HIO FOCUS

The Ohio Section Newsletter

Volume 6 | Fall, 1999 | Number 5

Banchoff, Strang & Dunham at College of Wooster October 22-23

Fall Meeting with SIAM Section

We are pleased to welcome the Great Lakes Section of the Society for Industrial and Applied Mathematics as a partner in our meeting at Wooster.

MAA President Thomas Banchoff, Brown U., will lead off the meeting on Friday, and SIAM President Gilbert Strang, MIT, will give the concluding invited address on Saturday morning. Strang has an Ohio connection: he spent some of his school years in Cincinnati. The third invited talk will be by former Ohio Section member William Dunham on a favorite subject: Euler.

Following up on the panel last Spring on middle school licensure, there will be a special session, "Mathematical Education of Middle School Teachers," organized by David Kullman of Miami, which will include a report on the proposed recommendations in the upcoming report of the Mathematical Education of Teachers (MET) Project We will also have a special session on industrial mathematics featuring David Field, Staff Research Scientist, General Motors Research and Development Center, and Ed Moylan, Support Services Manager, Ford Motor Company.

More details are on pages 8-11. Check the Section web page for up to the minute information. Get your contributed paper ready too.

It's not too soon to start thinking about the Spring meeting at Marshall. Get your students working on their talks.

New Section Officers

At the Spring meeting at Dayton officers were elected for new terms. Others will advance to new positions. (See page 4 for a complete list.) Terms began at the close of the Spring meeting.

Aparna Higgins (Dayton–see page 7) moved from President-Elect to President. Judy Palagallo (Akron) was elected President-Elect. Roger Marty (Cleveland State) moved on to Past-President, and also in that capacity chairs the Teaching Award Committee. Past-President Leo Schneider (John Carroll) became chair of the Nominating Committee, joining Barbara Ashton (Wittenberg) and John Michel (Marietta).

Bill Friel (Dayton) begins his term as Secretary-Treasurer and Dwight Olson (John Carroll) begins a three year term on the Program Committee, joining Dale Mugler (Akron) and the new chair Thomas Gantner (Dayton).

President's Column

An Ohio Section Odyssey

In the fall of 1984, my husband Bill mentioned that Wittenberg's math faculty were going to an MAA meeting soon, and said that he thought he would go, and asked me if I wanted to go. I remember being in a fog regarding what this meeting was about, who was sponsoring it, what it would be like. None of this is very surprising in retrospect—I had never been to an MAA meeting of any kind. I remember being somewhat reluctant about going—going more for the company than for the cause, so to speak, and I remember feeling quite outraged when one of the plenary speakers spent his entire hour on telling us how computers would change the way we now taught calculus. The outrage came from being told that the computer would pervade my life. No way, I thought! (I was

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Inside

Section Governor's Report

The MAA Board of Governor's Meeting at the 1999 in Providence was held on Friday 30 July from 9:00 a.m. until 5:00 p.m. In attendance were Governors, or their representatives, of the 29 MAA Sections, Governors-at-Large representing Canadians, High School Teachers, Mathematicians Outside Academia, Minorities, and Teacher Education, as well as all the Editors of the Journals and the members of the Executive and Finance Committees and the major MAA administrators. In total, 50 Board members in addition to numerous guests, quite a merry crew. As you can imagine, a Board meeting of this size can easily become unworkable unless it is very tightly organized. Fortunately, we have very competent leaders in the MAA, and the 5 Board meetings I have attended have been informative, democratic, and efficient. The meeting begins and ends on time, and the discussion is kept relevant and informative.

I would like to mention some items that I think would most interest Ohio Section MAA members, and remind you of the upcoming meetings. You can get more information on the MAA web site.

The next Joint Winter Meeting will be held in Washington D.C on January 19-22, 2000, and the 2000 Summer Mathfest will be held in Los Angeles at UCLA on August 3-5. In 2001 the Winter meeting will be held in New Orleans on January 10-13 and in 2002 the Winter meeting will be in San Diego on January 6-9. All of the January meetings will be held, as traditional, with AMS, and SIAM will join us for the 2000 Joint Meetings.

The sites of the Summer MathFests have not yet been determined for 2001 and 2002, but the first of these will be held in the MidWest, with the likely site being University of Michigan at Ann Arbor, University of Wisconsin at Madison, or St. Mary's College, Notre Dame University. In 2002 the site will probably be chosen from San Jose State University, the University of Colorado at Boulder, and the University of Maine at Orono.

At the Board Meeting in San Antonio the Board passed the motion "The MAA approve in principle to have Mathfests after the year 2000 with the proviso that summer meetings be fiscally sound."

I am pleased to report that the Providence MathFest was a move toward this fiscal soundness, with the largest attendance since the AMS decided not to be involved in the summer meetings. As of July 29, 1999 there were 1013 registrants, compared with 746 in Toronto and 767 in Atlanta. The last Joint Summer MathFest with AMS was in Seattle with 1177 registrants, and the two Joint MathFests preceding that registered 1009 and 766, respectively. It seems clear that many MAA members want these Summer MathFests to continue. I find the Summer Meetings much more relaxed then those in the Winter and would encourage all of you to consider attending in the future.

In the past decade there has been a steady decrease in the number of Regular Members of the MAA. I am happy to report that this trend was reversed during the past year, although not dramatically. We in the Ohio Section have made progress in this area with our more active use of Department Liaisons, an effort being coordinated by Tom Price. It is, in my view, extremely important to the Association to have an active and vibrant Sectional membership, and that can be accomplished most effectively by maintaining close contact with the membership at the local level. Tom has created a web site (accessible from the Section web page) for his liaison work that I think you will find quite informative.

As mentioned in my last Report, Marcia Sward, the Executive Director of the MAA will retire at the end of 1999. At this Board meeting Tina Straley was approved as the new Executive Director, to begin January 1, 2000. Tina is currently Associate Vice President for Scholarship and Graduate Studies at Kennesaw State University in Georgia. She has held a variety of academic and administrative positions at that institution and was Program Officer for Mathematics and Coordinator for Teacher Education at the National Science Foundation from 1993 until 1995. In appreciation of the work that Marcia has done during her tenure as Executive Director, the past Presidents of the MAA have started a fund in her honor in the amount of $30,000 and the entrance area of the MAA headquarters building will be designated the Marcia Sward Room. If you are interested in contributing to this fund, contact Tom Banchoff, the MAA President and he will be happy to assist you.

The new accounting system that was installed by MAA Finance Director Neil Beskin is still being fine tuned so that there is a better picture of receipts and expenditures, but the financial picture as a whole is positive. After a couple years of negative balances, due to reorganization and outsourcing of various services, the General Fund in 1998 showed a surplus of nearly $375,000. The report submitted by the Treasurer, Gerald Porter, was revised into a form that was much easier for the Governors to see the large picture of finances in the organization. If you would like to see a copy of this report, please contact me.

Here are some of the other actions of the Board that I found particularly interesting, but perhaps because I have involvement in these activities:

- The recommendation of the Task Force on Special Interest Groups was adopted in principle to establish Special Interest Groups (SIGMAAs) that members of the MAA can join. Each SIGMAA will have a governance structure, charter, and regularly scheduled meetings at the MAA national meetings. They will also have a web page and newsletter for

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OHIO FOCUS

The newsletter of the Ohio Section of the Mathematical Association of America, which first appeared in 1973, is published twice yearly in time to reach members before the fall and spring meetings.

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Deadline for next newsletter is
February 15, 2000
Email copy preferred.

This information will also be posted, and updated, on the Section web page. Access from MAA On-Line or at URL http://www.bgsu.edu/departments/math/Ohio-section/

Call For Nominations for Section Teaching Award

Nominations for the ninth (2000) *Ohio Section Award for Distinguished College or University Teaching of Mathematics* are now being welcomed. Anyone may nominate an Ohio Section member for the award. Department chairs and MAA Liaisons should verify that all worthy colleagues will be considered.

The awardee will be announced and honored at the 2000 Spring Ohio Section meeting. News of the Award will be published in the Section newsletter, newspapers, and in other sources. Official letters will be sent to the appropriate persons at the awardee's institution.

The awardee will also be the Section candidate in the pool from which the recipients of the *Deborah and Franklin Tepper Haimo Award for Distinguished College or University Teaching of Mathematics* will be selected. There will be up to three such awards, each of which will be honored at the National Mathematics Meetings in January, 2001, and receive a $1000 check and a certificate. The rules and guidelines from the MAA are :

- Those eligible are College or University teachers assigned at least halftime during the academic year to teaching a mathematical science in a public or private college or university (from two-year college teaching through teaching at the Ph.D. level), who have at least five years teaching experience in a mathematical science, and are members of the Ohio Section of the MAA. Those on approved leave (sabbatical or other) during the academic year in which they are nominated qualify if they fulfilled the requirement in the previous year.
- Nominees should be widely recognized as extraordinarily successful in their teaching, have teaching effectiveness that can be documented, have had influence beyond their own institution, and foster curiosity and generate excitement about mathematics in their students.

Nominations forms and guidelines are available on the Section web page, at the Fall meeting, or from the chair of the Section award committee: Roger Marty. Please send this form and supporting information, postmarked by December 1, 1999 to: Roger Marty, Department of Mathematics, Cleveland State University, Euclid Avenue at E 24 St., Cleveland, OH 44115-2403, 216-523-7158, Fax: 687-9366, r.marty@popmail.csuohio.edu

1999 Ohio Section Award for Distinguished College or University Teaching of Mathematics

Zaven Karian of Denison University in Granville, Ohio is the eighth recipient of the prestigious mathematics teaching award of the Ohio Section. The award was presented to Dr. Karian during the Spring meeting held at the University of Dayton.

The Teaching Award is bestowed on faculty who are widely recognized as successful teachers, have an influence in their teaching of mathematics beyond their own institutions and foster curiosity and excitement about mathematics in their students.

For the past 34 years, Dr. Karian has brought enthusiasm and scholarship into the classroom with the objective of educating students to become creative and independent thinkers. He routinely enjoys excellent student reviews and was cited as a principle reason for deepening young protégés mathematical activity. A raft of honors projects in the Doane Library at Denison are a tribute to his tireless efforts to guide students on the road to excellence. Zaven is a popular instructor because he so thoroughly engages his students in the classroom experience of solving interesting problems. Additionally, students comment on his genuine personal interest in their professional development; his commitment to students does not end at the classroom doorway.

Dr. Karian has been described by colleagues as a first rate scholar whose research directly impacts undergraduate education. He has published twenty-nine articles in refereed journals during his tenure at Denison. In addition to areas of research that include number theory, simulation, and statistics, he has investigated the impact of technological innovations on mathematical pedagogy. Moreover, ten papers have been published in the last few years several of which list Denison undergraduates as co-authors. He currently holds the Barney Chair of Mathematics in recognition of his outstanding teaching record.

In the summer of 1992 he organized and hosted a national conference on "The Use of Symbolic Computation in Undergraduate Mathematics." The proceedings of the conference were nationally distributed and Karian's efforts greatly influenced the role of symbolic computation in the curriculum on a national as well as an international level. The central objective in this approach it to develop courses and course materials through which the fundamental principles of mathematics can be taught in an active learning environment. An example of his prodigious efforts include writing over 140 computer program modules for statistics specifically tailored to supplement the popular software package MAPLE. These supplements were made available, free of charge, on the internet and now are distributed and used throughout the world.

Finally, Zaven has been exceptionally active in the MAA. He has served on the national Board of Governors for the organization as well as chaired a variety of committees, including the committee on Symbolic Computation.

Dr. Karian received his Ph.D. in 1971 from The Ohio State University in mathematics. He has been an active member of the Denison University faculty since 1964. Zaven and his wife, Susan, have traveled extensively around the world. Recent trips include Machu Piccu and the Galapagos Islands. Each year the Karians make the trip to Stratford, Ontario to enjoy the theater productions.

John Zimerman
PIO

Jerry Moreno Honored

At the Joint Statistical Meetings this summer, the American Statistical Association honored Jerry Moreno, John Carroll U., with the Founders Award. This award is the highest honor conferred by the ASA. Jerry was "recognized for his exceptional leadership in advancing quantitative literacy efforts and for service to the Cleveland Chapter and to statistical education in northern Ohio and for editorial and committee work supporting statistical education."

1999-2000
Ohio Section Officers and Committees

ELECTED OFFICERS

President
Aparna Higgins, Dayton
937-229-2103
higgins@saber.udayton.edu

President-Elect
Judith Palagallo, Akron
330-972-7402, Palagallo@uakron.edu

Past-President
Roger Marty, Cleveland State
216-523-7158
r.marty@popmail.csuohio.edu

Section Governor
Douglas Faires, Youngstown State
330-742-1805, faires@math.ysu.edu

Secretary-Treasurer
J. William Friel, Dayton 2003
937-229-3071, friel@saber.udayton.edu

OTHER OFFICERS

Newsletter Editor and Webmaster:
Thomas Hern, Bowling Green 2002
419-372-7450, hern@wcnet.edu

Department Liaisons Coordinator
Thomas Price, Akron
330-972-8352, teprice@uakron.edu

Public Information Officer:
Delene Perley, Walsh 2001
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SUMMA Coordinator:
Dennis Davenport, Miami
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419-772-2347, r-hovis@onu.edu

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David Wallach, Findlay
419-424-4624, Fax: 424-4822
wallach@lucy.findlay.edu

Archivist:
John Zimmerman, Ohio U-Lancaster
740-654-6711 x231, Fax: 687-9497
zimmerman@lancaster.ohiou.edu

COMMITTEES

• denotes committee chair. The elected officers and these committee chairs are the voting members of the Executive Committee. Terms expire at the end of the Spring meeting of the year listed. See the Bylaws.

Program Committee:

Thomas Gantner•	Dayton	2000
937-229-2101, FAX 229-2566 gantner@udayton.edu		
Dale Mugler	Akron	2001
Dwight Olson	John Carroll	2002

Committee on Curriculum (CONCUR)

Carl Spitznagel•	John Carroll	2000
216-397-4351, spitz@jcvaxa.jcu.edu		
Mark deSaint-Rat	Miami Hamltn	2001
Wiebke Diestelkamp	Dayton	2002
Felipe Martins	Cleveland State	2001
Danny Otero	Xavier	2001
Carol Schumacher	Kenyon	2000
Maria Walters	Ohio Northern	2002

Committee on Section Activities (CONSACT)

Bob Dieffenbach•	Miami Middltn	2000
513-727-3238, diefferm@muohio.edu		
Thomas Dence	Ashland	2000
John Holcomb	Youngstown St.	2001
Darrell Horwath	John Carroll	2000
Thomas LaFramboise	Marietta	2001
Preston Nichols	Wittenberg	2000
Vickie Van Dresar	Ashland	2002

Committee on Student Members (CONSTUM)

Barbara D'Ambrosia•	John Carroll	2000
216-397-4682, bdambrosia@jcvaxa.jcu.edu		
Curtis Bennett	Bowling Green	2002
David Cusick	Marshall	2001
Paula Gnepp	Cleveland State	2001
James Sellers	Cedarville	2001
Gordon Swain	Ashland	2000

Committee on Teacher Education and Certification (CONTEAC)

Cathy Stoffer•	Ashland	2001
419-289-5261, cstoffer@ashland.edu		
Phil Huneke	Ohio State	2000
David Meel	Bowling Green	2001
John Prather	Ohio U. Eastern	2002
Sherwood Silliman	Cleveland St.	2000
Delene Perley	Walsh	2001

OTHER COMMITTEES

* denotes committee chair.

Nominating Committee:

Leo Schneider*	John Carroll	2002
216-397-4481, leo@jcu.edu		
Barbara Ashton	Wittenberg	2001
John Michel	Marietta	2000

Committee on Contests:

Bill Higgins	Wittenberg	AJHSME
David Stenson	John Carroll	AHSME

ByLaws Committee

Darrell Horwath*	John Carroll	
216-397-4685, djh@jcvaxa.jcu.edu		
J. William Friel	Dayton	

Teaching Award Committee

Roger Marty*	Cleveland State	
216-523-7158, r.marty@popmail.csuohio.edu		
J. William Friel	Dayton	
Thomas Hern	Bowling Green	
Dale Mugler	Akron	

Local arrangments for meetings:

Fall 1999: Wooster
Charles Hampton, 330-263-2486,
hampton@acs.wooster.edu

Spring 2000: Marshall
Ari Aluthge, 304-696-3050
aluthge@marshall.edu

Fall 2000: Wittenberg
Brian Shelburne
bjs@wittenberg.edu

Student Paper Contest

Students are invited to participate in the sixth annual Ohio Section Student Paper Contest. A prize of $100 will be awarded, and Honorable Mentions will be awarded.

Papers present a mathematical topic of the student's choice and may contain original results or be strictly expository. Where possible, the paper should give an historical perspective of the topic along with an indication of the topic's impact on other branches of mathematics, the sciences, or engineering. Judging will be based on mathematical content and writing style, with the expectation that the highest standards of English grammar and usage will be observed.

Any undergraduate student at a college or university in the Ohio Section is eligible to enter. Students who graduated from a school in the Ohio Section in 1999 or 2000 may submit papers that were written as part of their undergraduate work.

Papers must be received no later than January 31, 2000, by Barbara D'Ambrosia, CONSTUM Chairperson, either in printed form by U.S. mail at Dept. of Mathematics and C. S., John Carroll University, University Heights, OH 44118; or in TeX or LaTeX by e-mail bdambrosia@jcu.edu. The winners will be notified by mail no later than March 31, 2000, and the prize will be awarded at the Spring, 2000 meeting. Winning papers will be on the web.

Papers must be at most ten pages long. They are to be typed and double-spaced in black-and-white using 10 or 12 pt font. Margins must be at least one inch in each direction. Papers not meeting these specifications will be disqualified. Papers should be submitted with a cover letter indicating the student's name and institution; the student's U.S. mail and e-mail addresses; the faculty advisor who supervised the writing of the paper; the student's year in school (junior, senior, etc.); and the evolution of the paper (senior project, honors thesis, summer research experience, etc.).

1999 Winners

Congratulations to the 1999 winners! You can view the winning papers on the web.

- Miracle-Lynn Conrad, Mount Union College, first place for "Fourier Series and the Gibbs Phenomenon."
- Jennifer Wolke, John Carroll U., second for "Proof by Computer."
- Cara Grisola, Mount Union College, third for "The Golden Section, Golden Ratio, and Golden Rectangle."

Barbara D'Ambrosia.

Campus News

Ashland University

Professor Robert Wendling has retired after 36 years at Ashland.
Dr. Christopher Swanson is a new Assistant Professor in Mathematics. He received his Ph.D. from the University of Michigan in May, 1999. Chris is a national project NExT fellow.

Bowling Green State University

Neal Carothers is the new Department Chair, succeeding Jack Hayden who will be on leave.
Mary Chambers, department secretary for over 30 years, retired in July.
Kanti V. Mardia of the University of Leeds is visiting as Distinguished Lukacs Professor in Fall.
David Meel received the 1999 KME Excellence in Teaching Mathematics Award.
Charles Holland will be on leave at the U. of Denver. Steve McCleary returns from leave.
Florence Ogg died May 20, 1999 at age 98. She completed the coursework for a doctorate in mathematics at U of Illinois before coming to BGSU with her husband, Dr. Frank Ogg, in 1931. She taught mathematics at BGSU, and founded the local chapter of Kappa Mu Epsilon.
R.G. Laha, died July 14, 1999 at age 68. He was a student of C.R. Rao.

Oberlin College

New tenure track member in the Department: Chris Andrews, BA, Oberlin College, 1990, PhD, Carnegie Mellon University, 1997. Chris is the son of Professor Emeritus George Andrews.

Miami University

Mark Smith is the new Department Chair. He succeeds David Kullman, who served six years.
Robert Bullock and Joe Kennedy have retired.
David Kullman, Jerry Stonewater, and Doug Ward are on leave for the fall semester.
Dr. Christopher Lennard is the 1999-2000 Distinguished Visiting Professor. He is a functional analyst from the University of Pittsburgh. He received his Ph.D. from Kent State.
Visiting Assistant Professors include: Dr. Haitham Alkhateeb (mathematics education), Dr. Lakhdar Hammoudi (algebra), Dr. Katherine Magurn (algebra), and Dr. Dimitrina Stavrova (topology).
John Bailer has been named College of Arts and Science Distinguished Educator, Sigma Xi Researcher of the Year, and Fellow of the American Statistical Association.

Ohio State - Newark Campus

Matthew Stenzel has been promoted to Associate Professor, and Howard Marcum to Professor.

University of Akron

New faculty: Dr. Leonid Berlyand as Assoc.Prof., Dr. Loren Dill as Visiting Assist. Prof., both applied mathematics, Drs. Jeyakumaran Ratnaswamy and Mustafa Rahmani visiting Instructors.
Kevin Kreider is on Faculty Improvement Leave in a collaborative effort with James Scott, NASA Glenn Research Center, in the area of Computational Aeroacoustics.
Ethel Wheland received an Ohio Board of Regents' Eisenhower Professional Development Program Award for Project "Village" and an Ohio Systemic Initiative for Project T.E.A.M.S.
S.I. Hariharan was appointed Interim Associate Dean of the College of Engineering.
Linda Saliga was granted tenure. She and Curtis Clemons were promoted to Associate Professor.
Visit the AcroTeX web site (www.math.uakron.edu/~dpstory/acrotex.html) developed and maintained by Dr. D.P. Story. It is dedicated to placing free, quality mathematical instructional materials on the web, and has attracted considerable attention.

University of Cincinnati

Prof. Cecil Craig died Nov. 17, 1998, at age 71. He was appointed instructor in 1959, and received his Ph.D. from U.C. in 1962, working under A. J. Macintyre.
Jintai Ding, Ph.D. Yale 1995 (affine Lie algebras and quantum groups) joins the department.

University of Dayton

New faculty: Joan Hart (Asst Prof) PhD at the University of Wisconsin - Madison and BS at Miami. Joan's speciality is Set Theory; Glen Lobo (Lecturer) MS in Mathematics , University of Wisconsin-Milwaukee. His speciality is Partial Differential Equations; Youssef Raffoul (Asst Prof) PhD, Southern Illinois University and BS at the University of Dayton. Youssef's speciality is Differential Equations.
Bill Friel has retired after 36 years. He plans to keep teaching one course per term.

(Governor's Report continued)

their members. There will be modest dues assessed for members of the SIGMAA, part of which will be submitted to the MAA for hosting the meetings of the SIGMAA at the national meetings. The amount of the dues and the percentage which will be required by the MAA will depend on the activity required of the SIGMAA. Not all details have been determined, and the operation of the SIGMAAs will be on the Agenda for the Board Meeting in Washington. I am particularly interested in this item because I would like to form a SIGMAA on Undergraduate Research and its Communication. This would include the activities associated with the Research Experiences for Undergraduates, the presentation of student talks and writing of papers, and any other activities that contribute to the research and communications skills of our undergraduate mathematics students. From personal inquiries at the Providence meeting I have collected the names of over 30 mathematicians who are interested in a SIGMAA of this type. If you would like to be kept informed of this activity, please send an e-mail to me.

- The MAA publications under the direction of Don Albers has again been active. Included in the new releases is a short book on the work of *Archimedes* by Sherman Stein and a book entitled *Geometry from Africa* by Paulus Gerdes. Frank Farris has been appointed as the successor to Paul Zorn as Editor of *Mathematics Magazine*. The full archive of the *Monthly* through 1994 is now available through JSTOR, an electronic system for scholarly publications. Information about the system can be found at www.jstor.org .
- The MAA will become involved with the new High School Contest in Mathematical Modeling, which is currently under development by a teams organized by COMAP. This Contest will have a one-day format and be modeled on the highly successful COMAP Modeling Contest for Undergraduates, which is run over a four-day period. It is expected that the American Mathematics Contest headquarters in Lincoln, Nebraska will handle the logistics associated with the contest, and that the team from COMAP will continue to head the problem construction and judging activities. The Modeling contest is an effort on the part of the MAA to provide a new exciting experience in mathematics for students at the high school level. If it is anything like the successful experience that our undergraduates have in the COMAP contest if should be a major attraction for students considering mathematics as a collegiate major.

I encourage you to visit the MAA web site: www.maa.org. There is a tremendous amount of interesting material at the site and it is changing constantly. In particular, take a look at the Columns and Reviews sections, which are the most popular. You might also direct your students to the careers page.

There were many other interesting items that I would be happy to share with you. I am including the Agenda for the meeting with the Web copy of this report. If you see anything on it that you would like me to discuss, please let me know.

I hope to see you at the College of Wooster on October 22-23, 1999. It should be a particularly exciting meeting, William Dunham, author of *Euler: the Master of Us All*, MAA President Thomas Banchoff, and SIAM President Gilbert Strang have all accepted invitations to speak.

Doug Faires
Section Governor

(President's Column continued)

wrong.) After all, the only computers I had worked with were the ones that you fed cards into, or the ones that printed on DEC printers! No-one in my department had a desk-top computer, and I was certainly not going to take up my students' precious learning time by asking them to spend hours on computer work! I remember asking the speaker at the coffee break what his prediction for a time line would be when we could all have computers handy enough to actually create assignments on them. He predicted five years. (He was wrong.) The other sessions at that meeting were less disturbing—many were topics I could relate to in teaching mathematics. I enjoyed the meeting enough that when the Chair of the Section said at the end, "See you at the Spring meeting," I found myself thinking, "Yes, of course!"

A year or two later, my department chair made a deal with me when I asked for funding to go to a research conference. He said he would fund me if I would agree to be the University of Dayton's department representative to the MAA. So, then I *had* to go to each Ohio Section meeting, but by then, I wanted to go. I loved the whole process—driving to the meetings in a car or van with colleagues from either my department or my department-in-law, and talking about a new course someone was devising, or a new way of dealing with the entire-class-bombed-the-first-test problem, or discussing a fun problem that one of us couldn't solve, or, yes, even talking about those danged computers and how they were pervading our lives and affecting how we taught calculus! In the departmental representatives meetings, I learned a lot about how other schools do various things. I learnt about how other mathematics departments help their majors find internships, how they evaluate teaching for tenure/promotions, how and why they administer gateway/skills tests.

In the years since, the Ohio Section meetings have meant many different things to me, as they have to many of you. I could say that I support the work of the Ohio Section because it supports my profession—that of teaching mathematics at the University/college level. That statement is true. But so are these: I enjoy hearing about the new ideas and applications other teachers present to motivate *their* students to appreciate the calculus or linear algebra or statistics-without-calculus. I enjoy "discovering" new Ohio faculty who are great presenters, and I enjoy going to talks by my "old" favorites! I enjoy hearing a well-crafted exposition from an hour-long speaker on mathematics that is either fun to hear about or new to me or both. I enjoy hearing about the new course being tried over at this other university up the highway. I enjoy hearing a talk, parts of which I can relate to my own research. I enjoy being given new problems, some of which can be made into a student talk in the future. I enjoy the book exhibits, and the meeting discounts. I enjoy the discussions that occur after many of the talks. I enjoy the stimulation from hearing about mathematics being presented differently. I enjoy observing the OhioNExT Fellows as they participate in Section activities and leadership. And I enjoy meeting my mathematical family at the coffee breaks—chatting over what's new with the people I have met twice a year for the last fifteen. And each spring, I enjoy the ritual of coaxing some students to present papers, helping them create their talks and polish them, and

then listening to them and to students from other institutions present interesting topics with the uninhibited excitement that young people bring to their work.

If you've been reading this message, nodding agreement all the way, then you feel like I do about the Ohio Section meetings, and you know why we go to them. If you haven't noticed all these wonderful things at a Section meeting yet, come and let us show you! The fall meeting promises to be splendid. Our program committee has lined up three superb expositors of mathematics: Tom Banchoff of Brown University (geometer and President of the MAA), Bill Dunham (author of, most recently, *Euler: the Master of Us All*) and Gil Strang of MIT (linear algebraist, applied mathematician and President of SIAM). There will also be a Special Session on Industrial Mathematics. We are excited about the strong presence of industrial mathematicians and SIAM members at the meeting. So, come to the meeting October 22-23 at the College of Wooster. Come with a colleague. Come with a student. See you there!

Some Section Business

Janet Roll, of the University of Findlay, has resigned as Secretary-Treasurer of the Ohio Section of the MAA, since she is busy with a rapidly growing program in Technology Management at Findlay, which she initiated. At the Executive Committee meeting this summer, we thanked Janet for her service to the Section, expressing our hope that this resignation was only an interruption of her involvement with Section activities, not a culmination of it. Bill Friel, who was elected Secretary-Treasurer Elect at the Spring meeting, has kindly consented to take over the duties of Secretary-Treasurer, and has assumed that office. He will be Secretary-Treasurer for a term of four years.

Aparna Higgins
Section President

Aparna Higgins
Section President, 1999-2000

A native of Bombay, India, Aparna received her Ph.D. in mathematics from the University of Notre Dame in 1983, and has been a member of the University of Dayton's faculty since 1984. She also spent two one-year leaves at the Naval Postgraduate School. Her dissertation was in universal algebra, written under the direction of Abraham Goetz. Although she has published in this area, her current research interests are in graph theory. She has refereed for *Algebra Universalis* and the *Journal of Graph Theory*, and she is a reviewer for *Math Reviews*.

Aparna is both passionate and vocal about her love for mathematics, talking about and promoting mathematics, and mentoring students to do mathematics and become professionals themselves. A frequent invited speaker at regional conferences, and math clubs in colleges and high schools, she has given 30 invited addresses.

Aparna has received numerous awards for teaching, including the 1995 Ohio Section teaching award and campus wide awards at Dayton. She is especially known for her involvement in research experiences for undergraduates. Not only does she involve her own students in research as they write Honors theses, and advises students who are preparing talks for presentation at meetings, but she and Harold Mushenheim established a summer program which brought a small group of students together for seven weeks of guided research followed by attending a conference where the students presented their work to the mathematical community. This effort was funded by U.D. in 1989, then also funded by the NSF in 1990 and 1991. Harold Mushenheim continued this project in 1992 and 1993.

In 1999 she organized a poster session on undergraduate research at the national meetings, and she serves on the CUPM Subcommittee on Undergraduate Research. She has presented workshops on conducting undergraduate research at the Section and national meetings. She continually coaxes her students to attend and speak at meetings, and helps with the logistics to get them there. She is a founding member of the MAA Committee on Student Chapters and served as chair. Aparna says that these activities, while being a service to her students and the profession, have also influenced her own research direction towards graph theory and pedagogical issues.

She is currently codirector of the national Project NExT, and serves on the MAA Task Force on Institutional Members, National Meeting Site Selection Committee and Coordinating Council on Meetings. She has served on the MAA committees on membership, choosing speakers for national meetings, summer meetings, Math Horizons Advisory Board, Advisory Committee for Focus and MAA Online, and Committee on Sections.

An active member of the Ohio Section, besides now serving as President, she has served on CONSTUM, helped organize three Section meetings at Dayton, been Department Rep/Liaison many years, and made numerous presentations at Section meetings and OhioNExT.

Aparna fills her spare time by enjoying her kids' activities, reading, and cooking Indian food. She is married to Bill Higgins of Wittenberg University, who shares her love of teaching mathematics (and who always wins in Trivial Pursuit games against her). They have two sons, Prakash (9) and Vijay (6). Also very much a part of her life are two step sons. Patrick graduated from Oberlin College this spring with a mathematics/economics double major, and he will be a graduate student at Cornell University in mathematics. John will be a junior English major at Northwestern University.

Miami Conference and Pi Mu Epsilon Student Conference

The Annual Mathematics and Statistics Conference at Miami University will be held October 15-16, 1999. This year's theme is "Experimental Mathematics," and featured speakers include Jonathan Borwein (Simon Fraser University), David Griffeath (University of Wisconsin) and Doug Bowman (University of Illinois).

Anyone wishing to contribute a paper or receive more information about the conference should contact Professor Charles Holmes, Department of Mathematics and Statistics, Miami University, Oxford, Ohio 45056, or call (513) 529-5818 or send e-mail to holmescs@muohio.edu. Information is also posted on the web at miavx1.muohio.edu/~mstcwis/conferfall.html .

The Ohio Delta Chapter of Pi Mu Epsilon will hold its Student Conference on October 15-16. Send abstracts or requests for information to Professor Milton Cox at the above address or by phone (513) 529-6648 or e-mail: coxmd@muohio.edu.

OhioNExT

A full program of OhioNExT activities will be held preceding the Fall meeting. This workshop will be the sixth since the founding of the Ohio Section's local version of the national Project NExT for new faculty members. The Ohio Section will provide housing and meals during the workshop for NExT Fellows during their first two years in the program. Others will be funded by their own departments. Activities begin with a banquet at 7:00 p.m. Thursday evening. Following the banquet, there will be a freewheeling discussion about issues in teaching and professional development.

Friday morning, workshop activities begin. Leading off will be short "teaching vignettes" presented by OhioNExT fellows about experience in teaching. Following the short talks, there will be two major workshop sessions. David Kullman (Miami) will present the first workshop session. Dave's title is "Citizenship in Your Department and College." The talk will touch on tenure matters, but will examine broader issues. Dave is the immediate past chair of the mathematics department at Miami. He has served the Ohio Section as Newsletter Editor, President, and Governor. John Ramsay (Wooster) will present the second workshop. He will discuss Wooster's Applied Mathematical Research Experience (AMRE) program. In the summer, student teams and faculty advisors from the college are joined with a (usually local) business, industry, or agency (client) to get experience in the practical applications of mathematics and computer science which the classroom cannot provide.

Eighteen NExT fellows and three mentors took part in the NExT workshop at last spring's meeting at the University of Dayton. Short talks by three fellows on their mathematical research activities were given by Laura Gross (Akron), Vic Perera (Kent State), and Maria Walters (Ohio Northern). There were two major sessions. Barbara Ashton (Wittenberg) presented a workshop titled "New Course Design." She discussed the process involved in the design of a new mathematics course, including how to find the appropriate materials and how to design the syllabus. Andy Sterrett (Prof. Emeritus, Denison) presented the second workshop, titled "Career Information for the Mathematical Sciences." He discussed source material about mathematical careers, including the book he edited for MAA called "101 Careers in Mathematics." →

There are now more than thirty OhioNExT fellows, and about half are also national NExT fellows. To be eligible, the only requirements are that a faculty member be in her/his first four years of teaching and have a strong commitment to teaching undergraduates. Applications for new OhioNExT fellows are now being accepted. Details and application materials are on the web, or contact Barbara Ashton , bashton@wittenberg.edu.

John Michel

Student Activities at the Spring Meeting

At the meeting last March, undergraduate and graduate students presented 37 talks. Total student participation in the meeting was more than twice that number. Students are a vital part of Section activities, and we hope everyone who came had a good time. In addition to the student talks and other addresses, everyone had a chance to juggle with Ron Graham (see pictures at www1.jcu.edu\math\constum\juggle.htm). Fred Rickey presented a microcourse: "A Quick History of the Calculus." Thanks again to all of the UD students who acted as hosts and provided behind-the-scenes support!

Now is the time to start encouraging students to give a talk in the spring. As we all know, the more preparation that goes into a talk, the better the presentation will be. Students who are interested in speaking at the spring meeting should work with a faculty member who will help them choose a mathematical topic and assist them in developing and polishing their talks.

Barbara D'Ambrosia

Thomas Banchoff received his BA at Notre Dame in 1960 and his Ph.D. at Berkeley in 1964. After two years at Harvard and one year at the Univ. of Amsterdam, he came to Brown where he has been for 32 years, with sabbaticals at the UCLA, the IHES outside of Paris, the Technical University of Denmark, Notre Dame, and the Geometry Center. In 1996 he received the MAA *Deborah and Franklin Tepper Haimo Award for Distinguished College or University Teaching of Mathematics*, and in 1998, the Professor of the year in Rhode Island award from the Carnegie Foundation. In 1999, he was named a Carnegie Fellow at the Center for the Scholarship of Teaching and Learning, and became President of the MAA.

William Dunham, who received his B.S. (1969) from the University of Pittsburgh and his M.S. (1970) and Ph.D. (1974) from Ohio State, is the Truman Koehler Professor of Mathematics at Muhlenberg College, Allentown, PA. Although trained in general topology, Dunhan's interests soon shifted to the history of mathematics. He received grants from the National Endowment for the Humanities to direct summer seminars on math history at Ohio State, and he has spoken on historical topics at national and regional mathematics meetings as well as at the Smithsonian Institution, on NPR's *Talk of the Nation/Science Friday*, and on the BBC. His expository writing was recognized with the MAA's *George Polya Award* in 1991 and the MAA's *Trevor Evans Award* in 1997, and he received the *Award for Distinguished College or University Teaching of Mathematics* from the MAA's Eastern Pennsylvania and Delaware Section in 1994.

Dunham combined his historical and mathematical interests by authoring *Journey Through Genius: The Great Theorems of Mathematics* (John Wiley, 1990). A second book, *The Mathematical Universe* (John Wiley, 1994) received the American Association of Publisher's award as the Best Mathematics Book of 1994. His most recent work, *Euler: The Master of Us All*, has just been published by the MAA as part of their Dolciani Mathematical Exposition series.

Gilbert Strang was an undergraduate at MIT and a Rhodes Scholar at Balliol College, Oxford. His Ph.D. was from UCLA and since then he has taught at MIT. He has been a Sloan Fellow and a Fairchild Scholar and is a Fellow of the American Academy of Arts and Sciences. He is a Professor of Mathematics at MIT and an Honorary Fellow of Balliol College.

Professor Strang has published a monograph with George Fix, *An Analysis of the Finite Element Method*, and six textbooks: *Introduction to Linear Algebra* (1993, 1998); *Linear Algebra and Its Applications* (1976, 1980, 1988); *Introduction to Applied Mathematics* (1986); *Calculus* (1991); *Wavelets and Filter Banks*, with Truong Nguyen (1996); *Linear Algebra, Geodesy, and GPS*, with Kai Borre (1997).

He is President of SIAM during 1999 and 2000. His web page is http://www-math.mit.edu/~gs

Fall Ohio Section Meeting
Preliminary Program
With SIAM Great Lakes Section
October 22-23, 1999
College of Wooster

All sessions are open to all registrants.

Friday

Noon-4:30	Registration & Book Exhibits
12:15-1:15	Committee Meetings (CONSTUM, CONSACT, CONCUR, CONTEAC, PROGRAM)
1:30-1:45	Welcome & Announcements
1:45-2:45	**Invited Address:** "Interactive Geometry on the Internet" Thomas Banchoff Brown University and President of MAA
2:45-3:15	Coffee Break
3:15-4:45	Contributed Paper Session Executive Committee; Chairs Meeting
4:45-5:45	Special Session on the Mathematical Education of Middle School Teachers Organizer: David Kullman, Miami University
6:00-8:30	Banquet and Social

Saturday

8:00-10:00	Registration
8:15-9:00	MAA Department Liaison Meeting, Exec. Com.
9:00-9:15	Welcome & Announcements
9:15-10:15	**Invited Address:** "Euler's Sums and Euler's Crumbs" William Dunham, Muhlenberg College
10:15-10:45	Coffee Break
10:45-11:45	Special Session on Industrial Mathematics: David Field, General Motors, and Ed Moylan, Ford Contributed Paper Session
12:00-1:00	**Invited Address:** "Small World Networks and Partly Random Graphs" Gilbert Strang, MIT, and President of SIAM

Check the web for updates (www.bgsu.edu/departments/math/Ohio-section/).

Interactive Geometry on the Internet
Thomas Banchoff

Modern advances in technology, especially the Internet, are changing the way we do mathematics, the way we communicate it, and the way we explore it with our students. This talk will describe courses in multivariable calculus, linear algebra, geometric theories, and differential geometry of curves and surfaces using new graphics and communication software. Also featured will be a totally electronic journal and a virtual art gallery of surfaces beyond the third dimension.

Call for Contributed Papers

Fifteen-minute presentations on any topic of general interest in mathematics or related areas are encouraged. Reports on projects, research announcements or anything you believe would be of interest to those in attendance are welcome.

Reports related to classroom innovations and projects will constitute the *Kenneth Cummins Teacher's Corner*. Contributors for all sessions should send a title and a brief abstract by October 13, 1999, preferably by e-mail or FAX, to: Thomas Gantner, Department of Mathematics, University of Dayton, Dayton, OH 45469-2316; gantner@udayton.edu; or FAX: (937) 229-2566. The contributed paper program will be posted on the web page prior to the meeting.

Partly Random Graphs and Small World Networks
Gilbert Strang

It is probably true that any two people in the US are connected by less than six steps from one friend to another. What are models for large graphs with such small diameters? Watts and Strogatz observed (in *Nature*, June 1998) that a few random edges in a graph could quickly reduce its diameter (longest distance between two nodes). We try to analyze this. We also study a related model, which starts with n edges around a cycle (large diameter) and adds n edges around a second (but now random) cycle. The average distance between pairs becomes nearly A log n + B. The eigenvalues of the adjacency matrix are surprisingly close to an arithmetic progression; for each cycle they would be cosines, the sum changes everything. We will discuss some of the analysis (with Alan Edelman and Henrik Eriksson at MIT) and also some applications. We also report on the surprising eigenvalue distribution for trees (large and growing) found by Li He and Xiangwei Liu.

Mathematical Mindsets and Toolsets
Ed Moylan

The major problems and opportunities in business and industry always are initially ill-defined. The ability to identify overall structure and interrelationships among variables is a valued result of a mathematics education. The ability to interpret key information and communicate persuasively is a valued result of working within a multi-disciplined environment. Examples will be cited and student learning recommendations offered.

Euler's Sums and Euler's Crumbs
William Dunham

Leonhard Euler (1707-1783) was a mathematician of the highest rank, the awesome quantity of whose work is matched only by its extraordinary quality. In this talk, we sample from the Eulerian opus by considering: his first venture into analytic number theory; the derivation of *Euler's Identity* via integral calculus; and a strange and wonderful theorem about the geometry of quadrilaterals. Although these represent just a fraction of his total output, they reveal something of the power and insight of this towering figure from the history of mathematics.

Assessing the Quality of Triangulations
David Field

Many applications of mathematics rely on collections of triangles called meshes. These meshes provide many opportunities to apply mathematics in their methods of construction and in evaluations of the constructed meshes. This talk emphasizes the often neglected latter aspect of generating meshes.

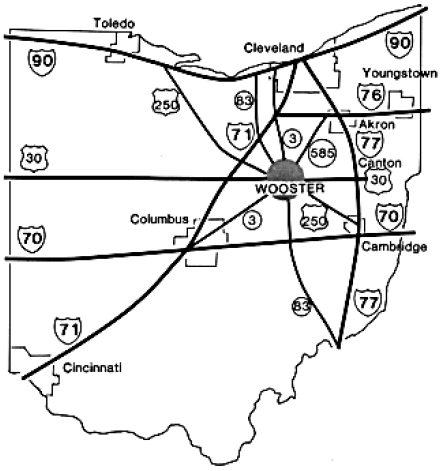
Directions and Parking

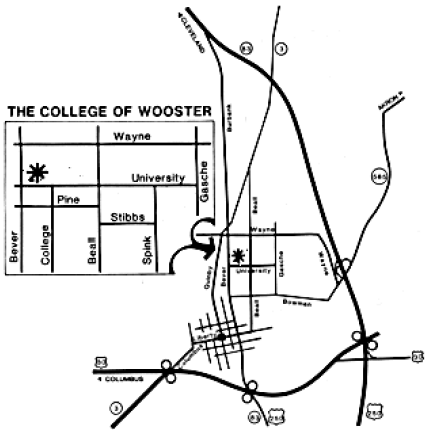
For those coming from the Cleveland area (approximately 55 miles to the northeast) take Interstate 71 South to Route 83 (Wooster exit). Proceed south on Route 83 for 14 miles to Wooster. Once in Wooster, veer right onto Burbank Road. Continue on Burbank through four traffic lights until it becomes Bever Street. The campus is on your left.

For those coming from the Columbus area, take Interstate 71 North to Route 30 East for approximately 28 miles into Wooster. Exit onto Madison Avenue. Turn right off of the exit and proceed into Wooster on Bever Street. Follow Bever Street approximately one mile up the hill. The campus is on your right.

From Akron, take Interstate 77 South to Route 21 South. Take Route 21 to Route 585. Go west for 21 miles into Wooster. Turn right onto Wayne Avenue immediately after passing over the Ohio 83 bypass. Continue up the hill past the stop light until you reach the stop sign at Bever Street. Turn left on Bever Street. The campus is on your left.

Follow signs for parking and registration.





The City of Wooster and Surrounding Area

The city of Wooster was founded in 1807 in the Killbuck Valley, fifty-five miles southwest of Cleveland, Ohio and ninety miles northeast of Columbus, Ohio. With a population of 23,000 in the city and approximately 100,000 in Wayne County, Wooster is the county seat, the home of both The College of Wooster, The Ohio Agricultural Research and Development Center, Ohio State's Agricultural Technical Institute, and the world headquarters of Rubbermaid, Inc. The largest population of Old Order Amish is located just to the south of Wooster, featuring shops, crafts, museums, and restaurants.

Places to Stay

Make your own reservations with the motels listed below. Identify yourself as attending the Ohio Mathematicians meeting at the College of Wooster. Prices below do not include tax.

- AmeriHost Inn - east 330-262-5008
  1.5 miles east of town on US-30
  2 beds, 1 to 4 in a room, $62
- AmeriHost Inn - north 330-345-1500
  1.5 miles north of campus on Ohio Rt. 3
  2 beds, 1 to 4 in a room, $65
- EconoLodge 330-264-2883
  1.5 miles east of town on US-30
  2 beds, 2 people $56.70
- Hampton Inn 330-345-4424
  2 miles north of campus on Ohio Rt. 83
  2 beds, 1 to 4 in a room $72

Banquet

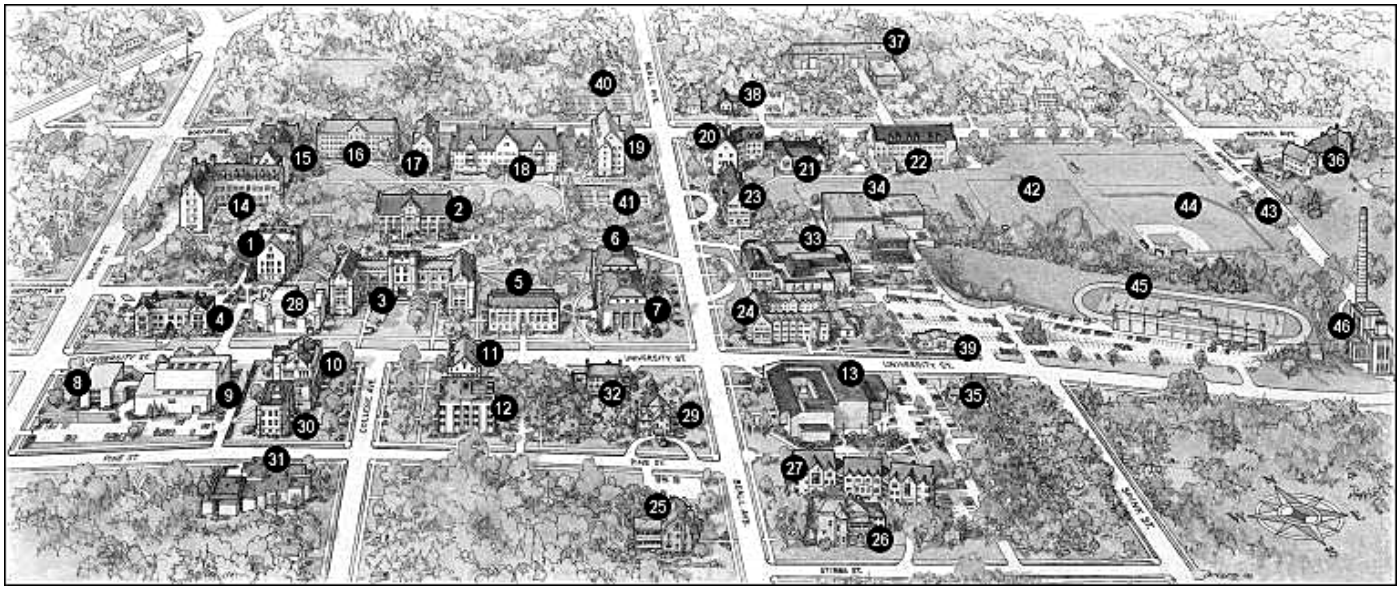
The Friday evening banquet is a buffet. Space is limited to 64, so best to reserve early. Cost is $17. Menu:

Deluxe mixed green salad
Italian style stuffed chicken breast
Honey glazed carrots
Green beens almondine
Classic rice pilaf
Triple chocolate torte or Apple crisp
Coffee, decaf, or hot tea

Golf Outing

As an additional feature for golf nuts in the Ohio MAA, a golf outing is planned for 2 pm Saturday afternoon at Hawk's Nest, one of Ohio's best public courses, which is 5 miles north of Wooster on Ohio Rt. 3. *First Come First Serve* for a limited number of spots (16-20). Cost: 9 holes $14, with cart $20; 18 holes $27, with cart $38. Contact Chuck Hampton.

The College of Wooster



Taylor Hall is #4, at Bever St. and University.

Founded in 1866 as one of the first coeducational colleges in the country, The College of Wooster is a private, independent, residential college of the liberal arts and sciences, which is affiliated with the Presbyterian Church. The campus encompasses 350 acres with 37 major buildings. 1,700 students, about equally divided between men and women, choose among 39 majors leading to BA degrees offered by a faculty of 148. Students come from across the United States and over 29 countries (nearly 10% are internationals) and 90% receive financial aid.

The Mathematical Sciences Department has seven full time faculty members and offers majors in both computer science and mathematics, graduating about 20 students each year. The Department shares Taylor Hall with the Physics Department and the Academic Computing Center. The staff welcomes the Ohio MAA to our campus once again.

Please see the www.wooster.edu website for further information.

Clip or photocopy, or use the form on the meeting web page.

MEETING REGISTRATION FORM

Name: _____ E-mail: _____

Institutional Affiliation: _____ Phone: _____

Address:_____

City: _____ State: _____ Zip: _____

Amount enclosed: _____ Registration Fee ($15.00 for full time, $5.00 for others, waived for students)

_____ Banquet ($17.00 each)

_____ Total

Please check one of the following: ___University faculty ___Four-year college faculty ___Two-year college faculty ___Graduate Student ___High school teacher ___Industry/Government _____Other

Mail the completed form, along with your check (Payable to "MAA Ohio Section"), to: Prof. Charles R. Hampton, Mathematical Sciences Department, The College of Wooster, Wooster OH 44691, Phone: 330-263-2486. Reservations also accepted by email: hampton@acs.wooster.edu

Make banquet reservations by October 15, but earlier is better since banquet tickets may sell out. Early registration will help those making arrangements.

Calendar

Ohio Section

October 22-23, 1999, College of Wooster.
OhioNExT, Oct. 21-22.

April 7-8, 2000, Marshall University, Huntington WV

Summer Short Course, 2000, Cedarville College, Presenter: David Bressoud

October 27-28, 2000, Wittenberg U., Springfield.

Summer Short Course, 2001, John Carroll Univ., Cleveland

National MAA-AMS

January 19-22, 2000, Annual Joint Meetings, Washington, DC, also with SIAM.

August 3-5, 2000, Mathfest, UCLA

"Mathematical Challenges of the 21st Century", AMS, August 7-12, 2000, UCLA.

January 10-13, 2001, Annual Joint Meetings, New Orleans

January 6-9, 2002, Annual Joint Meetings, San Diego

Other

OCTM, Sept. 23-25, 1999, Dayton Convention Center

Ohio Statistics Conference, October 8, 1999, with Ohio State Statistics Silver Ann. Conference, October 7-8, 1999. Ohio State U.

Allegheny Mountain Section, October 10, 1999 - Indiana U. of Penn.

Miami U. Annual Fall Conference, "Experimental Mathematics", and Pi Mu Epsilon Student Conferrence, October 15-16, 1999. Oxford OH

Indiana Section, October 16, 1999, Valparaiso U.

AMATYC, November 18-21, 1999, Pittsburgh, PA

Kentucky Section, March 31 - April 1, 2000, Eastern Kentucky U.

Allegheny Mountain Section, April 7-8, 2000, CC of Allegheny College, Pittsburgh, PA

NCTM, April 13-16, 2000, Chicago

Michigan Section, May 5-6, 2000, Central Michigan U., Mt. Pleasant.

Indiana Section, Spring 2000, Earlham C., Richmond, IN.

SIAM Annual Meeting, July 10-14, 2000, Puerto Rico

Complimentary copies of this newsletter are being distributed to people who would be interested in Ohio Section activities. By joining the MAA, you will get your own copy of the newsletter. If you are not an MAA member, look at the web page: www.maa.org/mbsvcs/individual.html. MAA Departmental Liaisons also have membership information.

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Bowling Green OH 43403-0221

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Give to someone in mathematics.

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Time Value Material - Please do not delay!