
Mathematics People

Bringmann Receives Krupp Prize

KATHRIN BRINGMANN of the University of Minnesota and the University of Cologne has been awarded the Alfried Krupp-Förderpreis for Young Professors. She was honored for her joint work with Ken Ono on Ramanujan's mock theta functions. Following seminal work by the Dutch mathematician Sander Zwegers, Bringmann and Ono have built and applied their theory to many topics in mathematics, including partitions and q -series, Moonshine, and elliptic curves. The prize carries a cash award of one million euros (approximately US\$1,400,000) for a five-year period and is awarded by the Alfried Krupp von Bohlen und Halbach Foundation. Other mathematicians who have won the prize are Ursula Gather (1987) and Albrecht Böttcher (1992).

—*From a Deutsche Mathematiker-Vereinigung announcement*

SIAM Prizes Awarded

The Society for Industrial and Applied Mathematics (SIAM) awarded a number of prizes at its annual meeting in July 2009 in Denver, Colorado.

MARY F. WHEELER of the University of Texas at Austin has been awarded the Theodore von Kármán Prize for her seminal research in numerical methods for partial differential equations, her leadership in the field of scientific computation and service to the scientific community, and her pioneering work in the application of computational methods to the engineering sciences, most notably in geosciences. Her work has included developing and applying state-of-the-art algorithms and computational science tools to problems of societal importance in energy and the environment. The prize is awarded every five years for a notable application of mathematics to mechanics and/or the engineering sciences. It carries a cash award of US\$1,000.

ANDERS LINDQUIST of the Royal Institute of Technology, Sweden, has been awarded the W. T. and Idalia Reid Prize in Mathematics. He was recognized for his fundamental contributions to the theory of stochastic systems, signals, and control. The prize is given for outstanding work in,

or other contributions to, the broadly defined areas of differential equations and control theory. It carries a cash award of US\$10,000.

Franco Brezzi of the Institute for Advanced Study (IUSS), Pavia, Italy, was named the John von Neumann Lecturer. He was recognized for his insight, analysis, and exposition, which have had a profound impact on computational science and engineering, particularly his work clarifying the nature of numerical stability and developing tools to devise stable finite element methods. The lectureship is awarded annually for outstanding and distinguished contributions to the field of applied mathematical sciences and for the effective communication of these ideas to the community. It consists of a cash award of US\$4,500.

RAFAL GOEBEL of Loyola University, Chicago, was honored with the SIAM Activity Group on Control and Systems Theory (SIAG/CST) Prize for his accomplishments in developing novel and fundamental results for in-depth study of hybrid systems and resolving some long-standing issues in these systems, such as well-posedness of solutions and robustness of asymptotic stability in hybrid control systems. The prize is awarded every two years to a junior researcher for outstanding and significant research contributions to mathematical control or systems theory.

WEINAN E of Princeton University has been awarded the Ralph E. Kleinman Prize for his interdisciplinary contributions and for his exemplary record in mentoring students and postdocs. He has had a profound impact on research in stochastic partial differential equations and turbulence, numerical solutions of multiscale problems, dynamics of interacting dislocations, liquid crystals and polymers, metastability, protein folding, gas dynamics, epitaxial growth, micromagnetics, and superconductivity. The prize is awarded every other year to one individual for outstanding research or other contributions that bridge the gap between mathematics and applications. It carries a cash award of US\$5,000.

ASSYR ABDULLE of École Polytechnique Fédérale de Lausanne (EPFL), Switzerland, was honored with the James H. Wilkinson Prize in Numerical Analysis and Scientific Computing. He was recognized for his contributions to a broad range of applied mathematics fields, including stability analysis and mathematical software for stiff initial value problems, efficient solution algorithms for stochastic differential equations, and error analysis of heterogeneous multiscale methods. The prize is awarded every four years for research in, or other contributions to, numerical analysis and scientific computing

during the six years preceding the award. It carries a cash award of US\$1,000.

ERIC VANDEN-EIJNDEN of the Courant Institute of Mathematical Sciences, New York University, received the Germund Dahlquist Prize for his work in developing mathematical tools and numerical methods for the analysis of dynamical systems that are both stochastic and multiscale. The prize is awarded to a young scientist (normally under age forty-five) for original contributions to fields associated with Germund Dahlquist, especially the numerical solution of differential equations and numerical methods for scientific computing.

ANDREA BERTOZZI of the University of California, Los Angeles, was selected as the AWM-SIAM Sonia Kovalevsky Lecturer. Her lecture was titled “Swarming by Nature and by Design”. The lecture is intended to highlight significant contributions of women to applied or computational mathematics.

ANDREW W. LO of the Massachusetts Institute of Technology was named the I. E. Block Community Lecturer. His lecture was titled “Kill All the Quants?: Models vs. Mania in the Current Financial Crisis”. The lectureship is awarded annually and is intended to encourage public appreciation of the excitement and vitality of science.

J. TINSLEY ODEN of the University of Texas at Austin has been awarded the SIAM Prize for Distinguished Service to the Profession. He was the founding director of the Institute for Computational Engineering and Sciences (ICES). The prize is awarded to an applied mathematician who has made distinguished contributions to the furtherance of applied mathematics on the national level.

ARND SCHEEL of the University of Minnesota was honored with the J. D. Crawford Prize of the SIAM Activity Group on Dynamical Systems (SIAG/DS). The prize is awarded to one individual for recent outstanding work on a topic in nonlinear science and carries a US\$750 cash award.

MARTIN GOLUBITSKY of The Ohio State University was honored with the 2009 Jürgen Moser Lectureship of the SIAM Dynamical Systems Activity Group. The lectureship is awarded to a person who has made distinguished contributions to nonlinear science. It carries a cash award of US\$500.

MARY F. WHEELER of the University of Texas at Austin was awarded the SIAG/Geosciences Career Prize of the SIAM Activity Group on Geosciences. The prize is awarded to an outstanding senior researcher who has made broad and distinguished contributions to the field of geosciences.

JAN M. NORDBOTTEN has been awarded the SIAG/Geosciences Junior Scientist Prize of the SIAM Activity Group on Geosciences. The prize is awarded to an outstanding junior researcher in the field of geosciences for distinguished contributions to the field in the three calendar years prior to the year of the award.

The SIAM Awards in the Mathematical Contest in Modeling were awarded to the following students: For Problem A, The Continuous Problem: Designing a Traffic Circle, the awardees were CHRISTOPHER CHANG, ZHOU FAN, and YI SUN of Harvard University for “A Simulation-Based Assessment of

Traffic Circle Control”. Their faculty advisor was Clifford H. Taubes. For Problem B, The Discrete Problem: Energy and the Cell Phone, the awardees were STEPHEN FOSTER, BOB POTTER, and TOMMY ROGERS of Southwestern University for “America’s New Calling”. Their faculty advisor was Richard T. Denman.

The SIAM Student Paper Prizes were awarded to the following students: AWAD H. AL-MOHY of the University of Manchester, United Kingdom, for “A new scaling and squaring algorithm for the matrix exponential”, coauthored with Nicholas J. Higham; JIE CHEN of the University of Minnesota for “On the tensor SVD and the optimal low rank orthogonal approximation of tensors”, coauthored with Yousef Saad; SHUN ZHANG of Purdue University for “Recovery-based error estimator for interface problems: Conforming linear elements”, coauthored with Zhiqiang Cai.

—From a SIAM announcement

Sargsyan Awarded Artin Prize

GRIGOR SARGSYAN of the University of California, Berkeley, has been awarded the 2009 Emil Artin Junior Prize in Mathematics. He was honored for his paper “On the indestructibility aspects of identity crisis”, published in the *Archive for Mathematical Logic* **48** (2009), 493–513. The prize was established in 2001 and carries a cash award of US\$1,000. It is usually presented every year to an Armenian university student or former student who is under the age of thirty-five for outstanding contributions to algebra, geometry, topology, and number theory—the fields in which Emil Artin made major contributions. The prize committee consisted of A. Basmajian, Y. Movsisyan, and V. Pambuccian.

—Victor Pambuccian for the Artin Prize Committee

Prizes of the London Mathematical Society

The London Mathematical Society (LMS) has awarded several prizes for 2009.

ROGER HEATH-BROWN of the University of Oxford has been awarded the Pólya Prize for his many contributions within analytic number theory and his dynamic application of analytic methods in wide-ranging investigations of problems spanning number theory and arithmetic geometry. VLADIMIR MAZ'YA of the University of Liverpool was awarded the Senior Whitehead Prize in recognition of his contributions to the theory of differential equations. PHILIP MAINI of the University of Oxford has been awarded the Naylor Prize and Lectureship in Applied Mathematics in recognition of his contributions to and influence on the field of mathematical biology. JOSEPH CHUANG of City University London and RADHA KESSAR of the University of Aberdeen have been awarded the Berwick Prize for their joint paper “Symmetric groups, wreath products, Morita

equivalences and Broué's abelian defect conjecture", published in the *Bulletin of the London Mathematical Society*.

Four Whitehead Prizes were awarded. MIHALIS DAFERMOS of the University of Cambridge was honored for his work on the rigorous analysis of hyperbolic partial differential equations in general relativity. CORNELIA DRUTU of the University of Oxford was honored for her work in geometric group theory. ROBERT MARSH of the University of Leeds was selected for his work on representation theory and especially for his research on cluster categories and cluster algebras. MARKUS OWEN of the University of Nottingham was recognized for his contributions to the development of multiscale modeling approaches in systems medicine and biology.

—From an LMS announcement

Prizes of the Canadian Mathematical Society

The Canadian Mathematical Society (CMS) has made several awards for 2009.

MARK BRAVERMAN of the University of Toronto has been named the recipient of the CMS Doctoral Prize for his work on how computability and complexity theory affect our understanding of real-world phenomena. The main part of his thesis contains groundbreaking work on the computability and complexity of Julia sets. His work has covered a wide range of areas of mathematics and computer science, including stochastic processes, algorithms, game theory, machine learning, computer-aided verification, and automated image processing. He has also worked on derandomization, pseudorandomness, and applications of information theory to communication complexity. He was a gold medal winner at the 2000 International Mathematical Olympiad. The prize was inaugurated to recognize outstanding performance by a doctoral student who graduated from a Canadian university during the preceding year (January–December). The prize carries a cash award of C\$500 (approximately US\$450).

DMITRY JAKOBSON of McGill University, NIKOLAI NADIRASHVILI of CNRS, Marseille, France, and IOSIF POKROVICH of the University of Montreal were awarded the G. de B. Robinson Award for their joint paper "Extremal metric for the first eigenvalue on a Klein bottle", published in *Canadian Journal of Mathematics* 58, no. 2 (2006). The paper is concerned with the study of extremal metrics, considering the problem in the case of the Klein bottle.

DAVID POOLE of Trent University has been awarded the CMS Excellence in Teaching Award, which recognizes sustained and distinguished contributions in teaching at the postsecondary undergraduate level at a Canadian institution.

BILL SANDS of the University of Calgary has been awarded the 2008 Graham Wright Award for Distinguished Service for his work in guiding and nurturing the CMS's International Mathematical Olympiad (IMO) program.

HERMANN BRUNNER of the Memorial University of Newfoundland is the recipient of the 2008 David Borwein

Distinguished Career Award for his notable contributions to Canadian mathematics through his research, his teaching, and the breadth of his service to the mathematical community, particularly his work in developing the Atlantic Association for Research in the Mathematical Sciences (AARMS) and, through AARMS, in expanding and enhancing the infrastructure that supports research and graduate training in Atlantic Canada.

—From a CMS announcement

AWM Essay Contest Winners

The Association for Women in Mathematics (AWM) has announced the winners of its 2009 essay contest, "Biographies of Contemporary Women in Mathematics".

The grand prize was awarded to WAI-TING LAM, St. Francis College Ore Creek, Brooklyn, New York, for "The Charm of Topology—Dr. Joan Birman: Mathematics Is Very Beautiful!" This essay won first place in the college category and will be published in the *AWM Newsletter*.

In the grades 9–12 category, first place went to CHRISTINA BAX, National Cathedral School, Bethesda, Maryland, for "Dr. Mahlet Tadesse: A Mathematician's Quest from Ethiopia to the United States". Chosen for honorable mentions were LENA SIZIKOVA, Mission San Jose High School, Fremont, California, for "Music + Math = Linda Kadis" and CARMEN NG, Monte Vista High School, Danville, California, for "Dr. Laura Gunn—Family Misfit".

In the grades 6–8 category, first place was awarded to ANGELA PHAM, Francis of Assisi School, North Tustin, California, for "Maria Droujkova: Beautiful Math Is All About the People". Honorable Mention in the category went to NUR KOSE, Kose Homeschooling, New Castle, Delaware, for "Falls in Love with Math and Science: Biography of Dr. Shaheen Rab".

—From an AWM announcement

SIAM Names 183 Fellows

The Society for Industrial and Applied Mathematics (SIAM) has announced the SIAM Fellows Class of 2009 and the inauguration of the SIAM Fellows Program. Fellowship is an honorific designation conferred on members distinguished for their outstanding contributions to the fields of applied mathematics and computational science. The Fellows were recognized during the 2009 SIAM Annual Meeting in Denver, Colorado. See the SIAM announcement at <http://www.siam.org/prizes/fellows/index.php>.

—AMS Public Awareness Office