



OHIO FOCUS

The Ohio Section Newsletter

Volume 6

Spring, 2001

Number 8

Arthur Benjamin, Fred Rickey Featured at Spring Meeting



Olscamp Hall on the campus of BGSU

The Annual Meeting of the Section will be held at Bowling Green State University, Friday and Saturday, March 23-24, 2001. All sessions and activities will take place in Olscamp Hall, pictured here. This is a large classroom building with conference facilities. That will allow us to have the invited talks in a large room, and smaller sessions will be in classrooms nearby. Other activities—registration, coffee breaks, book exhibits, and social hour and banquet—will all be in an adjacent large room.

Arthur Benjamin will start things off with “Proofs That Really Count!” and later demonstrate his “Mathemagics!” calculating ability. Fred Rickey, a former Section member and old friend, will give a talk entitled “History of Mathematics as a Pedagogical Tool, Part II” on Saturday. Judy Palagallo will round out the talks with her Retiring President’s Address on “Random Fractal Images.”

(Continued on page 2)

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 March 23, after the banquet at Bowling Green State University:

- James A. Sellers from Cedarville University for a three-year term on the Program Committee, the third year as chair.
- Harold Putt from Ohio Northern University for President-Elect, succeeding the following year to President, then to Past-President, and then to a three-year term on the Nominating Committee.

James, who has written papers in number theory and combinatorics, did his graduate work at Penn State under the direction of David Bressoud. He recently chaired CONTEAC and currently chairs CONSTUM. He also handled the local arrangements at Cedarville University for

(Continued on page 2)

Ohio Project NExT

An Ohio Project NExT (New Experiences in Teaching) workshop will be held Thursday evening and Friday morning, March 22-23, preceding the Ohio Section spring meeting at Bowling Green State University. This workshop will be the ninth since the founding of the Ohio Section's local version of national Project NExT for new faculty members. The Ohio Section will provide 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. The “headquarters” hotel for NExTers in Bowling Green will be the Best Western Falcon Plaza at 1450 E. Wooster Street. Fellows should make their own reservations by calling 419-352-4671. Ask for the “Math. Assoc. of Amer.” group rate to get the special room price. Activities begin with a banquet at 7:00 PM Thursday evening at Kaufman's at the Lodge restaurant.

(Continued on page 3)

Inside

Spring meeting details and student activities

Summer Short Course

Officers and committees

Governor's Report

President's Message

Schedule of events

Campus News

T³ Technology Conference

Section Governor's Report

The January 2001 meeting of the Mathematical Association of America was a great success. While our New Orleans hosts were apologizing about their 50-degree winter weather, we from Ohio thought it was great to see grass and sidewalks instead of snow and slush. The Board of Governors met on the Tuesday before the meeting and covered its 86-page agenda within the 8-hour limit. Here are a few highlights:

MathFest, a three-day meeting beginning Thursday, August 2, 2001 in Madison, WI, announced plans for a great conference—Judy Grabiner, Frank Morgan, Michael Starbird, and Thomas Banchoff will be giving the featured addresses in the MAA and Pi Mu Epsilon programs. Scan your next issues of MAA Focus and MAA OnLine for details. This meeting will be especially easy to attend because it is just a day's drive from anywhere in the Ohio Section. I hope to see you there! This will be the fifth summer meeting without the AMS. After a slightly bumpy start, our MathFests have been growing steadily in quality and attendance, with attendance at the two most recent in the 1200-1500 range.

Other meetings approved by the Council are: San Diego, CA, January 6-9, 2002 [Sunday through Wednesday]; Burlington, VT, August 1-3, 2002 [Thursday through Saturday]; Baltimore, MD, January 15-18, 2003 [Wednesday through Saturday]; Phoenix, AZ, January 7-10, 2004 [Wednesday through Saturday]; San Antonio, TX, January 12-15, 2006 [Thursday through Sunday]. Under consideration but not yet approved is: Charlotte, NC or Atlanta, GA for January 2005. Currently, 23 sites are being investigated for suitability for hosting the MathFests in 2003, 2004, and 2005.

The MAA published 16 new titles in 2000. Look for them at our Section meeting March 23-24 in Bowling Green. Not only do you save if you purchase there, but our Section also earns income from your purchase. To keep these great books flowing out of the MAA, remind all your college administrators that expository writing is true scholarship.

A Committee on the Undergraduate Program in Mathematics [CUPM] Confer-

ence Report containing discussion papers is available through a link on the homepage of MAA Online. The Governors may discuss the CUPM 10-year update at its August meetings, so if you see any red flags in the document, please let me know so the Board can consider them before the next 10-year Recommendations are approved.

Regular dues will increase by 3.5% for 2002. Recomputation of the "present value of future benefits" for Life Members (available at age 62) will cause their rate to increase by 25% to a one-time payment of \$1500. Three Special Interest Groups have been authorized so far, and more are on the way. The current SIGMAAs are on: (1) Research in Undergraduate Mathematical Education; (2) Statistics Education; and (3) Business, Industry, and Government [BIG-SIGMAA]. Join a SIGMAA when you renew your membership; the additional cost is about \$10 each.

Our auditors suggested that the MAA have a policy on conflict of financial interest, the lawyers wrote one, and the Board adopted it at this meeting. It applies to everyone from full time employees at headquarters down to each member of every committee of our Section. If you are a committee member or officer of our section, please read it. You can find it on MAA OnLine under "About MAA," "Policies and Procedures."

Leo Schneider
John Carroll University
Section Governor

(Nominations, continued from page 1)
CONSACT's summer short course last year.

Harold did his graduate work at Bowling Green State University where he wrote his dissertation on ordered permutation groups under the direction of W. Charles Holland. He has been a member of the MAA and the Ohio Section since 1973. Over the years he has served on the Program Committee (the third year as chair), CONCUR (two terms, one year as chair), CONTEAC, and is currently a member of CONSACT.

Roger Marty, Chair
Nominating Committee

(Meeting, continued from page 1)

After dinner Fred will talk about the Palimpsest of Archimedes, which was sold at auction by Christie's in 1998, followed by the presentation of the Section teaching award and the election of officers.

There will be ample time to meet and greet old and new friends from around the state and compare notes. This is one of the major benefits of these meetings. Book publishers, including the MAA, will have displays in the large area devoted to breaks, registration, social hour, and banquet.

Sharing of ideas and projects are formally done in the contributed paper sessions. Start thinking now. Program details begin on page 8. Local arrangements are on pages 10-11.

As usual, student activities are an integral part of the Spring meeting. Contributed talks by students are scheduled for both days. There is a free pizza party as well. And drawing for a calculator. Bring a big group of students. See page 9.

The meeting is preceded by the Ohio Project NExT Workshop for teachers entering the profession. They will then join us for the regular meeting. See page 1.

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.

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Deadline for next newsletter is
August 30, 2001
Email copy preferred. No Word documents please.

This information will also be posted, and updated, on the web page:
www.maa.org/Ohio.

President's Column

We have now officially entered the 21st century, an exciting time for us and for our students. Our discipline has a long history, but the nature of mathematics continues to change. We teach students of varied backgrounds and with multiple interests. Not all of our students choose to become scientists or mathematicians. They may become teachers, go into law or politics, or become entrepreneurs. Our challenge is to expose them to our excitement about mathematics and its usefulness in their lives. The Committee



on the Undergraduate Program in Mathematics (CUPM) of the MAA has been gathering information about what our students should know. Ultimately, CUPM will produce a new Curriculum Guide that will influence mathematical curriculum for the next decade. Look for papers, panel discussions and focus groups that will discuss these issues in upcoming meetings of the Section and the national MAA.

At the Joint Mathematics Meetings in New Orleans in January, I attended the poster session for Research by Undergraduates. Approximately 170 students presented seventy-eight posters of quality mathematics. The room was charged with the excitement of the students and those who came to hear about their work. Once again, Ohio was well represented, with students from Akron, Bowling Green, Marietta, Oberlin, Wittenberg and Xavier.

I hope that we will continue the tradition of encouraging students to attend and make presentations at our Section spring meetings. The meeting at Bowling Green in March will be the first Section meeting of the millenium. Arthur Benjamin, the keynote speaker, is known for his interesting and entertaining presentations. Fred Rickey, an Ohio Section member for many years, will increase our knowledge of the History of Mathematics. Students and faculty will have opportunities to present their work on Friday afternoon and on Saturday morning.

At the fall 2000 meeting the Executive Committee of the Section approved changes in the fee structure for registration at Section meetings. The new fees are \$20 for non-students who are employed

full-time, \$10 for non-students employed less than full-time. We continue with the policy of having no registration fee for students. The slight increase in the registration fees, effective for fall 2001, will allow the Section to continue to fund the OhioNExT program and other activities.

My term as President of the Section was eased by the generous assistance of many in the Section. I urge you to continue seeking ways to participate in the Section activities. Tom Gantner, the incoming president, welcomes your input and your help on various committees. Dates and locations for several future meetings are listed on the back of this newsletter. Plan ahead to attend the meetings and invite colleagues and students to join you. I look forward to seeing you in Bowling Green.

Judith Palagallo
University of Akron
Section President

T³ Technology Conference

The Ohio Section is one of several organizations co-sponsoring the 2001 Teachers Teaching with Technology International Conference. The conference will be held in Columbus, Ohio, on March 16-18, 2001 at the Hyatt Regency and the Greater Columbus Convention Center. The focus of the conference is on enhancing the teaching of mathematics and science from kindergarten to college through the use of educational technology.

Over 3000 teachers from many countries and nearly every state in the union are expected to attend and there will be approximately 400 different sessions to choose from. Former senator and astronaut John Glenn will give the opening keynote address on Friday Morning. Senator Glenn is Chair of the National Commission on Mathematics and Science Teaching for the 21st Century. The Commission report can be read or downloaded at www.ed.gov/americaaccounts/glenn.

Information on registration and housing is available at www.t3ww.org/t3/confoverview.htm. For general information, you can visit the T-cubed web site at www.t3ww.org/t3.htm.

For more information about the conference, contact Larry Lance (llance@cscs.edu) or Ed Laughbaum (elaughba@math.ohio-state.edu), Conference Co-Chairs.

Al Stickney

(NExT, continued from page1)

rant, which is located at 1628 Wooster Street. Following the banquet, there will be a freewheeling discussion about issues in teaching and professional development.

Friday morning, after a continental breakfast beginning at 8:00 AM in the Bishop Room at the Best Western Falcon Plaza motel, workshop activities will begin at 8:45 AM in the same room. Leading off will be short "teaching vignettes" presented by Ohio NExT Fellows about experiences in teaching. Following the short talks, there will be two major workshop sessions.

Twenty-six NExT fellows and four mentors took part in the NExT workshop at last fall's meeting at Wittenberg University. Short "teaching vignettes" were presented by three Fellows: Deborah Denvir (Marshall University) discussed "Ideas for Persuading Undergraduates to become Involved in Research Projects," Barbara Margolius (Cleveland State University) talked about "Homework and Quizzes over the Internet: WeBWorks and WebCT," and Judy Holdener (Kenyon College) described "Models of Life: a Mathematics Course for Nonmajors." There were two major workshop sessions. Tom Price (University of Akron) presented a workshop titled "Web Based Course Materials" and Ann Farrell (Wright State University) presented the second workshop on "Strategies for Using Learning Groups in Math Classes."

There are more than forty Ohio NExT Fellows, and about half are also national NExTers. To be eligible, the only requirements are that a faculty member be "new" (in his or her first four years of teaching in Ohio) and have a strong commitment to teaching undergraduates. Applications for Ohio Project NExT are now being accepted. Details and application materials can be found on the Ohio Section web page, or from John Holcomb (Cleveland State University), jph422@yahoo.com.

Barbara Ashton



2000-2001

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• 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.

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Fall 2001 Marietta
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18th Annual Rose-Hulman Conference on Undergraduate Mathematics

The undergraduate math conference takes place March 16th and 17th, 2001 at Rose-Hulman Institute of Technology, Terre Haute, IN.

Invited speakers are Suzanne Lenhart, University of Tennessee at Knoxville and Oak Ridge National Labs, who will speak on applications of optimal control to various population models, and Linda Petzold, University of California at Santa Barbara, who will speak on computational science and engineering.

The main focus of the conference will be on undergraduate speakers, who are encouraged to submit abstracts of papers in any area of the mathematical sciences. We ask faculty to encourage their students to take advantage of this opportunity and submit an abstract by February 28th, 2001. In order to celebrate mathematics done by undergraduates, all of the talks (except the two invited talks) will be given by undergraduates. www.rose-hulman.edu/Class/ma/HTML/Conf/UndergradConf.html, phone: (812)-877-8391, fax: (812)-877-8883

Demos with Positive Impact

This is an NSF project to connect mathematics instructors with effective teaching tools. It is a web-based collection of instructional demonstrations for teaching mathematical concepts across the undergraduate curriculum. Demonstrations to accompany ideas and concepts are a requirement for effective instruction. What we have in mind is a vignette, incorporated within a lecture that engages the learner on a level in addition to the dialogue of the instructor. In contrast to student activities such as projects or lab activities, these vignettes are intended to be presented by the instructor. Experienced instructors have private toolboxes of demos, conceptual approaches, or physical gadgets they use to encourage students to tune-in to the mathematics. This rich, but largely unharvested source of tried-and-tested ideas forms the basis for Demos with Positive Impact. We invite you to visit the web site at <http://www2.gasou.edu/facstaff/lroberts/demos>.

The success of Demos with Positive Impact depends on contributions of good ideas for demos from our colleagues. Although we cannot give you any money for your ideas, we will acknowledge your con-

Mathematics Undergraduate Research Summer

The Summer Undergraduate Mathematical Sciences Research Institute (SUMSRI) is currently accepting applications for its summer research program in mathematics and statistics. SUMSRI helps to prepare promising minority and female students for the pace and academic requirements of graduate school. SUMSRI will be held from June 3-July 20, 2001, at Miami University in Oxford, Ohio.

SUMSRI offers short courses in: abstract algebra, real analysis, GRE preparation, mathematical technical writing. Research seminars in algebra, statistics, combinatorics/graph theory are the core of the SUMSRI experience. Colloquia with prominent mathematicians, discussions and labs in LaTeX, MatLab, Maple and Minitab, and meeting with grad school representatives round out the summer.

Students are housed in an air conditioned dormitory on Miami's campus, meals are provided and a stipend paid of \$2500.

We are especially interested, but not limited to, minorities and women who have completed the calculus series and at least one upper level, proof-based mathematics or statistics course.

The application deadline: March 1, 2001. For more information, see website at www.muohio.edu/sumsri/ or contact Bonita Porter at porterbm@muohio.edu.

tribution to this NSF funded project. We will accept good ideas in any form; a description on paper, an electronic file or you may use our web form. We will take your idea, for which you will receive full credit, and fit it into our database format. You may submit your demo online at the *Demos with Positive Impact* web site or send it by mail to

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Statesboro, GA 30460

Campus News

Ashland University

Dr. Thomas Dence was one of this year's recipients of the Ashland University Mentor Awards, which is an award given to those faculty that have had a significant influence on the academic, intellectual, and character growth of a student. Tom is also, for the second year, the coach of McCormick Middle School's MathCounts team.

Bowling Green State University

Bradley Efron of Stanford will present the Lukacs Lectures, April 2-5.

Cleveland State University

Hiring: Dr. John P. Holcomb, Jr. He has a Bachelors Degree from St. Bonaventure University in Western NY (1989) and a Ph.D. in mathematical statistics from The University at Albany (SUNY) in 1995. Previously employed at Youngstown State University for five years. Areas of research include measurement error modelling, applied statistical analysis in nutrition, osteoporosis, and economics, and education innovation and assessment.

Retirements: Paula Gnepp and Fred Chang.
Professional Leaves: Luiz Felipe Martins (Spring 01) John Oprea (Fall 00 & Spring 01).

John Carroll University

Dick Horwath and Barbara D'Ambrosia are on leave for the spring semester.

Marshall University

Positions being filled: a division head and dean for College of Science, two tenure-track positions—one statistician and one "open."

Ohio Univeristy

Two math ed positions (an assist Prof and an instructor) are available starting Sept. 2001.

Walsh University

James Jerkofsky, Associate Professor of Mathematics and Computer Science, earned a second Master's degree last fall, in computer science from Kent State University.

Look! There was room for your news.

Section Summer Short Course
A Mathematical Sampler: 1669-1900
 June 27-29, 2001
 Ashland University
 Presented by William Dunham, Muhlenberg College

Abstract

This workshop examines a collection of beautiful theorems from a particularly significant period in the history of mathematics. We consider original works of Newton, the Bernoullis, Euler, Gauss, Weierstrass, Cantor, and other major figures as they addressed questions from the realms of analysis, number theory, geometry, complex variables, and the theory of sets. The theorems - all of which have relevance to the undergraduate classroom - are amplified by biographical information and placed in historical context, but the primary focus is on the genius of great mathematicians doing great mathematics.

Biographical Sketch

William Dunham, who received his B.S. (1969) from the University of Pittsburgh and his M.S. (1970) and Ph.D. (1974) from The Ohio State University, is the Truman Koehler Professor of Mathematics at Muhlenberg College. Although trained in general topology, Dunham's interests soon shifted to the history of mathematics. He received grants from the National Endowment for the Humanities (NEH) to direct summer seminars on math history at Ohio State, and he has spoken on historical topics at national and regional mathematics meetings as well as the Smithsonian Institution, on NPR's "Talk of the Nation/Science Friday," and on the BBC. His expository writing was recognized with the MAA's *George Polya Award* in 1991 and the MAA's *Trevor Evans Award* in 1997, and he received the *Award for Distinguished College or University Teaching of Mathematics* from the MAA's Eastern Pennsylvania and Delaware (EPADEL) section in 1994. Dunham combined his historical and mathematical interests by authoring *Journey Through Genius: The Great Theorems of Mathematics* (John Wiley, 1990). A second book, *The Mathematical Universe* (John Wiley, 1994) received the American Association of Publishers' award as the Best Mathematics Book of 1994. His most recent work, *Euler: The Master of Us All* (1999), has been published by the Math-

ematical Association of America as part of their *Dolciani Mathematical Exposition* series.

Expenses/Lodging/Dining

The registration fee for this year's summer short course is \$100. On-campus dormitory rooms (without air conditioning) are available at a daily cost of \$18 (single) or \$13 (half a double). A number of area hotels and restaurants are within a 5-10 minute drive of campus.

A Wednesday night picnic will be furnished by Ashland University's Department of Mathematics and Computer Science.

Registration/Additional Details

Fill out the online registration form to sign up for the 2001 MAA Ohio Section Summer Short Course. Please submit check for \$100 registration fee made payable to Ashland University Math Dept. For additional details or to register by mail, contact: Dr. Thomas Dence, Department of Mathematics and Computer Science, Ashland University, 401 College Avenue, Ashland, Ohio 4480, Phone: (419) 289-5262, Fax: 289-5791, Email: tdence@ashland.edu

Tentative Schedule/Course Content

The 2001 MAA Ohio Section Summer Short Course will meet 9:00am-4:30pm on Wednesday, June 27th and Thursday, June 28th, and 9:00am-noon on Friday, June 29th.

An optional canoe trip on the Mohican River is being planned for the afternoon of Tuesday, June 26th as a kickoff activity. The cost for this canoe trip will be approximately \$10-\$15 per person, depending on the length of the trip and the number of people participating. Send e-mail to cswanson@ashland.edu if you are interested in canoeing. An optional golf outing is being planned for the afternoon of Friday, June 29th after the short course ends. Details about the golf outing will be posted later. Send e-mail to tdence@ashland.edu if you are interested in participating in the golf outing.

Sessions are informal with discussion encouraged, and problem sets will be pro-

vided for possible use in courses elsewhere. Participants will have access to the original papers/books in which these great theorems appear.

The course content includes the following:

- Newton's Method in its original form (1669)
- The Bernoullis' divergent proofs for the harmonic series (1689)
- Euler's evaluation of $\sum 1/k^2$ and related series (1734)
- Euler and the origin of analytic number theory (1737)
- The Euclid-Euler theorem characterizing even perfect numbers (1747)
- Gauss's construction of the regular 17-gon (1796)
- Pathological functions of Dirichlet (1829), Riemann (1854), and Weierstrass (1872)
- Cantor's first proof of the non-denumerability of the continuum (1874)
- Volterra's proof that no real functions can be continuous precisely on the rationals (1881)
- Baire and his "category theorem" (1899)



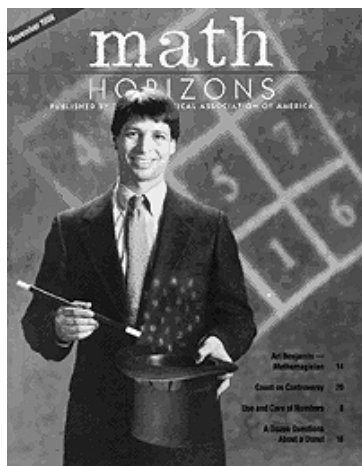
Who am I?

Arthur Benjamin

One of the main speakers for the 2001 MAA-Ohio section spring meeting may be best introduced to Ohio section members from the article titled "Arthur Benjamin - Mathematician", that appeared about him in the November, 1998, issue (pp.14-20) of *Math Horizons*. His web site at www.math.hmc.edu/faculty/benjamin/ is also a wealth of information.

As a brief overview: Arthur Benjamin earned his B.S. in Applied Mathematics from Carnegie Mellon U and his PhD in Mathematical Sciences from Johns Hopkins University. Since 1989, he has taught at Harvey Mudd College, where he is currently Professor of Mathematics. He has served as Editor of the Spectrum book series for MAA, and currently serves on the editorial board of *Mathematics Magazine*, the *UMAP Journal*, and the *Anneli Lax New Mathematical Library*. In 2000, he received the MAA's Haimo Award for Distinguished Teaching. Aside from his research interests in combinatorics and game theory, he enjoys tournament backgammon, racing calculators, and performing magic.

Prof. Benjamin has written well over twenty major research articles, many with undergraduates as co-authors. He held a National Science Foundation Graduate Fellowship from 1985-88, and won first place in the American Backgammon Tour in 1997. He has worked at the Institute for Defense Analyses in Princeton and at the National Security Agency in Washington, D.C. as well as other industrial sites. Three of his most recent lighter mathematical works which have appeared or are to appear in *Math Horizons* have the titles "Math Major Wins College Jeopardy", "A Better Way to Memorize Pi: The Phonetic Code", and "The Mathematical Web".



Fred Rickey.

V. Frederick Rickey, a logician turned historian, earned three degrees from the University of Notre Dame (Ph.D. 1968) and then went to Bowling Green State University where he rose through the professorial ranks to become Distinguished Teaching Professor Emeritus. For the past three years he has been at the United States Military Academy, West Point, NY, where he has been teaching the four core mathematics courses that every cadet takes.

He has been on leave five times, most recently in Washington D. C. where he was

Visiting Mathematician at the MAA headquarters. While there he was involved in the founding of *Math Horizons*, a magazine for mathematics



undergraduates; became the first editor of electronic services for the MAA and built its first gopher and web pages (both long departed); and wrote a successful NSF grant for an Institute for the History of Mathematics and Its Use in Teaching.

Here is a short list of Prof. Rickey's awards and decorations: Award for Distinguished College or University Teaching of Mathematics, MAA, 1993; Appointed Distinguished Teaching Professor, Bowling Green State University, 1992; Outstanding Civilian Service Medal, Department of the Army, 1990; George Polya Award for Mathematical Exposition, MAA, 1988 for the paper "Isaac Newton: Man, Myth, and Mathematics," *College Mathematics Journal*, 18 (1987), 362-389.

He has broad interests in the history of mathematics and especially the development of the calculus. He is very interested in finding ways to use history in the classroom to inspire and motivate students. He loves teaching and enjoys giving lectures to mathematicians about the history of their field.

His web page is www.dean.usma.edu/math/resource/faculty/rickey/rickey.htm

(BGSU, continued from page 10)

Ph.D. degrees. In addition, there are faculty members in the Department of Computer Science, and in statistics and operations research in the College of Business, and in mathematics education in the College of Education.

The Department of Mathematics and Statistics is located in the Mathematical Sciences Building (MSC on the campus map) which also houses the Frank C. Ogg Science Library and the Scientific Computing Laboratory. The Ogg Library houses a fine collection, please visit it when you can. Most classes in mathematics and statistics are held in this same building. In addition to formal courses, we offer a variety of seminars and weekly colloquia where mathematicians and statisticians of international reputation present talks. Erdős has visited the campus for example.

The Department offers the Bachelor of Science, Bachelor of Science in Education, Master of Arts, Master of Arts in Teaching, Master of Science in Applied Statistics, and Doctor of Philosophy degrees. The doctoral program has awarded 75 degrees since 1975. A number of faculty in Ohio colleges and universities are BGSU graduates. Kenneth Cummins received his masters degree at BGSU, writing his thesis under Frank Ogg.

Ohio Alpha Chapter of Kappa Mu Epsilon was founded at BG in 1936. The national records have been kept recently at BGSU by Waldemar Weber, national secretary until his retirement in January.

The City of Bowling Green has a population of nearly 30,000. It is a rich, and flat, agricultural area. (Ideal for teaching the concept of a tangent plane.)

There is quite a lot of history in the area that is not widely known. Bowling Green is situated in the middle of what was called the Great Black Swamp, which separated the English south from the French north during the early years of the country. The site of the Battle of Fallen Timbers, which opened the northwest territories to settlement, is located 10 miles north along the Maumee River, as is the restored Fort Meigs of the War of 1812. Wood County was the center of an oil and gas boom after the Pennsylvania finds and before the great oil fields of Oklahoma and Texas opened up, which led to the growth of the glass industry in Toledo and north west Ohio. This boom is celebrated in the murals of the historic Wood County Court House downtown.

Spring Ohio Section Meeting Preliminary Program

Friday, March 23

Noon-4:30 Registration
 Noon-7:30 Book Exhibits
 12:15-1:15 Committee Meetings
 1:30-1:45 Announcements and Welcome
 1:45-2:45 **Invited Address:**
 “Proofs That Really Count!”
 Arthur Benjamin, Harvey Mudd College
 2:45-3:15 Coffee Break -
 3:20-4:20 **Retiring President’s Address**
 “Random Fractal Images”
 Judith Palagallo, University of Akron
 4:30 Executive Committee Meeting
 4:30-6:25 Contributed Papers Session 1
 6:30 Social Hour
 7:00 Student Pizza Party
 7:00 Banquet
 8:00 **Evening Address**
 “The Palimpsest of Archimedes”
 Fred Rickey, USMA, West Point
 Business Meeting

Saturday, March 24

8-10:30 AM Registration
 Book Exhibits
 8:00-9:00 Coffee and Donuts
 8:15-9:00 MAA Department Chairs and Liaison Meeting
 Meeting of Student Leaders
 MAA Executive Committee
 9:00-10:00 **Invited Address:**
 “History of Mathematics as a Pedagogical Tool,
 Part II”
 Fred Rickey, USMA, West Point
 10:00-10:20 Coffee break
 10:20-12:00 Contributed Papers Session 2
 12:00-1:00 **Invited Address.**
 “Mathemagics!”
 Arthur Benjamin, Harvey Mudd College

All sessions are in Olscamp Hall.

Check the web for updates (www.maa.org/Ohio).

Proofs That Really Count!

Arthur Benjamin.

We explore some magical properties of Fibonacci numbers, and a combinatorial interpretation of them which reveals most of their hidden secrets.

It is easy to show that the number of ways to tile a 1-by- n board with squares and dominoes is the n th Fibonacci number f_n where $f_1=1$ and $f_2=2$. It is less well-known that the number of ways to tile a 1-by- n bracelet with squares and dominoes is the n th Lucas number. In fact, similar combinatorial interpretations can be given for all positive Fibonacci-like sequences as well as to the numerators and denominators of all finite simple continued fractions. Armed with these interpretations, and the occasional use of probability, many beautiful identities of number theory can be viewed as stories that are “recounted” in two different ways. (This talk is based on joint work with Jennifer Quinn and Francis Su.)

Mathemagics!

Arthur Benjamin.

Arthur Benjamin is a “lightning calculator” and will demonstrate and explain his secrets of rapid mental calculation. He has presented this mixture of math and magic to audiences all over the world.

Information about the speakers can be found on the previous page.

Random Fractal Images

Judith Palagallo

Fractal geometry has become an increasingly popular branch of mathematics with cross-disciplinary applications. In this talk, I will generalize several results obtained from the classical Sierpinski triangle. Fractal dimension and self-similarity are the special characteristics of these geometric objects. The mathematical goal is to describe the geometry of linear transformations using fractal geometry. I will also discuss the contributions made by undergraduates to the solution of these problems.

The Palimpsest of Archimedes

Fred Rickey

Archimedes is undoubtedly the greatest mathematician of antiquity, but his writings were difficult and so survive in very few copies, some in unique copies. The most fascinating of these, which contains his wonderful work that we call “the Method,” was sold at auction by Christie’s in 1998. This manuscript was created in the tenth century, palimpsested in the twelfth, discovered and published in the early twentieth, and sold at auction in 1998. It has been exhibited at the Walters Art Museum in Baltimore and the Field Museum in Chicago and is presently under restoration and extensive scholarly study. Scholars have great hope for what the manuscript will reveal. All of this makes for a fascinating story.

History of Mathematics as a Pedagogical Tool, Part II

Fred Rickey

Part I of this lecture was presented in 1979 when I was first invited to speak to this section. There was some philosophy about why you should use historical ideas while teaching calculus and then there were examples such as the intermediate value theorem, the history of trigonometry, and the integral of the secant. Perhaps I can be pardoned for revisiting this topic, for I have learned a bit more in the past two decades. Now I can show you how easy it is to differentiate and integrate the trigonometric functions, why the cables on suspension bridges are parabolic, what shape a clepsydra is, and how the Schwartz paradox changed the way we define surface area. It is my hope that you will take these examples into your classrooms and show your students.

Call for Contributed Papers

Fifteen-minute presentations on any topic of general interest in mathematics or related areas are encouraged. Reports on projects, research announcements or anything you believe would be of interest to those in attendance are welcome. Reports related to classroom innovations and projects will constitute the *Kenneth Cummins Teacher’s Corner*.

Contributors for all sessions should send a title and a brief abstract by March 9,

2001. On-line submission preferred. Or mail to: Dale Mugler, Dept of Math & Comp Sci, University of Akron, Akron, OH 44325-4002, Phone: 330-972-8013, dmugler@uakron.edu. The contributed paper program will be posted on the web page prior to the meeting.

Dale Mugler
Program Committee Chair
Banquet

The Friday evening banquet will be in Olscamp Hall. This will be preceded by a social hour with a cash bar. It is a buffet with entrees of roast beef, baked white fish, and vegetarian lasagna. Also au gratin potatoes, fresh green beans, baby carrots, salad, rolls, and coffee, tea, or iced tea. Dessert choice includes the campus specialty: coconut cream pie.

Cost is \$15.00, payable with preregistration. Students are welcome to attend the banquet, for the same price. There may be a few banquet tickets available on site, but this cannot be guaranteed.

Students from the pizza party will join us for dessert. Then we will adjourn for the after-dinner program.

Book Exhibits

Textbook publishers will be displaying their wares at the meeting. Tables will be set up in the same area as registration, coffee breaks, and social hour. There will be ample opportunity to browse. Please encourage book reps to contact Thomas Hern 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, but it also earns money for the Section.

New Online Registration

Thomas Price, University of Akron, has been working on on-line registration and abstract submission. This new system will also keep information in a database for future reference. The system was tested last fall, and this spring it will be used for the first time.

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

Department Chairs Luncheon

Neal Carothers, BGSU Chair, will host a Friday luncheon for department chairs or division heads from the Section to discuss matters of mutual interest. Please contact Neal if you haven't received information: carother@bgnet.bgsu.edu, 419-372-7453.

Student Activities

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 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. 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 James Sellers, Department of Science and Mathematics, Cedarville University, 251 N. Main St., Cedarville, OH 45314. 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 9, 2001. 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 on the MAA Ohio Section webpage. Otherwise contact Professor James Sellers (as above).→

Free "sleepover" type overnight housing will be available at United Christian Fellowship (UCF on the campus map) for those who do not make arrangements in motels, etc. Be sure to indicate this request when registering. This is a large open area, with bath and shower. Sleeping bags, pads or air mattresses, soap, towels, etc will be needed.

Door Prize(s) Planned

With the goal of encouraging student participation and attendance at the meetings we have received a commitment from Hewlett-Packard for a graphing calculator to be donated for use as a door prize, and await responses from others. The calculator(s) will only be given to students who have registered and who are present at the giveaway.

Encourage your students to attend for many reasons, including this one!

New Forum for Student Leaders Planned

The Section often holds various meetings on Saturday morning of the Spring Meeting to allow various groups to meet, such as MAA Department Liaisons. These are usually very informative times, as people are able to learn of new activities in the MAA and brainstorm ideas.

This year, CONSTUM plans to hold an additional meeting during this hour for the student leaders and officers in the various MAA Student Chapters around the state. The meeting will also be open to students and faculty of institutions who do not currently have a MAA Chapter. We hope this will be an excellent opportunity for information gathering and sharing amongst the students, as well as a prime networking opportunity.

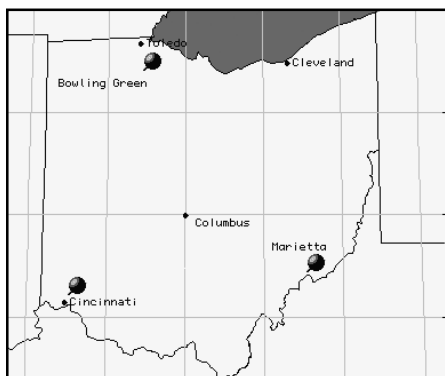
Watch the schedule for the Spring Meeting for more details as they arise!

Friday Night's Dinner Opportunities

Students at the meeting will have more choices for dinner Friday night. The traditional student pizza party (with free pizza) will be available. Students are also invited to attend the banquet and spend some time with the faculty if they wish. Be sure to share your dinner preference when you register!

No matter what their choice for dinner, all students are invited to enjoy free dessert with everyone after dinner is completed.

James A. Sellers, Chair
CONSTUM



Section Meetings Sites

Bowling Green State University

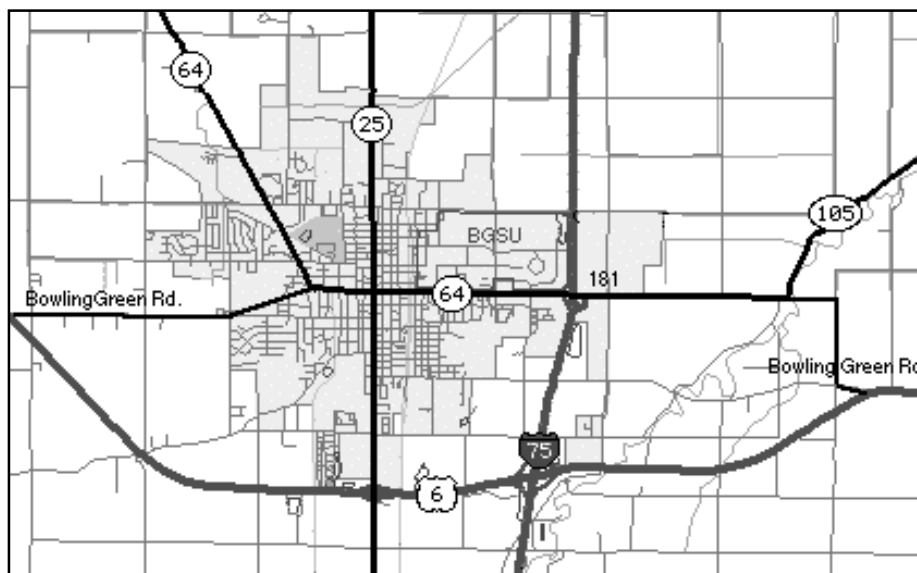
BGSU is situated on a 1,338-acre campus in the City of Bowling Green in northwest Ohio. The University offers 165 undergraduate degree programs, 13 master's degree programs in 65 fields, and 14 doctoral programs with more than 60 areas of specialization, including mathematics and statistics. More than 18,000 students, including about 2,700 graduate students, attend classes on the main campus. The University enrolls another 1,500 students at the Firelands College in Huron and various off-campus centers. There 700 full-time faculty members.

Established in 1910 as a teacher-training institution, Bowling Green held its first classes in 1914, but it was not until the following year that the first two buildings were ready for use. Student enrollment for that initial year totaled 304, with a faculty of 21. The first bachelor's degrees were awarded in 1917. One of those first faculty members was J. Robert Overman, professor of mathematics for many years and Dean of Faculties. He wrote several early texts.

In 1929, the functions of Bowling Green were expanded to provide four-year degree programs in the College of Education and the College of Liberal Arts. The College of Business Administration and graduate programs were added in 1935, the year in which Bowling Green attained full university status. In 1947, the Graduate School was formed, and BGSU awarded its first doctoral degrees in 1963.

BGSU Libraries house collections of more than 6 million items including books, journals, periodicals, microforms, government documents, sound recordings and other research materials.

The Department of Mathematics and Statistics has 27 tenure track faculty and several distinguished visitors, all with
(Continued on page 7)



City of Bowling Green

Travel Directions

Bowling Green is in northwest Ohio just south of Toledo, and is very easy to get to. It is located at Exit 181 of I-75, 14 miles south of Exit 64 (#4A) of the Ohio Turnpike—about two hours or so drive from Cleveland, Columbus, or Dayton. (Special care should be taken at the turnpike exit, it sneaks up on you pretty fast and the exit lane is short.)

Those travelling from central or southeastern Ohio should take US 23 from Columbus, which turns into SR 15, to I-75 in Findlay, then north. (Taking US 33, SR 31, and US 68 to SR 15 avoids the congestion north of Columbus.)

There is an Amtrak station in Toledo (25 miles), commercial airports in Toledo (25 miles) and Detroit (75 miles), and a general aviation airport in Bowling Green. Contact us for possible assistance. Greyhound stops in Bowling Green near the railroad tracks, and the city maintains a public taxi service (call 352-0796 for pickup).

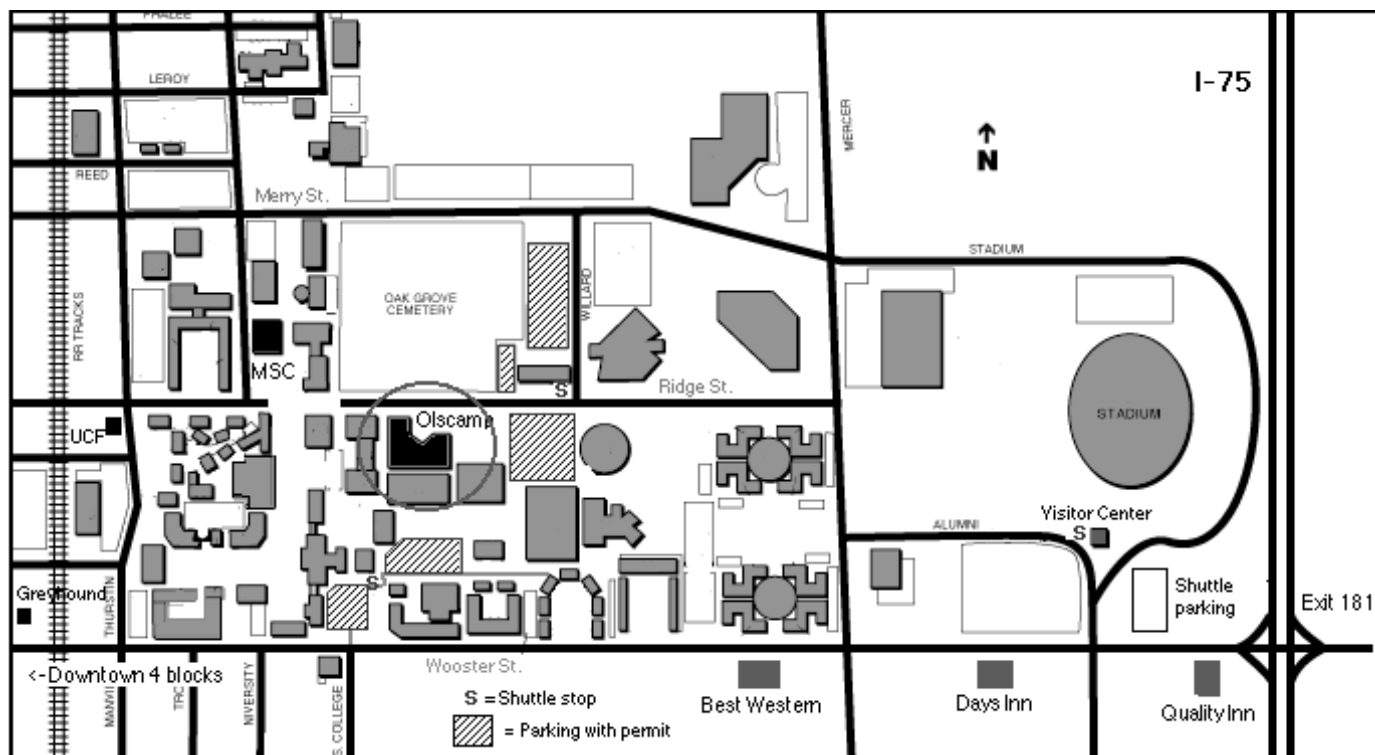
There are at least a dozen places to eat between I-75 and the Best Western (including the usual Wendy's, Burger King, and McDonald's), and at the southwest corner of campus and downtown. Other quick lunch suggestions: DiBenedetto's Subs next to the Best Western, Subway and Barry's Bagels near the railroad tracks (parking in the rear), and Hunan Palace/ Buffet opposite the stadium.

Toledo has a very good public radio station at 91.3 FM, which can also be received as far south as Dayton at 90.7.

Places to Stay

Please make your own reservations with the following motels. Listed in order of distance. These four are located between campus and I-75. See campus map. AAA rating given. Prices do not include 9% tax.

- Best Western Falcon Plaza ♦♦♦
1450 E. Wooster St., 419-352-4671
2 beds, 1 or 2 people. Standard \$60.31, "Executive" \$68.81. Triples and singles available. Mention "Math. Assoc. of Amer." group. Block of rooms will be held until March 9. Subject to availability after that.
Complimentary breakfast (cereals, bagels, etc).
Easy ten minute walk across campus to Olscamp Hall.
 - Days Inn ♦♦
1550 E. Wooster St., 419-352-5211
\$50.00 1-4 people. Mention MAA to get this rate. Rooms held until March 9.
Complimentary continental breakfast.
 - Quality Inn ♦♦
1630 E. Wooster St. 419-352-2521, 888-492-7144
\$50.00 single or double. Ask for the BGSU rate.
No breakfast. Adjacent to Kaufman's restaurant.
 - Buckeye Budget Motor Inn (not rated)
1740 E. Wooster St, 419-352-1520
\$47.95 for 1 or 2 people, 1 or 2 beds.
Free coffee. Behind Bob Evans at I-75.
- More modest and more distant:
- Angel Motel
1024 N. Main St., 419-352-3170
 - Best Motel
13527 S. Hwy #25. (S. Main St. at US 6)
419-353-7114



BGSU Campus

Everything will be in Olscamp Hall, circled on the map. It is 1¼ miles from the I-75 exit, using the New York metric.

You may park in any legal spot on Saturday without a permit.

Parking will be tight on Friday. You can obtain a visitor's parking permit at the

Visitor's Center, and then try to park in any of the lots marked on the map. Or take the campus shuttle bus, which runs to and from the Visitor's Center until 11 p.m. Friday. It stops just south of Olscamp Hall (stop #5) or east (#10/11)—those stops are marked on the map by **S**.

If you are staying at Best Western, walking is recommended. The campus is well lit at night. Crime is not a big problem, but caution is always a good idea.

Olscamp Hall has a drop off drive at the entrance on Ridge St. There are side-walks all the way to I-75.

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

MEETING REGISTRATION FORM

On-Line Registration Preferred!

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 Buffet (\$15.00).

_____ 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: Thomas Hern, Department of Mathematics and Statistics, Bowling Green State University, Bowling Green OH 43403-0221

To ensure a banquet ticket, register by March 19. On-site registration is available, but banquet tickets cannot be guaranteed.

Calendar

Ohio Section

T³ Technology Conference, March 16-18, 2001, Columbus, OH

March 23-24, 2001, Bowling Green State U., Bowling Green OH,
Ohio Project NExT, March 22-23.

Summer Short Course, June 27-29, 2001, Ashland U., Ashland OH

October 26-27, 2001, Marietta College, Marietta OH.

April 5-6, 2002, Xavier U., Cincinnati OH

National MAA-AMS

Mathfest, August 2-4, 2001, University of Wisconsin, Madison WI.

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

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

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

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

Other

Undergraduate Math Conference, March 16-17, 2001, Rose-Hulman.

Indiana Section, March 23-24, 2001, University of Indianapolis

Ohio Academy of Science, March 30-April 1, 2001, Mt. Union Coll.

SIAM Great Lakes Section NUMPDES Meeting, March 31, 2001,
Oakland U., Rochester MI

NCTM, April 4-6, 2001, Orlando FL

Allegheny Mountain Section, April 6-7, 2001, Penn State Altoona

Kentucky Section, April 6-7, 2001, University of Kentucky, Lexington

OhioMATYC, April 7, 2001, Hocking Tech Coll., Nelsonville.

Michigan Section, April 27-28, 2001, Hope College, Holland, MI

State Science Day, April 28, 2001, Ohio Academy of Science, Ohio
Wesleyan U., Delaware, OH.

SIAM Annual Meeting, July 9-13, 2001, San Diego, CA

Joint Statistical Meetings, August 5-9, 2001, Atlanta, GA

NCTM Regional Meeting, Sept. 18-20, 2001, Columbus, OH

AMS Central Section Meeting, September 21-23, 2001 Columbus, OH

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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