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

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VOL. 9, NO. 3 EDITOR: MARY KAY ABBEY FEB. 1988

Notes from the Chair

The spring meeting on April 23 at Mount Saint Mary's College in Emmitsburg, Maryland, promises to be fun and enlightening. John August and his colleagues have been working hard making local arrangements; so plan to come up and spend the weekend. Catoctin Mountain Park and Gettysburg are both quite close by and have a lot to offer in the Spring. John has also made arrangements for dorm space for students. This is the ideal time for you to encourage your students or your mathematically inclined son or daughter or friend to give a presentation since their lodging is no problem. If they don't feel at this time that they can give a presentation, you can still bring a few students along to the meeting. Your encouragement just might make a difference to their future careers.

We have a full program planned for this meeting. Leonard Gilmann, the current president of the MAA, is the invited speaker. He will speak on inductive thinking. In addition, a panel discussion will be held on mathematics teachers' preparation. This topic is very "hot" right now. All of us as mathematicians and/or parents need to pay attention because these future teachers will surely affect us all. Commissions are being set up and reports are coming out all over the country on this topic. Two of the most important are the report of the Holmes Group (Tomorrow's Teachers) and the report of the Carnegie Forum on Education and Economy (A Nation Prepared: Teachers for the 21st Century). The panel will consist of three members: Martin Johnson of the University of Maryland will discuss their new program as well as describe what is happening at the state level, Michael Lohr of Virginia Commonwealth University will tell us what is happening in Virginia, and a speaker from Teacher Preparation and Enhancement at NSF will describe the model programs being funded by NSF.

In addition to the above parts of the program, NSF will offer a minicourse on proposal writing. If any of you are thinking about writing a proposal for any type of funding or just want to know more about the process for future use, this workshop should prove invaluable. We have been told that the reason so few mathematics projects are funded is that so few are submitted. This is your chance to learn what to do. Then you can do it! The cost is only $10. Register for it by filling in the form at the end of the newsletter.

To really complete the program, I hope that many of you are planning to present a paper. Let all of us in the section know what you are doing. It's exciting to you; so share it with us! Don't forget to encourage your students, too.

The Atlanta meeting was really exciting and fun. Our section was well represented. When I came home, I counted over 40 members of our section that I had seen, and I know that many more were there. Over 5000 mathematicians attended this meeting - some of whom stayed longer than they had originally intended since there was quite a snowstorm while we were there. Over 2000 people attended the banquet on Thursday night - most of whom purchased the HP28S calculator which was offered to those attending the banquet at a very special price. We received a 10 minute introduction to its use by Thomas Tucker who admitted that it had taken him over 10 hours to become comfortable with its use. Very few of us left feeling that we were experts. After spending quite a few hours learning to use this calculator, I have become quite impressed with its power and versatility. Calculators such as this that can graph and perform complex analytic operations as well as standard arithmetic operations certainly raise complex philosophical questions about what mathematics we will teach as well as how we will teach it in the years to come.

Finally I can recommend that you read Calculus for a New Century, the report of the calculus colloquium held in Washington in October, 1987. It will be well worth your time. It can be purchased directly from the MAA for about $15. You may not agree with what it says, but you probably will want to at least know what it says.

A special thanks to Northern Virginia Community College in Alexandria for hosting the Fall meeting as well as to all of you who spoke at the meeting. It was a very successful meeting with more than 160 people attending the minicourse, the banquet, or the Saturday talks or all three.

With all that is being offered at this Spring meeting, how can you not come? If you do not see what you would like at the meetings, please contact one of the officers. They are open to suggestions and would like your help in setting up programs.

See you in April.

Elizabeth Teles

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 Catoctin Mountains within 10 miles to the southwest of the Mount are Camp David, Catoctin 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. There will be a buffet luncheon available for those who wish. It will be extremely difficult to go off campus to eat and still return in time to hear Professor Gilmann so all are encouraged to reserve a spot for lunch. The cut-off date for this as well as the particulars concerning hotel arrangements and the menu will be in the next newsletter.

INVITED SPEAKER

Leonard Gilmann was born in Cleveland, Ohio, in 1917. He earned three degrees in mathematics from Columbia University - B.S. 1941, M.A. 1945, and Ph.D. 1953. He has spent his entire adult life in teaching and researching mathematics. At some time or the other during the past few decades, he has been affilated with an impressive list of institutions - MIT, Tufts, Purdue, University of Rochester, and the University of Texas. Has has been Professor of Mathematics at the University of Texas since 1969.

He was named a Guggenheim Memorial Fellow, 1958-59. He did post doctoral study at the Institute of Advanced Study, 1958-60. He has been a Senior Research Fellow with the National Science Foundation.

He has served on several standing committees of the MAA, AMS, and AAAS including being Associate Secretary of The AMS, 1969-71and Treasurer of the MAA. He is the current President of the MAA after having served as President-Elect under Lynn Steen.

His research interests include theory of sets, topology, and rings of continuous functions. He collaborated with Jerison Meyer and was the senior author of "Rings of Continuous Functions", a key entry in the Van Nostrand University series in higher mathematics.

INVITED ADDRESS

Professor's Gilmann's talk is entitled:

An '*Obvious*' Induction

He insists that any attempt to supply an abstract for this presentation would be superfluous. *Obviously*, '*obvious*' has an important and *obvious* role in mathematics. Probably the most salient characteristic of inductive thinking is *obvious*. Probably the most important step in an inductive proof is establishing the *obvious* inductive step. *Obviously* one will need to hear Professor Gilmann in order to understand what his presentation is about.

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.

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

The center sheet of this newsletter can be removed and posted for your fellow colleagues to view.

Also, for your information, the following are the descriptions for two short courses offered by one of our neighboring sections. If ours are not to your liking, please consider theirs.

Eastern Pennsylvania and Delaware Section
Mathematical Association of America
Workshops, Messiah College

APPLIED MATH VIA CLASSROOM EXPERIMENTS

Conducted by Herbert R. Bailey
Rose-Hulman Institute of Technology

This workshop will present appropriate experiments and analysis of the resulting models for several physical science problems. Linear motion, projectile motion, rotational motion and collisions will be studied. Other topics will include fluid flow, heat flow and Calculus of Variations-type problems.

June 13-17, 1988

HISTORY of the CALCULUS

Conducted by V. Frederick Rickey
Bowling Green State University

This short course will present a conceptual outline of the history of the calculus, beginning with the topics from algebra, geometry and trigonometry which played a role in the development of the calculus. Ample time will be devoted to illustrating how the history of mathematics can be used in the classroom to motivate and inform students.

June 20-24, 1988

For further information, contact:
Professor Marvin Brubaker
Department of Mathematical Sciences
Messiah College, Grantham, PA 17027
Phone (717) 766-2511

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.

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

Support sought for mathematics stamp

A broad coalition of groups led by Professor Eileen Poiani of Saint Peter's College in Jersey City, NJ, is seeking to have a U.S. postage stamp honoring mathematics issued within the next three years. Such action is appropriate now with much nationwide interest in mathematics education and with anniversary dates occurring during this triennium for many mathematics organizations. For example, AMATYC celebrates its 15th anniversary in 1989, SIAM its 35th anniversary in 1987, MAA its 75th anniversary in 1990, and AMS its 100th anniversary in 1988.

There is precedent for issuing such a stamp. Professions which have been recognized in the past include nursing (1961), photography (1978), architecture (1979 and 1984), professional management (1981) and certified public accountants (1987). If you would like to support this project, write to Belmont Faries, Chairman, Citizens' Stamp Advisory Committee, Stamps Division, U.S. Postal Service, Washington, DC 20260.

CALL FOR PAPERS
Please reply by February 26, 1988

Name:_____

Institution:_____

Address:_____

_____

_____

Phone: Office _____ Home _____

Title of Paper:_____

Brief Abstract:_____

Special Needs: (Overhead projector, slide projector, computer,

etc)_____

Please mail this form to:

Professor Bill Sanders
James Madison University
Harrisonburg, VA 22807

BITNET:FAC SAND@ JMUVAX1

MATHEMATICS EXAMINATION COMMITTEE

The registration for the examination is going on now. The exam will be 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.

CAMPUS NEWS

Goucher College has established an Expert Systems Development Laboratory on its campus. With some assistance from the students, four expert systems have been developed by faculty within the past year:

1. The Goucher College Biographical Reference Advisor - a system which directs students to resource materials in the college library appropriate for investigating biographical information.
2. The Constitutional Interpreter - a system to help students understand events and factors leading up to the drafting and signing of the U. S. Constitution.
3. The Financial Advisor - an instructional system which uses historic data to evaluate loan applications.
4. Z-EXPERT - a system developed for the Zenith Data Systems Corporation which advises potential customers on a configuration of Zenith computer equipment appropriate for their needs.

The first three projects were funded in part by a grant from the Decker Center for Information Technology which was established on campus in 1986.

Emory and Henry is looking for two new faculty members for next year. One will be a tenure track position to replace retiring faculty member, Dr. Rex Haren. The other position will be just for one year since Mr. Robert L. Pour will be on leave.

CAMPUS NEWS ITEMS

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

OFFICERS

Chairman	Elizabeth Teles Montgomery College Takoma Park, MD, 20912 (301) 587-4090/ext. 305
Past Chairman	Robert Lewand Goucher College Towson, MD, 21204
Vice-Chairman Programs	Bill Sanders James Madison University Harrisonburg, VA, 22807 (703) 568-6535 (703) 568-6184 (Secretary) BITNET:FAC SAND@ JMUVAX1
Vice-Chairman Membership	Mary Kay Abbey Montgomery College Takoma Park, MD, 20912 (301) 587-4090/ext. 283
Secretary	Beverly Phillips Thomas Nelson Community College P. O. Box 9407 Hampton, VA, 23670 (804) 825-2920
Treasurer	David A. Schedler P. O. Box 2014 Virginia Commonwealth University Richmond, VA, 23284 (804) 257-1301
Governor & Summer Course Coordinator	Ben Fusaro Mathematics Department U. S. Military Academy West Point, NY, 10996 (914) 938-5285
or	Department of Mathematical Sciences Salisbury State College Salisbury, MD, 21801 (301) 543-6471

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