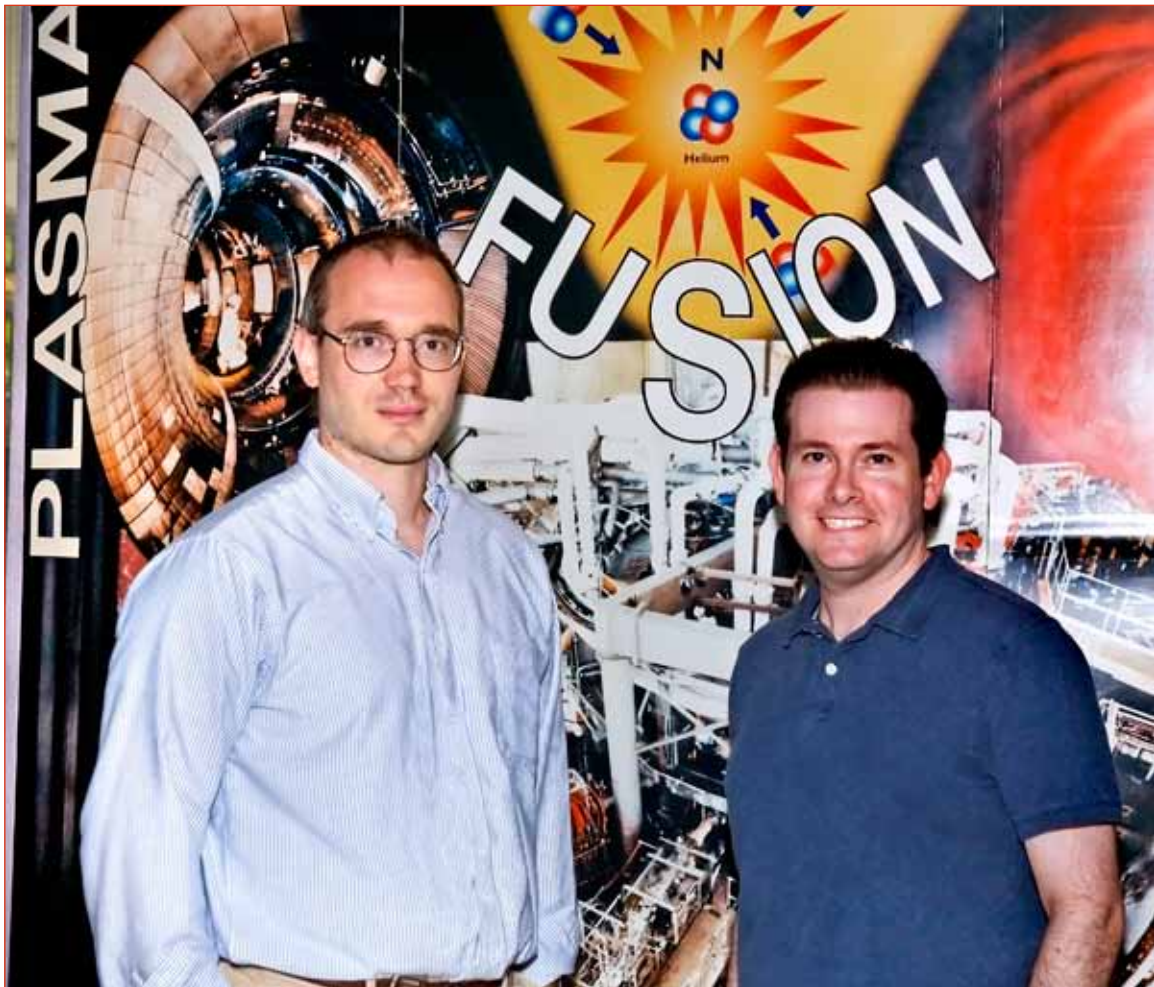


HOTLINE

The US DOE Princeton Plasma Physics Laboratory is a United States Department of Energy Facility

Gerhardt and Breslau Receive Presidential Award



Stefan Gerhardt and Joshua Breslau

President Obama has named PPPL physicists Joshua Breslau and Stefan Gerhardt as recipients of the Presidential Early Career Awards for Scientists and Engineers. The award is the highest honor bestowed by the United States government on young professionals in the early stages of their independent research careers. Breslau and Gerhardt are among 100 recipient scientists and engineers who will receive their awards this fall at a White House ceremony.

“These extraordinarily gifted young scientists and engineers represent the best in our country,” President Obama said

in a White House release issued July 9. “With their talent, creativity, and dedication, I am confident that they will lead their fields in new breakthroughs and discoveries and help us use science and technology to lift up our nation and our world.”

Breslau and Gerhardt are among 12 of the honorees from U.S. Department of Energy (DOE) national laboratories.

“PPPL is doubly blessed to have these two outstanding young physicists on our staff. Josh has been a developer of one of the most advanced computer codes in the world fusion

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Award

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community, and has used the code to solve some key problems in fusion plasma physics. Stefan has somehow in his short career had the extraordinary energy and talent to make major contributions to three different approaches to fusion energy," said PPPL Director Stewart Prager.

Breslau was cited for playing an essential role in the development of the massively parallel fusion magnetohydrodynamics (MHD) code M3D and for his original and unique applications of this code to nonlinear dynamics. MHD refers to the dynamics of electrically conducting fluids such as plasmas. Plasma is a hot, gaseous state of matter used as the fuel to produce fusion energy — the power source of the sun and the stars.



The Laboratory honored Presidential Early Career Award recipients Josh Breslau and Stefan Gerhardt with an August 5 party in the Lobby. From left are Breslau, PPPL Director Stewart Prager, and Gerhardt (holding his son, Diedrich).



Staff enjoyed refreshments during the Josh Breslau and Stefan Gerhardt celebration in the Lobby.

Breslau is a research physicist in computational plasma physics. He conducted post-doctoral research at PPPL for two years before joining the research staff in 2003. He received a bachelor's degree in physics from the Massachusetts Institute of Technology in 1995 and a master's and a Ph.D. in plasma physics from Princeton University, Department of Astrophysical Sciences, in 1997 and 2001, respectively. Breslau is the author or co-author of close to 30 professional publications.

Gerhardt was cited for his innovative and seminal work by enabling the systematic diagnosis for interpretation of key stability characteristics of a broad range of magnetically-confined toroidal plasmas and for his outstanding contributions to improving understanding of fundamental plasma physics in laboratory plasmas.

He is a staff physicist at PPPL conducting research on the National Spherical Torus Experiment. He joined the staff in 2004 after receiving a bachelor's interdisciplinary degree in applied math, engineering and physics in 1998, a master's in electrical engineering in 2001 and a Ph.D. in electrical engineering in 2004, all from the University of Wisconsin-Madison. He is the author or co-author of more than 25 journal articles and has given 10 invited talks.

The awards, established by President Clinton in February 1996, are coordinated by the Office of Science and Technology Policy within the Executive Office of the President. Awardees are selected on the basis of two criteria: Pursuit of innovative research at the frontiers of science and technology and a commitment to community service as demonstrated through scientific leadership, public education, or community outreach. Winning scientists and engineers receive up to a five-year research grant to further their study in support of critical government missions. PPPL honored Breslau and Gerhardt during an August 5 celebration in the Lobby. ●

HOTLINE

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PPPL Receiving \$13.8 Million in Recovery Act Funding

During the next two years, PPPL will receive a total of \$13.8 million in funding as a result of the American Recovery and Reinvestment Act (ARRA), the stimulus bill signed by President Obama earlier this year. The stimulus funding will be in addition to the Laboratory's regular budget allocations for fiscal years 2009 through 2011.

PPPL's stimulus funds include \$8.8 million for a variety of initiatives in fusion energy research and \$5 million for infrastructure improvements at the Laboratory. PPPL is one of ten of DOE's national laboratories in six states receiving ARRA funding at this time.

PPPL Director Stewart Prager said, "We are pleased that stimulus funding is being made available for Princeton's fusion energy research program. The additional research capabilities enabled by this funding will accelerate research on the major experiment at PPPL, where we are exploring new methods to confine the hot plasma that forms the core of a fusion energy system."

PPPL's ARRA funding will be used to upgrade and expand the use of PPPL's National Spherical Torus Experiment (NSTX). Several of the diagnostic instruments, employed on the experiment to measure the behavior of plasma, will be upgraded, and NSTX research operations will be increased by a total of five weeks during the next two years — closer to the facility's full utilization level. Also, ARRA funding will allow the hiring of additional post-graduate staff to support these enhanced research capabilities. The upgrades and greater run time are expected to significantly enhance NSTX's scientific output, accelerating its contribution to the fundamental understanding of fusion plasmas and providing near-term results needed for next-step fusion experiments, including ITER — a large international fusion energy experiment under construction at Cadarache, France.

A portion of PPPL's stimulus funding will be dedicated to the modernization of the Laboratory's electrical distribution system to improve reliability and availability for PPPL's experimental systems.

In March, Secretary of Energy Steven Chu announced \$1.2 billion of stimulus funding for DOE Office of Science projects. On July 17, DOE announced a new Office of Science Early Career Research Program to be funded with \$85 million in Recovery Act funds. With this third and final round of funding, the Obama Administration has now approved projects covering the full \$1.6 billion that the DOE Office of Science received from Congress under the Recovery Act. ●

The PPPL TOKABATS Score Big for the 2009 Season

The 2009 PPPL TOKABATS softball team placed fourth this year in the intramural summer games with other Princeton University teams. The TOKABATS is made up mostly of plasma physics grad students.

From left are (standing): Matt Lucia, Tyler Abrams, Josh Kallman, Jess Baumgaertel, David Michta, Jeff Parker, Sterling Smith, Filippo Scotti, Craig Jacobson, Hua Wang, Kelsey Tresemer, Dan Lundberg, Nikolas Logan, John Rhoads; (kneeling), Patrick Ross, Luc Peterson, Clayton Myers, and Cyril Becquart. For more information, contact TOKABATS Captain Luc Peterson at jpeterso@pppl.gov. Go team!





PPPL
PRINCETON PLASMA
PHYSICS LABORATORY

PICNIC

Wednesday, September 9

11:45 A.M. to 1:30 P.M.

LSB
West Lawn



Games

Music

Prizes

Hamburgers

Hot Dogs

Salads

Sausage & Peppers

Chips

Beverages

Rita's Italian Ice

Wear Your Team Caps and Team Wear!

RAIN DATE IS THURSDAY, SEPT. 10

