NORTHEASTERN SECTION

NEWSLETTER

SPRING 2007

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Web Page: **http:/www.maa.org/northeastern**
Webmaster: **Tommy Ratliff, Wheaton College**

EXECUTIVE COMMITTEE

NEXT SECTION MEETING

June 8 and 9, 2007 — Spring Section Meeting
Keene State College, Keene, NH.
Program Committee: Vincent Ferlini, Keene State College; Frank Ford, Providence College
Local Arrangements: Ockle Johnson, Keene State College; Joseph Witkowski, Keene State College

FUTURE SECTION MEETINGS

November 16 and 17, 2007 — Fall Section Meeting
Framingham State College, Framingham, MA
contact: Sarah Mabrouk

OTHER ACTIVITIES

June 8, 2007 — Section NExT Meeting
Keene State College

COORDINATORS

Dinner Meetings: Lucy Kimball
lkimball@LNMTA.bentley.edu

NES/MAA Distinguished Teaching Award: Sarah Mabrouk, Framingham State College
smabrouk@frc.mass.edu

Section Project NExT: Lisa Humphreys, Rhode Island College
LHumphreys@ric.edu
Ockle Johnson, Keen State College
ojohnson@keene.edu

New Colleagues Talks: Chris Aubuchon, Johnson State College
aubuchoc @ badger.jsc.vsc.edu
Phil Hotchkiss, Western New England College
PHOTCHKISS@wsc.ma.edu

Undergraduate Papers: Raimundo Kovac, Rhode Island College
rkovac@ric.edu
Karen Stanish. Keene State College
kstanish@keene.edu

Graduate Papers: Sarah Mabrouk, Framingham State College
smabrouk@frc.mass.edu

Contributed Papers: Rob Poodiack, Norwich University
rpoodiac@norwich.edu

Problem Competition: Jason Moliterno, Sacred Heart University
MolitiernoJ@sacredheart.edu
Rob Poodiack, Norwich University
rpoodiac@norwich.edu

Message from the Chair…….Tommy Ratliff

I hope everyone's year is off to a good start. There have been many busy people around the Section since the Fall Newsletter came out:

- Congratulations are due to Gil Strang from MIT for winning the Haimo Award for Distinguished College or University Teaching of Mathematics. This is the highest teaching honor that the national MAA offers.
- Jason Molitierno was elected Vice-Chair of the Section, which means that he will assume the role of Section Chair this November at the end of the Fall Meeting at Framingham State. The Section also reelected Ann Kizanis as Secretary-Treasurer and Lois Martin as the Two-Year College Representative. Congratulations to Jason, Ann and Lois!
- Our long string of successful meetings continued this fall with the meeting at Sacred Heart University. A warm "Thank You" are owed to the entire Local Arrangements Committee (Jason Molitierno, Hema Gopalakrishnan, and Rose Marie Kinik) and the Program Committee (Julie Levandosky, June Decker, and Hansun To).

I would like to thank Rob Poodiack specifically for organizing the first Northeastern Section Collegiate Mathematics Competition at the Fall Meeting. There were eight teams and 22 undergraduates who participated in this soon to be annual event at the Fall Meetings. Please encourage your students to participate this fall at Framingham State.

We have another exciting event planned for students this fall. The Section is helping to sponsor a Student Career Day on October 27, 2007 at Bentley College. This will be a fantastic opportunity for your students to learn more answers to the omnipresent question "What can I do with a math major?" Look for more details in the Fall Newsletter and the Section Website.

The Executive Committee considered the results of the web survey the Section conducted last fall related to the interest in, and purpose of, the Spring Section Meeting. The consensus that developed is that the Spring Meeting is what it is - a chance for people in the Section to get together at a more relaxing time of the year in a more intimate setting. The responses also indicated that there is probably little that the Section can do to substantially increase attendance at the Spring Meetings since many members have other professional and personal commitments once their academic year ends. Those of you who have been able

to attend a Spring Meeting know what a pleasure it can be. If you have never attended a Spring Meeting, or haven't attended recently, please come to Keene State this June.

As always, if you have any suggestions for the Section or projects that you would like to initiate, don't hesitate to contact me or any of the other officers. I hope to see you at Keene State!

Message from the Governor ..... Ockle Johnson

It was good to be back in New Orleans for the Joint Meetings. Although there were concerns last year over keeping the meetings in New Orleans, the meeting went very smoothly and had a record attendance. As someone who spent a lot of time in New Orleans as a child visiting my grandmother, I was glad that we were able to contribute in a small way to the city's revitalization.

The Board of Governors meeting was interesting and I would like to share some of the highlights. Carl Cowen, who has just finished his term as MAA President, again spoke about enhancing our international involvement and cooperation. The Treasurer, John Kenelly, reported that our finances are in good order with the following approximate breakdown in millions: $10, operating budget; $6, investments; $8, buildings; and $6, grants.

Congratulations to Rick Cleary who was elected to the Budget and Audit Committees. As a member of those committees for the next five years, he will also be serving on the Board of Governors.

One of the lively discussions of the day was over an amendment to forego a $4 increase in dues for retirees in response to complaints over a substantial increase last year. The amendment failed in a close vote. The Board passed an amendment to the bylaws redefining emeritus membership status, which does not include journal subscriptions.

The Board received the final strategic planning reports for the first three areas: American Mathematical Competitions, Revenue and Professional Development. All were well-received. They were very positive in tone and contained some recommendations for the Executive Committee to consider. The second set of subcommittees, on Governance, Membership and Students, are continuing their work. Both the governors and the section officers spent time during their meetings discussing MAA Student Activities. The Board also voted on the issues to be addressed in the next cycle of strategic planning. They are Meetings, Sections, and STEM.

On the programming side, there is a lot of excitement about the newly renovated Carriage House at MAA headquarters, made possible by a generous gift from Paul and Virginia Halmos. The facility has been in use since the fall, but the official grand opening celebration will occur April 19-21. Highlighting this years PREP offerings is the Euler Study Tour in honor of Euler's 300th birthday. Two of the PREP programs will take place in the Northeastern Section and three will use the new Carriage House.

Donna Beers reported on her activities as a visiting mathematician at the MAA. While there she worked on a PREP program for departments doing self-studies, MAA activities for students, and education programs including the preparation of elementary teachers, AP Calculus and the transition to college mathematics, and K-16 algebra. As Donna will tell you it was a busy and productive sabbatical and she highly recommends the experience.

I hope to see many of you at the upcoming Northeastern Section meeting here at Keene State College in Keene, NH or at one of our upcoming dinner meetings. This summer Mathfest will be in San Jose, CA. If anyone has any issues or concerns they would like me to share at the August Board of Governors meeting, please let me know.

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

In the Fall newsletter, I reported a balance of $19,138.11. Since that time, we spent $971.31 on reimbursements for the Fall meeting at Sacred Heart University and $225.00 for Student Awards at that meeting. The expenses from the Fall meeting were 3,048.02, while the revenue from meeting registrations was $5,532.00. The expenses for the printing and postage of the Fall newsletter for that meeting totaled $1,453.97. Moreover, we earned $332.51 in interest since the last newsletter. The 11-month CD that I opened in the amount of $15,000 in the summer with APY 5.00% will mature on May 10, 2007. Our present balance is $19,304.32.

The expenses for our Fall meeting were $2,036.75 less than our Spring meeting expenses, while the registrations from the Fall meeting were $294 more than the Spring meeting registrations. Our expenses for postage and printing of our newsletter have remained basically the same. We spent $1,430.39 for the printing and postage of the Spring 2006 newsletter and spent $1,453.97 for the Fall 2006 newsletter. We are planning to fund a project at Bentley College this fall, since our balance has been increasing over the last few years.

In January, I wrote and submitted our Section's 2006 Financial Report, and at the beginning of the summer, I shall be writing our section's annual report.

That is my update for now! We are all looking forward to the Spring MAA meeting at Keene State University on June 8-9, where I will update you further on our finances. I wish you all a very enjoyable spring semester!

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

The 19th Annual International Conference on Technology in Collegiate Mathematics (ICTCM), was held in Boston on February 15-18, 2007, was hosted by Quinsigamond Community College. Virginia Asadoorian, professor of mathematics at QCC, served as conference chair.

The annual NEMATYC conference was held at Bristol Community College in Fall River on Friday and Saturday, April 20-21. The theme was **E X P A N D Your Horizons** and the program promises to help you do exactly that. There were sessions on using tablet pc technology, reading in mathematics, assessment, and other hot topics, as well as special sessions for department chairs and adjunct faculty,

The MATYCONN Spring 2007 Meeting will be held at Manchester Community College, Manchester, CT, on Friday, April 27, 2007.

Mathematics faculty from Bristol Community College (Elaine Previte and Greg Sethares), Cape Cod Community College (Mary Moynihan and Aaron Wan), Massasoit Community College (Jane DeVoe and Lois Martin), Bridgewater State College (Glenn Pavlicek), and UMass Dartmouth (Sokratis Koumas) form the Math CONNECT committee. Facilitated by Ron Pitt from BSC, the group has been working for the past year, discussing mathematics curriculum from the five schools with the goal of facilitating transfer among the schools.

Mathematics faculty from the 15 Massachusetts community colleges worked for three years on the 100% Math Initiative, a grant funded by the U.S. Department of Education. The goal of the project was to spark changes in instructional practice that would foster improved student retention and performance in their developmental math classes. The final report of the group, the *100% Math Initiative, Building a Foundation for Student Success in Developmental Mathematics,* was recently published and distributed to all of the community colleges. Phil Mahler, Middlesex Community College, is a member of the

Developmental Mathematics Institute which oversaw the project.

From the Newsletter Editor .....Frank Ford

Spring is here and that means we are calling you all to a Section meeting. Come to Keene and hear talks on topics ranging from Euler to Origami, from the Axiom of Choice to rubber bands. I hope you enjoy the variety of speakers we have gathered. I'm biased since I was part of the program committee but I know that Vince Ferlini and Ockle Johnson of Keene State have worked hard to provide an enjoyable experience for us. A Spring Section meeting may not have as many participants as the Fall meeting but many of us like the cozy atmosphere. Come and find out why.

Congratulations to Jason, Ann, and Lois on their election victories.

Graduate Student Papers Presented at the NES/MAA Fall 2007 Meeting
Hyperelliptic Curves in Characteristic Two
Yasin Demirbas, Boston University
The Dynamics of Maps of the Torus
Sebastian Mineo, Fairfield University
The Bochner Identity in Euclidean Space
Zachary J. Smith, University of Maine – Orono

New Colleague Papers Presented at the NES/MAA Fall 2007 Meeting
Pseudodifferntial operators on groups
Susan Córe, Smith College
Student Probability Misconceptions and (possible) Remedies
Kathleen Rondinone, Southern Connecticut State University
that activate student misconceptions and also offer possible remedies.
8:20-8:35 **A Matrix Completion Problem on P 0,1-matrices**
Amy Wangsness, Fitchburg State College

Undergraduate Student Papers Presented at the NES/MAA Spring 2006 Meeting
Determinism in Text
Adam Callahan, UMass Dartmouth
Ehrenreucht-Fraisse Games on Linear Orderings
Tom Kern, Dartmouth College
Chaos Theory
Tariq Lescouflair, Sacred Heart University

The Impact of the Sleeper Effect and Relapse on the Dynamics of Cigarette Smoking Among Adolescents.
Pamela Reitsma, University of Maine
Numerical Instability of Loop Quantum Cosmology II
Jessica Rosen, UMass Dartmouth
Oral Communication Skills
Mary Servatius, Worcester Polytechnic Institute
REU Experience
Allah Shved, UMass Boston
Asymmetrical Binary Branching Fractal Trees
Kinneret Suberri, University of Hartford
Vertex-Magic Total Labelings
John Walthour and Matt Burger
A Generating Function Description of the Sieve Method
Yangyang Liu, Dartmouth College

Contributed Papers Presented at the NES/MAA Spring 2006 Meeting
Clustering the Short Stories of Edgar Allan Poe with Formal Concept Theory
Roger Bilisoly, Central Connecticut State University
A Report on a Class of Mechanical Problems
Larry Blaine, Plymouth State University
Medieval Islam as the birthplace for college algebra
Ezra Halleck, New York City College of Technology (CUNY)
Dragon Folds and Turn Lists
Brian Kelly, Roger Williams University
Residuated semilattices and positive universal classes
Jeffrey S. Olson, Norwich University
A College Course for Math/Computer Science majors in a Community College
Zenaida Ramos, Quincy College
Euler and the Odd Perfect Numbers
Ed Sandifer, Western Connecticut State University
A Common Reflexive Basis for Studying the Degree of Certainty of Mathematical Models
Krassimir Tarkalanov, Quincy College
Monte Carlo Simulation and Brownian motion in the Finance Industry
Xiaochuan (Frank) Wu, Norwalk, CT

Kenneth I. Gross wins 2007 Distinguished Teacher Award –Sarah Mabrouk
The Northeastern Section is proud to announce that Kenneth I. Gross, University of Vermont/Lesley University, is the winner of this year's NES/MAA Award for Distinguished College or University Teaching of Mathematics.

The Distinguished Teaching Award Committee had the challenge of selecting this year's winner from among the strong field of nominations. When reviewing Ken Gross' nomination, we were impressed by his commitment to mathematics education of high school students through the Vermont High School Summer Enrichment Institute and of high school teachers through the Vermont Mathematics Initiative and the Center for Mathematics Achievement at Lesley College. Examples of his incredible dedication to students and to education include his teaching extra courses in a summer program for minority freshman students and continuing as their advisor during the academic year all without remuneration, substitute teaching at Walter Johnson High School without remuneration and organizing their first Math Day, designing and teaching "Gateways to Mathematics", a course for adult learners, donating his salary to a scholarship fund, co-founding a week-long summer enrichment program for high school mathematics students aimed at girls and rural Vermonters, and founding the Vermont Mathematics Initiative, a Master's program designed to train K-6 teachers to act as mathematics leaders in their schools/districts. Students site his encouragement, his taking an interest in them, his encouragement of and support for women studying mathematics, his mentoring all students, whether his advisees or not, his giving of himself, and his dedication as a teacher and as a mentor as being key elements in their success as well as his being a major influence on their "desire and decision to go to graduate school".

Thomas Pietraho, Bowdoin College, describes Ken's support and encouragement from their initial meeting at the awards ceremony for the UVM Prize Examination in Mathematics when he was a student at Burlington High School. "Dr. Gross approached me and encouraged me to visit his office to discuss my educational plans. I was amazed that the chairman of the Mathematics Department was willing to talk to me, a mere high school student. The following spring, I wanted to take a mathematics class at the University taught by Ken Gross, but unfortunately, it was scheduled at an inconvenient time. Without hesitation, Dr. Gross offered to teach me independently. During our weekly meetings, he realized I aspired to a career in mathematics and he encouraged me to apply to a program designed to expose students to actual research mathematics. He knew that only through such an experience I would be able to affirm my ambitions. The advice he offered me throughout high school proved instrumental in forming my college decision and career goals."

Thomas continues to describe Ken's interaction with students. "Throughout the many years that I have known Ken Gross, I have come to realize that he approaches all students with a similar enthusiasm and dedication. As one of the organizers of the UVM Summer Enrichment Institute in Mathematics, Ken Gross meets high school student from throughout the state. During the span of the Institute, I have observed Dr. Gross approach each of the students and discuss their future plans, offering his advice and resources. He truly enjoys helping students and is committed to his vocation. Professor Ken Gross has had a profound influence on my life, as he guided me from a high school student to an aspiring mathematician. He shares his advice and resources with students from the University of Vermont, as well as from its community. To me, and to uncountably many others, Ken Gross has been a teacher, a mentor, and a friend."

Debra Carney, University of Denver, extols his encouragement of female students. "One sometimes hears stories of women who are discouraged from pursuing mathematics, but this was definitely not the case with Dr. Gross. Before I had even taken a class with him, he was encouraging, supportive, and respectful towards me as a person and as a mathematician. He took upon himself the roll of surrogate advisor to me even though I had a different advisor on paper. On one occasion, I can remember a fellow student telling me how she was doing her calculus homework in the library and this man (Dr. Gross) she had never met before approached her and asked her how her homework was going and how she liked her calculus class. This was just another example of what I saw on a daily basis from Dr. Gross. I saw his genuine interest in students and their appreciation for mathematics and his own love of learning and mathematics."

Debra describes Dr. Gross as a major influence on her desire and decision to go to graduate school. "After a few years of observing him interact with his students, I thought 'I want to be like that'. When I began the graduate school search, Dr. Gross was once again there to help. He offered advice about schools and helped me come up with a short list of places to consider. He also authorized funding for me to attend a national conference to allow me some exposure to the mathematics world. In retrospect, I can see he was doing all he could to prepare me for my future as a mathematician. Dr. Gross' support and guidance did not stop upon my graduation from UVM in 1991. I especially remember the words of encouragement he gave me during my difficult first year of graduate school. We exchanged several emails over my struggles with my classes and my doubts about my own abilities. He encouraged me and helped me to feel more confident about myself. Furthermore, he continued to provide support whenever I needed it as I worked to complete my PhD. Without a

doubt, I know that if I contacted him today he would still be there for support and advice."

Debra concludes by describing Ken's overall affect on her life from college to graduate school and beyond. "Dr. Gross is the main reason my experience at UVM was so positive. He made me feel like I belonged in a place where it was easy to get lost in the crowd. He helped give me confidence that I could take into the future. I consider Dr. Gross a friend, a mentor, and a scholar, and I cannot say thank you enough for everything that he has done for me. I would not be where I am today without his support and guidance. I cannot think of a professor more deserving of an MAA teaching award than Dr. Gross."

We applaud Ken Gross for his service to the mathematics community and his commitment to mathematics education, for his mentoring of students, for his sharing his love of mathematics with students and inspiring them to learn and to grow as mathematicians and as individuals.

Tribute to Walter Brady **Percy Susskind**

(Karen Schroeder informed me that Walter Brady, a regular attendee of our Section meetings, passed away recently. She expected to write a tribute but found it too difficult. I found the following tribute from Walter's Chair and, with Dr. Susskind's permission, I am reprinting it here. –The Editor)

This tribute was presented by Perry Susskind, professor of mathematics, at the Connecticut College faculty meeting on Feb. 7, 2007.

Walter Foster Brady Jr. was born in 1933, grew up in Larchmont, NY, and received his Bachelor's degree at College of the Holy Cross in 1955. He followed this with a stint in the U.S. Navy where he served as a commissioned officer, and sailed the Atlantic and Pacific Oceans aboard a U.S. Navy Destroyer.

Walter then continued his education in mathematics, receiving a Master's degree from Harvard University in 1960 and his Ph.D. in Mathematics from Indiana University in 1967. An algebraic geometer, his thesis was in the difficult and abstruse area called class field theory. By the time Walter received his Ph.D. he'd already had wide experience teaching mathematics at institutions including Boston College, Indiana University, University of Notre Dame, and University of Connecticut at Storrs.

Walter joined the Mathematics Department at Connecticut College in 1967 and taught generations of students just about every mathematics subject or course offered by the department. His students remember him fondly as a professor with high standards who was always willing to help them do their best.

A statistician ahead of his time

Early in the nineteen-seventies, Walter became interested in Statistics and Probability. With energy and zeal he became a highly skilled Statistician, bringing this expertise to bear by almost single-handedly providing the department's offerings in Statistics, Probability and Statistical Modeling.
The importance of this work is reflected in the College's appointing a full-time statistician seven years ago, in the department's developing both a minor in statistics and a statistics concentration in the major. Recently, several departments have become aware that a statistics course is an important component of their majors. Indeed, Walter was ahead of his time in developing this essential discipline here: nationally, liberal arts colleges and universities now fight to hire inadequate numbers of statisticians to support their burgeoning programs.
Professionally, Walter's stature as a statistician was recognized in1998 with his appointment as a Statistical Analyst and Consultant for the Census Monitoring Board. This Board, established by Congress in 1998, was charged with the responsibility of independently analyzing and monitoring the techniques used in the taking of the 2000 census. Walter was alert to the possible unreliability of statistical analyses.
Once, given my interest in aviation and Walter's interest in statistics, I mentioned to him that I thought there must be something wrong with measuring the safety of air travel, compared with other ways of traveling, by using the measure of passenger-miles. You know, if you fill a plane with 150 people and fly them 1000 miles, you have 150,000 passenger-miles. Walter cocked his head, thought for barely an instant and said: "Yes, put five astronauts in the space shuttle, have them orbit the earth a few times and the space shuttle becomes the safest form of travel by that measure. Yet every few launches the space shuttle blows up."

Devoted to the College

Walter's service and his presence at the College were unique. Rather than name the many committees Walter served on I will instead say this: as much or more than anyone else at Connecticut College, Walter vigilantly and selflessly represented and defended the principle of shared governance. As an active member of the American Association of University Professors for many years, and as president of the Connecticut Conference of AAUP from 1993–1997, he understood shared governance as a way of assigning primary authority to different constituencies of the college.
Walter was completely devoted to the College and to serving the College in all of the various ways available to the faculty. He carried out this service without fanfare but with admirable grace and civility even during difficult and contentious times. In 1995, Walter was appointed Faculty Parliamentarian and served in that role, with perhaps one interruption, until his retirement in 2001.
So, there it is: just a glimpse of the teaching, scholarship and service record of

Walter Brady, much of which might have been gleaned from his annual reports. There is more. Walter's college file is peppered with letters of thanks and acknowledgement for strikingly generous gifts to the college: gifts to the general fund, but also gifts to purchase arboretum land, or to repair tennis courts; in a typical case his gift was over 6% of his gross salary for the year.

There were other forms of generosity and dedication. Though it certainly did not benefit him, he repeatedly provided advice and acted as ombudsman to members of the college community whose contracts had not been renewed or whose tenure was denied or whose tenure was taken away. Those who have been here some time or those who simply enjoy the wonderful green across from Harkness Chapel may recall that it was Walter who was almost solely responsible for getting the planned location of the Admissions Building moved from Harkness Green to its present site. In accomplishing this feat, Walter visited virtually every member of the faculty, and after doing so was able to present a petition with almost every faculty signature on it, requesting that the planned location be changed.

Even after Walter retired he lent his assistance to the college by serving on a committee that rewrote substantial portions of IFF, now called Policies and Procedures. The faculty voted these changes just last Spring. No one was more scrupulously devoted to providing faculty the means to carry on their business in an orderly way.

'Part of the fabric of the College'

But these remarks do not fully capture Walter's influence on his students, his family and friends, and this faculty. Walter was part of the fabric of the College in a way that may have been commonplace once but is now rare. He was involved in almost every aspect of College life: keeping in touch with students and alumni, attending performances, lectures, and generally being a part of what for him was the exceedingly engaging and complex activity of living a life as a faculty member at Connecticut College.

Walter also was eccentric and had a goofy sense of humor. In social situations with friends and strangers he would every so often stretch the envelope of what constitutes expected behavior. Waiters or salespeople would become increasingly attentive or momentarily disoriented or suspicious, and his friends would smile.

He was a geographical savant. If you mentioned to Walter some obscure, far away place you had been he would say something like: "Oh yes, as you approach you begin to go up a hill and there is a house with pink shutters on the right." He never forgot the smallest details about places he had been and he'd been almost everywhere: he traveled extensively with his partner Gail Shulman, and with family and friends.

Music was an important part of Walter's life and he was an accomplished pianist. He was an uncommonly graceful athlete. It was a pleasure to watch him

play tennis, or ski, ice skate or dance. He ran in dozens of marathons and road-races. In his daily life he energetically sought enjoyment of even the simplest occasions and events. If there was a beautiful sunset or a full moon, Walter had seen it. If the flowers were blooming on campus, Walter had admired them, and if there was a brisk southwesterly wind, Walter had been out sailing that afternoon.

A close-knit family

Walter also participated fully and exuberantly in the life of a large and close-knit family. By the count of his nephew Richard, Walter had 45 brothers, sisters, cousins, nephews, nieces, grand nephews and grand nieces He rarely missed a christening, communion, confirmation, graduation or wedding. For roughly seventy years, except during a couple of the World War II years – during gas rationing – the family gathered every August in Chatham on Cape Cod.

Though his family and friends knew Walter had a grave illness, all were surprised by the swiftness of his decline. Diagnosed in July, he died six months later. Driving to Walter's wake two weeks ago, Frederic Henry's words in Hemingway's, *A Farewell to Arms,* felt apt. "[The world] kills the very good and the very gentle and the very brave impartially. If you are none of these things it will kill you too but there will be no special hurry."

Walter F. Brady, a dedicated teacher, a colleague of solid character, a loyal friend, loving and beloved partner and family member.

Mr. President, you might guess, given Walter's devotion to the orderly running of faculty business, that it would have been important to him to know that these remarks will be recorded as part of our faculty minutes. Accordingly, I make this request.

Careers in the Mathematical Sciences Student Conference at Bentley

A Student Conference focusing on Careers in the Mathematical Sciences, jointly sponsored by the Northeastern Section of the MAA and Bentley College, will be held on Saturday, October 27, 2007 at Bentley College, Waltham, Massachusetts. The day will commence with a keynote speaker. Following the keynote address, participants will be able to choose to attend talks by four from among approximately thirty speakers whose careers depend heavily on mathematics or statistics. There will be ample time for questions in each session. Representatives from graduate schools will also be available to meet with students.

An exciting day is planned. So, please encourage your students to attend this conference and plan to come yourself. Detailed information and registration materials will be mailed to all mathematics departments during the first week in September. Information will also be available on the Bentley College website with a link from the MAA website, at that time. For further information contact Karen Schroeder at kschroeder@bentley.edu.

Northeastern Section NExT at Spring 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, June 8, 2007
12:00 pm - 2:00 pm
Keene State College, Keene, NH

12:00 – 12:50 p.m.	**Lunch and Group Discussion**
1:00 – 1:50 p.m.	**Welcome to Our World: Mathematics Communication and Reasoning Beyond the Calculus Sequence** Michael Cullinane, Keene State College

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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.)

NES/MAA Award for Distinguished College/University Teaching of Mathematics
Summer is an ideal time to plan your nomination for the Distinguished College/University Teaching Award for 2008. Here is last year's information on the award. This year, Jason Moliterno will be in charge of the award committee.

There is no packet of forms to fill out in order to make nominations for the 2008 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 *2007 NES/MAA Award for Distinguished College of University Teaching of Mathematics* are due in January of 2008, 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."

Results of the First NES/MAA Collegiate Mathematics Contest

The Northeastern Section of the Mathematical Association of America held its first Collegiate Mathematics Competition on November 17th, 2006 at the Fall Meeting at Sacred Heart University. Eight teams consisting of a total of 22 undergraduates worked hard for two hours on the problems. The teams were from **Dartmouth College, Fairfield University, the University of Hartford, Norwich University, Providence College, Roger Williams University, Sacred Heart University, and Wheaton College.** These pioneering competitors deserve our applause.

The team from ***Dartmouth College*** -- Yong Su, Yangyang Liu, and Tom Kern -- won the competition with a score of 68 out of a possible 70 points and took home individual copies of Mathematica for Students and split a $100 prize. The team from ***Providence College*** -- Jaclyn Scholl, Deanna Dupuis, and Bernadette Boyle -- came in second place and split a $75 prize, while the team from ***Norwich University*** -- Matt Burger and John Walthour -- came in third place and divided a $50 prize.

Special thanks go to Jason Molitierno and Sarah Novotny at Sacred Heart for their constant on-site help. Thanks to Ed Sandifer for his assistance during the competition. Thanks also to Ben Wilson at Wolfram Research for his and Wolfram's generosity in donating the copies of Mathematica for Students.

Here are the problems in the contest.

1. The figure below shows a circle with radius 1 inscribed in the parabola y = x2. Find the center of the circle.
(Thee was a graph here which I have omitted.- The Editor.)

2. Which number is bigger: e^{π} or π^{e}? (Your calculator will of course tell you the answer; You need to prove it.)

3. If x, y, and z are positive numbers, prove that

$$\frac{(x^2+1)(y^2+1)(z^2+1)}{xyz} \geq 8$$

4. The minute hand on a watch is 8 mm long and the hour hand is 4 mm long. How fast is the distance between the tips of the hands changing at one o'clock?

5. Let A be a square matrix and suppose that there exist positive integers m and n such that $A^m = I$ and $A^n \neq I$. Calculate $\det(I + A + A^2 + \cdots A^{m-1})$.

6. Can a group be a union of two proper subgroups?

7. A chicken and a half can lay an egg and a half in a day and a half. How long will it take for two chickens to lay 32 eggs?

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 May 27, 2007.

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 May 27, 2007.

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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, May 27, 2007.

Northeastern Section of the MAA

KEENE STATE COLLEGE, KEENE, NEW HAMPSHIRE

SPRING MEETING OF NES/MAA

All events are located in the Science Center, #19 on the College map at http://www.keene.edu/aboutksc/campusmap.cfm.

Program Committee

Co-Chair: Vincent Ferlini, Keene State College
Co-Chair: Frank Ford, Providence College
Zenaida Ramos, Quincy College

Local Arrangements Committee

Chair: Ockle Johnson, Keene State College
Joseph Witkowski, Keene State College

Friday, June 8, 2007: NES/MAA Project NExT Program (all full-time untenured faculty are welcome)

12:00 – 12:50 p.m.	**Lunch and Group Discussion**
1:00 – 1:50 p.m.	**Welcome to Our World: Mathematics Communication and Reasoning Beyond the Calculus Sequence** Michael Cullinane, Keene State College

Friday, June 8, 2007: NES/MAA Spring Meeting

2:00 – 6:00 p.m.	**Registration** Lobby of the Science Center
2:00 – 2:50 p.m.	**Executive Committee Meeting**
3:00 – 3:50 p.m.	**The Impact of Ballistics on Mathematics** Shawnee McMurran, United States Military Academy
4:00 – 4:50 p.m	**Euler as an Old Man: The 1770's** Edward Sandifer, Western Connecticut State University
5:00 – 5:50 p.m.	**Undergraduate Student Papers**
6:00 – 7:50 p.m.	**Reception and Buffet Dinner**
8:00 – 8:50 p.m.	**Battles Lecture: Squaring the Plane** Jim Henle, Smith College

Saturday, June 9, 2007

8:00 – 11:30 a.m.	**Registration** University Commons
8:00 – 8:50 a. m.	**Graduate Student Paper Session**
9:00 – 9:50 a. m.	**Origami Math and its Increasing Intersections** Thomas Hull, Merrimack College
10:00 – 10:30 a.m.	**Break**
10:30 – 11:20 a.m.	**A Peculiar Connection Between the Axiom of Choice and Predicting the Future**

	Alan Taylor, Union College
11:20 – 11:50 a.m.	**Business Meeting**
11:50 – 1:00 p.m.	**Lunch**
1:00 – 1:50 p.m.	**Voting with Rubber Bands and Pulleys**
	William Zwicker, Union College
2:00 – 2:50 p.m.	**Contributed Paper Session**
2:00 – 2:50 p.m.	**Origami Geometry Workshop**
	Thomas Hull, Merrimack College

Abstracts/Biographies

Title: The Impact of Ballistics on Mathematics
Speaker: Shawnee McMurran, United States Military Academy
Abstract: Benjamin Robins, a British mathematician and military engineer, invented the ballistic pendulum during the first half of the 18th century. This device allowed for the determination of the muzzle velocity of a projectile. In 1742, Robins published *New Principles of Gunnery*, the first book to deal extensively with external ballistics. Robins' work motivated a deeper mathematical analysis of projectile motion – a topic tackled by such mathematicians as Leonhard Euler and Daniel Bernoulli. Not surprisingly, Euler chose to "annotate" Robins' work, effectively tripling its length.
This talk will describe some of the conclusions of Robins and Euler, and present some evidence which suggests that such studies may have prompted the introduction of calculus into the curricula of institutes of higher learning. The work presented here is based on joint research between the speaker and Dr. V. Frederick Rickey, a math historian at West Point Military Academy.
Biography: Shawnee McMurran, an analyst attempting to turn historian, earned her Ph.D. from the University of California, Riverside in 1991. She is an associate professor at California State University in San Bernardino. This year she is enjoying the East Coast as a visiting professor at West Point where she has had the opportunity to work with math historian Fred Rickey. Prior to her current research she co-authored several articles with James Tattersall of Providence College on the role of women in mathematics during the late nineteenth century and the joint work of Mary Cartwright and John E. Littlewood during the mid-twentieth century. In California, in addition to teaching a variety of mathematics courses, she regularly works with local teachers to develop effective investigations that use rich problems and technology to motivate active learning and improve problem-solving and modeling skills.

Title: Euler as an Old Man: The 1770's
Speaker: Ed Sandifer, Western Connecticut State University
Abstract: Leonhard Euler lost his vision to an eye infection in 1771. For many

scientists, this would end their careers. For Euler, though, stopped work for six months, then began a decade of immense productivity writing more than 400 papers as he trained a generation of scientists to succeed him. I will describe some of his more important work and how his "disciples" helped. I will also tell some little-known anecdotes from Euler's personal life and the life of the Academy.
Biography: Ed Sandifer has been a Professor of Mathematics at Western Connecticut State University. He is former chair of the Northeastern Section of the MAA, secretary of the Euler Society, and, despite an excellent education in ring theory under John Fogarty at the University of Massachusetts – Amherst, now mostly works on the history of mathematics, especially Euler. He writes a monthly column, "How Euler Did It" for MAA Online, has had a couple of books on Euler come out this year, and has run the Boston Marathon 35 times.

Title: Squaring the Plane
Speaker: Jim Henle, Smith College
Abstract: We prove that it is possible to tile the plane using exactly square each of every integral side-length. (Joint work with F. V. Henle)
Biography: Jim Henle's A.B. is from Dartmouth College and his Ph.D. is from M.I.T. In between these, he taught in the Philippines as a Peace Corps volunteer. Most of his career has been in set theory and logic, but lately he has worked in geometry, number theory, and economics. I have authored or co-authored texts in nonstandard analysis, set theory, and logic. His most recent book is Calculus: The Language of Change with David Cohen.

Title: Origami Math and its Increasing Intersections
Speaker: Thomas Hull, Merrimack College
Abstract: Mathematical studies of origami (paper folding) have been enjoying growing attention over the past 5 years. Computational folding problems have found applications in protein folding, and engineering fields from nanotechnology to solar panels in outer space have turned to origami for assistance. Such attention had led to a deeper understanding of the various ways in which paper folding can be modeled mathematically. One surprise has been the sheer number of different branches of math that can be applied to origami. From geometry to abstract algebra to number theory to combinatorics, origami seems to crimp its way into everything. This talk will present a survey of the diverse field that is origami mathematics, with particular attention placed on recent discoveries of both old and new connections.
Workshop: Origami Geometry Workshop
We will explore some of the ways in which origami and math feed off each other by getting our hands dirty with paper folding! In honor of the MAA, we'll fold a modular icosahedron and witness a chance to explore Johnson Solids. If

time permits, we will also explore the currently hot area of mathematical paper folding known as origami tessellations.
Biography: Thomas Hull learned origami at age 8 from a hermit uncle, first glimpsed its connections to math while an undergraduate at Hampshire College, helped develop its theory while in grad school at the University of Rhode Island (where he fooled everyone by getting his Ph.D. in graph theory), and now teaches at Merrimack College in Massachusetts. He is considered a leading expert on origami mathematics as well as an accomplished paper folder. His PHiZZ unit has infected the fingers of procrastinators world-wide, and his Five Intersecting Tetrahedra model was voted by the British Origami Society as one of the top 10 origami models of all-time. He recently wrote a book, Project Origami (AK Peters), and he'll be one of the subjects of an upcoming documentary on origami (see the trailer at www.greenfusefilms.com). To see more about his work and folds, visit Tom's web page: www.merrimack.edu/~thull

Title:: A Peculiar Connection Between the Axiom of Choice and Predicting the Future (joint work with Chris Hardin)
Speaker: Alan Zwicker, Union College
Abstract:: We often model systems that change over time as functions from the real numbers into some set of states, and it is often our goal to predict the behavior of these systems. For example, we might be interested in the function that associates to each instant the weather in Keene at that time or the list of Fortune 500 companies whose value has increased in the last minute. Generally, success in this kind of prediction requires rules governing the behavior of the system, such as a set of differential equations or the assumption that the system (as a function) is analytic. With no such assumptions, the system could be an arbitrary function, and the values of arbitrary functions are notoriously hard to predict.
Remarkably, the axiom of choice implies that there *is* a strategy for predicting the values of an arbitrary function, based on its previous values, that is almost always correct. Specifically, given the values of a function on $\{x: x < t\}$ the strategy produces a guess for the values of the function on the whole real line, and for all t -- except those in a countable, nowhere dense set -- there is an $x > 0$ such that the prediction is valid on $[t, t + x)$.
Biography: Alan D. Taylor is the Marie Louise Bailey Professor of Mathematics at Union College. His research interests include logic and set theory, finite and infinitary combinatorics, simple games, and social choice theory. He is the author of *Mathematics and Politics: Strategy, Voting, Power, and Proof* (Springer-Verlag, 1995); with Steven J. Brams, *Fair Division: From*

Cake-Cutting to Dispute Resolution (Cambridge, 1995) and *The Win-Win Solution: Guaranteeing Fair Shares to Everybody* (Norton, 1999); with William S. Zwicker, *Simple Games: Desirability Relations, Trading, and Pseudoweightings* (Princeton, 1999); and *Social Choice and the Mathematics of Manipulation* (Cambridge, 2005).

Title: Voting with Rubber Bands and Pulleys
Speaker: William S Zwicker
Abstract: Suppose each voter ranks three candidates p, q, and r for president. How should we decide the winner? Here is a bizarre voting system: we arrange six points as the vertices of a hexagon, labeled with the six possible rankings. Each voter loops one end of a rubber band around the vertex with their ranking, and the other end around one movable point ⭘, ⭘ is released, it achieves an equilibrium position, and the winner is determined by the ranking on the vertex closest to ⭘.
Surprisingly, this voting system is identical to the better-known "Borda count," in which each voter awards 3 points to her favorite candidate, 2 to her next favorite, and 1 to her least. The candidate with the greatest point total, or "score," wins.
We'll address some of the following questions:

- Which other voting rules can be described via rubber bands?
- What do these representations tell us about voting via scores?
- How can dishonest voters use their rubber bands to stretch the truth?
- What is the connection with Christiaan Huygens (1629 -1695)?
- What happens if we replace rubber bands with strings, weights, and pulleys?

Biography: William Zwicker's 1976 Ph.D. is from MIT, where he received his training in mathematical logic. After early work in combinatorial set theory, he became interested in applications of mathematics to political science. He has published in the areas of voting, fair division, and cooperative game theory, and is on the editorial board of Mathematical Social Sciences and of the International Journal of Game Theory. He is the inventor of the hypergame paradox, and is the author, with Alan D. Taylor, of Simple Games (Princeton University Press, 1999). His entire career has been at Union College, where he is currently the William D. Williams Professor of Mathematics. His hobbies include cooking, classical music, travel, and reading escapist fiction of dubious worth.
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Campus Housing and Hotel Information

You may reserve a room on campus in the college residence halls. The halls we

will be using are apartment buildings with 4 one-person bedrooms per apartment. Please note that the apartments are not air conditioned.
If you prefer off campus housing, you may reserve a room with a special rate at the following hotels. Both hotels are located within a mile of Keene State:
Best Western located at 401 Winchester Street. Please call the Best Western directly at (603) 357-3038 and let reservations know you are with the NES/MAA Conference at Keene State. There are 5 rooms blocked until May 10, at the rate of $95 per room/per night. This includes a full breakfast.
E.F.Lane located at 30 Main Street, Keene please call number directly and indicates you are with theNES/MAA Conference at Keene State. There are 5 rooms on hold until May 7, 2007 at the rate of $155. This includes a full breakfast. Telephone (603) 537-7070 .

Other motels close to campus include:
Carriage Barn Bed and Breakfast located at 358 Main Street. Prices are $89 (single) and $99 (double). Telephone (603) 357-3812.
Super 8 Motel located at 3 Ashbrook Rd. Prices are $99 per room. Telephone (603) 352-9780.
Holiday Inn Express located at 175 Key Road. Prices are 179.99 (two double beds) Telephone (603) 352-7616.
For a complete listing of area accommodations go to (http://www.keene.edu/aboutksc/lodging.cfm)

Meals

.**Buffet Dinner {Friday}**
Garden Salad (2 dressing choices), rolls, butter
Entrees
Herbed Stuffed Breast of Chicken with Sauce Supreme
Vegetarian Lasagna
Additional Selections
Toasted Orzo Rice Pilaf
Rosemary Garlic Roasted Potatoes and Maple Glazed Carrots
Sautéed Green Beans
Dessert (Choice of one):
New York Cheesecake, Chocolate Layer Cake, Carrot Cake
Barbeque Lunch (Saturday)
Hamburgers
Hot dogs
BBQ Chicken Quarters
Vegetarian Burgers

Potato Salad
Tossed Salad
Sliced tomatoes, onions, leaf lettuce, pickles, and cheese
Watermelon
Cookies and Brownies
Iced Tea and Lemonade

Directions
(from http://www.keene.edu/aboutksc/directions.cfm}

From the WEST and Interstate 91

- From I-91, take exit 3 in Brattleboro, Vt., to Route 9 East.
- Follow Route 9 East to Keene (continuing straight on Route 101 East) to the fourth traffic light.
- Turn left onto Main Street.
- Proceed on Main Street and turn left onto Wyman Way.

From the NORTH (Routes 9, 10, and 12)

- Follow the highway to the traffic light at the intersection of Route 101.
- Turn left onto 101 East and at the second light, turn left onto Main Street.
- Proceed on Main Street and turn left onto Wyman Way.

From the EAST (Route 101)

- Proceed on Route 101 West to Keene.
- At the second traffic light, turn right onto Main Street.
- Proceed on Main Street and turn left onto Wyman Way.

From the SOUTH (Route 12)

- Proceed on Route 12 North to Keene.
- At the intersection with Route 101, go straight ahead onto Main Street and turn left onto Wyman Way.

From BOSTON and EASTERN MASSACHUSETTS

- Take Route 2 West to Route 140 North (Gardner, Mass.) to Route 12 North to Keene
- At the intersection with Route 101, go straight ahead onto Main Street and turn left onto Wyman Way.

By AIR, BUS, and RAIL
Several regional airports are accessible from Keene. The Manchester, N.H., Airport is less than 90 minutes east by car. Bradley Airport, near Hartford,

Conn., is about two hours south. Logan Airport, in Boston, is just over two hours east.
Keene is also served by Greyhound/Vermont Transit Lines; the bus station is several blocks from the College.
Amtrak's Vermonter also stops in nearby Brattleboro, Vt

Parking

The directions above will bring you to Wyman Way. Continue down Wyman Way to the parking lot next to the Recreation Center.

About Keene State College

Keene State College and the Keene State College Mathematics Department are pleased to be hosting this year's NES /MAA Spring Meeting.

On April 9, 1909, legislation was signed creating Keene Normal School, and the School opened on September 28, 1909 with 27 students. In 1926, the New Hampshire Legislature granted the school authority to award the bachelor of education degree. The curricula expanded into four-year programs by 1939, when the institution was officially named Keene Teachers College. Graduate studies were introduced following World War II and, by 1951, graduate offerings warranted the granting of the master of education degree. In 1963, the College was re-named Keene State College and became part of the University System of New Hampshire. The College was then authorized to develop curricula in the liberal arts and sciences, leading to bachelor of arts and bachelor of science degrees.

The Keene State College campus is located on Main Street in Keene, NH (population 25,000), a small New England city chartered in 1753. Keene is surrounded by hills arising from the Connecticut River, while Mount Monadnock overlooks the city from 18 miles to the southeast. From its original 20 acres, the campus has expanded to 150 acres, with 70 buildings of traditional and contemporary architecture. Three of the buildings are registered as National Historic Landmarks.

Keene State College, New Hampshire's foremost public liberal-arts college, currently enrolls 5,100 full- and part-time students and offers nearly 40 majors in the liberal arts and sciences, professional programs, and selected graduate

degrees. Keene State draws on strong academic programs, faculty scholars, and a tradition of small classes and spirited inquiry. The College's commitment to academic excellence is founded on integrative learning for all students. Rich and varied co-curricular experiences move the classroom into the community and the world, making the College motto, "Enter to learn, go forth to serve," a touchstone in the lives of students and alumni.

The Keene State College Mathematics Department consists of eight faculty and a Director of the Math Center. Next year as part of a college-wide transition to four credit courses, the Mathematics Department will be offering two revised major programs. A mathematics major specifically designed for prospective elementary school teachers or mathematics specialists includes a mix of standard college mathematics courses and courses that focus on elementary mathematics at a deeper level. The general mathematics major incorporates new integrated core courses, specialized topics courses, and greater flexibility for students. Recent graduates have pursued a number of career options including teaching, actuarial work, computer programming, graduate school, and mathematical jobs in industry and government.

Pre-Registration

Registration Form is on the next page

Please make check payable to: NES/MAA and mail this form to:

Barbara Yardley
Mathematics Department
Keene State College
229 Main Street
Keene, NH 03435-2010

Note: Form needs to be received in office by May 18th. If you have any questions, please email
byardley@keene.edu or call **(603) 358-2023**

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_____
Email Address _____ FAX Number_____
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_____
Pre-registration fee:
MAA Member $25 Non-Member $30 Student or unemployed $10
$____
Friday Banquet: $20 per person (Be sure to include any guests.)
Number:_____ Please indicate special meal needs/allergies:_____
$____
Saturday Barbecue: $10 per person (Be sure to include any guests.)
Number:_____ Please indicate special meal needs/allergies:_____
$____
On campus accommodations: $45 pp/night. Number:_____ $____
TOTAL PAYMENT (Make checks payable to: *NES/MAA*.)
Section NExT (all full-time untenured faculty are welcome. There is no fee.):
Are you attending Section NExT on Friday? yes____ no ____
Are you attending Section NExT lunch on Friday? yes____ no ____

Note: There is no breakfast served Saturday morning, but there are restaurants within walking distance to the campus. For a listing, go to: http://www.keene.edu/aboutksc/dining.cfm?Type=Mile. For those staying on campus, the apartments have a stove and refrigerator and so you are welcome to bring food for breakfast.

TOTAL PAYMENT $_____

Frank Ford
Newsletter Editor
Dept of Math/CS
Providence College
Providence, RI 02918