Spring Meeting at Marshall University, April 7-8

The penultimate Section meeting of the century (sorry, but math teachers have to be picky about such things) will be held at Marshall University in Huntington, West Virginia. Yes, they are in the Ohio Section, and very active members too. All MAA members in Cabell County, WV (just across the Ohio River) are members of the Section. See the map on page 11.

The major invited addresses include real estate in hyperbolic space, and making calculus fun. The latter talk will be presented by Colin Adams of Williams College, MAA Polya Lecturer. In her Retiring President's Address, Aparna Higgins will discuss finding problems for undergraduate research projects. The CONCUR Committee is organizing a panel on the capstone experience. Contributed paper sessions are scheduled for Friday and Saturday.

In the Friday evening activities, following the banquet, Katherine Coleman Johnson, a native of West Virginia and retired from NASA, will share experiences of a long career with NASA's Space Flight Division. The annual business meeting will include the presentation of the Section teaching award and the election of new officers. Details begin on page 8.

As usual, student activities are a vital part of this meeting. Besides being invited to attend all the regular sessions, student talks are a major part of the program. These will be given at sessions on both Friday afternoon and Saturday morning. There is a Friday student pizza party. No charge, but preregister. Students will rejoin the group for dessert and evening activities. Katherine Johnson's remarks will be of special interest to students, as will the teaching award presentation. See page 9.

The Section meeting is preceded by the OhioNExT workshop. See page7.

The excellent local arrangements are on pages 10 and 11.

Report of the Nominating Committee

The Nominating Committee proudly presents the following slate of candidates for the elections to take place at the 2001 business meeting of the Ohio Section, Friday April 7, after the banquet at Marshall University:

- Sherri L. Brugh from Mount Union College for a three-year term on the Program Committee, the third year as chair.
- Thomas E. Gantner from the University of Dayton for President-Elect, succeeding the following year to President, then to Past-President, and then to a three-year term on the Nominating Committee.

Sherri, whose specialty is algebra, did her graduate work at Vanderbilt. She was a member of CONSTUM for three years, chairing that committee her last year, 1997-1998; and she assisted the Secretary of the section during the 1998-1999 year.

Tom, whose specialty is in the area of rings of continuous functions, did his graduate work at Purdue. He was a member of CONSACT for three years, chairing that committee his last two years and also doing the local arrangements at the University of Dayton for CONSACT's summer short course his last year; and he was an elected member of the Program Committee for three years, chairing it his last year.

Leo J. Schneider, Chair
Nominating Committee

Section Governor Election

The election of the Section Governor for the 2000-2003 term is being conducted by the national MAA office. Doug Faires is the current Governor. All Section members will be getting a ballot in the mail. The term begins July 1.

The Section Governor is a voting member of the MAA Board of Governors, attends the meetings of the Board, and represents and reports back to the Section.

Section Governor's Report

First, I would like to express my appreciation to the members of the Ohio Section of the MAA for giving me the opportunity to represent this fine organization on the MAA Board of Governors for the past 3 years. The Winter meeting of 2000 was my last as your representative, although my term does not end until July 1, 2000. Since this will be my last Governor's report, I would like to tell you about a concern that I have for our organization, and some ways that I hope we can work to together to ensure that the outcomes of my concern are not realized.

The MAA has traditionally drawn much of its strength and membership from mathematics faculty at colleges and universities whose primary educational goal is undergraduate education. Since at least the 1960's, this group has included not only the traditional liberal arts colleges, but the many middle-sized state universities. A quick look at the recent past Presidents and Governors of the Sections will document this.

The technology revolution may not significantly change the role of the traditional liberal arts colleges, but I think the changes in store for the middle-sized state universities will be much different. We have already seen how early retirement plans have decreased the overall numbers of mathematics faculty at these schools. The move toward "distance learning" is less driven by many administrations, in my view, for reasons of educational benefit to students than it is to increase enrollments without an accompanying increase in instructional cost—that means us.

I think that the situation a decade from now will be very different for our undergraduate majors; they will have much less personal contact with faculty and be less likely to do graduate work. Since the primary source of membership comes from a pool that I think will steadily decrease, unless some changes are soon made, the membership and influence of the MAA will significant decrease in the next decade and beyond.

Because of the uncertainties regarding higher-educational employment opportunities for our students, many of us have been rethinking the recommendations that we are giving our best undergraduates. Ten years ago, I recommended most talented mathematics undergraduates to try graduate school in mathematics. About five years ago, my recommendations changed somewhat, to encourage student to do graduate work in areas that had multiple employment opportunities, such as statistics and scientific computing. My recommendations to my most recent undergraduates have emphasized graduate work to a far less degree since there are such exciting prospects for talented problem solvers in business, and I am concerned that the type of highly attractive faculty position I hold will be much rarer during their employment career. You might ask, what does this have to do with the MAA? My answer is that my current students like and appreciate mathematics at least as much as those who went on to graduate programs in the past, but unless the philosophy of the MAA changes, they are not likely to become members of the MAA or of any other mathematics organization.

Too many of us have a provincial and chauvinistic definition of who should be considered a mathematician. We seldom apply this term to one without at least a doctorate in mathematics, and some would only deem this honorific title worthy of those doing original mathematical research on a constant basis. If this is the view of those of us in the profession, is it any wonder that our students see very few ads for "mathematician" in the classifieds? But more important for the health of the MAA, how can we expect to attract and maintain mathematicians, in a much broader sense, who do not choose to follow our footsteps into academic work? More importantly, what will help these students maintain their interest in, and association with, mathematics, if that interest is seen by the MAA as the perogative of those in the academic community?

I think I have some partial answers to these questions. The first and foremost is to change our attitude with regard to whom we feel are worthy to be our peers. For example, we must encourage students planning to teach in secondary schools to consider themselves mathematicians who choose to teach students in high school, not as high school teachers who happen to teach mathematics. The emphasis on the discipline must be first if students are to retain an appreciation and interest in mathematics. Our undergraduates going to work in business should be strongly encouraged to maintain their interest and contact with mathematical sources, especially ourselves and the MAA.

We must do all we can to attract mathematics students in the short period that we have influence over them. The Ohio Section has been a leader in this regard with our strong program of student participation at the Spring Section meetings. The success of this programs has not come without difficulty, and some have suggested that it be curtailed, but unless we can find ways to continue to attract increasing numbers of students, where will the future MAA membership come from? Our student paper contest has been less successful, but I think it could become a important attraction for our students. We need to think of better ways to attract interest to this activity. Think of other ways that we can attract and maintain student interest in the MAA. If we don't capture their interest while they are undergraduates, it is extremely unlikely that the MAA will attract them in the future.

Now a brief report on the MAA Board of Governor's Meeting. The meeting was held in Washington DC on Tuesday 16 January 2000 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. 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 2000 Summer Mathfest will be held in Los Angeles at UCLA 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. In addition, the 2006 Winter meeting has been scheduled for San Antonio on January 12-15, since a long lead time is required for this attractive site. All of these January meetings will be held, as traditional, with AMS.

The sites of the Summer MathFests have not yet been finalized for 2001 and 2002, but the 2001 meeting will likely be at the University of Wisconsin at Madison. In 2002 the site will probably be chosen from among San Jose State University, the University of Colorado at Boulder, and the University of Maine at Orono.

As mentioned in my previous Reports, Marcia Sward, the Executive Director of the MAA retired at the end of 1999. Tina Straley, the new Executive Director, was previously 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 excess of $30,000 and the entrance area of the MAA headquarters building has been designated the Marcia Sward Room. Marcia has also been given the title of Executive Director Emerita.

The finances of the Association are in good shape and the surplus in 1998 was sufficient to permit the transfer of $175,000 from the general fund to the investment fund. If you would like to see a copy of the Report of the Treasurer, please contact me.

Here are some of the other items at the meeting that I think you might find to be interesting.

- Tom Banchoff, the MAA President, showed a wonderful interactive poster that will be available for Mathematics Awareness Month. The development of the poster is not complete, but it should be ready soon and available at the MAA web site.
- New releases of MAA publications that I found particularly attractive include *The Random Walks of George Polya* by Past President Gerald Alexanderson, *The Beginnings & Evolution of Algebra* by Isabella Bashmakova and Galina Smirnova, and *The Math Chat Book* by Frank Morgan.
- There were a number of opportunities for members to visit the MAA Headquarters building. The building has recently undergone extensive exterior renovation to return the surface to its original form.
- Total Membership and Paid Membership both increased slightly during the past year, although Paid Membership is still down over 12% from the 1995 level.

I encourage you to visit the MAA web site. 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 are 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 and your students at Marshall University on April 7-8, 2000.

Doug Faires
Ohio Section Governor

Buying MAA Books

If you are considering purchasing a book from the MAA, we would encourage you to buy it at the Section Meeting at Marshall, for two reasons:
1. You will get the best possible price; and
2. The Section will receive a rebate.

Bill Friel
Secretary-Treasurer

President's Message

At the recent Joint Mathematics Meetings, I was impressed with the large number of younger mathematicians present. Many were Project NExT fellows, and there were many graduate students, mostly found near the vicinity of the Employment Center. However, there were many undergraduates in attendance at the meetings. Most of them were either presenting papers, or presenting posters at the poster session on undergraduate mathematics research. Sixty-five posters were presented, representing about one hundred forty students. I was impressed, considering that there was no general source of funding to support students' travel costs to the winter meetings. These students were supported, at least partially, by the grants under which they did their research, or by their home institutions.

In the Ohio Section, we take great pride in our strong tradition of student paper presentations at our spring meeting. In fact, taking a large student contingent to the spring meeting of the Ohio Section is an annual ritual at many Ohio schools. This year ought to be no exception. We hope you will continue the tradition by coming to the spring meeting at Marshall University on April 7-8, 2000, and by bringing with you fellow students or colleagues.

Traditions evolve, however, with the passage of time, and the Executive Committee has decided to change the structure of the contributed paper sessions a little. Instead of having contributed paper sessions exclusively for student presentations on Friday, and contributed paper sessions with faculty presentations on Saturday, we will have joint paper sessions on both days. We believe it will be to the advantage of the membership to organize the paper sessions by mathematical area, and not by length of experience as a mathematician. We are excited about this new format, and hope that you will enjoy it too.

In case you were puzzled by the (mis)information for Ohio Section meetings printed in FOCUS, the newsletter of the MAA, the correct information is Spring 2000 Marshall University, April 7-8, 2000; Fall 2000, Wittenberg University, October 27-28, 2000. It is my pleasure to inform you that the spring meeting in 2001 will be at Bowling Green State University, on March 23 and 24.

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
216-345-6889, perley@alex.walsh.edu

SUMMA Coordinator:
Dennis Davenport, Miami
513-529-3555
davenpde@casmail.muohio.edu

OhioMATYC Liaison to OhioMAA:
William Tulloss
tullossb@cinstate.cc.oh.us

OhioMAA Liaison to OhioMATYC:
Robert Hovis, Ohio Northern
419-772-2347, r-hovis@onu.edu

OCTM Liaison to OhioMAA and
OhioMAA Liaison to OCTM
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:

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

Fall 2000: Wittenberg
Brian Shelburne, 937-327-7862
bshelburne@wittenberg.edu

(President's Message continued)

My term as president of the Ohio Section ends with the spring meeting this year. I thank all of you for the opportunity to serve you, and I join you in welcoming Judy Palagallo of the University of Akron as she takes over the duties of President. I want to thank the members of the Executive Committee and our newsletter editor/webmaster, Tom Hern, for their counsel and support. Their efficiency and dedication made my job easier, and working with them was a great deal of fun.

I hope to see you all at Marshall University in April. Bring a friend—the age doesn't matter—to join in our celebration of doing, and teaching, mathematics.

Aparna Higgins
Section President

CONCUR Report

Last fall, CONCUR conducted a survey of departments within the Section on recent changes to the curriculum. Although many of the findings were not very surprising, it was discovered that a large number of departments now require a capstone course in their mathematics major. As a result, CONCUR is organizing a panel discussion on the capstone experience, to take place at the spring meeting at Marshall University. The complete committee report, along with the original survey questions and the coded responses, can be found on the web at www.jcu.edu/math/concur/.

Carl Spitznagel, Chair
CONCUR

NCTM Cummins Scholarship

Kenneth Cummins left $10,000 to the NCTM and they are willing to name a National Scholarship in his honor if the amount is matched. The OCTM through the Executive Director, Marge Hunt, is spearheading this fund raising. Contributions can be sent to: Margie Raub Hunt, Exec. Dir. OCTM, 16734 Hamilton Ct., Strongsville, OH 44136-5701.

Dave Wallach
OCTM/MAA Liaison

Demos with Positive Impact: A Resource for Math Instructors

Do you have favorite demos and examples that you feel really help your students. Share them with colleagues by participating in this NSF project. Go to web page www2.gasou.edu/facstaff/lroberts/demos to see a sample and submit your idea.

David Hill
Temple University

Campus News

Ashland University:
Robert Wendling retired May 1999 after 36 years of service.
Christopher Swanson was hired as an Assistant Professor of Mathematics. He comes from the University of Michigan and is a National Project NExT Fellow. His area is combinatorics.
Gordon Swain, Associate Professor of Mathematics, received tenure.
Simon Gray received tenure and was promoted to Associate Professor of Computer Science.
Cathy Stoffer was appointed as Chair of the Department of Mathematics and Computer Science in Fall and Vickie Van Dresar is now the liaison for Ashland University.

Baldwin-Wallace College
Richard Little received the prestigious campus Strosacker Award for Excellence in Teaching.
Tim Riggle and Hester Lewellen are on sabbatical this Spring semester. Hester is studying physics and writing about math ed., principally the preparation of future elementary teachers.
Tony Lauria is on sabbatical this academic year, teaching in the Ukraine on a Fulbright.

Bowling Green State University
Lukacs Professors for Spring, 2000 are Nail Bakirov, asymptotics of nonparametric tests (Ufa, Russia) and James Berger, Bayesian statistics (Purdue U.).
Curt Bennett has been selected as a Carnegie Scholar by the Carnegie Academy for the Scholarship of Teaching and Learning for 2000-2001. He will be on leave next year as well.
New: Tong Sun, PhD, Texas A&M, 1997, and Inst. for Scientific Comp. at A&M; Corneliu Hoffman, PhD, U of S. Cal., 1998, group theory, also UC Irvine, and a semester at MSRI.

John Carroll University
Dwight Olson is on leave for the Spring semester.

Ohio University
Hari Shankar, long time active Section member, is retired but still teaching one term per year. The rest of the year he teaches at the University of Northern Iowa.

University of Akron
Abdel-Elah Ayyoub joined our faculty as an Assistant Professor of Computer Science.
D. P. Story will be on a one semester Faculty Improvement Leave this fall. He has been invited by Adobe Systems in San Jose to join their Adobe Acrobat Development Team.
Dale Mugler and Tom Price received Favorite Faculty Member awards from the Mortar Board, Senior Class Board and Omicron Delta Kappa

University of Toledo
New chairman is En-Bing Lin. He replaces Lamar Bentley
Paul Shields and George Kertz have retired.
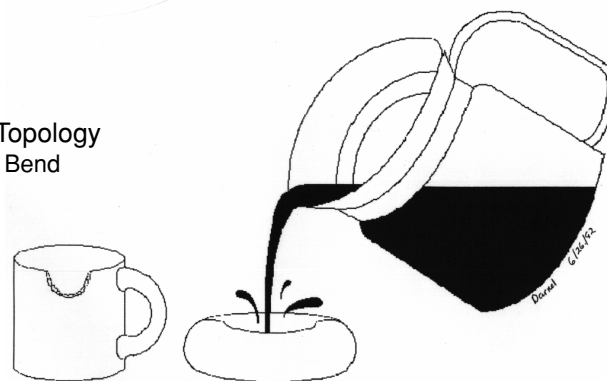Bud Davis and Steve Spielberg have completed their "superannuate" post-retirement teaching.
Clifford Thomson died at the age of 87. He had taught at U.T. for 35 years.

Youngstown State University
Nathan Ritchey will be Chair of the Dept. of Mathematics and Statistics, begining in Fall 2000.
John Holcomb has been named a Carnegie Scholar by the Carnegie Academy for the Scholarship of Teaching and Learning.

The Pitfalls of Learning Topology
  Mike Darnel - IU South Bend

Proofs and Confirmations:
The Story of the Alternating Sign Matrix Conjecture

MAA Ohio Section Summer Short Course
June 28 - 30, 2000
Cedarville College, Cedarville, OH
Presenter: David M. Bressoud, Macalester College

Discrete mathematics is now a regular part of the undergraduate mathematics curriculum at most colleges. Too often, the adjective "discrete" also applies to the individual topics which seem to bear little relationship to each other. They lack a sense of historical development. The stories and connections are missing. This short course is a chance to share some favorite stories. They interweave in often surprising ways and each lead, in some fashion, to the story of the alternating sign matrix conjecture. There will also be a lot of hands-on work, with opportunities to explore the algorithms and patterns that arise.

The alternating sign matrix conjecture was proposed in 1980, a deceptively simple-looking statement about the number of matrices of 0s, 1s, and -1s with row- and column-sums 1 and alternating nonzero entries in each row and column. The original question arose from a rather curious algorithm discovered by C. L. Dodgson (better known as Lewis Carroll) for evaluating determinants.

During this short course, you will see how determinants are related to the quest for a formula for the roots of an arbitrary polynomial, how they relate to the binomial theorem, counting lattice paths, and figuring out the number of ways of stacking boxes into a corner. We will explore some of the combinatorial work of Euler, the development of the theory of determinants under Cauchy and Jacobi, and the early development of partition theory by Sylvester and MacMahon, two of the most colorful mathematicians of the 19th century.

David Bressoud is DeWitt Wallace Professor and Chair of Mathematics and Computer Science at Macalester College, St. Paul, Minnesota. He was a Peace Corps Volunteer in Antigua, West Indies (1971-73), received his PhD (1977) from Temple University where he studied with Emil Grosswald. He taught at the University Park campus of Penn State from 1977 to 1994 before moving to Macalester. He has held visiting positions at the Institute for Advanced Study (1979-80), University of Wisconsin (1980-81 & 1982), University of Minnesota (1983 & 1998), and the University of Strasbourg (1984-85). He has received a Sloan Fellowship, a Fulbright Fellowship, and the MAA Distinguished Teaching Award. He serves on the Advanced Placement Calculus Committee. He has published over fifty research articles and his books include *Factorization and Primality Testing* (1989), *Second Year Calculus from Celestial Mechanics to Special Relativity* (1991), *A Radical Approach to Real Analysis* (1994), *Proofs and Confirmations: The Story of the Alternating Sign Matrix Conjecture* (1999), and, with Stan Wagon, *A Course in Computational Number Theory* (1999).

Lodging/Dining: On-campus dormitory rooms (with air conditioning) will be available. The cost for one of these rooms is $14 for the first night and $13 for each additional night. A number of area hotels are within a 10-15 minute drive from Cedarville. Please indicate your housing preference on the registration form. Meals will be available at the Student Center on campus. There is also a handful of locally owned restaurants in Cedarville.

Registration: The registration fee is $100. See the on-line registration form (preferred) or use the form below. Deadline is May 30. A $25 deposit is required. Make check payable to "MAA Ohio Section". See web page at www.cedarville.edu/dept/sm/jas/maashort/shcourse.htm for more details or contact: James Sellers, Phone: (937) 766-7695, Fax: (937) 766-7631, Email: sellersj@cedarville.edu

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Online registration preferred.

Registration Form
MAA Ohio Section Summer Short Course

Name: _____

Institution: _____Email Address: _____

Mailing Address: _____

_____
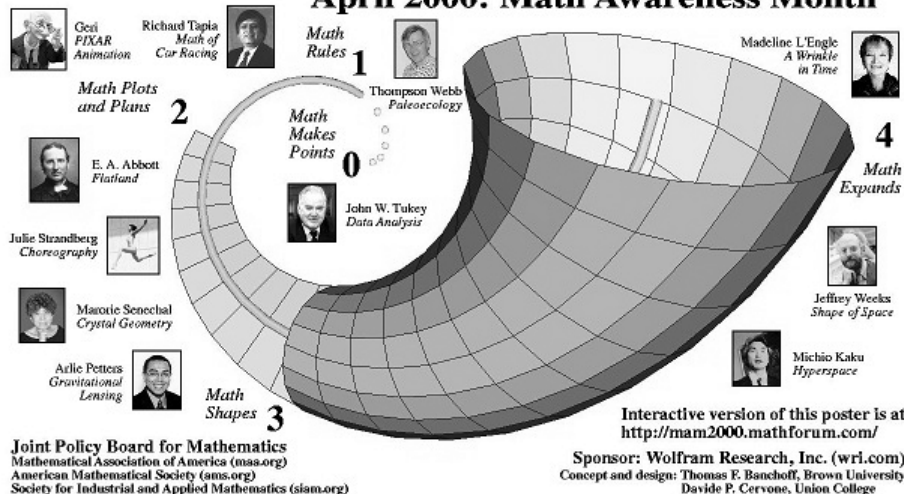
Office Phone Number:_____   Home Phone Number: _____

Lodging Plans _____ An area hotel. _____ An on-campus dormitory. _____ Other.

Nights Planning to Stay   _____Tuesday, _____Wednesday_____ Thursday,_____ Friday,

Mail to: James Sellers, Department of Science and Mathematics, Cedarville College, P.O. Box 601, Cedarville, OH 45314.

Math Spans All Dimensions
April 2000: Math Awareness Month

Geri
PIXAR
Animation

Richard Tapia
Math of
Car Racing

Math
Rules 1

Madeline L'Engle
A Wrinkle
in Time

Math Plots
and Plans 2

Thompson Webb
Paleoecology

Math
Makes
Points 0

E. A. Abbott
Flatland

4

Math
Expands

Julie Strandberg
Choreography

John W. Tukey
Data Analysis

Marjorie Senechal
Crystal Geometry

Jeffrey Weeks
Shape of Space

Arlie Petters
Gravitational
Lensing

Michio Kaku
Hyperspace

Math
Shapes 3

Interactive version of this poster is at
http://mam2000.mathforum.com/

Joint Policy Board for Mathematics
Mathematical Association of America (maa.org)
American Mathematical Society (ams.org)
Society for Industrial and Applied Mathematics (siam.org)

Sponsor: Wolfram Research, Inc. (wri.com)
Concept and design: Thomas F. Banchoff, Brown University
Davide P. Cervone, Union College

"Math Spans All Dimensions" is the theme of Mathematics Awareness Month, April 2000, sponsored by the Joint Policy Board for Mathematics (JPBM), with support from Wolfram Research, Inc. For the first time, the MAM2000 poster will appear both on bulletin boards and also on the computer screen as a fully interactive document.

Mathematics Awareness Month provides the mathematical science community with opportunities for promoting the importance and versatility of mathematics, and its relationship to our daily lives. JPBM invites you to use the electronic poster for MAM 2000 and the related materials available on the MAM website to inform your colleagues, students, and the general public about the value of mathematics.

This year's MAM2000 electronic poster invites teachers and students to explore mathematics in all dimensions by investigating the contributions of eleven individuals who use mathematics in various dimensions in their work. Starting with 0 dimensions and the analysis of point clouds, the central figure of the poster moves from 1-dimensional worlds of geological core samples and racing car geometry to the 2-dimensional worlds of Edwin Abbott Abbott's "Flatland" and Pixar Animation Studios, to the 3 dimensions of choreography and crystal geometry and gravitational lensing, on to 4 dimensions and higher, with cosmology, hyperspace, and Madeleine L'Engle's "A Wrinkle in Time." Each part of the poster will be a link to more information about the different individuals, and further links to litera-

ture, electronic resources, and teaching materials at different levels.

Mathematics Awareness Month is an excellent time to communicate with broad audiences about the relevance of mathematics in their lives. Here are some suggested activities:

• Design your own World Wide Web page, and submit it to be linked from the MAM2000 website.

• Encourage your local math club, student chapter of the AMS, MAA, or SIAM, or chapter of Pi Mu Epsilon or Kappa Mu Epsilon, to organize campus events related to the MAM2000 theme.

• Request that appropriate state and local officials issue a proclamation declaring April 2000 to be Mathematics Awareness Month in your locality—a sample proclamation can be found on the MAM2000 website.

• Invite your local legislators and other elected officials to visit your department —public officials appreciate opportunities to speak with faculty about their public policy concerns.

• Tailor the sample news release to include details on your MAM activities and mail it to your local print and broadcast media outlets—you can find media listings in the reference section of your library, or work with your institution's public information office.

• Check the MAM website for an extensive listing of past activities and events.

Please help us share Mathematics Awareness Month by posting announcements and reports of your MAM2000 activities on our electronic mailing list: mathforum.com/mam/mamlist.html. *JPBM*

OhioNExT

The next workshop will be held Thursday evening and Friday morning, April 6-7, preceding the Ohio Section spring meeting at Marshall University. This workshop will be the seventh 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 local mathematics departments. Activities begin with a banquet Thursday evening. Following the banquet, there will be a freewheeling discussion about issues in teaching and professional development.

Friday morning workshop activities will lead off with short "teaching vignettes" presented by OhioNExT fellows about experiences in teaching. Following the short talks, there will be two major workshop sessions. Joe Diestel (Kent State) will present a session titled "Staying Alive." Mark Smith (Miami) will present a session entitled "Math Majors: Where have They All Gone, and How Do We Start Getting Them Back?"

Nineteen NExT fellows and four mentors took part in the NExT workshop at last fall's meeting at the College of Wooster. Short "teaching vignettes" were presented by three fellows: Dave Sobecki (Miami-Hamilton), Angela Spalsbury (Hiram), and Vickie VanDeslar (Ashland). There were two major workshop sessions. David Kullman (Miami) presented a workshop titled "Citizenship in Your Department and College". He discussed tenure matters in the context of broader issues. John Ramsay (Wooster) presented the second workshop. He discussed Wooster's Applied Mathematical Research Experience (AMRE) program, which sends student teams and faculty advisors from the college to a business, industry, or agency for mathematical "consulting" during the summer.

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 can be found on the Section web page, or from Barbara Ashton (Wittenberg), e-mail: bashton@wittenberg.edu.

John Michel

Spring Ohio Section Meeting
Preliminary Program
April 7-8. 2000
Marshall University

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:** "Real Estate in Hyperbolic Space: Investment Opportunities for the Next Millennium" Mel Slugbate, Slugbate and Mossbutter Real Estate (Sponsored by Colin Adams)
2:45-3:20	Coffee Break
3:20-6:15	**Contributed Paper Session**
3:20-4:50	Executive Committee Meeting
6:15-7:30	Banquet
6:30-7:30	Student Pizza Party
7:30-8:30	Dessert and After Dinner Talk: "A Chat with Students of All Ages" Katherine Coleman Johnson
8:30-9:30	Annual Business Meeting

Saturday

8:00-10:00	Registration
8:00-9:00	Coffee and Donuts
8:15-9:00	Department Liaisons Meeting
9:00-10:00	**Retiring President's Address:** "Questions about Networks; Stories about Networking" Aparna Higgins, University of Dayton
10:00-10:20	Coffee Break
10:20-11:55	**Contributed Paper Session**
11:15-12:00	**CONCUR Panel Discussion:** "The Capstone Experience" Organizer: Carl Spitznagel, John Carroll U.
12:10-1:10	**Invited Address:** "Making Calculus Fun: How to Entertain at Parties" Colin Adams, Williams College
1:10	Closing Remarks

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

Real Estate in Hyperbolic Space: Investment Opportunities for the Next Millennium
Mel Slugbate

The skyhigh stock market got you nervous? What goes up must come down? Antsy about stocks, bonds and mutual funds? Afraid of risky investments in Euclidean space? Then real estate in hyperbolic space is for you. We will discuss the enormous potential of this new investment opportunity and describe the many fascinating properties of hyperbolic space that make it such an attractive place to live. This is the financial equivalent of the 1980's junk bond. Don't miss it. Bring your checkbook and credit references! No previous math or real estate background assumed! Recommended for faculty and students alike! Roger Ebert says, "Two fingers up!"

Panel Discussion: The Capstone Experience
Organizer: Carl Spitznagel

The CONCUR survey conducted last fall revealed that a large number of departments in the Section have instituted a required capstone course for their mathematics majors. After the panelists discuss the capstone experience at their schools, there will be time for questions and comments from the audience.

Chat with Students
Katherine Coleman Johnson

In an informal and non-technical presentation, the speaker will share stories about her experiences during a long career in NASA's Flight Research Division, where she made many contributions to NASA's space program.

Katherine Coleman Johnson received her BS degree summa cum laude from West Virginia State College in 1937, and later completed graduate work in mathematics and physics at West Virginia University. She joined NASA's mathematics pool at the Langley Research Center at Hampton in 1953, and soon after began work in NASA's Flight Research Division, where she had a long and distinguished career until her retirement in 1986. She was instrumental in the development of calculations for tracing the orbits of spacecraft and satellites, and was chosen to work on many space missions, including those of John Glenn, Alan Shepard, Jr. and Neil Armstrong. As a result of her contributions, she is one of twenty-four scientists included in a permanent collection at the Afro-American Historical and Cultural Museum in Philadelphia, she received an honorary Doctor of Laws degree from Farmingdale State University of New York in 1998, and she was honored as an outstanding alumna of West Virginia State College in 1999.

Making Calculus Fun: How to Entertain at Parties
Colin Adams

How do you make calculus fun for your students, for the taxidriver, for the person sitting next to you on the plane? Lots of examples of what works. And a few of what doesn't.

Colin Adams is Mark Hopkins Professor and Chair of the Mathematics Department at Williams College. He received his Ph.D. from the University of Wisconsin-Madison in 1983. He is particularly interested in the mathematical theory of knots, their applications and their connections with hyperbolic geometry. He is the author of *The Knot Book*, an elementary introduction to the mathematical theory of knots, a co-author of *How to Ace Calculus: The Streetwise Guide*, which has been as high as #62 at amazon.com, and the author of a variety of research articles on knot theory and hyperbolic 3-manifolds. Professor Adams is a recipient of the *Deborah and Franklin Tepper Haimo Distinguished Teaching Award* from the MAA in 1998, is a Polya Lecturer for the MAA for 1998-2000 and is a Sigma Xi Distinguished Lecturer for 2000-2002.

Textbook Exhibits

Please have your book reps contact Ari Aluthge at Marshall (304-696-3050, aluthge@marshall.edu) to arrange display.

Questions about Networks; Stories about Networking
Aparna Higgins

Undergraduate research is becoming widespread at colleges and universities around the country, with many universities using it as a recruiting tool. Advisors of undergraduate research projects in mathematics face the age-old difficulty of providing challenging, yet accessible, problems to their advisees. How does one find such problems? This talk is an attempt to answer this question by considering the strength of a communications network. Measures such as reliability and redundancy can differ widely for the same network. The search for correlations and dissimilarities between these and other measures of strength of a network can be the beginning of interesting undergraduate research projects.

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 submit a title and a brief abstract by March 24, 2000. Please use the online submission form (preferred) on the meeting web pages (or at www.cedarville.edu/dept/sm/jas/maastuff/papersubfac.htm), or send to the Program Committee chair: Thomas Gantner, Dept. of Mathematics, Univ. of Dayton, Dayton, OH 45469-2316; gantner@udayton.edu; FAX: (937) 229-2566.

The contributed paper program will be posted on the web page prior to the meeting. *Thomas Gantner*

Call for Student Talks

Undergraduate and graduate students are encouraged to submit abstracts for 15-minute talks at the Spring Meeting. Topic 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 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 students, 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 who are preparing talks might want to refer to 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. The speaker must provide anything else necessary for his/her talk. The rooms do not have internet connections.

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 web at www.cedarville.edu/dept/sm/jas/maastuff/papersub.htm. There is a link to this form from the Section meeting page. Otherwise, abstracts may be submitted by U.S. mail to Barbara D'Ambrosia, Department of Mathematics and Computer Science, John Carroll University, University Heights, Ohio 44118. Please include your name, institution, e-mail address, student status (junior, senior, etc.), name of faculty mentor for the talk, your intended audience (upper level undergraduate, lower level undergraduate, etc.), the title of the talk, and a brief description of the presentation.

Abstracts must be received by March 24, 2000. Due to time and space restrictions, we may not be able to accommodate all talks. Please submit your abstracts early. Students who submit abstracts should also register for the meeting.

Student Registration and Housing

Students are encouraged to use the on-line meeting registration form at http://www.cedarville.edu/dept/sm/jas/maastuff/stureg.htm. There is a link to this form from the Section meeting page. Otherwise contact Prof. D'Ambrosia (see above). Students who request overnight housing should be aware that the amount of available housing is limited. Rooms will be reserved on a first-come, first-serve basis.

Barbara D'Ambrosia, Chair
CONSTUM

Online Registration

Regular preregistration and banquet reservations should be done online if at all possible. See Section web page.

Banquet

John Marshall Room, Memorial Student Center (#32 on map). All entrees include a salad, dinner rolls with butter, dessert, and coffee and iced tea. Cost is $12.00.
- Baked Stuffed Chicken Breast. Stuffed with wild rice and served with a chicken cream sauce.
- London Broil. Thin slices of grilled flank steak with oven roasted potatoes and choice of vegetables.
- Vegetarian. Bow tie pasta with sauteed vegetables and marinara sauce.

Please indicate choice with registration.

Marshall University

Founded in 1837 and named for US Supreme Court Chief Justice John Marshall, Marshall University is West Virginia's oldest university. With locations throughout West Virginia, and main campus located in Huntington, West Virginia, just across the Ohio River from the rest of the Ohio Section, Marshall is the focal point of a city with a population of 50,000.

The current enrollment of Marshall University is approximately 16,000 students including 4,000 graduate and medical students. Growth has allowed Marshall to step to the academic forefront with the John Deaver Drinko Library, one of the most advanced libraries in the country.

Although Marshall continues to grow, its attention remains on the individual. A quality education begins with the faculty and 83% of Marshall faculty members hold a Ph.D. or the highest degree in their academic field. Individual attention is assured with a student to teacher ratio of 23 to 1. Academic possibilities abound at Marshall. With 10 academic colleges, 22 associate, 52 baccalaureate degree programs and 50 graduate degree programs,

The Department of Mathematics offers a Bachelor of Science degree program which prepares students for careers in the mathematical sciences and related disciplines. The program provides a solid mathematical foundation which enables students to perform successfully in industrial, business or government positions, or in graduate studies in mathematics or related areas such as engineering and economics. The Department of Mathematics also offers an M.A. degree in Mathematics. The department employs 23 full-time faculty, including talented researchers from many branches of mathematics and mathematics education who are chosen primarily for

Travel Directions

From Portsmouth, Ohio

Take US highway 52 East. Stay on highway 52 through South Point until it becomes State Highway 7. Follow until the divided highway ends. Go straight on at the light over the bridge into West Virginia. Turn left at the second light onto 5th Avenue. Marshall University is on 5th Avenue and Hal Greer Boulevard (16th Street).

From Cincinnati

Take State Highway 32 East to Piketon, and then US Highway 23 South to Portsmouth, and follow directions from Portsmouth.

From Dayton

Take US highway 35 South to Chillicothe, then US highway 23 South to, Portsmouth, and follow the directions for Portsmouth.

From Columbus

Take US Highway 23 South through Chillicothe to Portsmouth, and follow directions from Portsmouth.

From Northwest Ohio

Take US highway 23 to Columbus and follow the directions from Columbus.

From Northeast Ohio

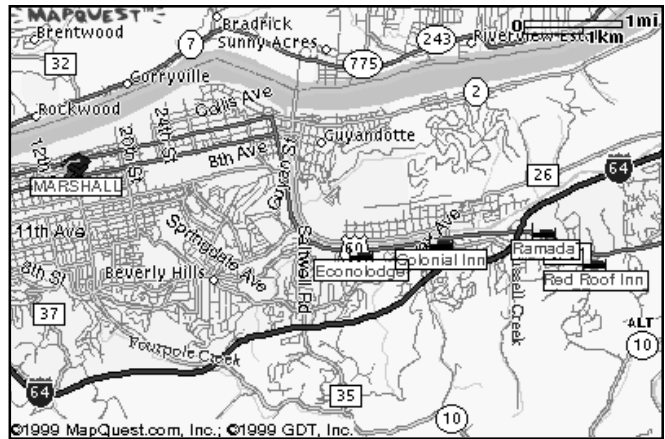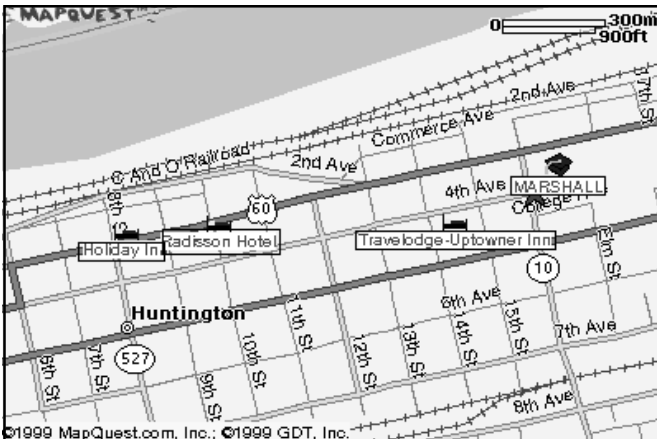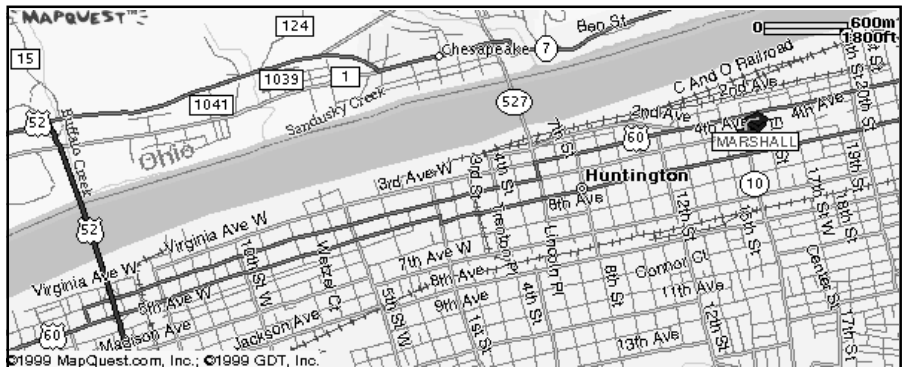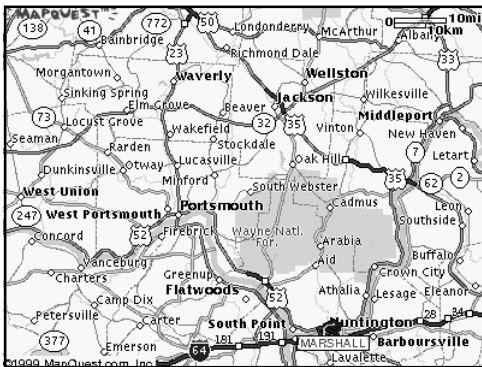Take I77 South to Charleston, West Virginia, and follow I64 West to Huntington. Take exit 11 onto Highway 10 North. Stay on highway 10 until it becomes 16th Street, and then Hal Greer Boulevard. Marshall University is located to the east of Hal Greer Boulevard between 3rd Avenue and 5th Avenue.

From Eastern Kentucky

Take I-64 East to West Virginia exit 11, and follow directions above.

Air Travel

Marshall University is served by Huntington Tri-State Airport (approximately 15-20 minutes drive) and by Yeager Airport in Charleston, West Virginia (approximately 60 minutes drive).

Maps provided by www.mapquest.com

Places to Stay

Mention "Mathematics conference at Marshall" when making reservations. Reserve by April 1st to receive discount.

Campus Area

• Holiday Inn Hotel and Suites
At 3rd Avenue and 8th Street, approximately half a mile.
(304) 523-8880
$79.00 single or double.

• Radisson Hotel
At 3rd Avenue and 11th Street, 5 blocks from Marshall University.
(304) 525-1001, Fax: 525-1048
$69.00 single or double.
Breakfast buffet $5.99. Lunch buffet 11am-2pm. $4.99.

• Travelodge-Uptowner Inn
14th Street and 4th Avenue, 1.5 blocks.
(304) 525-7741, Fax; 525-3508
$52.00 single or double (ask for special Marshall rate)
Breakfast menu at $3.95 and up.

US 60 East

• Colonial Inn, 3.5 miles.
4644 Route 60 East. (304) 736-3466
$27.95 single, $31.95 double.

• Econolodge, 3 miles.
3325 Route 60 East, (304) 529-1331
$43.00 single, $48.00 double
Free Continental Breakfast.

• Red Roof Inn, 5 miles.
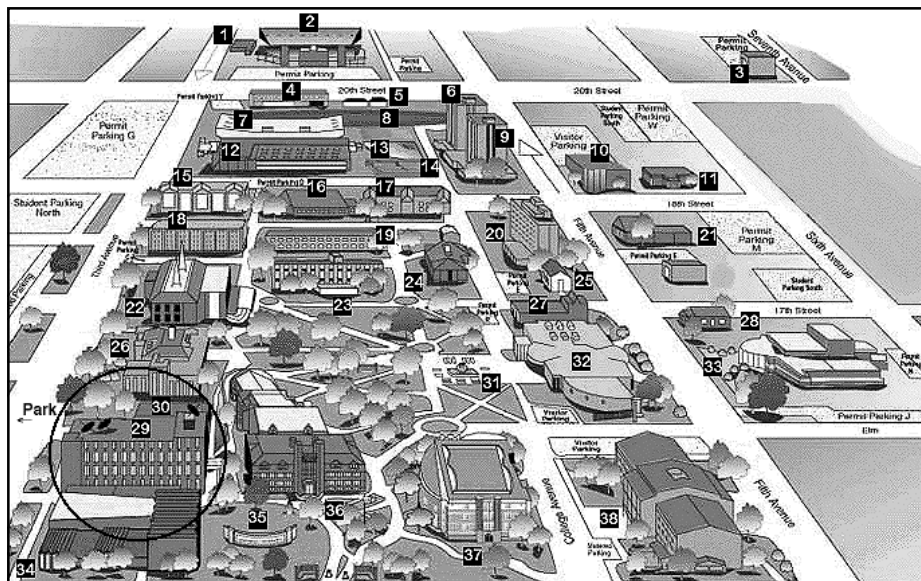At I64 exit 15, (304) 733-3737
$55.99 single or double

• Ramada Inn, 10 miles
82441 Route 60 East, Barboursville, WV.
(304) 736-9772
$43.95
Free Continental Breakfast. Kids free.

South Point, Ohio

• Best Western Southern Hills Inn
12 miles west at 803 Solida Road.
(740) 894-3391
$36.00 single, $40.50 double
Free Deluxe Continental Breakfast Bar.

Camping:

• Beech Fork State Park, (304) 522-0303
$13-$15 per night.

• Fox Fire Resort, (304) 743-5622
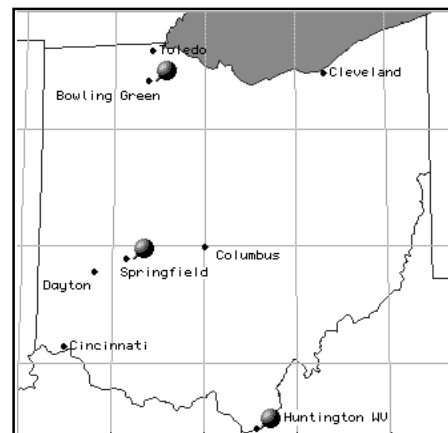Campers only: no tents.
$22-$30 per night.

Marshall University campus facing east from Hal Greer Blvd. (16th St.)

their excellence in teaching. The department is committed to quality education at all levels, from core curriculum math for the liberal arts student to graduate mathematics classes.

Athletics are an integral part of life at Marshall. A member of the Division I-A Mid–American Conference, Thundering Herd teams continue to gather recognition and support throughout the region and the nation.

Marshall is considered one of the best educational values in the south.

Section Meeting Sites

Registration and all talks will be in Smith Hall (#29) on Third Avenue (across from Lot F). Friday committee meetings, banquet, student pizza party, and the ice cream social will be in the Memorial Student Center (#32). Everything on Saturday will be in Smith Hall.

Parking

Everyone must park in Lot F on Third Avenue. There will be directions. Note that Third Avenue is one-way (going East to West). There will be someone at the parking lot to handout parking permits. Make sure that you have a parking permit displayed in your car.

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Clip or photocopy, or use the online form on the meeting web page (preferred).

MEETING REGISTRATION FORM

There is separate student registration. See page 9. Graduate students may choose either.

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 ($12.00). Entree choice: ___ Chicken ___ London Broil ___Vegetarian

_____ 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: Ari Aluthge, Department of Mathematics, Marshall University, Huntington, WV 25755

Seats at the banquet are limited and will be on a first-come, first-serve basis. Latest date for banquet reservations is April 1st. Early registration will help those making arrangements and ensure a banquet ticket.

Calendar

Ohio Section

April 7-8, 2000, Marshall U., Huntington WV., OhioNExT, April 6-7.

Summer Short Course, June 28 - 30, 2000, Cedarville College, (See page 6.)

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

March 23-24, 2001, Bowling Green State U., Bowling Green OH

Summer Short Course, 2001, John Carroll U., Cleveland OH

National MAA-AMS

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

Rose-Hulman Undergraduate Mathematics Conference, March 17-18, 2000. Terre Haute, IN.

Ohio Academy of Science, March 31-April 2, 2000, Ohio Northern U.

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

Great Lakes SIAM Forum on Numerics and Modeling for PDEs, April 1, 2000, U of Mich-Dearborn.

Indiana Section, April 7-8, 2000, Earlham C., Richmond, IN.

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

OhioMATYC, April 8, 2000, Edison CC, Piqua.

NCTM, April 13-16, 2000, Chicago

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

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

Joint Statistical Meetings. August 13-17, 2000, Indianapolis, IN.

OCTM, Oct. 18-20, 2000, Toledo Convention Center

Indiana Section, Fall, 2000, University of Southern Indiana, Evansville.

AMATYC, November 9-12, 2000, Chicago IL

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

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Give to someone in mathematics.

Complimentary Copy

Time Value Material - Please do not delay!