MAA MATHFEST

PROGRAM

Hartford, Connecticut
July 31 — August 3, 2013

Solve the differential equation.

$$t \ln t \frac{dr}{dt} + r = 7te^t$$

$$r = \frac{7e^t + C}{\ln t}$$

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MAA MATHFEST

WELCOME
TO MAA MATHFEST IN HARTFORD!

With the support of many MAA staff and committee members, we have an interesting and exciting program planned this year.

There is one change this year from previous MathFest programs that you should be aware of. Instead of the opening banquet, this year we will hold a Grand Opening Reception on Wednesday, July 31 from 6-8 PM, the evening before the scientific program commences on Thursday morning. All registered participants and guests are welcome to attend. Please enjoy the complimentary light hors d'oeuvres and a cash bar while you mingle with the other attendees.

This year's MathFest program looks enticing. As usual, the Hedrick Lectures are one of the main features of the conference. This year's series of three lectures will be given by Olga Holtz from UC Berkeley and the Technical University of Berlin. Her lectures will touch on a variety of topics drawn from algebra, combinatorics, and communication complexity. In addition there are numerous other invited lecturers covering a wide range of important topics in mathematics. There will also be a number of invited paper sessions involving topics from knot theory, commutative algebra, complex geometry, coding theory, mathematical finance, and climate modeling. In addition, there are thirteen different contributed paper sessions, six minicourses, two workshops, and a short course on The Mathematics of Games and Puzzles led by Art Benjamin.

For students, there are plenty of fun and interesting activities as well. Events begin with the MAA-PME Student Reception on Wednesday afternoon at 4:30 PM followed immediately by Math Jeopardy, a fun mathematics contest that leads off MathFest. There is also the Graduate Student Reception on Thursday. Frank Morgan will give the MAA Lecture for Students on Thursday and Gil Strang will present the Pi Mu Epsilon J. Sutherland Frame Lecture on Friday. In addition there are several panel presentations aimed at students, and numerous student paper sessions on Thursday and Friday, followed by the MAA Ice Cream Social and Award Ceremony on Friday evening, and the Student Problem Solving Competition on Saturday.

Don't miss the MAA Prize Session on Friday. On Saturday morning we will organize another 5K Fun Run & Walk, and the meeting will conclude that evening with the Silver and Gold Banquet.

One final item: Hartford is located very close to the border between Red Sox Nation and Yankee Territory. So be careful if you choose to wear a baseball cap during the meeting! I'm from Boston, so I can hopefully help out if you get into trouble (assuming you have the correct letter on your cap!)

Robert L. Devaney

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WELCOME to MathFest!

WIN AN IPAD

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When:
Friday, 3:30-4:30PM

Where:
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Invited Addresses

Earle Raymond Hedrick Lecture Series

Olga Holtz, University of California Berkeley and Technical University Berlin

Lecture 1:

Zeros of Polynomials via Structured Matrices and Continued Fractions

Thursday, August 1, 10:30 a.m. - 11:20 a.m.
Connecticut Convention Center, Ballroom B

Going back to Descartes, Gauss, Laguerre, and other giants of our field, the theory of zero localization attempts to answer questions of the type: given a polynomial, how many of its roots are real? positive? have negative real part? lie in a given disk? etc. A fascinating algebro-analytic theory was gradually built to answer such questions, where structured matrices and continued fractions play a central role. This talk will be devoted to some of these intriguing connections, many classical, some new.

Lecture 2:

Approximation Theory Meets Algebra and Combinatorics

Friday, August 2, 9:30 a.m. - 10:20 a.m.
Connecticut Convention Center, Ballroom B

What (if anything) do the following things have in common?
- multivariate splines
- hyperplane arrangements
- integer points in polytopes
- spanning trees of graphs
- multivariate polynomial interpolation?

Surprisingly, these seemingly unrelated objects have been recently unified within the emerging theory of zonotopal algebra. I will offer its overview, state of the art, and some open problems.

Lecture 3:

Communication Complexity of Algorithms

Saturday, August 3, 9:30 a.m. - 10:20 a.m.
Connecticut Convention Center, Ballroom B

Unlike arithmetic complexity that measures the amount of computations performed, communication complexity of an algorithm measures the total communication (that is, the amount of data sent and received) between processors in a parallel cluster or levels of memory hierarchy. Since communication is much costlier than arithmetic, the main practical task in this area is minimizing communication and the main theoretical question is finding exact lower bounds on communication. The latter (rather technical) question turns out to have a very elegant answer to having to do with graph theory. I will discuss the resulting novel approach to communication in algorithms, illustrate it on Strassen and Strassen-like algorithms for matrix multiplication, and point out some of its practical consequences.

Biography: Olga Holtz received her Diploma in Applied Mathematics from Southern Ural State University in Chelyabinsk, Russia, and her Ph.D in Mathematics from the University of Wisconsin-Madison under the guidance of Hans Schneider. She held a postdoctorate research position at the Computer Science Department of the University of Wisconsin-Madison, a Humboldt fellowship at the Institute of Mathematics of Technical University Berlin, a Morrey Assistant Professorship and an Associate Professorship at the Department of Mathematics of the University of California-Berkeley. Currently, Holtz is a Professor of Mathematics at the University of California-Berkeley, a Professor of Applied Mathematics at Technical University Berlin, and a Professor of Berlin Mathematical School. She is a Sofja Kovalevskaja awardee, a member of the Junge Akademie of Germany, and a European Mathematical Society Prize winner.

AMS — MAA Joint Invited Address

Judy Walker, University of Nebraska at Lincoln

Coding Theory: A Cornucopia of Mathematics

Thursday, August 1, 9:30 a.m. - 10:20 a.m.
Connecticut Convention Center, Ballroom B

Whenever information is transmitted or stored, errors are bound to occur. It is the goal of coding theory to find efficient ways of adding redundancy to the information so that these errors can be corrected. The mathematical study of error-correcting codes began with Claude Shannon's groundbreaking 1948 paper, in which he proved probabilistically that good codes exist. The subsequent challenge has been to actually find or design these good codes; this problem has occupied the minds of many mathematicians, computer scientists and electrical engineers ever since. In addressing Shannon's challenge, many areas of mathematics have been drawn upon, including several that are not typically thought of as "applied math". This talk will give a mathematical tour through coding theory, focusing especially on the wide range of areas such as algebraic geometry, number theory, and graph theory that have played a crucial role in the development of this field.

Biography: Judy Walker received her undergraduate degree from the University of Michigan and both her master's degree and her Ph.D. from the University of Illinois at Urbana-Champaign. She has been at the University of Nebraska Lincoln since 1996, and currently serves as Aaron Douglas Professor and Chair of the Department of Mathematics there. Her research in algebraic coding theory has been continuously supported by the National Science Foundation, and she spent much of the fall 2011

Invited Addresses (continued)

semester as a Visiting Professor at Centre Interfacultaire Bernoulli, EPFL in Lausanne, Switzerland. Dr. Walker is a co-founder of the Nebraska Conference for Undergraduate Women in Mathematics and has served as an elected member of the AWM Executive Committee and the AMS Council. She was the lecturer for the undergraduate portion of the IAS/PCMI Mentoring Program for Women in 1999 and was one of three lecturers at the 2007 Summer School in Coding Theory at the Sophus Lie Conference Center, Nordfjordeid, Norway. She has won several teaching awards, including the Deborah and Franklin Tepper Haimo Award from the MAA, and she served as the MAA's Polya Lecturer for 2009-2011.

MAA Invited Address

Susan Loepp, Williams College

Algebra, Analysis, and The Way You Eat Corn: The Complete Story

Thursday, August 1, 8:30 a.m. - 9:20 a.m.
Connecticut Convention Center, Ballroom B

It has been conjectured that one can tell an Algebraist from an Analyst by the way she eats corn on the cob. As this talk involves both Algebra and Analysis, all are welcome, regardless of your preferred corn on the cob eating technique. We start with a ring, define a metric on it, and proceed to construct the completion of the resulting metric space. We then consider which algebraic properties of the ring are, or are not, inherited by its completion. We give an overview of completions of rings for a general audience, including recent results, and open questions. Research results obtained by undergraduates will be highlighted. And if you don't like corn, you're probably a topologist.

Biography: Susan Loepp received a B.A. in mathematics and a B.S. in physics from Bethel College (N. Newton, KS) in 1989. She earned her Ph.D. in mathematics from the University of Texas at Austin in 1994. After a two-year postdoctoral position at the University of Nebraska, she joined the faculty at Williams College, where she now holds the rank of Professor. Dr. Loepp is currently the principal investigator on the Williams College SMALL REU grant, and has served as the director of the program three times. Her research area is commutative algebra and she has advised the research of many undergraduate students in that field. Loepp also loves teaching, and in 2012, she received the Deborah and Franklin Tepper Haimo Award for Distinguished College or University Teaching. Loepp and William K. Wootters, an expert in quantum information theory, are co-authors of the book "Protecting Information: From Classical Error Correction to Quantum Cryptography," published by Cambridge University Press in 2006.

MAA Invited Address

Chris Danforth, University of Vermont

Improving Numerical Weather Predictions Using Ideas from Nonlinear Dynamics

Friday, August 2, 10:30 a.m. - 11:20 a.m.
Connecticut Convention Center, Ballroom B

Modern weather forecasts are initialized with a 10 billion variable estimate of the Earth's atmospheric state. This initial condition is typically the result of 'data assimilation', the process by which satellite observations are combined with prior forecasts to produce a best guess. Predictions of the future state are then made by integrating a collection of perturbations of this best guess, and the resulting variance represents the forecast uncertainty. This talk will discuss the state-of-the-art in weather prediction in the context of our group's efforts to improve forecast methodology. We leverage results from low-dimensional nonlinear dynamical systems to suggest algorithms for reducing forecast error, and demonstrate success using an experimental apparatus analogous to Lorenz's 1963 model of convection.

Biography: Chris Danforth received his Ph.D in 2006 from the University of Maryland, where he worked under the direction of James Yorke and Eugenia Kalnay. Dr. Danforth is currently on the faculty of the University of Vermont where he co-directs the Computational Story Lab, a group of applied mathematicians working on large-scale, system-level problems in many fields including sociology, nonlinear dynamics, networks, ecology, and physics. His research has been covered by the New York Times, Science Magazine, and the BBC among others. Descriptions of his projects are available on his website and blog.

MAA Invited Address

Gordon Zitkovic, University of Texas At Austin

Financial Mathematics: A Two-Way Bridge between Finance and Mathematics

Saturday, August 3, 10:30 a.m. – 11:00 a.m.
Connecticut Convention Center, Ballroom B

Financial mathematics is a relatively recent addition to the spectrum of mathematical disciplines. Like many other mathematical specialties, it aims to provide a rigorous analysis and an abstract reductionist view of a circle of ideas, intuitions, models, observations and beliefs related to a specific "facet of reality." In the case of financial

Invited Addresses (continued)

mathematics, the focus is on the structure and dynamics of financial markets and the role played by financial agents acting in them. It builds on fundamental ideas of financial economics, but goes beyond the toy models and does not shy away from embracing the powerful analytical tools contemporary mathematics has to offer. A major attraction of the subject is the breadth of the array of such tools that can be effectively used; they range from classical analysis, partial differential equations and their numerical counterparts over the Banach-space theory and non-locally-convex functional analysis through convex analysis and optimization to probability theory and stochastic analysis. Another—in a sense dual—source of appeal of financial mathematics is the degree of enrichment these purely mathematical fields have gained from the relationship. Indeed, problems first encountered in analysis of financial problems led to many mathematical developments in a variety of disciplines. The talk will focus on an assortment of problems illustrating the above mutually beneficial interactions and provide a glimpse of contemporary frontiers of research in this exciting field. It is meant to be accessible to a mathematically mature audience, but no previous exposure to the subject is required.

Biography: Gordan Zitkovic received his Ph.D in 2003 from Columbia University, under the mentorship of Ioannis Karatzas. After a postdoc at Carnegie Mellon University he joined the Department of Mathematics at the University of Texas at Austin, where he currently holds the position of Associate Professor. His research interests focus on stochastic analysis and optimal control with applications to financial mathematics.

AWM — MAA Etta Z. Falconer Lecture

Patricia Kenschaft, Montclair University

Improving Equity and Education: Why and How

Friday, August 2, 8:30 a.m. - 9:20 a.m.
Connecticut Convention Center, Ballroom B

Drawing on both the speaker's own experiences and research and that of others, this talk will explore ideas and behaviors that would improve equity and education, especially in mathematics. She will emphasize the importance of elementary school teachers' knowing the mathematics they are supposed to teach. Why are some powerful people so opposed to teaching them the requisite mathematics? What is equity? How does mathematics education affect equity issues including those of race and gender, but also of economics, ability and personality? What is the connection between innumeracy and the pressing economic and environmental issues of our time? What roles do testing, homework and nurturing responsibility in children play?

Biography: Patricia Clark Kenschaft is Professor Emerita of Mathematics at Montclair State University. She is P.I. on fourteen grants for helping elementary school teachers mathematically, the mother of two, and author, co-author, or co-editor of nine published books, including "Change is Possible: Stories of Women and Minorities in Mathematics" and "Math Power: How to Help Your Child Love Math Even If You Don't." She holds an A.B from Swarthmore College and a Ph.D. from the University of Pennsylvania. She moderated a radio talk show "Math Medley" for six years, interviewing over 300 people about their relationship to mathematics, including presidents of mathematical organizations, elementary school teachers, and those in apparently unrelated fields. In the national MAA she has been Governor from New Jersey, chair of the Committee on Environmental Mathematics, and first chair of the Committee on Participation of Women. In the latter capacity she moderated and directed micro-inequity skits at national meetings, depicting actual experiences of women in the previous year. She has interviewed over 100 African American mathematicians.

James R. Leitzel Lecture

Ann Watkins, California State University Northridge

Statistics Isn't Mathematics: So How's That Working Out?

Saturday, August 3, 8:30 a.m. - 9:20 a.m.
Connecticut Convention Center, Ballroom B

Mathematics and statistics faculty have different priorities concerning their overlapping interests in the school mathematics curriculum, the training of teachers, the Advanced Placement program, undergraduate majors, and the introductory statistics course. Has this tension worked to the benefit of our common students? A survey of current issues shows mixed results, some surprising trends, and a need for a continuing emphasis on respectful cooperation.

Biography: Ann Watkins is Professor of Mathematics at California State University, Northridge (CSUN) and specializes in statistics education. Beginning as co-chair of the joint committee of the American Statistical Association and National Council of Teachers of Mathematics, Ann has worked for many years with high school teachers and statisticians to develop materials for teaching statistics and probability in secondary schools and the introductory courses in colleges

Invited Addresses (continued)

and to design opportunities for professional development for teachers. She is a co-author of textbooks published as a result of the Quantitative Literacy, Activity-Based Statistics, and Core-Plus Mathematics projects. She chaired the College Board's Development Committee for Advanced Placement Statistics, was exam leader at AP Statistics readings, and was primary author of the AP Statistics Teacher's Guide. She was a member of the Board of Editors of the Journal of Statistics Education. She served as president of the Mathematical Association of America from 2001 to 2003, and has been MAA second vice-president, sectional governor, co-editor of the College Mathematics Journal, and associate editor of the American Mathematical Monthly. She has won the following CSUN awards: Outstanding Professor, Advancement of Teaching Effectiveness, and Extraordinary Service. In 1999, she was elected a Fellow of the American Statistical Association "for innovative contributions to curriculum and pedagogy; for masterful teaching, and teaching of teachers; and for an extraordinary record of sustained and successful efforts to institutionalize reform in statistics education."

Pi Mu Epsilon J. Sutherland Frame Lecture

Gilbert Strang, Massachusetts Institute of Technology

Matrices I Admire

Friday, August 2, 8:00 p.m. - 8:50 p.m.
Connecticut Convention Center, Ballroom B

I will start with my absolute favorite among all matrices. It has 2's down the main diagonal and -1's on the diagonals just above and just below. It is a Toeplitz matrix (constant diagonals), a second difference matrix (because of -1, 2, -1), and a highpass filter. The matrix is tridiagonal and positive definite and you see it all over pure mathematics too. Its determinant is n+1, and most important are its eigenvectors which are pure sines.

Recently I came back to this well-loved matrix, realizing that I didn't know its symmetric square root, its exponential or its cosine. Those are all badly needed for the heat equation and wave equation. They are not tridiagonal but still amazing. I will speak about another matrix too (the graph Laplacian) as well as the combination of differential equations and linear algebra.

Biography: Gilbert Strang was an undergraduate at MIT and a Rhodes Scholar at Balliol College, Oxford. His Ph.D. was from UCLA and since then he has taught at MIT. He has been a Sloan Fellow and a Fairchild Scholar and is a Fellow of the American Academy of Arts and Sciences. He is a Professor of Mathematics at MIT and an Honorary Fellow of Balliol College. Professor Strang has published eight textbooks: Introduction to Linear Algebra (1993, 1998, 2003, 2009) Linear Algebra and Its Applications (1976, 1980, 1988, 2005) An Analysis of the Finite Element Method, with George Fix (1973, 2008) Introduction to Applied Mathematics (1986) Calculus (1991) Wavelets and Filter Banks, with Truong Nguyen (1996) Linear Algebra, Geodesy, and GPS, with Kai Borre (1997) Computational Science and Engineering (2007) Strang was the President of SIAM during 1999 and 2000, and Chair of the Joint Policy Board for Mathematics. He received the von Neumann Medal of the US Association for Computational Mechanics, and the Henrici Prize for applied analysis. The first Su Buchin Prize from the International Congress of Industrial and Applied Mathematics, and the Haimo Prize from the Mathematical Association of America, were awarded for his contributions to teaching around the world. His home page is math.mit.edu/~gs/ and his video lectures on linear algebra and on computational science and engineering are on ocw.mit.edu (mathematics/18.06 and 18.085).

NAM David Blackwell Lecture

Karen Morgan Ivy, New Jersey City University

Bridging A Gap between Creative Literacy and Quantitative Literacy: Using Poetry to Improve Quantitative Reasoning

Friday, August 2, 1:00 p.m. – 1:50 p.m.
Connecticut Convention Center, Ballroom B

How do we as mathematics educators provide alternative ways in which students engage in mathematical discourse and explore mathematical ideas, thereby improving students' quantitative literacy? How do creative literacy and quantitative literacy conjointly enhance the cognitive and affective domains in the mathematics classroom? The use of mathematics in poetry extends beyond more obvious platforms such as counting syllables or lines and stresses in meter and structure. This talk will offer that teaching mathematics with poetry provides an opportunity to not only address quantitative reasoning, but to also improve students' quantitative literacy. Writing poetry inspired by mathematics offers students the opportunity to frame mathematical reasoning with arguments grounded in succinctness and clarity of thought processes. Additionally, writing poetry inspired by mathematics bolsters students' confidence in performing mathematics.

Invited Addresses (continued)

Biography: Karen Morgan Ivy, an Associate Professor of Mathematics at New Jersey City University, is a mathematics educator who earned a Ph.D. from the University of Mississippi in 2001. Her current research interests include examining affective dimensions of math anxiety through student poetry; investigating pre-service teachers' conceptualization of regrouping and placement value using base n arithmetic; examining the connection between mathematics memories and feelings toward mathematics; integrative learning; and the connection between general education and STEM disciplines, especially Mathematics.

She was awarded the Phi Eta Sigma Outstanding Teacher Award because of her excellence in classroom instruction, her exceptional ability to intellectually stimulate her students, and her genuine concern for the welfare of her students. She was a member of the Steering Committee for the 2012 Infinite Possibilities Conference (IPC), a national initiative designed to promote, educate, encourage and support minority women who are interested in mathematics and statistics.

She welcomes the opportunity to engage in student-learning, pedagogical and content issues at all levels as evidenced by her commitment to serve on the Mathematical Association of America (MAA) Committee for the Teaching of Undergraduate Mathematics (CTUM) for two consecutive terms, on the MAA Committee on Minority Participation in Mathematics (CMPM), and on the New Jersey Association of Mathematics Teacher Educators (NJ AMTE) Executive Board.

She is also a member of several other professional organizations including the National Council of Teachers of Mathematics (NCTM); the National Association of Mathematicians (NAM); the School Science and Mathematics Association (SSMA); the Association of Mathematics Teacher Educators (AMTE); and the Association of Mathematics Teachers of New Jersey (AMTNJ).

CSHPM Kenneth O. May Lecture

Jeremy Gray, Open University

Henri Poincaré: Mathematician, Physicist, Philosopher

Saturday, August 3, 1:00 p.m. – 1:50 p.m.
Connecticut Convention Center, Ballroom B

Henri Poincaré held strong views about human knowledge that animated his work in both mathematics and physics. He held views on the possibly non-Euclidean nature of space, on the foundations of mathematics, on the fundamental 'laws' of physics, on why the basic equations of mathematical physics are linear, on space and time, and on theory change in science. These views, and the debates they generated, give a rich insight into the frontiers of research a century ago.

Biography: Jeremy Gray's first degree is in mathematics from Oxford, and his Ph.D is from the University of Warwick. In 1983—84 he was a Visiting Assistant Professor of Mathematics at Brandeis University, Waltham, Mass, USA, and from September to December 1996 a Resident Fellow at the Dibner Institute for the History of Science and Technology, MIT, Cambridge, USA. In 1998 he gave a 45-minute Invited Lecture at the International Congress of Mathematicians in Berlin on 'The Riemann-Roch Theorem, 1854 - 1914'. He is presently a Professor of the History of Mathematics at the Open University, and an Honorary Professor at the University of Warwick, where he lectures on the history of mathematics. In 2009 he was awarded the Albert Leon Whiteman Memorial Prize of the American Mathematical Society for his work on the history of mathematics. His book "Plato's Ghost: The Modernist Transformation of Mathematics," was published by Princeton University Press in 2008, and his scientific biography of Henri Poincaré was published by them in November 2012.

MAA Lecture for Students

Frank Morgan, Williams College

Optimal Pentagonal Tilings

Thursday, August 1, 1:00 p.m. - 1:50 p.m.
Connecticut Convention Center, Ballroom B

Hales proved that the least-perimeter way to tile the plane with unit areas is by regular hexagons. What is the least-perimeter way to tile the plane with unit-area pentagons? We will discuss some new results, examples, and open questions, including work by undergraduates.

Biography: Frank Morgan studies optimal shapes and minimal surfaces. He has published over 150 articles and six books, including "Calculus" and "The Math Chat Book," based on his live, call-in TV show and column. He now has a blog at the Huffington Post. Founder of the NSF "SMALL" Undergraduate Research Project, inaugural winner of the MAA's Haimo teaching award, past vice-president of the MAA and of the AMS, he is Atwell Professor of Mathematics at Williams College.

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OXFORD

Invited Paper Sessions

Open and Accessible Problems in Knot Theory

Thursday, August 1, 1:00 p.m. – 5:00 p.m., Marriott, Ballroom A

With the increase in undergraduate research there is also an increased need for open and accessible problems for students to tackle. Knot theory is particularly fertile ground for such problems. Each speaker in this session will introduce a topic, pose three open questions that are accessible to undergraduate research, and place the questions in context of the topic. The final time slot in the session will consist of a discussion/reception where faculty and undergraduates can further discuss open problems with the speakers.

Organizers: Lew Ludwig, Denison University; Laura Taalman, James Madison University

Developments in Commutative Algebra

Thursday, August 1, 2:00 p.m. – 4:50 p.m., Marriott, Ballroom B

Commutative algebra may be thought of as studying solutions of many equations in many unknowns when, typically, the solution is not unique. The set of solutions could then be viewed geometrically, but one can instead encode all the relevant information about the equations in algebraic objects called commutative rings. Study of the resulting ring structure can then give information about the geometric object, or can be pursued in its own right. In this Invited

Paper Session, current research results in commutative algebra will be presented in a way that will be inviting to a non-expert audience.

Organizers: Susan Loepp, Williams College; Janet Striuli, Fairfield University

Complex Geometry Research and Accessible Problems

Friday, August 2, 2:00 – 4:50 p.m., Marriott Ballroom A

Complex geometry continues to be an area of fruitful research at all levels, from undergraduates to professional researchers. Areas as diverse as algebraic geometry and complex dynamics make use of the structure that complex analysis provides. In this session the speakers will highlight areas of current research related to complex geometry and point out opportunities for research involving undergraduates.

Organizers: Lynette Boos, Providence College; Su-Jeong Kang, Providence College

AMS – MAA Special Session: Coding Theory and ...

Friday, August 2, 2:00 – 4:50 p.m., Marriott, Ballroom B

Whenever information is transmitted or stored, errors are bound to occur. It is the goal of coding theory to devise efficient methods of adding redundancy to the information so that these errors can be detected and corrected. By its very nature, coding theory lies at the intersection of mathematics, computer science, and electrical engineering. Many different areas of mathematics have found applications in coding theory, including linear algebra, combinatorial designs, number theory, group theory, algebraic geometry, and graph theory, just to name a few. Each talk in this session will highlight a connection between coding theory and some area of mathematics, either by discussing how that branch of mathematics was used to obtain a recent coding theoretic result or by discussing how coding theory can be incorporated into an undergraduate-level course in that branch of mathematics.

Organizers: Katherine Morrison, University of Northern Colorado; Judy L. Walker, University of Nebraska – Lincoln

Recent Developments in Mathematical Finance

Saturday, August 3, 1:00 – 4:30 p.m., Marriott, Ballroom B

This invited paper session will address recent challenges and solutions in Mathematical Finance. In particular, presentation themes will cover the theories of optimal investment, options pricing, risk management and price impact for large investors. The mathematical methods used herein are primarily from the field of Stochastic Analysis, but also branch out to include results from general Probability Theory, Partial Differential Equations, Convex and Harmonic Analysis, as well as Game Theory.

While the chief objective of the session is to provide results from the forefront of research into Mathematical Finance, a significant secondary goal is to make the talks accessible to a broader audience. Special attention will be paid to undergraduate and graduate students, as well as those researchers with a basic working knowledge of Probability and Stochastic Processes. Indeed, this session hopes to convince those who attend it that there are many interesting and challenging open problems in Mathematical Finance, both from a Mathematical and "Real World" perspective.

Organizers: Tomoyuki Ichiba, University of California Santa Barbara; Scott Robertson, Carnegie Mellon University

Climate and Geophysical Modeling

Saturday, August 3, 2:00 – 3:50 p.m., Marriott, Ballroom A

Mathematical models of the atmosphere, oceans, and other geophysical systems and are a key part of understanding Earth system dynamics and the effects of climate change. The Earth system is immensely complex and mathematical and computational techniques are vital to analyzing and studying the dynamics. In honor of the 2013 Mathematics of Planet Earth initiative, this session will highlight role of mathematics in modeling, predicting, and explaining behavior in areas such as hydrodynamics, atmospheric and oceanic circulation, sea ice, and biogeochemical processes. It will focus research involving computational models of geophysical systems and the integration of data into these models.

Organizer: Matthew J. Hoffman, Rochester Institute of Technology

Contributed Paper Sessions

1. Best Practices for Teaching Online Courses

Thursday, August 1, 1:00 p.m. – 4:55 p.m.
Connecticut Convention Center, Room 14

Online education is becoming increasingly common, and many institutions desire to offer courses online. Some faculty members are tasked with developing and teaching online courses without adequate training for doing so effectively. This session seeks to share ideas to help instructors of online courses. The focus will be on teaching courses completely online, rather than using online tools to augment a face-to-face class. Possible topics include strategies for delivering content, engaging students, fostering discussion and collaboration, and assessment in an online environment. Presentations about particular technologies useful for online classes are also welcome.

Organizer: Matthew Wright, Huntington University

2. History and Philosophy of Mathematics

This session welcomes contributions from all areas related to history and philosophy of mathematics. This includes reports on research, survey talks, and issues related to the use of history and philosophy of mathematics in the classroom.

Organizers: Robert E. Bradley, Adelphi University; Bonnie Gold, Monmouth University; Maria Zack, Point Loma Nazarene University

Sponsors: The Canadian Society for History and Philosophy of Mathematics; HOM SIGMAA; POM SIGMAA

Euler's Mathematics
Thursday, August 1, 9:00 a.m. – 10:20 a.m.,
Connecticut Convention Center, Room 27

Seventeenth and Eighteenth Centuries
Thursday, August 1, 1:00 p.m. – 5:20 p.m.
Connecticut Convention Center, Room 27

Nineteenth Century
Friday, August 2, 2013, 8:30 a.m. – 9:50 a.m.
Connecticut Convention Center, Room 26

Twentieth Century, Part 1
Friday, August 2, 8:30 a.m. – 11:20 a.m.
Connecticut Convention Center, Room 27

Twentieth Century, Part 2
Friday, August 2, 2:30 p.m. – 3:50 p.m.
Connecticut Convention Center, Room 26

Using History and Philosophy in Teaching Mathematics
Friday, August 2, 3:00 p.m. – 5:20 p.m.
Connecticut Convention Center, Room 27

The Arc of Time
Saturday, August 3, 8:30 a.m. – 10:20 a.m.
Connecticut Convention Center, Room 27

3. Interactions between History and Philosophy of Mathematics

Part 1
Saturday, August 3, 10:30 a.m. – 11:20 a.m.
Connecticut Convention Center, Room 27

Part 2
Saturday, August 3, 2:30 p.m. – 4:50 p.m.
Connecticut Convention Center, Room 27

This session is geared specifically to interactions between the history and philosophy of mathematics. Talks will be expected either to approach specifically how each discipline informs the other in particular or general contexts, or to discuss issues and episodes that have implications for both the philosophy and the history of mathematics.

Organizers: Thomas Drucker, University of Wisconsin—Whitewater; Glen Van Brummelen, Quest University

Sponsors: The Canadian Society for History and Philosophy of Mathematics; HOM SIGMAA; POM SIGMAA

4. My Favorite Geometry Proof

Friday, August 2, 1:00 p.m. – 4:55 p.m.
Connecticut Convention Center, Room 14

This session invites presenters to share their favorite undergraduate geometry proofs. These proofs should be suitable for Euclidean and non-Euclidean geometry courses as well as for courses frequently referred to as "modern" or "higher" geometry but not those related to differential geometry or (low-level) graduate courses. Proofs must be for theorems other than the Pythagorean Theorem. Presenters must do the full proof, discuss how the proof fits into the course, provide information regarding prerequisite topics for the proof, and discuss associated areas with which students have difficulty and how such concerns are addressed so that students understand the proof. Presenters are invited to discuss how they have modified the proof over time as well as to share historical information for "classic" proofs and explorations/demonstrations that they use to help students understand the associated theorem. Abstracts should include the theorem to be proved/discussed as well as brief background information.

Organizer: Sarah L. Mabrouk, Framingham State University

5. Inquiry-Based Learning Best Practices

Part 1
Friday, August 2, 3:20 p.m. – 5:15 p.m.
Connecticut Convention Center, Room 16

Part 2
Saturday, August 3, 8:30 a.m. – 11:00 a.m.
Connecticut Convention Center, Room 16

Contributed Paper Sessions (continued)

Part 3
Saturday, August 3, 1:00 p.m. – 4:55 p.m.
Connecticut Convention Center, Room 16

In many mathematics classrooms, doing mathematics means following the rules dictated by the teacher and knowing mathematics means remembering and applying these rules. However, an inquiry-based learning (IBL) approach challenges students to create/discover mathematics. Boiled down to its essence, IBL is a method of teaching that engages students in sense-making activities. Students are given tasks requiring them to conjecture, experiment, explore, and solve problems. Rather than showing facts or a clear, smooth path to a solution, the instructor guides students via well-crafted problems through an adventure in mathematical discovery. The talks in this session will focus on IBL best practices. We seek both novel ideas and effective approaches to IBL. Claims made should be supported by data (student responses, test scores, survey results, etc.) or anecdotal evidence. This session will be of interest to instructors new to IBL, as well as seasoned practitioners looking for new ideas.

Organizers: Dana Campbell Ernst, Northern Arizona University; Angie Hodge, University of Nebraska at Omaha; Stan Yoshinobu, Cal Poly, San Luis Obispo

6. Undergraduate Research Activities in Mathematical and Computational Biology
Thursday, August 1, 1:00 p.m. – 3:55 p.m.
Connecticut Convention Center, Room 15

This session will highlight research results of projects that either were conducted by undergraduates or were collaborations between undergraduates and their faculty mentors. Of particular interest are those collaborations that involve students and faculty from both mathematics and biology. As many institutions have started undergraduate research programs in this area frequently with the help of initial external funding, the session is interested in the process and logistics of starting a program and maintaining a program even after the initial funding expires. Important issues include faculty development and interdisciplinary collaboration, student preparation and selection, the structure of research programs, the acquisition of resources to support the program, and the subsequent achievements of students who participate in undergraduate research in mathematical and computational biology.

The session will also feature undergraduate research projects in mathematical and computational biology, which are mentored by a single faculty mentor without the support of a larger program. We seek scholarly papers that present results from undergraduate research projects in mathematical or computational biology, discuss the creation, maintenance, or achievements of an undergraduate research program, or describe the establishment or maintenance of collaborations between faculty and students in mathematics and biology.

Organizer: Carrie Elizabeth Diaz Eaton, Unity College

Sponsor: BIO SIGMAA

7. Research in Mathematics for High School and Community College
Friday, August 2, 1:00 p.m. – 2:55 p.m.
Connecticut Convention Center, Room 16

The goal of this contributed paper session is to share appropriate problems, course descriptions, and other opportunities designed to support and encourage small research project in mathematics at the high school and community college level. Presentations that focus on examples of good problems, experiences with recruitment of students, support for both faculty and students, and presentation and publication of results are encouraged.

In 2012 there were approximately 27,000 students who took BC Calculus before entering the 12th grade. For these students, a standard course in Differential Equations, Multivariable Calculus, or Linear Algebra may be offered at their school, a local community college or university, or on- line. While these may be good courses, they do not offer high-level investigative experiences emphasizing the creative aspects of mathematical discovery, which encourages continued study in mathematics.

Encouraging students to use their own mind is absolutely essential when working with students who are talented and interested in mathematics. Students must be working on problems that are sufficiently rich to allow for extended work on them and sufficiently interesting and engaging so that they are willing to give the problems their time and intellectual energy. Small researchable problems offer this challenge to student creativity.

Organizer: Daniel J. Teague, NC School of Science and Mathematics

Sponsor: SIGMAA TASHM

8. The Mathematics of Planet Earth in Research
Friday, August 2, 1:00 p.m. – 2:15 p.m.
Connecticut Convention Center, Room 15

Earth is a dynamic and complex planet; mathematics is a tool that we can use to understand it. The North American Mathematical Sciences Institutes are sponsoring the theme of The Mathematics of Planet Earth in 2013 (MPE 2013) with the goal of showcasing the role that mathematics plays in recognizing, exploring, and solving planetary problems. In support of MPE 2013, this session seeks proposals from those who have engaged in Environmental Mathematics

Contributed Paper Sessions (continued)

research. Accepted papers will be published on the SIGMAA EM website to spark conversation on theme related topics throughout the year and beyond.

Organizers: Ben Galluzzo, Shippensburg University; Monika Kiss, Saint Leo University

Sponsor: SIGMAA EM

9. The Mathematics of Planet Earth in The College Mathematics Curriculum

Friday, August 2, 3:05 p.m. – 4:00 p.m.
Connecticut Convention Center, Room 15

Earth is a dynamic and complex planet; mathematics is a tool that we can use to understand it. The North American Mathematical Sciences Institutes are sponsoring the theme of "The Mathematics of Planet Earth" in 2013 (MPE 2013) with the goal of showcasing the role that mathematics plays in recognizing, exploring, and solving planetary problems. In support of MPE 2013, this session seeks proposals from those interested in integrating Environmental Mathematics issues into the typical college curriculum. Accepted papers will be published on the SIGMAA EM website to spark conversation on theme-related topics throughout this year and beyond.

Organizers: Ben Galluzzo, Shippensburg University; Monika Kiss, Saint Leo University

Sponsor: SIGMAA EM

10. Recreational Mathematics: New Problems and New Solutions

Part 1

Thursday, August 1, 1:00 p.m. – 4:15 p.m.
Connecticut Convention Center, Ballroom A

Part 2

Friday, August 2, 8:30 a.m. – 10:45 a.m.
Connecticut Convention Center, Room 16

As with all mathematics, recreational mathematics continues to expand through the solution of new problems and the development of novel solutions to old problems. For the purposes of this session, the definition of recreational mathematics will be a broad one. The primary guideline used to determine the suitability of a paper will be the understandability of the mathematics. Papers submitted to this session should be accessible to undergraduate students. Novel applications as well as new approaches to old problems are welcome. Examples of use of the material in the undergraduate classroom are encouraged.

Organizers: Paul Richard Coe, Dominican University; Kristen Schemmerhorn, Dominican University

11. Curriculum Development to Support First Year Mathematics Students

Part 1

Saturday, August 3, 8:30 a.m. – 11:25 a.m.
Connecticut Convention Center, Room 14

Part 2

Saturday, August 3, 1:00 p.m. – 4:55 p.m.
Connecticut Convention Center, Room 14

A common focus of university administration is student retention and graduation. First year mathematics courses, both general education and major specific, have comparatively high drop/fail/withdraw rates. This means that they are often scrutinized in regard to their effect on retention and graduation rates. In this session, we would like to hear what you have been doing to respond to this scrutiny. We hope to focus on departmental-wide efforts, rather than specific classroom approaches. Presentations could include complete course redesign, co-requisite support courses, restructure of curriculum, departmental efforts to standardize, etc. Note that we would like to hear about successful, in process, and unsuccessful initiatives. Presentations that include a description of the initiative along with data supporting the success or failure of these initiatives are especially encouraged.

Organizers: Donna Flint, South Dakota State University; Becky Diischer, South Dakota State University; Charles Wesley Bingen, South Dakota State University

12. Math Circles: Best Practices

Thursday, August 1, 1:00 p.m. – 4:15 p.m.
Connecticut Convention Center, Room 17

A math circle is broadly defined as a sustained enrichment experience that brings mathematics professionals in direct contact with pre-college students and/or their teachers. Circles foster passion and excitement for deep mathematics. The SIGMAA on Math Circles for Students and Teachers (SIGMAA MCST) supports MAA members who share an interest in initiating and coordinating math circles.

SIGMAA MCST invites speakers to report on best practices in math circles with which they are or have been associated. Talks could address effective organizational strategies, successful math circle presentations, or innovative activities for students, for instance. Ideally, talks in this session will equip individuals currently involved in a math circle with ideas for improving some aspect of their circle, while also inspiring listeners who have only begun to consider math circles.

Organizers: Tatiana Shubin, San Jose State University; Sam Vandervelde, St. Lawrence University

Sponsor: SIGMAA MCST

Welcome to

Math Circles

Steps to getting started as a Math Circle Leader…

(1) Sign up for your NAMC Account: http://mathcircles.org

(2) Register your new Math Circle:
https://www.mathcircles.org/node/add/mathcircle

(3) Join Math Circle Communities (support and resources):
* Special Interest Group of the Mathematical Association of America (SIGMAA) on Circles – Math Circles for Students & Teachers (MCST): http://sigmaa.maa.org/mcst
* Circle of Circles Email Group
http://tech.groups.yahoo.com/group/circleofcircles/
* NAMC Facebook: http://www.facebook.com/MathCircles
* Math Teachers' Circle (MTC) Network:
http://mathteacherscircle.org

Coming soon – Math Circle Mentorship Partnerships

http://mathcircles.org/

NAMC Resources

Problem Collection:
https://www.mathcircles.org/content/math-circle-problem-collection

Math Circle Listing:
https://www.mathcircles.org/Wiki_ExistingMathCirclePrograms

Summer Programs for Students:
https://www.mathcircles.org/node/56

Math Event & Competition Listing:
https://www.mathcircles.org/content/math-competition-listing

Annual Conferences and Workshops

Joint Math Meetings (January):
SIGMAA MCST special sessions (presentations and networking) for Math Circle leaders. http://jointmathematicsmeetings.org/jmm

Circle On The Road (March/April):
NAMC annual meeting for new and experienced Circle leaders.
https://www.mathcircles.org/content/circle-road

How to Run a Math Teachers' Circle Workshop (June/July):
Training for new Math Teachers' Circle Teams
http://www.mathteacherscircle.org/

Math Circle Institute (July):
Notre Dame University, South Bend, IN.
Workshop for new and experienced Math Circle leaders.
Email Bob and Ellen Kaplan at kaplan@math.harvard.edu

MathFest (August):
SIGMAA MCST sponsors special sessions (presentations and networking) for Math Circle leaders. http://www.maa.org/mathfest/

AMS/MSRI Math Circles Library

Collection of great books for Math Circle organizers including wonderful problem collections, discussions of experiences in math teaching, and practical books:
https://www.mathcircles.org/content/math-circle-library

General Contributed Paper Sessions

Organizers: Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

1. History and Philosophy of Mathematics
Thursday, August 1, 8:30 a.m. – 10:10 a.m.
Connecticut Convention Center, Room 14

2. Research in Graph Theory or Combinatorics
Thursday, August 1, 8:30 a.m. – 10:10 a.m.
Connecticut Convention Center, Room 15

3. Probability or Statistics
Thursday, August 1, 8:30 a.m. – 9:40 a.m.
Connecticut Convention Center, Room 16

4. Teaching Advanced Mathematics, Part 1
Thursday, August 1, 8:30 a.m. – 10:10 a.m.
Connecticut Convention Center, Room 26

5. Research in Linear Algebra or Geometry
Thursday, August 1, 1:00 p.m. – 4:25 p.m.
Connecticut Convention Center, Room 26

6. Assessment, Mentoring, or Outreach
Friday, August 2, 8:30 a.m. – 11:25 a.m.
Connecticut Convention Center, Room 14

7. Teaching Calculus, Part 1
Friday, August 2, 8:30 a.m. – 10:25 a.m.
Connecticut Convention Center, Room 15

8. Other/Research in Applied Mathematics
Friday, August 2, 8:30 a.m. – 11:10 a.m.
Connecticut Convention Center, Room 17

9. Teaching Introductory Mathematics
Friday, August 2, 1:00 p.m. – 3:55 p.m.
Connecticut Convention Center, Room 17

10. Research in Algebra or Topology
Saturday, August 3, 8:30 a.m. – 9:55 a.m.
Connecticut Convention Center, Room 15

11. Teaching Calculus, Part 2
Saturday, August 3, 8:30 a.m. – 10:40 a.m.
Connecticut Convention Center, Room 21

12. Teaching Introductory Mathematics, Part 2
Saturday, August 3, 8:30 a.m. – 10:25 a.m.
Connecticut Convention Center, Room 22

13. Modeling and Applications
Saturday, August 3, 8:30 a.m. – 10:55 a.m.
Connecticut Convention Center, Room 26

14. Teaching Advanced Mathematics, Part 2
Saturday, August 3, 1:00 p.m. – 4:10 p.m.
Connecticut Convention Center, Room 21

15. Research in Number Theory
Saturday, August 3, 1:00 p.m. – 2:25 p.m.
Connecticut Convention Center, Room 22

16. Mathematics and Technology/ Research in Analysis
Saturday, August 3, 1:00 p.m. – 3:25 p.m.
Connecticut Convention Center, Room 26

SIGMAA Activities

The following is a list of activities at MathFest 2013 that are sponsored by SIGMAAs. Full descriptions of the sessions may be found elsewhere in the program or online at http://maa.org/meetings/maa-mathfest/program-details/2013/sigmaa-activities

Mathematical and Computational Biology: BIO SIGMAA

Contributed Paper Session: Undergraduate Research Activities in Mathematical and Computational Biology

Thursday, August 1, 1:00 p.m. - 3:55 p.m.
Connecticut Convention Center, Room 15

History of Mathematics: HOM SIGMAA

Contributed Paper Session: History and Philosophy of Mathematics

Thursday, August 1, 9:00 a.m. – 10:20 a.m. and 1:00 p.m.– 5:20 p.m.
Connecticut Convention Center, Room 27

Friday, August 2, 8:30 a.m. – 11:20 a.m. and 3:00 p.m. – 5:20 p.m.
Connecticut Convention Center, Room 27

Friday, August 2, 8:30 a.m. – 9:50 a.m. and 3:00 p.m. – 3:50 p.m.
Connecticut Convention Center, Room 26

Saturday, August 3, 8:30 a.m. – 10:20 a.m.
Connecticut Convention Center, Room 27

Contributed Paper Session: Interactions Between History and Philosophy of Mathematics

Saturday, August 3, 10:30 a.m. - 11:20 a.m. and 2:30 p.m. - 4:50 p.m.
Connecticut Convention Center, Room 27

Math Circles for Students and Teachers: SIGMAA MCST

Contributed Paper Session: Math Circles: Best Practices

Thursday, August 1, 1:00 p.m. - 4:15 p.m.
Connecticut Convention Center, Room 17

Math Circle Demonstrations

Session 1: Saturday, August 3, 9:00 a.m. - 9:55 a.m.
Connecticut Convention Center, Room 13

Session 2: Saturday, August 3, 10:00 a.m. - 10:55 a.m.
Connecticut Convention Center, Room 13

Philosophy of Mathematics: POM SIGMAA

Contributed Paper Session: History and Philosophy of Mathematics

Thursday, August 1, 9:00 a.m. – 10:20 a.m. and 1:00 p.m.– 5:20 p.m.
Connecticut Convention Center, Room 27

Friday, August 2, 8:30 a.m. – 11:20 a.m. and 3:00 p.m. – 5:20 p.m.
Connecticut Convention Center, Room 27

Friday, August 2, 8:30 a.m. – 9:50 a.m. and 3:00 p.m. – 3:50 p.m.
Connecticut Convention Center, Room 26

Saturday, August 3, 8:30 a.m. – 10:20 a.m.
Connecticut Convention Center, Room 27

Contributed Paper Session: Interactions Between History and Philosophy of Mathematics

Saturday, August 3, 10:30 a.m. – 11:20 a.m. and 2:30 p.m. – 4:50 p.m.
Connecticut Convention Center, Room 27

Environmental Mathematics: SIGMAA EM

Contributed Paper Session: The Mathematics of Planet Earth in Research

Friday, August 2, 1:00 p.m. – 2:15 p.m.
Connecticut Convention Center, Room 15

SIGMAA EM Business Meeting and Reception

Friday, August 2, 2:20 p.m. – 3:00 p.m.
Connecticut Convention Center, Room 15

Contributed Paper Session: The Mathematics of Planet Earth in the College Mathematics Curriculum

Friday, August 2, 3:05 p.m. – 4:00 p.m.
Connecticut Convention Center, Room 15

Statistics Education: SIGMAA STAT-ED

Panel Discussion: A Mathematician Teaches Statistics: Tales from the Front Lines

Thursday, August 1, 4:10 p.m. – 5:30 p.m.
Marriott, Ballroom D

Mathematics Instruction Using the Web: WEB SIGMAA

WEB SIGMAA Business Meeting

Friday, August 2, 5:00 p.m. – 6:30 p.m.
Connecticut Convention Center, Room 17

Undergraduate Student Activities

For full descriptions of the Undergraduate Student Sessions, go to http://www.maa.org/meetings/mathfest/program-details/2013/undergraduate-student-activities

MAA – PME Student Reception

Wednesday, July 31, 4:30 p.m. – 5:30 p.m., Connecticut Convention Center, Ballroom A

Math Jeopardy

Wednesday, July 31, 5:30 p.m. – 6:15 p.m., Connecticut Convention Center, Ballroom A

Answer: A fun undergraduate mathematics contest to lead off MathFest.
Question: What is Mathematics Jeopardy?
Four teams of students will provide the questions to go with the mathematical answers in many categories. Come cheer for your favorite team.
The session will be emceed by Michael Berry.
Organizers: Robert Vallin, Slippery Rock University; Michael Berry, University of Tennessee

Student Hospitality Center

Thursday, August 1, 9:00 a.m. - 5:00 p.m., Connecticut Convention Center, Ballroom C

Friday, August 2, 9:00 a.m. - 5:00 p.m., Connecticut Convention Center, Ballroom C

Saturday, August 3, 9:00 a.m. - 12:30 p.m., Connecticut Convention Center, Ballroom C

The Student Hospitality Center (SHC) provides a place for students and other MathFest attendees to meet for informal conversation, refreshments, and mathematical diversions. Programs for the MAA and Pi Mu Epsilon student paper sessions, packets for the MAA student presenters, and information on MathFest activities of interest to students are available in the SHC.
Organizers: Richard and Araceli Neal, American Society for the Communication of Mathematics

MAA Lecture for Students
Optimal Pentagonal Tilings

Thursday, August 1, 1:00 p.m. – 1:50 p.m., Connecticut Convention Center, Ballroom B

Speaker: Frank Morgan, Williams College

Opportunities in the Actuarial Profession

Thursday, August 1, 2:30 p.m. - 4:00 p.m., Marriott, Ballroom E

Moderator: Thea Cardamone, FSA, UnitedHealthcare Group
Panelists: Daniel Akier, UnitedHealthcare; Gaia Dong, FSA, Aetna; Trevor Foster, Aetna; Harry Gong, UnitedHealthcare; Eli Greenberg, UnitedHealthcare; Amber Lahde, ASA, MassMutual; Olga Jacobs, FSA, UnitedHealthcare; Gao Niu, University of Connecticut; Stephen Smith, FSA, MassMutual; Jay Vadiveloo, FSA, Ph.D,. University of Connecticut Goldenson Center for Actuarial Research; June (Chunchun) Wu, FSA, Ph.D., UnitedHealthcare
Sponsor: The Actuaries' Club of Hartford and Springfield

MAA Undergraduate Student Activity
A Mathematician and an Environmental Scientist Walk into a Bar

Friday, August 2, 1:00 p.m. - 1:50 p.m., Marriott, Ballroom E

Come and engage in the conversation that ensues and see how interacting with scientists is good for both the mathematician and the scientist. The conversation will provide some useful intellectual tools related to the role of mathematics in society. In the end you will be armed with at least one answer to the questions of who cares about math and where does it get used.
Speakers: Thomas J. Pfaff, Department of Mathematics, Ithaca College; Jason Hamilton, Dept. of Environmental Sciences and Studies, Ithaca College

MAA Undergraduate Student Activity
Exhilaration and Consternation: Adventures in Conducting Undergraduate Research

Friday, August 2, 1:00 p.m. – 1:50 p.m., Marriott, Ballroom C

One day you are sitting in your office, chipping away at your responsibilities: preparing for class, grading papers, producing paperwork for committees, creating workshops for teachers, or whatever it is that you are doing to find and maintain your niche. There comes a knock at your door, and for the first time in your life you hear the words, "Are you willing to be my research advisor?" Ah, the excitement, and… the fear. I will relate my personal story of entering this endeavor: the trials and tribulations, the excitement and revelations, as I carry you through the results my students have produced over the past few years and provide you with materials to explore topics in graph theory and knot theory as the story progresses!
Speaker: Robin Blankenship, Morehead State University

Non-Academic Career Paths for Students Who Like Math
A Response to the Statement: "I Really Like Math, but I Don't Want to Teach."

Friday, August 2, 2:35 p.m. – 3:55 p.m., Marriott, Ballroom D

Speakers: Lisa Marano, West Chester University; Ben Galluzzo, Shippensburg University; Jean McGivney-Burelle, University of Hartford
Panelists: Ben Baumer, Smith College, former statistician for the NY Mets; Anna Mika, Campus Program Associate from Clean Air-Cool Planet; An actuary from Mass Mutual; A representative from ESPN
Sponsor: CUSAC

Undergraduate Student Activities (continued)

For full descriptions of the Undergraduate Student Sessions, go to http://www.maa.org/meetings/mathfest/program-details/2013/undergraduate-student-activities

MAA Student Paper Sessions

Thursday, August 1, 8:30 a.m. – 10:25 a.m. and 2:00 p.m. – 3:55 p.m.

Friday, August 2, 8:30 a.m. – 11:45 a.m. and 2:00 p.m. – 3:55 p.m.

Organizers: Theron J. Hitchman, University of Northern Iowa; Jennifer Bergner, Salisbury University

Pi Mu Epsilon Student Paper Sessions

Thursday, August 1, 2:00 p.m. – 6:15 p.m.
Friday, August 2, 10:00 a.m. – 12:00 p.m.

Organizer: Angela Spalsbury, Youngstown State University

Speed Interviewing Marathon for Students

Friday, August 2, 2:00 p.m. – 3:15 p.m., Marriott, Ballroom E

Employers suggest that communication skills are a critical component when considering a mathematics major for a job. An important time to demonstrate good communication skills is during the job interview. This session will start with an overview of best practices and tips on job interviewing, then guide students as they participate in several speed interviewing sessions of 10 minutes each, where they can practice what they have learned and hone their interviewing skills. Speed interviewing sessions will include individual feedback for students, as well as opportunities to network with fellow students.
Organizers: Michael Dorff, Brigham Young University; Jenna Carpenter, Louisiana Tech University

Sponsor: Professional Development Committee and Committee on Graduate Students

Pi Mu Epsilon Student Banquet and Awards Ceremony

Friday, August 2, 6:00 p.m. – 7:45 p.m., Marriott, Ballroom C

All PME members and their supporters are welcome. See the registration form for more information on this ticketed event.

Pi Mu Epsilon J. Sutherland Frame Lecture

Friday, August 2, 8:00 p.m. – 8:50 p.m., Connecticut Convention Center, Ballroom B

Speaker: Gilbert Strang, Massachusetts Institute of Technology

MAA Ice Cream Social and Undergraduate Awards Ceremony

Friday, August 2, 9:00 p.m. – 10:00 p.m., Connecticut Convention Center, Pre-Function

We will recognize all students who gave talks in the MAA Student Paper Sessions, and award prizes for the best of them. All undergraduate students are invited to attend.

MAA Mathematical Competition in Modeling (MCM) Winners

Saturday, August 3, 9:00 a.m. – 10:30 a.m., Connecticut Convention Center, Room 17

About 500 American teams, each consisting of three undergraduates, entered the 2013 MCM in February. The contest consists of two real(istic) problems, one discrete, one continuous. The teams have four days to deal with the challenge during which time they may use or consult anything inanimate — computers, libraries, the Web, etc. MAA judges choose one continuous winner and one discrete winner from the top contenders. The two MAA winning teams of students will present the results of their four-day challenge.
Organizer: Ben Fusaro, Florida State University

Student Problem Solving Competition

Saturday, August 3, 1:00 p.m. – 2:15 p.m., Connecticut Convention Center, Room 17

This event is the finals of the Problem Solving Competition. Universities and colleges that participate monthly on their own campuses by holding problem solving contests are invited to send a contestant. Each contestant will be required to solve a series of mathematical problems. Based on the outcome, a champion along with 2nd through 6th place winners will be named.
Sponsor: Richard Neal, American Society for the Communication of Mathematics

Great Talks for a General Audience: Coached Presentations by Graduate Students

Saturday, August 3, 1:00 p.m. – 5:30 p.m., Connecticut Convention Center, Room 12

Your ears are needed! Come hear this sampler of talks by graduate students. The 20-minute presentations are designed to be dynamic talks about a wide range of mathematics topics -- specifically chosen to be exciting and accessible to undergraduates familiar with calculus and linear algebra. Speakers in this session are current graduate students. More details for potential speakers can be found in the description of this session in the Information for Graduate Students section of the program.
Organizers: Jim Freeman, Cornell College; Rachel Schwell, Central Connecticut State University
Sponsors: Committee on Graduate Students and the Young Mathematicians Network

You love that ‘aha’ moment; you want your students to love it, too.

Math for America is looking for people who want to become part of a dynamic community of mathematics and science teachers and school leaders.

- The **MƒA Fellowship**: a five-year program with stipends of up to $100,000 for recent college graduates and mid-career professionals.
- The **MƒA Early Career Fellowship**: a four-year program with stipends of up to $60,000 for secondary mathematics teachers.
- The **MƒA Master Teacher Fellowship**: a four-year program with stipends of up to $60,000 for experienced mathematics and science teachers.
- The **MƒA School Leader Fellowship**: a two-year program with stipends of up to $10,000 for school leaders with math backgrounds and $20,000 in funding to the school.

MƒA Math for America

FELLOWSHIP PROGRAMS

MƒA’s fellowship programs enable STEM teachers and school leaders to exchange innovations in mathematics and science instruction, while also engaging in a larger, shared mission.

Could you be a part of the MƒA community?

Learn more at www.mathforamerica.org

Visit us at booth #26

Graduate Student Activities

GRADUATE STUDENT WORKSHOP

What's the Story? A Graduate Student Workshop on Formulating a Research Presentation for a General Audience

Thursday, August 1, 1:00 p.m. – 2:20 p.m., Marriott, Ballroom C

Presenting our research to undergraduate students can be both fun and rewarding. It can also be difficult, however, since the gory details of our results often require a great deal of specific jargon and background. Nonetheless, the big ideas can almost always be presented at a variety of levels, and this workshop is designed to help participants develop the skills needed to formulate a presentation on their research that is appropriate for an audience of undergraduate students. Since many colleges and universities require giving such a talk as part of a job interview, almost any graduate student will have the opportunity to do so, and the ability to communicate complex mathematical ideas to students is a valued trait in a candidate. This workshop will consist of hands-on activities and audience interaction aimed toward developing and improving the necessary skills for creating an engaging and accessible presentation for undergraduates.
Organizer: Rachel Schwell, Central Connecticut State University
Sponsors: Committee on Graduate Students; Young Mathematicians Network

Graduate Student Reception

Thursday, August 1, 5:30 p.m. – 6:30 p.m., Connecticut Convention Center, Adriaen's Landing

Graduate students are invited for some refreshments and to meet several of the invited speakers.
Organizers: Estela A. Gavosto, University of Kansas; James Freeman, Cornell College

POSTER SESSION

PosterFest 2013: A Poster Session of Scholarship by Early Career Mathematicians and Graduate Students

Friday, August 2, 3:00 p.m. – 5:00 p.m., Connecticut Convention Center, Pre-Function

This poster session will allow early career mathematicians, including untenured faculty and graduate students, to present and discuss their scholarly activities with other attendees in an informal atmosphere. Examples of scholarly activities suitable for this poster session include expository work, preliminary reports, scholarship of teaching and learning, and research reports.
Organizer: Audrey Malagon, Virginia Wesleyan College
Sponsors: MAA Early Career Mathematicians Committee; Graduate Student Committee; Young Mathematicians Network

SPECIAL SESSION FOR GRADUATE STUDENTS

Great Talks for a General Audience: Coached Presentations by Graduate Students

Saturday, August 3, 1:00 p.m. – 5:30 p.m., Connecticut Convention Center, Room 12

Organizers: Jim Freeman, Cornell College; Rachel Schwell, Central Connecticut State University
Sponsor: Committee on Graduate Students

PANEL SESSION

How to Apply for Jobs

Thursday, August 1, 2:35 p.m. – 3:55 p.m., Marriott, Ballroom D

This session is aimed at graduate students and recent Ph.D.s. An overview of the employment process will be given with ample opportunity for participants to ask questions. Questions that will be addressed include: How do you find which jobs are available? How do you choose which jobs you want to apply for? What are academic and other employers looking for in the materials that you send? How should you tailor your application material for the job that you are applying to? How do schools conduct interviews?
Organizers: Estela A. Gavosto, University of Kansas; Kristine Roinestad, Georgetown College
Panelists: James Freeman, Cornell College; Joanne Peeples, El Paso Community College; Kristine Roinestad, Georgetown College; A mathematician from industry
Sponsors: Committee on Graduate Students; Professional Development Committee; Young Mathematicians Network

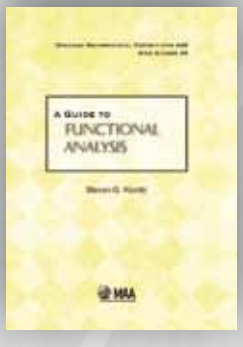
Speed Interviewing Marathon for Students

Friday, August 1, 2:00 p.m. - 3:15 p.m., Marriott, Ballroom E

Employers suggest that communication skills are a critical component when considering a mathematics major for a job. An important time to demonstrate good communication skills is during the job interview. This session will start with an overview of best practices and tips on job interviewing, then guide students as they participate in several speed interviewing sessions of 10 minutes each, where they can practice what they have learned and hone their interviewing skills. Speed interviewing sessions will include individual feedback for students, as well as opportunities to network with fellow students.
Organizers: Michael Dorff, Brigham Young University; Jenna Carpenter, Louisiana Tech University
Sponsors: Professional Development Committee; Committee on Graduate Students

New from the MAA

Stop by the MAA Pavilion and check out our newest books.



A Guide to Functional Analysis

By Steven G. Krantz
Meeting Price: $38.00

A quick but precise and careful introduction to the subject of functional analysis. It covers the basic topics that can be found in a basic graduate analysis text and it also covers more sophisticated topics such as spectral theory, convexity, and fixed-point theorems.

Paradoxes and Sophisms in Calculus

By Sergiy Klymchuk and Susan Staples
Meeting Price: $30.50

Offers a delightful supplementary resource to enhance the study of single variable calculus. A collection of over fifty paradoxes and sophisms showcases the subtleties of this subject and leads students to contemplate the underlying concepts.

Beyond the Quadratic Formula

By Ron Irving
Meeting Price: $41.75

Designed for self-study, with many results presented as exercises and some supplemented by outlines for solution.

Learning Modern Algebra

By Al Cuoco and Joseph J. Rotman
Meeting Price: $45.75

Aligns with the CBMS Mathematical Education of Teachers-II recommendations, in both content and practice. It emphasizes rings and fields over groups, and it makes explicit connections between the ideas of abstract algebra and the mathematics used by high school teachers.

Exploring Advanced Euclidean Geometry with GeoGebra

By Gerard A. Venema
Meeting Price: $38.00

An inquiry-based introduction to advanced Euclidean geometry. It utilizes dynamic geometry software, specifically GeoGebra, to explore the statements and proofs of many of the most interesting theorems in the subject.

MAA
MATHEMATICAL ASSOCIATION OF AMERICA

Workshops and Poster Session

POSTER SESSION

PosterFest 2013: A Poster Session of Scholarship by Early Career Mathematicians and Graduate Students

Friday, August 2, 3:00 p.m. – 5:00 p.m.
Connecticut Convention Center, Pre-Function

This poster session will allow early career mathematicians, including untenured faculty and graduate students, to present and discuss their scholarly activities with other attendees in an informal atmosphere. Examples of scholarly activities suitable for this poster session include expository work, preliminary reports, scholarship of teaching and learning, and research reports.

Organizer: Audrey Malagon, Virginia Wesleyan College

Sponsors: MAA Early Career Mathematicians Committee; Graduate Student Committee; Young Mathematicians Network

WORKSHOP

Exploding Dots: An Accessible and Interactive Workshop for Middle- and High-School Educators

Friday, August 2, 6:00 p.m. - 7:50 p.m.
Connecticut Convention Center, Room 25

Here is a story that isn't true: When I was a young child I invented a machine (not true) that was nothing more than a series of boxes that could hold dots. And these dots would, upon certain actions, explode. And with this machine, in this non-true story, I realized I could explain true things! In one fell swoop I explained all the mathematics of arithmetic I learnt in grade school (true), all the of the polynomial algebra I was to learn in high-school (true), elements of calculus and number theory I was to learn in both high school and in university (true), and I began to explore unanswered research questions still intriguing mathematicians to this day (also true)!

Let me share this story with you. See how simple and elegant ideas from the regular curriculum connect to elegant and profound ideas in mathematics as a whole. And, other way round, discover from all this new and exciting approaches to bring back into the classroom.

It's win-win all round! Be sure to bring pencil and paper. This experience will be interactive!

Organizer: James Tanton, MAA Mathematician in Residence

Sponsor: Council on Outreach

WORKSHOP

What's the Story? A Graduate Student Workshop on Formulating a Research Presentation for a General Audience

Thursday, August 1, 1:00 p.m. - 2:20 p.m.
Marriott, Ballroom C

Presenting our research to undergraduate students can be both fun and rewarding. It can also be difficult, however, since the gory details of our results often require a great deal of specific jargon and background. Nonetheless, the big ideas can almost always be presented at a variety of levels, and this workshop is designed to help participants develop the skills needed to formulate a presentation on their research that is appropriate for an audience of undergraduate students. Since many colleges and universities require giving such a talk as part of a job interview, almost any graduate student will have the opportunity to do so, and the ability to communicate complex mathematical ideas to students is a valued trait in a candidate. This workshop will consist of hands-on activities and audience interaction aimed toward developing and improving the necessary skills for creating an engaging and accessible presentation for undergraduates.

Organizer: Rachel Schwell, Central Connecticut State University

Sponsors: Committee on Graduate Students; Young Mathematician's Network

Panel Sessions

National Assessment Instruments

Friday, August 2, 1:00 p.m. - 2:20 p.m., Marriott, Ballroom D

There are several nationally normed instruments used to assess college-level mathematics learning. One, the Major Field Test (MFT), is used to assess the major; two others, the Collegiate Learning Assessment (CLA) and the ETS Proficiency Profile (ETS-PP, formerly MAPP: Measure of Academic Proficiency and Progress), are used to assess general education – not just in mathematics, but overall, but they do have mathematical components. (Another, the Praxis, for pre-service teachers, was discussed by a panel at JMM 2013.) This panel will consist of faculty at institutions that use the test. They will discuss the kinds of questions the test includes, how it is administered at their institution, what kinds of information the institution receives, and how their school has used this information to improve its program.

Organizer: Bonnie Gold, Monmouth University

Panelists: Timothy Flood, Pittsburg State University; Gerald Kruse, Juniata College; Mary Shepherd, Northwest Missouri State University; Janine Wittwer, Westminster College

Sponsor: Committee on Assessment

Non-Academic Career Paths for Students who Like Math. A Response to the Statement: "I Really Like Math, but I Don't Want to Teach."

Friday, August 2, 2:35 p.m. - 3:50 p.m., Marriott, Ballroom D

It's the bottom of the ninth; bases loaded. The right-handed relief pitcher has already thrown for two innings. At-bat is a lefty batting .295. Is it time to pull the pitcher? Come to this exciting panel to find out! During our panel we will hear from mathematicians from various fields including sports statistics (hopefully you are a Mets fan) and actuarial science. Each panelist will be given the opportunity to describe their non-academic career, then we will open the floor to questions. Be sure you are not left on the bench for this one!

Organizers: Lisa Marano, West Chester University; Ben Galluzzo, Shippensburg University; Jean McGivney-Burelle, University of Hartford

Panelists: Ben Baumer, Smith College; A former statistician for NY Mets Actuary from Mass Mutual; Anna Mika, Campus Program Associate from Clean Air-Cool Planet; An actuary from Mass Mutual; A representative from ESPN

Sponsor: CUSAC

Hosting an AMC Competition: Advice from the Experts!

Saturday, August 3, 1:00 p.m. - 2:30 p.m., Marriott, Ballroom D

The MAA sponsors the annual American Mathematics Competition for 8th, 10th and 12th grade students. This session will outline how institutions can serve as a regional host site for the AMC, with a focus not only on encouraging students in the area to participate in this event, but to also educate students about career and other opportunities in mathematics at the host institution. Panelists include faculty from successful AMC host institutions, as well as AMC Director Steve Dunbar. There will be a Q&A session at the end, as well as handouts for participants.

Organizer: Jenna Carpenter, Louisiana Tech University

Panelists: Jon Scott, Montgomery College; Steve Dunbar, University of Nebraska-Lincoln; Randy Cone, Virginia Military Institute

Sponsor: Committee on Professional Development

Student Summer Programs, Study Abroad Opportunities, and Graduate Fellowships: Who, What, When, Where, and Why?

Friday, August 2, 4:10 p.m. - 5:30 p.m., Marriott, Ballroom D

Myriad opportunities exist for undergraduate and graduate students interested in participating in summer programs, study abroad programs, or pursuing graduate school in the mathematical sciences. This session will provide an overview several different opportunities, as well as best practices on topics such as successful applications and securing funds. Panelists will discuss the NSF Graduate Fellowship Program, the Math in Moscow Program, the Budapest Semester in Mathematics Program, and the Carleton College Summer Mathematics Program for Women. There will be a Q&A session at the end and handouts for participants.

Organizer: Jenna Carpenter, Louisiana Tech University

Panelists: Kristina Garrett, St Olaf College; Stephen Kennedy, Carleton College; Sean Howe, University of Chicago; Jenna Carpenter, Louisiana Tech University

Sponsor: Committee on Professional Development and Committee on Undergraduate Student Activities and Chapters

Panel Sessions (continued)

Successful Career Transitions

Thursday, August 1, 1:00 p.m. - 2:20 p.m., Marriott, Ballroom D

The journey from undergraduate student to graduate student to a career in mathematics involves the navigation of several crucial transition points. This panel will address the common transitions that may be encountered, including the transition from graduate work to a postdoctoral position; the transition from postdoctoral work to employment in an academia, government, or industry; and transition between different types of positions (academic to industry, etc.). Panelists will discuss their experiences and the successful strategies that they used in their transitions, such as finding mentors and role models, negotiating for resources, and understanding key aspects of the job market and culture.

Organizers: Jacqueline Jensen, Slippery Rock University; Magnhild Lien, California State University Northridge; Maura Mast, University of Massachusetts Boston

Panelists: Lynette Boos, Providence College; Eileen Lee, Math for America

Connie Leidy, Wesleyan University; Karen Ricciardi, University of Massachusetts Boston; Milena Tzigantcheva, State Street Corporation, Boston

Sponsor: Association for Women in Mathematics

How to Apply for Jobs

Thursday, August 1, 2:35 p.m. – 3:55 p.m., Marriott, Ballroom D

This session is aimed at graduate students and recent Ph.D.s. An overview of the employment process will be given with ample opportunity for participants to ask questions. Questions that will be addressed include: How do you find which jobs are available? How do you choose which jobs you want to apply for? What are academic and other employers looking for in the materials that you send? How should you tailor your application material for the job that you are applying to? How do schools conduct interviews?

Organizers: Estela A. Gavosto, University of Kansas; Kristine Roinestad, Georgetown College

Panelists: James Freeman, Cornell College; Joanne Peeples, El Paso Community College; Kristine Roinestad, Georgetown College; A mathematician from industry

Sponsors: Committee on Graduate Students; Professional Development Committee; Young Mathematicians Network

A Mathematician Teaches Statistics: Tales from the Front Lines

Thursday, August 1, 4:10 p.m. - 5:30 p.m., Marriott, Ballroom D

At many institutions, mathematicians are invited, lured, or coerced into teaching statistics courses. This is especially true at smaller institutions that do not have separate statistics departments, but may also happen at larger institutions where statistics departments struggle to find sufficiently many instructors to teach all of their courses.

Many of these instructors have had little or no formal statistical training, and most have had no prior experience teaching statistics. Come hear from mathematicians who have successfully made the transition to teaching statistics. Find out what lessons they have learned from teaching statistics and get their advice for other mathematicians who find themselves in the same situation.

Organizer: Randall Pruim, Calvin College

Panelists: Kimberly Roth, Juniata College; Iwan Praton, Franklin & Marshal; Mike Stob, Calvin College; Jason Shaw, Truman State University

Sponsor: SIGMAA StatEd and Committee on Professional Development

Minicourses

1. Environmental Mathematics

Part 1:
Friday, August 2, 3:30 p.m. – 5:30 p.m.
Connecticut Convention Center, Room 24

Part 2:
Saturday, August 3, 3:30 p.m. - 5:30 p.m.
Connecticut Convention Center, Room 24

The goal of the course is to provide you with the concepts, techniques and resources that will serve as the basis for a six-week module in a liberal arts course or a three-week module in an introductory modeling course. This approach to systems modeling requires little beyond high school algebra, yet it will enable students to model processes such as the flow and interaction of energy, materials, and populations. The modeling is based on an integrated visual-qualitative-computational approach. A flow equation (a D.E. in disguise) will be our key concept/technique. The first hour will be an overview, including examples; we will model systems with one tank (variable). In the second hour you will be modeling a system with two tanks. You will represent the system diagrammatically, express the diagram with flow equations, solve the equations qualitatively, and then numerically solve the equations. In the third hour, teams will model scenarios that involve non-linear interaction of flows and tanks. In the last hour, we will link economics to natural capital and sustainability, and then have an open discussion.

Organizer: Ben Fusaro, Florida State University

2. Teaching with Classroom Voting and Clickers

Part 1:
Thursday, August 1, 1:00 p.m. - 3:00 p.m.
Connecticut Convention Center, Room 24

Part 2:
Friday, August 2, 1:00 p.m. - 3:00 p.m.
Connecticut Convention Center, Room 24

This minicourse will provide participants with an overview of classroom voting pedagogy in a wide range of college mathematics courses. Time will be spent discussing the logistics of classroom voting using clickers as well as recent research on this type of pedagogy. Participants will play the role of students in a voting demonstration, explore an online library of over 2300 classroom voting questions, prepare a lecture with voting questions for use in one of their own courses, and try their hands at writing some questions.

Organizers: Holly Zullo, Carroll College; Jean McGivney-Burelle, University of Hartford; Ann Stewart, Hood College; Christopher Storm, Adelphi University

3. Resequencing Calculus

Part 1:
Thursday, August 1, 3:30 p.m. - 5:30 p.m.
Connecticut Convention Center, Room 24

Part 2:
Friday, August 2, 1:00 p.m. - 3:00 p.m.
Connecticut Convention Center, Room 25

The Resequencing Calculus project is redesigning the calculus sequence, ordering topics so that material prerequisite for upper-level STEM courses is front-loaded into the first two semesters and so that there is a natural progression of difficulty throughout the 3-course sequence. Participants will explore the proposed resequence of Calculus I-III and will have a chance to discuss the sequence with instructors who have taught the sequence. Participants will discuss the progress and assessment of the project to date, future plans, and various approaches for dealing with multiple challenges, including those posed by course transfers and AP credit. This project is supported by NSF Grants DUE 1225566 and 0836676.

Organizers: Mike Axtell, University of Saint Thomas; Joe Stickles, Millikin University

4. Passion-Driven Statistics: A Supportive, Project-Based, Multidisciplinary Introductory Curriculum

Part 1:
Friday, August 2, 3:30 p.m. - 5:30 p.m.
Connecticut Convention Center, Room 25

Part 2:
Saturday, August 3, 3:30 p.m. - 5:30 p.m.
Connecticut Convention Center, Room 25

This minicourse exposes participants to a multidisciplinary, project-based model for teaching introductory statistics. We will present new learning materials and innovative teaching strategies that directly and creatively tackle many of the most significant challenges currently faced by introductory statistics instructors and students. The curriculum is aimed at taking advantage of students' natural curiosity and providing a common language for approaching questions across numerous scientific disciplines. Core features of this curriculum include providing opportunities for students to flexibly apply their knowledge, the use of computing as a window to core statistical concepts, and supporting students with varying levels of preparation.

Organizers: Lisa Dierker, Wesleyan University; Jeffrey Nolan, Wesleyan University; Arielle Selya, Wesleyan University

Minicourses (continued)

5. Mathematical Expeditions in Polar Science

Part 1:
Thursday, August 1, 3:30 p.m. - 5:30 p.m.
Connecticut Convention Center, Room 25

Part 2:
Saturday, August 3, 1:00 p.m. - 3:00 p.m.
Connecticut Convention Center, Room 25

"The challenges facing our planet and our civilization are multidisciplinary and multifaceted, and the mathematical sciences play a central role in the scientific effort to understand and to deal with these challenges."—Mathematics of Planet Earth 2013.

The polar regions are critically important to the global system. Participants will learn about many different areas of scientific research going on in the Arctic and in Antarctica, including sea ice, glaciers, ice cores, phenology, astronomy, biology, and satellite mapping. This mini-course will appeal to teachers of grades 11-14 who are looking for interesting, timely, and interdisciplinary applications which illustrate the power of mathematics in understanding our planet and its challenges. Mathematical modeling and data representation will be a unifying theme in the activities; mathematics from algebra to differential equations may be highlighted. Many excellent resources will be used during the mini-course, so please bring a laptop with wireless capability.

Organizer: Lynn Foshee Reed, Einstein Distinguished Educator Fellow, NSF Polar Programs

6. Making Math Relevant: A Multidisciplinary Sustainability Module for Calculus

Part 1:
Thursday, August 1, 1:00 p.m. - 3:00 p.m.
Connecticut Convention Center, Room 25

Part 2:
Saturday, August 3, 1:00 p.m. - 3:00 p.m.
Connecticut Convention Center, Room 24

Do you want to improve student engagement and understanding of the relevance of calculus to every-day life, without sacrificing typical content? This minicourse will bring together data, Excel, sustainability and a multidisciplinary approach to provide richer context and relevance for calculus. The module has students consider the 21st century problem: What are the current and future impacts of global climate change on polar bears? Students then use real data and Excel, write a technical report, read reports written by student in data structures, ecology, and thermodynamics, and then complete a summary assignment to bring together the information for all disciplines. This mini-course provides the background information to successfully use the module, along with data sets ideas for sustainability exercises. Participants will need Excel loaded onto their laptops and are encouraged to bring a calculator.

Organizers: Thomas J. Pfaff, Department of Mathematics, Ithaca College and Jason Hamilton, Dept. of Environmental Sciences and Studies, Ithaca College

Short Course

MAA Short Course is made possible through contributions to the William F. Lucas Fund made in honor of William F. Lucas.

The Mathematics of Games and Puzzles

Part 1:
Tuesday, July 30, 9:00 a.m. – 5:00 p.m.
Connecticut Convention Center, Room 11

Part 2:
Wednesday, July 31, 9:00 a.m. – 5:00 p.m.
Connecticut Convention Center, Room 11

In this course, you will learn about the mathematics that underlies many of the great games and puzzles that people enjoy today. Imagine impressing your friends, students, or fellow classmates with your ability to solve the Rubik's cube or almost any Sudoku. Learn the optimal basic strategy for playing blackjack, along with some simple card counting techniques. Learn the mathematics needed to play great poker or expert backgammon. Since you're a mathematician, most people assume that you're already good at these things. This course will teach you those skills and you'll learn some fun mathematics along the way.

Organizer and Presenter: Arthur Benjamin, Harvey Mudd College

The Game Plan:

Tuesday

- Great Expectations and Winning Wagers
- Optimal Blackjack and Simple Card Counting
- Games You Can't Lose and Impossible Puzzles
- How to Solve and Understand Rubik's Cube

Wednesday

- Zero Sum Games and Practical Poker Probabilities
- Expert Backgammon
- Solving Sudoku and KenKen
- Chess and Games of Pure Strategy
- The average lecture time is 75 minutes, and all material will be accessible to undergraduates.

All lectures will be given by Arthur Benjamin, Professor of Mathematics at Harvey Mudd College. Dr. Benjamin is a past co-editor of Math Horizons, an MAA-Award winning teacher and author, and a past winner of the American Backgammon Tour. He has created four DVD courses for The Great Courses, including one on The Mathematics of Games and Puzzles.

Alder Award Session

Friday, August 2, 2:00 p.m. – 3:20 p.m., Connecticut Convention Center, Ballroom B

In January 2003 the MAA established the Henry L. Alder Award for Distinguished Teaching by a Beginning College or University Mathematics Faculty Member to honor beginning college or university faculty whose teaching has been extra-ordinarily successful and whose effectiveness in teaching undergraduate mathematics is shown to have influence beyond their own classrooms. Each year, at most three college or university teachers are honored with this national award. The awardees are invited to make a presentation at MathFest on their work. Presentations by the Alder Award honorees.

Honorees: Kumer Pial Das, Lamar University; Rachel Levy, Harvey Mudd College; Christopher Storm, Adelphi University

Moderator: Paul Zorn, Former MAA President

Discover Facts, Enrich Artistic Ability, and Increase the Sum of Knowledge: Participate in Undergraduate Research

2:00 – 2:20 p.m.

Speaker: Kumer Pial Das, Lamar University

Over the last several years, there has been a proliferation of summer and semester-long undergraduate research experience programs in mathematical sciences. Besides those sponsored summer research programs, academic year research for undergraduate students at their home institution becoming popular. Mathematics faculty around the country are getting involved with this type of research and administrators are encouraging this effort. Research with faculty during the regular academic year, at a student's home institution, provides a different type of opportunity. Such academic-year research experiences expand possibilities for undergraduates, proceed with time for students to reflect as they work and can be extended to allow students to complete substantial work. Since 2007, we have been conducting academic year research at Lamar University. This study describes our academic year research program.

Mentoring through Media: Grandma got STEM

2:30 – 2:50 p.m.

Speaker: Rachel Levy, Harvey Mudd College

Have you ever heard the phrase, "That's so easy your grandmother could do it"? I'll share a project designed to change perspectives about grandmothers in STEM fields that unexpectedly blossomed. Take home message: when you mentor through social media, you just might reach the world.

Teaching Mathematics: Get Real

3:00 – 3:20 p.m.

Speaker: Christopher K. Storm, Adelphi University

One of the key goals of an undergraduate research experience is to empower students mathematically by engaging them in mathematics in the same way we as mathematicians are engaged. With the rise of REUs and university curricula that intentionally incorporate research, more undergraduate students than ever are participating. However, many students still do not have or take advantage of such an opportunity. With this as a backdrop, I share my own progression as a teacher who seeks to engage students in authentic mathematical experiences. I've always designed my courses to invite students to do mathematics; however, as the result of my participation in the National Science Foundation grant "Mathvote: Teaching Mathematics with Classroom Voting" and a recent conference, I have taken the next step and now work to design experiences where every mathematics undergraduate student has the opportunity to function in the same manner as a professional mathematician.

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Maplesoft Presentation - Partnering with the MAA to Revolutionize Placement Testing

Thursday, August 1 from 3:30 p.m. - 5:00 p.m. • Connecticut Convention Center in Room 16

Attendees of this presentation will be entered into an exclusive draw to **win a MacBook Air equipped with a copy of Maple!**

Visit Maplesoft at Mathfest booth #25 and ask about Maplesoft's complimentary evaluation opportunities!

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Committee Meetings

Committee on Undergraduate Student Activities and Chapters
Wednesday, July 31, 2:00 p.m. – 4:00 p.m., Marriott, Conference Room 7

Committee on the Undergraduate Program in Mathematics (CUPM) Meeting
Wednesday, July 31, 7:30 p.m. – 9:00 p.m., Connecticut Convention Center, Room 11

MathDL Advisory Board and Friends Meeting
Thursday, August 1, 8:00 a.m. – 9:30 a.m., Marriott, Conference Room 4

PME Council Meeting
Thursday, August 1, 8:30 a.m. – 11:30 a.m., Connecticut Convention Center, Room 17

Committee on the Status of the Profession
Thursday, August 1, 9:00 a.m. – 10:00 a.m., Connecticut Convention Center, Boardroom B

Committee on the Teaching of Undergraduate Mathematics Meeting
Thursday, August 1, 9:00 a.m. – 10:30 a.m., Connecticut Convention Center, Boardroom A

MAA Committee on Departmental Review Meeting
Thursday, August 1, 9:00 a.m. – 10:30 a.m., Marriott, Conference Room 7

Science Policy Committee Meeting
Thursday, August 1, 9:00 a.m. – 10:30 a.m., Connecticut Convention Center, Room 24

Professional Development Committee Meeting
Thursday, August 1, 11:30 a.m. – 1:30 p.m., Marriott, Conference Room 6

Lunch with RUMC
Thursday, August 1, 12:00 p.m. – 1:30 p.m., Marriott, Conference Room 4

Committee on Journals Meeting
Thursday, August 1, 1:00 p.m. – 2:00 p.m., Connecticut Convention Center, Boardroom A

Council on Members and Communities Meeting
Thursday, August 1, 1:00 p.m. – 2:30 p.m., Marriott, Conference Room 7

URSIP Group
Thursday, August 1, 1:00 p.m. – 3:00 p.m., Marriott, Conference Room 5

Ad Hoc Planning Committee for the MAA Centennial 2015 Meeting
Thursday, August 1, 2:00 p.m. – 4:00 p.m., Connecticut Convention Center, Boardroom B

Council on Prizes and Awards Meeting
Thursday, August 1, 2:30 p.m. – 4:30 p.m., Connecticut Convention Center, Boardroom A

Membership Committee Meeting
Thursday, August 1, 3:00 p.m. – 4:30 p.m., Marriott, Conference Room 6

Section Officers Meeting
Thursday, August 1, 3:00 p.m. – 5:00 p.m., Marriott, Ballroom C

PME Advisors Breakfast
Friday, August 2, 7:30 a.m. – 8:30 a.m., Connecticut Convention Center, Room 25

Committee on Technologies in Mathematics Education Meeting
Friday, August 2, 8:00 a.m. – 9:15 a.m., Connecticut Convention Center, Boardroom A

Committee on Sections Meeting
Friday, August 2, 8:00 a.m. – 10:00 a.m., Marriott, Conference Room 4

Council on Outreach Programs Meeting
Friday, August 2, 8:30 a.m. – 10:30 a.m., Connecticut Convention Center, Boardroom B

Committee on MAA/Department Liaisons Meeting
Friday, August 2, 10:00 a.m. – 11:30 a.m., Marriott, Conference Room 5

Council on Programs and Students in the Mathematical Science Meeting
Friday, August 2, 10:30 a.m. – 11:30 a.m., Marriott, Conference Room 7

CUPM Steering Committee Meeting
Friday, August 2, 12:00 p.m. – 1:30 p.m., Connecticut Convention Center, Boardroom A

Committee on Early Career Mathematics Meeting
Friday, August 2, 1:30 p.m. – 3:00 p.m., Connecticut Convention Center, Boardroom A

Math Awareness Month 2014 Meeting
Friday, August 2, 2:00 p.m. – 3:00 p.m., Marriott, Conference Room 5

Council on Meetings and Professional Development Meeting
Friday, August 2, 2:00 p.m. – 3:30 p.m., Marriott, Conference Room 4

CUPM Committee Meeting
Friday, August 2, 2:00 p.m. – 3:30 p.m., Marriott, Conference Room 7

SIGMAA EM Business Meeting and Reception
Friday, August 2, 2:20 p.m. – 3:00 p.m., Connecticut Convention Center, Room 15

SIGMAA TAHSM Committee Meeting
Friday, August 2, 3:30 p.m. – 4:30 p.m., Connecticut Convention Center, Boardroom B

CRAFTY Committee Meeting
Friday, August 2, 4:30 p.m. – 6:00 p.m., Connecticut Convention Center, Boardroom A

WEB SIGMAA Business Meeting
Friday, August 2, 5:00 p.m. – 6:30 p.m., Connecticut Convention Center, Room 17

REU Leadership Group Meeting
Friday, August 2, 8:00 p.m. – 9:00 p.m., Connecticut Convention Center, Room 25

Minicourse Committee Meeting
Saturday, August 3, 10:30 a.m. – 11:20 a.m., Marriott, Conference Room 4

Committee on Committees and Councils Meeting
Saturday, August 3, 12:00 p.m. – 2:00 p.m., Marriott, Conference Room 7

Project NExT Director Meeting
Saturday, August 3, 1:30 p.m. – 3:00 p.m., Marriott, Conference Room 6

Council on the Profession Meeting
Saturday, August 3, 2:30 p.m. – 3:30 p.m., Marriott, Conference Room 4

Fun & Social Events

Wednesday, July 31

MAA – PME Student Reception
4:30 p.m. – 5:30 p.m., Connecticut Convention Center, Ballroom A

Math Jeopardy
5:30 p.m. – 6:15 p.m., Connecticut Convention Center, Ballroom A

Grand Opening Reception
6:00 p.m. – 8:00 p.m., Connecticut Convention Center, Pre-Function and Ballroom C

The MAA MathFest Grand Opening Reception will launch this year's MAA MathFest on a high note. This event, intended to draw attendees together in a spirit of camaraderie, replaces the opening banquet. While scientific sessions will still commence on Thursday, we warmly invite you to enjoy complimentary light hors d'oeuvres and a cash bar while you mix and mingle in the Exhibit Hall with other registered participants and guests, sponsors, and exhibitors. Robert Devaney, MAA president, will be our host.

Thursday, August 1

Graduate Student Reception
5:30 p.m. – 6:30 p.m., Connecticut Convention Center, Adriaen's Landing

Graduate students are invited for some refreshments and to meet several of the invited speakers.

Organizer(s): Estela A. Gavosto, University of Kansas; James Freeman, Cornell College

Codebreaker
7:30 p.m. – 9:15 p.m., Marriott, Ballroom C

Join us for a free screening of Codebreaker, the award-winning film that tells the story of Alan Turing, mathematical genius, World War II codebreaker, and intellectual father of computer science and artificial intelligence. In the early 1950s, Turing faced terrible persecution from the British government because he was gay. The film explores this aspect of his personal life as well as his scientific achievements. Codebreaker's executive Producer and creator Patrick Sammon will introduce the film and provide Q&A afterward. Learn more details about the film and watch a two-minute trailer at http://www.turingfilm.com/.

Friday, August 2

AWM – MAA Morning Coffee
8:00 a.m. – 8:25 a.m., Connecticut Convention Center, Ballroom B

The Association for Women in Mathematics and the Mathematical Association of America invite you to enjoy coffee and light refreshments before the Eta Z. Falconer Lecture.

Pi Mu Epsilon Student Banquet and Awards Ceremony
6:00 p.m. – 7:45 p.m., Marriott, Ballroom C

All PME members and their supporters are welcome. See the registration form for more information on this ticketed event.

MAA Ice Cream Social and Undergraduate Awards Ceremony
Friday, August 2, 9:00 p.m. – 10:00 p.m., Connecticut Convention Center, Pre-Function

We will recognize all students who gave talks in the MAA Student Paper Sessions, and award prizes for the best of them. All undergraduate students are invited to attend.

Saturday, August 3

5K Fun Run & Walk
6:30 a.m. – 9:00 a.m., Location TBA

Join us for a fun 5K run or walk. Open to all attendees and guests. See the registration desk for a waiver form.

Silver and Gold Reception and Banquet
6:00 p.m. – 9:00 p.m., Marriott, Ballroom C

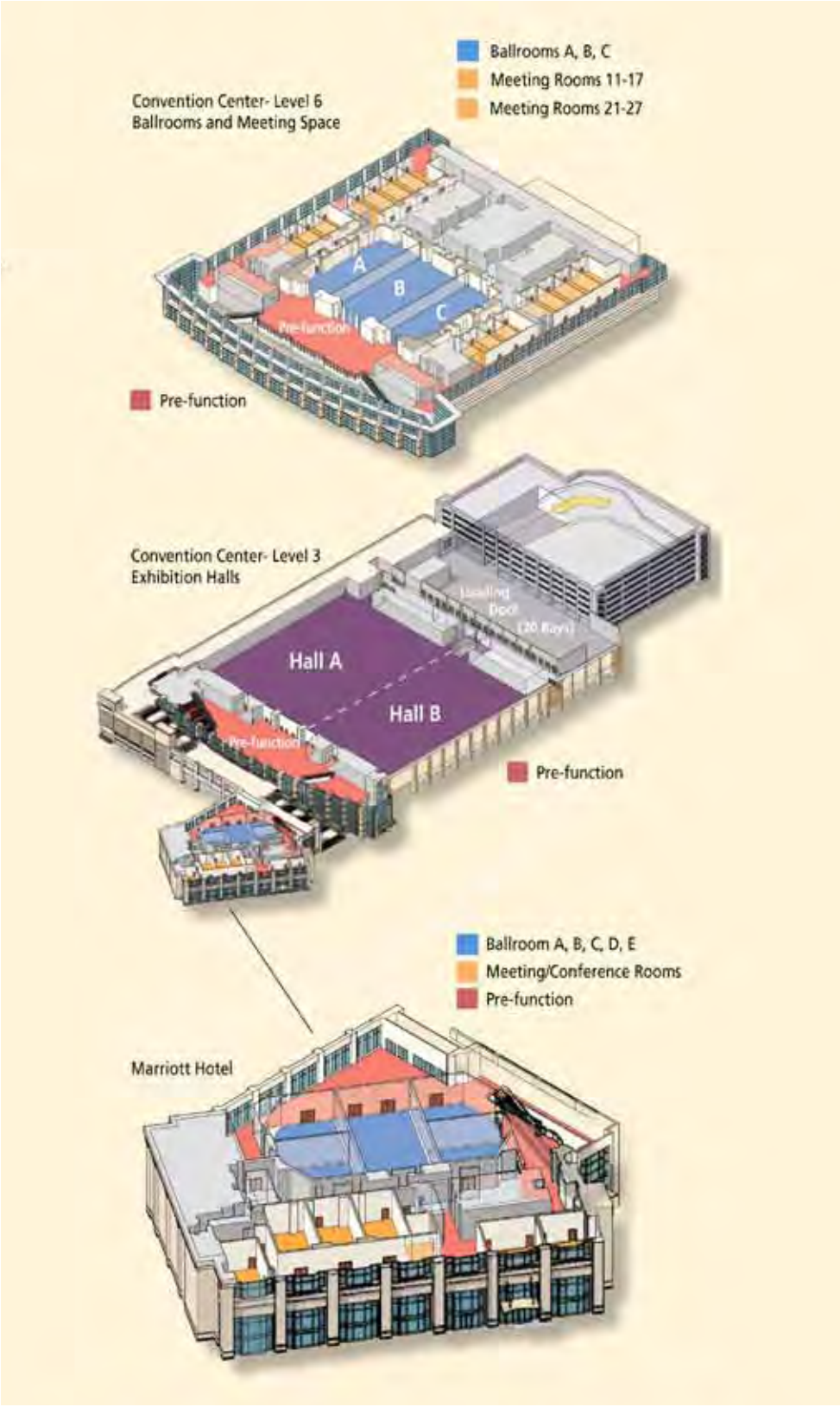
Many mathematicians are called on to teach statistics or interpret statistical information, often with very little training in data analysis. Using fun examples from sports, business and other fields we present a few key ideas of statistical thinking that help define the ways the subject is different from mathematics. And, to be fair, we look at some things statisticians can learn from mathematicians as well.

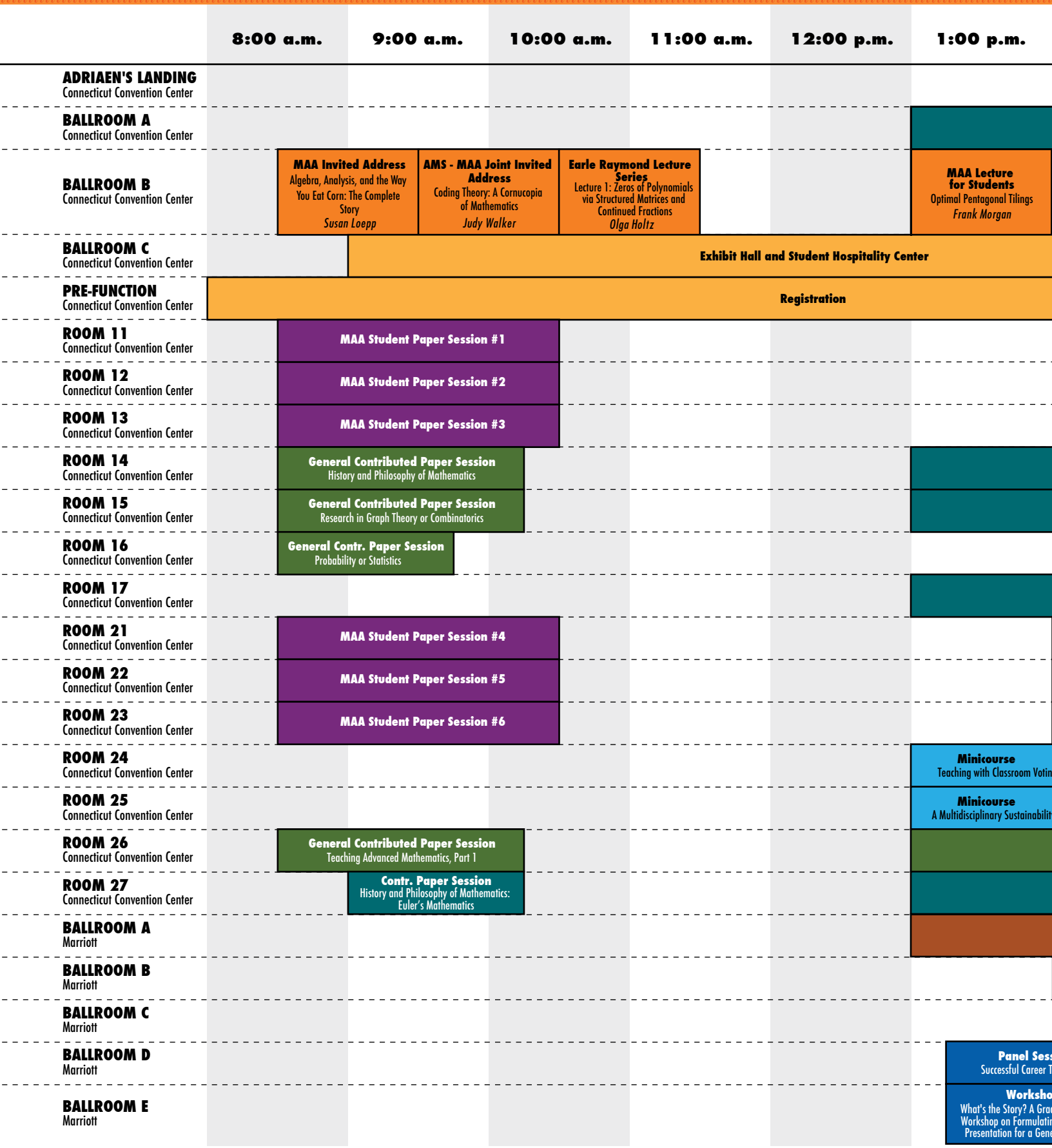
MC: Christine Stevens, St. Louis University

Speaker: Richard Cleary, Babson College

Title: What Every Math Professor Needs to Know About Statistics ... and Vice Versa

Floor Plan


Ballrooms A, B, C
Meeting Rooms 11-17
Meeting Rooms 21-27
Convention Center- Level 6
Ballrooms and Meeting Space
A
B
C
Pre-function
Pre-function
Convention Center- Level 3
Exhibition Halls
Hall A
Hall B
Pre-function
Pre-function
Ballroom A, B, C, D, E
Meeting/Conference Rooms
Pre-function
Marriott Hotel


8:00 a.m.
9:00 a.m.
10:00 a.m.
11:00 a.m.
12:00 p.m.
1:00 p.m.
ADRIAEN'S LANDING
Connecticut Convention Center
BALLROOM A
Connecticut Convention Center
BALLROOM B
Connecticut Convention Center
MAA Invited Address
Algebra, Analysis, and the Way You Eat Corn: The Complete Story
Susan Loepp
AMS - MAA Joint Invited Address
Coding Theory: A Cornucopia of Mathematics
Judy Walker
Earle Raymond Lecture Series
Lecture 1: Zeros of Polynomials via Structured Matrices and Continued Fractions
Olga Holtz
MAA Lecture for Students
Optimal Pentagonal Tilings
Frank Morgan
BALLROOM C
Connecticut Convention Center
Exhibit Hall and Student Hospitality Center
PRE-FUNCTION
Connecticut Convention Center
Registration
ROOM 11
Connecticut Convention Center
MAA Student Paper Session #1
ROOM 12
Connecticut Convention Center
MAA Student Paper Session #2
ROOM 13
Connecticut Convention Center
MAA Student Paper Session #3
ROOM 14
Connecticut Convention Center
General Contributed Paper Session
History and Philosophy of Mathematics
ROOM 15
Connecticut Convention Center
General Contributed Paper Session
Research in Graph Theory or Combinatorics
ROOM 16
Connecticut Convention Center
General Contr. Paper Session
Probability or Statistics
ROOM 17
Connecticut Convention Center
ROOM 21
Connecticut Convention Center
MAA Student Paper Session #4
ROOM 22
Connecticut Convention Center
MAA Student Paper Session #5
ROOM 23
Connecticut Convention Center
MAA Student Paper Session #6
ROOM 24
Connecticut Convention Center
Minicourse
Teaching with Classroom Votin
ROOM 25
Connecticut Convention Center
Minicourse
A Multidisciplinary Sustainabilit
ROOM 26
Connecticut Convention Center
General Contributed Paper Session
Teaching Advanced Mathematics, Part 1
ROOM 27
Connecticut Convention Center
Contr. Paper Session
History and Philosophy of Mathematics: Euler's Mathematics
BALLROOM A
Marriott
BALLROOM B
Marriott
BALLROOM C
Marriott
BALLROOM D
Marriott
Panel Ses
Successful Career T
BALLROOM E
Marriott
Worksho
What's the Story? A Gra
Workshop on Formulatin
Presentation for a Gen

Thursday, August 1

2:00 p.m. | 3:00 p.m. | 4:00 p.m. | 5:00 p.m. | 6:00 p.m. | 7:00 p.m. | 8:00 p.m.

Graduate Student Reception

Contributed Paper Session
Recreational Mathematics: New Problems and New Solutions, Part 1

Town Meeting on Minority Participation in Mathematics

MAA Student Paper Session #7

MAA Student Paper Session #8

MAA Student Paper Session #9

Contributed Paper Session
Best Practices for Teaching Online Courses

Contributed Paper Session
Undergraduate Research Activities in Mathematical and Computational Biology

Contributed Paper Session
Math Circles: Best Practices

MAA Student Paper Session #10

PME Student Paper Session #1

PME Student Paper Session #3

PME Student Paper Session #2

PME Student Paper Session #4

g and Clickers, Part 1

Minicourse
Resequencing Calculus, Part 1

y Module for Calculus, Part 1

Minicourse
Mathematical Expeditions in Polar Science, Part 1

General Contributed Paper Session
Research in Linear Algebra or Geometry

Contributed Paper Session
History and Philosophy of Mathematics: Seventeenth and Eighteenth Centuries

Invited Paper Session
Open and Accessible Problems in Knot Theory

Invited Paper Session
Developments in Commutative Alegbra

Special Event - Movie
Codebreaker

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ransitions

Panel Session
How to Apply for Jobs

Panel Session
A Mathematician Teaches Statistics: Tales from the Front Lines

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eral Audience

Other Session
Opportunities in the Actuarial Profession

	8:00 a.m.	9:00 a.m.	10:00 a.m.	11:00 a.m.	12:00 p.m.	1:00 p.m.
ADRIAEN'S LANDING Connecticut Convention Center						
BALLROOM A Connecticut Convention Center						
BALLROOM B Connecticut Convention Center	**AWM - MAA Etta Z. Falconer Lecture** Improving Equity and Education: Why and How *Patricia Kenschaft*	**Earle Raymond Hedrick Lecture Series** Lecture 2: Approximation Theory Meets Algebra and Combinatorics *Olga Holtz*	**MAA Invited Address** Improving Numerical Weather Predictions Using Ideas from Nonlinear Dynamics *Chris Danforth*	**MAA Prize Session**		**NAM David Blackwell Lecture** Bridging a Gap Between Creative Literacy and Quantitative Literacy: Using Poetry to Improve Quantitative Reasoning *Karen Morgan Ivy*
BALLROOM C Connecticut Convention Center	**Exhibit Hall and Student Hospitality Center**					
PRE-FUNCTION Connecticut Convention Center	**Registration**					
ROOM 11 Connecticut Convention Center	**MAA Student Paper Session #15**					
ROOM 12 Connecticut Convention Center	**MAA Student Paper Session #16**					
ROOM 13 Connecticut Convention Center	**MAA Student Paper Session #17**					
ROOM 14 Connecticut Convention Center	**General Contributed Paper Session** Assessment, Mentoring, or Outreach					
ROOM 15 Connecticut Convention Center	**General Contributed Paper Session** Teaching Calculus, Part 1					**Contributed Paper Sess** The Mathematics of Planet Earth in R
ROOM 16 Connecticut Convention Center	**Contributed Paper Session** Recreational Mathematics: New Problems and New Solutions, Part 2					**Contributed** Research in Mathematics for High Sch
ROOM 17 Connecticut Convention Center	**General Contributed Paper Session** Other / Research in Applied Mathematics					**General Contribu** Teaching Introduc
ROOM 21 Connecticut Convention Center	**MAA Student Paper Session #18**					
ROOM 22 Connecticut Convention Center			**PME Student Paper Session #5**			
ROOM 23 Connecticut Convention Center			**PME Student Paper Session #6**			
ROOM 24 Connecticut Convention Center						**Minicourse** Teaching with Classroom Votin
ROOM 25 Connecticut Convention Center						**Minicourse** Resequencing Calculus, Part 2
ROOM 26 Connecticut Convention Center	**Contributed Paper Session** History and Philosophy of Mathematics: Nineteenth Century					
ROOM 27 Connecticut Convention Center	**Contributed Paper Session** History and Philosophy of Mathematics: Twentieth Century, Part 1					The Canadian Society for History and Philosophy of Mathematics Business Meeting
BALLROOM A Marriott						
BALLROOM B Marriott						
BALLROOM C Marriott						**MAA Undergrad. St. Act.** A Mathematician and an Environmental Scientist Walk into a Bar
BALLROOM D Marriott Marriott						**Panel Session** National Assessment Instr
BALLROOM E						**MAA Undergrad. St. Act.** Exhilaration and Consternation: Adventures in Conducting Undergraduate Research

Friday, August 2

2:00 p.m. | 3:00 p.m. | 4:00 p.m. | 5:00 p.m. | 6:00 p.m. | 7:00 p.m. | 8:00 p.m.

Alder Award Session

Pi Mu Epsilon J. Sutherland Frame Lecture
Matrices I Admire
Gilbert Strang

9:00 p.m.
MAA Ice Cream Social and Undergraduate Awards Ceremony

Poster Session
PosterFest 2013: A Poster Session of Scholarship by Early Career Mathematicians and Graduate Students

MAA Student Paper Session #19

MAA Student Paper Session #20

MAA Student Paper Session #21

Contributed Paper Session
My Favorite Geometry Proof

Contributed Paper Session
The Mathematics of Planet Earth in the College Mathematics Curriculum

Contributed Paper Session
Inquiry-Based Learning Best Practices, Part 1

MAA Student Paper Session #22

Minicourse
Environmental Mathematics, Part 1

Minicourse
Passion-Driven Statistics: A Supportive, Project-Based, Multidisciplinary Introductory Curriculum, Part 1

Workshop
Exploding Dots: An Accessible and Interactive Workshop for Middle- and High-School Educators

Contributed Paper Session
History and Philosophy of Mathematics: Twentieth Century, Part 2

Contributed Paper Session
History and Philosophy of Mathematics: Using History and Philosophy in Teaching Mathematics

Invited Paper Session
Complex Geometry Research and Accessible Problems

AMS - MAA Special Session
Coding Theory and...

Special Event
Pi Mu Epsilon Student Banquet and Awards Ceremony

Panel Session
Non-Academic Career Paths for Students Who Like Math. A Response to the Statement: "I Really Like Math, but I Don't Want to Teach."

Panel Session
Student Summer Programs, Study Abroad Opportunities, and Graduate Fellowships: Who, What, When, Where, and Why?

Speed Interviewing Marathon for Students

	8:00 a.m.	9:00 a.m.	10:00 a.m.	11:00 a.m.	12:00 p.m.	1:00
ADRIAEN'S LANDING Connecticut Convention Center						
BALLROOM A Connecticut Convention Center						
BALLROOM B Connecticut Convention Center		**James R. Leitzel Lecture** Statistics Isn't Mathematics: So How's That Working Out? *Ann Watkins*	**Earle Raymond Hedrick Lecture Series** Lecture 3: Communication Complexity of Algorithms *Olga Holtz*	**MAA Invited Address** Financial Mathematics: A Two-Way Bridge Between Finance and Mathematics *Gordon Zitkovic*	**MAA Business Meeting**	**CSHPM Kenn Lect** Henri Poincaré: Physicist, P *Jerem*
BALLROOM C Connecticut Convention Center		**Exhibit Hall and Student Hospitality Center**				
BUSHNELL PARK Downtown Hartford	**6:30 a.m.** **5K Fun Run & Walk**					
PRE-FUNCTION Connecticut Convention Center		**Registration**				
ROOM 12 Connecticut Convention Center						
ROOM 13 Connecticut Convention Center		**Math Circle Demonstration**	**Math Circle Demonstration**			
ROOM 14 Connecticut Convention Center		**Contributed Paper Session** Curriculum Development to Support First Year Mathematics Students, Part 1				
ROOM 15 Connecticut Convention Center		**General Contributed Paper Session** Research in Algebra or Topology				
ROOM 16 Connecticut Convention Center		**Contributed Paper Session** Inquiry-Based Learning Best Practices, Part 2				
ROOM 17 Connecticut Convention Center		**MAA Mathematical Competition in Modeling (MCM) Winners**				**Stude Solving**
ROOM 21 Connecticut Convention Center		**General Contributed Paper Session** Teaching Calculus, Part 2				
ROOM 22 Connecticut Convention Center		**General Contributed Paper Session** Teaching Introductory Mathematics, Part 2				**General Cont** Resear
ROOM 24 Connecticut Convention Center						Mather
ROOM 25 Connecticut Convention Center						Mak Sus
ROOM 26 Connecticut Convention Center		**General Contributed Paper Session** Modeling and Applications				
ROOM 27 Connecticut Convention Center		**Contributed Paper Session** History and Philosophy of Mathematics: The Arc of Time	**Contributed Paper Session** Interactions Between History and Philosophy of Mathematics, Part 1			
BALLROOM A Marriott						
BALLROOM B Marriott						
BALLROOM C Marriott						Hosting an AMC C
BALLROOM E Marriott						

Saturday, August 3

p.m. | 2:00 p.m. | 3:00 p.m. | 4:00 p.m. | 5:00 p.m. | 6:00 p.m. | 7:00 p.m. | 8:00 p.m.

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Mathematician,
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Special Session for Graduate Students
Great Talks for a General Audience: Coached Presentations by Graduate Students

Contributed Paper Session
Curriculum Development to Support First Year Mathematics Students, Part 2

Contributed Paper Session
Inquiry-Based Learning Best Practices, Part 3

nt Problem
Competition

General Contributed Paper Session
Teaching Advanced Mathematics, Part 2

tributed Paper Session
ch in Number Theory

Minicourse
natical Expeditions in Polar Science, Part 2

Minicourse
Environmental Mathematics, Part 2

Minicourse
king Math Relevant: A Multidisciplinary
tainability Module for Calculus, Part 2

Minicourse
Passion-Driven Statistics: A Supportive, Project-Based, Multidisciplinary Introductory Curriculum, Part 2

General Contributed Paper Session
Mathematics and Technology/Research in Analysis

Contributed Paper Session
Interactions Between History and Philosophy of Mathematics, Part 2

Invited Paper Session
Climate and Geophysical Modeling

Invited Paper Session
Recent Developments in Mathematical Finance

Panel Session
ompetition: Advice from the Experts!

Special Event
Silver and Gold Reception and Banquet

Undergraduate Student Activity
Speed Interviewing Marathon for Students

MyMathLab is constantly analyzing the work students do and responding to it. Our new adaptive learning technology helps MyMathLab provide students with even better recommendations. So students are working more efficiently, spending time where they really need to.

MyMathLab/MyStatLab	The Others
Recommends the most efficient path through course materials based on each student's performance	No adaptive capabilities within the online homework
Provides wrong-answer feedback specific for each exercise	No specific wrong-answer feedback
Provides help resources that require students to work through the steps of a problem	Passive help resources—e.g., read an example, watch a video

MyMathLab® | MyStatLab™

For more information, visit **www.mymathlab.com** or **www.mystatlab.com**

ALWAYS LEARNING

PEARSON

Tuesday, July 30

Short Course
The Mathematics of Games and Puzzles
9:00 a.m. – 5:00 p.m., Connecticut Convention Center, Room 11
Art Benjamin, Harvey Mudd College

Wednesday, July 31

Tour
Mark Twain House and Harriet Beecher Stowe House
9:00 a.m. – 12:00 p.m., see registration desk for location

Board of Governors Meeting
9:00 a.m. – 6:30 p.m., Marriott, Ballroom AB

Short Course
The Mathematics of Games and Puzzles
9:00 a.m. – 6:30 p.m., Connecticut Convention Center, Room 11
Art Benjamin, Harvey Mudd College

Registration
1:00 p.m. – 7:00 p.m., Connecticut Convention Center, Pre-Function

MAA – PME Student Reception
4:30 p.m. – 5:30 p.m., Connecticut Convention Center, Ballroom A

Math Jeopardy
5:30 p.m. – 6:15 p.m., Connecticut Convention Center, Ballroom A
Robert Vallin, Slippery Rock University; Michael Berry, University of Tennessee

Special Event
Grand Opening Reception
6:00 p.m. – 8:00 p.m., Connecticut Convention Center, Pre-Function and Ballroom C (Exhibit Hall)

Thursday, August 1

Registration
8:00 a.m. – 5:00 p.m., Connecticut Convention Center, Pre-Function

MAA Invited Address
Algebra, Analysis, and the Way You Eat Corn: The Complete Story
8:30 a.m. – 9:20 a.m., Connecticut Convention Center, Ballroom B
Susan Loepp, Williams College

General Contributed Paper Session
Probability or Statistics
8:30 a.m. – 9:40 a.m., Connecticut Convention Center, Room 16
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

In Quest of Fairness, Randomness and Independence
8:45 a.m. – 8:55 a.m.
Leo Chosid, NYC College of Technology; Jonathan Natov, NYC College of Technology

Re-Sequencing Hypothesis Testing in an Introductory Statistics Course with Active Learning
9:00 a.m. – 9:10 a.m.
Aminul Huq, University of Minnesota Rochester; Wei Wei, Metropolitan State University; Heidi Hulsizer, Hampden-Sydney College

A New Class of Benford Random Variables
9:15 a.m. – 9:25 a.m.
Azar Khosravani, Columbia College Chicago; Constantin Rasinariu, Columbia College Chicago

The M-Tile Means, A New Class of Measures of Central Tendency
9:30 a.m. – 9:40 a.m.
David DiMarco, Neumann University; Ryan Savitz, Neumann University; Fred Savitz, Neumann University

General Contributed Paper Session
History and Philosophy of Mathematics
8:30 a.m. – 10:10 a.m., Connecticut Convention Center, Room 14
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

The Fourier's Fecundity of Analytic Method or Application
8:30 a.m. – 8:40 a.m.
Shigeru Masuda, Kyoto University

Beyond Euclid
8:45 a.m. – 8:55 a.m.
Kenneth Rietz, Asbury University

Galois and His Theory
9:00 a.m. – 9:10 a.m.
Philip Blau, Shawnee State University

Thursday, August 1 (continued)

Mathematics in the Book of Michael of Rhodes, A Fifteenth-Century Maritime Manuscript
9:15 a.m. – 9:25 a.m.
Andrew Perry, Springfield College

Mathesis Universalis
9:30 a.m. – 9:40 a.m.
Patricia Giurgescu, Mathematical Association of America

Kempe's Flawed Proof that Four Colors Suffice
9:45 a.m. – 9:55 a.m.
Timothy Sipka, Alma College

Recruiting and Training Mathematicians as Codebreaker
10:00 a.m. – 10:10 a.m.
Chris Christensen, Northern Kentucky University

General Contributed Paper Session
Research in Graph Theory or Combinatorics
8:30 a.m. – 10:10 a.m., Connecticut Convention Center, Room 15
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

Fuzzy Greedoids—Structure and Invariants
8:30 a.m. – 8:40 a.m.
Steven J. Tedford, Misericordia University

A Combinatorial Proof of the Poincare-Miranda Theorem
8:45 a.m. – 8:55 a.m.
Francis Edward Su, Harvey Mudd College

2-Color Rado Numbers for $\sum_{i=1}^{m-1} x_i + c = x_m$
9:00 a.m. – 9:10 a.m.
Chris Spicer, Morningside College

Harmoniously Coloring Powers of Path Graphs
9:15 a.m. – 9:25 a.m.
Natacha Fontes-Merz, Westminster College

Adjacency Relationships Forced by Graph Degree Sequences
9:30 a.m. – 9:40 a.m.
Michael Barrus, Brigham Young University

The Birank Number of Ladder Graphs
9:45 a.m. – 9:55 a.m.
Michael Fraboni, Moravian College

The Algebraic Connectivity of Planar Graphs
10:00 a.m. – 10:10 a.m.
Jason Molitierno, Sacred Heart University

General Contributed Paper Session
Teaching Advanced Mathematics, Part 1
8:30 a.m. – 10:25 a.m., Connecticut Convention Center, Room 26
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

Applications of Maxima to Calculus and Differential Equations
8:30 a.m. – 8:40 a.m.
Leon Kaganovskiy, Touro College Brooklyn Campus

Students' Learning Journey in Linear Algebra
8:45 a.m. - 8:55 a.m.
Nermine El-Sissi, The American University in Cairo

Teaching Determinants by Rook-Arrangements
9:00 a.m. - 9:10 a.m.
Anders O.F. Hendrickson, Saint Norbert College

Bulls-Eye Jenga
9:15 a.m. - 9:25 a.m.
Michael David Smith, Lycoming College

A Sweet Way to Explore Statistics
9:30 a.m. - 9:40 a.m.
Sarah L. Mabrouk, Framingham State University

An Advanced, Applied Statistics Course for Mathematics Majors
9:45 a.m. - 9:55 a.m.
Pete Johnson, Eastern Connecticut State University; Marsha Davis, Eastern Connecticut State University

Curriculum Infusion of Alcohol Prevention in Probability and Statistics Courses
10:00 a.m. - 10:10 a.m.
Andrew Lazowski, Sacred Heart University

How We Got From There to Here: A Story of Real Analysis
10:15 a.m. - 10:25 a.m.
Eugene Boman, Penn State University

MAA Student Paper Session #1
8:30 a.m. – 10:25 a.m., Connecticut Convention Center, Room 11

MAA Student Paper Session #2
8:30 a.m. – 10:25 a.m., Connecticut Convention Center, Room 12

MAA Student Paper Session #3
8:30 a.m. – 10:25 a.m., Connecticut Convention Center, Room 13

MAA Student Paper Session #4
8:30 a.m. – 10:25 a.m., Connecticut Convention Center, Room 21

MAA Student Paper Session #5
8:30 a.m. – 10:25 a.m., Connecticut Convention Center, Room 22

Thursday, August 1 (continued)

MAA Student Paper Session #6
8:30 a.m. – 10:25 a.m., Connecticut Convention Center, Room 23

Contributed Paper Session
History and Philosophy of Mathematics: Euler's Mathematics
9:00 a.m. – 10:20 a.m., Connecticut Convention Center, Room 27
Robert E. Bradley, Adelphi University; Bonnie Gold, Monmouth University; Maria Zack, Point Loma Nazarene University

Leonhard Euler's Mathematical Correspondence – The Early Berlin Years
9:00 a.m. – 9:20 a.m.
Robert E. Bradley, Adelphi University

Vector Calculus in Euler's Fluid Mechanics
9:30 a.m. – 9:50 a.m.
Stacy Langton, University of San Diego

Euler's Method for a Plentiful Harvest
10:00 a.m. – 10:20 a.m.
Michael P. Saclolo, St. Edward's University

Exhibit Hall
9:00 a.m. – 5:00 p.m., Connecticut Convention Center, Ballroom C

Student Hospitality Center
9:00 a.m. – 5:00 p.m., Connecticut Convention Center, Ballroom C
Richard and Araceli Neal, American Society for the Communication of Mathematics

AMS – MAA Joint Invited Address
Coding Theory: A Cornucopia of Mathematics
9:30 a.m. – 10:20 a.m., Connecticut Convention Center, Ballroom B
Judy Walker, University of Nebraska at Lincoln

Earle Raymond Hedrick Lecture Series
Lecture 1: Zeros of Polynomials via Structured Matrices and Continued Fractions
10:30 a.m. – 11:20 a.m., Connecticut Convention Center, Ballroom B
Olga Holtz, University of California Berkeley and Technical University Berlin

MAA Lecture for Students
Optimal Pentagonal Tilings
1:00 p.m. – 1:50 p.m., Connecticut Convention Center, Ballroom B
Frank Morgan, Williams College

Panel Session
Successful Career Transitions
1:00 p.m. - 2:20 p.m., Marriott, Ballroom D
Jacqueline Jensen, Slippery Rock University; Magnhild Lien, California State University Northridge; Maura Mast, University of Massachusetts Boston
Lynette Boos, Providence College; Eileen Lee, Math for America; Connie Leidy, Wesleyan University; Karen Ricciardi, University of Massachusetts Boston; Milena Tzigantcheva, State Street Corporation, Boston Association for Women in Mathematics

Workshop
What's the Story? A Graduate Student Workshop on Formulating a Research Presentation for a General Audience
1:00 p.m. - 2:20 p.m., Marriott, Ballroom C
Rachel Schwell, Central Connecticut State University

Minicourse
Teaching with Classroom Voting and Clickers, Part 1
1:00 p.m. – 3:00 p.m., Connecticut Convention Center, Room 24
Holly Zullo, Carroll College; Jean McGivney-Burelle, University of Hartford; Ann Stewart, Hood College; Christopher Storm, Adelphi University

Minicourse
Making Math Relevant: A Multidisciplinary Sustainability Module for Calculus, Part 1
1:00 p.m. – 3:00 p.m., Connecticut Convention Center, Room 25
Thomas J. Pfaff, Department of Mathematics, Ithaca College; Jason Hamilton, Department of Environmental Sciences, Ithaca College

Contributed Paper Session
Undergraduate Research Activities in Mathematical and Computational Biology
1:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 15
Carrie Elizabeth Diaz Eaton, Unity College

UBM Program at University of Houston–Downtown: Experiences and the Challenge to Sustain It
1:00 p.m. – 1:15 p.m.
Edwin Tecarro, University of Houston-Downtown; Jeong-Mi Yoon, University of Houston-Downtown; Youn-Sha Chan, University of Houston-Downtown; Akif Uzman, University of Houston-Downtown

Undergraduate Mathematical Biology Research at Truman State University
1:20 p.m. – 1:35 p.m.
Pam Ryan, Truman State University

Graph Theory in DNA Self-Assembly: An Early Entry Point for Interdisciplinary Student Research
1:40 p.m. – 1:55 p.m.
Jo Anthony Ellis-Monaghan, Saint Michael's College

Thursday, August 1 (continued)

Using Bioinformatic Approaches to Predict Gene Expression Based on Promoter Structure in Acute Myeloid Leukemia
2:00 p.m. – 2:15 p.m.
Natalie Stanley, Dickinson College

Analysis of Refined Gaussian Network Model for HIV-1 Protease
2:20 p.m. – 2:35 p.m.
Jacob Liddle, Houghton College; Nicholas Fuller, Houghton College; Junkoo Park, Houghton College

A Mathematical Model of Sleep Regulation
2:40 p.m. – 2:55 p.m.
Anita Kummamuri Rao, Texas Academy of Math & Science, Denton, TX

A Cognitive Neuroscience Modeling Experiment
3:00 p.m. – 3:15 p.m.
Ted Theodosopoulos, Saint Ann's School; Patricia Theodosopoulos, Saint Ann's School

Undergraduate Research in Epidemic Modeling
3:20 p.m. – 3:35 p.m.
Anthony DeLegge, Benedictine University

Undergraduate Research in Modeling the Response of Chaparral Shrubs to Wildfires
3:40 p.m. – 3:55 p.m.
Timothy Lucas, Pepperdine University

Contributed Paper Session
Recreational Mathematics: New Problems and New Solutions, Part 1
1:00 p.m. – 4:15 p.m., Connecticut Convention Center, Ballroom A
Paul Richard Coe, Dominican University; Kristen Schemmerhorn, Dominican University

Fitch Cheney's Five Card Trick for Four or Three Cards
1:00 p.m. – 1:15 p.m.
Colm Mulcahy, Spelman College

Continued Fractions from a Magic Trick, A Preliminary Report
1:20 p.m. – 1:35 p.m.
Robert W Vallin, Slippery Rock University

Pop-Guitar-Music and Mathematics
1:40 p.m. – 1:55 p.m.
Duk-Hyung Lee, Asbury University

The Easiest Possible NY Times Crossword Puzzle
2:00 p.m. – 2:15 p.m.
Kevin Ferland, Bloomsburg University

Thinking Outside of the Box: The Mathematics of Swirldoku
2:20 p.m. – 2:35 p.m.
Michael Mulligan, PuzzMill

Nim$^{\infty}$
2:40 p.m. – 2:55 p.m.
John Perry, University of Southern Mississippi

Utilizing Information "Perfectly" in a Logic Puzzle
3:00 p.m. – 3:15 p.m.
Blane Hollingsworth, Middle Georgia State College

Tinkering with a Mathematical Goldmine
3:20 p.m. – 3:35 p.m.
Jeff Johannes, SUNY Geneseo

Parametic Equations Go to the Circus: Trochoids in Poi Flower Patterns
3:40 p.m. – 3:55 p.m.
Eleanor Farrington, Massachusetts Maritime Academy

Randomly Generating a Dekaaz Poetry Form
4:00 p.m. – 4:15 p.m.
Mike Pinter, Belmont University

Contributed Paper Session
Math Circles: Best Practices
1:00 p.m. – 4:15 p.m., Connecticut Convention Center, Room 17
Tatiana Shubin, San Jose State University; Sam Vandervelde, St. Lawrence University

A Sampler of Math Circle Problems
1:00 p.m. – 1:15 p.m.
James Tanton, MAA

Math (Circles) Magic!
1:20 p.m. – 1:35 p.m.
Cheryll Crowe, Eastern Kentucky University

Two Circle Projects
1:40 p.m. – 1:55 p.m.
Elgin Johnston, Iowa State University

Circle in a Plane: Can Math Circle Activities be done with Tablets?
2:00 p.m. – 2:15 p.m.
Paul Andrew Zeitz, University of San Francisco

More Games for Little Wranglers
2:20 p.m. – 2:35 p.m.
Edward C Keppelmann, University of Nevada Reno

"I Need a Drink of Water!": 10 Things to Think About When Working with Elementary Math Circle Students
2:40 p.m. – 2:55 p.m.
Brandy Wiegers, National Association of Math Circles

Thursday, August 1 (continued)

Albany Area Math Circle: Building a Mathematical Community
3:00 p.m. – 3:15 p.m.
Gili Rusak, Albany Area Math Circle

Developing Collaborative Lesson Plans for Math Enrichment
3:20 p.m. – 3:35 p.m.
Lauren Rose, Bard College; Beth Goldberg, Linden Avenue Middle School, Red Hook, NY; Joy Sebesta, Bard College

Northern Colorado Math Teachers' Circle
3:40 p.m. – 3:55 p.m.
Gulden Karakok, University of Northern Colorado; Katherine Morrison, University of Northern Colorado; Cathleen Craviotto, University of Northern Colorado

What Happens in the Classroom of Math Teachers' Circle Participants?
4:00 p.m. - 4:15 p.m.
Diana White, University of Colorado Denver

General Contributed Paper Session
Research in Linear Algebra or Geometry
1:00 p.m. – 4:25 p.m., Connecticut Convention Center, Room 26
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

A Structured Inverse Eigenvalue Problem
1:00 p.m. – 1:10 p.m.
Keivan Hassani Monfared, University of Wyoming

Golden Triangulations
1:15 p.m. – 1:25 p.m.
Bruce Atkinson, Samford University; Braxton Carrigan, Southern CT State University

A Property of the Tangent Rectangle of the Parbelos: My Proof Compared with Tsukerman's
1:30 p.m. – 1:40 p.m.
Jonathan Sondow, New York City

Guarding a Koch Fractal Art Gallery
1:45 a.m. – 1:55 a.m.
William Roger Fuller, Ohio Northern University; Lauren Cassell, Ohio Northern University

Hidden Equilateral Triangles Inside Circles on Square Hyperbolas
2:00 p.m. – 2:10 p.m.
Genghmun Eng

Mathematics and Art on the Sphere
2:15 p.m. – 2:25 p.m.
Judith Ann Silver, Marshall University

Using a Curved Space Division Assembly, Two Plane Geometry Curves, for Partition of Linear Magnitude
2:30 p.m. – 2:40 p.m.
Alexander Louis Garron, Sand Box Geometry LLC

Identifying The Right Recursion
2:45 p.m. – 2:55 p.m.
Brian Kelly, Fisher College

Klein's Hypercycles in 3D
3:00 p.m. – 3:10 p.m.
Margaret Symington, Mercer University

Möbius Transformations Fixing Finite Sets of Points
3:15 p.m. – 3:25 p.m.
Damiano Fulghesu, Minnesota State University, Moorhead; Ishan Subedi, Minnesota State University, Moorhead

Some Not-So-Well-Known Constants Associated with the Conic Sedtions
3:30 p.m. – 3:40 p.m.
Sylvester Reese

Minima Domain Intervals, Dimensions, and How to Extend the Class 'Convex Functions'
3:45 p.m. – 3:55 p.m.
Marcia R Pinheiro, RGMIA

The Equivalence of the Illumination and Covering Conjectures
4:00 p.m. – 4:10 p.m.
Ryan Trelford, University of Calgary

The Complex Descartes Circle Theorem
4:15 p.m. – 4:25 p.m.
Sam Northshield, SUNY-Plattsburgh

Contributed Paper Session
Best Practices for Teaching Online Courses
1:00 p.m. – 4:55 p.m., Connecticut Convention Center, Room 14
Matthew Wright, Huntington University

Bridging the Digital Divide: Building a Sense of Community and Improving Student Engagement
1:00 p.m. – 1:15 p.m.
Amy Wheeler, Hondros College

Collaboration and Assessment Strategies for Teaching Online Undergraduate vs. Graduate Courses
1:20 p.m. – 1:35 p.m.
Magdalena Luca, MCPHS University

Thursday, August 1 (continued)

Fostering Online Discussion in Introductory Statistics
1:40 p.m. – 1:55 p.m.
Jacci White, Saint Leo University
Scott White, St. Petersburg College

Teaching Online Courses to Overseas Students
2:00 p.m. – 2:15 p.m.
Xinlong Weng, University of Bridgeport

Getting Started in MY Online Math Class
2:20 p.m. – 2:35 p.m.
Carol Hannahs, Kaplan University

Teaching Online and Face-to-Face Students in the Same Class
2:40 p.m. – 2:55 p.m.
Elizabeth Miller, The Ohio State University

Creating a Community Within an On-line Class
3:00 p.m. – 3:15 p.m.
Cornelius P Nelan, Quinnipiac University

Teaching an Activities Based Course Online
3:20 p.m. – 3:35 p.m.
Donna Flint, South Dakota State University
Becky Diischer, South Dakota State University

Raising Standards for Math Practice Software
3:40 p.m. – 3:55 p.m.
John C. Miller, The City College of The City University of New York

Living it Up with Live Binders: Organizing Faculty Shared Web 2.0 Resources
4:00 p.m. – 4:15 p.m.
Lea Rosenberry, Kaplan University Leslie Johnson, Kaplan University Michelle Lis, Kaplan University

Using Digital Game-Based Learning in Online Math Courses
4:20 p.m. – 4:35 p.m.
Tamara Eyster, Kaplan University
Lea Rosenberry, Kaplan University

Teaching Statistics Online Using Blackboard Collaborate
4:40 p.m. – 4:55 p.m.
Eric Ruggieri, College of the Holy Cross

Invited Paper Session
Open and Accessible Problems in Knot Theory
1:00 p.m. – 5:00 p.m., Marriott, Ballroom A
Lew Ludwig, Denison University
Laura Taalman, James Madison University

Turning Knots into Flowers
1:00 p.m. – 1:20 p.m.
Colin Adams, Williams College

Knot Mosaics
1:30 p.m. – 1:50 p.m.
Lew Ludwig, Denison University

The Forbidden Number of a Knot
2:00 p.m. – 2:20 p.m.
Sandy Ganzell, St. Mary's College of Maryland

Folded Ribbon Knots in the Plane
2:30 p.m. – 2:50 p.m.
Elizabeth Denne, Washington & Lee University

Graphs that are Intrinsically Linked with an Unused Vertex
3:00 p.m. – 3:20 p.m.
Joel Foisy, SUNY Potsdam

Sequences, Spiral Knots, and the Elephant in the Room
3:30 p.m. – 3:50 p.m.
Laura Taalman, James Madison University

Problems in Virtual Knot Theory
4:00 p.m. – 4:20 p.m.
Louis Kauffman, University of Illinois at Chicago

Question & Answer Session
4:30 p.m. – 5:00 p.m.

Contributed Paper Session
History and Philosophy of Mathematics: Seventeenth and Eighteenth Centuries
1:00 p.m. – 5:20 p.m., Connecticut Convention Center, Room 27
Robert E. Bradley, Adelphi University; Bonnie Gold, Monmouth University; Maria Zack, Point Loma Nazarene University

Conics in the 17th Century: Claude Mydorge and After
1:00 p.m. – 1:20 p.m.
Christopher Baltus Baltus, SUNY Oswego

Christiaan Huygens's Work on the Catenary, 1690–1691
1:30 p.m. – 1:50 p.m.
John Bukowski, Juniata College

The Geometric Algebra of John Wallis
2:00 p.m. – 2:20 p.m.
Maria Zack, Point Loma Nazarene University

Newton's Writings on the Calculus
2:30 p.m. – 2:50 p.m.
Troy Larry Goodsell, Brigham Young University-Idaho

Après 1713: Bernoulli, Montmort et Waldegrave
3:00 p.m. – 3:20 p.m.
David Richard Bellhouse, University of Western Ontario

Thursday, August 1 (continued)

George Washington's Use of Trigonometry and Logarithms
3:30 p.m. – 3:50 p.m.
Theodore J. Crackel, Papers of George Washington
V. Frederick Rickey, West Point
Joel Silverberg, Roger Williams University

Mathematics as Practiced in Colonial and Post-Colonial America
4:00 p.m. – 4:20 p.m.
Scott Guthery, Docent Press

Images of Andrew Ellicott (1754–1820)
4:30 p.m. – 4:50 p.m.
Florence Fasanelli, AAAS

How Brook Taylor Got Joshua Kirby a Position
5:00 p.m. – 5:20 p.m.
Duncan J Melville, St. Lawrence University

MAA Student Paper Session #7
2:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 11

MAA Student Paper Session #8
2:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 12

MAA Student Paper Session #9
2:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 13

MAA Student Paper Session #10
2:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 21

PME Student Paper Session #1
2:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 22

PME Student Paper Session #2
2:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 23

Invited Paper Session
Developments in Commutative Algebra
2:00 p.m. – 4:50 p.m., Marriott, Ballroom B
Susan Loepp, Williams College
Janet Striuli, Fairfield University

Zero-Divisor Graphs of Certain Semigroups Associated to Commutative Rings
2:00 p.m. – 2:20 p.m.
Neil Epstein, George Mason University

An Introduction to Path Ideals
2:30 p.m. – 2:50 p.m.
Leah Gold, Cleveland State University

Associated Primes of the Third Power of Cover Ideals
3:00 p.m. – 3:20 p.m.
Cameron Bishop, Fairfield University

Totally Reflexive Module
3:30 p.m. – 3:50 p.m.
Janet Striuli, Fairfield University

Hilbert Series, H-Vectors, and the Fibonacci Sequence
4:00 p.m. – 4:20 p.m.
Branden Stone, Bard College

Going to Great Lengths…
4:30 p.m. – 4:50 p.m.
Hans Schoutens, New York City College of Technology

Opportunities in the Actuarial Profession
2:30 p.m. – 4:00 p.m., Marriott, Ballroom E
Thea Cardamone, FSA, UnitedHealthcare Group
Daniel Akier, UnitedHealthcare; Gaia Dong, FSA, Aetna; Trevor Foster, Aetna; Harry Gong, UnitedHealthcare; Eli Greenberg, UnitedHealthcare; Amber Lahde, ASA, MassMutual; Olga Jacobs, FSA, UnitedHealthcare; Gao Niu, University of Connecticut; Stephen Smith, FSA, MassMutual; Jay Vadiveloo, FSA, Ph.D,. University of Connecticut Goldenson Center for Actuarial Research; June (Chunchun) Wu, FSA, Ph.D., UnitedHealthcare

Panel Session
How to Apply for Jobs
2:35 p.m. - 3:55 p.m., Marriott, Ballroom D
Estela Gavosto, University of Kansas; Kristine Roinestad, Georgetown College
James Freeman, Cornell College; Joanne Peeples, El Paso Community College; Kristine Roinestad, Georgetown College; A mathematician from industry

Section Officers Meeting
3:00 p.m. – 5:00 p.m., Marriott Ballroom C

Minicourse
Resequencing Calculus, Part 1
3:30 p.m. – 5:30 p.m., Connecticut Convention Center, Room 24
Mike Axtell, University of Saint Thomas; Joe Stickles, Millikin University

Minicourse
Mathematical Expeditions in Polar Science, Part 1
3:30 p.m. – 5:30 p.m., Connecticut Convention Center, Room 25
Lynn Foshee Reed, Einstein Distinguished Educator

Town Meeting on Minority Participation in Mathematics
4:00 p.m. – 5:00 p.m., Connecticut Convention Center, Ballroom B

Thursday, August 1 (continued)

PME Student Paper Session #3
4:00 p.m. – 6:15 p.m., Connecticut Convention Center, Room 22

PME Student Paper Session #4
4:00 p.m. – 6:15 p.m., Connecticut Convention Center, Room 23

Panel Session
A Mathematician Teaches Statistics: Tales from the Front Lines
Thursday, August 1, 4:10 p.m. - 5:30 p.m., Marriott, Ballroom D
Randall Pruim, Calvin College
Kimberly Roth, Juniata College; Iwan Praton, Franklin & Marshal; Mike Stob, Calvin College; Jason Shaw, Truman State University

Graduate Student Reception
5:30 p.m. – 6:30 p.m., Connecticut Convention Center, Adriaen's Landing
Estela A. Gavosto, University of Kansas; James Freeman, Cornell College

Codebreaker
7:30 p.m. – 9:15 a.m., Marriott, Ballroom C

Friday, August 2

AWM – MAA Morning Coffee
8:00 a.m. – 8:25 a.m., Connecticut Convention Center, Ballroom B

Registration
8:00 a.m. – 5:00 p.m., Connecticut Convention Center, Pre-Function

AWM – MAA Etta Z. Falconer Lecture
Improving Equity and Education: Why and How
8:30 a.m. – 9:20 a.m., Connecticut Convention Center, Ballroom B
Patricia Kenschaft, Montclair University

Contributed Paper Session
History and Philosophy of Mathematics: Nineteenth Century
8:30 a.m. – 9:50 a.m., Connecticut Convention Center, Room 26
Robert E. Bradley, Adelphi University; Bonnie Gold, Monmouth University; Maria Zack, Point Loma Nazarene University

Origins of Block Designs, Normed Algebras, and Finite Geometries: 1835 to 1892
8:30 a.m. – 8:50 a.m.
Ezra A. Brown, Virginia Tech

Monsieur François-Joseph Servois: His Life and Mathematical Contributions
9:00 a.m. – 9:20 a.m.
Salvatore John Petrilli, Adelphi University

The Definite Integral by Euler, Lagrange and Laplace from the Viewpoint of Poisson
9:30 a.m. – 9:50 a.m.
Shigeru Masuda, Kyoto University

General Contributed Paper Session
Teaching Calculus, Part 1
8:30 a.m. – 10:25 a.m., Connecticut Convention Center, Room 15
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

Assessing Maplets for Calculus: Best Practices for Instructors and Software Developers
8:30 a.m. – 8:40 a.m.
Douglas B Meade, University of South Carolina; Philip B Yasskin, Texas A&M University; Raymond E Patenaude, University of South Carolina; Robert Petrulis, EPRE Consulting LLC

Maplets for Calculus Expands Offerings in Precalculus, Calculus and Differential Equations
8:45 a.m. – 8:55 a.m.
Philip B Yasskin, Texas A&M University; Douglas B Meade, University of South Carolina; Matthew James Barry, Texas A&M University

Using Programming to Understand Limits in a Calculus II Class
9:00 a.m. – 9:10 a.m.
Amanda Harsy Ramsay, IUPUI (Indianapolis University Purdue University Indianapolis)

Video Games and Calculus
9:15 a.m. – 9:25 a.m.
Derek Thompson, Trine University

iPads in the Classroom: A Departmental Project at the University of Hartford
9:30 a.m. – 9:40 a.m.
Mako Haruta, University of Hartford

Friday, August 2

Implementing the Flipped Classroom in a First-Year Pre-Calculus/Calculus Course
9:45 a.m. – 9:55 a.m.
Kristen Sellke, Saint Mary's University of Minnesota; Janel Schultz, Saint Mary's University of Minnesota

SONET-MATH: Using Social Networks to Learn Mathematics
10:00 a.m. – 10:10 a.m.
Lori Dunlop-Pyle, University of Central Florida; Ivan Garibay, University of Central Florida; Ozlem Garibay, University of Central Florida; Amanda Koontz Anthony, University of Central Florida

Technology Enhanced Large Calculus Lectures
10:15 a.m. – 10:25 a.m.
Elizabeth Miller, The Ohio State University

Contributed Paper Session
Recreational Mathematics: New Problems and New Solutions, Part 2
8:30 a.m. – 10:45 a.m., Connecticut Convention Center, Room 16
Paul Richard Coe, Dominican University; Kristen Schemmerhorn, Dominican University

A Brief Study of Abundant Numbers Not Divisible by Any of the First n Primes
8:30 a.m. – 8:45 a.m.
Jay Lawrence Schiffman, Rowan University

Discovery of Unusual Patterns of Squares Modulo an Odd Prime
8:50 a.m. – 9:05 a.m.
Roger Bilisoly, Central Connecticut State University

New Roles of an Old Puzzle: the Magic Square Problem
9:10 a.m. – 9:25 a.m.
Aihua Li, Montclair State University

Solving the World's Hardest Magic Square
9:30 a.m. – 9:45 a.m.
Ethan Brown, Phillips Academy Andover

Getting Hyper from Painting Cubes
9:50 a.m. – 10:05 a.m.
Thomas Q Sibley, St. John's University

Rubber Sheet Photography
10:10 a.m. – 10:25 a.m.
Bruce Torrence, Randolph-Macon College

Classification of Polyominoes by Spinal Character
10:30 a.m. – 10:45 a.m.
David Jacob Wildstrom, University of Louisville

General Contributed Paper Session
Other/Research in Applied Mathematics
8:30 a.m. – 11:10 a.m., Connecticut Convention Center, Room 17
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

Numerical Solution of Sine-Gordon Equation by Spectral Method
8:30 a.m. – 8:40 a.m.
Narayan Thapa, Minot State University

Stonger Numerical Stability for Nonlinear PDEs
8:45 a.m. – 8:55 a.m.
Corban Harwood, George Fox University

An Exploration in Differential Equations for Modeling Population Growth
9:00 a.m. – 9:10 a.m.
Terry Jo Leiterman, St. Norbert College

A Theory of Formal Mathematical Reasoning
9:15 a.m. – 9:25 a.m.
Raymond Puzio, PlanetMath.org

Comparing Reducibilities on Computably Enumerable Sets
9:30 a.m. – 9:40 a.m.
Brooke Andersen, Assumption College

Solvable and/or Integrable Many-Body Models on a Circle
9:45 a.m. – 9:55 a.m.
Oksana Bihun, Concordia College at Moorhead, MN

An Assignment that Promotes a Symbiotic Relationship Between Math Pre-Service Teachers and High School Students
10:00 a.m. – 10:10 a.m.
Becky Hall, Western Connecticut State University

Flipping a Math Content Course for Elementary School Teachers
10:15 a.m. – 10:25 a.m.
Pari Ford, University of Nebraska at Kearney

Integrating Content, Pedagogy, and Cognitive Coaching to Support K-8 Teachers' Implementation of Common Core
10:30 a.m. – 10:40 a.m.
Ekaterina Lioutikova, Univeristy of Saint Joseph (Connecticut); Barbara Henriques, University of Saint Joseph

Using Doodling to Teach the Mathematics of Art
10:45 a.m. – 10:55 a.m.
Martha Ellen Waggoner, Simpson College

A Complex Calcudoku Classification
11:00 a.m. – 11:10 a.m.
David Nacin, William Paterson University

Friday, August 2 (continued)

Contributed Paper Session
History and Philosophy of Mathematics: Twentieth Century, Part 1
8:30 a.m. – 11:20 a.m., Connecticut Convention Center, Room 27
Robert E. Bradley, Adelphi University; Bonnie Gold, Monmouth University; Maria Zack, Point Loma Nazarene University

Statistics at the 1924 Toronto IMC and BAAS
8:30 a.m. – 8:50 a.m.
David Orenstein, Toronto District School Board

Fictionalism and Mathematical Practice
9:00 a.m. – 9:20 a.m.
Matthew Clemens, Keene State College

Who's That Mathematician? No, Really, Who Is She (or He)?
9:30 a.m. – 9:50 a.m.
Janet Beery, University of Redlands

Rational Discovery of the Natural World: An Algebraic and Geometric Answer to Steiner
10:00 a.m. – 10:20 a.m.
Robert H C Moir, Western University

Mathematical Logic and the History of Computers
10:30 a.m. – 10:50 a.m.
Jonathan Seldin, University of Lethbridge

Canonical Maps: Where Do They Come From and Why Do They Matter?
11:00 a.m. – 11:20 a.m.
Jean-Pierre Marquis, Université de Montréal

General Contributed Paper Session
Assessment, Mentoring, or Outreach
8:30 a.m. – 11:25 a.m., Connecticut Convention Center, Room 14
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

Assessment and Curving Grades
8:30 a.m. – 8:40 a.m.
Fariba Nowrouzi Kashan, KYSU

Getting at the (Grade) Point of Grading
8:45 a.m. – 8:55 a.m.
Carrie Muir, University of Colorado, Boulder

The Scarlet Letter: Assessment with a Purpose
9:00 a.m. – 9:10 a.m.
M. Leigh Lunsford, Longwood University; Phillip L. Poplin, Longwood University

Placement Tests: Are Students Getting the Course They Need?
9:15 a.m.- 9:25 a.m.
David C. Wilson, SUNY, Buffalo State; Chaitali Ghosh, SUNY, Buffalo State

High School Mathematics Competition—Females versus Males
9:30 a.m. – 9:40 a.m.
Carey Childers, Clarion University

Teaching Faculty How to Improve Students' Quantitative Skills through Cognitive Illusions
9:45 a.m. – 9:55 a.m.
Frank Wang, LaGuardia Community College, CUNY

Maths Week Ireland: Lessons from a Small Island?
10:00 a.m. – 10:10 a.m.
Eoin Gill, Maths Week Ireland

Outreach with Grades K–8 Teachers Impacting Pre-Service Mathematics Courses
10:15 a.m. – 10:25 a.m.
Matthew Haines, Augsburg College

Training Gifted Students: The Fullerton Mathematical Circle Experience
10:30 a.m. – 10:40 a.m.
Rebecca Etnyre, Cal State Fullerton; Christina Tran, California State University, Fullerton Mathematical Circle

Professor Abian Teaches a Lesson from Kelley's "General Topology"
10:45 a.m. – 10:55 a.m.
Andrew deLong Martin, Kentucky State University

The National Research Experience for Undergraduates Programs' (NREUP) Influence on Minority Students
11:00 a.m. – 11:10 a.m.
Brian Arthur Christopher, University of Northern Colorado; Gulden Karakok, University of Northern Colorado

Professional Development Training for Graduate Students: A Different Kind of Seminar
11:15 a.m. – 11:25 a.m.
Jenna P. Carpenter, Louisiana Tech University

MAA Student Paper Session #15
8:30 a.m. – 11:45 a.m., Connecticut Convention Center, Room 11

MAA Student Paper Session #16
8:30 a.m. – 11:45 a.m., Connecticut Convention Center, Room 12

MAA Student Paper Session #17
8:30 a.m. – 11:45 a.m., Connecticut Convention Center, Room 13

MAA Student Paper Session #18
8:30 a.m. – 11:45 a.m., Connecticut Convention Center, Room 21

Friday, August 2 (continued)

Exhibit Hall
9:00 a.m. – 5:00 p.m., Connecticut Convention Center, Ballroom C

Student Hospitality Center
9:00 a.m. – 5:00 p.m., Connecticut Convention Center, Ballroom C
Richard and Araceli Neal, American Society for the Communication of Mathematics

Earle Raymond Hedrick Lecture Series
Lecture 2: Approximation Theory Meets Algebra and Combinatorics
9:30 a.m. – 10:20 a.m., Connecticut Convention Center, Ballroom B
Olga Holtz, University of California Berkeley and Technical University Berlin

PME Student Paper Session #5
10:00 a.m. – 12:00 a.m., Connecticut Convention Center, Room 22

PME Student Paper Session #6
10:00 a.m. – 12:00 a.m., Connecticut Convention Center, Room 23

MAA Invited Address
Improving Numerical Weather Predictions Using Ideas from Nonlinear Dynamics
10:30 a.m. – 11:20 a.m., Connecticut Convention Center, Ballroom B
Chris Danforth, University of Vermont

MAA Prize Session
11:30 a.m. – 12:00 p.m., Connecticut Convention Center, Ballroom B

NAM David Blackwell Lecture
Bridging a Gap Between Creative Literacy and Quantitative Literacy: Using Poetry to Improve Quantitative Reasoning
1:00 p.m. – 1:50 p.m., Connecticut Convention Center, Ballroom B
Karen Morgan Ivy, New Jersey City University

MAA Undergraduate Student Activity
A Mathematician and an Environmental Scientist Walk into a Bar
1:00 p.m. – 1:50 p.m., Marriott, Ballroom C
Thomas J. Pfaff, Ithaca College; Jason Hamilton, Ithaca College

MAA Undergraduate Student Activity
Exhilaration and Consternation: Adventures in Conducting Undergraduate Research
1:00 p.m. – 1:50 p.m., Marriott, Ballroom E
Robin Blankenship, Morehead State University

The Canadian Society for History and Philosophy of Mathematics Business Meeting
1:00 p.m. – 1:50 p.m., Connecticut Convention Center, Room 27

Contributed Paper Session
The Mathematics of Planet Earth in Research
1:00 p.m. – 2:15 p.m., Connecticut Convention Center, Room 15
Ben Galluzzo, Shippensburg University; Monika Kiss, Saint Leo University

Modeling the Size of Raindrops
1:00 p.m. – 1:15 p.m.
Roger William Johnson, South Dakota School of Mines & Technology

Rate-Limited Sorption Modeling in Contaminant Transport
1:20 p.m. – 1:35 p.m.
David Coulliette, Asbury University; Kenneth Rietz, Asbury University

Using Photometric Instruments to Observe and Model the South Atlantic Anomaly
1:40 p.m. – 1:55 p.m.
Christina Selby, Rose-Hulman Institute of Technology

The Impact of Temperature on Chinese Coal Demand
2:00 p.m. – 2:15 p.m.
Amir Y. Ahmadi, Purdue University - Agricultural Economics; Xin Zhao, Purdue University - Agricultural Economics; Daniel Ghambi, Purdue University - Agricultural Economics

Panel Session
National Assessment Instruments
1:00 p.m. - 2:20 p.m., Marriott, Ballroom D
Bonnie Gold, Monmouth University
Timothy Flood, Pittsburg State University; Gerald Kruse, Juniata College; Mary Shepherd, Northwest Missouri State University; Janine Wittwer, Westminster College

Contributed Paper Session
Research in Mathematics for High School and Community College Students
1:00 p.m. – 2:55 p.m., Connecticut Convention Center, Room 16
Daniel J. Teague, NC School of Science and Mathematics

Good Problems are the Key to Building a High School Research Program
1:00 p.m. – 1:15 p.m.
Daniel J. Teague, NC School of Science and Mathematics

Studying Knot Theory with High School Students
1:20 p.m. – 1:35 p.m.
Gyo Taek Jin, Dept. of Mathematical Science, KAIST; Hun Kim, Korea Science Academy of KAIST

Undergraduate Math Research with Games and Puzzles
1:40 p.m. – 1:55 p.m.
Shenglan Yuan, LaGuardia Community College, CUNY

Friday, August 2 (continued)

Structuring a Research in Mathematics Program for High School or Community College Students
2:00 p.m. – 2:15 p.m.
Christine E. Belledin, NC School of Science and Mathematics

Research with Zombies
2:20 p.m. – 2:35 p.m.
Jean Marie Marie Linhart, Texas A&M University

Using the Gini Coefficient as a Research Project in Precalculus
2:40 p.m. – 2:55 p.m.
Victor Piercey, Ferris State University

Minicourse
Teaching with Classroom Voting and Clickers, Part 2
1:00 p.m. – 3:00 p.m., Connecticut Convention Center, Room 24
Holly Zullo, Carroll College; Jean McGivney-Burelle, University of Hartford; Ann Stewart, Hood College; Christopher Storm, Adelphi University

Minicourse
Resequencing Calculus, Part 2
1:00 p.m. – 3:00 p.m., Connecticut Convention Center, Room 25
Mike Axtell, University of Saint Thomas; Joe Stickles, Millikin University

General Contributed Paper Session
Teaching Introductory Mathematics
1:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 17
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

College Algebra in the High Schools
1:00 p.m. – 1:10 p.m.
Christopher Schroeder, Morehead State University

Honors College Algebra at the University of Central Missouri
1:15 p.m. – 1:25 p.m.
Dale Bachman, University of Central Missouri; Nicholas Baeth, University of Central Missouri

Using Algebra in the Classroom to Understand the Way in which Automobiles Collide
1:30 p.m. – 1:40 p.m.
Alexander G. Atwood, Suffolk County Community College

Developmental Math as a Gateway, Not a Gatekeeper
1:45 p.m. – 1:55 p.m.
Curtis Card, Black Hills State University; Daluss Siewert, Black Hills State University

Transforming Developmental Mathematics Classes
2:00 p.m. – 2:10 p.m.
Daluss Siewert, Black Hills State University; Curtis Card, Black Hills State University

Preparing Students for College Math: A Successful Model of One-Semester Developmental Math
2:15 p.m. – 2:25 p.m.
Pangyen Weng, Metropolitan State University

Improving Secondary School Students' Mathematics Achievement in Nigeria through the use of Tutorial Computer-Aided Instruction
2:30 p.m. – 2:40 p.m.
Solomon Abogunde Iyekekpolor, Federal University, Wukari, PMB 1020, Wukari-Nigeria

Linking "Women in Mathematics" and Middle School Girls through Mentoring
2:45 p.m. - 2:55 p.m.
Emek Kose, St. Mary's College of Maryland

South Carolina High Energy Mathematics Teachers' Circle: A First Year Experience – Playing It By Ear
3:00 p.m. - 3:10 p.m.
George F McNulty, University of South Carolina; Nieves F McNulty, Columbia College; Douglas B Meade, University of South Carolina; Diana White, University of Colorado Denver

From Problem Solving to Research
3:15 p.m. - 3:25 p.m.
Ted Theodosopoulos, Saint Ann's School

Using Projects to Support Quantitative Literacy
3:30 p.m. - 3:40 p.m.
Victor Piercey, Ferris State University

Doing SoTL (Scholarship of Teaching and Learning) Projects
3:45 p.m. - 3:55 p.m.
Sarah Ultan, UW-BC

Contributed Paper Session
My Favorite Geometry Proof
1:00 p.m. – 4:55 p.m., Connecticut Convention Center, Room 14
Sarah L. Mabrouk, Framingham State University

Pizzas, Calzones, and Crusts: Using Symmetry to Slice up a Circle
1:00 p.m. – 1:15 p.m.
Michael Nathanson, Saint Mary's College of California

Friday, August 2 (continued)

Heron's Formula: A Proof without Words
1:20 p.m. – 1:35 p.m.
Daniel E. Otero, Xavier University

Heron's Formula for the Area of a Triangle
1:40 p.m. – 1:55 p.m.
Diana White, University of Colorado Denver

Spherical Triangle Area and Angle Sum
2:00 p.m. – 2:15 p.m.
Jeff Johannes, SUNY Geneseo

The Angle Sum Theorem for Triangles on the Sphere
2:20 p.m. – 2:35 p.m.
Marshall Whittlesey, California State University San Marcos

The Existence of the Nine-Point Circle for a Given Triangle
2:40 p.m. – 2:55 p.m.
Stephen Andrilli, La Salle University

Ptolemy's Theorem
3:00 p.m. – 3:15 p.m.
Pat Touhey, Misericordia University

When is the Inversion of Circle C over Circle k Orthogonal to Circle k?
3:20 p.m. – 3:35 p.m.
Mary Platt, Salem State University

Convex Quadrilaterals
3:40 p.m. – 3:55 p.m.
Braxton Carrigan, Southern CT State University

Quadrature, the Geometric Mean, Hinged Dissections, and the Purpose of Proof
4:00 p.m. – 4:15 p.m.
Clark P Wells, Grand Valley State University

A Simple Proof of the Classification of Conics by the Discriminant
4:20 p.m. – 4:35 p.m.
Martin E Flashman, Humboldt State University

It's Not Hyperbole: A Transforming Proof
4:40 p.m. – 4:55 p.m.
Thomas Q Sibley, St. John's University

Speed Interviewing Marathon for Students
2:00 p.m. – 3:15 p.m., Marriott, Ballroom E

MAA Student Paper Session #19
2:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 11

MAA Student Paper Session #20
2:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 12

MAA Student Paper Session #21
2:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 13

MAA Student Paper Session #22
2:00 p.m. – 3:55 p.m., Connecticut Convention Center, Room 21

AMS – MAA Special Session
Coding Theory and ...
2:00 p.m. – 4:50 p.m., Marriott, Ballroom B
Katherine Morrison, University of Northern Colorado
Judy L. Walker, University of Nebraska – Lincoln

Using Coding Theory for Quantum Cryptography
2:00 p.m. – 2:20 p.m.
Susan Loepp, Williams College

Coding Theory, Designs, and Finite Geometries
2:30 p.m. – 2:50 p.m.
David Clark, University of Minnesota

Coding Theory and Elementary Number Theory
3:00 p.m. – 3:20 p.m.
Justin Peachey, Davidson College

Coding Theory and Neuroscience
3:30 p.m. – 3:50 p.m.
Nora Youngs, University of Nebraska – Lincoln

Coding Theory and Graph Search Algorithms
4:00 p.m. – 4:20 p.m.
Elizabeth Weaver, Indiana University Southeast

Coding Theory and Instrumentation
4:30 p.m. – 4:50 p.m.
Jonathan Hall, Michigan State University

Alder Award Session
2:00 p.m. - 3:20 p.m., Connecticut Convention Center, Ballroom B
Kumer Pial Das, Lamar University; Rachel Levy, Harvey Mudd College; Christopher Storm, Adelphi University
Paul Zorn, Former MAA President

Invited Paper Session
Complex Geometry Research and Accessible Problems
2:00 p.m. – 4:50 p.m., Marriott, Ballroom A
Lynette Boos, Providence College
Su-Jeong Kang, Providence College

Locating and Counting the Zeros of the Polynomials p(z) = zn + zk – 1
2:00 p.m. – 2:20 p.m.
Michael Brilleslyper, U.S. Air Force Academy

Minimal Surface and Harmonic Mappings
2:30 p.m. – 2:50 p.m.
Jane McDougall, Colorado College

Friday, August 2 (continued)

Composition Operators and the Geometry of the Unit Disk
3:00 p.m. – 3:20 p.m.
Christopher Hammond, Connecticut College

Complex Variables and Gravitational Lensing by a Spiral Galaxy
3:30 p.m. – 3:50 p.m.
Erik Lundberg, Purdue University

Connecting Real and Imaginary Parts of Complex Quadratic Functions to Julia Sets
4:00 p.m. – 4:20 p.m.
Julia Barnes, Western Carolina University

Complex Analysis and Soap Films
4:30 p.m. – 4:50 p.m.
Michael Dorff, Brigham Young University

SIGMAA EM Business Meeting and Reception
2:20 p.m. – 3:00 p.m., Connecticut Convention Center, Room 15

Contributed Paper Session
History and Philosophy of Mathematics: Twentieth Century, Part 2
2:30 p.m. – 3:50 p.m., Connecticut Convention Center, Room 26
Robert E. Bradley, Adelphi University; Bonnie Gold, Monmouth University; Maria Zack, Point Loma Nazarene University

Panel Session
Non-Academic Career Paths for Students who Like Math. A Response to the Statement: "I Really Like Math, but I Don't Want to Teach."
2:35 p.m. - 3:50 p.m., Marriott, Ballroom D
Lisa Marano, West Chester University; Ben Galluzzo, Shippensburg University; Jean McGivney-Burelle, University of Hartford
Ben Baumer, Smith College, former statistician for NY Mets Actuary from Mass Mutual; Anna Mika, Campus Program Associate from Clean Air-Cool Planet; an actuary from Mass Mutual; a representative from ESPN
CUSAC

Tools of the Table Crackers: Quantitative Methods in the History of Numerical Tables
2:30 p.m. – 2:50 p.m.
Glen Van Brummelen, Quest University

On the Chebychev Quadrature
3:00 p.m. – 3:20 p.m.
Roger Godard, RMC

Felix Hausdorff: We Wish for You Better Times
3:30 p.m. – 3:50 p.m.
Charlotte Simmons, University of Central Oklahoma

Poster Session
PosterFest 2013: A Poster Session of Scholarship by Early Career Mathematicians and Graduate Students
3:00 p.m. - 5:00 p.m., Connecticut Convention Center, Pre-Function
Audrey Malagon, Virginia Wesleyan College
MAA Committee on Early Career Mathematicians;

Contributed Paper Session
History and Philosophy of Mathematics: Using History and Philosophy in Teaching Mathematics
3:00 p.m. – 5:20 p.m., Connecticut Convention Center, Room 27
Robert E. Bradley, Adelphi University; Bonnie Gold, Monmouth University; Maria Zack, Point Loma Nazarene University

Logic is Not Epistemology: Should Philosophy Play a Larger Role in Learning about Proofs?
3:00 p.m. – 3:20 p.m.
Martin E. Flashman, Humboldt State University

Teaching Mathematical Ideas by the History of from Quadratic to Quartic Equations
3:30 p.m. – 3:50 p.m.
Xinlong Weng, University of Bridgeport

Playful History: A Generalizable Mesolabium for Geometer's Sketchpad
4:00 p.m. – 4:20 p.m.
J. Lyn Miller, Slippery Rock University

Historical Accuracy, Popular Books, and Videos: Three Components of a History of Math Class
4:30 p.m. – 4:50 p.m.
Diana White, University of Colorado Denver

The Use of History of Mathematics as a Tool in Teaching Mathematics
5:00 p.m. – 5:20 p.m.
Santhosh Mathew, Regis College

Contributed Paper Session
The Mathematics of Planet Earth in the College Mathematics Curriculum
3:05 p.m. – 4:00 p.m., Connecticut Convention Center, Room 15
Ben Galluzzo, Shippensburg University; Monika Kiss, Saint Leo University

Motivating a Gen-Ed Math Modeling Course with Food Policy Issues – A Follow-up Report
3:05 p.m. – 3:20 p.m.
Jessica M. Libertini, University of Rhode Island

Exploring the Conversion of Alternative Energy
3:25 p.m. – 3:40 p.m.
Carrie Elizabeth Diaz Eaton, Unity College

Friday, August 2 (continued)

Hurricanes : Engines of Destruction
3:45 p.m. – 4:00 p.m.
Marc Laforest, Ecole Polytechnique de Montreal

Contributed Paper Session
Inquiry-Based Learning Best Practices, Part 1
3:20 p.m. – 5:15 p.m., Connecticut Convention Center, Room 16
Dana Campbell Ernst, Northern Arizona University; Angie Hodge, University of Nebraska at Omaha; Stan Yoshinobu, Cal Poly, San Luis Obispo

Course Notes for Differential Calculus
3:20 p.m. – 3:35 p.m.
Brian Loft, Sam Houston State University

Using Inquiry-Based Leaning to Define Continuity
3:40 p.m. – 3:55 p.m.
Tim Boester, Wright State University

A Flipped Classroom Study in Second Semester Calculus
4:00 p.m. – 4:15 p.m.
Ellie Kennedy, Northern Arizona University

Calculus—The IBL Way!
4:20 p.m. – 4:35 p.m.
Janice Rech, Univeristy of Nebraska at Omaha; Angie Hodge, University of Nebraska at Omaha

Calculus Group Projects to Motivate Sequences and Series by Major
4:40 p.m. – 4:55 p.m.
Daniel Shifflet, Clarion University of Pennsylvania

IBL in the Time of MOOCs
5:00 p.m. – 5:15 p.m.
Olympia Nicodemi, SUNY Geneseo

Minicourse
Environmental Mathematics, Part 1
3:30 p.m. – 5:30 p.m., Connecticut Convention Center, Room 24
Ben Fusaro, Florida State University

Minicourse
Passion-Driven Statistics: A Supportive, Project-Based, Multidisciplinary Introductory Curriculum, Part 1
3:30 p.m. – 5:30 p.m., Connecticut Convention Center, Room 25
Jeffrey Nolan, Wesleyan University; Arielle Selya, Wesleyan University

Panel Session
Student Summer Programs, Study Abroad Opportunities, and Graduate Fellowships: Who, What, When, Where, and Why?
4:10 p.m. - 5:30 p.m., Marriott, Ballroom D
Jenna Carpenter, Louisiana Tech University
Kristina Garrett, St Olaf College; Stephen Kennedy, Carleton College; Sean Howe, University of Chicago; Jenna Carpenter, Louisiana Tech University

Special Event
Pi Mu Epsilon Student Banquet and Awards Ceremony
6:00 p.m. – 7:45 p.m., Marriott, Ballroom C

Workshop
Exploding Dots: An Accessible and Interactive Workshop for Middle- and High-School Educators
6:00 p.m. - 7:50 p.m., Conencticut Convention Center, Room 25
James Tanton, MAA Mathematician in Residence

Pi Mu Epsilon J. Sutherland Frame Lecture
Matrices I Admire
8:00 p.m. – 8:50 p.m., Connecticut Convention Center, Ballroom B
Gilbert Strang, Massachusetts Institute of Technology

MAA Ice Cream Social and Undergraduate Awards Ceremony
9:00 p.m. – 10:00 p.m., Connecticut Convention Center, Pre-Function

Saturday, August 3

5K Fun Run & Walk
6:30 a.m. – 9:00 a.m., Bushnell Park

Registation
8:00 a.m. – 12:30 p.m., Connecticut Convention Center, Pre-Function

James R. Leitzel Lecture
Statistics Isn't Mathematics: So How's That Working Out?
8:30 a.m. – 9:20 a.m., Connecticut Convention Center, Ballroom B
Ann Watkins, California State University Northridge

General Contributed Paper Session
Research in Algebra or Topology
8:30 a.m. – 9:55 a.m., Connecticut Convention Center, Room 15
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

Bounds on Mosaic Knots
8:30 a.m. – 8:40 a.m.
Alan Alewine, McKendree University

Best Representations and Intervals of Uncertainty in a Weakened Topology for the Integers
8:45 a.m. – 8:55 a.m.
Sean Corrigan, Saint Louis University

Understanding the Johnson Filtration of the Mapping Class Group via Geometric Topology
9:00 a.m. – 9:10 a.m.
Aaron Heap, SUNY Geneseo

On the Parity of a Permutation
9:30 a.m. – 9:40 a.m.
Richard K. Oliver, Missoula, Montana

Semi-Simple Lie Groups Acting on Flag Manifolds
9:45 a.m. – 9:55 a.m.
B Ntatin, Austin Peay State University

Contributed Paper Session
History and Philosophy of Mathematics: The Arc of Time
8:30 a.m. – 10:20 a.m., Connecticut Convention Center, Room 27
Robert E. Bradley, Adelphi University; Bonnie Gold, Monmouth University; Maria Zack, Point Loma Nazarene University

Euclid's Treatment of the Golden Ratio
8:30 a.m. – 8:50 a.m.
Charlie Smith, Park University

Plato was Not a Mathematical Platonist
9:00 a.m. – 9:20 a.m.
Elaine Landry, University of California, Davis

Some Illustrated Comments on Selected "Magical Squares with Magical Parts"
9:30 a.m. – 9:50 a.m.
George P.H. Styan, McGill University

Mathematical Devices at the Smithsonian: Ideas for Using Digital Collections in the Classroom
10:00 a.m. – 10:20 a.m.
Amy Shell-Gellasch, Hood College; Amy Ackerberg-Hastings, NMAH/UMUC

General Contributed Paper Session
Teaching Introductory Mathematics, Part 2
8:30 a.m. – 10:25 a.m., Connecticut Convention Center, Room 22
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

Behind the Scene: What the Brain Thinks the Eyes Are Seeing
8:30 a.m. – 8:40 a.m.
Russell Coe, Suffolk County Community College

A New Approach for the Liberal Arts Mathematics Courses
8:45 a.m. – 8:55 a.m.
James Fulton, Suffolk County Community College

Belended Developmental Mathematics Courses
9:00 a.m. – 9:10 a.m.
Xinlong Weng, University of Bridgeport

Helping Students Learn Geometry Using the Teacher made Manipulative
9:15 a.m. – 9:25 a.m.
Hari Narayan Upadhyaya, Scholars Home Academy

Puzzles + Games = Mathematical Thinking
9:30 a.m. – 9:40 a.m.
Edmund A Lamagna, University of Rhode Island

Some Different Applications of Logarithms
9:45 a.m. – 9:55 a.m.
Brian Heinold, Mount St. Mary's University

Case Study: Student with Dyscalculia Offered History of Mathematics Course to Satisfy General Education
10:00 a.m. – 10:10 a.m.
Gargi Bhattacharyya, University of Baltimore

The Challenges of Designing a Mathematics Course for Liberal Arts in a Former Soviet Republic
10:15 a.m. - 10:25 a.m.
Tracey McGrail, Marist College

Saturday, August 3 (continued)

General Contributed Paper Session
Teaching Calculus, Part 2
8:30 a.m. – 10:40 a.m., Connecticut Convention Center, Room 21
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

Can The Beauty of Limits Be Recovered in Calculus?
8:30 a.m. – 8:40 a.m.
Jose Giraldo, Texas A&M University Corpus Christi

Deconstructing the Formal Definition of Limit at a Point
8:45 a.m. – 8:55 a.m.
Tim Boester, Wright State University

Resequencing Calculus with an Early Multivariate Approach
9:00 a.m. – 9:10 a.m.
David Dwyer, University of Evansville; Mark Gruenwald, University of Evansville; Mike Axtell, University of St. Thomas; Ken Luther, Valparaiso University; Joe Stickles, Millikin University; Nicholas Baeth, University of Central Missouri

Rigorous Calculus I Course for Biology Majors
9:15 a.m. - 9:25 a.m.
Melissa Stoner, Salisbury University

Convincing Students that Old Dogs Can Learn New Tricks
9:30 a.m. - 9:40 a.m.
Bradley James Paynter, University of Central Oklahoma

Teaching Calculus to Students who have Already Seen Calculus
9:45 a.m. - 9:55 a.m.
Charlotte Ann Knotts-Zides, Wofford College

Taking Math Students from 'Blah' to 'Aha!'; What Can We Do?
10:00 a.m. - 10:10 a.m.
Darja Kalajdzievska, University of Manitoba

Teaching Calculus through History, Intuition, Exploration, and Development (HIED)
10:15 a.m. - 10:25 a.m.
Paul Sisson, Louisiana State University Shreveport; Tibor Szarvas, Louisiana State University Shreveport

Unit Acceleration Vectors
10:30 a.m. - 10:40 a.m.
Jeffrey William Clark, Elon University

General Contributed Paper Session
Modeling and Applications
8:30 a.m. – 10:55 a.m., Connecticut Convention Center, Room 26
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

Modeling Opportunities with Differential Equations in the Classroom
8:30 a.m. – 8:40 a.m.
Brian Winkel, United States Military Academy

Fractal Powers in Serrin's Swirling Vortex Solutions
8:45 a.m. – 8:55 a.m.
Pavel Belik, Augsburg College; Doug Dokken, University of St. Thomas; Kurt Scholz, University of St. Thomas; Mikhail Shvartsman, University of St. Thomas

Fighting Fires in Siberia
9:00 a.m. – 9:10 a.m.
Edward Aboufadel, Grand Valley State University; Beth Bjorkman, Grand Valley State University

Mathematical Models of a Zombie Outbreak
9:15 a.m. – 9:25 a.m.
Jean Marie Marie Linhart, Texas A&M University

Generosity without Reciprocity: Computation Models of Need-Based Transfers and Risk-Pooling
9:30 a.m. – 9:40 a.m.
Yan Hao, Hobart and William Smith Colleges

Stochastic Differential Equation Models of the Nosocomial Infection VRE
9:45 a.m. – 9:55 a.m.
Mohammed Yahdi, Ursinus College

Modeling Preferntial Admissoins at Elite Liberal Arts Colleges
10:00 a.m. – 10:10 a.m.
Sally Cockburn, Hamilton College

Ranking the Academic Output of Medical Schools in the United States Using Data Envelopment Analysis
10:15 a.m. – 10:25 a.m.
Brian Harris Nathanson, OptiStatim, LLC

Timbral Partial Orders
10:30 a.m. – 10:40 a.m.
Marcus Pendergrass, Hampden-Sydney College

Numerical Estimates for the Regularization of Nonautonomous Ill-Posed Problems
10:45 a.m. – 10:55 a.m.
Matthew Fury, Penn State Abington

Saturday, August 3 (continued)

Contributed Paper Session
Inquiry-Based Learning Best Practices, Part 2
8:30 a.m. – 11:00 a.m., Connecticut Convention Center, Room 16
Dana Campbell Ernst, Northern Arizona University; Angie Hodge, University of Nebraska at Omaha; Stan Yoshinobu, Cal Poly, San Luis Obispo

MathDL Mathematical Communication: Resources for Engaging Students in Communicating about Mathematics
8:30 a.m. – 8:45 a.m.
Susan Ruff, MIT

Discovery on "Number Theory Island"
8:50 a.m. – 9:05 a.m.
Martha Allen, Georgia College; Blair Dietrich, Georgia Military College

Inquiry Based Learning in a Number Theory Course for Non-Majors
9:10 a.m. – 9:25 a.m.
Lauren Rose, Bard College

A Collaborative, Student-Written Textbook in a Writing Intensive, IBL Discrete Mathematics Course
9:30 a.m. – 9:45 a.m.
David Richeson, Dickinson College

From Cookbook to Toolbox: Modified Moore Method in Discrete Math and Abstract Algebra
9:50 a.m. – 10:05 a.m.
Rachel Schwell, Central Connecticut State University

An IBL Proofs Course: Student Perspectives
10:10 a.m. – 10:25 a.m.
Julianna Stockton, Sacred Heart University; Nicole Trommelen, Sacred Heart University; Jennifer Robillard, Sacred Heart University; Cole Matthew, Sacred Heart University; Bowers Jonathan, Sacred Heart University

Assessment in an IBL Geometry Course
10:30 a.m. – 10:45 a.m.
Theron James Hitchman, University of Northern Iowa

SIMIODE – Systemic Initiative for Modeling Investigations and Opportunities with Differential Equations
10:50 a.m. – 11:00 a.m.
Brian Winkel, United States Military Academy

Contributed Paper Session
Curriculum Development to Support First Year Mathematics Students, Part 1
8:30 a.m. – 11:25 a.m., Connecticut Convention Center, Room 14
Donna Flint, South Dakota State University; Becky Diischer, South Dakota State University; Charles Wesley Bingen, South Dakota State University

Effectively Supporting First-Year Students in Precalculus and Calculus Via the Arlington-Emerging Scholars Program
8:30 a.m. – 8:45 a.m.
James Anthony Mendoza Epperson, The University of Texas at Arlington; Julie Marie Skinner Sutton, The University of Texas at Arlington

Flipping Calculus: A Departmental Project of the University of Hartford
8:50 a.m. – 9:05 a.m.
Fei Xue, University of Hartford

Math Workshop for Accelerated Pathway to Calculus
9:10 a.m. – 9:25 a.m.
Brandy Wiegers, National Association of Math Circles; Addie Evans, San Francisco State University, CSME; Emiliano Gomez, University of California, Berkeley

Precalculus Redesign: The Influence of a Placement Program and the Power of a Name
9:30 a.m. – 9:45 a.m.
Alison Ahlgren-Reddy, University of Illinois; Marc Harper, UCLA

The Precalculus Competency Exam: A Remediation Program for Calculus
9:50 a.m. – 10:05 a.m.
Caitlin Phifer, University of Rhode Island; Jessica M. Libertini, University of Rhode Island

Variations on the Theme of Calculus Support
10:10 a.m. – 10:25 a.m.
Jill Jordan, Houghton College

Developing an Integrated Mathematics Curriculum in a Health Sciences Program
10:30 a.m. - 10:45 a.m.
Aminul Huq, University of Minnesota Rochester

Great Ideas in Mathematics and Interdisciplinary Connections – Restructuring Core Content to Engage and Retain Students
10:50 a.m. - 11:05 a.m.
Melinda Schulteis, Concordia University, Irvine

Increasing Math Majors' Skills, Confidence, Community and Retention with a 1st Year Course
11:10 a.m. - 11:25 a.m.
Jacqueline Dewar, Loyola Marymount University; Suzanne Larson, Loyola Marymount University; Thomas Zachariah, Loyola Marymount University

Saturday, August 3 (continued)

Math Circle Demonstration
9:00 a.m. – 9:55 a.m., Connecticut Convention Center, Room 13

MAA Mathematical Competition in Modeling (MCM) Winners
9:00 a.m. – 10:30 a.m., Connecticut Convention Center, Room 17

Exhibit Hall
9:00 a.m. – 12:30 p.m., Connecticut Convention Center, Ballroom B

Student Hospitality Center
9:00 a.m. – 12:30 p.m., Connecticut Convention Center, Ballroom C
Richard and Araceli Neal, American Society for the Communication of Mathematics

Earle Raymond Hedrick Lecture Series
Lecture 3: Communication Complexity of Algorithms
9:30 a.m. – 10:20 a.m., Connecticut Convention Center, Ballroom B
Olga Holtz, University of California Berkeley and Technical University Berlin

Math Circle Demonstration
10:00 a.m. – 10:55 a.m., Connecticut Convention Center, Room 13

MAA Invited Address
Financial Mathematics: A Two-Way Bridge Between Finance and Mathematics
10:30 a.m. – 11:20 a.m., Connecticut Convention Center, Ballroom B
Gordon Zitkovic, University of Texas at Austin

Contributed Paper Session
Interactions Between History and Philosophy of Mathematics, Part 1
10:30 a.m. – 11:20 a.m., Connecticut Convention Center, Room 27
Thomas Drucker, University of Wisconsin - Whitewater; Glen Van Brummelen, Quest University

Zeno Will Rise Again
10:30 a.m. – 10:50 a.m.
Thomas Drucker, University of Wisconsin - Whitewater

Analysis and Synthesis in Geometry Textbooks: Who Cares?
11:00 a.m. – 11:20 a.m.
Amy Ackerberg-Hastings, NMAH/UMUC

MAA Business Meeting
11:30 a.m. - 12:00 p.m., Connecticut Convention Center, Ballroom B

CSHPM Kenneth O. May Lecture
Henri Poincaré: Mathematician, Physicist, Philosopher
1:00 p.m. – 1:50 p.m., Connecticut Convention Center, Ballroom B
Jeremy Gray, Open University

Student Problem Solving Competition
1:00 p.m. – 2:15 p.m., Connecticut Convention Center, Room 17

General Contributed Paper Session
Research in Number Theory
1:00 p.m. – 2:25 p.m., Connecticut Convention Center, Room 22
Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

Class Numbers and Continued Fraction Expansions
1:00 p.m. – 1:10 p.m.
Mark Bauer, University of Calgary; Richard Guy, University of Calgary; Michael Katsuris Wanless, University of Calgary; Colin Weir, University of Calgary

Distributions of Sequences Modulo 1: The Good, the Bad, and the Ugly
1:15 p.m. – 1:25 p.m.
Paul Spiegelhalter, University of Illinois at Urbana Champaign

Independent Divisibility Pairs on the Set of Integers from *1* to *n*
1:30 p.m. – 1:40 p.m.
Rosemary Sullivan, West Chester University of PA

Equality of Cardinality of Sets of Subsets with Cardinality Congruent to Values Modulo *k*
1:45 p.m. – 1:55 p.m.
John Pesek, University of Delaware

A Delightful Interconnection Between Pythagorean Triples and Fibonacci-Like Sequences
2:00 p.m. - 2:10 p.m.
Jay Lawrence Schiffman, Rowan University

Squares and Pythagorean Triples II
2:15 p.m. - 2:25 p.m.
Frederick Donald Chichester, Montclair Tutoring Center

Panel Session
Hosting an AMC Competition: Advice from the Experts!
1:00 p.m. - 2:30 p.m., Marriott, Ballroom D
Jenna Carpenter, Louisiana Tech University
Jon Scott, Montgomery College; Steve Dunbar, University of Nebraska-Lincoln; Randy Cone, Virginia Military Institute

Minicourse
Mathematical Expeditions in Polar Science, Part 2
1:00 p.m. – 3:00 p.m., Connecticut Convention Center, Room 25
Lynn Foshee Reed, Einstein Distinguished Educator

Saturday, August 3 (continued)

Minicourse

Making Math Relevant: A Multidisciplinary Sustainability Module for Calculus, Part 2

1:00 p.m. – 3:00 p.m., Connecticut Convention Center, Room 24

Thomas J. Pfaff, Department of Mathematics, Ithaca College; Jason Hamilton, Department of Environmental Sciences, Ithaca College

General Contributed Paper Session

Mathematics and Technology/Research in Analysis

1:00 p.m. – 3:25 p.m., Connecticut Convention Center, Room 26

Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

Are You Ready for R

1:00 p.m. – 1:10 p.m.

Joseph Manthey, University of Saint Joseph, West Hartford, CT

Applets Embedded in WeBWorK Homework Problems

1:15 p.m. – 1:25 p.m.

Barbara Margolius, Cleveland State University

Using Lurch in an Introduction to Proofs Course

1:30 p.m. – 1:40 p.m.

Nathan Carter, Bentley University; Kenneth G. Monks, University of Scranton

Technology in the Mathematics Classroom

1:45 p.m. – 1:55 p.m.

Helmut Knaust, The University of Texas at El Paso

Creating and Analyzing Chaotic Attractors Using Mathematica

2:00 p.m. – 2:10 p.m.

Ulrich Hoensch, Rocky Mountain College

An Introduction to Formal Laurent Series

2:15 p.m. – 2:25 p.m.

Xiao-Xiong Gan, Morgan State University

Classifying Rational Points in Generalized Cantor Sets and Cantor Like Sets

2:30 p.m. – 2:40 p.m.

Douglas Daniel, Presbyterian College

Geometric Approach to the Computation of Certain Definite Integrals

2:45 p.m. – 2:55 p.m.

Sergei Artamoshin, CCSU

Traveling Wave Solutions of the Porous Medium Equation

3:00 p.m. – 3:10 p.m.

Joseph A. Iaia, University of North Texas

Geometry of Fractal Squares

3:15 p.m. – 3:25 p.m.

Kristine Roinestad, Georgetown College

Invited Paper Session

Recent Developments in Mathematical Finance

1:00 p.m. – 4:30 p.m., Marriott, Ballroom B

Tomoyuki Ichiba, University of California Santa Barbara
Scott Robertson, Carnegie Mellon University

Static Fund Separation of Long Term Investments

1:00 p.m. – 1:30 p.m.

Scott Robertson, Carnegie Mellon University

Occupation Times, Drawdowns, and Drawups for One-Dimensional Regular Diffusions

1:45 p.m. – 2:15 p.m.

Hongzhong Zhang, Columbia University

Volatility – A Key Concept in Mathematical Finance

2:30 p.m. – 3:00 p.m.

Stephan Sturm, Worcester Polytechnic Institute

Optimal Investment in the Presence of High-Water Mark Fees

3:15 p.m. – 3:45 p.m.

Gerard Brunick, UC Santa Barbara

Trends and Trades

4:00 p.m. – 4:30 p.m.

Olympia Hadjiliadis, CUNY Brooklyn

General Contributed Paper Session

Teaching Advanced Mathematics, Part 2

1:00 p.m. – 4:10 p.m., Connecticut Convention Center, Room 21

Kristi Meyer, Wisconsin Lutheran College; Thomas Hagedorn, The College of New Jersey

A Simple Explanation of Stochastic Differential Equations

1:00 p.m. – 1:10 p.m.

Blane Hollingsworth, Middle Georgia State College

Differential Equations without Derivatives

1:15 p.m. – 1:25 p.m.

Brian Sutton, Randolph-Macon College

Essay-Style Problems in Differential Equations with WeBWorK

1:30 p.m. – 1:40 p.m.

L. Felipe Martins, Cleveland State University; Barbara Margolius, Cleveland State University

I Want it All, and I Want it Now! (Or, May I Please Graduate on Time?)

1:45 p.m. – 1:55 p.m.

Anna Davis, Ohio Dominican University

Teaching an Honors Seminar on Fractals for Non-Majors

2:00 p.m. – 2:10 p.m.

Christopher Sass, Young Harris College

Saturday, August 3 (continued)

Mathematics of Origami Honors Seminar—Successes and Lessons Learned
2:15 p.m. – 2:25 p.m.
Vera Cherepinsky, Post University

Teachable Math in Cryptocurrency Phenomenon
2:30 p.m. – 2:40 p.m.
Maryam Vulis, NCC and York College CUNY

The 2-Column Method: A Better Way to Teach Proofs?
2:45 p.m. – 2:55 p.m.
Mindy Capaldi, Valparaiso University

"Where Have I Seen this Before?"—Encouraging Undergraduate Students to See Connections
3:00 p.m. – 3:10 p.m.
Antonia Cardwell, Millersville University of Pennsylvania

Transformative Learning in an Analysis Course: A Tactile Approach
3:15 p.m. – 3:25 p.m.
Kristi Karber, University of Central Oklahoma

The Constant of Integration
3:30 p.m. – 3:40 p.m.
Marian Anton, Central Connecticut State University

Adapted Sequence/Function Project
3:45 p.m. – 3:55 p.m.
Violeta Vasilevska, Utah Valley University

Native American-Based Mathematics Materials for Integration into Undergraduate Courses
4:00 p.m. - 4:10 p.m.
Charles Funkhouser, California State University Fullerton; Miles R Pfahl, Turtle Mountain Community College

Contributed Paper Session
Inquiry-Based Learning Best Practices, Part 3
1:00 p.m. – 4:55 p.m., Connecticut Convention Center, Room 16
Dana Campbell Ernst, Northern Arizona University; Angie Hodge, University of Nebraska at Omaha; Stan Yoshinobu, Cal Poly, San Luis Obispo

Computer Environments Promoting Student Inquiry
1:00 p.m. – 1:15 p.m.
Robert Sachs, George Mason University

A Student-Centered Approach to Intermediate Algebra
1:20 p.m. – 1:35 p.m.
Jacqueline Jensen-Vallin, Slippery Rock University

Presentation Fridays in Advanced Calculus
1:40 p.m. – 1:55 p.m.
Robert W Vallin, Slippery Rock University

A Bridge between IBL and Student Inquiry
2:00 p.m. – 2:15 p.m.
Brian Katz, Augustana College

IBL Classroom Activities Beyond Student Presentation
2:20 p.m. – 2:35 p.m.
Elizabeth Thoren, University of California, Santa Barbara

Strategies for Implementing Inquiry-Based Learning in the College Mathematics Classroom
2:40 p.m. – 2:55 p.m.
Erin Moss, Millersville University

IBL Teachers' Perspectives on Gettting Students to Work Together, Present, and Critique
3:00 p.m. – 3:15 p.m.
Timothy Whittemore, University of Michigan; Vilma Mesa, University of Michigan

Asking Good Questions to Promote Inquiry and Mathematical Conversations
3:20 p.m. – 3:35 p.m.
Christine von Renesse, Westfield State University; Volker Ecke, Westfield State University

Teachers Teaching: An Inquiry-Based Approach to Math Education
3:40 p.m. – 3:55 p.m.
Cheryll Crowe, Eastern Kentucky University

Using Computer Programming to Push Students to Build Mental Frameworks for Abstraction and Generalization
4:00 p.m. – 4:15 p.m.
Cynthia L. Stenger, University of North Alabama; James A. Jerkins, University of North Alabama

Creating an IBL Summer Mathematics Institute
4:20 p.m. – 4:35 p.m.
Randall E Cone, VMI

Tile Flooring and Recursive Relation
4:40 p.m. – 4:55 p.m.
Xinlong Weng, University of Bridgeport

Contributed Paper Session
Curriculum Development to Support First Year Mathematics Students, Part 2
Saturday, August 3, 1:00 p.m. – 4:55 p.m., Connecticut Convention Center, Room 14
Donna Flint, South Dakota State University; Becky Diischer, South Dakota State University; Charles Wesley Bingen, South Dakota State University

A Re-Redesign of College Algebra: Maximizing Flexibility and Consistency
1:00 p.m. – 1:15 p.m.
Brian Hollenbeck, Emporia State University

Saturday, August 3 (continued)

College Algebra Delivered Online: An Autopsy of an Unsuccessful Initiative
1:20 p.m. – 1:35 p.m.
Malissa Peery, University of Tennessee; Jennifer Fowler, University of Tennessee; Charles Collins, University of Tennesse

Just Enough Algebra—A Successful Approach to Preparing College Students
1:40 p.m. – 1:55 p.m.
Suzanne Ingrid Doree, Augsburg College, Minneapolis

Realigning a Service Mathematics Curriculum to Better Serve the Major Department
2:00 p.m. – 2:15 p.m.
Daniel Cole, SUNY Maritime College

Supporting Large-First Year Courses with a Mathematics and Statistics Learning Center
2:20 p.m. – 2:35 p.m.
Darry Andrews, The Ohio State University; Elizabeth Miller, The Ohio State University

Uniting to Support First-Year Success: A Collaboration between State Universities in Connecticut
2:40 p.m. – 2:55 p.m.
Karen Santoro, Central Connecticut State University

Improved Success Rates in Developmental Math through Acceleration, Collaboration, and Technology
3:00 p.m. – 3:15 p.m.
Awilda Delgado, Broward College

Implementing a Mastery-Based Format for Remedial Mathematics Courses- an Iterative Approach
3:20 p.m. – 3:35 p.m.
Donna Flint, South Dakota State University; Charles Wesley Bingen, South Dakota State University

Creating an Online Math Lab
3:40 p.m. – 3:55 p.m.
Stepan Paul, UC Santa Barbara; Michael Yoshizawa, UC Santa Barbara

Math Skills, An Emporium Model Modified: What We learned from the Pilot Year
4:00 p.m. – 4:15 p.m.
Mary D Shepherd, Northwest Missouri State University

Serving the Under-Resourced Student in a University Setting through Mathematics
4:20 p.m. – 4:35 p.m.
Kerry Luse, Trinity Washington University; Joseph Sheridan, Trinity Washington University

Year One Results from Developmental Course Redesign
4:40 p.m. – 4:55 p.m.
Stephen Hardin Fast, Limestone College

Special Session for Graduate Students
Great Talks for a General Audience: Coached Presentations by Graduate Students
1:00 p.m. – 5:30 p.m., Connecticut Convention Center, Room 12

Introductory Session
1:00 p.m. - 1:10 p.m.

A Variation on Tetris for Algebraic Geometers
1:15 p.m. - 1:35 p.m.
Stepan Paul, UC Santa Barbara

Where Will I Sit?!
1:40 p.m. - 2:00 p.m.
John Asplund, Auburn University

What Your Professor Didn't Tell You About Critical Points
2:05 p.m. - 2:25 p.m.
Rachel Webb, Brigham Young University

A Beautiful Connection Between Graphs and Knots
2:30 p.m. - 2:50 p.m.
Adam Giambrone, Michigan State University

Modeling Changes in DNA Topology Using the Tangle Method
2:55 p.m. - 3:15 p.m.
Crista Moreno, San Francisco State University

Extremal Cayley Digraphs
3:20 p.m. - 3:40 p.m.
Joni Schneider, Texas State University-San Marcos

Introduction to Mutually Orthogonal Latin Squares
3:45 p.m. - 4:05 p.m.
James Hammer, Auburn University

The Game of Basic Mancala
4:10 p.m. - 4:30 p.m.
Maximiliano Liprandi, University of Calgary

Panel Discussion
4:45 p.m. - 5:30 p.m.

Saturday, August 3 (continued)

Invited Paper Session
Climate and Geophysical Modeling
2:00 p.m. – 3:50 p.m., Marriott, Ballroom A
Matthew J. Hoffman, Rochester Institute of Technology

Improving Climate Models Using Non-Global Data Assimilation and Parameter Estimation
2:00 p.m. – 2:20 p.m.
Lewis Mitchell, University of Vermont

A Hybrid Ensemble Kalman Filter/Variational Method for Data Assimilation of the Ocean
2:30 p.m. – 2:50 p.m.
Steven Penny, University of Maryland

Numerical Modeling of Vegetation-Climate Feedbacks: An Example over Western Africa
3:00 p.m. – 3:20 p.m.
Clement Alo, Montclair State University

Quasi-Periodic Fluctuations in Climate Due to Sea Ice
3:30 p.m. – 3:50 p.m.
Raj Saha, Bowdoin College

Contributed Paper Session
Interactions Between History and Philosophy of Mathematics, Part 2
2:30 p.m. – 4:50 p.m., Connecticut Convention Center, Room 27
Thomas Drucker, University of Wisconsin—Whitewater; Glen Van Brummelen, Quest University

Assimilation in Mathematics and Beyond
2:30 p.m. – 2:50 p.m.
Robert S D Thomas, University of Manitoba

Euler and the Enlightenment
3:00 p.m. – 3:20 p.m.
Lawrence D'Antonio, Ramapo College

Persecution of Nikolai Luzin
3:30 p.m. – 3:50 p.m.
Maryam Vulis, NCC and York College CUNY

Philosophy Etched in Stone: The Geometry of Jerusalem's 'Absalom Pillar'
4:00 p.m. – 4:20 p.m.
Roger Auguste Petry, Luther College at the University of Regina

Understanding the Interplay between the History and the Philosophy of Mathematics in Proof Mining
4:30 p.m. – 4:50 p.m.
Jeff Buechner, Rutgers University; Saul Kripke Center, CUNY GC

Minicourse
Environmental Mathematics, Part 2
3:30 p.m. – 5:30 p.m., Connecticut Convention Center, Room 24
Ben Fusaro, Florida State University

Minicourse
Passion-Driven Statistics: A Supportive, Project-Based, Multidisciplinary Introductory Curriculum, Part 2
3:30 p.m. – 5:30 p.m., Connecticut Convention Center, Room 25
Lisa Dierker, Wesleyan University; Jeffrey Nolan, Wesleyan University; Arielle Selya, Wesleyan University

Special Event
Silver and Gold Reception and Banquet
6:00 p.m. – 9:00 p.m., Marriott, Ballroom C
MC: Christine Stevens, St Louis University; Speaker: Richard Cleary, Babson College; Title: What Every Math Professor Needs to Know About Statistics... and Vice Versa

Sunday, August 4

Tour
Yale University Tour
10:00 a.m. – 2:00 p.m.
See registration desk for location

Commercial Presentations

Maplesoft

Partnering with the MAA to Revolutionize Placement Testing

Thursday, August 1, 3:30 p.m. – 5:00 p.m.
Connecticut Convention Center, Room 16

Placement testing plays a vital role in ensuring students are placed in the correct mathematics courses from the very beginning, contributing to student success (and instructor sanity!). Placement testing can be a major headache for everyone involved, but it doesn't have to be. Place your incoming students in the right mathematics courses quickly and painlessly using the renowned Mathematical Association of America (MAA) placement tests offered online exclusively through the Maple T.A. testing environment.

This presentation offers an overview and demonstration of the Maple T.A. MAA Placement Test Suite. Find out how this online testing solution will give you easy administration, instant results, and flexible scheduling for your incoming students. Attendees of this presentation will be entered into an exclusive draw to win a MacBook Air equipped with a copy of Maple!

MyiMaths

How Well Supported Are You for Interactive IB Resources?

Friday, August 2, 10:00 a.m. – 11:30 a.m.
Connecticut Convention Center, Room 24

MyiMaths (part of Oxford University Press) are looking for feedback from you! MyiMaths supports over 4 million mathematics learners in 80 countries worldwide. Teachers and students love the huge bank of interactive online resources and lessons, auto-marked homeworks, and reports to diagnose and evidence progress. Bring your laptop, try it out yourself—and find out how MyiMaths can support **your** IB teaching. We'd also love you to tell us exactly what you'd like to see more of. Don't miss this exciting opportunity to help develop a specific US IB resource. MyiMaths is written **by** math teachers **for** math teachers—now it's your turn to have some input!

Hawkes Learning Systems

Mastering Math, Not the System

Friday, August 2, 3:30 p.m. – 5:00 p.m.
Marriott, Ballroom E

You know the scenario: Students seem to be doing well on homework, yet are performing poorly on exams. With Hawkes, students cannot "cheat the system" to get through assignments. Instead, they are held accountable for mastering the material without relying on learning aids. Discover how Hawkes motivates students to succeed! We will end the presentation with a little fun and raffle off an iPad!

Sponsors & Exhibitors

MAA gives a special thanks to our eight sponsors of MAA MathFest 2013. Please be sure to visit the Exhibit Hall in Ballroom C of the Connecticut Convention Center for fun activities, information, and to complete the Scavenger Hunt (see the form on page 67–68).

Sponsors:

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Hawkes Learning Systems (BOOTHS 21-22)

With over 30 years of experience in specializing in mathematics courseware, Hawkes Learning Systems knows what it takes to provide the best learning tools in order to help students succeed. Hawkes courseware motivates students thorough its unique approach to mastery learning which promotes grade improvement and encourages students by engaging them in the learning process. The courseware provides students with interactive instruction, step-by-step tutorials, unlimited practice, error-specific feedback for incorrect answers, and mastery-based homework assignments. With Hawkes, we believe: Students matter. Success counts.

Maplesoft (BOOTH 25)

Maplesoft's core technology is the world's most advanced symbolic computation engine, which is the foundation for all of its products, including Maple™, the technical computing and documentation environment; Maple T.A., a web-based system for creating tests, assignments, and exercises particularly suited for mathematics; the Maple T.A. MAA Placement Test Suite which offers the renowned Mathematical Association of America (MAA) placement tests in an online environment; and introducing The Möbius Project™, a revolutionary initiative that brings the power of Maple to even more people, in even more ways.

MyiMaths (BOOTH 24)

MyiMaths is an interactive online solution to teaching and learning mathematics. It strengthens engagement and results for 4 million learners in over 80 countries, with a huge range of online lessons, activities and auto-marked homeworks for ages 11-18. Teachers, students and parents can track progress at a glance with the powerful assessment tools and reports. We're also working on material to support IB Mathematics Standard and Higher Levels and IB Mathematical Studies. We already offer online resources to support between 75 and 100% of these courses – and you can rely on this growing in the future. MyiMaths is part of Oxford University Press, the only publisher to develop resources directly with the IB. We're committed to developing the support for IB in MyiMaths, and we'd like to hear what you think and what you'd like to see in your resources. Find out more by coming along to our session on Friday August 2nd, 10- 11.30am, in Room 24. Bring your laptop and try MyiMaths yourself!

WebAssign (BOOTH 23)

WebAssign, the independent online homework and assessment solution, continues to innovate. With robust new tools and pre-coded questions from over 450 leading math and statistics titles from every major publisher (including open text solutions), WebAssign is your indispensible partner in education. WebAssign's new patent-pending Answer Evaluation and Grading Engine is powerful functionality that interprets and evaluates student responses mathematically, grading answers just like you do. Visit www.webassign.net or stop by our booth to learn more. WebAssign, the independent online homework and assessment solution, continues to innovate. With robust new tools and pre-coded questions from over 450 leading math and statistics titles from every major publisher (including open text solutions), WebAssign is your indispensible partner in education. WebAssign's new patent-pending Answer Evaluation and Grading Engine is powerful functionality that interprets and evaluates student responses mathematically, grading answers just like you do. Visit www.webassign.net or stop by our booth to learn more.

Gold Sponsors

Math for America (BOOTHS 26-27)

Math for America is a nonprofit organization with a mission to improve mathematics and science education in U.S. public secondary schools by building a corps of outstanding STEM teachers and leaders.

National Association of Math Circles (NAMC) (BOOTHS 29-30)

The National Association of Math Circles provides a community for Math Circles and similar programs via a website http://mathcircles.org. This fun and interactive website includes a database of Math Circles worldwide, a wiki started by Sam Vandervelde's Circle in a Box Math Circle book, a Math Circle Problem and Lesson Collection, as well as a developing forum for discussion of Math Circle related ideas. Visit our booth to learn more or attend one of the SIGMAA-MCST sessions to learn more about Math Circles.

Pearson (BOOTHS 15-16)

A leading publisher in mathematics and statistics, Pearson provides course content from respected authors. Pearson's

Sponsors & Exhibitors (continued)

online courses within MyMathLab and MyStatLab have helped over 9 million students succeed at more than 1,900 colleges and universities since 2001. Please visit our booth to learn more and receive a special discount on products. See us online at www.pearsonhighered.com.

Silver Sponsor

American Mathematical Society
(BOOTHS 19-20)

The American Mathematical Society was founded in 1888 to further the interests of mathematical research and scholarship. This year we celebrate our 125th anniversary. The AMS serves over 30,000 individual members worldwide through meetings, programs, and professional services designed to foster communication, collaboration, and public awareness of the mathematical sciences. The AMS publishes books, journals (electronic and print), and MathSciNet-the Mathematical Reviews Database. Our top-tier research publications span the entire spectrum of pure and applied mathematics for professionals, graduate students, and advanced undergraduates. For more information go to www.ams.org.

Exhibitors:

ACTEX Publications (BOOTH 10)
AMATYC (BOOTH 31)
American Mathematics Competitions (AMC) (MAA PAVILION)
Association for Women in Mathematics (AWM) (TABLE 1)
BeAnActuary (BOOTH 17)
Cambridge University Press (BOOTH 18)
The Canadian Society for History and Philosophy of Mathematics (CSHPM) (BOOTH 1)
Fit To A Tee (BOOTH 35)
Liberty Mutual Insurance (BOOTH 12)
MAA Membership and Marketing Department (MAA PAVILION)
MAA Publications Department (MAA PAVILION)
Mathematical Sciences Publishers (BOOTH 6)
National Security Agency (BOOTHS 33-34)
Oxford University Press (BOOTH 36)
Piazza (BOOTH 37)
Princeton University Press (BOOTH 28)
Resequencing Calculus (BOOTH 32)
Richmond Teacher Residency (BOOTH 2)
SMART Scholarship Program (BOOTH 9)
Springer (BOOTH 5)
Taylor & Francis / CRC Press (BOOTHS 13-14)
Thinkwell (BOOTH 7)
W.H. Freeman & Company (BOOTH 4)
WeBWorK (MAA PAVILION)
Wiley (BOOTH 3)
Worldwide Center of Mathematics (BOOTH 8)
xyAlgebra (BOOTH 11)

EXHIBIT HALL HOURS:

Connecticut Convention Center, Ballroom C

Wednesday, July 31:	6:00 p.m. – 8:00 p.m.
Thursday, August 1:	9:00 a.m. – 5:00 p.m.
Friday, August 2:	9:00 a.m. – 5:00 p.m.
Saturday, August 3:	9:00 a.m. – 12:30 p.m.

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The Icosahedron Society recognizes organizations or individuals who have shown extraordinary generosity to the MAA, providing essential support at the highest level to uphold the Association's mission.
We commend the generosity of the following Icosahedron Society donors:

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MAA MATHFEST SCAVENGER HUNT 2013

Complete all of the questions below for a chance to win great prizes from our MAA MathFest 2013 exhibitors and sponsors!

ACTEX Publications
According to the Wall Street Journal (online.wsj.com), what is the best job of 2013?

The Canadian Society for History and Philosophy of Mathematics (CSHPM)
May Week in Cambridge is held in June. In what month is the May lecture for 2013 being held?

Fit To A Tee
What year did Fit To A Tee do its first educational conference?

Hawkes Learning Systems
Stop by Hawkes Learning Systems' exhibit to learn how Hawkes Knowledge Engineers have created an Expert System to offer guidance, feedback, and individualized help when students need it the most: when they have made a mistake.

Taylor and Francis/ CRC Press
What is the subarea of Abstract Algebra that is named after a French mathematician who died at the age of twenty after losing a duel?

MAA Publications Department
Which MAA book was the number one bestseller on the 2012 MAA Books Blog?

MAA Membership and Marketing Department
What is the name of the MAA's new video-essay resource for middle- and high-school math teachers which uses AMC contest questions to demonstrate problem solving strategies and techniques tied to the Common Core State Standards?

National Association of Math Circles (NAMC)

Complete one of the Math Circle interactive math activities at the NAMC Booth. Activities will include the Penny Problem, a game of Criss Cross, Mathematical Origami, Card Tricks, and more. Stop by to learn more.

Pearson

How many Interactive Rigures are in the Briggs Calculus eBook?

Princeton University Press

If the conjecture in this book can be proven, you will never be sick again, but you will have to hide your money in your mattress. What is the title?

Thinkwell

Our author Ed Burger recently left Williams College to become the president of what university?

WebAssign

Which textbook publishers does WebAssign partner with?

Worldwide Center of Mathematics

Come by Worldwide Center of Mathematics' booth to try and solve their challenge problem!

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xyAlgebra

What three words characterize and distinguish the help available in xyAlgebra?

Please submit your completed form to the registration desk by Friday, August 2 at 2:00 p.m. Winners will be announced Friday afternoon and Saturday morning.

Name _____

Phone Number _____

Email _____

Save the Date

MAA MATHFEST

August 6-9, 2014

Portland, OR