The Mathematical Association of America
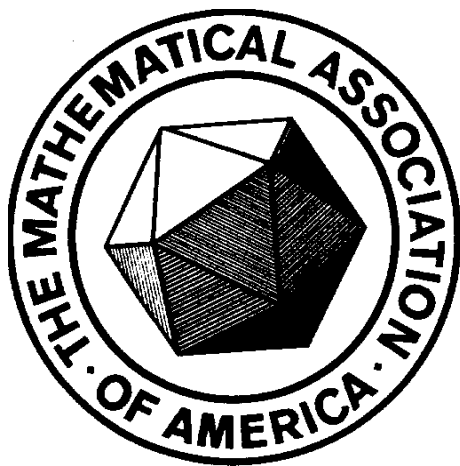
New Jersey Section Meeting

in conjunction with the 5th annual

Garden State Undergraduate Mathematics Conference

William Paterson University
Wayne, NJ

Saturday, April 12, 2008

Abstracts and Biographies of Speakers

Combinatorial Trigonometry
Arthur Benjamin, Harvey Mudd College (joint MAA-GSUMC speaker)

Many trigonometric identities, including the Pythagorean theorem, have combinatorial proofs. Furthermore, some combinatorial problems have trigonometric solutions. All of these problems can be reduced to alternating sums, and are attacked by a technique we call D.I.E. (Description, Involution, Exception). This technique offers new insights to identities involving binomial coefficients, Fibonacci numbers, derangements, zig-zag permutations, and Chebyshev polynomials.

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. Currently, he serves as the MAA's Polya Lecturer from 2006 to 2008.

His research interests include combinatorics and number theory, 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 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. He has demonstrated and explained his calculating talents in his book *Secrets of Mental Math* and on numerous television and radio programs, including The Today Show, CNN, and National Public Radio. He has been featured in Scientific American, Omni, Discover, People, Esquire, New York Times, Los Angeles Times, and Reader's Digest. In 2005, Reader's Digest called him "America's Best Math Whiz."

Why Standards-Based State Mathematics Tests are Destined to Fail
Alan Tucker, SUNY Stony Brook

This talk summarizes the mathematical workings of item response theory (IRT), the psychometric methodology for creating the state mathematics tests mandated by the No Child Left Behind Act. It will detail the catastrophic failure of this methodology on the 2003 New York state mathematics graduation test.

Alan Tucker is S.U.N.Y. Distinguished Teaching Professor at the State University of New York-Stony Brook in the Department of Applied Mathematics and Statistics. He obtained his PhD in Mathematics from Stanford University in 1969. Dr. Tucker has been at Stony Brook since 1970 except for sabbatical leaves at Stanford and the University of California-San Diego and has been either Undergraduate Program Director or Department Chair all but three of his 32 years at Stony Brook. His research specialty is combinatorial mathematics. He is the author of three textbooks and 40 research publications. Dr. Tucker has been very active in the Mathematical Association of America. He was a MAA First Vice-President and chair of its MAA's Education Council and is a recipient of the MAA's National Award for Distinguished University Teaching of Mathematics. He was the lead author of the 2001 CBMS report, Mathematical Education of Teachers, and the 1995 MAA report, Assessing Calculus Reform Efforts. He is currently directing the MAA project, Preparing Mathematicians to Educate Teachers, funded by grants from NSF and Texas Instruments. He was the research mathematician on the 2003 New York Regents Math A Panel, investigating the high failure rate on the June 2003 NY math graduation exam.

Some of my Favorite Sequences in my Most Favorite Website, Created and Daily Maintained by one of my Most Favorite Mathematicians
Doron Zeilberger, Rutgers University

I will rave about Neil Sloane's OEIS, and discuss some of my favorite sequences there, an extremely difficult task, since most of them are favorites.

Doron Zeilberger is an Israeli mathematician, known for his work in combinatorics. He is a Board of Governors Professor of Mathematics at Rutgers University. He received his doctorate from the Weizmann Institute of Science in 1976, under the direction of Harry Dym.

Zeilberger has made numerous important contributions to combinatorics, hypergeometric identities, and q-series. Zeilberger gave the first proof of the alternating sign matrix conjecture, noteworthy not only for its mathematical content, but also for the fact that Zeilberger recruited nearly a hundred volunteer checkers to "pre-referee" the paper. Together with Herbert Wilf, Zeilberger was awarded the American Mathematical Society's Leroy P. Steele Prize for Seminal Contributions to Research in 1998 for their development of WZ theory, which has revolutionized the field of hypergeometric summation. In 2004, Zeilberger was awarded the Euler Medal by the Institute of Combinatorics and its Applications; the citation refers to him as "a champion of using computers and algorithms to do mathematics quickly and efficiently."

Zeilberger is also known for crediting his computer, Shalosh B. Ekhad, as a co-author ("Shalosh" and "Ekhad" mean "Three" and "One" in Hebrew respectively, referring to the AT&T 3B1 model), and for his provocative opinions, some of which are:
- "People who believe that applied math is bad math are bad mathematicians"
- "Guess what? Programming is even more fun than proving, and, more importantly it gives as much, if not more, insight and understanding"
- "Frank Quinn's rigor is not as rigorous as he thinks"
- "Still like that old-time blackboard talk."

(from wikipedia, as suggested by Zeilberger)

Abstracts of MAA-NJ Contributed Paper Sessions

Session 1: Mathematics and Voting Theory
Room 168A, University Commons/Student Center
Organizer and Presider: Michael A. Jones, Montclair State University

1:50-2:05
> **Brian Hopkins**, St. Peter's College,
> bhopkins@spc.edu
> **Taking Turns, Knowledge, and the Weak Bruhat Order**
> Two players alternate choosing items that they may value differently. Sometimes knowledge of the other player's preferences can help you end up with items higher on your list, sometimes it doesn't help at all. Determining when knowledge matters and related questions led us to patterns in permutations under the weak Bruhat order, a new overlap

between fair division and algebraic combinatorics. This is joint work with Michael A. Jones, Montclair State University, Montclair, NJ.

2:10-2:25

Japheth Wood, Bard College,
jwood@bard.edu

Partially Ordered Voting Preferences
The preferences of voters who care about more than one issue can be naturally modeled using partially ordered sets. By replacing each voter's preference poset with its linear extension, we suggest a way to use any positional, pairwise, or other voting method that accepts totally ordered inputs to tally ballots.

2:30-2:45

Jennifer M. Wilson, Eugene Lang College, The New School for Liberal Arts, New York, NY,
wilsonj@newschool.edu

Incomplete Information and the Geometry of Voting
Given preferences of an electorate, it is possible to determine all election outcomes under different voting procedures. However, in practice, complete information about preferences is not available, especially for historical elections, where only the election result under one procedure is known. Political scientists have used polling data and historical records to reconstruct voters' preferences. In the absence of such information, can an election outcome under one procedure determine possible outcomes under other procedures? We use a geometric approach to answer this question in the affirmative and to determine a value which measures how much of a mandate a candidate receives in an election. We use this measure on all 3-candidate U.S. presidential elections. This is joint work with Michael A. Jones, Montclair State University, Montclair, NJ.

2:50-3:05

Michael A. Jones, Montclair State University, Montclair, NJ,
jonesm@mail.montclair.edu

Re-distributing and Reconstructing Probabilities in Horse Races, Voting Theory, and Poker

Does knowing the likelihood that each horse will win a race be used to determine the likelihood of the order of finish? In general, this is not true, despite an implicit assumption in a molecular dynamics textbook. We review the origins of implicit assumptions about conditional probability and how these assumptions explain the relationship between first place finishes and ordered finishes. We also investigate this relationship from a voting theory perspective by examining what happens when a candidate drops out of an election. Finally, we develop a test to determine when the assumptions hold and demonstrate its use with data from the 2006 World Series of Poker final table. This is joint work with John Stevens, Montclair State University, Monrtclair, NJ

Session 2: Statistics: Practice and Pedagogy
Room 168B, University Commons/Student Center
Organizer and Presider: Dexter C. Whittinghill, Rowan University

1:50-2:05

Christopher Tong, Biometrics Research Department**,** Merck Research Laboratories, Rahway, NJ**,**
christopher_tong@merck.com

Biostatistics Career Opportunities in the Pharmaceutical Industry
One of the largest private sector employers of statisticians is the pharmaceutical industry. The largest role for statisticians in that industry is in the design and analysis of clinical trials, where statistical analysis is required by federal law. However, in drug discovery and preclinical research, statisticians can also assist with the analysis of scientific data. After an overview of the pharmaceutical industry, the role of statistics is discussed. Experimental design is emphasized. Mathematics students are encouraged to consider a career in biostatistics, where the use of mathematical skills can have an important impact on health care and, potentially, help save lives. Recommendations on undergraduate preparation are given.

2:10-2:25

Dexter C. Whittinghill, Department of Mathematics**,** Rowan University,
whittinghill@rowan.edu

A Team-Taught Biometry Course With Labs

There is room for debate as to whether it is better to offer one introductory statistics course to the students of all majors, or to offer different introductory statistics courses tailored for different majors. Whether you call it "Biometry," "Biostatistics," or "Statistics for Biologists," I will present the workings of a team taught statistics course for the biology majors at Rowan University. Launched in the fall of 2007, the course was designed by two statisticians and two biologists, and is team taught with a statistician doing the lectures and a biologist doing the labs. The talk will include the context of the course, the background of the students, an overview of its content, the role of the lectures and labs, the types of assessments used, and some of the activities and experiments used to present the topics. Successes, failures and plans for the future will be related as well. (This is a reprise of the talk given at the Joint Mathematics Meetings in January in San Diego.)

2:30-2:45

Christopher Jay Lacke, Mathematics Department**,** Rowan University
lacke@rowan.edu

Some (Fast) Food For Thought - Gathering and Using a Meaningful Data Set for College Students
Many introductory statistics professors, including the author, obtain data from their students for use in the class, hoping that the data will pique their interest. A statistically improper survey of such teachers at past meetings has resulted in a fairly consistent conclusion - we haven't found the right variables. In what will hopefully work out as a moment of genius, the author decided to have students pick their favorite fast food restaurant from a list of eight, go to the nutrition calculator at the respective website, enter their favorite meal, and obtain the nutrition information. Each student was required to submit the information, and the data are being used in a series of mini-projects throughout the semester, including graphical and numerical summaries, approximating probability distributions, determining sampling distributions, demonstrating the influence of outliers on the t procedures for inference, and regression analysis. The talk will include a description of the project components, some interesting (and shocking) results from the data, and student feedback regarding the project.

2:50-3:05

Sandra Zak, Mathematics Department, Hillyer College of the University of Hartford,
zak@hartford.edu

Mathematics in the Sciences: The Statistical Component of an Interdisciplinary Course
During Spring 2007, several faculty members helped develop a new course aimed at increasing the mathematical knowledge of students interested in the sciences. The goal was to boost the student's mathematics skills so that they could be more successful in mathematics-intensive science courses like chemistry and physics and to give them a "hands-on" experience with science. The course was divided into three sections. Each section had a detailed introductory mathematics component followed by a scientific component. The course was coordinated by a mathematician who taught all of the introductory mathematics material and participated in each of the scientific components. Each scientific section was taught by a different faculty member with expertise in one aspect of science. The first section, taught in conjunction with a chemist, focused on introducing the course and on working with dimensional analysis and mixture problems. The second section, taught in conjunction with a nutritionist, introduced basic statistics, the normal distribution and hypothesis testing. The third section, taught in conjunction with a marine biologist, continued hypothesis testing and introduced ANOVA statistical testing and the use of statistical software to analyze data. The author will be describing the latter two sections which involved statistics.

Session 3: Combinatorics and Algebra
Room 171A, University Commons/Student Center
Organizer and Presider: Beimnet Teclezghi, New Jersey City University

1:50-2:05

Michael Puls, John J. College (CUNY),
mpuls@jjay.cuny.edu

The p-Harmonic Boundary of Finitely Generated Groups and the First Reduced l^p -Cohomology Space

In this talk we will define the p-harmonic boundary of a finitely generated group G. We will then characterize the vanishing of the first reduced l^p-cohomology in terms of the cardinality of this boundary.

2:10-2:25

David DiMarco, Neumann College, NJ,
dimarcod@neumann.edu

Realizability of Connected, Separable, p-Point, q-Line Graphs with Prescribed Minimum Degree and Line Connectivity
It is widely recognized that certain graph-theoretic extremal questions play a major role in the study of communication network vulnerability. These extremal problems are special cases of questions concerning the realizability of graph invariants. We define a CS(p, q, λ, δ) graph as a connected, separable graph having p points, q lines, line connectivity λ and minimum degree δ. In this notation, if the "CS" is omitted the graph is not necessarily connected and separable. An arbitrary quadruple of integers (a, b, c, d) is called CS(p, q, λ, δ) realizable if there is a CS(p, q, λ, δ) graph with p = a, q = b, λ = c and δ = d. Necessary and sufficient conditions for a quadruple to be CS(p, q, λ, δ) realizable are derived. This paper has been accepted for publication, but not yet published. In recent papers, the author gave necessary and sufficient conditions for (p, q, κ, Δ), (p, q, λ, Δ), (p, q, δ, Δ), (p, q, λ, δ) and (p, q, κ, δ) realizability, where Δ denotes the maximum degree for all points in a graph and κ denotes the point connectivity of a graph. Boesch and Suffel gave the solutions for (p, q, κ), (p, q, λ), (p, q, δ), (p, Δ, δ, λ) and (p, Δ, δ, κ) realizability in earlier manuscripts.

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Mathematical Association of America
New Jersey Section, Spring 2008 Meeting Program

Except for the Contributed Paper Sessions and lunch, all events take place in, or in the lobby just outside, Ballroom C, University Commons/Student Center

8:30 – 9:15	**Registration and Coffee**
8:30 – 1:30	**Book Exhibits**
9:15 – 9:30	**Welcome by Dr. Sandra DeYoung,** Dean of the College of Science & Health
9:30 – 10:25	***Some of my Favorite Sequences in my Most Favorite Website, Created and Daily Maintained by one of my Most Favorite Mathematicians,*** *Doron Zeilberger*, Rutgers University Presider: Melkamu Zeleke, William Paterson University
10:25– 11:05	**Intermission**, Coffee and Book Exibits
11:05 – 11:25	**Chair's and Governor's Reports**
11:25 – 12:20	***Why Standards-Based Mathematics Tests are Destined to Fail,*** *Alan Tucker,* SUNY Stony Brook Presider: Carol Avelsgaard, Middlesex County College
12:20 – 1:50	**Lunch**, Wayne Hall Cafeteria
1:50 – 3:05	**Contributed Paper Sessions** **Mathematics and Voting Theory** Room 168A, University Commons/Student Center **Statistics: Practice and Pedagogy** Room 168B, University Commons/Student Center **Combinatorics and Algebra** Room 171A, University Commons/Student Center **General Session** Room 171B, University Commons/Student Center
3:05 – 3:30	**Intermission**
3:30 – 4:25	***Combinatorial Trigonometry,*** *Art Benjamin,* Harvey Mudd College Presider: David C. Marshall, Monmouth University
4:25 – 4:45	**Prizes and Awards,** GSUMC Awards, door prizes, and silent auction winners (must be present to win)
5:00	Dinner honoring the Invited Speakers

Garden State Undergraduate Math Conference
Spring 2008 Program

8:30 – 9:00	Registration and Breakfast University Commons/Student Center, Ballroom A
9:15 – 12:00	**Garden State Undergraduate Math Competition** Science Building, Rooms 200A and 200B
12:00 – 1:00	**Complimentary Student Lunch**
1:00 – 2:00	**Student Poster Session** University Commons/Student Center, Ballroom B
2:15 – 3:15	**Students Talks** University Commons/Student Center, Ballroom A
3:30 – 4:25	***Combinatorial Trigonometry,*** *Art Benjamin***, Harvey Mudd College** University Commons/Student Center, Ballroom C Presider: David C. Marshall, Monmouth University
4:25 – 4:45	Contest Results, Awards, and Prizes, University Commons/Student Center, Ballroom C

New Jersey NExT Workshops
Spring 2008
(NJ-NExT Fellows only)

2:10 – 3:25	**Workshop on Undergraduate Research** Room Location Organizer: Srabasti Dutta, College of Saint Elizabeth

4:30 – 6:00	**Concurrent Workshops:**
	• **Developing and Teaching a Hybrid Mathematics Course**, Room location
	  Organizer: Irene Jai, Raritan Valley CC
	• **The Road Towards Tenure**, Room location
	  Organizers: John Saccoman, Seton Hall University, and Miroslav Orna, Raritan Valley CC

Session 4: General Session
Room 171B, University Commons/Student Center
Organizer: Theresa Michnowicz, New Jersey City University
Presider: Robert Search, Centenary College

1:50-2:05

Pangyen Ben Weng, Ramapo College,
 pweng@ramapo.edu

PCMP: Ramapo College's Online Program for Developmental Mathematics
PCMP is an online program for developmental mathematics at Ramapo College. The program serves as an alternative to traditional courses taught in classrooms. I will talk about the development of the program by presenting the program's mission, its practice, its technical and pedagogical aspects, and the challenge of institutionalizing the program at Ramapo College.

2:10-2:25

Rabab Abi-Hanna, Montclair State University,
abihannar@mail.montclair.edu

The Optimal Placement of Range Lights
Range lights are pairs of lighthouses on bays, rivers and other waterways that guide boats safely along a linear path, called the *range line*. To keep a boat in a channel bounded by curves $y = f(x)$ and $y = f(x) + h$, optimally long range lines are secant and/or tangent lines to the two curves. Their placement depends on concavity and applies the Mean Value Theorem. This is joint work with Michael A. Jones and Kenneth Krott, Montclair State University.

2:30-2:45

Jay L. Schiffman, Rowan University,
Schiffman@rowan.edu

First Occurrence Examples and Counterexamples
The sheer joy of immersing oneself in mathematics is manifested in studying patterns and drawing inferences based upon the analysis of such patterns. It is often the case that such empirical evidence while certainly useful may lead one astray. A formula, structure or pattern may fail to exhibit behavior initially suspected. In this talk, first

examples and counterexamples selected from algebra and number theory will be presented serving to counter our initial assumptions.

2:50-3:05

F.Olcay Ilicasu, Rowan University,
ilicasu@rowan.edu

Stability Comparison of Three Difference Techniques on an Elliptic Singular Perturbation Problem
Third, fourth and fifth order techniques are developed to solve an elliptic singular perturbation boundary value problem in one dimension using Taylor Series expansions. In all developments only three points are used. The effect of including a next derivative term in Taylor expansions on stability is investigated. This is joint work with David H. Schultz, UW-Milwaukee (Prof. Emeritus), Bakhodirzhon Siddikov, Ferris State University.

Announcements

Distinguished Service Award
The recipient of the 2008 MAA-NJ Award for Distinguished Service is **Lawrence D'Antonio**, Ramapo College.

Professor D'Antonio has been active in the New Jersey Section since 1995. He served as Vice Chair for Speakers (1995-1997) and as Section Chair (1997-1999). He has served as Vice Chair for Student Activities since 2001. Larry created the first web page for our section in 1996 and served as web-master until 2001.

D'Antonio served as Director of the Garden State Undergraduate Mathematics Conference (GSUMC) at the spring meetings in 2005 and 2006. In 2007, he was a member of the GSUMC Advisory Committee. He organized undergraduate student contributed paper sessions at the spring meetings from 1997 to 2003.

Larry organized contributed paper sessions on the History of Mathematics at the section spring meetings, 2004, 2006, and 2007. He is also Historian for the New Jersey Section. He served on the Nomination Committee (2005-2006). He serves on the Contributed Paper Selection Committee (2005-present).

Larry will be a candidate of MAA-NJ governor election in 2009.

We are grateful to him for his many years of continued service to the section.

Lunch Discussion Tables - Spring 2008 Meeting

Organized by Theresa C. Michnowicz, New Jersey City University

There will be 6 discussion tables at lunch (in addition to one for NJ-NExT).

1. *Do students really learn better with web-based homework systems?*, led by Alan Tucker, SUNY Stony Brook.
2. *How to search for a great academic candidate*, led by Art Benjamin, Harvey Mudd College.
3. *Mathematics and the Social Sciences in the classroom*, led by Michael A. Jones, Montclair State University.
4. *Cooperation Between Two-year and Four-year Institutions: Improving Statistics Course Dovetailing to Ease the Student's Transition*, led by Dexter C. Whittinghill, Rowan University.
5. *Environmental Mathematics*, led by Patricia Clark Kenschaft, Bloomfield College
6. *Conference on transfer credits: Where do we go from here?,* led by Carol Avelsgaard, Middlesex County College.

Those who pre-registered have priority at these discussion tables.

NJ-NExT

The 2007 NJ-NExT fellows will have their second set of workshops at this meeting. From 2:10 to 3:25, there will be a session on "Undergraduate Research" organized by Srabasti Dutta of the College of St. Elizabeth. Starting immediately after the final talk, there will be two concurrent sessions, "Developing and Teaching a Hybrid Mathematics Course" organized by Irene Jai of Raritan Valley Community College, and "The Road Towards Tenure" organized by John Saccoman of Seton Hall University and Miroslav Orna of Raritan Valley Community College. These sessions are for current NJ-NExT fellows only.

Call for Nominations for the MAA-NJ Award for Dinstinguished College or University Teaching

The MAA-NJ Section Distinguished Teaching Award Selection Committee is seeking nominations for the 2009 award. Please consider nominating an inspiring, respected, or influential deserving colleague for this prestigious award. Information about the nomination process and eligibility requirements are posted online at http://www.maa.org/newjersey. For additional information you may contact Naomi Shapiro (Secretary, MAA-NJ) at nshapiro@georgian.edu . Award nominations are due November 7, 2008.

Future MAA-NJ Meeting
- The Fall 2008 MAA-NJ Section meeting will be held at Fairleigh Dickinson University, Saturday, November 1. Invited speakers include Karen Parshall, University of Virginia, and Robert Wilson, Rutgers University.
- The Spring 2009 MAA-NJ Section meeting will be held at Monmouth University on Sunday, March 29 (tentative).

Call for Lunch Table Discussion Leaders
People interested in leading a lunch table discussion topic at the Fall 2008 meeting are asked to please submit the proposed topics to Theresa Michnowicz, New Jersey City University, tmichnowicz@njcu.edu, by Wednesday, September 17, 2008.

Call for Contributed Paper Session Organizers
People interested in organizing a contributed paper session at the Spring 2009 meeting are asked to please submit the proposed session topic to Theresa Michnowicz, New Jersey City University, tmichnowicz@njcu.edu, by Wednesday, September 17, 2008.

MathFest 2008
The Mathematical Asociation of America will hold its annual MathFest in Madison, WI, July 31-August 2, 2008. More information, including online registration and a list of contributed paper sessions, can be found online at http://www.maa.org .

Other Future National MAA Meetings
- 2009 Joint Mathematics Meeting, Washington, DC, January 7-10, 2009
- 2009 MathFest, Portland, OR, August 6-8, 2009
- 2010 Joint Mathematics Meeting, San Francisco, CA, January 6-9, 2010

2008 MAA PREP Workshops
The program costs as well as the costs of food and lodging during the workshop are covered by PREP. However, there is a registration fee for each workshop. Visit MAA Online at http://www.maa.org/prep/ for information.

Dinner Honoring the Invited Speakers
The Section will honor the invited speakers at dinner following the meeting. Everyone is cordially invited.

JOIN THE MAA (http://maa.org/mbsvcs/future.html#joinmaa).

Governor's Report

The January 2008 meeting of the MAA Board of Governors (BoG) included a request from the newly formed Strategic Planning Group on Sections that we are to share with our Sections. I hereby solicit responses from members of the NJ section to the following questions to be shared with a focus group during the next BoG meeting.

1. Beyond reporting to the Board of Governors' meeting to the section, what three things can a Section Governor do for his or her section?
2. Beyond preparing for and attending the Board of Governors' meeting, what three things can the Section Governor do for the Association?

A brochure was disseminated for the Summer 2008 PREP programs all over the country. Members might consider participating in these Professional Enhancement Programs of the MAA.

Also, and appeal was made by William Hawkins for more sites for the summer programs for minority undergraduates. He can help get funding. There are no such sites yet in New Jersey.

The January BoG meeting was dominated by discussion of the first two final reports of Strategic Working Groups: those on Governanance and Students. The Strategic Group on Students had 21 recommendations including making boxes of activities for chapters, having a Student Activities Coordinator for each section, and having a student representative from each section sent to MathFest, where there will be more student activities. Complimentary memberships for students were suggested with bulk mailings of HORIZON to be distributed by a local faculty member. There should be some student chapter news in each issue of FOCUS. A NExT program for graduate students would be desirable, as well as an on-line journal for student research.

The Strategic Group on Governance report included 39 recommendations. They decided to leave the BoG very large as governing boards go; it seems functional. They wanted to have a governor for each of the 29 sections, and once a board is that large, it doesn't make a great difference if it has 50 members. Morale on the BoG seems high; people take satisfaction in serving. (I do.) Most BoG meetings have perfect attendance.

Many recommendations involved rearranging the 100+ national MAA committees. They will be more equally distributed among Councils, with the chair of each committee in that Council a member of the Council, and each Council chair a member of the BoG. Committee and Council terms will be extended from 36 to 37 months so that new and leaving members can meet together at January JMM meetings. MAA members nationwide are invited to

submit their requests to become members of national committees to their governor, the MAA president, or the chair of the committee they want to join, but are reminded that attendance of national meetings is expected.

The BoG voted on 9 of these 39 recommendations, and 11 will require by-law changes. We set up a task force to consider and implement these by-law changes, or to rewrite the by-laws, whichever seems more prudent. The remaining recommendations can be implemented without further BoG action.

Finances, of course, were also discussed. Virginia Halmos offered a $600,000 matching grant if the MAA could raise $300,000 within two years. We actually did it in six weeks! Several said that President Joe Gallian was responsible for most of the fund-raising. He said, "I wasn't going to say this, but with that introduction I will. I used to regret it when a fine REU student left academia and went to Wall Street, but I have a different view on that now."

We had a long discussion on registration fees for conferences. This JMM had record attendance with about 5600 registered. It was suggested that instead of a "high school" registration fee there should be a "pre-college" fee, since one participant this time is nine years old. The MAA has about 22,000 members, fewer than earlier. We voted NOT to raise dues for 2009 to see if this has any impact on renewals.

A report on "green" investments said that there is money to be made, but also money to be lost on companies that provide renewalable energy and other needed environmentally desirable services. The professional advisor recommended investing not more than 3% of the MAA endowment in green mutual funds (such as PowerShares WilderHill Clean Energy Portfolio, which has a minimum initial investment of $50), but the finance committee recommended waiting, emphasizing that the collective individual investments of members of the BoG were far more than the $7 million of the national MAA. The governor from NJ suggested that a small investment now in green funds was timely given the emergency state of the planet. (She later attended ten lectures on "The Mathematics of Climate Change" at the JMM that week.)

Governor Jim Bruening from Arkansas participated in our discussion this past August and died of cancer in September. He kept writing his column for the COLLEGE MATHEMATICS JOURNAL right up until his death. We "passed a hat" to buy a brick on the Halmos walk in his memory, and collected more than enough. The rest will be used as part of a memorial scholarship fund.

News from NJ Departments

New Jersey City University.   The NJCU Mathematics Awareness Lectures will be held at New Jersey City University on Thursday, April 24, 2008. The theme of the program is Mathematics and Voting Theory, www.mathaware.org. Invited speakers will be Fred Roberts, DIMACS, Rutgers University, and Michael A. Jones, Montclair University. Contributed paper presenters will be Brian Hopkins, St. Peter's College; Joseph Malkevitch, CUNY, York College; Francis Moran, New Jersey City University; Panyeng Weng, Ramapo University; Jennifer Wilson, The New School; and Japheth Wood, Bard College. For information, please contact Theresa C. Michnowicz, tmichnowicz@njcu.edu.

MAA-NJ Section Officers

Chair	Hieu D. Nguyen, Rowan University
Vice Chair for	
Speakers	Bonnie Gold, Monmouth University
Innovations	Theresa C. Michnowicz, NJCU
Two-Year Colleges	Carol Avelsgaard, Middlesex County College
Student Activities	Lawrence D'Antonio, Ramapo College
Secretary	Naomi Shapiro, Georgian Court University
Treasurer	Karen Clark, The College of New Jersey
Governor	Patricia Clark Kenschaft, Bloomfield College
Public Information Officer	Pangyen Ben Weng, Ramapo College
Program Editor	David Marshall, Monmouth University
Liaison Coordinator	Aihua Li, Montclair State University
Workshop Organizer	Amy Cohen, Rutgers University
Contributed Paper Organizer	Theresa C. Michnowicz, NJCU
Book Sale Coordinator	Beimnet Teclezghi, New Jersey City University
Door Prize Coordinator	Olcay Ilicasu, Rowan University
GSUMC Director	Thomas Hagedorn, The College of New Jersey
Project NJ-NExT Co-Directors	John Saccoman, Seton Hall University
	Kaaren Finberg, Ocean County College

Committees

Organizing Committee Carol Avelsgaard, Middlesex County College; Karen Clark, The College of New Jersey; Amy Cohen, Rutgers University; Larry D'Antonio, Ramapo College; Bonnie Gold, Monmouth University; Thomas Hagedorn, The College of New Jersey; Olcay Ilicasu, Rowan University; Mark S. Korlie, Montclair State University; Aihua Li, Montclair State University; Reginald Luke, Middlesex County College; David Marshall, Monmouth University; Theresa C. Michnowicz, New Jersey City University; Hieu D. Nguyen, Rowan University; Naomi Shapiro, Georgian Court University; Beimnet Teclezghi, New Jersey City University; Pangyen Ben Weng, Ramapo College

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