

## At PPPL THIS WEEK

MONDAY, MAY 20

**Cake celebrating DEP award**  
2 p.m. ♦ LSB Lobby

TUESDAY, MAY 21

**The Trenton EMS Mass Casualty Unit will visit PPPL in honor of National EMS Week**  
11:30 a.m. - 1:30 p.m. ♦ PPPL

THURSDAY, MAY 23

**PPPL Colloquium**  
4:15 p.m. ♦ MBG Auditorium

Big Data at the Pittsburgh Supercomputing Center

Ralph Roskies, Pittsburgh Supercomputing Center

Refreshments at 4 p.m. in the LSB Lobby

FRIDAY, MAY 24

**Just Breathe: Mindfulness Series at PPPL**  
12 to 12:30 p.m. ♦ Furth Library

Learn to quiet the mind and slow down. No registration is required.

### UPCOMING EVENTS...

May 27

**Memorial Day Holiday**  
Lab Closed

The PPPL Weekly will not be published this week.

May 28

**State of the Laboratory Address**  
1:30 p.m. ♦ MBG Auditorium

May 31

**Princeton University Reunion Tours at PPPL**

10:30 a.m. and 1:30 p.m.

Contact: [jjackson@pppl.gov](mailto:jjackson@pppl.gov)

June 1

**PPPL Open House**

9 a.m. - 4 p.m. ♦ Lab wide

## Inside...

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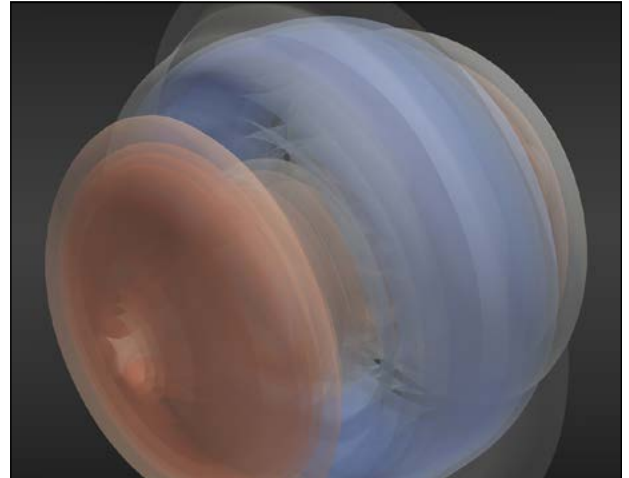
# PPPL's Christopher Cane has winning image in Art of Science competition

By Jeanne Jackson DeVoe

PPPL's Webmaster Chris Cane was one of the winners in this year's Art of Science competition at Princeton University, with "Web of art and science," a flower-like design put together with a former Princeton University webmaster colleague depicting the PPPL and the Lewis Center for the Arts websites.

Cane said he and Paul Csogi, the former webmaster at the Lewis Center, came up with the idea of visualizing their websites when they met at a Drupal seminar on campus

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Martin Jucker, of the Program in Atmospheric and Oceanic Sciences, won first place in the Art of Science Competition for his image, "East-West, West-East," depicting wind moving around the globe in two different directions. (Photo courtesy of the Art of Science).



**Artists Exhibit**  
see story on page 3

Instructor Josephine Halvorson examines a painting of the wall by Kemy Lin in the MG building.

### Today

## Eat Cake, Celebrate "Green" PPPL


Everyone at PPPL is invited to come have a piece of cake and celebrate PPPL's recognition by the New Jersey Department of Environmental Protection as the top facility in the state for environmental stewardship in a ceremony today, Monday, May 20, at 2 p.m. in the LSB Lobby.



PPPL is one of more than 750 companies, colleges and universities, hospitals and municipalities taking part in the DEP's **Environmental Stewardship program**, a voluntary self-monitoring program aimed at encouraging participants to work toward improving their environmental practices. This year, the Laboratory was first on the list – having met 20 out of 21 criteria in areas such as green building certification, water use reduction, EMS, and renewable energy use.

"It's a credit to the Laboratory for having such a diverse environmental stewardship program," said Robert Sheneman, head of the Environmental Services Division, "and it's a credit to the people we work with because it's part of who we are and what we do every day."

Several officials from the New Jersey DEP are expected to come to PPPL Monday for the brief ceremony, including Assistant Commissioner Wolfgang Skacel.

PPPL has received numerous awards for its sustainability programs and recently won the prestigious federal Environmental Protection Agency's 2012 EPA WasteWise Program's Federal Partner of the Year award. 

# Art of Science

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last year and began talking about it more seriously when they met again in February. “We started talking about the idea – wouldn’t it be great to visualize the two websites and have them connect somehow because they’re completely different in content but similar in structure,” Cane recalled.

Csogi found a program that creates an image of the websites and the two worked on an image that combines them, with each dot showing webpages and the nodes showing links.

As it so happened, the theme of this year’s Art of Science competition was “Connections,” and it seemed to be a perfect fit, said Andrew Zwicker, head of science education, who is one of the organizers of the event. “His image was not just beautiful but appropriate for the theme given the connections of the website.”


The exhibit opened on Friday, May 10, and featured 44 images chosen from 170 submissions from 24 departments, which were produced during the course of scientific research.

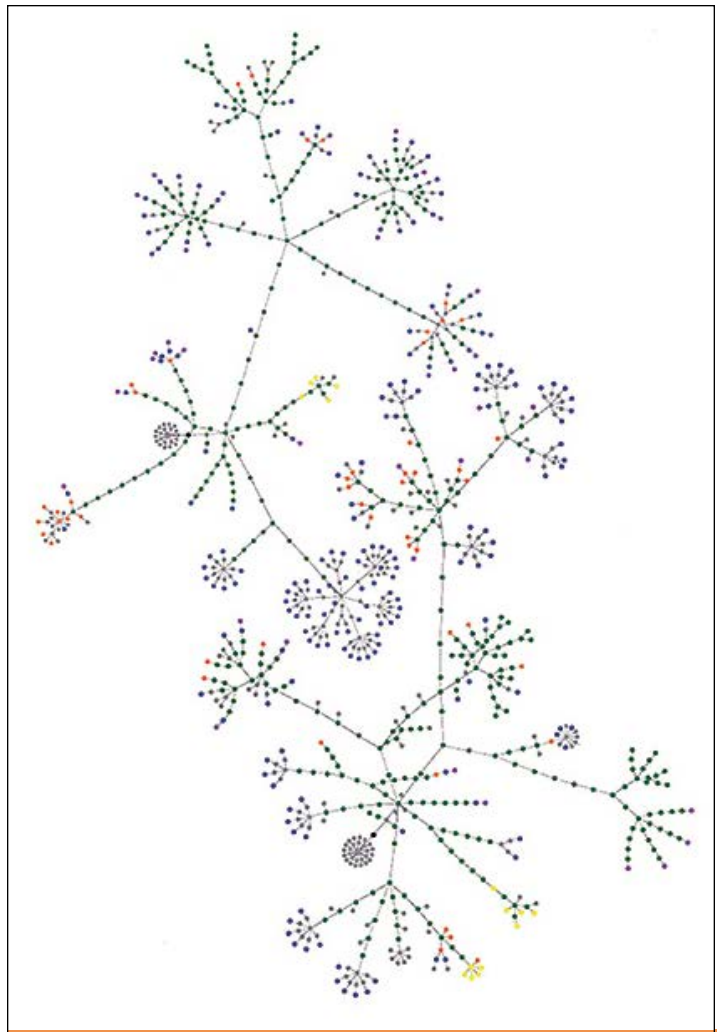
This year’s exhibit also includes a close-up shot of the stellarator by Jacob Schwartz, a graduate student at PPPL.

Zwicker noted that PPPL has won or been placed in four of the six Art of Science competitions since they began in 2005 and 18 science artworks by PPPLers have been exhibited. “That’s no surprise given how creative our colleagues are,” he said. PPPL photographer Elle Starkman’s “Iron Lotus” photo was displayed in the 2011 exhibit and Zwicker and Starkman’s photo of a dusty plasma won in 2005.

The exhibit is on display in the atrium of the Friends Center at Princeton’s School of Engineering. PPPL was one of the sponsors of the Art of Science 2013, along with the School of Engineering and Applied Science and the David A. Gardner ’69 Fund in the Council of the Humanities, and several cosponsors.

PPPL’s Art of Science photos will be displayed during the Laboratory’s Open House on June 1 from 9 a.m. to 4 p.m.

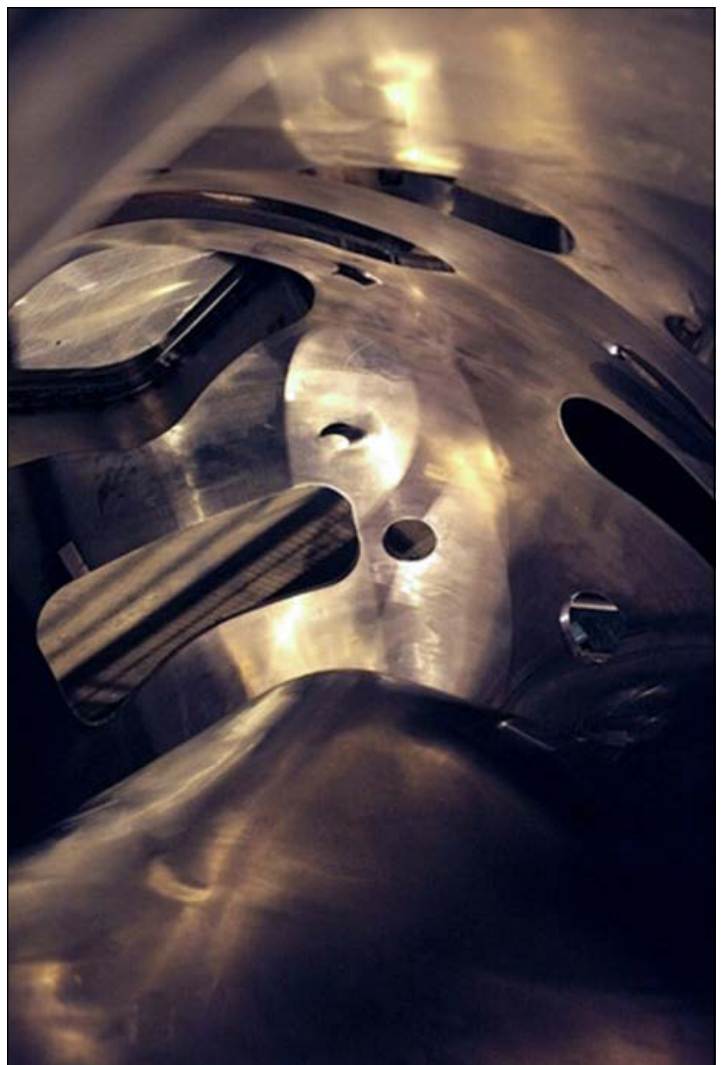
An online gallery of this year’s exhibit can be viewed [here](#). 



PPPL Webmaster Chris Cane and Paul Csogi, former Webmaster for the Lewis Center for the Arts, came up with this design depicting their two websites. PPPL’s website is at the top left. (Photo courtesy of the Art of Science).



PPPL Webmaster Chris Cane with his winning design.



PPPL graduate student Jacob Schwartz contributed this close-up photo of the NCSX vacuum vessel. (Photo courtesy of Art of Science).

# An unusual partnership takes fruit: artists exhibit works from PPPL at Open House

By Jeanne Jackson DeVoe

Artist Josephine Halvorson and her Princeton University art class were a startling sight in the cavernous warehouse of a basement in the old motor generator (MG) site at PPPL where they spent several weeks and countless hours painting stunningly beautiful works based on not-so-beautiful objects – metal beams and grates and even an old telephone booth.

Some of the art works that resulted from Halvorson's unusual partnership with PPPL will be displayed in a gallery at PPPL's Open House on June 1 from 9 a.m. to 4 p.m. and over the summer at the Laboratory.

Halvorson has made a career of realistic paintings of everyday and industrial objects and has had solo exhibitions in New York and Paris. The New York Times in its review of a 2011 show by Halvorson called her paintings of diverse objects such as a steam valve, a generator and an empty set of metal sign holders "rugged, deeply gratifying realism." "One might see Ms. Halvorson as a gifted salvager, rummaging through the odds and ends of American experience and finding plenty that's suitable – even desirable – for painting," the review concluded.

## Exhibit continues connection with PPPL

She and her students are happy to continue the connection they made with PPPL by exhibiting their artwork at the Laboratory, Halvorson said. "I feel that it's especially meaningful that we can display the work here," she said. "Painting is a discipline where the object and the context are not often aligned. As the artist, it's rare to witness the act of communication. What's really nice about showing work at the PPPL is it kind of reconciles these issues because this is an environment we all share."

Halvorson spent many hours of her own time at the MG site painting pink colored I-beams and concrete blocks, which once served as bases for heavy machinery. She will exhibit one of her paintings in the upcoming exhibit.

## An unusual partnership

The unusual partnership between the art class and PPPL began when Paul LaMarche, the vice provost for space programming and planning at Princeton University and a for-

mer plasma physicist at PPPL, approached Deputy Director for Operations Adam Cohen about the idea of having Halvorson bring her advanced art class to PPPL. "I thought absolutely, 100 percent, yes, let's go for it," Cohen said. "If you want to have a strong, vibrant lab, this is just another one of those things that makes the Lab and the university that much stronger."

Cohen invited Halvorson to PPPL for a tour and she came back with her six students and the portable easels they constructed themselves to start painting.

They not only painted every Tuesday from 1 p.m. to 6 p.m., they also took safety training and got badges so that they could come to the Laboratory at all hours of the day – often past midnight – to complete their paintings. The students also spent a few weeks painting dinosaur bones, gems and other artifacts at Princeton University's Guyot Hall and painted outside at Carnegie Lake in Princeton during one class.

"I think people at first raised eyebrows and looked a little askance," Cohen said. "But they recognized in the end, these were mature students, they were taking instruction and they were actually interested in what we're doing. I think that all turned out really well and it's something different, it keeps our name in front of people."

Al Von Halle gave the students a tour of PPPL and Halvorson pointed out differences in lighting between various rooms as they went along. "They would go through areas that I had been going through for 30 years and they would zero in on something I had seen every day but never noticed," Von Halle said.

## Setting up easels at the NCSX site

The class spent one day painting at the NCSX site, where the vacuum vessels of the stellarator are stored and work on the center stack for the NSTX upgrade is taking place. The students painted silently at their easels for four hours and while few painted the shiny, twisting metal of the stellarator, they were taken with the beauty of the machine.

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Below, senior Laura Preston spent hours painting an old telephone booth in the basement of the MG site, and built a recreation of the booth for an exhibit. A close-up of the painting next to the phone booth is shown on the right.



# Artists Exhibit

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"We were saying it was one of the best sculptures we've seen in a while," Halvorson recalled.

One of the students, Buse Aktas, a mechanical engineering major, was particularly struck by the bright, shiny metal vacuum vessels and painted a vacuum vessel being stored in the basement of the MG site. "This thing is awesome," she said. "It's a different kind of really cool."

## Seeing Laboratory through artists' eyes

For the engineers and technicians who watched the students painting, it was odd seeing their workplace through the artists' eyes. "I find it interesting to see what they see because my mind sees all the clutter but they pick up certain shapes and stuff," said engineer Steve Raftopoulos. "It's really neat."

The artists said they preferred the MG site basement despite or perhaps because of its dark, gloomy industrial look, which Von Halle compared to a World War II bunker. "I personally prefer the other room," said Kemy Lin, a sophomore. "There's something almost tragic about it that I like."

The students painted a fire extinguisher and the valves of red pipes, the grates on the floor and the cement walls, where long-ago workers scrawled directions and where one wall has mysterious footprints going up the wall. Halvorson said the hand-written scrawls on the wall reminded her of cave paintings.

The MG site once housed three massive sets of motor generators and one smaller set that powered the Laboratory's early experiments and were removed in 2011 when the metal components were sold for scrap metal and recycled.

Laura Preston, a graduating senior at Princeton, said she was drawn to the MG site. "I'm just loving the space here – it's so beautiful," she said. "I turn everywhere and there's something I want to paint."

## Dozens of hours painting at old MG site

Preston spent dozens of hours at the MG site working on paintings for her senior project, an exhibit of paintings that featured paintings from PPPL that ran for a week at the Lewis Center for the Arts' Lucas Gallery. Preston parked her easel in front of a dilapidated phone booth at the site day after day and often late into the night as she brought the telephone booth to life in an oil painting, right down to the crumpled safety brochure on a shelf of the phone booth, which had a picture of a big toe and the slogan, "Avoid Toetal Loss." Preston adopted that slogan as the title of her show and both the painting and a wooden recreation of the phone booth were displayed in her exhibit.



Firdevs Ulus mixes paint before beginning a new painting.

The show also featured a handwritten essay about her time at PPPL in which she described the effect of painting in the basement where the electric lights make a constant buzzing sound. She recounted how she dreamed about the MG site and her discovery of the phone booth. "I've sat at the base of the booth so many times that it's starting to feel like an altar to me," she wrote.

## Different views by artists

Preston said painting was a new way of seeing the world for her. "One thing I really love about painting is it really trains your eye," she said. "After you've been painting for a while, you enter the world with a new attention to detail. It sort of sharpens your eyesight."

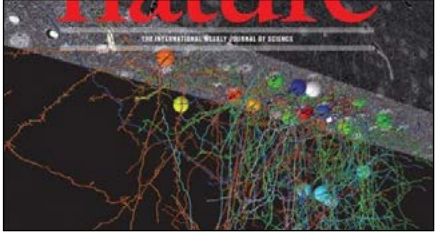
Halvorson said the class also got to see how the individual students view the same site. "It's been really fun," Halvorson said. "You bring people down here and everyone sees something different."

Halvorson said there are similarities between painting and the work by physicists and engineers at PPPL aimed at developing fusion energy as a viable energy source. "When you look at a painting and when you look at a machine or experiment you can draw a lot of parallels," she said. "Both are very creative fields and you have to think through the need but also innovate it and expand it. 📍"



Kemy Lin, right, was one of the students in a Princeton University art class that spent several weeks painting at PPPL. Here, she paints a vacuum vessel of the NCSX stellarator when the class spent the afternoon at the center stack fabrication bay where NCSX is located.

# COLLOQUIUM



## Big Data at the Pittsburgh Supercomputing Center

**RALPH ROSKIES**  
Pittsburgh Supercomputing Center

**Thursday, May 23**

4:15 p.m. (Coffee/Tea at 3 p.m.)  
MBG Auditorium, Lyman Spitzer Building

## SAVE THE DATE!



## STATE OF THE LABORATORY ADDRESS

**Tuesday, May 28, 2013**

**1:30 P.M.**

**MBG Auditorium**

After Dr. Prager's presentation, the Kaul Prize and the Distinguished Research Fellow Award will be presented.

*Refreshments to follow.*

*All Staff are Invited to Attend.*

## Volunteer for PPPL's

## OPEN HOUSE • JUNE 1

The Open House will have dozens of activities and exhibits and will bring thousands of visitors to the Laboratory. We need the help of everyone at PPPL to work for two hours at the event so that each staff member will have most of the day to spend with friends and family members. To volunteer please fill out the email form sent to PPPL staff or contact Andrea Moten, [amoten@pppl.gov](mailto:amoten@pppl.gov).

**Open House**  
"Hot Plasma, Cool Science"

**Saturday • June 1**  
9 a.m. to 4 p.m. rain or shine  
(Last admission at 3:30 p.m.)

- Free! Family Friendly!
- Open to All Ages!
- Hands-On Plasma Activities, See a Real Fusion Machine!
- NASA Moon Rocks!

100 Stellarator Road, Forrestal Campus  
[www.pppl.gov](http://www.pppl.gov)

A collaborative national center for fusion and plasma research, PPPL is funded by the U.S. Department of Energy and managed by Princeton University.

PRINCETON UNIVERSITY | U.S. DEPARTMENT OF ENERGY

## JUST BREATHE

Mindfulness Series

*Mindfulness is the practice of purposely focusing your attention on the present without drifting into concerns about the past or future.*

**Fridays, May 24 and June 7**

**12-12:30 p.m. Furth Plasma Physics Library**

**FOR PPPL STUDENTS, FACULTY, AND STAFF**

*Drop in as often as you can! No registration is required.*

Learn to quiet the mind and ease physical distress. This mindfulness series will provide an opportunity to slow down in this fast-paced setting, and to experience balance and a sense of calm.

Facilitated by Shefalika Gandhi, LCSW, University Health Services. Sponsored by Princeton Plasma Physics Laboratory (PPPL). Email [mgonzalez@pppl.gov](mailto:mgonzalez@pppl.gov) for more information.

## 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

	MONDAY MAY 20	TUESDAY MAY 21	WEDNESDAY MAY 22	THURSDAY MAY 23	FRIDAY MAY 24
	<b>MEXICAN CHICKEN</b>	<b>ROASTED TOMATO BEEF GOULASH</b>	<b>STUFFED PORK LOIN</b>	<b>CHICKEN PARMESAN WITH PASTA</b>	<b>Memorial Day BARBEQUE</b>
	Cinnamon Raisin French Toast	Pancakes with Turkey Sausage	Mushroom, Peppers & Onion Omelet ✓	Pear Pancakes ✓	Fill Your Plate with a Hamburger, Hot Dog, Baked Beans, Corn, Macaroni Salad, Watermelon and a Beverage
<b>EARLY RISER</b>	Tuscan White Bean with Chicken	Split Pea ✓	Chicken, & Sausage Gumbo	Beef Noodle	Honey Custard French Toast with Walnuts ✓
<b>COUNTRY KETTLE</b>	Turkey Reuben served with Coleslaw	Chicken Cutlet with Lettuce & Tomato served with Fries	Peppers, Eggs and Potato Torpedo ✓	Bratwurst & Sauerkraut Torpedo with Fries	California Turkey Burger on Wheat Roll with Pasta Salad
<b>GRILLE SPECIAL</b>	Three Cheese Hoagie ✓	Roasted Asparagus, Peppers, Zucchini & Feta Wrap ✓	Buffalo Chicken Salad Wrap	Roast Beef, Swiss, Arugula, Roasted Peppers & Horseradish	Turkey, Ham, Swiss & Bacon on a Kaiser Roll
<b>DELI SPECIAL</b>	Italian Chicken Panini	Buffalo Popcorn Shrimp Wrap ✓	Mushroom, Swiss & Onion Burger Panini	Chicken Cutlet, Blue Cheese and Roasted Pepper Quesadilla	BBQ Pulled Pork Panini
<b>PANINI</b>					

MENU SUBJECT TO CHANGE WITHOUT NOTICE

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

## WEEKLY

Editor: **Jeanne Jackson DeVoe** ♦ Layout and graphic design: **Gregory J. Czechowicz**  
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The 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.

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