ in celebration of the idea that both nature and the rearranging of the natural world have inherent beauty.”

The organizers are soliciting images made in the course of scientific research that have aesthetic value. This “found art” might include photographs from a microscope or a telescope; photographs taken for purposes of field research; images generated by computer simulations; 3D renderings of data sets; and data plots. It also may include photographs of physical objects related to science, such as a piece of equipment.

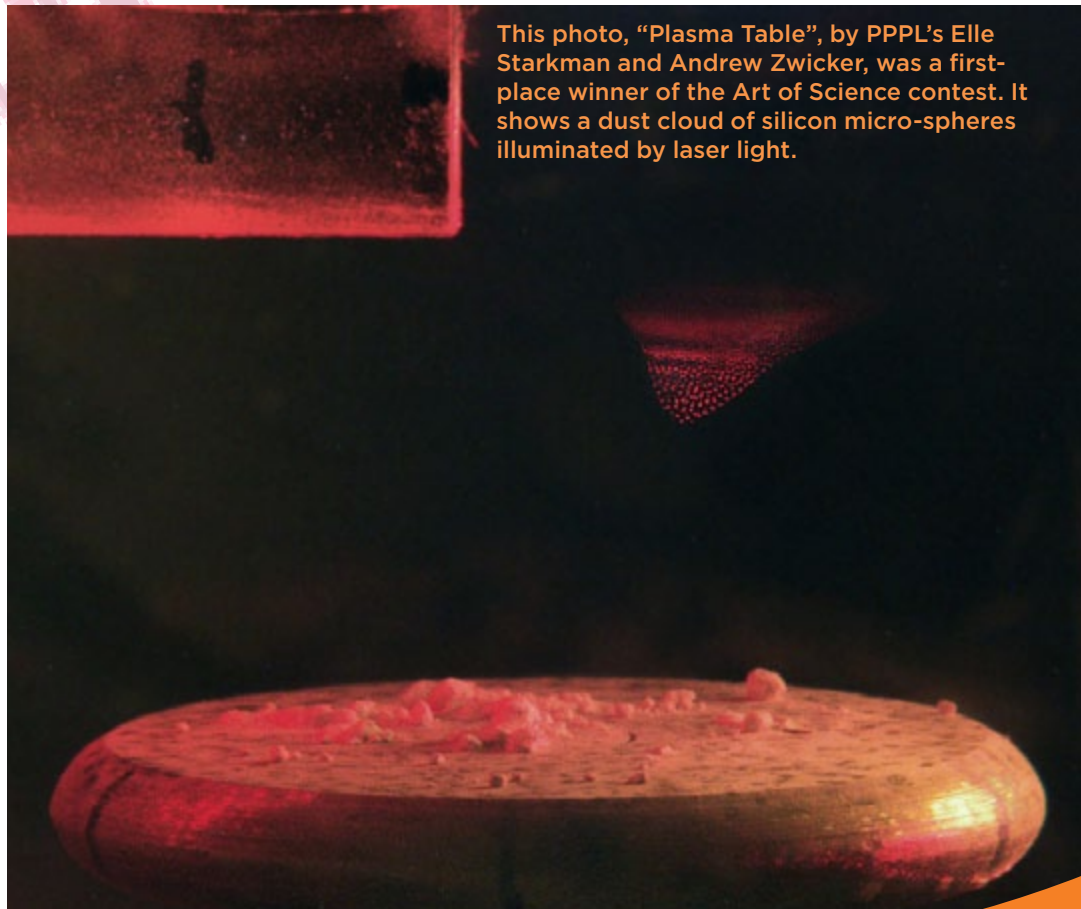
Entries should be scientific images created during an actual research project, rather than art that is inspired by science.

Jurors for the competition include President Shirley M. Tilghman; Dean of the Faculty David Dobkin, Phillip Y. Goldman ’86 Professor in Computer Science; the photographer Emmet Gowin; and James Steward, director of the Princeton University Art Museum.

Cash prizes will be given to the top three winners of the competition: \$250 for first place, \$154.51 for second; and \$95.49 for third. These amounts are derived according to the golden ratio, a mathematical proportion that has been found in aesthetically pleasing designs, from seashells to ancient Greek temples.

The awards will be announced at an opening reception November 11 in the Friend Center, where images selected from the competition will remain on display for a year. Images selected for the Art of Science 2011 show also will be featured in an online gallery. Submissions are limited to digital images up to 300 dpi and 20 MB in JPEG format that is “print ready.” Each submission should include a title and description of the image. The description should briefly explain the research that produced the image in language that is understandable by a non-technical audience.

A page describing frequently asked questions is at this FAQ, and the submission page, with details on submitting an image can be found at: <http://aos.cs.princeton.edu/>. ■



This photo, “Plasma Table”, by PPPL’s Elle Starkman and Andrew Zwicker, was a first-place winner of the Art of Science contest. It shows a dust cloud of silicon micro-spheres illuminated by laser light.

# The Future of Nuclear Power

Fall 2011 Maclean House Lecture Series  
Sponsored by the Office of the Alumni Association



## Curious about nuclear power?

Join Princeton faculty and engineers for this five-part lecture series about the science and future prospects of nuclear power, from the technology of nuclear fission energy to the developing area of nuclear fusion.



### Presenters

**M.V. Ramana**, Associate Research Scholar, Nuclear Futures Laboratory and the Program on Science and Global Security, Woodrow Wilson School



**Charles E. Kessel, Jr.**, Principal Engineer, Princeton Plasma Physics Laboratory



**Robert Goldston**, Professor of Astrophysical Sciences, Affiliated Faculty with the Princeton Program on Science and Global Security, and former Director of the Princeton Plasma Physics Laboratory

## Schedule

**October 6**  
3:00-4:00pm

Nuclear Fission Power:  
Some Motivations  
**M.V. Ramana**  
101 McCormick Hall

**October 20**  
3:00-4:00pm

Nuclear Fission Power: Some Challenges  
**M.V. Ramana**  
101 McCormick Hall

**October 13**  
3:00-4:00pm

Nuclear Fission Power:  
Technological Overview  
**M.V. Ramana**  
101 McCormick Hall

**November 3**  
3:00-4:00pm

An Overview of Nuclear Fusion  
and its Technology  
**Charles E. Kessel, Jr.**  
120 Lewis Library

**November 10**  
3:00-4:00pm

Climate Change, Nuclear Power and  
Nuclear Proliferation: Magnitude Matters  
**Robert Goldston**  
101 McCormick Hall

*Lectures will take place on the main campus  
at Princeton University.*



This event is free and open to the public.

Additional information can be found on the Alumni Education website  
<http://alumni.princeton.edu/learntravel/events/macleanhouse>

**Q. Why is PPPL switching to Google Apps?**

**A.** PPPL's existing email system, Microsoft Exchange 2003, is unable to meet the growing demands of its users. The existing system runs on antiquated hardware, struggles to handle the quantity of email received by PPPL, offers poor storage capabilities, falls short on calendaring, lacks robust mobile device integration, and fails to offer any additional collaborative tools. After conducting an exhaustive search and gathering feedback from about 100 pilot users, members of the Information Technology Department (ITD) decided that Google Apps was an appropriate solution for PPPL. Google Apps offers a powerful suite of collaborative tools including Google Mail, Google Calendar, Google Docs, and numerous others. Each of these tools works well in our multi-platform environment and follows you wherever you go.

**Q. How much email will I be able to store in Google Apps?**

**A.** Google Mail will allow each user to store up to 25GB of data in their email account.

**Q. How large an email message can I send with Google Mail?**

**A.** Google Apps presently limits the total size of a single email message to 25MB. Should you need to send a larger email, you can use Google Docs which will allow you to send emails of up to 1GB in size. PPPL will provide on-site training covering the use of Google Docs.

**Q. Since Google Apps is hosted off-site in the cloud, how much slower will it be than our existing on-site system?**

**A.** It won't be. In fact, many of PPPL's pilot users reported seeing faster performance from Google Apps than our existing on-site system.

**Q. How will I access the services offered by Google Apps?**

**A.** The full suite of Google Apps services is only available through a web browser. As such, the ITD is strongly recommending that everyone access his or her Google Apps services through a web browser. In testing, the **Google Chrome** browser offered the best user experience but other browsers such as **Internet Explorer, Safari, and Firefox** work as well.

Should you find it necessary to continue using your desktop clients, your Google Apps email, calendaring, and contact information can still be retrieved. Supported email

For the latest PPPL Google information please visit <http://www-local.pppl.gov/google-info/>

access is available through Microsoft Outlook, Apple's Mail, and Mozilla's Thunderbird. Google calendar data can be accessed through Microsoft Outlook, Apple's iCal, and Mozilla's Sunbird. Contact information can be accessed through Microsoft Outlook and Apple's Address Book.

**Q. Can I transfer my existing data to Google Apps?**

**A.** Yes! Any existing email, calendars, and contacts you presently have stored on the current PPPL Exchange server will be automatically migrated to Google Apps for you.\* Any information that is stored locally on your computer can be migrated manually. Training sessions will cover how to migrate local email, calendars, and contacts to Google Apps.

*\*Please note that any emails you currently have, including their attachments, that exceed the 25MB message cap in Google Mail will not be migrated to Google Apps. You will also have the option to opt out of any automated migration of your data to Google Apps.*

**Q. Will I be able to access my Google Apps data from my mobile device?**

**A.** Yes! Google Apps integrates with a number of different devices including Android, BlackBerry, Windows Mobile, Symbian, iPhone, and iPad.

**Q. How long will the conversion take?**

**A.** The Lab has already started its conversion to Google Apps. For example, all user accounts and groups have already been created. The next phase of the migration will consist of data synchronization. The final stage of the conversion process will take place on 31 October 2011. On this date, everybody with an active PPPL email address will be using Google Apps.

**Q. What kind of service interruptions should I expect during the conversion process?**

**A.** There should not be any major service disruptions during the entire conversion process but please remember that we aren't perfect. The schedule that PPPL is going to follow allows us to perform most work during the hours of 7 p.m. and 7 a.m.. If you do experience any disruptions, please notify the Helpdesk at x2275 or [helpdesk@pppl.gov](mailto:helpdesk@pppl.gov).



*It has been a pleasure to serve our friends. The best in all your endeavors.*

**VAN BEUTELL AND THE WHITSONS PPPL STAFF**

# COLLOQUIUM

NEUROMECHANICS OF INSECT LOCOMOTION:  
HOW COCKROACHES RUN FAST AND STABLY WITHOUT MUCH THOUGHT

**PROFESSOR PHILIP HOLMES**

Princeton University

**Wednesday, October 5**

**4:15 p.m. (Coffee/Tea at 4:00 p.m.)**

**M.B. Gottlieb Auditorium, Lyman Spitzer Building**

Coming to PPPL **October 31st.**

**Be Ready!**



<http://www-local.pppl.gov/google-info/>

*From the PPPL Site Protection Division*

## Sun Glare

Please be aware that the change in season brings an increase in sun glare on the approach roads to PPPL Booth 6.

Site Protection has received reports of pedestrians/bicyclists not being seen by approaching traffic until upon or past them due to sun glare.

Pedestrians should walk facing traffic. Bicyclists must ride in the same direction as the flow of traffic. Please remember that although you can see the approaching traffic, the approaching driver may not see you.

**Drivers, Pedestrians, Bicyclists — Please Use Caution.**



## PPPL CAFÉ MENU



MONDAY, OCTOBER 3



**Cajun Rubbed Turkey  
London Broil with Garlic  
Mashed Potatoes and  
Country Gravy**

*Come meet Chef Keith! — Free cupcakes at noon!*

TUESDAY, OCTOBER 4



**Pork Carnitas Soft Taco  
with Black Beans and  
Rice**

WEDNESDAY, OCTOBER 5



**Tri-Colored Cheese  
Tortellini with Sun-Dried  
Tomato and Creamy  
Pesto Alfredo Sauce**

THURSDAY, OCTOBER 6



**Baked Mushroom and  
Spinach Lasagna with  
Parmesan Bread Stick**

FRIDAY, OCTOBER 7



**Chicken Tagine with  
Artichoke Hearts and  
Peas over Cous Cous**

MENU SUBJECT TO CHANGE WITHOUT NOTICE

[CLICK HERE FOR FULL WEEKLY MENU](#)

## WEEKLY

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

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Deadline for submissions is noon on Thursdays. Send to: [pwieser@pppl.gov](mailto:pwieser@pppl.gov) ♦ Comments: [commteam@pppl.gov](mailto:commteam@pppl.gov)

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