NORTHEASTERN SECTION

NEWSLETTER

SPRING 1992

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FUTURE SECTION MEETINGS

Merrimack College
June 5-6, 1992
See this *Newsletter* for details

Trinity College
November 20-21, 1992
Local Arrangements: David Robbins
Program Chair: Marilyn Durkin, Bentley College

University of Massachusetts - Dartmouth
June 11-12, 1993
Local Arrangements: Ronald Tannenwald

CHAIRPERSON'S MESSAGE

The MAA often refers to the sections as the "heart of the association." The sections play many important roles in the organization. They provide diversity by offering a wide range of programs, including meetings, workshops, courses and opportunities for exchanges of ideas on a regional basis. In addition, sections often generate interesting new activities which can be adapted for presentation in other sections or at the national level. The Northeastern Section is a strong and vibrant contributor to these efforts. It is my privilege and pleasure to have the opportunity to represent you, the Northeastern Section, in the on-going contacts and programs of the association as well as at the meetings of the Section Officers. You, the members of the NES, have enthusiastically supported our Section activities and programs. I am confident that this spirit of sharing ideas, interests and enthusiasm will continue and I thank you in advance for your continued participation and support.

The sections have now been asked to play another important role in the life of the MAA, to assist in the formulation of a strategic plan to set directions and goals for the association for the next few years. Input from the "grass roots" level of the association is being taken very seriously in the formation of this strategic plan. It is recognized that in order for this plan to be meaningful there must be input from the membership of the MAA. This input from the membership is being sought in a variety of ways. The strategic plan was the topic of extensive discussions at the meetings at Baltimore of both the Board of Governors and the Section Officers. Further ideas, reactions and comments are being solicited directly from members of sections themselves not only through the questionnaire that was included in the February issue of *Focus* but also through a request for your suggestions in regard to the proposed mission and goals of the MAA.

The proposed mission is to advance the mathematical sciences at the collegiate level. The proposed goals are: to support effective teaching and learning of mathematics; to support quality exposition in mathematics for students, for professionals, and for the public; to promote a broad view of scholarship in the mathematical sciences, including teaching, research, practice, and synthesis; to stimulate student interest and cultivate talent in the mathematical sciences, especially among members of under-represented groups; to enhance public understanding of the nature, significance, and uses of the mathematical sciences; to inform public policy; to provide opportunities for professional development in the mathematical sciences; and to foster a spirit of association in the mathematical community. The finalized form of the mission and goals in the strategic plan will depend upon the input from the membership of the MAA. Some of your reactions may be to help prioritize the proposed goals. Which, if any, of these are most important to you? What activities could help to achieve these goals? How could the MAA better support your efforts to advance the mathematical sciences at the collegiate level? What would you like to see accomplished by the MAA during the next five years?

Your thoughts and reactions and/or the results of a discussion within your department of the proposed mission and goals are solicited. Please forward your comments in this regard to me before the end of May so that they can be included in the discussion of the NES Executive Committee when it meets in June.

Turning the focus now to the Northeastern Section itself, you will find descriptions in this *Newsletter* of several Section activities for this spring. These activities include the minicourse at Western New England College, the series of Regional Dinner Meetings, the short course at the University of Maine and, of course, the Section Meeting at Merrimack College. Thanks to all of the many contributors who have been involved in the planning and preparation for these exciting events.

Congratulations to James J. Tattersall of Providence College, the recipient of the second NES Award for Meritorious Service. A certificate was presented at a formal ceremony at the meeting in Baltimore with several enthusiastic members of the Section in attendance. See Page 3 for further detail. The recipient of the first NES Award for Outstanding College or University Teaching of Mathematics will be announced at the June Section Meeting. Thank you to those who took the time and effort to submit a nomination as well as to the members of the selection committee. Since the teaching award will now be an annual event, with the section winners eligible for an additional award at the national level, I encourage you to nominate a colleague for next year's award. See Page 11 for further details.

Thanks are also extended to all of those who were involved in the successful section meeting last fall at Providence College, including the Program Co-chairs, Dick Pelosi and Alan Gorfin of Western New England College and the Local Arrangements Coordinator, Frank Ford of Providence College. The Section is grateful to Betsey Whitman of Framingham State College who served as Publisher's Liaison, Ed Sandifer of Western Connecticut State University and Joseph Witkowski of Keene State College who served as Contributed and Student Papers Coordinators, Helene Savicki of Dean Junior College who hosted the Two-Year College luncheon meeting, Jeff Hoag of Providence College for chairing the Student Swap Session and Malcolm MacGregor of Massachusetts Maritime Academy who videotaped the student minicourse. (If you are interested in obtaining a copy of this videotape, please let me know.) The Section also owes a debt of gratitude to Karen Schroeder of Bentley College for all that she contributed during her term as Chairperson. We will continue to be the recipient of her many talents since she has agreed to continue service to the NES in the capacity of Student Chapter Coordinator. In addition, I would like to thank Kenneth Schoen of Worcester State College for his many years of service as Chairperson of the Nominating Committee and to welcome those who have generously agreed to serve on this committee this year. I know that you join me in extending a warm welcome back to the Editor of the *Newsletter*, Frank Battles of Massachusetts Maritime Academy, and in sending best wishes for continuing progress in recovery to Gordon Pritchett of Babson College, who served the Section as Secretary/Treasurer for several years.

Your participation in the upcoming Section activities should prove beneficial both to you and to your colleagues. In addition to offering informative programs, these events offer opportunities for refreshing exchange of ideas and insights with friends both old and new which can re-inspire us all as we face the challenges ahead. For all Section activities, I welcome your suggestions, urge your involvement and appreciate your support. I look forward to seeing you soon.

Laura L. Kelleher
Massachusetts Maritime Academy
Chairperson NES/MAA

1992 MAA CERTIFICATE OF MERITORIOUS SERVICE

Every five years each Section is entitled to nominate one person from the Section for the MAA Certificate of Meritorious Service. This year this award was presented to Dr. James J. Tattersall of Providence College at a ceremony held at the National Meeting of the MAA in Baltimore this past January. The following citation was read:

"The Mathematical Association of America is pleased to recognize the outstanding service of James J. Tattersall to the MAA and to the Northeastern Section by presenting him with this Certificate of Meritorious Service.

James J. Tattersall is currently Professor of Mathematics at Providence College where he also serves as Special Lecturer in both Natural Science and Education. He received his B.A. from the University of Virginia, his M.A. from the University of Massachusetts and his Ph.D. from the University of Oklahoma. Each semester his expertise and enthusiasm are applied to teaching a variety of topics and courses which reach a wide range of students including advanced mathematics majors, future teachers of elementary level mathematics, special groups of high school students eager to learn additional mathematics and applications, and, of course, students who are initially far less interested in pursuing mathematics. His mathematical interests include geometry, number theory and the history of mathematics and he is a frequent and popular lecturer on these topics. His expertise and enjoyable style led to his selection as the first speaker invited to present the Student Chapters' Lecture at the Fall 1989 Meeting of the Northeastern Section of the MAA.

Professor Tattersall has been an active and valuable member of The Mathematical Association of America and in particular of the Northeastern Section of the MAA for many years. He served as the Host Coordinator for the NES/MAA Fall Meeting in 1983 and as the Program Chair for the Section's Fall Meeting in 1988. In addition he served for several years as the NES/MAA Contributed Papers Coordinator and the time of his tenure marked an improvement in both the quantity and quality of papers presented per meeting. He currently serves as the Section's Historian-Archivist. In this capacity he is in the process of writing a series of articles on the History of the Northeastern Section, several of which have already appeared in the NES Newsletter. He has been a Visiting Lecturer for the MAA since 1980, has served for several years on the AMS/MAA "Short Course Committee" and is currently an MAA representative on the AMS/MAA "Committee on Employment and Educational Policy". He also has served on a variety of committees, both formal and informal, for the Section and is always available for "behind the scenes" work to ensure that the its activities, programs and ventures run successfully. By his example and his quiet support he has been responsible for encouraging many other members of the Section to take a more active role in MAA and Northeastern Section activities. His continuous commitment to the advancement of mathematics and of the MAA is deserving of recognition."

The selection committee for this award consisted of the Governor-Elect of the Northeastern Section (Dennis M. Luciano of Western New England College), the Chairperson of the Northeastern Section (Karen J. Schroeder of Bentley College) and the Vice-Chairperson of the Northeastern Section (Laura L. Kelleher of Massachusetts Maritime Academy). Their selection was heartily endorsed by the Board of Governors.

GOVERNOR'S MESSAGE

Well, I made it through my second all day Board of Governors Meeting prior to the national meeting in Baltimore. Incidentally, Baltimore is a very attractive city with a host of sights and activities to fill the hours of the day. The inner harbor area was quite impressive and the cuisine in an area of town called "Little Italy" should not be missed. And the latter recommendation comes from someone who doubts the existence of a non-Italian ancestor. As usual the Governors covered an agenda that was almost one hundred fifty pages long during the all-day meeting. And, as usual, I will not attempt to comment on all the motions and committee reports here, but I will highlight a few. A significant amount of time was devoted to seeking input from the Governors with regard to strategic planning. The strategic planning process will be slow, but deliberate, and well-guided by Tom Tucker, Chair of the task force. All MAA members can participate if they so desire. By the time you are reading this, you will have received a questionnaire (enclosed in an issue of FOCUS) that seeks your input. Please find the time to complete it, and send it in. The Board approved the publication of a new journal *Math Horizons* directed to undergraduates. A preliminary "mock" version was distributed at the meeting and it certainly caught my interest. The MAA will keep you posted on the date of the inaugural issue. The program on Awards for Distinguished College or University Teaching of Mathematics is in its first year and each section awardee has been identified. All section awardees will be in competition for seven national awards to be announced at the 1993 winter meeting in San Antonio. The recipient of this year's section award will be reported at the NES Spring Meeting at Merrimack College. I am confident that you will concur that our choice was an excellent one. The most controversial agenda item was the initial draft of MAA standards for Undergraduate Mathematics prepared by the MAA Ad Hoc Committee on Guidelines. It was a sixteen page document, so I won't give you a full report here, but I will identify a few salient points. Relative to Program and Staffing, the standards state that "those who teach mathematics courses should have a minimum of a master's degree including at least 18 hours of graduate work in the mathematical sciences." They proceed to say "a doctoral degree in the mathematical sciences is the preferred educational credential for faculty members in baccalaureate granting mathematical sciences department. The majority of full-time mathematical sciences faculty should possess a doctorate. Even though they may not meet the above criteria, mathematical sciences graduate students may teach or assist with the teaching of mathematics courses provided they are closely supervised by faculty members. However, before being assigned as the instructor of record in a course at the calculus level or above, graduate students should have completed at least one year of graduate study in mathematical sciences." As you can imagine, this really brought the crowd to life. Does this sound like a double standard to you? Well it does to me! Relative to the role of mathematics within the institution the standards state that "the mathematical sciences are central (and essential) in liberal education and in most professional education ... mathematics is important in the life of every citizen and, in particular, in the life of every college graduate ... mathematics departments should strive to ensure that every college student graduates with an appropriate level of mathematical skills, a reasonable level of confidence regarding mathematical ideas, and a positive

attitude toward mathematics." Yet the standards do not mandate a minimum number of credit hours to be completed in order to achieve these objectives. In this report, it sometimes appears that the standards are stated in such a way as to cover all possible existing situations as opposed to setting more lofty goals for departments and institutions to strive for. The "standards" will have a return engagement with the Governors this summer in Quebec. It will be interesting to see what changes, if any, will have been made. I will keep you posted, and if you're interested in the original draft, just drop me a note.

I am sure that you are aware that one of the goals of AMERICA 2000, released April 18, 1991, is that "United States students will be first in the world in science and mathematics achievement by the year 2000." On a number of occasions, President Bush has cited this as a challenge to mathematics and science educators throughout the nation. During Math Awareness Week last year, President Bush unknowingly hit a raw nerve when he jokingly told math educators in attendance at the National Summit on Mathematics that "I am computer illiterate ... but I would like to report to you ... that today I learned to turn one on ... I pushed the button down here, and one up here with a green thing on it and out came a command to somebody." He also remarked that he "didn't know anything about physics." He chose the wrong time and wrong place for those particular confessions, since we believe that the public's attitude of it being socially acceptable for educated people to outwardly express their ignorance about mathematics and science must be changed in order to reach the goal stated above. It is truly amazing how people feel comfortable boasting about their inability to do simple mathematics, yet they certainly wouldn't feel comfortable saying they couldn't read I-G-N-O-R-A-N-C-E. This public aversion to mathematics and science is threatening America's competitiveness, as well as insuring mediocrity in our mathematics classrooms. This year, in early February, President Bush made a visit to a supermarket, and while at the checkout line, he marveled over the computerized price scanning device and the nifty printout on the receipt tape. Goodness, these devices have been around for years. Shouldn't we expect more support from the leader of our nation to assist us in meeting this lofty yet attainable goal.

It is generally accepted that American Universities and Colleges lead the world in mathematical research. We have achieved this preeminent position because the reward structure places high value on a narrowly defined view of scholarship. In *Moving Beyond Myths: Revitalizing Undergraduate Mathematics*, we ask that the quality of mathematics education rise to the level of mathematical research in this country. How are we to achieve this? First let us look closely at our present value systems in the mathematics profession. During our graduate studies we realize quickly that mathematical research, the quest for new knowledge, is all important for our success. We work closely with our fellow students and witness situations when they can't cope with the pressure and the required work and decide to leave to seek seemingly greener pastures. Worse yet we see students who receive A's in their coursework, yet fail their qualifying exams. Then we wonder whether or not teaching is taken seriously by all professors. We note that our professors are ranked by their peers based on their national and international research reputation. We see young professors failing to achieve tenure due to the quality of their research. All these experiences leave lasting impressions on us as we rise above each hurdle to finally achieve our degrees. With degree in hand, we accept our first positions knowing that our value to the institution

will be primarily assessed based on our research productivity. Furthermore, after spending the past two or more years seeking out new mathematical knowledge, we are quite interested in continuing the pursuit. Certainly the value system of universities and some (usually considered elite) colleges rewards research work first and foremost, when granting tenure and promotion. Obviously, these value systems have ensured the preeminent position that we presently have in America with regard to mathematical research. So it is quite logical to expect that with modifications of our value systems and reward systems we should be able to achieve the same quality in mathematics education. In no way should one construe my comments as saying research professors take a casual attitude to teaching. What we need to do is build bridges and take positive approaches to having all constituents of the mathematics community working together towards achieving our goals in mathematics education.

The relation of research and scholarship to faculty well-being is indeed a difficult issue facing all mathematics departments. Mathematics faculty must be actively engaged in professional growth as a necessary adjunct to effective teaching. Mathematics research, in its traditional narrow sense, plays only a small role in the mechanism required to maintain the intellectual vitality of a mathematics department. About 20% of mathematics faculty publish regularly in research journals. Couple this with the number of publications in research journals by faculty who do so infrequently, and it is questionable just what proportion of our research is truly worthy to the mathematical community. One should wonder if these efforts would be better spent on scholarly activity in the area of mathematics teaching? Clearly the mathematics community needs to encourage and support a broader view of scholarship in the mathematical sciences and utilize these standards as a basis for maintaining faculty leadership both in curriculum and in scholarship. We must promote the attitude that scholarship in the mathematical sciences includes teaching, research, practice, and synthesis. This will expand the definition of professional activity from "research" to "scholarship," and consequently will be more similar to that currently recognized in other academic disciplines. Applied consulting work, software development, problem solving, software and book reviews, expository writing, curriculum development, and educational innovation are examples of activities that serve many of the same purposes as research. They engage faculty in active original work, they reflect how mathematics is actually practiced, and they advance our field in many diverse directions. "To ensure continued vitality of undergraduate mathematics programs, all mathematics faculty should engage in public professional activity, broadly defined." In this regard "public" does not mean only publication, but a host of ventures such as lectures, workshops, demonstrations, community service, program reviews, etc.

To achieve excellence in the teaching and learning of undergraduate mathematics, we not only need to change the attitudes within our mathematics community, but we also need to change attitudes and policies within our institutions of higher education. To elevate the importance of undergraduate teaching, it will be necessary to reward effective teaching, contributions in innovative curricular design, and efforts in understanding how mathematics is learned. By offering sufficient rewards and recognition, mathematics faculty will seek out ways to teach that engage students and will question unexamined assumptions about how mathematics is learned. They will explore group methods, writing assignments, and laboratory

projects as effective alternatives to the traditional lecture and listen mode. They will exploit modern technology and learn more about how it improves the learning process. Students can truly become active participants in their own mathematics education. Our departments and institutions must utilize a broad standard of scholarship and place more emphasis on effective teaching in decisions about hiring, retention, salary, promotion, and tenure. Such value systems will help us adopt a standard of professional responsibility that encompasses teaching and scholarship, as well as research, and weight these areas based on our new goals.

Can we convince our administrators and colleagues to give top institutional priority to effective teaching? Will they also support us by providing resources for appropriate experimentation? And will they consider such endeavors as scholarly activity? These are just a few of the questions that our future will answer. If some are answered affirmatively, the next issue we must confront is to learn how to properly evaluate teaching. Renewal of undergraduate mathematics will require commitment, leadership, and support from all individuals and constituencies in the community.

Dennis M. Luciano
Western New England College
Governor NES/MAA

HOWARD EVES ROOM

The MAA Building Fund Drive will be over at the end of this year. As you may know, the Northeastern Section is responsible for the Howard Eves Room in the Washington headquarters. So far approximately $16,000 has been pledged towards the room which has a deficit of only $4,000. The Section challenges its membership to meet the $20,000 goal by January 1, 1993. If we would do so, we would be the first such section, an honor that all of us could share. Please consider making a donation. Even a small amount such as $5-$25 would be most helpful. Send to the national office of the MAA:

Mathematical Association of America
1529 Eighteenth Street NW
Washington DC 20036

Be sure to clearly mark your donation for *The Howard Eves Room Fund.*

NOMINATING COMMITTEE

The Nominating Committee is charged with presenting nominations for the following Section offices at the Fall Meeting: Vice-Chairperson, Secretary-Treasurer and Two-Year College Representative. Should you have any suggestions please notify one of the below named members of the Committee prior to **September 1, 1992**:

Frank P. Battles, Massachusetts Maritime Academy (Chair)

Helene S. Savicki, Dean Junior College

James J. Tattersall, Providence College

MINUTES OF THE LAST MEETING

The Fall Meeting of the Northeastern Section was held on November 22-23, 1991 at Providence College in Providence Rhode Island. There were approximately 180 registrants.

Invited Papers

Areas and Iterations and Matrices and Determinants by Gilbert Strang, Massachusetts Institute of Technology.
Mathematical People by Gerald Alexanderson, University of Santa Clara.
Constructing the Regular Heptadecagon: Ingenuity of Just a Lucky Gauss? by William Dunham, Hanover College.
Christie Lecture: Combinatorics of Integer Partitions - A Few Gems, Old and New by Rodica Simion, The George Washington University.
Women in Mathematics: What's Love Got To Do With It? by Claudia Henrion, Middlebury College.
Sculpting: Free Form 3-D Modeling and Its Underlying Mathematics by John Hughes, Brown University.

Workshops

Summa Workshop by Florence Fasinelli, Associate Director of SUMMA.
Graphing Calculators in the Mathematics Classroom by Mary Margaret Grubbs, Columbia University.
Workshop on Teaching Calculus and Linear Algebra by Gilbert Strang, Massachusetts Institute of Technology.

Student Chapter Minicourse

Mathematical Models for AIDS and Lyme Disease by Sonja Sandberg, Framingham State College.

Contributed Paper Session

Logarithmic Instruments in Seventeenth Century England by J. Mark Heumann, Western New England College.
The Connecticut Calculus Consortium by Robert Decker, University of Hartford.
Kepler Orbits and Velocity Circles by Edwin Wolf, Keene State College.
Clouds of Points; Is My Design Like Yours? by C. Edward Sandifer, Western Connecticut State University.
The Vector Representation of National Food Consumption Patterns by Parry Moon, Massachusetts Institute of Technology, Domina Eberle Spencer, Terri Mascardo and Irene Tan, University of Connecticut.
A Method of Interpretation of National Food Consumption Patterns by Parry Moon, Massachusetts Institute of Technology, Domina Eberle Spencer, Terri Mascardo and Irene Tan, University of Connecticut.
A Macro-Driven Spreadsheet for Numerical Integration by Laura L. Kelleher and Frank P. Battles, Massachusetts Maritime Academy.

Student Papers

Peaks of the Divisor Function by Andrew B. Perry, Williams College.
Soap Bubbles on Surfaces by Hugh N. Howards, Williams College.
Variations on the Steiner Problem by Christopher L. Cox, Williams College.
New Crossing Number Results by Jon Milanczuk, Western New England College.
Linear Programming Methods to Solve a Radio Coverage Problem by Jennifer Gyori, Smith College.
Perfect and Minimum Edge Dominations in Graphs by Marshall Whittlesay, Trinity College.
Music, Artificial Intelligence and Parallel Processing by Miriam Fendel, Connecticut College.

In the minutes of the previous meeting, the following contributed paper was inadvertently omitted:

Proof of a Conjecture by Erdös on Sequences and Measurable Sets by Yu Chuen Wei, Castleton State College.

At the Business Meeting, the Chairperson, Karen Schroeder announced that the Certificate of Meritorious Service from the Mathematical Association of America will be awarded to J. J. Tattersall of Providence College. This national award which is given every five years to a member of our Section will be presented to Jim at the National MAA Meeting to be held in Baltimore this coming January. Each of the seven student presenters at the Student Paper Sessions were awarded a certificate from the Northeastern Section and the national office of the MAA, a one year membership in the MAA and a book award donated by Prentice Hall. A special note was made of the fact that, at this meeting, John Milanczuk of Western New England College presented his third student paper. On behalf of a very grateful Section, Laura Kelleher of Massachusetts Maritime Academy thanked Karen Schroeder for her outstanding work as Chairperson and presented her with a memento in recognition of her many accomplishments.

PUBLISHERS

The following text book publishers exhibited their latest offerings in mathematics and computer science at the Fall 1991 Meeting held at Providence College:

Addison-Wesley Publishing Company
Ms. Anne King
1 Jacob Way
Reading MA 01867
(617)-914-3700

Harper Collins Publishers
Ms. Cynthia Biron
9 Oriole Ave.
Providence RI 02906
(401)-331-2716

Houghton Mifflin Company

PWS-Kent Publishers
Ms. Maureen Redmond
20 Park Plaza
Boston MA 02116
(617)-542-3377

Prentice Hall
Ms. Deirdre Carroll
5 Andrews Isle
Hingham MA 02043
(617)-749-9982

Wadsworth/Brooks Cole

Houghton Mifflin Company
Mr. David S. Levine
P. O. Box 612
Randolph MA 02368
(617)-986-5026

Richard D. Irwin, Inc.
Ms. Lisa Kennally
1818 Ridge Road
Homewood IL 60430
(800)-634-3963

Jones and Bartlett Publishers
Mr. Klaus Peters
20 Park Plaza, Suite 1435
Boston MA 02116
(617)-482-3900

Wadsworth/Brooks Cole
Ms. Lisa Gebo
76 Blackstone Blvd.
Providence RI 02906
(401)-861-8017

West Publishing Company
Mr. Mike Lee
50 W. Kellogg Blvd.
St. Paul MN 55102
(612)-228-2442

John Wiley and Sons
Mr. Carl Beers
605 Third Avenue
New York City NY 10158
(212)-850-6711

It is very helpful for text and software selection to see so many recent titles on display and the income to the Section goes a long way toward defraying expenses associated with the meeting.

This year a door prize was donated by SYSTAT, a copy of FASTAT. The drawing was held at the Business Meeting on Saturday and was won by William Dunham of Hanover College, one of our featured speakers. Prentice Hall kindly donated books that were awarded to the student presenters.

We of the NES/MAA would like to thank all of the above mentioned companies for their contributions to the success of the Fall Meeting.

Betsey Whitman
Framingham State College
Publisher's Liaison NES/MAA

EXPLORATORY DATA ANALYSIS UM-NES SHORT COURSE

Colonel Rickey Kolb, U.S. Military Academy, West Point, will present this year's short course at the University of Maine from June 15-19, 1992, on the topic of Exploratory Data Analysis.

We are bombarded with data through the news media, work reports, grade reports, etc. Often we are expected to take actions based on a data set for which we have little prior knowledge of any underlying structure. Frequently, it is advantageous to approach data in an informal way, not burdened by the assumptions required of classical techniques. Exploratory data analysis (EDA) provides a number of these methods for detailed study of a data set. This short course will provide an overview of some of these methods along with some practical experience. Afternoon sessions will include computer methods with software such as **MINITAB©**. The level of the course will be set according to the experience of the participants, and is expected to be aimed at those with limited statistical practice.

Dr. Rickey L. Kolb is a Professor of Statistics in the Department of Mathematical Sciences at the United States Military Academy. He is a registered professional industrial engineer, an operations research analyst and an applied statistician. His specific areas of academic interest include mathematical modeling, forecasting, data analysis and the design of statistical experiments. Dr. Kolb has been a research consultant with several DOD analytical agencies. He has produced numerous technical publications, presented papers at national and local meetings, and conducted seminars and courses for DOD agencies.

The primary reference, available at the UM Bookstore, is *Understanding Robust and Exploratory Data Analysis*, edited by Hoaglin, Mosteller, and Tukey, John Wiley and Sons, New York, 1983. Other references include *Exploring Data, Tables, and Trends*, by the same authors, 1985; *Applications, Basics, and Computing of Exploratory Data Analysis*, by Velleman and Hoaglin, Duxbury Press, Boston, 1981; *Exploratory Data Analysis*, by Tukey, Addison-Wesley, Reading, MA, 1977; and *MINITAB Reference Manual* (Release 6 or later), MINITAB, Inc.

You may anticipate a mailing regarding this course along with a registration form. For further information contact Clayton W. Dodge, Mathematics Department, University of Maine, Orono, ME 04469, Tel. (207)-581-3908.

MAA AWARDS FOR DISTINGUISHED COLLEGE OR UNIVERSITY TEACHING

In January 1991, the MAA Board of Governors established the MAA Awards for Distinguished College or University Teaching. Every year, each section selects a recipient for the Section Award; each of these recipients is then eligible to receive a National Award. The first Northeastern Section award winner will be recognized at our Spring meeting at Merrimack College.

As established by the Board of Governors, the Awards are to be made to teachers of mathematics at the post-secondary level who have been widely recognized as extraordinarily successful. Their teaching effectiveness must be documented and must have had influence beyond their own institutions. Recipients must be members of the MAA teaching in the United States or Canada.

At this time nominations are being sought for the second NES/MAA Award for Distinguished College or University Teaching. Any member of the NES/MAA may nominate any other member of the Section for this Award. Nomination forms and additional information on the nominating process may be obtained by contacting the Committee chairperson: Karen J. Schroeder, Department of Mathematical Sciences, Bentley College, 175 Forest Street, Waltham MA 02154-4705, (617)-891-2267, E-mail: KSCHROED @ BENTLEY.BITNET.

Since the deadline for nominations is **October 1, 1992**, nomination forms should be obtained no later than **September 1, 1992**.

NORTHEASTERN SECTION OF THE MAA
SPRING MEETING: JUNE 5-6, 1992
MERRIMACK COLLEGE
NORTH ANDOVER, MASSACHUSETTS

Friday, 5 June

3:00-6:00 Registration: Science and Engineering Building

2:30-3:45 Executive Committee Meeting

4:00-4:55 **Wavelets: A Tool for Time-Frequency Analysis**
Ingrid Daubechies, Rutgers University

5:00-5:55 **Soap Bubbles, Metals and Undergraduate Research**
Frank Morgan, Williams College

6:00-7:00 Reception

7:00-8:30 Banquet

8:30-8:35 **Welcoming Remarks**
John E. Deegan, O. S. A., Ph. D.,
President, Merrimack College

8:35-9:30 **Editorial Comments:**
The Myths and Mirth of Publishing
Martha J. Siegel, Towson State University

9:30-10:30 Social

Saturday, 6 June

7:45-11:00 Registration: Science and Engineering Building

8:00-9:00 Student and Contributed Paper Sessions

9:00-9:55 **Research in Mathematics Education:**
Can it Have a Role in the K-16 Reform Process?
Joan Ferrini-Mundy, University of New Hampshire

9:00-9:55 **Student Chapter Session:**
Group Theoryplay
Thomas Moore, Bridgewater State College

10:00-10:30 Coffee Break

10:30-11:25 **Christine Ladd-Franklin and**
the Algebra of Logic
Judy Green, Marymount University

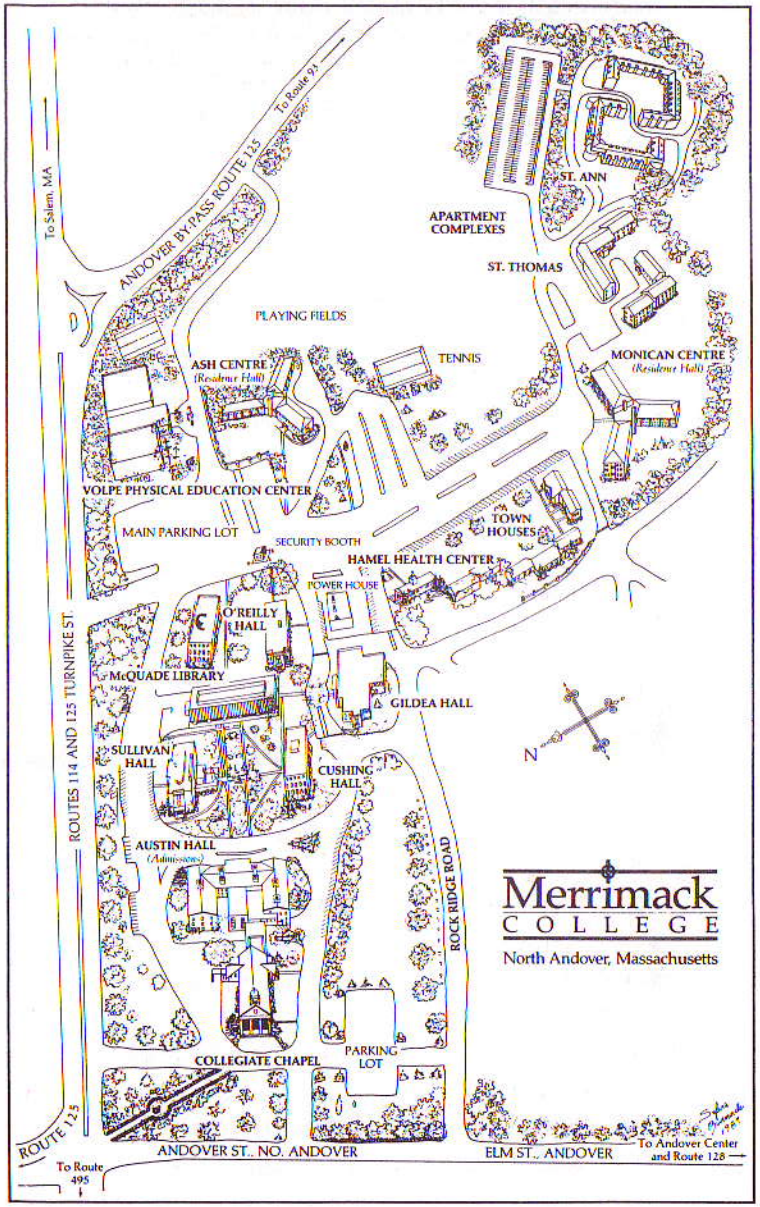
11:30-12:00 Business Meeting

12:00-1:30 Lunch

1:35-2:30 **The MULTIBAND Method for**
Traffic Light Synchronization
Susan Assmann, Regis College

2:35-3:30 **Mathematics in Agricultural Economics:**
The Theory of Individual Behavior Under Risk
Michael Weiss, Agricultural Economist
Economic Research Service, U. S. Department of Agriculture

PROGRAM COMMITTEE:
J. J. Tattersall, Providence College, Co-Chair
Barry Schiller, Rhode Island College, Co-Chair
Helene Savicki, Dean Junior College
Michael Latina, Community College of Rhode Island
Ann E. Moskol, Rhode Island College
LOCAL ARRANGEMENTS COORDINATOR:
John Royal, Merrimack College



DIRECTIONS TO MERRIMACK COLLEGE

FROM BOSTON: Route 93 North to exit 41, Route 125 to Andover/ North Andover. Campus is on the left at intersection of Routes 125 and 114. Approximately 25 minutes to campus.

FROM LOGAN AIRPORT: Route 1 North toward Saugus/Peabody to Route 114 West toward Middleton/North Andover. Approximately 40 minutes to campus.

FROM POINTS NORTH: Route 95 South to 495 South (traveling from Maine) or 93 South or 3 South to 495 North (traveling from New Hampshire) exit 42A. Follow route 114 toward Middleton, one mile to campus.

FROM POINTS SOUTH AND WEST: Massachusetts Turnpike (Route 90) to Auburn exit, Route 290 East to 495 North to exit 42A. Follow Route 114 East toward Middleton, one mile to campus.

MATHEMATICS AND COMPUTER SCIENCE AT MERRIMACK COLLEGE

The Department of Mathematics and Computer Science at Merrimack College offers a program of study leading to a Bachelor of Arts degree in Mathematics. The mathematics major prepares students for graduate study, and for careers as actuaries and in research, teaching and high technology.

The Department also offers a program of study leading to a Bachelor of Science degree in Computer Science. The computer science major prepares its graduates for professional entry level jobs in computer science as programmers, programmer/analysts, junior system analysts, associate engineers, and other technical support personnel for companies marketing computer equipment, software and services. These graduates are prepared to do graduate work in Computer Science.

Currently there are approximately 85 mathematics and computer science majors. There are 13 full time equivalent faculty members in the department who teach these majors as well as service courses for all other departments in the college especially the Science, Engineering and Business Departments.

OFF-CAMPUS ACCOMMODATIONS

For information regarding dormitory lodging, please see the Pre-registration Form. If you wish to stay off-campus, the following are a short drive from the campus: **Hampton Inn**, (508)-975-4050 or (800)-HAMPTON, **Marriot-Andover**, (508)-975-3600 and **Rolling Green Resort and Conference Center**, (508)-475-5400. Please inquire about special rates for Merrimack College guests.

CALL FOR CONTRIBUTED PAPERS

Participants are invited to submit contributed papers for either the Fall or Spring Meeting. We are particularly interested in papers pertaining to teaching, new courses, new techniques and in research you or your students have done relating to classroom material. We encourage you to share your experiences with our colleagues. Your presentation should be approximately 15 minutes in length. Please send a typed abstract, together with a list of any special equipment you may need to: Ed Sandifer, Department of Mathematics and Computer Science, Western Connecticut State University, Danbury CT 06810. Telephone (203)-797-4310 or BitNet at SANDIFER@CTSTATEU. The deadline for the Spring Meeting is May 15 and for the Fall Meeting is October 28.

CALL FOR STUDENT PAPERS

Students (and recent graduates) from the Northeastern Section are invited to present papers at the Spring Meeting on topics in mathematics, statistics, or computer science. The presentations will be 15 to 20 minutes in length, on either expository work, research projects, employment experiences, or problems from math periodicals. Prizes will be awarded and the registration fee and the cost of meals and room will be waived for one student presenter per paper at the Spring Meeting.

Almost every college/university has students working on projects, problems, and mathematical research. The success of a student paper session depends primarily on faculty members identifying prospective papers, encouraging their students and arranging departmental financial support when possible. If there are no potential student papers on your campus for the Spring Meeting, we urge you to initiate student projects now for presentation at the Fall Meeting.

Interested students should send an abstract and current address, with phone number, by Friday, May 15 to: Joseph C. Witkowski, Department of Mathematics and Computer Science, Keene State College, Keene NH 03431. Telephone (603)-358-2555. All proposals will be reviewed by department faculty members.

STUDENT CHAPTERS

The NES/MAA Spring Meeting at Merrimack College will feature a Student Chapters speaker, Professor Thomas Moore of Bridgewater State College, whose topic will be *Group Theoryplay*. The usual Student Papers Session will take place on Saturday morning and tables will be set aside at lunch for Student Chapter members. Two members from each Student Chapter will receive complimentary registration and lunch at the meeting. Student Chapter advisors will receive a mailing with registration information in the near future.

An extensive Student Chapters program is planned for the Fall Meeting which will focus on mathematics and the environment. A mailing will be sent to Chapter advisors in early October. I would also like to set up a Chapter advisors meeting at that time.

In an effort to help new chapters get started and revitalize some of the established chapters, I will be putting together a list of Student Chapter activities which have been successful. Chapter advisors will be contacted for their input in the near future.

Karen J. Schroeder
Bentley College
Student Chapters Coordinator

ABSTRACTS/SPEAKERS

Wavelets: A Tool for Time-Frequency Analysis

Ingrid Daubechies, Rutgers University

Wavelets are generated from one basic function by dilations and translations, either continuous or discrete. General functions can be represented by and reconstructed from their inner products with wavelets, the "wavelet coefficients". The wavelet coefficients of a function give a time-frequency decomposition of the function with higher time-resolution for high frequency than for low frequency components. The analysis can easily be extended to higher dimensions.

Ingrid Daubechies received her B. S. and Ph. D. in physics at the Free University in Brussels (Belgium) in 1975 and 1980 respectively. She spent from 1981-1983 in a postdoctoral position at Princeton University, 1984 at the Free University, 1986 at the Courant Institute and in 1987 she joined the mathematics department at AT&T Bell Laboratories as a member of their technical staff. In 1992 she joined the mathematics department at Rutgers University.

Soap Bubbles, Metals and Undergraduate Research

Frank Morgan, Williams College

Soap bubble clusters still challenge mathematicians and computers to understand their shapes. Some structures in metals look similar, but may be different. We discuss some recent advances made by undergraduates.

Frank Morgan works in minimal surfaces and studies the behavior and structure of minimizers in various dimensions and settings. His first book, *Geometric Measure Theory: a Beginner's Guide*, has just been followed by a second, *Riemannian Geometry: a Beginner's Guide*. He is currently writing a third, *Calculus in One Semester*.

He went to MIT and Princeton where his thesis advisor, Fred Almgren, introduced him to minimal surfaces. He then taught for ten years at MIT, where he served for three years as Undergraduate Mathematics Chairman, received the Everett Moore Baker Award for excellence in undergraduate teaching, and held the Cecil and Ida Green Career Development Chair. He spent two years as visiting professor at Rice and Stanford, and last year at the Institute for Advanced Study. He now serves at Williams College as Mathematics Department Chair and director of an undergraduate research project. He is coorganizer of the annual Boston Workshop for Mathematics Faculty.

Editorial Comments: The Myths and Mirth of Publishing
Martha J. Siegel, Towson State University

What does it take to get into print? How to succeed as an author and as a referee. With many examples.

Martha Siegel is professor of mathematics at Towson State University. She has been at Towson since 1971 when she was appointed associate professor after having taught at Goucher College from 1996 to 1971. Currently, she is the editor of *Mathematics Magazine* and is a member of the Executive Committee of the MAA. From 1986-1991, she served as an associate editor of the *Magazine*. In addition, she is an MAA consultant, serves on the Publications Committee, and has been chairperson of the Subcommittee on Discrete Mathematics in the First Two Years (funded by the Sloan Foundation), and a member of the Subcommittee on Service Courses, CRAFTY, CCIME and CTUM. Her mathematical interests include applied probability and modeling. She is the director of Towson State's Applied Mathematics Laboratory, a long-time member of the University Senate, and the 1990 recipient of the President's Award for Distinguished Service to the University. She is on the Executive Committee of the Maryland Mathematics Coalition. She has received several NSF grants and a grant from the National Institute of Mental Health while doing postdoctoral work in operations research at the John Hopkins University School of Hygiene and Public Health. She is a co-author (with Larry Goldstein and David Schneider) of *Finite Mathematics with Its Applications*, 4th Ed.

Student Chapter Session:
Group Theoryplay
Thomas Moore, Bridgewater State College

We take a recreational look at one aspect of elementary group theory (partitions by left cosets) and we take a group-theoretic look at some recreations (solitaire peg-jumping games and the game of SIM).

Tom Moore is a graduate of Stonehill College and the University of Notre Dame and has spent his professional life at Bridgewater State College (MA). He and his wife Kathleen are the parents of four daughters. When time permits he enjoys exploring a good number theory problem, especially with the aid of computer graphics. The fruits of one of these efforts is in the May, 1992 issue of *The Fibonacci Quarterly*.

Research in Mathematics Education:
Can it Have a Role in the K-16 Reform Process?
Joan Ferrini-Mundy, University of New Hampshire

With major changes in mathematics curriculum and pedagogy on the horizon, all who teach mathematics in grades K-16 must consider its implications. Mathematics educators engaged in research about the teaching and learning of mathematics may be able to provide useful contributions. Promising examples of interactions between mathematics education research and improved practice will be highlighted, including work in teacher education calculus. Implications of the "reform climate" for college teachers of mathematics will be examined.

Joan Ferrini-Mundy has been on the faculty at the University of New Hampshire since 1983 where she has taught undergraduate and graduate level mathematics and in the area of mathematics education. She has conducted a number of state and federally funded teacher education programs, spent 1989-91 as a Visiting Scientist in Teacher Enhancement at NSF and served as chair of the NCTM Research Advisory Committee. She is currently the co-chair of the American Educational Research Association Special Interest Group for Research in Mathematics Education, President of the Association of Mathematics Teachers in New England, a member of the MAA Committee on Research in Undergraduate Education and is on the editorial board of the *American Mathematical Monthly*. Her research interests are in calculus learning, gender issues and teacher development.

Christine Ladd-Franklin and the Algebra of Logic
Judy Green, Marymount University

Christine Ladd-Franklin was the first American woman to earn a Ph.D. in mathematics and about the 90th to receive one, having established an international reputation as a logician and psychologist during the intervening 44 years. Her life and work will be placed in context.

After graduating from Cornell, Judy Green followed her husband first to New Haven, where she received a masters in mathematics from Yale University, and then to Washington, where she taught at Howard University for a year before returning to graduate school in mathematics at the University of Maryland. After receiving her Ph.D. in mathematical logic in 1972, she joined the faculty of Rutgers University at Camden and spent the next 17 years commuting between her home in Maryland and her job in New Jersey. She is now Professor of Mathematics at Marymount University in Arlington, Virginia. Her current research interests and publications concern American women in mathematics who received Ph.D.'s prior to World War II, and the history of Logic. Her work on Christine Ladd-Franklin combines these interests.

The MULTIBAND Method for Traffic Light Synchronization
Susan Assmann, Regis College

You have probably had the experience of driving along a major roadway and getting one green light after another. You've probably also had the experience of having to stop for a red light at practically every intersection - much more annoying! Traffic engineers often try to synchronize the traffic lights along a major roadway so that as many drivers as possible have the first experience, rather than the second. There are more numerous constraints on how the lights can be timed. Furthermore, the needs of people traveling in one direction must be balanced against those of people traveling in the opposite direction. The MULTIBAND method differs from other methods in its more realistic modeling of the competing needs of the two directions of travel. We have done computer simulations comparing the MULTIBAND traffic light settings with those produced by conventional methods. In almost all cases, the MULTIBAND approach decreased both the average delay and the average number of stops. (This work was done jointly with Nathan Gartner, Fernando Lasaga and Dennis Hou.)

Susan Assmann received her B. A. in Mathematics from Dartmouth College and her Ph. D. in Mathematics from MIT. Her thesis work was in the areas of combinatorics and algorithms analysis. After completing her studies, she joined the mathematics department at the University of Lowell (now UMASS Lowell). It was there that she began working on the traffic light research, along with other faculty and students from mathematics and civil engineering. For the past two years she has been teaching mathematics at Regis College in Weston, Ma.

Mathematics in Agricultural Economics: The Theory of Individual Behavior Under Risk

Michael Weiss, Agricultural Economist
Economic Research Service, U. S. Department of Agriculture

Agriculture is inescapably tied to the notion of a risk. Since weather, and therefore crop yield, is unpredictable at planting time, a farmer's economic choices (what crops to plant, how much fertilizer to use, etc.) can, at best, guarantee a probability distribution of income. Thus, farmers may be viewed as optimizing a risk preference ordering defined over a space of probability distribution functions. We will describe the corresponding mathematical theory of economic behavior under risk, showing how such concepts as convexity of function spaces, weak convergence of probability measures, and projection operators on vector spaces help mathematical economists study behavior under risk.

Michael Weiss received a B. A. in mathematics from Brandeis University, a Ph.D. in mathematics from Brown University, and an M. A. in economics from the University of Maryland at College Park. He is particularly interested in the contribution mathematics can make to the foundational theories of other disciplines. Since 1976, he has served on the staff of the Economic Research Service of the U. S. Department of Agriculture, where his work has emphasized the clarifying role of mathematical concepts in economic theory and agricultural economics. A former mathematics professor, he continues to teach through extensive lecture series at his governmental agency. In 1988, the Economic Research Service honored him for his research on the economic theory of behavior under risk.

LEONARD C. SULSKI

Leonard C. Sulski of the College of The Holy Cross passed away last last August after a long illness. He had taught mathematics at Holy Cross since 1965 and served as department chair from 1969 to 1978. He main research interest was in real analysis and his love for the history of mathematics made his course in this area very popular among non-mathematics majors. Leonard was an active member of the MAA and AMS for many years. He served as Local Arrangements Coordinator for the Fall of 1989 meeting of the NES/MAA which was held at Holy Cross and in a similar capacity for two Eastern Section meetings of the AMS. He is deeply missed by all who knew him.

COMPUTER ALGEBRA SYSTEMS WORKSHOP

A **Computer Algebra Systems Workshop** will be held at Colby College, Waterville Maine on July 12-17, 1992. This Workshop is part of a National Science Foundation program to assist in preparing calculus teachers to use computer algebra systems (CASs) as teaching tools. All expenses, except participant travel, are paid by the National Science Foundation. The purpose of the Workshop is:

(a) To engage each participant in identifying and discussing pedagogical issues associated with the use of a CAS as a teaching tool.

(b) To engage each participant in developing a curriculum project involving the use of a CAS.

Doug Child (Rollins College) and Don Small (Colby College and U. S. Military Academy) are the instructors. Both are experienced in using CASs in their teaching and in conducting CAS workshops. Doug Child is the developer of the Calculus T/L CAS and Don Small is the Project Director for the national program of CAS workshops sponsored by the National Science Foundation.

The Calculus T/L, Derive, Maple and Mathematica CASs will be available for participant use. The Workshop begins with dinner on Sunday evening and concludes with lunch on Friday.

For further information and an application form, contact Don Small, Dept. of Mathematical Sciences, USMA, West Point NY 10996.

SUGGESTION FOR A HIGH SCHOOL-COLLEGE ARTICULATION PROJECT

The Dwight D. Eisenhower Mathematics and Science Act of 1989, administered through State Departments of Education, funds cooperative programs between high schools and colleges. For the past three years, this program has funded a workshop in the use of technology as teaching tools for the high school teachers in Maine. This program is described here in the hope that others may be inspired to develop a similar or parallel project. The Workshops start with a pizza party on a Thursday night and run through lunch on Saturday with a Follow-up afternoon and evening session approximately six weeks later. Each of the 40 teachers receive a TI-81 calculator, mileage reimbursements, as well as room and board. In addition, a participant's school is reimbursed up to $50 to pay for hiring a substitute teacher. Each teacher receives instruction in using the TI-81 calculator and the Derive and Calculus T/L computer algebra systems. This is done Thursday evening and Friday morning in 3 sessions (conducted in parallel with 20 teachers in each session). Discussions of goals, pedagogical issues and general curriculum matters takes place on Friday afternoon. Friday evening and Saturday morning is reserved for the teachers working in small groups to begin the development of a curriculum project. These projects are refined over the next six weeks and reported on during the Follow-up session. Copies of Derive and Calculus T/L are loaned to the teachers to use during the six week interim period. In addition, a "loaner" set of 20 TI-81's has been accumulated over the past three years which provides teachers the opportunity to borrow a "starter" set of five calculators for a few weeks.

There are three instructors: two high school and one college teacher. This spring's high school instructors were Rita Fox (Presque Isle High School) and David Heckman (Monmouth Academy). This program has been very successful as a development program for teachers, in forming a bridge of understanding between high school and college teachers, and in creating a network for teachers using technology. A personal benefit is the opportunity to work with a group of outstanding teachers.

I would be happy to provide a copy of the brochure, budget details, etc. to anyone who is interested. Write to me, Don Small, Dept. of Mathematical Sciences, U. S. Military Academy, West Point, NY 10996.

DINNER MEETINGS

This spring the first round of NES/MAA Regional Dinner Meetings is being held. Shown below is a list of those meetings which are scheduled:

Eastern Massachusetts Region (3/19): Peter Christopher, coordinator
Speaker: Gilbert Strang of MIT, *Mathematics After Dinner*

Rhode Island Region (4/8): Frank Ford and Ruth Koelle, co-coordinators
Speaker: James J. Tattersall of Providence College, *Episodes in the History of Mathematics: Winners and Losers*

Central New Hampshire Region (4/8): William J. Roberts, coordinator
Speaker: Donald L. Kreider of Dartmouth College, *Recursion*

Southern New Hampshire Region (4/9): Edwin Wolf, coordinator
Speaker: James J. Callahan of Smith College, *How the Computer Can Redefine Calculus*

Vermont Region (4/16): Indu Anand and Leonard Gambler, co-coordinators
Speaker: Roger Cooke of the University of Vermont, *The First Hundred Years of Mathematics in Vermont*

Southern Connecticut Region (4/23): Jean Sells, coordinator
Speaker: James J. Tattersall of Providence College, *Episodes in the History of Mathematics: From Kepler to Marks*

Central Connecticut Region (4/23): Salvatrice Keating, coordinator
Speaker: Robert A. Rosenbaum of Wesleyan University, *Generalizations*

We are planning now for another series of such meetings for the spring of 1993. If you are interested in serving as a coordinator (especially if your region was not represented for Spring 1992) or in assisting a coordinator please contact Thomas Koshy of Framingham State College (508-626-4727), Coordinator of the Regional Dinner Meetings.

NES/MAA MINICOURSE

The second annual NES/MAA minicourse is being held at Western New England College on April 11, 1992 with local arrangements being headed up by Richard Pelosi. The course *Challenging Students with Research Projects in Calculus* is being taught by David Pengelley and Edward Gaughan of New Mexico State University.

NEWS FROM THE TWO-YEAR COLLEGE REP

The National Conference for the American Mathematical Association for Two Year Colleges (AMATYC) will be held in Boston November 18-21 of 1993. NES/MAA has graciously changed the date of its annual meeting for 1993 only so that those interested may choose to attend both meetings. AMATYC gratefully acknowledges this change and enthusiastically invites MAA participation and attendance.

Jack Keating of Massasoit Community College and Helene Savicki of Dean Junior College are general Co-chairs of the conference. Other Chairs are Phil Mahler of Middlesex Community College (Local Arrangements), John Jacobs of Mass Bay Community College (Computer Equipment and Technology), Lois Martin of Massasoit Community College (Participant Information), Steve Zona of Quinsigamond Community College (Tours), Peg Stevenson of Massasoit Community College (Hospitality Committee), Dan Kimborowitz of Massasoit Community College (Local Registration), Elaine Previte of Dean Junior College (Local Treasurer), Judy Tulley of Bunker Hill Community College (Out-of Hotel site Committee), Arthur Jackman of Dean Junior College (Industry Strand Committee), Ann Corbeil of Massasoit Community College (Donations Committee), and Maureen Woolhouse of Dean Junior College (Wednesday Night Reception Committee). MATYCON, the Connecticut AMATYC affiliate, has volunteered to chair the Sign Committee. Many other responsibilities exist and we welcome participation by all interested members.

The theme of the conference is "The American (Mathematical) Revolution." If anyone is interested in presenting a paper or workshop at this conference, please contact either Co-chair for further information.

There will be a table for Two-Year College members at at the luncheon of the Spring Meeting at Merrimack College. If you are interested in sharing ideas and concerns on curricula or technology, please contact Helene Savicki at Dean Junior College: (508)-528-9100 x275.

Helene Savicki
Dean Junior College
Two-Year College Representative

NEWS FROM NEMATYC

The annual meeting of the New England Mathematics Association of Two-Year Colleges was held at Middlesex Community College (Lowell MA) on March 14, 1992 with 156 registrants. The program co-chairs were Philip Mahler and Regina Goodwin of Middlesex community College. This was a great meeting with lots of interesting presentations and workshops.

At the business meeting, the following slate of officers were elected: President - Philip Mahler of Middlesex Community College (MA), Vice-President- Steve Krevisky of Middlesex Community College (CT), Treasurer - Eiki Satake of Emerson College and Newsletter Editor - Judy Carter of North Shore Community College. Next year's meeting will be held in March at Middlesex Community College in Middletown CT.

FALL 1992 MEETING

This fall's meeting will be held at Trinity College in Hartford CT on November 20-21, 1992. Local arrangements are being handled by David Robbins. The Program Chair is Marilyn Durkin of Bentley College and the Program Committee also includes Helen Salzburg of Rhode Island College, Miguel Garcia of Greater New Haven State Technical College, David Robbins of Trinity College and Helene Savicki of Dean Junior College. The theme of this meeting is *Mathematics and the Environment.*

UPCOMING MEETINGS

In addition to those listed on the inside front cover, the following meeting dates and locations are tentatively scheduled:

Westfield State College
November 5-6, 1993
Local Arrangements: Diannne Haber and Maureen Bardwell

Bates College
June, 1994
Local Arrangements: Robin Brooks

Please note the date of the Fall 1993 Meeting! This meeting will be held several weeks earlier that usual to avoid conflict with the national meeting of AMATYC which will be held in Boston at a time that overlaps our usual meeting dates.

We are in need of people to serve on program committees for these meetings. If you are interested in serving on such please contact the Section Chairperson whose address appears on the inside front cover. Get involved!

EDITOR'S MESSAGE

Friday, September 11, 1992 is the date when all information for the *Fall Newsletter* must be received by the editor (address on inside front cover.) Thanks to all for their timely and well written input for this issue.

I was sadden to read of the death of Michael Crowley this winter. He had recently retired from Southeastern Massachusetts University (now U-Mass Dartmouth) after teaching there since 1958. I always looked forward to seeing Michael at the U-Maine Short Course which he attended frequently. He was quite a gentleman.

In case you are wondering why the two items in this *Newsletter* from Don Small, our past Governor and Chairperson, give an address of West Point and not Colby College, this is because Don is on leave at USMA for the next couple of years.

Many thanks to Laura Kelleher for finishing up the Fall 1991 issue of this *Newsletter* after I took ill. Thanks to those who sent get-well cards. They were much appreciated!

PRE-REGISTRATION FORM

SPRING MEETING OF THE NORTHEASTERN SECTION-MAA

JUNE 5-6, 1992 **MERRIMACK COLLEGE**

Mail Registration Form to: John Royal
Department of Mathematics/Computer Science
Merrimack College
North Andover MA 01845

Checks should be made out to: **NES/MAA**

You may register at the meeting if you wish; however, it would facilitate the organization of the meeting if you pre-register by mail and it will save you money in that on site registration fees are five dollars more than preregistration fees. In any case, meals and housing cannot be guaranteed unless reservations are received by Friday, May 22, 1992. Spouses and guests are welcome at all meals and in the dormitories.

REGISTRATION:

Name _____

Institution _____

Address _____

City, State, Zip _____

Telephone (O) ( ) _____ (H) ( ) _____

PRE-REGISTRATION FEE:

MAA Member ($10.00)
Non-member ($15.00)
Student or unemployed ($5.00) } $ _____

MEALS:

Banquet 7:00 p.m. Friday
Number ( ) x $16.00 $ _____

Breakfast 7:30 a.m. Saturday
Number ( ) x $5.00 $ _____

Luncheon 12:15 p.m. Saturday
Number ( ) x $10.50 $ _____

HOUSING:

Friday, June 5 $ _____
Rate : $25, for single; $15.50/person, for double

TOTAL $ _____

Northeastern Section MAA
Department of Basic Sciences
Massachusetts Maritime Academy
P.O. Box D, Buzzards Bay, MA 02532-1803