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Graduate Education

Fiscal Year 1998 graduate students in The Program in Plasma Physics, Department of Astrophysical Sciences, Princeton University.

The Princeton Plasma Physics Laboratory supports graduate education through the Program in Plasma Physics in the Department of Astrophysical Sciences of Princeton University. Students are admitted directly to the Program and are granted degrees through the Department of Astrophysical Sciences. With more than 193 graduates since 1959, the Program has had a significant impact on the field of plasma physics, providing many of today's leaders in the field of plasma research and technology in academic, industrial, and government institutions.

Both basic physics and applications are emphasized in the Program. There are opportunities for research projects in the physics of the very hot plasmas necessary for controlled fusion, as well as for projects in solar, magnetospheric and ionospheric physics, plasma processing, plasma thrusters, plasma devices, nonneutral plasmas, lasers, materials research, and in other important and challenging areas of plasma physics.

In FY98, there were 32 graduate students in residence in the Program in Plasma Physics, holding among them one Department of Energy Magnetic Fusion Science Fellowship, one Hertz Fellowship, one National Science Foundation Fellowship, two Department of Defense National Defense Science and Engineering Graduate Fellowships, two NASA Graduate Student Researchers Program Fellowships, and one Princeton University Honorific Fellowship.

Six new students were admitted in FY98, two from Russia and four from the

U.S. Eleven students graduated in FY98, nine receiving postdoctoral positions at the following: Los Alamos National Laboratory, University of Wisconsin at Madison, Princeton Plasma Physics Laboratory, Lawrence Livermore National Laboratory, University of Colorado at Boulder, and the University of Chicago. One graduate took a position in private industry (Santa Cruz Organization, New Jersey) and one graduate holds a teaching position at The Colorado College in Colorado Springs.

Our graduate students received several awards this year. A fifth-year graduate student won the Princeton University Porter Ogden Jacobus Fellowship in recognition of his distinguished work in the Department of Plasma Physics. The Jacobus Fellowship is an honorific fellowship awarded by the Graduate School and is conferred annually upon the student, who, in the judgment of the University Faculty, displayed the *highest scholarly excellence*. Two awards were received by fifth and sixth-year graduate students from the American Vacuum Society for outstanding scholarship in vacuum science and technology and a fourth student won a Department of Energy Postdoctoral Fellowship.

Recipients of Doctoral Degrees in Fiscal Year 1998.

Chen, Yang

Thesis: Numerical Study of the Nonlinear Evolution of Toroidicity-Induced In Alfvén Eigenmodes
Advisor: Roscoe B. White
Employment: University of Colorado at Boulder

Herrmann, Mark C.

Thesis: Cooling Alpha Particles with Waves
Advisor: Nathaniel J. Fisch
Employment: Lawrence Livermore National Laboratory, CA

Long, Hui

Thesis: Hybrid Simulation of High Recycling Divertors
Advisor: Charles F.F. Karney
Employment: Santa Cruz Organization, NJ

Menard, Jonathan E.

Thesis: High-Harmonic Fast Wave Coupling and Heating Experiments in the CDX-U Spherical Tokamak
Advisor: Masayuki Ono and Stephen C. Jardin
Employment: Princeton Plasma Physics Laboratory, NJ

Oliver, Hilary J.

Thesis: A Newton Method for the Magnetohydrodynamic Equilibrium Equations
Advisor: Allan H. Reiman and Donald A. Monticello
Employment: Princeton Plasma Physics Laboratory, NJ

Park, Jaeyoung

Thesis: Studies on a Transition to Strongly Recombining Plasmas
Advisor: Samuel A. Cohen
Employment: Los Alamos National Laboratory, NM

Qin, Hong

Thesis: Gyrokinetic Theory and Computational Methods for Electromagnetic Perturbations in Tokamaks
Advisor: William M. Tang
Employment: Princeton Plasma Physics Laboratory, NJ

Schwartz, Peter V.

Thesis: Molecular Beam Studies of the Growth and Kinetic of Self-Assembled Monolayers
Advisor: Giacinto Scoles
Employment: The Colorado College, Colorado Springs, CO

Uzdensky, Dmitri A.

Thesis: A Theoretical Study of Magnetic Reconnection
Advisor: Russell M. Kulsrud
Employment: The University of Chicago, IL

Wang, Zhehui

Thesis: A Hollow Cathode Magnetron: Its Characterization and Energetic Nitrogen Atom Diagnostics
Advisor: Samuel A. Cohen
Employment: Los Alamos National Laboratory, NM

Wright, John C.

Thesis: Fast Wave Current Drive Modeling in Tokamaks
Advisor: Cynthia K. Phillips
Employment: University of Wisconsin at Madison, WI

Stanislav Boldyrev (l), graduate student in the Astrophysical Sciences Department's Program in Plasma Physics, received the Porter Ogden Jacobus Fellowship, given annually to the graduate student who exhibits the "highest scholarly excellence." He is being congratulated by Dean of the Faculty Joseph Taylor at Alumni Day celebrations.

Students Admitted to the Plasma Physics Program in Fiscal Year 1998.

Student	Undergraduate Institution	Major Field
Leonid Dorf	Nizhny Novgorod State University, Russia	Physics
Elizabeth Foley	University of Massachusetts at Amherst	Physics and Math
Alexander Kuritsyn	Nizhny Novgorod State University, Russia	Physics
Alexandra Landsman	Dartmouth College	Physics
Adam Rosenberg	Cornell University	Applied and Engineering Physics
Jeffrey Spaleta	Worcester Polytechnic Institute	Physics and Math

First-year graduate students in the Program in Plasma Physics in 1998. From left-to-right are Alexandra Landsman — Dartmouth College; Elizabeth Foley — University of Massachusetts at Amherst; Jeffrey Spaleta — Worcester Polytechnic Institute; Alexander Kuritsyn — Nizhny Novgorod State University, Russia; Adam Rosenberg — Cornell University; (missing) Leonid Dorf — Nizhny Novgorod State University, Russia.

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