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# Mathematics Opportunities

## American Mathematical Society Centennial Fellowships

*Invitation for Applications for Awards for 2011–2012*

**Deadline December 1, 2010**

*Description:* The AMS Centennial Research Fellowship Program makes awards annually to outstanding mathematicians to help further their careers in research. The number of fellowships to be awarded is small and depends on the amount of money contributed to the program. The Society supplements contributions as needed. One fellowship will be awarded for the 2011–2012 academic year. A list of previous fellowship winners can be found at <http://www.ams.org/profession/prizes-awards/ams-awards/centennial-fellow>.

*Eligibility:* The eligibility rules are as follows. The primary selection criterion for the Centennial Fellowship is the excellence of the candidate's research. Preference will be given to candidates who have not had extensive fellowship support in the past. Recipients may not hold the Centennial Fellowship concurrently with another research fellowship such as a Sloan or NSF Postdoctoral Fellowship. Under normal circumstances, the fellowship cannot be deferred. A recipient of the fellowship shall have held his or her doctoral degree for at least three years and not more than twelve years at the inception of the award (that is, received between September 1, 1999, and September 1, 2008). Applications will be accepted from those currently holding a tenured, tenure-track, postdoctoral, or comparable (at the discretion of the selection committee) position at an institution in North America. Applications should include a cogent plan indicating how the fellowship will be used. The plan should include travel to at least one other institution and should demonstrate that the fellowship will be used for more than reductions of teaching at the candidate's home institution. The selection committee will consider the plan in addition to the quality of the candidate's research and will try to award the fellowship to those for whom the award would make a real difference in the development of their research careers.

Work in all areas of mathematics, including interdisciplinary work, is eligible.

*Grant amount:* The stipend for fellowships awarded for 2011–2012 is expected to be US\$79,000, with an additional expense allowance of about US\$7,900. Acceptance of the fellowship cannot be postponed.

*Deadline:* The deadline for receipt of applications is **December 1, 2010**. Awards will be announced in February 2011 or earlier if possible.

*Application information:* Find Centennial information and the application form via the Internet at <http://www.ams.org/ams-fellowships/>. For paper copies of the form, write to the Membership and Programs Department, American Mathematical Society, 201 Charles Street, Providence, RI 02904-2294; [prof-serv@ams.org](mailto:prof-serv@ams.org); 401-455-4105.

—AMS announcement

## AMS-AAAS Mass Media Summer Fellowships

The American Mathematical Society provides support each year for a graduate student in the mathematical sciences to participate in the American Association for the Advancement of Science (AAAS) Mass Media Science and Engineering Fellows Program. This summer fellowship program pairs graduate students with major media outlets nationwide where they will research, write, and report on science news, and use their skills to bring technical subjects to the general public. The principal goal of the program is to increase the public's understanding of science and technology by strengthening the connection between scientists and journalists to improve coverage of science-related issues in the media. Past AMS-sponsored fellows have held positions at *Scientific American*, *Business Week*, *Voice of America*, *Discovery Channel Online*, *National Geographic Television*, *Popular Science*, *The Chicago Tribune*, *Milwaukee Journal Sentinel*, and *WOSU-AM Radio*. Fellows receive a weekly stipend of US\$450, plus travel expenses, to work for ten weeks during the summer as

reporters, researchers, and production assistants in newsrooms across the country. They observe and participate in the process by which events and ideas become news, improve their ability to communicate about complex technical subjects in a manner understandable to the public, and increase their understanding of editorial decision making and of how information is effectively disseminated. Each fellow attends an orientation and evaluation session in Washington, DC, and begins the internship in mid-June. Fellows submit interim and final reports to AAAS. A wrap-up session is held at the end of the summer. Mathematical sciences faculty are urged to make their graduate students aware of this program. The deadline to apply for fellowships for the summer of 2011 is **January 15, 2011**. Further information about the fellowship program and application procedures is available online at <http://www.aaas.org/programs/education/MassMedia>; or applicants may contact Stacey Pasco, Manager, Mass Media Program, AAAS Mass Media Science and Engineering Fellows Program, 1200 New York Avenue, NW, Washington, DC 20005; telephone 202-326-6441; fax 202-371-9849; email [spasco@aaas.org](mailto:spasco@aaas.org). Further information is also available at <http://www.ams.org/policy/government/fellow-awards/fellow-awards> and through the AMS Washington Office, 1527 Eighteenth Street, NW, Washington, DC 20036; telephone: 202-588-1100; fax: 202-588-1853; email: [amsdc@ams.org](mailto:amsdc@ams.org).

—From the AMS Washington office

## Research Opportunities for U.S. Graduate Students in Asia and Australia

The National Science Foundation (NSF) is sponsoring a summer research program in Australia, China, Japan, Korea, Taiwan, New Zealand, and Singapore for U.S. graduate students during the summer of 2010. The East Asia and Pacific Summer Institutes (EAPSI) provide U.S. graduate students in science and engineering with firsthand research experience in Australia, China, Japan, Korea, Taiwan, New Zealand, or Singapore; an introduction to the science and science policy infrastructure of the respective location; and orientation to the culture and language. The primary goals of EAPSI are to introduce students to East Asian and Pacific science and engineering in the context of a research laboratory and to initiate personal relationships that will better enable them to collaborate with foreign counterparts in the future. The institutes last approximately eight weeks (ten weeks in Japan) from June to August and are administered in the United States by the NSF. Applicants must be U.S. citizens or permanent residents. They must be enrolled at U.S. institutions in a research-oriented master's or Ph.D. program (including joint-degree programs) in fields of science or engineering research and education that are supported by the NSF and that also are represented among the potential host institutions. International travel will be provided,

and each awardee will receive an allowance of US\$5,000. The deadline for application materials to be postmarked is **November 10, 2010**. Proposers are required to prepare and submit all proposals for this announcement/solicitation through the FastLane system. Further information and detailed instructions are available at <http://www.nsf.gov/pubs/2010/nsf10591/nsf10591.htm>.

—From an NSF announcement

## NSF Graduate Research Fellowships

The National Science Foundation (NSF) awards Graduate Research Fellowships to graduating seniors and first-year graduate students. These are three-year fellowships awarded to U.S. students for full-time graduate study at the institutions of their choice. The fellowships include a stipend, tuition coverage, and possible international travel allowances. Awards are made based on the candidates' intellectual merit and potential for research achievement. The deadline for full proposals in the mathematical sciences is **November 18, 2010**. For more information see <http://www.nsf.gov/pubs/2010/nsf10604/nsf10604.htm>.

—From an NSF announcement

## Jefferson Science Fellows Program

The Jefferson Science Fellows (JSF) program at the U.S. Department of State is intended to involve the American academic science, technology, and engineering communities in the formulation and implementation of U.S. foreign policy. Each fellow will spend one year at the U.S. Department of State or the U.S. Agency for International Development (USAID) for an on-site assignment in Washington, DC, that may also involve extended stays at U.S. foreign embassies and/or missions. Each fellow will receive a stipend of up to US\$50,000. Following the fellowship year, the Jefferson Science Fellow will return to his or her academic career but will remain available to the U.S. Department of State for short-term projects over the following five years. The JSF program is administered by the National Academies and supported through a partnership of the U.S. science, technology, and academic communities, professional scientific societies, and the U.S. Department of State. The deadline for applications is **January 15, 2011**. For further information, email [jsf@nas.edu](mailto:jsf@nas.edu), telephone 202-334-2643, or see the website [http://sites.nationalacademies.org/PGA/Jefferson/PGA\\_046612](http://sites.nationalacademies.org/PGA/Jefferson/PGA_046612).

—From a National Academies announcement

## NSF Mathematical Sciences Research Institutes

The Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) seeks proposals for mathematical sciences research institutes that will advance research in the mathematical sciences, increase the impact of the mathematical sciences in other disciplines, and expand the talent base engaged in mathematical research in the United States. DMS is particularly interested in proposals that are creative, demonstrate vision, involve the fullest spectrum of the mathematical sciences appropriate to the proposed institute's mission, and increase the potential to transform the mathematical sciences landscape. Up to four awards will be made depending on the quality of the submissions and the availability of funds. Award amounts are anticipated to range from approximately US\$1.5 million per year to US\$4 million per year for up to five years. Proposals may be submitted only by universities or four-year colleges accredited in and having campuses located in the United States or by nonprofit, nonacademic organizations in the United States associated with educational or research activities. Multi-institutional consortia are permitted, but a single entity must accept overall management responsibility. The deadline for full proposals is **February 4, 2011**. For full details, see [http://www.nsf.gov/pubs/2010/nsf10592/nsf10592.htm?WT.mc\\_id=USNSF\\_25&WT.mc\\_ev=click](http://www.nsf.gov/pubs/2010/nsf10592/nsf10592.htm?WT.mc_id=USNSF_25&WT.mc_ev=click).

—From an NSF announcement

## AAUW Educational Foundation Fellowships and Grants

The American Association of University Women (AAUW) awards Selected Professions Fellowships to women who intend to pursue a full-time course of study at accredited institutions during the fellowship year in a designated degree program in which women's participation has traditionally been low. All women who are candidates for the master of science (M.S.) degree in mathematics or statistics are eligible to apply. Applications are now available for Master's and First Professional Awards, which carry cash awards of between US\$5,000 and US\$18,000. The deadline for applications to be postmarked is **January 10, 2011**. The fellowship year runs from July 1, 2011, to June 30, 2012. For more information, see the AAUW's website at [http://www.aauw.org/fga/fellowships\\_grants/selected.cfm](http://www.aauw.org/fga/fellowships_grants/selected.cfm) or contact the AAUW Educational Foundation, Selected Professions Fellowships, Dept. 60, 301 ACT Drive, Iowa City, IA 52243-4030; telephone: 319/337-1716, ext. 60; email: [aauw@act.org](mailto:aauw@act.org).

—From an AAUW announcement

## EDGE for Women Summer Program

The Enhancing Diversity in Graduate Education (EDGE) Program is a postbaccalaureate summer enrichment program designed to strengthen the ability of women and minority students to successfully complete graduate programs in the mathematical sciences.

The summer program consists of two core courses in analysis and algebra/linear algebra. There will also be minicourses in vital areas of mathematical research in pure and applied mathematics, short-term visitors from academia and industry, guest lectures, graduate student mentors, and problem sessions. In addition, a follow-up mentoring program and support network will be established with the participants' respective graduate programs.

Applicants to the program should be women who are (1) graduating seniors who have applied to graduate programs in the mathematical sciences, (2) recent recipients of undergraduate degrees who are now entering graduate programs, or (3) first-year graduate students. All applicants should have completed standard junior- or senior-level undergraduate courses in analysis and abstract algebra and have a desire to earn the doctorate degree. Women from minority groups who fit one of the above three categories are especially encouraged to apply. A stipend of US\$2,000 plus travel, room, and board will be provided to participants. Final acceptance to the program is contingent on acceptance to a graduate program in the mathematical sciences.

The EDGE Program will be held in the summer of 2011 at Florida A&M University in Tallahassee. The application deadline is **February 21, 2011**. See the website [http://www.edgeforwomen.org/?page\\_id=5](http://www.edgeforwomen.org/?page_id=5) for further information as it becomes available.

—EDGE Program announcement

## NRC-Ford Foundation Diversity Fellowships

The National Research Council (NRC) administers the Ford Foundation Diversity Fellowships program. The program seeks to promote the diversity of the nation's college and university faculties by increasing their ethnic and racial diversity, to maximize the educational benefits of diversity, and to increase the number of professors who can and will use diversity as a resource for enriching the education of all students. Predoctoral fellowships support study toward a Ph.D. or Sc.D.; dissertation fellowships offer support in the final year of writing the Ph.D. or Sc.D. thesis; postdoctoral fellowships offer one-year awards for Ph.D. recipients. Applicants must be U.S. citizens or nationals in research-based fields of study. Membership in one of the following groups will be considered a positive factor: Alaska Native (Eskimo, Aleut, or other indigenous peoples), Black/African American, Mexican American/Chicana/

Chicano, Native American Indian, Native Pacific Islander (Hawaiian/Polynesian/Micronesian), or Puerto Rican.

Approximately forty predoctoral fellowships will be awarded for 2011. The awards provide three years of support and are made to individuals who, in the judgment of the review panels, have demonstrated superior academic achievement, are committed to a career in teaching and research at the college or university level, show promise of future achievement as scholars and teachers, and are well prepared to use diversity as a resource for enriching the education of all students. The annual stipend is US\$20,000, with an institutional allowance of US\$2,000. The deadline for applying online is **November 1, 2010**.

Approximately twenty dissertation fellowships will be awarded for 2011 and will provide one year of support for study leading to a Ph.D. or D.Sc. degree. The stipend for one year is US\$21,000. The deadline for applying online is **November 8, 2010**.

The postdoctoral fellowship program offers one year of postdoctoral support for individuals who have received their Ph.D.s no earlier than November 30, 2003, and no later than November 8, 2010. The stipend is US\$40,000, with an employing institution allowance of US\$1,500. Approximately eighteen postdoctoral fellowships will be awarded for 2011. The deadline for applying online is **November 8, 2010**.

More detailed information and applications are available at the website <http://sites.nationalacademies.org/PGA/FordFellowships/index.htm>. The postal address is: Fellowships Office, Keck 576, National Research Council, 500 Fifth Street, NW, Washington, DC 20001. The telephone number is 202-334-2872. The email address is [infofell@nas.edu](mailto:infofell@nas.edu).

—From an NRC announcement

## Fields Institute Postdoctoral Fellowships

The Fields Institute invites applications for postdoctoral fellowship positions for the 2011–2012 academic year. The thematic program on discrete geometry and applications will be held from July to December 2011, and the thematic program on Galois representations will take place from January to June 2012. The fellowships provide for a period of engagement in research and participation in the activities of the institute. In addition to regular postdoctoral support, one visitor for each six-month program will be awarded a Jerrold E. Marsden Postdoctoral Fellowship. A number of two-year positions are also available connected to the Fields-Ontario fellowship. Applicants seeking postdoctoral fellowships funded by other agencies (such as Natural Sciences and Engineering Research Council of Canada or international fellowships) are encouraged to request the Fields Institute as their proposed location of tenure and should apply to the institute for a letter of invitation.

Qualified candidates who will have recently completed a Ph.D. in a related area of the mathematical sciences are

encouraged to apply. The deadline for applications is **December 15, 2010**. For more information, see the website [www.fields.utoronto.ca/proposals/postdoc.html](http://www.fields.utoronto.ca/proposals/postdoc.html).

—From a Fields Institute announcement

## AMS Congressional Fellowship

The AMS, in conjunction with the American Association for the Advancement of Science (AAAS), will sponsor a Congressional Fellow from September 2011 through August 2012. The fellow will spend the year working on the staff of a member of Congress or on a congressional committee as a special legislative assistant in legislative and policy areas requiring scientific and technical input. The fellowship is designed to provide a unique public policy learning experience, to demonstrate the value of science-government interaction, and to bring a technical background and external perspective to the decision-making process in the Congress. Deadline for applications is **February 15, 2011**. Applicants must have a Ph.D. or an equivalent doctoral-level degree in the mathematical sciences by the application deadline. For further information, please consult the webpage at <http://www.ams.org/programs/ams-fellowships/ams-aaas/ams-aaas-congressional-fellowship> or contact the AMS Washington Office at 202-588-1100, email: [amsdc@ams.org](mailto:amsdc@ams.org).

—AMS Washington Office

## AMS Department Chairs Workshop

The annual workshop for department chairs will be held a day before the start of the Joint Mathematics Meetings in New Orleans, Louisiana, on Wednesday, January 5, 2011, from 8:00 a.m. to 6:30 p.m. This one-day session for mathematical sciences department chairs is organized in a workshop format so as to stimulate discussion among attendees. Sharing ideas and experiences with peers creates an environment that enables attending chairs to address departmental challenges from new perspectives.

Past workshop sessions have focused on a range of issues facing departments, including planning and budgeting, personnel management, assessment, outreach, faculty development, communications, and departmental leadership.

There is a registration fee for the workshop, which is in addition to and separate from the Joint Meetings registration. An invitation to attend the workshop will be sent to department chairs this fall. Information will also be posted on the AMS website. For further information, please contact the AMS Washington Office at 202-588-1100 or [amsdc@ams.org](mailto:amsdc@ams.org).

—AMS Washington Office

## News from the Institut Mittag-Leffler

The Institut Mittag-Leffler in Djursholm, Sweden, has issued a call for proposals for scientific programs for the academic year 2013–2014. The deadline to apply is **January 12, 2011**. For further information, consult the website <http://www.mittag-leffler.se>; click on “scientific programs”, then “call for proposals”.

The Institute has also announced postdoctoral fellowship grants for the academic year 2011–2012. The scientific areas are: Complex Analysis and Integrable Systems (September 1–December 15, 2011), and Geometric and Analytic Aspects of Group Theory (January 16–May 30, 2012). For further information, visit the website <http://www.mittag-leffler.se>; click on “scientific programs”, then “postdoc grants”.

—*Institut Mittag-Leffler announcement*

## New Programs at the Simons Foundation

The Simons Foundation has just announced three new programs of interest to the mathematics community: Collaboration Grants for Mathematicians, Math+X, and a competition to host an Institute for the Theory of Computation.

A little history: Jim Simons is a well-known mathematician (co-creator of the Chern-Simons invariants) who left academics in the late 1970s and entered the field of investing. Some years ago he and his wife Marilyn (who has a Ph.D. in economics) set up a foundation, the primary goal of which is to support basic research in mathematics and science.

Information about the foundation’s activities can be found at the website <http://www.simonsfoundation.org>. Notable projects include the Simons Foundation Autism Research Initiative (<http://www.sfari.org>), the Simons Center for Geometry and Physics at Stony Brook (<http://www.scgp.stonybrook.edu/>), and substantial support for the Mathematical Sciences Research Institute, the Institute for Advanced Study, and Institut des Hautes Études Scientifiques. The readers of the *Notices* may also be aware of the program of Simons Postdoctoral Fellows that began with appointments this fall (<https://simonsfoundation.org/simons-post-doctoral-fellows-program>).

Here is a brief summary of the three new programs. Anyone interested should look at the more complete information on the foundation’s website.

*Collaboration Grants for Mathematicians:* These are five-year grants that provide money for travel and for inviting visitors. They are available only to those without significant federal funding. Awards are based on research activity in the preceding five years. Application deadline for grants to start in the summer of 2011: **January 31, 2011**.

*Math+X:* These grants will support the creation of new chairs to be shared between departments of mathematics and some other department in the same institution. The grants will fund half the endowment for the chair and provide the chair holder with substantial means to pay postdocs and graduate students in the two collaborating departments. Letters of Intent for this year’s application cycle are due on **October 27, 2010**.

*Institute for the Theory of Computing:* The foundation has invited universities, institutes, or consortia to apply for major funding to host a new institute whose agenda would be to accelerate fundamental research on the theory of computation and to further develop its interactions with other areas of science ranging from mathematics and statistics to biology, physics, and engineering. Letters of Intent are due on **October 27, 2010**.

The foundation is planning to launch further programs in the mathematical and physical sciences as well, and good ideas for how to support basic research in these areas are always welcome! They can be sent to [mps@simonsfoundation.org](mailto:mps@simonsfoundation.org).

—*David Eisenbud, director  
for Mathematics and the Physical Sciences,  
Simons Foundation,  
and University of California, Berkeley*