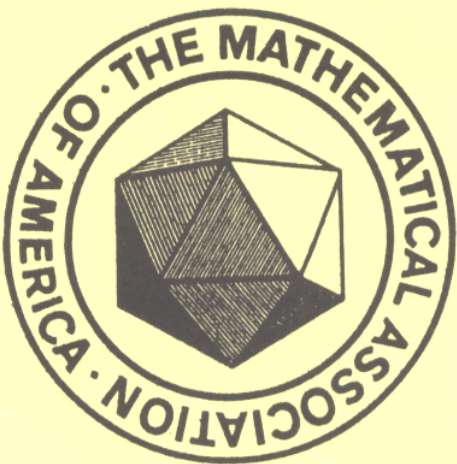


MARYLAND—DISTRICT OF COLUMBIA—  
VIRGINIA SECTION OF THE MAA  
NEWSLETTER



Final Announcement

Section Meeting

April 24-25, 1992

University of Virginia, Charlottesville, Va.

**Notes From the Chair**

Looking forward to a full and well-attended weekend in the Charlottesville area April 24 & 25, I encourage all to:

- 1) attend and bring as many potential graduate students as possible for the session with graduate faculty and graduate students planned for Friday evening at 7:30;
- 2) be present for the Business Meeting for which agenda items include: a) recognition of our Section's Distinguished Teacher; b) report on first survey from the Strategic Planning Task Force of the MAA Board of Governors, found in the current FOCUS and also a brief discussion of the second (leadership) survey now being planned; c) the election of Chair-Elect and Vice-Chair for Programs; and
- 3) bring in your written comments and/or suggestions about questions for the second survey (cf. January announcement to the Departmental Representatives) to be included when notes on the Section's discussion are sent to Thomas Tucker, Chair of the Task Force, so they can be incorporated into the survey in advance of its publication to general MAA membership.

See you in Charlottesville!

Helen Christensen, RSM, Chair, MD/DC/VA

**FRIDAY EVENING SESSION, APRIL 24, 7:30  
 CLARK HALL, ROOM 140**

*Prospective graduate students for Fall, 1993, and those who advise them: learn about current opportunities as well as expectations regarding graduate study today - from current graduate faculty and graduate students at the University of Virginia and other institutions in our section! Inquire of those who know, in a relaxing, informal setting, beginning with a brief presentation at 7:30 p.m. Friday evening, followed by a question/answer period and light refreshments.*

**SATURDAY, APRIL 25, 1992**

**8:00 - 11:00 Registration**

Clark Hall - near room 140

**8:15 Welcome Room 140 Clark**

**8:30 - 9:00 Contributed Paper Session I**

Digital Image Processing

Dr. John Schmeelk, Va Commonwealth Univ

Incompatible Degrees in Fuzzy Unions

E. William Chapin, Univ of MD Eastern Shore

Quaternions & Lagrange's Theorem

Harold N. Ward, UVA

Researching Linear Fractional Models

Jennifer M. Carr, Student, Washington & Lee

**9:15 - 9:45 Contributed Paper Session II**

Elliptical Curves over Finite Fields

Eric Von York, Student, George Mason Univ

What Are Artificial Life & Percolation Theory

Peter McCoy, USNA

Computer Vision: An Improved Algorithm to Determine Motion

Christopher Kirmse, Student, Thomas Jefferson

Modeling Team Winners

**10:00 - 10:30 Contributed Paper Session III**

Visualization of Applications of Calculus &  
Differential Equations

Howard Penn, USNA

Solving Natural Equations for Space Curves  
Paul D. Scofield, Washington & Lee Univ

Minimum & Characteristic Polynomials of Low  
Rank Matrices  
William P. Wardlaw, USNA

Modeling Team Winners

**10:45 - 11:15 Contributed Paper Session IV**

Computational Aspects of Polynomial Rings  
Albert Lin, Student, Thomas Jefferson H Sch

Strings in Common Lisp  
Vojislav Stojkovic, Morgan State Univ

Programs Available for Mathematics Education  
Elizabeth J. Teles, NSF

Modeling Team Winners

**11:30 MD/DC/VA Section Business Meeting  
Clark Room 140**

**12:00 LUNCH**

**1:00 Invited Address : Clark Room 140**  
Deborah Hughes Hallett  
Harvard University

**2:00 - 2:30 Contributed Paper Session V**

MathemaGIC: A Mathematical Guide to Issue  
Competence  
Philippe Loustau, George Mason Univ

The Flowering of Mathematics in the Garden of  
Allah  
Florence Ashby, Alexander Bathula, Jose  
Alonso, Montgomery College

Is the Integral Test Wrong?  
E. Lee May, Jr., Washington & Lee Univ & Howard  
Seidel, Student, Washington & Lee Univ

A Topic in Numerical Analysis  
Tamiko Brim, Student, Bowie State Univ

**2:30 - 5:30 EXP Workshop GILMER Room 109**  
Jon Wilken, NOVA

***Special Price Break -- Attendees will be  
able to purchase EXP at half price!!!!***

Room has 45 computer stations so every  
attendee will have lots of hands-on experience



## LODGING

Lodging accommodations are being handled through two local hotels:

Best Western Cavalier Inn (804) 296-8111

Single room (1 bed) -- \$51.00 plus 8.5% tax

Double room (2 beds) -- \$61.00 plus 8.5% tax

Prices include a complimentary continental breakfast. Reservations will not be accepted after April 10, 1992.

Days Hotel (804) 977-7700

\$48.00 per room (with up to four persons per room) plus 8.5% tax. Reservations will not be accepted after April 10, 1992.

A courtesy van will be furnished to take meeting participants to and from their hotels.

## RECEPTION

On Friday night at 7:30 P.M. there will be a brief meeting (in Clark Hall Room 140) at which the Chairman of the Mathematics Department at UVA will welcome everyone. A reception will follow starting at 8:30 P.M.

## LUNCHEON

There will be a luncheon on Saturday, April 25, at 12:00. The menu for the luncheon will be:

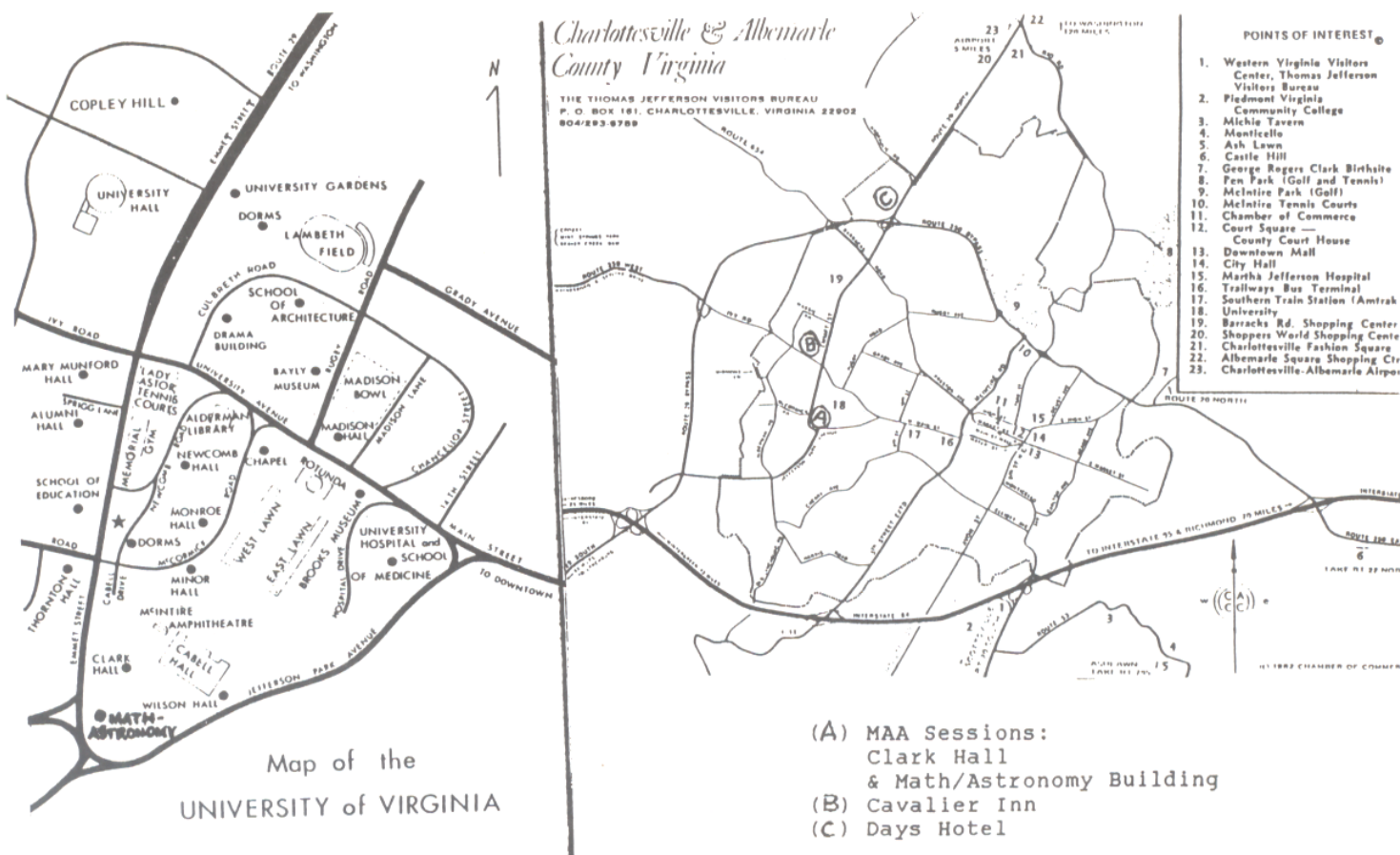
Cucumber and Tomato Salad with Dill Dressing  
Grilled Ham Steak Hawaiian  
Ginger Carrots  
Steamed Rice  
Pound Cake with Vanilla Sauce

The cost of the luncheon will be \$6.25 (see registration form inside the back cover of this newsletter). Reservations for the luncheon must be made with Bob Tardiff, Section Treasurer, no later than Friday, April 17.

## PARKING

For meeting participants who will not be staying overnight or will not be riding in the courtesy van: If you plan to drive to the meeting and will arrive before 5:00 P.M. on Friday evening, you will need to purchase a parking permit. Please send a check in the amount of \$3.75 made payable to the Mathematics Department, UVA, to Barbara Palmore, Mathematics Department, Math-Astronomy Building, University of Virginia, Charlottesville, VA 22903 no later than Monday, April 20.

There is no charge for parking on the campus after 5:00 P.M. on Friday or all weekend, but parking spaces may be hard to find. It is suggested that you first try the parking lot between Clark Hall and the Math-Astronomy Building (see map).





# MINUTES OF THE FALL, 1991 BUSINESS MEETING

The Fall 1991 Business Meeting was held at Marymount University on 16 November. The meeting was called to order at 11:30 by Helen Christensen, Section Chair.

Milton Eisner, Section Secretary, moved the adoption of the minutes of the Spring 1991 Business Meeting. The motion was seconded and passed unanimously.

Robert Tardiff, Section Treasurer, presented the Treasurer's Report. In summary:

Balance on Hand, 13 Nov 91	\$ 6028.67
Balance on Hand, 17 Nov 90	\$ 6188.11
Deficit for Period	\$ 159.44

Howard Penn, Governor, presented the Governor's Report. He discussed the meeting at Orono that dealt with demographic groups underrepresented in the MAA. The impression was that women are well represented in the MAA, minorities less so. Two-year college faculty are well represented, university faculty less so. Our section has made efforts, such as holding section meetings at predominantly Black institutions, to be perceived by Blacks as more hospitable.

Penn then discussed the upcoming Section elections. A Governor will be elected by mail ballot from three nominees: John Milcetic, John Schmeelk, and Elizabeth Teles. At the Spring Meeting, a chair-elect and a vice chair for programs will be elected. The incumbents in these positions described the duties of the positions. Nominations for these positions should be sent to the Nominating Committee.

Ben Fusaro announced that the Mathematical Competition in Modeling will be held 21-24 February 1992. Environmental mathematics will be an unofficial theme of the national MAA/AMS meeting in Baltimore in January, and might be a special topic for our section's spring meeting. The workshop topics for summer of 1992 are not yet determined.

Sally Garber, who was unable to attend the meeting, submitted a written report of the results of the Virginia High School Mathematics Examination, which was distributed to interested members. Craig

Bailey reported on the Maryland Examination. He said participation was down this year.

There was no report on student chapters because Bill Sanders was not at the meeting.

Helen Christensen discussed Distinguished Teaching Awards. The deadline for nomination is 1 January 1992. A three-person committee will select the awardee, who will be honored at the spring meeting. Some questions expressed regarding the process were: Should nominees be notified that they have been nominated? Should restrictions be placed on publicity regarding nominations? Are some institutions better equipped to promote their candidates? It was suggested that the Section use its best judgment this year and learn from experience in the future.

Helen Christensen announced that the spring meeting of the Section will be held at the University of Virginia on 24-25 April 1992, and that there will be no national summer meeting in mathematics in 1992 because the 7th International Congress on Mathematics Education (ICME-7) will be held at Université Laval in Québec, Québec, Canada on 17-23 August 1992. The first registration deadline for ICME-7 is 15 December 1991, so those wishing to attend can save money by registering before that date.

Bernice Kastner called the members' attention to the Career Fair to be held in Baltimore on 9 January 1992 in conjunction with the Joint Mathematics Meetings.

There was no old business.

Helen Christensen, Section Chair, thanked all presenters of reports and thanked Judy Green and Alice Schafer of Marymount University for hosting the meeting.

Howard Penn moved that the Section Secretary be directed to write a letter of thanks to Marymount University in appreciation of their hosting the meeting. The motion was seconded and approved unanimously.

The meeting was adjourned at 12:14.  
Respectfully submitted,

Milton P. Eisner, Section Secretary

# NOTE FROM THE GOVERNOR

The major topic of discussion at the January Board of Governor's Meeting was Strategic Planning. We spent two hours on this topic first in smaller groups which then reported to the entire Board. I urge you to return the survey form that was included in Focus. The survey will effect the directions that the MAA takes for the next several years so please let the leadership know what you think that MAA should be doing.

This will be my last report as the Governor. I have enjoyed representing you at the National Meetings. I leave secure in the knowledge that whichever of the three candidates we elect, the section will be well represented.

Howard Lewis Penn

## JOURNAL OF THE WASHINGTON ACADEMY OF SCIENCES SEEKS CONTRIBUTIONS

The Journal of the Washington Academy of Sciences, a journal of science for a scientifically literate readership, seeks contributions. Send inquiries, manuscripts to:

JWAS

c/o Department of Mathematics and Science  
Mount Vernon College  
Washington DC 20007-1199

## CONFERENCE ANNOUNCEMENT

The Fifth Annual International Conference On

### TECHNOLOGY IN COLLEGIATE MATHEMATICS

"Exploring The Classroom Of The Future"

November 12-15, 1992 at HYATT REGENCY O'HARE, Rosemont, Illinois

Sponsored by: ADDISON-WESLEY PUBLISHING COMPANY

Hosted by: WILLIAM RAINIEY HARPER COLLEGE

Honorary Chairs: BERT WAITS & FRANKLIN DEMANA

(Ohio State University)

Conference Co-Chairs: MERCEDES MCGOWEN

PHIL DEMARIS

(William Rainey Harper College)

DARLENE WHITKANACK

(Northern Illinois University)

### PRESENTATION TOPICS

- 1- Technology in Post-Calculus Mathematics
- 2- Technology in Statistics
- 3- Technology in Engineering and Applied Calculus  
--and its role in Calculus Reform
- 4- Technology in Precalculus Mathematics
- 5- Technology in Developmental Mathematics
- 6- Technology in Secondary Level Mathematics

### CONFERENCE HIGHLIGHTS

- 1- Current Research Results and Future Trends
- 2- NSF Project Reports
- 3- Industry and Academia  
--Partners in mathematics education and technology
- 4- Workshops and Minicourses  
--emphasizing implementation of technology in classroom

CONTRIBUTED PAPERS & POSTERS (more information to follow)

EXHIBITS (by publishers, computer and calculator vendors)



## Maryland Mathematics Coalition

The Maryland Mathematics Coalition represents a broad based constituency from across the state. It includes representatives of business, industry, civic groups, educators from elementary to college, and individuals who have joined together to advance reform in mathematics education. The Board of Governors is a racially diverse group that seeks to involve all members of the community and promote equality of opportunity for all and increased participation from historically underrepresented groups in mathematics. Activities of the Maryland Mathematics Coalition (MMC) to date include the following:

- \* development of a brochure (financial assistance by Westinghouse Electric) to assist a public awareness campaign
- \* membership drive to raise funds for non-profit activities
- \* production & distribution of a 30-second videotape shown on public television during Mathematics Awareness Month
- \* two newsletters, each sent to 2000 or more persons involved in mathematics organizations
- \* three meetings of the Governing Board, each featuring -
  - a business meeting for Governing Board members
  - a program involving these members and others in the community interested in reforming mathematics education to discuss current issues, such as national reports, the status of reform in Maryland, and what is happening around the state
- \* sponsorship of a session on Calculus reform at high school and college level during the program of the NCTM Regional Meeting in Baltimore, MD, on November 1, 1991.

### Future activities planned include:

- \* a public awareness campaign to reach school and community groups such as PTAs and Boards of Education
- \* formation of several task forces to assess the state of mathematics reform in Maryland, investigate pertinent issues, and make recommendations for action.

New individual or group members are always welcome. Contact:

William J. Moulds  
47 Glen Alpine Road  
Phoenix, MD 21131

### CAMPUS NEWS ITEMS

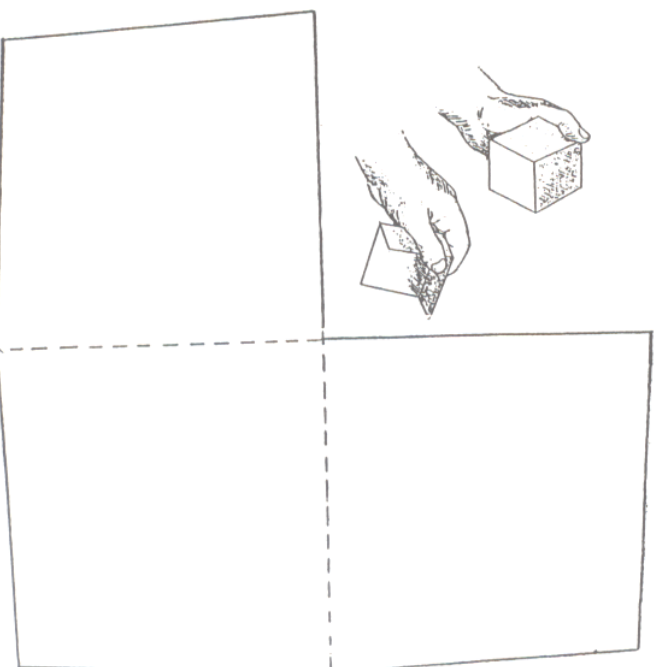
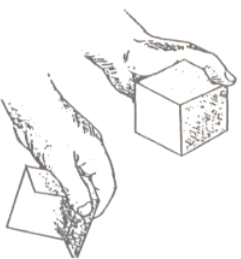
ROANOKE COLLEGE  
New Program: Master's Degree in Computational Sciences

Prof. Skip Thompson  
Director of Computational Sciences  
(703) 831-5478  
thompson@reed.science.ru.net.edu

(Editors' Note: This was the only Campus News Item we have received. Perhaps all the other departments have gone into hibernation hoping that the bean counters and budget cutters will not notice them until the recession is over.)

Make a corner-box by copying the pattern below on paper, then cutting, folding, and taping it into shape. Cradle it, corner pointing away from you, in the palm of your hand. Hold it at arm's length and close one eye. After a moment or two the inside corner-box should appear to be the protruding corner of a solid cube. Then move it slowly from side to side. Your eye will see one motion, although your hand will know another.

From "The Ring of Truth" by Philip and Phyllis Morrison (Random House, New York, 1987)





EIGHTH ANNUAL ALLEGHENY MOUNTAIN SECTION SUMMER SHORT COURSE

The course will be held at Allegheny College June 22-26, 1992, and will be given by Fred Rickey of Bowling Green.

Title: History of the Calculus

Abstract: The calculus is the most beautiful and important creation of mankind. To understand this it is essential that we have a firm knowledge of its history. This will be the primary goal of this Short Course. Morning sessions will be devoted to lectures about the mathematicians who made the most important contributions to the calculus. They will include biographical information, details about the individuals' contributions to the calculus, and ideas about how this information can be used in the classroom. Afternoon sessions will be devoted to a visit to the Rare Book Room, reading original sources, and discussions on teaching history of mathematics courses, and especially how to use the history of the calculus as a motivational tool in teaching calculus. There will also be contributed papers.

Fees are Registration: \$115  
Room and Board: \$105

V. Frederick Rickey, Professor of Mathematics at Bowling Green University, received his Ph.D. from the University of Notre Dame in 1968 with a specialization in Mathematical Logic. More recently his research has turned to the history of mathematics, especially the history of calculus. His MAA Milcourse, "Using History in Teaching Calculus," has been consistently popular and well received in several presentations at National Meetings of MAA.

For further information and an application, contact:

George Bradley  
Department of Mathematics and Computer Science  
Duquesne University  
Pittsburgh, PA 15282  
(412) 434-5115

WE SEE WHAT WE WANT TO SEE

Somebody once observed to the eminent philosopher Wittgenstein how stupid medieval Europeans living before the time of Copernicus must have been that they could have looked at the sky and thought that the sun was circling the earth. Surely a modicum of astronomical good sense would have told them that the reverse was true. Wittgenstein is said to have replied: "I agree. But I wonder what it would have looked like if the sun had been circling the earth."

From "The Day the Universe Changed," by James Burke (Little, Brown & Co., Boston 1986)

JOINT POLICY BOARD FOR MATHEMATICS

OFFICE OF GOVERNMENTAL AND PUBLIC AFFAIRS • 1528 BOUTTEYNH STREET, N.W., WASHINGTON, D.C. 20036 • 202/234-9570

International Space Year is being observed during 1992, and Earth Day, 1992, is being held the day before Mathematics Awareness Week begins--on April 25.

There has been a phenomenal increase in awareness about environmental issues--both national and international. The health and welfare of our planet, plus our economic viability, rely in large part on our ability to accurately understand an array of mathematical/environmental data. In many ways, mathematics relates to critical environmental issues, such as, pollution, the availability of resources, recycling, and population growth.

Recently, faculty throughout the U.S. have begun offering courses on mathematics and environmental issues. Simultaneously, problems in environmental modeling have been receiving attention from researchers and mathematicians in industrial settings.

Please start planning now for MATHEMATICS AWARENESS WEEK 1992 so that we will have the most effective MAW ever. This celebration is now 5 years old and it becomes more important every year. Meet with your colleagues soon and mark the dates for MATHEMATICS AWARENESS WEEK 1992.

Last year Mathematics Awareness Week stimulated newspaper coverage in *The New York Times*, *The Christian Science Monitor*, *The Boston Globe* and *SCIENCE*. Based on calls to our offices, there were hundreds of radio and television spots on MAW, plus even more publicity--both news articles and editorials in local newspapers.

Any idea you have about bringing mathematics to a wider audience is a viable one for MAW. Capitalizing on a proclamation issued by the governor of New Jersey, that state's MAA section arranged joint meetings with other groups and a series of events took place at community and four-year colleges throughout the state. Montgomery County Community College in Maryland hosted a lecture by mathematics author, John Paulos. The Pittsburgh Public School system celebrated MAW in a variety of ways for the entire month of April. And at least two mathematics professors visited grade school classrooms in their local areas to share their excitement and insight about mathematics with some of tomorrow's mathematicians and scientists.

We look forward to hearing from you with questions and comments and about your plans for MATHEMATICS AWARENESS WEEK 1992. Thank you for your ongoing interest in this annual event.

# OFFICERS

**Chair**  
 Sr. Helen Christensen, RSM  
 Loyola College in Maryland  
 4501 N. Charles St.  
 Baltimore, MD 21210-2699  
 (301)323-1010 x2266  
 HCC@LOYVAX.BITNET

**Vice-Chairs, Membership**  
 Prof. & Mrs. Ray Hancock  
 Emory & Henry College  
 Box Y  
 Emory, VA 24327-0965  
 (703)944-3010

**Treasurer**  
 Prof. Robert Tardiff  
 Salisbury State Univ.  
 Salisbury, MD 21801  
 (301)543-6475  
 E3FARMT@SAE.TOWSON.EDU

**Governor**  
 Prof. Howard Penn  
 United States Naval Academy  
 Annapolis, MD 21402-5002  
 (301)267-3892  
 HLP@USNA.ARPA

**High School Contest Coordinators**  
 Prof. Craig Bailey  
 United State Naval Academy  
 Annapolis, MD 21402

**Local Arrangements Coordinators**  
 Spring 1992:  
 Prof. Lawrence Thomas and Barbara Palmore  
 University of Virginia  
 Charlottesville, VA 22903  
 (804) 924-4935

**Vice-Chair, Programs**  
 Prof. Mary Kay Abbey  
 Montgomery College  
 Takoma Park, MD 20912  
 (301)650-1435

**Secretary**  
 Prof. Milton Eisner  
 Mount Vernon College  
 2100 Foxhall Road NW  
 Washington, DC 20007-1199  
 (202)625-4635 (NEW NO.)

**Summer Course Director**  
 Prof. Ben Fusaro  
 Salisbury State Univ.  
 Salisbury, MD 21801  
 (301)543-6470  
 E3FAFUSAR@SAE.TOWSON.EDU

**Student Chapters Coordinator**  
 Prof. William Sanders  
 James Madison University  
 Harrisonburg, VA 22807  
 (703)568-6535

**Prof. Sally Garber**  
 Hollins College  
 Roanoke, VA 24020

**Notes from the Editors**  
 The editors wish to express their deep and sincere appreciation to the following members of the Emory and Henry College Charter Student Chapter of the MAA and of the Emory and Henry Mathematics Association for their help in assembling the September issue of the Newsletter:

Bufy Milhorne  
 Malissa Brown  
 Robert Ramsey  
 Frank Woodward  
 Grady Walther  
 Paige Smith  
 Scott Updike

## NEW MEMBERS JOIN NOW NEW MEMBERS JOIN NOW

Send this application to: MAA Membership Department  
 1529 18th Street, N.W.  
 Washington, D.C. 20036-1385

Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

\_\_\_\_\_  
 Zip \_\_\_\_\_

Employer/School \_\_\_\_\_

Position (Name) \_\_\_\_\_

Employer's City/State \_\_\_\_\_

Highest Earned Degree \_\_\_\_\_ Year Degree Earned \_\_\_\_\_

Location Awarding Degree \_\_\_\_\_

Month/Year of Birth \_\_\_\_\_

Have you been a member of the MAA before? ☐ Yes ☐ No

Find the column for your desired combination of MAA journals in the table below. All members receive FOCUS. Select the row appropriate for your initial membership period (1 year or 1.5 years) and your status (student or regular). Circle your dues in the table. Write the amount on the form below.

Journal codes used in the columns of the dues table are: THE AMERICAN MATHEMATICAL MONTHLY = M  
 MATHEMATICS MAGAZINE = G THE COLLEGE MATHEMATICS JOURNAL = J

Student Membership	M	G	J	M + G	M + J	G + J	M + G + J
1 year (Jan-Dec. 1992)	\$34.00	\$28.00	\$30.00	\$40.00	\$41.00	\$36.00	\$47.00
1.5 years (July 1991-Dec. 1992)	\$50.00	\$41.50	\$44.50	\$58.50	\$60.50	\$51.50	\$69.00
Regular Membership							
1 year (Jan-Dec. 1992)	\$68.00	\$55.00	\$58.00	\$82.00	\$85.00	\$72.00	\$99.00
1.5 years (July 1991-Dec. 1992)	\$99.50	\$78.50	\$83.50	\$121.50	\$126.50	\$105.50	\$148.50

These are specially discounted rates for new members provided to help the MAA reach a wider audience. They are not available to those who have been members for two years. Student membership is available to high school and undergraduate students and to students regularly enrolled in graduate study at least half time. Student rates apply to unemployed persons who are seeking employment. Annual dues include subscription prices as follows: Regular Member \$27 M, \$17 J, \$14 G, \$6 Focus. Student member \$11 M, \$7 J, \$5 G, \$3 Focus. These rates are guaranteed for the indicated periods only.

Payment Enclosed \$ \_\_\_\_\_ U.S. Funds Only (see below)

METHOD OF PAYMENT ☐ Check Enclosed ☐ VISA ☐ MasterCard

Card Number \_\_\_\_\_ Expiration Date (month/year) \_\_\_\_\_

MasterCard Number \_\_\_\_\_ (MasterCard only—located above name on card)

SIGNATURE \_\_\_\_\_

REGISTRATION FORM

Registration for Spring Meeting

\_\_\_\_\_ at \$ 5.00 \$ \_\_\_\_\_

Saturday Luncheon \_\_\_\_\_ at \$ 6.25 \_\_\_\_\_  
(Luncheon Reservation Deadline: April 17)

EXP Workshop \_\_\_\_\_ at \$20.00 \_\_\_\_\_

TOTAL \$ \_\_\_\_\_

Name(s): \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_  
Name(s) and School/Company (for Nametag(s)):  
\_\_\_\_\_  
\_\_\_\_\_

Make checks payable to MAA and send to:

Dr. Robert Tardiff  
Mathematical Sciences Department  
Salisbury State University  
Salisbury, Maryland 21801