



OHIO FOCUS

The Ohio Section Newsletter

Volume 6

Fall, 2000

Number 7

Devaney, Tattersall & Karian at Wittenberg, October 27-28 Fall Meeting with OhioMATYC

The Fall meeting of the Ohio Section will be held in conjunction with the Ohio Mathematical Association of Two Year Colleges. The normal pattern for the Ohio Section is to meet Friday afternoon and Saturday morning, while OhioMATYC customarily meets Saturday morning and afternoon. There will be separate registrations, but all sessions are open to all participants.

The first invited address on Friday afternoon will be "The Mandelbrot Set, the Farey Tree, and the Fibonacci Sequence" by Robert L. Devaney of Boston University. Following contributed papers, James Tattersall, Providence College, will speak on "Two Books that Spanned a Millennium." After dinner Devaney will talk on "The Chaos Games and Fractal Images".

James Tattersall returns Saturday morning with "A Ubiquitous Sequence", and Zaven Karian, Denison University, will talk about using MAPLE for teaching probability and statistics. He is
(Continued on page 3)



Wittenberg campus, looking northeast.

New Section Officers

Leo Schneider, John Carroll U., was elected Section Governor for 2000-2003 in an election conducted by the MAA. His term began July 1. He is a member of the MAA Board of Governors, representing the Section and reporting back to the Section on MAA matters. His first *Governor's Report* appears on page 2.

At the close of the Annual Meeting April 7-8 at Marshall U. the following became new officers of the Section. Judith Palagallo, U. of Akron, moved from President-Elect to President. Her biography and report can be found on page 3. Aparna Higgins, U. of Dayton, moved from President to the office of Past-President. She also will chair the Teaching Award Committee. Dale Mugler, U. of Akron, became
(Continued on page 3)

Teaching Award

Professor Jerry L. Moreno of the Department of Mathematics and Computer Science at John Carroll University is the ninth recipient of the prestigious *Award for Distinguished College or University Teaching of Mathematics*. The award was presented to Moreno during the recent spring meeting held at Marshall University.

The Teaching Award is bestowed on faculty who are widely recognized as successful teachers, have an influence in their teaching of mathematics beyond their own institutions and foster curiosity and excitement about mathematics in their students. Moreno's nominators and colleagues at John Carroll University, Darrell Horwath and Carl Spitznagel, noted that these requirements were certainly well met.
(Continued on page 6)

Inside

Fall meeting details

President's Message

Governor's Report

Ohio Project NExT

Officers and committees

Schedule of meetings and conferences

Campus News

Short Course

Governor's Report

MathFest2000 was held at UCLA the first week of August. This was my first extended stay on that campus, and I was impressed. UCLA has great conference facilities and accommodations; I would return there for a conference anytime! MathFest2000 provided an informative and lively program. As usual, the Ohio Section was very well represented in the contributed student papers. The Board of Governors of the Mathematical Association of America met all day Wednesday, August 2, 2000, guided by the 120 page (!) agenda. Doug Faires, former Section Governor, also attended the Governors' meeting, having been invited to serve as Parliamentarian, and there were many familiar Ohio Section faces among the MathFest attendees.

This is my first report as Governor. I am honored that I was elected as Section Governor. Thank you! The Ohio Section could not have lost in that election. Both John and I are well qualified to serve you, and capable of doing a conscientious job for the next three years. Besides helping with the governance of 'big-MAA', the Section Governor is a primary link between the Section and the national organization. The last two paragraphs of this report summarize items discussed at the board meeting that I thought might be of immediate interest to you. That covers communication one direction. Regarding the other direction, one item mentioned at the orientation reception for new Governors was that Section Governors are expected to suggest members for national committees. Many of the MAA councils and committees do work parallel to work in our Section: programs for meetings and selecting sites, student activities, high school contests, awards, NExT, mathematics education, etc. The MAA is an organization of volunteers at all levels. It is important for members of the Ohio Section to become involved with the work of the national organization. *Please, please, email me about work in which you might be willing to become involved at the national level.*

The Washington meeting in January 2000 broke attendance records with 5107 MAA members in attendance. The following future meeting sites have been approved: New Orleans, LA January 10-13,



Leo Schneider
Section Governor

2001; Madison, WI August 2-4, 2001; San Diego, CA January 6-9, 2002 [note that this is a Sunday through Wednesday meeting]; Baltimore, MD January 15-18, 2003; Phoenix, AZ January 7-10, 2004; San Antonio, TX January 12-15, 2006. Under consideration but not yet approved are: Cambridge, MA or Burlington, VT for MathFest 2002; Boulder, CO for MathFest 2003; Charlotte, NC or Atlanta, GA for January 2005. *I hope to see you in New Orleans this January and at the University of Wisconsin next August!*

The bottom line for 1999 finances: income \$4,814,602, expenses \$4,646,138; the 1998 balance sheet was similar. Professional positions at the MAA-office [Visiting Mathematician & Associate Executive Director for Programs and Services] were not filled during these years to create the surplus. For 2000 these positions have been filled, so there will no longer be a surplus. The surplus built up the past two years will be spent on a package of new management software which should be on line in another year. *All these moves will increase the services all MAA members receive from the central office.*

Leo Schneider

State Science Day Award

The 2000 Ohio Section Award for Excellence was presented at the State Science Day in April, to Mr. James Y. Zou, a 9th grader at Upper Arlington High School. Mr. Zou's research was entitled "Cyclic groups and other topics in finite fields" and focused on the study of cyclic groups in U_m by integrating known theorems with some original proofs of these theorems. Specifically, his paper focused on (1) for which m is U_m cyclic, (2) the underlying structure that separates cyclic groups from non-cyclic groups, (3) the relationship between cyclic and non-cyclic groups, and (4) the application of the study to public key cryptography (specifically the RSA System). The award included a \$100 prize, a certificate, and a subscription for *Mathematics Magazine*.

David Meel

New Web Address

Courtesy of the MAA, we now have a new web address available, www.maa.org/Ohio which is much simpler and easier to remember. The old one still works—and will for a long time—but we should start using this one in publications and correspondence. Besides being simpler, it is portable. Any future move of the Section web pages will not require everyone to know the new address.

On a more technical level, which you can easily ignore, this is really web page forwarding. That means the MAA processes the page requests and forwards them to the real address. Only one change at the MAA will be needed to effectively move the web site for the Section. The downside is that we cannot address subdirectories this way, only the main page. Trying www.maa.org/Ohio/NExT will not reach the NExT subdirectory. Also bookmarks will still point to the real address, and not this alias.

Never-the-less this is a very useful service of the Washington office.

Ed.

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.

Editor:

Thomas Hern

Department of Mathematics and Statistics

Bowling Green State University
Bowling Green OH 43403-0221
USA

419-372-7450, Fax 372-6092
hern@wcnet.org

Deadline for next newsletter is

February 1, 2001

Email copy preferred. No Word documents please. Please be aware that the newsletter is usually nearly ready for the printer at the deadline. So get items in early.

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

(Fall meeting, continued from page 1)
the 1999 Section Teaching Award recipient. In fact all the main speakers have won MAA or section teaching awards. Another session is being planned for web and distance learning.

OhioMATYC sessions continue in the afternoon. Check the OhioMATYC web page at www.terra.cc.oh.us/ohiomatyc/

The breaks and meals will give all participants time to mingle and compare notes. Representatives of textbook and software publishers will be displaying their products.

The meeting is preceded by the Ohio Project NExT workshop on Thursday and Friday. See page 7.

The program, abstracts, and other details of the meeting are on pages 8-11.

(Section Officers, cont. from page 1)
the Chair of the Program Committee as the senior member. Roger Marty, Cleveland State, became Chair of the Nominating Committee after serving as Past-President. He joins Leo Schneider and Barbara Ashton, Wittenberg, on the committee.

New Section officers were elected at the meeting: Thomas E. Gantner, from the University of Dayton, was elected President-Elect. He will succeed the following year to President, then to Past-President, and then to a three-year term on the Nominating Committee. Sherri Brugh from Mount Union College was elected to a three-year term on the Program Committee, joining Dale, and Dwight Olson of John Carroll U.

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 U. 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 last year.

The new President has appointed a number of members to other posts and committees. The complete list is on page 4. A list of officers and committees of the Section can be found in the *By Laws*, a copy of which is posted on the web page.

President's Column

When I first arrived in Ohio, over 20 years ago, my colleagues in Akron encouraged me to attend a meeting of the Ohio Section of the MAA. I found there a group of peers committed to teaching and excited about mathematics. During my first years, they challenged me to learn more mathematics and to try new pedagogical ideas. They invited me to be part of the Section activities by serving on committees, and always treated me like a valued colleague. I soon found that I looked forward to each Section meeting because I would see friends from around the state and would enjoy the time spent with them. If you have been part of the Section for a few years, I hope you have some of these same sentiments. If you are new to our Section, then I hope that my experiences will be repeated during your career in our state.

I have just returned from Math Fest in Los Angeles. At the Section Officers meeting, I noted several things that made me once again proud to represent our Section. Our support of Ohio NExT, our cooperation with other mathematics groups in Ohio, the Summer Short Course, and our encouragement of student mathematical activities make our Section an outstanding one in the country. At Math Fest this year, students from Ohio presented twenty-eight percent of all the student talks. This is certainly the result of the opportunities given to our students to attend and to make presentations at our Section meetings. When I saw all the students and NExTers attending Math Fest, I was reminded that the future of the mathematical community looks exciting and fresh.

The spirit of cooperation in the Ohio Section was evident when the Section officers met this summer to plan activities for the coming year. Many thanks to those who volunteered a Saturday of their summer to Ohio MAA business. CONSACT is planning the 2001 Summer Short course to be held at Ashland University with Bill Dunham as the instructor. The Program Committee, headed by Dale Mugler, is planning two good meetings for this academic year. We are even trying an online registration for the meetings. Plan now to attend both. Invite a colleague; bring along

Judith Palagallo Section President

Judith A. Palagallo of the Dept. of Mathematics and Computer Science at the University of Akron became President of the Ohio Section at the close of the Annual Meeting held April 7 at Marshall University. She had previously been President-Elect.

One of her major interests is mentoring women mathematics students, some of whom made presentations at the meetings in Huntington. Back on campus, she chairs the Mentoring Women in Mathematics organization. She, other female colleagues, and students meet monthly to exchange ideas, hear talks from female mathematicians in the workplace, have lunch, visit on-site programs in the area and just, in general, create a network of support. This year the group is being extended with invitations to other nearby universities and women computer science majors.



Judith Palagallo
Section President

Palagallo's main area of research is analysis, relating her study in recent years to fractals and chaos theory. She received her B. S. from Westminster College, M. S. from Purdue University and Ph. D. from Colorado State University. She has been teaching at the University of Akron since 1978.

Her previous work with the Ohio MAA was as Program Chair and chair of the Committee on Student Members. On the national level she has been a member of the committee Research by Undergraduate Students for the national MAA, organizing Student Poster Sessions.

While not on campus, together with her mathematician husband, Thomas Price, University of Akron, she directs the Young Adults Ministry at First Assembly of God in Akron.

*Delene Perley
PIO*

some students. I appreciate the cooperation from those who have agreed to serve on Section committees. Finally, thank you to the members of the Ohio Section for giving me the opportunity to serve as Section President this year.

Judith Palagallo

2000-2001 Ohio Section Officers and Committees

ELECTED OFFICERS

President
Judith Palagallo, Akron
330-972-7402 FAX 330-374-8630
Palagallo@uakron.edu

President-elect
Thomas Gantner, Dayton
937-229-2101, FAX 937-229-2566
gantner@udayton.edu

Past-President
Aparna Higgins, Dayton
845-938-2719
higgins@saber.udayton.edu

Section Governor 2003
Leo Schneider, John Carroll
216-397-4481
leo@jcu.edu

Secretary-Treasurer 2003
J. William Friel, Dayton
Department of Mathematics
University of Dayton
Dayton OH 45469-2316
937-229-3071
friel@saber.udayton.edu

OTHER OFFICERS

Newsletter Editor and Webmaster 2002
Thomas Hern, Bowling Green
419-372-7450, Fax: 372-6092
hern@wcnet.org

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

Ohio Project NexT Co-ordinators
Barbara Ashton, Wittenberg 2001
Bashton@wittenberg.edu
John Holcomb, Cleveland State 2002
jph422@yahoo.com

Public Information Officer 2001
Delene Perley, Walsh
330-345-6889, perley@alex.walsh.edu

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

OhioMATYC Liaison to OhioMAA
Mary Ann Hovis, Lima Technical College
419-995-8422, Fax: 995-8091
hovisma@lhc.tec.oh.us

OhioMAA Liaison to OhioMATYC
Robert Hovis, Ohio Northern
419-772-2347, Fax: 772-2330
r-hovis@onu.edu

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

OhioMAA Liaison to OCTM
David Wallach, Findlay

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. See the Bylaws.

Program Committee:
Dale Mugler • Akron 2001
339-972-8013 dmugler@uakron.edu
Dwight Olson John Carroll 2002
Sherri Brugh Mount Union 2003

Committee on Curriculum (CONCUR)
Carl Spitznagel • John Carroll 2001
216-397-4351, spitz@jcu.edu
Mark deSaint-Rat Miami Hamltm 2001
Wiebke Diestelkamp Dayton 2002
David Hahn Malone College 2003
Charles Hampton Wooster 2003
Felipe Martins Cleveland State 2001
Danny Otero Xavier 2001
Maria Walters Ohio Northern 2002

Committee on Section Activities (CONSACT)
Vickie Van Dresar • Ashland 2002
vvandres@ashland.edu
John Holcomb Cleveland State 2001
Thomas LaFramboise Marietta 2001
Harold Putt Ohio Northern 2003

Committee on Student Members (CONSTUM)
James Sellers • Cedarville 2001
SELLERSJ@cedarnet.cedarville.edu
Curtis Bennett Bowling Green 2002
David Cusick Marshall 2001
Judith Holdner Kenyon 2003
Gordon Swain Ashland 2003

Committee on Teacher Education and Certification (CONTEAC)
Cathy Stoffer • Ashland 2001
419-289-5261, cstoffer@ashland.edu
David Meel Bowling Green 2001
Delene Perley Walsh 2001
John Prather Ohio U. Eastern 2002
Linda Saliga Akron 2003
Sherwood Silliman Cleveland St. 2003

OTHER COMMITTEES

* denotes committee chair.

Nominating Committee
Roger Marty* Cleveland State 2003
216-523-7158
r.marty@popmail.csuohio.edu
Leo Schneider John Carroll 2002
Barbara Ashton Wittenberg 2001

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
Aparna Higgins* Dayton
845-938-2719
higgins@saber.udayton.edu
Zaven Karian Denison
J. William Friel Dayton

Local arrangements for meetings:

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

Spring 2001: Bowling Green
Thomas Hern,
419-372-7450, Fax: 372-6092
hern@wcnet.org

Miami Conference

The Twenty-Eighth Annual Mathematics and Statistics Conference, Miami University, Oxford, OH, will be held September 29-30, 2000. This year's conference theme is "Mathematical Pictures that are Worth a Thousand Words". The invited speakers are George Francis (University of Illinois), Stan Wagon (Macalester College), and Roger Nelsen (Lewis and Clark College).

Contributed paper sessions are being planned for both Friday and Saturday, and a poster gallery is contemplated. Conference programs with information concerning pre-registration and housing will be available after August 1. Send request for information to: Mathematical Pictures Conference, Department of Mathematics and Statistics, Miami University, Oxford, Ohio 45056. Telephone: (513) 529-5818; Fax: (513) 529-1493; or e-mail one of the directors. Website: <http://muohio.edu/mathstat/conf.html>. Conference Directors: Tom Farmer (farmerta@muohio.edu) and Fred Gass (gassfs@muohio.edu).

Midwest History of Mathematics Conference

The conference will be hosted by Northern Kentucky University near the Greater Cincinnati Airport on October 13-14, 2000. Kim Plofker, of Brown University, an expert in the mathematics and astronomy of ancient and medieval India will give the keynote address.

Twenty-minute contributed talks on general topics in the History of Mathematics will be presented, with the possibility that papers will be published in a conference proceedings volume.

For more information, check <http://www.nku.edu/~curtin/midwest.html> or contact Daniel J. Curtin, Department of Mathematics and Computer Science, Northern Kentucky University, Highland Heights, KY 41099, curtin@nku.edu

Kenneth Cummins Scholarship Report

Margaret Raub Hunt reports that OCTM has collected over \$10,000 for the Kenneth Cummins' scholarship. All money has been sent to NCTM.

Campus News

Ashland University:

New faculty: Darren Wick, Assistant Professor. He received his Ph.D. in mathematics from the U. of Oregon and has five years teaching experience at Millsaps College in Mississippi. Gordon Swain, Associate Professor of Mathematics was awarded tenure. Simon Gray was promoted to Associate Professor of Computer Science and awarded tenure.

Bowling Green State University

Steven Seubert has been promoted to Professor.

Craig Zirbel is the recipient of the KME Excellence in Teaching Mathematics Award.

Waldemar Weber will retire in January after 33 years at BGSU. He will be moving to Colorado.

Steve McCleary has retired to New Mexico, and Edsel Peña has moved to U. of South Carolina. Jack Hayden and Charles Holland have returned from leave.

Curt Bennett is on leave at Michigan State U., and Alex Izzo is on leave at Texas A&M.

Warren McGovern, U. of Florida (ordered groups), and Tuhao (John) Chen, U. of Sydney (statistics), have joined the department.

Jim Albert and Gabor Székely have been elected Fellows of the American Statistical Association.

Cleveland State University

Promotion to full professor: Gregory Lupton.

Retirements: Fred Chang and Paula Gnepp (effective Fall 00)

Professional leaves: Luiz Felipe Martins (Spring 01), John Oprea (academic year) and John Walsh (Fall 00)

John Carroll University

Visiting assistant professors: Angela Spalsbury, who is returning to JCU after a semester at Hiram College, and Julia Fredericks, who just completed her Ph.D. in Topology at Oregon State U.

Dena (Cowen) Morton, who was in a visiting position at JCU for the last three years, has moved to a tenure-track position at Xavier University.

Barbara D'Ambrosia has received tenure and promotion to Associate Professor, and Paul Shick has been promoted to Professor. Paul will be on leave in the fall, and Barbara in the spring.

Mount Union College

Sherri Brugh has been awarded tenure and promotion to Associate Professor.

University of Akron

Kevin Kreider was promoted to Professor of Applied Mathematics, and John Heminger was promoted to Associate Professor of Applied Mathematics.

Wolfgang Pelz has accepted the position of Acting Chair of the Department. Timothy Norfolk has accepted the position of Assistant Chair.

Antonio Quesada was awarded the Buchtel College of Arts and Sciences Teaching Award.

Dmitry Golovaty joins the department as an Assistant Professor of Applied Mathematics. Michael Abramson, Loren Dill, Xuan-Hein T. Dang, and Darrell Ulm have accepted positions as Visiting Assistant Professors.

University of Dayton

Tom Gantner stepped down after serving 12 years as department chair. He will be on sabbatical for the fall term. Paul Eloie is the new chair of the department.

Aparna Higgins is on sabbatical. She will be spending the next year at West Point.

Jennifer Hontz is also on leave for the next year. She will be spending her time at Meredith College.

Atif Abueida is a new tenure-track assistant professor. He obtained his Ph.D. in Mathematics from Auburn University. His speciality is Combinatorics. He is also a participant in Project NExT.

Rebecca Krakowski has a non-tenure track appointment as an assistant professor. She obtained her Ph.D. from N. C. State where her speciality is Mathematical Education. Shirley Ober and Lester Steinlage have both received appointments as lecturers after serving many years as part-time faculty members.

Jerry Strange retired last December after 41 years of service to the University.

(Continued from page 1)

At John Carroll University, Moreno's special professional interests are in probability, statistics, operations research and mathematics education. On receiving the award Moreno told how fortunate he is in being surrounded by colleagues "whose dedication to students and profession is extraordinary, who have a genuine passion for teaching, and from whom I have stolen ideas, infinitely more that I could even think of giving back in return." He expressed appreciation to John Carroll University where, without a terminal degree, he was given the opportunity to learn and to contribute. He was especially thankful to all of his students over the years whom he has been thrilled to serve, noting every one of them "has made my every day, an absolute joy."

Moreno earned his bachelor's degree in mathematics from Lehigh University, master's degree in probability and statistics from Michigan State and did further graduate work at the University of Sheffield in England. He began his teaching career at John Carroll University in 1968. In the ensuing years, over 6000 students have had him as their professor. Many have gone on to careers in education themselves. His students invariably describe him as energetic and creative, bringing in numerous interesting examples to assist them in catching his enthusiasm for the subjects of mathematics and statistics. Moreno was always there to help "either over the phone, computer modem, or in person," stopping what he was doing "to explain, but making me work for the answers," stated one of his former students. A mainstay of Moreno's teaching has been Math for Elementary Education. One future teacher noted, "He had a mission to change how math is being taught in schools today and by his example we, his students, can model his techniques and ideas and implement them in our classroom."

Moreno describes his teaching as "wanting to make a difference in how students view learning." Part of that learning takes place in the classroom, and he tries to make the classroom experience an exciting and meaningful one. He co-chaired a university committee that addressed classroom issues, and later helped create

the university's Center for Excellence in Teaching and Learning. He has also been a part of the creation of the JCU Center for Mathematics and Science Education, Teaching and Technology for the school community.



Jerry Moreno

The talent and enthusiasm which he brings to his classroom for future teachers, he has been willing and able to share through other professional involvements. These include numerous talks and workshops for in-service teachers and work with colleagues in various groups such as CONCUR and Project UPLIFT of the Ohio MAA, Project Discovery and local, state and national Councils of Mathematics. Particularly during the last decade, he has been very involved with the movement to incorporate probability and statistics into the K-12 curriculum. In this regard, he is the editor of the *Statistics Teacher Network*, a national resource for teachers of statistics. In 1990, he began the *American Statistics Poster Competition* that encourages students in grades K-12 to use their creativity in displaying statistical information. There were over 1500 entries this year. His interest in K-12 education is also witnessed by his having been a member of the Kenston Board of Education for 12 years, including a term as chair.

In 1992, Moreno received John Carroll University's *Lucrezia Culicchia Award for Teaching Excellence* in the College of Arts and Sciences. In 1995, he was named a Fellow of the American Statistical Association (ASA). He was the Cleveland Technical Societies Council's 1997 Technical Educator of the year. In 1999, he became only the 40th person to win the ASA's prestigious *Founder's Award*.

In his words of acceptance for this award, he thanked his wife of 35 years, MaryAnn, who accepted long ago that he would have two homes, at the same time acknowledging that he has spent far too many hours at the University one. The Morenos have two children, Michelle, who is an elementary school teacher and mother of Nathan and Madison, and son Michael who is in accounting. MaryAnn is an administrative assistant in the Cleveland Hts./University Hts. School system. Jerry and MaryAnn live in Bainbridge Township, Geauga County.

Delene Perley, PIO

Call For Nominations for Section Teaching Award

Nominations for the tenth (2001) *Ohio Section Award for Distinguished College or University Teaching of Mathematics* are now being welcomed. Anyone may nominate an Ohio Section member for the award. Department chairs and MAA Liaisons should verify that all worthy colleagues will be considered.

The awardee will be announced and honored at the 2001 Spring Ohio Section meeting. News of the Award will be published in the Section newsletter, newspapers, and in other sources. Official letters will be sent to the appropriate persons at the awardee's institution.

The awardee will also be the Section candidate in the pool from which the recipients of the *Deborah and Franklin Pepper Haimo Award for Distinguished College or University Teaching of Mathematics* will be selected. There will be up to three such awards, each of which will be honored at the National Mathematics Meetings in January, 2002, and receive a \$1000 check and a certificate. The rules and guidelines from the MAA are :

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

Nominations forms and guidelines are available on the Section web page, at the Fall meeting, or from the Section Secretary-Treasurer: J. William Friel.

Inquiries may be made to the committee chair, Aparna Higgins, at 845-938-2719, or Fax: 845-938-2409, or by email at higgins@saber.udayton.edu.

Please send nominations, postmarked by December 1, 2000, to Friel.

Aparna Higgins

Ohio Project NExT

An Ohio Project NExT (New Experiences in Teaching) will be held Thursday evening and Friday morning, October 26-27, preceding the Ohio Section fall meeting at Wittenberg University. This workshop will be the eighth 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. The "headquarters" hotel for NExTers in Springfield, Ohio will be the Springfield Inn at 100 South Fountain Avenue. Fellows should make their own reservations by calling 937-322-3600. Mention the word "Math" to get the special room rates. Activities begin with a banquet at 7:00 PM Thursday evening in the James DeMint Room of the Springfield Inn. 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 Li Room on the first floor of the Student Center at Wittenberg University, 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.

Eighteen NExT Fellows and four mentors took part in the NExT workshop at last spring's meeting at Marshall University. Short "teaching vignettes" were presented by three Fellows: Erica Johnson (Shawnee State University) discussed "The Portfolio Project and Gateway Exam Two very Different Assessments of Mathematical Mastery," Wiebke Diestelkamp (University of Dayton) talked about "Incorporating Maple into a Traditional Calculus Curriculum," and Mark Miller (Marietta College) described "My Favorite Matrices." There were two major workshop sessions. Joe Diestel (Kent State University) presented a workshop titled "Staying Alive" and Mark Smith (Miami University) presented the second workshop on "Math Majors: Where Have They All Gone, and How Do We Start Getting Them Back?"

There are now more than thirty Ohio NExT Fellows, and about half are also national NExTers. To be eligible, the only

requirements are that a faculty member be in his or her first year of teaching in Ohio and have a strong commitment to teaching undergraduates. Applications for new Ohio NExT Fellows are now being accepted. Details and application materials can be found on the Ohio Section web page, or from John Holcomb (Cleveland State U.), E-mail: jph422@yahoo.com

Barbara Ashton

2000 Student Paper Contest Winner

Congratulations to the winner of the Ohio Section 2000 Student Paper Contest. Judy Maendel, from Mount Union College, won the Student Paper Contest for her paper, "The World of Hyperbolic Geometry." You can view the text of the winning paper on the web page using Adobe Acrobat Reader.

Barbara D'Ambrosia

Student Activities at the Spring Meeting

At the April 2000 meeting held at Marshall University, students played a significant role. Almost 70 students preregistered for the meeting, with approximately 40 of these delivering contributed talks.

I encourage you, as faculty, to work with and assist your students in any way possible to speak at this year's Spring Meeting. This is a wonderful opportunity for our students, so I trust you will help. Obviously, the more the students prepare, the better the presentation will be. Both expository and research-based talks are welcome, with the expectation of highest quality possible.

Students and faculty should watch the Ohio Section MAA webpage, <http://www.maa.org/ohio>, for more details on how to register for the meeting and submit titles and abstracts for student paper presentations.

In related news, participants at the Marshall conference overwhelmingly approved of the new format for the contributed paper sessions (in which students and faculty speakers were not separated from one another in various sessions). Hence, such a system will be used again at the Spring 2001 meeting.

James Sellers
CONSTUM

CONSACT

CONSACT is working to complete the history of the Ohio Section MAA Short Courses. It is hoped that this information will help us continue to offer topics of interest and to increase the number of participants. CONSACT has developed a timeline to aid hosting institutions in successfully sponsoring a summer short course. The Summer 2000 Short Course was held at Cedarville. William Dunham is scheduled to present the Summer 2001 Short Course at Ashland University. We are looking for someone to host the Summer 2002 Short Course with Phil Straffin as presenter.

2001 Summer Short Course

"A Mathematical Sampler: 1669 - 1900" by William Dunham has been rescheduled for June 27-29, 2001 at Ashland U. It had to be cancelled due to illness last year.

This workshop examines a collection of beautiful theorems from a particularly significant period in the history of mathematics. It will 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, algebra, geometry, 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.

Vickie VanDresar
Chair

2000 Ohio Section Short Course A Great Success.

A total of 17 participants attended the three-day event that was hosted by Cedarville College. David Bressoud shared many wonderful insights regarding the "story" surrounding alternating sign matrices and plane partitions of various kinds. David's enthusiasm for the topic was certainly evident.

Mary and James Sellers hosted an evening picnic on Wednesday at their home which was well attended and well enjoyed (gauging from the lively interactions between the participants and the amount of food eaten)!! Special thanks to Mary Sellers for her many hours of work to prepare such an excellent event and to Tom Dence for providing the photos on the web page.

James Sellers
Cedarville College

Preliminary Meeting Program

October 27-28, 2000

All sessions are open to all registrants.

Friday

Noon-4:30 PM Registration and Book Exhibits
 12:15-1:15 Committee Meetings
 CONSTUM, CONSACT, CONCUR,
 CONTEAC
 Program Committee
 Nominating Committee
 1:30-1:45 Announcements and Welcome
 1:45-2:45 **Invited Address:**
 “The Mandelbrot Set, the Farey Tree, and the
 Fibonacci Sequence”
 Robert L. Devaney, Boston University
 2:45-3:00 Coffee Break
 3:05-4:40 Contributed Paper Session
 Special session on web and distance learning
 3:05-4:40 Executive Committee Meeting
 4:45-5:45 **Invited Address:**
 “Two Books that Spanned a Millennium”
 James Tattersall, Providence College
 6:15-7:30 Banquet
 7:30-8:15 Dessert and After-Dinner Talk
 “The Chaos Games and Fractal Images”
 Robert L. Devaney

Saturday

8:00-10:00 AM Registration and Book Exhibit
 8:00-9:00 Coffee and Donuts
 8:15-9:00 MAA Dept. Chairs and Liaison Meeting
 MAA Executive Committee
 9:00-9:15 Announcements and Welcome
 9:15-10:15 **Invited Address**
 “Mathematical Vignettes from Cambridge”
 James Tattersall
 10:15-10:45 Coffee break
 10:45-11:50 Special Panel Discussion on Web and Distance
 Learning
 12:00-1:00 PM **Invited Address**
 Using MAPLE for teaching Probability and
 Statistics
 Zaven Karian, Denison U.
 Ohio Section Teaching Award Winner
 Afternoon OhioMATYC sessions continued.

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

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. Papers are encouraged on the topic of web/distance learning. These may be grouped in a special session on this topic. Reports related to classroom innovations and projects will constitute the *Kenneth Cummins Teacher's Corner*.

Contributors for all sessions should send a title and a brief abstract by October 13, 2000. 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.

Textbook Exhibits

Please have your book reps contact Brian Shelburne at Wittenberg (937-327-7862 bshelburne@wittenberg.edu) to arrange a display.

Abstracts

“The Mandelbrot Set, the Farey Tree, and the Fibonacci Sequence”

Robert L. Devaney

In this lecture we describe several folk theorems concerning the Mandelbrot set. We show how one can determine the dynamics of the corresponding quadratic maps by visualizing tiny regions in the Mandelbrot set. We also show how the size and location of the bulbs in the Mandelbrot set is governed by Farey arithmetic.

“The Chaos Games and Fractal Images”

Robert L. Devaney

In this talk we describe via a collection of interactive games and animations the mathematics behind variations on the theme of the chaos game. The mathematical goal is to describe the geometry of linear transformations using fractal geometry. During the course of the talk, we will demo a number of java applets available on the web for teaching this material. We will also challenge the audience to “beat the speaker” at the chaos game and win his computer.

“Two Books that Spanned a Millennium”

James Tattersall

The first century A.D. text, *Introduction to Arithmetic*, by Nicomachus of Gerasa was one of the few sources of knowledge of formal Greek arithmetic in the Middle Ages. The book is philosophical in nature, contains few original results, and no formal proofs. Perhaps that is why it served as a text in medieval universities for almost 500 years. At the end of the millennium, Gerbert's *Geometry* exhibits a fascinating account of right-angle geometry at the end of the millennium. These books contain several properties of numbers and triangles that are as intriguing today as they were a thousand years ago. We generalize these results and generate some challenging problems.

“Mathematical Vignettes from Cambridge University”

James Tattersall

Note: This is a last minute change. We were able to change the title in the program above, but it was too late to have room for the new abstract here. See the web page.

Robert L. Devaney

Bob received his BA from Holy Cross and his PhD from Berkeley in 1973, and has been at Boston University since 1980.

His research is in dynamical systems, specifically Hamiltonian systems, complex analytic dynamics, and computer experiments in dynamics. He is the author of over sixty research papers, and the author or editor of ten books, including texts for undergraduates and graduates in mathematics and researchers in other fields, and high school students and teachers.

He is director of the NSF's Dynamical Systems and Technology Project. The goal of this project is to show teachers how ideas from modern mathematics such as chaos, fractals, and dynamics, together with modern technology, can be used effectively in the high school curriculum. He is also the Director of LERNet, the Learning Resource Network at Boston University, which offers outreach activities in science, mathematics, and engineering for area high school students.

He and his students have developed software for exploring dynamical systems. With funding from the NSF, he has produced a dozen short films which depict the transition to chaos in dynamical systems. He has also been the "Chaos Consultant" for the Huntington Theater's presentation of Tom Stoppard's play *Arcadia*.

He also received the *Award for Distinguished University Teaching*.

James Tattersall

Jim received an undergraduate degree in mathematics from the University of Virginia in 1963, a Master's degree from the University of Massachusetts in 1965, and a Ph.D. degree in mathematics from the University of Oklahoma in 1971. On a number of occasions he has been a visiting scholar at the Department of Pure Mathematics and Mathematical Statistics at Cambridge University. He has been a visiting mathematician at the American Mathematical Society, and a visiting professor at West Point.

He was given the *Award for Distinguished Service* (1992) and the *Award for Distinguished College Teaching* (1997) from the Northeastern Section of the MAA. He is Past-President of Canadian Society for the History and Philosophy of Mathematics, Archivist/Historian of NES/MAA, and Associate Secretary of the Mathematical Association of America. His book on number theory was recently published by Cambridge University Press.

Zaven Karian

Zaven is *Benjamin Barney Professor of Mathematics and Computer Science* at Denison University, Granville OH, and is the 1999 recipient of the *Section Award for Distinguished College or University Teaching of Mathematics*.

He received his Ph.D. in 1971 from The Ohio State University in mathematics. He has been an active member of the Denison University faculty since 1964. He is especially known for his promoting the use of symbolic computation in undergraduate mathematics.

More information is available in the Fall, 1999 Ohio FOCUS article on his award, and the Section Teaching Award web page.

Wittenberg University

Wittenberg was one for the earliest colleges to be founded in what was at the time the frontier region of the United States. In the early 19th century a movement known as American Lutheranism was breaking with the traditions of the Old World. In 1836, pastors adhering to the use of the English language separated from the Joint Synod of Ohio and organized the English Evangelical Lutheran Synod of Ohio.

In 1842 the new synod voted unanimously to establish a theological and literary institution that would teach in English and serve American students. Wittenberg was named after the German university where Martin Luther posted his famous 95 theses and where William Shakespeare in his play sent the young Hamlet for his early schooling.

The new college held preliminary sessions in Wooster Ohio in the spring of 1844 but Ezra Keller, the man who founded the school, was interested in locating Wittenberg in a more central region of the state near the arteries of transportation over which German immigrants moved westward. On February 28, 1845 Keller announced the decision to locate in Springfield Ohio and on March 11, 1845, the Ohio Legislature issued a charter.

When Wittenberg began, it offered the traditional classical curriculum of Latin, Greek, Hebrew, moral philosophy, religion and mathematics but also included an emphasis on geology and other emerging sciences. Its founders were opposed to slavery and to undue foreign influences in education and religion.

In the 1880s, the pressures for curricular reform that were being experienced all across the country began to be felt at

Wittenberg. Course selection, graduate work, and new courses such as art, music, and science were among the modifications. At the turn of the century Wittenberg enjoyed an prosperous growth and as a result attained a national perspective finding a place in the mainstream of American higher education.

Today with an enrollment of just over 2000 students, Wittenberg is a nationally recognized college for the liberal arts and sciences affiliated with the Lutheran Church. Wittenberg focuses on the development of the "whole person," as it educates and prepares students for their intellectual, social, physical, spiritual, and aesthetic lives. With 96% of its faculty holding a Ph.D. or the highest degree in their academic field, Wittenberg offers a multifaceted program of more than 50 majors and programs designed to be rewarding both in and out of the classroom. The latest technology combines with a distinguished teaching tradition to produce a dynamic environment in Springfield, Ohio (pop. 68000). A lovely 70 acre wooded residential campus helps create a nurturing environment with a strong community tradition. Wittenberg is a member of the NCAA Division III North Coast Athletic Conference.

Since its founding, the study of mathematics has had played a central role in the education of Wittenberg graduates. Currently the Department of Mathematics and Computer Science has eight members and offers B.A. and B.S. degrees in both Mathematics and Computer Science. The department emphasizes small classes, quality teaching and using technology in the classroom. Wittenberg faculty members are active in the Ohio Section of the MAA and Wittenberg math students are active in the Wittenberg student chapter of the MAA.

Friday Banquet Menu

Mesclun Salad (Raspberry Vinaigrette, Ranch, or Tomato Bacon Dressing)

Entree: choice of: Herb Crusted Beef Tenderloin with Bordelaise Sauce, Sauteed Chicken Breast with a Fresh Mushroom Sauce, or Spinach Lasagna

Oven Brownd Baby Red Potatoes

Fresh Vegetable Medley (green beans, cauliflower, baby carrots and red pepper)

White and Wheat Dinner Rolls

Dessert : Sara Lee N.Y. Cheesecake with Cherry Topping or French Silk Pie

Iced Tea, Coffee, Decaf. Coffee, Hot Tea

Cost: \$18.95.

Directions

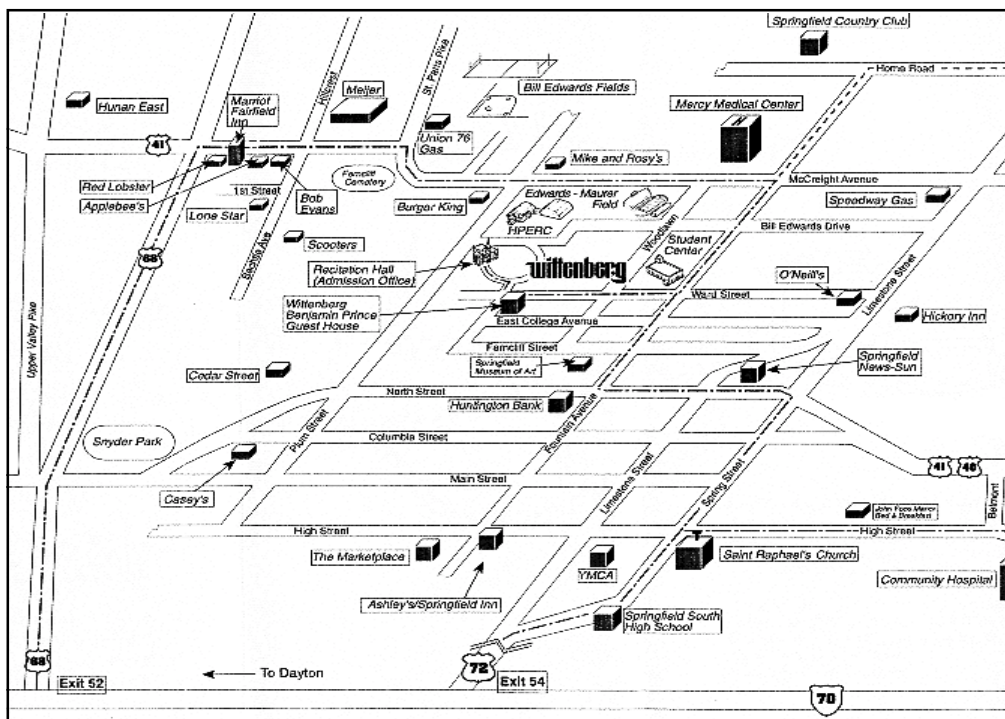
Wittenberg University is in Springfield Ohio, midway between Columbus and Dayton on I-70. There are three basic approaches to Wittenberg from I-70. The “western” approach is the easiest since it avoids downtown Springfield. The “central” approach takes you past 5 motels.

Western Approach: From I-70 take Exit 52 US 68 north. Drive 4 miles north and take the second exit off US 68 which is Ohio 41. As you exit US 68 right onto Ohio 41 continue about one mile. You will pass a Bob Evans on the right (light at Bechtel Ave) and a Meijers on the left (light at Hillside) until you come to third light at a T intersection (Union 76 station is immediately ahead to right). Turn right onto St Paris Pike which turns into McCreight Ave. at the bend. Past the bend at the first light turn right onto N. Plum (next to Burger King). The back of the Science Building is at the SE corner of N. Plum and Bill Edwards Drive (first street on the left before you go down the hill). Fairfield Inn and the Country Inn and Suites are on W. First St. which parallels Ohio 41. Turn south at the Bob Evans onto Bechtel Ave. then turn right at the next light.

Central Approach: From I-70 take Exit 54 Ohio 72 north. As you exit I-70 north onto Ohio 72 the first light is E. and W. Leffel Lane (Days Inn, Hampton Inn, Super 8 Motel are to left, Holiday Inn and Ramada Limited are to right). Continue north for about 2 miles through Springfield. Eventually you will go over a RR overpass, past High Street (St. Raphaels' Church is on the right), past Main street, over a second overpass over Columbia to the light at North (Springfield News-Sun building is on the left). Turn left and go down to the second light. Turn right onto Fountain Avenue. Go north to the third light (passing Wittenberg on your left). Turn left at McCreight Avenue go the the next light (Burger King is on the corner). Turn left onto N. Plum.

Eastern Approach: From I-70 take Exit 62 US 40 West. Travel west about 6 miles into Springfield. US 40 west becomes North, a one-way street. Go through

(Continued on page 11)



Springfield area.

Places to Stay

October 27-28 is also homecoming at Wittenberg! Make your reservations early! Most of the motels below require early registration for special rates; otherwise the block of reserved rooms will be returned to the “general” pool.

West. From I-70 Exit 52 take US 68 north. Exit US 68 at Ohio 41 (2nd exit). Going east on Ohio 41 (1/2 mile) turn south onto Bechtel Avenue at the Bob Evans restaurant. Turn right at the first light onto West 1st St. Distance to campus: 1 mile.

- Country Inns & Suites
1751 W. 1st Street, (937) 322-2200
\$75.00 plus tax for room with two Queen-sized beds (mention MAA conference at Wittenberg for this rate). There is an October 16th registration deadline
- Fairfield Inn
1870 West 1st Street, (937) 323-9554
\$65.00 plus tax (mention MAA conference for this rate) There is an October 6 registration deadline.

Central Springfield

- Springfield Inn
100 N. Fountain Ave., (937) 322-3600
\$60.00 plus tax (mention the keyword “MATH” for this rate). There is an October 13 registration deadline.
From Wittenberg, take Fountain Avenue south. Cross bridge (Buck Creek) and go through downtown Springfield

through traffic lights at North, Columbia, and Main streets. The next street is High. The Springfield Inn is on the south-east corner of Fountain and High. Distance to campus: 1 mile.

I-70 Exit 54, Ohio 72 North. Turn at first light onto Leffel Lane. Days Inn, Hampton Inn, Super 8 Motel are to left, Holiday Inn and Ramada Limited are to right. Distance to campus: 3 miles.

- Days Inn
11 W. Leffel Lane, (937) 322-4942
\$49.00 plus tax (mention Ohio Section of MAA for this rate) There is an October 20 registration deadline.
- The Hampton Inn of Springfield
101 W. Leffel Lane, (937) 325-8480
\$69.00 plus tax (mention “Wittenberg Math Department” for this rate) There is an October 13 registration deadline.
- Holiday Inn
383 E. Leffel Lane, (937) 323-8631
\$69.00 plus tax (mention MAA conference for this rate) There is a September 30 registration deadline.
- Ramada Limited
319 E. Leffel Lane, (937) 328-0123
\$65.00 plus tax (mention MAA conference for this rate) There is an October 6 registration deadline.
- Super 8 Motel
2 W. Leffel Lane, (937) 324-5501
\$53.95 plus tax (mention Ohio Section of MAA Conference for this rate - best to call between 8 AM and 4 PM).

(Directions Continued)

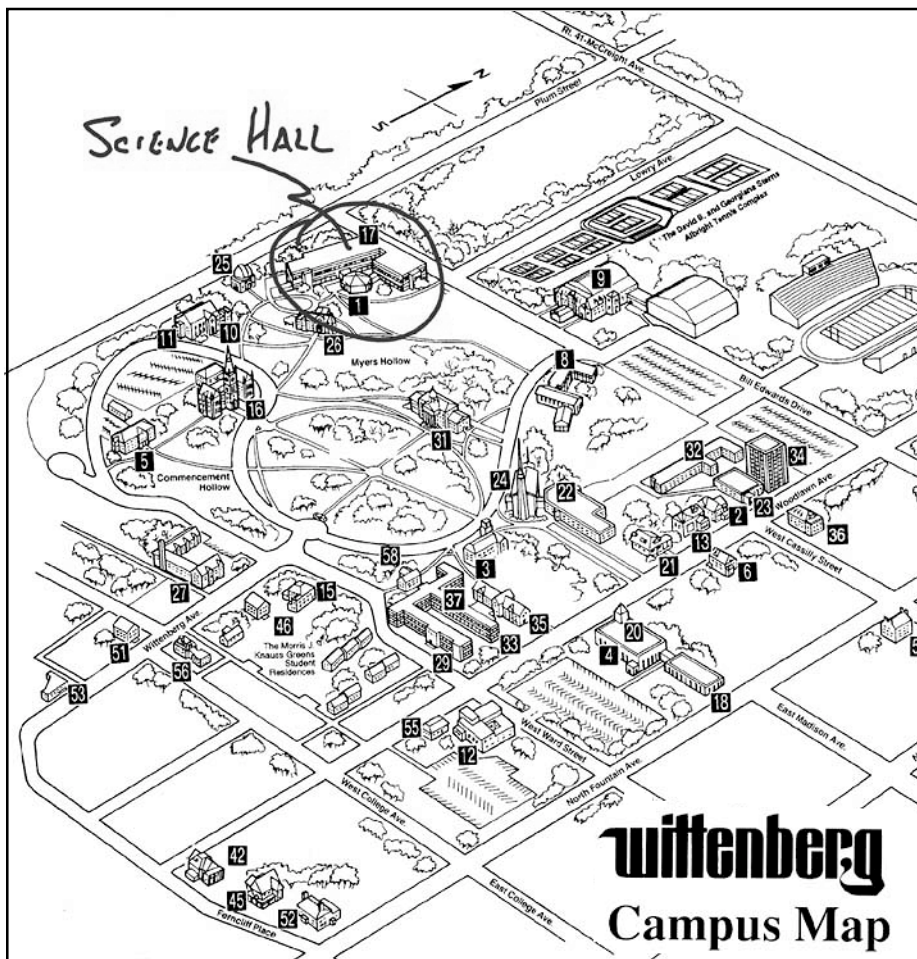
the light at Spring Street, Ohio 72 (Springfield News-Sun building is on the right). Go down to the second light and turn right onto Fountain Avenue. Go north to the third light (passing Wittenberg on your left). Turn left at McCreight Avenue go the the next light (Burger King is on the corner). Turn left onto N. Plum.

Wittenberg Campus

Wittenberg is bordered on the north by McCreight Street, on the east by Fountain Avenue, on the south by Veterans Park, which follows Buck Creek and on the west by N. Plum Street. The Science Building is in the north-west quadrant of the campus on the corner of Plum and Bill Edwards Drive. The entrance of the Science building faces south-east toward the main campus. Registration is in the lobby of Science.

On the campus map, Science Hall is #17. The banquet will be held in 105 Shouvlin (building #18) located at the lower right side of the map.

Parking is available at the corner of Bill Edwards and Plum or go up Bill Edwards (past Science and Hollenbeck Hall) and park across from the Health and Physical Recreation Center (Gym).



Clip, photocopy, or register online (preferred.).

MAA MEETING REGISTRATION FORM

Name: _____ E-mail: _____

Institutional Affiliation: _____ Phone: _____

Address: _____

City: _____ State: _____ Zip: _____

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

_____ Banquet (\$18.95)

Select Entree: ___ Chicken ___ Beef ___ Spinach Lasagna

_____ 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: Brian Shelburne, Dept. of Mathematics and Computer Science, Wittenberg University, Springfield, OH 45501, Phone: 937-327-7862, email bshelburne@wittenberg.edu

To ensure a banquet ticket, please register by Oct 20. On-site registration is available, but early preregistration will greatly help those making local arrangements.

Calendar

Ohio Section

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

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

Summer Short Course, "A Mathematical Sampler: 1669-1900",
William Dunham, June 27-29, 2001, Ashland U., Ashland OH

National MAA-AMS

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

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

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

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

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

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

Other

Mathematics and Statistics Conference, "Mathematical Pictures that are
Worth a Thousand Words", Sept. 29-30, 2000, Miami U., Oxford, OH

Midwest History of Mathematics Conf., Oct. 13-14, 2000, N. Ky. U.

OCTM, October 19-21, 2000, Toledo Convention Center

Indiana Section, October 28, 2000, U. of Southern Indiana, Evansville.

AMATYC, November 9-12, 2000, Chicago IL

Conf. on Technology in Collegiate Mathematics, Nov. 16-19, 2000,
Atlanta GA

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

Undergraduate Math Conf., March 16-17, 2001, Rose-Hulman Inst.,
Terre Haute IN

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

NCTM, April 4-6, 2001, Orlando FL

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

Kentucky Section, April 6-7, 2001, U. of Kentucky, Lexington KY

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

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

Complimentary copies of this newsletter are being distributed to OhioMATYC members, and to others—such as new faculty and graduate students—who might 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: <http://www.maa.org/mbsvcs/future.html>. MAA Departmental Liaisons have membership information.

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

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

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

Complimentary Copy

Time Value Material - Please do not delay!