

Announcing

ISMAA 2004:

**The 2004 Annual Meeting of the Illinois Section of the
Mathematical Association of America**

Friday – Saturday, April 2 - 3, 2004
Roosevelt University, Schaumburg Campus
1400 North Roosevelt Avenue
Schaumburg, IL

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REMINDERS

Visit <http://ismaa.knox.edu/> for abstracts and updated information.

Book hotel rooms early for the ISMAA rate.

Submit Student Contributed Papers by March 19.

Pre-register by March 22 for the banquet, mini-course, and interactive session.

Mini-course and Interactive Session
(Pre-registration Required)

Mini-course:

Title: How to present mathematical masterpieces to enliven all students

Presenter: Michael Starbird, University of Texas and co-author of *The Heart of Mathematics*

Time: Friday, April 2, 9:00AM - 12:00PM

Place: Room 314

Cost: \$10

Overview: Mathematics contains great ideas and employs powerful methods of analysis. Infinity, the fourth dimension, probability, chaos, etc. spark everyone's imagination. These mathematical ideas are culturally comparable to masterpieces of art, literature, philosophy, or science. Our challenge is to convey the genuine ideas of classical and new mathematics and the strategies of analysis that made them possible. This minicourse will allow participants to learn effective methods for bringing mathematical results and techniques to life.

Interactive Session:

Title: Using Palm PDA's in Introductory Mathematics Courses

Presenters: Abigail Hoit and Allen Rogers, Elmhurst College

Time: Saturday, April 3, 1:30 - 3:30PM

Place: Room 314

Cost: \$5

Overview: The Elmhurst Mathematics department was recently awarded an SBC/Ameritech grant to incorporate PalmOS-based Personal Digital Assistants (PDAs) into our Calculus I and II classes. We taught these PDA-incorporated courses for the first time in the Fall of 2003. Our presentation will include a brief overview of how we are using the PDA and our results so far. We will also give a breakdown of exactly what the students and the department must purchase in order to make this kind of course work and give participants some hands-on experience with the handheld units. **Note:** People with PalmOS PDA's should bring them to the session.

Plenary Speakers

Paul Sally, University of Chicago

Title: Problems in Mathematics from Zero to Infinity

Time: Friday, April 2, 12:45 - 1:45PM

Abstract: In this talk I will discuss several problems which begin at a very elementary level and escalate rapidly into serious mathematics.

Art Benjamin, Harvey Mudd College

Title: The Mathemagic Show

Time: Friday, April 2, 7:15PM - 8:15PM (Friday banquet)

John Birge, Northwestern University

Title: Optimization Models in Financial Mathematics

Time: Saturday, April 3, 8:30 - 9:30AM

Abstract: Advances in computation and analysis have led to significant interest in the mathematics of financial markets. The models in this area often derive from some form of optimization problem such as maximizing expected utility or minimizing expected loss. We will describe a variety of these optimization models and results that derive from duality, optimality conditions, and convexity properties. We will also discuss issues that arise when regularity and convexity conditions do not apply.

Michael Starbird, University of Texas-Austin

Title: Circles, Pyramids, Spheres, and Archimedes

Time: Saturday, April 3, 12:00 - 1:00PM

Abstract: How do we discover the formulas for the areas of objects such as circles and triangles and the volumes of solids such as cones, pyramids, and spheres? In each case, an effective strategy involves dividing the object into small pieces and seeing how the small pieces can be re-assembled to produce an object whose volume or area is easier to compute. One of the most impressive of these triumphs occurred in the third century B.C., when Archimedes devised an ingenious method using levers to deduce the formula for the volume of a sphere. All these methods foreshadowed the concept of the integral.

Call for Student Contributed Papers

Multiple sessions of student contributed papers are planned for Saturday, April 3, at the ISMAA Annual Meeting. Any undergraduate mathematics student or group of students may propose a 15-minute presentation on a topic dealing with mathematics or the teaching and learning of mathematics. The paper may represent a class project, a senior thesis, or a research project.

Individuals interested in contributing a paper should forward a short (at most one paragraph) summary of the paper with the name(s) and address(es) of the author(s) by March 19, 2004 to:

John Haverhals
Department of Mathematics
Bradley University, Peoria, IL 61625
jsh@bradley.edu, (309) 677-2499

Call for Contributed Papers for ISMAA 2004

The Program Committee for the 2004 Meeting of the ISMAA is soliciting contributions for 20 minute (or longer) presentations in the following areas:

- Research in mathematics
- Research in mathematics education
- Developments in undergraduate mathematics courses and curricula
- Expository mathematics

Contributors should send a paper title, a short (2-3 sentence) abstract, and name and contact information for the author(s) to

Andrew Leahy (Program Chair)
Knox College
2 East South Street
Galesburg, IL 61401
aleahy@knox.edu, (309) 341-7439

Friday Preliminary Schedule

On-site registration will take place outside the Alumni Hall room. Abstracts, updated schedules, and room assignments will be available at the registration desk. Book and technology vendors and coffee will be available in Rm 311 throughout the afternoon.

9:00AM – 12:00PM (PRE-REGISTRATION REQUIRED)

Mini-course: "How to present mathematical masterpieces to enliven all students", Michael Starbird (Rm 314)

12:45PM – 1:45PM

Plenary Talk: "Problems in Mathematics from Zero to Infinity", Paul Sally (Alumni Hall room)

2:00PM – 3:00PM (Concurrent Sessions)

Session A (30 minute talks)

Timothy Comar, Benedictine University and
Jessica M. Tyrus, Benedictine University,
"Regular and Almost Regular Stick Numbers of Knots"

Sarah Ziesler, Dominican University,
"The Fourier transform, restriction theorems and decay estimates"

Session B (30 minute talks)

Heidi Staebler, Illinois State University
"Students' Perceptions of Learning in an Inquiry-Based University
Level Mathematics Course"

Ming Jeng Lin, Roosevelt University
"Using various software programs to solve linear programming
problems."

Session C (1 hour talk)

Todd Oberg, Illinois College
"Matrices, ISBE, and NCATE - What have I learned over the past 12
months?"

Session D (1 hour panel discussion)

Susanna Epp, DePaul University

Herbert Kasube, Bradley University

"CUPM Curriculum Guide 2004 : An Overview of the Recommendations
and What They Mean for Mathematics Departments"

3:15PM – 4:15PM (Concurrent Sessions)

Session A (20 minute talks)

Paul Coe, Dominican University
"HORSEing around with Mathematics"

Mark Pinsky, Northwestern University

"Stirling's formula from the Poisson distribution"

Kari E. Fowler, Northern Illinois University

"Interaction Between Coefficient Conditions and Solution Conditions of
Differential Equations"

Session B (1 hour talk)

Nader Vakil, Western Illinois University
"Simplifying the Syntax of Mathematical Analysis"

Session C (1 hour panel discussion)

Sherry Meier, Illinois State University
Todd Oberg, Illinois College
Cynthia Stecher, Northern Illinois University
"Panel Discussion on issues and concerns related to mathematics
teacher education programs"

3:15PM – 4:45PM

Student Mathematics Contest

4:30PM – 5:30PM

ISMAA Business Meeting (Alumni Hall room)

5:00PM – 7:00PM

Student Pizza Party (SpringHill Suites Breakfast Room)

6:00PM – 8:30PM

Banquet (Blue Room, Prairie Rock Brewing Company, 1385 North
Meacham)

Art Benjamin, *Mathemagic: The Art of Mental Calculation* (7:15)

Saturday Preliminary Schedule

On-site registration will take place outside the Alumni Hall room. Abstracts, updated schedules, and room assignments will be available at the registration desk. Book and technology vendors and coffee will be available in Rm 311 throughout the morning.

8:30AM – 9:30AM

Plenary Talk: “Optimization Models in Financial Mathematics”,
John Birge (Alumni Hall room)

9:40AM – 10:40AM (Concurrent Sessions)

Session A (30 minute talks)

Roger Eggleton, Illinois State University
"Jigsaw Puzzles and Mathematics"

Leonard Blackburn, Knox College
"Definition by Recursion"

Session B (30 minute talks)

Mehmet Dik, Rockford College
"Necessary and Sufficient Tauberian Conditions for
Convergence Recovery of a Sequence out of its Abel Summability"

Filiz Dik, Rockford College
“Subsequential Tauberian Theory”

Session C (1 hour panel discussion)

Don Porzio, IMSA (organizer)
Natalie Jakucyn, Glenbrook South HS
Ray Klein, Glenbard West HS
Michelle Kolet, Schaumburg HS
"Computer Algebra Systems in Secondary School Mathematics – Their
Usage and Their Impact on Undergraduate Mathematics"

Session D (15 minute talks)

Student Contributed Paper Session

10:50AM – 11:50AM (Concurrent Sessions)

Session A (30 minute talks)

Howard Dwyer, Monmouth College
“A Demonstration of Conformal Mapping Using a Graphing Calculator”

Andrew Leahy, Knox College
“Distributed Computing in the Numerical Analysis Curriculum”

Session B (1 hour talk)

Mercedes McGowen, William Rainey Harper College
"Meeting the needs of ALL our students: How well are we doing?"

Session C (1 hour talk)

Steve Hinthorne, Principia College
"Teaching Future Elementary Teachers the History of Arithmetic
and Geometry"

Session D (15 minute talks)

Student Contributed Paper Session

12:00M – 1:00PM

Plenary Talk: “Circles, Pyramids, Spheres, and Archimedes”,
Michael Starbird (Alumni Hall room)

1:30PM – 3:30PM (PRE-REGISTRATION REQUIRED)

Interactive Session: “Using Palm PDA's in Introductory
Mathematics Courses”, Abigail Hoit and Allen Rogers (Rm 314)

REMINDERS

*Abstracts are available online at <http://ismaa.knox.edu/ismaa04.htm> or at the
registration desk.*

*An updated schedule and room assignments will also be available at the
registration desk.*

*Contact John Haverhals (jsh@bradley.edu) about participating in the student
mathematics contest.*

Accomodations

The Roosevelt University-Schaumburg campus is a commuter campus. There will be NO on-campus student accomodations available. Book accomodations early to assure the ISMAA rate.

Spring Hill Suites

1550 McConnor Parkway
Schaumburg, IL 60173
(847) 995-1500
\$69 ISMAA rate before 3/12/04
(across from Roosevelt campus; will be hosting the student pizza party)

Comfort Suites

1100 East Higgins Road
Schaumburg, IL 60173
(847) 330-0133
\$79 ISMAA rate before 3/10/04

Hampton Inn

1300 East Higgins Road
Schaumburg, IL 60173
(847) 619-1000
\$55 ISMAA rate before 3/13/04

Radisson Hotel

1725 East Algonquin Road
Schaumburg, IL 60173
(847) 397-1500
\$79 ISMAA rate before 3/22/04

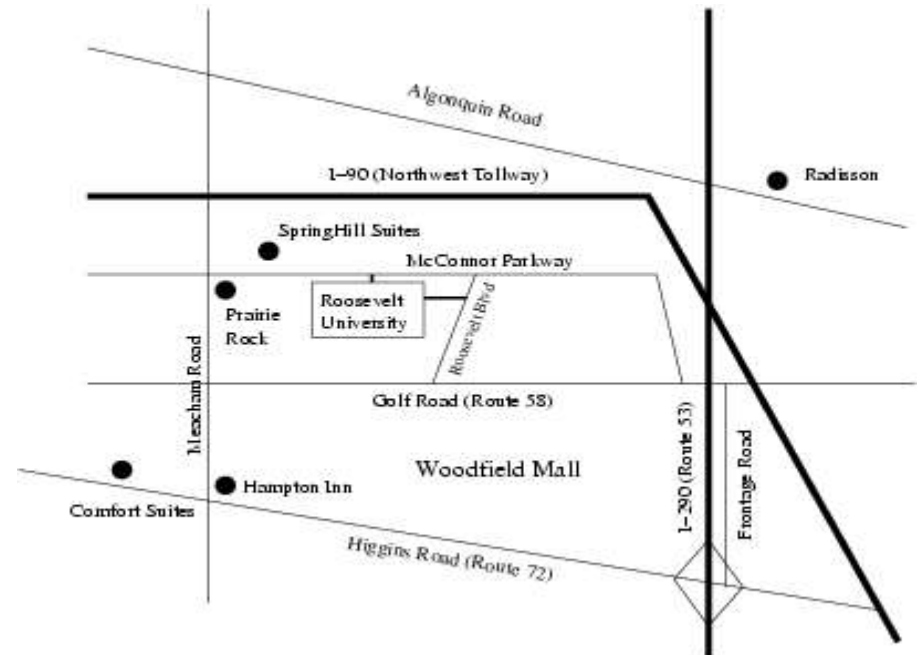
Map and Directions

Directions from I-90

From I-90 west (toward Rockford), exit at Route 53 North. From Route 53, exit at Algonquin Road (Route 62). Turn right (west) on Algonquin and go to Meacham. Turn left (south), go over the tollway. At first light (McConnor) turn left (east) to Roosevelt Campus.

Directions from I-290

From I290/Route 53, exit at Higgins Road. Continue north along the Frontage Road to Golf Road (Route 58). Turn left (west) on Golf. First stop light on your right is McConnor Parkway. Turn right on McConnor parkway to the Roosevelt Campus.



MARK YOUR CALENDARS

Illinois-Indiana-Kentucky Trisection Meeting, November 5-6, 2004

University of Evansville, Evansville, Indiana

84th Annual Illinois Section Meeting, April 8-9, 2005

Knox College, Galesburg, Illinois