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# Mathematics Opportunities

## AMS Scholarships for “Math in Moscow”

The Independent University of Moscow has created a program called “Math in Moscow” that offers foreign students (undergraduate or graduate students specializing in mathematics and/or computer science) the chance to spend a semester in Moscow studying mathematics.

Math in Moscow provides students with a fifteen-week program similar to the Research Experiences for Undergraduates programs that are held each summer across the United States. Math in Moscow draws on the Russian tradition of teaching mathematics, which emphasizes creative approaches to problem solving rather than memorizing theorems. The focus is on developing in-depth understanding of carefully selected material rather than broad surveys of large quantities of material. Discovering mathematics under the guidance of an experienced teacher is the central principle of Math in Moscow. Most of the program’s teachers are internationally recognized research mathematicians, and all of them have considerable teaching experience in English, typically in the United States or Canada. (All instruction is in English.)

Each semester, five \$5,000 scholarships will be granted to U.S. students to attend the Math in Moscow program. Funding is provided by the National Science Foundation, and the scholarships are administered by the AMS. To be eligible for the scholarships, students must submit applications to *both* the Math in Moscow program and the AMS. An applicant should be an undergraduate mathematics or computer science major enrolled at a U.S. institution. **May 15** is the deadline for applications to enroll in Math in Moscow for the following fall semester; **October 15** is the deadline for the spring semester. The same deadlines apply for the AMS scholarships.

Information and application forms for Math in Moscow are available either on the Web at <http://www.mccme.ru/mathinmoscow/> or by writing to: Math in Moscow, P.O. Box 524, Wynnewood, PA 19096; fax +7095-291-65-01; email: [mim@mccme.ru](mailto:mim@mccme.ru). Information and application forms for the AMS scholarship are available either on the Web at <http://www.ams.org/careers-edu/>

[mimoscow.html](http://mimoscow.html) or by writing to: Math in Moscow Program, Membership and Programs Department, American Mathematical Society, 201 Charles Street, Providence RI 02904-2294; email: [prof-serv@ams.org](mailto:prof-serv@ams.org).

—Allyn Jackson

## News from the Newton Institute

### Call for Proposals

The Isaac Newton Institute for Mathematical Sciences is an international research institute in Cambridge, England. It aims to bring mathematical scientists from United Kingdom universities and leading experts from overseas together for concentrated research on specialized topics in all branches of the mathematical sciences, from pure mathematics, applied mathematics, and statistics to engineering, computer science, theoretical physics, mathematical biology, and other related fields.

At any time there are two visitor programs in progress, each with about twenty scientists in residence. Included within these programs are periods of more expanded activity, including instructional courses and workshops. About fifty programs have now been completed, the most recent being “New Contexts in Stable Homotopy Theory” and “Computation, Combinatorics and Probability”. The programs currently taking place are “Computational Challenges in Partial Differential Equations”, and “Nonlinear Hyperbolic Waves in Phase Dynamics and Astrophysics”.

The institute now invites new proposals for programs for 2005 onwards. A choice of six-month or four-month programs is available, and a short program of four weeks’ duration is available during July/August each year. These short programs are intended for more narrowly focused topics or for subjects that may be at an embryonic stage of development and for which a longer program might not be as yet justified.

The institute is pleased to receive proposals at any time. The Scientific Steering Committee normally meets in April and October each year. Proposals to be considered

at these meetings are submitted by January 31 or July 31 respectively.

Further information is available at <http://www.newton.cam.ac.uk/> or from the director, John Kingman (email: [info@newton.cam.ac.uk](mailto:info@newton.cam.ac.uk), telephone +44(0)1223-335999), who will answer any inquiries. The postal address is: Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge, CB3 0EH, United Kingdom.

—*From Newton Institute announcements*

## AP Calculus Readers Sought

The Educational Testing Service and the College Board invite interested college faculty to apply to be readers for the Advanced Placement Calculus Exam. The AP Calculus exams (AB and BC) were taken by approximately 200,000 high-school students last year. The six free-response problems on the exam are graded during seven days in June by more than 650 high-school and college mathematics teachers at Colorado State University in Ft. Collins, Colorado. This is an excellent opportunity for teachers, especially those just starting their professional careers, to enhance their knowledge of the AP Calculus Program and of teaching and to meet with other faculty from around the country. To learn more about this opportunity or to apply for a position as a reader, see the website <http://apcentral.collegeboard.com/> and click on the link to “Faculty Involvement” under the drop-down menu for “Colleges & Universities”, or send email to [apreader@ets.org](mailto:apreader@ets.org). Questions about the reading may be sent to Larry Riddle, chief reader for the AP Calculus Program, at [LRiddle@agnesscott.edu](mailto:LRiddle@agnesscott.edu).

—*Larry Riddle, Agnes Scott College*

## Everett Pitcher Lectures

The next series of Everett Pitcher Lectures will be held April 7, 9, and 10, 2003, on the campus of Lehigh University in Bethlehem, Pennsylvania. The speaker will be James Arthur of the University of Toronto. The title of his lecture series is “Automorphic Forms and the Trace Formula”.

The lectures, which are open to the public, are held in honor of Everett Pitcher, who was secretary of the AMS from 1967 until 1988. Pitcher served in the mathematics department at Lehigh from 1938 until 1978, when he retired as Distinguished Professor of Mathematics.

Further information can be obtained by writing to Everett Pitcher Lecture Series, Department of Mathematics, Lehigh University, Bethlehem, PA 18015; by calling 610-758-3745; or by visiting the website <http://www.lehigh.edu/~math/pitcher.html>.

—*Department of Mathematics, Lehigh University*

## NSF Teacher Professional Continuum Program

The Teacher Professional Continuum (TPC) program at the National Science Foundation (NSF) announces new funding opportunities to conduct research studies, as well as research and development projects for K-12 science, technology, and mathematics (STM) education. TPC addresses critical issues and needs regarding the recruitment, preparation, enhancement, and retention of science, technology and mathematics (STM) teachers for grades K-12.

The principal mission of the TPC program is to promote quality K-12 STM teaching through (1) the production of resources, (2) the development of infrastructure, and (3) the advancement of knowledge. To fulfill its mission, the TPC program set the following goals to:

- Improve the quality and coherence of the learning experiences that prepare and enhance STM teachers;
- Develop innovative curricula, materials, tools, ideas, and information resources that prepare and support STM teachers and administrators;
- Research, develop, and identify models, organizational structures, and systems that support the teacher professional continuum;
- Research teacher learning throughout the teacher professional continuum and its impact on teaching practice using scientifically based investigations;
- Advance the knowledge base on the preparation, enhancement, and retention of STM teachers and on the strategies that strengthen and diversify the STM teaching profession; and
- Disseminate this knowledge and research, as well as innovative models and resources, to a national audience.

Research studies from first-time principal investigators are especially encouraged. The deadline for required preliminary proposals is **May 19, 2003**. For more information and the TPC program solicitation, visit the NSF website at <http://www.ehr.nsf.gov/ehr/esie/>.

—*NSF announcement*

## Oberwolfach Prize

The Mathematisches Forschungsinstitut Oberwolfach will award a prize for excellent achievements in geometry and topology. The prize is 5,000 euros (about US\$5,000). Candidates should be mathematicians under 35 years of age from Europe and must be nominated. Nominations should contain a description of the scientific achievements, curriculum vitae, and publication list of the nominee. Nominations must be made before **May 31, 2003**, to: Gert-Martin Greuel, Director, Mathematisches Forschungsinstitut Oberwolfach, Lorenzenhof, 77709 Oberwolfach-Walke, Germany. The telephone number is +49(0)7834-979-51, the fax number is +49(0)7834-979-55, the email address is [greuel@mfo.de](mailto:greuel@mfo.de), and the website address is <http://www.oberwolfach.org/>.

—*Oberwolfach announcement*

## New NSF Program in Optical Communications

The National Science Foundation (NSF) announces a broad interdisciplinary program of research and education on ultra-high-capacity optical communications, including novel concepts in photonic devices, advanced fiber communication systems, component technologies for broadband optical access, new approaches to low-cost processing and manufacturing, and new mathematical coding tools and models to simulate the device and system performance. The objective is to enable the continued growth of broadband optical access and high-capacity optical communications into the next decade.

The deadline for the required letters of intent is **March 31, 2003**, and full proposals are due **May 6, 2003**. For further information, see the webpage <http://www.nsf.gov/pubs/2003/nsf03537/nsf03537.htm>, or contact Ken Shaw of the NSF's Division of Mathematical Sciences, telephone 703-292-4859, email: [kshaw@nsf.gov](mailto:kshaw@nsf.gov).

—*From an NSF announcement*

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