

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



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VOL. 10, NO. 3 EDITOR: MARY KAY ABBEY January 1988

Notes from the Chair

An exciting Spring meeting at Virginia Beach is now in the final planning stages. This will be a joint meeting of the Md-Va-DC Section of the MAA, VMATYC (Virginia Mathematics Association of Two-Year Colleges) and probably MMATYC (Maryland section of the same organization). Two minicourses, a Friday evening banquet with a speaker, and a main speaker for Saturday have already been arranged. An outline of these activities can be found in another section of the newsletter, and comprehensive information will follow in March. For now, be sure that you have Friday, April 21, and Saturday, April, 22, on your calendars. An extra bonus for us this time is the beautiful Virginia Beach area. It should be wonderful that time of year; so plan to spend the weekend. Just be sure that you don't skip the Friday and Saturday sessions to go the beach -- make Sunday your day for the sand and the sun.

The Winter meeting in Phoenix was great. The weather was beautiful (no snow this year) and the sessions exciting. Our section had seven members present at the Section Officers' Meeting -- a record!! Paper sessions on calculus reform and writing in mathematics seemed the best attended. Fred Rickey's minicourse on "Using History in the Teaching of Calculus" that we were lucky enough to have at American University in November was the first to "sell out".

Our section is well represented on national committees of the MAA including committees on Mathematics Outside Academia, Department Heads, Opportunities for Underrepresented Groups, Minorities in Mathematics, Archives of American Mathematics, the Major in the Mathematical Sciences, Science Policy, Spectrum, the Undergraduate Major, Membership, Remedial Mathematics, Professional Opportunities Booklet, Teaching of Undergraduate Mathematics, Visiting Lecturers, Publications, Participation of Women, Calculus Reform and the First Two Years, Sections, Meetings, Faculty Development, Two-Years Colleges, Invitational Math Exam, American Mathematics Competitions, and

Mathematical Education of Teachers. (I bet most of you didn't even know there were so many committees, and the above list is by no means all of them.) In addition Lawrence Cox, Peter Renz, Al Wilcox, and Richard Witter are ex officio members of many additional committees. Several members of our section are also on the Board of Editors for Mathematics Magazine and The College Mathematics Journal. Since the list itself is three type written pages of small print, I will not attempt to reproduce that here. If any of you would like a copy of the list or just want to know about any particular committee, please give me a call or write a note requesting that information and I will forward it to you. What I wanted you to have is a sense of how active our section is at the national level as well as the sectional level.

The earlier you preregister for the meeting, the banquet, the Saturday lunch, and the minicourses, the easier it is for those persons in charge of the arrangements. Why not go ahead and preregister today??? See you in Virginia Beach.

Elizabeth Teles

MAA Book Sale Program

At every Spring meeting we sell books published by the MAA at discounted prices. The MAA now tell us that they will return to the section a check for 10% of the proceeds from these sales. If you are planning to purchase a book published by the MAA and can postpone that purchase until the Spring meeting, it will be to everyone's advantage for you to do so. You will get a discount, and the section will earn some money.

Look for the sale at the meeting.

SPRING Meeting April 21 - 22, 1989

The meeting for VMATYC will begin with a general session at 12:50. Following this are three sessions at 1:30, 2:45, and 4:00. Each of these three sessions will offer three choices. The dinner will be at 5:45.

BANQUET AND LUNCHEON DETAILS

VMATYC has planned a dinner for Friday evening. The cost is \$7.50. The dinner is scheduled for 5:45. Dr. Karl Smith, the national president of AMATYC, will speak on "Mathematical Adventures." If you recognize his name, it's because he has written many texts, some of which you have used at some point in your career.

For the MAA Saturday meeting, a luncheon has been planned. The cost is \$5.00. This will be a buffet consisting of salad, cole slaw, potato salad, cold cuts, bread, dessert, coffee, and tea.

INVITED SPEAKER

Professor Solomon Garfunkel, the Executive Director of COMAP and the Project Director of the Annenberg/CPB Project, will be the afternoon speaker. His energies have been focused on the development of the new math text For All Practical Purposes and the accompanying half hour television programs.

CALL FOR PAPERS

The theme for our Spring meeting is to be problem-solving and applications in mathematics. There will be an emphasis on increased student involvement in the MAA, both as presenters and as members of institutional student chapters. Each student making a presentation at the session will be given a year's membership in the MAA. Please encourage your students to use this opportunity to attend the meeting as well as to consider making a presentation. In addition to Professor Garfunkel's invited address, Dr. Florence Fasanelli, currently a program director in the Teacher Enhancement Division of NSF, has accepted an invitation to present a session giving some historical background on women in mathematics.

Contributed papers by MAA members and/or their students will be scheduled Saturday morning before the Business Meeting and again Saturday afternoon after the luncheon address. In particular, topics involving computer applications and other applications of mathematics are encouraged. Papers should be approximately twenty minutes in length, to allow for a question and answer period after the talk. If necessary, a speaker may be allotted two consecutive periods if the topic requires this amount of time.

Abstracts of contributed papers (giving sufficient information to assist with planning a varied schedule), as well as specifications for any computer needs and/or visual aids equipment, should be sent to:

S. Helen Christensen, RSM
Department of Mathematical Sciences
Loyola College
4501 N. Charles Street
Baltimore, MD 21210-2699

by February 28, 1989.

MINICOURSES

On both Friday and Saturday afternoons, Howard Penn and James Buchanan of the United States Naval Academy will present minicourses. Buchanan's course will deal with software for the teaching of calculus. The Friday's course will be 3 to 5. Saturday's course will cover time for this course will be 3 to 5. Saturday's course will cover software for differential equations. The time for this course will be the first two hours after the paper sessions are over. It will start no later than 3 and will last for two hours. All the software emphasizes the use of graphing for the teaching of concepts. Attendees will receive copies of most of the demonstrated software. See the registration form at the end of this newsletter to sign up. The courses have a maximum of 40 each.

Lodgings - Hotels

As you check out the following list, be sure to pay attention to the reservation dates.

The closest motel is three miles away. There is very little public transportation in Virginia Beach. Richard Watkins has arranged to use the college van for shuttling members to and from the meeting. If you would like to use this service, contact Richard (804-427-7265) or the math office (804-427-7260). Please have ready your name, motel, and phone number.

Ambassador Place (beach front suites) \$55 for Friday night
2315 Atlantic Avenue \$100 for both Friday and
Virginia Beach, VA Saturday
804-428-1111 \$6/person if more than 2
8 miles from campus children under 12 are free
Reserve by March 21, 1989

Days Inn Oceanfront \$50/ night
Atlantic Avenue & 32nd St.
Virginia Beach, VA
single to quad rooms
804-428-7233

Reserve by March 21, 1989

Comfort Inn \$34
804 Lynnhaven Parkway single rate
Virginia Beach, VA call for other rates
804-427-5500

3 miles from campus
Reserve by April 7, 1989

LaQuinta \$35
192 Newtown Road single rate
Virginia Beach, VA call for other rates
804-497-6620

Provides airport pick up service
Reserve by April 21, 1989

The Ohio State University Conference on Technology in Collegiate Mathematics

Over 300 hundred mathematicians from across the United States attended the three day Conference on Technology in Collegiate Mathematics held October 27-29, 1988 at The Ohio State University in Columbus, Ohio. Registration had to be closed early when capacity was reached three weeks prior to the opening of the conference. Among the many conference highlights was a "standing room only" lecture/demonstration of *Mathematica*™ by its developer, Stephen Wolfram of *Wolfram Research, Inc.* Other well received lectures were given by *Franklin Demana, The Ohio State University, "Using Computer Graphing to Enhance the Teaching and Learning of Pre-calculus Mathematics"*

Stan Devitt, University of Saskatchewan, "Maple® - An Electronic Blackboard for Mathematics"

John Harvey, University of Wisconsin-Madison and Alan Osborne, The Ohio State University, "Changes in Pedagogy and Testing When Using Technology in Collegiate Mathematics"

Zaven Karian, Denison University, "Getting Started with Symbolic Computation"

Anthony Ralston, SUNY at Buffalo, "Technology in Mathematics: What to Teach and How to Teach It"

Thomas Tucker, Colgate University, "The Twilight of Paper and Pencil: Collegiate Mathematics Between the Centuries"

Jerry Uhl, University of Illinois-Urbana, "Calculus and Mathematica™: An Electronic Calculus Textbook"

Paul Zorn, St. Olaf College, "Symbolic, Numerical, and Graphical Computing in Calculus"

The closing lecture given by *Dr. John Kenelly, Program Director for calculus reform initiatives at the National Science Foundation*, provided conference participants with a variety of good suggestions about funding sources.

There were 55 contributed papers presented at the conference as well as several "hands on" workshops. The theme of the workshops was "Using technology to enhance the teaching and learning of collegiate mathematics." Workshops included computer based graphing (*Bert Waits*), calculator based graphing (*Thomas Tucker* and *Gregory Foley*), Maple® (*Stan Devitt* and *Jeanette Palmieri*), MATLAB (*Tom Ralley*), and Mathematica™ (*Jerry Uhl*).

The Conference Proceedings will be published by Addison-Wesley Publishing Company and will be available to the mathematics community by Spring, 1989. The conference received generous financial support from Addison-Wesley Publishing Company, Apple Computer Inc., Texas Instruments Inc., and the Charles Merrill Publishing Company.

The second annual Ohio State University Conference on Technology in Collegiate Mathematics will be held at Ohio State in Columbus, Ohio on November 2-4, 1989. The registration fee for the 1989 conference is expected to be \$50. For further information, contact:

Professor Bert Waits
1989 Technology Conference
Department of Mathematics
The Ohio State University
231 W. 18th. Ave.
Columbus, Ohio 43210



... the household robot laughed to see such sport and the microprocessor run away with the cellular phone."

CENTERFOLD

Please remove the centerfold and post it on your office door or the department bulletin board.



The MD-DC-VA Section of the MAA

Will Sponsor
Two Workshops at
SALISBURY STATE UNIVERSITY
on the Eastern Shore of Maryland



CHAOS & THE MICROCOMPUTER 5-9 JUNE 1989

C. Grebogi, Lab for Plasma Research, University of Maryland, has a PhD in Physics from Maryland. He has taught courses in chaos, as well as being an invited speaker at over a dozen national or international conferences. Grebogi is a master in the clarification and presentation of the ideas in this emerging field.

- MON** Basic Concepts: Chaotic systems, deterministic processes; maps; attractors.
- TUE** Strange Attractors: Fractal attractors; sensitivity to initial conditions.
- WED** Bifurcations to Chaos: Bifurcation diagram; period doubling; intermittency.
- THR** Fractal Basin Boundaries: Basins of attraction; sensitivity of final states.
- FRI** Chaos & the Curriculum: Crises; transient chaos. Getting it in the curriculum.

DECISION-MAKING & THE MICROCOMPUTER 12-16 JUNE 1989

T. L. Saaty, School of Business, University of Pittsburgh, has a PhD in mathematics from Yale. He has done seminal work in applied mathematics, especially in decision theory. Saaty is the creator of the Analytic Hierarchy Process, a mathematical model to deal with evaluation and judgment. He will be assisted by Professor Ernest Forman, George Washington University, whose Expert Choice software was designed to implement AHP.

- MON** Introduction to AHP: Hierarchies and priorities.
- TUE** Examples: Illumination intensity; wealth and influence; energy allocation.
- WED** Foundations & Extensions: Priority as an eigenvector; revising judgments; consensus.
- THR** Applications: Prediction; dynamic priorities; I/O interdependence.
- FRI** Applications: Planning; conflict resolution. Getting it in the curriculum.

Intended for college mathematics teachers. The total cost is \$235 per workshop *including room and board* (double occupancy). There is a deposit of \$100 per workshop, refundable until May 12, 1989. Please use form on the next page to preregister.

WORKSHOP DIRECTOR: Dr. B. A. Fusaro (301) 543-6471, 6470
Department of Mathematical Sciences
Salisbury State University
Salisbury, MD 21801

MAA-SSU

1989 Workshops

Name

Address

() CHAOS & THE MICROCOMPUTER Grebogi 5-9 June
() DECISION-MAKING Saaty 12-17 June

Questions or Comments

Fold on the dotted lines, enclose your deposit, and mail soon
since the courses fill early.



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Salisbury State College
Salisbury, Maryland 21801



Please use the four on the other side of this page
to enrol your colleagues. Nationwide, only one
person has taken advantage of this.

?

JOIN MAA TODAY!

Send this application to: **Robb Koehler**
498 Davenport Lane
Gahanna, OH 43230

Name _____

Mailing Address _____

Zip _____

Employer/School _____

Position (Rank) _____

Employer's City/State _____

Highest Earned Degree _____ Year Degree Earned _____

Institution Awarding Degree _____

Month/Year of Birth _____

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

Your membership may begin on July 1 or January 1. You may elect to receive any of the listed combinations of the three MAA journals. All members receive *Focus*, the MAA newsletter.

Please **circle** the appropriate box corresponding to your initial membership period and the selection of journals you wish to receive. (Rates are guaranteed for the indicated periods only.) Subscription prices are included with dues (see **).

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. 1989)	\$29.00	\$23.00	\$25.00	\$36.00	\$38.00	\$31.00	\$ 44.00
1 1/2 year (July 1988-Dec. 1989)	\$43.50	\$34.50	\$37.50	\$54.00	\$57.00	\$46.50	\$ 66.00

Regular Membership

1 year (Jan.-Dec. 1989)	\$48.00	\$35.00	\$39.00	\$61.00	\$65.00	\$52.00	\$ 78.00
1 1/2 year (July 1988-Dec. 1989)	\$72.00	\$52.50	\$58.50	\$91.50	\$97.50	\$78.00	\$117.00

* Student membership available to high school and undergraduate students and to students regularly enrolled in graduate study at least half time. Enclose letter from school or department official confirming status. Student rates apply to unemployed persons who are seeking employment.

** Annual dues include subscription prices as follows: Regular Member \$26 (M), \$17 (J), \$13 (G), \$31 (Focus). Student Member \$13 (M), \$9 (J), \$7 (G), \$1 (Focus).

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

METHOD OF PAYMENT

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Expiration Date _____
(month/year)

(MasterCard only—located above name on card)

SIGNATURE _____

Pennsylvania Section Meeting

You may be interested in the meetings of sections close to ours. For your information, this is the program for the Pennsylvania section meeting to be held April 8, 1989. The meeting will be held at the University of Pennsylvania in the David Rittenhouse Laboratory at 33rd and Walnut Street.

An Introduction to Computer Algebra Systems and Their Use in Undergraduate Mathematics Instruction Program

8:30-9:25	Registration
9:25-9:30	Welcome and Overview of Program Gerald J. Porter, University of Pennsylvania
9:30-10:30	Computer Algebra using the HP 28S John Kenelly, Clemson University
10:30-11:00	Coffee Break
11:00-12:00	Computer Algebra using Mathematica Paul Zorn, St. Olaf University
12:00-12:15	Business Meeting
12:30-1:45	Lunch
2:00-3:00	Pedagogical Issues in Using Computer Algebra Systems Warren Page, NY Technical College, CUNY
3:00-4:00	Panel Discussion: The Use of CAS's in Undergraduate Instruction Leinbach, Kenelly, Porter, Page, and Zorn
4:00-5:00	Wine and Cheese

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MAA REGISTRATION FORM

Registration for Spring Meeting @ \$ 2.00 \$ _____

Luncheon Reservation: @ \$ 5.00 \$ _____

Minicourse Registration:

Friday Minicourse @ \$15.00 \$ _____

Saturday Minicourse @ \$15.00 \$ _____

Both courses @ \$25.00 \$ _____

TOTAL \$ _____

Name _____

Address _____

Make checks payable to MAA and send by April 7, 1989 to:

Dr. David A. Schedler
Department of Mathematical Sciences
PO Box 2014
Virginia Commonwealth University
Richmond, VA 23284

VMATYC REGISTRATION FORM

Registration for Spring Meeting @ \$ 5.00 \$ _____

Dinner Registration @ \$ 7.50 \$ _____

TOTAL \$ _____

Name _____

Address _____

Make checks payable to VMATYC and send by April 1, 1989 to:

Professor John Fogelgren
Piedmont Virginia Community College
Charlottesville, VA 22902