
Mathematics Opportunities

Call for Proposals for the 2018 AMS Short Courses

The AMS Short Course Subcommittee invites submissions of preliminary proposals for Short Courses on fields of application of mathematics, to be given at the 2018 Joint Mathematics Meetings. Members are also invited to submit names of colleagues who they think would conduct an inspiring short course. A Short Course consists of a coherent sequence of survey lectures and discussions on a single theme. A Short Course ordinarily extends over a period of two days immediately preceding the Joint Mathematics Meetings held in January. Usually there are about six different lecturers, and it is anticipated that the proceedings of the Short Course will be published in the series *Proceedings of Symposia in Applied Mathematics*.

Preliminary proposals may be as short as one page. After reviewing the preliminary proposals, the Subcommittee may ask for more details from some of the proposers. Proposals should be sent via e-mail to Associate Executive Director (aed-mps@ams.org) with a cc to Robin Hagan Aguiar (rha@ams.org). For full consideration for the 2018 Short Courses, proposals should be submitted by **December 19, 2016**.

—AMS Associate Executive Director

**The most up-to-date listing of NSF funding opportunities from the Division of Mathematical Sciences can be found online at: www.nsf.gov/dms and for the Directorate of Education and Human Resources at www.nsf.gov/dir/index.jsp?org=ehr. To receive periodic updates, subscribe to the DMSNEWS listserv by following the directions at www.nsf.gov/mps/dms/about.jsp.*

*NSF Project ADVANCE

The goal of the National Science Foundation's (NSF) ADVANCE program is to increase the representation and advancement of women in academic science and engineering careers, thereby contributing to the development of a more diverse science and engineering workforce. ADVANCE encourages institutions of higher education and the broader science, technology, engineering, and mathematics (STEM) community, including professional societies and other STEM-related not-for-profit organizations, to address various aspects of STEM academic culture and institutional structure that may differentially affect women faculty and academic administrators. Since 2001, the NSF has invested over US\$130 million to support ADVANCE projects at more than one hundred institutions and organizations in forty-one states, the District of Columbia, and Puerto Rico. Additional information about ADVANCE programs, as well as application deadlines, can be found at www.nsf.gov/funding/pgm_summ.jsp?pims_id=5383&org=DMS&sel_org=DMS&from=fund.

—From an NSF announcement

*NSF Conferences and Workshops in the Mathematical Sciences

The National Science Foundation (NSF) supports conferences, workshops, and related events (including seasonal schools and international travel by groups). Proposals for such activities may request funding of any amount

and for durations of up to three years. Proposals may be submitted only by universities and colleges and by nonprofit nonacademic institutions. For full information, including deadlines for each disciplinary program, see the web page http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=11701&org=DMS&sel_org=DMS&from=fund.

—From an NSF announcement

News from IPAM

The Institute for Pure and Applied Mathematics (IPAM) is a National Science Foundation (NSF) mathematics institute located at the University of California Los Angeles. IPAM holds long programs (three months) and workshops (three to five days) throughout the academic year for junior and senior mathematicians and scientists who work in academia, research laboratories, and industry. In the summer, IPAM offers an industrial research experience for undergraduates and a summer school for graduate students and postdocs.

IPAM seeks program proposals from the math and science communities. Please send your idea for a workshop, long program, or summer school to director@ipam.ucla.edu.

IPAM's upcoming programs are listed below. We accept applications for funding for workshops and long programs. You may register and attend a workshop without IPAM support as well. Please go to www.ipam.ucla.edu for detailed information on each program, and to find application and registration forms.

The current long program is **Understanding Many-Particle Systems with Machine Learning**. The three remaining workshops in the program are listed below. You may register online, and the application for Workshop IV is open through **October 10, 2016**.

October 24–28, 2016: Workshop II: Collective Variables in Classical Mechanics.

November 14–18, 2016: Workshop III: Collective Variables in Quantum Mechanics.

December 5–9, 2016: Workshop IV: Synergies between Machine Learning and Physical Models.

2017 Winter Workshops. You may apply for support or register for each workshop online.

January 9–13, 2017: Turbulent Dissipation, Mixing and Predictability.

January 23–27, 2017: Beam Dynamics.

January 30–February 3, 2017: Big Data Meets Computation.

February 6–10, 2017: Emerging Wireless Networks.

February 27–March 2, 2017: Regulatory and Epigenetic Stochasticity in Development and Disease.

March 6–10, 2017: Gauge Theory and Categorification.

March 20–June 9, 2017: Computational Issues in Oil Field Applications. This long program is still accepting applications for full or partial participation. You may also register or apply for funding to attend a workshop.

March 21–24, 2017: Computational Issues in Oil Field Applications Tutorials.

April 3–7, 2017: Workshop I: Multiphysics, Multiscale, and Coupled Problems in Subsurface Physics.

May 1–5, 2017: Workshop II: Full Waveform Inversion and Velocity Analysis.

May 22–26, 2017: Workshop III: Data Assimilation, Uncertainty Reduction, and Optimization for Subsurface Flow.

Undergraduate students may apply for our **Research in Industrial Projects for Students (RIPS)** summer program, featuring “real world” problems proposed by companies such as Google, AMD, and the Aerospace Corporation. The website and application form will be posted in November. Applications are due **February 13, 2017**.

The 2017–2018 long programs will be “Complex High-Dimensional Energy Landscapes” (fall) and “Quantitative Linear Algebra” (spring). More information on these programs, including a schedule of workshops and application and registration forms, are available online.

—IPAM announcement

Mathematical Sciences Research Institute Berkeley, CA

MSRI invites applications for Research Members and Postdoctoral Fellows in the following programs:

Geometric Functional Analysis and Applications (August 14–December 15, 2017),

Geometric and Topological Combinatorics (August 14–December 15, 2017),

Group Representation Theory and Applications (January 16–May 25, 2018),

Enumerative Geometry Beyond Numbers (January 16–May 25, 2018).

Research Memberships are intended for researchers who will be making contributions to a program and who will be in residence for one or more months. Postdoctoral Fellowships are intended for recent PhDs.

MSRI uses MathJobs.Org to process applications. Interested candidates must apply online beginning August 1, 2016. To receive full consideration, applications must be complete, including all letters of support, by **December 1, 2016**. Application information can be found at www.msri.org/application.

It is the policy of MSRI actively to seek to achieve diversity in its programs and workshops. Thus, a strong effort is made to remove barriers that hinder equal opportunity, particularly for those groups that have been historically underrepresented in the mathematical sciences.

Programs [are] funded by the National Science Foundation.

—MSRI announcement