

Message from the Chair.....Ockle Johnson

Greetings! As we settle into another academic year, it is a good time to look back at some of the highlights of the summer and look forward to what the fall has to offer.

At our spring meeting, planned and hosted by Frank Morgan at Williams College, we had a record number of students sharing the results of their research. Paul Estes hosted and Cathy Frey, Gerard LaVarnway, and Rob Poodiak (with a little assistance from Paul Blanchard) delivered an excellent short course that served not only members of the section, but K-12 teachers as well. The Mathfest in Burlington was a great success. As our president, Ann Watkins, noted, our numbers bypassed the NASDAQ—perhaps not the best news for those approaching retirement age. The excellent program and enjoyable activities were due in no small measure to members of our section: Tony Jullianelle and others from Vermont worked on local arrangements, many members of our section planned the program, organized sessions and gave talks, and, of course, Jim Tattersall oversaw it all. Now we look forward to a fall meeting not to miss. Sarah Mabrouk will be our host at Framingham State and has planned a program full of interesting talks and activities. Highlights include the talks by our Christie lecturer, Carl Pomerance, and our Distinguished Teaching Award winner, Laura Kelleher and a number of technology workshops. If you're still searching for texts for your spring courses, you will also be able to consult the many book representatives. And those of us involved in assessment activities as a result of recent or impending NEASC accreditation visits will certainly benefit from the Assessment workshop led by Bonnie Gold.

I am also very excited about the Northeastern Section NEXt program we are inaugurating for new and relatively new colleagues prior to this year's fall Section meeting. By providing talks and workshops on issues of interest, opportunities for networking, and an introduction to Section activities, we hope to assist new faculty in their transition from graduate school to professional academic life. The program is open to all untenured full time faculty, both those who have and have not been National NEXt fellows. Thanks to Lisa Humphreys who has been spearheading this effort. More information can be found in the Newsletter, on the web, and in the mailing sent to Department Chairs. So "older" faculty, please encourage your new faculty to participate, and new faculty, please join us.

Finally, at the business meeting this fall we will be electing new officers. In the Newsletter you can find out more about the nominees for Vice-Chair (Chair Elect), John Lutz and Sarah Mabrouk, Secretary/Treasurer, Ann Kizanis and Two-Year College Representative, Kathy Bavelas and Michael Latina. Thanks to Donna Beers and the Nominating Committee for their work. See you in Framingham.

Message from the Governor.....Donna Beers

MathFest 2002 in Burlington was an overwhelming success! There was a record number (1245) of attendees; and, while the weather outside was sultry, we enjoyed beautiful presentations in air-conditioned comfort. As a member of the Northeastern Section, I'm probably partial, but I thought Joe Gallian's statistical case for the greatness of Red Sox hitter Ted Williams was delightful, as was Colin Adams's (excuse me, Sir Randolph "Skipper" Bacon III's) presentation, "Blown Away: What Knot To Do When Sailing." As usual, many thanks are due Jim Tattersall of Providence College who, as Associate Secretary of the MAA, worked nonstop behind the scenes to make sure that the program ran smoothly.

I want to report on the Board of Governors meeting that took place on July 31. Here are some highlights:

- First, congratulations are in order: Our colleague Jim Tattersall was elected to a second five-year term as Associate Secretary of the MAA.
- Upcoming Joint Mathematics Meetings:
The January 2003 Joint Mathematics Meeting (JMM) will take place in Baltimore. The MAA invited speakers will include David Fowler from the University of Warwick, Paul Sally from the University of Chicago, Joe Silverman from Brown University, Richard Tapia from Rice, and Robin Wilson from Open University. The MAA Short Course has been organized by Fred Rickey. The topic will be "Teaching and Learning about Mathematics in the Ancient World." Looking farther into the future, the Associate Secretary announced that the JMM meeting in January 2008 will take place in San Diego, and the JMM in 2009 will take place in Washington, D.C.
- News from Tina Straley, Executive Director of the MAA:
 - Membership numbers are high.
 - Attendance at national MAA meetings has been strong.
 - Amazon book sales are good; and there is every reason to believe that book sales will grow further with the addition of Barnes and Noble Online.
 - The MAA has been serving the NSF by hosting meetings to support programs of the Division of Undergraduate Education (DUE) and the Division of the Mathematical Sciences (DMS). This serves MAA members and keeps the MAA connected to the latest developments in undergraduate mathematics education. In addition, the MAA has 10 projects currently active or in the process of being awarded by the NSF.
 - The MAA has received funding from the NSF to hold a conference next February that will bring together faculty who are interested in bioinformatics or computational biology, an area that is red-hot and that combines mathematics, computer science, and biology. An outcome of the meeting is planning a new program, to be supported by the NSF and NIH, to fund the creation of new interdisciplinary undergraduate programs and curriculum. A special *Report to the Nation* will follow this conference.

- Exciting learning/teaching trip: The MAA is planning a trip to Greece next summer. This will feature a guided tour by mathematics historian Victor Kac of MIT. Space will be limited to 30, so stay tuned. This may be the first of a series of such trips!
- Good news from MAA Treasurer John Kenelly of Clemson University:
Despite the downturn in the stock market, the MAA's financial picture is good. Cost savings programs that were put into effect after 9/11 have helped to offset market losses. However, he offered some cautionary observations: First, the MAA is a dues-driven organization and income is flat, so there is a need to cultivate new revenue sources to support expanded member services; second, the MAA has not built adequate "rainy day" funds, so attention needs to be given to new and better ways to use the MAA's real estate asset; and third, the endowment of the MAA currently falls short of accepted standards for an organization to ride out "peaks and valleys" in its income stream. His special interest is development. Among other initiatives, he will be working to develop resources for renovating the MAA carriage house in Washington, D.C.
- Project NExT (New Experiences in Teaching):
In Burlington the ninth group of Project NExT Fellows attended a 2 ½ -day workshop before the MathFest. Workshop themes included teaching how to write proofs, using writing to teach mathematics, group projects in upper division courses, academic and professional advising, and math modeling. Also included in the program were addresses by MAA leaders who are recognized nationally for their expertise. A special activity for new Fellows was a meeting with the 2001-02 Fellows for whom the Burlington meeting marked the close of their formal participation in Project NExT. The ninth group of Fellows brings the total number of participants in the program to 628. The Northeastern Section is fortunate to have 7 new NExT Fellows. They are: Jonathan Bihari, Tufts University; Elizabeth Brown, Dartmouth College; Dorothy Buck, Brown University; Charles Rocca, Western Connecticut State University; Dana Rowland, Merrimack College; Sarah Spence, Olin College of Engineering; and Gregory Warrington, University of Massachusetts at Amherst.
- News from the American Mathematics Competitions (AMC):
The USA Mathematical Olympiad was held on May 3-4 at MIT. A total of 325 students participated, 200 of them at MIT and the remaining students at their local high schools. Tom Leighton, founder of Akamai Technologies and Chief Scientist, gave a general address to students at MIT on May 3 and MAA President-elect Ron Graham addressed them on May 4. Twelve students were named USAMO Winners, with the five students who scored perfect papers sharing first place. For the first time there were two females among the twelve winners. An additional 13 students received Honorable Mentions. The twelve winners were celebrated on Sunday, June 23, with a reception at the MAA headquarters. The USAMO ceremony took place the next day at the National Academy of Sciences, followed by a formal banquet in the Diplomatic Reception Rooms in the United States Department of State.
- News on the International Mathematical Olympiad (IMO):
China won the 43rd IMO held in Glasgow, Scotland in July. The IMO is the world's most prestigious mathematics competition for secondary school pupils, and some 500 students participated in this event. Of more than eighty participating countries, China placed first with 212 points, Russia second with 204 points, and the USA third with 171 points. The six-member USA team won four gold medals and one silver.

In closing, I urge you to attend our upcoming NES/MAA meeting. Sarah Mabrouk of Framingham State College has organized the fall meeting, to take place November 22-23, 2002 at Framingham State College. Also, Lisa Humphreys of Rhode Island College is initiating the Northeastern Section NExT and has planned a program for new (and almost new) colleagues on Friday morning and afternoon before the meeting. I look forward to seeing you and visiting with you at Framingham State.

Message from the Secretary-Treasurer..... Ann Kizanis

I gave my last Treasurer's report at the Spring meeting at Williams College. At this time, our balance was 7,089.86. The meeting at Williams College was a very good one, and we broke even from that meeting. During the summer, we had some expenses from the very successful summer short course, but we also received our annual subvention from the MAA. As a result, our present balance is \$7,902.06. Note that this balance does not include \$904.14, which is held by the Northeastern Section of the MAA for a future summer short course.

I am very pleased that our section is making more progress toward distributing an electronic newsletter. This Spring, we spent \$2,058.16 on both the printing and postage of our newsletter. I am confident that we can save a substantial amount of money over time by introducing an electronic newsletter. In the future, these savings shall help to offset the expenses we incur each year. Our expenses have gone up over the past year, and as a result, our present balance is approximately \$3200.00 less than it was last year at this time. Therefore, we are taking steps to cut the cost of our newsletters by sending more letters electronically and by saving on the postage from those newsletters that are mailed to our members.

I wrote the annual report of the Northeastern Section of the MAA at the beginning of the summer. David Stone, who collects all the annual reports and compiles the information, was impressed by all that we had done. We had a busy year, holding a fall meeting, four spring dinner meetings, a spring meeting, and a summer short course. We had outstanding speakers at these meetings, and we were very proud of the presentations made by the student speakers.

That's all for now. We are all looking forward to the fall meeting at Framingham State College in November, where I will update you further on our financial state.

Have a good semester everyone!

Two-year College Representative's ReportKathy Bavelas

The fall MATYCONN meeting will be hosted by Middlesex Community College in Middletown, CT on Oct.25 from 2:30 to 7:30. Seok Sagong (Mx) will present his work on the Fibonacci Numbers and the Chinese Zodiac in the afternoon. He gave the presentation last year at the joint MAA-AMS meeting during the winter. Judy Moran (Trinity College) will be the after dinner speaker. Her topic will be the "Geometry of Italian Tiles." Alice Burstein (aburstein@mxcc.commnet.edu) is the college contact.

The annual AMATYC Conference will be held in Phoenix Arizona from Nov. 14 -17. More than 160 sessions will be offered and a special symposium on ways to create and support equal opportunity in mathematics education with featured speaker Julian Weissglass will be a highlight of the first day of the conference. Additional information and registration is available on the web at www.amatyc.org.

From the Newsletter Editor Frank Ford

Here we are again with another school year. I hope the beginning of the school year still excites you no matter how long you have been teaching and even if you are retired. This newsletter brings you announcements of our meeting in November and of the many changes in the colleges of our Section. As you must know, Massachusetts offered early retirement in its state colleges and universities this year. If you look in the **From the Colleges** section, you will see how many people took advantage of this. Even some of our very active members such as Diane Haber and Ed Connors have decided to retire. It makes some of us feel old to see friends retire. They seem too young.

This newsletter has important information about the elections that will be part of the Fall meeting this year. We will be electing officers to carry on the tradition of our Section. Donna Beers and her committee produced a slate that guarantees the Section will win no matter who wins the elections.

Every organization needs to renew itself and, for us, part of that renewal is our New Faculty talks at the Fall meeting. Please encourage your new faculty to give a brief talk that will serve to introduce them to our Section and get them involved. This year, we begin a new effort to involve new faculty under the guidance of Lisa Humpreys of Rhode Island College. Be sure to read about the Section's Project NEXt project. We have a small grant from the national Project NEXt and we expect this first project NEXt event to be the beginning of an important ongoing activity of the Section.

Ockle Johnson talks of the success of the Williamstown and Burlington meetings and I can echo his sentiment. Come join us at Framingham and Baltimore and see what all the shouting is about. I hope to see you there.

Papers Presented at the Spring 2002 MAA/NES Section Meeting:

Intrinsically chiral graphs

Garry Bowlin, Clarkson University
Bryan Heller, University of Rochester
Eman Kunz, SUNY Potsdam
Quincy Loney, SUNY Potsdam

On local zeta functions

Ramla Gabriel, Mount Holyoke College
Manjari Goenka, Mount Holyoke College
John Gonzalez, MIT
Ben Marko, University of Akron
Annalee Wiswell, Scripps College
Thomas Wright, Bowdoin College
Sarah Zubairy, University of Rochester

Computer calibration of curves

Mark Burkhardt, Williams College

Bubbles on a cone

Tracy Borawski, Williams College
Robert Lopez, Williams College

Square functions

Philippa Charters, Williams College
Lisa DeKeukelaere, Colby and Williams College
Edvard Major, Williams College
Anna Todd, Missouri Baptist and Williams College

Geometric decoupling of optimization problems

Neil Hoffman, Williams College

The double bubble on a torus

Eric Schoenfeld, Williams College
David Clark, Michigan Technical University
Donovan McFeron, University of Notre Dame

Virginia Peterson, University of Massachusetts, Amherst
Craig Phillips, Rutgers University
Alexandra Zuser, Marlboro College

Polynomial knots
David Clark, Michigan Technical University
Donovan McFeron, University of Notre Dame
Virginia Peterson, University of Massachusetts, Amherst
Craig Phillips, Rutgers University
Alexandra Zuser, Marlboro College

Tailored calibrations
Aaron Magid, Williams College

Competing double bubbles on a torus
George Lee, Harvard University and Williams College
Ben Steinhurst, Williams College

Convergence and continuity
Gerald M. Higdon, Fitchburg State College

The double bubble in three-dimensional spherical and hyperbolic space
Joseph Corneli, New College of Florida/University of Texas at Austin

Tilings and dynamics, I
Brian Katz, Williams College
Kristen Wickelgren, Harvard University and Williams College

Stability and eigenvalues: applications
Michelle Abdella, SUNY Brockport

The two-body problem in a photogravitational field
Michael Barbosu, SUNY Brockport
Title: Michael Barbosu, SUNY Brockport

Mapped-slicing -- a promising method for proving minimization
Joe Rabinoff, Harvard University and Williams College

Tilings and dynamics, II
Sarah Iams, Williams College
Brian Street, University of Virginia and Williams College

Student presentations on real-life applications of mathematics
Andrew Perry, Springfield College

The triple bubble
Gary R. Lawlor, Brigham Young University

Voting problems with three candidates
Anthony Doran, Wheaton College