

The Mathematical Association of America
Louisiana/Mississippi Section
86th Annual Meeting



Mississippi College
Clinton, MS
March 5 -7, 2009

Thanks from the Section Chair:

Thank you for the opportunity to serve as the section chair for the past year. I have had several opportunities to be involved in the work of the MAA during the year, culminating with this meeting. A successful meeting is the result of the efforts of many people. It would be impossible for me to thank each person who has contributed individually, but let me take this opportunity to tell you about some of those who have helped.

Let me start with the mathematics faculty and students of Mississippi College. I have found them to be eager to aid me in whatever way possible. Thank you for saying "yes" when I asked for one thing more. The staff and administration have also been helpful in making the facilities available for us. A big thanks is in order for Sheri Bobo, coordinator of these facilities, and Mike Prince of Sodexo for coordinating the food arrangements.

The work of the section depends on the Executive Committee. I thank them for all they have done during this year. Let me also extend thanks to David Bressoud, David Sutherland, Eric Batten, George Cochran and Lynne Tullos for their contributions to this meeting. A special thanks is also due to the vendors who provided exhibits and our refreshments. Many thanks to Jenna Carpenter for organizing our section NExT program this year. I appreciate Jennifer Wilson, Jeff Hughes and Richard DeVault for participating in the panel discussion. Untold hours went into the preparation of the student activities, and a big thanks to all those who prepared and will judge the various competitions.

Finally, thanks to each of you who decided to participate in this meeting. The success of the MAA depends on the people who choose to participate. Each student in the integration bee and the team competition, each student presenter, each faculty presenter, each panel member and each committee member have added their part to the success of the meeting. I hope you enjoy the meeting and your time on the campus of Mississippi College. If we can help you in any way while you are here, please let us know.

Tommy Leavelle
Chair, LA/MS Section of the MAA

Local Contact Number for Tommy Leavelle: 601-316-5587

Schedule of Events

Thursday, March 5, 2009

Registration	4:30 -7:30 pm	BCR Student Center
Integration Bee	6:30 – 9:00 pm	Anderson Hall East
Section NExT Dinner	6:30 pm	Newk's in Clinton

Friday, March 6, 2009

Registration	8:00 am - 4:00 pm	BCR Student Center
Student Team Comp.	8:30 -11:00 am	Anderson Hall East
NExT Session I:	8:00 - 9:00 am	Meeting Room A
NExT Session II	9:15 - 10:15 am	Meeting Room A
NExT Session III	10:30 - 11:30 am	Meeting Room A
Student Luncheon	12:00 - 1:00 pm	Anderson Hall East
Dept. Head Luncheon	12:00 - 1:00 pm	Pres. Dining Room B
Opening Session	1:00 - 2:15 pm	Anderson Hall West
Student Papers	2:30 - 4:15 pm	West Room 2
Contributed Papers I	2:30 - 4:45 pm	East Room 2
Contributed Papers II	2:30 - 4:45 pm	Meeting Room A
Panel Discussion	2:30 - 3:30 pm	Anderson Hall West
Banquet	6:30 - 8:30 pm	Anderson Hall East

Saturday, March 7, 2009

Registration	8:00 -10:00 am	BCR Student Center
Liaison's Breakfast	8:00 - 9:00 am	Pres. Dining Room B
Contributed Papers III	9:00 -10:00 am	East Room 2
Student Papers	9:00 - 9:45 am	West Room 2
TI Presentation	9:30 - 10:00 am	Anderson Hall West
Invited Talk	10:15 - 11:00 am	Anderson Hall West
Business Meeting	11:00 - 12:00	Anderson Hall West
Executive Committee	12:00	Pres. Dining Room B

Throughout the Meeting

- Book Exhibits will be in the Board Room Friday from 12:30 - 5:00 and Saturday from 8:30-11:00.
- 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 Anderson Hall.
- Meeting Room B will be open for committee meetings.

Opening Session

Friday, March 6, 2009

1:00 pm – 2:15 pm

Welcome from Mississippi College – Lee Royce, President
Introduction of Invited Speaker – Michael Pearson
Invited Presentation – David Bressoud, MAA President

Calculus as a High School Course

Abstract:

Over the past quarter century, 2- and 4-year college enrollment in first semester calculus has remained constant while high school enrollment in calculus has grown tenfold, from 50,000 to 500,000, and continues to grow at 6% per year. We have reached the cross-over point where each year more students study first semester calculus in US high schools than in all 2- and 4-year colleges and universities in the United States. There is considerable overlap between these populations. Most high school students do not earn college credit for the calculus they study. This talk will present some of the data that we have about this phenomenon and its effects and will raise issues of how colleges and universities should respond.

Biography:

David Bressoud is President of the Mathematical Association of America and DeWitt Professor of Mathematics at Macalester College in St. Paul, Minnesota. Dr. Bressoud grew up in Bethlehem, Pennsylvania, and graduated with a bachelor's degree from Swarthmore College in Swarthmore, Pennsylvania. Following his graduation, he went to Antigua in the West Indies with the Peace Corps and taught mathematics and science at Clare Hall School. He entered graduate school at Temple University in Philadelphia and earned a PhD degree. He taught at Pennsylvania State University from 1977 – 1994 and at Macalester College from 1994 to the present time. He has written an impressive number of research articles in number theory and combinatorics, and he has authored a number of books on topics which include real analysis, calculus, and number theory. In addition to his research, Dr. Bressoud has a passion for teaching. He has a concern for undergraduate education and the effective dissemination of mathematical knowledge.

Student Luncheon

12:00-1:00 – Friday, March 6, 2009

Speaker – David Sutherland

Mathematics: Get Involved

Biography:

David C. Sutherland is Associate Provost and Professor of Mathematics at Hendrix College in Arkansas. He is currently serving a three-year term as President of Pi Mu Epsilon, the national honorary mathematics society for undergraduates that has 335 chapters at colleges and universities around the country. He received a B.A. degree from Hendrix College and an M.A. and Ph.D. from North Texas State University where his area of specialty was combinatorics. He has been the faculty advisor for seven student publications in the Pi Mu Epsilon Journal; four of those papers received Andree Awards.

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.

Panel Discussion

Friday, 2:30 - 3:30 pm

Calculus in Various Environments

Panel: Tommy Leavelle – Moderator

Jennifer Wilson (Northwest Rankin High School), Jeff Hughes (Hinds Community College), Richard DeVault (Northwestern Louisiana), David Bressoud (Macalester College)

Calculus in various settings will be discussed – high school, community college, and senior college environments.

Banquet

Friday, March 6, 2009

6:30 - 8:30 pm

Dinner

Program – *Life and Legacy of R. D. Anderson*

presentation provided by Lynne Tullos

Special Announcement

Presentation

Saturday, March 7, 2009

9:30 - 10:00 am

Your Involvement in the Math Forward Program

Eric Batten, Texas Instruments

Invited Talk

Saturday, March 7, 2009

10:15 - 11:00 am

2008 Outstanding Teacher Lecture

George Cochran, LSU

Business Session

Saturday, March 7, 2009

11:00 am – 12:00 pm

Session I
Friday, March 6
2:30 – 4:45 pm
East Room 2

Session II
Friday, March 6
2:30 – 4:30 pm
Meeting Room A

Student Papers
Undergraduate
Friday, March 6
2:30 – 4:15 pm
West Room 2

2:30	Relationships between a Group and its Automorphism Group – Gary Walls, Southeastern LA Univ.	Russian Peasant Multiplication and Binary Numeration – Roberta Yellott, McNeese	Hymni Wind-Powered Charger Data Approximations- Anna Meade, MSU
2:45	Legendre Collocation Method for Solving Delayed Optimal Control Problem – Ken S. Li, Southeastern LA Univ.	Secrets, Ciphers, and Long Division – Lenny Ormas, McNeese	Paths of Least Distance for Polytopes of Higher Dimensions – Peter Thayer, UL Lafayette
3:00	A Multidimensional Look at Regression Lines – David Gurney, Southeastern LA Univ.	A Redesigned Mathematics Course for Business Majors - Kathleen Lopez, (Michael Totaro, Lee Price), UL Lafayette	Generalized Mersenne and Fermat Primes - Catherine Putnam, Ole Miss
3:15	Pell's Type and Fibonacci Like Sequences – Syrous Marivani, LSU Alexandria	Significance of Learning Community Effects of Attitudes Toward Mathematics and Mathematics Self-Efficacy - Dohyoung Ryang, USM	A Study of Tag Retention in <i>Hyla cinerea</i> - Geoffrey Goudeau, UL Lafayette
3:30	Analytic Value Function in Multi-Objective Optimization Faisal Kaleem, UL Monroe	Can YOU Do Math on a Post-It? – Mary E. Reeves, Northwestern LA	Dynamics of a Discrete-Time Three Stage Population Model: Equilibria Analysis and Parameter Estimation – Anthony Mai, UL Lafayette
3:45	The Probability Distribution of (0,1)-Matrix Determinants – David Hare, UL Monroe	Mathematics Experiences Laboratory (MEL) – Leigh Ann Myers, Mary Reeves, & Eric Fountain, Northwestern LA	Differential Forms and the Generalized Stokes' Theorem – Thomas Scarborough, McNeese
4:00	General Discrete Juvenile-Adult Population Model – Ross Chiquet, UL Lafayette	STEM Images:Pilot II - Bonnie Oppenheimer, MUW	Nena Higginbotham Northwestern LA
4:15	Probability in the Construction of Spaghetti – Haimeng Zhang, MSU	A Brief History of the Infinite - Jose Contreras, USM	
4:30	Euclidean Algorithm, the Euler Phi Function, and Their Applications in Theory and Practice – M.R. Khadivi, JSU	Determinants in Wonderland - John Perry, USM	

Session III
 Saturday, 9:00 – 10:00 am
 East Room 2

Student Papers
 Graduate
 Saturday, 9:00 – 9:45 am
 West Room 2

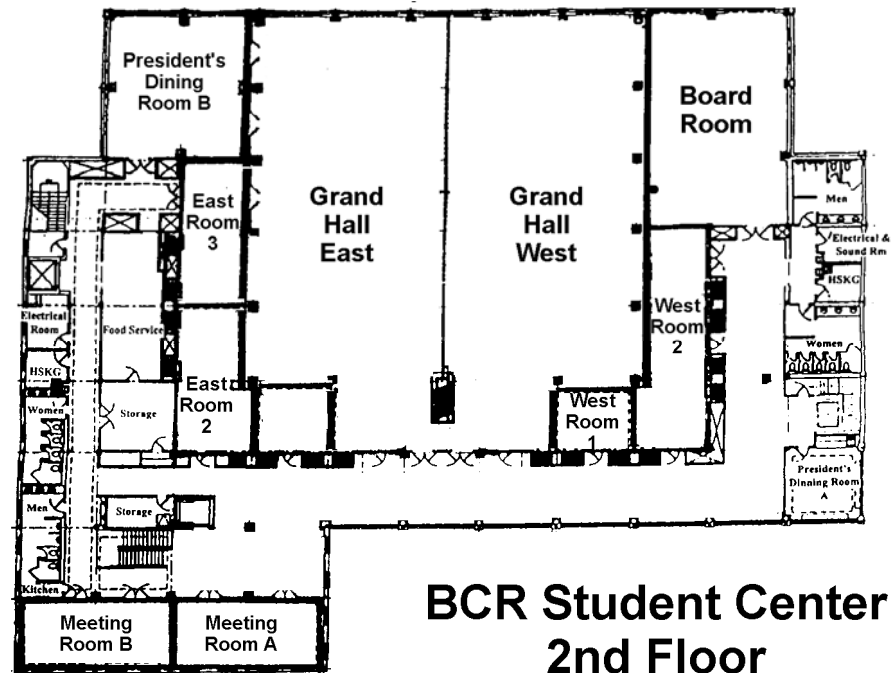
9:00	Considerations of Low Order Control Design for the Klein-Gordon Relativistic Wave Equation – Katie Evans (LA Tech) & Belinda Batten (OregonState)	Competitive Exclusion in a Discrete Stage-Structured Model with Application to Blue and Yellow Irises – Pei Zhang, UL Lafayette
9:15	How to Draw a Rotationally Symmetric Brunnian Venn Diagram on 5 Sets – Rick Mabry, LSU Shreveport	A Population Model with Nonlinear Boundary Conditions and Constant Yield Harvesting – Jerome Goddard II, MSU
9:30	Solving Problems with Sketchpad - Jose Contreras, USM	A Stochastic Approach to Asset Assessment Process – Serhat Yildiz, Southeastern LA
9:45	Module Extensions over $k\{x,y\} / \langle yx - 1 \rangle$ Linhong Wang, Southeastern LA	

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

- LSMSA
- Louisiana State University
- Millsaps
- Mississippi College
- Mississippi State University
- Northwestern State University of Louisiana
- University of Louisiana – Lafayette
- University of Mississippi

Special Thanks to:

- Cengage Learning
- Holmes Specialty Advertising
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- BankPlus
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**BCR Student Center
 2nd Floor**