

Sixty-three mathematical scientists from around the world have been named Fellows of the American Mathematical Society (AMS) for 2018.

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 2018 class of Fellows was honored at a dessert reception held during the Joint Mathematics Meetings in San Diego, California. 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).



**Members of the 2018 Class of Fellows of the AMS who attended the reception at the JMM in San Diego.**

**Mohammed Abouzaid**, Columbia University  
*For contributions to symplectic geometry, homological mirror symmetry, and service to the profession.*

**Daniel D. Anderson**, University of Iowa  
*For contributions to commutative algebra and its exposition, service to the mathematical community, and mentoring.*

**Federico Ardila**, San Francisco State University  
*For contributions to combinatorics and service to the profession.*

**Hélène Barcelo**, Mathematical Sciences Research Institute  
*For contributions to combinatorics and service to the profession.*

**Estelle Basor**, American Institute of Mathematics  
*For contributions to analysis and for service to the mathematical community.*

**Kai Behrend**, University of British Columbia  
*For contributions to algebraic geometry.*

**Michele Benzi**, Emory University  
*For contributions in numerical linear algebra, exposition, and service to the profession.*

**Don Blasius**, University of California, Los Angeles  
*For contributions to arithmetic algebraic geometry and representation theory.*

**Lev Borisov**, Rutgers The State University of New Jersey  
New Brunswick  
*For contributions to algebraic geometry and mirror symmetry.*

**Aldridge Bousfield**, University of Illinois at Chicago  
*For contributions to homotopy theory and for exposition.*

**Steven Bradlow**, University of Illinois, Urbana-Champaign  
*For contributions to geometric analysis and moduli theory, and service to the mathematical community.*

**Emmanuel Candès**, Stanford University  
*For contributions to the field of compressed sensing, and to multiscale analysis, statistics, and matrix completion.*

**Izzet Coskun**, University of Illinois at Chicago  
*For contributions to algebraic geometry, and for mentoring.*

**James Davis**, Indiana University, Bloomington  
*For contributions to geometric topology especially through surgery theory, and for exposition.*

**Peter Ebenfelt**, University of California, San Diego  
*For contributions to CR geometry, complex geometry, and several complex variables, and for mentoring and professional service.*

**Joan Ferrini-Mundy**, National Science Foundation  
*For contributions to mathematics education, and to the development of educational policy and initiatives.*

**Antonella Grassi**, University of Pennsylvania  
*For contributions to algebraic geometry and mathematical physics, and for leadership in mentoring programs.*

**Jesper Grodal**, University of Copenhagen  
*For contributions to algebraic topology, representation theory and their interactions, and for service to the profession.*

**Cristian E. Gutierrez**, Temple University  
*For contributions to nonlinear partial differential equations and its applications to geometric optics, and mentoring.*

**David A. Hoffman**, Stanford University  
*For contributions to differential geometry, particularly minimal surface theory, and for pioneering the use of computer graphics as an aid to research.*

**William A. Howard**, University of Illinois at Chicago  
*For contributions to proof theory and constructive foundations of mathematics.*

**Alexandru Ionescu**, Princeton University  
*For contributions to harmonic analysis on symmetric spaces, discrete analogs of singular Radon transforms, and the mathematics of general relativity.*

**Thomas Kailath**, Stanford University  
*For contributions to information theory and related areas, and for applications.*

**Sergiu Klainerman**, Princeton University  
*For contributions to partial differential equations, to the mathematical theory of general relativity, and mentoring.*

**Nicholas J. Kuhn**, University of Virginia  
*For contributions to homotopy theory, group cohomology and representation theory.*

**Igor Kukavica**, University of Southern California  
*For contributions to nonlinear partial differential equations, mentoring, and service to the profession.*

**Max Lieblich**, University of Washington  
*For contributions to algebraic geometry and for service to the mathematical community.*

**Ivan Losev**, Northeastern University  
*For contributions to geometric representation theory, noncommutative algebra, and the theory of categorification.*

**Guozhen Lu**, University of Connecticut, Storrs  
*For contributions to harmonic analysis and partial differential equations, and for service to the mathematical community.*



**AMS Secretary Carla D. Savage and former AMS President Eric Friedlander.**

**Feng Luo**, Rutgers The State University of New Jersey New Brunswick  
*For contributions to Teichmüller theory, conformal geometry, hyperbolic geometry, 3-manifolds, combinatorial topology and computer graphics.*

**Brian Marcus**, University of British Columbia  
*For contributions to dynamical systems, symbolic dynamics and applications to data storage problems, and service to the profession.*

**Fernando Codá Marques**, Princeton University  
*For contributions to geometric analysis.*

**Stephen D. Miller**, Rutgers The State University of New Jersey New Brunswick  
*For contributions to analytic number theory, cryptography, and theoretical physics.*

**Detlef Müller**, Christian-Albrechts-Universität zu Kiel  
*For contributions to harmonic analysis and partial differential equations.*

**James R. Munkres**, Massachusetts Institute of Technology  
*For contributions to algebraic topology, and for exposition.*

**Aaron Naber**, Northwestern University  
*For contributions to differential geometry, particularly to manifolds with bounds on Ricci curvature.*

**Melvyn B. Nathanson**, The City University of New York, The Graduate Center and Lehman College  
*For contributions to the development of additive combinatorics and service to the profession.*

**Lei Ni**, University of California, San Diego  
*For contributions to geometric analysis, particularly to Ricci flow, and for mentorship.*

## FROM THE AMS SECRETARY

**John Pardon**, Princeton University  
*For contributions to knot distortion, the Hilbert-Smith conjecture, and pseudo-holomorphic curves.*

**Peter Polacik**, University of Minnesota-Twin Cities  
*For contributions to analysis of partial differential equations and infinite-dimensional dynamical systems.*

**Mason A. Porter**, University of California, Los Angeles  
*For contributions to nonlinear and complex systems, and to the emerging field of network science.*

**Rachel Justine Pries**, Colorado State University  
*For contributions to arithmetic geometry, and for service to the mathematical community.*

**Andrew Putman**, University of Notre Dame  
*For contributions to combinatorial and geometric group theory and topology.*

**Eric M. Rains**, California Institute of Technology  
*For contributions to quantum information theory and coding theory, the theory of random matrices, the study of special functions, non-commutative geometry and number theory.*

**Kavita Ramanan**, Brown University  
*For contributions to the theory and applications of stochastic processes.*

**Peter Sarnak**, Princeton University and The Institute for Advanced Study  
*For contributions to number theory and analysis.*

**Larry L. Schumaker**, Vanderbilt University  
*For contributions to spline theory, approximation theory, and numerical analysis, and for service to the profession.*

**Albert Schwarz**, University of California, Davis  
*For contributions to mathematical physics.*

**Timo Seppäläinen**, University of Wisconsin, Madison  
*For contributions to probability.*

**Roger R. Smith**, Texas A&M University  
*For contributions to operator theory and operator algebras.*

**Kannan Soundararajan**, Stanford University  
*For contributions to analytic number theory.*

**Hema Srinivasan**, University of Missouri-Columbia  
*For contributions to algebra and algebraic geometry, mentoring, and service to the mathematical community.*

**Ed Swartz**, Cornell University  
*For contributions to topological and geometric combinatorics.*

**Simon Tavaré**, University of Cambridge  
*For contributions to population genetics and computational biology, and for service to the profession.*

**Joseph M. Teran**, University of California, Los Angeles  
*For contributions to numerical methods for partial differential equations in classical physics with modern applications.*

**Richard P. Thomas**, Imperial College  
*For contributions to algebraic geometry.*

**Marie-France Vigneras**, Université Paris-Diderot  
*For contributions to the Langlands program and the theory of automorphic forms.*

**Luc Vinet**, Université de Montréal  
*For contributions to mathematical physics and special functions, and for service to the mathematical community.*

**Weiqiang Wang**, University of Virginia  
*For contributions to Lie theory and representation theory and service to the mathematical community.*

**Richard M. Weiss**, Tufts University  
*For contributions to group theory and geometry, and for exposition.*

**Sarah Witherspoon**, Texas A&M University  
*For contributions to representation theory and cohomology of Hopf algebras, quantum groups, and related objects, and for service to the profession and mentoring.*

**Milen Yakimov**, Louisiana State University, Baton Rouge  
*For contributions to noncommutative algebra and service to the mathematical community.*

**Catherine Huafei Yan**, Texas A&M University  
*For contributions to combinatorics and discrete geometry.*

### Photo Credit

Photos by Kate Awtrey, Atlanta Convention Photography.

See more at: [www.ams.org/profession/ams-fellows/new-fellows](http://www.ams.org/profession/ams-fellows/new-fellows).