

The Mathematical Association of America  
Louisiana/Mississippi Section  
80<sup>th</sup> Annual Meeting



Mississippi College  
Clinton, MS  
February 21-22, 2003

Thanks from the Section Chair:

It has been a privilege to serve as your section chair this past year. Many of you across our section have been encouraging and have willingly volunteered your time and energy to make our section vibrant. Specifically, I would like to thank the faculty, staff and students of Mississippi College and Blue Mountain College for their hard work in helping host this meeting.

I would also like to thank the members of the Executive Committee, the various section committees and those who serve on panels and discussion groups for faithfully performing their various assignments behind the scenes. Your efforts often go unnoticed but are essential.

I am also grateful to Jane Wenstrom, John Harvey, Melinda Gann and Judith Covington for their work with the creation of our section NExT program. Due to their hard work, we will look forward to starting our first class in 2004.

Further, I am thankful to our MAA representatives Ann Watkins and Michael Pearson for their participation with our section. Also, thanks to John Hornsby for graciously serving as our banquet speaker in memory of Paul Rees. Additionally, thanks to Robert Bruce of the Speaker's Bureau at NASA-Stennis for speaking at our student luncheon.

Finally, I am thankful to you for supporting this section by your participation in this meeting. From my perspective as section chair, I have been able to see how fine you are. It is always encouraging to me to share this time with you. I hope you enjoy your stay on the Mississippi College campus.

John Travis  
Chair, LA/MS Section of the MAA

Local Arrangements Committee:

- John Travis – Chair and Host
- Xavier Retnam – MS Vice Chair and Co-Host
- Registration – Debbie Woodall, Brock Ratcliff
- Contributed and Student Papers – Xavier Retnam
- Luncheons/Breakfasts – Tommy Leavelle
- Banquet – Charlotte McMath and John McMath
- Book Sellers – Teresa Floyd
- T-Shirts – Minnie Porch
- Thursday reception – Melinda Gann
- Refreshments – Charlotte McMath and Teresa Floyd
- Facilities – Tommy Leavelle
- Program – John Travis, MC Student Workers
- Computer Resources – Brock Ratcliff

Local Contact Numbers for John Travis:

601.925.3817 (office) 601.573.3792 (cell)

## Schedule of Events

Thursday, February 20, 2003

Registration 5:00-9:00 Hampton Inn

Friday, February 21, 2003

Registration 8:00-4:00 2<sup>nd</sup> Floor BCR Lobby  
Student Team Comp. 8:30-11:00 Grand Hall East  
NExT Committee 11:00-12:00 Meeting Room A  
Student Luncheon 11:15-12:30 Grand Hall East  
Dept. Head Luncheon 11:30-12:30 Meeting Room B

Opening Session 1:00-2:15 Grand Hall West  
Student Papers 2:20-5:00 West Room 2  
Contributed Papers I 2:20-5:00 East Room 2  
Contributed Papers II 2:20-5:00 East Room 3  
Open Discussion 2:45-3:45 Grand Hall West  
Panel Discussion I 4:00-5:00 Grand Hall West  
Banquet 6:30-8:30 Grand Hall East

Saturday, February 22, 2003

Registration 8:00-10:00 2<sup>nd</sup> Floor BCR Lobby  
Liaison's Breakfast 8:00-9:00 Meeting Room B  
Concerns Committee 8:45-9:20 Meeting Room A  
Contributed Papers III 9:20-10:40 West Room 2  
Contributed Papers IV 9:20-10:40 East Room 2  
Panel Discussion II 9:30-10:30 Grand Hall West  
Business Meeting 11:00-12:00 Grand Hall West  
Executive Committee 12:00-12:15 Meeting Room A

Throughout the Meeting

- Book Exhibits will be in the Board Room Friday from 8:00-5:00 and Saturday from 8:00-11:00.
- Coffee and other refreshments will be available in the Board Room. Members are encouraged to gather in this area for socializing.
- Registration will be held in the lobby outside the Grand Hall.
- Meeting Rooms A and B will be open for committee meetings.
- An exhibit of various constructions in wood by Dr. John McMath of Mississippi College will be held in West Room 2.

## Opening Session

Friday, February 21, 2003

1:00pm – 2:15pm

Welcome from Mississippi College – Lee Royce, President and Ronald Howard, Dean of Arts and Sciences  
Introduction of Invited Speaker – Michael Pearson and Dick Anderson  
Invited Presentation – Ann Watkins

## Banquet

Friday, February 21, 2003

6:00-6:30 Hor's Douvres  
6:30-8:30 Dinner  
Section Outstanding Teaching Award  
– Kathleen Lopez, Presenter  
Invited Speaker – Math and the Movies  
– John Hornsby

(Those not eating are encouraged to attend the invited presentation.)

## Business Session

Saturday, February 22, 2003

11:00am-noon

Opening Comments – John Travis  
Governor's Report – Connie Campbell  
Section NExT Committee Report – Jane Wenstrom  
Mathematical Concerns Committee Report – Clifton Wingard  
Proceedings Committee Report – James Reid  
Treasurer's Report – Leigh Ann Myers  
Outstanding Teaching Committee Report – Kathleen Lopez  
Necrology Committee Report – Kathleen Lopez  
Resolutions Committee Report – Grace Cascio-Houston  
Location and Nomination Committee Report – Georgia Miller  
Student Papers Committee Report – Xavier Retnam  
Student Competition Report – George Cochran  
Closing Comments – John Travis

**Open Discussion** – Friday, 2:45pm-3:45pm  
 Seth Oppenheimer and Kathleen Lopez – Co-Moderators  
 Jenna Carpenter

This session will be a general open discussion session dealing with issues of importance to the mathematical community. Some topics to discuss may include partial credit grading; math accreditation; The No Child Left Behind Act; grant funding; NCATE.

**Panel Discussion I** – Friday, 4:00pm-5:00pm  
 Panel: Jane Wenstrom – Moderator  
 John Harvey, Melinda Gann, Judith Covington

A committee in our section has been organizing a local faculty development program patterned after the national NExT program. Committee members will discuss plans and goals for the program.

**Panel Discussion II** – Saturday, 9:30am-10:30am:  
 Panel: Connie Campbell – Moderator  
 Michael Pearson, Ann Watkins, Judith Covington

A panel discussion focusing on several MAA programs dealing with professional enhancement and assessment. All section meeting participants interested in taking advantage of these programs are encouraged to attend.

**Contributed Papers**

Student Papers

2:20pm – 5:00pm, Friday, West Room 2, Xavier Retnam

Faculty and Ph.D. Candidate Papers

Session I 2:20pm - 5:00pm, Friday, East Room 2, Tommy Leavelle  
 Session II 2:20pm - 5:00pm, Friday, East Room 3, Jo Anne Brooks  
 Session III 9:00am – 10:40am, Saturday, West Room 2, Xavier Retnam  
 Session IV 9:00am – 10:40am, Saturday, East Room 2, Jo Anne Brooks

**Special Exhibit – Geometrical Structures in Wood**  
 8:00am-5:00pm Friday, West Room 1  
 Dr. John McMath, Mississippi College

**Discussion Sessions and Papers Sessions at a Glance:**

Discussion Sessions Friday	SESSION I General Mathematics Friday, 2:20 - 5:00 EAST ROOM 2	SESSION II Mathematics Education Friday 2:20-5:00 EAST ROOM 3	STUDENT PAPERS Undergrad/Grad Friday 2:20-5:00 WEST ROOM 2
2:20	<i>A Fishbowl Activity-Demonstrating Relative Risk</i> - Conway Link, Louisiana State University, Shreveport	<i>Teaching Induction thru Hands-on Activities</i> - Brian Kelly, University of Louisiana, Monroe	<i>The Koch Snowflake</i> - Michael Kraus & Hunter Poitevint, Southeastern Louisiana University
2:40	Open Discussion 2:45-3:45 Grand Hall West	<i>Bézier Curves</i> - Kent Neuerburg, Southeastern Louisiana University	<i>Maximizing and Minimizing With and Without Calculus</i> - Matthew Milton, Southeastern Louisiana University
3:00	<i>What Do You Want To Talk About?</i>	<i>Don't Fret About It, I'm Just Pickin'</i> - Ben Rushing, Northwestern State University of LA	<i>Volumes of Solid of Revolution around Oblique Axes</i> - Alisha Dugopolski, Southeastern Louisiana University
3:20		<i>The Frobenius Coin Problem</i> - Danny Acosta, Southeastern Louisiana University	<i>Characteristic Polynomials of one-parameter classes of matrices</i> - Loretta L. George, Southeastern Louisiana University
3:40		<i>On Non-Separating Cocircuits in Binary Matroids</i> - Haidong Wu, University of Mississippi, Oxford	<i>DS-divisors of Positive Integers</i> - Nicole Robichaux, Loyola University
4:00	Panel Discussion I 4:00-5:00 Grand Hall West	<i>An Attribute Control Chart for Monitoring Markov Process</i> - Debbie Shepherd, LSU	<i>Steady State Planar Flow of an incompressible, irrotational fluid</i> - John Lestrade, Mississippi State University
4:20	Section NExT	<i>What is a Vector in Hyperbolic Geometry? And What is a Hyperbolic linear transformation?</i> - Edgar Reyes, Southeastern Louisiana University	<i>Wave Focusing</i> - Karolina Sarnowska, Mississippi State University
4:40		<i>Solving Problems with Dynamic Geometry</i> - Jose Contreras, University of Southern Mississippi	<i>The AEP 300 as a method for Identifying and Localizing Cognitive Origins of Musical Phenomena</i> - Ethan Jordan, University of Louisiana, Lafayette

**Discussion  
Session  
Saturday**

**SESSION III  
General Mathematics  
Saturday 9:00-10:40  
WEST ROOM 2**

**SESSION IV  
Miscellaneous  
Saturday 9:00-10:40  
EAST ROOM 2**

9:20

**On the Fibonacci Sequence** - Syrous Marivani, Louisiana State University, Alexandria.

**Paths for Biped** - Margaret Maxfield, Louisiana Tech University [Prof. Emeritus]

9:40

Panel Discussion II  
9:30-10:30  
Grand Hall West  
*What Can the MAA offer you?*

**When are the functions inverse and reciprocal equal?** - Bruce Ebanks, Mississippi State University

**Results from an Arithmetic Test for Preservice Elementary Teachers** - Bonnie Oppenheimer, MUW, Columbus

10:00

**The Central Gravity of Plane Regions, Locus Problems, and Geometry**- Tilak de Alwis, Southeastern Louisiana University

**The Nearest Line to a Set of Points in the Plane** - David Gurney, Southeast Louisiana University

10:20

**Did Euclid know that 5 is Prime?** - Roger Waggoner, University of Louisiana, Lafayette.

**Second Order Sturm-Liouville Difference Equations with Parameters in the Boundary Conditions** - Aihua Li, Loyola University, New Orleans/Virginia Tech

**MAA Invited Speaker – MAA President Ann Watkins**  
1:00pm – Friday, February 21, 2003

**Fallacies in Elementary Statistics**

Abstract: We will have some fun demolishing several enticing examples that commonly are used in statistics textbooks to illustrate the mean, median, and mode. A little calculus backed up by a little data show that these concepts are not as intuitive as they appear.

Biography: Ann Watkins is Professor of Mathematics at California State University, Northridge. She has just finished two years as president of the Mathematical Association of America, having served previously as second vice-president, governor of the Southern California Section, chair of the Coordinating Council on Education, and co-editor of the *College Mathematics Journal*. She is a former chair of the Advanced Placement Statistics Development Committee and the co-author or co-editor of thirteen books including *Activity-Based Statistics* and *Statistics in Action*. She was selected as the 1994-1995 Cal State Northridge Outstanding Professor and won the 1997 Cal State Northridge Award for the Advancement of Teaching Effectiveness. In 1999, she was elected a Fellow of the American Statistical Association.

**Banquet Invited Speaker – John Hornsby**  
7:00pm – Friday, February 21, 2003

**Math Class Goes to Hollywood**  
(In memory of Paul Rees – LSU)

Abstract: "Math Class Goes to Hollywood" is a collection of good, bad, and sometimes really ugly scenes dealing with elementary mathematics that have appeared in major motion pictures and television over the years. Now readily available on tape and disc, these scenes can be used in classes of today's students who have grown up not knowing what it was like to be without movie channels and video stores.

Biography: John Hornsby is a native of Louisiana and currently resides in Mandeville. He spent 7 years teaching at the high school level and 16 years as an Instructor at the University of New Orleans. He retired from teaching in 1996 to devote more time to his family and his writing. John took Math 1 at LSU in 1967 from Paul Rees using the 5th edition of his College Algebra text (taught by then-graduate student Wally Pye of USM). He was fortunate enough to meet Paul, and talk and laugh with him many times during his later years. This talk is given by John to honor the memory of Paul Rees.

**Special Exhibit – Geometrical Sculptures in Wood**

8:00am-5:00pm Friday, West Room 1  
Dr. John McMath, Mississippi College

John McMath is Professor of Mathematics at Mississippi College. He received his Ph.D. from Louisiana Tech University, M.S. from Texas Tech University and B.A. from Texas A & M University.

John enjoys woodworking and has constructed a number of items that are both beautiful and mathematically intriguing. The Moebius Strip pictured on the back of this program is an example from the exhibit and is also featured on the back of the meeting T-shirt.

**Student Luncheon Speaker** – Robert Bruce/ John W. Bailey, Jr.  
11:30-12:30 – Friday, February 21, 2003

### **How Math Affects My Life at Work**

Biography: Robert Bruce serves as Supervisor for the Technology Development & Transfer Office at the John C. Stennis Space Center. Robert leads the Technology Development & Transfer Office in the NASA John C. Stennis Space Center Program Integration Office. The Technology Development & Transfer Office is responsible for research and development of new technologies from all sources, including the commercial, academic, and government sectors, in order to support propulsion testing, earth science, and the Stennis Space Center institution, by improving safety, efficiency, and effectiveness.

After obtaining a Bachelor of Science in Aerospace Engineering from the United States Naval Academy in Annapolis, Maryland, in 1974, Robert served 5 years of active duty in the Nuclear Navy. Then, having earned his Master of Engineering in Engineering Management from Tulane University in 1980, he began at SSC in June of 1980, as a Support Contractor Project Engineer in the Test Complex. He joined NASA at SSC in September, 1983, and has held a number of leadership roles responsible for planning the future of the Stennis Space Center, as well as project management of major test projects and test facility construction and modification projects. Robert continues to serve as a Captain (O-6) in the Naval Reserve.

John W. Bailey Jr. is the Intellectual Property Manager and is responsible for the Dual Use Technology Development Program in the Technology Development & Transfer.

After obtaining a Bachelor of Science in Electrical Engineering from the University of South Alabama in Mobile, Alabama in 1988, John began his engineering career as a civil servant with the United States Air Force (USAF), at Keesler Air Force Base in Biloxi, Mississippi. While with the USAF he received his Master of Business Administration from University of South Alabama in 1998. After receiving his M.B.A. he looked for an opportunity in which to apply both his engineering and business skills. In 1999, he joined NASA at John C. Stennis Space Center, as the Intellectual Property Manager in the Office of Technology Transfer.

*All students and their faculty advisors are encouraged to enjoy this complementary luncheon. Special thanks to those individual and institutional section members who help support this event.*

The following companies have provided funds for the coffee and other refreshments available during this meeting:

Jan McMillan  
Executive Sales Representative  
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Addison Wesley/Benjamin Cummins

Special Thanks for assistance:

Mississippi College Bookstore  
Alumni Hall  
MC

The following institutions are current institutional members of our section. Funding from these memberships helps support the section's student activities:

Louisiana School for Math, Science and Arts

McNeese State University

Mississippi College

Mississippi State University

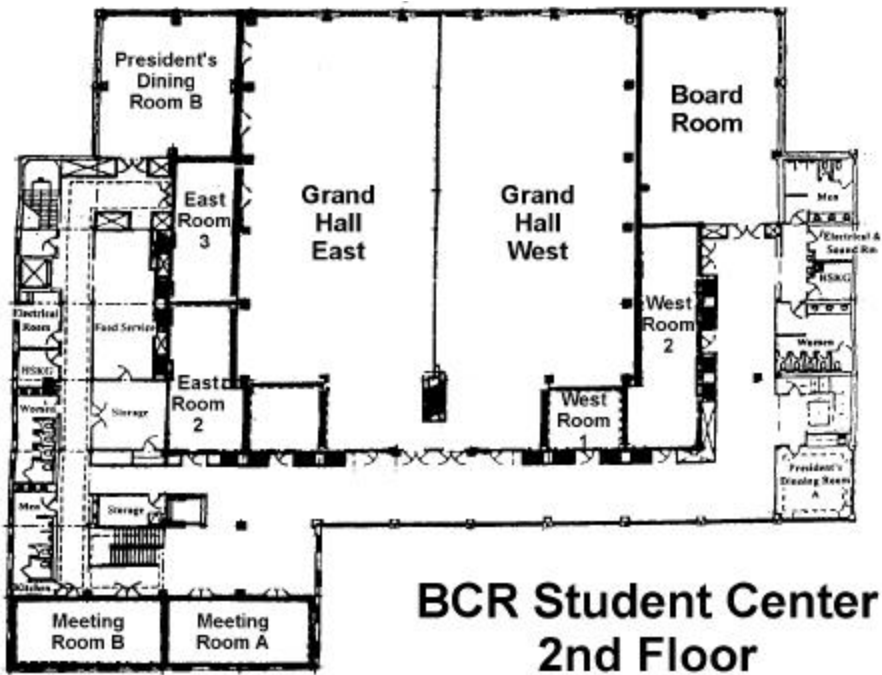
Northwestern State University of Louisiana

Southeastern Louisiana University

Tulane University

University of Louisiana at Lafayette

University of Mississippi



**Möbius Strip in Wood**

Dr. John McMath  
Mississippi College

