

# 2014 Class of the Fellows of the AMS

Fifty mathematical scientists from around the world have been named Fellows of the American Mathematical Society (AMS) for 2014, the program's second year.

The Fellows of the American Mathematical Society program recognizes members who have made outstanding contributions to the creation, exposition, advancement, communication, and utilization of mathematics. Among the goals of the program are to create an enlarged class of mathematicians recognized by their peers as distinguished for their contributions to the profession and to honor excellence.

The 2014 class of Fellows was honored at a dessert reception held during the Joint Mathematics Meetings in Baltimore, MD. Names of the individuals who are in this year's class, their institutions, and citations appear below.

The nomination period for Fellows is open each year from February 1 to March 31. For additional information about the Fellows program, as well as instructions for making nominations, visit the web page [www.ams.org/profession/ams-fellows](http://www.ams.org/profession/ams-fellows).

**Akram Aldroubi**, Vanderbilt University

For contributions to modern harmonic analysis and its applications, and for building bridges between mathematics and other areas of science and engineering.

**Stephanie B. Alexander**, University of Illinois, Urbana-Champaign  
For contributions to geometry, for high-quality exposition, and for exceptional teaching of mathematics.

**Donald Babbitt**, University of California, Los Angeles  
For contributions to mathematical physics, for the development of MathSciNet, and for his long service as Publisher of the American Mathematical Society.

**Rodrigo Bañuelos**, Purdue University  
For contributions at the interface between probability and analysis.

**Hari Bercovici**, Indiana University, Bloomington  
For contributions to operator theory and to free probability.

**Christian Borgs**, Microsoft Research  
For contributions bringing together analysis, probability theory, graph theory and combinatorics with mathematical statistical physics and rigorous computer science.

**Francesco Calegari**, Northwestern University  
For contributions to number theory and to many aspects of the Langlands program.

**Zhen-Qing Chen**, University of Washington  
For contributions to the potential theory of stable and other jump processes in Euclidean domains.

**Tim D. Cochran**, Rice University  
For contributions to low-dimensional topology, specifically knot and link concordance, and for mentoring numerous junior mathematicians.

**John P. D'Angelo**, University of Illinois, Urbana-Champaign  
For contributions to several complex variables and Cauchy-Riemann geometry, and for his inspiration of students.

**Edward G. Effros**, University of California, Los Angeles  
For contributions to the study of quantized Banach spaces, classification of  $C^*$ -algebras, and quantum information theory.

**Alexandre Eremenko**, Purdue University  
For contributions to value distribution theory, geometric function theory, and other areas of analysis and complex dynamics.

**Gregory I. Eskin**, University of California, Los Angeles  
For contributions to linear partial differential equations and their applications.

**Steven C. Ferry**, Rutgers, The State University of New Jersey  
New Brunswick  
For contributions to controlled topology, and work on the Novikov conjecture.

**Patrick J. Fitzsimmons**, University of California, San Diego  
For contributions to stochastic analysis and probabilistic potential theory.

**Edward Frenkel**, University of California, Berkeley  
For contributions to representation theory, conformal field theory, affine Lie algebras, and quantum field theory.

**Solomon Friedberg**, Boston College  
For contributions to number theory, representation theory, and automorphic forms, and for the establishment of a new Ph.D. program in mathematics.

**Richard J. Gardner**, Western Washington University  
For contributions to geometric tomography.

**Toby Gee**, Imperial College  
For contributions to Galois representations and automorphic forms.

**Steve Gelbart**, Weizmann Institute of Science  
For contributions to the development and dissemination of the Langlands program.

**Jane Piore Gilman**, Rutgers, The State University of New Jersey  
Newark  
For contributions to topology and group theory, and for service to her department and the larger community.

**Paul G. Goerss**, Northwestern University  
For contributions to modern homotopy theory through applications of modular forms and algebraic geometry.

**Jerome A. Goldstein**, University of Memphis  
For contributions to partial differential equations and its applications, and to the dissemination of mathematics to a wider public.

**Peter M. Gruber**, Vienna University of Technology  
For contributions to the geometry of numbers and to convex and discrete geometry.

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**Michael Handel**, Lehman College, The City University of New York  
For contributions to dynamics on surfaces, pseudo-Anosov maps, and automorphisms of free groups.

**Brendan Hassett**, Rice University

For contributions to higher-dimensional arithmetic geometry and birational geometry.

**Helge Holden**, Norwegian University of Science and Technology  
For contributions to partial differential equations.

**Xiaojun Huang**, Rutgers, The State University of New Jersey New Brunswick

For contributions to the study of several complex variables, and for service to the community.

**Alexander Iosevich**, University of Rochester

For contributions to harmonic analysis, analytic number theory, geometric measure theory, and geometric combinatorics.

**Srikanth B. Iyengar**, University of Nebraska-Lincoln

For contributions to commutative algebra, representation theory, homotopy theory, and algebraic geometry.

**Michael J. Larsen**, Indiana University, Bloomington

For contributions to group theory, number theory, topology, and algebraic geometry.

**Darren Long**, University of California, Santa Barbara

For contributions to low-dimensional topology and hyperbolic geometry.

**Richard N. Lyons**, Rutgers, The State University of New Jersey New Brunswick

For contributions to the classification of the finite simple groups, including the discovery of one of the 26 sporadic finite simple groups.

**John C. Meakin**, University of Nebraska-Lincoln

For contributions to semigroup theory, and for exemplary service as department chair.

**John Willard Milnor**, Stony Brook University

For contributions to differential topology, geometric topology, algebraic topology, algebra, and dynamical systems.

**Kailash C. Misra**, North Carolina State University

For contributions to the representation theory of Kac-Moody Lie algebras and quantum groups, and for service to the mathematical community.

**Victor Y. Pan**, Graduate Center and Lehman College, The City University of New York

For contributions to the mathematical theory of computation.

**Peter Paule**, Research Institute for Symbolic Computation, Johannes Kepler University Linz

For contributions to classical combinatorics, computer algebra, and symbolic computation in combinatorics.

**Irena Peeva**, Cornell University

For contributions to commutative algebra and its applications.

**Murray Rosenblatt**, University of California, San Diego

For contributions to probability and statistics.

**Louis Halle Rowen**, Bar-Ilan University

For contributions to noncommutative algebra, and for service to the mathematical community.

**K. Peter Russell**, McGill University

For contributions to algebraic geometry, for mentoring the next generation of mathematicians, and for professional leadership at the highest levels.

**Martin Scharlemann**, University of California, Santa Barbara

For contributions to low-dimensional topology and knot theory.

**Andreas Seeger**, University of Wisconsin, Madison

For contributions to Fourier integral operators, local smoothing, oscillatory integrals, and Fourier multipliers.

**Robert J. Vanderbei**, Princeton University

For contributions to linear programming and nonlinear optimization problems.

**Shouhong Wang**, Indiana University, Bloomington

For contributions to geophysical fluid mechanics.

**Guofang Wei**, University of California, Santa Barbara

For contributions to global Riemannian geometry and its relation with Ricci curvature.

**Michael I. Weinstein**, Columbia University

For contributions to existence and stability of solitary waves, and nonlinear dispersive wave propagation.

**Amie Wilkinson**, University of Chicago

For contributions to dynamical systems.

**Kevin R. Zumbrun**, Indiana University, Bloomington

For contributions to continuum mechanics, shock, and boundary layer theory.