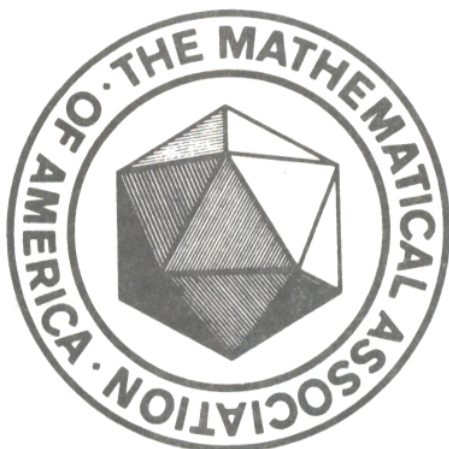


MARYLAND—DISTRICT OF COLUMBIA—
VIRGINIA SECTION OF THE MAA
NEWSLETTER



MARYLAND - DISTRICT OF COLUMBIA VIRGINIA SECTION OF THE MAA NEWSLETTER

VOL. 9, NO. 4 EDITOR: MARY KAY ABBEY MAR. 1988

Notes from the Chair

The National Office of the MAA has instituted a new Membership Incentive Program (MIP). This program will allow the section to earn \$10 for each new member recruited. The only requirement is that the new members be actively recruited by section members and that a designated representative validate the application forms. More information on this program will be presented at the Spring meeting. If you would be willing to serve as the MIP representative for our section, please send in the form at the end of the newsletter. This is a way for you to be involved without a large time commitment. Meanwhile each current member should be thinking of potential members from their department or workplace. Your college representative should have application forms. I also have some.

The National Research Council has asked us to keep them informed of any activities, ongoing or planned, that pertain to calculus reform. This includes workshops, special presentations, departmental or individual projects, etc. If you will send me this information, I will be sure it is included in the newsletter and will forward it to the National Research Council. If you prefer, you may send it directly to Dr. Bernard Madison at the National Research Council. If you do this, please send me a copy.

You do not have to wait for newsletter call for papers. You can submit an abstract to the program chair and he will keep it on file until it is time to compile a program.

Elections will be held at the Spring meeting. The positions to be filled are program chair, secretary and president-elect. At this time I would like to thank the outgoing officers. Bill Sanders has worked really hard for the past two years getting speakers for the meetings. This is one of the most important jobs in the section and Bill has performed his duties in an exemplary fashion. Beverly Phillips is finishing her three year term as secretary. She thought it was only a two year appointment when she accepted the nomination but she has served us faithfully for the full three years. Bob Lewand is completing his year as Past-Chairman. A

very special thank-you goes out to him because he spent much time training me first as program chair and then as chair. Without his guidance, patience and hard work, I would have been totally lost. The section also owes him a special thank-you because he has served us so well as program chair, then chair, and has contributed so much to the growth of the section. Howard Penn receives a thank-you for serving as Chairman of the Nominating Committee.

The Spring meeting promises to be really exciting. All you have to do is read the enclosed program to see all that is happening that day. It will be a full, rewarding day of learning. It is also a good time to see your friends from other schools and just talk to them about what they are doing. I'm looking forward to seeing all of you there.

Elizabeth Teles

Proposal Writing Workshop

This workshop will be the final activity for the Spring meeting. Dr. Florence Fasanelli will lead the workshop to be held from 2:30 to 5:30. It will consist of two main components. Small groups will first analyze both successful and unsuccessful proposals. Following this activity recommendations will be given for writing competitive proposals.

NOMINATIONS

The nominations committee is seeking names for the following offices:

President Elect - This is one year as President elect, two years as President, and one year as Past President.
Vice-President/Program - This a two year appointment.
Secretary - This is a three year appointment.

Please send any nominations to:

Professor Howard Penn
Department of Mathematics
United States Naval Academy
Annapolis, MD 21402

Spring Meeting April 23, 1988

Plan to attend the Spring Meeting of the MD-DC-VA Section of the MAA to be held April 23, 1988 at Mount Saint Mary's College in Emmitsburg, Maryland. Come spend an enjoyable and enlightening Spring weekend at what is arguably the most scenic campus in western Maryland. On-campus attractions include the recently completed \$10.5 million Knott Athletic Recreation Convocation Complex (ARCC), spacious playing fields, tennis courts, the historic Grotto of Lourdes, and the buildings ranging from contemporary back almost to the 1808 founding of "the Mount" - the oldest independent Catholic college in the U. S. The ARCC includes an arena with a seating capacity of over 4000, indoor tennis and racquetball courts, a swimming pool, weight room, and indoor track.

Should you venture off campus, the historic town of Emmitsburg is only three miles to the north, next to the Mason-Dixon Line. Emmitsburg boasts an interesting range of architectural styles and the current rebuilding of Main Street (MD 140) is resulting in a revitalization of which many other small towns are surely envious. Emmitsburg was to be the capital of Maryland but lost out to Annapolis because much of northern Maryland was claimed by Pennsylvania before the Mason-Dixon Line was surveyed. In the Catocin Mountains within 10 miles to the southwest of the Mount are Camp David, Catocin Mountain National Park, and Cunningham Falls State Park. There you can find camping sites, many hiking trails, and wilderness beauty. Twelve miles to the north of the campus is Gettysburg and its surrounding National Military Park.

Mark your calendars now. We hope to see you at the Mount in April. Start your day with coffee, tea and donuts. Iced tea will be available in the afternoon. There will be a buffet luncheon available for those who wish. The cost for the luncheon is \$6.00. It will be a cold cut buffet of beef, ham, turkey, cheeses, salad, dessert and beverages. We urge you to take advantage of the on-campus meal as time is short, off-campus restaurants miles away and Dr. Gillman's talk will be immediately after lunch in the same room.

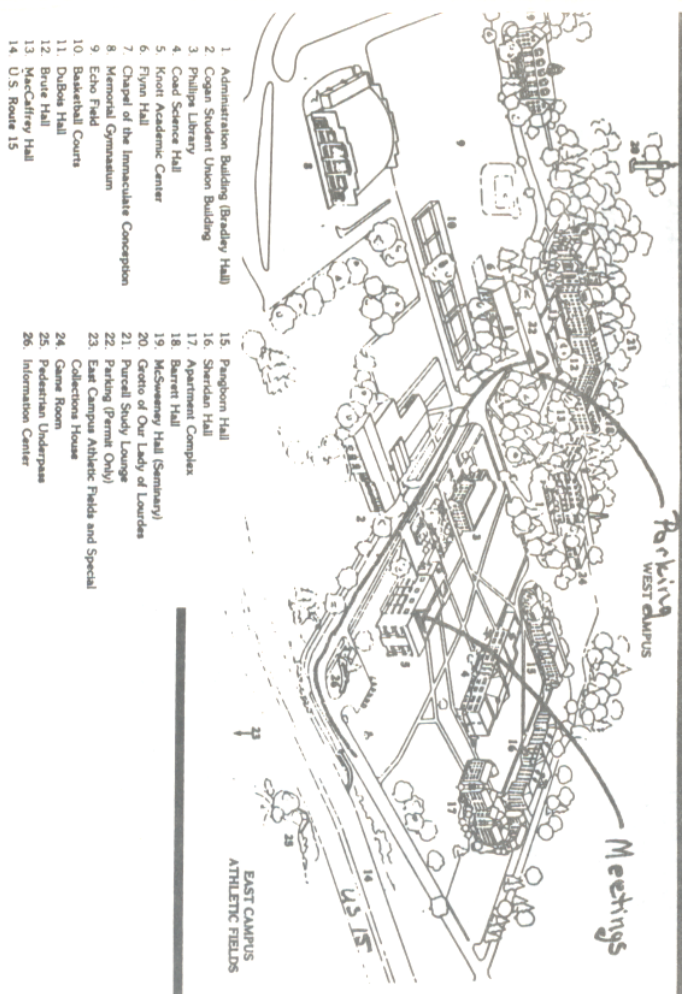
Directions to the Mount

From the Washington, DC, area: Take I-270 to Frederick. Stay to the left for US 15 - do not take I-70. Follow US 15 North toward Gettysburg, PA. The Mount is about 25 miles north of Frederick on US 15.

From the Baltimore area: Take the Northwest Freeway (I-795) from the Beltway to MD 140, then west to US 15 at Emmitsburg. From there follow the signs to the campus which is about 3.5 miles south on US 15.

From the west and south: Take US 40 from I-70 or US 340 to Frederick, then US 15 North as above.

When exiting US 15, follow the signs for "Main Campus" and turn onto Annadale Road. At the first intersection, turn left and travel up the Main Avenue of the campus. After a sharp right turn, the first building you pass on the right is the Knott Academic Center where the conference sessions will be held. Keep going until the road enters a large parking lot at the top of the campus, near the chapel. Please park your cars there and walk down the hill to the Academic Center.



Lodgings - Hotels

Please contact the following directly:

Fairfield, PA

Rates

Ski Liberty Motel
R.D. #1
Fairfield, PA
(717) 642-6288

2 people - \$55 to \$60

8 miles to campus

Frederick, MD

Days Inn Motel*
5646 Buckeystown Pike
Frederick, MD
(301) 694-6600

1 person - \$46+tax
2 people - \$53 +tax
\$5/extra person, \$2/child
26 miles to campus

Red Horse Motor Inn
998 W. Patrick St.
Frederick, MD
(301)662-0281

1 person - \$38+tax
2 people - \$74+tax

23 miles to campus

Gettysburg, PA

Gettysburg Motor Lodge
380 Steinwehr Ave.
Gettysburg, PA
(717) 334-1103

1 person King - \$37+tax
3 people double - \$74+tax

14 miles to campus

Sheraton
Rt. 15 (Business)
Gettysburg, PA
(717) 334-8121 (Ask for Barbara Bask)

1 person - \$68
2 people - \$79

* Mention Mount Saint Mary's and receive 10% off.

Bed and Breakfast - Guest Houses

Bishop's Rocking Horse Inn
40 Hospital Road
Gettysburg, PA 17325
(717) 334-9530

The Brafferton Inn
44-46 York Street
Gettysburg, PA 17325
(717) 337-3423

Cozy Comfort
264 Baltimore Street
Gettysburg, PA 17325
(717) 337-3997

The Doubleday Inn
104 Doubleday Avenue
Gettysburg, PA 17325
(717) 334-9119

Fairfield Inn Guest House (& restaurant)
Main Street
Fairfield, PA 17320
(717) 642-5410

The Gettysburg Inn
89 Steinwehr Avenue
Gettysburg, PA 17325
(717) 334-4930

Hickory Bridge Farm (& restaurant)
98 Hickory Bridge Rd. by reservation)
Ortanna, PA 17353 (off Rt 116, west
of Gettysburg)
(717) 642-5261

New Salem House
Box 24
McKnightstown, PA 17343
(717) 337-3520

The Old Appleford Inn
218 Carlisle Street
Gettysburg, PA 17325
(717) 337-1711

The Old Barn
1 Main Trail
Carroll Valley, PA 17320
(717) 642-5711

Mention Mount Saint Mary's and you may get a discount.

Student Lodgings

Free lodging is available (sharing student apartment complexes) by contacting the department secretary (301- 447-6122, ext 4865).

An Extra Benefit

For those staying overnight: We have free passes available for use of the swimming pool, racquet ball and squash courts, indoor and outdoor tennis and basketball courts - all facilities in our new Athletic Recreation Convocation Center. Contact the department secretary directly to reserve a pass (301-447-6122, ext 4865).

INVITED SPEAKER

Leonard Gillman was born in Cleveland, Ohio and attended both the Julliard Graduate School (New York City), piano fellowship, for five years and Columbia University, earning BS, MA, and PhD degrees in mathematics. He worked in operations research and then taught at Purdue, Rochester and Texas where he served as department chair for 13 years. He was a member of the Institute for Advanced Study for two years, holding a Guggenheim Fellowship and then a National Science Fellowship.

He has written an advanced book, *Rings of Continuous Functions* (with Meyer Jerison) and calculus text (with Robert McDowell). The new edition of the calculus text has January 1990 as its target date. The MAA has published two of his booklets: "You'll Need Math" and "Writing Mathematics Well".

He is a concert pianist and has given two performances at our national meetings. He plans another one for next year.

In addition to many other services he has rendered, he has been the national treasurer (13 years) and is the current President of the MAA.

INVITED ADDRESS

Professor's Gillman's talk is entitled:

An 'Obvious' Induction

Prerequisites: Know what a prime number is.

Know what mathematical induction is.

Eventually, I will talk about prime ideals in a commutative ring. But I will define all terms and give plenty of examples. Moreover, I will invoke these concepts at only a minimal technical level.

Moral of the talk: Never tell anyone -- e.g. a student -- that something is obvious until you have checked the details.

PANEL SPEAKERS

DR. MARTIN JOHNSON is a professor of mathematics education at the University of Maryland, College Park, where he has taught since 1972. During leaves of absence from Maryland he has served as an associate program director in the Teacher Preparation Program at NSF and as a reader in Science Education at the Federal University of Technology in Nigeria. He is the author of three books and numerous articles and chapters in edited books and journals. He has presented over 25 papers at national and regional meetings and has served as a consultant to over 50 groups on issues in mathematics education. Of particular interest for this talk was his chairmanship of the Mathematics Credit Count Committee for the Maryland State Department of Education. This committee was set up to review mathematics certification procedures. He is a former chair of the Maryland Council of Teachers of Mathematics and has been in many other leadership positions.

Dr. Michael Lohr is a professor of mathematics and mathematics education at Virginia Commonwealth University where he teaches content as well as methods courses for secondary mathematics teachers. He is currently serving as the Chair of the Virginia Council of Teachers of Mathematics and has served that organization in many roles. He has been the President of the Richmond Council of Teachers of Mathematics. He is also the director of the Virginia Council of Teachers of Mathematics - Virginia Commonwealth University (VCTM-VCU) high school mathematics contest.

Dr. Florence Fasanelli is currently a program officer for the National Science Foundation in the Science and Engineering Education Directorate in the Teacher Enhancement Division. She received her PhD in mathematics from American University where she worked on the creation of sheaf theory. Her current field of activity, in addition to NSF, is the history of mathematics. She is at present organizing the satellite meeting on the History and Pedagogy of Mathematics which will be held in Florence, Italy in July.



The MD-DC-VA Section of the MAA



Will Sponsor
Two Workshops at
SALISBURY STATE COLLEGE (SSC)
on the Eastern Shore of Maryland

FRACTALS & THE MICROCOMPUTER 6-10 JUNE 1988

W. D. Withers, United States Naval Academy, has a PhD from the Georgia Institute of Technology. He has had extensive experience working with fractals on microcomputers and has written several articles on fractals & dynamic systems. This workshop will use elementary methods to connect fractals with traditional classroom topics.

- MON** Basic fractals. Using iterated function systems to create fractals.
- TUE** Refinements of iterated function systems. Fractal measures.
- WED** Various concepts of fractal dimension.
- THR** Fractal interpolation. Taking derivatives of fractals.
- FRI** Julia sets and the Mandelbrot set. Fractals in the classroom.

PROGRAM DESIGN & DATA ABSTRACTION 13-17 JUNE 1988

W. J. Collins, Radford University, VA, has a PhD from Purdue University. He has been chairman of the Radford and Salisbury State College Computer Science departments. Dr. Collins conducted two highly successful MAA-SSC workshops in 1980 and 1984. He has published two books on programming. This workshop assumes a knowledge of introductory Pascal.

- MON** Algorithm Design: Trees, structure charts, algorithm validation.
- TUE** Data Types & Data Abstraction: Definitions, contiguous lists, linked lists.
- WED** A Case Study: Analysis, algorithm & data type design, validation.
- THR** The "Stack" Data Type: Definition, postfix notation. Recursion.
- FRI** Data Abstraction and Discrete Math. Getting it in the curriculum.

Intended for college mathematics teachers. The total cost is \$230 per workshop *including meals and room* (double occupancy). There is a deposit of \$100 per workshop, refundable until May 13, 1988. A postcard is enclosed for your convenience.

WORKSHOP DIRECTOR: Dr. B. A. Fusaro (301) 543-6471
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Salisbury State College
Salisbury, MD, 21801

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or

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(301) 543-6471

SPRING MEETING Saturday, April 23, 1988 Mount Saint Mary's College

8:00 - 11:00 REGISTRATION, Knott Academic Center

8:30 - 9:00 "Welcoming Remarks"

Room 321/323 Dr. John August, Chairman, Department of Mathematics,
Academic Center Mount Saint Mary's College

9:00 - 10:00 Panel Discussion - "Teacher Preparation: Teachers for
the 21st Century"

Room 321/323 Michael Lohr, Virginia Commonwealth University
Martin Johnson, University of Maryland
Florence Fasanelli, National Science Foundation

SESSION BEGINNING AT 10:00, Knott Academic Center

Room 218 "Graphkit: A Computing Graphing Aid"

Edward T. White, Frostburg State University

Room 222 "Strange Attractors for Lotha Volterra Models"

Jack Clark, Western Maryland College

Room 224 "The Convergence Rates of the Conditional Risk
Estimates in the Problem of the Nearest Prediction"

Ling Chen, The American University

Room 225 "Using Computer Graphics and Numeric Software in the
Teaching of Calculus"

Howard Penn, United States Naval Academy

Room 230 "A True One-Angle Form of SAS"

Clifford J. Maloney, National Institutes of Health
(Retired)

Room 309 "An Error Analysis of a Centrifugal Separation
Problem"

Ed Donley, Indiana University of Pennsylvania

SESSION BEGINNING AT 10:30, Knott Academic Center

Room 218

"A Semi-Intelligent User Interface"
Nimer Favez Baya'a, The American University

Room 222

"Group Codes: A Unifying Application in Discrete Mathematics"
Helmer Junghans, Montgomery College

Room 224

"Critical Thinking and CAI"
Mansour A. Zarin, Mary Washington College

Room 225

"Teaching Calculus with an HP 28"
Craig Bailey, United States Naval Academy

Room 230

"The Mathematical Creativity of Ancient Civilizations"
Robert Blair, Brenda Call, Joe Hartung, Roy Siskind and
Eric Tomas - Students, Gallaudet University
T. Hoy Booker - Sponsor

Room 309

"Another Look at the Four Color Problem"
Alice T. Williams, James Madison University

11:00 -- MAA BUSINESS MEETING -- Room 321/323, Academic Center

LUNCH BREAK -- NOON, The Cogan Student Union Building

1:00 --INVITED ADDRESS -- The Cogan Student Union Building

"An Obvious Induction"
Leonard Gillman, President of MAA, University
of Texas

SESSION BEGINNING AT 2:00, Knott Academic Center

Room 218

"The Effect of Microcomputer-Assisted Instruction
of Mathematics Achievement and Attitudes Toward
Mathematics and Microcomputers of Preservice
Elementary Teachers"
Richard M. Krach, Towson State University

Room 224

"Ecumenical-Algebraic Chaology for the Classroom"
John Hays, Naval Research Laboratory

Room 225

"A Solution of a Problem Posed in the American
Mathematical Monthly"
James P. Coughlin, Towson State University

Room 230

"Folding Polynomials"
Wm. Douglas Withers, United States Naval Academy

Room 309

"Playing with Blocks: Applications of the Integral as a
Modeling Strategy"
Richard Leo Eisenman, RAND and University of
Maryland

MINICOURSE - 2:30 to 5:30 - WRITING GRANT PROPOSALS

The workshop will be conducted by Dr. Florence Fasanelli from
the National Science Foundation. Persons who wish to participate
should submit \$10 to Professor David Schedler to register. Use
the form at the end of the newsletter.

MATHEMATICS EXAMINATION COMMITTEE

The exam was given Tuesday, March 1, 1988. This is followed by the American Invitational Mathematics Examination on Tuesday, March 22, 1988 and the USA Mathematics Olympiad on Tuesday, April 26, 1988.

FALL MEETING

The Fall meeting of the MD-VA-DC Section of the MAA will be held at the American University in Washington, DC, on November 11 and 12. Put this date on your calendar and plan to attend.

MINICOURSE AT OXFORD, ENGLAND

This summer, the course "On the Shoulders of Giants: A History of British Mathematics" will again be offered at Oxford University. Lectures, aimed at a general audience, will cover the lives and contributions of some giants of British mathematics, taking a broad view of the scientific and cultural contests of their achievements. A few lectures will draw on a background in the calculus. To supplement the lectures, visits are planned to some places where these men and women lived and worked. Three undergraduate credits are available for completing the three week course, August 1-20. Professionals may find their expenses to be tax deductible.

This course is part of the 1988 summer program at Oxford University sponsored by International University Partnerships of the Center for International Studies, Indiana University of Pennsylvania. Its program is designed to provide an opportunity to study in England's oldest university, founded in 1167. Classes, as well as room and board, will be scheduled at Ruskin, one of Oxford's colleges. Room, board, and one-day trips in conjunction with the course are all covered by the program fee of \$750. Tuition (\$228 per 3-credit undergraduate and \$306 per 3-credit graduate course), airfare, and weekend meals are not included. For further information, write to the instructor:

Professor Paul Wolfson
Department of Mathematical Sciences
West Chester University
West Chester, PA, 19383

CAMPUS NEWS ITEMS

(Tear out and return to Mary Kay Abbey, Montgomery College, Takoma Park, MD, 20912. Deadline for the next newsletter is August 1, 1988.)

Name of School

New department members (may want to include rank, specialty, where graduated, etc.)

Faculty members on leave (may want to include location)

Visiting faculty (include home institution)

Promotions, tenure, and emeritus status

New programs/New courses

Other news

MEMBERSHIP INCENTIVE PROGRAM REPRESENTATIVE

I would be willing to serve as the designated representative for the Membership Incentive Program.

I may be willing to serve as the designated representative for the Membership Incentive Program but I would like to talk to you first.

Name _____

Address _____

Send to: Elizabeth Teles

Department of Mathematics
Montgomery College
Takoma Park, MD, 20912

REGISTRATION FORM

Registration for Spring Meeting @ \$ 2.00 \$ _____

Luncheon Reservation @ \$ 6.00 \$ _____

Minicourse Registration @ \$10.00 \$ _____

TOTAL \$ _____

Name _____

Address _____

Send reservations to:

Professor David A. Schedler
Department of Mathematical Sciences
P. O. Box 2014
Virginia Commonwealth University
Richmond, VA 23284