

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



Vol. 10 No. 4 Mar. 89

MARYLAND - DISTRICT OF COLUMBIA VIRGINIA SECTION OF THE MAA NEWSLETTER

VOL. 10, NO. 4 EDITOR: MARY KAY ABBEY March 1989

Notes from the Chair

As I write my last column for you, I would like to thank all of you for your support during the last two years. Serving as your Chairman has been quite a rewarding experience for me. It has been hard work, but I have made so many wonderful friends that I have gotten much more from it than I have put into it. I now wish John Milcetic good luck in his term which begins immediately after the April meeting. I would especially like to thank two people who have made my job so much easier this year -- Helen Christensen, the program chairman, for her excellent work in arranging two meetings, and Mary Kay Abbey, the newsletter editor, who has served both years of my term and has worked diligently seeing that eight newsletters have been sent to you over that period.

The AMATYC-MAA Task Force to "Reduce the Need of Remedial Mathematics" has just published a three page report which the MAA Board of Governors has endorsed. Questions such as "How many years of remedial mathematics does it take to replace many years of study in topics taught with practice and repetition followed by reinforcement and application?" and "Can even the best short-term intense remedial experience substitute for systematic learning over a period of years?" led to the formation of the task force. While recognizing that a nationally accepted definition of remediation does not exist and that a solution to the problem cannot be legislated, they nevertheless made two recommendations in each of four areas: articulation, curriculum, instruction, and advisement. If any of you have not seen this report and would like to, I will be glad to send you a copy if requested.

Other reports of interest include the National Research Council's Everybody Counts: A Report to the Nation on the Future of Mathematics Education and the NCTM's Standards for School Mathematics. Also later this year the Mathematical Sciences Board will release "Framework for School Mathematics". I urge all of you to find a copy of these reports and read them. Later this year in my role as Chairman of the MAA Committee on Two-Year Colleges, I am to attend a special meeting of MAA leaders to discuss how the MAA will support the National Research Council in this

effort. John Smith, also of our section, in his role as Chairman of the Committee on Meetings will be at the same meeting. If you have any comments on any of these reports that you would like to share or any ideas about how the MAA should support this effort, please call or write me. I definitely want some input from as many of you as possible.

The theme for this year's Mathematics's Awareness Week - April 23 to 29 - is Mathematics: Discovering Patterns. An excellent article that you might want to share with your students is "The Science of Patterns" by Lynn Steen (Science, April 29, 1988, Volume 240, pp 611-616). If you have difficulty finding this article, I have a copy I am willing to copy. In addition you will find a list of audiovisuals in this newsletter. This year try to have some special activity sponsored by the Mathematics Department at your school to recognize this special week.

Student Chapter Resource Packets have been mailed to Student Chapter Advisors and Coordinators. If you did not receive this information and are interested, please contact me, Bill Sanders, or the MAA office. Even if you don't form an official student chapter, there may be some useful information contained in the packet.

I look forward to seeing all of you at Virginia Beach in April. The speakers, minicourses, and the social arrangements all are excellent. The coordinators at Virginia Beach have promised us a beautiful, warm, and sunny weekend. Read about all the arrangements and the program elsewhere in this newsletter. Don't miss it!!!

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 on Friday, April 21st, with a general session at 12:50. Following this are three sessions at 1:30, 2:45, and 4:00. At each of these times there will be three speakers from whom you may choose. There will be a banquet at 5:45.

Then on Saturday, April 22nd, we will have our usual Spring meeting at the Beach Campus of Tidewater Community College. The weather at the beach is often pleasant by the end of April. The wind can be cool or warm and the beaches are not crowded. Besides Virginia Beach, the area has many vacation attractions. Williamsburg is about an hour away.

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 may 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. Be sure to send in your reservation by **April 7, 1989**. Use the form at the end of the newsletter.

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. Currently he is working on a similar project called Against All Odds. His talk will give us a preview of what is to come.

MINICOURSES

On both Friday and Saturday afternoons, Howard Lewis Penn and James Buchanan of the United States Naval Academy will present minicourses. Friday's course will cover MPP, a program written primarily by Howard. The program is for use in the teaching of Calculus. It makes heavy use of graphics as an aid to teaching concepts. The program also implements the numerical methods of calculus and is useful in several applications. The program requires an IBM compatible computer with 512K memory and a graphics board. The time for this course will be 3 to 5.

Saturday's course will cover MDEP, a differential equations computer package written by James Buchanan. The program presents solutions to differential equations, direction fields, Fourier series approximations to functions and other topics. The computer requirements are the same as above. 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.

Each minicourse will be limited to 40 participants. There will be 20 computers available so attendees will be able to use the software. The programs will be available for the nominal cost of \$2.00 to cover the price of the disks. See the registration form at the end of this newsletter to sign up. Be sure to register before **April 7, 1989**.

Directions to the Virginia Beach Campus Tidewater Community College

From the Eastern Shore: Follow Northampton Blvd. from the Bay Bridge Tunnel to I-64 East (toward Chesapeake and Virginia Beach). Take Rt. 44 exit toward Virginia Beach. After passing a toll booth (25¢), you will see the Roesmont Rd. exit. Go to the right toward Princess Anne. This road will take you directly to the Virginia Beach Campus.

From Newport News/Hampton: Follow I-64 East to the Rt. 44 exit toward Virginia Beach as above.

From Emporia or Petersburg (via US 58): Take I-64 West to Rt. 44 toward Virginia Beach as above.

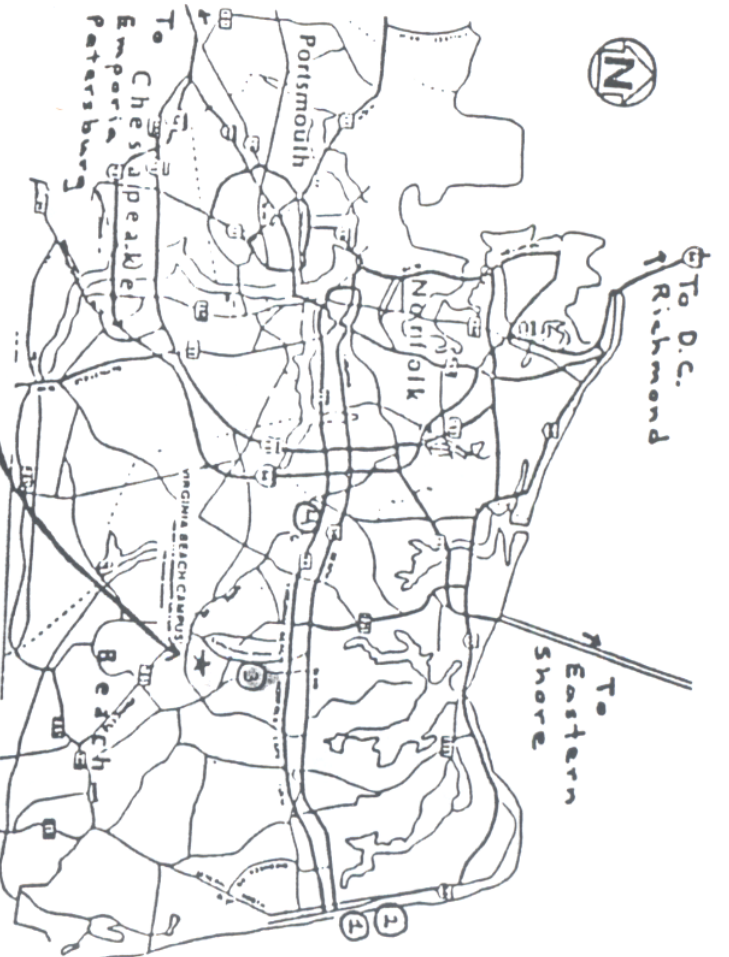
From the Oceanfront: Take Atlantic Avenue to Rt. 44. Exit at Rosemont Rd. to the left toward Princess Anne (10¢ toll). This will take you directly to the Beach Campus. (The distance is about 10 miles.)

From Comfort Inn: Go left on Lynnhaven Blvd. After about 2 and 1/2 miles, there will be a left turn at Rosemont Rd. If you miss this turn, you can continue until the road ends at Princess Anne and turn left onto Princess Anne Rd. Go to the blinking light and turn left into the campus.

From La Quinta: Turn onto Rt. 44 East from Newtown Rd. Take the Rosemont Rd. Exit after the toll plaza (25¢). This will take you to the Virginia Beach Campus. (The distance is about 5 miles.)

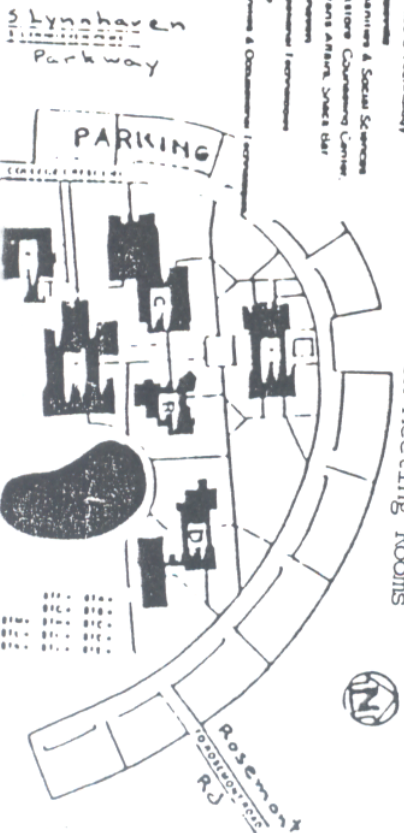
VIRGINIA BEACH CAMPUS
1700 College Crescent
Virginia Beach, Virginia 23458
Phone: 427-7100

○ Location of motels



- A. • Princess Anne
Administration & Business Services
Admissions & Records Office
- B. • Bayside
Learning Resources Center
- C. • Black Center
Continuing Education
Services & Technology
- D. • Bayside
Humanities & Social Sciences
Bookstore Counseling Center
Veterans Affairs, Black Bar
- E. • Lynnhaven
Occupational Administration
- F. • Beach
Recreation & Occupational Activities

B Registration and Business Meeting
C Session Meeting Rooms



Lodgings - Hotels

As you check out the following list, be sure to pay attention to the reservation dates. All reservations should be made directly with the hotel. Rooms have been set aside so you should mention that you are with the Math Conference at Tidewater Community College.

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 a limited number of 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.

The following are the hotels available with their pertinent details and specific directions. The numbers will help you locate the hotels on the following map.

1. A block of beachfront suites has been reserved for Friday and/or Saturday night at the **Ambassador Place** at 2315 Atlantic Avenue 804-428-1111. Each suite has a full kitchen, a bedroom with two double beds, a foldout sofa and a picture window overlooking the ocean. The motel has enclosed parking and a heated pool. Restaurants are nearby. Up to two people and children under 12 may stay for \$55 on Friday night or \$100 for both nights. (Additional persons are \$6 each per night.) Reservations should be made directly with the **Ambassador Place** by March 21st. There are a limited number of suites available. Directions to motel: Follow the Virginia Beach Expressway (25¢ toll) to Oceanfront, Atlantic Avenue, and turn left. The motel is on the right.

AMBASSADOR Place

CONDO APARTMENTS

RESERVATION FORM

2315 Atlantic Avenue
Virginia Beach, Virginia
23451
(804) 428-1111

Names of Persons Who Will
Be Occupying Apartment

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Name _____
Address _____
City _____ State _____
Zip _____ Telephone _____

Arrival Date & Day _____ Departure Date & Day _____
Expected Arrival Time: (3:00 p.m. or after please) _____
Number in Party: Adults (limit of 4 adults per unit) _____
Children 12 and over \$6 each _____ Children under 12 FREE _____
Crib (\$2 per day) _____ Other information _____

Enclosed is one night's deposit of \$ _____ Check No. _____
CATERING ESPECIALLY TO FAMILIES

904482

2. **Days Inn Oceanfront**, Atlantic Avenue and 32nd Street, 804-428-7233. The rooms are \$50 per night for single to quad rooms. Reservations should be made by March 21st. Directions to motel: Follow the Virginia Beach Expressway (25¢ toll) to Oceanfront, Atlantic Avenue, and turn left. The motel is on the right.
3. **Comfort Inn**, 804 Lynnhaven Parkway, 804-427-5500. Single rooms are \$34 per night. This motel is across the street from Lynnhaven Shopping Center and near several fast food restaurants (pizza, fish, and burgers). This is the closest motel to the college (about 3 miles). Reservations should be made by April 7th. Directions to motel: Follow Virginia Beach Expressway past the toll booth (25¢) to the first Lynnhaven Parkway Exit. The motel is on the left across from a major shopping center. You enter the motel parking lot through the pizza restaurant parking lot.
4. **La Quinta**, 192 Newtown Road, 804-497-6620. Single rooms are \$35 per night. Airport pickup is provided by the motel. Reservations should be made by April 21st. Directions to motel: From I-64 take the Newtown Road Exit and then the first right onto Newtown Road. The motel is on the left.

MATHEMATICAL ASSOCIATION OF AMERICA
MARYLAND/DISTRICT OF COLUMBIA/VIRGINIA
SPRING MEETING

AT
TIDEWATER COMMUNITY COLLEGE
APRIL 20 AND 21, 1989

FRIDAY, APRIL 20:

MINICOURSE I: "SOFTWARE FOR CALCULUS"

Professor Howard Penn

Professor James Buchanan

3:00 - 5:00 p.m.

VMATYC Dinner, Guest Speaker
"MATHEMATICAL ADVENTURES"

Dr. Karl Smith

National President, AMATYC

5:45 p.m.

SATURDAY, APRIL 21:

8:00 - 11:00 REGISTRATION

8:45 - WELCOMING REMARKS

SESSION BEGINNING AT 9:00 A.M.:

"Chaos in Newton's Method"

Jack Clark
Western Maryland University

"Asymptotic Factorization of Operators, Part II:
The Non-Linear Case"

Andrew G. McMorran and Charlie H. Cooke
Old Dominion University

"A Mathematical Model for Pollution Control:
Where to build a sewage treatment plant?"

Linda Christler, student
Hood College

SESSION BEGINNING AT 9:30 A.M.

"How about a Real Partial Differential Equations
Course?"

James P. Coughlin
Towson State University

"A Fourier Model for Human Vision"

John Schmeelk
Virginia Commonwealth University

"A Mathematical Model for Traffic Control: Four-
way stop sign or traffic signal?"

Josephine Bynum and James Moler, students,
Hood College

SESSION BEGINNING AT 10:00 A.M.:

"Women of Mathematics: Then and Now"
Florence Fasanelli
KSP - Young Scholars Project

"Euler's Theorem for Polynomials"
William Wardlaw
United States Naval Academy

"The Product Rule for Integrals"
Daniel Richman
Towson State University

SESSION BEGINNING AT 10:30 A.M.

"Using Mathematics to Compare the Effectiveness
of Computerized Information Systems"
Archle W. Earl
Christopher Newport College

"Report on NCTM Standards"
Charlotte E. Copley
Mathematics Supervisor for Hampton Public
Schools

11:00 - MAA BUSINESS MEETING

12:00 - LUNCHEON

**INVITED ADDRESS: "AGAINST ALL ODDS"
PROFESSOR SOLOMON GARFUNKEL**

SESSION BEGINNING AT 2:00 P.M.:

"Computer Assisted Instruction and Critical
Thinking Developmental Models" - Some Results
from the 1986 Presentation
Mansour Akbari-Zarin
Mary Washington College

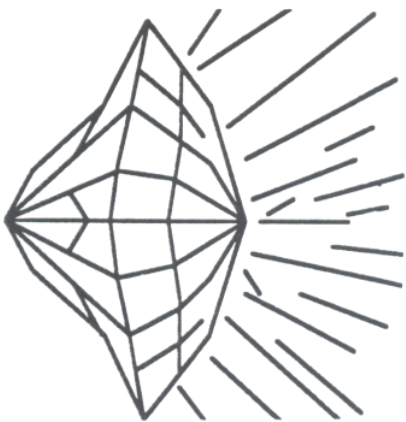
"Trachtenberg System of Basic Mathematical
Computations"
John B. Tant

"Negative Bases"
Michael Fripp
All-American Academic Team
Bruton High School, Williamsburg, Virginia

2:30 - 4:30: MINICOURSE II

**"SOFTWARE FOR DIFFERENTIAL EQUATIONS"
Professor Howard Penn
Professor James Buchanan
United States Naval Academy**

**THE NOVA FILM "THE MAN WHO LOVED NUMBERS"
WILL BE AVAILABLE FOR VCR VIEWING
AT TIMES AND PLACE TO BE ANNOUNCED.**



AMATYC

15th Annual Convention
October 26-29, 1989
Hyatt Regency
Baltimore, Maryland

A three day workshop will be offered at Ohio State University, Friday through Sunday, August 18 - 20, 1989. The workshop is on using technology in collegiate mathematics. Workshop features include:

- * \$250 stipend for each participant from Addison-Wesley Publishing
- * low cost housing - \$36.95 for a double
- * hands on use of software and graphing calculators
- * reduced price for CASIO graphing calculator
- * reduced price for HP 28S calculator
- * instruction based on *College Algebra and Trigonometry, A Graphing Approach*, by Demana and Waits
- * instruction by leaders in the field - Demana, Waits and others

Workshop is limited to 30. Contact:

Professors Bert Waits and Frank Demana
1989 Summer College Workshop on Technology
Department of Mathematics
The Ohio State University
231 W. 18th Ave.
Columbus, OH 43210

A five day conference - June 25 through 30, 1989 - will be held at Carleton College. Their summer conference will focus on computer graphics. Workshop features include:

- * lessons in 2D and 3D image display, such as rotation
- * displays for continuous images in discrete graphic systems
- * raytracing, shading techniques, surface textures
- * spline surfaces
- * fractals
- * cost is \$110
- * room and board \$125 for double occupancy

Workshop is limited to 120 participants. Contact:

Steve Galovich (507-663-4362)
Department of Mathematics and Computer Science
Carleton College
Northfield, MN 55057

SUMMER WORKSHOPS

Our section is offering two summer workshops. The first one - Chaos and the Microcomputer - is already fully subscribed. The second one - Decision-Making and the Microcomputer - still has a few openings. Workshop features include:

- * good possibility for a stipend
- * total cost is \$235 - includes room and board
- * instruction by T. L. Saaty

For more information or to register, contact:

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

Meredith College in Raleigh, North Carolina, and the Undergraduate Faculty Enhancement Program of the National Science Foundation are sponsoring a weeklong workshop - July 17 through 21 - on computer based mathematics education. Workshop features include:

- * \$250 stipend plus room and board provided by NSF
- * rooms are in air-conditioned suites on campus
- * meals including an opening Sunday evening banquet will be served in the campus dining hall
- * lessons in calculus, linear algebra, differential equations, & others
- * participants will be expected to prepare and present lessons
- * instruction by Professor Vivian Kraines
- * family members welcome at an additional rate

Workshop is limited to 30. Please contact:

Professor Vivian Kraines
Department of Mathematics and Computer Sciences
Meredith College
Raleigh, NC 27607-5298

MATHEMATICS/AUDIOVISUALS

Following is a list of 16mm sound films for sale or rent from:

Wards Natural Science Establishment
(Modern Learning Aids)
5100 West Henrietta Road
Rochester, NY 14692
Contact Steve Hubright - 716-359-2502

Challenge in the Classroom - b/w, 55 min
Topology - b/w, 30 min
Pits, Peaks and Passes - color, 48 min
Predicting at Random - color, 43 min
Nim and Other Oriented Graph Games - b/w, 63 min
John von Neumann, A Documentary - b/w, 63 min
Who Killed Determinants? - b/w, 57 min
Can You Hear the Shape of the Drum? - color, 49 min
The Marriage Theorem: Matching Theory - b/w, 46 min
Continuity of Mappings - color, 10 min
Challenging Conjectures - b/w, 40 min
Infinite Acres - color, 11 min
Newton's Method - color, 10 min
Mr. Simplex Saves the Aspidstra - color, 33 min
Ordered Pairs and the Cartesian Product - color, 33 min
Cycloidal Curves or Tales from the Wanklenberg Woods - color, 22 min
The Gauss-Bonnet Theorem - color, 25 min

Other titles and distributors:

Math Anxiety: We Beat It, So Can You! - color, 29 min
EDCC Distribution Center
55 Chapel Street
Newton, MA 02160

Mathematics of the Honeycomb - 13 min
Flatland - 12 min
Moody Institute of Science
12000 E. Washington Blvd
Whittier, CA 90606

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Bill Sanders
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Harrisonburg, VA 22807
BITNET: FAC_SAND@JMUVMAX1
(703) 568-6535

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