NORTHEASTERN SECTION

NEWSLETTER

fall 1987

VOLUME 9   NUMBER 2

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- -

FUTURE SECTION MEETINGS

SPRING, 1988

St. Michael's College
June 10,11

Program Chair: Ed Sandifer
Western Connecticut State College
Local Arrangements Chair: Rich Cleary,
St. Michael's College

FALL, 1988

Rhode Island College
November 18,19

Program Chair: James Tattersall
Providence College
Local Arrangements Chair: Frederich F. Harrop
Rhode Island College

MESSAGE FROM THE CHAIR

Over the past two years the national MAA has become much more active in the promotion of the profession and in increasing the public awareness of mathematics and the contributions of its practitioners. Internally, there are new initiatives to increase faculty membership and to establish student chapters of the MAA to parallel the Section organization. Externally, the MAA is encouraging Sections to organize for political action in support of professional issues and to be much more aggressive in promoting the profession to the public through its Public Information Officers organization. While the debate continues on the role of these initiatives in the mission of the MAA, the action intensifies. Exciting times!

Locally, our Northeast Section is the largest of the twenty-nine sections and one of the most active as judged from the variety of activities sponsored and the level of participation in our meetings, workshops, conferences and short courses. Our challenge in the next two years will be to maintain this leadership by broadening our membership base to include significant faculty participation from all sectors of higher education as well as to imbed student chapters into our organization.

One additional objective should be to increase our participation on the national committees of the MAA. It is clear from an analysis of the MAA committee structure and the Northeast Section's involvement, that we are underrepresented on the committee participation list. A copy of this analysis will be available at the November meeting. If you'd be interested in lending your expertise to a national effort, check the opportunities available and offer your services.

The Northeast Section is blessed with an active faculty willing to provide leadership and service to the Section. Phil Mahler retires as *Newsletter* Editor this Fall after three years. Under his editorship the *Newsletter* has been expanded to serve the Section not only as a bulletin of upcoming meetings but as an historical record and a professional information journal. Perhaps the best compliment to Phil would be to note that his *Newsletter* has become a model for other sections. Frank Battles, Massachusetts Maritime Academy, has accepted the editorship beginning this winter.

Dennis Luciano assumes the Chair of the Section at the close of the November meeting. He has been the Vice Chair for the past year and for several years the Student Paper Coordinator. Since he initiated student papers at Section meetings, these sessions have earned our commendation and attracted increasing faculty participation. Under Dennis' guidance, the Northeast has become a leader among the sections in student participation. We are fortunate to have that guidance extended to all Section activities for the next two years.

How can I summarize the past two years? Maintaining the activities of the Section has been a challenge; addressing the issues as the Section representative has been stimulating; working with our faculty has been a pleasure. What more could anyone ask? Thanks!

Steven K. Ingram
Chair

GOVERNOR'S MESSAGE

I want to report to you on two votes taken by the Board of Governors at its summer meeting in Salt Lake City:

Student Chapters. The Board voted to take another step toward establishing MAA student chapters. Specifically, the Board approved the idea subject to the availability of funding. If the proposal clears this final hurdle, MAA student chapters will be established on college campuses by inviting each Mathematics Department to affiliate its existing mathematics club with the MAA as an MAA student chapter or, if no such club exists, to create an MAA student chapter. The student chapters within an MAA section would constitute an "MAA student section" to be considered part of the "parent MAA section." The parent section would have the responsibility for assisting and coordinating the section activities of its student section. Student members would pay minimal dues (the amount which has been mentioned is $10 per year) and for that would receive Focus and the MAA mailings. There would be modest additonal charges ($5 or $10) for each journal subscription. It has been recommended that each section newsletter be expanded, if necessary, to include space for activities of its student chapter and that Focus allocate space for articles of interest to students. It is hoped that members of student chapters would become regular MAA members after graduation.

The Language of College Entrance Requirements. The Board voted to endorse the recommendations of a joint MAA/NCTM committee regarding college statements about entrance requirements in mathematics. The problem, reported the committee, is that a recent survey of college catalog statements about entrance requirements in mathematics revealed "a great diversity in phrasing, suprisingly many ambiguities, and a general lack of clarity." The committee expressed concern that many colleges now express their requirements in a way that "prevents appropriate and needed curriculum change in high schools." To help remedy the situation, the committee made three recommendations intended to assure that statements of college admission requirements in mathematics are uniform and clear. The first recommendation concerns specific language for college catalogs (a sample: for colleges requiring three years of mathematics in high school, the suggested statement is, "At least three years of mathematics, including topics at the level of a one-year course in advanced algebra and the topics typically contained in a one-year course in geometry of two and three dimensions."). The second recommendation is that colleges go beyond the general statements and prepare detailed descriptions of the topics included in the requirements and then disseminate them widely to high schools and prospective students. The third recommendation is that all colleges should urge all students preparing for college to take at least three years of mathematics in grades 9 through 12 and also point out that it is especially important for students to take mathematics during their entire senior year.

It seems to me that these two matters are likely to affect a great many of us. You will probably be hearing more about them both in the near future.

James E. Ward
Governor

MINUTES OF THE LAST MEETING

The Spring Meeting of the Northeastern Section was held on June 12-13, 1987 at Connecticut College in New London, Connecticut. There were 80 registrants.

Invited Addresses

"Artificial Intelligence: An Applied Liberal Art," by Stanley J. Wertheimer, Bridget B. Baird, Connecticut College.
"After Abstract Algebra, What? One Year of Applied and Abstract Algebra," by Margaret S. Menzin, Simmons College.
"Computer Graphics Experiments in Complex Dynamical Systems," by Robert L. Devaney, Boston University.
"Factoring Polynomials Quickly," by Susan Landau, Wesleyan University.
"The Equations of the Kinetic Theory of Plasmas," by Waltar A. Strauss, Brown University.
"Enhancing Calculus with True BASIC," by James E. Hurley, University of Connecticut.

Panel Discussion

"An Educational and Industrial Partnership: PIMMS (Project to Increase Mastery of Mathematics and Science)," by Robert A. Rosenbaum (Moderator), Wesleyan University; Phyllis McGrath, General Electric Foundation; Nancy Cetorelli, Stratford High School; Kenneth Hoffman, Hampshire College.

Contributed Papers

"Generating Simpson's Paradox," by Thurmon Whitley, University of New Haven.
"Mathematical Programming for the Optimization of Objectives of Health Care Systems," by Richard S. Segall, University of Lowell.
"The Determinant and Inverse for Holors (Generalized Tensors)," by Gerard Coutu, Hartford Graduate Center.
"The Exact Solution of the Richardson Equations," by Joseph W. Hogan, Domina E. Spencer, University of Connecticut.
"The Riemann Force," by Domina E. Spencer, Shama Y. Uma, Philip J. Mann, University of Connecticut; Parry Moon, Massachusetts Institute of Technology.
"A Comparison of the Ampere, Grassmann and Riemann Forces," by Philip J. Mann, Domina E. Spencer, Shama Y. Uma, University of Connecticut.
"The Force Fields of Current Elements," by Shama Y. Uma, Domina E. Spencer, Philip J. Mann, University of Connecticut.

Student Papers

"An Electromagnetic Paradox: The Hering Bridge," by Euclid Eberle Moon, Massachusetts Institute of Technology.
"Evaluating Functions of Matrices," by Michael Perrone, Worcester Polytechnic Institute.
"An Application of Multi-Expanded Graphs," by Martin Coutre, Western New England College.

Laura L. Kelleher
Secretary-Treasurer

Fall Meeting, Northeast Section
Nov 20-21, 1987
Bentley College, Waltham, Massachusetts

With the 100th birthday of the AMS in mind, the Northeastern Section is planning an extraordinary Fall Meeting, organized around the theme of the promotion of mathematics. Invited particpants are A.K. Dewdney, Computer Recreations Editor of Scientific American, and Peter L. Renz, Associate Director of the MAA and former Mathematics Editor for W.H. Freedman, on 'Writing for the Public'; Peter J. Hilton, SUNY at Binghamton, and Joel E. Schneider, Children's Television Workshop, on 'Promoting Mathematics among Children'; Reuben Hersh, UNM (Christie Lecturer) on 'Ethical Questions in Mathematics', and Serge Lang, Yale, 'Misuse of "Mathematics" in the Social "Sciences"'. John W. Milnor, Institute for Advanced Studies, will speak on 'Chaos in Polynomials of Low Degree', representing the phenomenon of popular trends in research.

Five workshops will be offered Friday, on ADA, MODULA 2, TEX, Use of Spreadsheets in Calculus, and Use of COMAP's Public TV Series in a Credit-bearing Course. There will be a session Saturday for contributed papers on the topic of Special Courses (for majors or non-majors) in Mathematics (see Call for Papers), and a session for student papers. The Boston Area AWM will also host a session.

The meeting will be outside of Boston, in Waltham, Massachusetts, at Bentley College, on Friday and Saturday November 20 and 21. Special-rate motel accomodations will be available for one or two nights. Details appear elsewhere in this Newsletter.

> Program Committee: Stephanie Troyer, Robert Decker, Gerald Leibowitz, Zoe Leibowitz
> Local Arrangements Committee: Karen Schroeder

CALL FOR STUDENT PAPERS

Students (and recent graduates) are invited to present papers at the Fall 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 is waived for student presenters at all Section meetings.

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

Interested students should send an abstract and current address and phone number, by November 6 to: Dennis M. Luciano, Department of Mathematics and Computer Science, Western New England College, Springfield, MA 01119 (413-782-1275). All proposals will be reviewed by Department faculty members.

CALL FOR CONTRIBUTED PAPERS

At both the Fall and Spring Meetings we will have contributed papers sessions. Members are urged to participate; let your colleagues know what your are doing!

At the Fall Meeting papers are specifically solicited on the topic of Special Courses (for majors or non-majors) in Mathematics.

Abstracts for the Fall Meeting should be sent by November 6 to: Jim Tattersall, Department of Mathematics, Providence College, Providence, RI 02918

MATH CLIPS

From MATH CLIPS, A Clipping Service for the Officers and Governors of the Mathematical Association of America, May 1, 1987.

From "NSF Pushes Math Literacy", by Alex Kozlov, SIAM News, January 1987: The NSF's Teacher Preparation and Enhancement Program seeks to recruit university professors to work closely with pre-college mathematics teachers. Louise Raphael, Professor of Mathematics at Howard University, recently took a leave of absence to become Associate Program Director; she reports that: "Only one-third of today's students study chemistry; only 15% study physics, yet 63% of adults feel science and mathematics education is inadequate, and 87% think high school students should take mathematics courses every year".

Good proposals from mathematicians are strongly solicited. Part of Raphel's job is to review proposals for two types of teacher workshops. One is geared toward identifying "leadership teachers", and the other to help teachers who need to improve their basic knowledge of mathematics. Good proposals will emphasize collaboration with secondary teachers, cost effectiveness including cost-sharing agreements with universities, industry and the school system, and the "bottom line: How will this proposal help the teacher help the student? How will it help the student think?".

From "Mothers' Attitudes May Affect Math Scores" by Barbara Vobejda, The Washington Post, January 11, 1987: From a study in math education released by the Mathematics Sciences Education Board of the National Research Council and the National Academy of Sciences: American mothers are likely to believe that their children's achievement is determined more by ability than effort. Japanese and Chinese mothers stress effort as an explanation for achievement. Asian children spend more time in school, more time in math classes, and, in those classes, more time working on math activities. American math classes exhibit a relative lack of coherence, jumping between activities, while a Japanese teacher sticks to one goal for the day, perhaps spending an entire class on one problem. In Japan they stress doing a fewer number of problems and doing it right, no matter how long it takes; American teachers stress speed over accuracy.

The Chronicle of Higher Education, March 25, 1987, in an article "Congress May Tell Science Foundation to Spend More on Education Programs" by Colleen Cordes reports just that, as the Congress prepares to write legislation extending the life of the National Science Foundation.

From "American Students not No. 1 in Math" by Lynn Arthur Steen, from the Eugene Register Guard, February 26, 1987. After documenting the title, Prof. Steen states "So what's left after simplistic explanations (such as our averages being taken over a higher percentage of our population (false) and cultural diversity of American students) are eliminated? The major difference seems to be one of attitude and resolve. ... Americans, more than any other people, attribute success in mathematics to innate ability rather than hard work."

From "Math Papers Called Inaccessible" by Gina Kolata, Science, January 9, 1987: Kolata reports the following, from a letter by James Yorke of the University of Maryland, published in the January 1987 issue of the Notices of the American Mathematics Society. A study of the 1000 most cited scientists turned up ZERO mathematicians. Mathematicians do not even cite each other very often. Physicists who want to understand various theorems cannot read papers in math journals (ever). "To me this indicates that while some research is widely celebrated, very little of it is very useful to mathematicians" (and others).

RAMANUJAN SYMPOSIUM

A one-day symposium to celebrate the birth centennial of S. Ramanujan, the great Indian mathematician, will be held on Saturday, October 24, 1987 at the College Center, Framingham State College, Framingham, MA 01701. The symposium will be inaugurated by India's Ambassador to the United States.

On Friday, October 23, at 7:30 p.m., the Ambassador will speak on INDO-US RELATIONS. For further information, please contact Thomas Koshy, Department of Mathematics, Framingham State College, Framingham, MA 01701, (617)-626-4727.

A COURSEWARE OFFER

Professor James Hurley spoke on "Enhancing Calculus with True BASIC," at the Spring Meeting; at that time he offered attendees a copy of a demo disk prepared in conjunction with a minicourse he gave at the San Antonio meeting in January. This offer is extended to any interested section member, along with an offer of a copy of the transparancies used in that talk, and other associated printed materials. Contact Professor Hurley at the University of Connecticut, Department of Mathematics, U-9, Room 111, 196 Auditorium Road, Storrs, Connecticut, 06268, or call at (203) 486-4143 or leave a message at (203)-486-3923/3924 Mon-Fri, 8:30-4:30.

> Mathematicians use intuition, conjecture and guesswork all the time except when they are in the classroom.
> Joseph Warren

MAA CERTIFICATE OF MERITORIOUS SERVICE
AWARDED TO DON SMALL

Once every five years each MAA section is entitled to nominate one person for the MAA Certificate of Meritorious Service. The nomination must be confirmed by the Board of Governors. As its first recipient, the Northeastern Section nominated Donald B. Small of Colby College and the certificate was presented to Don at an awards ceremony held during the 1987 summer meeting in Salt Lake City in August. Here is the citation which accompanied the certificate:

The Northeastern Section of the Mathematical Association of America is pleased to nominate Professor Donald B. Small of Colby College as the Section's first recipient of the MAA Certificate of Meritorious Service. In so doing the Section gratefully recognizes Don Small's many contributions to the Northeastern Section, to the national MAA and to mathematics education in general.

It is safe to say that the Northeastern Section would not be in the strong condition it is today without Don Small. He was one of the founders of the Section's very successful annual short course and he has personally co-directed most of those courses. He has contributed innovative ideas and strong leadership in several Section offices, including those of vice-chairman, chairman and governor, which have helped the Section increase its activities and offerings, and thereby the participation and attendance by its members. Don has also been instrumental in turning the Section from an organization which was never sure it could pay all its bills into one which now makes a profit and uses its surplus monies to support a variety of mathematical activities. Incidentally, one of those Section-supported activities, one which we believe is a model for others seeking Section support, is an annual conference on graph theory which Don himself helped organize.

Don's service to the national MAA has been equally impressive. He has served on a mind-boggling list of MAA committees: the committee on secondary school lectures, which he chaired; CUPM; the CUPM panel on calculus articulation, which he also chaired; the subcommittee on Dolciani mathematical expositions; the MAWIS steering committee; the advisory committee to WAM; the advisory committee to BAM; the MAA/NCTM task force on the mathematics curriculum for grades 11-13, and numerous others. Don is widely recognized as a sensible, committed proponent of quality mathematics education. More than that, he is known as someone who not only has good ideas, but is willing to invest his time and energy to bring them to fruition.

As extensive as his service to the MAA is, Don Small's service to mathematics education goes well beyond his MAA activities. He organized and obtained funding for a very successful secondary school lecture program in his home state of Maine. He developed and directed a tutoring program for local elementary school children that was staffed by Colby College students. And he has served on several Maine and New England grade school mathematics committees. Back home in Maine his advice and counsel are widely sought by everyone from elementary school teachers to college faculty and he is unfailingly generous in giving of his many talents.

For all these reasons, the Northeastern Section is proud to nominate Donald B. SMall for the MAA Certificate of Meritorious Service.

NORTHEASTERN SECTION OF THE MAA
FALL MEETING

BENTLEY COLLEGE
WALTHAM, MASSACHUSETTS

November 20-21, 1987

PROGRAM

Friday, November 20

3:00-6:00   REGISTRATION: Forum - Graduate Center

3:00-4:30   Campus Tours Available

3:30-4:30   Executive Committee Meeting

WORKSHOPS

3:30-5:30   (A) **ADA: AN OVERVIEW**
                  Zoe Leibowitz
                  Central Connecticut State University

            *(B) **TEX**
                  William Abikoff
                  University of Connecticut

             (C) **USE OF COMAP'S PUBLIC TV SERIES IN A CREDIT-
                       BEARING COURSE**
                  Solomon Garfunkel
                  COMAP

4:00-5:30   *(D) **COMPUTER SOFTWARE IN A CALCULUS COURSE: ONE
                       SCHOOL'S APPROACH**
                  Barbara Nevils
                  Bentley College

             (E) **MODULA 2**
                  James C. McKim
                  University of Hartford

5:30-6:20   AWM Panel: **The Relationships Between Gender and
                          Science**
                  Moderator: Mary Beth Ruskai
                             University of Lowell

5:30-6:20   RECEPTION - Cash Bar

6:30-7:45   BANQUET

7:55-8:00   Welcoming Address
             Gregory H. Adamian, President
             Bentley College

8:00-9:00   **Panel: Writing for the Public**
                  Peter Renz, MAA, Washington, D.C.
                  A.K. Dewdney, Computer Recreations Edito
                  Scientific American

9:00-   WINE AND CHEESE SOCIAL - Hosted by the Bentley
             College Quantitative Analysis Department

Saturday, November 21

8:00-10:00   REGISTRATION: Graduate Center

8:00-4:00   Textbook/Software Exhibits

8:00-9:00   Student Paper Session

9:00-3:00   Films

9:05-9:55   **PROMOTING MATHEMATICS AMONG CHILDREN**
             Peter J. Hilton
             SUNY at Binghamton

9:55-10:35   Coffee Break

10:40-11:35 Christie Lecture

             THE SOCIAL RESPONSIBILITY OF MATHEMATICIANS
             Reuben Hersh
             University of New Mexico

11:35-12:00 Business Meeting

11:45-1:15   Buffet Luncheon

1:00-2:00   **SQUARE ONE TV: WHAT IS IT AND HOW DO WE VIEW IT?**
             Joel Schneider
             Children's Television Workshop

1:00-2:00   Contributed Paper Session

2:10-3:00   **CHAOS IN POLYNOMIALS OF LOW DEGREE**
             John Milnor
             Institute for Advanced Study
             School of Mathematics, Princeton, NJ

3:10-4:00   **THE EFFECT OF ABUSE OF SO-CALLED "MATHEMATICS" IN SOME
                  SOCIAL "SCIENCES"**
             Serge Lang
             Yale University

* **NOTE:** There is a limit of 20 participants for Workshops B and D.
  There is no limit on the others. Registration for workshops will
  be on a first-come basis at the Registration Desk.

* *

Program Committee: Stephanie Troyer
                    Robert Decker
                    Gerald Leibowitz
                    Zoe Leibowitz

Local Arrangements: Karen Schroeder

* *

WORKSHOP DESCRIPTIONS

Ada: An Overview
Zoe Leibowitz, Central Connecticut State University

Ada is a very powerful and versatile language which was developed for the Department of Defense. Features of the Ada language will be explored and programs using these features will be reviewed. Knowledge of a high level language is assumed.

Computer Software in a Calculus Course: One School's Approach
Barbara Nevils, Bentley College

The first half of this workshop will be a discussion of how Bentley College integrates calculus software into the calculus curriculum. Specific examples and demonstrations using a calculus package, Turbo Basic and a spreadsheet program will be shown. After the demonstration, computer lab time will be available to the participants to experiment with the software and with student assignments.

ABSTRACTS/SPEAKERS

The Christie Lecture

The Social Responsibility of Mathematicians
Reuben Hersh, University of New Mexico

In recent years, most scientific professions have given attention to the ethical problems of their professional practice as it affects society at large. Important examples are physics, biology, medicine, computer science, statistics and most or all of the branches of engineering. In contrast, there have been very few published discussions of ethical issues in mathematics or of the social consequences of mathematical activity. Are there, in fact, no ethical problems worthy of discussion in mathematical life? This talk will suggest some ethical issues which I believe merit attention.

Reuben Hersh received a B.A. in English Literature from Harvard and a Ph.D. in Mathematics from New York University. His research interests include linear partial differential equations, linear operator equations, random evolutions, nonstandard analysis and the philosophy of mathematics. Formerly an instructor at Stanford University, he is currently at the University of New Mexico, Albuquerque, where he has taught since 1964. In 1975, he was the recipient of the Chauvenet Prize, jointly with Martin Davis. He is the coauthor with Philip Davis of The Mathematical Experience (1981), which won a National Book Award in 1983, and of Descartes' Dream (1986).

> Computation involves going from a question to an answer.
> Mathematics involves going from an answer to a question.
> Peter Hilton

SQUARE ONE TV: What Is It and How Do We View It?
Joel Schneider, Children's Television Workshop

SQUARE ONE TV is the Children's Television Workshop's daily, half-hour mathematics series for children of 8-12 years. The 75 program series is in its second semester of broadcast. Directed at home and school audiences, the series aims to promote interest in mathematics, to model problem solving and to exhibit a broad range of mathematics. The series enjoys strong public response as well as professional acceptance as a part of school mathematics instruction. The long-range effect is expected to be increased public attention to mathematics.

Joel Schneider is content director for SQUARE ONE TV. He earned degrees in mathematics from Franklin and Marshall College and the University of Oregon. He has taught mathematics at all levels, kindergarten through graduate school. At the Pennsylvania State University, where he taught mathematics for seven years, he began work in mathematics education by developing courses for elementary education majors. At CEMREL, Inc. in St. Louis, he was co-author of the Comprehensive School Mathematics Program, a K-6 curriculum, and directed its teacher education and implementation programs. He was also project director for a major problem-solving initiative, A Program in the Teaching of Problem Solving, funded by the U.S. Department of Education. Schneider has been with the Children's Television Workshop for four years.

The Effect of Abuse of So-called "Mathematics" in Some Social "Sciences"
Serge Lang, Yale University

Examples will be given of the abuse of so-called "mathematics" in some works by some people who called themselves Political Scientists. I shall discuss how these works are related to journalism and policy making in Washington, as well as how they are or are not discussed critically in the classroom. The examples will be taken principally from:

1. "The 1977 Survey of the American Professoriate" by E.C. Ladd and S.M. Lipset;
2. "Political Order in Changing Societies", by S.P. Huntington;
3. Other articles by Lipset and Huntington.

Serge Lang was born in Paris. He moved to the United States where he completed high school and received a degree from the California Institute of Technology. After a year and a half in the U.S. Army, he spent a year in the Philosophy Department at Princeton before switching to mathematics. He received a Ph.D. from Princeton in 1951, taught there and spent a year at the Institute for Advanced Study. He has also taught at: the University of Chicago (1953-1955), Columbia University (1955-1970); Princeton University (1970-1971); Harvard University (1971-1972); and Yale University since 1972. He was also a Fulbright scholar in Paris in 1958. From 1966-69, he was politically and socially active during a period when the United States faced numerous problems which affected the universities very deeply. He has also been concerned with the problems of

financing universities and of their intellectual freedom, threatened by political and bureaucratic interference. However, his principal interest has always been mathematics. He has published 32 books and more than 70 research articles. He received the Cole Prize in the United States and the Prix Carriere in France.

NEWS NOTES

MATHEMATICS PROFESSOR MAKES GOOD: Gordon Pritchett, Professor of Mathematics at Babson College, and our previous and illustrious Secretary-Treasurer, was recently appointed Vice-President and Dean of Faculty.

NEW ENGLAND REPRESENTED IN INTERNATIONAL MATH OLYMPIAD: Eric Wepsic, a junior at Boston Latin School in Boston, MA won a Gold Medal in the 28th International Mathematical Olympiad in Havana, Cuba on July 10 and 11. Robert Southworth of Winchester, MA received a second prize award.

⊛ SOFTWARE EXCHANGE

Copies of the Microcomputer Software Exchange list will be available at the registration desk at the fall meeting. Also, you may obtain a copy by sending $1.00 to Steve Snover, University of Hartford (West Hartford, CT 06117), or Thurmon Whitley, University of New Haven (West Haven, CT 06516).

Some current titles on the list are: Class Roster, Nim, Markov Chains, Least Squares Line and other Statistics Programs, Combinatorics Programs, Linear Programming, Operating Room Simulation, Eigenvalues and Eigenvectors, etc., etc.

We need listings for Commodores, IBM's, Apple IIc's and Apple Macintosh's. If you have written public domain programs for any of these machines, please send the relevant information to either Steve Snover or Thurmon Whitley.

EDITOR'S MESSAGE

Frank Battles of the Massachusetts Maritime Academy assumes the editorship of this *Newsletter* with the spring issue. March 15, 1988 is the date by which all material for the Spring, 1988 issue must be in his hands: Frank Battles, Massachusetts Maritime Academy, Academy Drive, Buzzards Bay, MA 02532.

"I have made this letter longer than usual only because I have not had the time to make it shorter."

Blaise Pascal
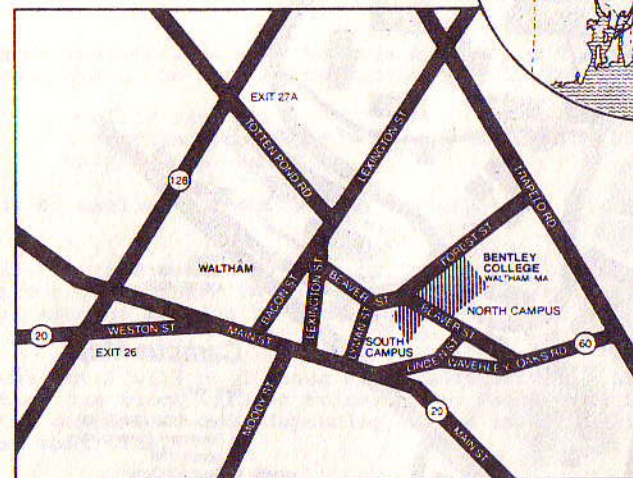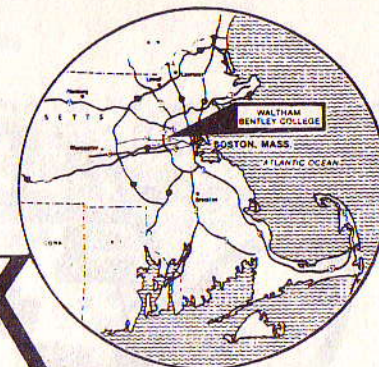
Area Map

From Boston and Points East:
Follow Storrow Drive (west) or Memorial Drive (west) to Mount Auburn Street. After passing Star Market, bear right onto Belmont Street and continue west to the Route 60 intersection. Turn left and follow Waverley Oaks Road (Route 60) to the traffic light (Beaver Street). Turn right onto Beaver Street, this street intersects the Bentley College campus.

From South and West:
Take exit 14 off the Massachusetts Turnpike and follow signs to Route 128 North; turn right at Trapelo Road, exit 28A, and proceed 2.2 miles toward Belmont. Turn right onto Forest Street. One-half mile on the left is the Bentley College North Campus entrance.
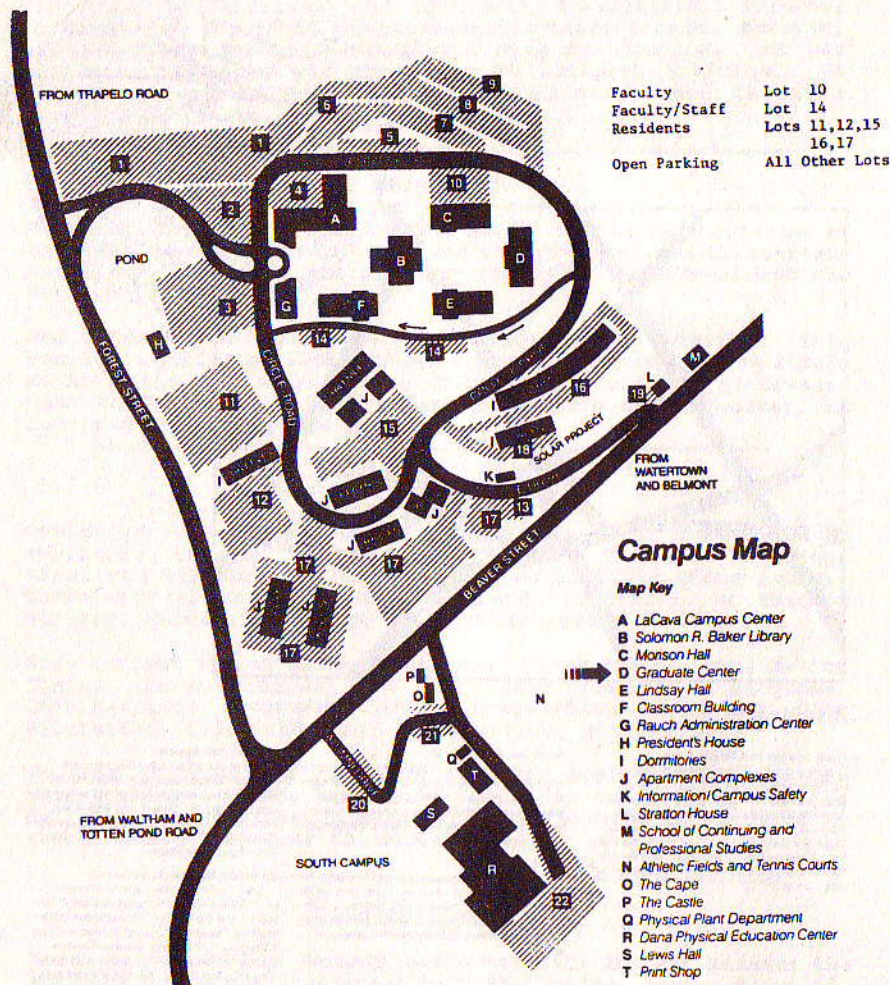
From the North:
Take Route 128 South to Trapelo Road, exit 28A; turn left at top of exit ramp and follow Trapelo Road 2.2 miles toward Belmont. Turn right onto Forest Street. One-half mile on the left is the Bentley College North Campus entrance.

From Logan Airport:
Leave the airport following signs for Sumner Tunnel (Downtown Boston). At end of tunnel, bear right and follow signs to Route 93 South. Take Route 93S to the Mass. Pike. Route 90 West exit. Continue on Mass. Pike to exit 14. Follow directions as noted From South and West.

By Public Transportation:
Take the MBTA Red Line to the Harvard Brattle stop in Harvard Square. From there, take the number 73 trackless trolley marked "Waverley Square." Buses number 54 and 521, "Waverley Square-Newton Corner" leave Waverley Square and travel along Beaver Street; this street intersects the Bentley College campus. Contact the MBTA directly at 617/722-3200 for the current bus schedule.

Faculty   Lot 10
Faculty/Staff   Lot 14
Residents   Lots 11,12,15
                                 16,17
Open Parking   All Other Lots

Campus Map

Map Key

A LaCava Campus Center
B Solomon R. Baker Library
C Monson Hall
D Graduate Center
E Lindsay Hall
F Classroom Building
G Rauch Administration Center
H President's House
I Dormitories
J Apartment Complexes
K Information/Campus Safety
L Stratton House
M School of Continuing and
   Professional Studies
N Athletic Fields and Tennis Courts
O The Cape
P The Castle
Q Physical Plant Department
R Dana Physical Education Center
S Lewis Hall
T Print Shop

LODGING

A block of 50 rooms has been reserved for the meeting in the name of Bentley College/Mathematical Association of America at the Quality Inn. Located within 5 minutes driving distance of the Bentley Campus, the Quality Inn is offering double rooms at the reduced flat-rate of $55 plus tax per room per night. <u>For those wishing to extend their stay in the Boston area, the hotel will offer this rate for the entire weekend</u>.

Room reservations must be made directly with the hotel either by completing the form below and mailing it to:

Quality Inn   (located at Exit 27A off
455 Totten Pond Road   Route 95/128)
Waltham, MA 02154

or by calling the hotel at: 890-3000.

If the reservation is made by telephone, please indicate that you are a participant in the Bentley College/Mathematical Association of America Meeting to guarantee the reduced rate.

The hotel will hold these rooms until October 31, 1987 at which time the block will be released and rooms will be available at the guaranteed rate depending on the space available in the hotel at that time.

✂ BENTLEY COLLEGE/MATHEMATICAL ASSOCIATION OF AMERICA

PLEASE RESERVE : ☐ ——————— ROOM (S)

——————— OCCUPANTS PER ROOM

☐ COT   ☐ CRIB

DATE OF ARRIVAL: ———————

LENGTH OF STAY: ———————

☐ ARRIVAL BY 4 PM
☐ GUARANTEED ARRIVAL. CREDIT CARD NO. ———————
                      TYPE ——————— EXPIRATION———————
☐ DEPOSIT BEING SENT.

NAME: ———————
STREET: ———————
CITY:——————— STATE ——————— ZIP ———————

GUARANTEED RESERVATIONS REQUIRE PAYMENT OF ROOM CHARGE IF YOU FAIL TO ARRIVE OR CANCEL BY 4 PM ON DATE OF ARRIVAL.

ANOTHER EXCELLENT SHORT COURSE

Sixty-three participants enjoyed and learned much from the sterling lectures of Professor Fred S. Roberts of Rutgers this past June at the ninth annual Short Course sponsored jointly by the Northeast Section of the MAA and the University of Maine. His lectures, entitled Applications of Discrete Mathematics, started with simple ideas of graphs and combinatorics, and then went into more advanced applications from switching functions to unambiguous codes, form scheduling and maintenance to traffic routing.
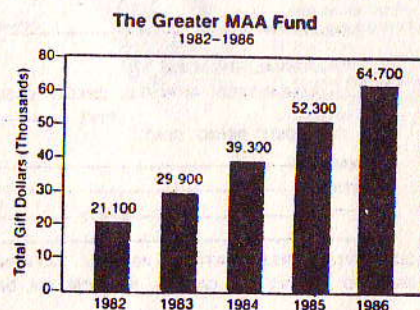
This year the weather cooperated fully for our midweek trip to Acadia National Park, including the picnic at which we were accompanied by the stereo of a picnicking local school group. The usual pizza party (catered by Pat's Pizza) and curriculum discussion led by Don Small followed. The Thursday evening lobster/steak banquet completed the social activities.

It is difficult to come up with new superlatives each year to describe our short course. Perhaps we should just say that: As usual, the lectures were excellent, the accomodations comfortable, the food tasty, and the cost quite modest. The lecturer for our next smash hit, the 1988 Short Course, will be announced later.

Clayton W. Dodge
University of Maine - Orono

GREATER MAA FUND UPDATE

The chart below illustrates the first five years of the Greater MAA Fund. Members are asked to contribute this year especially to establish student chapters and/or to the R.H. Bing Memorial Fund to provide an endowment for increasing public awareness and understanding of mathematics.

The Greater MAA Fund
1982-1986

Year	Total Gift Dollars (Thousands)
1982	21,100
1983	29,900
1984	39,300
1985	52,300
1986	64,700

This graph shows the growth of the Greater MAA Fund for its first five years.

PRE-REGISTRATION FORM
MAA - NORTHEASTERN SECTION

FALL MEETING NOVEMBER 20-21, 1987 BENTLEY COLLEGE

Name_____
      Last   First   Middle Initial

Mailing Address_____

_____

Telephone (O:)_(___)_____ (H:)_(___)_____

Affiliation_____

Registration $10.00 $_____
($5.00 for students and unemployed members;
no charge for students presenting papers at
the meeting)

Friday Banquet $18.50 $_____

Saturday Luncheon Buffet $10.50 $_____
                                              _____

                                    TOTAL $_____

Make checks payable to: MAA - Northeastern Section

Please mail to: Professor Karen J. Schroeder
                    Mathematics Department
                    Bentley College
                    Waltham, MA 02254

Your check must be received no later than Tuesday, November 3, 1987.