

NORTHEASTERN SECTION



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November 19 and 20, 2010
Providence College, Providence, RI

Spring, 2011	Norwich University, Northfield, VT	Spring Section Meeting
Fall 2011	Connecticut College, New London, CT	Fall Section Meeting

November 19, 2010
Providence College, Providence, RI

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Message from the Chair.....Rob Poodiac

Hello Northeastern Section members --

I hope everyone's Fall semesters are going smoothly and that snow hasn't come to visit you just yet. As of this writing (Halloween), we have some flurries in northern Vermont, just enough to cover the leaves I haven't raked yet.

A lot of things have been happening with the Section. We had a fantastic meeting at Salve Regina University in Newport, RI back in June. The weather was fantastic and you can't go wrong with a meeting in such a spectacular location. Many thanks to Will Stout and Ernie Rothman at Salve for their hard work on local arrangements. The excellent meeting program was put together by Lisa Humphreys of Rhode Island College (chair), Eric Johnson of the Coast Guard Academy, and Ryan Mullen of Sacred Heart University, in conjunction with all of our special session coordinators. They all did yeoman's work putting the meeting together and we are grateful for all their time and effort.

Our next meeting happens, as is tradition, the Friday and Saturday before Thanksgiving. For the Providence College meeting, Ann Moskol of Rhode Island College and her committee have put together a strong program. We are privileged to have Benjamin Raphael from Brown University and Ian Winokur from Greenfield Community College as our invited speakers. Susan Loepp from Williams College will give her presentation as our section's Distinguished Teaching Award winner. We are honored to have Erik Demaine from MIT as the 2010 Christie Lecturer. We will also give the 2010 Howard Eves Award to Rick Cleary from Bentley University.

We'll also have two invigorating panel discussions on Saturday, one on how we can set up high school students for success in college math, and another on the rewards and challenges of teaching math online.

Of course, there are plenty of opportunities for you to participate as well! We have chances for professors, teachers, undergraduates, and graduate students to give paper talks, so why not sign up?

Speaking of undergraduates, the Fall Meeting has the 5th Annual Collegiate Mathematics Competition on Friday afternoon. If you're an undergraduate student in the section, form a team of two or three members and come down to Providence for a chance to see some invigorating problems and to win cash prizes!

We now have online registration for the section meetings and the ability to take payments via PayPal. It's all available via the section website: <http://www.maa.org/northeastern>.

I've only been in the job as section chair for a year, but it's already time to elect my successor. Karen Stanish from Keene State, our current Section NeXT coordinator; and Eric Johnson from the U.S. Coast Guard Academy, our current Contributed Papers coordinator, are the candidates for Vice Chair. Whomever is elected becomes Vice Chair immediately and then takes over as Chair in a year at the conclusion of the 2011 Fall meeting. Both Karen and Eric have

worked hard for the Section and would make excellent Chairs.

Ann Kizanis from Western New England College is running for re-election as Secretary/Treasurer, and Phil Mahler from Middlesex Community College is running for re-election as Two-Year College Representative. We hope you'll come to the meeting in Providence to elect from among these candidates (or nominate your own). If you're interested in the process, feel free to peruse the newest version of our section bylaws.

While we're on the subject of section officers, I just wanted to give a quick update on the health of our Governor, Ed Sandifer of Western Connecticut State University. All reports indicate that his recovery from a stroke he suffered in August 2009 continues apace and that Ed is in great spirits. We owe a debt of gratitude to our previous Governor, Ockle Johnson of Keene State, for filling in for Ed at the national meetings and on the section's executive committee.

One last reminder is that it's already time to start thinking about our section's 2011 Distinguished Teaching Award winner. Take a look at your college or nearby ones and nominate someone who's made a difference to students and to fellow professors. Do you have someone who's changed the way you teach certain topics? Why not nominate them? Details on how to nominate someone will be discussed at the Providence meeting and posted on the section website afterward.

My thanks to all the volunteers who help the section move forward day-by-day. It's amazing what you all accomplish. I look forward to seeing many of you not only at Providence, but at the Joint Mathematics Meetings in New Orleans in January!

Message from the Acting Governor Ockle Johnson

This summer I again substituted for Ed Sandifer at the Governor's meeting during Mathfest. We wish Ed all the best as he continues to recover from last year's stroke.

Of particular note to the Northeastern Section, our revised section bylaws were approved by the governor's. I was a little concerned to see our policies—which we had pulled out of the bylaws so that we could revise them without a bylaw change—were included as well. But that was just a cutting and pasting error, so in fact only the actual bylaws were considered by the governors.

The revised bylaws for the national MAA organization were also approved, first by the governors and then by the membership at the business meeting. Thanks to Fernando Gouvea for picking up some typos that had eluded the other eagle eyes who had proofread the text.

At one point in the discussion the issue of information about careers in mathematics arose and Rick Cleary shared information about our career days at Bentley. We also discussed David Bressoud's August Focus column and ideas for the future of the MAA. The most heated discussion arose around a statement of principles that prefaces the joint MAA/MAPLE placement test. The contentious issue was the statement that calculators and computers should be considered for use in placement testing programs. After discussion, the statement was approved on a split vote.

Strategic planning work continues with the working group on periodicals finishing up soon and two new groups beginning. Rick Cleary is chairing one on MAA books and Doug Ensley one on SIGMAAs. Speaking of books we were reminded to consider MAA textbooks as high quality, low cost texts for our courses. Financially we have survived the economic downturn. MAA finances have been affected like everyone else, but we've fared much better than most—due in large part to a conservative investment philosophy. In round numbers, our investments are about \$6 million, assets \$15 million, and budget \$8 million. With close attention to cost containment in challenging times, recent budgets have been not quite balanced, but close.

Message from the Secretary-Treasurer Ann Kizanis

In the spring newsletter, I reported a balance of \$21,945.81. Since that time, the expenses from the successful spring meeting at Salve Regina University were \$3,926.00. We also spent \$401.66 to reimburse travel expenses. The total expenses for the spring meeting were \$4,327.66, while the revenue from meeting registrations was \$5,215.00. The expenses for the printing and postage of the spring newsletter totaled \$780.97. Moreover, we earned \$17.79 in interest from money placed into a money market account since the last newsletter and received our subvention check in the amount of \$2,666.00 from the national office. Our present balance is \$24,735.97.

The expenses for our spring 2010 meeting were \$2,676.03 less than our fall 2009 meeting expenses, and the revenue from spring meeting registrations was \$2,366.51 less than the revenue from fall meeting registrations. The expenses for the postage and printing of our newsletter last spring decreased from last fall. We spent \$1,255.90 for the printing and postage of the fall 2009 newsletter and \$780.97 for the printing and postage of the spring 2010 newsletter.

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 Providence College, on November 19-20, where I will update you further on our finances.

I wish you all a very enjoyable fall semester!

Two-year College Representative's ReportPhil Mahler

The spring meeting of NEMATYC will be held at Cape Cod CC April 29-30. Accommodations will be offered at a hotel on the beach, and all are hoping for good weather to optimize the meeting location. Information is always at www.nematyc.org, including an archive of information of past meetings. MATYCONN has tentatively set its spring meeting for Friday, May 6, at Naugatuck Valley CC. www.matyconn.org will always have the most current information. AMATYC's national meeting is Nov 11-14.

The community colleges continue to look for curricula and modes of instruction to improve success rates for the many developmental students who enter our doors. One notable new idea is to precisely define the skills needed to succeed in a liberal arts or statistics course, and focus on achieving ability in these skills in one semester, typically fall, and take the college level, hopefully transferable, course in the spring. This is in reaction to the realization that too many semesters of developmental mathematics are a real roadblock to student success for non-STEM majors who do achieve success in their other courses.

From the Newsletter Editor Frank Ford

It is my turn to welcome you to a sectional meeting. I hope to see many of you at Providence College in November. Ann Moskol, Lynnette Boos and Phil Mahler have produced an excellent program and I hope you will visit us we come near to the close of another semester.

Student Presentations at the Spring 2009 Meeting

Synchronization of Two Pendulums on a Moving Support

Kevin M. Tichy, Western Connecticut State University

Hybrid Trigonometric Polynomial Approximations,

Zachary Grant and Sidafa Conde, UMass Dartmouth.

Exploration of Robust Rumor Spreading Protocols,

Charles Drake Poole, UMass Dartmouth

Time Series Analysis of Keyboarding Dynamics Using Normal

Inverse Gaussian with Generalized Auto-Regression

Sidafa Conde & Charles Drake Poole, UMass Dartmouth

Fibonacci Nim: How number theory allows you to always be a winner

Nancy Wang, Williams College

Writing natural numbers in a really cool way: How many terms do we need on average?

David Clyde, Williams College

Finding your own neat Fibonacci identities: Moving from multiples to sums,

Cory Colbert, Williams College

Continued fractions: How their denominators generate all natural numbers

Gea Shin, Williams College

Contributed Papers Presented at the Spring 2009 Meeting

The Pythagorean Theorem,

Peter Ash, Math for the Rest of Us

Quadrature Methods for Multilevel Data Analysis, Jacob Gagnon,

University of Massachusetts Amherst

Teaching Undergraduate Number Theory Using the Moore Method,

Hema Gopalakrishnan, Sacred Heart University

What I Learned about Using Online Homeworks from Student Feedback

Laura McSweeney, Fairfield University

Logistic Curves in the Mandelbrot Set: Analyzing the Tilt of Julia Sets

Lynette Boos and Daniel J. Ford, Providence College

Summands of the normal bundle of a rational curve in a hypersurface,

Bin Wang, Rhode Island College

Group Quizzes in Calculus

Fei Xue, University of Hartford

Hamiltonian Decomposition of Hypercubes,

Joseph E. Fields, Southern Connecticut State University

Richard Cleary wins the Howard Eves Award

The Northeastern Section of the Mathematical Association of America is proud to announce that Dr. Richard Cleary of Bentley University is the winner of the 2010 Howard Eves Award.

The Howard Eves Award is given every five years by the NES/MAA to a recipient who reflects those characteristics of Howard Eves that placed him at a level of high esteem by the entire mathematical community.

Dr. Cleary possesses all of these characteristics in spades. Like Dr. Eves, Dr. Cleary is a spellbinding lecturer, well known throughout the Northeastern Section for his lectures on statistics as well as the short course on statistics for teachers in 2003. His humorous presentations have been enjoyed at several colleges and universities in the section and throughout the country.

Howard Eves was one of the people instrumental in founding, organizing, promoting, and providing the necessary leadership for the section in its early existence. Dr. Cleary also has provided astute leadership for the Northeastern Section. From 1994 to 1999, he served as Vice Chair, Chair and Past Chair of the Section. Since then, he has served on several national committees

of the MAA, including his current stint as associate treasurer. The 2010 Howard Eves Award will be presented to Dr. Cleary at the Northeastern Section meeting at Providence College. Congratulations and our gratitude to Rick!

From the Colleges

Bentley University(reporter **Rick Cleary**) Professor **Nathan Carter** was granted tenure and promoted to Associate Professor as of July 1 of this year. Nathan also was one of two 2010 recipients of the MAA's Alder Award. He received the award and gave a talk at MathFest. Professor **Lucy Kimball** was promoted to Full Professor as of July 1 of this year. She will take over from **Rick Cleary** as department chair on July 1, 2011. Professors **Charlie Hadlock** and **Vita Steblovskaya** are on sabbatical for the 2010-11 school year. Professor **Mihaela Predescu** has a daughter, Alexandra, born in February. The most exciting news of all is the explosive growth in our enrollments. We started a new concentration in Actuarial Sciences that has attracted a lot of students, so many that we had to run a second section of our course on Mathematical Interest Theory last spring. From those sections, over half of the students (22 and counting) have now passed Exam FM on Financial Mathematics. We now have over 60 majors spread across the four undergraduate years.

Bowdoin College (reporter **Aba Mbirka**) Aba Mbirka has been hired as a Post Doctoral Fellow and Instructor in the Department of Mathematics.

Bridgewater State University (reporter **Thomas Moore**). We are now Bridgewater State University having made this transition in name and organization of schools much like our sister institutions in Connecticut a few years ago. Our new hire is Dr. **Irina Seceleanu** who received her PhD in Functional Analysis from Bowling Green State University. We are also seeking applicants for two tenure track assistant professor positions, one in mathematics and one in mathematics education.

Colby College (reporter **Scott Taylor**) **Scott Taylor** has been hired as an assistant professor after two years in a temporary

position and has a new son born of July 8.

University of Connecticut (reporter **Gerald Leibowitz**) The Hachemeister Prize Committee has awarded the 2010 Charles A. Hachemeister Prize to **Edward W. Frees, Peng Shi, and Emiliano A. Valdez** for their paper, "Actuarial Applications of a Hierarchical Insurance Claims Model." The Probability, Combinatorics, and Foundations Program of the NSF informed **Ralf Schiffler** that it will fund him for the next three years to do research on his proposal "Cluster Algebras and Tilting Theory II," and informed **Masha Gordina** that it will fund her for the next three years to do research on her proposal "Stochastic Analysis and Related Topics."

Curry College (reporter **Rebecca Vassenes**) **Rebecca Vassenes** has been hired as an Assistant Professor of Mathematics. She has her Ph. D. in Algebraic Combinatorics from Caltech and her M. Ed. in Instructional Design from UMass-Boston.

Dartmouth (reporter **Carl Pomerance**) Dartmouth has two new John Wesley Young postdoctoral instructors: **Erik van Erp**, coming from U. Pennsylvania, in the fields of operator algebras and noncommutative geometry; **Andrew Yang**, coming from Princeton U., in the field of number theory. A former JWY postdoctoral instructor, **Joe Mileti**, has accepted a tenure track position at Grinnell College in Iowa. Professor **Pete Winkler** gave a talk in Rome, Italy on "Mathematical revelations in bridge". He also has completed a new book "Cryptobridge". Professor **Dan Rockmore** was featured in a SIAM News article on artist Vincent Van Gogh. Both Pete and Dan gave hour talks at the Joint Mathematics Meetings in Washington, DC in January. Chance News, a project of **Professor Emeritus J. Laurie Snell**, continues to feature lively news articles that are of interest in probability theory and statistics. The website is www.dartmouth.edu/~chance Laurie is assisted by Professors **Peter Doyle** of Dartmouth, **Bill Peterson** of Middlebury College, and several others outside of the Northeastern Section. Professor **Dorothy Wallace** gave a half-day workshop on quantitative literacy for schools in the Appalachian College Association. Professor **Carl Pomerance** gave plenary lectures at the Fibonacci Association biennial conference (Patras,

Greece) and the Canadian Number Theory biennial conference (Waterloo, Ontario), as well as at a festrschrift in Leiden, The Netherlands in honor of Hendrik Lenstra. Professor **Georgia Benkart** of U. Wisconsin gave our Kemeny Lecture Series, and Professor **Ken Ono**, also from Wisconsin, gave our Prosser Lecture. In 2009, we had 45 graduating math majors in addition to 10 math minors. Of the majors, 6 wrote honors theses. Three students received their PhD's: **Jonathan Brown** (analysis, postdoc position at Ben-Gurion U. in Israel), **Geoff Goehle** (analysis, tenure track position at Western Carolina U.), and **John (Matt) Mahoney** (analysis, visiting scholar at Dartmouth). Geoff won the college-wide Hannah Croasdale award for excellence among all Dartmouth PhD recipients. The department has just been awarded a Graduate Assistance in Areas of National Need grant. This award will help greatly to build our graduate program.

Framingham State University (reporter **Sarah Mabrouk**) On Wednesday, July 28th, Governor Deval Patrick signed legislation, effective October 26, 2010, creating a state university system in Massachusetts, transforming Framingham State College into Framingham State University. We are delighted to welcome new assistant professor **Nicholas Sedlock** to the Department effective September 1, 2010. Nic earned his Ph.D. in Mathematical Sciences in May 2010 and his A.M. in Mathematical Sciences in May 2006 from Washington University in St. Louis, his M.S.T in Secondary Education in Mathematics in May 2004 from Boston College, and his B.S. in Mathematical Sciences in May 2002 from Carnegie Mellon. Nic said that he “is excited to return to Massachusetts, where he met his wife Holly 6 years ago” and that he and Holly “are enjoying life in New England with their daughter Josephine, born last August”. **Julie Levandosky** was awarded promotion to the rank of Associate Professor effective September 1, 2010. **Joyce Cutler** became Chair of the Mathematics Department for a three-year term effective July 1, 2010. **Walter Czarnec** and **Robert Page** are in the process of creating two new mathematics courses for a proposed M.Ed. for elementary teachers. The courses are part of a STEM initiative to improve the mathematics background of elementary teachers. On

a personal note, Walter has become a grandfather for the fourth time with the birth of his first grandson Marek Rey Konish.

Thomas Koshy retired effective July 1, 2010 from Framingham State University. However, as always, he is very busy and, among other things, he is teaching part-time for the University. Tom will conduct the MAA minicourse *The Ubiquitous Catalan Numbers and Their Applications* during the 2011 Joint Mathematics Meetings in New Orleans, Louisiana, and he is the co-organizer of the MAA invited paper session on *The Beauty and Power of Number Theory* with **Shannon Lockard**, Bridgewater State College, during the meeting. Tom will be the speaker for the Ninth Annual NES/MAA Preskenis Dinner, and the title of his presentation is *Fibonacci and Pell Tilings*. **Sarah Mabrouk** is the organizer of the MAA session on *Journals and Portfolios: Tools in Learning Mathematics??* during the 2011 Joint Mathematics.

Norwich University (reporter **Ernest True**) After 40 years of distinguished service to Norwich University as Professor of Mathematics, **Dr. Edwin "Ted" Marsden** passed away unexpectedly in June 2010. Ted was a valuable member of the mathematics faculty at Norwich. In addition he was a driving force in the Vermont Mathematics Initiative (VMI) working with colleagues at the University of Vermont. Professor Marsden was instrumental in the teacher licensure program at Norwich especially mentoring mathematics majors pursuing careers in mathematics education. The first mathematics colloquium of the year at Norwich is now called the Marsden Lecture. In addition, Norwich has initiated the Ted Marsden Freshman Mathematics Prize awarded annually at convocation.

Providence College (reporter **Frank Ford**) Providence College hired **Su-Jeong Kang and Cayla McBee** to a tenure tract positions. Cayla completed her Ph.D. at Colorado State University and her Bachelor's from Wheaton College in Massachusetts. Her area is graph theory. Su-Jeong got her Ph.D. from Purdue University and taught at The University of Alberta in Edmonton and at Central Michigan State. Her area is algebraic geometry.

Jack King retired after 53 years of service to the Department including many years as Chair. Another long-time member of the

Department, **Steve Schultz** also retired. **Jim Tattersall** gave two talks at the Joint Mathematics Meetings in San Francisco: “Bougainville’s *Traite du Calcul-Integral*” and “Joel E. Hendricks and the *An alyst*.” He presented “The Mathematical Department of the *Yates County Chronicle*” at the History and Pedagogy of Mathematics Americas Section annual meeting in Washington, D.C., on March 13. He also presented “The Prouhet-Terry-Escott Problem” at the Canadian Society for History and Philosophy of Mathematics meeting in Montreal, Quebec, on May 29. **Si-Jeong Kang** was invited to attend “Workshop on Algebraic Varieties” from Nov. 6-7 at Fields Institutes in the University of Toronto, and gave an hour talk with title “Kaehler-de Rham cohomology and Chern classes.” **Lynette Boos** spoke at the math club colloquium at Central Connecticut State University on April 9, 2010 giving a talk titled “Algebras in Analysis.” Under the direction of **Jim Tattersall**, the Department has launched a colloquium series to allow faculty to share work they are doing.

University of Massachusetts-Lowell (reporter **Tzu-Yang Yu**) **Tzu-Yang Yu** received a fellowship from the Japan Society for the Promotion of Science (JSPS). She will use the fellowship I will visit several universities and national labs in Japan to conduct experimental and theoretical work. She will visit in January of 2011.

St Michael’s College (reporter **George Ashline**) **Jo Ellis-Monaghan** recently was promoted to full professor. **Phil Yates** joined our department as an assistant professor in the fall semester. Phil previously taught in the Department of Mathematics & Statistics at Cal Poly Pomona. In January, 2010, **Jo Ellis-Monaghan** became Associate Editor of PRIMUS (Problems, Resources, and Issues in Mathematics Undergraduate Studies), a refereed Taylor & Francis journal devoted to dialogue and exchange of ideas among those interested in teaching undergraduate mathematics. She will assume the role of Editor-in-Chief of PRIMUS in January, 2011. **Jo Ellis-Monaghan** is the PI on a recently awarded 3 year \$200,000 NSF grant to support undergraduate collaborative research projects in nanoconstruct design (**Greta Pangborn** from the CS department is the co-PI on

the grant). Over the summer, **Jim Hefferon** presented “Characterizing CTAN Packages” at the 2010 TeX Users Group conference in San Francisco. On October 1, we inducted eighteen undergraduates into the Vermont Alpha chapter of Pi Mu Epsilon. **Zsu Kadas** continues as chapter advisor. **Lloyd Simons** continues as our Putnam Competition advisor, and this semester he is offering for the first time a problem seminar for interested students. **George Ashline** received the Norbert Kuntz Service Award at the fall convocation.

Salem State University (reporter **Kathi Crow**) Salem State has a new hire to its faculty: **Kathi Crow**. She is in non-commutative rings and is studying Leavitt Path Algebras. She got her Ph.D. from the University of California at Santa Barbara and her undergraduate degree from Holy Cross. She has previously taught at Gettysburg College and the American University in Cairo. She is a 2004 Project NEXt Fellow and has been on the executive council of the EPaDel Section of the MAA.

Stonehill College (reporter **Sahi Simonson**) Cambridge University Press has published **Shai Simonson’s** book *Rediscovering Mathematics: You Do the Math*.

Yale University (reporter **George Seligman**) Professor **Ilya Piatetski-Shapiro** died on February 22, 2009. A memorial conference in his honor was held on September 13, 2009.

Professors **Gil Kalai** and **Alex Lubotsky** have been appointed to multiyear positions as Adjunct Professors. Visitors for the academic year are Professor **Douglas Lind**, of the University of Washington, and **Marianna Csoernyei**, of University College, London. Associate Professor **Mara Neusel**, of Texas Tech University, is visiting for the fall semester. New to the faculty are Gibbs Assistant Professors **Ian Biringer**, **Corina Calinescu**, **Anna Lachowska**, **Neta Rabin** and **Andrew James Wells**.

Professor of Computer Science and Applied Mathematics **Daniel Spielman** was awarded the Rolf Nevanlinna Prize at the 2010 International Congress of Mathematicians in Hyderabad. Professor **Vladimir Rokhlin** has been named recipient of the ICIAM Maxwell Prize for 2011. **Alexaander Goncharov**, formerly of Brown University, has joined the mathematics department as

Professor. Newly appointed Assistant Professors are **Yael Algom-Kfir, Amanda Folsom, Garving Luli, Sam Payne and Zhenqi Wang. Prof. Willard Miranker** is a Visiting Fellow and Tobias Dyckerhoff, a Simons Postdoctoral Fellow. **Professor Yair Minsky** is the new Chair of the Department of Mathematics. **Professor Emeritus Benoit Mandelbrot** died on October 14, 2010.

NES/MAA Award for Distinguished College/University Teaching of Mathematics

Here is information on the award. This year, Rob Poodiac will be in charge of the award committee. His contact information is:

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There is no packet of forms to fill out in order to make nominations for the 2009 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 students.

Nominations for the *2009 NES/MAA Award for Distinguished College of University Teaching of Mathematics* are due in January of 2010, 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, more detailed information about the Section award, eligibility, and nomination process can be found on the MAA website. 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."

Officer Elections

The Membership will elect officers at the Business meeting on Saturday, November 20 at Providence College. The Elections Committee consisting of Rob Poodiac, Ockle Johnson and Frank Ford proposes the following slate. Other nominations may be made at the meeting.

For President:

Eric Johnson, United States Coast Guard Academy

Eric C. Johnson received his B.S. in Mathematics and the Max Hirsch Prize for "outstanding academic achievement and promise for a successful career" from Rensselaer Polytechnic Institute (RPI) in Troy, NY in 1991. He continued his study of mathematics

at RPI in graduate school, earning a M.S. in 1993 and a Ph.D. in 2001. His research interests lie in linear and nonlinear optimization, although he is even more interested in teaching (including math placement and assessment).

After finishing his Ph.D., Eric worked for a year as an adjunct professor at RPI and Siena College in Loudonville, NY before joining the Department of Mathematics at the U.S. Coast Guard Academy (CGA) in New London, CT in 2002. In addition to his teaching and advising duties at the CGA, Eric routinely advises cadet capstone projects, sits on the Faculty Senate, is a member of the GOLD (Guide to Officer and Leader Development) Advisory Team, coordinates the Math Placement Program for incoming freshmen, is his department's MAA and SASMC (Service Academies Student Mathematics Conference) representative, volunteers both as a faculty advisor/coach to the CGA Men's Club Volleyball Team and as judge and reader for the annual MathCounts competition, and has been an active member of the NES/MAA since 2006, serving as the Contributed Papers Coordinator for the past year.

When he isn't working, Dr. J, as his students affectionately call him, enjoys working outside in his yard and garden, playing volleyball, cooking, watching Red Sox and NFL games on TV, and spending time with friends and family. He is currently single and lives in Groton, CT.

Karen Stanish, Keene State University

Karen Batt Stanish, an assistant professor of mathematics at Keene State College, has been involved with the Northeastern Section since she entered the section in fall 2002. She was a Section NExT fellow from fall 2002 until she received tenure in spring 2008. She co-coordinated the Undergraduate Student Paper session from fall 2005 through fall 2007. Then in spring 2008, she took over coordination of the Section NExT program and has continued in that role. Karen greatly enjoys teaching, and she pursues scholarship both in teaching undergraduate mathematics and in nonassociative algebra. Karen received her Bachelor of Science degree in Mathematics/Computer Science from Stonehill College

and her Doctor of Philosophy in Mathematics from the University of Virginia. Outside of her mathematical life, Karen enjoys spending time with her family, reading, and attending Red Sox games.

For Secretary-Treasurer:

Ann Kizanis, Western New England College

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. Eight 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 in her area of interest, epicompletions of archimedean lattice-ordered groups and has had a joint paper published this year.

Ann remains very active in governance and departmental affairs at the college. She has been a member of many committees at the college during the last nineteen years. Among them, she has served on the Faculty Senate for three terms, was chair of a retention task force, and was chair of the First Year Program Committee for nine years. She also served as advisor to the Math Club from 1992-2000. She is presently on two search 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 Local

Arrangements Committee for the Fall Meeting of the NES/MAA that was held at Western New England College in 1997 and 2009 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 ten years. Ann has enjoyed working and interacting with members of the Northeastern section and hopes to continue to serve the section.

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.

For Two-Year College Representative:

Phil Mahler, Middlesex Community College

Phil Mahler has taught mathematics at Middlesex Community College, Bedford, Massachusetts since 1982, and before that taught at a community college in Michigan.

He was a co-chair of the Michigan MAA section, and for the Northeast MAA section has served as newsletter editor and program chair. He recently served on an MAA task force on governance, and serves on the MAA Consultants Committee and the MAA Investment Committee.

He is a past president of AMATYC, and NEMATYC. He has participated in activities at the national level on quantitative literacy and college algebra reform and was a co-PI on grants related to the recent updating of the AMATYC standards document. He currently serves as NEMATYC Historian and Newsletter editor. He is also currently treasurer and webmaster for the Massachusetts Community College Council (union for the 15 Massachusetts community college professionals).

Phil holds a BA in Modern Languages, German and Russian, from Assumption College, and, after service as an electronics technician in the Navy, he earned an MAT in Mathematics from the University of Florida

**PROVIDENCE COLLEGE, PROVIDENCE, RI
55TH FALL MEETING OF NES/MAA**

Program Committee:

Ann Moskol (Chair), Rhode Island College,
Lynette Boos, Providence College
Phil Mahler, Middlesex Community College

Local Arrangements:

Frank Ford (Chair), Providence College
Asta Shomberg, Providence College
Joseph Shomberg, Providence College

Northeastern Section NExT Program

Friday, November 19, 2010

11:30 – 5:30 Registration
12:00 – 2:00 Section NExT Presentation and Lunch
Lisa Humphreys. RIC

NES/MAA 55th Meeting

Friday, November 19, 2010

11:30– 5:30 Registration in Glass Room, Slavin Center
1:00 – 3:00 5th Student Problem Solving Competition
1:30 – 2:50 Executive Committee Meeting in Slavin 103
3:00 – 3:50 How to Solve Rubik's Cube in 20 Seconds:
Demonstrations and Techniques
Ian Winokur, Greenfield Community College,
Greenfield, MA
4:00 – 4:50 Computational Problems in Cancer Genomics
Benjamin Raphael, Brown University
5:00 – 5:50 Undergraduate Student Papers
6:00 – 6:30 Reception in Glass Room, Slavin Center
6:30 – 8:00 Banquet in '64 Hall, Slavin Center
8:00 – 9:00 Algorithms Meet Art, Puzzles, and Magic
Erik Demaine, MIT
'64 Hall, Slavin Center

Saturday, November 20, 2010

8:00 – 11:00 Registration

8:00 – 8:50 New Colleagues Talks

9:00 – 10:30 Panel: What do Pre-College Students need to succeed in College Mathematics courses and how do the various pre-college initiatives address this need?

Beverly Carnevale, Rhode Island Department of Elementary and Secondary Education

Tony Griffith, AP calculus teacher at Westminster School in Simsbury, CT

Lewis Pakula, University of Rhode Island

Lynn Rakatansky, President of ATMNE

Mary Sullivan Rhode Island College

10:30 – 10:45 Break

10:45 – 11:35 Distinguished Teacher Presentation: These Are a Few of My Favorite Rings: Ideas for Inspiring Students to Like Abstract Algebra
Susan Loepp, Williams College

11:40 – 12:00 Business Meeting and Election of Officers

12:00 – 1:15 Lunch in Quiet Dining Room, Slavin Center

1:20 – 2:50 Challenges and Advantages in Teaching On-Line Mathematics Courses:

Moderator:

Phil Mahler, Middlesex Community College

Panelists:

Sarah Mabrouk, Framingham State University

Susan McCourt, Bristol community College

Bev Pepe, Community College of Rhode Island

2:55 – 3:45 Contributed Papers

Abstracts/Biographies

How to Solve Rubik's Cube in 20 Seconds: Demonstrations and Techniques

Ian Winokur, Greenfield Community College, Greenfield, MA

Abstract: Ian Winokur teaches mathematics at Greenfield CC. He is an accomplished "speedsolver" of the Rubik's Cube. When in competition form he can solve any Rubik's cube in under 20

seconds. There are many who do this, and they have competitions. The most recent US Nationals competition was at MIT in August. Ian will touch on some of the mathematics related to this, and a recent interesting result on the maximum number of steps required to solve any cube. Ian will present some background on speedsolving, his personal experience, and some demonstrations of speedsolving. Bring your unsolved Rubik's Cube!

Ian Winokur is in his second year as a math teacher at Greenfield Community College. He has taught at Deerfield Academy, the Horace Mann School, Manhattan College, and Bronx Community College. Ian's interests include reading, cycling, and playing with the Rubik's Cube. He and his wife Christine live in Leverett, MA.

Computational Problems in Cancer Genomics

Ben Raphael, Brown University, Department of Computer Science & Center for Computational Molecular Biology

Abstract: Cancer is a disease driven by somatic mutations that accumulate in the genome during an individual's lifetime. Recent advances in DNA sequencing technologies are enabling the measurement of these mutations in many cancer samples.

However, distinguishing functional *driver* mutations responsible for cancer from random *passenger* mutations remains a challenge. We develop two mathematical models to address this challenge. These models rely on the observation that driver mutations target a relatively small number of signaling and regulatory networks in the cell. In the first model, we use a diffusion process on graphs and a novel statistical test to identify groups of interacting genes, or pathways, that are mutated in a significant number of cancer samples. In the second model, we use a Markov Chain Monte Carlo approach to identify groups of genes whose mutations are mutually exclusive (or nearly so) in a large number of samples. I will describe the theory underpinning these two models and will illustrate applications of our approaches to real mutation data from The Cancer Genome Atlas.

This is joint work with Fabio Vandin and Eli Upfal from Brown University.

Ben Raphael is an Assistant Professor in the Department of Computer Science and Center for Computational Molecular

Biology at Brown University. His research focuses on the design of combinatorial and statistical algorithms for the interpretation of genomes. Particular areas of emphasis include somatic structural rearrangements in cancer genomes; analysis of genetic structural variation in human populations; and comparative genomics. Dr. Raphael received an S.B. in Mathematics from MIT, a Ph.D. in Mathematics from the University of California, San Diego (UCSD), and completed postdoctoral training in Bioinformatics and Computer Science at UCSD. He is the recipient of a Career Award at the Scientific Interface from the Burroughs Wellcome Fund and an Alfred P. Sloan Research Fellowship.

Algorithms Meet Art, Puzzles, and Magic

Erik Demaine, Massachusetts Institute of Technology

Abstract: When I was six years old, my father Martin Demaine and I designed and made puzzles as the Erik and Dad Puzzle Company, which distributed to toy stores across Canada. So began our journey into the interactions between algorithms and the arts (here, puzzle design). More and more, we find that our mathematical research and artistic projects converge, with the artistic side inspiring the mathematical side and vice versa. Mathematics itself is an art form, and through other media such as sculpture, puzzles, and magic, the beauty of mathematics can be brought to a wider audience. These artistic endeavors also provide us with deeper insights into the underlying mathematics, by providing physical realizations of objects under consideration, by pointing to interesting special cases and directions to explore, and by suggesting new problems to solve (such as the metapuzzle of how to solve a puzzle). This talk will give several examples in each category, from how our first font design led to building transforming robots, to how studying curved creases in origami led to sculptures at MoMA.

The audience will be expected to participate in some live magic demonstrations.

Erik Demaine is Associate Professor in computer science at the Massachusetts Institute of Technology. Demaine's research interests range throughout algorithms, from data structures for improving web searches to the geometry of understanding how

proteins fold to the computational difficulty of playing games. He received a MacArthur Fellowship (2003) as a "computational geometer tackling and solving difficult problems related to folding and bending--moving readily between the theoretical and the playful, with a keen eye to revealing the former in the latter". He cowrote a book about the theory of folding, together with Joseph O'Rourke, called Geometric Folding Algorithms: Linkages, Origami, Polyhedra (Cambridge University Press, 2007). His interests span the connections between mathematics and art, particularly sculpture and performance.

Panel: What do Pre-College Students need to succeed in College Mathematics courses and how do the various pre-college initiatives address this need?

Panelists:

Tony Griffith, AP calculus teacher at Westminster School in Simsbury, CT

Lewis Pakula, University of Rhode Island

Lynn Rakatansky, President of ATMNE

Mary Sullivan Rhode Island College

Patricia Carnevale has over 20 years of middle and high school mathematics classroom experience in urban districts within the Rhode Island public schools. Presently, she is the Mathematics Specialist at the Rhode Island Department of Elementary & Secondary Education in the office of Instruction, Assessment, and Curriculum. Her work includes development of the New England Common Assessment Program (NECAP) and the America Diploma Project's Algebra I and Algebra II end of course assessment. Additionally, Patty is involved with the Common Core State Standards initiative and with the next generation of state assessments titled: Partnership for the Assessment of Readiness for College and Career (PARCC).

Tony Griffith is the head of the mathematics department at Westminster School in Simsbury, CT. He has been teaching high school mathematics for 22 years at four different schools. He is a founding member of the North Carolina Association of Advanced Placement Calculus teachers. For the past six years, he has been a reader for the college board in AP Calculus. After graduating from

Wake Forest University, he earned an MALS from Wesleyan University.

Lew Pakula has been in the mathematics department at URI since 1973 and was chair 1999-2008. He chaired the RI Calculus Consortium in 1991-94, and the RI PK-16 Mathematics Advisory Committee 2004-2007. He served on the Governor's Blue Ribbon Panel on Math and Science Education 2004-2006.

Lynn Rakatansky, who taught mathematics in grades 7-12 in East Providence for 32 years, is an adjunct faculty member at Lesley University. She is the current President of Association of Teachers of Mathematics in New England, past President of the Rhode Island Mathematics Teachers Association, and a Presidential Awardee for Excellence in Mathematics Teaching. She received her B.A. from Brown University and her MA from Middlebury College

Mary M. Sullivan is in her 13th year at RIC and divides her teaching responsibilities between two schools and two departments. She is professor of mathematics in the Faculty of Arts and Sciences and of educational studies in the Feinstein School of Education and Human Development. She recently assumed the position of Director of the RI STEM Center at RIC. She is interested in mathematical problem solving in discrete mathematics areas, statistics, and how to best develop concepts so that they make sense to all learners. In light of her involvement with RI STEM, her interests have expanded to creating interdisciplinary content modules around real-world issues.

Distinguished Teacher: These Are a Few of My Favorite Rings: Ideas for Inspiring Students to Like Abstract Algebra

Susan Loepp, Williams College

Abstract: There are many reasons why students like, or do not like, Abstract Algebra. In this talk, we will discuss several possible reasons students do not like the course and present ideas for how faculty teaching Abstract Algebra might successfully reach those students. We will consider specific examples and general philosophies.

Susan Loepp received a B.A. in mathematics and a B.S. in physics from Bethel College (N. Newton, KS) in 1989. She earned her

Ph.D.in mathematics from the University of Texas at Austin in 1994. After a two-year postdoctoral position at the University of Nebraska, she joined the faculty at Williams College, where she now holds the rank of Professor. Her research area is commutative algebra and she has advised the research of many undergraduate students in that field. Loepp and William K. Wootters, a leading physicist, are co-authors of the book "Protecting Information: From Classical Error Correction to Quantum Cryptography," published by Cambridge University Press in 2006.

Panel: Challenges and Advantages in Teaching On-Line Mathematics Courses

A panel discussion of the special challenges, pitfalls, advantages and disadvantages of teaching mathematics in the first two years online. Panelists will share their ideas on these subjects through their own experience in on-line teaching. After each panelist has presented, an open discussion with the listeners will occur in which others can share their recommendations and ask questions.

Beverly has been teaching math for over 30 years. She began teaching at CCRI in 1977 as an adjunct faculty member and was hired as a full-time member of the Mathematics Department in 1980. Her work with adult students in both developmental and credit math courses at the college and community college level has given her an insight into teaching strategies that work well for mature students.

Beverly Pepe's undergraduate work is in mathematics education and her master's degree is in mathematics. This has allowed her to combine her enjoyment of math with her love of teaching. A common thread in student comments is their appreciation of her ability to break unwieldy tasks down to easily understood and mastered steps, helping to make learning mathematics manageable and enjoyable.

When the RI Board of Governors for Higher Education mandated that the three state colleges write learning outcomes for their courses, Beverly, acting as chair of the Developmental Mathematics and General/Liberal Arts committees, took a leading

role in writing her department's learning outcomes for the courses overseen by those committees.

Beverly began experimenting with online learning tools in the spring of 2006. She was one of the first instructors at CCRI to teach an entire section of Elementary Algebra (Math 0600) using an online homework generator to reinforce her classroom lessons. She used the Prentice Hall product Phim2 (which has since been incorporated with Addison Wesley's MyMathLab) for that experiment. This experience inspired her to offer her school's first online math course (Math 0600) in the spring of 2007. With her encouragement and guidance, there are now three instructors from her department who are teaching a total of seven different online math courses through CCRI.

In 2010, Beverly was nominated by her school's administration and received a National Institute for Staff and Organizational Development (NISOD) Teaching Excellence Award.

Sarah Mabrouk is an Associate Professor of Mathematics at Framingham State University. She received her A.B. in Mathematics and Physics from Wheaton College and her M.A. and Ph.D. in Mathematics from Boston University. Since Summer 2005, she has taught fourteen (14) sections of MATH 117 Introduction to Statistics as an online course. During Spring 2011, for a change of pace, she will teach MATH 117 Introduction to Statistics as a hybrid course.

Susan McCourt is Assistant Professor of Mathematics at Bristol Community College in Fall River, MA. She was awarded a BS in Mathematics from Hofstra University and MA in Mathematics from the University of Maryland.

Susan has worked on course design and assessment for developmental mathematics and statistics. She introduced a mathematics topics course to the curriculum, and taught and offered an Honors Seminar (for non Math Majors) in the History of Math which culminated in students presenting their work at the Massachusetts Undergraduate Conference at the University of Massachusetts at Amherst. She represents Bristol on the CONNECT Math Group, which meets to align goals and

curriculum to ease transfer between the CONNECT colleges. She is a member of NEMATYC and AMATYC.

Susan has used online resources in teaching courses at Bristol for more than fifteen years and began offering the Math for Liberal Arts class online more than five years ago. She has offered Introductory Statistics online since the Fall of 2009. Susan has worked as a mentor on using online resources and has offered several presentations on using discussion boards in online math courses.

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