Mathematics Opportunities

Call for Proposals for the 2017 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 2017 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 email to the Associate Executive Director (`aed-mps@ams.org`) with a copy to Robin Hagan Aguiar (`rha@ams.org`). For full consideration for the 2017 Short Courses, proposals should be submitted by **December 21, 2015**.

—AMS Associate Executive Director

*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 of higher learning and STEM-related not-for-profit 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 conferences, workshops, or conference-like 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 `www.nsf.gov/funding/pgm_summ.jsp?pims_id=11701&org=DMS&sel_org=DMS&from=fund`.

—From an NSF announcement

**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`.

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`.

The current long program is **New Directions in Mathematical Approaches for Traffic Flow Management**. The three remaining workshops in the program are: Traffic Estimation (October 12–16), Traffic Control (October 26–30), and Decision Support for Traffic (November 16–20). A mini-workshop on October 7 includes a field trip to the Los Angeles Regional Transportation Management Center. You may register for the workshops online.

On Tuesday, October 6, IPAM will celebrate its fifteenth anniversary and the renewal of support from the National Science Foundation. Former program participants, board members, and the public are invited to the fifteenth anniversary event, which will feature three talks by former participants of IPAM programs whose research was greatly influenced by their participation at IPAM, followed by a reception. You can find more information and register online.

IPAM's other upcoming programs are listed below. Please go to `www.ipam.ucla.edu` for detailed information and to find application and registration forms.

2016 Winter Workshops. You may apply for support or register for each workshop online.

January 11–15, 2016: Optimization and Equilibrium in Energy Economics.

January 19–22, 2016: Uncertainty Quantification for Multiscale Stochastic Systems and Applications.

January 25–29, 2016: Partial Order: Mathematics, Simulations, and Applications.

February 8–12, 2016: Shape Analysis and Learning by Geometry and Machine.

February 22–26, 2016: Algebraic Geometry for Coding Theory and Cryptography.

March 7–June 10, 2016: Culture Analytics. You may apply online for support to be a core participant for the entire program or apply or register for individual workshops.

March 8–11, 2016: Tutorials.

March 21–24, 2016: Workshop I: Mathematical Analysis of Cultural Expressive Forms: Images, Videos, Music, and Cognition.

April 11–15, 2016: Workshop II: Culture Analytics and User Experience Design.

May 9–13, 2016: Workshop III: Cultural Patterns: Multiscale Data-Driven Models.

May 23–27, 2016: Workshop IV: Mathematical Analysis of Cultural Expressive Forms: Text Data.

September 12–December 16, 2016. Understanding Many-Particle Systems with Machine Learning. You may apply online for support to be a core participant for the entire program or may apply or register for individual workshops.

September 13–16, 2016: Tutorials.

September 26–30, 2016: Workshop I: Machine Learning Meets Many-Particle Problems.

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.

The spring 2017 long program (March 20–June 9, 2017) is entitled "Computational Issues in Oil Field Applications." Please check our upcoming programs page soon for information on individual workshops.

—IPAM announcement

Mathematical Sciences Research Institute, Berkeley, CA

MSRI invites applications for Research Members and Postdoctoral Fellows in the following programs: Geometric Group Theory (August 15–December 16, 2016), Analytic Number Theory (January 17–May 26, 2017), and Harmonic Analysis (January 17–May 26, 2017). 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. Interested individuals should carefully describe the purpose of their proposed visit and indicate why a residency at MSRI will advance their research program. To receive full consideration, application must be complete, including all letters of support, by December 1, 2015. Application information can be found at `https://www.msri.org/web/msri/scientific/member-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 funded by the National Science Foundation.

—MSRI announcement