

Monday, July 28

- 11:00am–5:00pm **Project NExT Registration**
*1st Floor Lobby
 Univ. of Wisconsin
 Lowell Center*
- 1:30pm–9:00pm **Project NExT Workshop
 (for 2008–2009 Fellows)**
*Univ. of Wisconsin
 Lowell and Pyle Centers*

Tuesday, July 29

- 8:00am–5:00pm **Project NExT Registration**
*1st Floor Lobby
 Univ. of Wisconsin
 Lowell Center*
- 8:30am–5:25pm **Project NExT Workshop
 (for 2008–2009 Fellows)**
*Univ. of Wisconsin
 Lowell and Pyle Centers*
- 9:00am–5:15pm **Part 1: Two Day
 Short Course**
*Capital Ballroom B
 Concourse Hotel*
- Game–Theoretic Modeling:
 Techniques and Applications**
*Michael A. Jones,
 Montclair State University*
- 5:15pm–6:45pm **Short Course Reception**
Caucus Room
- 2:00pm–8:00pm **New Governors
 Orientation**
Capitol A, Concourse Hotel

Wednesday, July 30

- 8:00am–5:00pm **MAA Board of Governors**
Capital AB, Concourse Hotel

- 8:00am–5:00pm **Project NExT Registration**
*1st Floor Lobby
 Univ. of Wisconsin
 Lowell Center*
- 8:15am–5:30pm **Project NExT Workshop
 (for 2007–2008 and
 2008–2009 Fellows)**
*Univ. of Wisconsin
 Lowell and Pyle Centers*
- 8:30am–2:30pm **The Madison Tour**
Main Entrance, Concourse Hotel
- 9:00am–5:00pm **Part 2: Two Day
 Short Course**
*Capital Ballroom B
 Concourse Hotel*
- Game–Theoretic Modeling:
 Techniques and Applications**
*Michael A. Jones,
 Montclair State University*
- 2:00pm–7:00pm **Registration**
*Lakeside Commons, Level 1
 Monona Terrace*
- 2:45pm–4:00pm **CUSAC Meeting**
*Concourse Hotel,
 Conference Room II*
- 4:30pm–5:30pm **MAA–PME Student
 Reception**
*Senate Rooms AB
 Concourse Hotel*
- 5:30pm–6:45pm **Undergraduate Activity**
*Wisconsin Ballroom
 Concourse Hotel*
- Math JEOPARDY**
John Harris, Furman University
- Mike Berry,
 University of Tennessee*
- Mike Mossinghoff,
 Davidson College*

- 6:30pm–7:30pm **Opening Reception**
*Madison Ballroom
Monona Terrace*
- 7:30pm–9:30pm **Opening Banquet**
*Capitol AB Ballroom,
Monona Terrace*

Thursday, July 31

- 8:00am – 4:00pm **Registration**
*Lakeside Commons
Level 1, Monona Terrace*
- 8:30am–9:20am **MAA Invited Address**
Ballroom AB, Monona Terrace
**Intellectual Need and its Role
in Mathematics Instruction**
*Guershon Harel, University of
California, San Diego*
- 8:30am–10:30am **Contributed Paper Session**
Hall Ideas E, Monona Terrace
**Fascinating Examples from
Combinatorics, Discrete
Mathematics, and Graph
Theory**
Suzanne Dorée, Augsburg College
*Nancy Ann Neudauer,
Pacific University*
- 8:30am–8:45am **Applications of Graph
Theory to Conservation
Biology**
Kay Smith, Saint Olaf College
- 8:50am–9:05am **Equal Circle Packing On a
Square Torus**
*William Dickinson, Grand Valley
State University*
- 9:10am–9:25am **Solving Instant Insanity
Without Going Insane**
*Rachel Marie Robertson, Michigan
Technological University*

- 9:30am–9:40am **The Guessing Secrets
Problem: Classical
and Quantum Algorithms**
*Michael Nathanson, St. Mary's
College of California*
- 9:50am–10:05am **Permutation Patterns and
Patience Sorting:
Sophisticated Combinatorics
From a Simple Card Game**
*Isaiah Lankham,
Simpson University*
- 8:30am–10:30am **Contributed Paper Session**
Hall Ideas F, Monona Terrace
**Interesting Topics in History
of Mathematics That
Enhance the Teaching and
Learning of Mathematics I**
*Daniel Curtin, Northern
Kentucky University*
*Amy Shell–Gellasch,
Pacific Lutheran University*
- 8:30am–8:40am **Obsession From the Greeks:
Doubling Cubes, Squaring
Circles, Trisecting
Angles, and Constructing
Regular Polygons**
*Charlie Smith,
Park University*
- 8:45am–8:55am **Edlin's Enigma**
*Anne E. Edlin,
La Salle University*
- 9:00am–9:10am **Maya Mathematical
Presentation**
*Doy O. Hollman,
Lipscomb University*
- 9:15am–9:25am **My Mathematician is Better
than Your Mathematician**
*Sarah Mabrouk, Framingham
State University*

Schedule of Events | Thursday

9:30am–9:40am	<p>Positive Impacts From Using the History of Mathematics When Teaching Students With Weak Mathematical Backgrounds</p> <p><i>Ciaran Mac an Bhaird, National University of Ireland, Maynooth</i></p>	9:15am–9:25am	<p>Math Chats: Engaging Students in Mathematics Outside the Classroom</p> <p><i>Robin Lydiann Anderson, Southwestern Illinois College</i></p>
9:45am–9:55am	<p>The Calculation of Galois Groups By Classical Methods With the Aid of Mathematica</p> <p><i>Matt David Lunsford, Union University</i></p>	9:30am–9:40am	<p>Mathematics Skills Assessment and Training in Freshman Engineering Courses</p> <p><i>Janet Marie McShane, Phillip Mlsna, Jennifer Maynard, Chester Ismay, and Sarah Brown, Northern Arizona University</i></p>
10:00am–10:10am	<p>The Role of History of Mathematics</p> <p><i>Dr. Pragati, Jain, SIMS, Indore</i></p>	9:45am–9:55am	<p>Lessons Learned From a Calculus Redesign Project</p> <p><i>Jennifer McLoud–Mann, University of Texas at Tyler</i></p>
8:30am–10:30am	<p>General Contributed Paper Session I</p> <p><i>Meeting Room O Monona Terrace</i></p> <p><i>Linda Becerra, University of Houston-Downtown</i></p> <p><i>Ron Barns, University of Houston-Downtown</i></p>	10:00am–10:10am	<p>Google’s PageRank for Beginners: A Directed Graph Example for Liberal Arts Math Courses</p> <p><i>Rebecca S. Wills, Roanoke College</i></p>
8:30am–8:40am	<p>Redesigning Developmental Math to More Efficient and Effective</p> <p><i>Sue Beck, Morehead State University</i></p>	10:15am–10:25am	<p>Frontloading Statistical Inference Topics in an Introductory Statistics Course</p> <p><i>Kate McGivney, Shippensburg University</i></p>
8:45am–8:55am	<p>Report on Progress in Developmental Algebra at Lindsey Wilson College</p> <p><i>Scott Dillery, Lindsey Wilson College</i></p>	8:30am–10:30am	<p>MAA Student Paper Session (1)</p> <p><i>Meeting Room L Monona Terrace</i></p>
9:00am–9:10am	<p>Using a Homework Notebook in College Algebra</p> <p><i>Patricia Kiihne, Illinois College</i></p>	8:30am–10:30am	<p>MAA Student Paper Session (2)</p> <p><i>Meeting Room M Monona Terrace</i></p>
		8:30am–10:30am	<p>MAA Student Paper Session (3)</p> <p><i>Meeting Room N, Monona Terrace</i></p>

Schedule of Events | Thursday

8:30am–10:30am **MAA Student Paper Session (4)**
Meeting Room Q, Monona Terrace

8:30am–10:30am **MAA Student Paper Session (5)**
Meeting Room R, Monona Terrace

9:00am–10:20am **Panels and Other Sessions**
Ballroom C, Monona Terrace
The Role of Quantitative Literacy Centers in Supporting Students and Faculty
Maura Mast, University of Massachusetts, Boston

9:00am–5:00pm **Art Exhibit**
Exhibit Hall B, Monona Terrace

9:00am–5:00pm **Exhibits and Book Sales**
Exhibit Hall B, Monona Terrace

9:00am–5:00pm **Undergraduate Activities**
Exhibit Hall B, Monona Terrace
Student Hospitality Center
Richard and Araceli Neal, American Society for the Communications of Math

9:30am–10:20am **MAA Invited Address**
Ballroom AB, Monona Terrace
Ecological and Evolutionary Consequences of Species Interactions
Claudia Neuhauser, University of Minnesota

9:30am–10:50am **Contributed Paper Session**
Hall Ideas I, Monona Terrace
Teaching Mathematics and Statistics Through Current Civic Issues

9:30am–9:45am **Developing “Mathematics and Social Justice.” A Course Which Incorporates Social Justice Issues and Service–Learning Projects**
Rikki Wagstrom and Cynthia Kaus, Metropolitan State University

9:50am–10:05am **Global Consciousness, Social Responsibility, Ethical Awareness (and MATH!) at Westminster**
Lisa Marano, West Chester University of Pennsylvania

10:10am–10:25am **Integrating Service Learning Projects in a Differential Equations Course**
Bradford Bynum, Westminster College

10:25am–10:45am **Statistics through Current Civic Issues**
John Zobitz, Augsburg College

10:30am–11:20am **Earle R. Hedrick Lecture Series**
Ballroom AB, Monona Terrace
Lecture 1 | Mathematics Meets Art, Puzzles, and Magic
Erik Demaine, Massachusetts Institute of Technology

1:00pm–1:50pm **MAA Lecture for Students**
Ballroom A, Monona Terrace
Sudoku: Questions, Variations, and Research
Laura Taalman, James Madison University

1:00pm–2:20pm **Panels and Other Sessions**
Lecture Hall, Monona Terrace

Writing for MAA Periodicals
Lowell Beineke, Indiana University–Purdue University Fort Wayne and Editor, The College Mathematics Journal

Ivars Peterson, MAA Director of Publications for Journals and Communications

1:00pm–3:00pm **Contributed Paper Session**
Ballroom D, Monona Terrace

Integrating Biology and Mathematics
James Fulton, Suffolk County Community College

Timothy Comar, Benedictine University

1:00pm–1:20pm **Analyzing the Interaction of Species: Game Theory in a Calculus Course**
Lee Stemkoski, Adelphi University

1:20pm–1:40pm **Biofuels, Useful Arithmetic and Embodied Energy**
Ben Fusaro, Florida State University

1:40pm–2:00pm **Biology, Discrete Mathematics and Theoretical Computer Science**
Dr. Atabong Timothy Agendia and Dr. Awunglefack Dominic Fobellah, BaaP Systems

2:00pm–2:20pm **Using Knot Theory to Model DNA: An Undergraduate Research Project**
William Schellhorn, Simpson College

2:20pm–2:40pm **Teaching Mathematics to Biology Majors Using the Scientific Method**
James Fulton and Linda Sabatino, Suffolk County Community College

2:40pm–3:00pm **Discussion on Integrating Biology and Mathematics**
James Fulton, Suffolk County Community College

Timothy Comar, Benedictine University

1:00pm–3:00pm **Contributed Paper Session**
Hall Ideas E, Monona Terrace

Advances in Recreational Mathematics
Paul R. Coe and Kristen Schemmerhorn, Dominican University

1:00pm–1:15pm **Problems From the Pages of the Journal of Recreational Mathematics That are Still Unsolved**
Charles Ashbacher, Mount Mercy College

1:20pm–1:35pm **Combinatorics, Probabilities, and the NCAA Basketball Tournaments**
Matthew Menzel, Marietta College

1:40pm–1:55pm **Re-Distributing and Reconstruction Probabilities in Horse Races, Voting Theory, and Poker**
Michael Jones and John Stevens, Montclair State University

2:00pm–2:15pm **Voting Off: How Bad Can It Be?**
Dylan Helliwell, Seattle University

2:20pm–2:35pm **Mathematical Thinking With Magic Squares**
Hossein Behforooz, Utica College

2:40pm–2:55pm **Stuck in a Sudoku**
Helen Schroeder, University of Wisconsin – Stout

1:00pm–3:00pm **Contributed Paper Session**
Hall Ideas I, Monona Terrace
Teaching Mathematics and Statistics Through Current Civic Issues
Rikki Wagstrom and Cynthia Kaus, Metropolitan State University

1:00pm–1:20pm **Authentic Discovery Learning Projects in Statistics with Constructs From Environmental and Social Science Disciplines**
Diana Spence and Robb Sin, North Georgia College & State University

1:20pm–1:40pm **The Gini Coefficient: Measuring Inequality in Resource Allocation**
Michael Catalano, Dakota Wesleyan University

1:40pm–2:00pm **Confounder Influence on Cases Attributed**
Milo Schield, W. M. Keck Statistical Literacy Project

2:00pm–2:20pm **Equity: Not Just a Goal, But a Vehicle in Introductory Statistics**
Lawrence Lesser, The University of Texas at El Paso

2:20pm–2:40pm **College Algebra in Context: A Report and Examples From an NSF Project**
Michael Catalano, Thomas Pfaff and Tanya Leise, Dakota Wesleyan University

2:40pm–3:00pm **The Homeless Average Age 9? Examining a Bad Statistic**
Adam Molnar, Bellarmine University

1:00pm–3:00pm **Minicourse | 1**
Hall Ideas G, Monona Terrace
A Game Theory Path to Quantitative Literacy
Rick Gillman, Valparaiso University
David Housman, Goshen College

1:00pm–3:00pm **General Contributed Paper Session 2**
Meeting Room O Monona Terrace
Jennifer McCloud-Mann, University of Texas at Tyler
Aaron Wangberg, Winona State University

1:00pm–1:10pm **Mathematical Myths: Some Interesting Facts and Fictions**
Linda Becerra and Ron Barnes, University of Houston–Downtown

1:15pm–1:25pm **Resourceful Session Before a Developmental Math Test**
Gowribalan Ananda Vamadeva, University of Cincinnati

1:30pm–1:40pm **Developing Mathematical Thinkers – Laying the Foundation for Successful Math Majors**
Trae Holcomb, United States Air Force Academy

1:45pm–1:55pm **The “No WAY!” Moment in Mathematics**
Mike Krebs, California State University, Los Angeles

Schedule of Events | Thursday

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2:00pm–2:10pm	<p>Visual Mathematics for the Visually Impaired: Reflections and Strategies</p> <p><i>Mandi Shea Maxwell, Trinity Christian College</i></p>	2:00pm–2:30pm	<p>High Points in the Encyclopedia of Triangle Centers</p> <p><i>Clark Kimberling, University of Evansville</i></p>
2:15pm–2:25pm	<p>The Ultimate Class Project ...and No Grade!</p> <p><i>Terry Jo Leiterman, St. Norbert College</i></p>	2:30pm–3:00pm	<p>Special Quadrilaterals and Special Conics</p> <p><i>James L. Parish, Southern Illinois University at Edwardsville</i></p>
2:30pm–2:40pm	<p>The Mathematics of Games as Experiential Learning</p> <p><i>Jacob Robert Heidenreich, Loras College</i></p>	3:00pm–3:30pm	<p>The Equation of Euler's Line Yields a Tzitzeica Surface</p> <p><i>Bogdan Suceava, California State University, Fullerton</i></p>
2:45pm–2:55pm	<p>Academic Program Review</p> <p><i>Siamack Bondari and Monika Vo, Saint Leo University</i></p>	1:00pm–5:00pm	<p>Project NExT</p> <p><i>Doty, Hilton</i></p>
1:00pm–3:00pm	<p>Minicourse 2</p> <p><i>Hall Ideas J, Monona Terrace</i></p> <p>The Ubiquitous Catalan Numbers and Their Applications</p> <p><i>Thomas Koshy, Framingham State College</i></p>	1:00pm–5:00pm	<p>Project NExT</p> <p><i>Vilas, Hilton</i></p>
1:00pm–4:00pm	<p>Invited Paper Session</p> <p><i>Ballroom C, Monona Terrace</i></p> <p>Classical Euclidean Geometry</p> <p><i>Paul Yiu, Florida Atlantic University</i></p>	1:00pm–5:00pm	<p>Project NExT</p> <p><i>Tenny, Hilton</i></p>
1:00pm–1:30pm	<p>The Circles of Lester, Evans, Parry, and Their Generalizations</p> <p><i>Paul Yiu, Florida Atlantic University</i></p>	2:00pm–3:00pm	<p>Green Tour</p> <p><i>Meet at Lakeside Commons, Monona Terrace</i></p>
1:30pm–2:00pm	<p>Use of Oriented Angles and Their Extension to n-Sections</p> <p><i>Eisso J. Atzema, University of Maine</i></p>	2:00pm–4:00pm	<p>Invited Paper Session</p> <p><i>Hall Ideas H, Monona Terrace</i></p> <p>Isoperimetric Problems and Manifolds With Density</p> <p><i>Frank Morgan, Williams College</i></p>
		2:00pm–2:20pm	<p>Isoperimetric Problems, Manifolds with Density, and the SMALL Undergraduate Research Project</p> <p><i>Frank Morgan, Williams College</i></p>
		2:20pm–2:40pm	<p>The Isoperimetric Problem on Surfaces with Density</p> <p><i>Alex Dubbs, Harvard '09</i></p>
		2:40pm–3:00pm	<p>The Isoperimetric Problem in the Plane with Density r^p</p> <p><i>Hung Tran, Berea College '09</i></p>

3:00pm–3:20pm **The Geometry of Surfaces with Density**
Jon Dahlberg, Williams College '09

3:20pm–3:40pm **Optimal Partitions of the Sphere**
Edward Newkirk, Williams College'09

3:40pm–4:00pm **Hypertext Platforms**
Joseph Corneli, PlanetMath.org

2:00pm–3:55pm **Pi Mu Epsilon Student Paper Session 1**
Meeting Room L, Monona Terrace

2:00pm–3:55pm **Pi Mu Epsilon Student Paper Session 2**
Meeting Room M, Monona Terrace

2:00pm–3:55pm **MAA Student Paper Session 6**
Meeting Room N, Monona Terrace

2:00pm–3:55pm **MAA Student Paper Session 7**
Meeting Room Q, Monona Terrace

2:00pm–3:55pm **MAA Student Paper Session 8**
Meeting Room R, Monona Terrace

2:30pm–5:00pm **Panels and Other Sessions**
Ballroom B, Monona Terrace
MAA Section Officers Meeting
Moderator: Nancy L. Hagelgans, Ursinus College

3:00pm–4:20pm **Panels and Other Sessions**
Lecture Hall, Monona Terrace
SUMMA Special Session on MAA Summer Research Programs

William Hawkins, MAA and University of the District of Columbia

Robert Megginson, University of Michigan

3:15pm–5:15pm **General Contributed Paper Session 3**
Meeting Room O, Monona Terrace
Monika Vo, Saint Leo University
Robin Lydiann Anderson, Southwestern Illinois College

3:15pm–3:25pm **Pizza Delivery: 2–Stop–Return Distances in Graphs**
Ralucca Gera, Naval Postgraduate School
Linda Eroh, Steven J. Winters, and Grady Bullington, University of Wisconsin-Oshkosh

3:30pm–3:40pm **Three Colorings in Graphs**
Gary Chartrand and Ping Zhang, Western Michigan University
Futaba Okamoto, University of Wisconsin–La Crosse
Zsolt Tuza, Hungarian Academy of Sciences, University of Pannonia

3:45pm–3:55pm **Signed Graph Coloring, a Theorem of Jacobi, and the Art of Linear Algebra**
Steven Morse and Elisha Peterson, United States Military Academy (West Point)

4:00pm–4:10pm **Open Source Software: What Can It Do for You?**
Tony Weathers, Adams State College

4:15pm–4:25pm	<p>Validating the Warrant $P(k) \rightarrow P(k+1)$: Does Any Means Justify the Ends?</p> <p><i>Tabitha T. Mingus, Western Michigan University</i></p> <p><i>Richard M. Grassl, University of Northern Colorado</i></p>	4:15pm–4:45pm	<p>Recent Rectangle Visibility Results</p> <p><i>Alice Dean, Skidmore College</i></p>
4:30pm–4:40pm	<p>The Lorentz Transformation as a Visual Consequence of the Swiveled Line Theorem</p> <p><i>John E. dePillis, University of California, Riverside</i></p>	4:45pm–5:15pm	<p>Crossing Numbers</p> <p><i>Michael Pelsmajer, Illinois Institute of Technology</i></p>
4:45pm–4:55pm	<p>The Explicit Solution to an Infinite Linear Differential Equation System</p> <p><i>Mahmoud F. Almanassra, University of Wisconsin–Marinette</i></p>	5:15pm–5:45pm	<p>Recognition Algorithms for Some Generalization of Interval Graphs</p> <p><i>Art Busch, University of Dayton</i></p>
5:00pm–5:10pm	<p>Exploring Prime Gaps with CAS (Computer Algebra System) Technology</p> <p><i>Jay Lawrence Schiffman, Rowan University</i></p>	3:15pm–6:15pm	<p>Contributed Paper Session</p> <p><i>Hall Ideas F, Monona Terrace</i></p> <p>Incorporating Humanities and the Arts into the Mathematics Classroom (and Vice Versa)</p> <p><i>Michelle Ghrist, U.S. Air Force Academy</i></p>
3:15 pm–5:45pm	<p>Invited Paper Session</p> <p><i>Ballroom D, Monona Terrace</i></p> <p>Graph Theory With Connections to Geometry and Topology</p> <p><i>Joshua Laison, Willamette University</i></p>	3:15pm–3:30pm	<p>Mandala as the Key to Teaching Trigonometry to Multiple Intelligences</p> <p><i>Paul F. Stang</i></p>
3:15pm–3:45pm	<p>An Adventurer’s Guide to the Colorful Tale of Thickness—Two Graphs</p> <p><i>Ellen Gethner, University of Colorado – Denver</i></p>	3:35pm–3:50pm	<p>What is Mathematics and Why Won’t It Go Away?</p> <p><i>Susan Jane Colley, Oberlin College</i></p>
3:45pm–4:15pm	<p>Visibility Graphs: Different Models of Sight</p> <p><i>Stephen Hartke, University of Nebraska – Lincoln</i></p>	3:55pm–4:10pm	<p>Teaching Art, Literature, Science, Theater, Speech, and Computer Science All in One Mathematics Course</p> <p><i>Julie Barnes, Western Carolina University</i></p>
		4:15pm–4:30pm	<p>Viewing Mathematics as Human Endeavor</p> <p><i>Mike Pinter, Belmont University</i></p>

4:35pm–4:50pm **MathTV: A Curiously Funny Mathematical Production**
Michelle Ghrist, U.S. Air Force Academy
Cynthia Elizabeth Chin, Madison East High School
Jeffrey Sanders, Oberlin College
Jonathon Glam, U.S. Air Force Academy

4:55pm–5:10pm **This World, and Others: FLATLAND in the Classroom, Rehearsal Studio, Theater, and Beyond**
Mary Paulson, Madison East High School

5:15pm–5:30pm **Mathematicians Can Participate in Faculty Development for the Arts & Humanities**
David Edward Boliver, University of Central Oklahoma

5:35pm–5:50pm **Combinatorics, Topology, and Graph Theory in Jorge Luis Borges' Short Story "The Library of Babel"**
William L. Bloch, Wheaton College

5:55pm–6:10pm **Running Circles 'round the Truth: A Mathematical Perspective on Deconstructive**
Michael Wodzak, Viterbo University

3:15pm–6:15pm **Contributed Paper Session**
Hall Ideas I, Monona Terrace
Actual Problems, Actual Mathematics – Applied Mathematics in Science and the Classroom I

William Stone, New Mexico Institute of Mining and Technology
Stephen Davis, Davidson College

3:15pm–3:30pm **Quartic Equations Applied to 6–DOF Wiimote Tracking**
William Stone, New Mexico Institute of Mining and Technology
Stephen Davis, Davidson College

3:35pm–3:50pm **Energy Efficient Flight: Decision–Making Mathematics Glider Pilots Use to Soar Great Distance**
Michael Lundin, Central Washington University

3:55pm–4:10pm **What Else Can You Do With an Open Topped Box?**
Doug Shaw, University of Northern Iowa

4:15pm–4:30pm **The Math Behind a Roll–Call Vote**
Chen–Han Sung, Texas A&M International University

4:35pm–4:50pm **Gender Division of Labor in Parenting: A Game–Theoretic Perspective**
Angela Vierling–Claassen, Lesley University

4:55pm–5:10pm **Four Stories in Applied Mathematics**
William Joseph Stazer, 3M Company

5:15pm–5:30pm **Elementary Physical Chemistry Problems in Multi–Variable Calculus**
George Rublein, College of William and Mary

5:35pm–5:50pm	<p>Predator–Prey Models – A Generalization of Lotka–Volterra Model</p> <p><i>Leon Kaganovskiy, New College of Florida</i></p>	<p>Grand Poster Unveilings and Reception</p> <p><i>Amy Shell–Gellasch, Pacific Lutheran University</i></p>
5:55pm–6:10pm	<p>The Brachistochrone Revisited: A Timely Consideration</p> <p><i>Alfred Paul Lehnen, Madison Area Technical College</i></p>	<p>Undergraduate Activities</p> <p>Pi Mu Epsilon Student Paper Session 3</p> <p><i>Meeting Room L Monona Terrace</i></p>
3:30pm–5:00pm	<p>Graduate Student Sessions</p> <p><i>Exhibit Hall B, Monona Terrace</i></p> <p>Graduate Student Poster Session</p> <p><i>James Freeman, Cornell College</i></p>	<p>4:20pm–6:15pm</p> <p>Pi Mu Epsilon Student Paper Session 4</p> <p><i>Meeting Room M Monona Terrace</i></p>
3:30pm–5:30pm	<p>Minicourse 3</p> <p><i>Hall Ideas G, Monona Terrace</i></p> <p>Teaching a Proof–Based Course as the Gateway to the Mathematics Major</p> <p><i>James Sandefur, Georgetown University</i></p> <p><i>Connie Campbell, Millsaps College</i></p>	<p>4:20pm–6:15pm</p> <p>MAA Student Paper Session 9</p> <p><i>Meeting Room N Monona Terrace</i></p>
3:30pm–5:30pm	<p>Minicourse 4</p> <p><i>Hall Ideas J, Monona Terrace</i></p> <p>How to Run a Successful Math Circle</p> <p><i>Matthias Beck, San Francisco State University</i></p> <p><i>Tatiana Shubin, San Jose State University</i></p> <p><i>Sam Vandervelde, Saint Lawrence University</i></p>	<p>4:20pm–6:15pm</p> <p>MAA Student Paper Session 10</p> <p><i>Meeting Room Q Monona Terrace</i></p>
4:00pm–5:00pm	<p>Panels and Other Sessions</p> <p><i>Ballroom A, Monona Terrace</i></p> <p>SIGMAA on the History of Mathematics</p>	<p>4:20pm–6:15pm</p> <p>MAA Student Paper Session 11</p> <p><i>Meeting Room R Monona Terrace</i></p>
		<p>5:00pm–6:00pm</p> <p>Graduate Student Session</p> <p><i>Senate AB, Concourse Hotel</i></p> <p>Graduate Student Reception</p> <p><i>David Manderscheid, University of Nebraska–Lincoln</i></p> <p><i>James Freeman, Cornell College</i></p>
		<p>5:00pm–6:30pm</p> <p>SIGMAA on Teaching Advanced High School Mathematics</p> <p><i>Ballroom C, Monona Terrace</i></p> <p>Business Meeting and Reception</p> <p>Creating a Post–Calculus Pre–Calculus Course for Advanced High School Students</p>

7:00pm–10:00pm **Jazz on the Terrace**
Rooftop, Monona Terrace

Friday, August 1

8:00am – 4:00pm **Registration**
*Lakeside Commons, Level 1
Monona Terrace*

8:30am–9:20am **MAA Invited Address**
Ballroom AB, Monona Terrace

**The Chaotic Evolution of
Newton’s Universe**
*Donald Saari,
University of California, Irvine*

8:30am–10:30am **General Contributed Paper
Session 4**
Meeting Room O, Monona Terrace

*Janet Marie McShane,
Northern Arizona University*

*Raluca Gera,
Naval Postgraduate School*

8:30am–8:40am **The Status of Mathematics
Education in Palestine**
*AbdelNaser Al-Hasan, MSOE &
An-Najah National University*

8:45am–8:55am **Assessing General Education
Mathematics Courses**
*James Hamblin,
Shippensburg University*

9:00am–9:10am **Calculus: One Lesson Study at
a Time**
*Joy Becker, Christopher P. Bendel,
and Helen Schroeder,
University of Wisconsin–Stout*

9:15am–9:25am **Applying Active–
Cooperative Learning in
Calculus 1**
*Christopher K. Cartwright,
Lawrence Technological University*

9:30am–9:40am **Calculus: Where We’ve
Been; Where Are We Going?**
*Karen Rhea,
University of Michigan*

9:45am–9:55am **CAGD, Geometer’s
Sketchpad and Secondary
Mathematics**
*Murphy Waggoner,
Simpson College*

10:00am–10:10am **Mathematicians’ Uses of
Computer Algebra Systems
in Mathematics Teaching in
the UK, US, and Hungary**
*Zsolt Lavicza,
University of Cambridge*

*Laszlo Erdodi,
Eastern Michigan University*

10:15am–10:25am **Teaching Statistics from
A to Z**
*Jason Joseph Moliterno,
Sacred Heart University*

8:30am–10:30am **MAA Student Paper
Session 12**
Meeting Room L, Monona Terrace

8:30am–10:30am **MAA Student Paper
Session 13**
*Meeting Room M
Monona Terrace*

8:30am–10:30am **MAA Student Paper
Session 14**
*Meeting Room N
Monona Terrace*

8:30am–10:30am **MAA Student Paper
Session 15**
*Meeting Room Q
Monona Terrace*

8:30am–10:30am	<p>MAA Student Paper Session 16</p> <p><i>Meeting Room R Monona Terrace</i></p>	<p><i>Peter D. Johnson, Auburn University</i></p>
8:30am–10:30am	<p>Contributed Paper Session</p> <p><i>Hall Ideas E, Monona Terrace</i></p> <p>Fascinating Examples from Combinatorics, Discrete Mathematics, and Graph Theory</p> <p><i>Suzanne Dorée, Augsburg College</i></p> <p><i>Nancy Ann Neudauer, Pacific University</i></p>	<p><i>Robert Dobrow, Rebecca Ferrell, Miranda Fix and Michael Duyzend, Carleton College</i></p>
8:30am–8:45am	<p>Adapting Hosoya's Topological Index as a Local Vertex Environment Descriptor</p> <p><i>Matthew G. Hudelson, Washington State University</i></p>	<p><i>Lila F. Roberts, Clayton State University</i></p> <p><i>David R. Hill, Temple University</i></p>
8:50am–9:05am	<p>Viewing the Hamming Code in its Natural Habitat</p> <p><i>Paul Weiner, Saint Mary's University of Minnesota</i></p>	<p><i>Mathematics on the iPhone</i></p> <p><i>Lila F. Roberts, Clayton State University</i></p>
9:10am–9:25am	<p>MIT vs. Harvard: The Mathematics of Good Will Hunting</p> <p><i>Kristina Garrett, St. Olaf College</i></p>	<p><i>Using Video Podcasts to Model Critical Thinking in Undergraduate Mathematics</i></p> <p><i>Jennifer Kosiak, University of Wisconsin</i></p>
9:30am–9:45am	<p>Generalized Permutation Descents and Inversions Controlled By a Drop Sequence</p> <p><i>William Griffiths IV and Albert Bush, Southern Polytechnic State University</i></p>	<p><i>Using Technology to Promote Reflective Discourse: Combining Dynamically Connected Representations With Video Reflection</i></p> <p><i>Douglas A. Lapp, Central Michigan University</i></p>
9:50am–10:05am	<p>Edge Cut Cycles and Cutting Numbers of Cycles and Graphs</p> <p><i>Dianna Spence, Brad Bailey, and John Holliday, North Georgia College and State University</i></p>	<p><i>Popcorn Statistics</i></p> <p><i>Allan Struthers, Michigan Technological University</i></p>
		<p><i>YouTube in the Classroom</i></p> <p><i>Andrew S. Leahy, Knox College</i></p>

10:10am–10:25am Online Collaboration with a Wiki in Real Analysis
Elisha Peterson, United States Military Academy

8:30am–10:30am Contributed Paper Session
Hall Ideas I, Monona Terrace
Incorporating Humanities and the Arts into the Mathematics Classroom (and Vice Versa)
Michelle Ghrist, U.S. Air Force Academy

8:30am–8:45am Math Modeling Can Help Build Bridges to the Humanities
Rick L. Spellerberg, Simpson College

8:50am–9:05am Group Theory is Child’s Play
Pamela Warton, University of Findlay

9:10am–9:25am Mathematical World: Liberal Arts Mathematics With an Art Emphasis
Patricia Oakley, Goshen College

9:30am–9:45am Perspective Drawing Experiment in a Freshman Interdisciplinary Seminar
Anna Davis, Ohio Dominican University

9:50am–10:05am An Artistic Exploration Within an Introduction to Measure Theory and Dimension
Zdenka Guadarrama, Rockhurst University

10:10am–10:25am An “Unreasonable” Reading Component to a Reasonable Course: Readings for a Transitional Class
Gizem Karaali, Pomona College

9:00am–10:30am SIGMAA on Research in Undergraduate Mathematics Education
Meeting Room K, Monona Terrace
Workshop on Essential Reasoning Abilities and Conceptual Foundations of Calculus
Marilyn P. Carlson, Arizona State University

9:00am–5:00pm Art Exhibit
Exhibit Hall B, Monona Terrace

9:00am–5:00pm Exhibits and Book Sales
Exhibit Hall B, Monona Terrace

9:00am–5:00pm Undergraduate Activities
Exhibit Hall B, Monona Terrace
Student Hospitality Center
Richard and Araceli Neal, American Society for the Communications of Math

9:30am–10:20am Earle R. Hedrick Lecture Series
Ballroom AB, Monona Terrace
Lecture 2 | Origami, Linkages and Polyhedra: Geometric Folding Algorithms
Erik Demaine, Massachusetts Institute of Technology

10:30am–11:20am James R. Leitzel Lecture
Ballroom AB, Monona Terrace
Building Mathematical Communities
T. Christine Stevens, Saint Louis University

11:30am–12:00pm MAA Prize Session
Ballroom AB, Monona Terrace
Moderator: *Martha J. Siegel*

Schedule of Events | Friday

11:30am–12:30pm	Green Tour <i>Meet at Lakeside Commons, Monona Terrace</i>	<i>Ken Ono, University of Wisconsin</i>
11:30am–1:30pm	Square Wheeled Bicycle Demonstration <i>Exhibit Hall B, Monona Terrace</i>	1:00pm–3:00pm Invited Paper Session <i>Ballroom D, Monona Terrace</i>
1:00pm–1:50pm	NAM David Blackwell Lecture <i>Lecture Hall, Monona Terrace</i> Random Dynamics and Memory: Structure Within Chaos <i>Salah–Eldin A. Mohammed, Southern Illinois University– Carbondale</i>	1:00pm–1:15pm Mathematical Biology <i>Julie Mitchell, University of Wisconsin</i>
1:00pm–1:50pm	Undergraduate Activities Session <i>Ballroom A, Monona Terrace</i> What is the Color of My Hat? <i>Ezra (Bud) Brown, Virginia Tech</i>	1:20pm–1:35pm Multiple Equilibria and Global Attractors in Biochemical Reaction Network Dynamics <i>Gheorghe Craciun, University of Wisconsin</i>
1:00pm–1:50pm	Undergraduate Student Activities Session <i>Ballroom B, Monona Terrace</i> Mathematics in Forensics <i>Dan Russel, Oklahoma State Bureau of Investigation</i>	1:40pm–1:55pm Physical Chemical Principles for Mathematical Analysis and Simulation of Large– Scale Biochemical Systems <i>Daniel Beard, Medical College of Wisconsin</i>
1:00pm–3:00pm	Invited Paper Session <i>Ballroom C, Monona Terrace</i> Ramanujan’s Impact on Number Theory– Then and Now <i>James Sellers, Penn State University</i> <i>Krishna Alladi, University of Florida</i> <i>George Andrews, Penn State University</i> <i>Bruce Berndt, University of Illinois at Urbana–Champaign</i>	2:00pm–2:15pm Modeling Protein – DNA Complexes Using Tangles <i>Isabel Darcy, University of Iowa</i>
		2:20pm–2:35pm Mathematical Modeling of Immune Response in Tissue <i>Bo Su, Iowa State University</i>
		1:00pm–3:00pm Contributed Paper Session <i>Hall Ideas H, Monona Terrace</i> Interesting Topics in History of Mathematics that Enhance the Teaching and Learning of Mathematics II <i>Daniel Curtin, Northern Kentucky University</i> <i>Amy Shell–Gellasch, Pacific Lutheran University</i>
		1:00pm–1:15pm Motivating Infinite Series Through Modified Leap Years <i>Robert Myers, Bethel College</i>

Schedule of Events | Friday

1:20pm–1:35pm	Napier’s “Logarithms” Weren’t <i>Andrew deLong Martin, Kentucky State University</i>
1:40pm–1:55pm	Fermat’s Shrinking Rectangles <i>Amy Shell–Gellasch, Pacific Lutheran University</i>
2:00pm–2:15pm	It’s Just Thin Air: Resistance and Projectile Motion <i>Shawnee McMurrin, California State University San Bernardino</i>
2:20pm–2:35pm	Thomas Harriot’s Pythagorean Triples: Could He List Them All? <i>Janet L. Beery, University of Redlands</i>
2:40pm–2:55pm	What’s Interesting About the Number 1729? <i>Peter Schumer, Middlebury College</i>
1:00pm–3:00pm	General Contributed Paper Session 5 <i>Meeting Room K, Monona Terrace Charlotte Schulze-Hewett, Harper College Abdel Naser Al-Hasan, MSOE & An- Najah National University</i>
1:00pm–1:10pm	Angle Trisection in the Nine Pointed Star, and Introducing Ψ <i>Paul Stang</i>
1:15pm–1:25pm	Dissecting $2n$ –Gons to Approximate the Circle–Squaring Process <i>Pamela B. Pierce and Jeffrey Willert, The College of Wooster</i>

1:30pm–1:40pm	Exploring a Quartet of Triangle Theorems – Old and New Insights via Geometer’s Sketchpad <i>Gregory Gerard Wojnar, Frostburg State University</i>
1:45pm–1:55pm	Limit Cycles From a Sum and Number of Digits Concatenated Sequence <i>Richard Brazier, Penn State University– DuBois Campus Shauna Knarr and Andra Barraclough, Penn State University</i>
2:00pm–2:10pm	The Harmonic Series: Used, Abused, and Confused <i>Scott Hochwald, University of North Florida</i>
2:15pm–2:25pm	A Streamfunction–Velocity Based Simulation of the Laminar Flow Past a Square Cylinder <i>Jiten C. Kalita, Indian Institute of Technology Guwahati, INDIA</i>
2:30pm–2:40pm	The Elementary Mathematical Theory of Parallelism, Convergence and Divergence <i>Stewart Ernest Brekke, International University for Graduate Studies</i>
2:45pm–2:55pm	Recreational Mathematics <i>Jim Carpenter, Iona College</i>
1:00pm–3:00pm	Minicourse 2 <i>Hall Ideas J, Monona Terrace The Ubiquitous Catalan Numbers and Their Applications Thomas Koshy, Framingham State College</i>

Schedule of Events | Friday

1:00pm–3:00pm	<p>Minicourse 1 <i>Hall Ideas G, Monona Terrace</i></p> <p>A Game Theory Path to Quantitative Literacy</p> <p><i>Rick Gillman, Valparaiso University</i></p> <p><i>David Housman, Goshen College</i></p>	2:20pm–2:40pm	<p>Getting Your Hands Wet in a Differential Equations Course</p> <p><i>Terry Jo Leiterman, St. Norbert College</i></p>
1:00pm–3:20pm	<p>Contributed Paper Session <i>Hall Ideas E, Monona Terrace</i></p> <p>Projects and Demonstrations That Enhance a Differential Equations Course</p> <p><i>Shawnee McMurrin, California State University, San Bernardino</i></p> <p><i>Richard Marchand, Slippery Rock University</i></p>	2:40pm–3:00pm	<p>Fundamental Solutions of Dirac System</p> <p><i>Wen Liu and Gro Hovhannisyan, Kent State University</i></p>
1:00pm–1:20pm	<p>Exploring Differential Equations Using MS Excel</p> <p><i>Sarah Mabrouk, Framingham State College</i></p>	3:00pm–3:20pm	<p>Stabilizing Elastic Beams</p> <p><i>Richard Marchand, Slippery Rock University</i></p>
1:20pm–1:40pm	<p>The Laplace Transform: Motivating the Definition</p> <p><i>Howard I. Dwyer, Monmouth College</i></p>	1:00pm–4:00pm	<p>Contributed Paper Session <i>Hall Ideas F, Monona Terrace</i></p> <p>Creative Uses of Emerging Technologies for Mathematics Teaching</p> <p><i>Lila F. Roberts, Clayton State University</i></p> <p><i>David R. Hill, Temple University</i></p>
1:40pm–2:00pm	<p>Integrating Synaptic Models into a Different Equations Course</p> <p><i>Joe Latulippe, Cal Poly Pomona</i></p>	1:00pm–1:15pm	<p>Mathematical Handwriting Recognition for Education</p> <p><i>Peter Garst, Enventra, Inc.</i></p>
2:00pm–2:20pm	<p>Desktop Circuits: Audio Data Collection</p> <p><i>Allen Struthers, Michigan Technological University</i></p>	1:20pm–1:35pm	<p>Using CaluMath Software to Create Interactive Web Pages for College Algebra, Pre–Calculus, and Calculus</p> <p><i>Peter Turbek, Purdue University Calumet</i></p>
		1:40pm–1:55pm	<p>Interactive CaluMath Web Pages for College Algebra and Pre–Calculus</p> <p><i>Jeff Gregg, Purdue University Calumet</i></p>
		2:00pm–2:15pm	<p>Capturing a Class: Adventures with Tegrity</p> <p><i>Kevin William Dennis and Chad Kjorlien, Saint Mary's University of Minnesota</i></p>

2:20pm–2:35pm **“Tabulating” Mathematics**
Denise LeGrand and Sally Robinson, UALR

2:40pm–2:55pm **Using Tablet PCs in Calculus 1**
Christopher K. Cartwright, Lawrence Technological University

3:00pm–3:15pm **Using Clickers to Encourage Discussion and Communication in Mathematics**
Erick Hofacker and Kathryn Teresa Ernie, University of Wisconsin – River Falls

3:20pm–3:35pm **Using Clickers Toward Conceptual Understanding: Experiences in Statistical Courses**
Teri Jo Murphy, University of Oklahoma

3:40pm–3:55pm **ICLICK the MATH in Class**
Chen–Han Sung, Texas A&M International University

1:00pm–5:00pm **Project NExT**
Doty, Hilton

1:00pm–5:00pm **Project NExT**
Vilas, Hilton

1:00pm–5:00pm **Project NExT**
Tenny, Hilton

2:00pm–3:30pm **Panels and Other Sessions**
Lecture Hall, Monona Terrace

MAA Alder Awards Session
Moderator–Joseph Gallian, University of Minnesota, Duluth, MAA President

2:00pm–4:55pm **Pi Mu Epsilon Student Paper Session 5**
Meeting Room L, Monona Terrace

2:00pm–4:55pm **Pi Mu Epsilon Student Paper Session 6**
Meeting Room M, Monona Terrace

2:00pm–4:55pm **Pi Mu Epsilon Student Paper Session 7**
Meeting Room N, Monona Terrace

2:00pm–4:55pm **MAA Student Paper Session 17**
Meeting Room Q, Monona Terrace

2:00pm–4:55pm **MAA Student Paper Session 18**
Meeting Room R, Monona Terrace

2:15pm–3:35pm **Panels and Other Sessions**
Ballroom A, Monona Terrace

Teachers for a New Era’s Impact on Mathematics Education
Magnhild Lien, California State University, Northridge
Nancy Marcus, University of Texas, El Paso
Aaron Brakoniecki, Michigan State University
Henry Kepner, Kevin McLeod, and DeAnn Huinker, University of Wisconsin-Milwaukee
Joel Zeitlin and Jerrold Gold, California State University, Northridge

2:15pm–3:35pm **Panels and Other Sessions**
Ballroom B, Monona Terrace

Using On–Line Homework in Mathematics Classes
Michael E. Gage, Arnold L. Pizer and Vicki Roth, University of Rochester

Schedule of Events | Friday

3:15pm–5:15pm	<p>Invited Paper Session <i>Ballroom D, Monona Terrace</i></p> <p>Implications for Teaching of Research on Learning <i>Patrick Thompson, Arizona State University</i></p>	<p><i>Murphy Waggoner, Simpson College</i></p> <p><i>Jason Joseph Moliterno, Sacred Heart University</i></p>
3:15pm–3:30pm	<p>The Role of Quantitative Reasoning in Learning Word Problems in Pre–Calculus Mathematics <i>Marilyn Carlson, Arizona State University</i></p>	<p>3:15pm–3:25pm Challenging Gifted High School Students <i>Vince Matsko, IMSA</i></p>
3:35pm–3:50pm	<p>From Individual Interviews to Whole–Class Experiments: Reconstructing a Course in Abstract Algebra <i>Sean Larsen, Portland State University</i></p>	<p>3:30pm–3:40pm Cross–Cultural Analysis of Females Identified with Exceptional Mathematical Talent <i>Janet E. Mertz, University of Wisconsin – Madison</i></p> <p><i>Titu Andreescu, University of Texas – Dallas</i></p> <p><i>Joseph A. Gallian, University of Minnesota Duluth</i></p> <p><i>Jonathan Kane, University of Wisconsin – Whitewater</i></p>
3:55pm–4:10pm	<p>Successful and Unsuccessful Students’ Learning Strategies in Real Analysis <i>Keith Weber, Rutgers University</i></p>	<p>3:45pm–3:55pm Compass and Straightedge Constructions, Without a Compass <i>Charlotte Schulze–Hewett, Harper College</i></p>
4:15pm–4:30pm	<p>Learning Without Understanding and Its Implications for the Mathematics That Teachers Teach <i>Pat Thompson, Arizona State University</i></p>	<p>4:00pm–4:10pm Teach Concepts and Understanding, and Do Not Concentrate on Manipulations Which Hinder This <i>Herman Rubin, Purdue University</i></p>
3:15pm–4:35pm	<p>Panels and Other Sessions <i>Ballroom C, Monona Terrace</i></p> <p>How to Apply for Jobs <i>David Manderscheid, University of Nebraska–Lincoln</i></p>	<p>4:15pm–4:25pm Strengthening and Assessing College Students’ Learning Outcomes in General Education Mathematics Courses <i>Xuhui Li, California State University, Long Beach</i></p>
3:15pm–5:30pm	<p>General Contributed Paper Session 6 <i>Meeting Room O Monona Terrace</i></p>	

4:30pm–4:40pm **The Effect of Knotting on the Shape of Polymers**
Kenneth Cary Millett, University of California

4:45pm–4:55pm **SPLN—What is it?**
Monika Vo, St. Leo University

5:00pm–5:10pm **Teaching Mathematics to Lebanese Engineers: The Experience of the Ecole Supérieure d’Ingénieurs de Beyrouth**
Salim Wehbé Salem, Ecole Supérieure d’Ingénieurs de Beyrouth

5:15pm–5:25pm **Facilitating IBL Classroom Issues With Technology**
Glenn Hurlbert, Arizona State University

3:15pm–6:15pm **Contributed Paper Session**
Hall Ideas H, Monona Terrace
Projects, Applications and Demonstrations to Enhance a Numerical Analysis or Computational Mathematics Course
Olga Brezhneva, Miami University
David Coulliette, Asbury College

3:15pm–3:30pm **Muscle Contraction Modeling – This Will Pump You Up!**
David Coulliette, Asbury College

3:35pm–3:50pm **If I May Make a Generalization, Generalizations are Generally Good (in numerics)**
Anthony Tongen, James Madison University

3:55pm–4:10pm **Expert vs. Novice Understanding of Estimation Using Taylor Series**
Jason Howard Martin, University of Oklahoma

4:15pm–4:30pm **Computational Applications in Mathematical Biology**
Nicoleta Eugenia Tarfulea, Purdue University Calumet

4:35pm–4:50pm **Exploring Computational Mathematics: Unfolding Polyhedra**
Brittany Terese Fasy, Duke University
David Millman, UNC – Chapel Hill

4:55pm–5:10pm **Some Interesting Applications of Numerical Analysis in Science and Engineering**
Muhammad Usman, University of Dayton

5:15pm–5:30pm **Truth, Justice and the Search for Rigorous Error Bounds: A Case Study in Interval Analysis**
Matthew Glomski, Marist College

5:35pm–5:50pm **Providing Options: Making Projects Work for a Diverse Audience**
Andrew John Miller, Belmont University

5:55pm–6:10pm **Projects and Illustrations That Can Be Used In a Numerical Analysis Course**
Olga Brezhneva, Miami University

3:30pm–5:30pm **Contributed Paper Session**
Hall Ideas E, Monona Terrace

How To Get Students to Read the Text and Does This Matter?
Mike Axtell, Wabash College

Joe A. Stickles Jr. and Paula R. Stickles, Millikin University

3:30pm–3:45pm **Read It— Techniques to Get It to Happen**
Allen Hibbard, Central College

3:50pm–4:05pm **“Do Real Mathematicians Read The Book?”: Encouraging Mathematical Maturity Via Reading Checks**
Andrea Frazier, North Central College

4:10pm–4:25pm **Assessing Student Growth in Reading Mathematics**
Bonnie Gold, Monmouth University

4:30pm–4:45pm **Learning Styles and Measurable Reading Assignments**
Rachel Esselstein, California State University, Monterey Bay

4:50pm–5:05pm **What Do Students Actually Read, and Its Educational Implications?**
Bill Rybolt, Babson College

5:10pm–5:25pm **What Students Read is Not Necessarily What They “Get”**
Mary D. Shepherd, Northwest Missouri State University

3:30pm–5:30pm **Minicourse | 5**
Hall Ideas G, Monona Terrace

Perspective Viewing and Drawing Make Good Math Problems
Marc Frantz, Indiana University

Annalisa Crannell, Franklin & Marshall College

3:30pm–5:30pm **Minicourse | 6**
Hall Ideas J, Monona Terrace

Mathematics and the Geometry of Voting
Donald G. Saari, University of California Irvine

4:00pm–5:30pm **SIGMAA on the Philosophy of Mathematics**
Ballroom A, Monona Terrace

Guest Lecture and Reception
Mo Hirsch, University of California, Berkeley

4:00pm–5:45pm **Panels and Other Sessions**
Lecture Hall, Monona Terrace

Hard Problems: Movie
George Csicsery, Zala Films

4:15pm–5:15pm **Contributed Paper Session**
Hall Ideas E, Monona Terrace

Advances in Recreational Mathematics
Paul R. Coe and Kristen Schemmerhorn, Dominican University

4:15pm–4:30pm **Falling Through the Earth in the *Mirror of the World***
Andrew Simoson, King College

4:35pm–4:50pm **N + k Queens Reflection**
Doug Chatham, Morehead State University

- 4:55pm–5:10pm **First Occurrence Counterexamples in Odd Abundant Number Sequences**
Jay Schiffman, Rowan University
- 4:30pm–6:00pm **SIGMAA on Environmental Mathematics**
Ballroom D, Monona Terrace
Guest Lecturer and Business Meeting
Models for Managing Forested Landscape
Joseph Buongiorno, University of Wisconsin
- 6:00pm–7:45pm **Undergraduate Activities**
Grand Terrace, Monona Terrace
Pi Mu Epsilon Student Banquet and Awards Ceremony
- 7:00pm–9:00pm **UW-Madison Alumni Reunion**
UW-Madison Campus, Van Vleck Hall
- 8:00pm–8:50pm **Pi Mu Epsilon J. Sutherland Frame Lecturer**
Ballroom AB, Monona Terrace
The Symmetries of Things
John H. Conway, Princeton University
- 9:00pm–10:00pm **MAA Ice Cream Social**
Grand Terrace, Monona Terrace

Saturday, August 2

- 7:00am–9:00am **5K Fun Run/Walk**
Meet in the Lobby, Monona Terrace
- 8:00am–2:00pm **Registration**
Lakeside Commons, Level 1 Monona Terrace

- 8:30am–9:20am **AWM–MAA Etta Z. Falconer Lecture**
Ballroom AB, Monona Terrace
The Circle: From Antiquity to Today
Rebecca Goldin, George Mason University
- 8:30am–10:30am **Contributed Paper Session**
Hall Ideas I, Monona Terrace
Actual Problems, Actual Mathematics – Applied Mathematics in Science and the Classroom
William Stone, New Mexico Institute of Mining and Technology
Stephen Davis, Davidson College
- 8:30am–8:45am **Problem Formulation for Sustainability**
Chulin Likasiri, Chiang Mai University
- 8:50am–9:05am **A Modular Approach to Teaching a Course in Application–Based Problem Solving**
Benjamin Galluzzo, University of Iowa
Theodore Wendt, University of Wisconsin – La Crosse
- 9:10am–9:25am **Using Simulation to Verify Biological Model Fit with Field Data**
Scott Searcy and Paul Bartelt, Waldorf College
- 9:30am–9:45am **Modeling the Buoyancy Properties of Virginia Class Submarines**
James S. Rolf and Kimberly Swetz, United States Air Force Academy

Schedule of Events | Saturday

9:50am–10:05am	<p>Euler’s Constant in Interstate Highway Driving</p> <p><i>Mostafa Ghandehari and Siamak Ardekani, University of Texas at Arlington</i></p>	<p>Multivariable Calculus Using Geometry and Language</p> <p><i>Aaron Wangberg, Winona State University</i></p>
10:10am–10:25am	<p>Wavelet Transforms: The Linear Algebra Approach</p> <p><i>Jenae Beauchamp, Eastern Connecticut State University</i></p>	<p>9:30am–9:40am</p> <p>Dual Enrollment Using Mathxl</p> <p><i>William Calbeck, LSU–Alexandria</i></p>
8:30am–10:30am	<p>General Contributed Paper Session 7</p> <p><i>Hall Ideas I, Monona Terrace</i></p> <p><i>Jay Stine, Misericordia University</i></p> <p><i>Magdalena Luca, Massachusetts College of Pharmacy and Health Sciences</i></p>	<p>9:45am–9:55am</p> <p>College Entrance Examinations You Need to Pass to Be a Middle School or High School Mathematics Teacher in Japan</p> <p><i>Kazuko Ito West, Keio Academy of New York</i></p>
8:30am–8:40am	<p>Statistics’r’us – Reshaping Students’ Attitude From Aversion and Anxiety to Curiosity and Confidence</p> <p><i>Laszlo Erdodi, Eastern Michigan University</i></p> <p><i>Zsolt Lavicza, University of Cambridge</i></p>	<p>10:00am–10:10am</p> <p>Common Misconceptions in Middle School Math Textbooks</p> <p><i>Jerome Dancis, University of Maryland</i></p>
8:45am–8:55am	<p>Data Mining: An Emerging Topic in Mathematical/ Statistical Education</p> <p><i>Deborah Gougeon, University of Scranton</i></p>	<p>10:15am–10:25am</p> <p>Maplets for Calculus– Tutoring Without the Tutor</p> <p><i>Philip B. Yasskin, Texas A&M University</i></p> <p><i>Douglas B. Meade, University of South Carolina</i></p>
9:00am–9:10am	<p>The Next Phase In Developing Effective Teaching Techniques For Undergraduate College Algebra Courses</p> <p><i>Jonathan Paul Lambright, Savannah State University</i></p>	<p>8:30am–10:30am</p> <p>Contributed Paper Session</p> <p><i>Meeting Room M Monona Terrace</i></p> <p>Fascinating Examples from Combinatorics, Discrete Mathematics, and Graph Theory</p> <p><i>Suzanne Dorée, Augsburg College</i></p> <p><i>Nancy Ann Neudauer, Pacific University</i></p>
9:15am–9:25am	<p>Let’s Do This Once: Folding Vector Calculus into</p>	

8:30am–8:45am **Changing Dimensionality in Data Processing**
Amy Mihnea, Florida Atlantic University

8:50am–9:05am **Building Fast Communications Networks: A Brief Introduction to Expanders and Ramanujan Graphs**
Mike Krebs, California State University, Los Angeles

9:10am–9:25am **Minimum Spanning Trees: An In-Class Project**
Pallavi Jayawant, Bates College

9:30am–9:45am **Egalitarian Matching and Normalized Matching**
Mark Joseph Logan, University of Minnesota – Morris

9:50am–10:05am **A Graph Theoretic Proof That There Are Only Five Platonic Solids**
Alan Alewine, McKendree University

10:10am–10:25am **The Pohlig–Hellman Exponentiation Cipher as a Bridge Between Classical and Modern Cryptography**
Joshua Holden, Rose–Hulman Institute of Technology

8:30am–10:30am **Contributed Paper Session**
Meeting Room N, Monona Terrace

How To Get Students to Read the Text and Does This Matter?
Mike Axtell, Wabash College

Joe A. Stickles, Jr. and Paula R. Stickles, Millikin University

8:30am–8:45am **Learning to Read and Reading to Learn: The Value of Reading the Text Before Class**
Matt Boelkins, Grand Valley State University

8:50am–9:05am **Homework Can Motivate Students to Read the Book**
Richard Maher, Loyola University Chicago

9:10am–9:25am **Journal Forms to Test Student’s Understanding**
Amy Wehe and Rala Diakite, Fitchburg State College

9:30am–9:45am **An Analysis Sketchbook: Rethinking Texts to Generate Student Interest**
Clark Wells, Grand Valley State University

9:50am–10:05am **Students and College Algebra Textbooks**
Satish C. Bhatnagar, UNLV

8:30am–10:30am **Contributed Paper Session**
Meeting Room Q, Monona Terrace

Incorporating Humanities and the Arts into the Mathematics Classroom (and Vice Versa)
Michelle Ghrist, U.S. Air Force Academy

8:30am–8:45am **Teaching the Mathematics of Music**
Rachel Hall, Saint Joseph’s University

8:50am–9:05am **Mathematics in Music: An Interdisciplinary Course**
James Richard Hughes, Elizabethtown College

Schedule of Events | Saturday

Schedule of Events | Saturday

9:10am–9:25am	<p>A Musical Journey Through Abstract Algebra</p> <p><i>Samuel A. Lopes, University of Poto, Portugal</i></p>	9:30am–9:45am	<p>Ghosts of Departed Errors: Berkeley’s Mathematical Objections to the Calculus</p> <p><i>Eugene Boman, Penn State University, Harrison Campus</i></p>
9:30am–9:45am	<p>Leading a Book Discussion in a Liberal Arts Mathematics Class</p> <p><i>Russell Goodman, Central College</i></p>	9:50am–10:05am	<p>Mathematician or Poet</p> <p><i>Mohammad Moazzam, Salisbury University</i></p>
9:50am–10:00am	<p>Honor–ing Mathematics History</p> <p><i>Tracey McGrail, Marist College</i></p>	10:10am–10:25am	<p>Who Discovered Discontinuous Derivatives?</p> <p><i>Dave Lawrence Renfro, ACT, Inc.</i></p>
10:10am–10:25am	<p>Finite, Infinite, and Countable Infinite</p> <p><i>Timothy Agendia Atabong, Madonna University, Nigeria</i></p>	9:00am–10:20am	<p>Finding a Good Fit in a Graduate Program</p> <p><i>Hall Ideas H, Monona Terrace</i> <i>Abbe H. Herzig, SUNY at Albany</i></p>
8:30am–10:30am	<p>Contributed Paper Session</p> <p><i>Meeting Room R Monona Terrace</i></p> <p>Interesting Topics in History of Mathematics that Enhance the Teaching and Learning of Mathematics III</p> <p><i>Daniel Curtin, Northern Kentucky University</i> <i>Amy Shell–Gellasch, Pacific Lutheran University</i></p>	9:00am–10:30am	<p>Math Matters: Numerate Approaches to Everyday Issues</p> <p><i>Ballroom C, Monona Terrace</i> <i>Maura Mast, University of Massachusetts at Boston</i></p>
8:30am–8:45am	<p>Connecting Pascal’s Triangle to Geometry and Trigonometry</p> <p><i>Tom McMillian and Jim Fulmer, University of Arkansas at Little Rock</i></p>	9:00am–10:30am	<p>Undergraduate Activity</p> <p><i>Hall Ideas E, Monona Terrace</i></p> <p>MAA Mathematical Contest in Modeling (MCM) Winners</p> <p><i>Ben Fusaro, Florida State University</i></p>
8:50am–9:05am	<p>Treasures in Three</p> <p><i>Joyati Debnath, Winona State University</i></p>	9:00am–10:30am	<p>SIGMAA on Research in Undergraduate Mathematics Education</p> <p><i>Hall Ideas F, Monona Terrace</i></p> <p>Workshop on Essential Reasoning Abilities and Conceptual Foundations of Calculus</p> <p><i>Marilyn P. Carlson, Arizona State University</i></p>
9:10am–9:25am	<p>“Vedic” Decimal Fraction Patterns</p> <p><i>Jeff Johannes, SUNY Geneseo</i></p>		

9:00am–2:00pm **Art Exhibit**
Exhibit Hall B, Monona Terrace

9:00am–2:00pm **Exhibits and Book Sale**
Exhibit Hall B, Monona Terrace

9:00am–2:00pm **Undergraduate Activities**
Exhibit Hall B, Monona Terrace
Student Hospitality Center
*Richard and Araceli Neal,
 American Society for the
 Communications of Math*

9:30am–10:20am **Earle R. Hedrick
 Lecture Series**
Ballroom AB, Monona Terrace
**Lecture 3 | Transformers:
 Reconfigurable Robots and
 Hinged Dissections**
*Erik Demaine, Massachusetts
 Institute of Technology*

9:30am–10:30pm **Math Horizons Session**
Lecture Hall, Monona Terrace

10:30am–11:20am **MAA Invited Address**
Ballroom AB, Monona Terrace
**Generalizing “ ℓ ”: The
 Combinatorics of “ ℓ ”
 Sequences**
*Carla Savage,
 North Carolina State University*

11:00am–12:00pm **Green Tour**
*Meet at Lakeside Commons,
 Monona Terrace*

11:30am–12:00pm **MAA Business Meeting**
Ballroom AB, Monona Terrace
**Moderated by Martha J. Siegel,
 Towson University,
 MAA Secretary**

1:00pm–2:00pm **Flatland: Movie**
Ballroom B, Monona Terrace

1:00pm–2:20pm **Creating a Post–Calculus
 Pre–Calculus Course for
 Advanced High School
 Students**
Lecture Hall, Monona Terrace
*Dan Teague, NC School of Science
 and Mathematics*
*Dan Lotesto,
 Milwaukee Public Schools*

1:00pm–2:20pm **First–Year Courses
 Designed to Attract
 Students to the Serious
 Study of Mathematics**
Ballroom A, Monona Terrace
*Michael Starbird,
 University of Texas*
*James Sellers,
 Penn State University*

1:00pm–3:00pm **Invited Paper Session**
Ballroom D, Monona Terrace
History of Mathematics
*Amy Shell–Gellasch,
 Pacific Lutheran College*
*Shawnee L. McMurrin, California
 State University, San Bernardino*

1:00pm–1:20pm **Navigating Between
 Triangular Numbers and
 Trigonometric Tables:
 How Thomas Harriot
 Developed His Interpolation
 Formulas**
*Janet L. Beery,
 University of Redlands*

1:25pm–1:45pm **The Best of All Possible
 Computers**
*Thomas Druckert, University of
 Wisconsin - Whitewater*

1:50pm–2:10pm **Was Cantor Surprised?**
*Fernando Gouvea,
 Colby College*

Schedule of Events | Saturday

2:15pm–2:35pm	<p>Pierre Fermat and the Development of Integration as a Summation</p> <p><i>Amy Shell-Gellasch, Pacific Lutheran University</i></p>	<p><i>Bonnie Saunders and Janet Simpson Bessinger, University of Illinois at Chicago</i></p>
2:40pm–3:00pm	<p>The MAA and American Mathematics in WWI</p> <p><i>Deborah Kent, Hillsdale College</i></p>	<p>Vertically Connecting College and Middle Grades Mathematics: The Two–Problem Comparison Paper</p> <p><i>Theresa A. Jorgensen, University of Texas at Arlington</i></p>
1:00pm–3:00pm	<p>Contributed Paper Session</p> <p><i>Hall Ideas F, Monona Terrace</i></p> <p>Innovations in Mathematics Education I</p> <p><i>Nancy Leveille and Carol Vobach, University of Houston–Downtown</i></p>	<p>2:00pm–2:10pm</p> <p>The Impact of Teaching for Understanding Experiment in 8–12th Grade Mathematics</p> <p><i>John Hasenbank and Jennifer Kosiak, University of Wisconsin – La Crosse</i></p>
1:00pm–1:10pm	<p>Supplementing Pre–Service Mathematical Content Courses with Online Homework</p> <p><i>Michael B. Scott, California State University, Monterey Bay</i></p>	<p>2:15pm–2:25pm</p> <p>Technology, Conjecture and Proof: Exposing the Thinking of Teachers</p> <p><i>Kathryn Shafer, Bethel College</i></p>
1:15pm–1:25pm	<p>Development of a Survey to Assess Pre–Service Teachers’ Views and Uses of Problem–Solving in Mathematics</p> <p><i>Jane Ries Cushman, Buffalo State College</i></p>	<p>2:30pm–2:40pm</p> <p>University Geometry: Pre–Service Teachers’ Views on Its Role in the Classroom</p> <p><i>Angela Marie Hodge, North Dakota State University</i></p>
1:30pm–1:40pm	<p>Focusing Pre–Service Elementary Teachers’ Thinking on Children’s Thinking in Order to Deepen Their Mathematical Understanding</p> <p><i>Jeff Gregg and Gayle Millsaps, Purdue University Calumet</i></p>	<p>2:45pm–2:55pm</p> <p>Minicourse 3</p> <p><i>Hall Ideas G, Monona Terrace</i></p> <p>Teaching a Proof–Based Course as the Gateway to the Mathematics Major</p> <p><i>James Sandefur, Georgetown University</i></p> <p><i>Connie Campbell, Millsaps College</i></p>
1:45pm–1:55pm	<p>Using Cryptography to Teach Number Theory to Future Middle School Teachers</p>	<p>1:00pm–3:00pm</p> <p>General Contributed Paper Session 8</p> <p><i>Hall Ideas I, Monona Terrace</i></p> <p><i>Radwan Al-jarrah, Southwestern Oklahoma State University</i></p>

	<i>Christopher K. Cartwright, Lawrence Technological University</i>
1:00pm–1:10pm	The Impact of K-12 Mathematics on College Mathematics <i>Magdalena Luca, Massachusetts College of Pharmacy and Health Sciences</i>
1:15pm–1:25pm	Induced Topologies and Separation Axioms <i>Jay Stine, Misericordia University</i>
1:30pm–1:40pm	An Integral Representation for Zeta(n) <i>Ranjith A Munasinghe, WVU Institute of Technology</i>
1:45pm–1:55pm	Addressing the Hammer-and-Nail Phenomenon in Mathematics Classrooms <i>Kien Hwa Lim, University of Texas at El Paso</i>
2:00pm–2:10pm	Modified Taylor Polynomials <i>Sayel Ali, Minnesota State University, Moorhead & The Petroleum Institute/Abu Dhabi</i> <i>Radwan Al-jarrah, Southwestern Oklahoma State University</i>
2:15pm–2:25pm	A Proof and Generalization of the Ladder of Eudoxus <i>James E. Carpenter, Iona College</i>
2:30pm–2:40pm	Factor, Factor - Who's Got the Factor? <i>Leslie Horton, Delta State University</i>
2:45pm–2:55pm	An Idealized Mathematical Model of a Runner Built-Up From the Angle-of-Lean <i>Michael Edward Zeidler, Retired</i>

1:00pm–3:00pm	Minicourse 4 <i>Hall Ideas J, Monona Terrace</i> How to Run a Successful Math Circle <i>Matthias Beck, San Francisco State University</i> <i>Tatiana Shubin, San Jose State University</i> <i>Sam Vandervelde, Saint Lawrence University</i>
1:00pm–3:00pm	Graduate Paper Session <i>Meeting Room M, Monona Terrace</i> <i>James Freeman, Cornell College</i>
1:00pm–4:15pm	Contributed Paper Session <i>Hall Ideas E, Monona Terrace</i> Fascinating Examples from Combinatorics, Discrete Mathematics, and Graph Theory <i>Suzanne Dorée, Augsburg College</i> <i>Nancy Ann Neudauer, Pacific University</i>
1:00pm–1:20pm	Fibonacci Trees: A Dream Come True <i>Benjamin V.C. Collins, University of Wisconsin – Platteville</i>
1:25pm–1:45pm	Using Recursion to Study Mathematical Induction, Schur Numbers, and the Pill Problem <i>Keith Brandt, Rockhurst University</i>
1:50pm–2:10pm	An Unexpected Appearance of Continued Fractions <i>David Molnar and Adam McDougall, University of Iowa</i>

Schedule of Events | Saturday

Schedule of Events | Saturday

2:15pm–2:35pm	<p>Numerals Based on the Golden Ratio</p> <p><i>Bruce Walker Atkinson, Samford University</i></p>	3:00pm–3:30pm	<p>How to Juggle Seven Undergraduate Student Projects Without Dropping Any</p> <p><i>Jacqueline Jensen, Sam Houston State University</i></p>
2:40pm–3:00pm	<p>Activities Exploring the Collatz Conjecture – An Unsolved Problem in Fifth Grade Arithmetic</p> <p><i>Doug Shaw, University of Northern Iowa</i></p>	3:30pm–4:00pm	<p>The Applied Representation Theory Group at Harvey Mudd College</p> <p><i>Michael Orrison, Harvey Mudd College</i></p>
3:05pm–3:25pm	<p>Edge Nets of Cubes</p> <p><i>Vince Matsko, IMSA</i></p>	4:00pm–4:30pm	<p>Tracing Certain n – Dimensional Space Point</p> <p><i>Aihua Li, Montclair State University</i></p>
3:30pm–3:50pm	<p>Hard to Guard Art Galleries</p> <p><i>T.S. Michael, United States Naval Academy</i></p>	4:30pm–5:00pm	<p>Ramanujan’s Dream</p> <p><i>Marc Chamberland, Grinnell College</i></p>
3:55pm–4:15pm	<p>Paint By Numbers: Constructing a Map That Needs Nineteen Colors</p> <p><i>Todd Cadwallader Olsker, California State University, Fullerton</i></p>	1:30pm–5:00pm	<p>Aldo Leopold Legacy Center Trip</p> <p><i>Meet in the Lobby, Monona Terrace</i></p>
1:00pm–5:00pm	<p>Invited Paper Session</p> <p><i>Ballroom C, Monona Terrace</i></p> <p>Research With Undergraduates</p> <p><i>Mario Martelli, Claremont–McKenna College</i></p>	2:00pm–3:15pm	<p>Undergraduate Activity</p> <p><i>Meeting Room R, Monona Terrace</i></p> <p>Do Dogs Know Calculus? Bifurcations at the Beach</p> <p><i>Tim Pennings, Hope College and his dog Elvis</i></p>
1:00pm–1:30pm	<p>From Chaos to Colleagues</p> <p><i>Annalisa Crannell, Franklin & Marshall College</i></p>	2:30pm–3:45pm	<p>Undergraduate Activity</p> <p><i>Ballroom A, Monona Terrace</i></p> <p>Student Problem Solving Competition</p> <p><i>Richard Neal, American Society for the Communication of Mathematics</i></p>
1:30pm–2:00pm	<p>Knot Theory Research with Undergraduates</p> <p><i>Colin Adams, Williams College</i></p>	3:00pm–4:20pm	<p>The Role of Open Source Math Projects in the Mathematics Community</p> <p><i>Lecture Hall, Monona Terrace</i></p>
2:00pm–2:30pm	<p>Compactness in Metric Trees</p> <p><i>Asuman Aksoy, Claremont-McKenna College</i></p>		
2:30pm–3:00pm	<p>Compactness in Metric Trees</p> <p><i>Marc Chamberland, Grinnell College</i></p>		

*Charles Weaver,
University of Phoenix*

*Jason Aubrey,
University of Missouri*

*Michael Scott, California State
University, Monterey Bay*

3:15pm–5:15pm **General Contributed
Paper Session 9**
Hall Ideas I, Monona Terrace

*Sayel Ali, Minnesota State
University Moorhead & Petroleum
Institute/Abu Dhabi*

*Ranjith A. Munasinghe, West
Virginia University Institute of
Technology*

3:15pm–3:25pm **Illuminating Group Lattices**

*Nancy Rodgers,
Hanover College*

*Doug Anewalt,
University of Kentucky*

3:30pm–3:40pm **Elastic–plastic Transition of
Transversely Isotropic Thin
Rotating Disc**

*Sanjeev Sharma and
Noida Manojshani,
Jaypee Institute of Information
Technology University*

3:45pm–3:55pm **Creep Transition of
Transversely Isotropic Thin
Rotating Disc**

*Noida Manojshani and
Sanjeev Sharma,
Jaypee Institute of Information
Technology University*

4:00pm–4:10pm **A Generalization of
Taylor’s Theorem: A
Determinant Approach
Using Mathematica**

*Radwan Al-jarrah, Southwestern
Oklahoma State University*

*Sayel Ali, Minnesota State
University, Moorhead & The
Petroleum Institute/Abu Dhabi*

4:15pm–4:25pm **Probe into Goldbach Problem**

*Liu Maocheng,
Shengli Petroleum Bureau*

4:30pm–4:40pm **Beyond Classic: New Solution
to Generalized Quadratic
Function and Equation**

Roland Shen, Olympia Institute

4:45pm–4:55pm **Biharmonic–Extension Space**

*Ibtesam Bajunaid,
King Saud University*

3:15pm–5:15pm **Invited Paper Session**
Ballroom B, Monona Terrace

Gems in Number Theory

*Sarah Mabrouk,
Framingham State College*

3:15pm–3:40pm **A Tale of Two Curves**

Ezra Brown, Virginia Tech

3:45pm–4:05pm **Farey Fractions and Ford
Circles**

*Richard K. Guy,
University of Calgary*

4:10pm–4:30pm **Two Ways to Count
Solutions to Polynomial Equations**

*Margaret Robinson,
Mt. Holyoke College*

4:35pm–5:10pm **Biscuits of Number Theory**

*Art Benjamin,
Harvey Mudd College*

Ezra Brown, Virginia Tech

Schedule of Events | Saturday

3:15pm–5:15pm	<p>Contributed Paper Session <i>Hall Ideas E, Monona Terrace</i></p> <p>Innovations in Mathematics Education II</p> <p><i>Nancy Leveille and Carol Vobach, University of Houston–Downtown</i></p>
3:15pm–3:25pm	<p>Geometer’s Sketchpad Software (GPS) as a Teaching Aid for Secondary School Level</p> <p><i>Abd Rahim Abd Salim, University Teknologi Petronas</i></p>
3:30pm–3:40pm	<p>Putting a STAMP on Mathematics Teacher Education</p> <p><i>Tim Hendrix, Meredith College</i></p>
3:45pm–3:55pm	<p>Constructing a World of Mathematics in the Middle School</p> <p><i>Melissa A. Stoner, Lehigh University</i></p>
4:00pm–4:10pm	<p>PRAXIS Project WI: Interactive Learning Objects</p> <p><i>Kathryn Teresa Ernie and Erick Hofacker, University of Wisconsin – River Falls</i></p>
4:15pm–4:25pm	<p>Math 201: Mathematics, Education, and Access to Power</p> <p><i>Alan P. Knoerr, Occidental College</i></p>
4:30pm–4:40pm	<p>Place Value Arithmetic via Polynomials</p> <p><i>Jeff Johannes, SUNY Geneseo</i></p>

4:45pm–4:55pm	<p>Preparing Elementary School Teaching Candidates to Meet Changing Licensure Requirements in Mathematics</p> <p><i>Donna Beers, Simmons College</i></p>
5:00pm–5:10pm	<p>Using Prediction Items and Clickers to Address Misconceptions</p> <p><i>Kien Hwa Lim, University of Texas at El Paso</i></p>
3:15pm–5:15pm	<p>General Contributed Paper Session 10</p> <p><i>Meeting Room N Monona Terrace</i></p> <p><i>Patricia Kiihne, Illinois College</i></p> <p><i>Kenneth Cary Millett, University of California</i></p>
3:15pm–3:25pm	<p>The Box Method for Teaching Ratio and Proportion Problems</p> <p><i>Jim Sullivan, Dallas ISD</i></p>
3:30pm–3:40pm	<p>Simultaneous Binary Collision for the Collinear Four Body Problem</p> <p><i>Duokui Yan, Brigham Young University</i></p>
3:45pm–3:55pm	<p>Paracycles in Snell Geometries</p> <p><i>Jack Mealy and Cicily Smith, Austin College</i></p>
4:00pm–4:10pm	<p>Thin Film Over Thin Porous Layers</p> <p><i>Kumnit Nong, George Mason University</i></p>
4:15pm–4:25pm	<p>On the Representation of Recursive Functions by Integrals</p> <p><i>Raymond Stanley Puzio, PlanetMath</i></p>

4:30pm–4:40pm **Milking the Fascinating Applications of Geometric Power Series**
Mulatu Lemma, Savannah State University

4:45pm–4:55pm **Lagrangian Formulations of Mechanics With Designer Conservation Laws**
Artem Yankov, BYU REU

3:30pm–5:30pm **Minicourse | 5**
Hall Ideas G, Monona Terrace

Perspective Viewing and Drawing Make Good Math Problems
Marc Frantz, Indiana University
Annalisa Crannell, Franklin & Marshall College

3:30pm–5:30pm **Minicourse | 6**
Hall Ideas J, Monona Terrace

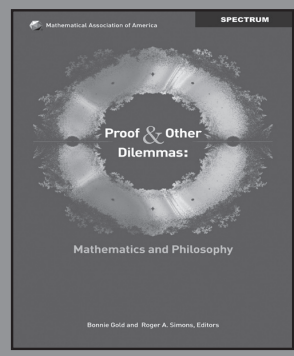
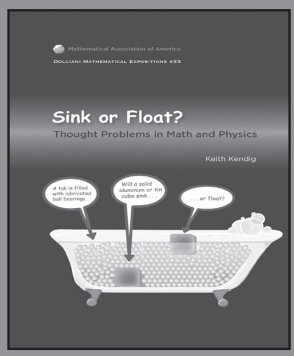
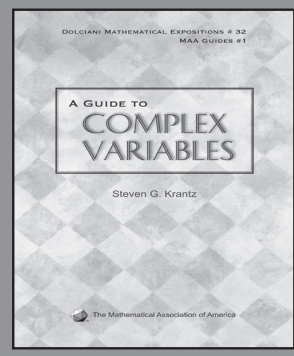
Mathematics and the Geometry of Voting
Donald G. Saari, University of California, Irvine

6:00pm–9:00pm **MAA Silver and Gold Reception and Banquet**
Grand Terrace, Monona Terrace

Sunday, August 3

8:15am–12:15pm **Taliesin Tour**
Meet in the Lobby Concourse Hotel

New Titles from the Mathematical Association of America:



Also, Join Us at the Publications Booth for Signings by these Authors:

Thursday, July 31:
 11:30am-12:00pm- **John DePillis** author of “777 Mathematical Conversation Starters”

Friday, August 1:
 11:30am-12:00pm- **Art Benjamin** author of “Secrets of Mental Math”
 12:00pm-12:30pm- **Keith Kendig** author of “Sink or Float? Thought Problems in Math and Physics”