Mathematics People

Ye Tian Awarded 2013 ICTP/ IMU Ramanujan Prize

Ye Tian of the Academy of Mathematics and Systems Science, Chinese Academy of Sciences, has been named the recipient of the 2013 Ramanujan Prize for Young Mathematicians from Developing Countries, awarded by the International Centre for Theoretical Physics (ICTP) and the International Mathematical Union (IMU). According to the prize citation, he was honored for "his outstanding contributions to number theory. These include the completion of the proof of a multiplicity one conjecture for local theta correspondences and important work related to Heegner points and to the Birch and Swinnerton-Dyer conjecture: the nonexistence of points on twisted Fermat curves, and recently remarkable progress on the congruent number problem, showing the existence of infinitely many congruent numbers with arbitrarily many prime factors."

The Ramanujan Prize is awarded annually to a researcher from a developing country who is younger than forty-five years of age on December 31 of the year of the award and who has conducted outstanding research in a developing country. Researchers working in any branch of the mathematical sciences are eligible. The prize carries a cash award of US$15,000, and the winner is invited to deliver a lecture at ICTP.

Tian received his Ph.D. in mathematics from Columbia University in 2003. He has been affiliated with the Institute for Advanced Study and McGill University. Earlier in 2013 he was awarded the Morningside Medal of Mathematics at the Sixth International Congress of Chinese Mathematicians.

—From an ICTP announcement

Avila Awarded TWAS Prize

Artur Avila of the Instituto de Matemática Pura e Aplicada (IMPA), Rio de Janeiro, Brazil, has been awarded the 2013 TWAS Prize in Mathematics of the Academy of Sciences for the Developing World (TWAS). He was recognized "for his fundamental contributions to the theory of renormalization in low-dimension dynamical systems, to the theory of one-dimensional Schrödinger operators and related co-cycles, to the theory of Teichmüller flow, interval exchange transformations and translation flows." The TWAS Prizes honor individual scientists who have been working and living in a developing country for at least ten years. The prize carries a cash award of US$15,000.

Avila received his Ph.D. from IMPA in 2001. He has also been affiliated with the Collège de France and the Centre National de la Recherche Scientifique (CNRS) and has been a research fellow of the Clay Mathematics Institute. He was awarded the Salem Prize in 2006. Among his other honors are the European Mathematical Society (EMS) Prize (2008), the Grand Prix Jacques Herbrand of the French Academy of Sciences (2009), the Wolff Memorial Lectures (2008), and the International Association of Mathematical Physics (IAMP) Early Career Award (2012). He gave a plenary address at the 2010 International Congress of Mathematicians. Avila will present a lecture at the TWAS general meeting in 2014.

—From a TWAS announcement

2013 Hopf Prizes Awarded

Yakov Eliashberg of Stanford University and Helmut Hofer of the Institute for Advanced Study have been selected recipients of the 2013 Heinz Hopf Prize by ETH Zurich. Eliashberg received his Ph.D. in 1972 from Leningrad University and has been at Stanford since 1989. He received a Guggenheim Fellowship in 1995 and the Oswald Veblen Prize in Geometry in 2001. He is a fellow of the AMS. Hofer received his Ph.D. from the University of Zurich in 1981. He is a founder of the field of symplectic topology, and his work has led to a new area of mathematics known as Hofer geometry. He has been an Alfred P. Sloan Fellow (1987–1989) and is a member of the National Academy

of Sciences and is a fellow of the AMS. He received the Ostrowski Prize in 1999.

The Hopf Prize is awarded every two years for outstanding scientific work in the field of pure mathematics. It carries a cash award of 30,000 Swiss francs (approximately US$33,000). Eliashberg and Hofer presented the Heinz Hopf lectures in December 2013 entitled "From Dynamical Systems to Geometry and Back".

—Elaine Kehoe

2013 CMS G. de B. Robinson Award Announced

KENNETH DAVIDSON of the University of Waterloo and ALEX WRIGHT of the University of Chicago have been awarded the 2013 G. de B. Robinson Award of the Canadian Mathematical Society (CMS) for their paper titled "Operator algebras with unique preduals", published in the *Canadian Mathematical Bulletin* **54** (2011), 411–421; http://cms.math.ca/10.4153/CMB-2011-036-0. The award is given in recognition of outstanding contributions to the *Canadian Journal of Mathematics* or the *Canadian Mathematical Bulletin*.

—From a CMS announcement

Ghate Awarded 2013 Bhatnagar Prize

EKNATH PRABHAKAR GHATE of the Tata Institute of Fundamental Research has been awarded the 2013 Shanti Swarup Bhatnagar Prize for Science and Technology in the mathematical sciences. The prize is awarded by the Council of Scientific Research and Industrial Development to recognize outstanding Indian work in science and technology. Shanti Swarup Bhatnagar was the founding director of the Council. It is the highest award for science in India. The prize carries a cash award of 500,000 rupees (approximately US$8,000).

—Council of Scientific Research and Industrial Development, India

2013 Infosys Prize Awarded

RAHUL PANDHARIPANDE of ETH Zurich has been awarded the 2013 Infosys Prize in mathematical sciences by the Infosys Science Foundation. He was recognized "for his profound work in algebraic geometry, in particular, for his work on Gromov-Witten theory for Riemann surfaces, for predicting the connection between Gromov-Witten and Donaldson-Thomas theories, and for his recent work with Aaron Pixton that establishes this connection for Calabi-Yau 3-folds." The prizewinners are chosen based on significant progress showcased in their chosen spheres, as well as for the impact their research will have on the specific field. The prize carries a cash award of Rs. 55 lakhs (approximately US$87,000). In addition to the prize purse, each category award includes a gold medallion and a citation certificate.

—From an Infosys Science Foundation announcement

2013 Prix de Recherches Awarded

BENJAMIN JOURDAIN of Université Paris-Est and ENPC, SYLVIE MÉLÉARD of Ecole Polytechnique, and WOJBOR WOYCZYNSKI of Case Western Reserve University have been chosen the recipients of the 2013 Prix de Recherches Award for their joint article "Lévy flights in evolutionary ecology", published in the *Journal of Mathematical Biology*. Given by the French magazine *La Recherche*, the award highlights research at the crossroads of science and technology.

—From a La Recherche *announcement*

CAREER Awards Presented

The Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) has honored a number of young mathematicians in fiscal year 2013 with Faculty Early Career Development (CAREER) awards. The NSF established the awards to support promising scientists, mathematicians, and engineers who are committed to the integration of research and education. The grants provide funding of at least US$400,000 over a five-year period. The 2013 CAREER grant awardees and the titles of their grant projects follow.

ETHAN ANDERES, University of California Davis, Deformations in Statistics, Cosmology and Image Analysis; ARAVIND ASOK, University of Southern California, Vector Bundles, Rational Points, and Homotopy Theory; LYDIA BIERI, University of Michigan, Ann Arbor, Geometric-Analytic Investigations of Spacetimes and their Nonlinear Phenomena; ANDREA BONITO, Texas A&M University, Explicit Adaptive Methods for Coupled Problems; CHING-SHAN CHOU, Ohio State University, Spatial Modeling and Computation of Cell Signaling in Cell-to-Cell Communication; MARK CULP, West Virginia University, Statistical Methodology in Multi-View Learning with Large Data; LAURENT DEMANET, Massachusetts Institute of Technology, Super-Resolution and Subwavelength Imaging; MOON DUCHIN, Tufts University, Finer Coarse Geometry; AMANDA FOLSOM, Yale University, Maass Forms, Modular Forms, and Applications in Number Theory; MARK HOEFER, North Carolina State University, Solitary Waves and Wavetrains in Dispersive Media; ADRIAN IOANA, University of California San Diego, Classification and Rigidity for von Neumann Algebras; SAMUEL ISAACSON, Boston University, Numerical Methods for Stochastic Reaction Diffusion Equations; GAUTAM IYER, Carnegie Mellon University, Anomalous Diffusion,

Homogenization, and Averaging; TODD KEMP, University of California San Diego, Free Probability and Connections to Random Matrices, Stochastic Analysis, and PDEs; KAY KIRKPATRICK, University of Illinois, Urbana-Champaign, Mechanics of Superconductors and Other Macroscopic Phenomena; ALEX KONTOROVICH, Yale University, Local-Global Phenomena and Sieves in Thin Orbits; AARON LAUDA, University of Southern California, Interactions between Knot Homology and Representation Theory; RADU LAZA, State University of New York, Stony Brook, Advances in Hodge Theory and Moduli; TAI MELCHER, University of Virginia, Heat Kernel Measures in Infinite Dimensions; KARIN MELNICK, University of Maryland, Frontiers of Rigidity in Pseudo-Riemannian, Conformal, and Parabolic Geometries; DEBASHIS MONDAL, University of Chicago, New Directions in Spatial Statistics; YI NI, California Institute of Technology, Heegaard Floer Homology and Low-Dimensional Topology; JESSICA PURCELL, Brigham Young University, Hyperbolic Geometry and Knots and Links; ANDREW PUTMAN, Rice University, The Topology of Infinite Groups; Brian Rider, Temple University, Random Matrices, Random Schroedinger, and Communication; RALF SCHIFFLER, University of Connecticut, Cluster Algebras, Combinatorics and Representation Theory; KARL SCHWEDE, Pennsylvania State University, Test Ideals and the Geometry of Projective Varieties in Positive Characteristic; JAMES SCOTT, University of Texas at Austin, Bringing Richly Structured Bayesian Models into the Discrete-Data Realm via New Data-Augmentation Theory and Algorithms; LUIS SILVESTRE, University of Chicago, Regularity Estimates for Elliptic and Parabolic Equations; WENGUANG SUN, University of Southern California, Simultaneous and Sequential Inference of High-Dimensional Data with Sparse Structure; RACHEL WARD, University of Texas at Austin, Sparsity-Aware Sampling Theorems and Applications; DANIELA WITTEN, University of Washington, Flexible Network Estimation from High-Dimensional Data; JIANLIN XIA, Purdue University, Structured Matrix Computations: Foundations, Methods, and Applications; LEXING YING, Stanford University, Fast Algorithms for Oscillatory Integrals; MING YUAN, Morgridge Institute for Research, Sparse Modeling and Estimation with High-Dimensional Data; HAO ZHANG, University of Arizona, Nonparametric Models Building, Estimation, and Selection with Applications to High-Dimensional Data Mining.

—Elaine Kehoe

2013 Professors of the Year Chosen

Three college professors whose work involves the mathematical sciences are among the 2013 Professors of the Year, selected by the Carnegie Foundation for the Advancement of Teaching and the Council for Advancement for Support of Education (CASE). ROBERT CHANEY, a professor of mathematics at Sinclair Community College in Dayton, Ohio, was named Outstanding Community Colleges Professor of the Year. He uses hands-on learning projects with his students, such as teaching them to program a robot using algebraic functions. GINTARAS DUDA, an associate professor of physics at Creighton University, was chosen Outstanding Master's Universities and Colleges Professor of the Year. He teaches courses that have no lecture component but are problem-based, and he often coauthors articles with his undergraduate students. STEVEN POLLOCK, a professor of physics at the University of Colorado at Boulder, was named Outstanding Doctoral and Research Universities Professor of the Year. He considers himself more of a coach than a teacher, letting his students make sense of ideas by themselves. In his research he studies how students' mathematical skills help them with physics concepts.

—From a Carnegie Foundation announcement