



OHIO FOCUS

The Ohio Section Newsletter

Volume 6

Spring, 2002

Number 10

Spring Meeting at Xavier, April 5-6



Cintas Center

The Annual Meeting of the Section will be held in the Schiff Family Conference Center at the new Cintas Center on the campus of Xavier University in Cincinnati. It is an ideal facility for our meeting.

This meeting traditionally features student talks and activities. See page 9 for more detail. The meeting will be preceded by the Ohio Project NeXT Workshop. Details on page 7.

The annual business meeting Friday evening will include the presentation of the Section teaching award and the election of officers. The report of the Nominating Committee is below left.

The program features Jeffrey Weeks on "Measuring the Universe," Suzanne Lenhart, who is President of the *Association of Women in Mathematics*, and Thomas Gantner, retiring Section President. Please get your ideas ready now to share as a contributed paper. Deadline for submission is March 22.

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Report of the Nominating Committee

The Nominating Committee is pleased to present to you the following slate of candidates—each of whom has already served the Section in several capacities, and each of whom you will recognize as a familiar and friendly figure at Section meetings. This year, in addition to electing a President-Elect and someone to serve on the Program Committee for three years, the Section needs to elect a Secretary-Treasurer-Elect, and someone to serve on the Program Committee for a two-year period.

The two-year slot on the Program Committee comes about since one of the Program Committee members left the Section. Although the Nominating Committee was empowered by the Section by-laws to appoint someone to fill the vacancy on the Program Committee, the by-laws also state that the Chair of the Program Committee can be held only by an elected member. The Nominating Committee decided
(Continued on page 3)

New Newsletter Editors

My five-year term as editor of the Section newsletter ends with this issue. Section President Tom Gantner has appointed new editors. They are William Higgins and Brian Shelburne of Wittenberg University. The volume number for their new term will be seven.

I will continue as webmaster until the end of the year, at which time Tom Price, University of Akron, will take over.

Please send copy for Fall to both me (for the web) and Brian and Bill for the newsletter. See page 2 for details.

The deadline for Fall 2002 issue is **Sept. 1, 2002.**

I have enjoyed my tenure in these jobs. Please be as kind to these guys as you have been to me.
Thomas Hern

Mathematics Awareness Month

April is MAM. The theme this year is "Mathematics and the Genome." See www.maa.org/news/mam.html for what you can do.

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Section Governor's Report

Many Ohio Section members attended the national mathematics meetings in San Diego. It was a great meeting! The MAA Board of Governors met on Saturday before the conference and, led by President Ann Watkins, covered its 90-page agenda within the 8-hour limit. Ann's President's report included many laudatory remarks concerning her visit to our Ohio Section meeting last fall.

Locations for two additional summer MathFests were approved. These are the future MAA meeting sites: Burlington, VT, August 1-3, 2002 [Thursday-Saturday]; Baltimore, MD, January 15-18, 2003 [Wednesday-Saturday]; Boulder, CO, July 31-August 2, 2003 [Thursday-Saturday]; Phoenix, AZ, January 7-10, 2004 [Wednesday-Saturday]; Providence, RI, August 12-14, 2004 [Thursday-Saturday]; Atlanta, GA, January 5-8, 2005 [Wednesday-Saturday]; Albuquerque, NM, August 4-6, 2005 [Thursday-Saturday]; San Antonio, TX, January 12-15, 2006 [Thursday-Sunday]; New Orleans, LA, January 4-7, 2007 [Thursday-Sunday].

I took special interest in the very limiting criteria used to select sites for MathFests: sufficient hotels, a university campus with at least 500 air-conditioned dorm rooms, and a convention center with appropriate space must all lie within a circle of diameter 2 miles. The site selection committee says that few places meet these criteria, and asked us to bring additional suitable sites to their attention.

Next year dues will increase 4% for members in all categories except students. Student dues will remain at \$20 for which they will receive the Focus and Math Horizons. For \$10 more, students can add a subscription to the Monthly, College Math Journal, or Math Magazine. MAA's paid membership is about 20.6K. Dues and subscriptions account for about 47% of the income.

Currently the College Mathematics Journal has an annual submission of fewer manuscripts for main articles than the other MAA journals.

The MAA office has converted all of the membership data to TIMMS, their newly purchased association management system. This should lead to more accurate membership information and better access to that information. Members are cautioned, however, that changing personal data in the Combined Membership List online does not affect a change in the MAA

records; a separate call or email to the MAA is necessary. As the staff in the MAA headquarters becomes more familiar with TIMMS, more of its features will be utilized.

The MAA is seeking Visiting Mathematicians who have full financial support from their institutions for one or both terms of the 2002-2003 academic year. Areas of expertise being sought include: teacher preparation, public policy, and on-line publishing.

PREP = Professional Enhancement Programs. These are NSF-funded workshops to give college teachers additional expertise in some area. For example, a two-summer program for mathematicians on "Preparing Mathematicians To Educate Teachers" June 9-20, 2002 and June 8-19, 2003 is sponsored by PREP. For further information on the variety of PREP programs see: www.maa.org/pfdev/prep/prep.html

Our MAA SUMMA office assists the Benjamin Banneker Association in making reconditioned Texas Instruments calculators available at extremely low cost to schools, districts, and professional development projects serving minority or economically disadvantaged students. The deadline for submission of applications to the MAA SUMMA office is April 2002.

A long discussion at the Board meeting concerned the report of the Science Policy Committee. I learned that there are two MDs in each congressional district who contact their representative within 48 hours whenever issues arise on which their organization has formulated a policy. We thought it was not as necessary to mobilize the MAA for mathematical issues, but perhaps in this decision we are hurting ourselves.

The Board approved changes in by-laws for various sections. The Metro New York Section has changed the term of office for their President-Elect and President to three years because they had annual difficulties finding nominees. I hope the members of the Ohio Section will remain generous with their time so that we can continue to have a large number of our members lead us.

Jerry Porter resigned as MAA Treasurer. The Board voted to replace him with John Kennelly, who has just begun serving a five-year term.

Our new Section President will be appointing new committee members shortly

after our spring meeting in Cincinnati. All Section committee members should familiarize themselves with the MAA Conflict of Financial Interest Policy, which is posted on MAA Online at www.maa.org/aboutmaa/handbook/cfi_policy.html

The MAA continues to add to its outstanding list of publications. Be sure to check the MAA book display at our meeting at Xavier University in Cincinnati April 5-6. The prices are discounted, and our Section will also profit from the purchases you make there.

Leo Schneider

Special thanks to Jon Dunlap, BGSU, for assistance with the production of this newsletter.

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. Newsletters are sent using labels provided by the MAA.

Editor:
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Deadline for next newsletter is
Sept. 1, 2002
Email copy preferred.

Please send copy to me (above) for the web and to the new newsletter editors:
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This information will also be posted, and updated, on the web page: www.maa.org/Ohio.

President's Message

The spring Ohio Section meeting this year will be in Xavier University's new Cintas Center, which provides a very nice setting for the meeting. Cintas Center has conference facilities similar to those that were available at Bowling Green State University last year. It has a number of rooms for small sessions, as well as a large room for the main sessions, an adjacent room with banquet facilities, and ample space for book exhibits and the registration desk. The only drawback is the lack of availability of "free" housing for students, a problem that has been in the making for the last few years at our spring meetings. Nevertheless, please encourage your students to attend the meeting and participate in the parallel paper sessions.

The next major event, following the spring meeting, will be the Ohio Section Summer Short Course at the University of Dayton on June 27-29, 2002. The course will be given by Phil Straffin of Beloit College, and it will be an introduction to game theory, a topic on which Phil has lectured and written extensively over the years. This topic is especially timely following the release of the award-winning movie *A Beautiful Mind*, which is based on some of the major events in the life of John Nash, who won the Nobel Prize in Economics for his ground-breaking work in game theory in the 1950s. By the way, Keith Devlin devotes his December 2001 and January 2002 *Devlin's Angle* columns on the MAA web site to this movie. So mark your calendar and come to Dayton to learn about game theory and some of its applications.

On October 31, 2001, I represented the Ohio Section at a luncheon in the atrium of the statehouse in Columbus at which the Ohio Mathematics and Science Coalition launched their vision document: *Finding the Solution: A Call for Collaboration (Bringing Mathematics and Science Education in Ohio Into the 21st Century)*. This document may be downloaded from OMSC's web site which may be reached through the link on the Ohio Section's home page, or directly from: <http://www.oai.org/OMSC/New.html> David Kullman, our representative to OMSC, met with the Executive Committee this summer to critique the draft of this document, and several of our comments were taken into account in the final version.

Also, very recently, the Ohio Department of Education has begun to form Con-

tent Advisory Committees to help with the implementation of Senate Bill 1's new assessment system. The Ohio Section has been invited to submit nominations for members of these committees. The first committee to be formed is at the K-2 level, and I have nominated two people for membership on it. The Ohio Graduation Test committee will be formed this spring, followed later with committees on the achievement tests for grades 4 and 7. This is a wonderful opportunity for college-level mathematics faculty to become involved in mathematics education at the school level. I would encourage anyone interested in the latter two committees (grades 4 and 7) to let me know of your interest in being nominated.

Finally, my term as President comes to a close at the end of the spring meeting, and the new President, Harold Putt of Ohio Northern University, will take the helm. I have certainly enjoyed working with all of the officers, committee members and others during my term, and am especially appreciative for the willingness of Ohio Section members to serve the section in numerous capacities. Please continue the good work, and encourage your colleagues, as well as your students, to come to the spring meeting at Xavier University.

Thomas Gantner

(Nominating, cont. from page 1)

not to hold a special election during the year, and agreed to present to the Section members two names for membership on the Program Committee, one to fill the vacant two-year spot, and one to begin the standard three-year term.

For President-Elect, we nominate **Dale Mugler** of the University of Akron. Dale Mugler has done most of his mathematical work with people who have been active in the MAA. He did his graduate work at Northwestern University in complex function theory under the direction of R.P. Boas, a former editor of the American Mathematical Monthly and President of the MAA. Dale taught for fourteen years at Santa Clara University, where he worked with G. A. Alexanderson, a recent President of the MAA. Dale has taught at the University of Akron since 1989. Dale's honors include a von Humboldt Research Fellowship, during which Dale researched digital signals and signal reconstruction in Germany, five NASA-ASEE faculty fellowships, two of which involved work on

a mathematical model of inner ear acceleration-detecting organs, and the 1993 Ohio Section Award for Distinguished College or University Teaching. He has served the Ohio Section as a member and chair of CONSTUM and the Program Committee. He also served on the MAA Committee on Undergraduate Student Activities and Chapters and on the MAA Task Force that updated the "Guidelines for Programs and Departments in Undergraduate Mathematical Sciences."

For the two-year slot on the Program Committee, we nominate **Carl Spitznagel** of John Carroll University. Carl recently completed a term of four years on CONCUR, serving as chair for two years. He did his graduate work at the University of Kentucky, where he wrote his dissertation on the congruence lattices of algebraic semigroups. He has served as a consultant for the 1996-97 Project NExT Fellows, and has been a frequent presenter of papers and workshops on various uses of technology in collegiate mathematics education.

For the three-year slot on the Program Committee, our nominee is **Vickie J. Van Dresar** of Ashland University. She received her M.S. from the University of Akron and her Ph.D. from the University of Northern Colorado. Her research areas concern the teaching of mathematics and the preparation of future mathematics teachers. Vickie has served on CONSACT since 1999 and has chaired the committee since 2000.

J. William Friel of the University of Dayton, is our nominee for the office of Secretary-Treasurer-Elect. Bill Friel has been Secretary-Treasurer of the Ohio Section since July 1999. In 1987-88, he served the Section as President. Bill has also served as chair of local arrangements for three Section meetings held at the University of Dayton, where he has taught since 1963, first as a full-time faculty member, and since July 1999, as a part-time faculty member.

At the business meeting at the Section's April 2002 meeting, we will hold elections for the offices described above in accordance with Section by-laws. The Nominating Committee thanks you for your consideration of these nominees and thanks the nominees for their willingness to serve the Section.

Aparna Higgins
Roger Marty
Leo Schneider

2001-2002

Ohio Section Officers and Committees

ELECTED OFFICERS

President

Thomas Gantner, Dayton
937-837-1152, Fax: 937-229-2566
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President-elect

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Leo Schneider, John Carroll 2003
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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:

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216-397-4372, olson@jcu.edu
Sherri Brugh Mount Union 2003
TBA

Committee on Curriculum (CONCUR)

Mark deSaint-Rat • Miami Midtwn 2004
513-727-3331, desainme@muohio.edu
Wiebke Diestelkamp Dayton 2002
Maria Raiti Ohio N. 2002
David Hahn Malone 2003
Charles Hampton Wooster 2003
Rajappa K. Asthagiri Miami 2004
Jon Stadler Capital 2004
Christopher Swanson Ashland 2004

Committee on Section Activities (CONSACT)

Vickie Van Dresar • Ashland 2002
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vvandres@ashland.edu
Irina Chernikova Akron 2004
Ann Ritchey Mt. Union 2004
Donald Hunt Ohio Northern 2004

Committee on Student Members (CONSTUM)

Curtis Bennett • Bowling Green 2002
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Judith Holdener Kenyon 2003
Gordon Swain Ashland 2003
Deborah Denvir Marshall 2004
Darren Wick Ashland 2004

Committee on Teacher Education and Certification (CONTEAC)

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419-289-5261, cstoffer@ashland.edu
John Prather Ohio U. Eastern 2002
Sherwood Silliman Cleveland St. 2003
Linda Saliga Akron 2003
Phil Blau Shawnee State 2004

OTHER COMMITTEES

* denotes committee chair.

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937-229-2103
higgins@saber.udayton.edu
Roger Marty Cleveland St. 2003
Leo Schneider John Carroll 2002

Committee on Contests

Bill Higgins Wittenberg AJHSME
David Stenson John Carroll AHSME

ByLaws Committee

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

Teaching Award Committee

Judith Palagallo (PP) * Akron
Aparna Higgins Dayton
Jerry Moreno John Carroll
J. William Friel (ST) Dayton

Local arrangements for meetings:

Spring 2002 Xavier
Danny Otero
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Fall 2002 Kent State, Trumbull
Vic Perera, 330-675-8813
pererav@trumbull.kent.edu

Spring 2003 Ohio State
Phil Huneke, 614-292-7844
huneke@math.ohio-state.edu

Campus News

Ashland University

Gordon Swain has been appointed chair of the Department. Gordon was also honored this Spring with Ashland University's *Taylor Excellence in Teaching Award*.

Tom Dence received the University's *Mentor of the Year* award for his work with Kim Groshong.

Darren Wick and Vickie Van Dresar were co-authors of a \$10,000 TIMS grant funded through the University of Akron.

Cathy Stoffer co-authored a \$61,500 Eisenhower Grant.

Cleveland State University

Two hirings in Mathematics Education: Carol Phillips-Bey and Naomi Klarreich. Carol has an MA degree in Mathematics from Cleveland State University (1989) and a Ph.D. degree in Curriculum and Instruction from Kent State University (1999). Previously employed at Baldwin Wallace and CSU. She is interested in equity in mathematics accessibility and mathematics learning styles. Naomi has an MS (1992) and a Ph.D. in Mathematics (1996) from Rutgers University. Previously worked as a post-doc at CWRU. Interests include Geometry and Mathematics Education.

Retirement: Tom Hungerford.

Leaves: Pratibha Ghatge (year), Bhushan Wadhwa (fall), Roger Marty and Keith Kendig (spring)

Keith Kendig received the Lester R. Ford Award for expository articles in the MAA journals.

College of Wooster

New member of the math faculty: Visiting Assistant Professor Jon Breitenbucher. Jon completed his Ph. D. at Ohio State in 2001 and is a Wooster graduate.

College of Mount St. Joseph

Scott Sportsman has been awarded tenure.

Lisa Elderbrock Rome joins the faculty in Fall 2002 in a tenure-track position.

John Carroll University

Nancy Campbell and Daniel Palmer are on leave during Spring.

Miami-Middletown

New instructor: Leah Gustin, MAT, Bowling Green State University.

Ohio U Center for Ring Theory

The Ohio University board of trustees recently established a Center for Ring Theory and Its Applications including faculty from Athens and the regional campuses at Lancaster and Zanesville.

The Center is sponsoring a public lecture on March 5, 2002, by Professor Joachim Rosenthal of University of Notre Dame. The talk will be entitled "The three challenges of Claude Shannon." All interested are welcome to attend. The talk will be tutorial in nature and should be accessible to a wide audience including advanced undergraduate students. In addition, Professor Rosenthal will present a series of tutorial lectures on topics concerning applications of ring and semi-ring theory to cryptography and error-control coding.

For information on the lecture series and other activities of the center, go to the center's website at <http://math.ohiou.edu/~algebra/center/>

Mount Union College

Tom O'Malley is a new member of the mathematics department. Tom's Ph.D. is from Cornell and he comes to Mount Union as an Associate Professor of Mathematics after a long career in the Operations Research Department of McDermott Technology, Inc.

Gerry Wuchter has received tenure and a promotion to Associate Professor of Mathematics.

Ohio University-Lancaster

In Fall 2002 John Zimmerman will become the Chair of the Mathematics Department at Washington and Jefferson College, Washington, PA, which is just over the Ohio border.

Ohio State-Mansfield

The education program has won the Distinguished Achievement Award of the International Society for Technology in Education. This award recognizes institutions that have exhibited exemplary models of integration of the National Educational Technology Standards for Teachers onto their teacher education programs. Assistant Professor Terri Bucci deserves much of the credit for that award.

Shawnee State University

Michael Fiske is joining the mathematics faculty as department chair. He comes to Shawnee State after nine years on the faculty at Saint Cloud State University in Saint Cloud, Minnesota. His areas of special interest include the mathematical education of teachers and the use of technology in math education.

University of Cincinnati

T. C. Chang, In-Young Chung, Maita Levine, Lowell Leake, Ray Rolwing, and Jerry Ungar have retired.

Wittenberg University

Barbara Ashton, current chair of the Department of Mathematics and Computer Science, has been promoted to Full Professor effective Fall 2001.

Xavier University

New tenure-track faculty: Amy Vanderbilt (Ph.D., U. Florida, nonmonotonic logic), and Dena (Cowen) Morton (Ph.D., Johns Hopkins, homotopy theory), who comes to us from John Carroll.

David Flaspohler has been named Associate Vice President for Enrollment Services.

Youngstown State University

Angela Spalsbury (Ph.D., Kent State U.) has joined the Department.

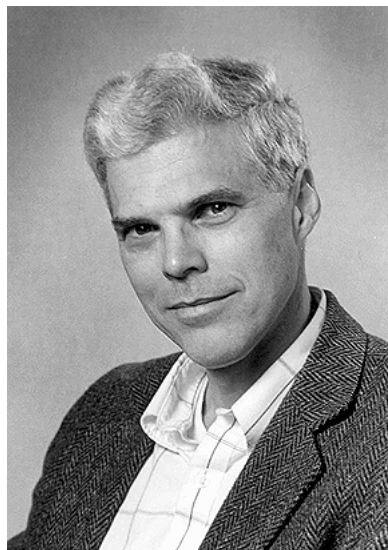
Regional Campus Mathematics Conference

Kent State, Stark Campus will host the Regional Campus Mathematics Conference, May 15-17, 2002. The primary focus of the meeting will be on the scholarships of teaching and application of regional campus mathematics faculty, but all mathematics faculty are welcome to participate in the meeting. Featured speakers will include Ed Dubinsky, Olaf Stackelberg and Mike Battista. For more information, please visit the conference web site at www.stark.kent.edu/math

Section Summer Short Course
Introduction to Game Theory
June 27-29, 2002
University of Dayton
Presented by Phil Straffin, Beloit College

Abstract

The mathematical theory of games grew out of the study of games of strategy and evolved into a general theory of rational behavior in conflict situations. We will first learn to set up and solve two-person games of conflict, and then study the complications that arise in two-person games which involve elements of both conflict and co-operation. In the last part of the course we will consider the theory of games with more than two players, where the objects of study are the formation of coalitions and the fair division of winnings. Throughout, we will pay careful attention to applications of game theory in economics, political science, biology, anthropology and social psychology.



Biographical Sketch

Professor Phil Straffin received his Ph.D. in algebraic topology from the University of California at Berkeley in 1971 and has been at Beloit College since, except for sabbaticals at Cornell University, the University of Florida, Harvard University, Boston University, and the University of Colorado. He is currently the Thomas White Professor of Mathematics and Computer Science at Beloit College. Phil has written numerous articles and books on a variety of topics, including a dozen articles that have appeared in MAA journals and several that have appeared in the UMAP Journal. He was the editor of the book,

Applications of Calculus, which appeared in 1993 as MAA Notes 29 in the Resources for Calculus collection, and he authored the New Mathematical Library title *Game Theory and Strategy* which was also published by MAA in 1993. The latter book will be the text for this short course. He also wrote *Topics in the Theory of Voting* (Birkhauser, 1980), and co-edited *Political and Related Models* with William Lucas and Steven Brams (Springer-Verlag, 1983), and *UMAP Modules: Tools for Teaching 1986* with Paul Campbell (COMAP, 1987). Phil has coached twenty-four student teams in the COMAP Mathematical Competition in Modeling. His teams in 1991 and 1994 were rated Outstanding, teams in 1985, 1987, 1992 and two in 1999 were rated Meritorious, and thirteen teams received Honorable Mention. Among his awards are the MAA Allendoerfer Award for Mathematical Exposition (1985), Distinguished Teaching Award from the MAA Wisconsin Section (1992), and the MAA Haimo Distinguished Teaching Award (1993).

Expenses/Lodging/Dining

The registration fee for this year's summer short course is \$150. On-campus housing is available in Virginia Kettering Residence Hall, an air-conditioned facility consisting of suites, each containing two bedrooms with twin beds plus a common living area. The suites rent for \$80 per night and may be shared by up to four people. On-campus meals are available in the cafeteria on the ground floor of Kennedy Union in the center of campus. The Dayton Marriott hotel is within walking distance of campus, and several restaurants are along the west edge of campus.

A Thursday evening picnic will be sponsored by University of Dayton's Department of Mathematics.



Registration/Additional Details

Fill out the online registration form to sign up for the 2002 MAA Ohio Section Summer Short Course. Please submit check for \$150 registration fee made payable to "University of Dayton Department of Mathematics." For additional details, or to register by mail, contact: Dr. Thomas Gantner, Department of Mathematics, U. of Dayton, Dayton, Ohio 45469-2316; phone: (937) 229-2511 (departmental secretary); FAX: (937) 229-2566; e-mail: gantner@udayton.edu

Tentative Schedule

The 2002 MAA Ohio Section Short Course will meet 9:00 am to 4:30 pm on Thursday, June 27th and Friday, June 28th, and 9:00 am to noon on Saturday, June 29th. Sessions are informal with discussion encouraged, and problem sets will be provided for possible use in courses elsewhere.

Other Items of Interest

Among the many attractions in the Dayton area, the AAA Tour Guide for Ohio designates two as AAA Gems, the recently renovated and expanded Dayton Art Institute (<http://www.daytonartinstitute.org>), and the United States Air Force Museum (<http://www.wpafb.af.mil/museum/>). Both of these museums have a free admission policy. However, the Dayton Art Institute generally has a small admission charge for special exhibits, and the IMAX Theatre at the U. S. Air Force Museum has an admission charge. The web site (<http://www.inventingflight.com>) maintains a calendar of events as we approach the 100th anniversary of the first manned flight by the Wright Brothers.

NW Ohio Regional Dinner Meeting

Another regional dinner meeting is being planned for Tuesday March 19 at Bowling Green. Henry Wente of the U. of Toledo, who is devoted to the mathematics of liquid drops and bubbles, will give a talk on that subject entitled "Bifurcations and Catastrophes with Liquid Drops - A History from C.V. Boys to the Present" at 7:30 pm in 459 Math. Sciences Bldg. We will also meet for an informal dinner in the new student union at 6 pm. Check the Section web page or send email to hern@wcnet.org

Ohio Masters of Mathematics Bicentennial Project

This collection of biographical sketches is being developed as part of Ohio's Bicentennial celebration. The project is sponsored by the Ohio Section and has been endorsed by the Science & Technology Council of The Ohio Bicentennial Commission. It is designed to foster public understanding, education, and appreciation of mathematics as a human endeavor and Ohio's contributions to that enterprise.

The biographies on this web site should be no more than 2 pages in length, along with a 3- or 4-line summary for the main page. See <http://129.1.87.63/bicen/index.html> for examples. If you know of a more extensive web site that features your mathematician, you may want to include a link to that site. Alternatively, if you know of a web page for someone appropriate that we should point to, please let us know that too.

Please contact David Kullman (kullmade@muohio.edu) or Thomas Hern (hern@wcnet.org) about the site or the guidelines.

Miami Fall Conference and Pi Mu Epsilon Student Conference

The Thirtieth Annual Conference will be held on October 4-5, 2002, in conjunction with the Ninth Midwest History of Mathematics Conference. In anticipation of the Ohio Bicentennial in 2003, this year's theme will be "History of Mathematics in America." Invited speakers are Karen H. Parshall (U. of Virginia), and David Zitarelli (Temple U.).

Authors wishing to contribute a 15-minute contributed paper consistent with the theme of the conference should submit an abstract by September 1, 2002.

Send your abstract or request for information to: History of Mathematics Conference, Department of Mathematics and Statistics, Miami University, Oxford, Ohio 45056, (513) 529-5818; Fax: (513) 529-1493; or email the director David Kullman (kullmade@muohio.edu) or check the web page, unixgen.muohio.edu/~MathStat/

The Ohio Delta Chapter of **Pi Mu Epsilon** will hold its twenty-ninth annual Student Conference October 4-5, 2002. Undergraduate and graduate students are invited to contribute 15 or 30 minute papers. Contact Prof. Milton Cox, Dept. of Mathematics and Stat., Miami U., Oxford, Ohio 45056, Telephone: (513) 529-6648 or e-mail: coxmd@muohio.edu

Ohio Project NExT

Members of the Ohio Section Project NExT gathered on Thursday evening, October 25th. The evening began with a very pleasant banquet in the Betty Cleland room in the McDonough Center on the campus of Marietta College. After the banquet, the NExTers discussed topics of interest to them as young faculty members (e.g., dealing with student academic dishonesty, dealing with student teaching evaluations, dealing with senior faculty members, and dealing with the department Chair).

On Friday morning, October 26th, the Ohio NExT workshop was held in the Emeritus Chamber of Andrews Hall. The workshop featured two major speakers: Douglas Faires (Youngstown State University) spoke on "Undergraduate Mathematics Activities." Doug addressed the NExTers about getting students involved in math clubs, in Pi Mu Epsilon, in holding a local math conference, and in presenting papers at local, regional, and national student conferences. He gave many examples of such student activities at YSU. Doug made the point that such outside the classroom activities can truly build a community amongst students that takes on a momentum of its own, a momentum that attracts additional students to mathematics. James Sellers (Pennsylvania State University) spoke on "Advising Mathematics Students Academically and Professionally." He pointed out to the NExTers that advising is one aspect of being a faculty member that is almost never addressed in graduate school. Jim discussed advising high school students and their parents when they visit campus and are considering a major in mathematics. He also addressed academic and non-academic advising of existing math majors on campus, stressing that no two students are the same. Jim noted that a faculty member could help a student decide what math courses to take, what related courses would be beneficial, and what extracurricular activities might be appropriate. He also addressed helping students find a job or a graduate school that fits their skills and future aspirations. In addition to the featured speakers, short talks were given by Ohio NExT members: Jon Stadler (Capital University), Mark de Saint-Rat (Miami University-Middletown), and Mark Miller (Marietta College).

The Ohio NExTers extend a sincere THANK YOU to John Michel (Marietta College) for handling all the local arrange-

ments to make our gathering a real success. After the conclusion of the workshop, and after a nice lunch in downtown Marietta, the NExTers attended and participated in the Fall Meeting of the Ohio Section.

The Spring workshop will be April 4-5, 2002, preceding the Section meeting at Xavier University. Major presenters will be Bill Davis (OSU), talking about Calculus reform and where it is today, and Phil Schmidt (NKU, formerly of Akron), talking about young faculty member involvement in department activities.

Ohio NExT is open to anyone who is in their first five years of college teaching within the Ohio Section. Please see www.bgsu.edu/departments/math/Ohio-section/NExT/ for more information.

Mark A. Smith

Northeast Ohio Women in Mathematics

On November 8, women faculty and students in mathematics from northeast Ohio gathered at the University of Akron for an exciting afternoon of mathematical activities.

Women from John Carroll University (with Barbara D'Ambrosia) and Youngstown State (with Angie Spalsbury) joined the women from University of Akron for lunch, followed by a short presentation from Dr. Kathleen Hoffman from University of Maryland, Baltimore. Kathleen discussed several applied mathematics projects she has recently developed. Following lunch the women joined together with a group of high school students and teachers from the Akron area. Dr. Hoffman gave a second talk on "What I wish I knew about applied mathematics when I was in high school." She described the steps she had taken to becoming a mathematician and answered questions from the girls about graduate studies, careers and mathematical issues. Judy Palagallo and Linda Saliga from University of Akron hosted the afternoon.

The activities were part of the Women in Mathematics program at the University of Akron. The program, which is now in its fourth year, was originally funded through a grant from the MAA and is now funded by alumni of the department. If you and your students would like to be included in future activities, contact Judy for information.

Judy Palagallo
palagallo@uakron.edu

Spring Meeting Program Xavier University

Friday April 5

Noon-4:30	Registration, Cintas Center Lobby
Noon-6:30	Book Exhibits
12:15-1:15	Committee Meetings: Cintas Center CONSTUM Room 1, CONSACT Room 2, CONCUR Room 3, CONTEAC Room 4, Program Committee Room 5
1:30-1:45	Greetings, Announcements
1:45-2:45	Invited Address "Measuring the Universe (Part 1: Curvature)" Jeffrey Weeks
2:45-3:10	Break
3:10-4:05	Invited Address "Applications of Optimal Control to Various Population Models" Suzanne Lenhart, Univ. of Tennessee, Oak Ridge Natl. Laboratory President, Assoc. of Women in Mathematics
4:15-6:30	Contributed Papers
4:15-6:15	Executive Committee Meeting
6:30-7:00	Social Time
6:45-8:00	Student Pizza Party
7:00-8:15	Banquet

8:15-8:45

After-Dinner Address

"What Do Parallel Parking and Lie Brackets
Have in Common?"

Suzanne Lenhart

8:45

Business Meeting and Presentation of Teaching
Award

Saturday, April 6

8:00-10:30 AM Registration Cintas Center Lobby

8:00-8:50 Coffee, etc.

8:00-8:50 Liaisons Meeting

8:00-8:50 Meeting of Student Leaders

8:50-8:55 Announcements

8:55-9:55 **Retiring President's Address**

"Mathematics Journals as a Teaching Resource"

Thomas Gantner

University of Dayton

9:55-10:20 Break

10:20-11:55 **Contributed Papers/Poster Session**

12:00-1:00 **Invited Address**

"Measuring the Universe (Part 2: Topology)"

Jeffrey Weeks

1:00 PM Closing Ceremony

Dept. Chairs Luncheon

Check the web page for updates, and online registration and paper submission (www.maa.org/Ohio).

Program

For matters concerning the program, contact the chair of the Program Committee: Dwight Olson, Dept. of Math & Comp Sci, John Carroll U., Cleveland, OH 44118, 216-397-4372, email: olson@jcu.edu.

Applications of Optimal Control to Various Population Models

Suzanne Lenhart

An introduction to the basic ideas of optimal control of ordinary differential equations will be given. The differences between optimal control of ordinary differential equations and optimal control of partial differential equations will be briefly explained.

An ordinary differential system for an immunology model for AIDS and control of chemotherapy will be used to illustrate the techniques. Bioreactors can be used to transform contaminants into less hazardous substances through bacteria metabolism. An example model for a gas phase bioreactor has a parabolic partial differential equation coupled with an ordinary differential equation.

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.

Contributors should send a title and a brief abstract by **March 22, 2002**.

Online submission is preferred (see meeting web page). Or, mail (e-mail) to the chair of the Program Committee: Dwight Olson (see left). The contributed paper program will be posted on the web page prior to the meeting.

What Do Parallel Parking and Lie Brackets Have in Common?

Suzanne Lenhart

This talk will introduce the idea of controllability for a certain type of ordinary differential equations. The idea of Lie brackets can give conditions to guarantee such controllability. Parallel parking works because of the non-commutativity of the operations involved; Lie brackets measure this non-commutativity.

Measuring the Universe (Part 1: Curvature)

Jeff Weeks

What does it mean for space to be curved? Hands-on constructions will introduce curvature in 2-dimensional surfaces, and interactive computer graphics will extend the concept to 3-dimensional space. We'll then go on to see how current astronomical observations are revealing the curvature of the physical universe, while simultaneously raising new questions about the matter and energy it contains.

Measuring the Universe (Part 2: Topology)

Jeff Weeks

Is the universe really infinite? The first half of this presentation will use computer games to show how space may be finite, yet have no boundary. Interactive 3D graphics will then take the viewer on a tour of several possible shapes for space. We'll see how the same satellite data that is already revealing the curvature of the universe might soon reveal its overall shape (its "topology") as well.

(Meeting, continued from page 1)

Travel, motel, and registration information is on pages 10 and 11. Complete program and banquet information is on these pages. Student activities to the right.

Bring a colleague, and your students!

Banquet

The Friday evening banquet will be in the Cintas Center in the Duff Banquet Hall, Room 1, preceded by a social hour with cash bar and followed by dessert with students. Participants have the choice of the following three plates: Chicken breast, Cajun red snapper, or Pasta primavera (vegetarian). Cost is \$20, payable with pre-registration (with a deadline of **Friday, March 29**). Tickets will be provided at the registration desk at the meeting. There may be some banquet tickets available on-site, but this cannot be guaranteed.

Suzanne Lenhart

Lenhart is a full professor in the Mathematics Department at the University of Tennessee and a part-time research staff member at Oak Ridge National Laboratory. She received her Ph. D. at the University of Kentucky in partial differential equations under the direction of L. C. Evans. Her research involves partial differential equations, ordinary differential equations and optimal control. She works on a variety of applications, including population models, disease models, bioremediation and resource management.

Professor Lenhart is the President of the *Association for Women in Mathematics* for 2001-2003. She is an elected member of the Board of the Society for Mathematical Biology and has been the director of the Research Experiences for Undergraduates summer program at UT since 1990.

Mathematics Journals as a Teaching Resource **Thomas Gantner**

Today we can easily retrieve articles from over 100 volumes of the Monthly from JSTOR in our homes and offices via the Internet, and we can do keyword searches for articles in the *Mathematics Magazine* and the *College Mathematics Journal* through MAA Online. These journals contain a wealth of articles that present basic mathematical concepts and proofs in ways not normally found in textbooks. Such approaches can serve as supplementary material for your classes. I will give several examples that I have found interesting and have used in various contexts over the years.

Student Activities

Student activities are a feature of the Spring meeting. Presentations by students are scheduled for both Friday afternoon and Saturday morning. See the call for student talks at right.

A student pizza party will be held Friday evening, followed by dessert in the general sessions. There is no charge, but registration is necessary. See the Section web page www.maa.org/Ohio for online registration.

Book Exhibits

Textbook publishers will be displaying their wares at the meeting. There will be ample opportunity to browse. Please encourage book reps to contact Danny Otero (below) and take advantage of a captive audience.

There will also be MAA books on display, with the opportunity to purchase books at a discount. Not only does that save you money, it also earns money for the Section.

Jeffrey Weeks

Jeff Weeks is a freelance mathematician living in Canton, NY. He has an A.B. from Dartmouth College and a Ph.D. from Princeton University, both in mathematics. His main interests are geometry, topology, education and cosmology. After several years of teaching undergraduate mathematics, he resigned to care for his newborn son. When his son began school, Jeff began doing mathematical research and software development for the University of Minnesota's Geometry Center, designing and implementing software for creating and studying possible shapes for 3-dimensional space. Currently a MacArthur Fellow, he splits his time between research and education. His present research centers on a collaboration with cosmologists, with whom he plans to test the shape of the universe using satellite data to become available in 2002-10. His educational activities have lead to a multimedia unit for middle schools on geometry and space. The unit uses classroom activities, computer games, and video to let students explore universes that are finite but have no boundaries. Jeff is the author of the book *The Shape of Space* (Marcel Dekker, 1985; second edition 2002), the unit *Exploring the Shape of Space* (Key Curriculum Press, 2001), and various research and expository articles.

Call for Student Talks

Undergraduate and graduate students are encouraged to submit abstracts for 15-minute talks at the Spring Meeting. Topics may be drawn from any area of mathematics or a related discipline. The presentation may be an expository talk, a recounting of a mathematical internship or a co-op experience, or the results of a research project. It is expected that each talk will be delivered by a single speaker. Co-authors will be listed in the program. Each student speaker will receive a free one-year MAA membership.

Contributed talks by student, faculty, and others will be given on Friday afternoon and Saturday morning. Talks will be scheduled primarily according to topic and audience level. Student talks are an integral part of the meeting and should be an enjoyable and rewarding experience for all who participate. Students preparing talks should read Joseph Gallian's article "How to Give a Good Talk" in the April 1998, *Math Horizons*. This article is available on the web at <http://www.jcu.edu/math/constum/gallian.pdf>.

The presentation rooms will include a blackboard and one overhead projector. Abstracts should be between 25 and 75 words in length and should employ proper English grammar and spelling. Students are strongly encouraged to use the abstract submission form on the MAA Ohio Section webpage at <http://www.maa.org/Ohio>. Otherwise, abstracts may be submitted by U.S. mail to Curtis Bennett, Department of Mathematics and Statistics, Bowling Green State University, Bowling Green, OH 43403. Please include your name, institution, e-mail address, student status (junior, senior, etc.), the title of your talk, and a brief description of the presentation.

Abstracts must be received by **March 22, 2002**. Due to time and space restrictions, we may not be able to accommodate all talks. Please submit your abstracts early. Students submitting abstracts should also register for the meeting.

Curt Bennett, Chair
CONSTUM

Meeting of Student Leaders

At the Section Spring Meeting at Xavier there will be a meeting of student leaders of mathematical organizations at 8:00 a.m., Saturday, April 6, 2002. This meeting is open to leaders of all such organizations (MAA, PME, KME, Math Club, etc.). Contact: Dr. Darren D. Wick, Ashland University, dwick@ashland.edu

Directions to Campus and Parking.

Xavier is located in central Cincinnati. It is easily reached by either I-71 or I-75. See campus map and bottom map at right.

From I-71 Southbound:

Get off the highway at Dana Ave. (Exit #5) in Cincinnati. Turn right (west) onto Dana Ave. Cross Montgomery Rd. at the second light; the third light is at Ledgewood Dr. Turn right and run alongside the Xavier campus, following the road as it veers right onto Herald Ave. The Cintas Center will be on your left; turn left into the parking lot as you pass the WVXU station building. There are labeled parking spots reading 'Conv Center' near the Cintas Center.

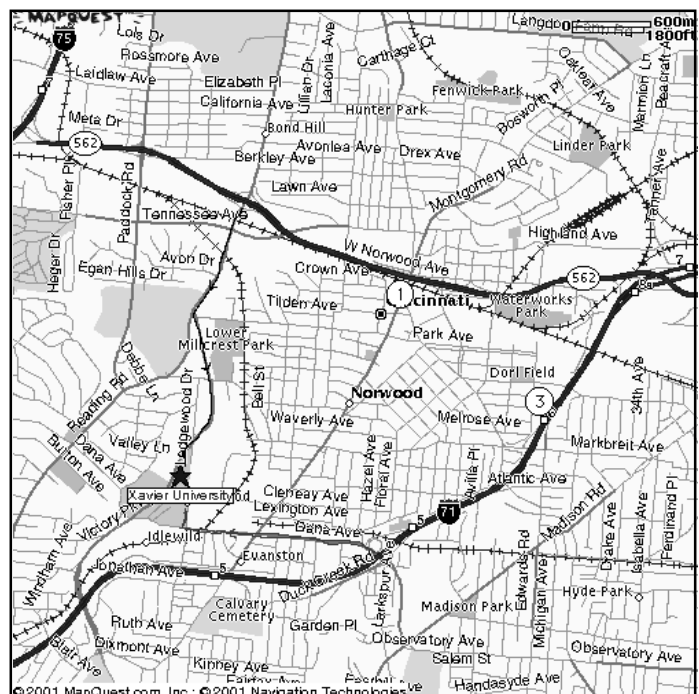
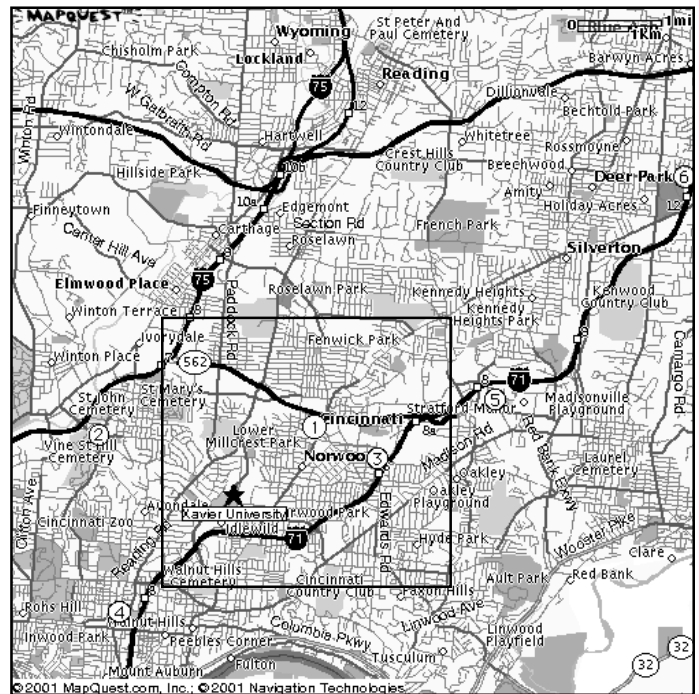
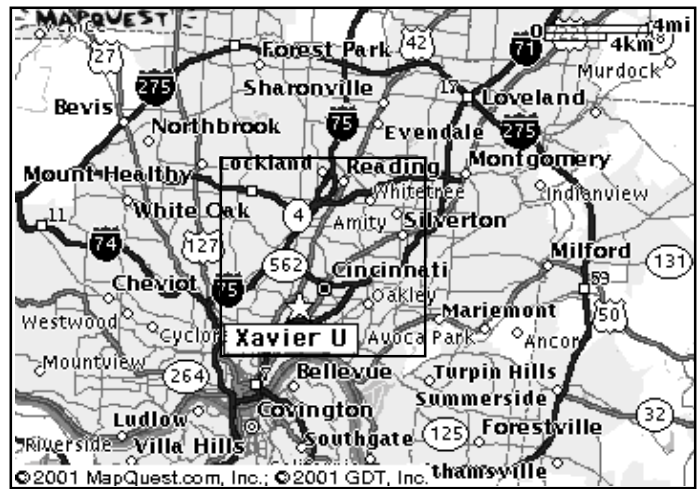
From I-75 Southbound:

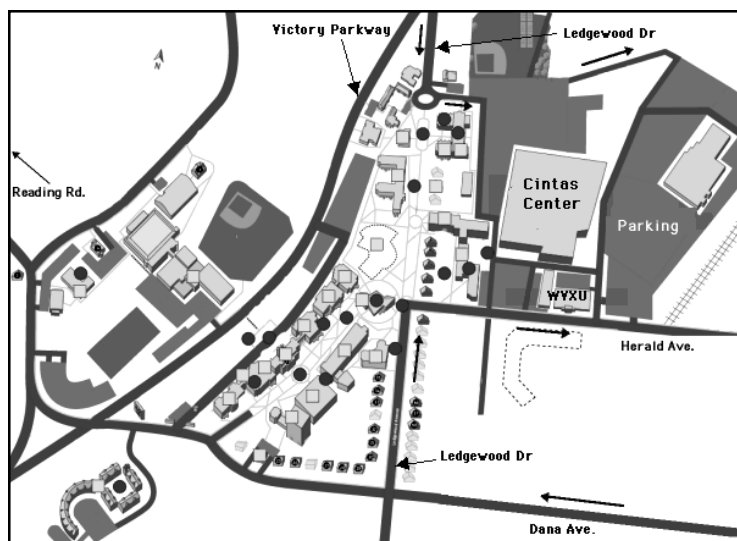
Take the Norwood, Rt. 562, exit (Exit #7) going east and get off the highway at the second exit, Rt. 42, Reading Rd. Turn right onto Reading Rd., then left at the third light onto Victory Parkway. Somewhat less than a mile ahead is Xavier University; turn left onto Ledgewood Dr. and left again at the entrance onto campus. Pass through the parking lot with Cintas Center on your right and drive uphill into the parking lot on the other side of the building. There are labeled parking spots reading 'Conv Center' near the Cintas Center.

Where to Stay

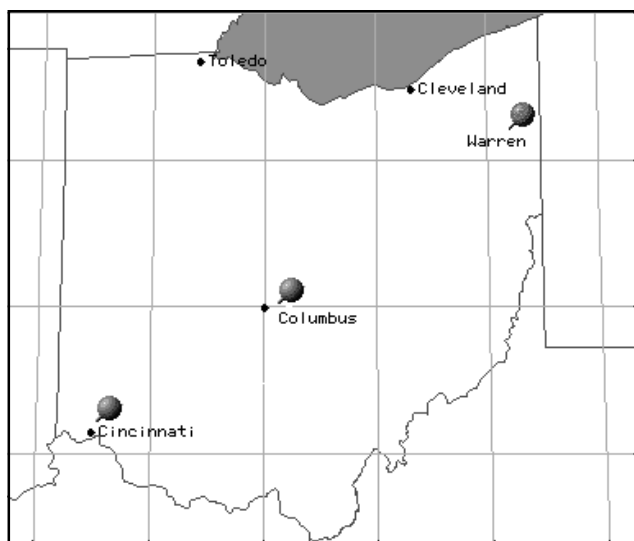
Please call and make your own reservations with the following motels, listed in order of distance from XU. Ask about the "MAA Ohio Section meeting at Xavier U" when making reservations. Prices do not include tax. Numbers refer to map at right.

1. Quality Inn Norwood (closest to University)
\$74
2mi from Xavier
4747 Montgomery Rd., Montgomery Rd Exit on SR 562.
800-292-2079, www.ohwy.com/OH/q/qhocenwd.htm
2. Holiday Express (convenient to I-75, Exit 6; new facilities)
\$80
2mi from Xavier
130 E. Mitchell Ave. Take Mitchell and Dana Ave. to campus.
513-242-1010
www.basshotels.com/hiexpress?_franchisee=CVGOH
3. Empty Nest Bed & Breakfast (a favorite of many guests)
\$55-\$90
2.5mi from Xavier
2707 Ida Ave. 5 blocks from I-71, Exit 6
513-631-3494, home.fuse.net/EmptyNest/
4. Vernon Manor Hotel (one of Cincinnati's grandest old hotels)
\$69
4mi from Xavier.
400 Oak St., I-71 Exit 3 west, immediate right on Reading Rd and left on Oak St.
513-281-3300, www.vernon-manor.com
5. Red Roof Inn (convenient to I-71, Exit 8)
\$55 single; \$60 double
4.5mi from Xavier
5300 Kennedy Ave.
513-531-6589
www.redroof.com/reservations/ (Enter Inn #050)
6. Four Points by Sheraton (convenient to I-71, Exit 12)
\$69 (reserve by March 6)
8mi from Xavier
8020 Montgomery Rd.
513-793-4300, www.fourpoints.com





Xavier Campus



Section Meeting Sites

Xavier University

Xavier University was established in 1831 when the first Catholic bishop of Cincinnati, Edward Fenwick, raised a two-story building near the cathedral in downtown Cincinnati and opened its doors to educate seminarians and other young men in the Ohio area. This institute of arts and sciences, the first Catholic institution of higher learning in the Northwest Territory, was originally named The Athanaeum, but it was dedicated from the beginning to the patronage of St. Francis Xavier.

In 1840, Fenwick's successor, Bishop John Baptist Purcell, handed over the administration of the college to the Society of Jesus (the order of Jesuit priests), who renamed the school St. Xavier College. At the same time, they added a mercantile program to the curriculum, recognizing the need to supplement the traditional humanities education with a sound education in business practices. They also offered night courses as early as 1841 to serve the needs and schedules of professionals in the Cincinnati community.

The college moved to its present location in the geographic center of Cincinnati in 1919 when its growth called for new and larger facilities, and its name was changed to Xavier University in 1930. In 1970, Xavier went co-educational, and in 1980, it acquired a neighboring women's liberal arts college, Edgecliff College, and brought Edgecliff programs to the Xavier campus. Also in the 1980s and 1990s, Xavier benefited from the donations of a number of contiguous properties, allowing the university to build student housing and erect other buildings to hold its expanding programs, in-

cluding most notably the opening in 2000 of the Cintas Center, a state-of-the-art facility housing dining services, a sports arena, and a convention center.

Today, Xavier University is one of 28 Jesuit colleges and universities in the U.S. (along with its sister institution in Ohio, John Carroll University). It enrolls 6700 students, including 4000 undergraduates. The majority of its post-graduate students are involved in its well-respected MBA program, or in masters programs in education. Its undergraduate programs share a commitment to the liberal arts with emphasis on the ethical and religious analysis of socially significant issues; roughly 60% of every student's coursework is part of a common core curriculum.



The Department of Mathematics and Computer Science serves some 40 undergraduate majors in mathematics and almost 60 undergraduate computer science majors with a faculty of 15 members, including three computer scientists and two academic staff (full-time instructors). Since every undergraduate at Xavier typically takes two mathematics courses as a component of their liberal arts core curriculum, a large number of courses are taught to non-majors. Recently, some innovative course offerings have been Women in Mathematics, Calculus from an Historical Perspective, and Complexity and the Origin of Order. Some distinctive elements of the mathematics major program are: weekly Maple lab experiences in the three-course calculus sequence; a discrete mathematics course in the freshman year; a year-long linear algebra course in the sopho-

more year; and a senior research project under the direction of a faculty member that culminates in a paper and presentation before the entire department. Math majors staff the university's Math Tutoring Lab and participate in an active MAA Student Chapter. The Ohio Theta Chapter of Pi Mu Epsilon has been inducting members annually since 1962.

Danny Otero

Registration

Online registration is preferred; see the meeting web page at www.maa.org/Ohio. Deadline for online registration is **Friday, March 29**.

On-site registration is always available, but last-minute banquet tickets cannot be guaranteed. Early registration helps those making arrangements, and is always appreciated.

You may also register by sending the following information: name, affiliation, address, phone, email address (if any), type of position, and banquet choice. Send with check for applicable fees [registration fee (\$20 full time, \$10 retired or part time, no fee for students), banquet (\$20)] to Danny Otero (see below).

Local Contact at Xavier

For any questions about local arrangements, contact Danny Otero, Dept. of Mathematics and C. S., Xavier University, Cincinnati, OH 45207-4441; email: otero@xavier.xu.edu; (513) 745-2012.

Department Chairs Luncheon

There will be a Saturday luncheon for department chairs or division heads from the Section to discuss matters of mutual interest. Contact Mark Smith, (513) 529-5818, smithma@muohio.edu, if you do not receive information.

Calendar

Ohio Section

Winter Technology Conference, Columbus State CC, Feb. 15-16, 2002.

April 5-6, 2002, Xavier University, Cincinnati OH.
Ohio Project NExT, April 4-5.

Summer Short Course, June 27-29, 2002, U of Dayton. See page 6.

October 25-26, 2002, Kent State U. Trumbull Campus, Warren, OH.
With OhioMATYC.

April 4-5, 2003, The Ohio State U., Columbus, OH

See state map with meeting sites on page 11.

National MAA

Mathfest, August 1-3, 2002, Burlington, VT.

Annual Joint Meetings, January 15-18, 2003, Baltimore MD.

MathFest, July 31-August 2, 2003, Boulder, CO.

Annual Joint Meetings, January 7-10, 2004, Phoenix AZ.

MathFest, August 12-14, 2004, Providence, RI.

Annual Joint Meetings, January 5-8, 2005, Atlanta, GA.

MathFest, August 4-6, 2005, Albuquerque, NM.

Annual Joint Meetings, January 12-15, 2006, San Antonio TX.

Other

Rose-Hulman Undergraduate Mathematics Conf., March 15-16, 2002

Indiana Section, March 22-23, 2002, Anderson U., Anderson, IN.

Kentucky Section, April 5-6, 2002, Georgetown C., Georgetown KY.

Allegheny Mountain Section, April 5-6, 2002, West Liberty State
College, West Liberty, WV.

Ohio Academy of Science, April 5-7, 2002, Capital U..

NCTM Annual Meeting, April 21-24, 2002, Las Vegas, NV.

Michigan Section and MichMATYC, May 10-11, 2002, Lawrence
Technological University, Southfield, MI.

State Science Day, May 11, 2002, Ohio State U., Columbus.

Allegheny Mountain Section Short Course, June 17-20, 2002.

SIAM 50th Ann. & Annual Meeting, July 8-12, 2002, Philadelphia.

Joint Statistical Meetings, August 11-15, 2002, New York, NY.

Annual Miami Conference, "History of Mathematics in America,"
and Pi Mu Epsilon Student Conference, October 4-5, 2002.

Indiana Section, October 5, 2002, Indiana University Northwest,
Gary, IN.

OCTM 52nd Annual Conference, October 10-12, 2002, Cincinnati.

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.

Department of Mathematics and Statistics
Bowling Green State University
Bowling Green OH 43403-0221

If undeliverable, do not return.
Give to someone in mathematics.

Non-Profit Org. U.S. POSTAGE PAID Bowling Green, OH 43402 Permit No. 1
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Complimentary Copy

Time Value Material - Please do not delay!