Thirty-nine mathematical scientists from around the world have been named Fellows of the American Mathematical Society (AMS) for 2023.

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.

Antonio Auffinger, Northwestern University
For contributions to probability theory and mathematical physics and, in particular, to the study of spin glasses and percolation theory.

József Balogh, University of Illinois, Urbana-Champaign
For contributions to extremal combinatorics, probability and additive number theory, and for graduate mentoring.

Mark Behrens, University of Notre Dame
For contributions to algebraic topology and, in particular, homotopy theory.

Lydia Bieri, University of Michigan
For contributions to mathematical general relativity and geometric analysis.

Jan Hendrik Bruinier, Technische Universität Darmstadt
For contributions to number theory, automorphic forms, and arithmetic geometry.

Jin-Yi Cai, University of Wisconsin, Madison
For contributions to computational complexity theory, especially in the areas of complexity dichotomy.

Xiaojun Chen, The Hong Kong Polytechnic University
For contributions to mathematical optimization, stochastic variational inequalities, and the analysis of nondifferentiable functions.

Kai Cieliebak, Universitaet Augsburg
For contributions to symplectic geometry and Hamiltonian dynamics.
Matthew Foreman, University of California, Irvine
For contributions to axioms of mathematics, Banach-Tarski phenomena, and descriptive dynamical systems.

Slava Krushkal, University of Virginia
For contributions to low-dimensional topology and, in particular, the topology of 4-manifolds.

Guihua Gong, University of Puerto Rico at Rio Piedras
For contributions to operator algebras and its application, in particular, to classification of C*-algebras.

Matilde Lalin, Université de Montréal
For contributions to number theory, including the study of L-functions, and for service to the mathematical community.

Maria Gordina, University of Connecticut, Storrs
For contributions to stochastic and geometric analysis, infinite-dimensional analysis, and ergodicity of hypoelliptic diffusions.

Christopher J. Leininger, Rice University
For contributions to geometric group theory, low-dimensional topology, and mentoring junior mathematicians.

Kirsten Graham Wickelgren, Duke University
For contributions to algebraic topology, algebraic geometry, and number theory.

Jiawang Nie, University of California, San Diego
For contributions to optimization, tensor computation, and convex algebraic geometry.

Ling Long, Louisiana State University, Baton Rouge
For contributions to geometric group theory, modular forms, and supercongruences.

Jianfeng Lu, Duke University
For contributions to applied mathematics, electronic structure theory, and high dimensional problems.

David Nualart, University of Kansas
For contributions to Malliavin calculus, stochastic PDE’s, and fractional Brownian motion.

Jiayang Nie, University of California, San Diego
For contributions to optimization, tensor computation, and convex algebraic geometry.

Sam Payne, University of Texas at Austin
For contributions to algebraic geometry and tropical geometry, and for mentorship of young researchers.

Guoqiang Qin, University of Chicago
For contributions to algebraic geometry and number theory.

Wei Ho, Princeton University and University of Michigan
For contributions to number theory and algebraic geometry, and for service to the mathematical community.

Jennifer Hom, Georgia Institute of Technology
For contributions to low-dimensional topology, Heegaard Floer homology, and service to the mathematical community.

Yiannis Sakellaridis, Johns Hopkins University
For contributions to representation theory and the theory of automorphic forms, and for service to the mathematical community.

Anurag K. Singh, University of Utah
For contributions to commutative algebra and for mentoring young mathematicians.

Betsy Stovall, University of Wisconsin, Madison
For contributions to harmonic analysis.

Xiang Tang, Washington University
For contributions to noncommutative geometry, Poisson geometry, and for service to the profession.

Stephanie van Willigenburg, University of British Columbia
For contributions to algebraic combinatorics, mentorship and exposition, and inclusive community building.

Anderson Varchenko, University of North Carolina at Chapel Hill
For contributions to singularity theory, real algebraic geometry, and the theory of quantum integrable systems.
Vlad C. Vicol, New York University, Courant Institute
For contributions to analysis of nonlinear PDEs arising in fluid dynamics.

Maria Cristina Villalobos, University of Texas Rio Grande Valley
For contributions to modelling and optimization and for broadening the participation of underrepresented groups in mathematics.

Lawrence C. Washington, University of Maryland
For contributions to number theory, especially cyclotomic fields, and for mentoring at all levels.

Zhouli Xu, University of California, San Diego
For contributions to stable homotopy theory, applications to manifold topology, and motivic homotopy theory.

Credits
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