
Mathematics People

Codá Marques Awarded Ramanujan and TWAS Prizes

FERNANDO CODÁ MARQUES of the Instituto Nacional de Matemática Pura e Aplicada (IMPA) in Rio de Janeiro, Brazil, has been named the recipient of two major prizes for 2012: the Ramanujan Prize of the International Centre for Theoretical Physics (ICTP), the Niels Henrik Abel Memorial Fund, and the International Mathematical Union (IMU); and the TWAS Prize, awarded by the Academy of Sciences for the Developing World (TWAS).

The announcement from the ICTP/IMU for the Ramanujan Prize reads in part: “The prize is in recognition of his several outstanding contributions to differential geometry. Together with his coauthors, Fernando Codá Marques has solved long-standing open problems and obtained important results, including results on the Yamabe problem, the complete solution of Schoen’s conjecture, counterexamples to the rigidity conjecture of Min-Oo, connectivity of the space of positive curvature metrics on an orientable 3-manifold, and most recently, a proof of the Willmore conjecture.” 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.

Codá Marques was honored with the TWAS Prize in Mathematics “for his fundamental contributions to the field of differential geometry, particularly for his work on variational problems in conformal geometry and applications of the theory of Ricci flow.” The TWAS Prizes honor individual scientists who have been working and living in a developing country for at least ten years. It carries a cash award of US\$15,000, and the 2012 prizewinners will give lectures at TWAS’s general meeting in Argentina in 2013.

Codá Marques received his Ph.D. from Cornell University in 2003. He has been affiliated with IMPA since then and has also held visiting positions at Stanford University, Princeton University, and the Institute for Advanced Study. He received a FAPERJ Young Scientist Fellowship in 2008 from the State of Rio de Janeiro, Brazil, and was an invited speaker at the International Congress of Mathematicians in Hyderabad, India, in 2010. He has also been awarded the 2012 UMALCA Prize of the Mathematical Union of Latin America and the Caribbean.

—Elaine Kehoe

CMS G. de B. Robinson Award Announced

TEODOR BANICA of the University of Toulouse, SERBAN BELINSCHI of Queens University, MIREILLE CAPITAINE of the Centre National de la Recherche Scientifique (CNRS), and BENOÎT COLLINS of the University of Ottawa have been awarded the 2012 G. de B. Robinson Award of the Canadian Mathematical Society (CMS) for their paper titled “Free Bessel laws”, published in the *Canadian Journal of Mathematics* 63 (2011), 3–37, <http://dx.doi.org/10.4153/CJM-2010-060-6>. The award is given in recognition of outstanding contributions to the *Canadian Journal of Mathematics* or the *Canadian Mathematical Bulletin*.

—From a CMS announcement

Przybyłowicz Awarded 2012 Information-Based Complexity Prize

PAWEŁ PRZYBYŁOWICZ of AGH University of Science and Technology, Krakow, Poland, has been awarded the 2012 Information-Based Complexity (IBC) Young Researcher Award. The award consists of US\$1,000 and a plaque. The prize is given annually for significant contributions to information-based complexity by a young researcher who has not reached his or her thirty-fifth birthday by September 30 the year of the award.

—Joseph Traub, Columbia University

Vinet Awarded CAP-CRM Prize

LUC VINET of the University of Montreal has been awarded the 2012 CAP-CRM Prize in Theoretical and Mathematical Physics by the Canadian Association of Physicists (CAP) and the Centre de Recherches Mathématiques (CRM). He was honored for “his outstanding and continued contributions to mathematical physics, mainly based on the study of symmetries, algebraic structures, and special functions.” The prize is intended to recognize research excellence in the fields of theoretical and mathematical physics.

—From a CAP-CRM announcement

Alexakis Awarded Aisenstadt Prize

SPYROS ALEXAKIS of the University of Toronto has been awarded the 2013 André-Aisenstadt Prize of the Centre de Recherches Mathématiques (CRM) for his work in analysis and mathematical physics. According to the prize citation, “his main contribution is a solution to a conjecture of Deser and Schwimmer regarding the structure of global conformal invariants. ... Secondly, together with Klainerman and Ionescu, he made important progress in the understanding of the Kerr solutions to Einstein’s equations. Finally, jointly with Mazzeo, he obtained deep results concerning minimal surfaces with bounded Willmore energy.” Alexakis received his Ph.D. from Princeton University in 2005 and has held Clay Research and Sloan fellowships. The prize recognizes outstanding research achievement by a young Canadian mathematician in pure or applied mathematics and consists of a cash award and a medal.

—From a CRM announcement

Athreya and Goswami Awarded 2012 Bhatnagar Prize

SIVA RAMACHANDRAN ATHREYA and DEBASHISH GOSWAMI of the Indian Statistical Institute won the 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\$9,000).

—Council of Scientific Research and Industrial Development, India

CAREER Awards Presented

The Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) has honored thirty-one young mathematicians in fiscal year 2012 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 2012 CAREER grant awardees and the titles of their grant projects follow.

ANDREW BLUMBERG, University of Texas, Austin, Algebraic K -Theory, Trace Methods, and Noncommutative Geometry; BENJAMIN BRUBAKER, University of Minnesota, Twin Cities, Multiple Dirichlet Series, Automorphic Forms, and Combinatorial Representation Theory; THOMAS CHEN, University of Texas, Austin, Dynamics of Complex Quantum Systems, Scaling Limits, and Renormalization;

GUANG CHENG, Purdue University, Bootstrap M -Estimation in Semiparametric Models; DANIJELA DAMJANOVIC, William Marsh Rice University, Smooth Group Actions: Persistence and Prevalence of Chaotic Behavior; YINGYING FAN, University of Southern California, High-Dimensional Variable Selection in Nonlinear Models and Classification with Correlated Data; JOSE FIGUEROA-LOPEZ, Purdue University, Bridging High-Frequency Data Analysis and Continuous-Time Features of Levy Models; TEENA GERHARDT, Michigan State University, Equivariant Homotopy and Algebraic K -Theory; JULIA GRIGSBY, Boston College, Connections between Algebraic and Geometric Invariants in Low-Dimensional Topology; MATTHEW HEDDEN, Michigan State University, Floer Homology and Low-Dimensional Topology; DANIEL KRASHEN, University of Georgia Research Foundation, The Arithmetic of Fields and the Complexity of Algebraic Structures; ANTON LEYKIN, Georgia Institute of Technology, Algorithms and Software for Computational Algebraic Geometry; PEIJUN LI, Purdue University, Direct and Inverse Scattering Problems for Wave Propagation in Complex and Random Environments; YEHUA LI, University of Georgia Research Foundation, New Topics in Functional Data Analysis; ROBERT LIPSHITZ, Columbia University, Floer-Theoretic Approaches to Low-Dimensional Topology; LAURA MILLER, University of North Carolina, Chapel Hill, Mathematical Modeling and Experiments of Neuro-mechanical Pumping; ANDREW NEITZKE, University of Texas, Austin, Geometric Applications of Gauge Theory; IRINA NENCIU, University of Illinois, Chicago, Long-Time Asymptotics of Completely Integrable Systems with Connections to Random Matrices and Partial Differential Equations; DRAGOS OPREA, University of California, San Diego, Stable Sheaves, Stable Quotients, Stable Pairs; GRIGORIS PAOURIS, Texas A&M University, Geometry of Measures in High Dimensions; SAM PAYNE, Yale University, Tropical and Nonarchimedean Analytic Methods in Algebraic Geometry; ALESSANDRO RINALDO, Carnegie-Mellon University, Statistical Inference for Topological and Geometric Data Analysis; SEBASTIEN ROCH, University of Wisconsin, Madison, Phylogenomics: New Computational Methods through Stochastic Modeling and Analysis; SVETLANA ROUDENKO, George Washington University, Nonlinear Phenomena in Evolution PDE; BODHISATTVA SEN, Columbia University, Nonparametric Methods in Multiple Dimensions: Shape Restrictions, Bootstrap, and Beyond; RAMON VAN HANDEL, Princeton University, Conditional Theory of Large-Scale Stochastic Systems; JOHN VOIGHT, University of Vermont and State Agricultural College, Explicit Methods in Arithmetic Geometry; HUIXIA WANG, North Carolina State University, A New and Pragmatic Framework for Modeling and Predicting Conditional Quantiles in Data-Sparse Regions; BENJAMIN WEBSTER, Northeastern University, Representation Theory of Symplectic Singularities; YIFENG YU, University of California, Irvine, Analysis of G -Equations in the Modeling of Turbulent Flame Speed and Comparison with Other Math Models; HONG-KUN ZHANG, University of Massachusetts, Amherst, The Nature of SRB Measures for Nonequilibrium Hyperbolic Systems.

—Elaine Kehoe

Professors of the Year Chosen

Four national winners and thirty-one state winners have been honored with U.S. Professor of the Year awards. Among the state winners are three mathematics professors: MIKE PINTER of Belmont University, Tennessee; JOHN HAMMAN of Montgomery College, Maryland; and STEPHEN DEBACKER of the University of Michigan, Ann Arbor. The U.S. Professors of the Year awards program celebrates outstanding instructors across the country. Sponsored by the Council for Advancement and Support of Education (CASE) and the Carnegie Foundation for the Advancement of Teaching, it is the only national program to recognize excellence in undergraduate education.

—From a CASE announcement

Rhodes Scholarships Announced

A senior mathematics student is among the thirty-two outstanding students named American Rhodes Scholars for 2013. EVAN R. SZABLOWSKI of Bakersfield, California, is a senior at the United States Military Academy, where he majors in mathematics. He has also studied at Al-Akhawayn University in Morocco and has worked on projects encouraging entrepreneurship in Ethiopia and on emerging markets in the Czech Republic. He is a triathlete, conducts a West Point choir, and was a member of the first American team ever to win the Sandhurst military competition. At Oxford he plans to do the M.Sc. in mathematical modeling and scientific computing. The Rhodes Scholars were chosen from a pool of more than eight hundred students nominated by their colleges and universities.

—From a Rhodes Trust announcement

Mathematics Opportunities

Summer Program for Women Undergraduates

The 2013 Summer Program for Women in Mathematics (SPWM) will take place at George Washington University in Washington, D.C., from June 29 to August 3, 2013. This is a five-week intensive program for mathematically talented undergraduate women who are completing their junior year and may be contemplating graduate study in mathematical sciences. The goals of this program are to communicate an enthusiasm for mathematics, to develop research skills, to cultivate mathematical self-confidence and independence, and to promote success in graduate school. A number of seminars will be offered, led by active research mathematicians with the assistance of graduate students. The seminars will be organized to enable the students to obtain a deep understanding of basic concepts in several areas of mathematics, to learn how to do independent work, and to gain experience in expressing mathematical ideas orally and in writing. There will be panel discussions on graduate schools, career opportunities, and the job market. Weekly field trips will be organized to facilities of mathematical interest around the Washington area.

Applicants must be U.S. citizens or permanent residents studying at a U.S. university or college who are completing their junior year or the equivalent and have mathematical experience beyond the typical first courses in calculus and linear algebra. Sixteen women will be selected. Each will receive a travel allowance, campus room and board, and a stipend of US\$1,750. The deadline for applications is

March 1, 2013. Early applications are encouraged. Applications are accepted only by mail. For further information, please contact the director, Murli M. Gupta, email: mmg@gwu.edu; telephone: 202-994-4857; or visit the program's website at <http://www.gwu.edu/~spwm/>. Application material is available on the website.

—From an SPWM announcement

News from the CRM

The Centre de Recerca Matemàtica (CRM) in Barcelona, Spain, will hold the International School and Research Workshop on Complex Systems April 8-13, 2013, organized by Álvaro Corral and Tomás Alarcón. The overall theme is the dynamics of complex systems, with an emphasis on emergent phenomena such as spatio-temporal patterns. The course focuses on the introduction and application of the basic quantitative concepts and tools for studying complexity via lectures and problem-solving classes. The deadline for registration is **March 18, 2013**. For more information see the website <http://www.crm.cat/en/Activities/Pages/ActivityDescriptions/International-School-and-Research-Workshop-on-Complex-systems.aspx>.

—From a CRM announcement