NORTHEASTERN SECTION

NEWSLETTER

SPRING 1987

VOLUME 9 NUMBER 1

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SPRING 1987 MEETING

The Spring, 1987 Meeting will be held Friday, June 12 and Saturday, June 13 at Connecticut College in New London, Connecticut. Donna Beers, Simmons College is the Program Chair and Ernest Schlesinger, Connecticut College, is coordinating local arrangements. Program information begins on Page 8; the registration form is on the inside of the back cover.

FUTURE MEETINGS

FALL, 1987

The Fall, 1987 Meeting will be held at Bentley College on November 20,21. Stephanie Troyer, University of Hartford, is Program Chair; Robert Decker, University of Hartford is Co-chair. Karen J. Schroeder, Bentley College, will handle local arrangements.

FROM THE CHAIR

An informal Section Officers' Meeting was held at the Joint Mathematics Meetings in San Antonio in January. The topic that received the most attention was the potential for MAA Student Chapters to be developed by each member institution and formed into a Northeast Student Section. Our Section would provide a coordinating committee to work with the faculty advisors of institutional chapters and the Student Section officers. The concept received general approval, but there were several reservations, most concerned about the dues schedule for student memberships and financial support for student chapters. The matter returns to the Board of Governors and various subcommittees for further study.

Section Officers did unanimously endorse student paper sessions at national meetings. Certainly, the student presentations we've had at our last meetings deserve a wider audience and we can now encourage our students to prepare for a national presentation.

As mentioned in the last Newsletter, the primary emphasis of the MAA will be public awareness of mathematics. ICM'86 was generally recognized to be a great success as a public relations opportunity and the MAA would like to continue this effort through its Public Information Panel and locally through our Section's Public Information Officer, Ken Lane from Colby College. The goal is to keep the value and contributions of mathematics and mathematicians in the public consciousness.

In the Northeast, the Section elected Dennis Luciano as President-elect, Laura Kelleher as Secretary/Treasurer and reelected Jean Smith as the Two-Year College Representative at the Fall meeting in Worcester. The challenging slate of officers proposed by the Nominating Committee, the participation in the election and the closeness of the tally reflect a continuing interest in the activities of the Section and the contribution the Section can make to the profession.

Two colleagues terminate their service on the Executive Committee. W. Thurmon Whitley has completed his sequence as Chair-elect, Chair and Past-Chair. Under his leadership and guidance the Section has grown in membership, expanded its activities and increased its impact on the region and the profession. Although his titles end, his service doesn't. He has accepted appointment to the Meritorious Service Award Selection Committee (see below).

Gordon D. Pritchett has closed the books on his tenure as Secretary/Treasurer. Under his fiscal fist, the Section progressed through the spectrum from red ink to black, leaving us as one of the most successful of the twenty-nine sections. The Section is indeed indebted to these two colleagues.

The Northeast Section has the opportunity to nominate one of its members for the MAA's Meritorious Service Award. Beginning in 1984, five sections each year are invited to select a member for this national honor. This year is our turn and a

selection committee composed of W. Thurmon Whitley, Chair, Dennis Luciano, Dan Blackett, Shirley Blackett and Jim Ward is in the process of selecting a nominee.

Finally, Donna Beers is putting together an exciting program for the June meeting at Connecticut College. See you on the southern coast.

Steven K. Ingram

TAKE AIM, PLEASE!

AIM, *Applications in Mathematics*, is an applied mathematics curriculum package which the MAA offers, without cost, to high schools. Currently three learning modules are available that involve fundamentals in trigonometry and algebra. Each module consists of a video cassette which introduces the problem provided by industry using on-site video, a student/teacher resource book, a "sum up" video cassette which presents industry's solution and comments on the associated career, and a microcomputer software package on a diskette. **All materials may be copied** and become an integral part of class materials. The resource book contains a thorough discussion of the problem with helpful hints for the student and an outline of the solution, together with stragegy, for the instructor. Your encouragement for your local high schools to use this material is strongly urged.

For further information and/or materials contact AIM Project, The Mathematical Association of America, 1529 Eighteenth Street NW, Washington, DC, 20036 (202-387-5200 Ext 5200). The Northeastern Section representative for the project is Homer Bechtell, Mathematics Department, University of New Hampshire.

Comment: I believe that you would be very impressed by the clarity of the exposition and the presentation of the problems that Professors Jeanne Agnew and John Jobe have prepared. My feeling is that undergraduate majors in math-ed and students in MST programs for mathematics would benefit by exposure to AIM and would be motivated to introduce these materials in the classroom.

Homer Bechtell
University of New Hampshire

GOVERNOR'S MESSAGE

At its San Antonio meeting, the Board of Governors reluctantly voted to increase MAA dues in 1988. Dues for a Regular member receiving the Monthly will be $58 per year, an increase of $10 over the 1987 dues, and there will be corresponding increases in the other dues categories and in subscription rates for non-members.

The Board was reluctant to vote the increase because we are aware that most MAA members do not earn large salaries and that professional dues will no longer be deductible under the new tax law. Nevertheless, we felt we had no choice if we were to act in the best interests of the Association. The officers and staff documented a need for additional income from dues of about $100,000 to erase operating deficits and of at least $150,000 to support important new initiatives.

To illustrate the problem with the current operating income, the Board was presented with the following table. In 1986 a Regular member receiving the Monthly paid dues of $48. This payment covered the following:

A subscription to the Monthly	$24.00
A subscription to FOCUS	1.00
Membership records and mailings	5.21
Subsidy to journals to cover deficit	3.79
Subsidy to FOCUS to cover deficit	4.26
Development	3.78
Support of special projects	2.84
CML and Employment Register	.71
Support of Sections	1.51
MAA Awards & Contributions	.71
Subsidy to books to cover deficit	4.17
Government & Public Relations	2.60
	$54.58

The above add up to more than the member paid in dues, to be precise, $6.58 more. This represents the contribution from the Association's reserves made for each member. It is the individual member's share of the 1986 operating deficit.

Steps are being taken to reduce expenses and to increase the sales of MAA publications. Peter Renz, the new associate director, has an externsive backround in publishing and it is hoped that he can reduce the amount spend to subsidize publications. Nevertheless, that will take time and the current operating deficit needs to be addressed now.

Looking beyond the current budget, there are several areas in which expenses can be expected to increase over the next few years. I will only mention two. One is government and public relations, as the MAA, in concert with the other mathematics professional organizations, increases its efforts to make the nation aware of the importance of mathematics education and the problems it faces. The other is building renovation. The engineer who looks after our buildings in Washington has informed us that, in his opinion, we will have to spend between $600,000

and $1 million for maintenance and major renovation in the next ten years. The Board believes that it is prudent for us to begin to set aside funds annually in anticipation of these expenses.

For all of these reasons, the Board decided that there was no alternative to increasing dues. I know it is not welcome news, but I do believe that it is necessary.

James E. Ward
Governor

CALL FOR STUDENT PAPERS

Students (and recent graduates) 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 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 Spring Meeting, we urge you initiate student projects now for presentation at the Fall Meeting.

Interested students should send an abstract and current address and phone number, by May 25 to: Dennis M. Luciano, Department of Mathematics and Computer Science, Western New England College, Springfield, MA 01119 (413-782-3111 ext 275). All proposals will be reviewed by Department faculty members.

CALL FOR CONTRIBUTED PAPERS

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

Abstracts for the Spring Meeting should be sent by May 25 to: Jim Tattersall, Department of Mathematics, Providence College, Providence, RI 02918

1987 MAA NORTHEAST SECTION SHORT COURSE

June 15-19, 1987, Professor FRED ROBERTS of Rutgers University will lecture on APPLICATIONS OF DISCRETE MATHEMATICS at the annual Northeast Section Short course at the University of Maine. Early lectures in the course will present a variety of applications of simple ideas from discrete mathematics, for instance graph coloring, eulerian path, the multiplication rule of combinatorics, and the notion of generating function. Later lectures will present more in-depth treatments of several applied topics. Well-known techniques of combinatorics and graph theory will be quickly reviewed (though prior knowledge of combinatorics and graph theory will not be necessary). Several less well-known techniques will be introduced in detail. The emphasis in the course will be on applications, including switching functions in computer science, DNA chains in genetics, power in simple games in economics and political science, scheduling and maintenance problems in operations research, engineering problems involving telecommunications and mobile radio transmission, urban sciences, computer graph plotting of electrical networks, keypunching errors in computing, competition between species with overlapping trophic niches, decisionmaking and utility theory, design of unambiguous codes, and traffic routing. Roberts' most recent book, *Applied Combinatorics*, is closely related to the subject of this course.

FRED S. ROBERTS, Professor of Mathematics at Rutgers University, has major research interests in mathematical models in the social, behavioral, and environmental sciences; graph theory and combinatorics and their applicaiotns; and measurement and decisionmaking. His first book, *Discrete Mathematical Models, with Applications to Social, Biological, and Environmental Problems*, has been called a classic in the field. Professor Roberts has been an active member of the MAA, serving as a member of CUPM, on the panel on a General Mathematical Sciences Program, and as a member of the Visiting Consultants Panel. He is currently the Vice President of SIAM and serves on the Board of Directors of the SIAM Institute for Mathematics and Society.

The cost of this excellent course, including room and board, the mid-week trip to Bar Harbor, and Don Small's fatherly advice, is still only $200 for MAA members. Family accomodations are available. For further information contact Clayton W. Dodge, Mathematics Department, University of Maine, Orono, ME 04469 (Tel. 207-581-3908).

MINUTES OF THE LAST MEETING

The Fall Meeting of the Northeastern Section was held November 21-22 at Worcester Polytechnic Institute in Worcester, Massachusetts. The theme of the meeting was "Mathematics and Computers". There were 182 registrants.

Invited Addresses

"Algorithms in Linear Algebra: Fast Fourier Transform, Conjugate Gradients, Karmarker", by Gilbert String, Massachusetts Institute of Technology.

"Graphical Representatives of Complex Zeros of Polynomial Functions", by Roland E. Larson, The Behrend College, Penn State University.

"On the Distribution of Zeros of the Zeta Function", by Andrew Odlyzko, AT&T Bell Laboratories.

"What Do We Do When We Do Mathematics?" by Ernst Snapper, Dartmouth College.

"What is Discrete Mathematics, and Why Do We Teach It?" by Kenneth P. Bogart, Dartmouth College.

"For All Practical Purposes - Applications in the Undergraduate Curriculum", by Solomon Garfunkel, Consortium for Mathematics and its Applications (COMAP).

Short Presentations

"Computer-aided Design (CAD) Demonstration", by Kenneth E. Scott, Worcester Polytechnic Institute.

"Computer-aided Manufacturing (CAM) Demonstration", by David P. Asmus, Worcester Polytechnic Institute.

Contributed Papers

"Mathematical Text Processing In the Land of Bhaskara", by Dilip K. Data, University of Rhode Island.

"A Discussion of the Effects of Computer Literacy Components on Cognitive Domains of Ninth Grade Students", by Ann Whitney-Roper, Newbury Junior College.

"Limits Without Topology", by Robert Gray, Prime Computer, Inc.

"Some Remarks on the Methodology of Mapping Functions of a Complex Variable", by Herbert J.Nichol, Drexel University.

"Bivariate Distributions to Model the Behavior of Wind Speeds at Two Different Heights", by Marilyn K. Pelosi, Western New England College.

"How to Beat Your Kids at Their Own Game", by Kenneth M. Levasseur, University of Lowell.

"Ada: An Overview", by Anita Zoe Leibowitz, Central Connecticut State University.

"Making the 'Most' of Predicate Calculus", by Steven Cushing, Stonehill College.

"The Divergence and Curl of the Fields of a Moving Charge", by A. S. Mirchandaney, Defiance College, D. E. Spencer, Philip J. Mann, and S. Y. Uma, University of Connecticut.

"Binary Stars from Three Viewpoints", by P. Moon, MIT, Domina E. Spencer, University of Connecticut, and E. E. Moon, MIT.

"The Fields of a Moving Charge", by A. S. Mirchandaney, Defiance College, D. E. Spencer, S. Y. Uma, and Philip J. Mann, University of Connecticut.

Student Papers

"On the Fringes: The Optics of Moire Patterns", by James Shea, Worcester Polytechnic Institute.

"An Interesting Property of Interpolating Polynomials", by K. Hitchinson, Colby College.

"A Simpson's Rule that Does Not Discriminate Against Even Nodes", by Diane Bergerson, Saint Michael's College.

"Ada and Data Abstraction", by Andre Russotti, Western New England Colege.

"Carmichael Numbers", by Michael S. Alexander, Colby College.

"Aegis Numbers", by Billy Don Sterling McConnell I, Bowdoin College.

"Computer-displayed Cusp Diagrams and Horoballs of Hyperbolic 3-manifolds", by Martin V. Hildebrand, Harvard University.

"Optical Block Equations", by Michael Perrone, Worcester Polytechnic Institute.

At the business meeting a new Secretary-Treasurer, Laura Kelleher, was elected and a new Vice-Chair, Dennis Luciano, was elected. Jean B. Smith was re-elected the two-year college representative.

Gordon D. Prichett
Secretary-Treasurer

NORTHEASTERN SECTION OF THE MAA

SPRING MEETING
June 12-13, 1987

CONNECTICUT COLLEGE

NEW LONDON, CONNECTICUT

PROGRAM

FRIDAY, JUNE 12

3:00-6:00 Registration

3:30-4:20 ***Artificial Intelligence: An Applied Liberal Art***
Stanley J. Wertheimer and Bridget B. Baird
Connecticut College

4:30-5:20 ***After Discrete, What? One Year of Applied and Abstract Algebra***
Margaret S. Menzin
Simmons College

5:30-6:20 Wine and Cheese Reception

6:30-7:30 Banquet

7:45-8:45 ***Computer Graphics Experiments in Complex Dynamical Systems***
Robert L. Devaney
Boston University

9:00 - 11:00 Social

SATURDAY, JUNE 13

8:00-10:00 Registration

8:00-9:00 Student Papers Session

9:00-9:05 Welcome
Oakes Ames, President
Connecticut College

9:10-10:00 ***Factoring Polynomials Quickly***
Susan Landau
Wesleyan University

10:00-10:30 Coffee Break

10:40-11:30 ***The Equations of the Kinetic Theory of Plasmas***
Walter A. Strauss
Brown University

11:30-12:00 Business Meeting

12:00-1:15 Buffet Luncheon

1:30-2:20 ***Enhancing Calculus with True BASIC***
James F. Hurley
University of Connecticut

1:30-2:20 Contributed Paper Session

2:30-3:30 Panel Discussion
An Education and Industry Partnership: PIMMS (Project to Increase Mastery of Mathematics and Science)
Moderator: Robert A. Rosenbaum,
University Professor Emeritus
Wesleyan University

SPRING, 1987 PROGRAM COMMITTEE

Donna Beers, Simmons College - Chair

Ernest Schlesinger, Connecticut College - Local Arrangements

ABSTRACTS/SPEAKERS

Artifical Intelligence: an applied liberal art
Stan Wertheimer and Bridget Baird, Connecticut College

Artificial Intelligence (AI) as a discipline lies at the confluence of mathematics, philosophy, computer science and psychology. Teaching and doing research in AI brings together practitioners in these fields, which results in fruitful collaborations. We will discuss how AI fits beautifully into a liberal arts curriculum and how it brings together faculty from different backrounds (in our case mathematics, computer science, and music) to do research.

Stan Wertheimer emerged from college as a chemical engineer and metamorphosized over the next thirteen years, with the help of several industrial positions and three stints in graduate school, into a point set topologist. Since 1972 he has been a faculty member at Connecticut College; his major research interests have been in applied mathematics and computer science, most recently in natural language processing.

Bridget Baird received mathematical training in abstract algebra, semigroups and topology. She has taught at Connecticut College since 1982 and during that time added computer science courses to her teaching repertoire. She settled comfortably into AI as a way to fulfill curiosity about mind-computer connections and also as a way to pursue a strong interest in music.

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After Discrete, What? One year of Applied and Abstract Algebra
Margaret S. Menzin, Simmons College

We will give a description of a one year course that could follow discrete mathematics and linear algebra. The course mixes applied and abstract algebra, and could appeal to both mathematics and more theoretically oriented computer science majors.

Margaret S. Menzin is Professor of Mathematics at Simmons College. In 1970 she received her Ph.D. from Brandeis Univesity; originally an algebraist, she is interested in the connections between mathematics and computer science. She is co-director of the Program in Computer Science at Simmons College.

*****

Computer Graphics Experiments in Complex Dynamical Systems
Robert L. Devaney, Boston University

Simple mappings of the complex plane, like the exponential or sine or cosine, when considered as a dynamical system, yield a rich and strikingly beautiful mathematical theory. In this lecture we will describe some of the mathematical ideas behind the Julia sets of these maps. From the dynamical systems point of view, the Julia set is the set on which all of the interesting dynamics takes place, so it is important to understand the geometry of these sets. From the computer graphics point of view, this geometry often yields images of startling complexity. Very often these images are fractals.

We will concentrate on the evolution of the Julia sets of maps like the exponential or the sine families. We will show that these sets may "explode" or pulse intermittently as a parameter is varied. Computer graphics evidence which led to the concept of an explosion will be presented, and some of the mathematical ideas behind these events will be described. Two short computer generated films which describe the evolution of particular families of Julia sets will be shown.

Robert L. Devaney is Professor of Mathematics at Boston University. He received his Ph.D. from the University of California, Berkeley in 1973 and taught at Northwestern University, the University of Maryland, and Tufts University prior to his appointment at Boston University. He is a fanatic for opera, especially Verdi.

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The Equations of the Kinetic Theory of Plasmas
Walter A. Strauss, Brown University

The kinetic theory of plasmas, which models comet tails, the solar wind and hot fusion reactors, is described mathematically by the Vlasov-Maxwell system. This is a system of nonlinear partial differential equations of hyperbolic type. The mathematican's job is to analyze its solutions and compare them with the physicist's experimental data. The question of whether or not smooth initial conditions could ever evolve into

singular behavior such as shock waves, turbulence, or chaos will be discussed.

Walter A. Strauss was educated at Columbia, Chicago and MIT. He taught at Stanford for three years and at Brown University since 1966. His interests have gradually shifted from pure functional analysis to the applications of functional and classical analysis in the natural world. His research work has centered around partial differential equations, scattering theory and mathematical physics.

*****

Enhancing Calculus with True BASIC
James F. Hurley, University of Connecticut

The recent availability of affordable microcomputers provides a number of ways to include computer-based enrichment in the freshman calculus sequence. One example, which has evolved over the past four years at the University of Connecticut, will be described. During the last two years, students have been using True BASIC, the powerful new fully structured version of BASIC recently introduced by John Kemeny and Thomas Kurtz of Dartmouth. Pros and cons of exposing students to a programming language in freshman calculus will be discussed, with particular reference to organizational questions, procedural uniformity, user control of the computer, later use of programming skills, and certain features of True BASIC that distinguish it from other languages for use in mathematical computing. Sample programs will be shown to illustrate some of the latter features.

James F. Hurley is Professor of Mathematics at the University of Connecticut. He received his Ph.D. from the University of California, Los Angeles. His research interests include Chevalley algebras and he is the author of textbooks on intermediate and multivariable calculus and has just published a textbook on the calculus.

*****

Factoring Polynomials Quickly
Susan Landau, Wesleyan University

Computer Science has a way of reaching back to the origins of mathematics: arithmetic and computations. Finding primes, factoring integers — the old problems recur. This is the story of another: factoring polynomials into irreducibles over the rationals. This talk will survey the history of the problem, from the computability solution of 1793 to the efficieent algorithms discovered in the last several years.

Reprinted from the Notices of the American Mathematical Society (1987) by permission of the American Mathematical Society.

Susan Landau is Assistant Professor in the Mathematics Department at Wesleyan University. She received her Ph.D. in 1983 from M.I.T. Her research interests include computational complexity and polynomial time algorithms in algebra and number theory.

DIRECTIONS TO CONNECTICUT COLLEGE

General Remarks

1. Persons traveling from Boston and vicinity may take either the Mass Turnpike (I-90) to Exit 10 (Auburn) and follow directions "From the North", or they may take I-95 to Providence and follow directions "From the East".

2. In the vicinity of New London, numerous signs direct travelers to the U.S. Coast Guard Academy. It is helpful to know that the Academy is on the East side of CT Rte 32, while the College is about one-half mile to the North, on the West side of CT Rte 32.

3. Once you enter the campus, "MAA Registration" will be clearly marked by signs.

FROM THE NORTH: (Worcester, MA) Use I-395 southbound. (From Hartford, use CT Rte 2 to its intersection with I-395 near Norwich.) Take exit 78 ("Groton/New London, Rte 32") from the left-hand lane of I-395. This connects with CT Rte 32, southbound. Continue approximately 2.5 miles to third traffic light. Turn right, up the ramp (135 degrees from Rte 32) into the Connecticut College campus.

[If you should go too far, continue on Rte 32 and bear right following signs to Williams Street. Continue right over bridge, then left on CT Rte 32 (northbound) and follow the remainder of directions in the paragraph below ("From the East"), beginning at the the place where the reference to General Remark 2 occurs.]

FROM THE EAST: (Providence) Use I-95 westbound (sometimes considered southbound). Exit 84-N from the Groton-New London bridge over the Thames River puts you on CT Rte 32, northbound. (See General Remark 2.) At the second traffic light, turn left, up the ramp into the campus.

FROM THE WEST: (New Haven) Use I-95 eastbound (sometimes considered northbound). Do NOT turn north on I-395. Exit 83 puts you on the CT Rte 32 connection ("New London/Norwich"). (This is just after you've passed a large shopping center on your right.) Follow Rt2 32 signs and make a left turn up Williams Street, then a right turn at traffic light onto Mohegan Avenue past the U.S. Coast Guard Academy (which is on the right). (See General Remark 2.) Go to second traffic light for left turn up the ramp to the Connecticut College campus.

Recreational Opportunities
New London and Vicinity

In order to give particpants at the meeting opportunity to take advantage of the many fine recreational facilities in Southeastern Connecticut, the dormitory will be available also on Saturday night (See Registration Form).

The area has many features of interest. The most attractive and noteworthy are the following: Ocean Beach Park (swimming, sunbathing, entertainment rides for children); Harkness State Park (a former estate with gardens, lawns and beach, suitable for picnicking, fishing and walks); the Mystic Seaport Museum (historical houses, whaling boats and exhibits related to 19th century life, with interpreters demonstrating crafts, etc.); the Mystic Marine Life Aquarium. In addition, the area has many historic districts and houses set in picturesque locations. Maps and brochures will be available at Registration.

For music lovers, a recital of J.S. Bach's Goldberg Variations will be given by Harpsichordist Igor Kipnis on Saturday evening (June 13), 8:00 p.m., at the near-by Noank Baptist Church. This concert is part of the Connecticut Early Music Society's series. Individual tickets will be about $10.00. Details at Registration.

For questions about any of the above or about other matters connected with the Meetings, please contact

Ernest C. Schlesinger
Department of Mathematics
P.O. Box 1566
Connecticut College
New London, CT 06320
(203)-447-4911, Ext. 7318 or 7240

JEAN SMITH HONORED BY EXCELLENCE AWARD

Our own Jean Smith, the Two-Year College Representative, of Middlesex Community College, Waterbury, CT, was awarded the 1986 AMATYC Mathematical Excellence Award. Professor Smith was selected from a screening of nominees received nationwide and a unanimous vote of the AMATYC Executive Committee. She is best known for her work related to mathematics anxiety and is a recognized international expert on the topic.

HUMOR

A young student, when asked how she decided which arithmetic technique to use in solving a problem, responded:
"3 numbers or more I add... 2 numbers about the same size I subtract... 2 numbers - one big, one little - I divide... otherwise I multiply."

From an Academic Press flyer on textbooks by Charles P. KcKeague.

"Results should not be too voluntarily aimed at or too busily thought of. They are sure to float up of their own accord, from a long enough daily work on a given matter." William James

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EDITOR'S MESSAGE

Friday, September 11, 1987 is the date by which all material for the Fall 1987 issue of the Newsletter must be in the hands of the editor, Philip Mahler, Math Department, Middlesex Community College, Springs Road, Bedford, MA 01730,(617)-275-8910 (School), (617)-369-9499 (Home).

SOFTWARE EXCHANGE

Copies of the Microcomputer Software Exchange list will be available at the registration desk at the spring 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.

DID YOU KNOW

MAA membership increased about 5000 members in two years; a recent headcount puts the membership at about 25000.

MATHEMATICS AS A SERVICE SUBJECT

The International Commission on Mathematics Instruction has written a draft position on mathematics as a service subject. The draft was distributed at a session held at ICM 86. The Commission is seeking reactions to the draft document. Copies may be obtained by writing the Secretariat, Centre for Mathematics Education, University of Southampton, Southampton, SO9 5NH, England.

SECTION MEMBERS IN THE NEWS

"Cryptology: From Ceasar Ciphers to Public-Key Cryptosystems", an article by Section Members Dennis Luciano (Current Vice-Chair) and Gordon Prichett (recent Secretary-Treasurer) appeared in the January, 1987 of *The College Mathematics Journal*. In the November, 1986 issue you could read "Computer Algebra Systems in Undergraduate Mathematics" by Don Small (Past-governor), John Hosack, and Kenneth Lane (Public Information Officer).

He became well known for an unconventional proof of the Pythagorean theorem.

ANTICIPATED VACANCY

The Fall, 1987 Newsletter will be my last. This will make three and one-half years for me. I told myself I would do the job for three years when I started, but since we now do an early mailing in late August I felt the transition would be easier with the Spring, 1988 issue. The hardest part of the job is the knowledge that the well-functioning of the Section depends upon the timely issuance of a fairly complete product. It is for this same reason that I have felt it a distinct honor to serve as editor.

To a future replacement, let me relate some of the 'benefits' of the editorship. First is the opportunity to work actively with people all over New England who are themselves active in this organization. I have thoroughly enjoyed my association with the members of the executive committee and six program committees, three nominating committees, et al. I think one gets much more out of an organization like the Section from the inside looking out. Second, the editor is on the mailing list for all other sections; if you like getting mail... This is of course one way to share information, although the information is seldom timely enough to pass on in the next issue of the Newsletter. It may interest you to know that our Newsletter is probably above average in content and format, etc., although others occassionally even run photographs. Yes, there is room for improvement, but we hold our own quite well. Third, the MAA seems to be becoming more active in mailing other items to the editor (and at least some other members of the executive committee); I now receive "CrossSections, a new missive edited by David Ballew, Chair of the Committee on Sections, and "Math Clips", "A clipping service for the officers and governors of the MAA". That I have not shared some of this information with the Section is because of the time involved in reading and digesting the material to pass it on, and second, the Newsletter has always been "choc full" up to this issue.

I would like to encourage any section member who is seriously interested to let Steve Ingram, Section Chair, know. I think that anyone who enjoys keeping up with the current issues in mathematics pedagogy and curriculum and who would like to share the same with like-minded individuals would enjoy and profit from this job.

Philip Mahler
Editor

PRE-REGISTRATION FORM

SPRING MEETING — **NORTHEAST SECTION — MAA** June 12,13, 1987 — **CONNECTICUT COLLEGE**

Name _____

Mailing Address _____

_____

_____

Affiliation _____

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

How do you want your name to appear on the badge?

_____

Male _____ Female _____

Special Concerns: ___ Non-Smoker ___ Smoker ___ Ground Floor

___ Wheelchair ___ Near Bathroom

Other: _____

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REGISTRATION ($5.00 for students or unemployed members; free for students who present papers at the Meeting)	$10.00	$_____
FRIDAY BANQUET (Includes wine/cheese and social)	$17.00	$_____
DORMITORY ROOM (Friday night) (BREAKFAST included)	$30.00	$_____
DORMITORY ROOM (Saturday night)	$18.75	$_____
SATURDAY LUNCH	$8.75	$_____
Make Check payable to CONNECTICUT COLLEGE	TOTAL	$_____

Please mail to:

Ernest C. Schlesinger
Department of Mathematics
P.O. Box 1566
Connecticut College
New London, CT 06320

To receive confirmation, Registration should be received by May 20, 1987.

NORTHEASTERN SECTION MAA
Mathematics Department
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