Mathematics People

2006–2007 AMS Centennial Fellowships Awarded

The AMS has awarded two Centennial Fellowships for 2006–2007. The recipients are CHRISTOPHER HACON of the University of Utah and BRYNA KRA of Northwestern University. Each fellowship carries a stipend of US$64,000, an expense allowance of US$3,250, and a complimentary Society membership for one year.

Christopher Hacon

Christopher Hacon received his Ph.D. in 1998 from the University of California at Los Angeles under the direction of Robert Lazarsfeld. He was a Wylie Assistant Professor at the University of Utah from 1998 to 2000, was an assistant professor at the University of California at Riverside from 2000 to 2002, and has been an assistant/associate professor at the University of Utah since 2002. Hacon's research is in the field of algebraic geometry. In particular he is interested in the classification of higher-dimensional complex projective varieties and in questions arising from the minimal model program. He plans to use the fellowship to visit James McKernan at the University of California at Santa Barbara and Sándor Kovács at the University of Washington in Seattle.

Bryna Kra

Bryna Kra works in dynamical systems and ergodic theory, focusing on problems at the intersection of ergodic theory, additive combinatorics, and number theory. She received her Ph.D. from Stanford University in 1995 under the direction of Yitzhak Katznelson and held postdoctoral positions at the Hebrew University of Jerusalem, the University of Michigan, the Institut des Hautes Études Scientifiques, and Ohio State University. She was an assistant professor at Pennsylvania State University from 2000 to 2004 and subsequently has been an associate professor at Northwestern University. Kra plans to use her fellowship at Northwestern University and at the Université de Marne-la-Vallée to continue her collaboration with Bernard Host on multiple ergodic averages.

Christopher Hacon   **Bryna Kra**

Please note: Information about the competition for the 2007–2008 AMS Centennial Fellowships will be published in the "Mathematics Opportunities" section of an upcoming issue of the *Notices*.

—Allyn Jackson

Barrow Receives Templeton Prize

JOHN D. BARROW, a noted cosmologist whose writings about the relationship between life and the universe, and the nature of human understanding have created new perspectives on questions of ultimate concern to science and religion, has won the 2006 Templeton Prize. The prize is valued at 795,000 pounds sterling, approximately US$1.4 million.

Barrow, 53, who serves as professor of mathematical sciences at the University of Cambridge, has used insights from mathematics, physics, and astronomy to set out wide-ranging views that challenge scientists and theologians to cross the boundaries of their disciplines if they are to fully realize what they may or may not understand about how time, space, and matter began; the behavior of the universe (or, perhaps, "multiverses"); and where it is all headed, if anywhere.

His work—including seventeen books translated into twenty-seven languages and written in accessible, lively

prose; hugely popular lectures; and more than 400 scientific papers—has illuminated understanding of the universe and cast the intrinsic limitations of scientific inquiry into sharp relief. It has also given theologians and philosophers inescapable questions to consider when examining the very essence of belief, the nature of the universe, and humanity's place in it.

At Cambridge Barrow was appointed director of the Millennium Mathematics Project, a many-faceted education initiative aimed at young people, aged five to nineteen, to help them understand and appreciate mathematics and its applications. In February 2006 the program was awarded the Queen's Anniversary Prize for Higher and Further Education in the UK Honors List.

The Templeton Prize for Progress Toward Research or Discoveries about Spiritual Realities was founded in 1972 by philanthropist and global financial pioneer Sir John Templeton. Given annually to a living person to encourage and honor the advancement of knowledge in spiritual matters, it is the world's best-known religion prize and the largest annual monetary prize of any kind given to an individual.

—From a Templeton Prize news release

Hejhal Receives Gårding Prize

DENNIS HEJHAL of Uppsala University and the University of Minnesota at Minneapolis has been awarded the Eva and Lars Gårding Prize in Mathematics by the Royal Physiographic Society in Lund, Sweden. The prize carries a cash award of approximately US$19,000.

Hejhal was honored for his paper "On a result of Selberg concerning zeros of linear combinations of L-functions", which was published in 2000 in *International Mathematics Research Notices*. The paper considers linear combinations of L-functions, which are number theoretic functions that generalize the Riemann zeta function. He obtains precise estimates of the number and distribution of zeros of generic linear combinations that lie off the critical line in various regions of the complex plane. Hejhal's major research interests are number theory, harmonic analysis, and complex analysis. The Royal Physiographic Society was founded in 1772 and supports research in natural sciences in Sweden.

—From a Royal Physiographic Society announcement

Ferrara, Freedman, and van Nieuwenhuizen Awarded Heineman Prize

SERGIO FERRARA of CERN, DANIEL FREEDMAN of the Massachusetts Institute of Technology, and PETER VAN NIEUWENHUIZEN of Stony Brook University have been awarded the Dannie Heineman Prize for Mathematical Physics "for constructing supergravity, the first supersymmetric extension of Einstein's theory of general relativity, and for their central role in its subsequent development."

The prize carries a cash award of US$7,500 and is presented in recognition of outstanding publications in the field of mathematical physics. The prize was established in 1959 by the Heineman Foundation for Research, Educational, Charitable, and Scientific Purposes, Inc., and is administered jointly by the American Institute of Physics (AIP) and the American Physical Society (APS). The prize is presented annually.

—From an APS announcement

Sheffield Awarded Rollo Davidson Prize

SCOTT SHEFFIELD of the Courant Institute of Mathematical Sciences, New York University, has been awarded the 2006 Rollo Davidson Prize. Sheffield was honored "for his work on spatial models of probability theory", especially "their relationship to stochastic (Schramm) Loewner evolutions". The Rollo Davidson Trust was founded in 1975 and awards an annual prize to young mathematicians working in the field of probability.

—From a Rollo Davidson Trust announcement

Gelfand Awarded Parzen Prize

ALAN E. GELFAND of Duke University has been awarded the 2006 Emanuel and Carol Parzen Prize for Statistical Innovation. He was honored for his significant research on statistical theory and applications, which has transformed Bayesian practice by pioneering statistical inference by Markov Chains Monte Carlo (MCMC) and the Gibbs sampler, and by innovating methods for spatial statistics, hierarchical modeling and model determination, and environment and earth sciences. The Parzen Prize is awarded in even-numbered years by the Department of Statistics at Texas A&M University to North American statisticians who have made outstanding and influential contributions to the development of applicable and innovative statistical methods.

—Department of Statistics, Texas A&M University

Mahlburg Honored with Paper of the Year Prize

The first annual Paper of the Year Prize of the *Proceedings of the National Academy of Sciences* (PNAS) has been awarded to KARL MAHLBURG, a doctoral candidate in mathematics at the University of Wisconsin, Madison, for his paper "Partition congruences and the Andrews-

Garvan-Dyson crank". The paper "solves a critical part of a mathematical puzzle in number theory" and was chosen from among 3,000 papers published in the journal in 2005.

The Paper of the Year Prize recognizes outstanding research articles published in PNAS. The winning paper, published in October 2005, is available online at `http://www.pnas.org/cgi/content/abstract/102/43/15373`. An accompanying commentary on the paper is available at `http://www.pnas.org/cgi/content/extract/102/43/15277`.

—From a PNAS announcement

Vatsal Awarded Ribenboim Prize

VINAYAK VATSAL of the University of British Columbia has been awarded the Ribenboim Prize by the Canadian Number Theory Association. The award recognizes his "fundamental contributions to the Iwasawa theory of elliptic curves, introducing profound techniques from ergodic theory into the subject and obtaining startling theorems on the nonvanishing of p-adic L-functions and μ-invariants that had previously been unobtainable by more orthodox analytic methods." His results have "transformed our understanding of the ranks of elliptic curves in towers of number fields." The prize consists of a certificate and a medal and is awarded normally every two years to a mathematician who is Canadian or has connections to Canadian mathematics.

—From an announcement of the Pacific Institute of Mathematical Sciences

Sloan Fellows Announced

The Alfred P. Sloan Foundation has announced the names of the recipients of the 2006 Sloan Research Fellowships. Each year the foundation awards 116 fellowships in the fields of mathematics, chemistry, computational and evolutionary molecular biology, computer science, economics, neuroscience, and physics. Grants of US$45,000 for a two-year period are administered by each fellow's institution. Once chosen, fellows are free to pursue whatever lines of inquiry most interest them, and they are permitted to employ fellowship funds in a wide variety of ways to further their research aims.

Following are the names of the 2006 Sloan Fellows who work in the mathematical sciences: VLADIMIR BARANOVSKY, University of California, Irvine; SIMON BRENDLE, Stanford University; SERGUEI DENISSOV, University of Wisconsin, Madison; FREDERIC G. GIBOU, University of California, Santa Barbara; ANNA C. GILBERT, University of Michigan; SINAN GÜNTÜRK, New York University; SHELLY L. HARVEY, Rice University; MICHAEL V. HITRIK, University of California, Los Angeles; KIRAN SRIDHARA KEDLAYA, Massachusetts Institute of

Technology; BENJAMIN J. MORRIS, University of California, Davis; ISABELLA NOVIK, University of Washington; MARTIN OLSSON, University of Texas, Austin; ROBERT POLLACK, Boston University; MIHNEA POPA, University of Chicago; OMRI SARIG, Pennsylvania State University; JOZSEF SOLYMOSI, University of British Columbia; DYLAN P. THURSTON, Columbia University; ANNA-KARIN TORNBERG, New York University; YEN-HSI RICHARD TSAI, University of Texas, Austin; and ALEKSEY ZINGER, Stony Brook University.

The mathematicians on the Sloan fellowship program committee are Ingrid Daubechies of Princeton University, Benedict Gross of Harvard University, and Dusa McDuff of Stony Brook University.

—From a Sloan Foundation announcement

NSF Graduate Research Fellowships Announced

The National Science Foundation (NSF) has awarded its Graduate Research Fellowships for fiscal year 2006. This program supports students pursuing doctoral study in all areas of science and engineering and provides a stipend of US$30,000 per year for a maximum of three years of full-time graduate study. Following are the names of the awardees in the mathematical sciences for 2006, followed by their undergraduate institutions (in parentheses) and the institutions at which they plan to pursue graduate work.

JENNIFER S. BALAKRISHNAN (Harvard University), Princeton University; LAURA S. BARON (University of California, Los Angeles), University of California, Berkeley; ADAM D. CHANDLER (Duke University), New York University; LAUREN M. CHILDS (Duke University), Cornell University; IVAN Z. CORWIN (Harvard University), Princeton University; JACOB FOX (Massachusetts Institute of Technology), Massachusetts Institute of Technology; SHEEL C. GANATRA (Harvard University), Massachusetts Institute of Technology; THOMAS A. GOLDSTEIN (Washington University), Stanford University; JEFFREY L. JAUREGUI (Harvey Mudd College), Duke University; BENJAMIN S. KUNSBERG (Johns Hopkins University), Princeton University; RICKY I. LIU (Harvard University), Princeton University; STEPHANIE M. MOYERMAN (Harvey Mudd College), Princeton University; RONEN E. MUKAMEL (Harvard University), Massachusetts Institute of Technology; EMILY E. RIEHL (Harvard University), University of Chicago; DAVID L. ROE (Massachusetts Institute of Technology), Harvard University; NIKITA ROZENBLYUM (Harvard University), Harvard University; MICHAEL D. SEKORA (Massachusetts Institute of Technology), Princeton University; JOSEF A. SIFUENTES (Rice University), Rice University; STEVEN W. SIVEK (Massachusetts Institute of Technology), Harvard University; BENJAMIN E. SONDAY (University of Michigan, Ann Arbor), Princeton University; MATTHEW J. THIBAULT (Massachusetts Institute of Technology), Massachusetts Institute of Technology; HEM H. WADHAR (University of Pennsylvania), University of California, Los Angeles; PHILLIP D. WHITMAN (University of Texas, Austin), Princeton University; and

TREVOR M. WILSON (California Institute of Technology), University of California, Berkeley.

—From an NSF announcement

Guggenheim Fellowships Awarded

The John Simon Guggenheim Memorial Foundation has announced the names of 187 United States and Canadian artists, scholars, and scientists who were selected as Guggenheim Fellows for 2006. Guggenheim Fellows are appointed on the basis of distinguished achievement in the past and exceptional promise for future accomplishment.

Following are the names of the awardees in the mathematical sciences, together with their affiliations and areas of research interest: L. MAHADEVAN, Harvard University: integrative pathophysiology of sickle-cell disease; JOSEPH MAZUR, Marlboro, Vermont: a mathematical memoir; WILLIAM H. MEEKS III, University of Massachusetts, Amherst: the global structure of complete embedded minimal surfaces in three-manifolds; LAURENT SALOFF-COSTE, Cornell University: diffusions and random walks on groups; and BIN YU, University of California, Berkeley: interpretable models for high-dimensional data.

—From a Guggenheim Foundation news release

Fulbright Awards Announced

The J. William Fulbright Foundation and the United States Department of State, Bureau of Educational and Cultural Affairs, have announced the names of the recipients of the Fulbright Foreign Scholarships for 2005–2006. Following are the U.S. scholars in the mathematical sciences who have been awarded Fulbright scholarships to lecture or conduct research, together with their home institutions and the countries in which they plan to use the awards.

GWYNETH F. HARRISON-SHERMOEN (Wesleyan University), France; JEREMY WEISSMANN (Northwestern University), Netherlands; CARMEL Y. ADRIAN (Vassar College), Germany; STEPHANIE J. JAKUS (Smith College), Hungary; JENNIFER L. LOSAW (Wellesley College), Austria; MICHAEL J. COONS (Baylor University), Hungary; DAVID SUSSILLO (Columbia University), Austria; and CARL S. MCTAGUE (at-large, Ohio), Germany.

—From a Fulbright Awards announcement

Intel Science Talent Search Winners Announced

Three high school students working in mathematics have been awarded Intel Science Talent Search Scholarships for 2006. YI SUN, a seventeen-year-old student at the Harker School, San Jose, California, was awarded second place and a US$75,000 scholarship for a project that involves the winding number of a function. NICHOLAS M. WAGE, a seventeen-year-old student at Appleton East High School in Appleton, Wisconsin, won fourth place and a US$25,000 scholarship for a project on generalized Paley graphs. KIMBERLY M. SCOTT, a seventeen-year-old student at Wellesley High School in Wellesley, Massachusetts, won tenth place and a US$20,000 scholarship for her project analyzing Ehrenfeucht-Fraisse games.

—From an Intel Corporation announcement

Thomas P. Branson (1953–2006)

Thomas P. Branson, who worked in the fields of mathematical physics, differential geometry, geometric analysis, and spectral and representation theory, passed away suddenly on March 11, 2006. Branson received his Ph.D. from the Massachuestts Institute of Technology in 1979. After holding postdoctoral and teaching positions at universities in the United States and in Europe, he had served as a professor at the University of Iowa since 1985. Branson had been an AMS member since 1979. His AMS activities include organizing a number of AMS special sessions on conformal geometry. He is widely known for his "Branson-Paneitz operators" and especially for his pioneering and deep work on conformal invariance and conformal symmetry. In particular, he introduced Q-curvature, and his work on the functional determinant of the conformal Laplacian on four-manifolds is profound.

Tom Branson is survived by siblings, by his wife, and by his two small daughters, who are in the second and third grade. The University of Iowa's mathematics department has set up an education fund for the Branson daughters; contact the department for more information.

—Palle Jorgensen, University of Iowa