

Calendar of Events

THIS WEEK

TUESDAY, OCT. 18

**PPPL parking decal distribution
(for renewals)**
10-11 a.m. ♦ Cafeteria

WEDNESDAY, OCT. 19

**PPPL parking decal distribution
(for renewals)**
10-11 a.m. ♦ Cafeteria

PPPL Colloquium
4:15 p.m. ♦ MBG Auditorium
[Flight of the Fruit Fly](#)
Itai Cohen, Cornell University

Records Shredding Event
Warehouse receiving area
in the lower parking lot
[See page 6 for details.](#)

THURSDAY, OCT. 20

**PPPL parking decal distribution
(for renewals)**
10-11 a.m. ♦ Cafeteria

FRIDAY, OCT. 21

Open Public Tour
10 a.m.
Contact tours@pppl.gov
for more information.

UPCOMING

WEDNESDAY, OCT. 26

PPPL Colloquium
4:15 p.m. ♦ MBG Auditorium
[Energy Return on Investment for
Future Energy Sources](#)
Charles Neumeyer, Princeton Plasma
Physics Laboratory

Records Shredding Event
Warehouse receiving area
in the lower parking lot
[See page 6 for details.](#)

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Organizational diagnosis survey will include more than 500 at PPPL

By Jeanne Jackson DeVoe



PPPL'ers listen to Ruth Orenstein, president of Princeton Consulting Resources Inc., in the MBG Auditorium. (Photo by Elle Starkman)

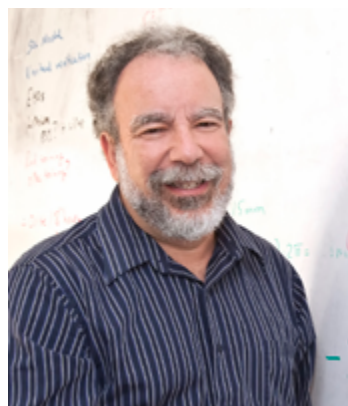
Everyone at PPPL will take part in a Lab-wide “organizational diagnosis” over the next several months. It will produce a report that will paint a clear picture of how the more-than 500 people working at the Laboratory view the culture of the organization.

The initiative was launched at an all-hands meeting on Friday, Oct. 7. It was the brainchild of Dave McComas, the Princeton University vice president for PPPL. “We really need to look deeply into this organization to understand what’s working well and identify what’s not working well,” McComas told the staff. “I hope you all will take it very seriously and be really blunt about your feedback and desires, and engage in this process.”

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Robert Goldston receives 2015 Nuclear Fusion Award for best paper published in 2012

By John Greenwald



Robert Goldston

Fusion researcher Robert Goldston, a Princeton University professor of astrophysical sciences and former director of PPPL, will be honored this week for writing the most outstanding paper to appear in the journal *Nuclear Fusion* during 2012. The journal, published by the Institute of Physics and the International Atomic Energy Agency, will present the award during the Nuclear Fusion Energy Conference in Kyoto, Japan. The annual honor recognizes papers that have made the greatest scientific impact in the two years following their publication, and includes a \$2,500 cash award.

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Organizational diagnosis survey

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Terry Brog, PPPL's interim Lab director, said the diagnosis is a vital step in ensuring that the Laboratory operates at the highest possible standards to achieve scientific and operational excellence." "You folks will have the opportunity not just to define our culture but also to define the steps or activities we need to take to improve our culture," Brog said at the meeting. "This is very important for us."

The diagnosis will be carried out by [Princeton Consulting Resources, Inc.](#) The goal is to determine "the extent to which changes in the Lab's culture are necessary and desirable," said Ruth Orenstein, the company president, at the all-hands meeting. "Everyone in the Lab will have the opportunity to be part of this determination."

Identifying most important issues

Princeton Consulting staff will use individual and group interviews to identify what PPPL leaders and staff members think are the most important aspects of the Laboratory's culture. They will then create a Lab-wide survey that incorporates those areas identified by the interviewed participants and will distribute the survey to everyone in the Laboratory.



PPPL staff during the Q&A portion of the meeting. (Photo by Elle Starkman)

Princeton Consulting has worked with numerous clients, including Princeton University, New York-Presbyterian Hospital, Johnson & Johnson and Goldman Sachs. ([A complete list is available here.](#)) Orenstein, who has a Psy.D. in organizational psychology from Rutgers University, founded the company more than two decades ago with her partner, Victoria Lincoln, the executive vice president. The three senior associates at the organization all have doctoral degrees in organizational psychology.

One staff member asked how Orenstein could make staff members feel confident that their comments would be kept confidential. Orenstein emphasized that the information will be completely confidential. She insists that the client's commitment to confidentiality be written into every contract. "We've been in business for 21 years," she said. "We couldn't possibly stay in business if we broke confidentiality."

In answer to another question by a staff member, Orenstein defined the culture of an organization as "the way people interact with one another at the individual, group, and systemic levels within the context of the organization." Staff members will define what the culture is at PPPL, she said. That definition will also include the six elements Brog identified as crucial to PPPL achieving its mission of scientific and operational excellence: diversity, morale, inclusion, complacency, sense of urgency, and engagement.



Dave McComas, Princeton University vice president for PPPL, speaks at the Oct. 7 all hands meeting. (Photo by Elle Starkman)

The first step of the organizational diagnosis was the Oct. 7 launch. Orenstein subsequently interviewed McComas, Brog, Mike Zarnstorff, deputy director for research; and Stacia Zelick, interim deputy director for operations. The four are among a representative sample of 50 managers and staff members who will be interviewed individually starting this week. The interviewing phase will also include 15 group interviews of 10 to 12 individuals across various departments. Staff members and their supervisors will not be in the same groups.

Survey based on data from participants

The next step will be for Princeton Consulting to create a survey that will be developed based on the interviews. The consultants will distribute the survey electronically to everyone in the Laboratory. They will then compile the results of all the data from the participants, including representative quotes, in an initial report of their findings.

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Ruth Orenstein addresses the all hands meeting. Stacia Zelick, PPPL's interim deputy director for operations, is at right. (Photo by Elle Starkman)

Organizational diagnosis survey

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In the final phase of the organizational diagnosis, Princeton Consulting staff will hold five feedback meetings with groups at every level of the staff. They will ask PPPLers “Did we get it right?” Orenstein said. “If you tell us ‘No. You didn’t get it right,’ we’ll say, ‘What needs to be revised?’” The consultants will ask whether the report compromises the confidentiality of any individuals or groups at the Laboratory. They will also ask for any recommendations. The last feedback meeting will be with managers.

The consultants will give the final report to Dave McComas, who committed to sharing it with the staff at large. The final report will be the findings of all aspects of the diagnosis, including the recommendations from the feedback meetings.

Orenstein said the diagnosis will focus on the staff’s “common understanding” of the culture. Shannon Greco, a program leader in Science Education, asked whether by excluding

“outlier perceptions,” the methodology could “silence the voices of minorities and women” at the Laboratory. Orenstein replied that trends within identity and organizational groups, not solely across the whole organization, are reported.

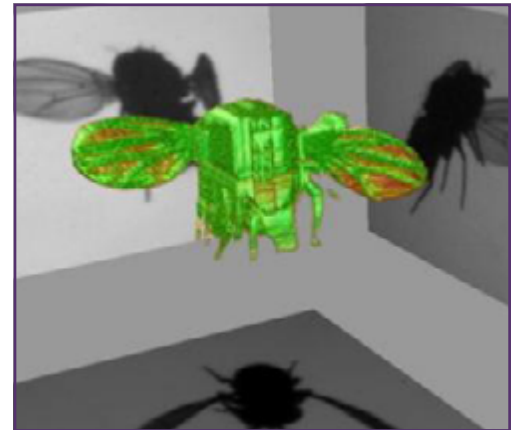
A couple of staff members questioned whether the diagnosis would include all the categories of staff working at PPPL, such as staff members employed by other institutions and consultants. Orenstein said her organization would work with PPPL’s Human Resources Department to make sure that everyone is included.

The diagnosis is just the first step in changing the culture at the Laboratory, Brog said. “We’re asking for your help to identify things we can work on,” he said. “We’re also going to ask for your help on how to implement change at the Laboratory. We cannot do this by ourselves. We need your help.”

COLLOQUIUM

Flight of the Fruit Fly

Itai Cohen
Cornell University



Wednesday, Oct. 19

4:15 p.m., M.B.G Auditorium, Lyman Spitzer Building

Thank you blood donors!

Our sincere thanks to all who participated and donated blood on Friday, October 7th. We had 18 people participate and collected 18 productive units. We are grateful for your donation.

The Spring Blood Drive is scheduled for March 15, 2017.

—American Red Cross/OMO Office

Nuclear Fusion Award

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The paper, for which Goldston was sole author, presents a new model for estimating the width of the scrape-off layer, the hot plasma exhausted from the closed magnetic surfaces of doughnut-shaped facilities called tokamaks. Such plasmas must be wide enough to avoid delivering a thin and concentrated blow that could damage the walls of the exhaust — or divertor — chamber where the heat is dissipated.


The 2012 paper, titled [“Heuristic drift-based model of the power scrape-off width in low-gas-puff H-mode tokamaks,”](#) showed that the width of the scrape-off layer depends on how rapidly the plasma drifts across the closed surfaces as it flows into the divertor region. The more rapid the drifts, the greater the width of the layer. His calculation enables operators of future tokamaks like ITER, the international experiment under construction in France, to prepare for the possible dimensions of the layer and its impact on the chamber region.

The editorial board of *Nuclear Fusion* cited the model as, “Potentially one of the most important results obtained in recent years in fusion” research. The estimate “provides a simple yet elegant model for the scrape-off layer power width,” the editors said, “and ultimately could have significant impact on the future direction of the field.”

Since publication of the paper, experiments on tokamaks around the world have largely confirmed the predictions of Goldston’s model. Confirmations include both the magnitude of the scrape-off-layer width, and its variation with parameters such as machine size, magnetic field strength, plasma shape, and heating power.

The effect has even been seen in plasmas without divertors but with material limiters that bound the hot gas. The model has also given rise to other predictions, such as the pressure gradient in the scrape-off layer, and the limit of plasma density in the best tokamak operating modes due to the limit to this gradient — both of which have recently been observed.

In addition, theoretical models predict greater scrape-off layer widths for larger machines such as ITER. Experiments on the international facility will therefore provide the definitive experimental test.

Goldston is the second researcher at PPPL to receive the award, which began in 2006. Steven Sabbagh, a senior research scientist at Columbia University on long-term assignment to PPPL, won the 2009 award as lead author for a paper titled, [“Resistive wall stabilized operation in rotating high beta NSTX plasmas.”](#) 

Boy Scouts STEM Fair, October 22

Volunteers needed

Subject experts in physics and engineering are especially needed to plan workshops.



Please contact Rob Sheneman, rshenema@pppl.gov, ext. 3392, to volunteer.

It's time to get your flu vaccine!

Influenza is a contagious disease caused by a virus. It can be spread by coughing, sneezing or nasal secretions.

By getting the flu vaccine, you can protect yourself from Influenza and may also avoid spreading this illness to others.

Please call the OMO at extension 3200 to make an appointment.

Plasma demos and more at tour guide training

More than 30 people attended the annual tour guide meeting and training on Oct. 11. The group learned about new developments in the tour program: the new calendar system, headphones, and training requirements for access to NSTX-U. They were treated to an overview of plasma demos by tour guides Atiba Brereton, and Brian Kraus. Shannon Greco, a Science Education program leader, gave an overview of science education principles. Physicists Erik Gilson and Sam Lazerson then gave an overview of tour sites, aided by Robert Kaita. If you missed the tour guide training but would still like to be a tour guide, contact Jeanne Jackson DeVoe, jjackson@pppl.gov, ext. 2757. 📍

(Photos by Elle Starkman)



Jeanne Jackson DeVoe, PPPL's tour coordinator, discusses new developments in the tour program.



Shannon Greco gives a presentation on science education.



Manish Kumar, a new tour guide, tries out the Van de Graaff generator as tour guide Brian Kraus and Tori Sikkema, another volunteer, look on.



Brian Kraus demonstrates to Carmela Ciummo, a new tour guide, how a Tesla coil lights up a fluorescent bulb.



Atiba Brereton shows an electromagnet demonstration to new tour guide Soha Aslam.



PPPL tour guides at the training session.

Shred your old business documents!

PPPL will hold shredding events on Oct. 19, 26, Nov. 2 & 9 at the warehouse receiving area in the lower parking lot for staff to shred old PPPL business-related records and documents.

Go to <https://goo.gl/Qm2O6> to submit a work order for your shredding requirements. Record retention and destruction guidelines are available at <https://goo.gl/Qm2O6o>.

For more information, contact Dean Peterson, dpeterso@pppl.gov, ext. 2998.

BROCK

NICK PETTI
Chef Manager



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.

	Monday October 17	Tuesday October 18	Wednesday October 19	Thursday October 20	Friday October 21
COMMAND PERFORMANCE Chef's Feature	Chicken Parmesan served with Pasta	Pasta with Clam Sauce and Garlic Bread	Baked Chicken with Cornbread Stuffing and Autumn Vegetables	Baked Meatloaf with Mashed Potatoes and Gravy	Cornmeal Catfish with Red Beans and Rice
Early Riser	Bacon, Egg & Cheese Croissant	Banana-Walnut French Toast with Caramel Sauce	Mango & Blueberry Pancakes served with Choice of Breakfast Meat	Turkey Bacon, Egg and Cheese Sandwich	2 Eggs, 2 Pancakes, Choice of Breakfast Meat & Potatoes
Country Kettle	Creamy Chicken & Mushroom with Wild Rice	Tomato Bisque	Beef Barley	Vegetable Noodle	Chicken Orzo
Grille Special	Chili Burger with Crisp Onions & Cheddar Cheese on an Onion Roll with Chipotle Mayo	Hot Pastrami & Cheddar Cheese on French Bread	Fish Taco with Cabbage, & Pico de Gallo served with Corn Relish & Chipotle Lime Sour Cream	Turkey, Bacon, Cheddar, Diced Tomato, Red Onion and BBQ Chipotle Mayo Flatbread	Roast Vegetable Stromboli
Deli Special	Middle Eastern Stacked Veggie Sandwich with Hummus, Eggplant, Red Onion, Red Pepper Tomato, Mozzarella & Balsamic on Wheat Roll	Turkey, Avocado, Pepperjack Cheese & Tomato on Ciabatta Bread	Egg Salad Croissant	Portobello Mushroom & Fontina Cheese with Roasted Peppers on Ciabatta	Chicken, Mozzarella, Red Onion, Basil, Arugula and Balsamic Tomatoes on French Bread
Panini	Tomato, Fresh Mozzarella, Spinach and Pesto Flatbread	Spicy Italian Grinder	Turkey Meatball Parmesan Torpedo	Grilled Ham and Cheese on Texas Toast	Foot-long Chili Dog

MENU SUBJECT TO CHANGE WITHOUT NOTICE

HEART HEALTHY

VEGETARIAN OPTION

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The PPPL WEEKLY is published by the [PPPL Office of Communications](#) on Mondays throughout most of the year and biweekly during the summer, except for holidays.

DEADLINE for calendar item submissions is noon on WEDNESDAY. Other stories should be submitted no later than noon on TUESDAY.

Comments: commteam@pppl.gov ♦ PPPL WEEKLY is archived on the web at: <http://w3.pppl.gov/communications/weekly/>.