



# Phoenix, Arizona

## Timetable

### M O N D A Y , J A N U A R Y 5

9:00 a.m. — 5:00 p.m. **AMS SHORT COURSE**

9:00 a.m. — 5:00 p.m. **MAA SHORT COURSE**

### T U E S D A Y , J A N U A R Y 6

8:30 a.m. — 4:00 p.m. **MAA BOARD OF GOVERNORS**

9:00 a.m. — 5:00 p.m. **AMS SHORT COURSE**

9:00 a.m. — 5:00 p.m. **MAA SHORT COURSE**

1:00 p.m. — 10:00 p.m. **AMS COUNCIL**

3:00 p.m. — 7:00 p.m. **JOINT MEETINGS REGISTRATION**, Exhibit Hall D, Phoenix Civic Plaza

### W E D N E S D A Y , J A N U A R Y 7

7:30 a.m. — 4:00 p.m. **JOINT MEETINGS REGISTRATION**, Exhibit Hall D, Phoenix Civic Plaza

7:30 a.m. — 5:00 p.m. **EMPLOYMENT CENTER**, Exhibit Hall E, Phoenix Civic Plaza

8:00 a.m. — 10:50 a.m. **AMS-MAA-MER SPECIAL SESSION ON MATHEMATICS AND EDUCATION REFORM, I**

8:00 a.m. — 10:50 a.m. **AMS-ASL SPECIAL SESSION ON INFINITE COMBINATORICS AND INNER MODEL THEORY, I**

#### **AMS SPECIAL SESSIONS**

8:00 a.m. — 10:50 a.m. *Celestial Mechanics, I*

8:00 a.m. — 10:50 a.m. *Mathematics in Natural Resource Modeling, I*

8:00 a.m. — 10:50 a.m. *Probability and Its Applications in Combinatorics and Algorithms, I*

8:00 a.m. — 10:50 a.m. *Discrete Dynamics and Difference Equations, I*

8:00 a.m. — 10:50 a.m. *Time Scales and Applications, I*

8:00 a.m. — 10:50 a.m. *The Many Lives of Lattice Theory and the Theory of Ordered Sets, with Connections to Combinatorics, I*

8:00 a.m. — 10:50 a.m. *Coding and Design-Theoretic Applications of Polynomials, I*

8:00 a.m. — 10:50 a.m. *Geometry and Combinatorics, I*

8:00 a.m. — 10:50 a.m. *Nonlinear Partial Differential Equations and Conformal Geometry, I*

8:00 a.m. — 10:55 a.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**

#### **MAA CONTRIBUTED PAPER SESSIONS**

8:00 a.m. — 10:55 a.m. *Teaching a History of Mathematics Course*

8:00 a.m. — 10:55 a.m. *Teaching Operations Research in the Undergraduate Classroom*

8:00 a.m. — 10:55 a.m. *Uses of the WWW That Enrich and Promote Learning, I*

8:00 a.m. — 10:55 a.m. *Mathematical Experiences for Students Outside the Classroom*

8:00 a.m. — 10:55 a.m. **SIAM MINISYMPOSIA**

9:00 a.m. — 11:00 a.m. **MAA MINICOURSE #12: PART A** *Incorporating discrete mathematics in the preparation of K–12 mathematics teachers.*

9:00 a.m. — 11:00 a.m. **MAA MINICOURSE #1: PART A** *Designing and evaluating assessments for introductory statistics.*

- 9:00 a.m. — 11:00 a.m. **MAA MINICOURSE #7: PART A** *Origami in undergraduate mathematics courses.*
- 9:00 a.m. — 10:20 a.m. **MAA CUPM SUBCOMMITTEE ON CURRICULUM RENEWAL ACROSS THE FIRST TWO YEARS PANEL DISCUSSION** *Open discussion on beginning level courses.*
- 10:05 a.m. — 10:55 a.m. **AMS INVITED ADDRESS** *The status of the classification of the finite simple groups.* **Michael Aschbacher**
- 11:10 a.m. — 12:00 p.m. **AMS-MAA INVITED ADDRESS** *Title to be announced.* **Stephen Wolfram**
- 12:00 p.m. — 5:30 p.m. **EXHIBITS AND BOOK SALES**, Exhibit Hall D, Phoenix Civic Plaza
- 1:00 p.m. — 2:00 p.m. **AMS COLLOQUIUM LECTURES: LECTURE I** *Conformal invariants and partial differential equations. Part I.* **Sun-Yang Alice Chang**
- 2:15 p.m. — 3:05 p.m. **MAA INVITED ADDRESS** *The on-line encyclopedia of integer sequences, or, confessions of a sequence addict.* **Neil J. A. Sloane**
- 2:15 p.m. — 6:05 p.m. **AMS-MAA-MER SPECIAL SESSION ON MATHEMATICS AND EDUCATION REFORM, II**
- 2:15 p.m. — 6:05 p.m. **AMS-ASL SPECIAL SESSION ON INFINITE COMBINATORICS AND INNER MODEL THEORY, II**
- AMS SPECIAL SESSIONS**
- 2:15 p.m. — 6:05 p.m. *Celestial Mechanics, II*
- 2:15 p.m. — 6:05 p.m. *Mathematics in Natural Resource Modeling, II*
- 2:15 p.m. — 6:05 p.m. *Probability and Its Applications in Combinatorics and Algorithms, II*
- 2:15 p.m. — 6:05 p.m. *Discrete Dynamics and Difference Equations, II*
- 2:15 p.m. — 6:05 p.m. *Time Scales and Applications, II*
- 2:15 p.m. — 6:05 p.m. *Theory and Applications of Orthogonal Polynomials, I*
- 2:15 p.m. — 6:05 p.m. *The Many Lives of Lattice Theory and the Theory of Ordered Sets, with Connections to Combinatorics, II*
- 2:15 p.m. — 6:05 p.m. *Coding and Design-Theoretic Applications of Polynomials, II*
- 2:15 p.m. — 6:05 p.m. *Geometry and Combinatorics, II*
- 2:15 p.m. — 6:05 p.m. *Nonlinear Partial Differential Equations and Conformal Geometry, II*
- 2:15 p.m. — 6:05 p.m. *Nonstandard Methods, I*
- 2:15 p.m. — 4:15 p.m. **MAA MINICOURSE #13: PART A** *The Fibonacci and Catalan numbers.*
- 2:15 p.m. — 4:15 p.m. **MAA MINICOURSE #2: PART A** *Hands-on discrete math with technology.*
- 2:15 p.m. — 4:15 p.m. **MAA MINICOURSE #8: PART A** *Some mathematics of Leonhard Euler.*
- 2:15 p.m. — 5:55 p.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- MAA CONTRIBUTED PAPER SESSIONS**
- 2:15 p.m. — 6:00 p.m. *Courses below Calculus: A New Focus, I*
- 2:15 p.m. — 6:00 p.m. *Getting Students to Discuss and Write about Mathematics*
- 2:15 p.m. — 6:00 p.m. *The Effective Use of Computer Algebra Systems in the Teaching of Mathematics*
- 2:15 p.m. — 6:00 p.m. **MAA GENERAL CONTRIBUTED PAPER SESSION, I**
- 2:15 p.m. — 3:35 p.m. **MAA PANEL DISCUSSION** *Service learning in mathematics: They wrote the book.*
- 2:15 p.m. — 3:35 p.m. **MAA CUPM SUBCOMMITTEE ON QUANTITATIVE LITERACY REQUIREMENTS PANEL DISCUSSION** *Quantitative literacy across the curriculum.*
- 2:15 p.m. — 5:00 p.m. **MATH ON THE WEB**
- 2:15 p.m. — 6:00 p.m. **SIAM MINISYMPOSIA**
- 2:30 p.m. — 4:00 p.m. **MAA PROJECT NEXT PANEL DISCUSSION** *Writing textbooks in mathematics.*
- 2:30 p.m. — 5:00 p.m. **MAA SECTION OFFICERS**
- 3:20 p.m. — 4:10 p.m. **MAA INVITED ADDRESS** *Selections from the calculus museum.* **William W. Dunham**
- 3:20 p.m. — 4:20 p.m. **AWM PANEL DISCUSSION** *Supporting the diverse personal lives of mathematicians.*
- 3:45 p.m. — 5:05 p.m. **MAA CUPM SUBCOMMITTEE ON CURRICULUM RENEWAL ACROSS THE FIRST TWO YEARS PANEL DISCUSSION** *The impact of laptop computers on classroom instruction.*

**W E D N E S D A Y , J A N U A R Y 7 ( c o n t ' d )**

- 4:20 p.m. — 4:50 p.m. **AWM BUSINESS MEETING**
- 4:30 p.m. — 6:30 p.m. **MAA MINICOURSE #14: PART A** *Introduction to mathematical card tricks.*
- 4:30 p.m. — 6:30 p.m. **MAA MINICOURSE #3: PART A** *Computation and discovery in the number theory classroom.*
- 4:30 p.m. — 6:30 p.m. **MAA MINICOURSE #9: PART A** *PMET: Preparing mathematicians to educate teachers, grades 7–12.*
- 4:30 p.m. — 6:00 p.m. **AMS COMMITTEE ON THE PROFESSION PANEL DISCUSSION**
- 5:00 p.m. — 6:00 p.m. **GRADUATE STUDENT RECEPTION**
- 5:30 p.m. — 8:00 p.m. **MATHEMATICAL SCIENCES INSTITUTES RECEPTION**
- 6:00 p.m. — 8:00 p.m. **HISTORY OF MATHEMATICS (HOM) SIGMAA ANNUAL MEETING AND INAUGURAL ANNUAL ADDRESS**
- 6:00 p.m. — 7:00 p.m. **RECEPTION FOR FIRST-TIME PARTICIPANTS**
- 7:15 p.m. — 8:15 p.m. **YOUNG MATHEMATICIANS NETWORK TOWN MEETING**
- 8:30 p.m. — 9:30 p.m. **AMS JOSIAH WILLARD GIBBS LECTURE** *Title to be announced.* **Eric Lander**
- 9:30 p.m. — 11:00 p.m. **AWM RECEPTION**

**T H U R S D A Y , J A N U A R Y 8**

- 7:00 a.m. — 7:00 p.m. **EMPLOYMENT CENTER**, Exhibit Hall E, Phoenix Civic Plaza
- 7:30 a.m. — 4:00 p.m. **JOINT MEETINGS REGISTRATION**, Exhibit Hall D, Phoenix Civic Plaza
- 8:00 a.m. — 11:50 a.m. **AMS-MAA-SIAM SPECIAL SESSION ON RESEARCH IN MATHEMATICS BY UNDERGRADUATES, I**
- 8:00 a.m. — 11:50 a.m. **AMS-MAA-MER SPECIAL SESSION ON MATHEMATICS AND EDUCATION REFORM, III**
- 8:00 a.m. — 11:50 a.m. **AMS-ASL SPECIAL SESSION ON INFINITE COMBINATORICS AND INNER MODEL THEORY, III**
- AMS SPECIAL SESSIONS**
- 8:00 a.m. — 11:50 a.m. *Probability and Its Applications in Combinatorics and Algorithms, III*
- 8:00 a.m. — 11:50 a.m. *Mathematical Modeling in Neuroscience, Biomedicine, Genetics, and Epidemiology, I*
- 8:00 a.m. — 11:50 a.m. *Discrete Dynamics and Difference Equations, III*
- 8:00 a.m. — 11:50 a.m. *Partial Differential Equations and Applications, I*
- 8:00 a.m. — 11:50 a.m. *Theory and Applications of Orthogonal Polynomials, II*
- 8:00 a.m. — 11:50 a.m. *Topological Dynamics and Ergodic Theory, I*
- 8:00 a.m. — 11:50 a.m. *The Many Lives of Lattice Theory and the Theory of Ordered Sets, with Connections to Combinatorics, III*
- 8:00 a.m. — 11:50 a.m. *Coding and Design-Theoretic Applications of Polynomials, III*
- 8:00 a.m. — 11:50 a.m. *Nonlinear Partial Differential Equations and Conformal Geometry, III*
- 8:00 a.m. — 11:50 a.m. *Nonstandard Methods, II*
- 8:00 a.m. — 10:00 a.m. **MAA MINICOURSE #4: PART A** *Java applets in teaching mathematics.*
- 8:00 a.m. — 11:55 a.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- MAA CONTRIBUTED PAPER SESSIONS**
- 8:00 a.m. — 12:00 p.m. *Courses below Calculus: A New Focus, II*
- 8:00 a.m. — 12:00 p.m. *Placement Strategies*
- 8:00 a.m. — 12:00 p.m. *Chaotic Dynamics and Fractal Geometry*
- 8:00 a.m. — 12:00 p.m. *Truth in Using the History of Mathematics in Teaching Mathematics*
- 8:00 a.m. — 12:00 p.m. **SIAM MINISYMPOSIA**
- 9:00 a.m. — 9:50 a.m. **AWM EMMY NOETHER LECTURE** *Symbolic dynamics for geodesic flows.* **Svetlana R. Katok**
- 9:00 a.m. — 11:00 a.m. **MAA MINICOURSE #10: PART A** *Teaching linear algebra with applications.*
- 9:00 a.m. — 11:00 a.m. **MAA MINICOURSE #15: PART A** *Fair enough? Mathematics of equity.*

- 9:00 a.m. — 10:30 a.m. **MAA PROJECT NEXT PANEL DISCUSSION** *Mentoring new faculty.*
- 9:00 a.m. — 10:20 a.m. **MAA CUPM SUBCOMMITTEE ON CURRICULUM RENEWAL ACROSS THE FIRST TWO YEARS PANEL DISCUSSION** *The impact of technology in calculus courses on long-term student performance and employment.*
- 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. — 10:20 a.m. **MAA COMMITTEE ON MINORITY PARTICIPATION PANEL DISCUSSION** *Strengthening Underrepresented Minority Mathematics Participation (SUMMA).*
- 10:00 a.m. — 6:00 p.m. **EXHIBITS AND BOOK SALES**, Exhibit Hall D, Phoenix Civic Plaza
- 10:05 a.m. — 10:55 a.m. **MAA INVITED ADDRESS** *Title to be announced.* **Manjul Bhargava**
- 10:15 a.m. — 12:15 p.m. **MAA MINICOURSE #5: PART A** *Visual linear algebra.*
- 10:30 a.m. — 5:00 p.m. **MATH ON THE WEB**
- 10:45 a.m. — 12:05 p.m. **MAA PROJECT NEXT-YOUNG MATHEMATICIANS' NETWORK PANEL DISCUSSION** *Finding your next job.*
- 10:45 a.m. — 12:05 p.m. **MAA COMMITTEE ON THE UNDERGRADUATE PROGRAM IN MATHEMATICS PANEL DISCUSSION** *Undergraduate programs and courses in the mathematical sciences: A CUPM Curriculum Guide.*
- 10:45 a.m. — 12:05 p.m. **MAA CUPM SUBCOMMITTEE ON CURRICULUM RENEWAL ACROSS THE FIRST TWO YEARS PANEL DISCUSSION** *Assessment in a refocused college algebra program.*
- 11:10 a.m. — 12:00 p.m. **SIAM INVITED ADDRESS** *Coupled cell systems: A potpourri of theory and examples,* **Martin Golubitsky**
- 1:00 p.m. — 2:00 p.m. **AMS COLLOQUIUM LECTURES: LECTURE II** *Conformal invariants and partial differential equations. Part II.* **Sun-Yang Alice Chang**
- 1:00 p.m. — 3:50 p.m. **AMS-MAA-SIAM SPECIAL SESSION ON RESEARCH IN MATHEMATICS BY UNDERGRADUATES, II**
- 1:00 p.m. — 3:50 p.m. **AMS-MAA-MER SPECIAL SESSION ON MATHEMATICS AND EDUCATION REFORM, IV**
- 1:00 p.m. — 3:50 p.m. **AMS-AWM SPECIAL SESSION ON CODING, GEOMETRY, AND HYPERBOLIC DYNAMICS, I**
- AMS SPECIAL SESSIONS**
- 1:00 p.m. — 3:50 p.m. *Probability and Its Applications in Combinatorics and Algorithms, IV*
- 1:00 p.m. — 3:50 p.m. *Mathematical Modeling in Neuroscience, Biomedicine, Genetics, and Epidemiology, II*
- 1:00 p.m. — 3:50 p.m. *Discrete Dynamics and Difference Equations, IV*
- 1:00 p.m. — 3:50 p.m. *Time Scales and Applications, III*
- 1:00 p.m. — 3:50 p.m. *Partial Differential Equations and Applications, II*
- 1:00 p.m. — 3:50 p.m. *Theory and Applications of Orthogonal Polynomials, III*
- 1:00 p.m. — 3:50 p.m. *The Many Lives of Lattice Theory and the Theory of Ordered Sets, with Connections to Combinatorics, IV*
- 1:00 p.m. — 3:50 p.m. *Geometry and Combinatorics, III,*
- 1:00 p.m. — 3:50 p.m. *Fixed Points: Theory and Application, I*
- 1:00 p.m. — 3:50 p.m. *Nonstandard Methods, III*
- 1:00 p.m. — 3:00 p.m. **MAA MINICOURSE #11: PART A** *Developing your department's assessment plan.*
- 1:00 p.m. — 3:00 p.m. **MAA MINICOURSE #16: PART A** *Getting students involved in undergraduate research.*
- 1:00 p.m. — 4:10 p.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- MAA CONTRIBUTED PAPER SESSIONS**
- 1:00 p.m. — 4:10 p.m. *Innovations in Teaching Discrete Mathematics*
- 1:00 p.m. — 4:10 p.m. *Initiating and Sustaining Undergraduate Research Projects and Programs*
- 1:00 p.m. — 4:10 p.m. *Mathlets for Teaching and Learning Mathematics*
- 1:00 p.m. — 4:10 p.m. **MAA GENERAL CONTRIBUTED PAPER SESSION, II**

**T H U R S D A Y , J A N U A R Y 8 ( c o n t ' d )**

- 1:00 p.m. — 4:00 p.m. **MAA INVITED PAPER SESSION ON WEBWORK, A WEB BASED HOMEWORK SYSTEM**
- 1:00 p.m. — 2:20 p.m. **MAA PANEL DISCUSSION** *Mathematics education in a research intensive department: What makes it work?*
- 1:00 p.m. — 2:30 p.m. **MAA PROJECT NEXT PANEL DISCUSSION** *Technology and the mathematics major.*
- 1:00 p.m. — 2:20 p.m. **MAA PANEL DISCUSSION** *Successful activities for a Math Club.*
- 1:00 p.m. — 4:10 p.m. **SIAM MINISYMPOSIA**
- 1:30 p.m. — 3:30 p.m. **MAA MINICOURSE #6: PART A** *Using interactive labs to explore abstract algebra topics.*
- 2:00 p.m. — 4:00 p.m. **MAA PROJECT NEXT-YOUNG MATHEMATICIANS NETWORK POSTER SESSION**
- 2:00 p.m. — 4:00 p.m. **SUMMER PROGRAM FOR WOMEN IN MATHEMATICS (SPWM)**
- 2:15 p.m. — 3:05 p.m. **AMS INVITED ADDRESS** *Title to be announced.* **Eva Tardos**
- 2:40 p.m. — 4:00 p.m. **MAA SIGMAA ON STATISTICS EDUCATION PANEL DISCUSSION** *The undergraduate mathematical statistics sequence.*
- 2:40 p.m. — 4:00 p.m. **MAA SIGMAA ON THE HISTORY OF MATHEMATICS PANEL DISCUSSION** *The history of applications in teaching undergraduate mathematics: 1950–2000.*
- 3:20 p.m. — 4:10 p.m. **AMS RETIRING PRESIDENTIAL ADDRESS** *Title to be announced.* **Hyman Bass**
- 4:25 p.m. — 6:30 p.m. **JOINT PRIZE SESSION AND RECEPTION**
- 5:45 p.m. — 7:15 p.m. **MAA PANEL DISCUSSION** *Web SIGMAA panel discussion and inaugural business meeting.*
- 6:00 p.m. — 8:00 p.m. **ASSOCIATION OF LESBIAN, GAY, BISEXUAL, AND TRANSGENDERED MATHEMATICIANS RECEPTION**
- 6:30 p.m. — 9:30 p.m. **MER BANQUET**
- 8:15 p.m. — 9:45 p.m. **KNITTING CIRCLE**

**F R I D A Y , J A N U A R Y 9**

- 7:00 a.m. — 8:00 a.m. **JOINT PME AND MAA STUDENT CHAPTER ADVISORS' BREAKFAST**
- 7:00 a.m. — 7:30 p.m. **EMPLOYMENT CENTER**, Exhibit Hall E, Phoenix Civic Plaza
- 7:30 a.m. — 4:00 p.m. **JOINT MEETINGS REGISTRATION**, Exhibit Hall D, Phoenix Civic Plaza
- 8:00 a.m. — 10:50 a.m. **AMS-MAA-SIAM SPECIAL SESSION ON RESEARCH IN MATHEMATICS BY UNDERGRADUATES, III**
- AMS-MAA SPECIAL SESSIONS**
- 8:00 a.m. — 10:50 a.m. *Mathematical Techniques in Musical Analysis, I*
- 8:00 a.m. — 10:50 a.m. *History of Mathematics, I*
- 8:00 a.m. — 10:50 a.m. **AMS-SIAM SPECIAL SESSION ON CLASSICAL AND NONLINEAR SPECIAL FUNCTIONS, I**
- 8:00 a.m. — 10:50 a.m. **AMS-AWM SPECIAL SESSION ON CODING, GEOMETRY, AND HYPERBOLIC DYNAMICS, II**
- AMS SPECIAL SESSIONS**
- 8:00 a.m. — 10:50 a.m. *Competitive and Adaptative Dynamics in Ecology, I*
- 8:00 a.m. — 10:50 a.m. *Multiscale and Oscillatory Phenomena: Modeling, Numerical Techniques, and Applications, I*
- 8:00 a.m. — 10:50 a.m. *Continued Fractions, I*
- 8:00 a.m. — 10:50 a.m. *Topological Dynamics and Ergodic Theory, II*
- 8:00 a.m. — 10:50 a.m. *Fixed Points: Theory and Application, II*
- 8:00 a.m. — 10:50 a.m. *Nonlinear PDEs and Variational Problems, I*
- 8:00 a.m. — 10:50 a.m. *Low-Dimensional Topology, I*
- 8:00 a.m. — 10:55 a.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**

**MAA CONTRIBUTED PAPER SESSIONS**

- 8:00 a.m. — 10:55 a.m. *Statistics Education Discourse on Inference*  
 8:00 a.m. — 10:55 a.m. *Math and the Arts*  
 8:00 a.m. — 10:55 a.m. *Applications of Mathematics in Computer Science*  
 8:00 a.m. — 10:55 a.m. *Mathematics Experiences in Business, Industry, and Government*

8:00 a.m. — 10:55 a.m. **MAA GENERAL CONTRIBUTED PAPER SESSION, III**

8:00 a.m. — 10:55 a.m. **ASL INVITED ADDRESSES AND CONTRIBUTED PAPER SESSIONS**

8:00 a.m. — 11:00 p.m. **PME COUNCIL**

9:00 a.m. — 9:50 a.m. **AMS INVITED ADDRESS** *Properties of “almost every”  $C^1$  image of compact sets.* **James A. Yorke**

9:00 a.m. — 11:00 a.m. **MAA MINICOURSE #12: PART B** *Incorporating discrete mathematics in the preparation of K–12 mathematics teachers.*

9:00 a.m. — 11:00 a.m. **MAA MINICOURSE #1: PART B** *Designing and evaluating assessments for introductory statistics.*

9:00 a.m. — 11:00 a.m. **MAA MINICOURSE #7: PART B** *Origami in undergraduate mathematics courses.*

9:00 a.m. — 11:00 a.m. **MAA POSTER SESSION ON PROJECTS SUPPORTED BY THE NSF** *Assessment of student learning in undergraduate mathematics: Works in progress.*

9:00 a.m. — 10:30 a.m. **MAA PROJECT NEXT PANEL DISCUSSION** *Writing expository mathematics.*

9:00 a.m. — 10:20 a.m. **MAA SPECIAL PRESENTATION** *Proposal writing workshop for grant applications to the NSF division of undergraduate education.*

9:00 a.m. — 10:20 a.m. **MAA PANEL DISCUSSION** *Preparing mathematicians to educate teachers.*

9:30 a.m. — 5:30 p.m. **EXHIBITS AND BOOK SALES**, Exhibit Hall D, Phoenix Civic Plaza

10:00 a.m. — 11:00 a.m. **AMS SPECIAL PRESENTATION** *Who Wants To Be A Mathematician?*

10:00 a.m. — 5:00 p.m. **MATH ON THE WEB**

10:05 a.m. — 10:55 a.m. **AMS INVITED ADDRESS** *Random planar curves and conformal invariance.* **Gregory F. Lawler**

11:10 a.m. — 12:00 p.m. **AMS-MAA INVITED ADDRESS** *Title to be announced.* **Bonnie Berger**

1:00 p.m. — 2:00 p.m. **AMS COLLOQUIUM LECTURES: LECTURE III** *Conformal invariants and partial differential equations. Part III.* **Sun-Yang Alice Chang**

1:00 p.m. — 1:50 p.m. **MAA STUDENT LECTURE** *Fractional calculus with applications.* **Mark M. Meerschaert**

1:00 p.m. — 5:50 p.m. **AMS-MAA-SIAM SPECIAL SESSION ON RESEARCH IN MATHEMATICS BY UNDERGRADUATES, IV**

**AMS-MAA SPECIAL SESSIONS**

1:00 p.m. — 6:00 p.m. *Mathematical Techniques in Musical Analysis, II*

1:00 p.m. — 5:50 p.m. *History of Mathematics, II*

1:00 p.m. — 5:50 p.m. **AMS-SIAM SPECIAL SESSION ON CLASSICAL AND NONLINEAR SPECIAL FUNCTIONS, II**

1:00 p.m. — 5:50 p.m. **AMS-AWM SPECIAL SESSION ON CODING, GEOMETRY, AND HYPERBOLIC DYNAMICS, III**

**AMS SPECIAL SESSIONS**

1:00 p.m. — 5:50 p.m. *Mathematical Modeling in Neuroscience, Biomedicine, Genetics, and Epidemiology, III*

1:00 p.m. — 5:50 p.m. *Current Events*

1:00 p.m. — 5:50 p.m. *Continued Fractions, II*

1:00 p.m. — 5:50 p.m. *Modern Function Theory, I*

1:00 p.m. — 5:50 p.m. *Arithmetical Algebraic Geometry, I*

1:00 p.m. — 5:50 p.m. *Fixed Points: Theory and Application, III*

1:00 p.m. — 5:50 p.m. *Nonlinear PDEs and Variational Problems, II*

1:00 p.m. — 5:50 p.m. *Low-Dimensional Topology, II*

- 1:00 p.m. — 3:00 p.m. **MAA MINICOURSE #13: PART B** *The Fibonacci and Catalan numbers.*
- 1:00 p.m. — 3:00 p.m. **MAA MINICOURSE #2: PART B** *Hands-on discrete math with technology.*
- 1:00 p.m. — 3:00 p.m. **MAA MINICOURSE #8: PART B** *Some mathematics of Leonhard Euler.*
- 1:00 p.m. — 5:55 p.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- MAA CONTRIBUTED PAPER SESSIONS**
- 1:00 p.m. — 3:30 p.m. *Teaching and Learning of Undergraduate Mathematics, I*
- 1:00 p.m. — 3:30 p.m. *My Favorite Demo: Innovative Strategies for Mathematics Instructors, I*
- 1:00 p.m. — 3:30 p.m. *Mathematical Models of the Environment*
- 1:00 p.m. — 2:20 p.m. **MAA PANEL DISCUSSION** *Voices of the partner disciplines: Building on the MAA curriculum foundations project.*
- 1:00 p.m. — 2:20 p.m. **MAA PANEL DISCUSSION** *Session for chairs: The chair's role in teaching teachers.*
- 1:00 p.m. — 3:00 p.m. **MAA POSTER SESSION** *Projects supported by the NSF division of undergraduate education.*
- 1:00 p.m. — 5:00 p.m. **ASL INVITED ADDRESSES AND CONTRIBUTED PAPER SESSIONS**
- MAA CONTRIBUTED PAPER SESSION**
- 2:00 p.m. — 6:30 p.m. *Philosophy of Mathematics*
- 2:15 p.m. — 4:00 p.m. **NAM GRANVILLE-BROWN-HAYNES SESSION OF PRESENTATIONS BY RECENT DOCTORAL RECIPIENTS IN THE MATHEMATICAL SCIENCES**
- 2:15 p.m. — 4:10 p.m. **RMMC BOARD OF DIRECTORS**
- MAA INVITED PAPER SESSIONS**
- 2:30 p.m. — 5:30 p.m. *Assessment of Student Learning in Undergraduate Mathematics*
- 2:30 p.m. — 5:30 p.m. *The Use of Hand-Held Technology in College and University Developmental Algebra Classrooms*
- 2:30 p.m. — 4:00 p.m. **AMS COMMITTEE ON SCIENCE POLICY PANEL DISCUSSION**
- 2:30 p.m. — 4:00 p.m. **MAA PRESENTATIONS BY TEACHING AWARD RECIPIENTS** *The winners of the Deborah and Franklin Tepper Haimo Award for Distinguished College of University Teaching give the secrets of their success.*
- 3:15 p.m. — 5:15 p.m. **MAA MINICOURSE #3: PART B** *Computation and discovery in the number theory classroom.*
- 3:15 p.m. — 5:15 p.m. **MAA MINICOURSE #9: PART B** *PMET: Preparing mathematicians to educate teachers, grades 7–12.*
- 3:30 p.m. — 6:30 p.m. **LONDON MATHEMATICAL SOCIETY** *This session includes a Society meeting, an Invited Address, and a reception.*
- 4:00 p.m. — 6:30 p.m. **MAA COMMITTEE ON UNDERGRADUATE STUDENT ACTIVITIES AND CHAPTERS UNDERGRADUATE POSTER SESSION**
- 4:00 p.m. — 6:00 p.m. **SIGMAA ON RESEARCH ON UNDERGRADUATE MATHEMATICS EDUCATION** *Business meeting and invited address by Chris Rasmussen.*
- 4:15 p.m. — 6:00 p.m. **MAA SPECIAL PRESENTATION** *CINEMATH: Mathematics on the silver screen.*
- 4:20 p.m. — 5:10 p.m. **AMS-MAA GOVERNMENT SPEAKER** *Speaker and title to be announced.*
- 4:30 p.m. — 6:30 p.m. **MAA MINICOURSE #14: PART B** *Introduction to mathematical card tricks.*
- 5:00 p.m. — 6:00 p.m. **RECEPTION FOR MATHEMATICIANS IN BUSINESS, INDUSTRY, AND GOVERNMENT**
- 5:15 p.m. — 7:15 p.m. **UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN DEPARTMENT OF MATHEMATICS RECEPTION**
- 5:30 p.m. — 9:00 p.m. **NAM RECEPTION, BANQUET, AND COX-TALBOT ADDRESS** *Speaker and title to be announced.*
- 5:30 p.m. — 7:30 p.m. **NEW MEXICO STATE UNIVERSITY MATHEMATICS ASSOCIATION RECEPTION**

**FRIDAY, JANUARY 9 (cont'd)**

6:00 p.m. — 7:00 p.m. **MATHEMATICAL REVIEWS RECEPTION**

8:30 p.m. — 10:30 p.m. **MAA PROJECT NEXT RECEPTION**

**SATURDAY, JANUARY 10**

7:30 a.m. — 2:00 p.m. **JOINT MEETINGS REGISTRATION**, Exhibit Hall D, Phoenix Civic Plaza

**AMS-MAA SPECIAL SESSION**

8:00 a.m. — 10:50 a.m. *History of Mathematics, III*

8:00 a.m. — 10:50 a.m. **AMS-SIAM SPECIAL SESSION ON CLASSICAL AND NONLINEAR SPECIAL FUNCTIONS, III**

**AMS SPECIAL SESSIONS**

8:00 a.m. — 10:50 a.m. *Nonassociative Algebra, I*

8:00 a.m. — 10:50 a.m. *Competitive and Adaptative Dynamics in Ecology, II*

8:00 a.m. — 10:50 a.m. *Multiscale and Oscillatory Phenomena: Modeling, Numerical Techniques, and Applications, II*

8:00 a.m. — 10:50 a.m. *Modern Function Theory, II*

8:00 a.m. — 10:50 a.m. *Smooth Dynamical Systems and Applications, I*

8:00 a.m. — 10:50 a.m. *Geometric Structures on Manifolds, I*

8:00 a.m. — 10:50 a.m. *Arithmetical Algebraic Geometry, II*

8:00 a.m. — 10:50 a.m. *Value Distribution Theory in Classical and p-adic Function Theory, I*

8:00 a.m. — 10:50 a.m. *Nonlinear PDEs and Variational Problems, III*

8:00 a.m. — 10:50 a.m. *Low-Dimensional Topology, III*

8:00 a.m. — 10:55 a.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**

**MAA CONTRIBUTED PAPER SESSIONS**

8:00 a.m. — 10:55 a.m. *Teaching and Learning of Undergraduate Mathematics, II*

8:00 a.m. — 10:55 a.m. *My Favorite Demo: Innovative Strategies for Mathematics Instructors, II*

8:00 a.m. — 10:55 a.m. *Focus on Integrating Graphic Handhelds into Collegiate Mathematics*

8:00 a.m. — 10:55 a.m. *Mathematics and Sports*

8:00 a.m. — 10:55 a.m. **MAA GENERAL CONTRIBUTED PAPER SESSION, IV**

8:00 a.m. — 10:55 a.m. **ASL INVITED ADDRESSES AND CONTRIBUTED PAPER SESSIONS**

8:30 a.m. — 10:00 a.m. **AMS COMMITTEE ON EDUCATION PANEL DISCUSSION**

8:30 a.m. — 5:00 p.m. **AWM WORKSHOP** *This session consists of several parts listed separately throughout the program.*

9:00 a.m. — 9:50 a.m. **MAA INVITED ADDRESS** *When topology meets chemistry.* **Erica L. Flapan**

9:00 a.m. — 11:00 a.m. **MAA MINICOURSE #10: PART B** *Teaching linear algebra with applications.*

9:00 a.m. — 11:00 a.m. **MAA MINICOURSE #15: PART B** *Fair enough? Mathematics of equity.*

9:00 a.m. — 11:00 a.m. **MAA MINICOURSE #4: PART B** *Java applets in teaching mathematics.*

9:00 a.m. — 10:20 a.m. **MAA PANEL DISCUSSION** *Mathematicians and mathematics teacher educators working together to improve K–12 mathematics education.*

9:00 a.m. — 10:20 a.m. **MAA PANEL DISCUSSION** *Doctorates in mathematics education: Where do they go? What do they do? How can mathematics departments contribute?*

9:00 a.m. — 10:20 a.m. **AMS-MAA COMMITTEE ON TEACHING ASSISTANTS AND PART-TIME INSTRUCTORS PANEL DISCUSSION** *Nonpermanent instructors: Implications and issues.*

9:00 a.m. — 10:00 a.m. **NAM PANEL DISCUSSION**

9:00 a.m. — 12:00 p.m. **EXHIBITS AND BOOK SALES**, Exhibit Hall D, Phoenix Civic Plaza

9:00 a.m. — 12:00 p.m. **EMPLOYMENT CENTER**, Exhibit Hall E, Phoenix Civic Plaza

10:00 a.m. — 12:00 p.m. **MATH ON THE WEB**

10:00 a.m. — 10:50 a.m. **NAM BUSINESS MEETING**

- 10:05 a.m. — 10:50 a.m. **MAA RETIRING PRESIDENTIAL ADDRESS** *Fallacies in elementary statistics.* **Ann E. Watkins**
- 11:10 a.m. — 11:40 a.m. **MAA BUSINESS MEETING**
- 11:45 a.m. — 12:15 p.m. **AMS BUSINESS MEETING**
- 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. — 6:00 p.m. *Mathematical Techniques in Musical Analysis, III*
- 1:00 p.m. — 5:50 p.m. *History of Mathematics, IV*
- AMS SPECIAL SESSIONS**
- 1:00 p.m. — 5:50 p.m. *Nonassociative Algebra, II*
- 1:00 p.m. — 5:50 p.m. *Competitive and Adaptative Dynamics in Ecology, III*
- 1:00 p.m. — 5:50 p.m. *Multiscale and Oscillatory Phenomena: Modeling, Numerical Techniques, and Applications, III*
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- 1:00 p.m. — 5:50 p.m. *Value Distribution Theory in Classical and  $p$ -adic Function Theory, II*
- 1:00 p.m. — 5:50 p.m. *Nonlinear PDEs and Variational Problems, IV*
- 1:00 p.m. — 5:50 p.m. *Low-Dimensional Topology, IV*
- 1:00 p.m. — 3:00 p.m. **MAA MINICOURSE #11: PART B** *Developing your department's assessment plan.*
- 1:00 p.m. — 3:00 p.m. **MAA MINICOURSE #16: PART B** *Getting students involved in undergraduate research.*
- 1:00 p.m. — 3:00 p.m. **MAA MINICOURSE #5: PART B** *Visual linear algebra.*
- 1:00 p.m. — 5:55 p.m. **AMS SESSIONS FOR CONTRIBUTED PAPERS**
- MAA CONTRIBUTED PAPER SESSIONS**
- 1:00 p.m. — 5:30 p.m. *Uses of the WWW That Enrich and Promote Learning, II*
- 1:00 p.m. — 5:30 p.m. *Technology in Mathematics Teacher Preparation Courses*
- 1:00 p.m. — 5:30 p.m. *Strategies That Work to Positively Change Student Attitudes toward Mathematics*
- 1:00 p.m. — 5:00 p.m. **MAA GENERAL CONTRIBUTED PAPER SESSION, V**
- 1:00 p.m. — 4:00 p.m. **MAA INVITED PAPER SESSION ON APPLICATIONS OF TOPOLOGY TO BIOLOGY, CHEMISTRY, AND PHYSICS**
- 1:00 p.m. — 2:20 p.m. **MAA CUPM SUBCOMMITTEE ON CURRICULUM RENEWAL ACROSS THE FIRST TWO YEARS PANEL DISCUSSION** *What are colleges doing with students with AP placement?*
- 1:00 p.m. — 2:20 p.m. **MAA SPECIAL PRESENTATION** *Oral presentations: Let's talk about it!*
- 1:00 p.m. — 2:20 p.m. **MAA PANEL DISCUSSION** *What can you do with a degree in mathematics?*
- 1:00 p.m. — 5:00 p.m. **ASL INVITED ADDRESSES AND CONTRIBUTED PAPER SESSIONS**
- 2:30 p.m. — 3:30 p.m. **MAA PANEL DISCUSSION** *Revisiting crossroads: Continuing the dialogue on two-year college mathematics.*
- 2:45 p.m. — 4:45 p.m. **MAA SPECIAL PRESENTATION** *Informal session on actuarial education.*
- 2:45 p.m. — 4:05 p.m. **MAA CUPM SUBCOMMITTEE ON CURRICULUM RENEWAL ACROSS THE FIRST TWO YEARS** *How to implement curriculum change.*
- 3:15 p.m. — 5:15 p.m. **MAA MINICOURSE #6: PART B** *Using interactive labs to explore abstract algebra topics.*
- 4:15 p.m. — 5:35 p.m. **MAA CUPM SUBCOMMITTEE ON CURRICULUM RENEWAL ACROSS THE FIRST TWO YEARS PANEL DISCUSSION** *How to assess problem solving.*
- 6:30 p.m. — 10:00 p.m. **AMS BANQUET**