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# Mathematics People

## Helgott and Sanders Awarded Adams Prize

HARALD HELGOTT of the University of Bristol and TOM SANDERS of the University of Cambridge have been awarded the 2011 Adams Prize. This year's topic was "Discrete Mathematics or Number Theory". According to the citation, "the work of both this year's winners has transformed our understanding of important topics in analytic number theory. They have each introduced new methodologies and techniques in applying deep tools from analysis in number theory; their results have already fostered much new research." Helgott's work "is a major breakthrough in understanding expanders in general groups, a major problem in additive combinatorics." Sanders "employed deep harmonic analysis to understand arithmetic progressions and answer long-standing conjectures in number theory."

The Adams Prize is awarded each year jointly by the Faculty of Mathematics at the University of Cambridge and St. John's College to a young researcher or researchers based in the United Kingdom doing first-class international research in the mathematical sciences. The prize is named after the mathematician John Couch Adams and was endowed by members of St. John's College. It carries a cash prize of approximately £14,000 (about US\$22,500), of which one-third is awarded to the prizewinner on announcement of the prize, one-third is provided to the prizewinner's institution (for research expenses of the prizewinner), and one-third is awarded to the prizewinner on acceptance for publication in an internationally recognized journal of a substantial (normally at least twenty-five printed pages) original survey article of which the prizewinner is an author.

—From a University of Cambridge announcement

## Butcher Receives Jones Medal

A new medal for lifetime achievement in the mathematical sciences, the Jones Medal, has been established by the Royal Society of New Zealand and has been awarded to JOHN BUTCHER, professor emeritus at the University of Auckland. The award consists of a medal designed by Marian Fountain, a New Zealand sculptor living in France, and a cash award of US\$4,000. It will be awarded biennially for lifetime achievement in pure or applied mathematics or statistics by a person with substantial connections to New Zealand.

The medal is named after and honors Sir Vaughan Jones, who was born in New Zealand and studied at the University of Auckland and the University of Geneva. Since 1985 he has been a professor at the University of California, Berkeley. His work on subfactors of von Neu-

mann algebras led to his discovery of the Jones polynomial invariant of knots and links and to his Fields Medal award in 1990 and his knighthood in 2002. (This work involved the golden ratio, which appears on the medal.) He has also worked on statistical mechanics, low-dimensional topology, and planar algebras. He has maintained a strong connection to New Zealand, including serving as codirector of the New Zealand Institute of Mathematics and Its Applications since its founding in 2002.

John Butcher is without doubt one of the leading world experts on numerical methods for the solution of ordinary differential equations (ODEs) and the world expert on Runge-Kutta methods. When he began work on Runge-Kutta methods in 1963, the area of numerical methods for ODE initial value problems was hardly considered fashionable, yet alone ripe for revolution. Yet that is what Butcher brought about in a series of papers over the following decades. The entire subject today is organized around the concept of B-series, named after John, the expansion of the integrator as a power series in the time step, with coefficients that are polynomial in the Runge-Kutta coefficients and in the vector field appearing in the ODE and its derivatives; the combinatorial aspects are handled by rooted trees.

The algebraic structure of B-series, whose study Butcher launched in 1972, was rediscovered twenty-five years later by Alain Connes and Dirk Kreimer for applications in quantum field theory. Connes and Kreimer applauded this work: "We regard Butcher's work on the classification of numerical integration methods as an impressive example that concrete problem-oriented work can lead to far-reaching conceptual results." Butcher has also worked on general linear methods, a simultaneous generalization of linear multistep and Runge-Kutta methods that led, for example, to his 2009 proof of the 1992 Butcher-Chipman conjecture on generalized Padé approximants of the exponential function.

Both mathematical and human elements are incorporated into the design of the medal. Marian Fountain says that the design "has been an interesting voyage for me and I spent a few weeks having too many possibilities and touching on the frustration of infinity, the feeling of not having quite found the right answer. I tried to keep thinking of the wonder of discovery in mathematics, and of the aspect of proof, so it had to stay a perfect circle, which was an interesting but important restraint." The knot design shows the simplest link that the Jones polynomial cannot distinguish from the unlink. Despite much effort, it is still unknown whether there exists a nontrivial knot that the Jones polynomial cannot distinguish from the unknot.

Additional information about the Jones Medal, including pictures of the medal itself, is available at <http://www.royalsociety.org.nz/programmes/awards/jones-medal>.

—Robert I. McLachlan, Massey University

## Oberman and Tropp Awarded Monroe H. Martin Prize

ADAM OBERMAN of Simon Fraser University and JOEL A. TROPP of the California Institute of Technology have been awarded the eighth Monroe H. Martin Prize. The prize is awarded every five years by the Institute for Physical Science and Technology to honor outstanding sole-authored papers by junior mathematicians. The prize carries a cash award of US\$5,000 to each awardee.

Oberman was honored for his paper “A convergent difference scheme for the infinity Laplacian: Construction of absolutely minimizing Lipschitz extensions”, which appeared in *Mathematics of Computation*, Volume 74 (2005), pp. 1217–1230. In this paper Oberman discusses building effective approximation methods for a class of nonlinear elliptic partial differential equations. These equations have applications in diverse areas: differential geometry, stochastic control, mathematical finance, and homogenization. Typical examples include Hamilton-Jacobi equations, the Monge-Ampère equation, and the equation for the convex envelope.

Tropp was honored for his paper “On the conditioning of random subdictionaries”, which appeared in *Applied and Computational Harmonic Analysis*, Volume 25 (2008), pp. 1–24. In this paper Tropp observes that computer scientists have long known that randomness can be used to improve the performance of algorithms. A familiar application is the process of dimension reduction, in which a random map transports data from a high-dimensional space to a lower-dimensional space while approximately preserving some geometric properties. By operating with the compact representation of the data, it is theoretically possible to produce approximate solutions to certain large problems very efficiently.

The Monroe H. Martin Prize was established to honor the outstanding contributions of the late Monroe H. Martin, professor emeritus at the University of Maryland, College Park. He was chair of the Department of Mathematics from 1942 until 1954 and the founding director of the Institute for Fluid Dynamics and Applied Mathematics (a forerunner of the Institute for Physical Science and Technology) from 1952 until 1968. Previous prizewinners are Neil Berger (1975), Marshall Slemrod (1980), Jonathan Goodman (1985), Marek Rychlik (1990), Andrew Stuart (1995), Zhihong Xia (1995), Yury Grabovsky (2000), Robert McCann (2000), C. Sinan Gunturk (2005), and Jared Tanner (2005).

—Frank W. J. Olver, *cochair*,  
Monroe H. Martin Prize Committee

## 2010 Prize for Achievement in Information-Based Complexity

BOLESŁAW Z. KACEWICZ of the AGH University of Science and Technology, Cracow, Poland, has been awarded the

2010 Prize for Achievement in Information-Based Complexity. The award consists of US\$3,000 and a plaque.

—IBC announcement

## ACM Newell Award

TAKEO KANADE of Carnegie Mellon University has been awarded the 2010 Allen Newell Award of the Association for Computing Machinery (ACM) for “fundamental contributions to research in computer vision and robotics, for applications to driving, 3D vision and quality of life technology, and for promoting the interaction between computer science and other disciplines, most notably robotics.”

The Allen Newell Award is presented to an individual selected for career contributions that have breadth within computer science or that bridge computer science and other disciplines. This endowed award is accompanied by a prize of US\$10,000 and is supported by the Association for the Advancement of Artificial Intelligence and by individual contributions.

—From an ACM announcement

## Daubechies Awarded Franklin Medal

INGRID DAUBECHIES of Duke University has been awarded the 2011 Benjamin Franklin Medal in Electrical Engineering “for fundamental discoveries in the field of compact representations of data, leading to efficient image compression as used in digital photography.” The Franklin Awards, given by the Franklin Institute, “identify individuals whose great innovation has benefited humanity, advanced science, launched new fields of inquiry, and deepened our understanding of the universe.”

—From a Franklin Institute announcement

## Lapidus Awarded Anassilaos Prize

MICHEL LAPIDUS, professor of mathematics at the University of California, Riverside, has been awarded an international prize in mathematics by the Associazione Culturale Anassilaos. The prize is named after the Italian geometer Renato Calapso (1901–1976). Lapidus serves as AMS associate secretary for the western section.

The prize citation says that Lapidus is being honored for “distinguished contributions to mathematical physics, as well as to spectral and fractal geometry, including the mathematical theory of Feynman integrals and the vibrations of fractal drums and strings, with applications to the study of the propagation of waves in rough media, the search for the origin of fractality in nature, the

development of the theory of complex fractal dimensions, and the establishment of new connections between fractal geometry and number theory, arithmetic and noncommutative geometry.” Lapidus will receive a plaque during a November 2011 ceremony and celebration in southern Italy. An international conference is being planned in southern Italy around his work.

—Allyn Jackson

## Kannan Awarded Knuth Prize

RAVI KANNAN of Microsoft Research Labs India has been awarded the 2011 Knuth Prize of the Association for Computing Machinery’s (ACM) Special Interest Group on Algorithms and Computation Theory (SIGACT) for developing influential algorithmic techniques aimed at solving long-standing computational problems. Kannan’s contributions address the challenges of computation with massive data that characterize today’s information-driven environment. His foundational work spans many areas of theoretical computer science, including lattices and their applications, geometric algorithms, machine learning, and computational linear algebra.

The Knuth Prize, named in honor of Donald Knuth of Stanford University, is given every eighteen months by ACM SIGACT and the Institute of Electrical and Electronics Engineers (IEEE) Technical Committee on the Mathematical Foundations of Computer Science. It includes a cash award of US\$5,000.

—From an ACM announcement

## USA Mathematical Olympiad

The 2011 USA Mathematical Olympiad (USAMO) was held April 27–28, 2011. The students who participated in the Olympiad were selected on the basis of their performances on the American High School and American Invitational Mathematics Examinations. This year 293 high school students qualified for the competition. The twelve highest scorers in the USAMO, listed in alphabetical order, were: Wenyu Cao (Phillips Academy, Andover, Massachusetts); Zijng (Michael) Gao (Cary Academy, Cary, North Carolina); Benjamin Gunby (Georgetown Day School, Washington, DC); Xiaoyu He (Acton-Boxborough Regional High School, Acton, Massachusetts); Ravi Jagadeesan (Phillips Exeter Academy, Exeter, New Hampshire); Yong Wook Kwon (Phillips Exeter Academy, Exeter, New Hampshire); Mitchell Lee (Thomas Jefferson High School for Science and Technology, Alexandria, Virginia); Ray Li (Phillips Exeter Academy, Exeter, New Hampshire); Evan O’Dorney (Berkeley Math Circle); Mark Sellke (William Henry Harrison High School, West Lafayette, Indiana); David Yang (Phillips Exeter Academy, Exeter, New Hampshire); Shijie (Joy) Zheng (Phillips Exeter Academy, Exeter, New Hampshire).

The twelve USAMO winners will attend the Mathematical Olympiad Summer Program (MOSP) at the University of Nebraska, Lincoln. Ten of the twelve will take the

team selection test to qualify for the U.S. team. The six students with the highest combined scores from the test and the USAMO will become members of the U.S. team and will compete in the International Mathematical Olympiad (IMO) to be held in Amsterdam, The Netherlands, July 16–24, 2011.

—Elaine Kehoe

## Moody’s Mega Math Challenge Winners Announced

The winners of the 2011 Mega Math Challenge for high school students have been announced. The topic for this year’s competition was “Colorado River Water: Good to the Last Acre-Foot”. A team from Pine View High School in Osprey, Florida, was awarded the Summa Cum Laude Team Prize of US\$20,000 in scholarship money. The members of the team were Caroline Bowman, Patrick Braga, Anthony Grebe, Alex Kiefer, and Jason Oettinger. Their coach was Ann Hankinson.

The Magna Cum Laude Team Prize of US\$15,000 was awarded to a team from Ridgefield High School in Ridgefield, Connecticut. The team members were Kimberly Cohen, Allison Collins, Andrew Klutey, Sean Scott, and Will Yolen. They were coached by David Yolen.

The Cum Laude Team Prize of US\$10,000 was awarded to a team from High Technology High School in Lincroft, New Jersey. The team members were Sidney Buchbinder, Stephen Guo, Channing Huang, Matthew Tsim, and Angela Zhou. Their coach was Ellen LeBlanc.

The Meritorious Team Prize of US\$7,500 went to a team from T. R. Robinson High School of Tampa, Florida. The team members were Kennon Bittick, James Gibson, Erin Seligsohn, Steven Seligsohn, and Aaron Warwick. They were coached by Judi Charley-Sale.

The Exemplary Team Prize of US\$5,000 was awarded to a team from Eastside High School, Gainesville, Florida. The team members were Peishi Cheng, Yi Fan, Alexander Geoffroy, Hohyun Jeon, and Medha Ranka. Their coach was Carl Henriksen.

Another team from High Technology High School, Lincroft, New Jersey, was awarded the First Honorable Mention Team Prize of US\$2,500. The team members were Vinay Ayyala, Robert Hale, Brittany Ko, Neil Rangwani, and James Ting. They were coached by Raymond Eng.

The Mega Math Challenge invites teams of high school juniors and seniors to solve an open-ended, realistic, challenging modeling problem focused on real-world issues. The top five teams receive awards ranging from US\$5,000 to US\$20,000 in scholarship money. The competition is sponsored by the Moody’s Foundation, a charitable foundation established by Moody’s Corporation, and organized by the Society for Industrial and Applied Mathematics (SIAM).

—From a Moody’s Foundation/SIAM announcement

## Klotz and Krulik Receive NCTM Lifetime Achievement Awards

The National Council of Teachers of Mathematics (NCTM) has presented Mathematics Education Trust Lifetime Achievement Awards for Distinguished Service to Mathematics Education to EUGENE A. KLOTZ and STEPHEN KRULIK. Klotz, retired from Swarthmore College, was among the first to realize the potential of technology to support mathematics learning. He launched the multimedia Visual Geometry Project, which eventually expanded to become the Math Forum. Krulik taught at Temple University for more than forty years, sharing his passion for and knowledge of mathematics through hundreds of presentations and in numerous publications spanning five decades.

—From NCTM announcements

## National Academy of Sciences Elections

The National Academy of Sciences (NAS) has elected seventy-two new members and eighteen foreign associates for 2011. Following are the new members whose work involves the mathematical sciences: JAMES W. DEMMEL, University

of California Berkeley; DAVID GABAI, Princeton University; STUART GEMAN, Brown University; JOSEPH HARRIS, Harvard University; JON M. KLEINBERG, Cornell University; LESLIE LAMPORT, Microsoft Research; and ANDREW STROMINGER, Harvard University. Elected as a foreign associate was JEAN BOURGAIN of the Institute for Advanced Study.

—From an NAS announcement

## AAAS Elects New Members

The American Academy of Arts and Sciences (AAAS) has chosen 212 new members and 16 foreign honorary members for 2011. Following are the names and affiliations of the new members who work in the mathematical sciences or whose work involves considerable mathematics: MARSHA BERGER, Courant Institute of Mathematical Sciences, New York University; EDMUND M. CLARKE, Carnegie Mellon University; ALEX ESKIN, University of Chicago; SYLVESTER JAMES GATES JR., University of Maryland; THOMAS Y. HOU, California Institute of Technology; MICHAEL I. JORDAN, University of California Berkeley; KAZUYA KATO, University of Chicago; GREGORY W. MOORE, Rutgers University; LAURENT SALOFF-COSTE, Cornell University; PETER SHOR, Massachusetts Institute of Technology; AVI WIGDERSON, Institute for Advanced Study; and SHOU-WU ZHANG, Columbia University.

—From an AAAS announcement

# Mathematics Opportunities

## Call for Entries for Balaguer Prize

The Ferran Sunyer i Balaguer Foundation invites entries for the 2012 Ferran Sunyer i Balaguer Prize. The prize will be awarded for a mathematical monograph of an expository nature presenting the latest developments in an active area of research in mathematics. The prize consists of 15,000 euros (approximately US\$21,500) and publication of the winning monograph in Birkhäuser-Verlag's series Progress in Mathematics. The deadline for submission is **December 2, 2011**. For more information see the website <http://ffsb.iec.cat>.

—From a Ferran Sunyer i Balaguer Foundation announcement

## Call for Nominations for Otto Neugebauer Prize

The European Mathematical Society (EMS) is seeking nominations for the Otto Neugebauer Prize for the History of Mathematics. The prize will be awarded "for

highly original and influential work in the field of history of mathematics that enhances our understanding of either the development of mathematics or a particular mathematical subject in any period and in any geographical region." The award comprises a certificate including the citation and a cash prize of 5,000 euros (approximately US\$7,000). The deadline for nominations is **December 31, 2011**. For further information see the website <http://www.euro-math-soc.eu/node/995>.

—From an EMS announcement

## Call for Nominations for Raymond J. Carroll Young Investigator Award

The Department of Statistics at Texas A&M University is seeking nominations for the Raymond J. Carroll Young Investigator Award. The award is presented every two years to an outstanding young researcher in statistical science. The awardee must have completed his or her Ph.D. within the ten years preceding the award and must have demonstrated outstanding scholarly contributions in statistical



methodology and applications. Nominations must be written and must include a curriculum vitae. Nominators are encouraged to supply supporting documents such as letters of recommendation. Self-nominations are invited and encouraged. Correspondence by email is preferred but not required. The deadline for award submissions is **August 15, 2011**. Nominations and supporting documents should be sent to Professor Jeff Hart, Chair, Raymond J. Carroll Young Investigator Award, Department of Statistics, Texas A&M University, 3143 TAMU, College Station, Texas 77843-3143; email: hart@stat.tamu.edu.

—From a Texas A&M University announcement

## NSF Focused Research Groups

The Focused Research Groups (FRG) activity of the Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) supports small groups of researchers in the mathematical sciences.

The DMS has announced deadline dates for the 2011 competition for FRG grants. The deadline for receipt of the required letters of intent to submit FRG proposals is **August 19, 2011**. The deadline date for full proposals is **September 16, 2011**. The FRG solicitation may be found on the Web at [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5671](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5671).

—From an NSF announcement

## NSF Mathematical Sciences Postdoctoral Research Fellowships

The Mathematical Sciences Postdoctoral Research Fellowship program of the Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) awards fellowships each year that are designed to permit awardees to choose research environments that will have maximal impact on their future scientific development. Awards of these fellowships are made for appropriate research in areas of the mathematical sciences, including applications to other disciplines. Fellows may opt to choose either a research fellowship or a research instructorship. The deadline for this year's applications is **October 19, 2011**. Applications must be submitted via FastLane on the World Wide Web. For more information see the website [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5301](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5301).

—From an NSF announcement

## NSA Mathematical Sciences Grants and Sabbaticals Program

As the nation's largest employer of mathematicians, the National Security Agency (NSA) is a strong supporter of the academic mathematics community in the United States. Through the Mathematical Sciences Program, the NSA

provides research funding and sabbatical opportunities for eligible faculty members in the mathematical sciences.

**Grants for Research in Mathematics.** The Mathematical Sciences Program (MSP) supports self-directed, unclassified research in the following areas of mathematics: algebra, number theory, discrete mathematics, probability, and statistics. The Research Grants program offers three types of grants: the Young Investigators Grant, the Standard Grant, and the Senior Investigators Grant. The program also supports conferences and workshops (typically in the range of US\$15,000–\$20,000) in these five mathematical areas. The program does not entertain research or conference proposals that involve cryptology. A Special Situation Proposal category is for research experience for undergraduates or events that do not fall within the typical “research” conference format. In particular, MSP is interested in supporting efforts that increase broader participation in the mathematical sciences, promote wide dissemination of mathematics, and promote the education and training of undergraduates and graduate students. Principal investigators, graduate students, and all other personnel supported by NSA grants must be U.S. citizens or permanent residents of the United States at the time of proposal submission. Proposals should be submitted **electronically** by **October 15, 2011**, via the program website: [http://www.nsa.gov/research/math\\_research/index.shtml](http://www.nsa.gov/research/math_research/index.shtml).

**Sabbatical Program.** NSA's Mathematics Sabbatical Program offers mathematicians, statisticians, and computer scientists the unique opportunity to develop skills in directions that would be nearly impossible anywhere else. Sabbatical employees work side by side with other NSA scientists on projects that involve cryptanalysis, coding theory, number theory, discrete mathematics, statistics and probability, and many other subjects. Visitors spend 9–24 months at NSA, and most find that within a very short period of time they are able to make significant contributions.

NSA pays 50 percent of salary and benefits during academic months and 100 percent of salary and benefits during summer months of the sabbatical detail. A monthly housing supplement is available to help offset the cost of local lodging. On average, three sabbatical positions are available per year.

Applicants must be U.S. citizens and must be able to obtain a security clearance. A complete application includes a cover letter and curriculum vitae with list of significant publications. The cover letter should describe the applicant's research interests, programming experience and level of fluency, and how an NSA sabbatical would affect teaching and research upon return to academia. Additional information is available about the Sabbatical Program at the following website: [http://www.nsa.gov/research/math\\_research/sabbaticals/index.shtml](http://www.nsa.gov/research/math_research/sabbaticals/index.shtml).

For more information about the Grants or Sabbatical Program, please contact the program office at 301-688-0400. You may also send email correspondences to [mspgrants@nsa.gov](mailto:mspgrants@nsa.gov).

—Mathematical Sciences Program announcement

## Research Experiences for Undergraduates

The Research Experiences for Undergraduates (REU) program supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation (NSF). Student research may be supported in two forms: REU supplements and REU sites.

REU supplements may be requested for ongoing NSF-funded research projects or may be included in proposals for new or renewal NSF grants or cooperative agreements.

REU sites are based on independent proposals to initiate and conduct undergraduate research participation projects for a number of students. REU site projects may be based in a single discipline or academic department or on interdisciplinary or multidisciplinary research opportunities with a strong intellectual focus. Proposals with an international dimension are welcomed. A partnership with the Department of Defense supports REU sites in research areas relevant to defense. Undergraduate student participants supported with NSF funds in either supplements or sites must be citizens or permanent residents of the United States or its possessions.

Students may not apply to NSF to participate in REU activities. Students apply directly to REU sites and should consult the directory of active REU sites on the Web at [http://www.nsf.gov/crssprgm/reu/reu\\_search.cfm](http://www.nsf.gov/crssprgm/reu/reu_search.cfm). The deadline for full proposals for REU sites is **August 24, 2011**. Deadline dates for REU supplements vary with the research program; contact the program director for more information. The full program announcement can be found at the website <http://www.nsf.gov/pubs/2009/nsf09598/nsf09598.htm>.

—From an NSF announcement

## Call for Nominations for 2011 Sacks Prize

The Association for Symbolic Logic (ASL) invites nominations for the 2011 Sacks Prize for the most outstanding doctoral dissertation in mathematical logic. The Sacks Prize consists of a cash award and five years' free membership in the ASL. Dissertations must have been defended by **September 30, 2011**.

General information about the prize is available at <http://www.aslonline.org/info-prizes.html>. For details about nomination procedures, see [http://www.aslonline.org/Sacks\\_nominations.html](http://www.aslonline.org/Sacks_nominations.html).

—From an ASL announcement

## PIMS Postdoctoral Fellowships

The Pacific Institute for the Mathematical Sciences (PIMS) invites nominations of outstanding young researchers in the mathematical sciences for postdoctoral fellowships for the year 2012–2013. **Please note that the deadline for**

**receipt of applications has been changed to December 1.** Candidates must be nominated by at least one scientist or by a department (or departments) affiliated with PIMS. The fellowships are intended to supplement support provided by the sponsor and are tenable at any of its Canadian member universities: Simon Fraser University, the University of Alberta, the University of British Columbia, the University of Calgary, the University of Victoria, University of Regina, and the University of Saskatchewan, as well as at the PIMS affiliates, the Universities of Lethbridge and Northern British Columbia.

For the 2012–2013 competition, to be held in January of 2012, the amount of the award will be C\$20,000 (approximately US\$20,400) and the sponsor(s) is (are) required to provide additional funds to finance a minimum total stipend of C\$40,000 (approximately US\$41,000). Rankings of candidates are made by the PIMS PDF Review Panel based on the qualifications of the candidate, his or her potential for participation in PIMS programs, and his or her potential involvement with PIMS partners. PIMS postdoctoral fellows will be expected to participate in all PIMS activities related to the fellow's area of expertise and will be encouraged to spend time at more than one site. To ensure that PIMS postdoctoral fellows are able to participate fully in institute activities, they may not teach more than two single-term courses per year.

Nominees must have a Ph.D. or equivalent (or expect to receive a Ph.D. by December 31, 2012) and be within three years of the Ph.D. at the time of the nomination (i.e., the candidate must have received her or his Ph.D. on or after January 1, 2009). The fellowship may be taken up at any time between September 1, 2012, and January 1, 2013. The fellowship is for one year and is renewable for at most one additional year.

The PIMS PDF nomination/application process takes place entirely online, utilizing the MathJobs service provided by the American Mathematical Society. Having selected their nominees, sponsors direct them to apply online at [mathjobs.org/jobs/PIMS](http://mathjobs.org/jobs/PIMS). Nominees are required to upload two letters of reference, a curriculum vitae, and a statement of research interests. Sponsors must upload their own reference letters (these are in addition to the two reference letters mentioned above) and a statement of financial support. They will receive instructions as to how to proceed from their nominees via email from MathJobs. Detailed instructions regarding all aspects of the MathJobs application procedure may be found in the online MathJobs user guides. Please note that application is by nomination only; unsolicited applications will not be considered. Please note that all nominees must apply through MathJobs; this includes nominees from PIMS Collaborative Research Groups.

Complete applications must be uploaded to MathJobs by **December 1, 2011**. (Note that this date is two weeks earlier than in previous years.) For further information, visit the website <http://www.pims.math.ca/scientific/postdoctoral> or contact: [assistant.director@pims.math.ca](mailto:assistant.director@pims.math.ca).

—PIMS announcement