

MATHFEST 2010

The official newsletter of MAA's Summer Meeting.



FOUND MATH: CURVED SURFACES AND SPATIAL TESSELLATIONS AROUND ON THE ALCOA CORPORATE CENTER ON PITTSBURGH'S NORTH SHORE. PHOTO COURTESY OF ALESSANDRO ARSIE (UNIVERSITY OF TOLEDO)

SCHEDULE CHANGES

CHECK FOR MORE UPDATES POSTED ON MESSAGE BOARDS AT REGISTRATION IN THE OMNI HOTEL

Thursday August 5th:

- MAA Student Paper Sessions 21 & 23 have been added from 8:30-10:25 am in the Three River and Bob Hope rooms, respectively. See next page in this newsletter for a listing of talks in this session.
- Richard Stankewitz, 1-1:20pm, Allegheny room, Invited Paper Session talk is cancelled.
- The Allegheny Mountain Section of the MAA will hold a reception for its members from 5:30-6:30 pm in the Sky Room.

Friday August 6th:

- Pi Mu Epsilon sessions 5 & 6 have been extended, and will now end at 11:30 am.

Coffee Break Math

Got some free time?
Stop by the MAA
Publications Booth
to solve the Problem
of the day!

flickr

Attention Shutterbugs!

Add your MathFest photos to our public pool on Flickr!
www.flickr.com/groups/mathfest2010/



We'll be posting regular MathFest updates to our Twitter and Facebook accounts. Find us online @maanow and

www.facebook.com/maanews

EXHIBIT HALL HOURS

Wednesday, August 4:

6:00—7:30 P.M.

Thursday, August 5:

9:00A.M.—5:00P.M.

Friday, August 6:

9:00A.M.—5:00P.M.

Saturday, August 7:

9:00A.M.—2:00P.M.

- The talk by Eduardo Martinez-Pedroza in the Geometric Group Theory IPS scheduled for 3:00-3:20 pm in Conference A has been cancelled.
- MAA Student Paper Session #18, 5:00-5:15 pm: The student talk Bio-Math Mapping and Water Quality Analysis of Gowanus Canal is now being presented by Renee Clarke, Poucar Jorge, and Philip Ajisogun.
- MAA Student Paper Session #19, 5:40-5:55: Stacey Kowalczyk's talk has been cancelled.
- The talk by Sharwan Kumar in the Pure Mathematics GCPS scheduled for 5:30-5:40 pm in Sky has been cancelled.
- Pi Mu Epsilon Student Paper Sessions 9 & 10 listed from 4:20-6:15 pm in Phipps and Oliver have been cancelled.

Saturday, August 7th:

- Teaching Introductory Mathematics II (Frick), 9:15-9:25am, Redesigning Algebra in the Classroom: Using Assessment to Drive Instruction, Mike Hall, Arkansas State University is withdrawn.
- Contributed Paper Session: Active Learning Intervention Strategies Accompanying Introductory Mathematics Courses, Angie Hodge talk, 2:40-2:55pm, is titled, "Helping students succeed by engaging them in the mathematics classroom"
- The presentation by Lew Ludwig originally scheduled at 10:10-10:25 am in Allegheny has been re-scheduled from 2:20-2:35 pm in Three Rivers. The talk by Ximena Catepillan originally scheduled for 2:20 in Three Rivers has been cancelled.
- Great Talks for a General Audience: Coached Presentations by Graduate Students has been added from 1:00-5:30pm in the Phipps room. See next page in this newsletter for a listing of talks in this session.
- The talk by Sybilla Beckmann scheduled from 3:00-3:20 in Allegheny has been cancelled.

Late Additions:

MAA Student Paper Session #21

Thursday, 8:30 am-10:25 am, Three Rivers Room

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|------------|---|
| 8:30-8:45 | Partition Regularity for The Jordan Canonical Form and Nilpotent Operators
Liam Solus, Oberlin College |
| 8:50-9:05 | Generators of the Symmetric Group
Kelsey Watson, Valparaiso University |
| 9:10-9:25 | Spectra of Semidirect Products of Cyclic Groups
Nathan Fox, University of Minnesota-Twin Cities |
| 9:30-9:45 | A Study on Tails of Bivariate Distributions
Steven Collazos, State University of New York at Binghamton; Diego Canales, University of Texas at El Paso |
| 9:50-10:05 | Analysis of Use it or Lose it Trees
Thomas James Murphy, Marist College |

EXHIBITOR UPDATE

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Career Fair at MathFest

The U.S. Department of State strongly encourages qualified U.S. citizens to compete for challenging professional positions in the UN and other international organizations. Jobs are in many desirable locations. Qualifications needed usually include a master's degree and skills in a foreign language. Job fields vary from technical/scientific to management/administrative. Compensation is attractive. Please contact us for more information:

E-mail: EmploymentUN@state.gov
Web Site: www.state.gov/p/io/empl/

Location

Riverboat Room, William Penn Level,
Omni William Penn Hotel

Times

Saturday, August 7, 9 A.M.—12 P.M.

Stop by the MAA Publications Booth for a Signing with Underwood Dudley on Saturday at 11:30 A.M.

10:10-10:25 Equitent Problems
Katelynn Kochalski, Canisius College

• **MAA Student Paper Session #22, Friday, 8:30 am – 11:30 am, Three Rivers Room**

8:30-8:45 An upper bound of conjugacy classes of a group with its Sylow p -groups
Cong Tuan Son Van, College of Saint Benedict and Saint John's University

8:50-9:05 Equivalence Classes of Zero Divisor Graphs
Kaylee Joy Kooiman, Calvin College; Cathryn Holm, St. Olaf College

9:10-9:25 Equivalence classes of zero divisor graphs and zero divisor graphs
Dane Skabelund, Brigham Young University; Eric New, The College of New Jersey

9:30-9:45 Measure-Preserving Actions with Various Mixing Properties
Ran Bi, Williams College

9:50-10:05 Various Applications of Mathematical Modeling for the Problems of Demalination Growth with Time
Luis Flores, Gainesville State College

10:10-10:25 Investigating the Higher-order Sheffer Polynomial Sequences
Jeffrey Scavo, Penn State Behrend

10:30-10:45 Asymptotic Connectivity of Hyperbolic Planar Tilings: A Study of Independence of Basepoint
Robin Neumayer, University of South Carolina

10:50-11:05 The Effect of Coalitions on the Banzhaf Power Index
Amanda Ketner, Elon University

11:10-11:25 k -Independence Polynomials
Nicole Gin, Spring Arbor University

11:30-11:45 Families of Hyperbolic Tilings
Katie Izzo, Keuka College

• **MAA Student Paper Session #23, Thursday, 8:30 am-10:25 am, Bob Hope Room**

8:30-8:45 The Graph of Equivalence Classes of Zero-Divisors
Blake Allen, Utah Valley University

8:50-9:05 Establishing Further Properties With Partition Regular Matrices
Ryan Wormald, Mount Holyoke College REU 2010; Kara Finley, University of Rochester

9:10-9:25 A stochastic game based on the gambler's ruin scenario for a cookie random walk
Timothy Pluta, Iowa State University; Brian Wu, Iowa State University; Matthew Temba, Iowa State University

9:30-9:45 Ciliary Dynamics with Boundary Wall Correction
Michael Casey, Mount Holyoke College REU; Faisal Ahmad, Mt. Holyoke College REU

- 9:50-10:05 Solution Theory for Bilinear Systems of Equations
Dian Yang, College of William and Mary
- 10:10-10:25 Tree Generation using the Use-it-or-Lose-it algorithm
Chris Kirkland, Mercer University

- **Great Talks for a General Audience: Coached Presentations by Graduate Students Saturday, August 7th, 1:00-5:00pm, Phipps Room Schedule:**

- 1:00-1:20 Playing with Bubbles: Metacalibration and Optimization
Donald Sampson, Brigham Young University
- 1:25-1:45 Solving the Pirate Game
Daniel Richard Shifflet, Bowling Green University
- 1:50-2:10 The Joy of Scheduling Chores
David Clark, Michigan Technological University
- 2:15-2:35 Graph Theory: Play as Mathematics and Research
Samuel Hensen, University of Nevada, Las Vegas/ACME Science
- 2:40-3:00 Why Should I Care About i?
Zachary Abernathy, North Carolina State University
- 3:05-3:25 Sparse Phase Reconstruction in Adaptive Optics
Reema Al-Aifari, Johannes Kepler University
- 3:30-3:50 A Tourist's Dilemma
Kristen Kobylus Abernathy, North Carolina State University
- 4:00-4:20 Mutually Orthogonal Latin Squares
John Asplund, Michigan Technological University
- 4:25-4:45 Classifying Symmetries of Rational Elliptic Surfaces with Section
Tolga Karayayla, University of Pennsylvania
- 4:50-5:10 Cluster Analysis Using Nonnegative Matrix Factorization
Charles D. Wessell, North Carolina State University
- 5:15-5:35 Interesting Proofs for Combinatorial Formulas
Amy Mihnea, Florida Atlantic University