Mathematics People

Werner Awarded 2005 Loève Prize

WENDELIN WERNER of Université Paris-Sud has been awarded the 2005 Line and Michel Loève International Prize in Probability. The prize, which carries a monetary award of US$30,000, was presented at a ceremony in Berkeley, California, in September 2005.

Werner received his Ph.D. in 1993 from Université Paris VI. His work has been instrumental in the study of two-dimensional random systems exhibiting conformal invariance. This work links the stochastic Loewner equation with intersection exponents for Brownian motion, variants of self-avoiding random walks, uniform spanning trees in the lattice, and critical percolation. It also develops new continuous processes such as Brownian loop soup.

The Loève Prize is awarded every two years in memory of Michel Loève, longtime professor at the University of California, Berkeley. It is intended to recognize outstanding contributions by researchers in probability who are less than forty-five years old. Previous recipients of the Loève Prize are David Aldous (1993), Michel Talagrand (1995), Jean-François Le Gall (1997), Alain-Sol Sznitman (1999), Yuval Peres (2001), and Oded Schramm (2003).

—David Aldous, University of California, Berkeley

Edwards and Lee Awarded 2005 Dirac Medals

The 2005 Dirac Medals of the Abdus Salam International Centre for Theoretical Physics (ICTP) have been awarded to SIR SAMUEL F. EDWARDS of the University of Cambridge, United Kingdom, and PATRICK A. LEE of the Massachusetts Institute of Technology.

Edwards, "one of the founding fathers of condensed matter physics," was awarded the medal for "fundamental contributions to polymer physics, spin glass theory, and the physics of granular matter." Lee is "internationally known for his work on weak localization and interaction effects;" he was honored for his "pioneering contributions to our understanding of disordered and strongly interacting many-body systems."

The ICTP awarded its first Dirac Medal in 1985. Given in honor of P. A. M. Dirac, the medal is awarded annually on Dirac's birthday, August 8, to an individual or individuals who have made significant contributions to theoretical physics and mathematics. The medalists receive a prize of US$5,000. An international committee of distinguished scientists selects the winners from a list of nominated candidates. The Dirac Medal is not awarded to Nobel laureates or Wolf Foundation Prize winners.

—From an ICTP announcement

MAA Writing Awards Presented

The Mathematical Association of America (MAA) presented several awards for excellence in expository writing at its Summer Mathfest in Albuquerque, New Mexico, in August 2005.

The Trevor Evans Award is given to authors of expository articles that are accessible to undergraduates and that were published in *Math Horizons.* This prize carries a cash award of US$250. The 2005 award was given to ROBERT L. DEVANEY, Boston University, for "Chaos Rules!", *Math Horizons,* November 2004.

The George Pólya Award is given for articles published in *The College Mathematics Journal* and has a cash prize of US$500. Two articles were honored for 2005. BRIAN HOPKINS of St. Peter's College and ROBIN J. WILSON of Open University, United Kingdom, were selected for their joint article "The Truth about Königsberg", *College Mathematics Journal*, May 2004; and STEPHEN M. WALK of St. Cloud State University was honored for his article "Mind Your *A*s and *E*s", *College Mathematics Journal,* November 2004.

The Carl B. Allendoerfer Award is given for articles published in *Mathematics Magazine* and carries a cash award of US$500. ROGER B. EGGLETON of Illinois State University and the late WILLIAM P. GALVIN of the University of Newcastle, New South Wales, were honored for their joint article "Upper Bounds on the Sum of Principal Divisors of an Integer", *Mathematics Magazine*, June 2004.

The Lester R. Ford Award honors articles published in *The American Mathematical Monthly* and carries a cash

prize of US$500. Five awards were made for 2005. TOM APOSTOL and MAMIKON MNATSAKANIAN of the California Institute of Technology were honored for a series of three joint articles: "Isoperimetric and Isoparametric Problems", *Monthly,* February 2004; "A Fresh Look at the Method of Archimedes", *Monthly,* June/July 2004; and "Figures Circumscribing Circles", *Monthly,* December 2004. HENRY COHN of Microsoft Corporation was honored for his article "Projective Geometry over 1 and the Gaussian Binomial Coefficients", *Monthly,* June/July 2004. ALAN EDELMAN and GILBERT STRANG of the Massachusetts Institute of Technology were honored for their joint article "Pascal Matrices", *Monthly,* March 2004. STEVEN FINCH of Boston University School of Public Health and JOHN WETZEL of the University of Illinois were selected for their joint article "Lost in a Forest", *Monthly,* October 2004. JUDITH GRABINER of Pitzer College was honored for her article "Newton, Maclaurin, and the Authority of Mathematics", *Monthly*, December 2004.

The Merten M. Hasse Prize is awarded for a noteworthy expository article appearing in an MAA publication, at least one of whose authors is a younger mathematician. The awardees for 2005 are MAUREEN CARROLL and STEVEN DOUGHERTY, both of the University of Scranton, for their joint article "Tic-Tac-Toe on a Finite Plane", *Mathematics Magazine*, October 2004.

The Chauvenet Prize for Expository Writing consists of a cash prize of US$1,000 and is awarded to the author of an outstanding expository article on a mathematical topic by a member of the association. The award for 2005 was given to JOHN STILLWELL of the University of San Francisco for his article "The Story of the 120-Cell", published in *Notices of the American Mathematical Society,* January 2001.

The Henry L. Alder Award for Distinguished Teaching by a Beginning College or University Mathematics Faculty Member honors a beginning college or university teacher whose teaching has been extraordinarily successful and whose effectiveness in teaching undergraduate mathematics is shown to have influence beyond his or her own classroom. The three awardees for 2005 are MATTHEW DELONG of Taylor University, SARAH GREENWALD of Appalachian State University, and LAURA TAALMAN of James Madison University.

—From an MAA announcement

SIAM Prizes Awarded

The Society for Industrial and Applied Mathematics (SIAM) awarded several prizes at its annual meeting held in New Orleans, Louisiana, in July 2005.

DESMOND J. HIGHAM of the University of Strathclyde, Glasgow, was awarded the Germund Dahlquist Prize. The prize is awarded to a young scientist (normally under forty-five) for original contributions to fields associated with Germund Dahlquist, especially the numerical solution of differential equations and numerical methods for scientific computing.

STANLEY J. OSHER of the University of California, Los Angeles, was awarded the Ralph E. Kleinman Prize, which is given for outstanding research or other contributions that bridge the gap between mathematics and applications.

CHRISTOPHER I. BYRNES of Washington University in St. Louis was awarded the W. T. and Idalia Reid Prize in Mathematics. This prize recognizes research in or other contributions to differential equations and control theory.

EMMANUEL J. CANDES of the California Institute of Technology received the James H. Wilkinson Prize in Numerical Analysis and Scientific Computing.

CLEVE MOLER of MathWorks, Inc., received the 2005 SIAM Prize for Distinguished Service to the Profession. It is awarded to an applied mathematician who has made distinguished contributions to the furtherance of applied mathematics on the national level.

JERROLD E. MARSDEN of the California Institute of Technology was awarded the John von Neumann Lectureship in recognition of his fundamental contributions to geometric mechanics based on symmetry. He lectured on geometric and computational dynamics. The von Neumann lectureship is awarded for outstanding and distinguished contributions to the field of applied mathematical sciences and for the effective communication of these ideas to the community.

CHRISTOPHER R. JOHNSON of the University of Utah delivered the I. E. Block Community Lecture. His talk was titled "Computing the Future of Biomedicine".

INGRID DAUBECHIES of Princeton University presented the AWM-SIAM Sonia Kovalevsky Lecture. This lecture is intended to highlight significant contributions of women to applied or computational mathematics.

Several Outstanding Paper Prizes were presented for articles published in SIAM journals. The winners are: ADRIAN LEWIS of Cornell University for his article "Active Sets, Nonsmoothness, and Sensitivity", *SIAM Journal on Optimization*, **13**, 2002; KAREN BRAMAN of the South Dakota School of Mines and Technology, RALPH BYERS of the University of Kansas, and ROY MATHIAS of the College of William and Mary for their joint article "The Multishift QR Algorithm. Part II: Aggressive Early Deflation", *SIAM Journal on Matrix Analysis and Applications*, **23**, 2002; and URIEL FEIGE of the Weizmann Institute of Science and ROBERT KRAUTHGAMER of IBM Almaden Research Center for their joint article "A Polylogarithmic Approximation of the Minimum Bisection", *SIAM Journal on Computing*, **31**, 2002.

ACHI BRANDT of the Weizmann Institute of Science was awarded the SIAM/ACM (Association for Computing Machinery) Prize in Computational Science and Engineering in the area of computational science in recognition of outstanding contributions to the development and use of mathematical and computational tools and methods for the solution of science and engineering problems.

—From a SIAM announcement

Mandelbrot Receives Sierpinski Prize

BENOIT MANDELBROT of Yale University has been named the 2005 recipient of the Sierpinski Prize, awarded jointly by the Polish Mathematical Society and the University of Warsaw.

Mandelbrot received his D.Sc. from the University of Paris in 1952 and is best known as the founder of fractal geometry. According to the prize announcement, he "singled out two shapes favored by the Polish school, labeled them Sierpinski gasket and carpet, and showed both to be extraordinarily useful in representing roughness in nature and man's works. These structures have become widely known, even to young students." His research interests are fractals, random processes and sets, and applications.

Wacław Sierpinski (1882–1969) was known for major contributions to abstract mathematics and for the creation of a Polish school of mathematics specifically devoted to his particular interest in pure mathematics.

—From a Yale University announcement

ONR Young Investigator Award

YI MA of the University of Illinois at Urbana-Champaign has been selected to receive a Young Investigator Award from the Office of Naval Research (ONR) in the 2005 ONR Young Investigators Program competition. Ma will use the grant to study the estimation of hybrid models in computer vision.

The Young Investigator Program supports basic research by exceptional faculty at U.S. universities who have received Ph.D.'s or equivalent degrees within the preceding five years. Grants to their institutions provide up to US$100,000 per year for three years. The funds may be applied to a variety of research costs, including salary, graduate student support, laboratory supplies, and operating costs. Young Investigators are selected on the basis of prior professional achievement, the submission of a meritorious research proposal, and evidence of strong support by their respective universities. The program supports outstanding research in a wide range of science and engineering fields that are critical to the evolution of a first-rate navy and marine corps.

—From an ONR announcement

NSF Postdoctoral Fellowships Awarded

The Mathematical Sciences Postdoctoral Research Fellowship program of the Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) awards fellowships each year for postdoctoral research in pure mathematics, applied mathematics and operations research, and statistics. Listed below are the names of the fellowship recipients for 2005, together with their Ph.D. institutions (in parentheses), and the institutions at which they will use their fellowships.

ETHAN B. ANDERES (University of Chicago), University of California, Berkeley; ELLIOTT I. ANSHELEVICH (Cornell University), Princeton University; ALIAA BARAKAT (University of Chicago), Brandeis University; JAMES M. BELK (Cornell University), Texas A&M University, College Station; GIGORIY BLEKHERMAN (University of Michigan, Ann Arbor), Cornell University; JEFFREY P. BURDGES (Rutgers University, New Brunswick), University of Manchester; SEBASTIAN CASALAINA-MARTIN (Columbia University), Harvard University; CHRISTOPHER L. DOUGLAS (Massachusetts Institute of Technology), Stanford University; KIRSTEN EISENTRAEGER (University of California, Berkeley), University of Michigan, Ann Arbor; NEIL M. EPSTEIN (University of Kansas), University of Michigan, Ann Arbor; THOMAS M. FIORE (University of Michigan, Ann Arbor), University of Chicago; JOHNNY GUZMAN (Cornell University), University of Minnesota, Minneapolis; MATTHEW E. HEDDEN (Columbia University), Princeton University; CHRISTOPHER J. HILLAR (University of California, Berkeley), Texas A&M University, College Station; JUSTIN A. HOLMER (University of Chicago), University of California, Berkeley; DAVID L. HU (Massachusetts Institute of Technology), Courant Institute of Mathematical Sciences; JONATHAN R. KAPLAN (Harvard University), Stanford University; ROBERT D. KLEINBERG (Massachusetts Institute of Technology), University of California, Berkeley; JAMES R. LEE (University of California, Berkeley), Princeton University; AARON D. LEVIN (University of California, Berkeley), Brown University; JASON L. METCALFE (Johns Hopkins University), University of California, Berkeley; DANIEL MEYER (University of Washington), University of Michigan, Ann Arbor; NICHOLAS A. RAMSEY (Harvard University), University of Michigan, Ann Arbor; RAANAN SCHUL (Yale University), University of California, Los Angeles; PATRICK D. SHIPMAN (University of Arizona), Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany; RICHARD L. SIEFRING (New York University), Stanford University; LOREN R. SPICE (University of Chicago), University of Michigan, Ann Arbor; JOSEPH M. TERAN (Stanford University), New York University; JOEL A. TROPP (University of Texas, Austin), University of Michigan, Ann Arbor; LAUREN K. WILLIAMS (Massachusetts Institute of Technology), University of California, Berkeley; STEPHANIE YANG (Harvard University), University of Michigan, Ann Arbor.

—Elaine Kehoe

2005 International Mathematical Olympiad

The 46th International Mathematical Olympiad (IMO) was held July 8–19, 2005, in Mérida, Mexico. The IMO is the preeminent mathematical competition for high school-age students from around the world. There were 513 competitors from 93 competing countries, making this the largest IMO ever. The IMO consists of solving six extremely

challenging mathematical problems in a nine-hour competition administered over two days.

The team from China finished first, with a total of 235 points and five gold medals. The U.S. team finished second with 213 points and four gold and two silver medals. Russia was third, followed by Iran and South Korea.

The U.S. team consisted of Robert Cordwell of Albuquerque, New Mexico; Brian Lawrence of Silver Spring, Maryland; Thomas Mildorf of Alexandria, Virginia; Eric Price of Alexandria, Virginia; Sherry Gong of Exeter, New Hampshire; and Hyun Soo Kim of Hackensack, New Jersey. Cordwell, Lawrence, Mildorf, and Price received gold medals; Lawrence achieved a perfect score. Gong and Kim received silver medals.

The Mathematical Association of America sponsors the U.S. team through its American Mathematics Competitions program, with travel support provided by a grant from the Army Research Office. Training for the team at the University of Nebraska-Lincoln is aided by a grant from the Akamai Foundation. Additional support for the team is provided by the National Council of Teachers of Mathematics.

More information about the 46th International Mathematical Olympiad is available at `http://erdos.fciencias.unam.mx/index.htm` or at `http://www.unl.edu/amc`.

—MAA American Mathematics Competitions

Plenary Speakers for ICM 2006, Madrid

The following individuals will deliver plenary lectures at the International Congress of Mathematicians (ICM) in Madrid, Spain, August 22-30, 2006. Current information about the 2006 ICM is available at the website `http://www.icm2006.org`.

Percy Deift, Courant Institute of Mathematical Sciences, New York University; Jean-Pierre Demailly, Université Joseph Fourier, Grenoble, France; Ronald DeVore, University of South Carolina, Columbia; Yakov Eliashberg, Stanford University; Étienne Ghys, École Normale Supérieure de Lyon, France; Richard Hamilton, Columbia University; Henryk Iwaniec, Rutgers University; Iain Johnstone, Stanford University; Kazuya Kato, Kyoto University, Japan; Robert V. Kohn, Courant Institute of Mathematical Sciences, New York University; Ib Madsen, Aarhus University, Denmark; Arkadi Nemirovski, Technion—Israel Institute of Technology; Sorin Popa, University of California, Los Angeles; Alfio Quarteroni, École Polytechnique Fédérale de Lausanne, Switzerland; Oded Schramm, Microsoft Corporation, Redmond, Washington; Richard P. Stanley, Massachusetts Institute of Technology; Terence Tao, University of California, Los Angeles; Juan Luis Vázquez, Universidad Autónoma de Madrid, Spain; Michèle Vergne, École Polytechnique, Palaiseau, France; Avi Wigderson, Institute for Advanced Study, Princeton.

—Allyn Jackson