Ohio Focus

The MAA Ohio Section Newsletter

Volume 9 | Spring 2010 | Number 4

Spring Meeting at Kent State University April 16-17, 2010

Mathematics and Computer Science Building: Meeting Registration Location

The Spring Meeting of the Ohio Section MAA will be held at Kent State University in Kent, Ohio, on April 16-17, 2010. The meeting will start at noon on Friday, with the first invited lecture starting at 1:45 pm in Henderson Hall, and will conclude on Saturday at 1:00 pm. Major addresses will be given by **Karen Parshall** of The University of Virgina, **John Oprea** of Cleveland State University, **Ivars Peterson**, the Director of Publications and Communications for the MAA, and **Mark Miller** of Marietta College. Other meeting participants are encouraged to submit talks for the contributed paper sessions on Friday afternoon and Saturday morning. Graduate and undergraduate students in mathematics or mathematics education are encouraged to attend.

It All Started in Ohio

Centennial Note #1

It is a well-known fact that the Mathematical Association of America was organized in Page Hall, on the Ohio State University campus, December 30-31, 1915. But before MAA there was AMM – the *American Mathematical Monthly*. This journal began as a private enterprise, published at Kidder, Missouri, starting in January 1894, but there is an Ohio connection.

The founder of the *Monthly* was Benjamin Franklin Finkel, born near Lancaster, Ohio, in 1865. He

(Continued on page 9)

Meeting Registration

Online registration is preferred. Visit the Section web site at www.maa.org/Ohio on or after Tuesday, March 2, for one-stop registration, banquet reservation, and abstract submission. The deadline for meeting pre-registration and banquet reservations is **April 9**. Abstracts for contributed papers must be submitted by **April 2**.

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

(Continued on page 4)

Inside

Section Governor's Report

The Joint Mathematics Meetings were in San Francisco in January. From all indications, the meetings were a big success. I didn't hear the final tally, but there was either record attendance or near-record attendance. Besides plenty of mathematics, there were 3 highlights of the meetings for me personally. First of all, I hadn't been to San Francisco in a long time. Secondly, I had a chance to sit down and visit with an old friend from graduate school. Lastly, I had a chance to meet with one of our recent graduates who is completing a Ph.D. this year. When you combine those 3 factors with all of the mathematics, it was a great trip. While I'm writing about national meetings, let me remind you that MathFest this summer will be in Pittsburgh. I would encourage you to consider attending.

As you probably know by now, the MAA has begun offering "all electronic memberships" for regular members. The program seems to have gotten off to a successful start. As of the start of 2010, there were more than 1600 members who had selected this option. This represents roughly 20% of recent membership renewals. The plan is to continue offering the option, with revisions possible in order to give more flexibility and to respond to feedback from the membership. Beginning later this year, all student memberships will be "all electronic". Whatever you think of electronic memberships, be sure to share your thoughts and concerns with me or directly with the national office. These changes are being thought of as pilot programs, and feedback from the membership is not only welcomed, but encouraged.

The MAA is also trying to keep up with the rapidly evolving world of electronic communications. During the past year, at least two MAA related twitter feeds have been established. There are also several Facebook pages for the MAA and its publications. Obviously, much more can be done in this area, and it will become more important over time as we try to reach out to potential mathematics students. Be sure to share your ideas on this.

The MAA has received funding from the National Science Foundation to support a five-year study, *Characteristics of Successful Programs in College Calculus*. Phase One of the study will entail a large-scale web-based survey to identify factors that are correlated with success in Calculus I. The Phase One survey will be conducted during Fall term 2010. Late in Spring 2010 a stratified random sampling will be used to choose approximately 600 colleges and universities whose mainstream Calculus I classes will be surveyed. If you are contacted and asked to be part of this study, please help by participating if you can.

Now that *FOCUS* is only published 6 times each year, we have been asked to encourage the membership to plan well in advance when they submit material (announcements, advertisements) for inclusion in the magazine. Not only are there fewer issues each year, but the lead time for submitting content has increased. More information is available at www.maa.org/pubs/focus.html.

The Ohio Section has a record that we can be proud of, and I urge you to continue seeking ways to participate in Section activities. Maybe now is the time you could expand your horizons and volunteer for something at the national level as well. Both the Section and the national MAA value your input and your help. I look forward to seeing you at Kent State this April. Bring someone new to the meeting with you if you can! Perhaps I'll also see you in Pittsburgh at MathFest in August.

Al Stickney
Wittenberg University
Section Governor

OHIO FOCUS

The newsletter of the Ohio Section of the Mathematical Association of America first appeared in 1973 and is published twice yearly, in time to reach members before the fall and spring meetings. Newsletters are published online at www.maa.org/ohio. Notification postcards are sent using labels provided by the MAA.

Editor: Barbara D'Ambrosia
216-397-4682
bdambrosia@jcu.edu
Dept. of Math & Comp Science
John Carroll University
University Heights, OH 44118

The deadline for the next newsletter is **September 1, 2010**. E-mail copy is preferred. Early submission is appreciated. Please send copy to the editor (see above), and also to the Section Webmaster, Darren Wick (dwick@ashland.edu), for posting on the web.

President's Message

Like many college professors, I often am prone to forgetting that the life I lead is rather different than the lives led by non-academicians. I usually think of myself as normal. Then from time to time I am reminded that in fact in the eyes of many non-academicians, my life is a curiosity of sorts. I do not make anything, I do not sell anything, and I do not process anything (to paraphrase Cameron Crowe's character, Lloyd Dobler from *Say Anything*): There are no more or fewer widgets at the end of my work day than there were when I started. Just what is it that I do? More to the point, what is it that ***we*** do as professional academic mathematicians?

This question was brought to the forefront of my mind recently. Earlier this month, a well known former governor of a very large and snowy state was giving a political speech. The governor roused the crowd by drawing attention to the fact that there were some people in public office who – get this – used to be college professors! This drew the intended response from the enraged audience. How could it be? How could good, hard working people let themselves be duped into being governed by someone as strange and out of touch as a college professor?

This diatribe reminded me that we in the academy do not always do a great job selling our wares. While I have no desire to run for public office, I do have a desire to be taken seriously as a normal person who is at least somewhat in touch with non-academics. To this end, perhaps it is a worthwhile endeavor for the professoriate to examine the ways in which our various academic disciplines are portrayed in the popular culture. As a mathematician, my primary interest in this regard is how mathematics is portrayed to non-mathematicians. In particular, I am curious about the ways mathematics and mathematicians are portrayed in stage plays, films, books and television programs. (This is why I enjoy *The Big Bang Theory*. It reminds me that by comparison to our cousins in Physics, we Mathematicians are pretty normal.)

Many colleges and universities offer mathematics courses with a liberal arts bent. Often these courses are designed for students whose interests lie in the arts and humanities. These can be ideal places for addressing the image problem of professional mathematicians in popular culture ("math-pop"). Also, math-pop can be a useful way of reinforcing mathematical concepts that have been covered in class. Finally, math-pop can be a way of helping students make connections between math and other disciplines.

Here are a few works that one might consider for such a course. Some of these I have used in my own classes. Others are on my list of things to try in the future. And a few are things that I would never try but that I wish someone else would and then tell me how it went.

Pi [film by Darren Aronofsky] – A mathematician is convinced that he has seen the mind of God and discovered the hidden code to the universe. This has come to him by examining the decimal expansion of π. This movie has intrigue and is psychologically disturbing. It makes references to irrational numbers,

the golden ratio and other concepts often covered in an introductory math course for liberal arts students. I love the movie. My wife hates it. Most of my students are a bit disturbed by it. However, it can be a useful class enhancement. (Is it a coincidence that the director chose an irrational number to highlight the irrational behavior of the main character?)

Proof [play by David Auburn] Does anyone own a proof of a theorem? If a proof is simply a verification of truth, then can one own truth? Why does it matter (mathematically) who proved something first? Are women's claims in mathematics taken less seriously than men's? Auburn's play can be a useful spring board for discussing these issues. I did not find the characters to be similar to actual mathematicians I know; then again, maybe I am the odd one.

Flatland [book by Edwin Abbott] How do we know how many dimensions we live in? Can things exist beyond our comprehension? Are lines and circles really degenerate polygons? Read the book; see the movie. There are countless websites devoted to *Flatland*. It practically teaches itself.

(Continued on page 14)

Call for Contributed Papers

Fifteen-minute presentations on any topic of general interest in mathematics or related areas are encouraged for the Contributed Paper Sessions on Friday afternoon and Saturday morning at the spring Ohio Section meeting. Reports on projects, research announcements, or anything you believe would be of interest to those in attendance are welcome. Graduate students in mathematics or mathematics education are strongly encouraged to submit talks. Contributors should send a title and brief abstract by **Friday April 2, 2009**.

Although online submission with your meeting registration is preferred, you may submit your title and abstract to the chair of the Program Committee, Brian Shelburne, by e-mail at bshelburne@wittenberg.edu, or by U.S. mail at Department of Mathematics and Computer Science, Wittenberg University, P.O. Box 720, Springfield, OH 45501. Please use only plain text in your title and abstract as the abstract submittal system cannot process TeX or other graphics code.

Each presentation room will have a whiteboard or chalkboard, overhead projector, computer projector, and laptop connections. Presenters can either plug their laptops into the overhead projection system or plug a flash drive into the resident computer. If internet access is needed, please mark the appropriate box when submitting your abstract online. Speakers with specific questions about technology availability should contact Laura Dykes, at ldykes@math.kent.edu.

Submit abstracts online at the Section web page: **www.maa.org/ohio**.

Meeting Registration

(Continued from page 1)

always appreciated. Registration will begin at 12:00pm on Friday in the Math Library on the 3rd floor of the Mathematics and Computer Sciences Building and will continue Saturday morning at 8:00am.

Meeting participants who are unable to register online at www.maa.org/Ohio may register by mail by sending the following information: name, affiliation, address, phone, e-mail address (if any), type of position, and banquet reservation. Send with check, payable to Ohio Section MAA, for applicable fees [registration fee ($25 ordinary registration, $10 retired or part-time, no fee for students or first-time attendees), banquet fee ($21 per person)] to: Ohio Section MAA Fall Meeting, c/o Virginia Wright, Dept. of Mathematical Sciences, Mathematics and Computer Science Building, Summit Street, Kent OH 44242. Phone (330) 672-2430, FAX (740) 672-2209. Registration by FAX or e-mail will be pending receipt of registration fees.

Ohio NExT Workshop

Ohio Project NExT (New Experiences in Teaching) is a program for new faculty members. Its goal is to help newer faculty to network with colleagues, to share ideas and experiences that promote professional growth, and to encourage faculty to become involved in the Ohio Section.

On Thursday evening, April 15th, the night preceding the Ohio Section Spring Meeting, members of Ohio Project NExT will gather for a banquet beginning at 7:00 p.m. at The Pufferbelly LTD. This is a great opportunity to meet old friends and make new ones. After the banquet, the NExTers will spend an hour or so discussing a topic related to the profession.

Then, on Friday morning, April 16th, the Ohio NExT program will continue on the Kent State University campus. The program will feature Ivars Peterson, the MAA Director of Publications and Communications, leading a workshop entitled “Communicating Mathematics”; John Oprea of Cleveland State University leading a workshop entitled “The Three R's: Refereeing, Reviewing and Reflecting”; as well as contributed talks by Ohio NExTers. At last fall’s meeting, the NExT workshop at Kenyon College featured Edward Packel of Lake Forest College and Judith Grabiner of Pitzer College for the fifty-minute workshops. Krista Hands of Ashland University and Craig Jackson of Ohio Wesleyan University presented 15-minute talks.

Ohio Project NExT is open to anyone in the Ohio Section who is in his/her first five years of teaching in Ohio. If this applies to you, please consider joining us this spring for our NExT Banquet and Workshop, as well as the Ohio Section Meeting that follows. Contact Chris Swanson (cswanson@ashland.edu) for membership information and details.

Ohio Project NExT is coordinated by Wiebke Diestelkamp, University of Dayton (wiebke@udayton.edu); John Prather, Ohio University Eastern Campus (john_prather@ skynet.eastern.ohiou.edu); and Chris Swanson, Ashland University (cswanson@ ashland.edu).

Student Activities at the Spring Meeting

Student Pizza Party

A student pizza party will be held Friday evening at 6:30 in the MSB Library (3rd Floor). There is no charge but meeting registration is necessary. See the Section webpage at www.maa.org/Ohio for online registration. Tentatively, concurrent with the pizza party will be a games tournament sponsored by the Pi Mu Epsilon chapter of Kent State University. Such games tournaments previously sponsored by Pi Mu Epsilon have included the games Dots-And-Boxes, Hex, and Mastermind. For information about previous games tournaments, please go to http://www.kent.edu/CAS/Math/undergraduate/pimuepsilon/gamescontest.cfm.

Student Team Competition

Undergraduate students from institutions of the Ohio section are invited to participate in the seventh annual Student Team Competition. The competition will take place on Friday from Noon to 1:20 in MSB 115, 120, and 121. Cash prizes will be awarded on Saturday to the top three teams. Rules and registration information, as well as copies of previous years' problems and their solutions, can be found on the Ohio Section Student Member website, http://www.constum.ohiomaa.org/. Any questions about the competition or other student activities can be addressed to John Whitaker at jwhitaker@shawnee.edu.

Call for Student Abstracts

Undergraduates and graduate students are encouraged to submit abstracts for 15 minute talks at the Spring Meeting. Topics may be drawn from any area of mathematics or a related discipline. The presentation may be an expository talk, a recounting of a mathematical internship or a co-op experience, or the results of a research project. It is expected that each talk will be delivered by a single speaker, but group presentations will be accommodated. Each student speaker will receive a certificate acknowledging their contribution to the meeting.

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. Each presentation room will have either a whiteboard or a chalkboard, overhead projector, computer projector, laptop connections and internet access. Presenters can either plug in their laptops to the overhead projection system or plug in a flash drive to the resident computer. Speakers with specific questions about technology availability or technology compatibility should contact Laura Dykes, at ldykes@math.kent.edu.

Abstracts should be between 25 and 75 words in length and should employ proper English grammar and spelling. Student are strongly encouraged to use the abstract submission form on the MAA Ohio Section webpage, http://www.maa.org/Ohio. If necessary a title and abstract may be submitted by U.S. mail or email to the chair of the Program Committee: Brian Shelburne, bshelburne@wittenberg.edu, Department of Mathematics and Computer Science, Wittenberg University, Post Office Box 720, Springfield, Ohio, 45501. Please use only plain text in your title and abstract, as the abstract submittal system cannot process TeX or other graphics code. If submitting an abstract by mail or e-mail, 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, etc.), the title of the talk, and a brief description of the presentation.

Abstracts must be received by April 2, 2010. Due to time and space restrictions, we may not be able to accommodate all talks. Please submit your abstracts early. Students submitting abstracts must also register for the meeting.

Resources for Speakers, by Joe Gallian in *Math Horizons*

"Advice on Giving a Good Power Point Talk" (April 2006): www.d.umn.edu/~jgallian/goodPPtalk.pdf
"How to Give a Good Talk" (April 1998): http://www.jcu.edu/math/constum/gallian.pdf.

Spring Meeting Program

Events will take place in the Mathematics and Computer Science Building (MSB), Henderson Hall, and the KSU Student Center. The locations of these buildings can be found on the campus maps on pages 11 and 12.

Friday, April 16		
12:00 – 4:30	Registration	MSB Library (3rd Floor)
12:00 – 1:20	Student Team Competition	MSB 115, 120, 121
12:00 – 1:00	Committee Meetings CONCUR CONSACT CONTEAL Centennial Committee	 MSB 211 MSB 213 MSB 274 MSB 276
12:00 – 4:30	Book Vendors and Exhibits	MSB Library
1:30 – 1:45	Welcome & Announcements	Henderson 201
1:45 – 2:45	**Invited Address** "The Internationalization of Mathematics in a World of Nations: 1800-1960" Karen Parshall, University of Virginia	Henderson 201
2:45 – 3:15	Break	Henderson Lobby
3:15 – 4:15	**Invited Address** "Geometry and the Real World" John Oprea, Cleveland State Univ.	Henderson 201
4:25 – 6:20	**Contributed Paper Sessions**	MSB 104, 106, 109, 115, 120, 121, 211, 213
4:25 – 6:20	Executive Committee Meeting	MSB 376
6:30 – 8:00	Student Pizza Party	MSB Library
6:30 – 6:50	Social Time	KSU Student Center 306
6:50 – 8:00	Banquet	KSU Student Center 306
8:10 – 9:00	**After Dinner Talk:** "Moebius Madness" Ivars Peterson, Director of Publications and Communications, MAA	KSU Student Center 306
9:00	**Business Meeting and Presentation of the Teaching Award**	KSU Student Center 306

Saturday, April 17		
8:00 – 10:15	Registration	MSB Library (3rd Floor)
8:00 – 10:15	Vendor and Book Exhibits	MSB Library
8:00 – 8:50	Coffee and Pastries	MSB Library
8:05 – 8:50	Executive Committee Meeting (if necessary)	MSB 376
8:05 – 8:50	Liaisons' and Department Chairs' Meeting	MSB 109
8:50 – 9:00	Announcements	Henderson 201
9:00 – 10:00	**Invited Address:** "Newton's Clock: Chaos in the Solar System" Ivars Peterson, Director of Publications and Communications, MAA	Henderson 201
10:00 – 10:15	Break	MSB Library
10:25 – 11:40	**Contributed Paper Sessions**	MSB 104, 106, 109, 115, 120, 121, 211, 213
11:50 – 12:50	**Retiring President's Address:** "Generalizing Euclid V: In Search of the Unique Other" Mark Miller, Marietta College	Henderson 201
12:50	Closing Remarks	Henderson 201

Event locations are subject to change. Check the official program you receive when you register for the meeting in the Library on the 3rd floor of the Mathematics and Computer Science Building. Also, check the Section web page, www.maa.org/ohio, for program updates, online registration, and contributed paper submissions.

Karen Parshall
"The Internationalization of Mathematics in a World of Nations: 1800-1960"

Mathematics has a history both grounded in time and place and, to some extent, transcendent of time and place. As an area of inquiry—but more fundamentally as a language through which to interpret nature—it has the ability to transcend time and place, even though for given time periods it may make sense to speak at least loosely of Mesopotamian or Greek or medieval Islamic or Chinese or European . . . mathematics. Over the course of the nineteenth and through the twentieth century, mathematics became not only a language but also an endeavor shared and developed internationally. How did this transformation occur? This talk will attempt to shed light on the answer to that question.

Karen Hunger Parshall is Professor of History and Mathematics and Associate Dean for the Social Sciences at the University of Virginia. She earned her PhD in history from the University of Chicago, under the supervision of I. N. Herstein (in mathematics) and Allen G. Debus (in the history of science). Her research interests lie in the history of science and mathematics in the nineteenth and twentieth centuries, with a special mathematical focus on the history of algebra and its various technical developments, such as the theory of algebras, group theory, and algebraic invariant theory. Her work also focuses on the development of national mathematical research communities, as well as on the internationalization of mathematics in the nineteenth and twentieth centuries. She has been editor of *Historia Mathematica*, was the recipient of a Guggenheim Fellowship (in 1996), and served as chair of the International Commission for the History of Mathematics from 2002 to 2009. Her most recent book is *James Joseph Sylvester: Jewish Mathematician in a Victorian World* (Johns Hopkins, 2006).

John Oprea
"Geometry in the Real World"

More and more, problems in the sciences are finding solutions in the form of "shapes". Geometers have ways of measuring shape and of determining shape through optimization. We shall discuss various "real-life" problems that exemplify the principle that Nature's penchant for economy produces the shapes we see in everyday life. Problems to be discussed include: the shapes of soap films, Mylar balloons, water droplets in space and shallowest pneumatic domes .

John Oprea received his Ph.D. in 1982 from Ohio State University and has been at Cleveland State University since 1985. His interests lie in both algebraic topology and differential geometry and he has written extensively in these areas. His books include: *Differential Geometry and its Applications* (MAA Classroom Resources 2007), *The Mathematics of Soap Films* (AMS Student Math Library 2000), *Symplectic Manifolds with no Kaehler Structure* (with A. Tralle, Springer Lecture Notes 1997), *Lusternik-Schnirelmann Category* (with O. Cornea, G. Lupton and D. Tanre, AMS Monographs 2003) and his most recent, *Algebraic Models in Geometry* (with Y. Felix and D. Tanre, Oxford U Press 2008). Oprea was awarded the Lester R. Ford award from the Mathematical Association of America in 1996 for his American Mathematical Monthly paper "Geometry and the Foucault Pendulum." In 2008, he was named as the Cleveland State College of Science Outstanding Researcher and received the University Distinguished Faculty Award for Research. He is currently an associate editor for the *Journal of Geometry and Symmetry in Physics*.

Ivars Peterson

**"Newton's Clock:
Chaos in the Solar System"**

With astronomical questions inspiring new mathematics, the remarkable insights of Johannes Kepler, Isaac Newton, and Henri Poincaré paved the way to celestial mechanics and modern notions of chaotic dynamics. The result is a new picture of a solar system less placid and predictable that its venerable clockwork image would suggest.

"Möbius Madness"

Since its discovery in the 19th century, the astonishing one-sided, one-edged Möbius strip has confounded and fascinated generations of people, inspiring stories, magic tricks, patents, artworks, cartoons, playground equipment, and much else. Learn more than you ever thought possible about how a mathematical object conquered the modern world.

Ivars Peterson is Director of Publications and Communications at the Mathematical Association of America in Washington, D.C. For more than 25 years previously, he was a writer at *Science News*. He also served as editor of *Science News for Kids* and *Science News Online* and wrote the weekly online column *Ivars Peterson's MathTrek*.

Ivars Peterson received his education from the University of Toronto, where he earned a Bachelor of Science degree (majoring in physics and chemistry) and a Bachelor of Education degree. He taught high school science and mathematics for eight years. In 1980, he left teaching to obtain a master's degree in journalism from the University of Missouri in Columbia. He served as an intern at *Science News* in Washington, D. C., then joined the weekly magazine's staff.

Peterson's first book, *The Mathematical Tourist: Snapshots of Modern Mathematics* (W.H. Freeman, 1988; rev. ed., 1998), was widely and favorably reviewed. He followed up that success with *Islands of Truth: A Mathematical Mystery Cruise* (W.H. Freeman, 1990), *Newton's Clock: Chaos in the Solar System* (W.H. Freeman, 1993), *Fatal Defect: Chasing Killer Computer Bugs* (Times Books, 1995), *The Jungles of Randomness: A Mathematical Safari* (Wiley, 1998), *Fragments of Infinity: A Kaleidoscope of Math and Art* (Wiley, 2001), and *Mathematical Treks: From Surreal Numbers to Magic Circles* (Mathematical Association of America, 2002).

He has collaborated with his wife, Nancy Henderson, on two books introducing selected topics in contemporary mathematics to children of middle-school age: *Math Trek: Adventures in the MathZone* (Wiley, 2000) and *Math Trek 2: A Mathematical Space Odyssey* (Wiley, 2001). For more than 10 years, he wrote the "Math Page" column for the children's magazine *Muse*.

In 1991, Ivars Peterson received the Joint Policy Board for Mathematics Communications Award recognizing him for his "exceptional ability and sustained effort in communicating mathematics to a general audience."

During the spring semester of 2008, Ivars Peterson served as the Basler Chair of Excellence for the Integration of the Arts, Rhetoric, and Science at East Tennessee State University in Johnson City, where he taught a course on "Communicating Mathematics."

He lives in Washington, D.C., with his family.

Banquet

The banquet on Friday evening will be in room 306 of the KSU Student Center, at 6:50. It will be preceded by a cash bar in the same location, starting at 6:30. The meal will be served as a buffet, with main dishes of baked chicken, carved ham, and vegetarian penne pasta, for a cost of $21. You should reserve your banquet tickets when you register for the meeting online at www.maa.org/ohio, as there will be few, if any, banquet tickets available for on-site registrants.

The banquet will be followed in the same room by the After-Dinner Talk, the Section Business Meeting, and the presentation of the Section Teaching Award. All meeting participants are welcome at these events, regardless of whether they attend the banquet.

Mark Miller
"Generalizing Euclid V: In Search of the Unique Other"

Euclid postulated that for any given non-incident point-line pair (*p, l*), there was a unique other line *m* containing *p* and missing *l*. In this talk, we consider generalizations of this notion appearing in graph theory, abstract algebra, and finite geometry. Along the way, we also consider the meta-question, "Why are these things appealing to (some) mathematicians?" (*N.B.* In fact, the first sentence of this abstract is incorrect. Sometimes a white-lie is preferable to an inconvenient truth. We will consider some reasons for this as part of the talk.)

Mark Miller completed his undergraduate degree in 1988 with a major in mathematics education at John Brown University, in Siloam Springs, Arkansas. He then returned to his home in Colorado where he taught high school mathematics and social studies, worked for an environmental litigation support contractor, and dropped in and out of graduate school. In 1999 he graduated with his in Ph.D. in Applied Mathematics from the University of Colorado at Denver, under the direction of Stanley E. Payne (formerly of Miami University). He then moved to Marietta College where he is currently Chair of the Department of Mathematics and Computer Science. His mathematical interests are in combinatorial structures and finite geometries. When not doing mathematics, he enjoys playing bridge, working crossword puzzles, and trying to figure what the television show *LOST* is actually about. He is an elder at the First Presbyterian Church of Parkersburg, and he is the recording secretary for the Marietta Reading Club.

It All Started in Ohio

(Continued from page 1)

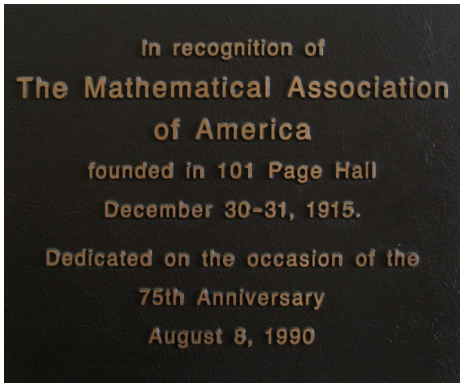
earned his B.S. and M.S. degrees at the Northwestern Ohio Normal School in Ada, now known as Ohio Northern University. After teaching in Ohio and Tennessee, Finkel joined the faculty of the Kidder Institute in 1892. He later became Professor of Mathematics and Physics at Drury College in Springfield, Missouri. Although he retired from teaching in 1937, he remained on the editorial board of the *Monthly* until his death in 1947.

The *Monthly* was originally intended to be a journal for high school mathematics teachers, but it soon attracted a collegiate audience. Finkel himself was an ardent mathematical problem solver, so a significant portion of each issue was (and still is) devoted to the solution of problems. By 1913 the *Monthly* was being published by a consortium of schools, including Oberlin College, and the editors were looking for an organization to take over the journal. The American Mathematical Society considered the idea, but rejected it. However, they declared their support for any additional organization that might be formed to promote collegiate mathematics.

In June 1915 a call went out to mathematics professors across the country, soliciting their interest in forming a new organization to represent "the large field between the field of secondary school mathematics and the field of pure research." By October, 350 replies had been received, nearly all favoring the idea. As a result, an organizational meeting was scheduled in conjunction with the AAAS meeting in Columbus, Ohio, on December 30. And that's how the MAA got started.

David Kullman
Centennial Committee

Benjamin F. Finkel



Plaque at the Ohio State University, commemorating the MAA

Driving Directions

From I-76:
Take the Kent/Route 43 exit (exit 33) and proceed north to Route 261. Turn right (east) onto Route 261. At the first traffic light turn left onto Campus Center Drive. At the first stop sign turn left onto Campus Center Drive West. Turn right onto Ted Boyd Drive. Proceed to the traffic light and turn left on Summit Street. The entrance to the parking lot will be on the right.

From I-80 (Ohio Turnpike):
Use exit 187/13 (Streetsboro). After the toll booth, proceed straight (follow Ravenna sign) onto Route 14 traveling southeast. Follow the directions in the "From I -90" paragraph blow, starting with Route 14.

From I-90 (and I-480):
Proceed toward Cleveland. Take I-271 south to I-480 east; stay on I-480 until it becomes Route 14 in Streetsboro. Turn right (south) on Route 43 and continue south for approximately six miles until you come to the traffic light at the dead end at Haymaker Parkway in the city of Kent. Turn left (east) onto Haymaker Parkway. At next traffic light turn right onto South Water Street (still St. Rt. 43). Turn left at first traffic light onto Summit Street. Turn left into the parking lot past the Student Center, before or at the sixth light (Ted Boyd Drive intersection).

Construction on Rt. 43 in Kent (north of campus) is causing some lane restrictions. For more information, go to
http://www.dot.state.oh.us/districts/D04/newsreleases/Pages/PortageCountyConstructionUpdate.aspx.

Where to Stay

Blocks of rooms have been set aside for meeting attendees at these hotels. All are about 3 miles south of campus, at the intersection of OH Route 43 and I-76.

(1) Comfort Inn
Group Code: MAA
Group Rate: $89.99 plus tax
non-smoking standard queen or king
330-673-1888
Rooms held until March 25, 2010
4423 State Route 43
Kent, OH 44240

(2) Days Inn
Group Code: MAA
Group Rate: $44.10 plus tax
non-smoking standard double room
330-677-9400
Rooms held until March 31, 2010
4422 Edson Road
Kent, OH 44240

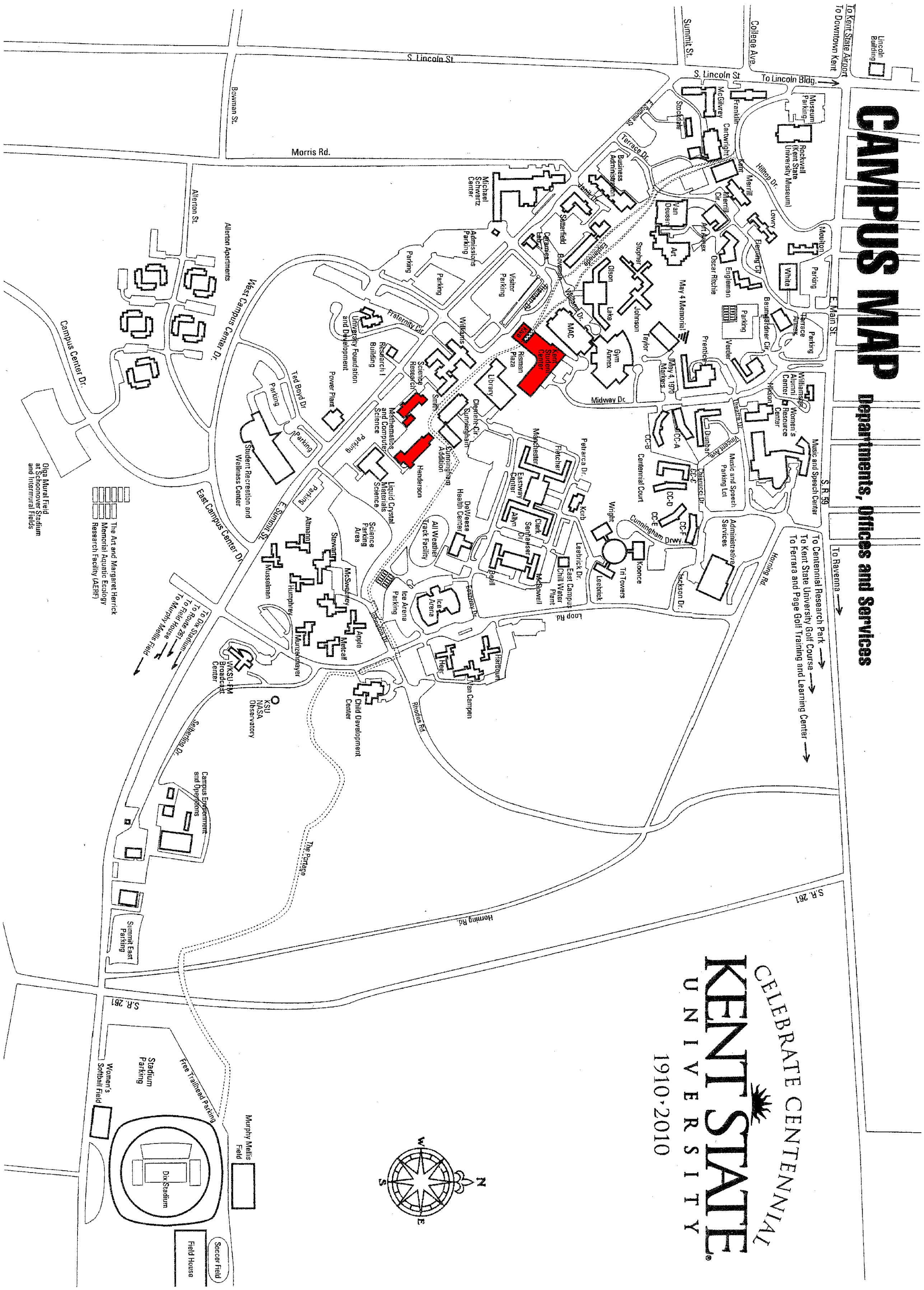
(3) Hampton Inn
Group Code: MAA
Group Rate: $59.00 plus tax
non-smoking double
330-673-8555
Rooms held until April 1, 2010
4406 State Route 43
Kent, OH 44240

(4) Holiday Inn Express
Group Code: MMD
Group Rate: $74.95
non-smoking king or double queen
330-673-9200
Rooms held until March 19, 2010
1215 Sanctuary View Drive
Kent, OH 44240

(5) Super 8
Group Code: MAA
Rate: $44.96 plus tax
non-smoking or smoking double queen
330-678-8817
Rooms held until April 9, 2010
4380 Edson Road
Kent, OH 44240

For additional local arrangements information, see pages 11 and 12, or the KSU Department web page, at http://www.kent.edu/cas/math/. The local contact person at Kent State University is Laura Dykes, ldykes@math.kent.edu or 330-672-9090.

Kent State University Campus Map



The Meeting locations are shown in **red**. See a close-up of the relevant area of campus on page 12.

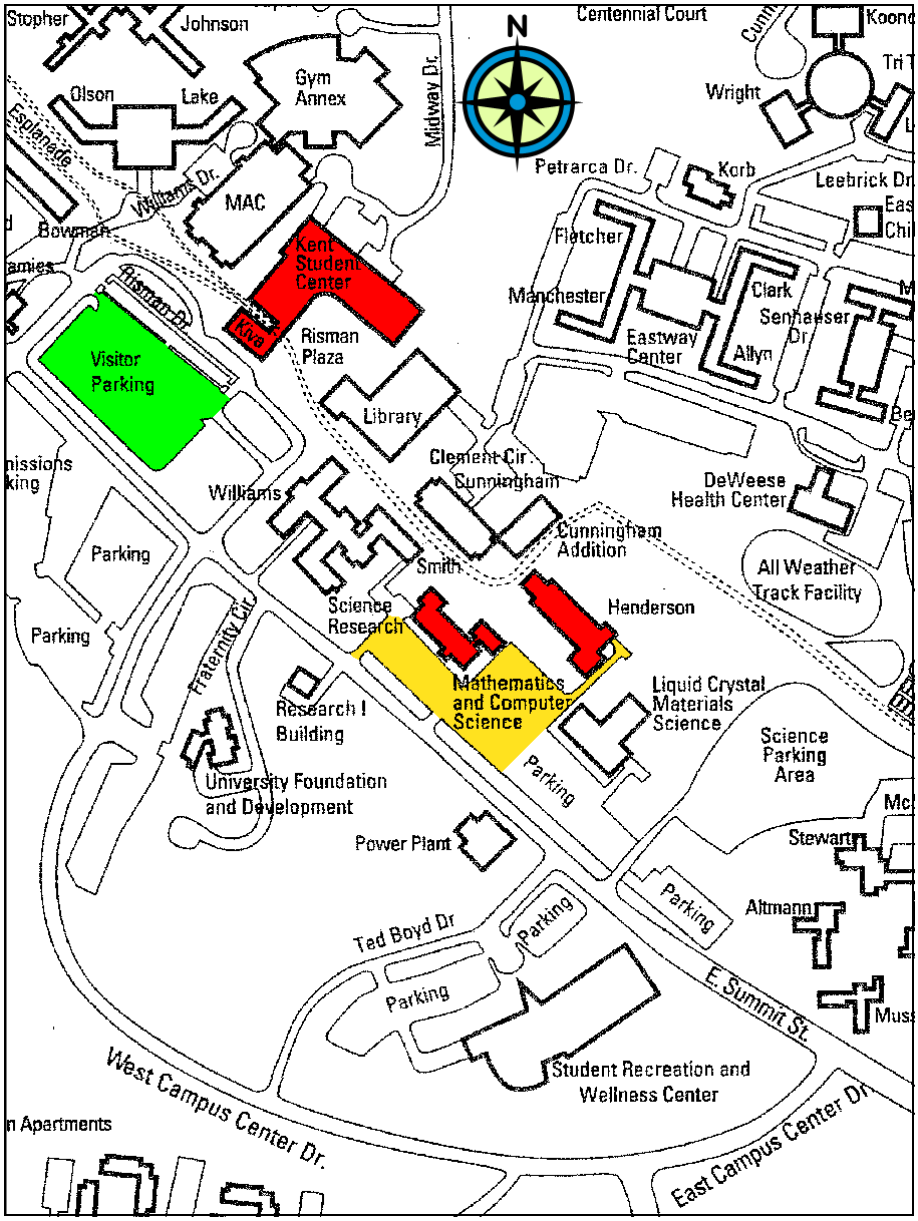
Parking

The area marked in yellow on the map shown here is the closest parking to the Friday afternoon and Saturday morning talks. Meeting participants can park there for free, except in the spaces marked as restricted.

The region marked in green is closest to the KSU Student Center, which is the location of the banquet and the After-Dinner Talk on Friday. People who park in that lot and leave the lot before 6:30 p.m. on Friday will be charged up to $6.00. Parking in this lot is free on Saturday.

Additional Driving Directions

The Kent State University web page has driving directions to most of the buildings on campus. Go to http://kentstate.kent.edu/directions/kent/travel.asp and select "Buildings & Departments" from the list on the left. Select the appropriate building from the drop down menu, and then click the direction buttons located under the picture of the building.



Campus Notes

Ashland University: Darren Wick has been promoted to Full Professor of Mathematics, effective July 1st, 2010. Tom Dence and Iyad Ajwa received Academic Mentor Awards, recognizing them for academic leadership with students that extends beyond the classroom. Tom Dence and Joseph Dence are the authors of a new textbook entitled *Advanced Calculus: A Transition to Analysis*.

Bowling Green State University: Professor and Bailey Endowed Chair Barbara Moses received the 2009 Kenneth Cummins award from the Ohio Council of Teachers of Mathematics (for post-secondary math teachers). Professor Moses is the PI and Director of "Science and Math Education in Action", a $3 million grant to prepare the best math and science teachers.

Cleveland State University: Drs. Keith Kendig and Allan Sielberger retired. The Math department is thankful for their many years of service. Dr. Ivan Soprunov was awarded a grant from NSA related to the proposal "Sparse Polynomial Systems: Residues and Duality, Toric Codes, and Lattice Points in Polytopes." Last Fall, Leah Stella Gold and Peter Bubenik become

(Continued on page 14)

Nominations for Section Officers

The Nominating Committee presents the following slate of candidates: **Jon Stadler** (Capital University) for President-Elect and **Adam Parker** (Wittenberg University) for a three-year term on the Program Committee. The President-Elect serves for one year and then becomes Section President. The senior person on the Program Committee serves as the chair.

Jon Stadler, the nominee for President-Elect, has been teaching at Capital University in Columbus since the fall of 1999 and has been active in the Ohio Section ever since. In addition to participating in the Ohio Project NExT program for several years, Jon has served on CONCUR, handled local arrangements for the 2003 summer short course in cryptology, and most recently, served on the Program Committee. After completing his undergraduate degree at Bowling Green State University, he attended The Ohio State University, receiving his PhD in algebraic combinatorics in 1997. He is currently serving as chair of the department for the second time since arriving at Capital.

Adam Parker, the nominee for Program Committee Member, earned his Ph.D. from the University of Texas at Austin under Sean Keel in 2005 and immediately joined the department of Mathematics and Computer Science at Wittenberg University. He quickly became involved in both the local and national MAA as a 2006 National Project NExT fellow and by serving on and chairing CONCUR. At Wittenberg, Adam acts as the department webmaster and newsletter editor. He is very involved in undergraduate research both in his research area of Algebraic Geometry and (especially?) when students have their own ideas and projects. Adam was the recipient of Wittenberg's Matthies Award in 2006 and Omicron Delta Kappa Excellence in Teaching Award in 2007. In 2007 he also won the Southwestern Ohio Council for Higher Education Excellence in Teaching Award.

The election will take place at the business meeting, Friday evening, April 16, 2010, after the banquet at Kent State University. At that time, nominations may also be made from the floor.

Bill Higgins, Chair
Tom Dence
Mark Smith

About Kent State University

Kent State University has a deeply-rooted history of excellence in educational programs that dates back to its founding in 1910. As the centennial anniversary approaches, Kent State has grown to become Ohio's third largest public university and northeast Ohio's leading public research university. The largest residential campus in northeast Ohio, Kent State is committed to the success of the more than 38,000 students on its eight campuses.

As one of 77 public research universities rated as demonstrating high-research activity by the Carnegie Foundation for the Advancement of Teaching, Kent State is among the top of the nation's nearly 3,900 colleges and universities. Its location on the banks of the scenic Cuyahoga River combines friendly, small-town ambience with proximity to metropolitan centers. Undergraduate students choose from more than 250 academic fields of study in nine colleges. Graduate students may choose from 15 degrees in more than 270 programs at the master's and doctoral levels. Kent State ranks third in Ohio for the number of doctoral graduates and programs.

The Department of Mathematical Sciences offers a wide variety of courses and degree options in mathematics and applied mathematics at the Bachelor's, Master's, and Ph.D. levels, as well as a Master's program for teachers. It partners with the Departments of Finance and Economics in running a highly rated Master of Science in Financial Engineering program. The doctoral program is one of six

(Continued on page 14)

President's Message

(Continued from page 3)

The Education of T. C. Mits [book by Lillian Lieber] I first encountered this book as an undergraduate. For many years it was out of print, but in 2007 it was reissued. Lieber presents the basic ideas of mathematics in free verse form. The light prose and the lively line drawing illustrations make it feel like a cross between a children's book and an illustrated poem. By the end of the book, low and behold the basics of pre-college math have been covered. Maybe math is fun.

Godel Escher Bach: An Eternal Golden Braid [book by Douglas R. Hofstadter] While this book would be too much for a class of the sort I am considering, excerpts from the book might be interesting supplemental material for discussing ties between music, art, and mathematics. It could also serve as a vehicle for discussing the idea behind Godel's Incompleteness Theorem – what it does and does not say. The idea that there are true statements that are not provable is one that all educated people should be forced to struggle with.

Mindwalk [film by Bernt Amadeus Capra] If you can stand to listen to a politician, a poet, and a disaffected doomsday scientist discuss Descartes, Bacon, and the state of the planet for the better part of two hours, then you have more patience than my honors students did last year. I actually like this movie tremendously. Most people I know find it to be pretentious and preachy.

Bladerunner [film by Ridley Scott] I realize that many people would not include this in a math-pop list. There is no mathematics in the movie, at least not explicitly. At the heart of this movie is the Cartesian notion of existence and the soul. Because Rene Descartes serves as a great example of a figure that was influential in mathematics, science, religion, and philosophy, discussing Descartes can be a way of engaging the humanities students who really do not care much for mathematics.

This is just a short list. I imagine that many of you have other examples you might add.

As mathematicians we are a curious lot. We owe it to our students to help them see what our discipline is from many viewpoints. We also owe it to ourselves to discuss with our students ways in which mathematics is used and sometimes caricatured in the popular media.

We are fortunate to be in a profession where thinking deep thoughts, conveying knowledge, and helping students discover truths for themselves are all in a day's work. Ours is a challenging and rewarding profession. Notwithstanding Palin's polemical protestations, I still maintain that one could do worse than to be a professor.

Mark Miller
Marietta College
Ohio Section President

No Ohio Section Summer Short Course for 2010

The Ohio Section will not be holding a Short Course this summer. Members who are interested in summer opportunities in Mathematics should check out the Professional Opportunities page on the MAA web site: http://www.maa.org/programs/profdev.html.

About Kent State University

(Continued from page 13)

mathematics Ph.D. programs in the state public university system, and one of only two in northeast Ohio. The flexible pure mathematics major is designed to meet individual needs and interests, including actuarial mathematics. The applied mathematics major allows for a concentration in classical applied mathematics, computational mathematics, probability and statistics, or financial mathematics. Programs prepare students for employment in industry, government, and education, as well as for graduate study. The faculty areas of research lie in functional analysis and operator theory, harmonic analysis, convex geometry, finite groups, character theory, ring theory, number theory, approximation theory, numerical analysis, applied mathematics, financial mathematics, statistics, and probability and stochastic processes.

Campus Notes

(Continued from page 12)

parents of a boy and a girl respectively. The department is currently reviewing applications for a non tenure track position renewable up to 6 years. The Student CSU Math Club meets once a week. For a sample of the club's activities see http://sites.google.com/site/csumathclub/Home.

Denison University: The Department of Mathematics and Computer Science at Denison University will be joined by two new faculty members in the fall of 2011. Dr. Ashwin Lall comes to Denison after complet-

(Continued on page 15)

April is Math Awareness Month

The AMS, the ASA, the MAA, and the SIAM announce that the theme for Mathematics Awareness Month, April 2010, is **Mathematics and Sports**.

The 2010 Mathematics Awareness web site has resources for this year's Mathematics Awareness Month that are designed to help explain the theme. At www.mathaware.org you can find articles on baseball, basketball, football, golf, soccer, track and field, tennis, and car racing as well as videos and links to other resources. You can also download 8.5 x 11" copies of any of the four 2010 posters.

Dolciani Mathematics Enrichment Program Call for Proposals

The Mary P. Dolciani Halloran Foundation has provided funding for the MAA to award grants for projects designed to develop math enrichment programs for talented students in middle school or high school. Proposals are sought from college and university mathematical sciences faculty working in partnership with middle and/or high school math teachers. Grants will be up to $6000 for a one-year project. Some grants may be renewed up to a maximum of three years. The deadline for proposals is April 15, 2010. For more information, see www.maa.org/dolciani.

Campus Notes

(Continued from page 14)

ing a postdoc at Georgia Tech where he used data streaming techniques to summarize very large data sources. Dr. Andy Lorenz joins Denison after completing a postdoc in the Biology Department at Boston College where he worked in bioinformatics. Denison research students Jacob Shapiro ('10) and Joe Paat ('11) won a cash prize at the Undergraduate Poster Session at the Joint Meetings in San Francisco. Their work, entitled *Tangles and Tiles: Investigations of Knot Mosaics*, was joint work with Dr. Lew Ludwig. Dr. Mike Starbird, coauthor of *The Heart of Mathematics*, will give a presentation entitled *The fourth dimension* at Denison University on February 25, at 7:30 PM in the Burton Morgan Lecture Hall as part of the Gordon Family Lecture Series. This talk is intended for a general audience. On February 26 at 12:30 he will give a presentation to the math department entitled *Gems of Geometry*.

Kent State University—Kent: Peter Palffy-Muhoray, professor of chemical physics and associate director of the Liquid Crystal Institute at Kent State, and Xiaoyu Zheng, assistant professor in Kent State's Department of Mathematical Sciences, along with four colleagues at the University of Michigan and one at Case Western Reserve University, have broken a world record for packing the most tetrahedra into a given volume. The researchers were able to obtain the highest packing fraction of 85.03, meaning tetrahedra fill 85.03 percent of the volume of the container. This shattered the previous record of 78.2 percent set by two Princeton University researchers in August 2009. Their findings are featured in the Dec. 10 issue of *Nature.* On March 20-21 the department will host an Informal Analysis Seminar dedicated to the work of Joe Diestel, who retired at the end of the 2008-2009 school year. Please e-mail Dmitry Ryabogin, ryabogin@math.kent.edu or Artem Zvavitch, zvavitch@math.kent.edu for more information.

Kent State University—Stark: Kent State University at Stark Mathematics Department and the MAA Student Chapter sponsored the fall Public Lecture on November 09, 2009. The speaker, Dr. Thomas Wakefield of Youngstown State University, spoke on *What is Actuarial Science?* The event was well attended by a lively audience comprised of college and high school students, community members, and faculty.

Otterbein College announces a return to its roots this autumn as Otterbein University. The school was founded in 1847 as Otterbein University of Ohio by the United Brethren Church. It became Otterbein College in 1917, when it was solely an undergraduate liberal-arts institution. Returning to Otterbein University more accurately reflects current classifications as a university offering undergraduate, liberal arts, professional studies and graduate programs, including a pending doctoral program. Professor Bill Harper has been appointed as an associate editor of the *Journal of Environmental Statistics*.

University of Dayton: Gerry Shaughnessy and Pete Hovey will be on leave for the 2010/2011 academic year. The Department of Mathematics invites applications for two one-year, non-renewable full-time lecturer positions for the 2010/2011 academic year. More information is available at http://campus.udayton.edu/~mathdept/.

2009-2010 Ohio Section Officers and Committees

ELECTED OFFICERS

President
Mark Miller, Marietta College
740-376-4811; millerr@marietta.edu

Past-President #1
Vickie Van Dresar, Ashland University
419-289-5265; vvandres@ashland.edu

Past President #2
Bill Higgins, Wittenberg University
937-327-7859, whiggins@wittenberg.edu

President-Elect
Don Hunt, Ohio Northern University
419-772-2351; d-hunt@onu.edu

Section Governor
Al Stickney, Wittenberg University
937-327-7856; astickney@wittenberg.edu

Secretary
Mark De Saint-Rat, Miami-Middletown
513-523-8896; desainme@muohio.edu

Treasurer
Charles Hampton, College of Wooster
hampton@wooster.edu

Secretary-Elect
Pamela Warton, University of Findlay
419-434-4147, warton@findlay.edu

Treasurer-Elect
Brian Shelburne, Wittenberg University
937-327-7862; bshelburne@wittenberg.edu

OTHER OFFICERS

Department Liaisons Coordinator
Wiebke Diestelkamp, University of Dayton
937-229-2013; wiebke@udayton.edu

Webmaster
Darren Wick, Ashland University
419-289-5795; dwick@ashland.edu

On-line Registration
G. Jay Kerns, Youngstown State University
330-941-3310; gkerns@ysu.edu

Newsletter Editor
Barbara D'Ambrosia, John Carroll University
216-397-4682; bdambrosia@jcu.edu

OhioMATYC Liaison to OhioMAA
Jim Anderson, University of Toledo

OhioMAA Liaison to OhioMATYC
Robert Hovis, Ohio Northern University

OMSC Liaison
Katie Cerrone, University of Akron

OCTM Liaison
Sandy Schroeder, Ohio Northern University

Ohio Project NExT Co-Coordinators
Wiebke Diestelkamp, University of Dayton
937-229-2013; wiebke@udayton.edu
Chris Swanson, Ashland University
419-289-5264; cswanson@ashland.edu
John Prather, Ohio University Eastern
740-699-2498; prather@ohio.edu

Archivist
Daniel Otero, Xavier University
513-745-2012; otero@xavier.edu

COMMITTEES

* Denotes committee chair. Elected Officers and Committee Chairs are voting members of the Executive Committee. Terms expire at the end of the Spring meetings of the year listed. See the Bylaws.

Program Committee
*Brian Shelburne, Wittenberg Univ (2010)
Phil Blau, Shawnee State University (2011)
David Singer, Case Western Reserve University (2012)

CONTEAL
*John Prather, Ohio Univ Eastern (2011)
John Williams, Malone College (2011)
Sandy Schroeder, Ohio Northern Univ (2010)
Chris O'Connor, Shawnee State Univ (2011)
Susan Thompson, Otterbein College (2011)
Pam Warton, University of Findlay (2012)
Shelly McGee, University of Findlay (2012)

CONSTUM
*John Whitaker, Shawnee State (2010)
Christopher Swanson, Ashland Univ (2012)
Sarah Crown, Denison University (2010)
Mihai Caragiu, Ohio Northern Univ (2011)
Phil DeOrsey, Ohio Uiversity (2010)
Matthew Menzel, Marietta College (2012)
Thomas Wakefield, Youngstown St. U (2012)

CONSACT
* Lew Ludwig, Denison University (2010)
Shannon Miller, Marshall University (2011)
Angela Spalsbury, Youngstown St. U. (2012)
Jon Stadler, Captial University (2012)

CONCUR
*Rob-Roy Mace, Marshall University (2010)
Charles McCracken, Sinclair CC (2010)
Allan Silberger, Cleveland State Univ (2010)
William Fuller, Ohio Northern Univ (2011)
Richard Daquilla, Muskingum College (2011)

OTHER COMMITTEES

Nominating Committee
*Bill Higgins, Wittenberg University (2012)
Tom Dence, Ashland University (2011)
Mark Smith, Miami University (2010)

Committee on Contests
David Stenson, John Carroll Univ, AMC12

Teaching Award Committee
* Vickie Van Dresar, Ashland University (Past President)
Mark De Saint-Rat, Miami University (Sec),
David Singer, Case-Western Reserve University (Past Recipient 2005)
Tom Price, University of Akron (Past Recipient 2006)

Centennial Committee
*David Kullman, Miami University
Tom Hern, Bowling Green State University
Danny Otero, Xavier University
John Zimmerman, Washington and Jefferson College
Tom Dence, Ashland University
Jon Dunlap, Terra Community College

Local Arrangements for Meetings

Spring 2010: Kent State University
Laura Dykes, ldykes@math.kent.edu

Fall 2010: Ursuline College
Michelle Wiggins, mwiggins@ursuline.edu

Spring 2011: Youngstown State Univ
Tom Wakefield, tpwakefield@ysu.edu

Calendar

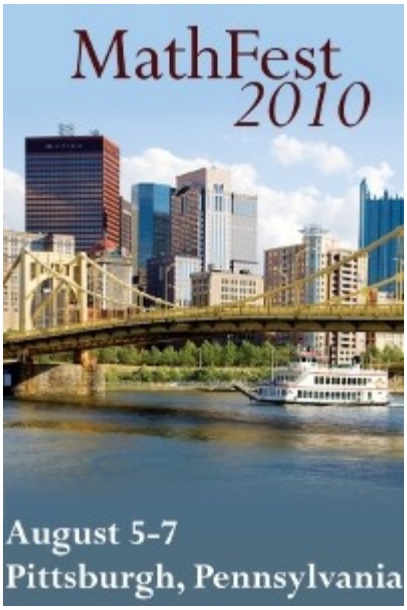
Ohio Section Meetings

Fall 2010 Section Meeting, Ursuline College, October 22-23, 2010, Cleveland, OH

Spring 2011 Section Meeting, dates to be announced, Youngstown State University, Youngstown, OH

Fall 2011 Section Meeting, dates to be announced, University of Findlay, Findlay, OH

National MAA-AMS Meetings



Annual Joint Meetings, January 5-8, 2011, New Orleans, LA

MathFest, August 4-6, 2011, Lexington, KY

Annual Joint Meetings, January 4-7, 2012, Boston, MA

MathFest, August 2-4, 2012, Madison, WI

Annual Joint Meetings, January 9-12, 2013, San Diego, CA

MathFest, August 5-8, 2015, Washington, D.C.

Thank You to the many people who contributed articles and information for this newsletter.

Barbara D'Ambrosia, Editor

Other Meetings: Ohio and Surrounding States

Kentucky Section MAA Section, Mar 26-27, 2010, University of Kentucky, Lexington, KY
http://sections.maa.org/kentucky/

Southeastern Section AMS, Mar 27-28, 2010, University of Kentucky, Lexington, KY
http://www.ams.org/amsmtgs/2162_other.html

Allegheny Mountain Section MAA, Apr 9-10, 2010, U. of Pittsburgh at Johnstown, Johnstown, PA
http://www.math.psu.edu/sellersj/alleghenymtn/

Illinois Section MAA, Apr 9-10, 2010, Augustana College, Rock Island, IL
http://ismaa.knox.edu/2010AnnualMeeting.htm

Indiana Section MAA, Apr 9-10, 2010, Franklin College, Franklin, IN
http://www.ipfw.edu/math/INMAA/

OhioMATYC Spring Meeting, Apr 23-24, 2010, Salt Fork State Park
http://www.ohiomatyc.org/index.php?p=1_24

Michigan Section MAA, May 7-8, 2010, Eastern Michigan University, Ypsilanti, MI
http://www.michmaa.org/

Miami University 38th Annual Conference, "Analysis in Undergraduate Curriculum," Sept 24-25, 2010, Miami University, Oxford, OH

OCTM Annual Meeting, Oct 14-15, 2010, Akron, OH
http://www.ohioctm.org/conference_2010.htm

Central Section AMS, Nov 5-7, 2010, Notre Dame University

Other National Meetings

International Conference on Technology in Collegiate Mathematics (ICTCM), Mar 11-14, 2010, Chicago, IL

NCTM, Apr 21-24, 2010, San Diego, CA

SIAM Annual Meeting, Jul 12-16, 2010, Pittsburgh, PA

Joint Statistical Meetings, Jul 31-August 5, 2010, Vancouver, British Columbia

AMATYC Annual Conference, Nov 11-14, 2010, Boston, MA

NCTM, Apr 13-16, 2011, Indianapolis, IN