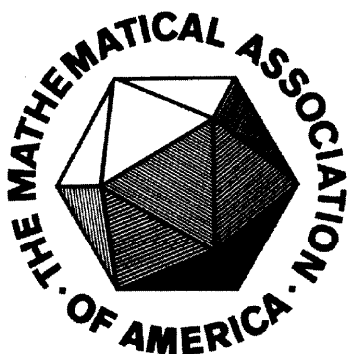# NORTHEASTERN SECTION

NEWSLETTER

FALL 2006

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NEXT SECTION MEETINGS

November. 17 and 18, 2006   Fall Section Meeting
        Sacred Heart University, Fairfield, CT.
        Program Committee
                June Decker, Three Rivers Community College, Program Co-chair
                Julie Levandosky, Framingham State College, Program Co-chair
                Hansun To, Worcester State College
        Local Arrangements Committee
                Jason Molitierno, Sacred Heart University(committee chair)
                Rose Marie Kinik, Sacred Heart Univesity
                Hema Gopalakrishnan, Sacred Heart University

FUTURE SECTION MEETINGS

Spring, 2007   Spring Section Meeting
     Keene State College, Keene, NH.
          Program Committee   Vincent Ferlini, Keene State College
          Local Arrangements   Ockle Johnson, Keene State College
                                        Joseph Witkowski, Keene State College

OTHER ACTIVITIES

November 17, 2006   Section NExT Meeting
     Sacred Heart University

COORDINATORS

Dinner Meetings: Lucy Kimball
                                    lkimball@LNMTA.bentley.edu
NES/MAA Distinguished Teaching Award: Sarah Mabrouk, Framingham State College
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Section Project NExT: Lisa Humphreys, Rhode Island College
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                                    Ockle Johnson, Keen State College
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New Colleagues Talks: Chris Aubuchon, Johnson State College
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                                    Phil Hotchkiss, Western New England College
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Undergraduate Papers: Raimundo Kovac, Rhode Island College
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                                    Karen Stanish. Keene State College
                                    kstanish@keene.edu
Graduate Papers: Sarah Mabrouk, Framingham State College
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Contributed Papers: Rob Poodiack, Norwich University
                                    rpoodiac@norwich.edu
Problem Competition: Jason Moliterno, Sacred Heart University
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                                    Rob Poodiack, Norwich University
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WEB PAGE

Address: http:/www.maa.org/northeastern
Webmaster: Tommy Ratliff, Wheaton College

Message from the Chair………………………………….Tommy Ratliff

Greetings!   I hope everyone's semester is off to a fantastic start.

It was wonderful to see so many of you at Boston University in June for the Spring Section Meeting. The entire meeting was fantastic, including the Invited Speakers, Undergraduate Student Papers, Graduate Student Papers, Contributed Papers, and our Section Project NExT. A great deal of credit for making the entire weekend run so smoothly goes to the local organizers and the staff at BU. Paul Blanchard, in particular, deserves a tremendous "Thank You" from the Section.

Our Fall Meeting at Sacred Heart University in Fairfield, Connecticut, also promises to be another wonderful event for both faculty and students.   Julie Levandosky and June Decker are planning a very interesting program, and Rob Poodiack and Jason Molitierno are organizing the Section's first student team Collegiate Mathematics Competition. Start recruiting those student teams now!   All information about the meeting will be posted at the Section website: http://www.maa.org/Northeastern.

The Executive Committee and others have continued the discussion of the purpose of the Section Meetings, and this led to the web survey that I hope many of you have completed. The goal of the Section is to meet the needs and interests of the members, so your feedback is very important. If you have any thoughts or suggestions for what you would like from the Section, please send them to me or any of the Section officers.

I look forward to seeing many of you at Sacred Heart in November!

Message from the Governor .... Ockle Johnson

Let me begin by saying it is an honor to serve as governor of the Northeastern Section. As I begin my term, on behalf of the section I would like to thank Laura Kelleher for her excellent service as governor—the latest in a long history of service to the section and the MAA.

At the Governor's meeting before Mathfest, a number of items were presented or discussed that I will briefly report. Carl Cowen, our MAA President, spoke of his participation in the International Conference on Teaching Mathematics in Istanbul. He found the focus of that conference to be very well aligned with the mission of the MAA and would like to increase our involvement in coming years. It was good to hear from our Treasurer, John Kenelly, that our finances

are in good order and that our investments did relatively well in a tough market.

From our Vice Presidents, Carl Pomerance and Deanna Haunsperger, we received an update on the MAA's strategic planning initiative. A key point was that this is arising not from any crisis, but from a desire to look critically at what we are doing to affirm what we are doing well, improve what we are not and focus on what is essential to our mission. Reports from the first set of subcommittees, on the American Mathematical Competitions, Revenue and Professional Development are due this fall. The second set of subcommittees, on Governance, Membership and Students, are currently busy at work and will report next year. At Mathfest, both the governors and the section officers spent time during their meetings discussing governance issues.

Our own Jim Tattersall will be stepping down as Associate Secretary of the MAA soon, but in order to allow sufficient time to find and train his successor, the Board of Governors voted to extend his term by one year. Jim's shoes are certainly very big ones to fill, but if anyone is interested, let me or Jim know. I'm sure Jim will be happy to describe what the position entails. The MAA is also trying to fill two new open positions Director of Publications and Journals (part of Don Albers former position, he'll continue to do the rest) and Associate Director for Student Activities.

Our Executive Director, Tina Straley filled us in on some of the lobbying activity of the MAA. One issue of concern was that administration efforts to support science and science research did not acknowledge the vital role that mathematics and mathematics research plays in Science. The MAA has been working to correct that on Capitol Hill.

On the programming side, there is a lot of excitement about the Euler tour next year in honor of Euler's 300th birthday. (I'm sure that Ed Sandifer would be willing to give a sales pitch for that as well as the upcoming MAA publications on Euler.) The other exciting news is the renovation of the Carriage House at MAA headquarters, made possible by a generous gift from Paul and Virginia Halmos. The space will be used for various programs and rented out when not being used by the MAA. Use of the facility will begin this fall with a grand opening celebration in the spring.

There was a plea for members to serve on national committees of the MAA. If any of you are interested in serving on a committee please let me know and what kinds of committees you are interested in. In the spring I hope to have a list of committees most in need of new members.

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This year three Project NExT fellows are in our section: Joseph Fox, Salem State College, Christopher Hardin, Smith College, and Matthew Horton, Wellesley College. We welcome them and all other new and relatively new faculty to our section. I hope that many of you will be able to attend our fall meeting, give a talk at the New Colleague's paper sessions and/or attend the Section NExT activities prior to the meeting. I also hope that senior faculty will encourage and facilitate the participation of their new colleagues in section activities.

I hope to see many of you at the upcoming Northeastern Section meeting at Sacred Heart University in Fairfield, CT and at the Joint Meetings in New Orleans. (I visited New Orleans this summer and while major parts of the city and surrounding area are still suffering badly from Hurricane Katrina, the French Quarter and nearby hotel and convention area was largely untouched and is full of life and activity.) If anyone has any issues or concerns they would like me to share at the January Board of Governor's meeting, please let me know.

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

In the spring newsletter, I reported a balance of $19,555.06. Since that time, we spent $742.70 on reimbursements for the fall meeting at the University of New Hampshire, $270.80 for the Joint meetings in San Antonio, $140.23 for one of the spring dinner meetings, and $1,133.60 for the successful spring meeting at Boston University. The expenses from the spring meeting were 5,084.77, while the revenue from meeting registrations was $5,238.00. The expenses for the printing and postage of the spring newsletter for that meeting totaled $1,430.39. We also received our yearly subvention check for $2,850.00 from the national office at the end of this summer. Moreover, we earned $297.54 in interest since the last newsletter. The 11-month CD that I opened in the amount of $12,000.00 last summer came due this June. At this time, I opened a new 11-month CD in the amount of $15,000 with APY 5.00%. Our present balance is $19,138.11.

We spent more than usual since the last newsletter on reimbursements for the various meetings, but our expenses for postage and printing of our newsletter has remained basically the same. Last fall, we spent $1,417.17 for the printing and postage of the fall 2005 newsletter and $1,430.39 for the spring 2006 newsletter. We are planning to fund some projects for our section this year, since our balance has been increasing over the last few years.

In the spring, I wrote and submitted the yearly financial report of the Northeastern

Section of the MAA. I also wrote our section's annual report at the beginning of the summer.

That is my update for now!   We are all looking forward to the Fall MAA meeting at Sacred Heart University, where I will update you further on our finances. I wish you all a very enjoyable fall semester!

Two-year College Representative's Report............................ Lois Martin

The 32nd annual AMATYC conference will be held in Cincinnati from November 2-5. The theme of the meeting is "Keeping Current with the Standards" and features keynote speakers Wade Ellis, Jr. and NES/MAA Teaching Award winner Colin Adams. To join AMATYC go to www.amatyc.org and click on "Join AMATYC".

NEMATYC 2007, Expand Your Horizons, will be held on April 20-21, 2007, at Bristol Community College Fall River, MA. See the web site www.NEMATYC.org for a Call for Presenters.

In Spring 2007, NEMATYC will make its first Student Math League Recognition Awards. This award program was established at the spring 2006 business meeting to foster extracurricular mathematics learning opportunities for students through participation in the AMATYC Student Mathematics League. The top scoring student in the AMATYC Student Mathematics League Competition, in up to five schools in NEMATYC's primary service area (Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont) will receive a $100 Recognition Award.

From the Newsletter Editor...Frank Ford

We have several exciting initiatives happening in our section this Fall. At the Spring Section meeting, the executive Board approved surveying the membership concerning Spring Meetings. The Board is divided on whether to continue holding Spring meetings. The survey should give us more information to make our decision. You should have received an e-mail directing you to the survey. Be sure to answer the survey and let the members of the Executive Board know your feelings. Another new event in our Section is our first problem contest. You can read about it in this newsletter. Other Sections have done this with great success. Coincidentally, the two directors of this contest are the two candidates for Vice-Chair and next Chair of the Section: Jason Moliterno and Rob Poodiack. Their biographies and those of the other candidates for office are in this newsletter. Come to the membership meeting at

the Fall Section meeting and vote.

You may notice that the winner of the Northeastern Section's Distinguished Teacher Award, Gil Strang, won the national Haimo Teaching Award for the umpteenth time. Our Section overflows with excellent teachers. You can nominate one of them for this year's teaching award. Directions are on the web site and in this newsletter.

See you in Fairfield.

Graduate Student Papers Presented at the NES/MAA Spring 2006 Meeting
Peter Barendse, Boston University
   Non-local Cellular Automata over Groups
Sebastian M. Marotta, Boston University
   Evolution of the McMullen Domain for Singularly Perturbed Rational Maps
Benjamin Hutz, Brown University
   Arithmetic Dynamics on a Class of K3 Surfaces

Undergraduate Student Papers Presented at the NES/MAA Spring 2006 Meeting
Jack Dalton, UMass Dartmouth
   High Order Approximation of the Soliton Solution of the Traffic Equation
Vincent Durante, UMass Dartmouth
   Radial Basis Function Neural Network Model for Discontinuous Signals
Jessica Rosen, UMass Dartmouth
   Numerical Analysis of Difference Equations from Loop Quantum Cosmology
Candace Selneck, Emmanuel College
   A Scheduling Problem
Benjamin Harshfield, Emmanuel College
   The Came of Go
Richard Ryan, University of Rhode Island
   The Effect of Harvesting on the Peregrine Falcon Population

William Day, University of Rhode Island
Joshua Sawyer, University of Rhode Island
   A Java Applet to explain and Demonstrate Markov Chains
Jessica Belanger, Fitchburg State College
   Fiction and Higher Dimensions

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Ruth Hibbard, Framingham State College
> *Olga Alexandrovna Ladyzhenskaya(1922-2004)*

Lucas Roesler, Central Connecticut State University
> *The Importance of Cantor's Diagonal Argument and Implications for Education*

<u>Contributed Papers Presented at the NES/MAA Spring 2006 Meeting</u>

Barbara Boschmans, Plymouth State University
April Hoffmeister, Univesity of Memphis
Michelle Iams, Univesity of North Dakota
Hortensia Soto-Johnson, University of Northen Colorado
Todd Oberg, Illinois College
> *The Impact of KTEM on Preservice Elementary Teachersy*

Karin Vorwerk, Westfield State College
> *Some Insights into Students' Minds...*

Robert Vaden-Goad, Southern Connecticut State University
> *Against the Current: Electing to Study Mathematics Since 1980 (Preliminary Report)*

Joan Weiss, Fairfield University
> *Trigonometric Identities on a Graphing Calculator*

Donna Beers, Simmons College
Ellen Davidson, Simmons College
> *A Learning Community for Prospective Elementary School Teachers*

L. J. Balasundarame, Harvard Institute for Learning in Retirement
> *Mod(6) Prime Patterns*

Tom Kalmar, Sterling College
> *The Goddard Prime Number Theorem Revisited (or: On the Harmonic Frequency of Primes)*

Northeastern Section Connections at the Knoxville Math Fest MAA Awards Presentation   **Frank Ford**

The Northeastern Section was well represented at the 2006 Math Fest Awards Ceremony in Knoxville. I always read through the awards booklet to find connections to our Section. Here are the ones I found this time. Jeff Suzuki, winner of a Carl B. Allendorfer award for an article in *Mathematics Magazine,* earned his masters and doctorate from Boston University. Victor Blåsjö, winner of a Lester Ford award for an article in the *American Mathematical Monthly*, will be a Mathematics Fellow at Marlboro College, Vermont, for the 2006-2007 academic year. Edward Berger, no stranger to awards, also won a Lester Ford award for publication in the same journal. Professor Berger is at Williams College and he did his undergraduate work at Connecticut College. A third

winner of the same award is Dr. Kenneth Stolarsky who is a professor at Dalhousie University in Halifax, Nova Scotia. Lesley Ward, who received one of the Henry L. Adler awards for distinguished teaching by a beginning faculty member received her M. Sc., M. Phil., and Ph.D. degrees from Yale University.

From the Colleges

Bowdoin College (reporter **Jim Ward**) **Mary Lou Zeeman** has joined the department this fall as a professor. She earned her B.A. from Oxford and her Ph.D. from the University of California at Berkeley, and she has spent the last 15 years at the University of Texas at San Antonio. For the next few years she will spend the fall semesters at Bowdoin and the spring semesters at Cornell where she will continue her research in endocrine biology using mathematical models. The eventual goal is to involve both Bowdoin and Cornell students in this research as Bowdoin develops a program in mathematical biology.

Connecticut College (reporter **Kathy McKeon**) **Sanjeeva Balasuriya** has joined the Department of Mathematics and Computer Science at Connecticut College. Sanji received his Ph.D. in Applied Math from Brown University. He has taught at the University of Peradeniya in Sri Lanka, Oberlin College and, most recently, the University of Sydney.

Dartmouth College (reporter **Carl Pomerance**) Our big news is **Kemeny Hall**, the new math building that has been under construction for about 2 years. Faculty, grad students, and staff have just moved in, and our classroom space should be ready a bit later in the fall. A novel feature is subject-area laboratories which will be magnets for students interested in these areas. Seminars will be held in them, some will have some interesting computing machinery, others interesting books, and some both. In particular there are two geometry labs, a number theory/cryptography lab, two applied math labs, a discrete math lab, a pedagogy lab, and a lab supporting the Chance newsletter. If you're in the area, please stop by and see our gorgeous new building---someone will be happy to show you around. We have three new faculty this fall. **Owen Dearricott** is a John Wesley Young Instructor in differential geometry working with **Craig Sutton** (who joined us as an assistant professor a year ago). Owen received his PhD in 2002 from SUNY Stony Brook. **Stephanie Treneer** is also a John Wesley Young Instructor. She is in number theory and working with **Dorothy Wallace**. She received her PhD this year from U. Illinois in Champaign--Urbana. **Sean McGuinness** is visiting the discrete math group this year (**Sergi Elizalde**, **Rosa Orellana**, and **Pete Winkler**). **Dan Rockmore** was recently named the John G. Kemeny Parents Professor of Mathematics. Dan holds a joint position with the Computer Science Department. **Rosa Orellana** was just promoted to associate professor with tenure, plus she won the Huntington Award for teaching this past spring, and she is also a recent recipient of a

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McLane Family Fellowship supporting teaching and research. **Carl Pomerance** was elected as the Mathematics Section chair of the American Association for the Advancement of Science. Two John Wesley Young Instructors finished their terms here last spring: **Ryan Daileda** took a tenure track job at Trinity U. in Texas and **Rob Hladky** took a postdoc at U. Rochester. Last June we had one graduating PhD, **Lee Stemkoski**, who took a tenure track job at Adelphi U. The year before we had 3 graduating PhD's who have all landed good postdocs. This academic year we should have a bunch (or is it a gaggle?) of new PhD grads. Overall, our department has been building some strength in applied math (both traditional and non-traditional), and to reflect this we have retooled the undergrad curriculum with new applied math courses as well as financial math. **Fitchburg State College** (reporter **Claire McAndrew**) For the 26th year the Fitchburg State Department of Mathematics has held the Elizabeth Haskins Mathematics Contest for 500 regional high school students. **Gerry Higdon** has organized the day of mathematics contests, talks, lunch, and the Awards Ceremony for the last quarter century. The department has welcomed two new faculty members in the last two years. Dr. **Amy Wangsness** joined the department from Iowa State in 2005 and P**eter Staab**, Ph.D., University of Colorado at Boulder, has recently arrived via Tufts and Colorado College. The Mara Award for Teaching Excellence at Fitchburg State was won by **Gerry Higdon** for the year 2005-2006. Assistant Professor **Amy Wangsness** will be one of the invited participants in a workshop on Spectra of Families of Matrices Described by Graphs, which will be run through the American Institute of Mathematics Research Conference Center (ARCC) in Palo Alto, CA, October 23-27, 2006. The organizers are Richard Brualdi, Bryan Shader, and Leslie Hogben, all known for work in the field of combinatorial matrix theory. The goal of this workshop, sponsored by the American Institute of Mathematics (AIM) and the National Science Foundation (NSF), is to bring together researchers in the fields of matrix theory, graph theory, and combinatorics to make progress in the investigation of the following problems: 1) The 2n-conjecture for spectrally arbitrary sign patterns. 2) Determination of the minimum rank of symmetric matrices described by a graph. 3) The energy of graphs.

Framingham State College (reporter **Sarah Mabrouk**) **Mohammad Salmassi** was promoted to Professor effective September 1, 2006. **Sarah Mabrouk** was promoted to Associate Professor effective September 1, 2006. **Eileen Lee** was awarded tenure effective September 1, 2006. **Robert Page** joined the Mathematics Department at Framingham State College in Fall 2006. Before coming to Framingham, he held a visiting position at Bennington College and, for the three years prior to that, he taught Mathematics at South Panola High School in Datesville, Mississippi. Robert earned his Ph.D. at the University of Mississippi. Our friend and colleague **Anita Goldner** died on

December 30, 2005. To honor and to celebrate her life, the College held a memorial service on March 8, 2006. During the memorial service, organized and lead by Mo Salmassi, some of Anita's many friends shared how she had enriched and brightened their lives. Anita inspired her students, guiding them in their education and in life. She was a wonderful colleague and a great supporter and encourager of junior faculty. She always made new colleagues feel immediately welcome and at home at the College and in the Mathematics Department. Anita loved Framingham State College and its students, and she included a bequest for the creation of an endowed scholarship for students majoring in elementary mathematics education in her will. It is our hope that you can join us on Tuesday, October 17th at 1:00 pm when the College will unveil a memorial bench in Anita's honor in front of Hemenway Hall at Framingham State College.

Keene State College (reporter **Dick Jardine**) **Vince Perlini** finished his sabbatical. **Mike Cullinane** is on sabbatical and **Dick Jardine** will be on sabbatical in the Spring. The Department is converting its current 3-credit based curriculum to a 4-credit based curriculum, and at the same time, participating in the revision of Keene's general education program. The general education program is now called the Integrative Studies Program (ISP), very different in philosophy and implementation from the old general education program. Part of the ISP is a quantitative literacy (QL) requirement, which the Mathematics Department is taking a leadership role in developing but that other departments are heavily involved in implementing. Mathematics Department faculty and staff are presently conducting a QL Institute, a faculty development initiative to prepare a broad spectrum of KSC faculty to teach QL in the context of their disciplines or interests.

Lyndon State College (reporters **Susan Gallagher** and **Kathy Armstrong**) Dr. Jeffrey Green, Assistant Professor of Mathematics and Computer Science, has been hired as a one-year replacement for Professor **David Mellor**, who is on a leave of absence. Dr. Green has a Ph.D. in Computer Science from Clemson University in South Carolina and an M.A. in Computer Science from the University of Texas in Austin and a B.S. in Physics from Carnegie-Mellon University. Most recently he served as network administrator at Karme Choling in Barnet, Vermont.

Manchester Community College (reporter **Kathy Bevelas**) Manchester CC hired **Paul Edelen** and **Catherine (Kate) Lombardi** to fill two positions. Paul was an adjunct in the MCC Mathematics Department since fall 2004. He received a bachelor's in Electrical Engineering from Rensselaer Polytechnic Institute, an M.S. in Mathematics and an M.A. in Mathematics Education, both from UConn, and an M.D. from the UConn School of Medicine. He has taught mathematics at the high school and college level (including at Gateway C.C. and the University of Hartford), and was an Assistant Clinical Professor at Yale and

UConn Schools of Medicine. **Kate Lombardi** recently received her M.S. in Mathematics from UConn.

MATYCONN (reporter **Kathy Bevelas**) The Fall 2006 MATYCONN meeting will be held Oct 20th at Norwalk Community College. It will focus on Mathematics Across the Community College Classroom and math folks are being encouraged to bring a nonmath faculty to the meeting.

Norwich University (reporter **Ernie True**) Professor **Cathy Frey** has recently been named Head of the Mathematics and Sciences Division. Professor **Gerard LaVarnway** has assumed the duties of Chair of the Mathematics Department. In addition, the department has added three new faculty on the tenure track. We are please to have Dr. **Susan Diesel** who has been visiting for two years now in a tenure track position. Susan also is the Director of our Developmental Mathematics Program. This year we also hired Dr. **Elizabeth Mathai** and Dr. **Darlene Olsen** at the rank of Assistant Professor. In addition, Dr. **Jeffrey Olson** is fulfilling a one year visiting position. We also have two new members of the department at the rank of Lecturer**, Sandy Desorda** and **Hung Kim**. Professor **Steve Wiitala** is on independent study leave for the fall semester and Dr. **Rob Poodiack** is on independent study leave for the spring semester.

Rivier College (reporter **Teresa Magnus**) Dr. **Darien Lauten** retired from the department this spring. During her tenure here, she developed and directed the MAT in Teaching Mathematics program which continues to thrive. Dr. **Teresa Magnus** has assumed the role of MAT-Math Director for Fall 2006, but is looking forward to a sabbatical in Spring 2007 in which she plans to study the mathematics of voting. Dr**. Stephan Ehrlich**, Dr**. William Bonnice**, and Dr. **Vladimir Riabov** are also fulltime faculty currently teaching mathematics at Rivier College.

St. Francis Xavier University (reporter **Tara Taylor**) Two faculty are on sabbatical: **Ping Wang** and **Ping Zhou**. **Wendy MacCaull** is part of an interdisciplinary research team that received an award to help build capacity in Nova Scotia's health research community. **Tara Taylor** received a service learning grant to help bring math to the community. **Tao Li** received an NSERC discovery grant.

St. Michael's College (reporter **George Ashline**) **Jo Ellis-Monaghan** was tenured and promoted to associate professor in the Spring of 2006. Another large group of students and faculty participated in the Hudson River Undergraduate Conference in April of 2006 at Westfield State College. There were eight Saint Michael's student presentations. **Jim Hefferon** is currently on sabbatical, in which he is focusing on web services for CTAN. **Zsu Kadas** is ably serving as department chair in his absence.

Salem State College (reporter **Mary Platt**) Students **Dan Kirkorian** and **Misook Wood** won the Lathorop Award for Excellence in Mathematics and

Joseph Ngenga won the Lathrop Award for excellence in Computer Science. The Department has two new assistant professors: **Joe Fox** with his Ph.D. from Western Michigan University who was a visiting instructor at Grand Valley State University last year, and **L. Pedro Poitevin** with his Ph.D from the University of Illinois at Urbana-Champaign. **Julie Belock** received tenure and was promoted to Associate Professor. **Kenny Ching** is on sabbatical for Fall 2006.

Three Rivers Community College (reporter **Kathy Bevelas**) Three Rivers Community College, has a new math instructor is **John Wengertsman**. He did adjunct work at Capital CC while he was an actuary at Travelers Insurance (now Travelers/ St Paul).

Tufts University (reporter **Eric Todd Quinto**) **Fulton Gonzalez** was promoted to full professor and received tenure. **Eric Todd Quinto** received the Robinson Chair in Mathematics.

University of Massachusetts-Boston (reporter **John Lutts**) **Karen Ricciardi** is on maternity leave until the spring. **Catalin Zara** is a new hire. (He was formerly at Penn State.) **Alfred Noel** received tenure last year. **Maura Mast** has been elected chair of SIGMAA-QL, the special interest group of the Mathematical Association of America in Quantitative Literacy and she continues to serve as Clerk of the Association for Women in Mathematics. She is also a mentor/consultant for Project NExT. Several members are National Project NExT fellows**: Karen Ricciardi**, **Steven Jackson** and **Catalin Zara**. **Geza Schay** retired at the end of the spring semester.

Westfield State College (reporter **Phil Hotchkiss**) On April 8, 2006 Westfield State College hosted the 13th annual **Hudson River Undergraduate Mathematics Conference**. This was the first time a public institution of higher education hosted the conference. By all accounts it was a tremendous success. There were about 650 attendees from New England, New York and Ohio. There were approximately 220 talks, the vast majority of which were given by undergraduates. **Mary Ann Connors** (Mathematics Department) participated in the First National Summit on The Advancement of Girls in Math and Science May 15th. She was among approximately 100 invited participants selected from academia, public affairs, advocacy, and the STEM professions. Mary Ann was excited and honored to participate with enthusiastic leaders in this groundbreaking national event on a crucial topic. She looks forward to seeing the realization of the goals set forth at the summit and to continuing to contribute to Westfield State College's historic role in the education of women and all students in the fields of mathematics and science. Mary Ann has also received and accepted an invitation from the National Science Foundation to read and evaluate proposals submitted to the National Science Foundation's Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP) and then serve on a panel that will convene November 13-14, 2006.

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Student Career Conference in the Mathematical Sciences October 27, 2007

A Student Career Conference in the Mathematical Sciences will be held at Bentley College on Saturday, **October 27, 2007**. The planning process is underway, so reserve the date to bring your students. More information will be available in future Newsletters and a website will be set up at some point in the future. Karen Schroeder of Bentley College will be chairing the conference.

Northeastern Section Elections at Fall Meeting

As specified in Article III, 5a, of the Bylaws of the Northeastern Section, the Section will conduct the bi-annual election of officers at the business meeting of its Fall meeting at Sacred Heart University on November 18, 2006. As specified by Article III,6, a committee consisting of Ockle Johnson as chair, and Linda Kelleher and Frank Ford as members will present the slate listed below. Nominations from the floor will be accepted. Vote will be by secret ballot of those members attending the business meeting. Note that the Vice-Chair elected at this meeting will become the Chair of the Section after the November 2007 meeting. Biographies supplied by the candidates are below the slate.

For Vice-Chair:
    Jason Moliterno, Sacred Heart University
    Robert Poodiac, Norwich University

For Secretary-Treasurer:
    Ann Kizanis, Western New England College

For Two-Year Representative:
    Lois Martin, Massasoit Community College

Biographies:
Jason Moliterno:
Jason Molitierno is an assistant professor of Mathematics at Sacred Heart University; this is his sixth year there. He received his B.A. from Connecticut College in 1996 with a major in Mathematics, minor in American History, and a teaching certificate for grades 7-12. After briefly teaching seventh grade in New London, CT, Jason pursued his Ph.D. at the University of Connecticut which he received in 2001. His areas of research are matrix theory and graph theory. An MAA member since 1998, Jason has attended every Northeast Sectional meeting and every national meeting since 2001. He was co-chair of the Program

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Committee for the MAA/NES Spring 2004 meeting, a member of the Program Committee for the MAA/NES Spring 2005 meeting, and chair of the Local Arrangements committee for the MAA/NES Fall 2006 meeting. Jason also organized an MAA dinner meeting at Sacred Heart University in April 2003, and he gave the invited talk at the MAA dinner meeting at Simmons College in April 2006. Jason has also served the section by being a member of the Distinguished Teaching Award Committee for three consecutive years, 2002-2005. He has been active in Section NExT and is currently assisting in organizing a problem solving competition that we hope to have at future MAA/NES meetings. At the national level, Jason has chaired several MAA contributed paper sessions at both MathFests and Joint MAA-AMS meetings. He has given a variety of talks at these meetings in both research and pedagogy. Jason has won a variety of teaching awards. He also actively mentors undergraduate research and is currently mentoring two students.

Robert Poodiac:

Rob Poodiack is an Associate Professor at Norwich University, where he's been since 1999. He did his graduate work at the University of Vermont in Fourier analysis, but spends more time investigating technology in the classroom and, currently, versions of trigonometric functions under different metrics. An MAA member since 1997, Rob was Local Arrangements Chair for the Spring 2001 meeting at Norwich. He was also a co-presenter of the Summer 2002 Short Course. Rob served on the local arrangements committee for Mathfest 2002 in Burlington, VT and has been the organizer of the contributed paper sessions at the NES/MAA meetings since 2004. At Norwich, Rob is co-advisor of the student section of the MAA and has organized the successful Integration Bee to kick off Mathematics Awareness Month every April.

Ann Kizanis:

Ann graduated with a B.A. in Mathematics from Connecticut College in 1985. During her time there, she received the Julia Welles Bower Prize for Excellence in Mathematics each year. She also received the Rosemary Park Fellowship for Teaching in 1985 and was named a Winthrop Scholar.

She did her graduate work at Wesleyan University in the area of archimedean lattice-ordered groups and graduated with a Ph.D. in 1991. She then began working as an Assistant Professor of Mathematics at Western New England College. She was granted tenure in 1995, was promoted to Associate Professor in 1996, and was promoted to Professor in 2004. While at Western New England College, she received the Teaching Excellence Award in 1995, as well as the Golden Bear Award, given in recognition of unselfish commitment to the student body at the college. Four years ago, Ann accepted the position of Associate Dean of the School of Arts and Sciences at the college. She continues

to enjoy the challenges of this position, as well as the rewarding experiences she receives from teaching.

Ann has published papers on her area of interest, epicompletions of archimean lattice-ordered groups and has had a joint paper published this past year.

Ann remains very active in governance and department affairs at the college. She has been a member of many committees at the college during the last fifteen years. Among them, she has served on the Faculty Senate for three terms, was chair of a retention task force, and has been chair of the First Year Program Committee since 1997. She also served as advisor to the Math Club from 1992-2000. She is presently on the Peer Review Committee and serves on many other committees.

Ann has been a member of the Mathematical Association of America since graduate school. She was a member of the Program Committee for the Fall Meeting of the NES/MAA that was held at Western New England College in 1997 and was also Publisher Liaison for the Spring Meetings in 1995, 1996. She has served as Secretary/Treasurer of the Northeastern Section of the Mathematical Association of America for the last six years. Ann has learned a great deal during this time and enjoys working and interacting with members of the Northeastern section. She hopes to continue to serve the section and looks forward to being involved in the planning of the Fall Meeting that will be held at Western New England College in 2009.

In her free time, Ann enjoys traveling. She visits her relatives in Greece each summer. She and her husband enjoy sight seeing, visiting family, and relaxing while in Greece. They also enjoy cooking together, visiting museums, and working outside on gardening and landscaping projects.

Lois Martin:
Lois Martin is a professor of Mathematics at Massasoit Community College, where she has taught since 1978. She has a B.S. (Mathematics) from the University of Massachusetts at Amherst and an M.A.T. (Mathematics) from Bridgewater State College. She is active in both the New England Mathematical Association of Two-Year Colleges (NEMATYC) and the American Mathematical Association of Two-Year Colleges (AMATYC) and has given presentations at conferences for both organizations. Last January she participated in a contributed paper session at the Joint Meetings in San Antonio. She is currently serving her third three-year term as NEMATYC treasurer and her second three- year term on AMATYC's Program Committee and has been a delegate at AMATYC conferences for several years. The current Two-Year College Representative for the Northeastern Section, Professor Martin is a longtime member of MAA, was a member of a CUPM Focus Group at Mathfest 2002, and represented the two-year colleges on the NES/MAA Nominating

Committee in 2002 and on the Teaching Award Selection Committee in 2004. At Massasoit Community College she is the current Mathematics Department Chair and has held the position of Academic Senate President. She has also received the NISOD Award for Teaching Excellence and the Governor's Pride in Performance Award.

Northeastern Section NExT at Fall Meeting……………Lisa Humphreys
The Northeastern Section is continuing a Section NExT program for new and relatively new colleagues at this year's Fall meeting. By providing talks and workshops on issues of interest, opportunities to meet and share ideas with other new colleagues, and an introduction into Section activities, we hope to assist new faculty in their transition from graduate school to professional academic life. We welcome all untenured full time faculty, both those who have and have not been National NExT fellows.

Friday, November 17, 2006
12:00 pm - 2:00 pm
Sacred Heart University, Fairfield, CT

12:00-1:00	Lunch and Group Discussion
1:00-2:00	**Calculus I, II, III and Differential Equations: A Smorgasbord of My Favorite Examples, Exercises and Projects**
	Lisa Humphreys, Rhode Island College.
3:00	Section Meeting begins.

If you are interested, please contact Lisa Humphreys of Rhode Island College at LHumphreys@ric.edu or Ockle Johnson of Keene State College at ojohnson@keene.edu. You should also register for the Section meeting by completing the registration form in the Section Newsletter and check off that you will be participating in the Section NExT program. (If you did not receive a Newsletter, indicate that to Lisa.)

Northeastern Section Collegiate Mathematics Competition
The Northeastern Section of the Mathematical Association of America is pleased to announce its first Collegiate Mathematics Competition. This will be a team competition for undergraduate students open to all college and universities of the Section. Teams can have two or three members and a College may enter as many teams as it wishes. This will be great fun for first-time competitors as well as competition veterans. It can also be a great warm-up for the Putnam exam, which takes place a couple of weeks after the Collegiate

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Mathematics Competition. The questions are meant to be stimulating, but not as difficult as those on the Putnam exam. The inaugural competition will take place during the Fall 2006 Section Meeting at Sacred Heart University in Fairfield, CT, on Friday, November 17th from 3:00 to 5:00 p.m.   The competition stands at the center of a great day for students at the meeting,
including opportunities to hear accessible talks by student speakers afterward and, if desired, a banquet and after-dinner talk. (More schedule details will be announced as we get closer to the meeting.)
Winning teams will be announced and prizes awarded after the banquet.   Prizes include copies of Mathematica for Students (courtesy of Wolfram Research) and $100 for the winning team, $75 for the second place team, and $50 for the third place team.
Rules, a registration form, and more details can be found at:
http://www2.norwich.edu/rpodiac. Click on the link marked "NES/MAA Information."
Please note: All team members must be registered for the meeting and have paid the registration fee for the meeting by November 3rd.

NES/MAA Award for Distinguished College/University Teaching of Mathematics
There is no packet of forms to fill out in order to make nominations for the 2007 Northeastern Section of the Mathematical Association of America (NES/MAA) Award for Distinguished College or University Teaching of Mathematics: you create the nomination packet with various letters written by those familiar with the candidate's teaching/research/publications. The eligibility and nomination requirements as well as some hyperlinks to help you in creating the nomination packet are listed below.
The eligibility requirements are
- college or university teachers who currently teach a mathematical science at least half-time during the academic year in a public or private college or university in the United States or Canada (those on approved leave (sabbatical or other) during the academic year in which they are nominated qualify if they fulfilled the requirements in the previous year),
- at least five years experience in teaching a mathematical science, and
- has membership in the Mathematical Association of America and is teaching in the Northeastern Section,
and the nomination requirements,
- widely recognized as extraordinarily successful in his/her teaching,
- has teaching effectiveness that can be documented,
- has influence in teaching beyond his/her own institution, and
- fosters curiosity and generates excitement about mathematics in

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students.

Nominations for the *2007 NES/MAA Award for Distinguished College of University Teaching of Mathematics* are due by **January 15, 2007,** and the winner of the Section's award for distinguished teaching is then nominated for the Deborah and Franklin Tepper Haimo Award for Distinguished College or University Teaching of Mathematics. General information for the distinguished teaching as well as a list of past recipients of the award can be found on the Sections Awards page of the NES/MAA web site, http://fileserver.wheatonma.edu/tratliff/NES/teaching_award.html; more detailed information about the Section award, eligibility, and nomination process can be found on the MAA website, http://www.maa.org/Awards/CFN_Template.html. Information about the nomination process as well as about the National award can be found on the MAA website,

- http://www.maa.org/Awards/teachingawards.htm
- http://www.maa.org/Awards/Haimo_EGN.pdf (general guidelines/eligibility information)
- http://www.maa.org/Awards/Haimo_NF.pdf (Nomination Form).

The *typed* completed Nomination Form must accompany the nomination packet that you create and nominations should include no more than five letters of recommendation of no more than one page each,

- two letters from present or former students
- two letters from colleagues one of whom could be the department chair, and
- one additional letter from anyone qualified to comment on extraordinary teaching success.

In addition to these letters, the nomination should include a narrative describing the nominee's background, experience, teaching style, special contributions, other teaching awards, evidence of unusual/extraordinary achievement/success in teaching; this narrative should be no more than five double spaced pages. Additional documentation on the nominee's teaching success including but not limited to summaries of peer or student teaching evaluations, comments on teaching, possible increases in the number of undergraduate/graduate degrees in mathematics directly related to the nominee, and student successes in mathematics competitions may be included on no more than three additional pages.

The Nomination Form, http://www.maa.org/Awards/Haimo_NF.pdf contains a note that states that "if the nomination packet significantly exceeds the prescribed limits" then "it will not be eligible for consideration for a national award." Since the nomination packet for the Section award will be forwarded to MAA for consideration for the National award, it is important to consider this caution and not exceed "the prescribed limits."

Once you have compiled the information and letters for the nomination packet, please send the completed packet to Sarah Mabrouk at Framingham State College before the ***January 15, 2007*** deadline. Once you have mailed the packet to
Sarah Mabrouk
Framingham State College
100 State Street, P.O. Box 9101
Framingham, MA 01701-9101,
please call her, (508) 626-4785, or email her, smabrouk@frc.mass.edu, to confirm the receipt of the nomination packet. The nomination process will not be complete until you have received confirmation that the completed nomination packet has been rec

Call for Undergraduate Student Papers

Undergraduate students from the Northeastern Section are invited to present talks at the Fall meeting on topics in mathematics, statistics, or computer science. The presentations should be 10 minutes in length, on expository work, research projects, employment experiences, or problems from mathematical periodicals. The registration fee and cost of meals will be waived for one student presenter per paper. Interested students should submit the title of the presentation with an abstract of no more than 80 words together with full name, email address, mailing address, college/university affiliation, indication of desire to attend the Friday Banquet, the Saturday lunch or both, and the name and email address of a faculty sponsor to Karen Stanish, kstanish@keene.edu, or Raimundo Kovac, rkovac@ric.edu. The deadline for submission is Nov. 3, 2006.

Call for Contributed Papers

Participants at the Fall Meeting of the section are invited to submit contributed papers. We are particularly interested in papers that will appeal to a variety of participants. If you are planning to speak about results of your research, keep in mind that the audience most likely will not be familiar with your specialty, so you will want to give some motivation and context for your work. Your presentations should be approximately 15 minutes in length. Please send an abstract and your mailing address together with a list of any special equipment you may need to Rob Poodiac at rpoodiac@norwich.edu or (802) 485-2339. Email submissions are preferred, but you may also send a typed submission to Rob Poodiac; Department of Mathematics; Norwich University; 158 Harmon Drive; Northfield, VT 05663. The deadline for submission of abstracts is November 3.

Call for Graduate Student Papers

GRADUATE STUDENTS, full-time and part-time, are invited to present papers on

topics in mathematics, statistics, or computer science. Graduate students at any stage of their graduate work are welcome to give a presentation during the session. The presentations, approximately fifteen (15) minutes in length, can be given on expository work, research projects, variations on intriguing proofs, interesting problems in mathematics, work derived from periodicals, employment experiences, summer/independent research experiences, or parts of or work related to Master's or Doctoral research projects. The registration fee and the cost for Saturday lunch will be waived for one graduate student presenter per paper. Interested graduate students should submit the title of the presentation with an abstract of no more than 100 words together with full name, college/university affiliation, contact information (phone number, fax number, and email address), audio-visual/technology needs for the presentation, the name of a faculty sponsor, and full contact information and affiliation for the faculty sponsor to Sarah Mabrouk, smabrouk@frc.mass.edu; please use "NES/MAA Graduate Student Paper Session - Submission" for the subject line. The deadline for submission is Friday, November 3, 2006.

Call for New Faculty Papers

New faculty participating in the Northeastern Section Fall MAA meeting are invited to submit papers for the New Faculty session. The purpose of these talks is to introduce you to the section. These talks should focus on either your research or pedagogical activities. If you are giving a talk on your research, please remember that there will be people in the audience that are unfamiliar with your research area so it might be helpful to give some background and motivation. Your presentations should be approximately 15 minutes in length. Overhead projectors and computers with projection capabilities <u>may</u> be available.

Please send a 25 word or less abstract, any special equipment needs you may have and your mailing address to Phil Hotchkiss at photchkiss @ wsc.ma.edu or Chris Aubuchon at aubuchoc @ badger.jsc.vsc.edu. Email submissions are preferred, but you may also send a typed submission to

> Phil Hotchkiss
> Department of Mathematics
> Westfield State College
> Westfield, MA 01086

or

> Chris Aubuchon
> Department of Mathematics
> Johnson State College
> 337 College Hill
> Johnson VT 05656

The deadline for submission of abstracts is November 3.

Northeastern Section of the MAA
SACRED HEART UNIVERSITY, FAIRFIELD, CT
51ST FALL MEETING OF NES/MAA
All rooms are in the Main Academic Building

Program Committee
> Co-Chair: Julie Levandosky, Framingham State College
> Co-Chair: June Decker, Three Rivers Community College
> Hansun To, Worcester State College

Local Arrangements Committee
> Chair: Jason Molitierno, Sacred Heart University
> Hema Gopalakrishnan, Sacred Heart University
> Rose Marie Kinik, Sacred Heart University

Northeastern Section NExT Program

Friday, November 17, 2006

12:00 - 1:00 p.m.	**Lunch and Group Discussion**
	Faculty Lounge,
1:00 - 2:00 p.m.	**Calculus I, II, III and Differential Equations: A Smorgasbord of My Favorite Examples, Exercises and Projects**
	Lisa Humphreys, Rhode Island College.
	Room SC 200B

NES/MAA 51st Meeting

Friday, November 17, 2006

2:00 – 6:00 p.m.	**Registration,**
	Faculty Lounge,
2:00 – 2:50 p.m.	**Executive Committee Meeting**
	SC 200B
3:00 – 4:50 p.m.	**2006 Northeastern Collegiate Mathematics Contest**
	UC 105
3:00 – 3:50 p.m.	**The State of Ramsey Theory**
	Aaron Robertson, Colgate University
	University Commons
4:00 – 4:50 p.m.	**MAA Initiative on College Algebra & Related Courses**
	Sheldon Gordon,
	Farmingdale State University of New York
	University Commons
5:00 – 5:50 p.m.	**Undergraduate Student Papers**
	UC 104-107

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6:00 – 8:00 p.m.	**Reception and Banquet**
	Mahogany Room
8:00 – 8:50 p.m.	**CHRISTIE LECTURE**
	Great Moments of the Riemann Zeta Function
	Jennifer Beineke, Western New England College
	Mahogany Room

Saturday, November 18, 2006

8:00 – Noon	**Registration**
	Faculty Lounge
8:00 – 8:50 a. m.	**New Colleagues Presentations**
	UC 104-107
8:00 – 8:50 a. m.	**Graduate Paper Session**
	UC 104-107
9:00 – 9:50 a.m.	**Some New Advances in the Theory of Dynamic Materials**
	Konstantin Lurie, Worcester Polytechnic Institute
	University Commons
9:00 – 10:30 a.m.	**Graduate Student Reception**
9:50 – 10:30 a.m.	**Break**
10:30 – 11:20 am	**DISTINGUISHED TEACHER LECTURE**
	Isoperimetric Inequalities (1000th Proof) with Applications
	Gilbert Strang, MIT
	University Commons
11:20 a.m. – 11:50 p.m.	**Business Meeting: Election of Officers**
	University Commons
11:50 – 1:00 p. m.	**Lunch**
	Mahogany Room
1:00 – 1:50 p. m.	**Cooperative Learning in Collegiate Mathematics Classes**
	Nancy Hagelmans, Villanova University
	University Commons
2:00 – 2:50 p. m.	**Mathematics and Music**
	John Little, College of the Holy Cross
	University Commons
3:00 – 3:50 p.m.	**Workshop: Online Teaching Techniques for the Classroom as Well as for Distance Learning**
	Kathy Gundersen, Three Rivers Community College
	Kem Barfield, Three Rivers Community College
	Room To Be Announced
3:00 – 3:50 p.m.	**Contributed Papers**
	UC 104-107

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Abstracts/Biographies

Title: The State of Ramsey Theory
Speaker: Aaron Robertson, Colgate University
Abstract: It has been nearly 80 years since Frank Plumpton Ramsey proved his eponymous theorem. So what has been done since then? We will present some history, the big theorems in this area of combinatorics, as well as present some recent results in the subarea of Ramsey theory on the integers. We will finish by presenting some open questions that are appropriate for undergraduate research.
Biography: Aaron works in the general area of combinatorics, specifically in Ramsey theory on the integers and restricted permutation enumeration. He is a coauthor, with Bruce Landman, of the recent book *Ramsey Theory on the Integers*. He is also the Associate managing editor of the online journal Integers. When not researching or teaching math at Colgate University, he enjoys playing guitar and spending time with his wife and two children.

Title : MAA Initiative on College Algebra & Related Courses
Speaker: Sheldon Gordon, Farmingdale State University of New York
Abstract: The MAA has recently launched a national initiative to change the focus in college algebra and related courses, courses that are taken by a million students each year. Who are these students? Why do they take these courses? Where do they go after taking these courses? What mathematics do they really need? What should be the focus in these courses to better serve the needs of the students and other disciplines?
Biography: Shelly Gordon is Distinguished Teaching Professor at Farmingdale State University of New York. He is a member of a number of national committees involved in undergraduate mathematics education and is leading a national initiative to refocus the courses below calculus. He is the principal author of *Functioning in the Real World* , a co-editor of the MAA Notes volume *A Fresh Start for Collegiate Mathematics: Rethinking the Courses Below Calculus*, and a co-author of the texts developed by the Harvard Calculus Consortium.

Title: Great Moments of the Riemann Zeta Function
Speaker: Jennifer Beineke, Western New England College
AbstractMovies have great moments and sports have great moments, but mathematics has the greatest moments of all. In this talk, we will review some basic properties of the Riemann zeta function and we will explore its moments

(also known as mean values), revisiting the momentous discoveries of Hardy, Littlewood, and Ingham in the 1920s. We will also discuss memorable moments that today's number theorists have encountered as they work on open problems related to the Riemann Hypothesis

Biography: Jennifer Beineke is an Associate Professor of Mathematics at Western New England College, where she has taught since 2001. She earned Bachelor's degrees in mathematics and French from Purdue University, and went on to earn her Master's and Ph.D. degrees from UCLA, under the supervision of Don Blasius. She also held a visiting position at Trinity College in Hartford, CT, where she received the Arthur H. Hughes Award for Outstanding Teaching Achievement. Her research is in the area of analytic number theory, most recently focusing on moments of the Riemann zeta function. Other activities Jennifer enjoys include reading, working on puzzles and cryptic crosswords, and traveling with her husband and 18-month-old daughter. In fact, her daughter is showing signs of becoming a mathematician, having already been to eight math conferences and slept through three talks.

Title: Some New Advances in the Theory of Dynamic Materials
Speaker: Konstantin Lurie, Worcester Polytechnic Institute
Abstract: The talk is focused on special material formations termed the dynamic materials (DM). DM are defined as structures assembled from conventional materials distributed in spacetime. If such assemblages occur on a microscale, they become spatio-temporal, or dynamic composites (DC). When a low frequency disturbance propagates through DC, it may perceive this one as a medium with some effective properties detected through homogenization. A discussion of such properties along with some special effects they produce in material design is the central objective of the talk. Such effects include material screening, elimination of a cutoff frequency in waveguides, amplification and generation of waves, compression of impulses, frequency multiplication, and so on. A DM is a linear system with coefficients (material parameters) variable in space and time, and their variability may produce said effects, some of them being typical for the non-linear systems. This is accompanied by an exchange of energy and momentum between DM and the environment. The energy/momentum transformation in DC is examined in the context of electrodynamics of moving dielectrics. Waves of negative energy may particularly emerge through the material mixing in space-time, and such waves may, in special circumstances, demonstrate instabilities and open the way to power generation. The effective properties of DC are needed for the purpose of optimal layout in dynamics. The bounds for such properties related to the mixtures of two or more original dielectrics will be discussed in the talk for one-dimensional wave propagation without shocks. Such bounds appear to be sharp, i.e. attainable by laminates of multiple rank. Other microstructures may

demonstrate quite a different performance, not necessarily characterized by the effective properties. For example, a spatio-temporal checkerboard may create "synchronized waves" in one spatial dimension, i.e. the waves with profiles initially occupying some space in one dimension and eventually being compressed into much smaller intervals that shrink to a point as t $\rightarrow \infty$. Energy supplied from without into the waves traveling through a checkerboard is accumulated within the impulses as they contract, and this creates very high energy concentration in space.

Biography: Dr. Konstantin Lurie received his B.Sc., M. Sc, from Leningrad Polytechnic Institute, (St. Petersburg, Russia) and his Ph.D, Dr.Sc. from A.F. loffe Physical-Technical Institute, Acad. of Sci. USSR, St. Petersbrug, Russia. He moved to USA in 1988; and since since 1989, he has been Professor of Mathematics at WPI. His research interests include optimal control and design of distributed parameter systems, homogenization and effective properties of composites, multidimensional and nonconvex variational problems. He is the author of 3 books and about 100 papers on these subjects.

Title*: Isoperimetric Inequalities (1000th Proof) with Applications
Speaker: Gilbert Strang, MIT
Abstract: The oldest competition for an optimal shape (area-maximizing) was won by the circle. But if the fixed perimeter is measured by the line integral of |dx| + |dy|, a square would win. Or if the boundary integral of max(|dx|,|dy|) is given, a diamond has maximum area. For any norm in R^2, we show that when the integral of ||(dx,dy)|| around the boundary is prescribed, the area inside is maximized by a ball in the dual norm. When || \ || is the l^2 norm, that ball is a circle (!). Our proof comes directly from the calculus of variations, where Busemann's original proof (and most of the 999 isoperimetric proofs) used inequalities from convex geometry. This problem has applications to computing minimum cuts and maximum flows in a plane domain.
Biography: Gilbert Strang was an undergraduate at MIT and a Rhodes Scholar at Balliol College, Oxford. His doctorate was from UCLA and since then he has taught at MIT. He has been a Sloan Fellow and a Fairchild Scholar and is a Fellow of the American Academy of Arts and Sciences. He is a Professor of Mathematics at MIT and an Honorary Fellow of Balliol College. Professor Strang has published a monograph with George Fix, "An Analysis of the Finite Element Method," and six textbooks:

Introduction to Linear Algebra (1993, 1998, 2003)
Linear Algebra and Its Applications (1976, 1980, 1988, 2006)
Introduction to Applied Mathematics (1986)
Calculus (1991)

Wavelets and Filter Banks, with Truong Nguyen (1996)
Linear Algebra, Geodesy, and GPS, with Kai Borre (1997)

Gilbert Strang served as President of SIAM during 1999 and 2000.
He was Chair of the US National Committee on Mathematics for 2003-2004.
He won the 2005 von Neumann Medal of the US Association for Computational
Mechanics. His home page is http://math.mit.edu/~gs and his courses
are on MIT's OpenCourseWare ocw.mit.edu.

Title*: Cooperative Learning in Collegiate Mathematics Classes
Speaker : Nancy Hagelmans**, Villanova University**

Abstract: Cooperative learning is a method of active learning in which stable
groups of students produce a significant amount of work in a course. Their
work is assessed and counts in the course grade. We will discuss formation of
student groups, initial activities for groups, groups in the classroom and
computer lab, assignments outside class, difficulties with groups, monitoring the
groups, modes of operation within groups, assessment in the courses, and group
testing.   Courses considered include Mathematics for the Liberal Arts, Calculus
with Review, Calculus I-III, Discrete Mathematics, Abstract Algebra, and
Topology.

Biography: Nancy Hagelgans is Professor Emerita of Mathematics and
Computer Science at Ursinus College, where she taught a great variety of
mathematics and computer science courses for 26 years and served two terms as
department chairperson. She earned a Ph.D. in algebraic topology at Johns
Hopkins University and later an M.S. in computer science at Villanova
University. Her A. B. in mathematics was awarded by Goucher College, which
she entered on a Ford Foundation Early Admissions Scholarship and where she
was elected to Phi Beta Kappa. Her interests include discrete mathematics,
computer solutions to mathematics problems, and student learning. She was a
co-author of the MAA book "A Practical Guide to Cooperative Learning in
Collegiate Mathematics". Currently she is a member of the MAA Executive
Committee, Chair of the MAA Committee on Sections, Chair of the MAA
Strategic Planning Working Group on Professional Development, and an adjunct
faculty member in graduate computer science at Villanova University. She
plays the violin in a symphony orchestra and various chamber music groups.

Title: Music and Mathematics
Speaker: John Little, College of the Holy Cross

Abstract: Mathematics and music have been associated throughout history, and
mathematicians in all ages have felt the affinities, even if they have not been
able to pin down exactly what it is about the subjects that ties them together. In
this talk, we will present evidence for the assertion that people from many

cultures have created musical compositions using processes that are closely to mathematics. Our examples will focus on various types of symmetry, and will include pieces from both Western classical music and traditional African music. Musical thought and mathematical thought have much more in common than might be apparent at first glance, and mathematics can be used to understand the structure of music in very deep ways.

Biography: John Little received his A.B. from Haverford College with a major in mathematics in 1976, and his Ph.D. in mathematics from Yale University in 1980. Since 1980 he has taught of the College of the Holy Cross in Worcester, MA, where he is currently Professor of Mathematics. His research interests are in algebraic geometry, computational techniques, and applications of algebraic geometry to error-control coding theory. He has been active in teaching and in directing undergraduate research. He is also an active amateur violist, performing in orchestras and chamber music in the Worcester and Boston areas.

Title Workshop: Online Teaching Techniques for the Classroom as Well as for Distance Learning
Speakers: Kathy Gundersen, Three Rivers Community College
　　　　　Kem Barfield, Three Rivers Community College
Abstract: This workshop will address the question of how to get beyond teaching math skills in an online environment. We will explore ways to develop higher order thinking in math using features such as the discussion tool available in course management systems. The workshop is not only for those who teach courses online, but also for those contemplating teaching online and those who wish to provide web-enhancements to their on-ground courses.

Biography: Kem Barfield is the Director of Distance Learning at Three Rivers Community College, Norwich, CT. His responsibilities include course management system technical support, software application training, and web site administration and maintenance. He is the co-chair of Connecticut Community Colleges' Distance Learning Council and is an active member of the Academic Information Technology Advisory Committee (AITAC), the Connecticut Distance Learning Consortium (CTDLC) Membership Council and the Connecticut Community Colleges Vista Implementation Teaching and Learning Workstream. He is a co-author of "Effective Teaching Practices for Web-enhanced, Hybrid and Online Classes." He is an active adjunct instructor, in face-to-face and online classes in computer applications, basic programming, college algebra, and freshman critical thinking. He enjoyed a career as a Navy submariner. At the Navy Submarine School he trained a variety of groups including astronauts from the International Space Station.

Biography: Kathy Gundersen has been a professor at Three Rivers Community College in Norwich, CT since 1982. She has been teaching on-line courses since 2002. Kathy earned her BA in mathematics from Assumption College

and her MS from Central Connecticut State University. Her current interest is in developing on-line materials to teach analytical skills and group problem-solving. Besides teaching math, she loves her camp on Toddy Pond in Maine.

Hotel Information

Hotel rooms have been blocked at the hotels listed below.

Courtyard by Marriott, Shelton
780 Bridgeport Avenue
Shelton, CT 06484
Phone: (203) 929-1500
Reservation: $94 per night.
Ask for MAA Block
Deadline: October 27

Trumbull Marriott
180 Hawley Lane
Trumbull, CT 06611
Phone: 1-800-682-4095
Reservation: $99 per night
Ask for MAA - Sacred Heart University block
Deadline: October 18

Hilton Garden Inn, Shelton
25 Old Stratford Road
Shelton, CT 06484
Phone: (203) 447-1000
Reservation: $79 per night
Ask for Group Code SHU
Deadline: October 28

AmeriSuites
695 Bridgeport Avenue
Shelton, CT 06484
Phone: (203) 925-5900
Reservation: $89 per night
Ask for Group Name
SHU – Mathematical Association (MAA)
Deadline: October 15

Homewood Suites by Hilton
6905 Main Street
Stratford, CT 06614
Phone: (203) 377-3322
Reservation: $89 per night
Ask for Group Code MAA
Deadline: October 25

Meals

Friday's banquet will be a buffet. It consists of sliced flank steak, chicken picatta, pasta primavera, steamed vegetables, red roasted potatoes, mixed green salad, bread and butter, and dessert. Lunch on Saturday is also a buffet and consists of assorted sandwiches and wraps, pasta salad, pickle tray, chips, cookies and brownies. The Friday banquet will cost $27 and the Saturday lunch will be $12. The lunch on Friday for the Section Project NExT will be free for those who enroll in the Section Next.

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Parking

Follow signs on campus for on-campus parking.

Directions

From Merritt Parkway (Route 15) North or South (Passenger Vehicles Only).

- Exit 47. At end of ramp turn left onto Park Avenue

- Proceed 1 1/2 blocks to Sacred Heart University. Entrance on Park Avenue.

From Connecticut Turnpike (I-95)North or South (Passenger Vehicles Only).

- Exit 27A. Continue straight ahead on combined Routes 8 and 25 to fork. Bear left onto Route 25.

- Take Exit 7, Merritt Parkway South to Exit 47. At end of ramp turn left onto Park Avenue and proceed 1 1/2 blocks to Sacred Heart University.

About Sacred Heart University

Sacred Heart University, located in Fairfield, CT was founded in 1963 by the Most Reverend Walter W. Curtis, Bishop of the Diocese of Bridgeport. Led and staffed by the laity, Sacred Heart University has grown into a residential

university with approximately 3,100 full-time undergraduates. As the second-largest Catholic university in New England, SHU provides men and women with a comprehensive, hands-on education rooted in the liberal arts and Catholic intellectual tradition. The university offers baccalaureate degrees in over 30 majors from four colleges: the College of Arts and Sciences, the John F. Welch College of Business, the College of Education and Health Professions, and University College which is responsible for our adult education program. In addition, Sacred Heart University also offers graduate programs in many areas. We also offer a clinical doctorate in physical therapy.

The mathematics department consists of ten full-time members. Faculty have received their doctoral degrees from schools such as Wesleyan University, University of Minnesota, University of Wisconsin, Stevens Institute of Technology, and University of Connecticut. The department offers many courses in a variety of areas of mathematics and is actively engaged in research in areas such as group theory, ring theory, topological groups, matrix theory, and graph theory. We also offer a wide range of research opportunities for students.
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Pre-Registration

Please Pre-register! On-line registration is NOT available. Please send the registration form on the next page so that it arrives by Thursday, November 3 2006. Checks should be made to: *NES/MAA*. If you have questions about registration, you can also contact Jason Moliterno at MolitiernoJ@sacredheart.edu. You should mail this pre-registration form to :

      MAA Registration
      Jason J. Molitierno, Ph.D.
      Assistant Professor of Mathematics
      Sacred Heart University
      5151 Park Avenue
      Fairfield, CT 06825-1000

PRE-REGISTRATION FORM

Last Name_____

First Name _____ MI _____

If you prefer another name on badge please indicate here: _____

Institutional Affiliation _____

Mailing Address

_____

_____

_____

City _____ State _____

ZIP _____ Country _____ Daytime Phone Number _____

FAX Number _____

Email Address_____Please check box that applies to you:		
Four-year college faculty ☐ Two-year college faculty ☐ University faculty☐ High School teacher ☐ Retired ☐ Business/industry/government ☐ Undergraduate☐ Unemployed (but not retired)☐ Graduate student ☐ Student ☐		
Pre-registration fee: MAA Member ☐ $25.00 Non-Member ☐ $30.00 Student or unemployed ☐ $10.00		**$**
Friday Banquet: $27.00 per person (Be sure to include any guests.) Number:_____ Please indicate special meal needs/allergies:_____		$
Saturday Luncheon: $12.00 per person (Be sure to include any guests.) Number:_____ Please indicate special meal needs/allergies:_____		$
TOTAL PAYMENT (Checks should be made payable to: *NES/MAA*.)		$

Section NExT:
   There is no fee for Section NExT activities for Fall 2006.
   Are you attending Section NeXT on Friday?
          ( ) Yes   ( ) No
   Are you attending the Section NeXT lunch on Friday?
            ( ) Yes ( ) No		

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