Mathematics Opportunities

Call for Nominations for 2019 Abel Prize

The Norwegian Academy of Science and Letters awards the Abel Prize annually to recognize outstanding scientific work in mathematics, including mathematical aspects of computer science, mathematical physics, probability, numerical analysis and scientific computing, statistics, and also applications in the sciences. Nominations are due by September 15, 2018. See http://www.abelprize.no/c53676/artikkel/vis.html?tid=53705.

—Norwegian Academy of Science and Letters

Call for Nominations for AWM Falconer Lectureship

The Association for Women in Mathematics (AWM) and the Mathematical Association of America (MAA) annually present the Etta Z. Falconer Lecture at MathFest to honor women who have made distinguished contributions to the mathematical sciences or mathematics education. The deadline for nominations is September 1, 2018. See https://sites.google.com/site/awmmath/programs/falconer-lectures.

—From an AWM announcement

Call for Nominations for AWM Schafer Prize

The Association for Women in Mathematics (AWM) calls for nominations for the Alice T. Schafer Mathematics Prize to be awarded to an undergraduate woman for excellence in mathematics. The nominee must be an undergraduate when nominated. The deadline is October 1, 2018. See https://sites.google.com/site/awmmath/programs/schafer-prize.

—From an AWM announcement

Call for Nominations for Gerald Sacks Prize

The Association for Symbolic Logic (ASL) invites nominations for the Gerald Sacks Prize for the most outstanding doctoral dissertation in mathematical logic. The deadline is September 30, 2018. See http://www.aslonline.org/info-prizes.html or http://www.aslonline.org/Sacks-nominations.html.

—From an ASL announcement

*Research Experiences for Undergraduates

The Research Experiences for Undergraduates (REU) program supports student research in areas funded by the National Science Foundation (NSF) through REU sites and REU supplements. See http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517. The deadline date for proposals from institutions wishing to host REU sites is August 22, 2018. Dates for REU supplements vary with the research program (contact the program director for more information). Students apply directly to REU sites; see http://www.nsf.gov/crssprgm/reu/11_result.jsp?unitid=5044 for active REU sites.

—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: http://www.nsf.gov/dms and for the Directorate of Education and Human Resources at http://www.nsf.gov/dir/index.jsp?org=ehr. To receive periodic updates, subscribe to the DMSNEWS listserv by following the directions at http://www.nsf.gov/mps/dms/about.jsp.
**Joint DMS/NIGMS Initiative to Support Research at the Interface of the Biological and Mathematical Sciences**

The National Science Foundation (NSF) and the National Institute of General Medical Sciences (NIGMS) at the National Institutes of Health (NIH) support research in mathematics and statistics on questions in the biological and biomedical sciences. The application period is **September 1–18, 2018**. For more information see [https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5300](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5300).

—From an NSF announcement

**Call for Nominations for Joseph F. Traub Prize**

The Joseph F. Traub Prize for Achievement in Information-Based Complexity is given for work done in a single year, a number of years, or a lifetime. The deadline for nominations for 2019 is **March 31, 2019**. See [https://www.journals.elsevier.com/journal-of-complexity/awards/joseph-f-traub-prize](https://www.journals.elsevier.com/journal-of-complexity/awards/joseph-f-traub-prize).

—Joseph F. Traub Prize Award Committee

**IPAM Call for Proposals**

The Institute for Pure and Applied Mathematics (IPAM) seeks program proposals from the mathematical, statistical, and scientific communities for long programs and workshops, to be reviewed at IPAM’s Science Advisory Board meeting in November. For more information, go to [www.ipam.ucla.edu/propose-a-program](http://www.ipam.ucla.edu/propose-a-program) or contact the IPAM Director at director@ipam.ucla.edu. For all proposals, the inclusion of women and members of underrepresented minorities as speakers, organizers, or participants is required.

—Stacey Beggs, Assistant Director, IPAM

**News from IPAM**

The Institute for Pure and Applied Mathematics (IPAM) is accepting applications for the following scientific programs.

**Focused Workshop Program:** These week-long workshops are distinguished by their specific mathematical goals. These may involve making progress on a significant unsolved problem or examining the convergence of two distinct areas of mathematics. Researchers may apply to attend an upcoming AIM workshop or may propose one. The deadline is **November 1, 2018**. A list of upcoming workshops is available at [www.aimath.org/workshops/upcoming/](https://www.aimath.org/workshops/upcoming/).

**SQuaRES Program:** Structured Quartet Research Ensembles (SQuaRES) brings together groups of four to six researchers for a week of focused work on a specific research problem, returning for up to three consecutive years. The deadline for applications is **November 1, 2018**. See [www.aimath.org](http://www.aimath.org).

—AIM announcement

**MSRI News**

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

- **Holomorphic Differentials in Mathematics and Physics** (August 12–December 13, 2019);
- **Microlocal Analysis** (August 12–December 13, 2019);
- **Quantum Symmetries** (January 21–May 29, 2020); and
- **Higher Categories and Categorification** (January 21–May 29, 2020).

Research Professorships are intended for senior researchers who will be making key contributions to a program, including the mentoring of postdoctoral fellows, and who will be in residence for three or more months. Application deadline: **October 1, 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. Application deadline: **December 1, 2018**.

Postdoctoral Fellowships are intended for recent PhDs. Application deadline: **December 1, 2018**.

More information can be found at [www.msri.org/application](http://www.msri.org/application).

—MSRI announcement

**News from IPAM**

The Institute for Pure and Applied Mathematics (IPAM) offers programs that encourage collaboration across disciplines and between two areas of mathematics. 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 industrial research programs in multiple locations for undergraduate and graduate students and a one- to three-week “summer school” for graduate students and recent PhDs.

IPAM seeks proposals for workshops, long programs, and summer schools. Proposals should be sent to director@ipam.ucla.edu by **October 1, 2018**. See [www.ipam.ucla.edu/proposal-a-program](http://www.ipam.ucla.edu/proposal-a-program).

Following are IPAM’s upcoming programs. For complete information and application and registration forms, see [www.ipam.ucla.edu/programs](http://www.ipam.ucla.edu/programs).
On August 27–29, 2018, IPAM will offer an exploratory workshop on “Quantum Computing Materials Challenges.” Register online.

The fall 2018 long program, “Science at Extreme Scales: Where Big Data Meets Large-Scale Computing,” is no longer accepting applications for long-term visitors, but researchers may register or apply for funding for one of the following one-week workshops online.

- **September 13–18, 2018**: Science at Extreme Scales: Where Big Data Meets Large-Scale Computing Tutorials
- **September 24–28, 2018**: Workshop I: Big Data Meets Large-Scale Computing
- **October 15–19, 2018**: Workshop II: HPC and Data Science for Scientific Discovery
- **November 5–9, 2018**: Workshop III: HPC for Computationally and Data-Intensive Problems
- **November 26–30, 2018**: Workshop IV: New Architectures and Algorithms

Following are the winter workshops in 2019. Apply for travel support or register online.

- **January 7–11, 2019**: Analysis and Geometry of Random Shapes
- **January 28–February 1, 2019**: Computational Challenges in Gravitational Wave Astronomy
- **February 11–15, 2019**: Operator Theoretic Methods in Dynamic Data Analysis and Control
- **February 19–21, 2019**: Braids, Resolvent Degree and Hilbert’s 13th Problem
- **February 25–March 1, 2019**: Autonomous Vehicles

Applications for long-term visitors are being accepted for the spring 2019 long program, “Geometry and Learning from Data in 3D and Beyond.” You may also register or apply for funding for one of the following one-week workshops online.

- **March 12–15, 2019**: Geometry and Learning from Data Tutorials
- **April 1–5, 2019**: Workshop I: Geometric Processing
- **April 15–19, 2019**: Workshop II: Shape Analysis
- **April 29–May 3, 2019**: Workshop III: Geometry of Big Data
- **May 20–24, 2019**: Workshop IV: Deep Geometric Learning of Big Data and Applications

An industrial short course on "Deep Learning and the Latest AI Algorithms" will be held on October 1–2, 2018. The course is designed for industry professionals who want to get started in deep learning and apply deep learning techniques and artificial intelligence to their research projects. The instructor is Xavier Bresson of Nanyang Technological University, Singapore. The course is limited to twenty participants; early registration is encouraged. You may register for the short course online.

— From an IPAM announcement