

Mathematics People

2005–2006 AMS Centennial Fellowships Awarded

The AMS has awarded two Centennial Fellowships for 2005–2006. The recipients are YUAN-PIN LEE of the University of Utah and MIHNEA POPA of Harvard University. The amount of each fellowship is \$62,000. The Centennial



Yuan-Pin Lee



Mihnea Popa

Fellows also receive an expense allowance of \$3,000 and a complimentary Society membership for one year.

Yuan-Pin Lee

Yuan-Pin Lee received his Ph.D. in 1999 from the University of California at Berkeley under the direction of Alexander Givental. Lee was a Hedrick Assistant Professor at the University of California, Los Angeles, from 1999 to 2002. Since 2002 he has been an assistant professor at the University of Utah. He spent the year 2002–2003 at Princeton University as a visiting research mathematician. His research interest is in Gromov-Witten theory and its relations with K-theory, integrable systems, and moduli of curves. He plans to use the fellowship to visit Rahul Pandharipande at Princeton University and Instituto Superior Técnico in Lisbon, and Yongbin Ruan at the Mathematical Sciences Research Institute in Berkeley.

Mihnea Popa

Mihnea Popa received his Ph.D. in 2001 from the University of Michigan under the direction of Robert Lazarsfeld. He has been a Benjamin Peirce Assistant Professor at Harvard University since 2001. Starting in the fall of 2005 he will be an assistant professor at the University of Chicago. Popa's research is in the field of algebraic geometry. He uses cohomological and vector bundle techniques in the study of divisors or linear series on moduli spaces (of vector bundles or curves) and on abelian varieties. His recent work has involved studying a notion of regularity for coherent sheaves on abelian varieties, based on the

Fourier-Mukai transform. He is also working on understanding the structure of cones of divisors on smooth projective varieties by analyzing asymptotic invariants associated to base loci of linear series. He plans to use his Centennial Fellowship at the University of Michigan and the University of Rome, as well as at the University of Chicago.

Please note: Information about the competition for the 2006–2007 AMS Centennial Fellowships will be published in the "Mathematics Opportunities" section of an upcoming issue of the *Notices*.

—Allyn Jackson

Cerf and Kahn Receive Turing Award

The Association for Computing Machinery (ACM) has named VINTON G. CERF and ROBERT E. KAHN the winners of the 2004 A. M. Turing Award, considered the "Nobel Prize of Computing", for pioneering work on the design and implementation of the Internet's basic communications protocols. Cerf is the senior vice president for technology strategy at MCI. Kahn is chairman, chief executive officer, and president of the Corporation for National Research Initiatives (CNRI), a not-for-profit organization for research in the public interest on strategic development of network-based information technologies.

The Turing Award, first awarded in 1966 and named for British mathematician Alan M. Turing, carries a \$100,000 prize, with financial support provided by Intel Corporation. Cerf and Kahn developed TCP/IP, a format and procedure for transmitting data that enables computers in diverse environments to communicate with each other. This computer networking protocol, widely used in information technology for a variety of applications, allows networks to be joined into a network of networks now known as the Internet.

—From an ACM news release

Parisi Awarded 2005 Heineman Prize

GIORGIO PARISI of the University of Rome has been awarded the Dannie Heineman Prize for Mathematical Physics for his "fundamental theoretical discoveries in broad areas of elementary particle physics, quantum field theory, and statistical mechanics; especially for work on spin glasses and disordered systems."

The prize carries a cash award of \$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 AIP announcement

Vakil Awarded André Aisenstadt Prize

RAVI VAKIL of Stanford University has been awarded the 2005 André Aisenstadt Mathematics Prize of the Centre de Recherches Mathématiques (CRM) at the University of Montreal. Vakil was honored for his work in algebraic geometry, including the enumerative geometry of projective algebraic curves and the study of degenerations in a Grassmannian. The prize, consisting of CA\$3,000 and a medal, is given in recognition of talented young Canadian researchers in pure and applied mathematics who have held a Ph.D. for no longer than seven years.

—From a CRM announcement

Klartag and Speyer Named Clay Research Fellows

The Clay Mathematics Institute (CMI) has announced the appointment of two Research Fellows: BO'AZ KLARTAG of the Institute for Advanced Study and DAVID SPEYER of the University of California, Berkeley. They were selected for their research achievements and for their potential to make significant future contributions. BEN GREEN of the University of Bristol, who received the 2005 Clay Research Award, was also named a Clay Research Fellow.

Bo'az Klartag, born in 1978, is a native of Israel and is currently a postdoctoral fellow at the Institute for Advanced Study in Princeton. He received his Ph.D. degree in 2004 from Tel Aviv University under the direction of Vitali Milman. In his thesis Klartag showed that a small number of Minkowski and Steiner symmetrizations suffice to bring a convex body in n -space close to a Euclidean ball. His current research interests include geometric problems in high dimension, in particular asymptotic convex geometry.

David Speyer, born in 1980, is currently completing his Ph.D. at the University of California, Berkeley, under the direction of Bernd Sturmfels. Much of his research is in the emerging area of tropical geometry, to which he has contributed both fundamental results and applications, a new proof of Horn's conjecture on eigenvalues of hermitian matrices, and, working with Lior Pachter, the reconstruction of phylogenetic trees from subtree weights. His current research interests include continuing work in tropical geometry, cluster algebras, and the geometry of Grassmannians and flag varieties.

Current Clay Research Fellows include Manjul Bhargava, Daniel Biss, Alexei Borodin, Maria Chudnovsky, Sergei Gukov,

Elon Lindenstrauss, Ciprian Manolescu, Maryam Mirzakhani, Igor Rodnianski, Andras Vasy, and Akshay Venkatesh.

—From a CMI news release

Sloan Fellows Announced

The Alfred P. Sloan Foundation has announced the names of the recipients of the 2005 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 \$40,000 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 2005 Sloan Fellows who work in the mathematical sciences: CAMIL MUSCALU, Cornell University; JONATHAN MATTINGLY, Duke University; DENIS AUROUX, Massachusetts Institute of Technology; JASON STARR, Massachusetts Institute of Technology; FENGBO HANG, Michigan State University; DMITRY E. TAMARKIN, Northwestern University; VLADA LIMIC, University of British Columbia; ELCHANAN MOSSEL, University of California, Berkeley; ROMAN VERSHYNIN, University of California, Davis; NATASHA KOMAROVA, University of California, Irvine; NARUTAKA OZAWA, University of California, Los Angeles; JEFF MOEHLIS, University of California, Santa Barbara; MILEN YAKIMOV, University of California, Santa Barbara; JESPER GRODAL, University of Chicago; DHURV MUBAYI, University of Illinois at Chicago; JINHO BAIK, University of Michigan; TOBIAS EKHOLM, University of Southern California; GAVRIL FARKAS, University of Texas, Austin; TAMAS HAUSEL, University of Texas, Austin; and JORDAN ELLENBERG, University of Wisconsin, Madison.

—From a Sloan Foundation announcement

Birgé Awarded Brouwer Medal

LUCIEN BIRGÉ of the Laboratoire de Probabilité, Université Paris VI, has been awarded the 2005 L. E. J. Brouwer Medal of the Royal Dutch Mathematical Society (Koninklijk Wiskundig Genootschap, KWG). Birgé was honored for his research on fundamental aspects of the asymptotic theory of statistics applied, in particular, to nonparametric model choice and to asymptotic optimality of estimators in infinite-dimensional spaces.

The Brouwer Prize is the Netherlands' most prestigious award in mathematics. It was established shortly after the death of the distinguished mathematician L. E. J. Brouwer and is awarded every three years. For each award the Society chooses an important field in mathematics; the 2005 award honors the field of mathematical statistics. The recipient is awarded a gold medal and presents a lecture at the annual meeting of the Dutch Mathematical Society.

—Richard Gill, University of Utrecht

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 2004–2005. 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.

CRISTINA M. BALLANTINE (College of the Holy Cross), Germany; DIPKA CHOUDHURY (Loyola College, Baltimore), Bangladesh; ERIC I. GOTTLIEB (Rhodes College), Chile; JACOB KOGAN (University of Maryland, Baltimore County), Israel; HUI-HSIUNG KUO (Louisiana State University, Baton Rouge), Italy; ROBERT A. LESLIE (Agnes Scott College), Nicaragua; ABDESSAMAD MORTABIT (Metropolitan State University, St. Paul), Morocco; JAYARAM SETHURAMAN (Florida State University), India; DRITAN ZELA (Scottsdale Community College), Albania.

—From a Fulbright Foundation announcement

Guggenheim Fellowships Awarded

The John Simon Guggenheim Memorial Foundation has announced the names of 185 United States and Canadian artists, scholars, and scientists who were selected as Guggenheim Fellows for 2005. 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: IAN AGOL, University of Illinois at Chicago: Studies in 3-manifold geometry and topology; YANNIS G. KEVREKIDIS, Princeton University: Equation-free studies of complex systems; DAVID R. MORRISON, Duke University: Mirror symmetry in mathematics and physics; CHRISTOPHER D. SOGGE, Johns Hopkins University: Solutions of wave equations on Riemannian manifolds; MADHU SUDAN, Massachusetts Institute of Technology: Algebraic methods in error correction; MOSHE Y. VARDI, Rice University: Studies in logic and algorithms; and SANTOSH SRINIVAS VEMPALA, Massachusetts Institute of Technology: Algorithmic convex geometry.

—From a Guggenheim Foundation news release

Intel Science Talent Search Winners Announced

Two high school students working in mathematics have been awarded Intel Science Talent Search Scholarships for 2005. ROBERT T. CORDWELL, a seventeen-year-old student at Manzano High School in Albuquerque, New Mexico, won fourth place and a \$25,000 scholarship for his

mathematics project “Some Results on Inclusive and Exclusive Partitions of Complete Graphs”. PO-LING LOH, an eighteen-year-old student at James Madison Memorial High School in Madison, Wisconsin, won the tenth-place scholarship of \$20,000 for her project in finite group theory, “Closure Properties of D_{2p} in Finite Groups”.

—From an Intel Corporation announcement

National Academy of Engineering Elections

The National Academy of Engineering (NAE) has announced the election of seventy-four new members and ten foreign associates, including twelve whose work involves the mathematical sciences. Their names, institutions, and the research for which they were elected follow.

IVO M. BABUSKA, University of Texas, Austin, for contributions to the theory and implementation of finite element methods for computer-based engineering analysis and design; MARSHA J. BERGER, Courant Institute of Mathematical Sciences, New York University, for developing adaptive mesh refinement algorithms and software that have advanced engineering applications, especially the analysis of aircraft and spacecraft; DIMITRIS J. BERTSIMAS, Massachusetts Institute of Technology, for contributions to optimization theory and stochastic systems and innovative applications in financial engineering and transportation; A. ROBERT CALDERBANK, Princeton University, for leadership in communications research, from advances in algebraic coding theory to signal processing for wire-line and wireless modems; EDMUND M. CLARKE, Carnegie Mellon University, for contributions to the formal verification of hardware and software correctness; DOMINIC M. DI TORO, University of Delaware, Newark, for his leadership in the development and application of mathematical models for establishing water-quality criteria and making management decisions; SHAFRIRA GOLDWASSER, Massachusetts Institute of Technology, for contributions to cryptography, number theory, and complexity theory and their applications to privacy and security; JOHN S. HUNTER, Princeton University, for the development and application of statistical methods for efficiently designed experiments and data interpretation; ROBERT M. MCMEEKING, University of California, Santa Barbara, for contributions to the computational modeling of materials and for the development of codes widely used by industry; and THOMAS L. SAATY, University of Pittsburgh, for the development and generalization of the analytic hierarchy process and the analytic network process in multicriteria decision making.

Elected as foreign associates were WILLIAM M. KAHAN, University of California, Berkeley, for the development of techniques for reliable floating point computation, especially the IEEE Floating Point Standards; and WALTER M. WONHAM, University of Toronto, for work on the geometric theory of linear systems and for bridging the gap between control theory and computer science.

—From an NAE announcement