A Word from the Section Chair:

Welcome to Mississippi State University. I hope you enjoy your stay in Starkville and find the meeting useful and fun. I am especially pleased to welcome all of the students and trust that some of you will consider Mississippi State University when thinking about your graduate school plans.

I would like to thank the members of the Executive Committee, without whom I would have collapsed into a blob of quivering jelly without a clue of what to do. I would also like to thank the various Section committees and those who volunteered to serve on panels and discussion groups for their faithful work behind the scenes. Your efforts are vital to the continued success of our Section activities.

I am also grateful to Jenna Carpenter who graciously took the reins of our section NExT when Jane Wenstrom took a leave of absence. We are delighted to host our Third Section NExT class this year.

We are so pleased to have the support and participation of our MAA representatives, MAA Polya Lecturer, Arthur Benjamin, and MAA Director of Programs and Services and hometown boy, Michael Pearson, in our Section Meeting activities. This meeting would not have happened without the cheerful and able assistance of Mississippi vice-chair Vivien Miller and Mississippi State University Department of Mathematics and Statistics Administrative Assistant Lydia Scott, who had to handle numerous questions from your less than organized chair.

Finally, I am thankful to you for supporting this Section by your participation in this meeting. It has been a pleasure to serve as your Section Chair this year. I know what a great group of people we have in this section and I hope we have given you a meeting you are glad you attended.

Once again, welcome to Mississippi State University and Starkville!

Seth F. Oppenheimer
Chair, LA/MS Section of the MAA

Local Arrangements:
- Chair/Vice-Chair – Seth F. Oppenheimer and Vivien G. Miller
- Contributed & Student Papers – Robert C. Smith
- Facilities/Exhibits – Seth F. Oppenheimer
- Food – Seth F. Oppenheimer
- Meeting Website/Computer Resources – John Travis
- Program – Seth F. Oppenheimer and Vivien G. Miller
- T-Shirts – Vivien G. Miller and MSU KME
Schedule at-a-Glance
Note that all rooms except for Allen 14 and Memorial Hall are in the Wise center. E-mail will be available via wireless access with a new user name and password posted daily.

Thursday, March 1, 2007
Registration 5:00-8:00 Holiday Inn Express
Student Integration Bee 7:00-9:00 Allen 14

Friday, February 17, 2006
Registration 8:00-4:00 Wise Center Foyer
Exhibits 8:00-5:00 Wise Center Foyer
Committee Meeting Room 8:00-5:00 Academic Affairs
Student Team Competition 8:30-11:00 Memorial Hall
Shuttles for students leave from Wise at 7:45 and 8:10 to Memorial Hall
Section NExT or New faculty I 8:00-9:00 Seminar room
Section NExT or New faculty II 9:00-10:00 Wise Auditorium
Section NExT or New faculty II 10:00-11:00 Wise Auditorium
Technology Session 9:00-10:30 Allen Hall
Student Luncheon 11:30-12:30 Memorial Hall

Shuttles from Memorial Hall to Wise at 12:35 and 12:50
Dept. Head Luncheon 11:45-12:45 Pegasus Cafeteria
Opening Session 1:15-2:30 Wise Auditorium
Student Papers 2:45-4:45 Tait-Butler
Contributed Papers I 2:45-4:45 Freshman Classroom
Col. Algebra Guidelines 2:45-3:45 Wise Auditorium
Music & Math Talk 3:45-4:45 Wise Auditorium
Reception 5:30-7:00 Memorial Hall
Informal Gathering 9:00 p.m.–? Holiday Inn Express

Saturday, February 18, 2006
Liaison’s Breakfast 7:30-8:30 Pegasus Cafeteria
Exhibits 8:00-11:00 Wise Center Foyer
Committee Meetings 8:00-11:00 Conference Room R2104
Registration 8:30-10:00 Wise Center Foyer
Contributed Papers II 8:00-9:45 Tait-Butler
Contributed Papers III 8:00-9:45 Freshman Classroom
Panel Session 8:45-9:45 Auditorium
Outstanding Teacher 10:00-11:00 Auditorium
Address
Business Meeting 11:15-12:15 Auditorium
Executive Committee 12:30-12:45 Auditorium

Throughout the Meeting
- Exhibit Room, including textbooks, MAA Book Sale, Graduate School Information, and Faculty Professional Development Information, will be in Wise Center Foyer Friday from 8:00-5:00 and Saturday from 8:00-11:00.
- E-Mail and internet access will be available via wireless internet. We will post the user name and password daily.
- Registration will be held in Wise Center Foyer
- On Friday Conference Room (L2115) will be open for Committee Meetings and on Saturday Conference Room R2104 be open for Committee Meetings.

Session Information

Section NExT and New Faculty Session
Friday, March 2, 2007

Welcome to the Section! & What can MAA do for you? Frank Serio (Northwestern) and Mike Pearson (MAA) 8:00-9:00
Session I 8:00-9:00 Seminar Room in Wise

How to get tenured and promoted-Bruce Ebanks (MSU), Dorothy Kerzel (MUW), John Travis (MC), and Jenna Carpenter (LA Tech)
Session II 9:00-10:00 Wise-Auditorium

Tips on Building a Successful Research Program – James Reid (Univ. of Miss.), Mark Schlatter (Centenary) and Richard DeVault (Northwestern State)
Session III 10:00-11:00 Wise-Auditorium
This will be a tour of and a discussion of Mississippi State University's new Math Domain computer lab which is used in intermediate and college algebra courses. Kim Walters and Marjorie Crittenden (Both of MSU)

**Student competition**
Shuttle for students leave from Wise at 7:45 and 8:10 to Memorial Hall. The competition will start at 8:30 and end at 11:00 am.

**Student Luncheon Speaker**
Arthur Benjamin, MAA George Polya Lecturer
11:30-12:30 – Friday, March 2, 2007, Memorial Hall

**Mathemagics: Secrets of Mental Math**
Dr. Arthur Benjamin is a mathematician and a magician. In his entertaining and fast-paced performance, he will demonstrate and explain how to mentally add and multiply numbers faster than a calculator, how to improve your memory for numbers, how to figure out the day of the week of any date in history, and other amazing feats of mind. He has presented his mixture of math and magic to audiences all over the world.

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

Shuttles will leave from memorial hall returning to the wise center at 12:35 and 12:50
Reception
Friday, March 2, 2007
Memorial
5:30-7:00
Mississippi State University Cheese, Fruit, Soft Drinks

Exhibit Room
Wise Center Foyer
8:00 a.m.–5:00 p.m. Fri., March 2
8:00–11:00 a.m. Sat., March 3

Publishers:
Addison-Wesley Publishing
McGraw-Hill Publishing
Prentice-Hall Publishing
Thomson Learning

MAA Book Sale

Professional Development Information for Faculty

Friday Morning Breakfast Break sponsored by Melissa Fischer of Addison-Wesley Publishing. 8:00 am – 11:00 am, with fresh food arriving at 9:45

Friday Afternoon Cookie Break sponsored by Jan McMillan of Thomson Learning: Brooks/Cole - Duxbury – Wadsworth
2:30 pm – 5:00 pm

Saturday Morning Breakfast Break sponsored by Susan House of McGraw-Hill Publishing. 8:00 am – 11:00 am, with fresh food arriving at 9:45

Contributed papers II
Saturday, March 3
Tait-Butler
8:00-9:45

Contributed papers III
Saturday, March 3
Freshman Classroom
8:00-9:45

Panel Session
Saturday March 3, 2007
Wise-Auditorium
8:45-9:45
You want me to teach what??!!"- Support for Mathematics Faculty Teaching Pre-Service Teacher Courses- Kathleen Lopez (ULL), Bonnie Oppenheimer (MUW), Dana Franz (MSU), Johnnie Lott (U of Miss.)

Business Meeting
Saturday, March 3, 2007
11:15-12:15
Wise-Auditorium
Opening Comments – Seth F. Oppenheimer
Governor’s Report – Roger Waggoner
Section NExT Report – Jenna Carpenter
Proceedings Committee Report – James Reid
Treasurer’s Report – Judith Covington
Outstanding Teaching Committee Report and Award – Randy Willis
Necrology Committee Report – John Travis
Resolutions Committee Report – Kathleen Lopez
Location and Nomination Committee Report – Frank Serio
Student Papers Committee Report – Robert Smith
Student Competition Report – George Cochran
Closing Comments – Seth F. Oppenheimer
Biography: Arthur Benjamin earned his B.S. in Applied Mathematics from Carnegie Mellon and his PhD in Mathematical Sciences from Johns Hopkins. Since 1989, he has taught at Harvey Mudd College, where he is Professor of Mathematics and past Chair. In 2000, he received the Haimo Award for Distinguished Teaching by the Mathematical Association of America.

His research interests include game theory and combinatorics, with a special fondness for Fibonacci numbers. Many of these ideas appear in his book (co-authored with Jennifer Quinn), "Proofs That Really Count: The Art of Combinatorial Proof", published by MAA. In 2006, that book received the Beckenbach Book Prize by the MAA. Professors Benjamin and Quinn are the co-editors of Math Horizons magazine, published by MAA.

Art is also a magician who performs his mixture of math and magic to audiences all over the world, including the Magic Castle in Hollywood. In 2005, Reader's Digest called him "America's Best Math Whiz."

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### Papers Sessions at-a-Glance

#### Student Papers – Friday 2:45-4:55 p.m., Tait-Butler classroom

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter</th>
<th>University</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2:45-3:00</td>
<td>Amber Williams</td>
<td>LSU-A</td>
<td>Finding Correlations and Covariance Matrices</td>
</tr>
<tr>
<td>3:00-3:15</td>
<td>Jonathan O'Rourke</td>
<td>USM</td>
<td>On Congruence Relations in Groups and Rings</td>
</tr>
<tr>
<td>3:15-3:30</td>
<td>Jay Monte</td>
<td>U of LA Lafayette</td>
<td>Data Fitting of a Three-Stage Nonautonomous Discrete-Time Anuran Population Model</td>
</tr>
<tr>
<td>3:30-3:45</td>
<td>Tom Nguyen</td>
<td>U of LA Lafayette</td>
<td>A Discrete Three Stage Population Model: Continuous Versus Seasonal Reproduction</td>
</tr>
<tr>
<td>3:45-4:00</td>
<td>Matthew Arbo</td>
<td>SELU</td>
<td>Fermat's Last Theorem in the Space of Linear Functions</td>
</tr>
<tr>
<td>4:00-4:15</td>
<td>Patricia Kulhman</td>
<td>Northwestern State U</td>
<td>Wagering in Final Jeopardy!</td>
</tr>
<tr>
<td>4:15-4:30</td>
<td>Kristen Stewart</td>
<td>McNeese State</td>
<td>Bicyclic Antiautomorphisms of Mendelsohn Triple Systems with Cycles of Different Lengths</td>
</tr>
<tr>
<td>4:30-4:45</td>
<td>Eric Stewart</td>
<td>McNeese State</td>
<td>Necessary Conditions for 1, M, N-Antiautomorphisms of Directed Triple Systems</td>
</tr>
</tbody>
</table>
## Contributed Papers Session I – Friday 2:45-4:45 p.m, Tait-Butler classroom

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter</th>
<th>University</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday</td>
<td>Julian</td>
<td>LSU-A</td>
<td>Inverse Limits and Endpoints of a Chainable Continua</td>
</tr>
<tr>
<td>2:45-3:00</td>
<td>Doucet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00-3:15</td>
<td>Larry</td>
<td>LSU-A</td>
<td>Remarks on the Closed Graph Theorem</td>
</tr>
<tr>
<td>3:15-3:30</td>
<td>Roger</td>
<td>U of LA at Lafayette</td>
<td>How Many Lottery Tickets Should you Buy?</td>
</tr>
<tr>
<td>3:30-3:45</td>
<td>David</td>
<td>SELU</td>
<td>On the Chi-Square Goodness-of-Fit test</td>
</tr>
<tr>
<td>3:45-4:00</td>
<td>Gerard</td>
<td>McNeese State University</td>
<td>Topics in Geometric Function Theory</td>
</tr>
<tr>
<td>4:00-4:15</td>
<td>Ken S. Li</td>
<td>SELU</td>
<td>Chaos, Probability and Orthogonal Polynomials</td>
</tr>
<tr>
<td>4:15-4:30</td>
<td>David R.</td>
<td>U of LA at Monroe</td>
<td>First Round NCAA Tournament Odds can be Predicted with 99.3% Accuracy</td>
</tr>
<tr>
<td>4:30-4:45</td>
<td>Rick Mabry</td>
<td>LSUS</td>
<td>A Proof of the Pizza Conjecture</td>
</tr>
</tbody>
</table>

## Session II – Saturday 8:00 a.m. -9:45 a.m., Tait-Butler classroom

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter</th>
<th>University</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-8:15</td>
<td>Jose</td>
<td>USM</td>
<td>Prominent Mathematicians’ Difficulties with Mathematical Concepts</td>
</tr>
<tr>
<td>8:15-8:30</td>
<td>John</td>
<td>USM</td>
<td>Combinatorial Criteria for Grobner Basis Computation</td>
</tr>
<tr>
<td>8:30-8:45</td>
<td>Michael</td>
<td>USM</td>
<td>Derivation of Particular Solutions for Berger Equation</td>
</tr>
<tr>
<td>8:45-9:00</td>
<td>Jenette</td>
<td>USM</td>
<td>The Method of Fundamental Solution with the Dual Reciprocity Method</td>
</tr>
<tr>
<td>9:00-9:15</td>
<td>Jiu</td>
<td>USM</td>
<td>A Spectral Theorem for Updated Matrices and its Application to the Google Matrix</td>
</tr>
<tr>
<td>9:15-9:30</td>
<td>Sunwook</td>
<td>USM</td>
<td>Timelike Minimal Surfaces in Minkowski 3-Space</td>
</tr>
<tr>
<td>9:30-9:45</td>
<td>Vic</td>
<td>U of LA at Lafayette</td>
<td>Differentiating the Tangent Function</td>
</tr>
</tbody>
</table>

## Session III  Saturday 8:00 a.m.-9:45 a.m., Freshman Classroom

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter</th>
<th>University</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-8:15</td>
<td>Karen</td>
<td>LSU-A</td>
<td>Fibered Products and Continuous Decompositions into Cell-like Continua</td>
</tr>
<tr>
<td>8:15-8:30</td>
<td>Laure</td>
<td>Georgia College</td>
<td>Focusing Attention on Retention Through Advising</td>
</tr>
<tr>
<td>8:30-8:45</td>
<td>Roberta</td>
<td>McNeese State University</td>
<td>Geometry Projects: A High School – College Collaboration</td>
</tr>
<tr>
<td>8:45-9:00</td>
<td>Jose</td>
<td>USM</td>
<td>Generating Problems, Conjectures and Theorems with Sketchpad</td>
</tr>
<tr>
<td>9:00-9:15</td>
<td>Vijaya</td>
<td>Jackson State</td>
<td>(E,M)-Topological Functors on Topological Algebras</td>
</tr>
<tr>
<td>9:15-9:30</td>
<td>Raghu</td>
<td>Jackson State</td>
<td>Two-Level Atoms: a Normal Form Approach</td>
</tr>
<tr>
<td>9:30-9:45</td>
<td>Edgar</td>
<td>SELU</td>
<td>Octavian Integers</td>
</tr>
</tbody>
</table>
Special Thanks:

The following groups helped support the conference:

The Department of Mathematics and Statistics, Mississippi State University
Greater Starkville Development Partnership
Thomson Learning and Jan McMillan
McGraw-Hill and Susan House
Prentice-Hall and Katie Hinkle
Addison-Wesley and Melissa Fischer

Institutional Partners:

The following institutions are current Institutional Partners of our Section. Funding from these partnerships helps support the Section’s student activities:

- Alcorn State University
- McNeese State University
- Mississippi College
- Mississippi State University
- Mississippi University for Women
- Northwestern State University
- University of Louisiana-Lafayette
- University of Mississippi
- Tulane University