## MEETINGS & CONFERENCES OF THE AMS

### SEPTEMBER TABLE OF CONTENTS

The Meetings and Conferences section of the Notices gives information on all AMS meetings and conferences approved by press time for this issue. Please refer to the page numbers cited on this page for more detailed information on each event. Invited Speakers and Special Sessions are listed as soon as they are approved by the cognizant program committee; the codes listed are needed for electronic abstract submission. For some meetings the list may be incomplete. Information in this issue may be dated.

The most up-to-date meeting and conference information can be found online at: [www.ams.org/meetings](http://www.ams.org/meetings).

### Important Information About AMS Meetings:

- Potential organizers, speakers, and hosts should refer to page 88 in the January 2018 issue of the Notices for general information regarding participation in AMS meetings and conferences.
- Abstracts: Speakers should submit abstracts on the easy-to-use interactive Web form. No knowledge of \LaTeX{} is necessary to submit an electronic form, although those who use \LaTeX{} may submit abstracts with such coding, and all math displays and similarly coded material (such as accent marks in text) must be typeset in \LaTeX{}. Visit [www.ams.org/cgi-bin/abstracts/abstract.pl](http://www.ams.org/cgi-bin/abstracts/abstract.pl). Questions about abstracts may be sent to abs-info@ams.org. Close attention should be paid to specified deadlines in this issue. Unfortunately, late abstracts cannot be accommodated.

### MEETINGS IN THIS ISSUE

#### 2018

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#### 2019

[See [www.ams.org/meetings](http://www.ams.org/meetings) for the most up-to-date information on the meetings and conferences that we offer.]

### ASSOCIATE SECRETARIES OF THE AMS

**Central Section:** Georgia Benkart, University of Wisconsin-Madison, Department of Mathematics, 480 Lincoln Drive, Madison, WI 53706-1388; email: benkart@math.wisc.edu; telephone: 608-263-4283.

**Eastern Section:** Steven H. Weintraub, Department of Mathematics, Lehigh University, Bethlehem, PA 18015-3174; email: steve.weintraub@lehigh.edu; telephone: 610-758-3717.

**Southeastern Section:** Brian D. Boe, Department of Mathematics, University of Georgia, 220 D W Brooks Drive, Athens, GA 30602-7403; email: brian@math.uga.edu; telephone: 706-542-2547.

**Western Section:** Michel L. Lapidus, Department of Mathematics, University of California, Surge Bldg., Riverside, CA 92521-0135; email: lapidus@math.ucr.edu; telephone: 951-827-5910.

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**2020**

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**See [www.ams.org/meetings](http://www.ams.org/meetings) for the most up-to-date information on the meetings and conferences that we offer.**
Meetings & Conferences of the AMS

Newark, Delaware

University of Delaware

September 29–30, 2018
Saturday – Sunday

Meeting #1141
Eastern Section
Associate secretary: Steven H. Weintraub
Announcement issue of Notices: June 2018
Program first available on AMS website: August 9, 2018
Issue of Abstracts: Volume 39, Issue 3

Deadlines
For organizers: Expired
For abstracts: Expired

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses
Leslie Greengard, New York University, Linear and nonlinear inverse problems in imaging.
Elisenda Grigsby, Boston College, Braids, surfaces, and homological invariants.
Davesh Maulik, Massachusetts Institute of Technology, Title to be announced.

Special Sessions
If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Advances in Numerical Approximation of Partial Differential Equations, Constantin Bacuta and Jingmei Qiu, University of Delaware.

Applied Algebraic Topology, Chad Giusti, University of Delaware, and Gregory Henselman, Princeton University.
Billiard Dynamics: Standard and Alternative Collision Models, Tim Chumley, Mount Holyoke College, Chris Cox, University of Delaware, and Renato Feres, Washington University in St. Louis.
Commutative Algebra, Ela Celikbas, West Virginia University, Sema Gunturkun, University of Michigan, and Oana Veliche, Northeastern University.
Convex Geometry and Functional Inequalities, Mokshay Madiman, University of Delaware, Elisabeth Werner, Case Western Reserve University, and Artem Zvavitch, Kent State University. Fixed Point Theory with Application and Computation, Clement Boateng Ampadu, Boston, MA, Penumarthy Parvatesam Murthy, Guru Ghasidas Vishwavidyalaya, Bilaspur, India, Naem Saleem, University of Management and Technology, Lahore, Pakistan, Yaé Ulrich Gaba, Institut de Mathématiques et de Sciences Physiques (IMSP), Porto-Novo, Bénin, and Xavier Udo-utun, University of Uyo, Uyo, Nigeria.
Graph Theory, Sebastian M. Cioabă, University of Delaware, Brian Kronenthal, Kutztown University of Pennsylvania, Felix Lazebnik, University of Delaware, and Wing Hong Tony Wong, Kutztown University of Pennsylvania.
Interplay between Analysis and Combinatorics, Mahya Ghandehari and Dominique Guillot, University of Delaware.

Modern Quasiconformal Analysis and Geometric Function Theory, David Herron, University of Cincinnati, and Yuk-J Leung, University of Delaware.
Nonlinear Water Waves and Related Problems, Philippe Guyenne, University of Delaware.
Operator and Function Theory, Kelly Bickel, Bucknell University, Michael Hartz, Washington University, St. Louis, Constanze Liaw, University of Delaware, and Alan Sola, Stockholm University.
Probability, Combinatorics, and Statistical Mechanics, Nayantara Bhatnagar and Douglas Rizzolo, University of Delaware.

Recent Advances in Nonlinear Schrödinger Equations, Alexander Pankov, Morgan State University, Junping Shi, College of William and Mary, and Jun Wang, Jiangsu University.

Recent Analytic and Numeric Results on Nonlinear Evolution Equations, Xiang Xu, Old Dominion University, and Wujun Zhang, Rutgers University.

Representations of Infinite Dimensional Lie Algebras and Applications, Marco Aldi, Virginia Commonwealth University, Michael Penn, Randolph College, and Juan Villarreal, Virginia Commonwealth University.

Stochastic Processes in Mathematical Biology, Yao Li, University of Massachusetts Amherst, and Abhyudai Singh, University of Delaware.

The Mathematics of Swimmers and Active Particles, Louis Rossi, University of Delaware, and Enkeleida Lushi, Flatiron Institute.

Ann Arbor, Michigan

University of Michigan, Ann Arbor

October 20–21, 2018
Saturday – Sunday

Meeting #1143
Central Section
Associate secretary: Georgia Benkart
Announcement issue of Notices: July 2018
Program first available on AMS website: August 30, 2018
Issue of Abstracts: Volume 39, Issue 4

Deadlines
For organizers: Expired
For abstracts: August 21, 2018

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses
Elena Fuchs, University of Illinois Urbana-Champaign, Title to be announced.
Andrew Putman, University of Notre Dame, Title to be announced.
Charles Smart, University of Chicago, Title to be announced.

Special Sessions
If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Advances in Commutative Algebra (Code: SS 15A), Jack Jeffries, University of Michigan, Linquan Ma, Purdue University, and Karl Schwede, University of Utah.

Advances on Analytical and Geometric Aspects of Differential Equations (Code: SS 24A), Alessandro Arsie, Chunhua Shan, and Ekaterina Shemyakova, University of Toledo.

Analytical and Numerical Aspects of Turbulent Transport (Code: SS 23A), Michele Coti Zelati, Imperial College London, and Ian Tobasco and Karen Zaya, University of Michigan.


Bio-inspired Mechanics and Propulsion (Code: SS 16A), Silas Alben, University of Michigan, and Longhua Zhao, Case Western Reserve University.

Canonical Operators in Several Complex Variables and Related Topics (Code: SS 21A), David Barrett and Luke Edholm, University of Michigan, and Yunus Zeytuncu, University of Michigan, Dearborn.
Cell Motility: Models and Applications (Code: SS 20A),
Magdalena Stolarska, University of St. Thomas, and Ni-
coleta Tarfulea, Purdue University Northwest.

Cluster Algebra, Poisson Geometry, and Related Topics
(Code: SS 9A), Eric Bucher, Michigan State University, and
Maitreyee Kulkarni and Bach Nguyen, Louisiana State
University.

Combinatorics in Algebra and Algebraic Geometry
(Code: SS 14A), Zachary Hamaker, Steven Karp, and Oli-
ver Pechenik, University of Michigan.

Commutative Algebra and Complexity (Code: SS 32A),
Harm Derksen, Francesca Gandini, and Visu Makam,
University of Michigan.

Commutative Ring Theory (Code: SS 22A), Joe Stick-
les, Millikin University, and Darrin Weber, University of
Evansville.

Ergodic and Topological Quantum Systems (Code: SS
28A), Matthew Cha, Ilya Kachkovskiy, and Shiwen Zhang,
Michigan State University.

Extensions-Interpolation-Shape Matching in $R^d$, Symm-
etry-Invariance, Algorithms and Related Topics (Code: SS
11A), Steven Damelin, American Mathematical Society,
and Nir Sharon, Princeton University.

From Hyperelliptic to Superelliptic Curves (Code: SS 6A),
Tony Shaska, Oakland University, Nicola Tarasca, Rutgers
University, and Yuri Zarhin, Pennsylvania State University.

Geometry of Submanifolds, in Honor of Bang-Yen Chen’s
75th Birthday (Code: SS 1A), Alfonso Carriazo, University
of Sevilla, Ivko Dimitric, Penn State Fayette, Yun Myung
Oh, Andrews University, Bogdan D. Suceava, California
State University, Fullerton, Joeri Van der Veken, University
of Leuven, and Luc Vrancken, Universite de Valen-
ciennes.

Interactions between Algebra, Machine Learning and
Data Privacy (Code: SS 3A), Jonathan Gryak, University of
Michigan, Kelsey Horan, CUNY Graduate Center, Delaram
Kahrobaei, CUNY Graduate Center and New York University,
Kayvan Najarian and Reza Soroshrmehr, University of Mich-
gen, and Alexander Wood, CUNY Graduate Center.

Large Cardinals and Combinatorial Set Theory (Code:
SS 10A), Andres E. Caicedo, Mathematical Reviews, and
Paul B. Larson, Miami University.

Mathematics of the Genome (Code: SS 30A), Anthony
Bloch, Daniel Burns, and Indika Rajapakse, University
of Michigan.

Modern Trends in Integrable Systems (Code: SS 12A),
Deniz Bilman, Peter Miller, Michael Music, and Guilherme
Silva, University of Michigan.

Multiplicities and Volumes: An Interplay Among Alge-
bra, Combinatorics, and Geometry (Code: SS 19A), Federico
Castillo, University of Kansas, and Jonathan Montaño,
New Mexico State University.

New Trends in Numerical Methods for Partial Differ-
ential Equations: Theory and Applications (Code: SS 17A),
Fatih Celiker, Wayne State University.

Nonlocality in Models for Kinetic, Chemical, and Popula-
tion Dynamics (Code: SS 25A), Christopher Henderson,
University of Chicago, Stanley Snelson, Florida Institute
of Technology, and Andrei Tarfulea, University of Chicago.

Probabilistic Methods in Combinatorics (Code: SS 7A),
Patrick Bennett and Andrzej Dudek, Western Michigan
University, and David Galvin, University of Notre Dame.

Random Matrix Theory Beyond Wigner and Wishart
(Code: SS 2A), Elizabeth Meckes and Mark Meckes, Case
Western Reserve University, and Mark Rudelson, Univer-
sity of Michigan.

Recent Advances in Nonlinear PDE (Code: SS 31A), Jes-
rica Lin, McGill University, and Russell Schwab, Michigan
State University.

Recent Developments in Discontinuous Galerkin Methods
for Differential Equations (Code: SS 34A), Mahboub Bac-
couch, University of Nebraska at Omaha.

Recent Developments in Mathematical Analysis of Some
Nonlinear Partial Differential Equations (Code: SS 18A),
Mimi Dai, University of Illinois at Chicago.

Recent Developments in the Mathematics of Tomogra-
phy and Scattering (Code: SS 26A), Shixu Meng, University
of Michigan, and Yang Yang, Michigan State University.

Recent Trends on Local, Nonlocal and Fractional Partial
Differential Equations (Code: SS 27A), Pablo Raül Stinga,
Iowa State University, Peiyong Wang, Wayne State Univer-
sity, and Jiuyi Zhu, Louisiana State University.

Representations of Reductive Groups over Local Fields
and Related Topics (Code: SS 8A), Anne-Marie Aubert,
Institut Mathématiques de Jussieu, Paris Rive Gauche, Jessi-
ca Fintzen, IAS, University of Michigan, University of
Cambridge, and Camelia Karimanpour, University of
Michigan.

Self-similarity and Long-range Dependence in Stochastic
Processes (Code: SS 4A), Takashi Owada, Purdue Univer-
sity, Yi Shen, University of Waterloo, and Yizao Wang,
University of Cincinnati.

Structured Homotopy Theory (Code: SS 5A), Thomas
Fiore, University of Michigan, Dearborn, Po Hu and Dan
Isaksen, Wayne State University, and Igor Kriz, University
of Michigan.

The Mathematics of Decisions, Elections, and Games
(Code: SS 29A), Michael A. Jones, Mathematical Reviews,
and David McCune, William Jewell College.

Topics in Graph Theory, Hypergraphs and Set Systems
(Code: SS 33A), John Engbers, Marquette University, and
Cliff Smyth, University of North Carolina, Greensboro.
MEETINGS & CONFERENCES

San Francisco, California
San Francisco State University

October 27–28, 2018
Saturday – Sunday

Meeting #1144
Western Section
Associate secretary: Michel L. Lapidus
Announcement issue of Notices: July 2018
Program first available on AMS website: September 6, 2018
Issue of Abstracts: Volume 39, Issue 4

Deadlines
For organizers: Expired
For abstracts: August 28, 2018

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs
/sectional.html.

Invited Addresses
Srikanth B. Iyengar, University of Utah, Title to be announced.
Sarah Witherspoon, Texas A&M University, Derivatives, Derivations, and Hochschild Cohomology.
Abdul-Aziz Yakubu, Howard University, Population cycles in discrete-time infectious disease models.

Special Sessions
If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin
/abstracts/abstract.pl.

Advances in Operator Theory, Operator Algebras, and Operator Semigroups (Code: SS 14A), Asuman G. Aksoy, Claremont McKenna College, Michael Hartglass, Santa Clara University, Zair Ibragimov, California State University, Fullerton, and Marat Markin, California State University, Fresno.
Algebraic Geometry (Code: SS 21A), Emily Clader and Dustin Ross, San Francisco State University, and Mark Shoemaker, Colorado State University.
Analysis and Geometry of Fractals (Code: SS 7A), Kyle Hambrook, University of Rochester, Chun-Kit Lai, San Francisco State University, and Sze-Man Ngai, Georgia Southern University.
Big Data and Statistical Analytics (Code: SS 17A), Tao He, Mohammad Kafai, and Alexandra Piryatinska, San Francisco State University.

Combinatorial and Categorical Aspects of Representation Theory (Code: SS 10A), Nicholas Davidson and Jonathan Kujawa, University of Oklahoma, and Robert Muth, Tarleton State University.
Coupling in Probability and Related Fields (Code: SS 3A), Sayan Banerjee, University of North Carolina, Chapel Hill, and Terry Soo, University of Kansas.
Geometric Analysis (Code: SS 8A), Ovidiu Munteanu, University of Connecticut, and David Bao, San Francisco State University.
Geometric Methods in Hypercomplex Analysis (Code: SS 13A), Paula Cerejeiras, Universidade de Aveiro, Matvei Libine, Indiana University, Bloomington, and Mihaela B. Vajiac, Chapman University.
Geometric and Analytic Inequalities and their Applications (Code: SS 4A), Nicholas Brubaker, Isabel M. Serrano, and Bogdan D. Suceavă, California State University, Fullerton.
Homological Aspects in Commutative Algebra and Representation Theory (Code: SS 5A), Srikanth B. Iyengar, University of Utah, and Julia Pevtsova, University of Washington.
Homological Aspects of Noncommutative Algebra and Geometry (Code: SS 2A), Dan Rogalski, University of California, San Diego, Sarah Witherspoon, Texas A&M University, and James Zhang, University of Washington, Seattle.
Markov Processes, Gaussian Processes and Applications (Code: SS 18A), Alan Krinik and Randall J. Swift, California State Polytechnic University.
Mathematical Biology with a focus on Modeling, Analysis, and Simulation (Code: SS 1A), Jim Cushing, The University of Arizona, Saber Elaydi, Trinity University, Suzanne Sindl, University of California, Merced, and Abdul-Aziz Yakubu, Howard University.
Mathematical Methods for the study of the Three Dimensional Structure of Biopolymers (Code: SS 22A), Javier Arsuaga and Mariel Vazquez, University of California Davis, Davis, and Robin Wilson, Cal Poly Pomona.
Noncommutative Geometry and Fundamental Applications (Code: SS 12A), Konrad Aguilar, Arizona State University, and Frederic Latremoliere, University of Denver.
Nonlocal PDEs via Harmonic Analysis (Code: SS 20A), Tadele Mengesha, University of Tennessee, Knoxville, and Armin Schikorra, University of Pittsburgh.
Probabilistic and Statistical Problems in Stochastic Dynamics (Code: SS 16A), Tao He, Mohammad Kafai, and Alexandra Piryatinska, San Francisco State University.
Research in Mathematics by Early Career Graduate Students (Code: SS 11A), Michael Bishop, Marat Markin, Jenna Tague, and Khang Tran, California State University, Fresno.
Social Change In and Through Mathematics and Education (Code: SS 19A), Federico Ardila and Matthias Beck, San Francisco State University, Jamylle Carter, Diablo Valley Community College, and Kimberly Seashore, San Francisco State University.
Statistical and Geometrical Properties of Dynamical Systems (Code: SS 6A), Joanna Furno and Matthew Nicol,
University of Houston, and Mariusz Urbanski, University of North Texas.

Topics in Operator Theory: CANCELLED (Code: SS 15A), Anna Skripka and Maxim Zinchenko, University of New Mexico.

Fayetteville, Arkansas
University of Arkansas
November 3–4, 2018
Saturday - Sunday

Meeting #1142
Southeastern Section
Associate secretary: Brian D. Boe
Announcement issue of Notices: July 2018
Program first available on AMS website: August 16, 2018
Issue of Abstracts: Volume 39, Issue 3

Deadlines
For organizers: Expired
For abstracts: September 4, 2018

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses
Mihalis Dafermos, Princeton University, On falling into black holes.
Jonathan Hauenstein, University of Notre Dame, Numerical Algebraic Geometry and Optimization.
Kathryn Mann, Brown University, Group actions, geometry and rigidity.

Special Sessions
If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Advances in Birational Geometry (Code: SS 11A), Roi Docampo, University of Oklahoma, and Lance Edward Miller and Wenbo Niu, University of Arkansas.

Commutative Algebra (Code: SS 3A), Alessandro De Stefani, University of Nebraska-Lincoln, Paolo Mantero, University of Arkansas, and Thomas Polstra, University of Utah.

Groups in Low-dimensional Topology and Dynamics (Code: SS 7A), Matt Clay, University of Arkansas, and Kathryn Mann, Brown University.

Harmonic Analysis and Partial Differential Equations (Code: SS 8A), Ariel Barton, University of Arkansas, and Simon Bortz, University of Minnesota.

Interactions Between Combinatorics and Commutative Algebra (Code: SS 10A), Ashwini Bhat, Chris Francisco, and Jeffrey Mermin, Oklahoma State University.

Interactions Between Contact and Symplectic Geometry and Low-dimensional Topology (Code: SS 5A), Jeremy Van Horn-Morris, University of Arkansas, and David Shea Vela-Vick, Louisiana State University.

Non-associative Algebraic Structures and their (Co)homology Theories (Code: SS 12A), Michael Kinyon, University of Denver, Jozef H Przytycki, The George Washington University, and Petr Vojtechovsky and Seung Yeop Yang, University of Denver.


Operator Theory and Function Spaces of Analytic Functions (Code: SS 13A), Daniel Luecking and Maria Tjani, University of Arkansas.

Partial Differential Equations in Several Complex Variables (Code: SS 2A), Phillip Harrington and Andrew Raich, University of Arkansas.

Recent Advances in Mathematical Fluid Mechanics (Code: SS 1A), Zachary Bradshaw, University of Arkansas.

Recent Developments on Fluid Turbulence (Code: SS 6A), Eleftherios Gkioulekas, University of Texas Rio Grande Valley.

The Geometry of Curves and Applications (Code: SS 14A), Jason Cantarella and Philipp Reiter, University of Georgia.

Validation and Verification Strategies in Multiphysics Problems (Code: SS 4A), Tulin Kaman, University of Arkansas.
MEETINGS & CONFERENCES

Baltimore, Maryland

Baltimore Convention Center, Hilton Baltimore, and Baltimore Marriott Inner Harbor Hotel

January 16–19, 2019
Wednesday – Saturday

Meeting #1145
Joint Mathematics Meetings, including the 125th Annual Meeting of the AMS, 102nd Annual Meeting of the Mathematical Association of America (MAA), annual meetings of the Association for Women in Mathematics (AWM) and the National Association of Mathematicians (NAM), and the winter meeting of the Association of Symbolic Logic (ASL), with sessions contributed by the Society for Industrial and Applied Mathematics (SIAM).

Associate secretary: Steven H. Weintraub
Announcement issue of Notices: October 2018
Program first available on AMS website: November 1, 2018
Issue of Abstracts: Volume 40, Issue 1

Deadlines
For organizers: Expired
For abstracts: September 25, 2018

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/national.html.

Joint Invited Addresses

Sarah Koch, University of Michigan, Title to be announced (AMS-MAA Invited Address).

Bryna Kra, Northwestern University, Dynamics of systems with low complexity (AWM-AMS Noether Lecture).

Cathy O’Neil, ORCAA, Big data, inequality, and democracy (MAA-AMS-SIAM Gerald and Judith Porter Public Lecture).

Daniel Spielman, Yale University, Miracles of Algebraic Graph Theory (AMS-MAA Invited Address).

AMS Invited Addresses

Jesus De Loera, University of California Davis, Title to be announced.

Benedict H. Gross, University of California San Diego, Complex multiplication: past, present, future (AMS Colloquium Lectures: Lecture I).

Benedict H. Gross, University of California San Diego, Complex multiplication: past, present, future (AMS Colloquium Lectures: Lecture II).

Benedict H. Gross, University of California San Diego, Complex multiplication: past, present, future (AMS Colloquium Lectures: Lecture III).

Peter Ozsvath, Princeton University, Title to be announced.

Lior Pachter, University of California Berkeley, Title to be announced.

Karen Hunger Parshall, University of Virginia, The Roaring Twenties in American Mathematics.

Alan Perelson, Los Alamos National Laboratory, Title to be announced (AMS Josiah Willard Gibbs Lecture).

Lillian Pierce, Duke University, Title to be announced.

AMS Special Sessions
If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at jointmathematicsmeetings.org/meetings/abstracts/abstract.pl?type=jmm.

Some sessions are cosponsored with other organizations. These are noted within the parenthesis at the end of each listing, where applicable.


A Showcase of Number Theory at Undergraduate Institutions (Code: SS 76A), Adriana Salerno, Bates College, and Lola Thompson, Oberlin College.

Advances and Applications in Integral and Differential Equations (Code: SS 40A), Jeffrey T. Neugebauer, Eastern Kentucky University, and Min Wang, Kennesaw State University.

Advances by Early Career Women in Discrete Mathematics (Code: SS 75A), Jessalyn Bolkema, State University of New York at Oswego, and Jessica De Silva, California State University, Stanislaus.

Advances in Operator Theory, Operator Algebras, and Operator Semigroups (Code: SS 30A), Joseph Ball, Virginia Tech, Marat Markin, California State University, Fresno, Igor Nikolaev, St. John’s University, and Ilya Spitkovsky, New York University, Abu Dhabi.

Advances in Quantum Walks, Quantum Simulations, and Related Quantum Theory (Code: SS 18A), Radhakrishnan Balu, US Army Research Lab, Chaobin Liu, Bowie State University, and Takuya Machida, Nihon University, Japan.

Agent-based Modeling in Biological and Social Systems (Mathematics Research Communities Session) (Code: SS 15A), Maryann Hohn, University of California, Santa Barbara, Angelika Manhart, Imperial College, London, Christopher Miles, Courant Institute, New York University, Cole Zmurchok, University of British Columbia.

Algebraic Structures Motivated by Knot Theory (Code: SS 51A), Mikhail Khovanov, Columbia University, and Jozef H. Przytycki and Alexander Shumakovitch, George Washington University.

Algebraic and Geometric Methods in Discrete Optimization (Code: SS 2A), Amitabh Basu, Johns Hopkins University, and Jesus De Loera, University of California, Davis.

Algebraic, Discrete, Topological and Stochastic Approaches to Modeling in Mathematical Biology (Code: SS 43A), Olcay Akman, Illinois State University, Timothy D. Comar, Benedictine University, Daniel Hrozencik, Chicago State University, and Raina Robeva, Sweet Briar College.
Algorithmic Dimensions and Fractal Geometry (Code: SS 37A), Jack H. Lutz, Iowa State University, and Elvira Mayordomo, University of Zaragoza, Spain (AMS-ASL).

Analysis and Geometry of Nonlinear Evolution Equations (Code: SS 65A), Marius Beceanu, University at Albany, State University of New York, and Dan-Andrei Geba, University of Rochester.

Analysis of Fractional, Stochastic, and Hybrid Dynamic Systems with Applications (Code: SS 19A), John R. Graef, University of Tennessee at Chattanooga, G. S. Ladde, University of South Florida, and A. S. Vatsala, University of Louisiana at Lafayette.

Analytic Number Theory (Code: SS 33A), Thomas A. Hulse, Boston College, Angel V. Kumchev and Nathan McNew, Towson University, and John Miller, The Johns Hopkins University.

Arithmetic Statistics (Code: SS 53A), Michael Chou and Robert Lemke Oliver, Tufts University, and Ari Shnidman, Center for Communications Research-Princeton.

Bifurcations of Difference Equations and Discrete Dynamical Systems with Applications (Code: SS 72A), Arzu Bilgin, Recep Tayyip Erdogan University, Turkey, and Toufik Kyhat, Trinity College.

Commutative Ring Theory: Research for Undergraduate and Early Graduate Students (Code: SS 60A), Nicholas Baeth, Franklin and Marshall College, and Branden Stone, Hamilton College.

Continued Fractions (Code: SS 35A), Geremías Polanco Encarnación, Hampshire College, James McLaughlin, West Chester University, Barry Smith, Lebanon Valley College, and Nancy J. Wyshinski, Trinity College.

Counting Methods in Number Theory (Code: SS 6A), Lillian Pierce, Duke University, Arindam Roy, Rice University, and Jiayu Wang, University of Wisconsin.

Definability and Decidability Problems in Number Theory (Code: SS 24A), Kirsten Eisentraeger, Pennsylvania State University, Deidre Haskell, McMaster University, Ontario, Canada, Jennifer Park, University of Michigan, and Alexander Shlapentokh, East Carolina University (AMS-ASL).


Enumerative Combinatorics (Code: SS 26A), Miklos Bona, University of Florida, and Cheyne Homberger, University of Maryland, Baltimore County.

Financial Mathematics (Code: SS 66A), Maxim Bichuch, Johns Hopkins University, Anja Richter, Baruch College, City University of New York, and Stephan Sturm, Worcester Polytechnic Institute.

Geometric and Topological Combinatorics (Code: SS 39A), Anastasia Chavez and Jamie Haddock, University of California, Davis, and Annie Raymond, University of Massachusetts, Amherst.

Geometric and Topological Generalization of Groups (Code: SS 74A), Amrita Acharyya, University of Toledo, and Bikash C. Das, University of North Georgia.

Geometry Labs United: Research, Visualization, and Outreach (Code: SS 57A), Marianne Korten, Kansas State University, and Sean Lawton and Anton Lukyanenko, George Mason University.

Geometry and Dynamics of Continued Fractions (Code: SS 47A), Anton Lukyanenko, George Mason University, and Joseph Vandebay, Ohio State University.

Geometry of Representation Spaces (Code: SS 58A), Sean Lawton, George Mason University, Chris Manon, University of Kentucky, and Daniel Ramras, Indiana University-Purdue University Indianapolis.

Group Representation Theory and Character Theory (Code: SS 38A), Mohammad Reza Darafsheh, University of Tehran, Iran, and Manouchehr Misaghian, Prairie View A&M University.

Harmonic Analysis, Partial Differential Equations, and Applications (Code: SS 44A), Russell Brown, University of Kentucky, and Irina Mitrea, Temple University.

Harmonic Analysis: Recent Developments in Oscillatory Integrals (a Mathematics Research Communities Session) (Code: SS 12A), Taryn C. Flock, University of Massachusetts Amherst, Xiumin Du, University of Maryland, Yakun Xi, University of Rochester.

History of Mathematics (Code: SS 42A), Sloan Despeaux, Western Carolina University, Jemma Lorenat, Pitzer College, Daniel E. Otero, Xavier University, and Adrian Rice, Randolph-Macon College (AMS-MAA-ICHM).

Hopf Algebras and Tensor Categories (Code: SS 62A), Shu-Hung Ng, Louisiana State University, Julia Plavnik, Texas A&M University, and Henry Tucker, University of California, San Diego.


If You Build It They Will Come: Presentations by Scholars in the National Alliance for Doctoral Studies in the Mathematical Sciences (Code: SS 54A), David Goldberg, Purdue University, and Phil Kutzko, University of Iowa.

Latinx in Math (Code: SS 34A), Alexander Diaz-Lopez, Villanova University, Laura Escobar, University of Illinois, and Juana Pinzón-Caicedo, North Carolina State University.

Lattice Path Combinatorics and Applications (Code: SS 68A), Christian Krattenthaler, University of Vienna, Austria, and Alan Krinik and Randall J. Swift, California State Polytechnic University.

Localization and Delocalization for Disordered Quantum Systems (Code: SS 83A), Peter D. Hislop, University of Kentucky, Christoph A. Marx, Oberlin College, and Jeffery Schenker, Michigan State University.

Low Complexity Models in Data Analysis and Machine Learning (Code: SS 55A), Emily J. King, University of Bremen, Germany, Nate Strawn, Georgetown University, and Soledad Villar, New York University.

Mappings on Metric and Banach Spaces with Applications to Fixed Point Theory (Code: SS 63A), Torrey M. Gal-
MEETINGS & CONFERENCES

Laghe, Bucknell University, and Christopher J. Lennard, University of Pittsburgh.

Mathematical Analysis in Fluid Dynamics (Code: SS 31A), Yanqi Guo, Florida International University, Jinkai Li, South China Normal University, Jing Tian, Towson University, and Yuncheng You, University of South Florida.

Mathematical Investigations of Spatial Ecology and Epidemiology (Code: SS 79A), Leah Shaw and Junping Shi, College of William and Mary, and Zhisheng Shuai, University of Central Florida.

Mathematical Models in Ecology, Epidemiology, and Medicine (Code: SS 85A), Richard Schugart, Western Kentucky University, and Najat Ziyadi, Morgan State University.

Mathematicians at Sea (in the Sky, or on Land): Defense Applications of Mathematics (Code: SS 21A), Tegan Emerson, Timothy Doster, and George Stantchev, Naval Research Laboratory.

Mathematics in the Realm of Cyber Research (Code: SS 22A), Daniel Bennett, Army Cyber Institute, Paul Goethals, United States Military Academy, and Natalie Scala, Towson University.

Mathematics of Coding Theory and Applications (Code: SS 78A), Hiram Lopez-Valdez and Felice Mangiello, Clemson University, and Gretchen L. Matthews, Virginia Tech.

Mathematics of Gravity and Light (a Mathematics Research Communities Session) (Code: SS 11A), Sougata Dhar, University of Maine, Chad R. Mangum, Niagara University, and Nadine Stritzelberger, University of Waterloo.

Multiscale Problems in the Calculus of Variations (Code: SS 46A), Elisa Davoli, University of Vienna, Austria, and Rita Ferreira, King Abdullah University of Science and Technology, Saudi Arabia.

Natural Resources Modeling (Code: SS 56A), Julie Blackwood, Williams College, and Shandelle M. Henson, Andrews University.

Network Science (Code: SS 52A), David Burstein, Swarthmore College, Franklin Kenter, United States Naval Academy, and Feng "Bill" Shi, University of North Carolina.

New Directions in the Theory of Complex Multiplication (Code: SS 1A), Henri Darmon, McGill University, Samit Dasgupta, University of California, Santa Cruz, and Benedict Gross, Harvard University.

Nonlinear Evolution Equations and Their Applications (Code: SS 20A), Mingchao Cai, Morgan State University, Gisele Mophou Loudjom, University of French West Indies, Guadeloupe, France, and Gaston N’Guerékata, Alexander Pankov, Xuming Xie, and Guoping Zhang, Morgan State University.


Number Theoretic Methods in Hyperbolic Geometry (a Mathematics Research Communities Session) (Code: SS 14A), Samantha Fairchild, University of Washington, Junxian Li, University of Illinois Urbana-Champaign, and Richard Vradenburg, University of Virginia.

Number Theory, Arithmetic Geometry, and Computation (Code: SS 61A), Brendan Hassett, Brown University, Drew Sutherland, Massachusetts Institute of Technology, and John Voight, Dartmouth College.

Numerical Methods for PDEs and Applications (Code: SS 41A), Wenrui Hao, Qingguo Hong, and Jinchao Xu, Pennsylvania State University.


Orthogonal Polynomials, Quantum Probability, Harmonic and Stochastic Analysis (Code: SS 27A), Nobuhiro Asai, Aichi University of Education, Kariya, Japan, Rodica Costin, The Ohio State University, Aurel I. Stan, The Ohio State University at Marion, and Hiroaki Yoshida, Ochanomizu University, Tokyo, Japan.

Partition Theory and Related Topics (Code: SS 80A), Dennis Eichhorn, University of California, Irvine, Tim Huber, University of Texas, Rio Grande Valley, and Amita Malik, Rutgers University.

Problems in Partial Differential Equations (Code: SS 36A), Alex Himonas, University of Notre Dame, and Curtis Holliman, The Catholic University of America.

Quantum Symmetries: Subfactors and Fusion Categories (a Mathematics Research Communities Session) (Code: SS 13A), Cain Edie-Michell, Vanderbilt University, Lauren Ruth, Vanderbilt University, and Yilong Wang, Louisiana State University.

Quaternions (Code: SS 28A), Terrence Blackman, Medgar Evers College, City University of New York, and Johannes Hamilton and Chris McCarthy, Borough of Manhattan Community College, City University of New York.

Recent Advancements in Mathematical Modeling of Cancer (Code: SS 49A), Kamila Larriga, Humboldt State University, and Hwayeon Ryu, University of Hartford.

Recent Advances and Trends in Computable Structure Theory (in honor of J. Remmel) (Code: SS 64A), Jennifer Chubb, University of San Francisco, and Tim McNicholl, Iowa State University.

Recent Advances in Biological Modeling and Related Dynamical Analysis (Code: SS 69A), Joshi Raj Hem, Xavier University, and Yanyu Xiao, University of Cincinnati.

Recent Advances in Homological and Commutative Algebra (Code: SS 70A), Neil Xiao, George Mason University, Claudiu Raicu, Notre Dame University, and Alexandra Seceleanu, University of Nebraska.

Recent Advances in Inverse Problems and Imaging (Code: SS 25A), Kui Ren, University of Texas at Austin, and Yang Yang, Michigan State University.

Recent Advances in Regularity Lemmas (Code: SS 71A), Gabriel Conant, University of Notre Dame, Rehana Patel, and Julia Wolf, University of Bristol, UK.
Recent Progress in Multivariable Operator Theory (Code: SS 86A), Dmitry Kaluzhnii-Verbovetsky and Hugo Woerdeman, Drexel University.

Research in Mathematics by Early Career Graduate Students (Code: SS 84A), Marat Markin, Morgan Rodgers, Khang Tran, and Oscar Vega, California State University, Fresno.

Research in Mathematics by Undergraduates and Students in Post-Baccalaureate Programs (Code: SS 32A), Darren A. Narayan, Rochester Institute of Technology, Khang Tran, California State University, Fresno, Mark David Ward, Purdue University, and John Wierman, The Johns Hopkins University (AMS-MAA-SIAM).

Research in Mathematics by Teachers of Mathematics (Code: SS 50A), Alexander Burstein and Dennis Davenport, Howard University, Asamoah Nkwanta, Morgan State University, Lou Shapiro, Howard University, and Leon Woodson, Morgan State University. Statistical, Variational, and Learning Techniques in Image Analysis and their Applications to Biomedical, Hyperspectral, and Other Imaging (Code: SS 45A), Justin Marks, Gonzaga University, Laramie Paxton, Washington State University, and Viktoria Taroudaki, Eastern Washington University.

Stochastic Analysis and Applications in Finance, Actuarial Science and Related Fields (Code: SS 17A), Julius N. Esunge, University of Mary Washington, See Keong Lee, University of the Sciences, Malaysia, and Aurel I. Stan, The Ohio State University at Marion.

Stochastic Differential Equations and Applications (Code: SS 59), Carey Caginalp, University of Pittsburgh.

Symbolic Dynamics (Code: SS 9A), Van Cyr, Bucknell University, and Bryna Kra, Northwestern University.

The Mathematics of Historically Black Colleges and Universities (HBCUs) in the Mid-Atlantic (Code: SS 88A), Edray Goins, Purdue University, Janis Oldham, University of North Carolina A&T, Talitha Washington, Howard University, and Scott Williams, University at Buffalo, State University of New York.

Topological Data Analysis: Theory and Applications (Code: SS 73A), Justin Curry, University at Albany, State University of New York, Mikael Vejdemo-Johansson, College of Staten Island, City University of New York, and Sara Kalisnik Verovsek, Wesleyan University.

Topology, Structure and Symmetry in Graph Theory (Code: SS 48A), Lowell Abrams, George Washington University, and Mark Ellingham, Vanderbilt University.

Using Modeling to Motivate the Study of Differential Equations (Code: SS 29A), Robert Kennedy, Centennial High School, Ellicott City MD, Audrey Malagon, Virginia Wesleyan University, Brian Winkel, SIMIODE, Cornwall NY, and Dina Yagodich, Frederick Community College.

Women in Topology (Code: SS 67A), Jocelyn Bell, Hobart and William Smith Colleges, Rosemary Guzman, University of Chicago, Candice Price, University of San Diego, and Arunima Ray, Max Planck Institute for Mathematics, Germany.
Honolulu, Hawaii

University of Hawaii at Manoa

March 22–24, 2019
Friday - Sunday

Meeting #1147
Central Section

Associate secretaries: Georgia Benkart and Michel L. Lapidus

Announcement issue of Notices: January, 2019
Program first available on AMS website: February 7, 2019
Issue of Abstracts: Volume 40, Issue 2

Deadlines
For organizers: Expired
For abstracts: January 29, 2019

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs /sectional.html.

Invited Addresses

Barry Mazur, Harvard University, On the Arithmetic of Curves (Einstein Public Lecture in Mathematics).

Aaron Nabers, Northwestern University, Analysis of Geometric Nonlinear Partial Differential Equations.

Deanna Needell, University of California, Los Angeles, Simple approaches to complicated data analysis.

Katherine Stange, University of Colorado, Boulder, Title to be announced.

Andrew Suk, University of California, San Diego, Title to be announced.

Special Sessions

If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Advances in Iwasawa Theory (Code: SS 12A), Frauke Bleher, University of Iowa, Ted Chinburg, University of Pennsylvania, and Robert Harron, University of Hawaii at Manoa.

Advances in Mathematical Fluid Mechanics (Code: SS 32A), Kazuo Yamazaki, University of Rochester, and Adam Larios, University of Nebraska - Lincoln.

Algebraic Groups, Galois Cohomology, and Local-Global Principles (Code: SS 3A), Raman Parimala, Emory University, Andrei Rapinchuk, University of Virginia, and Igor Rapinchuk, Michigan State University.

Algebraic Number Theory and Diophantine Equations (Code: SS 20A), Claude Levesque, University of Laval.

Algebraic Points (Code: SS 36A), Barry Mazur and Hector Pasten, Harvard University.

Algebraic and Combinatorial Structures in Knot Theory (Code: SS 9A), Sam Nelson, Claremont McKenna College, Natsumi Oyamaguchi, Shumei University, and Kanako Oshiro, Sophia University.

Algebraic and Geometric Combinatorics (Code: SS 17A), Andrew Berget, Western Washington University, and Steven Klee, Seattle University.

Analysis of Nonlinear Geometric Equations (Code: SS 23A), Aaron Naber, Northwestern University, and Richard Bamler, University of California Berkeley.

Analytic and Probabilistic Methods in Convex Geometry (Code: SS 27A), Alexander Koldobsky, University of Missouri, Alexander Litvak, University of Alberta, Dmitry Ryabogin, Kent State University, Vladyslav Yaskin, University of Alberta, and Artem Zvavitch, Kent State University.

Applications of Ultrafilters and Nonstandard Methods (Code: SS 33A), Isaac Goldbring, University of California, Irvine, and Steven Leth, University of Northern Colorado.

Arithmetic Dynamics (Code: SS 29A), Andrew Bridy, Texas A&M University, Michelle Manes, University of Hawai’i at Manoa, and Bianca Thompson, Harvey Mudd College.

Arithmetic Geometry and Its Connections (Code: SS 51A), Laura Capuano, University of Oxford, and Amos Turchet, University of Washington.

Arithmetic and Transcendence of Special Functions and Special Values (Code: SS 56A), Matthew A. Papanikolas, Texas A&M University, and Federico Pellarin, Université Jean Monnet, St. Etienne.

Coarse Geometry, Index Theory, and Operator Algebras: Around the Mathematics of John Roe (Code: SS 53A), Erik Guentner, University of Hawai’i at Manoa, Nigel Higson, Penn State University, and Rufus Willett, University of Hawai’i at Manoa.

Coding Theory and Information Theory (Code: SS 39A), Manabu Hagiwara, Chiba University, and James B. Nation, University of Hawaii.

Combinatorial and Experimental Methods in Mathematical Phylogeny (Code: SS 47A), Sean Cleary, City College of New York and the CUNY Graduate Center, and Katherine St. John, Hunter College and the American Museum of Natural History.

Commutative Algebra and its Environs (Code: SS 4A), Olgu C k il bas and Ela C k il bas, West Virginia University, and Ryo Takahashi, Nagoya University.

Computability, Complexity, and Learning (Code: SS 45A), Achilles A. Beross and Bjorn Kjos-Hanssen, University of Hawai’i at Manoa.

Computational and Data-Enabled Sciences (Code: SS 54A), Roummel Marcia, Boaz Ilan, and Suzanne Sindi, University of California, Merced.

Constructive Aspects of Complex Analysis (Code: SS 7A), Ilia Binder and Michael Yampolsky, University of Toronto, and Malik Younsi, University of Hawaii at Manoa.

Differential Geometry (Code: SS 10A), Vincent B. Bonini, Cal Poly San Luis Obispo, Jie Qing, University of California, Santa Cruz, and Bogdan D. Suceava, California State University, Fullerton.
Emerging Connections with Number Theory (Code: SS 43A), Katherine Stange, University of Colorado, Boulder, and Renate Scheidler, University of Calgary.

Factorization and Arithmetic Properties of Integral Domains and Monoids (Code: SS 31A), Scott Chapman, Sam Houston State University, Jim Coykendall, Clemson University, and Christopher O'Neill, University California, Davis.

Generalizations of Symmetric Spaces (Code: SS 22A), Aloysius Helminck, University of Hawaii at Manoa, Vicky Klima, Appalachian State University, Jennifer Schaefer, Dickinson College, and Carmen Wright, Jackson State University.

Geometric Approaches to Mechanics and Control (Code: SS 55A), Monique Chyba, University of Hawaii at Manoa, Tomoki Ohsawa, The University of Texas at Dallas, and Vakhtang Putkaradze, University of Alberta.

Geometry, Analysis, Dynamics and Mathematical Physics on Fractal Spaces (Code: SS 8A), Joe P. Chen, Colgate University, Lü (Tim) Hung, Hawai‘i Pacific University, Machiel van Frankenhuijzen, Utah Valley University, and Robert G. Niemeyer, University of the Incarnate Word.

Homotopy Theory (Code: SS 48A), Kyle Ormsby and Angélica Osorno, Reed College.

Interactions between Geometric Measure Theory, PDE, and Harmonic Analysis (Code: SS 41A), Mark Allen, Brigham Young University, Spencer Becker-Kahn, University of Washington, Max Engelstein, Massachusetts Institute of Technology, and Mariana Smit Vega García, University of Washington.

Interactions between Noncommutative Algebra and Noncommutative Algebraic Geometry (Code: SS 24A), Garrett Johnson, North Carolina Central University, Bach Nguyen and Xingting Wang, Temple University, and Daniel Yee, Bradley University.

Lie Theory in the Representations of Groups and Related Structures (Code: SS 14A), Christopher Drupieski, DePaul University, and Kay Magaard, University of Arizona.

Mapping Class Groups (Code: SS 35A), Asaf Hadari, University of Hawaii.

Mathematical Analysis of Nonlinear Phenomena (Code: SS 16A), Mimi Dai, University of Illinois at Chicago.

Mathematical Methods and Models in Medicine (Code: SS 19A), Monique Chyba, University of Hawaii, and Jakob Kotas, University of Hawaii and University of Portland.

New Trends in Geometric Measure Theory (Code: SS 37A), Antonio De Rosa, Courant Institute of Mathematical Sciences, New York University, and Luca Spolaor, Massachusetts Institute of Technology.

New Trends on Variational Calculus and Non-Linear Partial Differential Equations (Code: SS 44A), Craig Cowan, University of Manitoba, Michinori Ishiwata, Osaka University, Abbas Moameni, Carleton University, and Futoshi Takahashi, Osaka City University.

Nonlinear Wave Equations and Applications (Code: SS 42A), Boaz Ilan, University of California, Merced, and Barbara Prinari, University of Colorado, Colorado Springs.

Numerical Methods for Partial Differential Equations (Code: SS 50A), Evan Gawlik, Michael Holst, and Martin Lucht, University of California, San Diego.

Real and Complex Singularities (Code: SS 34A), Leslie Charles Wilson, University of Hawaii, Manoa, Goo Ishikawa, Hokkaido University, and David Trotman, Université de Provence.

Recent Advances and Applications of Modular Forms (Code: SS 1A), Amanda Folsom, Amherst College, Pavel Guerzhoy, University of Hawaii at Manoa, Masanobu Kaneko, Kyushu University, and Ken Ono, Emory University.

Recent Advances in Lie and Related Algebras and their Representations (Code: SS 28A), Brian D. Boe, University of Georgia, and Jonathan Kujawa, University of Oklahoma.

Recent Advances in Numerical Methods for PDEs (Code: SS 24A9), Hengguang Li, Wayne State University, and Sara Pollock, University of Florida.

Recent Advances in Numerical Methods for PDEs (Code: SS 49A), Hengguang Li, Wayne State University, and Sara Pollock, University of Florida.

Recent Developments in Automorphic Forms (Code: SS 2A), Solomon Friedberg, Boston College, and Jayce Getz, Duke University.

Recent Trends in Algebraic Graph Theory (Code: SS 26A), Sebastian Cioaba, University of Delaware, and Shaun Fallat, University of Regina.

SYZ Mirror Symmetry and Enumerative Geometry (Code: SS 11A), Siu Cheong Lau, Boston University, Naichung Leung, The Chinese University of Hong Kong, and Hsian-Hua Tseng, Ohio State University.

Several Complex Variables (Code: SS 5A), Peter Ebenfelt, University of California, San Diego, John Erik Fornaess, University of Michigan and Norwegian University of Science and Technology, Ming Xiao, University of California, San Diego, and Yuan Yuan, Syracuse University.

Spaces of Holomorphic Functions and Their Operators (Code: SS 21A), Mirjana Jovovic and Wayne Smith, University of Hawaii.

Sparisity, Randomness, and Optimization (Code: SS 15A), Deanna Needell and Jamie Haddock, University of California, Los Angeles.


Stability and Singularity in Fluid Dynamics (Code: SS 40A), Tristan Buckmaster, Princeton University, Steve Shkoller, University of California, Davis, and Vlad Vicol, Princeton University.

Structural Graph Theory (Code: SS 30A), Zixia Song, University of Central Florida, Martin Rolek, College of William and Mary, and Yue Zhao, University of Central Florida.

Teaching Mathematics for Understanding (Code: SS 13A), Tara Davis and Hung Lu, Hawai‘i Pacific University, Prasad Senesi, The Catholic University of America, and Machiel van Frankenhuijzen, Utah Valley University.
MEETINGS & CONFERENCES

The Mathematics of Cryptography (Code: SS 18A), Shaheen Sharif, California State University, San Marcos, and Alice Silverberg, University of California, Irvine.

Three-dimensional Floer Theory, Contact Geometry, and Foliations (Code: SS 6A), Joan Licata, Australian National University, and Robert Lipshitz, University of Oregon.

Topics at the Interface of Analysis and Geometry (Code: SS 38A), Alex Austin and Sylvester Eriksson-Bique, University of California, Los Angeles.

Valuations on Algebraic Function Fields and Their Subrings (Code: SS 46A), Ron Brown, University of Hawaii, Steven Dale Cutkosky, University of Missouri, and Franz-Viktor Kuhlmann, University of Szczecin.

What is Happening in Mathematical Epidemiology? Current Theory, New Methods, and Open Questions (Code: SS 52A), Olivia Prosper, University of Kentucky.

Hartford, Connecticut

University of Connecticut Hartford (Hartford Regional Campus)

April 13–14, 2019
Saturday - Sunday

Meeting #1148

Eastern Section

Associate secretary: Steven H. Weintraub

Announcement issue of Notices: February, 2019

Program first available on AMS website: February 21, 2019

Issue of Abstracts: Volume 40, Issue 2

Deadlines

For organizers: September 13, 2018
For abstracts: February 5, 2019

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses

Olivier Bernardi, Brandeis University, Title to be announced.

Brian Hall, Notre Dame University, Title to be announced.

Christina Sormani, City University of New York, Title to be announced.

Special Sessions

If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Analysis, Geometry, and PDEs in Non-smooth Metric Spaces (Code: SS 1A), Vyron Vellis, University of Connecticut, Xiaodan Zhou, Worcester Polytechnic Institute, and Scott Zimmerman, University of Connecticut.

Computability Theory (Code: SS 2A), Damir Dzhafarov and Reed Solomon, University of Connecticut, and Linda Brown Westrick, Pennsylvania State University.

Mathematical Cryptology (Code: SS 8A), Lubjana Beshaj, United States Military Academy, and Jamie Jaime Gutierrez, University of Cantabria, Santander, Spain.

Modeling and Qualitative Study of PDEs from Materials Science and Geometry. (Code: SS 6A), Yung-Sze Choi, Changfeng Gui, and Xiaodong Yan, University of Connecticut.

Recent Development of Geometric Analysis and Nonlinear PDEs (Code: SS 3A), Ovidiu Munteanu, Lihan Wang, and Ling Xiao, University of Connecticut.
MEETINGS & CONFERENCES

Madison, Wisconsin
University of Wisconsin-Madison

September 14–15, 2019
Saturday – Sunday

Meeting #1150
Central Section
Associate secretary: Georgia Benkart
Announcement issue of Notices: June/July 2019
Program first available on AMS website: July 23, 2019
Issue of Abstracts: Volume 40, Issue 3

Deadlines
For organizers: February 14, 2019
For abstracts: July 16, 2019

The scientific information listed below may be dated.
For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses
Nathan Dunfield, University of Illinois, Urbana-Champaign,
Title to be announced.
Teena Gerhardt, Michigan State University, Title to be announced.
Lauren Williams, University of California, Berkeley, Title to be announced (Erdős Memorial Lecture).

Special Sessions
If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Homological and Characteristic $p > 0$ Methods in Commutative Algebra (Code: SS 1A), Michael Brown, University of Wisconsin-Madison, and Eric Canton, University of Michigan.
Recent Developments in Harmonic Analysis (Code: SS 3A), Theresa Anderson, Purdue University, and Joris Roos, University of Wisconsin-Madison.
Recent Work in the Philosophy of Mathematics (Code: SS 4A), Thomas Drucker, University of Wisconsin-Whitewater, and Dan Sloughter, Furman University.
Special Functions and Orthogonal Polynomials (Code: SS 2A), Sarah Post, University of Hawai‘i at Manoa, and Paul Terwilliger, University of Wisconsin-Madison.

Quy Nhơn City, Vietnam

Quy Nhơn University

June 10–13, 2019
Monday – Thursday

Meeting #1149
Associate secretary: Brian D. Boe
Announcement issue of Notices: April, 2019
Program first available on AMS website: To be announced
Issue of Abstracts: To be announced

Deadlines
For organizers: November 30, 2018
For abstracts: To be announced

The scientific information listed below may be dated.
For the latest information, see www.ams.org/amsmtgs/internmtgs.html.

Invited Addresses
Henry Cohn, Microsoft Research, To be announced.
Robert Guralnick, University of Southern California, To be announced.
Le Tuan Hoa, Hanoi Institute of Mathematics, To be announced.
Nguyen Dong Yen, Hanoi Institute of Mathematics, To be announced.
Zhiwei Yun, Massachusetts Institute of Technology, To be announced.
Nguyen Tien Zung, Toulouse Mathematics Institute, To be announced.

Special Session on Regularity Theory of PDEs and Calculus of Variations on Domains with Rough Boundaries (Code: SS 5A), Murat Akman, University of Connecticut, and Zihui Zhao, University of Washington.
Stochastic Processes, Random Walks, and Heat Kernels (Code: SS 4A), Patricia Alonso Ruiz, University of Connecticut, and Phanuel Mariano, Purdue University.

Quy Nhơn City, Vietnam

Quy Nhơn University

June 10–13, 2019
Monday – Thursday

Meeting #1149
Associate secretary: Brian D. Boe
Announcement issue of Notices: April, 2019
Program first available on AMS website: To be announced
Issue of Abstracts: To be announced

Deadlines
For organizers: November 30, 2018
For abstracts: To be announced

The scientific information listed below may be dated.
For the latest information, see www.ams.org/amsmtgs/internmtgs.html.

Invited Addresses
Henry Cohn, Microsoft Research, To be announced.
Robert Guralnick, University of Southern California, To be announced.
Le Tuan Hoa, Hanoi Institute of Mathematics, To be announced.
Nguyen Dong Yen, Hanoi Institute of Mathematics, To be announced.
Zhiwei Yun, Massachusetts Institute of Technology, To be announced.
Nguyen Tien Zung, Toulouse Mathematics Institute, To be announced.

Invited Addresses
Nathan Dunfield, University of Illinois, Urbana-Champaign, Title to be announced.
Teena Gerhardt, Michigan State University, Title to be announced.
Lauren Williams, University of California, Berkeley, Title to be announced (Erdős Memorial Lecture).

Special Sessions
If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Homological and Characteristic $p > 0$ Methods in Commutative Algebra (Code: SS 1A), Michael Brown, University of Wisconsin-Madison, and Eric Canton, University of Michigan.
Recent Developments in Harmonic Analysis (Code: SS 3A), Theresa Anderson, Purdue University, and Joris Roos, University of Wisconsin-Madison.
Recent Work in the Philosophy of Mathematics (Code: SS 4A), Thomas Drucker, University of Wisconsin-Whitewater, and Dan Sloughter, Furman University.
Special Functions and Orthogonal Polynomials (Code: SS 2A), Sarah Post, University of Hawai‘i at Manoa, and Paul Terwilliger, University of Wisconsin-Madison.
MEETINGS & CONFERENCES

Binghamton, New York

*Binghamton University*

**October 12–13, 2019**  
Saturday – Sunday

**Meeting #1151**  
Eastern Section  
Associate secretary: Steven H. Weintraub  
Announcement issue of Notices: August, 2019  
Program first available on AMS website: August 29, 2019  
Issue of Abstracts: Volume 40, Issue 3

**Deadlines**  
For organizers: March 12, 2019  
For abstracts: August 20, 2019

*The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.*

**Invited Addresses**  
- **Richard Kenyon**, Brown University, *Title to be announced.*  
- **Tony Pantev**, University of Pennsylvania, *Title to be announced.*  
- **Lai-Sang Young**, New York University, *Title to be announced.*

Gainesville, Florida

*University of Florida*

**November 2–3, 2019**  
Saturday – Sunday

**Meeting #1152**  
Southeastern Section  
Associate secretary: Brian D. Boe  
Program first available on AMS website: September 19, 2019  
Program issue of electronic Notices: September, 2019  
Issue of Abstracts: Volume 40, Issue 4

**Deadlines**  
For organizers: April 2, 2019  
For abstracts: September 10, 2019

*The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.*

**Invited Addresses**  
- **Jonathan Mattingly**, Duke University, *To be announced.*  
- **Isabella Novik**, University of Washington, *To be announced.*  
- **Eduardo Teixeira**, University of Central Florida, *To be announced.*

**Special Sessions**  
If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

*Geometric and Topological Combinatorics* (Code: SS 1A),  
**Bruno Benedetti**, University of Miami, **Steve Klee**, Seattle University, and **Isabella Novik**, University of Washington.
Riverside, California

University of California, Riverside

November 9–10, 2019
Saturday - Sunday

Meeting #1153
Western Section
Associate secretary: Michel L. Lapidus
Program first available on AMS website: September 12, 2019
Program issue of electronic Notices: September, 2019
Issue of Abstracts: Volume 40, Issue 4

Deadlines
For organizers: April 9, 2019
For abstracts: September 3, 2019

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses
- Robert Boltje, University of California, Santa Cruz, Title to be announced.
- Jonathan Novak, University of California, San Diego, Title to be announced.
- Anna Skripka, University of New Mexico, Albuquerque, Title to be announced.

Special Sessions
If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Topics in Operator Theory (Code: SS 1A), Anna Skripka and Maxim Zinchenko, University of New Mexico. Random Matrices and Related Structures (Code: SS 2A), Jonathan Novak, University of California, San Diego, and Kari Liechty, De Paul.

Denver, Colorado

Colorado Convention Center

January 15–18, 2020
Wednesday - Saturday

Meeting #1154
Joint Mathematics Meetings, including the 126th Annual Meeting of the AMS, 103rd Annual Meeting of the Mathematical Association of America (MAA), annual meetings of the Association for Women in Mathematics (AWM) and the National Association of Mathematicians (NAM), and the winter meeting of the Association of Symbolic Logic (ASL), with sessions contributed by the Society for Industrial and Applied Mathematics (SIAM)
Associate secretary: Michel L. Lapidus
Announcement issue of Notices: To be announced
Program first available on AMS website: To be announced
Issue of Abstracts: To be announced

Deadlines
For organizers: To be announced
For abstracts: To be announced

Charlottesville, Virginia

University of Virginia

March 13–15, 2020
Friday - Sunday

Southeastern Section
Associate secretary: Brian D. Boe
Announcement issue of Notices: To be announced
Program first available on AMS website: To be announced
Issue of Abstracts: To be announced

Deadlines
For organizers: To be announced
For abstracts: To be announced
Fresno, California
California State University, Fresno

May 2–3, 2020
Saturday – Sunday
Western Section
Associate secretary: Michel L. Lapidus
Announcement issue of Notices: To be announced
Program first available on AMS website: To be announced
Issue of Abstracts: To be announced

Deadlines
For organizers: To be announced
For abstracts: To be announced

Washington, District of Columbia
Walter E. Washington Convention Center

January 6–9, 2021
Wednesday – Saturday
Joint Mathematics Meetings, including the 127th Annual Meeting of the AMS, 104th Annual Meeting of the Mathematical Association of America (MAA), annual meetings of the Association for Women in Mathematics (AWM) and the National Association of Mathematicians (NAM), and the winter meeting of the Association of Symbolic Logic (ASL), with sessions contributed by the Society for Industrial and Applied Mathematics (SIAM).
Associate secretary: Brian D. Boe
Announcement issue of Notices: October 2020
Program first available on AMS website: November 1, 2020
Issue of Abstracts: To be announced

Deadlines
For organizers: April 1, 2020
For abstracts: To be announced

Grenoble, France
Université Grenoble Alpes

July 5–9, 2021
Monday – Friday
Associate secretary: Michel L. Lapidus
Announcement issue of Notices: To be announced
Program first available on AMS website: To be announced
Issue of Abstracts: To be announced

Deadlines
For organizers: To be announced
For abstracts: To be announced

Buenos Aires, Argentina
The University of Buenos Aires

July 19–23, 2021
Monday – Friday
Associate secretary: Steven H. Weintraub
Announcement issue of Notices: To be announced
Program first available on AMS website: To be announced
Issue of Abstracts: To be announced

Deadlines
For organizers: To be announced
For abstracts: To be announced
Seattle, Washington
Washington State Convention Center and the Sheraton Seattle Hotel

January 5–8, 2022
Wednesday – Saturday
Associate secretary: Georgia Benkart
Announcement issue of Notices: October 2021
Program first available on AMS website: To be announced
Issue of Abstracts: To be announced

Deadlines
For organizers: To be announced
For abstracts: To be announced

Boston, Massachusetts
John B. Hynes Veterans Memorial Convention Center, Boston Marriott Hotel, and Boston Sheraton Hotel

January 4–7, 2023
Wednesday – Saturday
Associate secretary: Steven H. Weintraub
Announcement issue of Notices: October 2022
Program first available on AMS website: To be announced
Issue of Abstracts: To be announced

Deadlines
For organizers: To be announced
For abstracts: To be announced

AIM, the American Institute of Mathematics, sponsors week-long activities in all areas of the mathematical sciences with an emphasis on focused collaborative research.

Call for Proposals

Workshop Program
AIM invites proposals for its focused workshop program. AIM’s workshops are distinguished by their specific mathematical goals. This may involve making progress on a significant unsolved problem or examining the convergence of two distinct areas of mathematics. Workshops are small in size, up to 28 people, to allow for close collaboration among the participants.

SQuaREs Program
AIM also invites proposals for the SQuaREs program: Structured Quarter Research Ensembles. More long-term in nature, this program brings together groups of four to six researchers for a week of focused work on a specific research problem in consecutive years.

More details are available at:
http://www.aimath.org/research/
Deadline: November 1

AIM seeks to promote diversity in the mathematics research community. We encourage proposals which include significant participation of women, underrepresented minorities, junior scientists, and researchers from primarily undergraduate institutions.