

Maryland-District of Columbia-Virginia Section of the Mathematical Association of America

Newsletter, Spring 1996

Vol. 17, No. 1 Final.

February 1996

Spring 1996 Meeting: April 12–13 Randolph-Macon College

The Spring meeting of the MD-DC-VA section of the MAA will be held at Randolph-Macon College. Randolph-Macon is an independent coeducational liberal arts college founded in 1830. The college enrolls 1100 students, mostly from Virginia and nearby mid-Atlantic states. The campus is situated on 105 wooded acres in Ashland, Va, a picturesque turn of the century railroad town. Amtrack has daily stops at the small railway station adjacent to campus. Ashland is a popular location for Richmonders to take weekend bicycle rides in the Spring.

Ashland is located at exit 92 off Interstate 95, 15 miles North of Richmond and 5 miles South of Paramount's Kings Dominion. Richmond has many museums, historical sites and interesting shopping districts.

Meeting Highlights

Our Friday evening banquet speaker will be **Lawrence** G. Dotolo of Old Dominion University. Dr. Dotolo is President of the Virginia Tidewater Consortium for Higher Education. He is a dynamic speaker and actively involved in distance learning and many other aspects of higher education. He is on the Academic Advisory Board to the PBS Adult Learning Service, the National University Teleconference Network, and is a member of the Association of Consortium Leadership. He has had several grants, workshops and presentations. His talk will be "The Use of Technology in Higher Education: Will It Make a Difference?"

There will be four workshops — "surfing" the World Wide Web, Active/Cooperative Learning, using the TI-92 graphing calculator, and Stress Management. Two of these are on Friday, and the other two during the day on Saturday. There are more details on each workshop after the program, inside. Saturday it is our good fortune to have as our luncheon speaker **Franklin A. Wattenberg** of Weber State University, Odgen, Utah. Dr. Wattenberg will talk about the "Connected Curriculum Project". This is a special project using the World Wide Web together with the TI-CBL (inexpensive, flexible, lab equipment). The goal is to offer a very active environment for learning how to emphasize the connections between mathematics and the physical, life, and social sciences through courses that the students design for themselves.

If there is enough interest, there will be a book swap during the day on Saturday. This idea came to our attention because the library at Randolf-Macon Woman's College sold hard copies of the 1990 and 1991 issues of the College Mathematics Journal, which would be helpful for their senior seminar. So, if you have these, Paul Irwin would appreciate them. If you have any other books or journals that you think someone else would like, please bring them and we'll give this experiment a try.

GOVERNOR'S REPORT

The Orlando meetings venue stood in stark contrast to the MD-DC-VA environs in early January — more accurately, the starkness was at this end. Luckily, Sr. Helen Christensen had gone to Orlando early, thus dodging the snow and giving our section a presence at the MAA Board of Governors meeting. (I missed it by 38 hours.) These notes are summarized from Sr. Helen's more copious ones. Here are the highlights.

(1) The MAA will continue the summer mathematics meetings through 2000. (The AMS voted to **discontinue** holding summer meetings in 1997-1999!) The MAA's summer meetings will focus on professional development, exposition, networking, and students. The meetings will either be financially viable with over 500 attendees and make use of professional planners, or will become smaller regional meetings supported by volunteers.

(2) The MAA supplemented its 1995 income by about\$6K by member use of the MAA credit card.

(3) The Committee on Member Services is going to do a new study on the MAA dues structure. The study will try to determine a better way to decide on dues, without tying them to the cost of specific journals, the AAUP, and the Consumer Price Index (as is the current situation). (4) There was much discussion on the California Board of Regents recent actions on affirmative action. I believe the current MAA status is that the MAA will draft a general policy on this issue (i.e., one not specifically addressed to the California Board of Regents).

(5) The report of the Strategic Planning Committee was commended for its readability. A summary should be available in time for the spring Sectional meeting at Randolph-Macon College in April.

(6) Twelve of 29 MAA sections have Web home pages. One Student Chapter already does as well: the University of Minnesota.

On a personal note: Disney World beats Silver Spring hands down. (But ice cream from my fridge is cheaper!) The contrast in weather-and traffic — and pace of life — gave me serious pause for thought. Seems as though Ben Fusaro knew what he was doing!

cheers,

j. kev jkev@romulus.ncsc.mil

NOTES from the CHAIR

Two very important things will be happening at the Spring meeting. The emphasis will be on student speakers. This will only be a success if faculty recruit the students and encourage them to attend even if they are not at a point for a presentation. There will be prizes for those who do present. Also, we are trying to arrange for some dorm rooms to house students attending the conference. Please check off the box on the registration form if you are a student who will need housing. We will notify the winners.

Also we will be electing some new officers. Your input for nominations is being solicited. The offices to be filled are Chair-elect, Treasurer and Program Chair. If any of you are interested or know of a colleague who is, please forward the information to the committee. The chair of the nominations committee is Jon Wilkin and he can be reached via e-mail at US015905@interramp.com. Don't be shy.

I intend to have an item on the agenda for the business meeting about the possibility of increasing the registration or having section dues. With this we might, for example, be able to send an expanded newsletter (or more issues) only to dues paying members, which could go first class. Another option could be members not having to pay a registration fee at meetings. Please ponder these suggestions before the spring meeting.

Mary Kay Abbey Section Chair

Mathematics Workshops with Derive 5-9 June 1995

The twenty participants in the MAA-FSU Summer Workshop found themselves on Monday morning seated at computers starting their first assignment. They quickly found that the workshop leaders, Marvin Brubaker and Carl Leinbach, had planned a full week of mathematical explorations using Derive which culminated in reports on their group projects at the end of the week.

The time was not totally devoted to Derive, as there were also other treats prepared for them. During the week they also were able to try out Acrospin, a computer package which enables the viewer to observe a three dimensional surface from any angle desired and even rotates the surface as you watch. In addition, there were brief tutorials on the TI-92 calculator which is to become available this fall.

There were also excursions to local attractions such as 'Gandalf's', tennis and hikes for those so inclined, and a free afternoon which some used to visit 'Falling Water', a summer cottage in nearby Pennsylvania designed by Frank Lloyd Wright.

The workshop director wishes to express appreciation to all of the participants for their good humor and willingness to give occasional help, and especially to those who shared experiences and mathematical vignettes with their colleagues.

(Editor's Note: I was unable to get this into the last newsletter before it went to the printer.)

LOST AND FOUND

A few days after the regional MAA meeting at Georgetown (November 3-4, 1995), someone found a carved stone in Reiss 282 that looks like an antique. Reiss 282 is the upstairs computer classroom that was used for some of the contributed papers on Saturday.

If you think it might be yours, please contact Andrew Vogt. (His address and phone number are on the back of the newsletter.)

TREASURER'S REPORT 1 February 1996

Balance — 18 August 1995	\$6,483.84		
Receipts Interest Fall, 1995 registrations Fall, 1995 vendor registrations Collect returned check	\$ 73.38 2,055.00 80.00 27.00	Expenses Fall 1995 newsletters Spring 1996 Newsletter (Prelim) Fall, 1995 meeting — Speaker expenses	\$1,463.38 56.20 582.22
Total Receipts	\$2,235.38	Total Expenses	\$2,975.80
Balance — 1 February 1996	\$5,743.42		

John G. Milcetich Memorial Fund Contributions - \$560.00

Jon W. Scott Treasurer 1.) President Mary Kay Abbey called the meeting to order.

2.) Secretary Jim Coughlin read the minutes. Since no one proposed any changes, they were approved.

3.) Treasurer Jon Scott gave the treasurer's report. We have a balance of \$6217.00 in the treasury compared with \$6483.00 as of the last report. Part of the funds in the treasury are for the John Milcetich award, which will be presented to the student who delivers the best paper at the spring meeting. Donations to this worthy cause are being solicited. See Jon Scott.

In answer to a question that has been raised at a previous meeting, Jon reported that National headquarters supports the section by "kicking back" 2.5 % of the dues that come in from members in our area. (i.e.: Maryland, Virginia or the District of Columbia).

4.) One of the largest items in the budget is the cost of printing and mailing the newsletter. It has been

suggested that the newsletter should be e-mailed to the members, but this was impractical because some members do not have access to e-mail and others do not have their email addresses listed with us. The preliminary newsletter was e-mailed, but several members didn't get it, so the final version was sent through the post-office, in the usual fashion. One suggestion was that the members be given the option of e-mail or not. A further suggestion for cost containment was the elimination of duplication whereby a member receives one copy at home and another at work. Theresa Francis pointed out that she is, unofficially, eliminating this duplication whenever the member calls it to her attention. It was agreed that cost cutting measures should be taken on the newsletter.

5.) The Chair explained that students who pre-register are ordinarily entitled to a free lunch when lunches are provided. Where lunches are not provided, the students will have their registration fees reduced or waived.

6.) J. Kevin Colligan, our new governor, was introduced to the meeting.

7.) The Meritorious Service Award had been awarded to Howard Penn last spring but, owing to unforeseen circumstances, the announcement was not made then. President Mary Kay Abbey belatedly made the announcement at the present meeting.

8.) Jon Scott, our treasurer, is currently on sabbatical and is spending his sabbatical at MAA National Headquarters. He is our section's voice in the corridors of power (?). 9.) Nominating committees are being formed to solicit nominations for the office of Program Chair and of Treasurer to fill the terms being vacated by Beverly Phillips and Jon Scott respectively

10.) Members were reminded that the nominations for the distinguished teaching award are due on the 1st of January. Forms may be obtained from the secretary, Jim Coughlin.

11.) Jack Biggs reported on the workshop on DERIVE that was held at Frostburg in June. Those who attended got plenty of experience using DERIVE. But it was not all work and no play. Suggestions for the next workshop are being actively solicited.

12.) At the breakfast for departmental representatives, John Zirkle was appointed chair of the Departmental Representatives, but he was forced to resign the office upon being appointed to an administrative post. He did not feel he had the time to handle both jobs. Jon Scott pointed out that the title has been changed from departmental representative to departmental liaison. National feels that the departmental chairs should appoint the liaisons (/representatives). There was a discussion on the point.

13.) The Spring meeting is scheduled for Randolph Macon College in Ashland, Virginia on the 12th and 13th of April. Beverly Phillips, the Program Chair, pointed out that the call for papers was available at the meeting and urged everyone to pick one up. Please submit in plenty of time, as there have been several unpleasant incidents where people submitted their proposed talks after the deadline had passed and had to be turned down because the program had already been sent to the printers.

14.) Next fall's meeting is tentatively scheduled for Hood College in Frederick, Maryland and the following spring our meeting will be at the College of William and Mary in Williamsburg.

15.) Information on the World Wide Web is available from John Nolan of American University. He will be running a workshop on that this coming spring. Watch the newsletter for details.

16.) Kathleen Shannon is currently on sabbatical and Andy Vogt was tied up with the current meeting. Hence there was no report on student chapters this time.

17.) Genevieve Knight mentioned the new standards for grades K through 12 that are currently being debated at the highest levels in Maryland and suggested that we mathematicians ought to get more involved with the political process so that our voices will be heard when making these decisions.

Mathematical Association of America

Maryland/DC/Virginia Section Spring Meeting, April 12 & 13, 1996

> Randolph-Macon College Ashland, Virginia

Meeting Program

*** ALL ACTIVITIES WILL TAKE PLACE ON CAMPUS ***

FRIDAY, APRIL 12

WORKSHOPS:Copley Science Center

3:00 - 5:00 PM "The World Wide Web" John Nolan, American University Room 201

3:00 - 4:30 PM "Active/Cooperative Learning in the Mathematics Classroom" Sandra Spain, Thomas Nelson Community College Room 132

6:00 - 6:55 PM

REGISTRATION and COCKTAILS Washington-Franklin Hall

7:00 PM

DINNER and INVITED SPEAKER Estes Dining Hall (2nd floor)

DR. LAWRENCE G. DOTOLO

"The Use of Technology in Higher Education: Will It Make a Difference?"

SATURDAY, APRIL 13

COPLEY SCIENCE CENTER

7:30 - 10:00 AM	Registration and Refreshments (lobby)
8:00 - 1:30 PM	Book Sales and Displays
	Opening Remarks: Dr. Jerome H. Garris, Provost and Dean of the College
Room 100	

CONTRIBUTED PAPERS AND WORKSHOPS

8:50 - 9:20	<u>Session I</u>
ROOM 100:	Highest Putnam Scorer in our Section (to be announced)
ROOM 101:	"An Elementary Mathematical Models Course" Dan Kalman, American University
ROOM 132:	"Limit Examples With a TI-82 Graphing Calculator" Theresa A. Francis, Mount St. Mary's College
ROOM 205:	"The N-Body Problem: A Brief History" Josh Pepper, Student, Randolph-Macon College
ROOM 201:	"Spatial Visualization and Three Dimensional Graphs: Questions for Research" Dan K. Bell, Student, American University
ROOM 243:	"How to Get Rid of Your Red Neighbors When You're Black: A Combinatorial Game" Davida Marie McWilliams, Student, Bowie State University

<u>9:30 – 10:00</u> Session II

ROOM 101:	"Hilbert Matrices	in Linear	Equations"
	I-Lok Chang,	American	University

- ROOM 132: "Projects for Calculus with a Military Orientation" Howard Lewis Penn, U.S. Naval Academy
- ROOM 205: "Number Theory, Small Divisors, and The N-Body Problem" Lyn Geisler, Randolph-Macon College
- ROOM 206: "Implications of Graphing Calculators in the Middle School " Michelle Merriweather, Student, American University
- ROOM 243: "Exact Multiplicity Results for a Class of Periodic Equations" James Rossmanith, Student, Christopher
- ROOM 100: **WORKSHOP**: "Introduction to the TI92 Graphing Calculator" Greg Williams and Verl Walters (9:30 - 11:00)

10:10 - 10:40	Session III
ROOM 101:	"Representing a Many-Sorted Algebra as a Partial Algebra" William P. Wardlaw, U.S. Naval Academy
ROOM 132:	"Maple: A Comprehensive Tool for Multivariable Calculus" Hongwei Chen, Christopher Newport Univ.
ROOM 205:	"A Divisibility Algorithm for All Primes" Teri Woodington, Student, James Madison Univ.
ROOM 206:	"Are Mathematicians Nerds??: Attitudes of School Children" Izzy Kyle, Student, Hood College
ROOM 243:	"A Mathematical Model for Survival Statistics" Reginald Lavender, Student, Bowie State Univ.
ROOM 100:	Workshop, continued.
<u>10:50 - 11:20</u>	Session IV
ROOM 101:	"Quantum Mechanics as an Honors Project for Linear Algebra and Differential Equations Classes" George Derise, Thomas Nelson Community College
ROOM 132:	"Inflection Points and Symmetry of Polynomials" Parviz Khalili, Christopher Newport University
ROOM 205:	"How to Solve Quadratic Congruences" Gary Gadson, Student, Bowie State University
ROOM 206:	"The African Heritage of Benjamin Banneker" Kenneth Lee Jones, Student, American Univ.
ROOM 243:	"An Introduction to the Project Next Fellows Program" Della Fenster, University of Richmond Jacqueline Hall, Hampden-Sydney College Christine McMillan, Va. Polytechnic In. & St. Univ. Maureen Yarnevich, Towson State University
ROOM 100:	Workshop, continued.
11:30 - 12:00	MAA BUSINESS MEETING, Copley, Room 100
12:15 - 1:15	$\underline{\mathbf{LUNCH}}$ — Box lunches in the lobby of Copley
1:30 - 2:30	Invited Speaker, Copley, ROOM 100
	DR. FRANKLIN A. WATTENBERG

"CONNECTED CURRICULUM PROJECT"

2:40 - 3:10	Session V
ROOM 101:	"The Interior Angle Sum Theorem For Polygons" Nicholas Martin, Shepherd College
ROOM 132:	"Idempotents and Unique Factorization" Robb T. Koether, Hampden-Sydney College
ROOM 205:	"From Conformal to Quasiconformal and Back" Victoria Hill, Student, American University
ROOM 206:	"Prerequisites to Reform" Kathleen Ambruso, Student, American University
ROOM 244:	COMAP Modeling Competition Solution: Meritorious Rating (to be announced)
3:20 - 3:50	Session VI
ROOM 101:	"Pascal's Triangle, Cyclic Groups, Tilings and Computer Graphics" Kathleen Shannon, Salisbury State University
ROOM 132:	"Solving Real, Not Just Realistic, Problems: The Salisbury State Center for Applied Mathematical Sciences" Lee May, Salisbury State University
ROOM 205:	"The Queen Dirties Her Hands!! (a tawdry tabloid tale)" Steve Casey, American University
ROOM 206:	"The Forgotten Variable in the Mathematics Education Reform Equation: The Teacher" Mary E. Donahue, Student, American University
ROOM 244:	COMAP Modeling Competition Solution: Meritorious Rating (to be announced)
ROOM 243:	WORKSHOP: "Stress Management Through Yoga and Meditation" Atma Kaur Khalsa (3:20 – 4:40)
4:00 - 4:30	Session VII
ROOM 101:	"Conveying the Beauty of Mathematics in a Liberal Arts Course" Richard Stark, Susan Strickland, and Lindy Elkins, St. Mary's College of Maryland
ROOM 132:	"Teaching Undergraduates to Consult in Applied Mathematics" Philip E. Luft, Salisbury State Univ.
ROOM 206:	"GaussJordan Row Reduction Algorithms on TI Graphing Calculators" Melvin Jones III, Student, Bowie State University
ROOM 244:	COMAP Modeling Competition Solution: Meritorious Rating (to be announced)
ROOM 243:	Workshop, continued.

Lodging for Spring Meeting

The Henry Clay Inn is a lovely bed and breakfast adjacent to the college and the railway station. It has 15 rooms available, each with a private bath.

The Comfort Inn, Holiday Inn, and Ramada Inn are located about a mile from campus on Rt. 54, just off 195.

Henry Clay Inn 1-804-798-3100 Single: \$65 Double: \$70

Holiday Inn 1-800-922-4231 or or 1-804-798-4231 \$49.00 (until April 1, mention RMC-MAA meeting) restaurant, lounge, fitness center Ramada Inn 1-800-2-RAMADA 1-804-798-4262 \$39.95 (mention RMC-MAA meeting)

Comfort Inn 1-804-752-7777 \$57.00 includes continental breakfast (mention RM-C for a 10% discount) fitness center

Workshop Descriptions

Sandra Spain, Associate Professor of Mathematics and Thomas Nelson Community College's Coordinator of Professional Development, will introduce "Active/Cooperative Learning in the Mathematics Classroom". Participants will be actively involved in cooperative learning techniques that have been used successfully in teaching developmental math, statistics, pre-calculus, and calculus courses. Sandra has presented active/cooperative learning workshops for the VA Master Teacher Seminar at Hampdon Sydney College, the VA Tidewater Consortium's Summer Institute on College Teaching at the College of William and Mary, and at various AMATYC and VMATYC conferences.

John Nolan of American University will give a workshop on the World Wide Web, a graphical interface to the Internet. This will be a hands-on workshop and your opportunity to "surf" the Web with a pro. Atma Kaur Khalsa will offer a workshop in "Stress Management Through Yoga and Meditation". Participants will learn some quick fixes to de-stress and relax. Atma is a certified teacher (B.S., Biology) in VA and a certified crisis counselor with Contact Peninsula, Inc. She has been a teacher of Kundalini Yoga for over 17 years and has taught children and adult classes through both the Newport News and Hampton departments of Parks and Recreation. She has been a guest speaker at local and national MENSA meetings and since 1985 has been a regular teacher at the International Yoga Camp in New Mexico.

Greg Williams and **Verl Walters** of VANT, Virginia Network for Technology, will give a workshop on using the new TI92 graphing calculator (loaners will be available). Both Greg and Verl are experienced math and physics teachers. Their hands-on introduction to this wonder machine will include classroom applications.

Campus News

The Board of Governors has elected **Martha Siegel**, **Towson State University**, to replace Jerry Alexanderson as MAA Secretary. As you know, Jerry was elected President, and thus it was necessary to elect a new Secretary. Martha will start immediately as Secretary-Elect. On July 1, 1996, she will assume the position of Secretary.

Many staff members have had the pleasure of working with Martha, particularly in her role as editor of Mathematics Magazine. We all look forward to working with Martha in this new role.

From Loyola College in Maryland: Dipa Choudhury is spending AY 1995-96 on a Fulbright teaching fellowship at Kenyatta University in Nairobi, Kenya. Also, Christopher Morrell is a visiting faculty member for Spring semester 1996 in the Statistical Sciences Department at the University of Cape Town in South Africa. From Hood College: The Hood student MAA chapter sponsored a workshop by Jon Scott, visiting mathematician at the MAA national office, on Internet for the Mathematician. Under Mr. Scott's direction, we investigated sites on the Internet using both gopher and the World Wide Web.

The Hood chapter of Pi Mu Epsilon, together with Tri-Beta, the biology honor society, sponsored a lecture by **Dr. John Commito** of the environmental studies program at **Gettysburg College** on "The Intersection of Mathematics and Ecology: Fractal Geometry of Bivalve Populations in Maine."

Two Hood undergraduates, **Izzy Kyle** and **Julie Ayres**, attended the national meetings in Orlando. Izzy participated in the soap bubble workshop led by **Frank Morgan** and won a prize for her solution to a problem!

Maryland Undergraduate Mathematics Enhancement Program II Workshop: Visual Thinking in Fractal Geometry July 22-26, 1996 Montgomery College, Takoma Park Campus Application Deadline: June 15, 1996 For more info and application, contact: Jon Scott, (202) 387-5200, jscott@maa.org or Denny Gulick, (301) 405-5157, dng@math.umd.edu

Sponsored by grant from NSF/DUE 9554632

OHIO SECTION 1996 SUMMER SHORT COURSE Actuarial Mathematics

The MAA Ohio Section will hold its summer short course in Actuarial Mathematics June 3-5, 1996, on the campus of Marshall University in Huntington, West Virginia. The course will be conducted by Professor Matthew Carlton. Prof. Carlton holds a Ph. D. in mathematics, is a Fellow of the Society of Actuaries, and is a principal in American Benefit Corporation, an insurance consulting firm, where he has practiced for over two decades.

Topics will include an overview of the actuarial profession and the actuarial exams, employment prospects for new graduates, suggested courses for student advising, actuarial problems to apply in traditional mathematics courses, numerical analysis topics and mortality tables. Demonstrations will be in the area of pension mathematics, which is his specialty and which he feels is also the most interesting mathematically.

Lodging is available through local hotels and motels at competitive rates. Dormitory rooms, with communal bath, at very inexpensive rates, may become available for the nights of June 3-5. Course registration fee is \$100, and the deadline for \$50 deposit is May 3. Checks should be made payable to the Marshall University Research Corporation, and they should be marked "Actuarial Mathematics." Registrations may be sent to Actuarial Mathematics, Department of Mathematics, Marshall University, Huntington, West Virginia 25755-2560. For more information contact David Cusick at the above address. Telephone 304-696-3038. e-mail cusick@munxt01.mu.wvnet.edu. This announcement, and any updates, will be posted on the MAA Ohio Section Home Page.

CONFERENCE ON FIBONACCI NUMBERS

The Seventh International Conference on Fibonacci Numbers and their Applications will take place at Technische Universitat Graz from July 14 to July 19,1996. This conference will be sponsored jointly by the Fibonacci Association and Technische Universitat Graz.

Papers on all branches of mathematics and science related to Fibonacci numbers and generalized Fibonacci numbers as well as papers related to recurrences and their generalizations are welcome. Abstracts are to be submitted by February 1, 1996. Manuscripts will be due by May 30, 1996. Questions about the conference as well as abstracts and manuscripts, which should be sent in duplicate following the guidelines for submission of articles found on the inside front cover of any recent issue of "The Fibonacci Quarterly", should be sent to:

Professor Gerald E. Bergum "The Fibonacci Quarterly"		
Computer Science Department	or	
Box 2201		
South Dakota State University		
Brookings, SD 57007-1596		

Professor F. T. Howard Dept of Math and Comp Sci Box 7388 Wake Forest University Winston-Salem, NC 27109-7388

(Editor's Note: Even though the date for the abstracts has passed, if you wish to present a paper at this conference, please send in an abstract. I was told that some would be accepted late, even into March.)

Calculus Reform Workshop at Penn State

The National Science Foundation is sponsoring a Calculus Reform Workshop at the University Park Campus of the Pennsylvania State University, July 28-August 2, 1996. The purpose of the workshop is to provide information on the Calculus Reform Movement – its history, current status, and FUTURE – and to encourage involvement in this movement.

The workshop will be led by Frank Wattenberg, the developer of a calculus course which emphasizes developing mathematics in the context of significant applications. The other workshop instructors will be Margo Mankus, author of "Calculus, an Activities-Based Course" and Larry Peterson, a high school AP calculus teacher and frequent workshop leader.

The workshop is open to all who teach calculus. There is no registration fee. Room, meals, and all materials will be paid for by the NSF. Transportation is not, however, included, and space is limited. For those applications received by March 31, notification of acceptance to the workshop will be sent in early April. Those interested are encouraged to apply up until May 31 as there may still be openings available.

To apply, please send a short curriculum vita, a letter from an appropropriate administrator confirming that you will be teaching calculus during the 1996-97 academic year, and a short statement detailing your interest and involvement in calculus at your home institution to:

Calculus Reform Workshop, c/o Eugene Wayne, 204 McAllister Building, Penn State, University Park, PA 16802, 814-865-7527/FAX:814-865-3735, e-mail: wayne@math.psu.edu

1996 Summer Technology One Week Short Courses for College Faculty

The Ohio State University College Short Course Program organized by Bert Waits and Frank Demana is offering weeklong courses at many colleges throughout the United States. Each short course participant will learn "hands-on" how to use the new TI-92 hand-held symbolic algebra computer and/or the TI-82 or TI-85 graphing calculator to enhance the teaching and learning of college and university mathematics. Mathematics reform materials consistent with the calculus reform movement, MAA recommendations, and the AMATYC Crossroads in Mathematics will be the focus of appropriate short courses. Applications, problem solving, group learning, pedagogy, implementation issues, and testing issues will be featured in all short courses. The Calculator-Based Laboratory (CBL) system may be used to gather real data and connect mathematics with science.

For information on specific courses, dates, and locations of all college sites, please contact Bert Waits and Frank Demana at Ohio State c/o Ed Laughbaum at (614) 292-7223, or jelaughba@math.ohio-state.edu¿, or Room 342 Math Tower, The Ohio State University, 231 West 18th Avenue, Columbus, OH 43210.

The Second Biannual Symposium on Mathematical Modeling in the Undergraduate Curriculum June 13-15, 1996

The Mathematics Department of the University of Wisconsin/La Crosse is hosting this three-day Symposium to bring together mathematicians, scientists and university educators for the purpose of sharing ideas, projects and problems related to mathematical modeling in the undergraduate curriculum.

We invite submissions for 25-minute and 50-minute presentations focusing on any aspect of mathematical modeling. Both mathematical and pedagogical themes are welcome. Publication of the Proceedings of the Symposium is planned and registration fees for presenters are waived.

For more information please call Professor Helen Skala at 608-785-6614 or e-mail to skala@math.uwlax.edu You may also leave a message with the Mathematics Department at 608-785-8382. If you wish to present a paper, please send a 50-word abstract before March 15, 1996 to: Mathematical Modeling Symposium, Mathematics Department, University of Wisconsin/La Crosse, La Crosse, WI 54601 or e-mail Dr. Skala with this same information. Maryland-D.C.-Virginia Section of the Mathematics Association of America

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Local arrangements coordinator Spring 1996 meeting: Eve Torrence Randolph-Macon College Department of Mathematics Ashland, VA 23005 (804)-752-7372 etorrenc@rmc.edu

Student Chapters Coordinators Andrew Vogt Dept. of Mathematics Georgetown University Washington, DC 20057-0996 (202) 687- 6254 Andy@GUMath1.Math.Georgetown.EDU

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February 1996