
Mathematics Opportunities

American Mathematical Society Centennial Fellowships

Invitation for Applications for Awards for 2009–2010

Deadline December 1, 2008

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 2009–2010 academic year. A list of previous fellowship winners can be found at <http://www.ams.org/prizes-awards>.

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 National Science Foundation 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, 1997, and September 1, 2006). 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 2009–2010 is expected to be US\$75,000, with an additional expense allowance of about US\$7,500. Acceptance of the fellowship cannot be postponed.

Deadline: The deadline for receipt of applications is **December 1, 2008**. Awards will be announced in February 2009 or earlier if possible.

Application information: Application forms are available via the Internet at <http://www.ams.org/employment/centflyer.html>. For paper copies of the form, write to the Membership and Programs Department, American Mathematical Society, 201 Charles Street, Providence, RI 02904-2294; or send email to prof-serv@ams.org; or call 401-455-4060.

—AMS announcement

AMS Scholarships for “Math in Moscow”

The Independent University of Moscow has created a program called “Math in Moscow”, which offers foreign students (undergraduate or graduate students specializing in mathematics and/or computer science) the chance to spend a semester in Moscow studying mathematics. The AMS provides a small number of scholarships to students to attend the program.

Math in Moscow provides students with a fifteen-week program similar to the Research Experiences for Undergraduates programs that are held each summer across the United States. Math in Moscow draws on the Russian tradition of teaching mathematics, which emphasizes creative approaches to problem solving. The focus is on developing in-depth understanding of carefully selected material rather than broad surveys of large quantities of material. Discovering mathematics under the guidance of an experienced teacher is the central principle of Math in Moscow. Most of the program's teachers are internationally recognized research mathematicians, and all of them have considerable teaching experience in English, typically in the United States or Canada. All instruction is in English.

With funding from the National Science Foundation (NSF), the AMS awards five US\$7,500 scholarships each semester to U.S. students to attend the Math in Moscow program. To be eligible for the scholarships, students must submit *separate* applications to *both* the Math in Moscow program and the AMS. An applicant should be an undergraduate mathematics or computer science major enrolled at a U.S. institution. **September 30, 2008**, is the deadline for the spring 2009 semester; **April 15, 2009**, is the deadline for scholarship applications for the fall 2009 semester.

Information and application forms for Math in Moscow are available on the Web at <http://www.mccme.ru/mathinmoscow> or by writing to: Math in Moscow,

P.O. Box 524, Wynnewood, PA 19096; fax: +7095-291-65-01; email: mim@mccme.ru. Information and application forms for the AMS scholarships are available on the Web at <http://www.ams.org/outreach/mimoscow.html> or by writing to: Math in Moscow Program, Membership and Programs Department, American Mathematical Society, 201 Charles Street, Providence, RI 02904-2294; email: student-serv@ams.org.

—AMS announcement

NSF International Research Fellow Awards

The objective of the International Research Fellowship Program (IRFP) of the National Science Foundation (NSF) is to introduce scientists and engineers in the early stages of their careers to research opportunities abroad. The program provides support for postdoctoral and junior investigators to do research in basic science and engineering for nine to twenty-four months in any country in the world. The goal of the program is to establish productive, long-term relationships between U.S. and foreign science and engineering communities. Applicants must be U.S. citizens or permanent residents who have earned their doctoral degrees within three years prior to the date of application or who expect to receive their degrees by the date of the award.

The deadline for full proposals is **September 9, 2008**. For further information contact the program officer, Susan Parris, 703-292-8711, sparris@nsf.gov; or visit the website http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5179&org=NSF.

—From an NSF announcement

AWM Travel Grants for Women

The National Science Foundation (NSF) and the Association for Women in Mathematics (AWM) sponsor travel grant programs for women mathematicians. AWM Travel Grants enable women to attend research conferences in their fields, thereby providing scholars valuable opportunities to advance their research activities and their visibility in the research community. A travel grant provides full or partial support for travel and subsistence for a meeting or conference in the grantee's field of specialization. The Mathematics Education Research Travel Grants provide full or partial support for travel and subsistence in math/math education research for mathematicians attending a math education research conference or math education researchers attending a math conference.

AWM Mentoring Travel Grants are designed to help junior women develop long-term working and mentoring relationships with senior mathematicians. A mentoring travel grant funds travel, subsistence, and other expenses

for an untenured woman mathematician to travel to an institute or a department to do research with a specified individual for one month.

The final deadline for the Travel Grants program for 2008 is **October 1, 2008**; the deadlines for 2009 are **February 1, 2009**; **May 8, 2009**; and **October 1, 2009**. For the Mentoring Travel Grants program the deadline is **February 8, 2009**. For further information and details on applying, see the AWM website, <http://www.awm-math.org/travelgrants.html>; telephone: 703-934-0163; or email: awm@awm-math.edu. The postal address is: Association for Women in Mathematics, 11240 Waples Mill Road, Suite 200, Fairfax, VA 22030.

—From an AWM announcement

Research Experiences for Undergraduates

The Research Experiences for Undergraduates (REU) program supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation (NSF). Student research may be supported in two forms: REU supplements and REU sites.

REU supplements may be requested for ongoing NSF-funded research projects or may be included in proposals for new or renewal NSF grants or cooperative agreements.

REU sites are based on independent proposals to initiate and conduct undergraduate research participation projects for a number of students. REU site projects may be based in a single discipline or academic department or on interdisciplinary or multidepartment research opportunities with a strong intellectual focus. Proposals with an international dimension are welcomed. A partnership with the Department of Defense supports REU sites in research areas relevant to defense. Undergraduate student participants supported with NSF funds in either supplements or sites must be citizens or permanent residents of the United States or its possessions.

Students may not apply to NSF to participate in REU activities. Students apply directly to REU sites and should consult the directory of active REU sites on the Web at http://www.nsf.gov/crssprgm/reu/reu_search.cfm. The deadline for full proposals for REU sites is **August 18, 2008**. Deadline dates for REU supplements vary with the research program; contact the program director for more information. The full program announcement can be found at the website http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf07569.

—From an NSF announcement

News from the Fields Institute

The fall 2008 thematic program of the Fields Institute for Research in the Mathematical Sciences will be *Arithmetic Geometry, Hyperbolic Geometry, and Related Topics*, organized by John Bland (Toronto), Caterina Consani (Johns Hopkins), Stephen Kudla (Toronto), Min Ru (Houston), Paul Vojta (Berkeley), and Pit-Mann Wong (Notre Dame).

Two workshops will be held: *Arithmetic Geometry: Diophantine Approximation and Arakelov Theory*, October 20–24; and *Complex Hyperbolic Geometry and Related Topics*, November 17–21.

Henri Gillet (University of Illinois, Urbana-Champaign) will be the Clay Mathematics Institute Senior Scholar in the program. Yum-Tong Siu (Harvard) will be the University of Toronto Dean's Distinguished Visitor and will teach a graduate course related to the program, as well as deliver the *Distinguished Lecture Series*, November 10–14. Shou-Wu Zhang (Columbia) will give the *Coxeter Lecture Series*, September 29–October 3. Gillet and Siu will be in residence at the Institute for the fall term (September to December).

More information can be found at http://www.fields.utoronto.ca/programs/scientific/08-09/arith_hypergeo/.

The *Conference on Nonlinear Phenomena in Mathematical Physics*, dedicated to Cathleen Synge Morawetz on her eighty-fifth birthday, will be held September 18–20. See <http://www.fields.utoronto.ca/programs/scientific/08-09/math-physics/> for further information.

Future thematic programs include the following:

Winter/Spring 2009: O-Minimal Structures and Real Analytic Geometry, organized by David Marker (University of Illinois, Chicago), Chris Miller (Ohio State), Jean-Philippe Rolin (Bourgogne), Patrick Speissegger (McMaster), Carol Wood (Wesleyan), Edward Bierstone (Toronto), Lou van den Dries (UIUC), Robert Moussu (Bourgogne), and Alex Wilkie (Oxford).

Fall 2009: Foundations of Computational Mathematics, organized by Peter Borwein (Simon Fraser), Stephen A. Cook (Toronto), Teresa Krick (Buenos Aires), Adrian Lewis (Cornell), Michael Shub (Toronto), and Richard Schwartz (Brown).

Winter/Spring 2010: Quantitative Finance: Foundations and Applications, organized by Y. Ait-Sahalia (Princeton), M. Grasselli (McMaster), V. Henderson (Warwick), T. Hurd (McMaster), M. Rindisbacher (Toronto), and D. Rosen (R2 Financial Technologies).

Fall 2010: Asymptotic Geometric Analysis, organized by V. Milman (Tel-Aviv), V. Pestov (Ottawa), and N. Tomczak-Jaegermann (Alberta).

Winter/Spring 2011: Dynamics and Transport in Disordered Systems, organized by D. Dolgopyat, K. Khanin, R. de la Llave, A. Neishtadt, J. Quastel, and B. Toth.

Fall 2011: Discrete Geometry and Applications, organized by K. Bezdek, R. Connelly, A. Deza, H. Edelsbrunner, A. I. Weiss, and Yinyu Yi.

Winter/Spring 2012: Galois Representations, organized by F. Calegari, M. Emerton, M. Kisin, and S. Kudla.

Thanks to increased funding from the province of Ontario, Fields will be offering four Fields Ontario Postdoctoral Fellowships per year, two in connection with each thematic program during the academic year. These will be two- to three-year positions combining residency at Fields with a research-teaching position at an Ontario university. See the Fields website, <http://www.fields.utoronto.ca/programs/scientific/>, for application details and more information on these thematic programs and on all other activities at the Institute.

—Fields Institute announcement

Call for Nominations for Clay Research Fellows

The Clay Mathematics Institute (CMI) solicits nominations for its competition for the 2009 Clay Research Fellowships. Fellows are appointed for a period of two to five years. They may conduct their research at whatever institution or combination of institutions best suits their research. In addition to a generous salary, the Fellow receives support for travel, collaboration, and other research expenses.

The selection criteria are the quality of the candidate's research and promise to make contributions of the highest level. At the time of their selection, most recent appointees were graduating Ph.D. students. However, mathematicians within three years of the Ph.D. are sometimes appointed. Selection decisions are made by CMI's Scientific Advisory Board: Jim Carlson, Simon Donaldson, Gregory Margulis, Richard Melrose, Yum-Tong Siu, Andrew Wiles.

To nominate a candidate, please send the following items by **September 15, 2008**: (1) Letter of nomination; (2) Names and contact information of two other references; (3) Curriculum vitae for the nominee; and (4) Publication list for the nominee.

Nominations should be sent to the attention of Heather Spatz, Clay Mathematics Institute, One Bow Street, Cambridge, MA 02138. Electronic submissions are also accepted at nominations@claymath.org.

Information about the Clay Research Fellows is available on the CMI website at http://www.claymath.org/research_fellows. Additional information may be obtained by calling Heather Spatz at 617-995-2602 or emailing her at spatz@claymath.org.

Current and alumni Clay Research Fellows: Mohammed Abouzaid, Spyridon Alexakis, Artur Avila, Roman Bezrukavnikov, Manjul Bhargava, Daniel Biss, Alexei Borodin, Maria Chudnovsky, Dennis Gaitsgory, Soren Galatius, Daniel Gottesman, Ben Green, Sergei Gukov, Adrian Ioana, Bo'az Klartag, Elon Lindenstrauss, Ciprian Manolescu, Daves Maulik, Maryam Mirzakhani, Sophie Morel, Mircea Mustata, Sam Payne, Igor Rodnianski, David Speyer, Terence Tao, András Váasy, Akshay Venkatesh, Teruyoshi Yoshida, Xinyi Yuan.

—Clay Mathematics Institute announcement