MARYLAND - DISTRICT OF COLUMBIA
VIRGINIA SECTION
MAA
NEWSLETTER

Vol. 2, No. 2 Edited by Howard Penn January, 1980

SPRING MEETING ANNOUNCEMENT

The annual Spring meeting of the Maryland-District of Columbia-Virginia section of the Mathematical Association of America will be held on

Saturday, April 12, 1980

at the

University of Richmond

Richmond, Virginia

Much of the program will be structured about the topics, "What's Happening in Pure Mathematics?" and "A Mathematical Program Especially for Students." Complementing our traditional contributed paper session will be talks by mathematicians on research problems of current interest in algebra, topology, and analysis, as well as presentations by academic and government matematicians on topics of interest to undergraduate students of mathematics. Included in the latter are talks on the relationship of mathematics and music, applying mathematics in the real world, the world's smallest number, and experimental design. In addition, the keynote speaker, Professor Leonard Gillman, Treasurer of the MAA, will speak on "Optimal Strategies for Sports," a topic of interest to students, faculty, and non-academic mathematicians.

CALL FOR PAPERS

Contributed talks oriented toward mathematical research, education, and "real world" problems are invited. Of particular interest are papers on research problems in pure mathematics and on topics of interest to students. A total of 30 minutes will be allotted to both the presentation and audience discussion of each paper. Those interested in submitting a paper should send their name, address, business phone number, professional affiliation, and an abstract of not more than 100 words to:

Dr. Patrick Hayes
Program Manager, Operations Research
Division of Bank Operations
Board of Governors of the Federal
Reserve System
Washington, D. C. 20551
(202) 452-2714

by

March 11, 1980

If more papers are received than can be selected, preference will be given to early postmarks and new contributors. Everyone submitting a talk will be notified by March 31, 1980, of the program chairman's decision.

As in previous meetings, a special invitation to make presentations is extended to students. While the topic need not be original, the paper should be of interest to other students. Students should send their name, address, phone number, school, and a brief description of their talk to Dr. Patrick Hayes at the above address by March 11, 1980.

ELECTIONS

At the Spring meeting elections will be held for the positions of Chairman Elect, Vice-Chairman for Programs and Treasurer. The nominating committee has made the following nominations:

Chairman Elect: Mary Gray, American University
John Schmeelk, Virginia Commonwealth University

Vice-Chairman for Programs: Pat Hayes, Federal Reserve Board

Treasurer: Robert Leonard, Gocher College
Art Charlesworth, University of Richmond

Nominations for these positions may also be made from the floor.

MAA BOOKS

MAA publications will be available at sectional meetings at a discount. Therefore, you should attend the meetings.

SUMMER WORKSHOP

The Section will once again sponsor two five-day, summer workshops at Salisbury State College on the Maryland Eastern Shore.

The first workshop, Linear Algebra & Its Applications, will be given by Prof. M. Z. Nashed of the University of Delaware, June 2-6. Prof. Nashed is active in research and also highly interested in the undergraduate curriculum. He was a recipient of the MAA Ford Award in 1967. Nashed plans to review key results of Linear Algebra and then go on to applications in geometry, physics and the social sciences. There will be a special session on L.A. in the Undergrad curriculum. Anyone interested in L.A., especially teachers of the subject, will benefit from this outstanding lecturer.

The second workshop, Structure Programming in PASCAL, will be given by Dr. W. J. Collins of Salisbury State College, June 9-13. He has a Ph.D. in Computer Science from Purdue, and his main interests are the undergrad curriculum and structured design. Bill Collins has lectured in earlier workshops and also gave one. He was rated by participants as one of the very best. He plans to give an overview of structured programming and then go to simple data types and statements of PASCAL, and on to subprograms, files and records. This is a chance for someone with some programming experience to learn about the exciting PASCAL language from soneone who knows and loves structured programming.

The total cost (including meals and room) is $140 per workshop. For more information: B. A. Fusaro, Dept. Math. Science, Salisbury State College, Salisbury, MD 21801.

OPERATIONS RESEARCH MEETING

The Institute of Management Sciences and the Operations Research Society of America will hold their semiannual joint meeting this spring in Washington, D. C., at the Shoreham Hotel on May 5, 6, and 7. The program will feature over 1000 papers in both the methodological and applied areas of management science and operations research. A plenary session on the new Russian polynomial time algorithm for linear programming is featured, to be led by Dr. Philip Wolfe of the IBM Thomas J. Watson Research Center. For further information, contact

General Chairman: Donald Gross, Chairman
Department of Operations Research
School of Engineering & Applied Science
The George Washington University
Washington, D. C. 20052
Telephone: 202/676-6084

EDUCATIONAL COMPUTING CONFERENCE

The second national Educational Computing Conference will be held June 23-25, 1980, in Norfolk, Virginia. This conference is being organized with the cooperation of fifteen organizations in the field of Educational Computing. A wide range of topics will be covered. The conference is hosted by Christopher Newport College in Newport News, Virginia. All meetings and special sessions will be held at Holiday Inn, Downtown at Scope, 710 Monticello Avenue, Norfolk, Virginia 23510.

MESSAGE FROM OUR PRESIDENT

At the Summer meeting in Duluth, the theme of the meeting of the Section officers was, "What Constitutes a Good Section." (See Monthly, December, 1979, pages 889-891). It seems reasonable to assume that we would all like to belong to a "good Section." Is the Maryland - District of Columbia - Virginia Section a "good" one? Obviously it is difficult to define "good," but with regard to a number of guidelines, we have a "good" Section. We have a Newsletter (you are reading it). We do have a number of activities (two meetings each year, summer short courses, etc.). We have, at our meetings, discussed curriculum, pedagogy, employment, applications, and research. Do we have strong leadership? If we do, good! If we don't, we will have elections at the Spring meeting. Come and help to elect strong leaders. Do we have good meetings? Many of our members have never attended a meeting and can't answer this question. Give us a chance. Come to the meeting and let us know if it is good. If the meetings aren't good, let the officers know why. The real key to being a "good" Section seems to be participation. Participation probably starts with meeting attendance. Our meeting at Richmond is within 120 miles of the homes of about 70 percent of our members. Come to the meeting. Let the officers know what is being done well and what is not being done well. We have the largest Section of the MAA. Let's also have the best Section.

A site is needed for the Spring, 1981, meeting. If your institution is willing to host this meeting, please contact me. My address is:

Dr. John Smith, Chairman
Department of General Studies
George Mason University
Fairfax, Virginia 22030

See you in Richmond.

TREASURER'S REPORT

This report covers the period from July 1, 1979, until November 10, 1979.

July 1, 1979	Balance	$ 925.93	
Sept. 29, 1979	Interest	20.15	
Nov. 9, 1979	Mailing Permit		40.00
Nov. 9, 1979	Fall meeting mailing one		45.64
Nov. 9, 1979	Fall meeting mailing two		45.48
Nov. 10, 1979	Fall meeting registration	184.00	
	Totals	$1130.08	$131.12
Nov. 10, 1979	Balance	$ 998.96	

Respectfully submitted
John Schmeelk, Treasurer
MD - VA - DC Section MAA

DEDICATION OF MAA HEADQUARTERS BUILDING

On September 13, 1979, approximately 150 persons from almost all corners of the United States attended a Convocation or Reception to dedicate the Edgar H. Vaughn Building and the Dolciani Mathematical Center.

The festivities began at 5:00 p.m. with a Convocation held in the Carnegie Conference Center, about a block away from the MAA Headquarters. The participants were addressed by Dorothy L. Bernstein, MAA President; G. Baley Price, Member of the MAA Finance Committee, former President, and member of the Board of Governors for more years than anyone, himself included, can remember; David P. Roselle, MAA Secretary and Chairman of the Building Fund; George Pimentel, Deputy Director of the National Science Foundation; and Frank Press, Director of the Office of Science and Technology Policy, and Science advisor to President Carter.

Following the Convocation the guests moved to the Edgar H. Vaughn Building for a reception lasting well into the evening. Guests were able to explore the buildings in the Dolciani Mathematical Center, with the exception of areas rented to other professional groups, and to chat with members of the Headquarters Staff.

During the evening there was a brief dedication ceremony in the Edward G. Begle Conference Room. At this ceremony Executive Director Alfred Willcox, MAA Treasurer Leonard Gillman, and former MAA President Henry Pollak paid tribute to Ed Begle and thanked his many friends who contributed in his name. Ed's wife, Elsie, and all of the Begle children were present to share in these tributes.

Many of the larger donors to the Building Fund were present. We were delighted that they could inspect the object of their generous support and be thanked personally by the officers of the Association. These included Mr. and Mrs. James Vaughn of the Vaughn Foundation, and Mary P. Dolciani, and many others, too numerous to be listed here.

In addition to the Begle Conference Room, participants were able to inspect rooms named, in thanks for special gifts, for Walter B. Ford, James M. Earl, Harry M. Gehman, Leonard Gillman, Ruell V. Churchill, and Edwin F. Beckenbach.

All in all, it was a festive and heart-warming occasion. The many members of the MAA who were not able to be present are cordially invited to visit the MAA Headquarters whenever they are in Washington.

MATHEMATICAL PREPARATION FOR A CAREER IN OPERATIONS RESEARCH

The following is a synopsis of the talk given by Dr. Donald Gross, Chairman, Department of Operations Research, George Washington University, at the Fall sectional meeting.

What is OR?

There are many definitions of OR, but in the major OR texts three elements in common are found: a quantitative approach, executive function, and decision making. From a snythesis of these, we offer the following simple definition: "OR is a branch of applied mathematics whose application is to the decision-making process."

OR as a Career for Mathematicians

OR is an attractive career for mathematicians in part for the following reasons:

(1) The work is flexible and varied because the methodology is applicable to all sectors of society.

(2) There are many job openings for OR analysts.

(3) Excellent salaries are offered.

Various surveys show that professionals classified as OR analysts in both industry and government are often given more job offers at higher salaries than those who are classified generally as mathematicians. Other data show that significant numbers of practicing OR analysts are trained (have at least one degree) as mathematicians and are quite successful in the field. A sample of 66 students in the Master of Science (OR) program at The George Washington University (GWU) showed that the 27 of them who had bachelor's degrees in mathematics had higher grade point averages in their master's work than those holding any other single undergraduate degree, as well as all other degrees combined.

Mathematical Preparation for a Career in OR

Six prominent OR professionals who were all at one time or another responsible for hiring OR analysts were surveyed about what types of mathematics courses they considered necessary as preparation for an OR career. The results of the survey showed that they believed calculus, linear algebra, probability, and statistics to be crucial, and advanced calculus, numerical analysis, and differential equations to be highly desirable. Knowledge they adjudged to be nice but not essential were difference equations, logic, set theory, graph theory, and real analysis. Topology, abstract algebra, measure theory, and complex variables were deemed to be of little importance to this career.

Educational programs in OR per se have been and continue to be offered primarily at the graduate level, where bachelor's degrees in mathematics or statistics are excellent preparation. Graduate courses in OR at GWU began in the School of Engineering and Applied Science in the 1950's under the late Glenn D. Camp; a separate department emerged in 1971. This fall, a new undergraduate program in OR and Computational Science is being offered. The first two years of this program consist of the core engineering curriculum, and the last two years' courses are evenly divided between mathematics, statistics, OR, and computer science. The mathematics in this curriculum contains most of the courses recommended by the "panel of experts" cited above.

Conclusion

OR can be viewed as a branch of applied mathematics. As such, and because of its flexibility, variety, salary, and the availability of positions, it is a desirable career for mathematicians. Many OR analysts practicing today have had formal mathematical education and are quite successful. It is important that such courses as calculus, linear algebra, probability, statistics, and numerical analysis--rather than topology, logic, abstract algebra, or measure theory--be included as part of the mathematical preparation for a career in OR.

UMAP

Need classroom material to cover an application omitted by the text? Looking for a relevant supplemental subject? Want to provide good students with further study? Or interested in a brief development of some particular subject?

Maybe UMAP (Undergraduate Mathematics and Its Applications Project) has the answer. UMAP is run by the Education Development Center, Inc. with National Science Foundation funding. It produces short expositions (modules) of applications of math. The fields of application vary widely and include medicine, politics, chemistry, geography, biology, and math itself. The mathematics which is needed in these applications includes finite math, calculus, probability, statistics, linear algebra, differential equations, and analysis. Each module contains about 1 or 2 classroom lectures of material.

Modules (most cost 25¢) and further information are available from:

EDC/UMAP
55 Chapel Street
Newton, Massachusetts 02160

NEWSLETTER

The editor wishes to thank the following people for their contributions: John Smith, John Schmeelk, Pat Hayes, Donald Gross, Ben Fusaro, Mark Meyerson, Orville Thomas, Alfred Willcox, and John Hanson. The next newsletter will appear in the fall. the deadline for submission is August 10, 1980. Please send items to:

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