

Fellowship Opportunities Available to Graduate Students

Below is a list of fellowships to which Optics students can apply. While Ph.D. students in Optics normally receive full fellowship support, it is in their interest to apply for external fellowships for several reasons. Firstly, external fellowships have great curricular value, and get you in contact with funding agencies or professional societies. Secondly, having an external fellowship increases your chances of joining the research group of your choice. Thirdly, once you have joined a research group, an external fellowship gives you and your advisor more freedom to pursue a project of your choice.

For more options, visit also <http://www.rochester.edu/college/fellowships/>

The National Science Foundation Graduate Research Fellowship Program (GRFP) The NSF Graduate Research Fellowship provides three years of support for graduate study leading to research-based master's or doctoral degrees and is intended for students who are at the early stages of their graduate study. Eligibility requirements include U.S. citizenship or nationals or permanent resident aliens residing in the U.S

Application deadline: November

<http://www.nsf.gov/>

Hertz Foundation Scholarship The Hertz Foundation is a private organization which provides fellowships to students of the nation's finest universities for graduate work leading to award of the Ph.D. degree in applications of the physical sciences. Each year this foundation conducts a competitive application process and two rounds of rigorous interviews, the 15 Awardees are granted a five-year Hertz Foundation Fellowship. The Foundation looks to support the graduate education of America's most promising technical talent, the Ph.D.-directed effort of the young men and women who can be expected to have the greatest impact on the application of the physical sciences to human problems during the next half-century. Eligible applicants must be citizens or permanent residents of the United States. Minimum 3.75 GPA recommended.

Application Deadline: Fall (Typically Oct 30. Check website)

<http://www.hertzfoundation.org/>

Ford Foundation Diversity Fellowships Ford Foundation Diversity Fellowships seek to increase the diversity of the nation's college and university faculties by providing support to students whom demonstrate excellence, a commitment to diversity and, a desire to enter the professoriate. This year the program will award approximately 60 predoctoral fellowships. The predoctoral fellowships provide three years of support for individuals engaged in graduate study leading to a Doctor of Philosophy (Ph.D.) or Doctor of Science (Sc.D.) degree.

On-line Application Deadline: early November (check website)

www.nationalacademies.org/fordfellowships/index.html

National Defense Science and Engineering Graduate (NDSEG) Fellowship The Department of Defense (DoD) supports graduate students through portable fellowships awarded to U.S. citizens or nationals following a competition each year. The three year fellowship allows the recipients to pursue their graduate studies at whichever U.S. institution they choose to attend. One of these is the National Defense Science and Engineering Graduate (NDSEG) Fellowship, which is highly competitive and confers high honors upon its recipients. Eligible applicants must be citizens or permanent residents of the United States.

Application Deadline: January (check website)

<http://www.asee.org/ndseg/>

NASA Graduate Student Researchers Program (GSRP) awards one year fellowships for graduate study leading to masters or doctoral degrees in the fields of science, mathematics, and engineering related to NASA research and development. The goal of NASA's GSRP is to cultivate research ties to the academic community, to help meet the continuing needs of the Nation's aeronautics and space effort by increasing the number of highly trained scientists and engineers in aeronautics and space-related disciplines, and to broaden the base of students pursuing advanced degrees in science, mathematics, and engineering.

Research opportunities described in this solicitation are assessed and updated annually to complement the

mission requirements of NASA. Research areas are in disciplines that lead to aeronautics and space careers. Applicants must be U.S. citizens.

<http://fellowships.hq.nasa.gov/gsrp/program/>

National Institutes of Health The NIH awarding institutes use three major instruments to provide funds to organizations outside the NIH to accomplish program goals--grants, cooperative agreements, and contracts. With grants and cooperative agreements, the applicant investigators are responsible for developing concepts, methods and approaches for their research projects. With contracts, the awarding institute is responsible for establishing plans, protocols, and detailed requirements.

<http://grants1.nih.gov/grants/index.cfm>

National Physical Sciences Consortium Fellowship National Physical Sciences Fellowships provide support for two or three years, or for a full six years, depending on the employer-sponsor. Eligibility requirements include U.S. citizenship, but prizes awarded with an emphasis on underrepresented minorities and women. **Deadline: November (check website).**

<http://www.npsc.org/>

The National GEM Consortium Fellowship Programs The GEM Fellowship programs are designed to offer opportunities for underrepresented minority students to obtain MS and PhD degrees in engineering and the natural and physical sciences **Deadline: November (check website)**

www.gemfellowship.org/

American Association of University Women Fellowships The AAUW Educational Foundation is one of the world's largest sources of funding exclusively for graduate women. Both U.S. and international fellowships are available. **Deadline: November (check website)**

www.aauw.org/

Semiconductor Research Corporation Graduate Fellowship Program and Master's Scholarship Program. The GRC Research fellowships are designed to allow a [GRC member company](#) to sponsor a fellowship for a student on a task funded under this program with funds designated from this program. The Research Fellowships are renewable for up to three years of doctoral study and provide full tuition and fees and a stipend of \$2,000/month as well as a \$2,000 unrestricted gift to the department in which the student is enrolled. The sponsoring company will appoint an industry advisor for the Research Fellow and provide internship opportunities as appropriate.

<http://grc.src.org>

National Institutes of Health Graduate Partnerships Program Fellowship (U.S. citizens and permanent U.S. residents may apply) **Deadline: December (check website).**

<http://gpp.nih.gov/>

Soros Fellowships for New Americans (permanent U.S. residents, naturalized U.S. citizens, and children of two naturalized U.S. citizens may apply) **Sample essays on file in Lattimore 312. Deadline: November (check website) VERY COMPETITIVE!**

<http://www.pdsoros.org/>

Ford Foundation Pre-Doctoral Diversity Fellowship (U.S. citizens & nationals only may apply; interest in college teaching; commitment to diversity goals of foundation) **Deadline: mid November (check website)**

<http://sites.nationalacademies.org/PGA/FordFellowships/index.htm>

Department of Homeland Security Graduate Fellowship (U.S. citizens only may apply; minimum 3.30 GPA required) **Deadline: January (check website)**

<http://www.orau.gov/dhsed/index.html>

American Society for Engineering Education (ASEE) to learn more about the programs and apply online visit

www.asee.org/fellowships There are different deadlines.

Science, Mathematics, & Research for Transformation (NDEP) The National Defense Education Program sponsors a fellowship for graduate students pursuing a degree in Science, Technology, Engineering, and Mathematics (STEM) including a full scholarship and to be gainfully employed upon degree completion. Eligibility includes US citizenship.

<http://www.asee.org/fellowships/smart/>

Xerox Foundation: The sponsor awards scholarships to minority individuals enrolled as full-time undergraduate or graduate students in a technical field. Eligible fields are: chemistry; information management; computing and software systems; material science; printing management science; laser optics; physics; material science; and engineering (chemical, computer, electrical, imaging, manufacturing, mechanical, optical or software). Applicants must be U.S. citizens or visa-holding permanent residents of African-American, Asian, Pacific Island, Native American, Native Alaskan, or Hispanic descent. Applicants must be enrolled as full-time undergraduate or graduate students. Applicants must be academic high-achievers (3.0 or better GPA). Scholarships are awarded in the amount of \$1,000 to \$10,000 (depending on tuition balance on record and academic excellence). **Deadline(s): September (check website)**

<http://www.xeroxstudentcareers.com/why-xerox/scholarship.aspx>

http://www.xeroxstudentcareers.com/docs/2011-2012_Tech_Minority_Scholarship_App_updated_v3_2-18-11.pdf

Energy Fellowships: In an effort to foster education and innovation in the area of societal production and utilization of energy, the Link Foundation invites applications for 2-year fellowships of \$25,000/year for students working toward a Ph.D. degree. **Deadline: early December (check website)**

<http://www.linkenergy.org/guidelines.html>

Eligibility

- The applicant must be working toward a Ph.D. in an academic institution.
(Please note that the applicant must be accepted in a Ph.D. program.)
- No limitations have been placed on citizenship.
- Fellowships are only tenable at U.S. and Canadian Universities.
- Preference will be given to candidates who have a well-defined thesis direction but who still have enough time remaining working toward their Ph.D. that receipt of a Link Foundation Fellowship could make a difference.

DoE Computational Science Graduate Fellowship: (US citizen and permanent residents) for research on DOE-related topics. This is an exciting opportunity for doctoral students to earn up to four years of financial support along with outstanding benefits and opportunities while pursuing degrees in fields of study that utilize high performance computing technology to solve complex problems in science and engineering. **Deadline: early-mid January (check website).**

Benefits of the Fellowship:

- \$36,000 yearly stipend
- Payment of all tuition and fees
- \$5,000 academic allowance in first year
- \$1,000 academic allowance each renewed year
- 12-week research practicum at a DOE Laboratory
- Yearly conferences
- Career, professional and leadership development
- Renewable up to four years

<http://www.krellinst.org/csgf/>

HORIZONS (Women in Defense, A National Security Organization): Through the HORIZONS Scholarship, Women In Defense encourages women who are US citizens to pursue careers related to the national security and defense interests of the United States and to provide development opportunities to women already working in national security and defense fields. Applicants must meet the following criteria: be currently enrolled at an accredited university or college, either full-time or part-time; undergraduate and graduate students are eligible; undergraduates must have attained at least junior level status (60 credits); demonstrate interest in pursuing a career related to national security or defense;

demonstrate financial need; have a minimum grade point average of 3.25; be a woman; and be a citizen of the United States. **Deadline: July (check website)**

<http://wid.ndia.org/horizon/Pages/default.aspx>

D.J. Lovell Scholarship, International Society for Optical Engineering (SPIE)

The sponsor provides this scholarship for students enrolled or planning to enroll in an optics, photonics, imaging, optoelectronics program or related discipline (e.g., physics or electrical engineering) at an accredited school for the school year beginning in the Fall. This scholarship awards \$11,000 annually.

Deadline: mid February (check website)

<http://spie.org/x1736.xml>

Laser Technology, Engineering and Applications Scholarship; International Society for Optical Engineering (SPIE)

The Laser Technology, Engineering, and Applications Scholarship is awarded in recognition of a student's scholarly achievement in laser technology, engineering, or applications. The scholarship is worth \$5,000.

Deadline: mid February (check website)

<http://spie.org/x1736.xml>

Optical Design and Engineering Scholarship, International Society for Optical Engineering (SPIE)

A scholarship is awarded to a full-time graduate or undergraduate student in the field of optical design and engineering.

Deadline: mid February (check website)

<http://spie.org/x1736.xml>

BACUS Scholarship, International Society for Optical Engineering (SPIE)

The sponsor provides two scholarships to full-time undergraduate or graduate students in the field of microlithography with an emphasis on optical tooling and/or semiconductor manufacturing technologies. To be eligible to apply, student must: be a member of SPIE; be enrolled in an optics, photonics, imaging, or optoelectronics program or related discipline (e.g., physics, electrical engineering) at an accredited school for the full year beginning Fall 2013; and be in high school or secondary school, undergraduate or post-secondary school, undergraduate, or graduate school. Scholarships in the amount of \$5,000 each are awarded.

Deadline: mid February (check website)

<http://spie.org/x1736.xml>

John Kiel Scholarship, International Society for Optical Engineering (SPIE)

The sponsor offers a scholarship based on a student's potential for long-term contribution to the field of optics and optical engineering. This scholarship is awarded at \$10,000 annually.

Deadline: mid February (check website)

<http://spie.org/x1736.xml>

Internal fellowships: The following internal fellowships are also available. The candidates, however, have to be nominated by the faculty. Talk to your advisor about them.

- Dean's Fellowship
- Sproull Fellowship
- Provost's Fellowship
- Horton Fellowship (associated to LLE)
- Messersmith Fellowship: Optics can submit one nomination each year. Eligible students are those fully engaged in research. If you're interested, please ask the graduate chair for how to apply for the Optics nomination by the end of March. You will need a two-page statement of your research goals, accomplishments and interests.