
Mathematics Opportunities

New NSF Program: Enhancing the Mathematical Sciences Workforce in the Twenty-First Century

In an effort to increase the number of U.S. citizens, nationals, and permanent residents who are well prepared in the mathematical sciences and who pursue careers in the mathematical sciences and other scientific disciplines, the Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) has instituted a program called Enhancing the Mathematical Sciences Workforce in the Twenty-First Century. This new program is an expansion of the Vertical Integration of Research and Education (VIGRE) program and includes two new components: Research Training Groups in the Mathematical Sciences (RTG) and Mentoring through Critical Transition Points in the Mathematical Sciences (MCTP).

VIGRE grants are designed to allow departments in the mathematical sciences to carry out innovative educational programs in which research and education are integrated and in which undergraduates, graduate students, postdoctoral fellows, and faculty are mutually supportive. The goals of the program are: (1) to prepare undergraduate students, graduate students, and postdoctoral fellows for the broad range of opportunities available to individuals with training in the mathematical sciences; and (2) to encourage departments in the mathematical sciences to initiate or improve education activities that lend themselves to integration with research, especially activities that promote the interaction of scholars across boundaries of academic age and departmental standing.

The DMS expects to make six or seven awards under this program in 2004. The deadline for proposals is **September 16, 2004**. For more information about the program and all of its components, see the website <http://www.nsf.gov/pubs/2003/nsf03575/nsf03575.htm>.

—From an NSF announcement

NSF Postdoctoral Research Fellowships

The National Science Foundation (NSF) awards Mathematical Sciences Postdoctoral Research Fellowships for appropriate research in areas of the mathematical sciences, including applications to other disciplines. Awardees are permitted to choose research environments that will have maximal impact on their future scientific development. Stipends provide support for two 9-month academic years and 6 summer months, for a total of 24 months.

The deadline for applications is **October 15, 2004**. For more information and application instructions, see the NSF website at <http://www.nsf.gov/pubs/2001/nsf01126/nsf01126.htm>.

—From an NSF announcement

NSF Integrative Graduate Education and Research Training

The Integrative Graduate Education and Research Training (IGERT) program was initiated by the National Science Foundation (NSF) to meet the challenges of educating Ph.D. scientists and engineers with the interdisciplinary backgrounds and the technical, professional, and personal skills needed for the career demands of the future. The program is intended to catalyze a cultural change in graduate education for students, faculty, and universities by establishing innovative models for graduate education in a fertile environment for collaborative research that transcends traditional disciplinary boundaries. It is also intended to facilitate greater diversity in student participation and to contribute to the development of a diverse, globally aware science and engineering workforce. Supported projects must be based on a multidisciplinary research theme and administered by a diverse group of

investigators from U.S. Ph.D.-granting institutions with appropriate research and teaching interests and expertise.

The preproposal deadline for the 2004 IGERT competition is **April 29, 2004**. Further information may be found at the website <http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf04550>.

—From an NSF announcement

Maria Mitchell Women in Science Award

The Maria Mitchell Association offers an annual award to recognize an individual, program, or organization that encourages the advancement of girls and women in studies and careers in science and technology. Maria Mitchell (1818–1889) was the first woman astronomer and first woman astronomy professor in the United States.

The award may be given in the natural and physical sciences, mathematics, engineering, computer science, or technology. The winner will be chosen by a national jury of distinguished educators and scientists and will receive a cash award of \$5,000. Funding for the award has been provided by an anonymous donor. Guidelines and nomination forms are available from the website <http://209.68.19.123/museums/wmnInsc.php>, or contact the Maria Mitchell Women in Science Award Committee at the Maria Mitchell Association, 4 Vestal Street, Nantucket, MA 02554; telephone 508-228-9198. The deadline for nominations is **April 30, 2004**.

—From a Maria Mitchell Association announcement

2004 NSF-CBMS Regional Conferences

With funding from the National Science Foundation (NSF), the Conference Board of the Mathematical Sciences (CBMS) will hold four NSF-CBMS Regional Research Conferences during the summer of 2004. These conferences are intended to stimulate interest and activity in mathematical research.

Each five-day conference features a distinguished lecturer who will deliver ten lectures on a topic of importance in current research. Support for about thirty participants will be provided for each conference. Established researchers and interested newcomers, including postdoctoral fellows and graduate students, are invited to attend.

The title of each conference follows, along with the name of the principal speaker, the date and location of the conference, and the names of the organizers, as well as contact information. More information about the conferences can also be found at the website <http://www.cbmsweb.org/NSF> or by contacting the Conference Board of the Mathematical Sciences, 1529 18th Street, NW, Washington, DC 20036-1385; telephone 202-293-1170; fax

202-293-3412; email: kolbe@math.georgetown.edu or rosier@math.georgetown.edu.

Wave Packets, Multilinear Operators, and Carleson Theorems, Christoph Thiele, May 23–28, Georgia Institute of Technology. Organizer: Gerd Mockenhaupt, telephone 404-894-5089, email: gerdm@math.gatech.edu. World Wide Web: <http://www.math.gatech.edu/~gerdm/cbms/>.

Graph Algebras: Operator Algebras We Can See, Iain Raeburn, May 31–June 4, University of Iowa. Organizers: Paul S. Muhly, telephone 319-335-0795, email: pmuhly@math.uiowa.edu; Mark Tomforde, telephone 319-335-3873, email: tomforde@math.uiowa.edu; and David A. Pask, email: david@maths.newcastle.edu.au. World Wide Web: <http://www.math.uiowa.edu/events/Events.htm>.

The Combinatorics of Large Sparse Graphs, Fan Chung Graham, June 7–12, California State University, San Marcos. Organizers: Radhika Ramamurthi, telephone 760-750-8095, email: ramamurt@csusm.edu; and Andre Kundgen, telephone 760-750-8070, email: akundgen@csusm.edu. World Wide Web: <http://www.csusm.edu/Math/CBMS>.

Non-Positive Curvature in Group Theory, Martin Bridson, August 15–20, the Rensselaerville Institute. Organizer: Ted Turner, telephone 518-442-4610, email: ted@math.albany.edu. World Wide Web: <http://math.albany.edu/~ted/CBMS.html>.

—From a CBMS announcement

News from PIMS

The Pacific Institute for the Mathematical Sciences (PIMS) has announced its 2004 summer workshops, which are listed below. For more information please see <http://www.pims.math.ca>.

May 4–14: 3rd Annual PIMS-MITACS Mathematical Biology Summer Workshop, University of Alberta

May 6: 4th Combinatorics Day, University of Lethbridge

May 10–14: PIMS-MITACS Graduate Industrial Mathematics Modelling Camp, University of Victoria

May 17–21: PIMS-MITACS Industrial Problem Solving Workshop 2004, University of British Columbia

May 20–22: Seminar on Stochastic Processes 2004, UBC

May 25–June 25: Summer School in Probability, UBC

June 6–8: International Workshop on Non-monotonic Reasoning, Whistler, British Columbia

June 17–18: Analysis, Probability, and Logic: A Conference in Honor of Edward Nelson, UBC

June 28–July 2: 16th Annual International Conference on Formal Power Series and Algebraic Combinatorics, UBC

July 7–20: MSRI-PIMS Summer Graduate Programme: Knots and 3-Manifolds, UBC

July 18–23: International Conference on Differential Equations and Applications in Mathematical Biology, Nanaimo, British Columbia

July 18–24: International Category Theory Conference, UBC

July 19–23: Knots in Vancouver: Workshop in Knot Theory and 3-Manifolds, UBC

PIMS has adopted a new mission statement, which is described in the following message from the director of PIMS, Ivar Ekeland.

“The Pacific Institute for the Mathematical Sciences (PIMS) was founded and is maintained by the five main universities in Western Canada (Simon Fraser University, University of Alberta, University of British Columbia, University of Calgary, University of Victoria) with the objectives of:

- Promoting research in mathematics
- Strengthening ties and collaboration between the mathematical scientists in the academic community, in the industrial and business sector, and in government
- Enhancing education and training in mathematical sciences, and broadening communication of mathematical ideas
- Creating strong mathematical partnerships and links within Canada and with organizations in other countries, focusing on the nations of the Pacific Rim

“PIMS has a close partnership with the University of Washington and the Mathematical Sciences Research Institute (MSRI), and the Universities of Lethbridge and Northern British Columbia are affiliates.

“In its eight years of existence PIMS has developed various ways in which to fulfill the objectives set by its founding universities. These include the Collaborative Research Groups; various Scientific, Education and Industrial activities; and the Banff International Research Station (BIRS). As the Director of PIMS, I am committed to continuing in this direction, as well as exploring other ways in which PIMS can contribute to science and education.”

—*PIMS announcement*