Mathematics Opportunities

American Mathematical Society Centennial Fellowships

Invitation for Applications for Awards for 2001–02
Deadline December 1, 2000

The AMS Centennial Research Fellowship Program makes awards annually to outstanding mathematicians to help further their careers in research. Recently the AMS Council approved changes in the rules for the fellowships. From 1984 to 1996 the fellowship program was aimed at midcareer mathematicians. The changes adopted five years ago redirected the fellowship program toward recent Ph.D.'s. The eligibility rules are as follows.

Applicants must: (1) be citizens or permanent residents of a country in North America, (2) have held their doctoral degrees for at least two years at the time of the award, (3) not have permanent tenure, and (4) have held less than two years of research support at the time of the award. (Each year of a full-time teaching appointment with teaching load less than four [respectively five] courses per year on the semester [respectively quarter] system will count in this respect as one half year of research support.) Recipients may not hold the Centennial Fellowship concurrently with other research fellowships (e.g., Sloan Foundation Fellowships or National Science Foundation Postdoctoral Fellowships), they may not use the stipend solely to reduce teaching at the home institution, and they are expected to spend some of the fellowship period at another institution that has a stimulating research environment suited to the candidate's research development.

The stipend for fellowships awarded for 2001–02 is expected to be approximately $39,000, with an additional expense allowance of about $1,600. Acceptance of the fellowship cannot be postponed. A fellowship holder may use the stipend as full support for a year or may combine it with half-time teaching and use it as half support over a two-year period.

The number of fellowships to be awarded is small and depends on the amount of money contributed to the program. The trustees have arranged a matching program from general funds in such a way that funds for at least one fellowship are guaranteed. Because of the generosity of the AMS membership, it has been possible to award four to five fellowships a year for the past six years. A list of previous fellowship winners can be found at `http://www.ams.org/secretary/prizes.html`.

Applications should include a short research plan describing both an outline of the research to be pursued and a program for using the fellowship, including institutions at which it will be used and reasons for the choices. The selection committee will base its decision on both the research potential of the applicant, as indicated by track record and letters of recommendation, and on the quality and feasibility of the research plan.

The deadline for receipt of applications is **December 1, 2000**. Awards will be announced in February 2001 or earlier if possible.

For application forms write to the Executive Director, American Mathematical Society, P. O. Box 6248, Providence, RI 02940-6248, or send electronic mail to `ams@ams.org`, or call 401-455-4106. Application forms are also available via the Internet at `http://www.ams.org/employment/`.

Please note that completed application and reference forms should not be sent to the AMS, but to the address given on the forms.

—AMS announcement

News from the CRM

The Centre de Recherches Mathématiques (CRM) has announced the program for its thematic year 2000–01 on "Mathematical Methods in Biology and Medicine". The application of mathematics to biology and medicine contributes to the understanding of natural processes both through mathematical models and their analysis and through the development and application of mathematical methods of inference. The year emphasizes both aspects, with workshops covering various applications of nonlinear dynamics in biology and medicine, as well as genomics and medical imaging.

Following is the schedule for upcoming events in fall 2000, giving dates, titles, brief descriptions, and the names of the organizers of the workshops.

October 29–November 1, 2000: Workshop on Mapping and Control of Complex Arrhythmias. This workshop will cover the recent advances in computational and analytical techniques and power that have opened new avenues for the understanding of and intervention in the prevention of cardiac arrhythmias. Organizer: Leon Glass (McGill University).

November 11–14, 2000: Workshop on Fractal and Modeling in Structural and Dynamical Analysis. Classical problems in material sciences (surface characterization, description of branching networks) have been given new impetus by the introduction of fractal concepts. This workshop will cover the latest theoretical developments, their contributions in the biomedical field, and future directions of investigations. Organizers: Jacques Bélair (University of Montreal) and Fahima Nekka (University of Montreal).

December 10–11, 2000: Workshop on Mathematical Methods in Brain Mapping. Brain mapping is a rapidly growing research field that tries to understand human brain function and anatomy using three-dimensional images from MRI, fMRI, PET, EEG, and MEG using geometry, topology, statistics, and random fields. This workshop is intended to bring together mathematicians and statisticians interested in brain mapping and medical researchers interested in mathematical and statistical methods for the analysis of brain mapping data. Organizer: Keith Worsley (McGill University).

In preparation for the workshop on brain mapping, a series of four introductory lectures on techniques in brain mapping will be given December 5–8, 2000. This seminar will cover the geometry of random fields, methods in functional magnetic resonance imaging, and methods for EEG analysis. The organizers of the seminar are Keith Worsley and Bernard Goulard of the University of Montreal.

Further information about these and other activities of the CRM can be obtained from Louis Pelletier, Centre de Recherches Mathématiques (CRM), Université de Montréal, C.P. 6128, Succursale Centre-ville, Montréal, Québec, Canada H3C 3J7; e-mail: activites@crm.umontreal.ca; World Wide Web http://www.crm.umontreal.ca/.

—From a CRM announcement

Distinguished International Postdoctoral Research Fellowships

The Directorate for Mathematical and Physical Sciences (MPS) of the National Science Foundation (NSF) announces a special opportunity for postdoctoral investigators to conduct research projects abroad as MPS Distinguished International Postdoctoral Research Fellows (MPS-DRF).

The objective of this activity is to provide talented recent doctoral recipients in the mathematical and physical sciences an effective means of establishing international collaborations in the early stages of their careers, thereby facilitating and enhancing connections between the U.S. science and engineering community and its international counterparts. By providing the resources needed to establish collaborations with potential for long-term impact, this activity is aimed at recognizing and supporting future leaders. As the scientific enterprise becomes increasingly global, there is a growing need for scientists who will excel and provide leadership in such an environment. The MPS encourages qualified individuals to apply and to ask the help of the scientific community in identifying and encouraging potential candidates.

In addition to the standard National Science Board merit review criteria, the evaluation criteria for MPS-DRF proposals will include the potential for furthering international cooperation. The location of the research site should be chosen for its appropriateness to the project and its potential for establishing long-term productive high quality collaborations; however, the geographic location of the research site itself will not be a consideration in the review process. A unique feature of this program is that resources will be available during the fellowship period in order both to establish and further international contacts and collaborations and to maintain a viable presence in the fellow's research community in the United States. Multidisciplinary projects are encouraged.

The fiscal year 2001 deadline for submission of application materials is **November 13, 2000**. Successful applicants will be notified by March 1, 2001. Eligibility is limited to citizens and permanent residents of the United States who fulfill requirements for the doctoral degree in an MPS discipline (astronomy, chemistry, materials research, mathematical sciences, or physics) between June 1, 2000, and September 30, 2001.

The announcement for the MPS-DRF program can be found at http://www.nsf.gov/cgi-bin/getpub?nsf00142.

—NSF Announcement