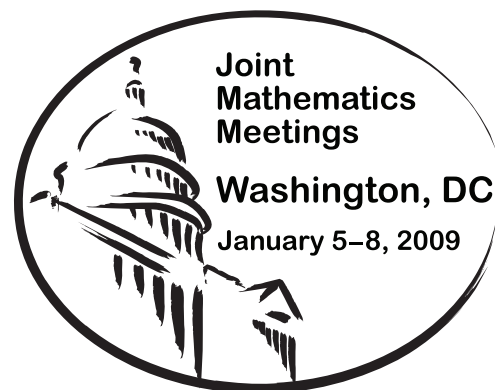

Program at a Glance

This document provides a thumbnail sketch of all scientific and social events so you can easily see which events may overlap and better plan your time.



Saturday, January 3

- 8:00 a.m.–12:00 p.m. **AMS SHORT COURSE ON QUANTUM COMPUTATION AND QUANTUM INFORMATION (PART I)**
- 8:00 a.m.–12:00 p.m. **MAA SHORT COURSE ON DATA MINING AND NEW TRENDS IN TEACHING STATISTICS (PART I)**

Sunday, January 4

- 8:00 a.m.–6:30 p.m. **AMS DEPARTMENT CHAIRS WORKSHOP**
- 9:00 a.m.–5:00 p.m. **AMS SHORT COURSE ON QUANTUM COMPUTATION AND QUANTUM INFORMATION (PART II)**
- 9:00 a.m.–4:00 p.m. **MAA SHORT COURSE ON DATA MINING AND NEW TRENDS IN TEACHING STATISTICS (PART II)**
- 9:00 a.m.–5:00 p.m. **MAA BOARD OF GOVERNORS**
- 1:30 p.m.–10:00 p.m. **AMS COUNCIL**
- 3:00 p.m.–7:00 p.m. **JOINT MEETINGS REGISTRATION**, Marriot Ballroom Lobby, Lobby Level, Marriott Wardman Park Hotel

Monday, January 5

- 7:30 a.m.–4:00 p.m. **JOINT MEETINGS REGISTRATION**, Marriot Ballroom Lobby, Lobby Level, Marriott Wardman Park Hotel
- 8:00 a.m.–10:50 a.m. **AMS-MAA-SIAM SPECIAL SESSION ON RESEARCH IN MATHEMATICS BY UNDERGRADUATES, I**
- AMS SPECIAL SESSIONS**
- 8:00 a.m.–10:50 a.m. *Recent Trends in Coding Theory, I*
- 8:00 a.m.–10:50 a.m. *Representation Theory of Lie Algebras and Algebraic Groups, I*
- 8:00 a.m.–10:50 a.m. *Nonlinear Partial Differential Equations and Applications, I*
- 8:00 a.m.–10:50 a.m. *Stochastic, Large-Scale, and Hybrid Systems with Applications, I*
- 8:00 a.m.–10:50 a.m. *Experimental Mathematics, I*
- 8:00 a.m.–10:50 a.m. *Heavy-Tailed Behavior: Theory and Applications*
- 8:00 a.m.–10:50 a.m. *Von Neumann Algebras, I*
- 8:00 a.m.–10:50 a.m. *Mathematics of Computation, I*
- 8:00 a.m.–10:50 a.m. *Difference Equations, I*
- 8:00 a.m.–10:50 a.m. *The Mathematics of Information and Knowledge, I*
- 8:00 a.m.–10:50 a.m. *Automorphic and Modular Forms in Number Theory, I*
- 8:00 a.m.–10:50 a.m. *Topological Methods in Applied Mathematics, I*

- 8:00 a.m.–10:50 a.m. *Group Actions on Homogeneous Spaces and Applications, I*
- 8:00 a.m.–10:50 a.m. *Role of Generalized Maximal Monotonicity Frameworks in Optimization and Control Theory with Applications, I*
- 8:00 a.m.–10:55 a.m. *General Contributed Paper Session, I*
- 8:00 a.m.–10:55 a.m. **SIAM MINISYMPOSIUM**
- 8:00 a.m.–10:55 a.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- 8:00 a.m.–7:00 p.m. **EMPLOYMENT CENTER**
- 9:00 a.m.–11:00 a.m. **MAA MINICOURSE #11: PART A** *Planning and teaching mathematics capstone courses for preservice secondary school teachers.*
- 9:00 a.m.–11:00 a.m. **MAA MINICOURSE #1: PART A** *Discrete models in biology and simulations.*
- 9:00 a.m.–11:00 a.m. **MAA MINICOURSE #6: PART A** *Teaching with clickers and classroom voting.*
- 9:00 a.m.–10:20 a.m. **MAA-YOUNG MATHEMATICIANS NETWORK PANEL DISCUSSION** *Finding your n^{th} job (for n greater than or equal to 2).*
- 9:00 a.m.–10:20 a.m. **MAA SPECIAL PRESENTATION** *National Science Foundation programs supporting learning and teaching in the mathematical sciences.*
- 9:00 a.m.–5:00 p.m. **STUDENT HOSPITALITY CENTER**
- 9:30 a.m.–10:30 a.m. **MAA SPECIAL PRESENTATION** *ICME-11 in retrospect.*
- 10:05 a.m.–10:55 a.m. **AMS INVITED ADDRESS** *Advances in advancing interfaces.* **James A. Sethian**
- 11:10 a.m.–12:00 p.m. **AMS-MAA INVITED ADDRESS** *Title to be announced.* **Douglas N. Arnold**
- 12:15 p.m.–5:30 p.m. **EXHIBITS AND BOOK SALES** *Come to the Grand Opening at 12:15!*
- 2:15 p.m.–3:15 p.m. **AMS COLLOQUIUM LECTURES: LECTURE I** *Homogeneous dynamics and number theory.* **Grigori A. Margulis**
- 2:15 p.m.–3:05 p.m. **MAA INVITED ADDRESS** *Stacking bricks and stoning crows.* **Peter M. Winkler**
- 2:15 p.m.–6:05 p.m. **AMS-MAA-SIAM SPECIAL SESSION ON RESEARCH IN MATHEMATICS BY UNDERGRADUATES, II**
- 2:15 p.m.–6:05 p.m. **AMS-ASL SPECIAL SESSION ON LOGIC AND DYNAMICAL SYSTEMS, I**
- AMS SPECIAL SESSIONS**
- 2:15 p.m.–6:05 p.m. *Convex and Discrete Geometry, I*
- 2:15 p.m.–6:05 p.m. *Recent Trends in Coding Theory, II*
- 2:15 p.m.–6:05 p.m. *Nonlinear Partial Differential Equations and Applications, II*
- 2:15 p.m.–6:05 p.m. *Recent Advances in Mathematical Modeling in Medicine*
- 2:15 p.m.–6:05 p.m. *Stochastic, Large-Scale, and Hybrid Systems with Applications, II*
- 2:15 p.m.–6:05 p.m. *Experimental Mathematics, II*
- 2:15 p.m.–6:05 p.m. *Algebraic Structures in Knot Theory*
- 2:15 p.m.–6:05 p.m. *Nonsmooth Analysis in Inverse and Variational Problems, I*
- 2:15 p.m.–6:05 p.m. *Difference Equations, II*
- 2:15 p.m.–6:05 p.m. *The Mathematics of Information and Knowledge, II*
- 2:15 p.m.–6:05 p.m. *Tracking Moving Interfaces in Complex Phenomena, I*
- 2:15 p.m.–6:05 p.m. *Group Actions on Homogeneous Spaces and Applications, II*
- 2:15 p.m.–4:15 p.m. **MAA MINICOURSE #12: PART A** *SNAP Math Fairs in elementary education.*
- 2:15 p.m.–4:15 p.m. **MAA MINICOURSE #2: PART A** *Using GeoGebra to create activities and applets for visualization and exploration.*
- 2:15 p.m.–4:15 p.m. **MAA MINICOURSE #7: PART A** *A Game Theory path to quantitative literacy.*
- MAA CONTRIBUTED PAPER SESSIONS**
- 2:15 p.m.–5:15 p.m. *Building Diversity in Advanced Mathematics: Models that Work*
- 2:15 p.m.–5:15 p.m. *Cryptology for Undergraduates*
- 2:15 p.m.–5:15 p.m. *Environmental Mathematics*
- 2:15 p.m.–5:15 p.m. *Mathematics of Chemistry*
- 2:15 p.m.–5:15 p.m. *Operations Research in the Undergraduate Classroom*

2:15 p.m.–5:15 p.m.	<i>Performing Mathematics</i>
2:15 p.m.–5:15 p.m.	<i>General Contributed Paper Session, II</i>
2:15 p.m.–4:15 p.m.	MAA INVITED PAPER SESSION ON MATHEMATICAL SOCIOLOGY
2:15 p.m.–6:05 p.m.	SIAM MINISYMPOSIUM
2:15 p.m.–3:35 p.m.	MAA-YOUNG MATHEMATICIANS NETWORK PANEL DISCUSSION <i>Graduate school: Choosing one, getting in, staying in.</i>
2:15 p.m.–3:15 p.m.	MAA-PROJECT NEXT PANEL DISCUSSION <i>The art of test-making and alternative assessments.</i>
2:15 p.m.–4:15 p.m.	MAA PROJECT NEXT-YOUNG MATHEMATICIANS' NETWORK POSTER SESSION
2:15 p.m.–3:40 p.m.	AWM PANEL DISCUSSION <i>What and where will the jobs be? Trends in mathematics and in employment.</i>
2:15 p.m.–5:55 p.m.	AMS SESSIONS FOR CONTRIBUTED PAPERS
2:30 p.m.–5:00 p.m.	MAA SECTION OFFICERS
3:20 p.m.–4:10 p.m.	MAA INVITED ADDRESS <i>Integral Appollonian packings and thin orbits.</i> Peter Sarnak
3:45 p.m.–4:15 p.m.	AWM BUSINESS MEETING
3:50 p.m.–5:10 p.m.	MAA CUPM SUBCOMMITTEE ON RESEARCH BY UNDERGRADUATES PANEL DISCUSSION <i>Starting and maintaining an academic year undergraduate research program.</i>
4:00 p.m.–5:00 p.m.	RECEPTION FOR UNDERGRADUATE STUDENTS AND MATH CLUB ADVISORS
4:30 p.m.–5:40 p.m.	MAA COMMITTEE ON GRADUATE STUDENTS-YOUNG MATHEMATICIANS NETWORK PANEL DISCUSSION <i>How to apply for jobs.</i>
5:30 p.m.–7:30 p.m.	SIGMAA ON ENVIRONMENTAL MATHEMATICS GUEST LECTURE AND BUSINESS MEETING
5:30 p.m.–6:30 p.m.	SIGMAA ON THE HISTORY OF MATHEMATICS BUSINESS MEETING AND RECEPTION
5:30 p.m.–6:30 p.m.	RECEPTION FOR GRADUATE STUDENTS AND FIRST-TIME PARTICIPANTS
5:30 p.m.–8:00 p.m.	MATHEMATICAL INSTITUTES OPEN HOUSE
6:00 p.m.–7:00 p.m.	MAA SPECIAL DRAMATIC PRESENTATION <i>The CNN United States of Mathematics Presidential Debate.</i>
6:00 p.m.–7:30 p.m.	RECEPTION FOR ALUMNI AND FRIENDS OF THE UNIVERSITY OF OREGON MATHEMATICS DEPARTMENT
6:30 p.m.–7:30 p.m.	SIGMAA ON THE HISTORY OF MATHEMATICS AND SIGMAA ON THE PHILOSOPHY OF MATHEMATICS GUEST LECTURE
8:30 p.m.–9:30 p.m.	AMS JOSIAH WILLARD GIBBS LECTURE <i>Conformally invariant random systems in the plane.</i> Oded Schramm
9:30 p.m.–11:00 p.m.	AWM RECEPTION

Tuesday, January 6

7:30 a.m.–4:00 p.m.	JOINT MEETINGS REGISTRATION , Marriot Ballroom Lobby, Lobby Level, Marriott Wardman Park Hotel
8:00 a.m.–11:50 a.m.	AMS-MAA-MER SPECIAL SESSION ON MATHEMATICS AND EDUCATION REFORM, I
8:00 a.m.–11:50 a.m.	AMS-SIAM SPECIAL SESSION ON ASYMPTOTIC METHODS IN ANALYSIS WITH APPLICATIONS, I
8:00 a.m.–11:50 a.m.	AMS-ASL SPECIAL SESSION ON LOGIC AND DYNAMICAL SYSTEMS, II
	AMS SPECIAL SESSIONS
8:00 a.m.–11:50 a.m.	<i>Mathematical Models of Biological Structures and Function</i>
8:00 a.m.–11:50 a.m.	<i>Noncommutative Algebra, I</i>
8:00 a.m.–11:50 a.m.	<i>Mathematics of Computation, II</i>
8:00 a.m.–11:50 a.m.	<i>Infinite Dimensional Analysis, Path Integrals and Related Fields</i>
8:00 a.m.–11:50 a.m.	<i>Computational Algebraic and Analytic Geometry for Low-dimensional Varieties, I</i>
8:00 a.m.–11:50 a.m.	<i>The Mathematics of Information and Knowledge, III</i>

- 8:00 a.m.–11:50 a.m. *Automorphic and Modular Forms in Number Theory, II*
- 8:00 a.m.–11:50 a.m. *Group Actions on Homogeneous Spaces and Applications, III*
- 8:00 a.m.–11:50 a.m. *Categorification and Link Homology, I*
- 8:00 a.m.–11:50 a.m. *Tracking Moving Interfaces in Complex Phenomena, I*
- 8:00 a.m.–11:50 a.m. *Teichmüller Theory and Low-Dimensional Topology, I*
- 8:00 a.m.–10:00 a.m. **MAA MINICOURSE #3: PART A** *Educating about the state of the planet and sustainability while enhancing calculus.*
- 8:00 a.m.–10:00 a.m. **MAA MINICOURSE #8: PART A** *Taking symbols seriously: Teaching form and function in college algebra.*
- MAA CONTRIBUTED PAPER SESSIONS**
- 8:00 a.m.–12:00 p.m. *Demos and Strategies with Technology that Enhance Teaching and Learning Mathematics, I*
- 8:00 a.m.–12:00 p.m. *Innovative and Effective Ways to Teach Linear Algebra, I*
- 8:00 a.m.–12:00 p.m. *Mathematics of Games and Puzzles*
- 8:00 a.m.–12:00 p.m. *Mathematics and Sports*
- 8:00 a.m.–12:00 p.m. *Teaching Calculus in High School: Ideas that Work*
- 8:00 a.m.–12:00 p.m. *Undergraduate Mathematical Biology, I*
- 8:00 a.m.–12:00 p.m. *General Contributed Paper Session, III*
- 8:00 a.m.–10:50 a.m. **SIAM MINISYMPOSIUM**
- 8:00 a.m.–11:55 a.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- 8:00 a.m.–7:00 p.m. **EMPLOYMENT CENTER**
- 9:00 a.m.–9:50 a.m. **MAA INVITED ADDRESS** *Perfect graphs—Structure and recognition.* **Maria Chudnovsky**
- 9:00 a.m.–11:00 a.m. **MAA MINICOURSE #13: PART A** *Directing undergraduate research.*
- 9:00 a.m.–10:20 a.m. **MAA-YOUNG MATHEMATICIANS NETWORK PANEL DISCUSSION** *Career options for undergraduate mathematics majors.*
- 9:00 a.m.–10:20 a.m. **MAA PANEL DISCUSSION** *Multidisciplinary projects that hook those not usually interested in mathematics.*
- 9:00 a.m.–10:20 a.m. **MAA COMMITTEE ON THE PROFESSION SPECIAL PRESENTATION** *Session for chairs.*
- 9:00 a.m.–11:00 a.m. **MAA COMMITTEE ON THE PARTICIPATION OF WOMEN/WOMEN AND MATHEMATICS NETWORK POSTER SESSION** *Mathematical outreach programs for underrepresented populations.*
- 9:00 a.m.–5:00 p.m. **STUDENT HOSPITALITY CENTER**
- 9:30 a.m.–5:30 p.m. **EXHIBITS AND BOOK SALES**
- 10:00 a.m.–11:30 a.m. **SIGMAA OFFICERS MEETING**
- 10:05 a.m.–10:55 a.m. **AWM EMMY NOETHER LECTURE** *The geometry of graphs.* **Fan Chung Graham**
- 10:30 a.m.–12:30 p.m. **MAA MINICOURSE #4: PART A** *An introduction to the mathematics of modern cryptography.*
- 10:30 a.m.–12:30 p.m. **MAA MINICOURSE #9: PART A** *Beyond formulas and algorithms: Teaching a conceptual/thematic single variable calculus course.*
- 10:45 a.m.–12:05 p.m. **SIGMAA ON THE HISTORY OF MATHEMATICS AND SIGMAA ON THE PHILOSOPHY OF MATHEMATICS PANEL DISCUSSION** *The intersection of the history and philosophy of mathematics.*
- 10:45 a.m.–12:05 p.m. **MAA WORKSHOP** *Proposal writing for grant applications to the NSF Division of Undergraduate Education.*
- 10:45 a.m.–12:05 p.m. **MAA COMMITTEE ON TECHNOLOGY IN MATHEMATICS EDUCATION PANEL DISCUSSION** *Picture this! Geometry software.*
- 11:10 a.m.–12:00 p.m. **SIAM INVITED ADDRESS** *Mathematics of sea ice to help predict climate change.* **Kenneth M. Golden**
- 1:00 p.m.–2:00 p.m. **AMS COLLOQUIUM LECTURES: LECTURE II** *Homogeneous dynamics and number theory.* **Grigori A. Margulis**
- 1:00 p.m.–4:20 p.m. **AMS-MAA-SIAM SPECIAL SESSION ON RESEARCH IN MATHEMATICS BY UNDERGRADUATES, III**

- 1:00 p.m.–4:20 p.m. **AMS-MAA-MER SPECIAL SESSION ON MATHEMATICS AND EDUCATION REFORM, II**
- 1:00 p.m.–4:20 p.m. **AMS-MAA SPECIAL SESSION ON THE SCHOLARSHIP OF TEACHING AND LEARNING, I**
- 1:00 p.m.–4:20 p.m. **AMS-SIAM SPECIAL SESSION ON ASYMPTOTIC METHODS IN ANALYSIS WITH APPLICATIONS, II**
- 1:00 p.m.–4:20 p.m. **AMS-ASL SPECIAL SESSION ON MODEL THEORETIC METHODS IN FINITE COMBINATORICS, I**
- AMS SPECIAL SESSIONS**
- 1:00 p.m.–4:20 p.m. *Convex and Discrete Geometry, II*
- 1:00 p.m.–4:20 p.m. *Von Neumann Algebras, II*
- 1:00 p.m.–4:20 p.m. *Noncommutative Algebra, II*
- 1:00 p.m.–4:20 p.m. *Computational Algebraic and Analytic Geometry for Low-dimensional Varieties, II*
- 1:00 p.m.–4:20 p.m. *Harmonic Analysis, I*
- 1:00 p.m.–4:20 p.m. *The Mathematics of Information and Knowledge, IV*
- 1:00 p.m.–4:20 p.m. *Topological Methods in Applied Mathematics, II*
- 1:00 p.m.–4:20 p.m. *Group Actions on Homogeneous Spaces and Applications, IV*
- 1:00 p.m.–4:20 p.m. *Teichmüller Theory and Low-Dimensional Topology, II*
- 1:00 p.m.–3:00 p.m. **MAA MINICOURSE #10: PART A** *The ubiquitous Catalan numbers and their applications.*
- 1:00 p.m.–3:00 p.m. **MAA MINICOURSE #14: PART A** *Teaching a course in the history of mathematics.*
- 1:00 p.m.–3:00 p.m. **MAA MINICOURSE #5: PART A** *Developing departmental self-studies.*
- MAA CONTRIBUTED PAPER SESSIONS**
- 1:00 p.m.–4:10 p.m. *Demos and Strategies with Technology that Enhance Teaching and Learning Mathematics, II*
- 1:00 p.m.–4:10 p.m. *Innovative and Effective Ways to Teach Linear Algebra, II*
- 1:00 p.m.–4:10 p.m. *Research on the Teaching and Learning of Undergraduate Mathematics*
- 1:00 p.m.–4:10 p.m. *Undergraduate Mathematical Biology, II*
- 1:00 p.m.–4:10 p.m. *General Contributed Paper Session, IV*
- 1:00 p.m.–4:15 p.m. **SIAM MINISYMPOSIUM**
- 1:00 p.m.–2:20 p.m. **MAA PANEL DISCUSSION** *Using open source software for undergraduate courses.*
- 1:00 p.m.–2:20 p.m. **MAA COMMITTEE ON GRADUATE STUDENTS PANEL DISCUSSION** *Teaching postdocs: A journey from graduate school to a position in the world of mathematics.*
- 1:00 p.m.–2:20 p.m. **MAA CUPM SUBCOMMITTEE ON RESEARCH BY UNDERGRADUATES-PROJECT NEXT PANEL DISCUSSION** *Preparing students to communicate mathematics.*
- 1:00 p.m.–2:15 p.m. **MAA-PROJECT NEXT PANEL DISCUSSION** *Establishing your identity as a post-tenure professor*
- 1:00 p.m.–4:10 p.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- 1:00 p.m.–4:00 p.m. **SUMMER PROGRAM FOR WOMEN IN MATHEMATICS (SPWM) REUNION**
- 2:00 p.m.–4:00 p.m. **MAA POSTER SESSION ON PROJECTS SUPPORTED BY THE NSF DIVISION OF UNDERGRADUATE EDUCATION**
- 2:15 p.m.–3:05 p.m. **AMS INVITED ADDRESS** *Unearthing the visions of a master: The web of Ramanujan's mock theta functions in number theory.* Ken Ono
- 2:30 p.m.–4:00 p.m. **AMS COMMITTEE ON THE PROFESSION PRESENTATION**
- 2:30 p.m.–3:50 p.m. **SIGMAA ON STATISTICS EDUCATION AND ASA-MAA JOINT COMMITTEE ON STATISTICS PANEL DISCUSSION** *Hiring, tenuring, and promoting statisticians in a mathematics or mathematical sciences department.*
- 2:30 p.m.–3:50 p.m. **MAA COMMITTEE ON THE TEACHING OF UNDERGRADUATE MATHEMATICS PANEL DISCUSSION** *Online homework systems: A pedagogical prospective.*
- 3:00 p.m.–4:00 p.m. **MAA SPECIAL FILM PRESENTATION** *The Story of Maths (Part I).*
- 3:20 p.m.–4:10 p.m. **AMS INVITED ADDRESS** *Categorification of quantum groups and link invariants.* Mikhail Khovanov
- 4:25 p.m.–5:25 p.m. **JOINT PRIZE SESSION**
- 5:30 p.m.–6:30 p.m. **JOINT PRIZE SESSION RECEPTION**

5:45 p.m.–6:45 p.m.	SIGMAA ON THE PHILOSOPHY OF MATHEMATICS BUSINESS MEETING AND RECEPTION
5:45 p.m.–7:15 p.m.	SIGMAA ON QUANTITATIVE LITERACY BUSINESS MEETING
5:45 p.m.–7:00 p.m.	UNIVERSITY OF IOWA MATHEMATICS DEPARTMENT RECEPTION
5:45 p.m.–7:00 p.m.	ASSOCIATION OF LESBIAN, GAY, BISEXUAL, AND TRANSGENDERED MATHEMATICIANS RECEPTION
5:45 p.m.–7:00 p.m.	MAA TWO-YEAR COLLEGE RECEPTION
5:45 p.m.–7:15 p.m.	NEW MEXICO STATE UNIVERSITY MATHEMATICS ASSOCIATION RECEPTION
6:00 p.m.–7:30 p.m.	MAA SPECIAL DRAMATIC PRESENTATION <i>Lewis Carroll in Numberland.</i>
6:00 p.m.–9:00 p.m.	ASSOCIATION OF CHRISTIANS IN THE MATHEMATICAL SCIENCES BANQUET
6:00 p.m.–7:00 p.m.	UNIVERSITY OF CHICAGO MATHEMATICS ALUMNI RECEPTION
6:00 p.m.–8:00 p.m.	OHIO STATE UNIVERSITY DEPARTMENT OF MATHEMATICS RECEPTION
6:00 p.m.–8:00 p.m.	RECEPTION FOR UNIVERSITY OF MARYLAND ALUMNI AND FRIENDS
6:30 p.m.–9:00 p.m.	MER BANQUET
7:00 p.m.–8:00 p.m.	SIGMAA ON MATHEMATICS AND THE ARTS BUSINESS MEETING
7:30 p.m.–8:30 p.m.	YOUNG MATHEMATICIANS NETWORK TOWN MEETING
8:15 p.m.–9:45 p.m.	KNITTING CIRCLE

Wednesday, January 7

7:30 a.m.–4:00 p.m.	JOINT MEETINGS REGISTRATION , Marriot Ballroom Lobby, Lobby Level, Marriott Wardman Park Hotel
8:00 a.m.–10:50 a.m.	AMS-MAA-SIAM SPECIAL SESSION ON RESEARCH IN MATHEMATICS BY UNDERGRADUATES, IV
8:00 a.m.–10:50 a.m.	AMS-MAA-MER SPECIAL SESSION ON MATHEMATICS AND EDUCATION REFORM, III
	AMS-MAA SPECIAL SESSIONS
8:00 a.m.–10:50 a.m.	<i>History of Mathematics, I</i>
8:00 a.m.–10:50 a.m.	<i>The Scholarship of Teaching and Learning, II</i>
	AMS SPECIAL SESSIONS
8:00 a.m.–10:50 a.m.	<i>Representation Theory of Lie Algebras and Algebraic Groups, II</i>
8:00 a.m.–10:50 a.m.	<i>Discrete Dynamical Systems in Periodic Environments, I</i>
8:00 a.m.–10:50 a.m.	<i>Homotopy Theory and Higher Categories, I</i>
8:00 a.m.–10:50 a.m.	<i>Algebraic Cryptography and Generic Complexity, I</i>
8:00 a.m.–10:50 a.m.	<i>Financial Mathematics, I</i>
8:00 a.m.–10:50 a.m.	<i>Dynamical Systems and Differential Equations: Theory and Applications, I</i>
8:00 a.m.–10:50 a.m.	<i>Asymptotic Geometric Analysis, I</i>
8:00 a.m.–10:50 a.m.	<i>Harmonic Analysis, II</i>
8:00 a.m.–10:50 a.m.	<i>Continued Fractions, I</i>
8:00 a.m.–10:50 a.m.	<i>Automorphic and Modular Forms in Number Theory, III</i>
8:00 a.m.–10:50 a.m.	<i>Computational Algebra and Convexity, I</i>
	MAA CONTRIBUTED PAPER SESSIONS
8:00 a.m.–10:55 a.m.	<i>Mathematics Experiences in Business, Industry, and Government</i>
8:00 a.m.–10:55 a.m.	<i>Mathlets for Teaching and Learning Mathematics, I</i>
8:00 a.m.–10:55 a.m.	<i>Productive Roles for Math Faculty in the Professional Development of K–12 Teachers</i>
8:00 a.m.–10:55 a.m.	<i>Quantitative Literacy Across the Curriculum</i>
8:00 a.m.–10:55 a.m.	<i>Statistics in K–12 Education: How Will It Affect Statistics at the College Level?</i>
8:00 a.m.–10:55 a.m.	<i>General Contributed Paper Session, V</i>
8:00 a.m.–10:50 a.m.	SIAM MINISYMPOSIUM

- 8:00 a.m.–10:55 a.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- 8:00 a.m.–5:30 p.m. **ASL INVITED ADDRESSES AND CONTRIBUTED PAPER SESSIONS**
- 8:00 a.m.–11:00 a.m. **PME COUNCIL**
- 8:00 a.m.–7:00 p.m. **EMPLOYMENT CENTER**
- 8:30 a.m.–10:30 a.m. **AMS-MAA GRAD SCHOOL FAIR** *Undergrads! Take this opportunity to meet representatives from mathematical sciences graduate programs.*
- 9:00 a.m.–9:50 a.m. **MAA INVITED ADDRESS** *Title to be announced.* **Daniel C. Rockmore**
- 9:00 a.m.–11:00 a.m. **MAA MINICOURSE #11: PART B** *Planning and teaching mathematics capstone courses for preservice secondary school teachers.*
- 9:00 a.m.–11:00 a.m. **MAA MINICOURSE #1: PART B** *Discrete models in biology and simulations.*
- 9:00 a.m.–11:00 a.m. **MAA MINICOURSE #6: PART B** *Teaching with clickers and classroom voting.*
- 9:00 a.m.–10:20 a.m. **SIGMAA ON ENVIRONMENTAL MATHEMATICS PANEL DISCUSSION** *Environmental mathematics: Getting it in the curriculum.*
- 9:00 a.m.–10:20 a.m. **MAA-NCTM COMMITTEE ON MUTUAL CONCERNS-MAA COMMITTEE ON ARTICULATION AND PLACEMENT PANEL DISCUSSION** *Placement testing: Is it working?*
- 9:00 a.m.–5:00 p.m. **STUDENT HOSPITALITY CENTER**
- 9:30 a.m.–5:30 p.m. **EXHIBITS AND BOOK SALES**
- 10:00 a.m.–11:00 a.m. **AMS SPECIAL PRESENTATION** *Who wants to be a mathematician.*
- 10:05 a.m.–10:55 a.m. **AMS INVITED ADDRESS** *Nonlinear problems involving integral diffusions.* **Luis A. Caffarelli**
- 11:10 a.m.–12:00 p.m. **AMS-MAA INVITED ADDRESS** *Title to be announced.* **Maryam Mirzakhani**
- 1:00 p.m.–2:00 p.m. **AMS COLLOQUIUM LECTURES: LECTURE III** *Homogeneous dynamics and number theory.* **Grigorii A. Margulis**
- 1:00 p.m.–2:00 p.m. **MAA LECTURE FOR STUDENTS** *Some elementary problems that remain unsolved.* **Nathaniel Dean**
- 1:00 p.m.–6:00 p.m. **AMS CURRENT EVENTS BULLETIN**
- 1:00 p.m.–5:50 p.m. **AMS-MAA SPECIAL SESSION ON THE HISTORY OF MATHEMATICS, II**
- 1:00 p.m.–5:50 p.m. **AMS-ASL SPECIAL SESSION ON MODEL THEORETIC METHODS IN FINITE COMBINATORICS, II**
- AMS SPECIAL SESSIONS**
- 1:00 p.m.–5:50 p.m. *Commutative Rings, I*
- 1:00 p.m.–5:50 p.m. *Mathematics and Mathematics Education in Fiber Arts*
- 1:00 p.m.–5:50 p.m. *Conformal Geometry, Twistor Theory, and Integrable Systems*
- 1:00 p.m.–5:50 p.m. *Discrete Dynamical Systems in Periodic Environments, II*
- 1:00 p.m.–5:50 p.m. *Homotopy Theory and Higher Categories, II*
- 1:00 p.m.–5:50 p.m. *Algebraic Cryptography and Generic Complexity, II*
- 1:00 p.m.–5:50 p.m. *Asymptotic Geometric Analysis, II*
- 1:00 p.m.–5:50 p.m. *Nonsmooth Analysis in Inverse and Variational Problems, II*
- 1:00 p.m.–5:50 p.m. *Categorification and Link Homology, II*
- 1:00 p.m.–5:50 p.m. *The Role of Generalized Maximal Monotonicity Frameworks in Optimization and Control Theory with Applications, II*
- 1:00 p.m.–5:50 p.m. *Computational Algebra and Convexity, II*
- MAA CONTRIBUTED PAPER SESSIONS**
- 1:00 p.m.–6:00 p.m. *Mathlets for Teaching and Learning Mathematics, II*
- 1:00 p.m.–6:00 p.m. *Statistics Resources on the Web*
- 1:00 p.m.–6:00 p.m. *Assessment of Student Learning in Undergraduate Mathematics*
- 1:00 p.m.–6:00 p.m. *General Contributed Paper Session, VI*
- 1:00 p.m.–6:00 p.m. **SIAM MINISYMPOSIUM**
- 1:00 p.m.–4:00 p.m. **NAM GRANVILLE-BROWN-HAYNES SESSION OF PRESENTATIONS BY RECENT DOCTORAL RECIPIENTS IN THE MATHEMATICAL SCIENCES**

Meetings & Conferences

- 1:00 p.m.–2:20 p.m. **MAA PANEL DISCUSSION** *Refocusing the courses below calculus: The view from the Dean's office.*
- 1:00 p.m.–2:20 p.m. **MAA PANEL DISCUSSION** *Power of three: How the public, private, and academic sector need to work together to restore education in America.*
- 1:00 p.m.–5:55 p.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- 2:15 p.m.–4:15 p.m. **MAA MINICOURSE #12: PART B** *SNAP Math Fairs in elementary education.*
- 2:15 p.m.–4:15 p.m. **MAA MINICOURSE #2: PART B** *Using GeoGebra to create activities and applets for visualization and exploration.*
- 2:15 p.m.–4:15 p.m. **MAA MINICOURSE #7: PART B** *A Game Theory path to quantitative literacy.*
- 2:15 p.m.–4:10 p.m. **RMMC BOARD OF DIRECTORS**
- 2:30 p.m.–4:00 p.m. **MAA PRESENTATIONS BY TEACHING AWARDS RECIPIENTS**
- 2:30 p.m.–4:00 p.m. **AMS COMMITTEE ON SCIENCE POLICY PANEL DISCUSSION**
- 2:30 p.m.–3:50 p.m. **MAA PANEL DISCUSSION** *From the trenches: Middle school teachers look at their training.*
- 3:00 p.m.–4:00 p.m. **MAA SPECIAL FILM PRESENTATION** *The Story of Maths (Part II).*
- 4:00 p.m.–5:30 p.m. **MAA POSTER SESSION ON RESEARCH BY UNDERGRADUATE STUDENTS**
- 4:20 p.m.–5:10 p.m. **AMS COMMITTEE ON SCIENCE POLICY-MAA SCIENCE POLICY COMMITTEE GOVERNMENT SPEAKER** *Speaker and title to be announced.*
- 5:00 p.m.–6:00 p.m. **SIGMAA ON BUSINESS, INDUSTRY, AND GOVERNMENT GUEST LECTURE**
- 5:00 p.m.–7:00 p.m. **MAA INFORMATION SESSION** *Actuarial education.*
- 5:30 p.m.–7:30 p.m. **UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN DEPARTMENT OF MATHEMATICS ALUMNI RECEPTION**
- 5:45 p.m.–7:00 p.m. **UNIVERSITY OF KANSAS ALUMNI AND FRIENDS RECEPTION**
- 6:00 p.m.–7:00 p.m. **HAWKES LEARNING SYSTEMS PRESENTATION**
- 6:00 p.m.–7:00 p.m. **MATHEMATICAL REVIEWS RECEPTION**
- 6:00 p.m.–8:40 p.m. **NAM RECEPTION, BANQUET, AND COX-TALBOT ADDRESS**
- 6:30 p.m.–8:30 p.m. **BUDAPEST SEMESTERS IN MATHEMATICS REUNION**
- 7:00 p.m.–8:30 p.m. **AMS SPECIAL FILM PRESENTATION** *Wolfgang Doeblin—A Mathematician Rediscovered.*
- 7:00 p.m.–9:00 p.m. **SIGMAA ON MATHEMATICS AND THE ARTS SPECIAL PRESENTATION** *Mathematics and love: A poetry reading*
- 7:00 p.m.–9:00 p.m. **NATIONAL ASSOCIATION OF MATH CIRCLES (NAMC) RECEPTION AND MEETING**
- 7:00 p.m.–9:00 p.m. **RECEPTION FOR MILLERSVILLE UNIVERSITY ALUMNI ASSOCIATION**
- 8:00 p.m.–8:40 p.m. **NAM COX-TALBOT ADDRESS** *Title to be announced who??*
- 8:30 p.m.–10:30 p.m. **MAA-PROJECT NEXT RECEPTION** *All Project NExT fellows, consultants, and other friends of Project NExT are invited.*

Thursday, January 8

- 7:30 a.m.–2:00 p.m. **JOINT MEETINGS REGISTRATION**, Marriot Ballroom Lobby, Lobby Level, Marriott Wardman Park Hotel
- AMS-MAA SPECIAL SESSIONS**
- 8:00 a.m.–10:50 a.m. *History of Mathematics, III*
- 8:00 a.m.–10:50 a.m. *Inquiry-Based Learning, I*
- AMS SPECIAL SESSIONS**
- 8:00 a.m.–10:50 a.m. *Function Theoretic Operator Theory, I*
- 8:00 a.m.–10:50 a.m. *Commutative Rings, II*
- 8:00 a.m.–10:50 a.m. *New Connections Between Topology, Combinatorics, and Physics, I*
- 8:00 a.m.–10:50 a.m. *SAGE and Mathematical Research Using Open Source Software, I*

- 8:00 a.m.–10:50 a.m. *Nonlinear Evolution Equations and Their Applications, I*
- 8:00 a.m.–10:50 a.m. *Homotopy Theory and Higher Categories, II*
- 8:00 a.m.–10:50 a.m. *Spectra of Matrix Patterns and Applications to Dynamical Systems, I*
- 8:00 a.m.–10:50 a.m. *Financial Mathematics, II*
- 8:00 a.m.–10:50 a.m. *Dynamical Systems and Differential Equations: Theory and Applications, II*
- 8:00 a.m.–10:50 a.m. *Continued Fractions, II*
- 8:00 a.m.–10:50 a.m. *Orderings in Logic and Topology, I*
- 8:00 a.m.–10:50 a.m. *Scientific Computing and Advanced Computation, I*
- MAA CONTRIBUTED PAPER SESSIONS**
- 8:00 a.m.–10:55 a.m. *College Algebra: Focusing on Conceptual Understanding, Real-World Data, and Mathematical Modeling*
- 8:00 a.m.–10:55 a.m. *Developmental Mathematics Education: Helping Under-Prepared Students Transition to College-Level Mathematics*
- 8:00 a.m.–10:55 a.m. *Mathematics and the Arts, I*
- 8:00 a.m.–10:55 a.m. *Promoting Deep Learning for Mathematics Majors through Experiential Learning, Writing, and Reflection, I*
- 8:00 a.m.–10:55 a.m. *MAA General Contributed Paper Session, VII*
- 8:00 a.m.–10:50 a.m. **SIAM MINISYMPOSIUM**
- 8:00 a.m.–10:55 a.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- 8:00 a.m.–5:30 p.m. **ASL INVITED ADDRESSES AND CONTRIBUTED PAPER SESSIONS**
- 8:20 a.m.–4:30 p.m. **AWM WORKSHOP** *This session has several parts that will be listed separately by time in this program. All presentations are open to all JMM participants.*
- 8:30 a.m.–10:20 a.m. **AWM WORKSHOP: RESEARCH PRESENTATIONS BY RECENT PH.D.'S, I**
- 8:30 a.m.–10:00 a.m. **AMS COMMITTEE ON EDUCATION PANEL DISCUSSION**
- 9:00 a.m.–9:50 a.m. **AMS INVITED ADDRESS** *On Nash, Brouwer, and other nonconstructive proofs. Christos Papadimitriou*
- 9:00 a.m.–11:00 a.m. **MAA MINICOURSE #13: PART B** *Directing undergraduate research.*
- 9:00 a.m.–11:00 a.m. **MAA MINICOURSE #3: PART B** *Educating about the state of the planet and sustainability while enhancing calculus.*
- 9:00 a.m.–11:00 a.m. **MAA MINICOURSE #8: PART B** *Taking symbols seriously: Teaching form and function in college algebra.*
- 9:00 a.m.–10:20 a.m. **SIGMAA ON STATISTICS EDUCATION PANEL DISCUSSION** *Technology in statistics education.*
- 9:00 a.m.–10:00 a.m. **NAM PANEL DISCUSSION** *Title to be announced.*
- 9:00 a.m.–12:00 p.m. **EXHIBITS AND BOOK SALES**
- 9:00 a.m.–2:00 p.m. **STUDENT HOSPITALITY CENTER**
- 9:00 a.m.–12:00 p.m. **EMPLOYMENT CENTER**
- 9:30 a.m.–10:45 a.m. **MAA-PROJECT NEXT PANEL DISCUSSION** *Designing and teaching a geometry course for preservice secondary mathematics teachers.*
- 10:00 a.m.–10:55 a.m. **NAM BUSINESS MEETING**
- 10:05 a.m.–10:55 a.m. **MAA INVITED ADDRESS** *Geometreks. Ivars Peterson*
- 10:30 a.m.–11:00 a.m. **AWM WORKSHOP: POSTER SESSION WITH PRESENTATIONS FROM WOMEN GRADUATE STUDENTS**
- 11:10 a.m.–11:40 a.m. **MAA BUSINESS MEETING**
- 11:45 a.m.–12:15 p.m. **AMS BUSINESS MEETING**
- 12:05 p.m.–1:30 p.m. **LUNCHEON IN HONOR OF RETIRING MAA ASSOCIATE SECRETARY JAMES TATTERSALL**
- 1:00 p.m.–1:50 p.m. **NAM CLAYTOR-WOODARD LECTURE** *Speaker and title to be announced*
- AMS-MAA SPECIAL SESSIONS**
- 1:00 p.m.–5:50 p.m. *History of Mathematics, IV*

- 1:00 p.m.–5:50 p.m. *Inquiry-Based Learning, II*
- AMS SPECIAL SESSIONS**
- 1:00 p.m.–5:50 p.m. *Function Theoretic Operator Theory, II*
- 1:00 p.m.–5:50 p.m. *Complex Dynamics and Complex Function Theory, I*
- 1:00 p.m.–5:50 p.m. *Commutative Rings, III*
- 1:00 p.m.–5:50 p.m. *New Connections Between Topology, Combinatorics, and Physics, II*
- 1:00 p.m.–5:50 p.m. *Geometry, Algebra, and Topology of Character Varieties*
- 1:00 p.m.–5:50 p.m. *SAGE and Mathematical Research Using Open Source Software, II*
- 1:00 p.m.–5:50 p.m. *Group Actions on Curves*
- 1:00 p.m.–5:50 p.m. *Nonlinear Evolution Equations and Their Applications, II*
- 1:00 p.m.–5:50 p.m. *Spectra of Matrix Patterns and Applications to Dynamical Systems, II*
- 1:00 p.m.–5:50 p.m. *Financial Mathematics, III*
- 1:00 p.m.–5:50 p.m. *The Redistricting Problem*
- 1:00 p.m.–5:50 p.m. *Orderings in Logic and Topology, II*
- 1:00 p.m.–5:50 p.m. *Scientific Computing and Advanced Computation, II*
- 1:00 p.m.–3:00 p.m. **MAA MINICOURSE #14: PART B** *Teaching a course in the history of mathematics.*
- 1:00 p.m.–3:00 p.m. **MAA MINICOURSE #4: PART B** *An introduction to the mathematics of modern cryptography.*
- 1:00 p.m.–3:00 p.m. **MAA MINICOURSE #9: PART B** *Beyond formulas and algorithms: Teaching a conceptual/thematic single variable calculus course.*
- MAA CONTRIBUTED PAPER SESSIONS**
- 1:00 p.m.–5:30 p.m. *Guided Discovery in Mathematics Education*
- 1:00 p.m.–5:30 p.m. *Mathematics and the Arts, II*
- 1:00 p.m.–5:30 p.m. *Promoting Deep Learning for Mathematics Majors through Experiential Learning, Writing, and Reflection, II*
- 1:00 p.m.–5:30 p.m. *General Contributed Paper Session, VIII*
- 1:00 p.m.–6:00 p.m. **SIAM MINISYMPOSIUM**
- 1:00 p.m.–2:20 p.m. **MAA PANEL DISCUSSION** *Beyond T.A. training: Calculus curriculum development by graduate teaching assistants.*
- 1:00 p.m.–2:00 p.m. **AWM WORKSHOP PANEL DISCUSSION** *What is the right job for me?*
- 1:00 p.m.–5:55 p.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- 2:30 p.m.–3:50 p.m. **MAA PANEL DISCUSSION** *Mathematics and public policy.*
- 2:30 p.m.–4:20 p.m. **AWM WORKSHOP: RESEARCH PRESENTATIONS BY RECENT PH.D.'S, II**
- 3:30 p.m.–5:30 p.m. **MAA MINICOURSE #10: PART B** *The ubiquitous Catalan numbers and their applications.*
- 3:30 p.m.–5:30 p.m. **MAA MINICOURSE #5: PART B** *Developing departmental self-studies.*
- 6:00 p.m.–7:00 p.m. **AMS-MAA-SIAM GERALD AND JUDITH PORTER PUBLIC LECTURE** *The story of a mathematical friendship. Steven Strogatz*
- 7:00 p.m.–7:45 p.m. **AMS-MAA-SIAM JOINT RECEPTION**
- 7:45 p.m.–10:00 p.m. **AMS BANQUET**