Mathematics People

Tardos Named Kovalevsky Lecturer

ÉVA TARDOS of Cornell University has been chosen as the 2018 AWM-SIAM Sonia Kovalevsky Lecturer by the Association for Women in Mathematics (AWM) and the Society for Industrial and Applied Mathematics (SIAM). She was honored for her "distinguished scientific contributions to the efficient methods for combinatorial optimization problems on graphs and networks, and her work on issues at the interface of computing and economics." According to the prize citation, she is considered "one of the leaders in defining the area of algorithmic game theory, in which algorithms are designed in the presence of self-interested agents governed by incentives and economic constraints." With Tim Roughgarden, she was awarded the 2012 Gödel Prize of the Association for Computing Machinery (ACM) for a paper "that shaped the field of algorithmic game theory." She received her PhD in 1984 from Eötvös Loránd University. She is also the recipient of a Fulkerson Prize (1988) and the George B. Dantzig Prize. She has received Packard, Sloan, and Guggenheim fellowships and is also a Fellow of the ACM and INFORMS. She was elected a Fellow of the AMS in 2013. She is a member of the National Academy of Engineering, the American Academy of Arts and Sciences, and the National Academy of Sciences and has served on the editorial boards of the *Journal of the ACM* and *Theory of Computing* and was editor in chief of the *SIAM Journal of Computing*. She will deliver the Kovalevsky Lecture at the 2018 SIAM Annual Meeting in Portland, Oregon, in July 2018.

The Sonia Kovalevsky Lectureship honors significant contributions by women to applied or computational mathematics.

—From an AWM announcement

Éva Tardos

Goldfarb and Nocedal Awarded 2017 von Neumann Theory Prize

DONALD GOLDFARB of Columbia University and JORGE NOCEDAL of Northwestern University have been awarded the 2017 John von Neumann Theory Prize by the Institute for Operations Research and the Management Sciences (INFORMS). According to the prize citation, "The award recognizes the seminal contributions that Donald Goldfarb and Jorge Nocedal have made to the theory and applications of nonlinear optimization over the past several decades. These contributions cover a full range of topics, going from modeling, to mathematical analysis, to breakthroughs in scientific computing. Their work on the variable metric methods (BFGS and L-BFGS, respectively) has been extremely influential."

About Goldfarb's work, the citation says, "Goldfarb's deep research contributions tie together the theoretical and the very practical in traditional linear and nonlinear programming, interior point methods, and the newly in vogue methods developed for signal processing and machine learning; and doing all that through a unique understanding of the fundamental issues in each and all of these areas. His contributions to the field are exceptionally broad, very influential and long-lasting, beginning with the famous Broyden-Fletcher-Goldfarb-Shanno (BFGS) algorithm for nonlinear optimization in the 60s, then the revolutionary steepest edge simplex method for linear programming in the 80s and in the last decade first-order methods for large-scale convex optimization. The primal and dual steepest edge simplex algorithms, devised by Goldfarb with Reid and Forrest, respectively, are the most widely used variants of the simplex method. Goldfarb's work provides the theoretical foundation for many variants of this method implemented in most state-of-the-art commercial linear programming solvers. The Goldfarb-Idnani dual active set method for quadratic programming (QP) is one of the most widely used QP methods."

Jorge Nocedal

About Nocedal's work, the citation goes on to say, "Nocedal made seminal contributions to the area of unconstrained and constrained nonlinear optimization that have fundamentally reshaped this field. This includes the development of L-BFGS methods, extending interior point methods to non-convex constrained optimization, co-authoring a highly influential book in nonlinear optimization, and recently illuminating the interface between optimization and machine learning via efficient and effective second-order methods. In the 1980s, Nocedal invented the L-BFGS optimization algorithm, the limited memory version of the BFGS method. This opened the door to solving vastly larger unconstrained and box-constrained nonlinear optimization problems than previously possible: Nocedal's L-BFGS algorithm requires storage that is only a small multiple of the number of variables, whereas the original BFGS method required a quadratic amount of storage. The L-BFGS algorithm has had an immense practical impact, which is difficult to overstate. Nocedal was also instrumental in extending the interior-point revolution beyond convex optimization. In the late 1990s, he and his collaborators proposed the first theoretically sound algorithm for nonlinear and nonconvex optimization problems."

Donald Goldfarb received his PhD from Princeton University in 1966. He has held positions at the City College of New York, Cornell University, and the Courant Institute of Mathematical Sciences at New York University. His honors include the 1995 INFORMS Prize for Research Excellence in the Interface between Operations Research and Computer Science and the 2013 INFORMS Khachiyan Prize for Lifetime Accomplishments in Optimization. He was named a SIAM Fellow in 2012. Jorge Nocedal received his PhD from Rice University in 1978. He held positions at the National University of Mexico and the Courant Institute of Mathematical Sciences before joining Northwestern University in 1983. He was an invited speaker at the International Congress of Mathematicians in 1998, and his honors include the Charles Broyden Prize (2010) and the George B. Dantzig Prize (2012). He was named a SIAM Fellow in 2010. Nocedal tells the *Notices*: "As a teenager my brother and I built a telescope from scratch, and our desire to improve the optics led me to discover the field of computational optimization, the focus of my research since then."

—From an INFORMS announcement

Brendle and Masmoudi Awarded 2017 Fermat Prize

Simon Brendle

Nader Masmoudi

SIMON BRENDLE of Columbia University and NADER MASMOUDI of the Courant Institute of Mathematical Sciences, New York University, have been awarded the 2017 Fermat Prize. Brendle was honored "for his numerous and profound results in geometric analysis, involving partial differential equations of elliptic, parabolic and hyperbolic type; in particular for his elegant proof of Lawson's conjecture, for his characterization of soliton solutions of Ricci flows and mean curvature in dimension 3 as well as for his remarkable contributions, in collaboration with Gerhard Huisken, to the analysis of mean curvature flow of mean convex surfaces in manifolds of dimension 3." Masmoudi was recognized "for his remarkable work of depth and creativity in the analysis of nonlinear partial differential equations and in particular for his recent contributions to the rigorous and complete resolution of hydrodynamic stability problems raised at the end of the 19th century by the founding fathers of modern fluid mechanics." The prize is awarded every two years by the Institut de Mathématiques de Toulouse in fields in which Pierre de Fermat made decisive contributions.

—Jean-François Coulombel
Institut de Mathématiques de Toulouse

Oh Awarded Ho-Am Prize

Hee Oh

HEE OH of Yale University has been awarded the 2018 Ho-Am Prize. According to the prize citation, she is "a world-leading expert in homogeneous dynamics, discrete subgroups of Lie groups, and its applications to geometry and number theory. A rare mathematician with expertise in all of ergodic, algebraic and analytic aspects of discrete subgroups of Lie groups, she combined them to develop innovative methods to solve many long-standing problems in geometry and number theory.

"One of her major achievements is the beautiful work on Apollonian circle packings, which originated from a theorem proven by the ancient Greek geometer Apollonius

that, given any three tangent circles in the plane, there are exactly two more circles that are tangent to all three."

Among her other contributions are work on orbits of thin groups arising in Diophantine problems, on equidistribution of rational solutions of Diophantine equations, on geometric analogues of the prime number theorem, and on geodesic planes in hyperbolic 3-manifolds.

Oh received her PhD in 1997 from Yale University. She has held positions at Princeton University, the Institute for Advanced Study, the California Institute of Technology, and Brown University, and since 2013 she has been Abraham Robinson Professor at Yale. She is an inaugural Fellow of the AMS.

Oh says: "During my first math class in college, the professor made a rather surprising remark that 'mathematics is beautiful.' In retrospect my journey in mathematics was driven by curiosity about that statement and a desire to understand it. As it turned out, it was a journey of appreciation and confirmation of the beauty of mathematics."

The Ho-Am Prize is presented each year to individuals who have contributed to academics, the arts, and social development, or who have furthered the welfare of humanity through distinguished accomplishments in their respective professional fields.

—From a Ho-Am Foundation announcement

Logunov and Sawin Named Clay Research Fellows

Aleksandr Logunov of the Institute for Advanced Study and Will Sawin of ETH Zürich have been awarded Clay Research Fellowships by the Clay Mathematics Institute (CMI).

Aleksandr Logunov gained his PhD in 2015 under the supervision of Viktor Havin at the Chebyshev Laboratory, St. Petersburg State University. After two years as a postdoctoral fellow at Tel-Aviv University, he moved last year to the Institute for Advanced Study at Princeton. He will hold his Clay Research Fellowship at Princeton University. Together with Eugenia Malinnikova, he received a Clay Research Award in 2017. The award recognized Logunov's and Malinnikova's introduction of a novel geometric combinatorial method to study doubling properties of solutions to elliptic eigenvalue problems. This led to the solution of long-standing problems in spectral geometry, for instance, the optimal lower bound on the measure of the nodal set of an eigenfunction of the

Aleksandr Logunov

Will Sawin

Laplace-Beltrami operator in a compact smooth manifold (Yau and Nadirashvili's conjectures). Logunov has been invited to speak on his work at the 2018 International Congress of Mathematicians in Rio. He has been appointed as a Clay Research Fellow for a term of two years beginning July 2018.

Will Sawin obtained his PhD in 2016 from Princeton University, under the supervision of Nicholas Katz. Since then he has worked with Emmanuel Kowalski as a Junior Fellow at ETH Zürich. Sawin's research is wide ranging but focused on the interactions of analytic number theory and algebraic geometry. Among the many areas in which he has made groundbreaking contributions are the application of étale cohomology to estimates of exponential sums over finite fields and, with Tim Browning, the adaptation of classical counting arguments in analytic number theory to explore compactly supported cohomology in spaces of interest in algebraic geometry. In a recent paper with Kowalski and Philippe Michel, he used l-adic cohomology to derive new bounds on certain bilinear forms that regularly arise in the study of automorphic forms. There are important applications, for example in the theory of twisted L-functions. He has also made many wider contributions to the mathematical community, not least through regular posts on diverse topics on the MathOverflow website. Sawin has been appointed as a Clay Research Fellow for a term of three years beginning July 2018.

Clay Research Fellowships are awarded on the basis of the exceptional quality of candidates' research and their promise to become mathematical leaders.

—From a CMI announcement

Camacho Receives Outstanding Latino/a Faculty Award

Erika Camacho of Arizona State University has been selected the recipient of the Outstanding Latino/a Faculty in Higher Education: Research/Teaching Award presented by the American Association of Hispanics in Higher Education (AAHHE). The selection criteria focused on demonstrated excellence in both research and teaching and significant contributions to the awardee's academic discipline.

Erika Camacho

—From an AAHHE announcement

Prizes of the Canadian Mathematical Society

Gordon Slade

Gordon Slade of the University of British Columbia has been awarded the Jeffery-Williams Prize for Research Excellence for his "outstanding work in rigorous statistical mechanics." He received his PhD from the University of British Columbia in 1984 and has been a member of the faculty there since 1999. He is a Fellow of the AMS, the Institute of Mathematical Statistics, the Fields Institute for Research in Mathematical Sciences, the Royal Society of Canada, and the Royal Society of London. He is the recipient of the Prize of the Institut Henri Poincaré, the CRM-Fields-PIMS Prize, and the 1995 CMS Coxeter-James Prize.

Slade tells the *Notices*: "I was raised in Toronto by parents who, due to the Great Depression, did not have the opportunity to finish high school. They understood the value of education, and did all they could to help me pursue mine. Sadly, they did not live long enough to see me graduate from university. Their encouragement is something I carry with me to this day."

Megumi Harada

Megumi Harada of McMaster University has been awarded the Krieger-Nelson Prize "for her research on Newton-Okounkov bodies, Hessenberg varieties, and their relationships to symplectic geometry, combinatorics, and equivariant topology, among others." She received her PhD from the University of California Berkeley in 2003. She was appointed a postdoc research fellow (academic) at the University of Toronto from 2003 to 2006, when she joined the faculty at McMaster University. She was awarded the Ruth I. Michler Memorial Prize of the Association for Women in Mathematics in 2013. She currently holds the Canada Research Chair in Equivariant Symplectic and Algebraic Geometry at McMaster. The prize recognizes outstanding research by a woman mathematician.

Harada tells the *Notices*: "I came to mathematics relatively late. I excelled in literature, history, and philosophy in high school, and was only passable in mathematics. When I entered college, I had serious intentions to become a cultural anthropologist. In fact, it was only a few weeks before my college graduation date that I finally, formally, declared mathematics to be my (sole) major."

Gary MacGillivray of the University of Victoria was awarded the CMS Excellence in Teaching Award. According to the prize citation, "MacGillivray's boundless energy, his love of teaching, his strong commitment and dedication to the success of his students have earned him the respect of his colleagues. His colleagues describe him as a great

Gary MacGillivray

and effective teacher...truly involved in his community and by his students as master of explaining hard topics...a very approachable professor." He received his PhD in 1990 from Simon Fraser University. He held positions at Capilano College and the University of Regina before joining the faculty at the University of Victoria in 1992. Over the course of his career, he has supervised 48 undergraduate research projects and 39 graduate students or postdocs. He has written more than 100 papers, more than half of which are collaborations with students or postdocs.

MacGillivray tells *Notices*, "I've had a lifelong interest in sports and have been a volunteer coach off and on since 1976. Twenty years ago I ran marathons and did IRON-MAN TRIATHALON®. Recently it has been less competitive things like cycling up Haleakala and hiking the Grand Canyon to the river and back in a day."

—From CMS announcements

Cirac Awarded Max Planck Medal

J. Ignacio Cirac

J. Ignacio Cirac of the Max Planck Institute of Quantum Optics has been awarded the 2018 Max Planck Medal "for his groundbreaking contributions to the field of quantum information and quantum optics." His research involves fundamental mathematical calculations in quantum information theory, modeling of quantum many-body systems, and concepts for the implementation of quantum optical systems. His group in the Theory Division has "developed new concepts for logical elements such as quantum gates that have already been implemented by experimental physicists. Furthermore, the group develops new algorithms for quantum communication, designs new quantum networks making use of the special properties of quantum particles, and creates new theoretical tools to characterize and quantify; e.g., entanglement of remote quantum systems." Cirac received his PhD in theoretical physics in 1991 from Universidad Complutense de Madrid. He was awarded the Wolf Prize in 2013.

—From a Max Planck Institute announcement

Lu Awarded IMA Prize

Jianfeng Lu

JIANFENG LU of Duke University has been awarded the 2017 IMA Prize in Mathematics and Its Applications by the Institute for Mathematics and Its Applications (IMA). He was honored "for his many contributions in applied analysis, computational mathematics, and applied probability, in particular for problems from physics, chemistry, and material sciences. The unique strength of his research is to combine advanced mathematical analysis and algorithmic tools with a deep understanding of problems from science and engineering." According to the prize citation, "Some of Lu's major research achievements include groundbreaking contributions to electronic structure models, multiscale methods, rare events, and quantum molecular dynamics. His most recent contribution on the mathematical understanding of surface hopping algorithms has generated enormous excitement in the quantum chemistry community."

Lu received his PhD from Princeton University in 2009. He received an Alfred P. Sloan Foundation Research Fellowship in 2013 and an NSF CAREER Award in 2015.

—From an IMA announcement

Rolf Schock Prizes Awarded

Saharon Shelah

Ronald Coifman

SAHARON SHELAH of the Hebrew University of Jerusalem and Rutgers University and RONALD COIFMAN of Yale University have been awarded Rolf Schock Prizes for 2018 by the Royal Swedish Academy of Sciences. Shelah was awarded the prize in logic and philosophy "for his outstanding contributions to mathematical logic, in particular to model theory, in which his classification of theories in terms of so-called stability properties has fundamentally transformed the field of research of this discipline." Coifman was honored with the prize in mathematics "for his fundamental contributions to pure and applied harmonic analysis."

The prize citation for Shelah reads: "Saharon Shelah has made fundamental contributions to mathematical logic, particularly in model theory and set theory. In model theory, Shelah developed classification theory, concerning the classification of first-order theories in terms of properties of their classes of models. The classes of models of so-called stable theories have structural properties that can be characterized in geometrical terms, while the class of models of an 'unstable' theory lacks structure. Most of contemporary research in model theory builds on Shelah's work. Shelah has also made decisive contributions to set theory, including the development of a new variety of the forcing method and remarkable results in cardinal arithmetic, and he has solved deep problems in other areas, such as algebra, algebraic geometry, topology, combinatorics, computer science, and social choice theory. Shelah has had, and still has, an indisputable and exceptional position in mathematical logic, particularly in model theory. He is almost unbelievably productive, with seven books and more than 1,100 articles to date."

The citation for Coifman reads: "Ronald Coifman has made outstanding contributions to harmonic analysis. He has proven several important classical results and has recently dedicated his research to applied harmonic analysis and related areas. Along with Yves Meyer, he has played a crucial role in the development of the theory of wavelets, which has important applications in image compression, signal processing, and computer vision. He and his collaborators have recently initiated diffusion geometry, bringing the opportunity to create methods for finding structures in large data sets."

Shelah was born in Jerusalem in 1945. He received his PhD from Hebrew University under the direction of Michael O. Rabin. He held positions at Princeton University (1969–1970) and the University of California Los Angeles before joining the faculty at Hebrew University. He is also distinguished visiting professor at Rutgers University. His honors include the Erdős Prize (1977), the Rothschild Prize (1982), the Karp Prize (1983), the George Pólya Prize (1992), the Bolyai Prize (2000), the Wolf Prize (2001), the Steele Prize for Seminal Contribution to Research (2013), and the Hausdorff Medal (with Maryanthe Malliaris, 2017).

Coifman received his PhD from the University of Geneva in 1965 under the direction of Jovan Karamata. His honors include the DARPA Sustained Excellence Award and the Connecticut Science Medal (both in 1966), the 1999 Pioneer Award of the International Society for Industrial and Applied Science, and the 1999 National Medal of Science. He is a member of the American Academy of Arts and Sciences, the Connecticut Academy of Science and Engineering, and the National Academy of Sciences.

The Rolf Schock Prizes are awarded in logic and philosophy, mathematics, visual arts, and musical arts. Each prize carries a cash award of 400,000 Swedish krona (approximately US$47,000).

—From a Royal Swedish Academy announcement

Perkowski Awarded Rollo Davidson Prize

Nicolas Perkowski

NICOLAS PERKOWSKI of Humboldt-Universität zu Berlin and the Max Planck Institute for Mathematics in the Sciences has been awarded the 2018 Rollo Davidson Prize for his role in the development of the theory of paracontrolled distributions for singular stochastic partial differential equations and for advances in understanding of the Kardar-Parisi-Zhang equation. Perkowski received his PhD in 2013 from Humboldt-Universität zu Berlin and has held positions at Universität Wien and Université Paris Dauphine. In his free time he enjoys traveling and hiking.

—From a Davidson Trust announcement

Nisan Receives Rothschild Prize

Noam Nisan

NOAM NISAN of The Hebrew University has been awarded the 2018 Rothschild Prize of Yad Hanadiv in mathematics/computer science. The prize was established to support, encourage, and advance the sciences and humanities in Israel and recognize original and outstanding published work in several disciplines. The prize in mathematics and computer science is awarded every two years.

—From a Yad Hanadiv announcement

ANZIAM Prizes Awarded

Australia and New Zealand Industrial and Applied Mathematics (ANZIAM), a division of the Australian Mathematical Society, has awarded medals for 2018 to three mathematical scientists. PHILIP G. HOWLETT of the University of South Australia was awarded the 2018 ANZIAM Medal for "sustained and outstanding contributions to both the theory and applications of mathematics, particularly in the development of control theoretic methods in the transport industry." The medal is given for outstanding merit in research achievements, activities enhancing applied or industrial mathematics or both, and contributions to ANZIAM. YVONNE STOKES of the University of Adelaide was awarded the E. O. Tuck Medal for fundamental contributions in viscous fluid mechanics and mathematical

biology. The Tuck Medal is a midcareer award given for outstanding research and distinguished service to the field of applied mathematics. CLAIRE POSTLETHWAITE of the University of Auckland received the J. H. Michell Medal for research focusing on dynamical systems, in which she has made "important contributions to a wide range of areas including: heteroclinic cycles and networks; time-delayed feedback control; delay-differential equations; coupled cell dynamics; noise-induced dynamics; and bifurcations." The medal recognizes an outstanding young researcher in applied/industrial mathematics.

—From an ANZIAM announcement

Ruzhansky and Suragan Awarded Balaguer Prize

MICHAEL RUZHANSKY of Imperial College London and DURVUDKHAN SURAGAN of Nazarbayev University, Kazakhstan, have been awarded the 2018 Ferran Sunyer i Balaguer Prize for their monograph, "Hardy Inequalities on Homogeneous Groups (100 Years of Hardy Inequalities)." The prize is awarded for an unpublished mathematical monograph of an expository nature presenting the latest developments in an active area of research in mathematics in which the applicant has made important contributions. The prize carries a cash award of 15,000 euros (approximately US$18,600). The winning monograph will be published in Birkhäuser's series "Progress in Mathematics."

—From a Balaguer Foundation announcement

ACM Turing Award

JOHN L. HENNESSY of Stanford University and DAVID PATTERSON of Google have been chosen recipients of the 2017 A. M. Turing Award of the Association for Computing Machinery (ACM) "for pioneering a systematic, quantitative approach to the design and evaluation of computer architectures with enduring impact on the microprocessor industry." The prize carries a cash award of US$1 million.

—From an ACM announcement

Putnam Prizes Awarded

The winners of the seventy-eighth William Lowell Putnam Mathematical Competition have been announced. The Putnam Competition is administered by the Mathematical Association of America (MAA) and consists of an examination containing mathematical problems that are designed to test both originality and technical competence. Prizes are awarded both to individuals and to teams.

The six highest ranking individuals each received a cash award of US$2,500. Listed in alphabetical order, they are:

- OMER CERRAHOGLU, Massachusetts Institute of Technology
- JIYANG GAO, Massachusetts Institute of Technology
- JUNYAO PENG, Massachusetts Institute of Technology
- ASHWIN SAH, Massachusetts Institute of Technology
- DAVID STONER, Harvard University
- YUNKUN ZHOU, Massachusetts Institute of Technology

Institutions with at least three registered participants obtain a team ranking in the competition based on the rankings of three designated individual participants. The five top-ranked teams (with members listed in alphabetical order) were:

- Massachusetts Institute of Technology (ALLEN LIU, SAMMY LUO, YUNKUN ZHOU)
- Harvard University (DONG RYUL KIM, STEFAN SPATARU, DAVID STONER)
- Princeton University (MURILO CORATO ZANARELLA, ZHUO QUN SONG, XIAOYU XU)
- University of Toronto (ITAI BAR-NATAN, MICHAEL CHOW, DMITRY PARAMONOV)
- University of California Los Angeles (XIAOYU HUANG, KONSTANTIN MIAGKOV, NI YAN)

The first-place team receives an award of US$25,000, and each member of the team receives US$1,000. The awards for second place are US$20,000 and US$800; for third place, US$15,000 and US$600; for fourth place, US$10,000 and $400; and for fifth place, US$5,000 and US$200.

- NI YAN of the University of California Los Angeles was awarded the Elizabeth Lowell Putnam Prize for outstanding performance by a woman in the competition. She received an award of US$1,000.

—From an MAA announcement

Simons Fellows in Mathematics

The Simons Foundation Mathematics and Physical Sciences (MPS) division supports research in mathematics, theoretical physics, and theoretical computer science. The MPS division provides funding for individuals, institutions, and science infrastructure. The Fellows Program provides funds to faculty for up to a semester-long research leave from classroom teaching and administrative obligations. The mathematical scientists who have been awarded Simons Fellowships for 2018 are:

- MARCELO AGUIAR, Cornell University
- ANAR AKHMEDOV, University of Minnesota
- DMYTRO ARINKIN, University of Wisconsin–Madison
- AARON BERTRAM, University of Utah
- LYDIA BIERI, University of Michigan
- ALEXANDER BRAVERMAN, University of Toronto
- CHING-LI CHAI, University of Pennsylvania
- JINGYI CHEN, University of British Columbia
- YINGDA CHENG, Michigan State University
- JORDAN ELLENBERG, University of Wisconsin–Madison
- RUI LOJA FERNANDES, University of Illinois at Urbana–Champaign

- AMANDA FOLSOM, Amherst College
- MICHAEL GOLDSTEIN, University of Toronto
- ALEXANDER GONCHAROV, Yale University
- ANTON GORODETSKI, University of California, Irvine
- ANTONELLA GRASSI, University of Pennsylvania
- LAN-HSUAN HUANG, University of Connecticut
- DAVID JERISON, Massachusetts Institute of Technology
- JEFFREY LAGARIAS, University of Michigan
- CLAUDE LEBRUN, Stony Brook University
- LIONEL LEVINE, Cornell University
- MARTA LEWICKA, University of Pittsburgh
- MAX LIEBLICH, University of Washington
- JACOB LURIE, Harvard University
- GOVIND MENON, Brown University
- ANTONIO MONTALBAN, University of California, Berkeley
- MIRCEA MUSTATA, University of Michigan
- ALEXEI OBLOMKOV, University of Massachusetts Amherst
- SAM PAYNE, Yale University
- OLGA PLAMENEVSKAYA, Stony Brook University
- KAVITA RAMANAN, Brown University
- SEBASTIEN ROCH, University of Wisconsin–Madison
- FEDERICO RODRÍGUEZ HERTZ, Pennsylvania State University
- SUNDER SETHURAMAN, University of Arizona
- ROMAN SHVYDKOY, University of Illinois at Chicago
- YANNICK SIRE, Johns Hopkins University
- CHRISTOPHER SOGGE, Johns Hopkins University
- FRANK THORNE, University of South Carolina
- SHANKAR VENKATARAMANI, University of Arizona
- ALEXANDER VLADIMIRSKY, Cornell University

—From a Simons Foundation announcement

Guggenheim Fellowship Awards to Mathematical Scientists

The John Simon Guggenheim Memorial Foundation has announced the names of 173 scholars, artists, and scientists who were selected as Guggenheim Fellows for 2018. Selected as fellows in the mathematical sciences were:

- MOON DUCHIN, Tufts University
- EDRISS S. TITI, Texas A&M University, Weizmann Institute of Science

Guggenheim Fellows are appointed on the basis of impressive achievement in the past and exceptional promise for future accomplishments.

—From a Guggenheim Foundation announcement

AAAS Fellows Elected

The American Academy of Arts and Sciences (AAAS) has elected its 2018 new fellows and foreign honorary members. Following are the new members in the section on Mathematics, Applied Mathematics, and Statistics:

- ALEXEI BORODIN, Massachusetts Institute of Technology
- SYLVAIN CAPPELL, Courant Institute of Mathematical Sciences, New York University
- LARRY D. GUTH, Massachusetts Institute of Technology
- SVETLANA JITOMIRSKAYA, University of California Irvine
- RICHARD V. KADISON, University of Pennsylvania
- GUILLERMO R. SAPIRO, Duke University

New fellows in other sections that involve the mathematical sciences are:

- JAMES W. DEMMEL, University of California Berkeley (Computer Sciences)
- LEONIDAS J. GUIBAS, Stanford University (Computer Sciences)
- ARKADI NEMIROVSKI, Georgia Institute of Technology (Class I Intersection)
- MARC S. MANGEL, University of California Santa Cruz (Evolutionary and Population Biology and Ecology)
- ROSA L. MATZKIN, University of California Los Angeles (Economics)
- PARAG A. PATHAK, Massachusetts Institute of Technology (Economics)
- H. PEYTON YOUNG, Johns Hopkins University, Oxford University (Economics)
- ITZHAK GILBOA, Tel Aviv University, Ecole des Hautes Etudes Commerciales (International Honorary Member, Economics)

Cappell, Kadison, and Demmel are fellows of the AMS.

—From an AAAS announcement

Regeneron Science Talent Search

Two young scientists whose work involves the mathematical sciences are among the top winners in the 2018 Regeneron Science Talent Search.

BENJAMIN FIRESTER, eighteen, of Hunter College High School received the first-place award of US$250,000 for developing a mathematical model to predict how disease data and weather patterns could spread a fungus that damages crops. DAVID WU, seventeen, of Montgomery Blair High School, Silver Spring, Maryland, received the fifth-place award of US$90,000 for his project, in which he studied the patterns of sequential prime numbers, improved the current methods for gathering data on prime number patterns by several orders of magnitude, and began connecting conjectures in number theory to irregularities in these patterns.

The Regeneron Science Talent Search is the United States' oldest and most prestigious science and mathematics competition for high school seniors. It is administered by the Society for Science and the Public.

—From a Society for Science and the Public announcement

SIAM Fellows Elected

The Society for Industrial and Applied Mathematics (SIAM) has elected its class of fellows for 2018. Their names and institutions follow.

- TODD J. ARBOGAST, University of Texas at Austin
- LILIANA BORCEA, University of Michigan
- LUIS A. CAFFARELLI, University of Texas at Austin
- RONALD A. DEVORE, Texas A&M University
- STANLEY C. EISENSTAT, Yale University
- MICHAEL ELAD, Technion-Israel Institute of Technology
- DAVID A. FIELD, General Motors Corporation
- MARGOT GERRITSEN, Stanford University
- MICHAEL B. GILES, University of Oxford
- ALAIN GORIELY, University of Oxford
- PETER KUCHMENT, Texas A&M University
- MADHAV V. MARATHE, Virginia Institute of Technology
- ALISON L. MARSDEN, Stanford University
- BOJAN MOHAR, Simon Fraser University
- HELEN MOORE, AstraZeneca
- PABLO A. PARRILO, Massachusetts Institute of Technology
- ALEX POTHEN, Purdue University
- HELMUT POTTMANN, Technische Universität Wien
- JUAN RESTREPO, Oregon State University
- JOHN N. SHADID, Sandia National Laboratories and University of New Mexico
- ARTHUR S. SHERMAN, National Institutes of Health
- RALPH C. SMITH, North Carolina State University
- TAMAS TERLAKY, Lehigh University
- ROBIN THOMAS, Georgia Institute of Technology
- KIM-CHUAN TOH, National University of Singapore
- PANAYOT S. VASSILEVSKI, Portland State University and Lawrence Livermore National Laboratory
- HOMER F. WALKER, Worcester Polytechnic Institute
- KAREN E. WILCOX, Massachusetts Institute of Technology

—From a SIAM announcement

Hertz Foundation Fellowships Announced

The Fannie and John Hertz Foundation awards fellowships for graduate work in science and mathematics. Each fellow receives five full years of support toward his or her PhD degree. Four young scientists were awarded the fellowships in the mathematical sciences. They are:

- COLIN DEFANT, Princeton University
- WILLIAM KUSZMAUL, Stanford University

- DAVID PALMER, Massachusetts Institute of Technology
- ETHAN SUSSMAN, Stanford University

—From a Hertz Foundation announcement

NSF Graduate Research Fellowships Awarded

The National Science Foundation (NSF) has awarded a number of Graduate Research Fellowships for fiscal year 2018. Further awards may be announced later in the year. This program supports students pursuing doctoral study in all areas of science and engineering and provides a stipend of US$30,000 per year for a maximum of three years of full-time graduate study. Information about the solicitation for the 2019 competition will be published in the "Mathematics Opportunities" section of an upcoming issue of the *Notices*.

Following are the names of the awardees in the mathematical sciences selected so far in 2018, followed by their undergraduate institutions (in parentheses) and the institutions at which they plan to pursue graduate work.

- IZABEL P. AGUIAR (Colorado School of Mines), University of Colorado at Boulder
- DYLAN ALTSCHULER (Princeton University), Princeton University
- RYAN ALWEISS (Massachusetts Institute of Technology), Massachusetts Institute of Technology
- OLIVIA ANGIULI (Harvard College), University of California Berkeley
- CHLOE I. AVERY (University of California Santa Barbara), University of California Santa Barbara
- ROBIN L. BELTON (Kenyon College), Montana State University
- SHAYNA BENNETT (Johnson State College), University of California Merced
- AARON BERGER (Yale University), Yale University
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—NSF announcement

Marvin J. Greenberg (1935–2017)

Marvin Greenberg was famous for being the first mathematician to apply Grothendieck's theory of schemes to a problem in algebraic geometry. He also invented the so-called Greenberg functor in that subject.

Greenberg was a gifted expositor. His book *Lectures on Algebraic Topology* is widely used. He was awarded the Lester R. Ford Prize in 2010 for his book *Euclidean and Non-Euclidean Geometry* and his wonderful *American Mathematical Monthly* expository article, "Old and New Results in the Foundations of Elementary Plane and Non-Euclidean Geometries."

Marvin Greenberg

Greenberg was Serge Lang's first doctoral student, receiving his degree in 1959 from Princeton. In 1967, after stints at the University of California Berkeley and Northeastern University, he became a founding member of the University of California Santa Cruz mathematics department.

—Steven G. Krantz and Tony Tromba

NEWS

Edwin F. Beschler
(1931–2018)
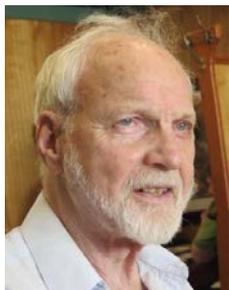
Edwin Beschler

EDWIN BESCHLER, creator of Academic Press' Pure and Applied Mathematics series, died April 29 at the age of 86. He attended the American Academy of Dramatic Arts and pursued an acting career until he was drafted to serve in the US Army during the Korean War.

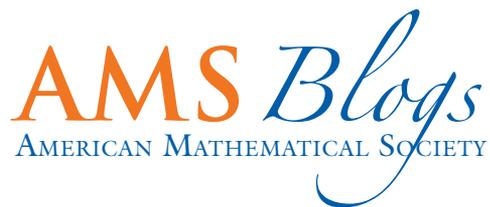After his military service, Beschler resumed his acting career and just before his GI Bill expired, he enrolled at Columbia University where he became a student of mathematics. His career was not as a mathematician, but as a publisher of mathematical books and journals for Academic Press, Birkhäuser Boston, and Springer-Verlag.

Beschler was particularly active in the 1960s in the founding of a program of significant new research-level journals in mathematics, all of which continue to be published today. He retired in 1999, did language editing of mathematics for a number of international publishers, and returned to his first love, acting, accepting roles in student films, in commercials, and as an extra in movies. Beschler was an AMS member since 1962.

—*Fern Beschler and Inna Mette*

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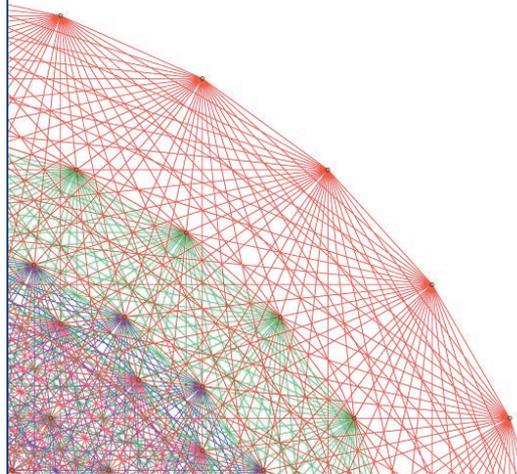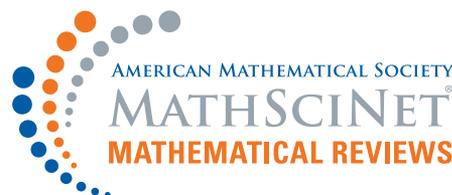Photo of Edwin Beschler courtesy of the Beschler family.