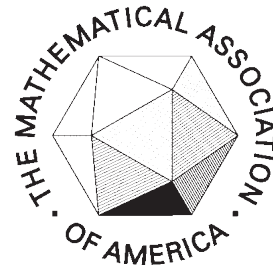


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## Michigan Section – MAA NEWSLETTER

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Volume 33, Number 1

December 2006

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Prince Conference Center at Calvin College

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**IN THIS ISSUE:**  
*Retaining Freshman Interest in Mathematics and  
Computer Science*

**Mathematical Association of America**  
**Michigan Section Newsletter**  
**Volume 33, Number 1**

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**Abbreviations**

C = College	MTU = Michigan Technological U
CC = Community College	NMU = Northern Michigan U
CMU = Central Michigan U	OU = Oakland U
EMU = Eastern Michigan U	SHU = Siena Heights U
FSU = Ferris State U	SVSU = Saginaw Valley State U
GVSU = Grand Valley State U	U = University
KU = Kettering U	UDM = U of Detroit Mercy
LSSU = Lake Superior State U	UM = U of Michigan
LTU = Lawrence Technological U	WMU = Western Michigan U
MSU = Michigan State U	WSU = Wayne State U

**Calendar of Events**

January 5–8, 2007	MAA/AMS Annual Meeting, New Orleans
March 21–24, 2007	NCTM Annual Meeting, Atlanta
May 4–5, 2007	Michigan Section Meeting, UM-Dearborn
August 3–5, 2007	MAA MathFest, San Jose
November 15–18, 2007	AMATYC Annual Meeting, New Orleans
January 6–9, 2008	MAA/AMS Annual Meeting, San Diego
April 9–12, 2008	NCTM Annual Meeting, Salt Lake City
July 31–August 2, 2008	MAA MathFest, Madison
November 20–23, 2008	AMATYC Annual Meeting, Washington, D.C.
January 7–10, 2009	MAA/AMS Annual Meeting, Washington, D.C.
April 22 – 25, 2009	NCTM Annual Meeting, Washington, D.C.
August 6-8, 2009	MAA MathFest, Portland
November 12–15, 2009	AMATYC Annual Meeting, Las Vegas
January 6–9, 2010	MAA/AMS Annual Meeting, San Francisco
April 21–24, 2010	NCTM Annual Meeting, San Diego
August 5-7, 2010	MAA MathFest, Pittsburgh
November 11–14, 2010	AMATYC Annual Meeting, Boston
January 5–8, 2011	MAA/AMS Annual Meeting, New Orleans

**Organizational Web sites**

Michigan Section–MAA	<a href="http://www.michmaa.org">www.michmaa.org</a>
MAA	<a href="http://www.maa.org">www.maa.org</a>
NCTM	<a href="http://www.nctm.org">www.nctm.org</a>
MCTM	<a href="http://www.mictm.org">www.mictm.org</a>
AMATYC	<a href="http://www.amatyc.org">www.amatyc.org</a>
MichMATYC	<a href="http://www.michmatyc.org">www.michmatyc.org</a>
MMPC	<a href="http://www.math.oakland.edu/main/mmppc">www.math.oakland.edu/main/mmppc</a>
MiNExT	<a href="http://www.calvin.edu/~rpruim/next/mich">www.calvin.edu/~rpruim/next/mich</a>

## Chairperson's Report

If you look at the Committees and Appointments section of any of our recent Michigan Section *Newsletters* (back issues of which are available at our Web page, <http://michmaa.org>, in case you ever lose one), you will find a list of the many volunteers who serve our section in one way or another. The strength of our section depends on these volunteer efforts since we have no paid staff, and I would like to thank all those who serve the section.

There is not space to thank all of our volunteers individually here, but I would like to take this opportunity to recognize some of them and to call attention to positions where there has recently been or will soon be turnover.

**Ruth Favro** (LTU) has served the section in many capacities, most recently as Governor of our Section. Previously Ruth has served as Section Chair and as Secretary/Treasurer. She has also been involved as a coach for the Michigan All-Star Teams that compete annually in the American Reagents Math League (ARML) Competition. As Ruth finishes up her 3-year term as governor I want to thank her for dedication and hard work on behalf of the section for many years. Ruth, **Jerrold Grossman** (OU), and **Matt Boelkins** (GVSU) reports that **Bette Warren** (EMU) and **Sidney Graham** (CMU) have accepted nominations to be our next governor. Ballots will be sent to all section members early next year.

Project NExT has played an important role in the MAA nationally for more than a decade now, and since 2000 our section has sponsored a Michigan NExT Symposium in conjunction with the spring meeting. Last year's successful symposium was the first organized by new coordinators **Mark Pearson** (Hope C) and **Paul Yu** (GVSU).

Another relatively recent addition to the Michigan Section activities is the Michigan Undergraduate Mathematics Conference. This conference gives our undergraduate students an opportunity to present the results of their research projects or to give expository mathematical talks. It has also featured a strong list of nationally known keynote speakers, discussion of career opportunities in academia and industry, and some interesting mathematical games. Thanks go to **Darin Stephenson** (Hope C) and his colleagues at



Hope College for hosting the Ninth Annual MUMC this October. Plans are already being made for future MUMCs. We have a tentative host site for 2007 and are looking for hosts for 2008 and beyond. If your institution is interested in hosting, please contact me for more information.

As Section Chair, I am keenly aware of the good work done by the Executive Committee, especially since they all have more experience with the issues of the executive committee than I have. **Nancy Colwell** (SVSU) continues to serve diligently in the often under-appreciated role of Secretary-Treasurer. On behalf of the section I would like to thank recent Chairs **Gerard Venema** (Calvin C) and **John Fink** (Kalamazoo C) for the work they did while chairing the section, and personally I thank them for the assistance they have offered me as current Chair.

New members on the Section Executive Committee this year are Two-Year College Vice Chair **David Redman** (Delta C) and Four-Year College Vice Chair **Tom Zerger** (SVSU), and they serve as well preparing the program for our up-coming Annual Meeting next spring in Dearborn. **Margret Höft** (UM-Dearborn) is chair of the local arrangements committee for this meeting. Plan now to join us at the 2007 Annual Meeting next Spring.

There are, of course, many others whom I have not singled out for thanks at this time. Some of them are mentioned elsewhere in this *Newsletter*. All of them are an important and appreciated part of the life of our section.

Thanks to all of you.

**Randy Pruim, Chair**

***UM-Dearborn in May***

## Annual Meeting in May

The next meeting of the Michigan Section of the MAA and MichMATYC will take place May 4 and 5, 2007 at the University of Michigan-Dearborn in Dearborn, Michigan. The program committee is planning a variety of talks and discussions on mathematics, the teaching of mathematics, applications of mathematics, and other issues of interest to members of the section. Confirmed speakers include **Joe Gallian** (President-Elect of the MAA and Professor, University of Minnesota-Duluth), **Doris Schattschneider** (Author and Professor Emeritus of Mathematics, Moravian College), and **Ron Solomon** (The Ohio State University). More details about the program will appear in the Spring *Newsletter*.



In addition to the plenary addresses and the thirty-minute talks by invited speakers, the program committee is planning sessions for contributed papers. Speaking at a contributed paper session is an excellent way to share the results of your work and to become better acquainted with your colleagues in Michigan. All members of the section are encouraged to submit abstracts of papers to be presented in these sessions. Contributed papers may be on mathematical topics or may discuss curriculum or pedagogy. Students are also encouraged to present talks at the meeting. Instructions for contributing abstracts for one of the sessions are included in the "Call for Papers" in this *Newsletter* on page 30.

The meeting is scheduled to run all day Friday and through the noon hour on Saturday. There will be luncheons both days and a banquet Friday evening. As is our custom, the section will present both a teaching award and a service award at the Friday banquet.

The program committee for this year consists of co-chairs **Tom Zerger** (SVSU) and **David Redman** (Delta C), along with **John Clifford** (UM-Dearborn), and **Amy Hlavacek** (SVSU). Please notify one of us if you have a suggestion regarding the program. **Margret Höft** (UM-Dearborn) is the chair of the local arrangements committee. Contact information for all of us may be found on page 34 in this *Newsletter*.

**Tom Zerger, Four-Year College Vice Chair**

## Governor's Report

Here are some highlights from the Board of Governor's meeting at the Mathfest in Knoxville: **John Kenelly** was re-elected treasurer. New auditors have been chosen (this is done every 5 years). Dues revenue grew, the core membership is stable, and the average retention is up. Book sales continue to grow, with strong sales through Amazon.

Public Policy involvement continues, with MAA and others arguing in Washington that the American Competitiveness Initiative, which increases funding for research in the physical sciences and engineering, can't be accomplished without also supporting mathematical sciences research. There was a Finding Common Ground meeting at IUPUI in February 2006, with intense discussions within the groups attending on "flashpoint issues" in K-12 education.

The MAA Tensor Foundation and SUMMA announced a new program with support for enrichment programs for underrepresented minorities in middle and high schools.

Mathematical tours featured a China tour in June 2006; there will be an Euler tour in 2007, and Peru in 2008. A new movie is being produced about the International Mathematical Olympiad (IMO) team. The Carriage House renovation at the Washington HQ is almost ready. It is booked with MAA meetings in October-November, with a grand opening planned for Spring 2007.



**Ruth Favro, Governor**

***UM-Dearborn in May***

## Secretary/Treasurer's Report

The Sections current bank balance (as of October 1) is \$3130, compared to \$5,487 at this time last year. This is normally the lowest point of the year, because it is before any of the dues contributions come in. I will be sending out requests for voluntary dues contributions this week. The Section has some support (\$1,150, up \$50 from previous years) from the national MAA, and a few rare grants, but nearly all of the Section's income is from the voluntary dues payments of its members. I would like to express my gratitude, on behalf of the Michigan Section, to those of you who have contributed. The Section could not continue its activities without your support.



Two major costs to the section are the printing and mailing of the *Newsletter* and the Annual Section Meeting in the spring. The *Newsletter* is an essential way of keeping Michigan Mathematics faculty informed of all the Math related events in the area. The Annual Meeting, which will be held at University of Michigan-Dearborn next May, provides an invaluable channel for Michigan mathematicians to meet each other, hear and present papers, and stay connected to the local professional community. I urge everyone to join us next May in Dearborn. The Michigan Section also provides financial support to the Michigan Undergraduate Mathematics Conference and the Upper Peninsula Regional Meeting.

The dues contribution for an individual dues-paying membership is \$15, or \$30 (or more) for a sustaining membership. Dues-paying members pay no registration fee for the Annual Section Meeting. Institutional membership dues are \$40 or \$70, depending on the size of the institution. Institutional members will receive the end-of-year report from the Michigan Mathematics Prize Competition, and also have access to a data base of all MMPC Part II participants to aid in recruiting efforts. A dues form can be found on page 33.

If I can be of any help, drop me a line at [nccolwel@svsu.edu](mailto:nccolwel@svsu.edu).

**Nancy Colwell, Secretary/Treasurer**

## Student Chapter News

### *Andrews University*

In April, the Michigan Gamma Chapter of Pi Mu Epsilon inducted eight new student members and elected new officers: **Nicholas Valles**, President; **Christopher Armstrong**, Vice President; and **Thomas Adams**, Secretary-Treasurer. The Chapter has already hosted **Timothy Pennings** from Hope C (and his famous time minimizing dog Elvis) and plans other interesting events including its annual celebration of Pi Day.

### *Grand Valley State University*

The GVSU Math & Stats Club officers for 2006–2007 are: **Brian Lerch**—President, **Delphine Ufitesse**—Vice President, **Sarah Grewe**—Secretary, **Grace Tillison**—Treasurer, **Meghan Vandermale**—Social Coordinator, **Mark Sheely**—Social Coordinator, and **Matthew Stamps**—Past President.

### *Lawrence Technological University*

New officers for 2006–2007 are **Brittany Forgue**, president, **Mohammed Hussein**, vice president, **Warren Beard**, secretary-treasurer, and **Steve Kryskalla**, webmaster.

### *University of Michigan-Flint*

Student Union of Mathematics (SUM) Club officers: **Mark Turnpauigh**, President; **Rachel Noffsinger**, Vice President; **Jamie Ward/Celeste Thornburg**, Treasurer; **Douglas Bunker**, Secretary.

## Michigan NExT

The Eighth Annual Michigan NExT Symposium will be held in conjunction with the 2007 Section Meeting at University of Michigan-Dearborn. Michigan Project NExT Fellows are cordially invited to participate in a session designed specifically for them on the afternoon of Thursday, May 3, 2007. The program will address issues of importance to new faculty, such as developing successful teaching and assessment strategies, mentoring undergraduate research projects, planning new courses and selecting texts, and balancing the responsibilities of an academic career. Co-organizers **Mark Pearson** (Hope C) and **Paul Yu** (GVSU) are currently soliciting suggestions for topics and speakers. If you have recommendations for either a topic or a speaker, please contact Mark (pearson@hope.edu) or Paul (yupaul@gvsu.edu). Self-nominations are welcome. Information about the 2007 Symposium will be posted on [www.math.hope.edu/pearson/MINExT.html](http://www.math.hope.edu/pearson/MINExT.html).

To be eligible to be a Michigan NexT fellow, faculty must be in their first four years of full-time teaching and have a strong commitment to teaching undergraduate mathematics. Application procedures will be posted on the Michigan NExT website by early January. National Project NExT fellows are encouraged to apply. Limited support for travel and lodging may be available for faculty whose departments cannot support faculty travel. Each year between five and ten Michigan NExT Fellows will be selected for two-year terms. Their fellowship will pay the conference registration fee and entitle them to participate in the special session on Thursday, which includes dinner on Thursday evening.

As always, past Michigan Project NExT fellows are warmly invited to attend and participate in the Thursday session. Graduate students are also welcome to join us; if interested, please contact one of the organizers. We are looking forward to building on the successes of past Michigan NExT Symposia, and we hope to see you in May.

**Mark Pearson, Hope C**

## Positions Available

*NOTE: Most positions in the mathematical sciences, including many of the ones listed here, are advertised in Employment Information in the Mathematical Sciences ([www.ams.org/eims](http://www.ams.org/eims)). The MAA also has a Web site for employment opportunities ([www.maa.org/pubs/employ.html](http://www.maa.org/pubs/employ.html)). All openings are for Fall 2007 unless otherwise stated, and further information is available from the department.*

**Albion College** anticipates filling two sabbatical replacement positions (pending approval).

**Hope College** ([www.math.hope.edu/position.html](http://www.math.hope.edu/position.html)) is accepting applications for a tenure-track position in mathematics.

**Siena Heights University** ([www.sienahts.edu](http://www.sienahts.edu)) invites applications for two anticipated continuing positions of Assistant Professor or Instructor of mathematics.

**Wayne State University** (<http://math.wayne.edu/tentrkpos.html>) is seeking to fill a tenure track position.

CITATION  
for  
**JANET ANDERSEN**  
for the

Michigan Section  
Mathematical Association of America  
**DISTINGUISHED SERVICE AWARD**

The Michigan Section of the Mathematical Association of America recognizes the late JANET ANDERSEN as the recipient of its 2006 Distinguished Service Award. We gratefully acknowledge the many contributions she made over the years, both to our section and to the larger mathematical community.

Janet tragically lost her life in an automobile accident on Thanksgiving Day, 2005. At that time she was serving as both the four year college vice chair of the section and as chair of the Program Committee for the meeting at which this award is being made. The high quality of the work she did in those capacities is evident to all who have been part of this meeting. Janet also served as chair of the Local Organizing Committee for the 2001 Michigan Section meeting.

Janet gave generously of her time and talents to serve the MAA. In particular, she served on the Committee on the Undergraduate Program in Mathematics (2004-2007), the Coordinating Council on Education (2003-2006), the Committee on the Teaching of Undergraduate Mathematics (1998-2001 as member, 2001-2004 as chair), the Committee on Short Courses (2005-2008), and the CUPM subcommittee on Assessment Guidelines. In addition, Janet organized a PREP workshop (2003) and published a book with the MAA (2004).

Janet was active in the MAA's Project NExT from its beginning. Her involvement began in 1995 when she made a presentation at the Project NExT summer workshop. For several years thereafter she was invited to return to serve on a panel that discussed "The faculty member as teacher and scholar" and to offer a short course on the use of projects in the teaching of precalculus. In 2004 Janet was the keynote speaker at the Project NExT workshop. She also participated in numerous Project NExT presentations at national meetings and served for many years as a Project NExT consultant.

Janet worked tirelessly at her own institution, Hope College. She served as chair of the Mathematics Department, as GEMS Coordinator (General Education in Mathematics & Science), and as Director of General Education before assuming the Directorship of the Pew Midstates Science and Mathematics Consortium in 2002. She was active in the Association for Women in Mathematics. At the time of her death she was pursuing her scholarly interest in mathematical biology and had developed a new course in that area.

In recognition of her life of service and the outstanding leadership she provided to the mathematical community, the Michigan Section gratefully presents its 2006 DISTINGUISHED SERVICE AWARD to

**PROFESSOR JANET ANDERSEN**

*Award for  
Distinguished College or University Teaching of Mathematics*  
Presented to  
**Timothy Carroll**

The Michigan Section of the Mathematical Association of America is pleased to announce that Professor Timothy Carroll of Eastern Michigan University has been selected as the 2006-2007 recipient of the *Award for Distinguished College or University Teaching of Mathematics*.

Dr. Carroll has been teaching at Eastern Michigan University for the past 20 years. Prior to that, he taught for a total of 6 years at Chicago State University and Bloomsburg University. Immediately after receiving his Ph.D. in Mathematics from Western Michigan University in 1973, he held various technical positions within the banking industry. This practical experience has allowed him to effectively communicate real-life applications of mathematics to his students.

Dr. Carroll's distinguished teaching career began, while still a graduate student, as a mathematics specialist/coordinator for Project SEED. His abiding interest in reaching minority and at-risk students continues to this day through involvement in the 4S Program of EMU's Holman Learning Center. Its Director writes "he seeks out students requiring help and refers them to vital resources in addition to meeting with students identified as having academic difficulties". His department head writes "he is a humane and caring person who creates a safe and supportive environment in which students thrive". A colleague writes "he is one of the most beloved and respected colleagues in our department – a feeling shared by faculty and students alike".

Dr. Carroll is a regular contributor of scholarly articles on mathematics' history. This activity has resulted in the transformation of EMU's *History of Mathematics* course for elementary education majors from "stories about mathematicians" into a course that teaches mathematics as it was developed. Since there was no appropriate text, he wrote one, self-published it and distributed it to students on CD. His penchant for math history extends beyond this one course and permeates all that he teaches. The effectiveness of his historical approach to mathematics pedagogy is attested to by his students, one of whom wrote, "Although abstract math courses are not generally known as exciting, Dr. Carroll knows his math history and capitalizes on this to motivate the material."

Dr. Carroll's dedication and enthusiasm for the teaching of mathematics is reflected in student testimonials such as, "His passion for mathematics is apparent because he displays a great deal of enthusiasm about the subject, always provides a plethora of examples and presents the material in a way that makes each topic interesting and enjoyable". This same student concludes, "I believe that he is a teacher who greatly deserves this award."

**The MAA Michigan Section is proud to presents this Award to  
Dr. Timothy Carroll.**

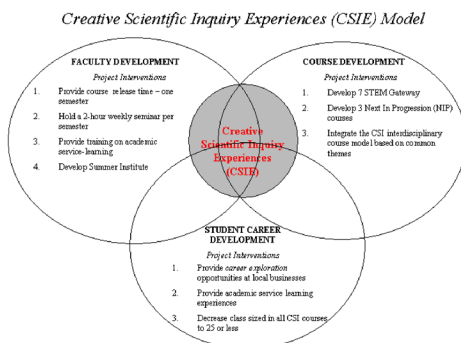
## **Retaining Freshman Interest in Mathematics and Computer Science Using Collaborative and Experiential Learning**

Joanne Caniglia, Krish Narayanan,  
Elene Tetras Contis, Kathleen Stacey  
*Eastern Michigan University*

### **I. Introduction and Background**

A three-year study to determine why undergraduate science, technology, engineering, and mathematics (STEM) majors switch to non-STEM majors was conducted by Seymour and Hewitt [1]. They found that the major reasons students give for switching majors were lack or loss of interest in science, belief that non-STEM majors hold more interest, poor teaching by STEM faculty, and feeling overwhelmed by the pace and load of the curriculum demands. The authors recommend that STEM programs examine their curriculum, structure, and delivery if they want to increase student retention. Studies offer compelling evidence that effective teaching in science and mathematics education enables students to: construct their own understanding of concepts; internalize relationships between concepts and processes ([2],[3]); develop critical thinking skills; integrate learned concepts with everyday experiences ([4], [5]); and appreciate the study of science and mathematics as a valuable endeavor. Programs that attract and sustain student interest feature learning that is experiential, investigative, hands-on, personally significant to both students and faculty, connected to other inquiries, and suggestive of practical application to students' lives. Such learning flourishes in a community in which faculty are committed equally to teaching, to maintaining their own intellectual vitality, and to partnering with students in learning, and in which institutional support for such a community exists [6].

Sheila Tobias and others ([7], [8], [9]) report that to retain students in engineering programs the focus should be on the first two years, offer cross-college course integration, provide service-learning opportunities and establish a records-tracking system to identify causes of retention problems. The Eastern Michigan University Creative Scientific Inquiry Experiences (CSIE) program integrates and innovatively adapts features of these successful programs to the teaching and learning of mathematics and science in general education and has the potential to become a



**Figure 1. The CSIE model**

university-wide support system: interdisciplinary course development, supplemental academic enrichment for students, intense and sustainable faculty professional development.

The CSIE Faculty Fellows will

- Earn released reassignment time to develop the theme-based integrated courses;
- Train in Academic Service-Learning pedagogy, one that focuses on academic research in the community;
- Participate in the Spring/Summer Institute for generating creative linkages with fellow faculty to explore interdisciplinary science connections and research opportunities;
- Develop a team approach to research-oriented community-based research.

The CSIE Student-Scholars will:

- Learn to partner with others on community-based research projects;
- Experience career exploration with local practitioners in their fields;
- Experience smaller class size and book/supplies subsidies;
- Have access to an intense network of academic support services through the CSIE Program Office.

### III. College Algebra--Computer Science CSIE

“Tell me, and I will forget. Show me, and I may remember. Involve me, and I will understand.” – Confucius, 450 B.C.

Our approach builds on the fact that a significant number of fresh-

model for producing more STEM graduates at such institutions.

Based on these explanations, data, recommendations, and Eastern Michigan University EMU demographics, an interdisciplinary project team developed a model to recruit and retain students in STEM majors. Figure 1 illustrates the CSIE model, which requires a

men do not appreciate a particular field of study due to the lack of immediate application of learning concepts [10, 11]. Such application is essential for their critical thinking and assessment of results to make appropriate connections between fundamental and applied concepts. The Computer Science department in particular faces this challenge with students who are pursuing a constantly changing field [12, 13]. Even though EMU's Computer Science and Mathematics curriculum recommends a senior, capstone project, it is too late for students, in their duration of study, to realize the practical applications of what they have learned. We believe that students need to be shown the significance of what they are learning from the beginning of their coursework, in order to sustain their interest in the field. Such students demonstrate a lack of understanding or misunderstanding of fundamental mathematical concepts and thereby lose interest.

To address the Mathematics-Computer Science issue, we have identified a freshmen course in Mathematics (MATH105 –College Algebra) and linked it with JAVA Programming (COSC111). Students in these linked courses will be able to comprehend the Math concepts they learn in class by applying them immediately in labs and projects in COSC111. Because of the reinforced mathematical foundation, it is hoped that students will be well-prepared to learn Computer Science fundamentals. In addition, students will apply their computer science and mathematical knowledge in serving the need(s) of community organizations in a one-credit course (CSIE 177—Creative Scientific Inquiry θ

Experience theme-linked course; [www.emich.edu/csie](http://www.emich.edu/csie)) that emphasizes service-learning and team work. Students attend the three courses in the same semester to benefit from the collaboration. Figure 2 shows an illustration of how these courses work in a cycle to reinforce student's learning of fundamental concepts and application.

#### IV. Academic Service Learning in College Algebra and Computer Science

With this model in mind, the College Algebra and Computer Science courses teamed with the Meals on Wheels Organization. After meetings with the director of the Ypsilanti Meals on Wheels (MOW),

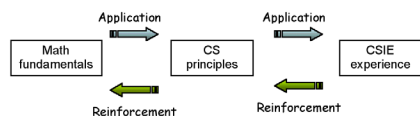
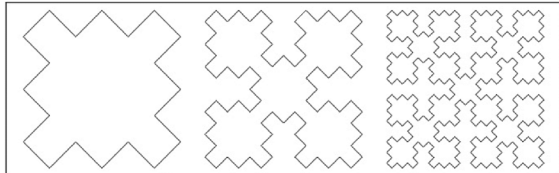


Fig. 2. Cycle of reinforced learning

not only would we serve the organization with data displays and trend analysis, but also the combined classes would develop an efficient routing system for a volatile client list. As an abstraction of the routing system, we used the “Traveling Salesman Problem” which can be formalized as: Given  $n$  locations, find a tour of minimum total length. (tour is a path that visits all the required locations and then returns to its origin). The TSP is a famous problem because it is simple to understand but hard to solve, at least for instances of realistic size. For a survey of solution techniques see Lawler et al., [14].

The Ypsilanti Meals on Wheels program delivers prepared lunches to persons who are unable to shop or cook for themselves. As it is for many nonprofit organizations, the funding for MOW is unstable, chronically insufficient and occasionally desperate [15]. The routing system is relatively accurate and inexpensive; consequently it has more implementations throughout the world than any other commercial routing system [16]. Materials are basic and consist of a map, a table of  $\theta$  values, and two card files. The map is an official map of Ypsilanti and surrounding townships. It is mounted under a plastic grid so that one can read the  $(x,y)$  coordinates for any location. Thus adding new or subtracting clients is not difficult. A JAVA program produced a table of values of  $\theta$ .

The Sierpinski space-filling curve is the limit of the series of recursively-constructed figures shown below. Each is built upon the preceding figure by dividing the square into quadrants and filling each quadrant



**Figure 3. Sierpinski space-filling curve.**

with a shrunken copy of the preceding figure. The limiting figure is a 1 dimensional curve that is continuous and visits every point in the 2 dimensional square [17].

## V. Conclusion

Although Ypsilanti Meals on Wheels creates formal routing sheets based on mapping systems, volunteer drivers deliver meals using informal visualization methods based on their knowledge of Ypsilanti. As students ride-along with volunteer drivers they discover the complex nature of mathematical modeling. Students realize that human factors

play key roles. They discover the difference between “real-world” applications and theoretical results.

The goals of the course are to instill inquiry, reasoning, and connection that we have found we can do in the seminar. Many students comment that the seminar is an important aspect of the course and helps students to see the connection between the mathematics and computer science programming.

Why should anyone take this type of experience (given it is not required)? We find that these types of courses are good for both the students and for us. We learn from each other and from the students. This mode of teaching is rejuvenating and if organized properly, is possible to be institutionalized.

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## 50<sup>th</sup> Annual MMPC

The 50<sup>th</sup> Annual MMPC is underway. **Eddie Cheng** (OU) is the Director of the 49<sup>th</sup>, 50<sup>th</sup>, and 51<sup>st</sup> MMPC. All information related to the MMPC is posted at the MMPC web site, [www.math.oakland.edu/MMPC/mmmpc.html](http://www.math.oakland.edu/MMPC/mmmpc.html).

About 200 schools and 10,000 students participated in Part I which took place on Wednesday, October 11 and results have been tabulated. Part II is completed and invitations will be extended to approximately 1000 students to participate in Part II on Wednesday, December 6.

The exam committee of **Patrick Pan** (Chair, SVSU), **Akalu Tefera** (GVSU), **Lazaros Kikashas** (UDM) and **Ada Cheng** (Kettering) has worked very hard in preparing Part I and Part II.

Grading Day is Saturday, January 20, 2007 on the campus of Oakland University located in Rochester.

Directions, problems, solutions, and assignments will be posted on our website. Teams of 10 to 12 people will work on each of the five problems of Part II. This is our tentative schedule:

8:30 a.m– 8:55 a.m. Welcome and Refreshments

9:00 a.m–12:30 p.m. Grading (Executive Committee Meeting)

12:30 p.m– 1:30 p.m. Lunch

Discuss this event in your department and come as a group to enjoy this important and fun project of the Michigan Section of the MAA. Send the names of those who are able to attend Grading Day to the Director ([echeng@oakland.edu](mailto:echeng@oakland.edu)).

We are in the process of inviting speakers for the Awards Day (tentatively scheduled on February 24, 2007). Awards Day presentations and banquet will be held on the campus of Oakland University.

**Eddie Cheng, Oakland U**

## Michigan Undergraduate Mathematics Conference

On Saturday, October 21, Hope College hosted the Ninth Annual Michigan Undergraduate Mathematics Conference. There were approximately 100 faculty and students in attendance from 14 different colleges and universities.

Thirteen students presented talks with topics from applied and pure mathematics like “The Dynamics of a Volleyball Serve” and “Classification of Invariants of Rational Functions.” Also included were talks in the area of mathematical biology and mathematics education.

In addition to the student talks, presentations were given about various graduate programs in mathematics and statistics as well as REU opportunities for next summer.

**Bob Devaney** from Boston University delivered the keynote address, entitled “The Fractal Geometry of the Mandelbrot Set.” He shared the beautiful mathematics that lurks behind the beautiful image of the Mandelbrot set and how it relates to the filled Julia set. It was a very informational and entertaining talk.

The conference concluded with the game Induction Seduction. Eight teams of students competed to determine the rule that was behind a sequence of numbers. Different sequences were determined acceptable or not acceptable until a rule was finally discovered. All students competing received some great prizes that were donated by sponsors of the conference.

A grant from the MAA Regional Undergraduate Mathematics Conference Program funded through the NSF was awarded to Hope College to support the conference this year. This once again made it possible to have the conference “registration free.” A complete list of talks and sponsors is available at [www.math.hope.edu/mumc.html](http://www.math.hope.edu/mumc.html).

**Todd Swanson, Hope C**

## High School Visiting Lecture Program

Annual Michigan The High School Visiting Lecture Program offers high school students and teachers throughout Michigan the opportunity to connect with college and university faculty and other mathematics professionals. Topics that mathematicians share with schools include alternate geometries, careers in mathematics, the mathematics of voting, recreational mathematics and topics in areas such as chaos theory and applied mathematics.

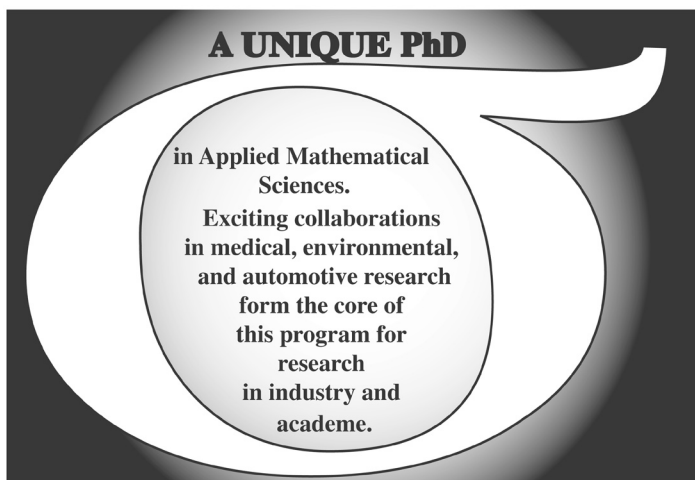
Last year there were 24 volunteer speakers from 16 institutions, offering 50 titles. There were 6 requests for visits, 5 of which have been honored

and 1 is scheduled for November. This number is up from the 5 requests during the 2004-2005 academic year. As of this writing there have been 4 requests for speakers for the 2006-2007 academic year, all of which are in the process of being fulfilled.

We are always looking for new speakers and talks of interest to students with a solid background in high school mathematics. All mathematicians who are interested in giving presentations to a high school audience are encouraged to participate. The continually updated list of speakers is available on the Section web site. Speakers volunteer their time and can have their travel expenses reimbursed through the HSVLP. Funding is provided by the Michigan Mathematics Prize Competition.

In addition, please encourage any high school teachers you may know to take advantage of the program. There is no charge to them for this service. Teachers can apply directly from the Web site. Teachers are encouraged to select speakers that are relatively close, but there have been speakers who have traveled great distances to share their love of mathematics with the next generation. For further information, please visit the Web site or contact one of the co-directors.

**Brian Snyder and Kimberly Miller, LSSU**



- Teaching Associateships — full-time students on a competitive basis.
- Other Degrees: MA, MS in Applied Statistics, and MS in Industrial Applied Mathematics.

**Oakland University**

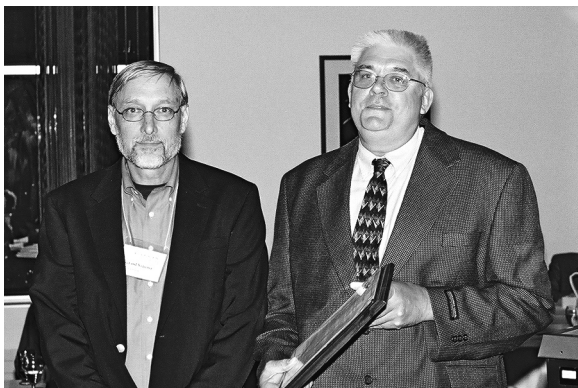
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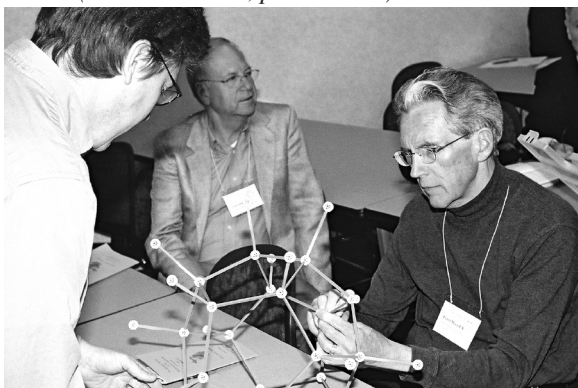
# Annual Meeting at Calvi



*Brian McCartin presents the Distinguished Teaching Award to Tim Carroll.*



*Gerard Venema presents the Distinguished Service Award (Janet Andersen, posthumous) to Jim Andersen.*



*Gretchen Mooningham receives 25-year membership certificate.*



*Paul Zwier, Calvin C, spoke on "Information and Rectangular Permutations."*

# n College, May 5–6, 2006



*Daniel Mulligan of Project SEED has everyone participating.*



*Joan Birman, Barnard College of Columbia University.*



*Harley Flanders (l), Joan Birman, and Jerry Grossman socialize before dinner.*



*Henry Escudro, WMU student, gave a talk on graph theory.*



*Michael Moody's after dinner talk was an "ODE to Toys", with many visual aids.*

## Contest News

The 2006 American Regions Mathematics League (ARML) Competition took place on June 3rd on the campuses of the University of Iowa, Pennsylvania State University, and the University of Nevada at Las Vegas. A total of 113 teams of 15 students each represented various regions of the United States and Canada, with guest teams from Taiwan.

Twenty-three students, ARML and MMPC veterans, boarded the bus for Iowa City on June 2. They competed in two teams, the Michigan Reals, and an Alternate team combined with eight students from Chicago. The Reals placed 30th out of 33 teams in hotly contested Division A, and the Alternate 3 team was 33rd out of 80 teams in Division B, which was impressive for an Alternate team. At the closing ceremonies in Iowa, the Samuel J. Greitzer Distinguished Coach Award for outstanding service to a regional team was awarded to Bob Messer, Albion C, who founded the All-Stars in 1989, and coached until 2005.

The contest consists of four parts: Team problems, 20 minutes for 10 problems; Power problem, one hour for a sequence of related problems requiring proof; Individual problems, eight problems, 10 minutes for each group of two; and the Relay, short problems requiring a number to be passed back to the next team member. Groups of three get six minutes to complete each of two Relays.

The coaches were **Ruth Favro**, LTU, **Ada Dong**, ICAE, and **Chris Cartwright**, LTU. Assistant coaches were **Douglas Li** and **Jeff Madsen**, both from UM-Ann Arbor.

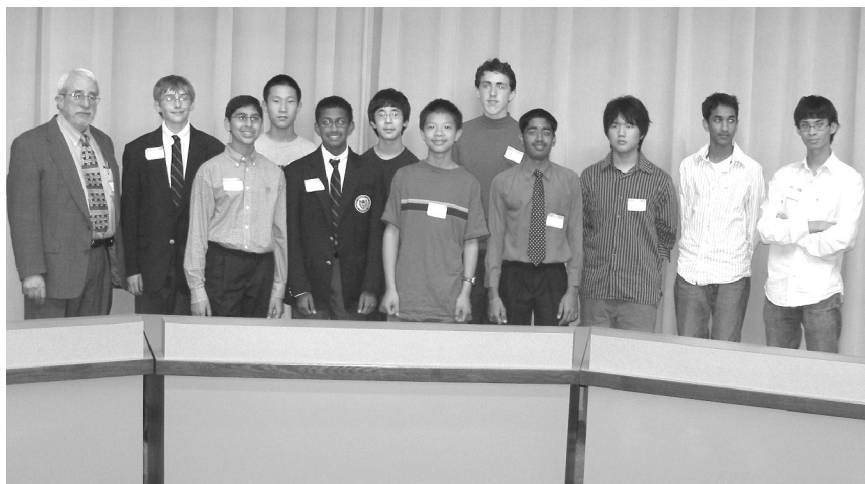
During the 2005–2006 academic year, 11,454 Michigan students participated the American Mathematics Competitions (AMC) (7,340 students from 95 schools for AMC8 and 4114 students throughout Michigan for AMC10/12). Among them, there were seven perfect papers for AMC8 and two perfect papers for AMC10. Further, 604 students were qualified for AIME (American Invitational Mathematics Examination), 17 qualified for USAMO (United States of America Mathematics Olympiad), and two qualified for (MOSP) Mathematical Olympiad Summer Program.

Among the five Middle School 2005 Sliffe Awards winners in the Region 4 (Indiana, Michigan, and Ohio), three are Michigan teachers: **Roy Kenneth Downie** of Smith Middle School, **Randall C. Meono** of Detroit Country Day Middle School, and **Lynn Ann Serenson** from Novi Middle School. **Mark Schmitt** of Detroit Country Day School, “the man who teaches for the love of working with mathematics and bright high school students”, was the winner of the 2006 Edyth May Sliffe Awards for Distinguished High School Mathematics Teaching.

Following our tradition of recognizing the excellent achievements of the AMC winners, their teachers and their parents, two celebrations have been organized. The reception with the Michigan Governor is pending for further arrangement. The Awards Ceremony was held on September 14 at the Department of Mathematics and Statistics, Oakland University, with distinguished speaker **Jack Nachman**, who presented a lecture on spherical geometry emphasizing the similarities and differences between familiar concepts in plane geometry and trigonometry and their corresponding concepts on the sphere. These events are funded by AMC, sponsored by the Department of Mathematics and Statistics, Oakland University, Wolfram Research, and The Art of Problem Solving Foundation.

The list of Michigan AMC winners can be found in the caption of the picture below. This working website will be moved to its permanent location at the Michigan Section MAA AMC Coordinator site after the reception with the Governor.

Special thanks go to **Jerry Grossman**, OU, who kindly acted as the photographer for the AMC Awards Ceremony for MAA publications.



*Pictured (l. to r.): Jack Nachman, Michael Dimattia, Matthew Vengalil, Randy Jia, Neil Gurram, Alan Huang, Robin He, John Treadway, Ram Bhaskar, Jaewon Kim, Sunil Agarwal, Michael Vo.*

*Not pictured: Vivek Behera, Steven Chang, Whit Froehlich, Philip Hu, Roger Jia, Chaitanya Malla, Frederic Sala, Nicholas Triantafyllou, Akshar Wunnava, Siyuan Xing, Alex Xu, John Zhou.*

## Nominations Sought for Awards and Offices

Nominations for the sixteenth (2007) Award for Distinguished College or University Teaching of Mathematics from the Michigan Section of the Mathematical Association of America are now being accepted. The Distinguished Teaching Award Committee will choose one of the nominees for the Section Award.

The awardee will be honored at the Spring meeting of the Section and will be widely recognized and acknowledged within the Section. The awardee will also be the official Section candidate for the national MAA Deborah and Franklin Tepper Haimo Awards for Distinguished College or University Teaching of Mathematics. Each of the three national awardees will be honored at the national MAA meeting in January 2008 and receive a \$1000 check and certificate. The Section awardees for the past three years, **Brian McCartin** (Kettering U), **Ted Sundstrom** (GVSU), and **Tim Carroll** (EMU), form the selection committee (see page 35).

Anyone (other than the candidate him/herself) is entitled to make a nomination, but nominations from chairs or MAA liaisons are especially encouraged. Any college or university teacher assigned at least half-time 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) is eligible, provided he or she has at least five years teaching experience in a mathematical science and is a member of the MAA.

The nominees should be widely recognized as extraordinarily successful in their teaching (interpreted in its broadest sense), have documented teaching effectiveness, have had influence in teaching beyond their own institutions, and foster curiosity and generate excitement about mathematics in their students.

Please send your nominations in triplicate to Brian McCartin, Science and Mathematics Department, Kettering University, Flint, MI 48504. Deadline for completed dossiers is January 1, 2007. Further information and copies of the nomination forms can be found on the Section's Web site at [www.michmaa.org/announcements.html](http://www.michmaa.org/announcements.html).

Nominations are also now being solicited for the Michigan Section's Distinguished Service Award. Please submit your nominations by January 14 to John Fink (Kalamazoo C); see contact information on page 35.

In addition, as Past Chair, John also chairs the Nominating Committee for Section officers and would appreciate suggestions (by January 5) for future Section leaders (this includes self-volunteering). We need to elect a Chair and two Vice Chairs (two-year school and four-year school) to one-year terms.



$$[X,[Y,Z]]+[Y,[Z,X]]+[Z,[X,Y]]=0$$



## **Western Michigan University**

The Department of Mathematics, Western Michigan University, consists of 37 full-time faculty members with specialties in many areas of mathematics and mathematics education, with about 40 graduate teaching assistants and doctoral associates. Western Michigan University is located in beautiful Southwestern Michigan, midway between Chicago and Detroit, near Lake Michigan.

*Degree Programs* The Department offers a variety of graduate programs tailored to meet the wants and needs of our graduate students. We offer Ph.D.s in Mathematics and Mathematics Education; and master's degrees in Mathematics, Applied and Computational Mathematics, and Mathematics Education. Graduate students receive individualized attention and encouragement from professors committed to maintaining the highest standards in research and teaching.

*Financial Assistance* The Department has a wide variety of forms of financial assistance. Stipends range from \$10,512-\$12,904. Currently all supported doctoral students receive tuition waivers, while supported master's students receive partial tuition waivers. Additional support may be available for the Summer sessions. Applications for Fall 2007 are due by 15 February 2007. Late applications are accepted as long as openings remain.

All application materials are available on our web pages:  
[www.wmich.edu/math](http://www.wmich.edu/math).

For additional information, please contact:

Maryann Bovo,  
 Graduate Secretary  
 Department of Mathematics  
 Western Michigan University  
 Kalamazoo, MI 49008-5248

Phone: (269) 387-4512  
 Fax: (269) 387-4530  
 E-mail: [maryann.bovo@wmich.edu](mailto:maryann.bovo@wmich.edu)  
 Web site: [www.wmich.edu/math](http://www.wmich.edu/math)

*Western Michigan University is an Equal Opportunity/Affirmative Action Institution*

## News from the Campuses

### *Adrian College [reported by Elizabeth Lamprecht]*

**Ken Henningfeld** has joined the Mathematics Department and is currently teaching both Developmental Mathematics and Intermediate Algebra. • **Beth Lamprecht** was promoted to the rank of Prof. • The department will be participating in the Thirteenth Annual Michigan Autumn Take Home Challenge. • **Lisa Randall**, Professor of Physics at Harvard University, will be speaking at the college's convocation in March. She is the author of *Warped Passages*. [elamprecht@adrian.edu]

### *Albion College [reported by Robert Messer]*

We welcome **Cayley Pendergrass**, who joined Albion as a tenure-track Assist. Prof. this Fall. She is originally from Maryland, earned her undergraduate degree in mathematics from Swarthmore C, and recently completed her doctoral degree in mathematics from UC San Diego. Her research is in the areas of just infinite associative algebras and how these properties correlate to characteristics of related rings. • **Darren Mason** has been promoted to Assoc. Prof. • **George Hart**, Professor of Computer Science at SUNY Stony Brook, visited the newly remodeled science complex to discuss the design of a sculpture with a mathematical theme. He suggests a sequence of pieces suspended from the ceiling of the atrium to represent a 4-dimensional object. Examples of Hart's work are available at [www.georgehart.com](http://www.georgehart.com). [Ram@albion.edu]

### *Alma College [reported by Mel Nyman]*

**Robert Molina** is on leave for the 2006–2007 academic year. He will be working with our former colleague **Aklilu Zeleke** at the Lyman Briggs College of MSU • **Amy Kuiper-Moore** has joined the department as a sabbatical replacement for the 2006–2007 academic year. Amy is a 2000 Alma graduate and recently completed a Ph.D. in applied mathematics at MSU. We are pleased to have her as a colleague for the year. • **Tim Sipka** continues to run the MATH Challenge. This Fall semester mathematics competition provides an opportunity for a significant number of undergraduates to test their problem solving skills. With the assistance of **Robert Molina**, Tim also operates a problem-of-the-month type Math Challenge for high school students around the state of Michigan. [nyman@alma.edu]

### *Andrews University [reported by Don Rhoads]*

Shandelle Henson has been promoted to Prof. • **Yun Myung Oh** has joined the mathematics faculty as Assoc. Prof., replacing **Ronald D. Johnson**, who has moved to Southern Adventist U, in Tennessee. She received her Ph.D. from MSU and has recently taught at MSU and IU NW. Her research interests are Riemannian geometry and submanifold theory. • NSF has renewed a grant to Andrews, Walla Walla C (Washington), and the U of Arizona, funding a study to mathematically predict the behavior of glaucous-winged gulls at Protection Island National Wildlife



## Position Openings Assistant Professor of Mathematics (2)

Siena Heights University, a Catholic liberal arts institution founded and sponsored by the Adrian Dominican Sisters, invites applications for two anticipated continuing positions of Assistant Professor or Instructor of mathematics, to begin August 20, 2007. Responsibilities include teaching 12 semester hours per semester of mathematics on all levels, advising undergraduate students, supervising senior projects and encouraging student participation in professional activities. Requires master's degree in mathematics; Ph.D. preferred. Requires teaching excellence in a liberal arts setting. The successful candidates will be very familiar with the use of technology in mathematics instruction. Review of applications will begin immediately and continue until the positions are filled. We encourage applications from minorities. Please send a letter of application, resume, statement of teaching philosophy, and three letters of reference to: Dr. Timothy Husband, Chair, Mathematics Search Committee, Department of Mathematics, 1247 E. Siena Heights Dr. Adrian, Michigan 49221 or submit materials electronically to [thusband@sienahts.edu](mailto:thusband@sienahts.edu). Visit our website at [www.sienahts.edu](http://www.sienahts.edu) for more information regarding Siena Heights University. E.O.E.

**The Division of Science and Mathematics Education at  
Michigan State University** is offering a *new program*:

### **Ph.D. in Mathematics Education**

The *Ph.D. in Mathematics Education* is designed for persons who show promise of becoming leaders in local, state, national and international mathematics education communities.

This program places an emphasis on:

- mathematics content
- mathematics education research
- research experience

and prepares researchers to address critical issues in mathematics teaching, learning, curriculum and policy.

**Apply now for Fall 2007!** Teaching and research assistantships and fellowships are available. For more information and to apply, visit our website at [www.dsme.msu.edu/mathed](http://www.dsme.msu.edu/mathed) or contact:

Margaret Iding, Graduate Secretary, DSME

116 N. Kedzie, East Lansing, MI 48824

Phone: 517.355.1708 x105; Fax: 517.432.9868; or [idingm@msu.edu](mailto:idingm@msu.edu)

Refuge in Washington state. The renewal is for \$300,000 over three years, assuring the continuation of research that has been going on for the past 16 years. Co-PIs are Andrews professors Shandelle Henson and James Hayward (Biology), together with Joe Galusha of WWC and Jim Cushing from U of Arizona. More details can be found at [www.andrews.edu/news/2006/9/nsf\\_grant.html](http://www.andrews.edu/news/2006/9/nsf_grant.html). [dhr@andrews.edu]

### *Calvin College [reported by Daryl Brink]*

**Chris Moseley** has been appointed to the department as Assoc. Prof. He was previously at West Point. • **Mike Stob** has returned to the department after a sabbatical at Notre Dame. • **Bob Daverman** is joining the department for the Fall semester as an Affiliated Visiting Scholar. [brkd@calvin.edu]

### *Central Michigan University [reported by Sid Graham]*

**Arnie Hammel** retired at the end of the Spring 2006 semester. Arnie was a faculty member in the Department of Mathematics for 41 years, longer than any other Department faculty member in CMU history. • Visiting faculty this year are **Tibor Marcinek** (mathematics education), **Boris Bekker** (algebraic geometry), and **Oksana Podkopaeva** (mathematical physics). • **Yury Ionin** and **Carl Lee** were co-winners of the President's Research Award this summer. • **Pete Vermeire** won the College Teaching Award. [sidney.w.graham@gmail.com]

### *Eastern Michigan University [reported by Tim Carroll]*

**John Ginther** celebrated 40 years at EMU in the Spring. • **Robert V. Hogg**, Professor Emeritus of Statistics from the U of Iowa, visited in November, 2005. • **Joanne Caniglia** recently helped EMU get a \$1.5 million grant from the NSF to begin a program designed to increase the number of math and science students. [tcarroll@emich.edu]

### *Grand Valley State University [reported by Reva Kasman]*

**Jody Sorensen** and **Karen Heidenreich** resigned, and **Don VanderJagt** retired. We hired one new tenure track Assist. Prof., **Feryal Alayont** and one Affiliate Faculty member, **Marcia Frobish**. In addition, we welcomed four new visitors: **Morgen Bills**, **Firas Hindeleh**, **Tae-Wan Park**, and **Semail Ulgen Yildirim**. • GVSU will be hosting an REU program in mathematics again in 2007. Applications will be available in January at [www.gvsu.edu/mathreu](http://www.gvsu.edu/mathreu). The 2007 program will feature faculty mentors **Will Dickinson**, **Filiz Dogru**, **Jon Hodge**, and either **Ed Aboufadel** or **Steve Schlicker**. The program will run June 10–August 4, 2007. • During the 2006-2007 academic year, GVSU will host a series of talks on the Art of Mathematics. Each of the talks in this series will present mathematics from an intuitive perspective and demonstrate the kind of thinking that leads to the discovery of new mathematics. As we will be using images to describe mathematics in a visual way, the talks will be accessible and interesting to a wide audience, including those whose mathematical background may be limited. Talks include “Playing Penrose’s Tile Game” by **David Austin**, GVSU, on September 21, “The Chaos

Game and Fractal Images” by **Bob Devaney**, Boston U, on October 19, “Fibonacci’s Garden” by **Matt Boelkins**, GVSU, on February 8, and “Mathematics in Stone and Bronze” by artists Clair and Helaman Ferguson on April 12. All lectures are free and will be held at 7 pm in Loutit Lecture Hall 102 at GVSU’s Allendale Campus. [kasmanr@gvsu.edu]

### ***Kalamazoo College [reported by David Murphy]***

This year, we welcome **Ryan Higginbottom** to our department. Ryan completed his Ph.D. at the U of Virginia and is joining us for one year as the sabbatical replacement for **John Fink** and **Eric Nordmoe**. • John Fink is Visiting Fellow in the Department of Biochemistry at Oxford University, giving a course on mathematics for first-year undergraduates. Winter and spring he will be Visiting Professor at UM-Ann Arbor, developing curriculum and assessment materials to use in his summer mathematics program for underrepresented minority middle school students. • Eric Nordmoe is spending his sabbatical at Nanyang Technological University in Singapore. • In other news, John Fink organized his second “Keeping the Doors Open,” a math camp for Black and Hispanic middle school students in Kalamazoo. Using a four-year grant from the Howard Hughes Medical Institute, John coordinates a Summer-Fall math enrichment program designed to encourage participants’ successful study of science and math in high school and beyond. Follow-up to the two-week summer session occurs in the Fall, when Kalamazoo C students pay weekly visits to each of the students in their schools. • David Murphy co-organized a Project NExT session, “Mathematics and Mingling: Starting and maintaining an active student Math Club,” at the Knoxville MathFest 2006. [dmurphy@kzoo.edu]

### ***Lawrence Technological University [reported by Michael Merscher]***

**Maryam Roshanaei** has joined the full time faculty. • The World Robofest 2006 Championship was held at LTU in April, with **C. J. Chung** in charge. This year’s festival involved 826 participants on 230 teams from around the world. • The 37th Annual LTU High School Mathematics competition, led by **Mike Merscher**, was won by Chaitanya Malla of Northville High School. • **David Field** of General Motors and SIAM gave a wonderful talk to the faculty at a recent colloquium. [merscher@ltu.edu]

### ***Michigan Technological University [reported by Lynn Murphy]***

Upcoming 2006 retirements in the department include: **Alphonse Baartmans**, August; **Beverly Baartmans**, August; **Michael Gilpin**, June. • **Thomas Drummer** was promoted to Prof. **Mark Gockenbach**, was promoted to Prof. • Individuals on sabbatical leave for the 2006–2007 academic year include: **Gilbert Lewis** (full year), **Huann-Sheng Chen** (Spring). • Visiting Faculty for the 2006–2007 academic year include: **Diane Mitchell**, Instructor (Fall), **Debra Zei**, Instructor (Fall), **Tao Feng**, Post-Doctoral Fellow (Fall and Spring), **Zhaogong Zhang**, Post-Doctoral Fellow (Fall and Spring). [murph@mtu.edu]

### *Northern Michigan University [reported by Roxin Zhang]*

**Don Zalewski** and **Jane Jamsen** (Mathematics Education) are retired from the department as of August 2006. • **Sujay Datta** (Statistics) is on a two-year professional development leave of absence beginning with the Fall 2006 semester. • **Boris Mordukhovich**, WSU was a guest speaker in October 2006 presenting “Variational Analysis and Generalized Differentiation: New Trends and Developments”. • **Roxin Zhang** was selected as a recipient of the NMU TLC (Teaching, Learning and Communications) Staff Award for 2006 for his contribution to the Automating Orientation project. He was responsible for creating and implementing systems which allow freshmen to take a math placement test on-line and obtain their placement results immediately. • **Don Faust** participated in the Study Abroad Program in Vienna, Austria during the winter 2006 semester mentoring 18 student participants and teaching the course “The Nature of Human Knowledge”. [rzhang@nmu.edu]

### *Oakland University [reported by Jerry Grossman]*

**Dorin Drignei** joined the faculty this Fall as Assist. Prof. He obtained his Ph.D. in Statistics from Iowa State U. **Janet Sharp** has been hired as Assoc. Prof. in the School of Education and Human Services, with an unofficial joint appointment in our department; she will be involved with our elementary and secondary education program in mathematics. Statistician **Gary McDonald**, who had been a visiting professor in our department for the past few years after retiring from General Motors, was appointed as a full-time Adjunct Prof. **Serge Kruk** was promoted to Assoc. Prof. with tenure. **Anna Spagnuolo** is on sabbatical leave this Fall. • Anna Spagnuolo and Peter Shi have each received research funding this year from the NSF. The Department will host the 13<sup>th</sup> International Conference on Applications of Computer Algebra in July; the organizer is Assistant Professor **Tanush Shaska**. Gary McDonald served as Chairman of the Board of Directors of MathCounts, a national middle school mathematics competition. He was the moderator of the final “Countdown Round” last spring. He and the students who won the contest met with President Bush in May. [grossman@oakland.edu]

### *Saginaw Valley State University [reported by Tony Crachiola]*

**Hamza Ahmad** received tenure and was promoted to the rank of Prof. **Nancy Colwell** received tenure and was promoted to the rank of Assoc. Prof. **Amy Hlavacek** and **Jan Hlavacek** were promoted to the rank of Assist. Prof. • **Curtis Grosse** and **Garry Johns** received a grant entitled “Math for Minorities” from the Michigan Space Grant Consortium to help area high school students increase their proficiency in mathematics. • **Andrew Tierman** received his Ph.D. from WSU. • The annual SVSU high school Math Olympics Competition is tentatively scheduled for March 23. Visit [www.svsu.edu/mathematics](http://www.svsu.edu/mathematics) for details. [acrachio@svsu.edu]

### *Schoolcraft College [reported by Randy Schwartz]*

**Larry G. Williams** retired in August 2006 after a 37-year teaching career at

Doctoral Studies at  
**Central Michigan University**

PhD with Concentration in  
**the Teaching of College Mathematics**

This PhD is a content-based degree designed to prepare individuals for a career in college teaching. The program consists of broadly distributed coursework, professional pedagogical components, teaching internships, and a dissertation. Areas of research strength include approximation theory, combinatorics, fluid dynamics, functional analysis, operator theory, number theory, algebraic geometry, algebra, differential geometry, statistics, and mathematics education. For information contact: Sivaram Narayan, Graduate Coordinator, Department of Mathematics, Central Michigan University, Mt. Pleasant, MI 48859; phone 989-774-3596, fax 989-774-2414, mthgrad@cmich.edu, <http://www.cst.cmich.edu/units/mth>.

CMU, an AA/EO institution, is strongly and actively committed to increasing diversity within its community ([www.cmich.edu/aaeo.html](http://www.cmich.edu/aaeo.html)).

**University of Michigan**  
**Biostatistics Department**  
**MS, MPH, PhD Degree Programs**

Our department offers training in the development and application of statistical and mathematical methods to the design and analysis of biomedical research. We offer course work leading to the degrees of Master of Science, Master of Public Health, and Doctor of Philosophy. We have a large number of funding opportunities for our students including graduate student instructorships, graduate student research assistantships, training grants, scholarships, and fellowships. The faculty conduct cutting-edge research in bioinformatics, imaging, longitudinal data, missing data, survival analysis, statistical genetics, and many other areas. Our graduates have great job opportunities in fields such as government, industry (e.g. biotech, pharmaceuticals), medical research institutions, and universities.

For detailed information on our programs and to find out how to apply go to: [www.sph.umich.edu/biostat](http://www.sph.umich.edu/biostat).

For further information, please contact [sph.bio.inquiries@umich.edu](mailto:sph.bio.inquiries@umich.edu).

# Call for Papers

The Michigan Section of the MAA and MichMATYC  
invite papers from students and faculty for the next  
combined Annual Meeting.

## University of Michigan - Dearborn Dearborn, MI May 4–5, 2007

Abstract submission is online at: [www.michmaa.org](http://www.michmaa.org).

Abstracts can also be e-mailed to Tom Zerger at [zerger@svsu.edu](mailto:zerger@svsu.edu) or faxed at 989-790-7638.

Papers should normally be at most 20 minutes in length, allowing some of this time for questions. Your abstract must include your name, affiliation, home or office address, phone number, e-mail address, and any equipment needs you have for your presentation. If you have any questions, please contact Tom Zerger at [zerger@svsu.edu](mailto:zerger@svsu.edu), or by phone at 989-964-4334.

**The deadline for abstracts is Friday, February 2, 2007.  
Undergraduate abstracts may be submitted until March 30.**

*Abstracts received after the February 2 deadline will be considered as space permits, but may not appear in the advance program.*

Schoolcraft. • We hired two new full-time mathematics instructors in August. **Andrea L. Lazarski** was previously a teacher at the Dearborn Center for Math, Science, and Technology. **Bradley D. Stetson** previously taught part-time at Schoolcraft and at other schools. [rschwart@schoolcraft.edu]

### *University of Detroit Mercy [reported by John O'Neill]*

In December **Katy Snyder** will receive her Ph.D. in Mathematical Education from WSU. This term our E&S College, with support from Ford and GM, is producing a number of programs to interest students, grade four through 12, in mathematics and science. About 3000 students are expected to participate. Those interested may contact **Dan Maggio** (maggiodd@udmercy.edu, 313-993-1435). [oneilljd@udmercy.edu]

### *University of Michigan-Ann Arbor [reported by Hugh Montgomery]*

*Kudos:* USNews & World Report recently ranked the department 7th nationally. The MAA gave the 2005 Gung-Hu Award for Distinguished Service to Mathematics to **Hyman Bass**. This is the most prestigious award given by the MAA. The American Mathematical Society awarded the 2006 Steele Prize for Lifetime Achievement to Professor Emeritus **Fred Gehring**. The NSF has given a CAREER award to **Anna Gilbert**. The American Academy of Arts and Sciences has elected **Robert Lazarsfeld** to membership. **Mircea Mustata** has received a Packhard Fellowship. Graduating senior **Charles Crissman** won a Churchill Fellowship for study at Cambridge University. • *New faculty include:* **Petter Branden** (combinatorics), **Robert Buckingham** (PDE), **Renzo Cavalieri** (algebraic geometry), **Masahiko Egami** (financial math), **Neil Epstein** (commutative algebra), **Selim Esedoglu** (nonconvex optimization), **Daniel Forger** (math biology), **Grigor Grigorov** (number theory), **Aaron King** (population dynamics), **Richard Kollar** (differential equations), **Peijun Li** (applied math), **Michael Ludkovski** (stochastic control), **Yongbin Ruan** (symplectic geometry), **Tamar Ziegler** (dynamical systems). • *Retirements include:* Prof. **Peter G. Hinman**, Lecturer **Patricia D. Shure**. • *Deaths:* Professors Emeriti **Donald G. Higman** (Feb. 2006), **James G. Wendel** (Jan. 2006), **Ethel M. Rathbun**, longtime assistant to the chair (Nov. 2005), former professors **Raoul Bott** (Dec. 2005), **Hans Samelson** (Sept. 2005), **Robert M. Thrall** (April, 2006). • The Michigan Reception at the joint AMS/MAA meetings in New Orleans will be Saturday, 6 January, 5:30–7:00 p.m.

### *University of Michigan-Dearborn [reported by F.-J. Papp]*

**Margaret Rathouz** joined our faculty as Assist. Prof. in mathematics education. She was previously on the faculty at California State U Monterey Bay. • **Angela Krebs** promoted to Assoc. Prof. with tenure. **John Clifford** promoted to Assoc. Prof. with tenure. • Lecturer **Helen Santiz** retired effective September 1 after serving for thirty years. • On leave for the Winter term: **Frank Massey**, **Angela Krebs**, and **John Clifford**. • **David James** is chairing a committee to have mathematical art on display around the department area. • **Mai Bazzi**, a preservice

elementary teacher, won a Michigan Council of Teachers of Mathematics Miriam Schaefer Scholarship • The Seventh Edition of the well-known text *Fourier Series and Boundary Value Problems* by **James Ward Brown** and the late Ruel V. Churchill has recently been published. [fjpapp@umich.edu]

### *University of Michigan-Flint [reported by Steven C. Althoen]*

**Kirk Weller** from U of North Texas at Denton, joined the Department on a tenure-track position as an Assoc. Prof. of Mathematics Education. [salthoen@umflint.edu]

### *Washtenaw Community College [reported by Jim Egan]*

Long time faculty member, department chair, and union president **Dennis Bila** retired last year. Never one to let himself stray too far from the classroom, he is back teaching calculus as a part-time faculty member. • The department welcomes its newest faculty member, **Lisa Manoukian**. [JEgan@wccnet.edu]

### *Wayne State University [reported by Daniel Frohardt]*

**Fatih Celiker** (Ph.D., 2005, U of Minnesota; J. Bernardo Cockburn, Advisor) is a new Assist. Prof. this Fall. Fatih did postdoctoral work at Stanford and specializes in numerical analysis. • Visiting this year is **Jyotsna Diwadkar** (Ph.D., 2006, U of Pittsburgh; Thomas Hales, Advisor). Jyotsna's field of specialty is algebra. • **Po Hu** has been awarded a Career Development Chair. **George Yin** has been elected to the WSU Academy of Scholars. • Five faculty members are on sabbatical leave: **Bertram Schreiber**, 2006–2007 academic year, **David Handel**, Fall 2006, **Daniel Isaksen**, Fall 2006, **Leonid Makar-Limanov**, Fall 2006, **Guozhen Lu**, Winter 2007 • Other faculty on leave for the year are: **Gregory Bachelis**, **Robert Berman** (to work in the provost's office), and **Rafail Khasminskii**. • **David Jonah** has retired after serving for 39 years in the department. • The department hosted an Asymptotic Analysis Conference in honor of **Rafail Khasminskii's** 75<sup>th</sup> birthday in September. • **Thomas Hales** of the U of Pittsburgh gave the annual Owen Owens talk in March. • **Gary Seitz** of the U of Oregon has been the Visiting Scholar for Fall, 2006. • The URL for the department's colloquium schedule is [www.math.wayne.edu/research/seminars/colloq.html](http://www.math.wayne.edu/research/seminars/colloq.html) • Several WSU students will participate in the MUMC at Hope C in October. [danf@math.wayne.edu]

### *Western Michigan University [reported by Paul Eenigenburg]*

The department is pleased to announce **Gene Freudenburg** as its new Chair. Gene comes to us from the U of Southern Indiana where he most recently served as Associate Dean. Our previous chair, **Terrell Hodge**, is on sabbatical leave at the U of Virginia. • Recent resignations include **Lixen Shen** and **Michael Raines**. **Steve Mackey** has joined the department as Visit. Assist. Prof. Also visiting is **Sanath Boralugoda** from Sri Lanka. • **Nil Mackey** and **John Martino** were promoted to Prof., and **Jeff Strom** was granted tenure and promoted to Assoc. Prof. • Recent Ph.D. graduates include **Shari Stockero** (mathematics education), now at MTU, **Joe Fox** (algebra), now at Salem State C in Massachusetts, and **Henry Escudro**

(graph theory), now at Juniata C in Pennsylvania. **Charlene Beckmann** of GVSU has been selected by the department to receive its Alumni Achievement Award for 2006. [paul.eenigenburg@wmich.edu]

## Section Dues: Individual • Institutional

The 2005–2006 individual and institutional membership dues for the Michigan Section are now being accepted. The \$15 individual dues payment (or \$30 contributing member payment) and the \$40 (small school) or \$70 (large school) institutional dues help support the activities of the Section such as its annual meeting and *Newsletter*. This coupon may be used to submit dues payments.

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# COMMITTEES AND APPOINTMENTS

## Michigan Section

### Mathematical Association of America

#### Contact Information

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<i>Past Chair</i>	John Fink (07)	Kalamazoo C	fink@kzoo.edu	269-337-7062
<i>Governor</i>	Ruth Favro (07)	LTU	favro@ltu.edu	248-204-3531

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<i>Co-Dir.</i>	Kimberly Muller (08)	LSSU	kmuller@lssu.edu	906-635-2170

##### Michigan Mathematics Prize Competition (MMPC)

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<i>Member</i>	Lazaros Kikas (09)	UDM	kikasld@udmercy.edu	313-993-3379
<i>Member</i>	Ada Cheng (10)	Kettering U	aching@kettering.edu	810-762-7914

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<i>Member</i>	Trisha Schlaff	UM-Dearborn	pjschlaf@umd.umich.edu	313-583-6511

##### Michigan Section Newsletter

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