
Mathematics Opportunities

NSF Competition in Mathematical Biology

The Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) is now soliciting proposals for a competition in mathematical biology. This competition is being held jointly with the National Institute for General Medical Sciences at the National Institutes of Health (NIH). The competition is designed to support research on mathematical problems related to biological research. A direct relationship between a biological application and mathematics is expected. Research teams that include scientists from both the life sciences community and the mathematical sciences community are encouraged to submit proposals. Both new and existing collaborations will be supported. Individual investigators who have expertise in both areas may also submit proposals.

The full program announcement is available at <http://www.nsf.gov/cgi-bin/getpub?nsf01128/>. The deadline for submission of proposals is **October 5, 2001**.

—From an NSF announcement

ONR Young Investigator Program

The Office of Naval Research (ONR) sponsors a Young Investigator Program to support academic scientists and engineers who have recently received Ph.D. or equivalent degrees and who show exceptional promise for doing creative research.

During fiscal year 2002 it is expected that at least twenty-four awards will be made for proposals within an area of naval research interest. The basic award is \$100,000 per year for three years, and additional funds may be provided based on need. The program is open to United States citizens, nationals (native residents of a U.S. possession), and permanent residents who hold tenure-track or permanent faculty positions at U.S. universities. Applicants must have received their graduate degrees on or after November 1, 1996.

Proposals in mathematical, computer, and information sciences should be sent to: Andre M. Van Tilborg, Director, Mathematical, Computer, and Information Sciences Division, Office of Naval Research, 800 N. Quincy Street,

Arlington, VA 22217-5660; telephone 703-696-4312; e-mail: vantila@onr.navy.mil. Proposals must be received by 4:00 p.m. on **November 1, 2001**. For further information and instructions for proposal preparation, see the ONR website, http://www.onr.navy.mil/sci_tech/special/complete.htm.

—From an ONR announcement

NSF International Research Fellow Awards

The International Research Fellow Awards Program of the National Science Foundation provides support for post-doctoral and junior investigators to do research in basic science and engineering for 3 to 24 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 six years before the date of application or who expect to receive their degrees by the date of award.

The deadline for applying is **October 22, 2001**. For further information contact the program officer, Susan Parris, 703-292-8711, sparris@nsf.gov; or visit the website <http://www.nsf.gov/sbe/int/fellows/start.htm>.

—From an NSF announcement

Grants to Support Attendance at ICM2002

Mathematicians from developing countries and mathematicians residing in Eastern European countries and independent states of the former Soviet Union are eligible to apply for support to attend the International Congress of Mathematicians (ICM) 2002 in Beijing, China, August 20–28, 2002.

To secure participation of as many people as possible, support is available only for local costs (registration and lodging) in Beijing. Travel grants are not available. Those applying are expected to cover travel expenses from other sources. The grants are provided by the Chinese Mathematical Society and the ICM-2002 Organizing Committee.

The deadline for submission of applications is **January 1, 2002**. Decisions will be announced immediately after May 1, 2002. More information and application forms can be found on the World Wide Web at <http://www.icm2002.org.cn/>. Or write to: Shanzhen Lu, Department of Mathematics, Beijing Normal University, 100875 Beijing, China; e-mail: icm@bnu.edu.cn.

—From an ICM-2002 announcement

Call for Applications for AMS Epsilon Fund

The AMS Epsilon Fund awards grants to summer mathematics programs that support and nurture mathematically talented high school students in the United States. The deadline for application for funding for summer 2002 programs is **December 15, 2001**. Application materials are available at <http://www.ams.org/careers-edu/epsilon.html> or by mail: Professional Services Department, AMS, 201 Charles Street, Providence, RI 02904; telephone 800-321-4267, ext. 4105; e-mail: prof-serv@ams.org.

—Diane M. Boumenot, AMS Professional Services Department

Humboldt Foundation Offers Fellowships

The Alexander von Humboldt Foundation awards annual fellowships to foreign scholars holding doctorates to support research projects of their own choosing in Germany. The fellowships are offered for research visits of between six and twelve months.

Applicants from all countries and in all academic disciplines may apply. The fellowships are awarded to scholars under forty years of age. Approximately 500 research fellowships are available each year. Decisions are based primarily on the quality and feasibility of the proposed research projects and on the applicants' international publications.

For more information on application requirements and procedure, consult the Foundation's website at http://www.avh.de/en/programme/stip_aus/index.htm.

—From a Humboldt Foundation announcement

Call for Nominations for Waterman Award

Congress established the Alan T. Waterman Award in August 1975 to mark the twenty-fifth anniversary of the National Science Foundation (NSF) and to honor its first director. The annual award recognizes an outstanding young researcher in any field of science or engineering supported

by the NSF. In addition to a medal the awardee receives a grant of \$500,000 over a three-year period for scientific research or advanced study in the mathematical, physical, medical, biological, engineering, social, or other sciences at the institution of the recipient's choice.

Candidates must be U.S. citizens or permanent residents and must be thirty-five years of age or younger or not more than seven years beyond receipt of the Ph.D. degree by December 31 of the year in which they are nominated. Candidates should have demonstrated exceptional individual achievements in scientific or engineering research of sufficient quality to place them at the forefront of their peers. Criteria include originality, innovation, and significant impact on the field.

Nominations for the award and supporting references must be postmarked by **December 31, 2001**. For more detailed information concerning the nomination procedures or to receive a nomination form, contact Susan E. Fannoney, telephone: 703-292-8096, or e-mail: sfannone@nsf.gov.

—From an NSF announcement

Call for Nominations for TWAS Awards

The Third World Academy of Sciences (TWAS) Awards in Basic Sciences were instituted in 1985 to recognize and support outstanding achievements made by scientists from developing countries. Five awards are given each year in the fields of mathematics, basic medical sciences, biology, chemistry, and physics. Each award consists of a prize of US\$10,000 and a plaque. Candidates for the awards must be nationals of developing countries and, as a rule, must be living and working in those countries.

Nominations for the 2002 awards are due on **March 1, 2002**. Completed nomination forms should be sent to: Helen Grant, TWAS Awards, Third World Academy of Sciences (TWAS), c/o The Abdus Salam International Centre for Theoretical Physics (ICTP), 34014 Trieste, Italy; fax: +39-040-224559. Further information is available on the World Wide Web at http://www.ictp.trieste.it/~twas/Awards_Info.html.

—From a TWAS announcement

News from MSRI

The Mathematical Sciences Research Institute (MSRI) has announced its programs for fall and spring 2001–02. Following are dates, titles, brief descriptions, and names of organizers of the programs.

August 13–December 14, 2001: Integral Geometry. This program will cover recent advances in integral geometry, with a focus on the interrelationships between integral geometry and the theory of representations (Penrose transform in flag domains, horospherical transforms), complex geometry, symplectic geometry, algebraic analysis, and

nonlinear differential equations. An introductory workshop in inverse problems and integral geometry will be held August 13–24. Organizers: L. Barchini, S. Gindikin, A. Goncharov, and J. Wolf.

August 13–December 14, 2001: Inverse Problems. The main topics of this program will be developments in inverse boundary value problems and inverse scattering problems. An introductory workshop in inverse problems and integral geometry will be held August 13–24. Organizers: D. Colton, J. McLaughlin, W. Symes, and G. Uhlmann.

January 7–May 17, 2002: Infinite-Dimensional Algebras and Mathematical Physics. This program will discuss recent progress in the representation theory of infinite-dimensional algebras and superalgebras and their applications to other fields. Organizers: E. Frenkel, V. Kac, I. Penkov, V. Serganova, and G. Zuckerman.

January 7–May 17, 2002: Algebraic Stacks, Intersection Theory, and Non-Abelian Hodge Theory. Algebraic stacks originally arose as solutions to moduli problems in which they were used to parametrize geometric objects in families. They have also arisen in studying homological properties of quotient singularities, non-Abelian Hodge theory, string theory, and so forth. This program will focus on intersection theory on stacks, non-Abelian Hodge theory and geometric n -stacks, perverse sheaves on stacks and the geometric Langlands program, D -brane charges in string theory, and moduli of gerbes and mirror symmetry. Organizers: W. Fulton, L. Katzarkov, M. Kontsevich, Y. Manin, R. Pandharipande, T. Pantev, C. Simpson, and A. Vistoli.

In addition to these programs MSRI has three award programs that offer support for work in mathematics at MSRI. Research Professorships provide partial salary support for at least three months and are intended for mathematicians with Ph.D.'s awarded in 1996 or earlier. Deadline for application is **September 28, 2001**. Postdoctoral Fellowships provide support for five or ten months for mathematicians with Ph.D.'s awarded in 1997 or later. There will be several one-semester awards for participants in half-year programs; this could be extended to a full year in special cases. Deadline for application is **November 16, 2001**. General Memberships provide partial support toward living and travel expenses. It is generally expected that general members will obtain partial or full support from other sources. Deadline for application is **November 16, 2001**.

Further information on these programs and application forms are available at <http://www.msri.org/> or from MSRI, 1000 Centennial Drive, Berkeley, CA 94720-5070.

—From an MSRI announcement

Mathematics Research Center Launched at Banff

The Banff International Research Station (BIRS) for Mathematical Innovation and Discovery is a cooperative venture of the United States and Canada to provide a conference center for mathematics similar to the ones in Oberwolfach,

Germany, and in Luminy, France. The first meetings at BIRS will be held in 2003.

BIRS is located in a self-contained facility on the site of the Banff Centre, an international learning center dedicated to the arts, leadership development, and mountain culture, and located in Banff, Alberta, Canada. The objective of BIRS is to support research and innovation, dissemination, and educational activities in all areas of science and technology involved with the mathematical and statistical sciences. BIRS programs will include: 5-day workshops for up to 40 participants (and perhaps a few smaller workshops with up to 20 people); 2-day meetings for up to 40 people; “Research in Teams” and “Focused Research Groups”, in which groups work together at BIRS for 2–4 weeks; and “Summer Schools and Training Camps” serving any educational level.

The U.S. participation in BIRS is led by the Mathematical Sciences Research Institute in Berkeley, and the Canadian participation is led by the Pacific Institute of Mathematical Sciences in Vancouver. Funding for BIRS will be provided by the Natural Science and Engineering Research Council of Canada, the U.S. National Science Foundation, and the Alberta Science Research Authority.

The 2003 operating year for BIRS will run from March to December, 2003. The deadline for proposals for 5-day workshops and summer schools is **October 1, 2001**. Proposals for research groups and teams and for 2-day meetings are also requested by October 1, 2001, but BIRS will consider proposals that arrive after that date, on a space-available basis.

For further information, visit the web site <http://www.pims.math.ca/birs/>.

—Allyn Jackson

Correction: NSA Grants

The September issue of the *Notices* carried an announcement about submitting grant proposals to the Mathematical Sciences Program of the National Security Agency (NSA). The announcement stated incorrectly that proposals for small grants for conferences, workshops, and special academic endeavors may be submitted at any time. These proposals, like all other proposals to the NSA program, must be submitted by the **October 15** deadline and will be funded the following fall.

Further information about the NSA Mathematical Sciences Program may be obtained from the NSA's web site, <http://www.nsa.gov/programs/msp/grants.html>. The telephone number is 301-688-0400, the e-mail address is msp@math.umbc.edu, and the postal address is: Mathematical Sciences Program, National Security Agency, Suite 6557, Ft. George G. Meade, MD 20755-6557.

—Allyn Jackson