



# 2021 *Class of* Fellows of the AMS

Forty-six mathematical scientists from around the world have been named Fellows of the American Mathematical Society (AMS) for 2021.

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.

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 <https://www.ams.org/ams-fellows>.



**Gang Bao**, Zhejiang University

*For contributions to applied mathematics, in particular to inverse problems and wave propagation.*

**Jason P. Bell**, University of Waterloo

*For contributions to noncommutative algebra and arithmetic dynamics.*

**Bhargav Bhatt**, University of Michigan

*For contributions to algebraic and arithmetic geometry in mixed and positive characteristic.*

**Dan Boneh**, Stanford University

*For contributions to cryptography.*

**Jonathan Brundan**, University of Oregon

*For contributions to Lie theory and representation theory.*

**Rene Carmona**, Princeton University

*For contributions to probability theory and its applications to mathematical physics, image processing and financial mathematics.*

**Raymond Hon-fu Chan**, City University of Hong Kong

*For contributions to computational mathematics, in particular to numerical linear algebra and applications to imaging sciences.*

**Michael Christ**, University of California, Berkeley

*For contributions to harmonic and complex analysis, and linear partial differential equations.*

**Ricardo Cortez**, Tulane University

*For contributions in numerical methods for fluid dynamics and leadership in promoting opportunities in mathematical sciences for underrepresented groups.*

**Daniel A. Goldston**, San Jose State University

*For contributions to analytic number theory.*

**John Greenlees**, University of Warwick

*For contributions to commutative algebra and algebraic topology, in particular to equivariant stable homotopy theory.*

**Jean-Luc Guermond**, Texas A&M University

*For contributions to computational mathematics, in particular to the theory of finite element methods in partial differential equations.*

**Boris Hasselblatt**, Tufts University

*Eleventh Secretary of the American Mathematical Society.*

**Michael A. Hill**, University of California, Los Angeles

*For contributions to algebraic topology, in particular equivariant stable homotopy theory.*

**Michael Hopkins**, Harvard University

*For contributions to algebraic topology and related areas of algebraic geometry, representation theory, and mathematical physics.*

**James Allen Isenberg**, University of Oregon

*For contributions to mathematical general relativity and geometry flows.*

**Lionel Levine**, Cornell University

*For contributions to research and exposition in probability theory and combinatorics.*

**Marta Lewicka**, University of Pittsburgh

*For contributions to partial differential equations, calculus of variations, and continuum mechanics.*

**Hanfeng Li**, State University of New York at Buffalo

*For contributions to algebraic dynamics and operator algebras.*

**Kening Lu**, Brigham Young University

*For contributions to infinite-dimensional and stochastic dynamics and their applications to partial differential equations.*

**G. Robert Meyerhoff**, Boston College

*For contributions to hyperbolic geometry including work on Chern-Simons theory and volumes of hyperbolic 3 manifolds.*

**Juan C. Meza**, University of California, Merced

*For contributions to the mathematical profession through leadership at the national level and to scientific computing and applications.*

**Yair Nathan Minsky**, Yale University

*For contributions to hyperbolic 3-manifolds, low-dimensional topology, geometric group theory and Teichmüller theory.*

**Rick Miranda**, Colorado State University

*For contributions to algebraic geometry, especially the study of degenerations, and for high-quality exposition.*

**Marius Mitrea**, Baylor University

*For contributions to partial differential equations and related subjects.*

**Jennifer Morse**, University of Virginia

*For contributions to algebraic combinatorics and representation theory and service to the mathematical community.*

**Volodymyr Nekrashevych**, Texas A&M University

*For contributions to group theory, dynamics, and operator algebras.*

**Denis Osin**, Vanderbilt University

*For contributions in geometric group theory, specifically groups acting on hyperbolic spaces.*

**Duong H. Phong**, Columbia University  
*For contributions to analysis, geometry, and mathematical physics.*

**Lillian B. Pierce**, Duke University  
*For contributions to number theory and harmonic analysis.*

**Cristian D. Popescu**, University of California, San Diego  
*For contributions to number theory and arithmetic geometry.*

**Siddhartha Sahi**, Rutgers, The State University of New Jersey, New Brunswick  
*For contributions to harmonic analysis and representation theory of real reductive groups, algebraic combinatorics, probability, mathematical physics and statistics.*

**Karl Schwede**, University of Utah  
*For contributions to birational geometry in positive and mixed characteristic, in particular in the context of the minimal model program.*

**Mikhail Shapiro**, Michigan State University  
*For contributions to enumerative algebraic geometry and to the theory of cluster algebras.*

**Valeria Simoncini**, Università di Bologna  
*For contributions to computational mathematics, in particular to numerical linear algebra.*

**Yannick Sire**, Johns Hopkins University  
*For contributions to analysis and geometry, in particular Kolmogorov-Arnold-Moser theory and nonlocal diffusion processes.*

**Andrew V. Sutherland**, Massachusetts Institute of Technology  
*For contributions to number theory, both on the theoretical and computational aspects of the subject.*

**Richard A. Tapia**, Rice University  
*For contributions in optimization theory and computational methods and for sustained efforts in fostering diversity and excellence in mathematics and science at the national level.*

**Anthony Várilly-Alvarado**, Rice University  
*For contributions to algebraic and arithmetic geometry, in particular to the study of rational points on varieties.*

**Jeffrey A. Viaclovsky**, University of California, Irvine  
*For contributions to differential geometry and geometric analysis.*

**Bianca Viray**, University of Washington  
*For contributions to arithmetic geometry, in particular to the subject of rational points on varieties, and for sustained efforts to support underrepresented groups in mathematics.*

**Alexander L. Volberg**, Michigan State University  
*For contributions to harmonic analysis and its relations to geometric measure theory.*

**Talitha M. Washington**, Clark Atlanta University and Atlanta University Center  
*For contributions to broadening the participation of underrepresented groups, and service to the mathematical profession.*

**Tong Yang**, City University of Hong Kong  
*For contributions to hyperbolic conservation laws and kinetic equations.*

**Laurent Younes**, Johns Hopkins University  
*For contributions to graphical model identification and shape analysis with applications to machine learning, medical imaging and computational anatomy.*

**Eric Zaslow**, Northwestern University  
*For contributions to mathematical physics and mirror symmetry.*

#### Credits

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