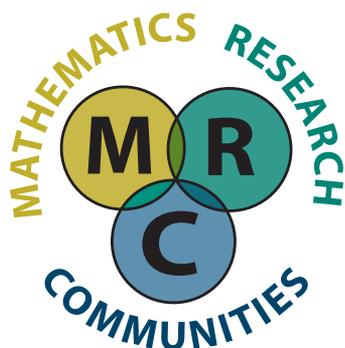

Mathematics Opportunities

Mathematics Research Communities 2009

The American Mathematical Society (AMS) invites mathematicians just beginning their research careers to



become part of Mathematics Research Communities (MRC), a new program to develop and sustain long-lasting cohorts for collaborative research projects in many areas of mathematics. Women and underrepresented minorities are especially encouraged to participate. The AMS will provide a structured program to engage and guide all participants as they start their careers. The program will include: a one-week summer conference for each topic, special sessions at the national meeting, discussion networks by research topic, ongoing mentoring, and a longitudinal study of early career mathematicians.

The summer conferences of the Mathematics Research Communities will be held in the breathtaking mountain setting of the Snowbird Resort, Utah, where participants can enjoy the natural beauty and a collegial atmosphere. The application deadline for summer 2009 is **March 2, 2009**. This program is supported by a grant from the National Science Foundation.

The topics, dates, and organizers of the 2009 conferences follow.

Mathematical Challenges of Relativity, June 13–19, 2009, Mihalis Dafermos (University of Cambridge), Alexandru Ionescu (University of Wisconsin, Madison), Sergiu Klainerman (Princeton University, chair), and Richard Schoen (Stanford University).

Inverse Problems, June 20–26, 2009, Guillaume Bal (Columbia University), Allan Greenleaf (University of Rochester), Todd Quinto (Tufts University), and Gunther Uhlmann (University of Washington, chair).

Modern Markov Chains and Their Statistical Applications, June 27–July 3, 2009, Persi Diaconis (Stanford University, chair), Jim Hobert (University of Florida), and Susan Holmes (Stanford University).

Harmonic Analysis, June 27–July 3, 2009, Ciprian Demeter (Indiana University), Michael Lacey (Georgia Institute of Technology), and Christoph Thiele (University of California, Los Angeles, chair).

Situated in a beautiful mountain setting, Snowbird Resort provides an extraordinary environment for the MRC. The atmosphere is comparable to the collegial gatherings at Oberwolfach and other conferences that combine peaceful natural ambience with stimulating meetings.

MRC participants have access to a range of activities, such as a tram ride to the top of the mountain, guided hikes, swimming, mountain bike tours, rock climbing, plus heated outdoor pools. More than a dozen walking and hiking trails head deep into the surrounding mountains. Participants also enjoy the simpler pleasures of convening on the patios at the resort to read, work, and socialize.

In the evenings colleagues enjoy informal gatherings to network and continue discussion of the day's sessions over refreshments. Within a half hour of the University of Utah, Snowbird is easily accessible from the Salt Lake City International Airport. For more information about Snowbird Resort, see <http://www.snowbird.com>.

A report about the 2008 MRC conferences appeared in the February issue of the *Notices*, pages 224–225. For information on applying for the 2009 program, please visit the website <http://www.ams.org/amsmtg/mrc-09.html>. For further information about the MRC program, please contact AMS Associate Executive Director Ellen Maycock at ejm@ams.org.

—AMS announcement

NSF Collaboration in Mathematical Geosciences

The Division of Mathematical Sciences (DMS) within the Directorate for Mathematical and Physical Sciences (MPS), the Directorate for Geosciences (GEO), and the Office of Polar Programs of the National Science Foundation (NSF) expect to make a number of awards in fiscal year 2009 that will support the activities of groups of investigators working at the frontiers of mathematical geosciences. Proposals should bring together scientists from both the mathematics and geosciences communities in a truly collaborative effort. Proposals in three broad thematic areas are solicited in this competition: mathematical and statistical modeling of complex geosystems, understanding and quantifying uncertainty in geosystems, and analyzing large/complex geoscience data sets. The window for submission is **February 24–March 10, 2009**. See http://www.nsf.gov/pubs/2009/nsf09520/nsf09520.htm?govDel=USNSF_25 for more information.

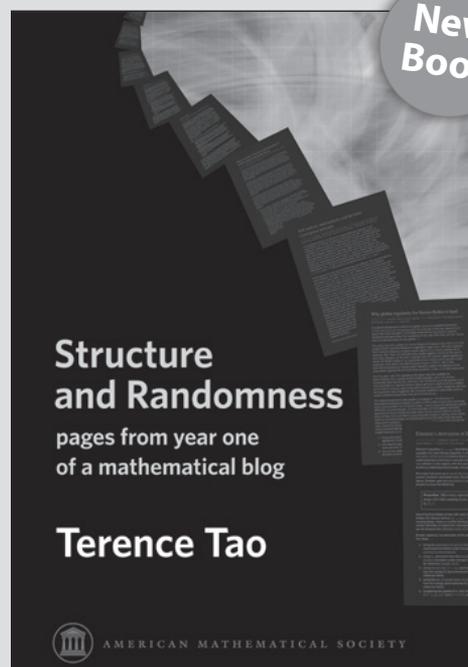
—From an NSF announcement

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 preliminary proposal deadline for the 2009 IGERT competition is **March 13, 2009**. The deadline for full proposals is **September 14, 2009**. Further information may be found at the website http://www.nsf.gov/pubs/2009/nsf09519/nsf09519.htm?govDel=USNSF_25.

—From an NSF announcement



Structure and Randomness pages from year one of a mathematical blog

Terence Tao, *University of California, Los Angeles, CA*

This collection of articles from Tao's research blog captures the insight, the inquisitiveness and even the playfulness of a great mathematician at the height of his influence. His contributions in diverse areas of mathematics allow him to establish connections between seemingly disparate subjects. An informal approach to the writing focuses on general ideas rather than detailed techniques.

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