Mathematics Opportunities

NSF Focused Research Groups

The Focused Research Groups (FRG) activity of the Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) supports small groups of researchers in the mathematical sciences.

The DMS has announced deadline dates for the fiscal year 2007 competition for FRG grants. The deadline for receipt of the required letters of intent to submit FRG proposals is **August 17, 2007**. The deadline date for full proposals is **September 21, 2007**. The FRG solicitation may be found on the Web at `http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5671&org=DMS`.

—From an NSF announcement

NSF Mathematical Sciences Postdoctoral Research Fellowships

The Mathematical Sciences Postdoctoral Research Fellowship program of the Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) awards fellowships each year for research in pure mathematics, applied mathematics and operations research, and statistics. The deadline for this year's applications is **October 17, 2007**. Applications must be submitted via FastLane on the World Wide Web. For more information see the website `http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5301&org=DMS`.

—From an NSF announcement

Travel Grants for ICME-11 in Monterrey, Mexico

Applications for travel grants are now available to attend the Eleventh International Congress on Mathematical Education (ICME-11), which will be held in Monterrey, Mexico, from July 6 to 13, 2008 (see `http://www.icme-11.dk/`). Contingent on the funding of a proposal pending at the National Science Foundation (NSF), grants will be available and awarded by the close of 2007. These grants will be available only to U.S. citizens and will support travel expenses to ICME-11 that include hotel accommodations, meal costs, and conference registration. They also can be used toward air transportation (on American carriers only). Travel grant awardees under this program may not use funds from other NSF programs to supplement their international travel (airfare to Mexico or subsistence at ICME-11).

The International Congresses are held every four years and offer a unique opportunity for mathematics educators from the United States to discuss issues related to mathematics education with international leaders from developed and developing countries. Grants will enable participants to listen to world-renowned scholars in mathematics and mathematics education and to take part in small, focused discussion groups on a wide range of topics, including a special emphasis on educating students from diverse cultures, mathematics education for second-language learners, the relationship between research and practice in mathematics education, the professional development of mathematics teachers, closing the achievement gap, and information and communication technology in mathematics education.

The National Science Foundation grants are available only to U.S. citizens and will support travel expenses to ICME-11 for K–12 mathematics teachers, mathematicians, graduate students, and mathematics teacher educators from the United States.

A selection committee will review applications and award the grants for ICME-11 travel. The committee will include representatives from the National Council of Teachers of Mathematics (NCTM), the Mathematical Association of America, the American Mathematical Association of Two-Year Colleges, the American Mathematical Society, and the U. S. National Commission on Mathematics Instruction.

Elementary, middle, and high school teachers and graduate students are strongly encouraged to apply. Questions can be directed to Gail Burrill, burrill@msu.edu. The travel grant application and selection criteria are available on the NCTM website at http://www.nctm.org/icme.aspx or from Margaret Iding, 116 North Kedzie, Division of Science and Mathematics Education, Michigan State University, East Lansing, MI 48824; telephone 517-355-1708, ext. 105; fax 517-432-9868; email: idingm@msu.edu. The application deadline is **September 30, 2007**. Notifications will be made by December 30, 2007.

—From an ICME-11 announcement

Wolfram Turing Machine Research Prize Established

Wolfram Research and Stephen Wolfram have announced the establishment of a US$25,000 prize for the first person or group to prove (or disprove) that a particular very simple Turing machine can act as a universal computer.

The prize is being announced on the fifth anniversary of the publication of Stephen Wolfram's influential book *A New Kind of Science* and is intended to help stimulate one of the lines of research opened up by the book.

Today's computers have CPUs with millions of components. But it is known in theory that much simpler systems are also capable of "universal computation", which means that with appropriate programming they can perform arbitrary computational tasks. The aim of the Wolfram 2,3 Turing Machine Research Prize is to determine the edge of where universal computation is possible.

The prize is open to all entrants, both amateur and professional. It has no closing date. The prize is being adjudicated by a distinguished committee consisting of Lenore Blum, Greg Chaitin, Martin Davis, Ron Graham, Yuri Matiyasevich, Marvin Minsky, Dana Scott, and Stephen Wolfram. Details of the prize are available at http://www.wolframprize.org.

—From a Wolfram Research news release

NSA Mathematical Sciences Program—Grants and Sabbaticals

As the nation's largest employer of mathematicians, the National Security Agency (NSA) is a strong supporter of the academic mathematics community in the United States. Through the Mathematical Sciences Program, the NSA provides research funding and sabbatical opportunities for eligible faculty members in the mathematical sciences.

Grants: The Mathematical Sciences Program (MSP) makes awards annually in support of self-directed, unclassified research in the following areas of mathematics: Algebra, Number Theory, Discrete Mathematics, Probability, and Statistics. Proposals for modest support of conferences and workshops in these five areas are also considered. The program does not entertain proposals that involve cryptology. Research grant support typically includes summer salary for faculty members, a modest amount for graduate student support, travel assistance, and other expenses typically associated with research in the mathematical sciences. Research and conference proposals that encourage the participation of women and other underrepresented groups in the mathematical sciences are particularly welcomed. Principal investigators, travelers, and all personnel supported by NSA grants must be U.S. citizens or permanent residents of the United States. Proposal submissions must be postmarked by **October 15** each year. Grants begin in the fall of the following year. Potential investigators are welcome to contact the MSP director prior to the submission date to discuss their proposal ideas: call 301-688-0400 or send email to mdwagn4@nsa.gov. For more detailed information on types of awards and proposal guidelines, see http://www.nsa.gov/msp/msp00002.cfm.

Sabbaticals: The NSA Mathematics Sabbatical Program provides support for mathematical scientists to work at the NSA for periods ranging from nine to twenty-four months. The NSA pays 50% of salary and benefits during academic months and 100% of salary and benefits during summer months of the sabbatical detail. A choice is offered between an allowance for moving expenses and a housing supplement. Applicants and their immediate family members (including parents and siblings) must be U.S. citizens. Target date for receipt of applications is **November 15** each year (to ensure ample time to complete the security clearance process). To apply, send a cover letter and curriculum vitae with list of publications. The cover letter should contain a description of research interests, description of programming experience and level of fluency, how the applicant hopes to contribute to NSA's mission, and how an NSA sabbatical would affect teaching and research upon returning to academia. On average, three sabbatical positions are available per year.

For additional information on these programs, see the Mathematical Sciences Program website (http://www.nsa.gov/msp/index.cfm), or contact the program staff: MSP Director, Michelle D. Wagner (mdwagn4@nsa.gov), MSP Program Administrator, Rosalie (Jackie) Smith (rjsmit2@nsa.gov). To obtain brochures or for questions, please call 301-688-0400 or write to: Mathematical Sciences Program, National Security Agency, Suite 6557, Fort Meade, MD 20755-6557.

—Mathematical Sciences Program announcement