Linda Sons on . . .
Quantitative Literacy. . .

Boris Murdokavich on . . .
Non-smooth Analysis and Applications

Paul Zorn on . . .
The Bieberbach Conjecture . . .

Patti Lamm on . . .
Sharp Features of Inverse Problems

Marty Isaacs on . . .
Dirty Children, Unfaithful Husbands . .

Christian Hirsch on . . .
Reshaping High School Mathematics . .

Chuck VonderEmbse on . . .
The Impact of Technology . . .

John Kenelly on . . .
Ten Years of Calculus Reform . . .

MICHIGAN SECTION ANNUAL MEETING
Siena Heights College, Adrian, Michigan, 10-11 May 1996

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Being the editor of our newsletter this past two years has been a very rewarding experience. However, it has also been very frustrating to get behind schedule at times due to too many other commitments. Help is on the way. Jerry Grossman, Oakland University, has agreed to take over the editorship of the Michigan Section's Newsletter beginning next fall. I will remain on as a co-editor next year. — John Petro

Annual Meeting Highlights Noted

This year's Annual Meeting of the Michigan Section will be held on Friday and Saturday, 10 and 11 May 1996, at Siena Heights College in Adrian, Michigan. There will be a full schedule of addresses, talks, panel discussions, sessions on mathematics and industry, and student activities. Speakers from outside of Michigan include **Linda Sons** of Northern Illinois University, **John Berry** of University of Plymouth, United Kindom, **Paul Zorn** of Saint Olaf College, **John Kenelly** of

Dick Phillips

Clemson University, **Diane Hagglund** of Waterloo Maple, and **Curt Bennet** of Bowling Green State University.

Complete details about the schedule, abstracts, registration, accomodations and locations of sessions are contained in the Program for the Annual Meeting which is included with this Newsletter.

The Program Committee for the Annual Meeting this year consists of **Richard E. Phillips** (Michigan State University), **Barbara A. Jur** (Macomb Community College), and **Timothy Husband** (Siena Heights College).

Nominating Committee Reports

The Section's Nominating Committee will present the following slate of candidates for the elective offices at the Annual Business meeting at Siena Heights College on Friday, 10 May 1996, :

Chair:	**Richard E. Philllips**, Michigan State Univ.
Vice-Chair(4-yr):	**Matthew F. Wyneken**, UM–Flint
Vice-Chair(2-yr):	**James Chesla**, Grand Rapids CC

The term for each of these offices is one year. Section By-Laws allow for additional nominations from the floor at the meeting. The Nominating Committee this year consists of **Marian Barry** (Grand Rapids), chair, **David Steinfurt** (Grand Rapids CC), and **Hugh Montgomery** (University of Michigan–Ann Arbor).

Chair's Report

The Michigan Statewide Systemic Initiative (**MSSI**) is an effort to join together people throughout the state to envision an educational system that advocates mathematics and science achievement for all students. The MAA report *A Call for Change: Recommendations for the Mathematical Preparation of Teachers of Mathematics* has provided guidance for what might be done in college level mathematics classes.

Tom Miles

If I teach a sophomore-level linear algebra course, say, how do changes in K-12 education affect me? In two ways. First, in my class are students who plan to be mathematics teachers. When such students teach, they often model what they see in the courses they have taken. Will they use active learning and technology if they've rarely seen them used? Second, in my class increasingly will be students who have been taught by other than traditional methods. If I teach by traditional methods, how will students respond?

How can you get involved? The Teacher Education Redesign Component of MSSI includes teams from all 15 public universityies in Michigan as well as teams representing consortia of private colleges and community colleges. Talk to them or ask me who they are. At the Michigan Secion Annual Meeting at Siena Heights College there will be a number of sessions dealing with teaching college level mathematics. Listen to what other people have tried and consider whether or not these ideas would work for you. More information on MSSI will be available at the meeting.

On the more mundane level, in the past two years the section's expenses have outstripped its revenues. This leads to consideration of an individual dues increase, an instituional dues increase, a meeting registration fee beyond dues, or some other ways to increase revenue or decrease expenses. No Actionis expected for next year, but he issue is under consideration and suggestions are welcome.

Thomas J. Miles, Chair
Michigan Section, MAA

Governor's Report

A major change in the MAA being instituted this year is the new MAA/Departmental Liaison Program. MAA/Departmental Liaisons at institutions will replace the former MAA Local Representatives. They will be appointed from MAA Headquarters, rather than by the Section Governors, as was done in the past. As the name "liaison" implies, two way communication is expected. Examples of communications which Liaisons will receive are the following:

John Petro

- Announcements of MAA publications, meetings, and programs.

- News on the national scene pertaining to collegiate mathematics.

- Tips on information available through the Internet.

- Requests for feedback on MAA programs and activities.

Examples of things Liaisons will be asked to do are the following:

- Forward to colleagues items received which may interest them.

- Encourage faculty and students to join the MAA, participate in Sectional and national activities, and subscribe to *Math Horizons* and other MAA publications.

- Encourage participation in Putnam and Math Modeling Competitions; and encourage the formation of MAA Student Chapters.

- Suggest names of speakers for Section programs and make nominations for Section offices and Section awards.

- Forward news from departments to Section Newsletter editors.

So far 36 of the 72 colleges and universities in Michigan have designated their local MAA/Departmental Liaisons in response to a request from the national office. Hopefully the remaining institutions will designate their liaisons soon. The result will be a stronger MAA and a stronger Michigan Section!

John W. Petro, Governor
Michigan Section, MAA

Electronic Service Officer's Report

The Michigan section has had a World Wide Web home page for nearly a year now. Its URL is

http://archives.math.utk.edu/~efife/MAA/

Presently, our site has listings of upcoming events of interest to the Section (along with preliminary schedules of events), information on Section officers and Section committees, listings of all post secondary institutions with links to their Web and gopher services, as well as links to several selected Web sites which might be of interest or of use to Section members.

Earl Fife

It is Executive Committee's vision to have the Michigan Section be the leader in the use of technology for dissemination of section news and information. We hope to make our Web site so complete that it will become one of our primary ways of distributing information about the Section. This would include expanded information on departments within the Section in the spirit of what is available from the Professional Services Directory, Section By-Laws, newsletters, and anything of interest to Section members. (Perhaps you even may downloaded this newsletter from the Section web site. Our hope is to have it available on-line even before we got it back from the printers.)

In order to make our "Michigan Section Network" up-to-date and easier for your department to use, we ask each department which has a home page to include a link to the Section's home page. In addition, as you use the these resources, please send suggestions, corrections, and updates to me at fife@calvin.edu. With your help, we can keep our information accurate and current, and we can "distribute" new information in a timely fashion.

Earl D. Fife, Calvin College
Electronic Services Officer
Michigan Section of the MAA

WAM has a Web Page

WAM has now developed an information Web-server with URL

http://www.mystery.com/WAM

Our Michigan region can be found at

http://www.mystery.com/WAM/regions/mi.html

Virginia G. Kasten, <vgkasten@horatio.mystery.com> is serving as Webmaster. She asks that anyone with questions or suggestions should drop her a line. She is especially interested in mathematical careers and women on the Net.

Michigan Students Score High on Putnam

The following students attending colleges in the state where ranked in the top 206 on the 1995 Putnam Exam:

John J. Kruger, Hope College, ranked between 16 and 24.

Igor Vladimirovich Pavlovsky, University of Michigan-AA, ranked between 107 and 204.

Douglas A. VanderGreind, Calvin College, ranked between 107 and 204.

There where several Michigan students studying elsewhere who finished in the top 206:

Amit Khetan, Troy, Michigan–Student at MIT

Vivek Mohta, Northville, Michigan–Student at MIT

Rebecca Swank, Holland, Michigan–Student at Carleton

Wayne State University will host the Michigan Section's 1997 Annual Meeting

Next year's Annual Meeting of the Michigan Section will be held at Wayne State University on Friday and Saturday, 1–4 May 1997. The meeting will be held jointly with the AMS Regional Meeting being held at Wayne State University at the same time.

Nominations For Meritorious Service Award Sought

Every five years each MAA Section nominates an awardee for the Certificate of Meritorious Service. This is a national MAA award recognizing exceptional service to the Section. Past recipients in the Michigan Section are **Yousef Alav**i and **Delia Koo**. We now have the opportunity to recognize a third outstanding individual from the Michigan Section in this way. Our awardee will receive the Certificate of Recognition at the January 1997 Joint Mathematics Meetings in San Diego.

A committee consisting of **Marian Barry** (Chair), **Yousef Alavi**, and **Mevin Nyman**, has been appointed to coordinate the process. Please forward names of your nominations, with rationale, to any of the committee members by 13 May 1996.

> **Marian Barry**
> 1045 Cambridge SE, Grand Rapids, MI 49506
> 73364,215@compuserve.com or barrym@gvsu.edu

Nominations for Distinguished Teaching Award Sought

This is a preliminary announcement that nominations for the sixth (1997) Award for Distinguished College or University Teaching of Mathematics from the Michigan Section of the Mathematical Association of America are are being sought. The Distinguished Teaching Award Committee will choose one of the nominees for the Section Award, to be honored at the Spring 1997 meeting of the Section.

The chair of the 1997 Distinguished Teaching Award Committee will be **Sid Graham**, Michigan Technological University. Other members of the 1997 Committee will be **Jerry Grossman** (Oakland University) and **Arthur T. White** (Western Michigan University). Anyone (other than the candidate him/herself) is entitled to make a nomination. Any college or university teacher assigned at least halftime during the academic year to teaching a mathematical science in a public or private college or university (from two-year college teaching through teaching at the Ph.D. level) is eligible, provided he or she has at least five years teaching experience in a mathematical science and is a member of the MAA. Nominations are due by 15 December 1996. More information will be in the Fall Newsletter.

Tanis and White to be Honored

The selection committees for the Michigan Section's two annual awards have announced the names of the two people to be honored at this year's annual meeting. Professor **Elliot A. Tanis** of Hope College will be this year's recipient of the Michigan Section Distinguished Service Award and Professor **Arthur T. White** of Western Michigan University will be this year's recipient of the Michigan Section's Award for Distinguished College or University Teaching of Mathematics.

These awards will be presented duringthe annual Banquet Program on Friday evening, 10 May 1996, as part of the Michigan Section Annual Meeting on 10 and 11 May 1996 at Siena Heights College in Adrian, Michigan.

Professor **Tanis** has served the Michigan Section as Vice Chair, Chair, Past Chair, and as Governor. In addition, he has helped develop a summer short course at Hope College. His own excellent teaching, research, and breadth of interests have been shared with the Section through his numerous presentations and in his various leadership activities.

Professor **White** has had a distinguished career as a teacher, author, scholar and lecturer. He has received both the Alumni Teaching Excellence Award and the Distinguished Faculty Scholar Award from his home institution, Western Michigan University. In 1990 he received the Michigan Teaching Excellence Award. He has been the dissertation advisor for nine doctoral students at Western Michigan University. Currently he is an MAA Visiting Leturer. He has writen compositions for the change ringing of English Tower Bells and he frequently teaches a Great Books course in the English Department.

Professor **White** will also be the official Michigan Section candidate for theMAA Deborah and Franklin Tepper Haimo Awards for Distinguished College or University Teaching of Mathematics. There will be at most three national awardees, each of whom will be honored at the January 1997 MAAMeeting in San Diego and receive a $1,000 check and a certificate.

Secretary / Treasurer's Report

The Michigan Section is alive and well. Our current balance is $8,580. We have 235 members, 71 of whom are sustaining members, and 30 instituional members. The number of institutional member is the larger this year than it has ever been in the past. Of these 30 institutional members, 14 are public universities, 11 are private four year colleges, and 5 are two year colleges. The Executive Committee would like to thank the many mathematicians and institutions who have supported the Section by becoming members.

Bette Warren

Bette Warren, Secretary-Treasurer
Michigan Section, MAA

1995-96 Institutional Members

As of 22 March 1996, the 30 colleges and universities listed below have renewed their institutional memberships in the Michigan Section for 1995-96. Additions will be announced at the Annual Meeting at Siena Heights College on 10 and 11 May 1996.

Adrian College	Michigan State University
Albion College	Michigan Tech University
Alma College	Mid Michigan Community Col
Andrews University	Muskegon Community College
Calvin College	Northern Michigan University
Central Michigan University	Northwood University
Eastern Michigan University	Oakland Community College
Ferris State University	Oakland University
GMI Eng. & Manag. Inst.	Schoolcraft College
Hillsdale College	St. Mary's College
Hope College	University of Michigan-Ann Arbor
Kalamazoo College	University of Michigan-Dearborn
Lake Superior State University	University of Michigan-Flint
Lansing Community College	Wayne State University
Marygrove College	Western Michigan University

Contributing Members Listed

The Michigan Section dues structure includes a sustaining individual member category for those who make a $15 contribution beyond the basic dues rate of $10. For 1995-96, as of 22 March 1996, 71 members of the Section are sustaining members. Additions will be announced at the Annual Meeting at Siena Heights College on 10 and 11 May 1996.

Gisela Ahlbrandt
Yousef Alavi
Steven Althoen
James Angelos
Sheldon Axler
Alphonse Baartmans
William W, Babcock
Rodney Barber
Robert G. Bartle
Irene Besancon
Joseph T. Buckley
Gerry Cox
Jackie Crow
Arthur J. Daniel
Peter L. Duren
Paul Eenigenburg
George Feeman
J. Sutherland Frame
Dan Frohardt
Chris Gardiner
Anthony Gioia
Jonathan I. Hall
Eric E. Hartley
Pierre V. Heftler

Margret Hoft
Larry Hopkins
Edward Ingraham
Phillip S. Jones
Wilfred Kaplan
Virginia G. Kasten
Robert Krasny
Lawrence D. Kugler
W. David Laverell
Gerald Leckrone
William A. Lewis
Margaret Marchand
C. A.. McGibbon
Renate McLaughlin
Thomas Miles
Peter M. Moloney
Warren K. Moore
Ronald G. Mosier
Robert Myers
Douglas W. Nance
Cicil Nesbit
George M. Nielson
Togo Nishiura
Karl E. Nock

Melvin Nyman
Jingyal Pak
Allen Perkins
John W. Petro
George Piranian
Jacob Plotkin
Katherine E. Price
Maxwell O. Reade
Bruce Sagan
Frank Sherburne
Harold T. Slaby
Philip Stich
Clarence B. Stortz
Ken Sullins
Elliot Tanis
Thyra Throop
Richard J. Vance
Gerard Venema
Silvia H. Verdonk
Bette Warren
Deborah E. Welsh
Walter E. White
Paul W. Wilson

Glenda Lappan Receives AWM Award

Professor **Glenda T. Lappan**, Michigan State University, was one of two recipirients of the Association for Women in Mathematics Louise Hay Awards for Contributions to Mathematics Education at the January 1996 Mathematics Meetings in Orlando. Professor Lappan was recognized for her long-standing and varied contributions that touched the individual and collective lives of numerous mathematicians, mathematics teacher educators, students, teachers, and children.

From the Origin: A Section for Opinion

My coordinates in the universe? ... The origin, of course!

From the Origin provides a forum for lively discussion of issues of importance to the mathematical community. The Michigan Section–MAA Newsletter solicits opinion pieces for publication in this column from anyone in the Michigan's mathematical community. In addition, comments on pieces published in earlier issues are welcomed.

Items for *From the Origin* should be submitted to the editor by 1 October for consideration for inclusion in the December issue and by 1 February for the April issue. Main opinion pieces should be at most 1800 words long, and responses at most 400. The editors reserve the right to shorten responses, if necessary, in order to fit as many as possible within the available space.

A very heated debate is going on in California concerning the advantages and disadvantages of the reform movement in mathematics, particularly at the precollegiate levels. Although the situation is not exactly the same in Michigan as it is in California, the questions and concerns raised there deserve to be considered here. The philosophical underpinnings for the reform movement is called constructivism. In the following guest editorial, Wayne Bishop, Professor of Mathematics, California State University at Los Angeles, presents his concern for the lack of data-supported research behind this reform movement. Professor Bishop received his Ph.D. at Western Michigan University in 1971. Presently he is serving on the Mathematics Advisory Panel to the California Commission on Teacher Credentialing. Recently he presented an expansion of these remarks in Sacramento to the Assembly Education Committee Hearing on Constructivism in Mathematics Education. —the Editors

MATHEMATICS EDUCATION IN THE EIGHTIES AND NINETIES

There has been a major reform movement underway in precollegiate mathematics education represented nationally by the Curriculum and Evaluation Standards for School Mathematics of the National Council of Teachers of Mathematics that came out in 1989. The California equivalents are the 1985 and 1992 editions of the Mathematics Framework of the state department of education. An alphabet soup of curricula is now being used that have been designed to meet the goals of these documents and the philosophy, called constructivism, that generated them. The mathematics educational leadership of California and the nation

are in almost unanimous support of the method and materials which claim concurrence, e.g., lengthy investigation of realistic problems by groups of students working together with a minimum of direct instruction and with calculator assistance at all times. Reduction or elimination of problems that admit algorithmic solution approaches is another aspect of the philosophy. Elimination of traditional testing is also recommended along with elimination of the usual efforts to group students according to mathematical experience and ability. The argument is that the single dimensionality of testing versus the multiple intelligence factors of students of mathematics should not be allowed to exclude some students from the benefits that completion of a college preparatory mathematics program would offer.

There is a down-side to this. The little testing data that has been released has been either badly flawed in its interpretation or is quite discouraging. California's falling NAEP scores correlate with increased implementation of the methods while in the past decade enough states have implemented aspects of a competing "back-to-basics" philosophy to have successfully reversed the national trend downward. Many private schools here in Southern California follow curricula and teaching strategies that are in direct conflict with the constructivist philosophy and have standardized test results and college admission numbers that support their choice.

My contribution has been to follow publicly released claims of objectively measured success of implementations of constructivist programs to their source. Misinterpretation or misrepresentation of the data has been the outcome of each and every pursuit in which the researchers were willing to respond to my request for supporting information. Some have been worthy of open derision; either the researchers were incompetent or they were lying. The most common response to requests for information about an educational experiment (i.e., the testing instruments used, the presence of control groups, the size of the population being studied, etc.) is

My coordinates in the universe? ... The origin, of course!

From the Origin: A Section for Opinion

no response at all. School districts that are considering curricular adoptions and colleges and universities that are training teachers of mathematics should be aware of the nature of the supporting data-based research and not simply the tons of biased literature.

Wayne Bishop, Professor of Mathematics
California State University, Los Angeles
E-mail: wbishop@calstatela.edu

NMU to Host Lake Superior Regional Meeting

Northern Michigan University will host the Lake Superior Regional Meeting, starting at 3:00 P.M. on Friday, 4 October 1996 and ending at 12:00 noon on Saturday, 5 October 1996. This meeting is sponsored jointly by the Michigan Section of the MAA and by Northern Michigan University. There will be a registration fee of $10. No fee for students. Local arrangements committee members are **Hal Martin** (hmartin@nmu.edu) and **Roxin Zhang** (rzhang@nmu.edu). Persons wishing to contribute twenty minute talks may contact a member of the local arrangements committee. All sessions of the meeting will be held in the West Science Building, Conference Room 239. Parking is available in Lot L on the Circle Drive opposite West Science. A more complete announcement will be forthcoming.

Ohio Section 1996 Summer Short Course

The MAA Ohio Section will hold its summer short course in Actuarial Mathematics 3-5 June 1996, on the campus of Marshall University in Huntington, West Virginia. The course will be conducted by Professor **Matthew Carlton**. Topics will include an overview of the actuarial profession and the actuarial exams, employment prospects for new graduates, advancement opportunities, suggested courses for student advising, actuarial problems to apply in traditional mathematics courses, actuarial topics for seminars, the theory of interest, numerical analysis topics and mortality tables. For more information contact **David Cusick** at Department of Mathematics, Marshall University, Huntington, West Virginia 25755. Telephone 304-696-3038. e-mail <cusick@munxt01.mu.wvnet.edu>.

39th MMPC Gives 106 Awards

A total of 106 Michigan high school students were honored for their achievements on the 39th Annual Michigan Mathematics Prize Competition at the Awards Day program held on 2 March 1996 at Grand Valley State University in Allendale. **Steve Schlicker**, Grand Valley State University, has served this year as Director of the MMPC.

David Field of General Motors Research presented a stimulating talk entitled *Manufacturing, Robotics and Computationjal Geometry* to the Award winners and their families and high school mathematics teachers. **Ed Aboufadel**, GVSU, organized a scavenger hunt for teams of students..

While the students were on the scavenger hunt the Executive Committee met with the parents and the teachers for a lively discussion concerning the use of calculators on the MMPC and on other questions of interest,

This year's top winners were Gold Award recipients, **Bryant Mathews** (Forest Hills Northern High School), **Christopher Kurtz** (H H Dow High School), and **Jordan A. Weitz** (H H Dow High School). Silver, 1st Level winners were **David Houston** (Henry Ford II High School), and **Chandan G. Reddy** (Detroit Country Day); Silver 2nd Level awards went to **Jonathan Chaffer** (Mt. Pleasant High SchooI), **Nicholas S. Jacobson** (Detroit Country Day), and **Christopher Peikert** (Kalamazoo Math and Science Center/Loy Norrix); Silver 3rd Level winners were **Kevin M. Franklin** (Brighton High School), **Aram Harrow** (East Lansing High School), **David A. Sivak** (Greenhills School), **Jeremiah Willcock** (Marquette High School), and **Jonathan Salz** (Seaholm High School).

MMPC Top 106 Stats

- Top Gold winner Bryant Mathews is a Sophomore.
- Next two Gold winners are 12th graders.
- Silvers winners: 7-12th graders and 3-11th graders.
- Bronze winners: 26-12th, 11-11th, 3-10th, and 1-9th.
- Honorable mentions: 32-12th, 10-11th, and 9-10th.
- Sixteen females among top 106 (4 bronze and 12 hon men)
- The 54 gold, silver, and bronze awards totalled $32,750.
- Highest score was 97.
- Cutoff score for scholarship (Bronze,Silver, & Gold): 58.6
- Cutoff score for Honorable Mention or higher: 51.0
- Minimum score of 19 on Part I required to qualify for Part II.
- 977 students from 203 schools qualified for Part II.

High School Students Selected for USAMO

The following four Michigan high school students were selected to participate in the six question, 6 hour USA Mathematical Olympiad (USAMO) which will be held on 2 May 1996.

Bryant Mathews, Forest Hills Northern HS, Grand Rapids, MI

Christopher Kurtz, H H Dow HS, Midland, MI

Jordan Weitz, H H Dow HS, Midland, MI

Christopher Peikert, Kalamazoo Area Mathematics and Science Center, Kalamazoo, MI

Selection was based on their performance on the American High School Mathematics Examination and American Invitational Mathematics Examination. The top 6 students on the USAMO will constitute the USA International Mathematical Olympiad (IMO) team. The IMO will be held in Mumbai (Bombay) India, 9-10 July. The top 8 USAMO students and their parents will be honored (2-3 June) in Washington at elaborate ceremonies planned by Dr. **Sward**, Executive Director of the Mathematical Association of America.

Dr. **Walter E. Mientka**, Executive Director
American Mathematics Competitions
1740 Vine Street
University of Nebraska
Lincoln, NE 68588-0658 U.S.A.

FAX: 402-472-6087
Tel: 800-527-3690, 402-472-5114
eMail: walter@amc.unl.edu
Bitnet: walter@unlamc
World Wide Web Page: http://www.unl.edu/amc/

Karen Novotny to be MMPC Director

Karen Novotny, Grand Valley State University, will be the Director of the MMPC for the 1996-97 year, replacing **Steve Schlicker**, who has received a sabbatical leave for the year.

MMPC Awards Day at Grand Valle

Gold and Silver Award Winners
Back row: David Houston, Kevin Franklin,
           Chandan Reddy (hidden from view),
           Christopher Peikert, Nicholas Jacobson,
           Jonathan Chafer
Front row: Bryant Mathews, Jordan Weitz, Christpher Kurz,
           Jonathan Salz

Tom Miles congratulates top
Gold Winner Bryant Mathews

Chandan Reddy tells
about ARML Team

Steve Schlicker
MMPC Director
1994–1996

Karen Novotny
MMPC Director
1996–1997

David Field
General Motors Research
Award's Day Speaker

Yuri Ionin, Chair of the
Exam Committee,
on Grading Day

MMPC Part II Problems

[The five problems below make up this year's Michigan Mathematics Prize Competition, the 39th MMPC.]

1. (a) Brian has a big job to do that will take him two hours to complete. He has six friends who can help him. They all work at the same rate, somewhat slower than Brian. All seven working together can finish the job in 45 minutes. How long will it take to do the job if Brian worked with only three of his friends?

(b) Brian could do his next job in N hours, working alone. This time he has an unlimited list of friends who can help him, but as he moves down the list, each friend works more slowly than those above on the list. The first friend would take kN $(k > 1)$ hours to do the job alone, the second friend would take k^2N hours alone, the third friend would take k^3N hours alone, etc. Theoretically, if Brian could get all his infinite number of friends to help him, how long would it take to complete the job?

2. (a) The centers of two circles of radius 1 are two opposite vertices of a square of side 1. Find the area of the intersection of the two circles.

(b) The centers of two circles of radius 1 are two consecutive vertices of a square of side 1. Find the area of the intersection of the two circles.

(c) The centers of four circles of radius 1 are the vertices of a square of side 1. Find the area of the intersection of the four circles.

3. For any real number x, $[x]$ denotes the greatest integer that does not exceed x. For example, $[7.3] = 7$, $[10/3] = 3$, $[5] = 5$. Given the natural number N, denote as $f(N)$ the following sum of N integers:

$$f(N) = [N/1] + [N/2] + [N/3] + \ . \ . \ . \ + [N/N] .$$

(a) Evaluate $f(7) - f(6)$.

(b) Evaluate $f(35) - f(34)$.

(c) Evaluate (with explanation) $f(1996) - f(1995)$.

4. We will say that triangle ABC is good if it satisfies the following conditions: $AB = 7$, the other two sides are integers, and $\cos A = 2/7$.

(a) Find the sides of a good isosceles triangle.

(b) Find the sides of a good scalene (i.e., non-isosceles) triangle.

(c) Find the sides of a good scalene triangle other than the one you found in (b) and prove that any good triangle is congruent to one of the three triangles you have found.

5. (a) A bag contains nine balls, some of which are white, the others are black. Two balls are drawn at random form the bag, without replacement. It is found that the probability that the two balls are of the same color is the same as the probability that they are of different colors. How many balls were of one color and how many of the other color?

(b) A bag contains *N* balls, some of which are white, the others are black. Two balls are drawn at random form the bag, without replacement. It is found that the probability that the two balls are of the same color is the same as the probability that they are of different colors. It is also found that $180 < N < 220$. Find the exact value of *N* and determine how many of the *N* balls were of one color and how many of the other color.

It sure must be nice to have an infinite number of friends!

[This year's MMPC Part II produced the usual collection of humorous remarks which the graders dutifully recorded. Here is a selection from among them.]

Problem 1

"I can't show this exactly—What happens is that even though they work slightly slower, if you set k to equal to as close to l as possible, then when n is multiplied by k any number of times it will be relatively unaffected. Then the number of people helping Brian will be infinitely close to as fast as Brian, and so when you get an infinite number of them, you divide work time by them and it is x over infinity which is effectively equal to 0.."

"therietically, if Brian have infinit # of friend to help, he would complete the job in no time, which mean 0 hr."

"It sure must be nice to have an infinite number of friends."

Problem 2

"(a) This problem is simple (...correct answers)
 (b) This should prove to be really fun (also correct)
 (c) This is really fun-in fact, it's so fun that I'm out of time for this test."

"I always knew knowing the $\sqrt{2}$ to 7 decimal places would come in handy."

"I know what they're asking; I don't know how to solve it."

"I couldn't calculate the integral since we have no calculator"

"The area of the intersection is the area of the square minus the area where they do not intersect."

"This is inaccesible to my puny human mind."

"This problem is astoundingly interesting."

Problem 3

(c) "Explanation: I'm guessing   P.S. The guess was 2 (for (a) and (b) also)"

Problem 4

"By the way-what is 'good'? Who defines 'good'? Good is a judgement, which should be left to God. Are you saying you are God? I, therefore, refuse to finish answering this question on religious grounds."

Problem 5

"After 3 pages of work: Y'know, I give up. What the blacks and whites do in the bag is their business, and I'm not gonna play God and segregate them."

News from the Campuses

Alma College

Myles McNally (Computer Science) has received tenure. **John Putz** is on sabbatical in Hull, England, from January to August 1996. Professor **John Berry** of the University of Plymouth (United Kingdom) will be visiting Alma College during the Spring term (29 April to 22 May, approximate). Dr. Berry is Professor of mathematics education and director of the Centre for Teaching Mathematics at the University of Plymouth. He is editor-in-chief of the International Derive Journal. • **Sarah Hession**, a statistician with EARTH TECH, gave a presentation entitled "Statistics and the Environment." • **Robert Molina**, with the assistance of others in the department, is organizing the MIGHTY meeting to be held at Alma on 26 October 96. • Four Alma College juniors have been offered computing internships at Ford Motor Company (Dearborn) for summer 96.

Cornerstone College

Jerry L. Rabbitt is the new Associate Professor of Mathematics Education, coming from the Math/Science Learning Center at Lake Superior State University. Associate Professor **Peter R. Atwood** has completed courses and prelim exams towards the Ph.D. in Mathematics (Concentration in College Teaching) at Western Michigan University.

Eastern Michigan University

Richard "Dr. M." Marshall died of cancer on 29 January 1996. Dr. M joined the Eastern Faculty in 1968. **Larry Badii** will be retiring at the end of the winter semester after 31 years of service to Eastern. • The Department hosted the EMU Mathematics Education Conference on 16 March 1996. • **Peter Hilton** of SUNY Binghamton and University of Central Florida and **Jean Pedersen** of Santa Clara Univesity visited EMU while on tour in Michigan. Other recent speakers include **Gian Mario Besana** of the University of Wisconsin-Eau Claire, **Laura Brinker** of the University of Wisconsin-Madison, **Tim Comar** of the University of Michigan, **Libin Mou** of Bradley University, **Sharon Walen** of Montana State University, and **Judy Werner** of West Virginia.

Hope College

Ron VanIwaarden and **Todd Swanson** were hired as visiting asistant professors for the 1995-96 academic year. **Ron VanIwaarden** will receive his Ph.D. from the University of Colorado at Denver in May 1996. **Mary DeYoung** has published "Patterns and Functions with Manipulatives (Grades 7 & 8)", which is a part of a series on different mathematics topics for various grade levels. • Hope College will be an official REU site suring June and July for the fifth straight summer. Professor John Meier of Lafayette Colleg will present a series of lectures on "Curvature, Rigidity, and Piecewise Euclidean Geometry." • Coming off 1994's 35th place finish in the Putnam Exam, Hope College had 14 students participate in the 1995 competition. • **Peter Hilton** (SUNY-Binghamton and University of Central Florida) and **Jean Pedersen** (Santa Clara University) were visiting lectures in February. They spoke on "Fibonacci and Lucas Indices."

Lake Superior State University

Lake Superior State University hosted a High School Conference on Mathematics and Engineering Technology on Monday, 15 April. Included among the activities were: a series of half-hour presentations from students, faculty and alumni concerning applications of mathematics, engineering technology and computer science; demonstrations; and a double-elimination math bowl competition. Two to three hundred high school students participated.

Schoolcraft College

Janina Udrys is the President ot MichMATYC for 1995-96. **Rodman E. Doll** has written two books of programs for the TI-81 Graphing Calculator and three books for the TI-85 Graphing Calculator. Included are programs to solve differential equations. Two new mathematics awards have become available to outstanding students at Schoolcraft College and at nearby colleges.

Siena Heights College

The mathematics department at Siena Heights College has a new degree program in actuarial mathematics. **Kevin Burke** has received a grant (second year of project) to develope a course in Mathematics with Mathematics in cooperation with **Helmut Hoft** (Eastern Michigan University) and **Margaret Hoft** (University of Michigan-

Dearborn). **Tim Husband** is serving as President of the MCTM this year. Tim is also sponsoring a series of workshops on using the TI calculators in mathematics education. The series is intended to involve high school teachers and students as well as other college students in the innovations in teaching of mathematics at Siena Heights. • The LCMST (Lenawee County Mathematics and Science Teachers) will held its Math/Science Olympiad at SHC on 16 March. The The Annual Meeting of the Michigan Section–MAA will be held at SHC on 10 and 11 May. • Students and faculty will be attended the Rose Hulman Student Mathematics Conference on 15–16 March. **Darlene Lizzyness** and **Marianne Herman** gave talks on the research they are doing in the junior/senior seminar.

Spring Arbor College

Professor Emeritus **Edgar Westrum** (University of Michigan-AA) presented a talk on his work in the 1940's on the atomic bomb.

University of Michigan–Ann Arbor

The big news is that the Department is moving from scattered locations into the old East Engineering Building. The building has been remodeled, renamed "East Hall," and we shall be sharing it with the Psychology Department. Come visit us in the Psycho-Math building on East University, just North of Ulrich's. • New faculty are as follows: Asst Prof. **John N. Aarsvold** (applied analysis), T. H. Hildebrandt Research Asst. Prof. **Jeremy D. Avigad** (Proof Theory, Logic), Asst. Prof. **Michael Bennett** (Number Theory, Diophantine Approximation), Asst. Prof. **Timothy Chow** (Combinatorics), Asst. Professor **Michael Gekhtman**, Asst. Prof. **Rita Gitik** (Topology), Asst. Prof. **Mark Gockenbach** (Applied Math), T. H. Hildebrandt Research Asst. Prof. **Timothy Hsu** (Group Theory), Asst. Prof. **Lizhen Ji** (Geometry, Analysis), Visiting Assoc. Prof. **David Kraines**, Visiting Assoc. Prof. **Norman Levenberg** (Several Complex Variables), Visiting Prof. **Jean-Louis Loday**, Asst. Prof. **Guillaume Sanje Mpacko** (Representation Theory), Asst. Prof. **Nikolai Saveliev** (Geometry), Asst. Prof. **Lan Wang** (Number Theory), Asst. Prof. **Caryn Werner** (Algebraic Geometry), and Visiting Asst. Prof. **He Wu** (Complex Dynamical Systems)

University of Michigan–Flint
Krista Hansen is currently on sabbatical leave. In his Fall 1996 sabbatical leave **Ricardo Alfaro** plans to visit Hokkaido University and Okayama University to work with Professors Sugano and Ikehata. He also plans to spend a month at Universidad del Comahue in Neuquen, Argentina, doing research in error-correcting codes. • Four new high schools were among the 34 participants at the twenty-ninth annual Math Field Day. Winners in the Large, Medium, and Small school categories were respectively Detroit Country Day, Detroit Catholic Central, and Lake Fenton. **Richard Gibbs** of Ft. Lewis College, CO and Chair of the Committee on the American Mathematics Competitions was present as an observer. • The department sponsored Family Math Night for first through fourth graders was held on 16 April.

Wayne State University
Lowell Hansen has been promoted to Professor. Visitors for the 1995-96 academic year are **Leon Hanin**, **Nikolai Moschuk**, and **Daoqi Yin**. **Daoqi Yin** will assume the position of Assistant Professor in Fall 1996. **Rafail Khasminskii** and **Boris Mordukhovich** were on sabbatical leave during Fall 1995. **Gregory Bachelis**, **Robert Bruner**, and **Lowell Hansen** are on sabbatical leave during Winter 1996. **Lisa Langsetmo** and **Leonid Makar-Limanov** are on leave of absence during 1995-96. **Paul Catlin** died on 20 April 1995 and **Judith Longyear** died on 13 December 1995. • **Efim Zelmanov**, Yale University, presented the Owens Memorial Lecture in March 1996. Visiting speakers during Fall 1995 were **Kenneth Davidson** from University of Waterloo, **Ron Fintushe**, from Michigan State University, **Robert Liptser** from Tel Aviv University, **Joel Smolle** from University of Michigan, **Ron Solomon** from Ohio State University, **Steve Hurder** from University of Illinois at Chicago, **Nigel Higson** from Penn. State University, **Ken Kuttler** from Michigan Technological University, **Arkadii Kryazhimski** from Intl. Inst. Appl. Systems Analysis (Austria), and **Faina Kirillova** and **Rafaeil Gabasov** from Academy of Sciences, Belarus. Visiting speakers during Winter 1996 are **Tom Hales** from University of Michigan, **Yuri Brudnyi** from Technion and Princeton, **Mark Agranovski** from Bar Ilan and Tufts, **Vitaly Bergelsen** from Ohio State Univer-

sity, **Xiaochun Rong** from University of Chicago, **Haynes Miller** from Massachusetts Institute of Technology, **Robert Guralnick** from University of Southern California, **Sylvain Cappell** from Courant Institute, NYU, and **Qing Zhang** from University of Georgia. • Wayne State University will host both the annual meeting for the Michigan Section of the MAA and a Central Regional meeting of the AMS on 2–4 May 1997.

Washtenaw Community College
Percy Mealing, chair of the Mathematics Department since it was formed, retired this past summer. He is missed by his many colleagues and friends. **James C. Egan** has been appointe as chair. **Ralph Bottorff** is on sick leave.

Western Michigan University
Antony Gioia will retire in June after 30 years in the department. **Jung Chao Wang** has received a sabbatical leave for the 1996-67 academic year. • Recent colloquium speakers include **Robert R. Bruner** (Wayne State University), **Theresa Grant** (University of Delaware), **Navah Langmeyer** (University of Michigan-AA), **Kathryn F. Lesh** (University of Toledo), **Tony Rickard** (Alma College), **Jon D. Vanderwerff** (Walla Walla College), **Kristina Vuskovic** (University of Waterloo), **Jack Warga** (Northeastern University), **Todd R. Young** (Northwestern University), and **Ping Zhang** (University of Texas at El Paso). • The Department will host the **Eighth International Conference on Graph Theory, Combinatorics, and Applications** on 3-7 June 1996, **The Midwest Topology Conference** on Saturday, 12 October 1996, and **The Fourth Great Lakes Symposium on Statistics (Experimental Design: Medical and Industrial)** on 23-25 October 1996.

Student Chapter News
Alma College
1996 Officers of the Mathematical Society of Alma College:

President:	**Dan Wilson**
Vice-President:	**Jason Bandlow**
Secretary:	**Carrie Milne**

Student Chapter News, continued

Olivet College

The student organization at Olivet College is known as Mu Chi Sigma and encompasses both mathematics and computer science. **J. Donald Nelson** and **Ben Pinkowski** (Western Michigan University) were recent speakers. Current officers are;

President:	**Bijendra Basnyat**
Vice-President:	**Marilis Soik**
Secretary:	**Gil Flores**
Treasurer:	**Debra Wilson**

University of Michigan–Flint

The UM-Flint Student Union for Mathematics (S.U.M.) held a math career conference entitled "Mathematics and the Working World: Life After College," on Saturday, 16 March. Presenters included: **John Martino** and **Paul Eenigenburg** (Western Michigan University), **Tom Miles** (Central Michigan University), and former UM-Flint students **Joe Dorris** (Vector Research), **Lavon Compton** (EDS), **Karen Anway** (Wyatt Co.), and **Robert Bourdeau** (CIESIN).

Western Michigan University

The Pi Mu Epsilon Chapter and the Kalamazoo Area Student Chapter of the MAA hold meetings jointly. Principal speakers for the Winter Semester were **Peter Hilton** from SUNY at Binghamton and University of Central Florida, **Jean Pedersen** from Santa Clara University, **John R. Martino** from Western Michigan University, **Michelle Schultz**, a doctoral student at Western Michigan University, **David C. Murphy**, a senior mathematics student at Western Michigan University, **Donald W. VanderJagt** from Grand Valley State University, and **Leonard A. VanWyk** from Hope College, The newly elected 1996-97 officers for the Pi Mu Epsilon Chapter are

President:	**Lars C. Helenius**
Vice-President:	**Kathryn V. Iciek**
Secretary:	**Heather Muszall**
Treasurer	**Jonathan M. Woodard**
Grad Student Representative:	**Dawn M. Jones**

Technology Short Courses Announced

Grand Rapids Community College, in cooporation with MichMATYC, will host on 15-19 July 1996 a **TI-92 Calculator Short Course** organized by **Bert Waits** and **Frank Demana** from Ohio State University. Texas Instruments offers reduced prices for course particpants on calculators. For information contact **Jim Chesla**, Grand Rapids CC, 143 Bostwick, Grand Rapids, MI 49503. Phone 616-771-4273. Email <jchesla@post.grcc.cc.mi.us>.

Central Michigan University will host on 16-21 June 1996 a **Teaching Mathematics with Technology Short Course** for high school, college, and university faculty. The short course is designed to make effective classroom use of graphics caluclators in algebra and trigonometry classes. For informations contact **Denny St. John**, TMTI-Short Course, 214 Pearce hall, Central Michigan University, Mt. Pleasant, MI 48859. Phone 517-774-2554. Fax 517-774-2554. Email: TMTI@cmich.edu.

Section Dues: Individual • Institutional

The 1995-96 individual and institutional membership dues for the Michigan Section are now being accepted. The $10.00 individual dues payment (or $25 contributing member payment) and the $30 (small school) or $50 (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. If you do not recall if you have paid your dues for 1995-96, you may also use this form to ask the Secretary–Treasurer about your dues status.

Enclosed is a check for: Regular Dues @ $10 ❑
Contributing Membership @ $25 ❑
Small Institutional Dues @ $30 ❑
Large Institutional Dues @ $50 ❑

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Make checks payable to the Michigan Section–MAA, and mail them to: **BetteL. Warren, Secretary-Treasurer, Michigan Section—MAA, Department of Mathematics, Eastern Michigan University, Ypsilanti, MI 48197**

Positions Available

Alma College invites applications for an anticipated one year (1996-97) visiting faculty appointment in Mathematics. Responsibilities include teaching undergraduate mathematics and/or statistics courses. Teaching experience required; Ph.D. preferred (A.B.D. acceptable). Applications should include curriculum vitae, statement of interests, and three letters of reference, at least one of which must speak to the candidate's teaching ability. Send applications or enquiries to Melvin A. Nyman, Chair of Mathematics & Computer Science, Alma College, Alma, MI 48801. Alma College's non-discrimination policy includes age, color, creed, national origin, physical ability, race, religion and sexual orientation.

Hope College anticipates having one (perhaps two) tenure track positions for Fall 1997.

Siena Heights College invites applications for a continuing position of Assistant Professor of Mathematics, to begin Fall, 1996. The successful candidate will be a creative and energetic mathematician, proficient in teaching undergraduate mathematics, especially upper level courses in analysis. Please send a letter of application, resume, philosophy of education, and references to:

> Dr. Tim Husband
> Mathematics Search Committee
> Siena Heights College
> 1247 East Siena Heights Drive
> Adrian, MI 49221

University of Detroit Mercy is currently seeking Teaching Assistants for the Department of Mathematics and Computer Science. Applicants must be admitted to one of the following graduate degree programs: Master of Arts in Mathematics, Master of Science in Computer Science, Master of Arts in the Teaching of Mathematics. For more information, please contact

> Dr. R. Michael Canjar
> Department of Mathematics and Computer Science
> University of Detroit Mercy
> PO Box 19900
> Detroit Michigan 48219-0900

COMMITTEES AND APPOINTMENTS
Michigan Section—MAA

Executive Committee

Chair	Thomas J. Miles (96)	Central Mich U	t.miles@cmich.edu	517-774-6518
Vice-Chair	Richard E. Phillips	Michigan State U	rphillips@math.msu.edu	517-353-4689
Vice-Chair	Barbara A. Jur (96)	Macomb C C	jur@macomb.cc.mi.us	810-445-7105
Sec/Treas	Bette L. Warren (97)	Eastern Mich U	mth_warren@online.emich.edu	313-487-1444
Past Chair	Marian Barry (96)		barrym@gvsu.edu	
		1045 Cambridge SE, Grand Rapids, MI 49506		616-245-4753
Governor	John W. Petro (98)	Western Mich U	john.petro@wmich.edu	616-387-4551

High School Visiting Lecture Program (HSVLP)

Director	Garry L. Johns	Sag Valley St U	glj@tardis.svsu.edu	517-790-5688

Michigan Mathematics Prize Competition (MMPC)

Director	Steven J. Schlicker (96)	Grnd Valley St U	schlicks@gvsu.edu	616-895-2062
Exam Committee				
Chair	Yuri Ionin (96)	Central Mich U	3aztpfs@cmuvm.csv.cmich.edu	517-774-5577
Member	Christopher E. Hee (97)	Eastern Mich U	mth_hee@emuvax.emich.edu	313-487-1294
Member	Michael J. Merscher (98)	Lawrence Tech U	merscher@ltu.bitnet	810-356-0200
Member	Allan Struthers (99)	Mich Tech U	struther@math.mtu.edu	906-487-2068

Ad Hoc Committee to Study Calculator Usage at MMPC Exam

Chair	Paul J. Eenigenburg	Western Mich U	paul.eenigenburg@wmich.edu	616-387-4522
Member	Yuri Ionin	Central Mich U	3aztpfs@cmuvm.csv.cmich.edu	517-774-5577
Member	Kenneth Schilling	U of Mich-Flint	schilling_k@msb.flint.umich.edu	810-762-3314
Member	Melvin Billik	Dow High School	melvin.billik@woverine.com	517-839-2482
Member	Ruth G. Favro	Lawrence Tech U	favro@ltu.bitnet	810-204-3531
Member	Robert A. Messer	Albion College	ram@albion.edu	517-629-1000
Member	Marcia L. Weinhold		mweinhold@kamsc.k12.mi.us	
		Kalamazoo Area Math-Sci Ctr		616-337-0004
Member	John B. Fink	Kalamazoo C	fink@hobbes.kzoo.edu	616-337-7067

Program Committee: 1996 Annual Meeting

Chair	Richard E. Phillips	Michigan State U	rphillips@math.msu.edu	517-353-4689
Member	Barbara A. Jur (95)	Macomb C C	jur@macomb.cc.mi.us	810-445-7105
Member	Tim Husband	Siena Hts C	thusband@alpha.sienahts.edu	517-263-0731

Local Arrangements Committee: 1996 Annual Meeting

Chair	Gail Johnson	Siena Hts C	gjohnson@alpha.sienahts.edu	517-263-0731
Member	Tim Husband	Siena Hts C	thusband@alpha.sienahts.edu	517-263-0731
Member	Toni Carroll	Siena Hts C	tcarroll@emunix.emich.edu	517-263-0731
Member	Lana H. Taylor	Siena Hts C		517-263-0731
Member	Kevin S. Burke	Siena Hts C	kevin@alpha.sienahts.edu	517-263-0731

Michigan Section Newsletter

Editor	John W. Petro (97)	Western Mich U	john.petro@wmich.edu	616-387-4551
Editor	Allen J. Schwenk (97)	Western Mich U	allen.schwenk@wmich.edu	616-387-4532
Ad Manager	Cynthia T. Bosio (95)	Adrian College	cbosio@adrian.edu	517-265-5161

Distinguished Service Award Committee

Chair	Richard J. Fleming (96)	Central Mich U	r.fleming@cmuvm.csv.cmich.edu	517-774-3596
Member	Marian Barry (97)		barrym@gvsu.edu	
		1045 Cambridge SE, Grand Rapids, MI 49506		616-245-4753
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Distinguished Teaching Award Committee

Chair	Jerrold W. Grossman (97)	Oakland U	grossman@vela.acs.oakland.edu	810-370-3443
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Member	Sidney Graham (98)	NSF (& MTU)	swgraham@nsf.gov	703-306-1876

Nominating Committee

Chair	Marian Barry (96)		barrym@gvsu.edu	
		1045 Cambridge SE, Grand Rapids, MI 49506		616-245-4753
Member	David Steinfort	Grand Rapids CC	dsteinfo@post.grcc.cc.mi.us	616-771-4275
Member	Hugh L. Montgomery	U of Mich–AA	hlm@math.lsa.umich.edu	313-763-3269

MAA Meritorious Service Award Committee

Chair	Marian Barry (96)		barrym@gvsu.edu	
		1045 Cambridge SE, Grand Rapids, MI 49506		616-245-4753
Member	Yousef Alavi (96)	Western Mich U	yousef.alavi@wmich.edu	616-387-4591
-Member	Melvin A. Nyman (96)	Alma College	nyman@alma.edu	517-463-7264

Student Activities Committee

Chair	Michael J. Kilpin (96)	Mich Tech U	gilpin@math.mtu.edu	906-487-2918
Member	Robert H. Myers (96)	Northern Mich U	farm@nmumus.bitnet	906-227-1610

Special Appointments

PIO	Earl D. Fife	Calvin College	fife@calvin.edu	616-957-6403
AHSME Dir.	David W. Laverell	Calvin College	lave@calvin.edu	616-957-7102
AJHSME Dir.	Matthew F. Wyneken	U of Mich-Flint	mwyneken@umich.edu	810-762-3313
AJHSME Dir.	Kristina D. Hansen	U of Mich-Flint	khansen@umich.edu	810-762-3304
WAM	Virginia Kasten	GM Truck & Bus	vgkasten@horatio.mystery.com	810-753-3222
WAM	Ruth Favro	Lawrence Tech U	favro@ltu.bitnet	810-204-3531
Archivist	John W. Petro (98)	Western Mich U	john.petro@wmich.edu	616-387-4551
MCTM Rep.	Renate McLaughlin (96)	U of Mich-Flint	rmcl@umich.edu	810-762-3273

Audit Committee

Member	Gerald D. Ludden	Mich State U	21144gdl@msu.edu	517-355-9683
Member	Cecil J. Nesbitt	U of Mich-AA	cecil.nesbitt@ub.cc.umich.edu	313-764-7227

Organizing Committee: Upper Peninsula Regional Meeting

Chair	Harold W. Martin	Northern Mich U	hmartin@nmu.edu	906-
Member	Roxin Zhang	Northern Mich U	rzhang@nmu.edu	906-

Women's Study Committee

Chair	Bette L. Warren (96)	Eastern Mich U	mth_warren@onlilne.emich.edu	313-487-1444
Member	Madeline Masterson (95)	Lansing C C		517-483-1087
Member	Jean Wald Kerr (95)	Michigan State U	jwk@msu.bitnet	517-355-9695
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These are **specially discounted rates for new members** provided to help the **MAA** reach a wider audience. They are not available to those who have been members for two years or more. **Student membership** is available to high school and undergraduate students and to students regularly enrolled in graduate study at least half time. Student rates apply to unemployed persons who are seeking employment. These rates are guaranteed for 1996 only.

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Calendar of Events

10-11 May 1996	Michigan Section Meeting, Siena Heights College, Adrian MI
3-5 June 1996	Ohio Summer Short Course, Huntington WV
16-21 June 1996	Teaching Mathematics with Technology Short Course, Mt. Pleasant MI
21-22 June 1996	Fifth Conference on the Teaching of Mathematics, Baltimore MD
14-21 July 1996	ICME-8, Seville, Spain
15-19 July 1996	TI-92 Calculator Short Course, Grand Rapids MI
10-12 August 1996	Joint Summer Meetings (71th), Seattle WA
27-28 Sept 1996	Twenty-Fourth Annual Conference & Twenty-Third Annual Student Conference, Oxford OH
4-5 October 1996	Lake Superior Regional Meeting, Marquette MI
10-12 October 1996	MCTM Annual Conference, Marquette, MI
31 Oct - 2 Nov 1996	NCTM Regional Meeting, South Bend IN
1-3 November 1996	AMS Regional Meeting, Columbia MO
8-11 January 1997	Joint Math Meetings (103rd), San Diego CA
17-20 April 1997	NCTM 75th Annual Meeting, Minneapolis MN
2-3 May 1997	Michigan Section Meeting,, Wayne State University, Detroit MI
2-4 May 1997	AMS Regional Meeting, WSU, Detroit MI
15-18 October 1997	MCTM Annual Meeting, Dearborn MI
7-10 January 1998	Joint Math Meetings (104th), Baltimore MD
2-5 April 1998	NCTM 76th Annual Meeting, Washington DC
1-2 May 1998	Michigan Section Meeting, Western Michigan University, Kalamazoo MI
29-31 October 1998	MCTM Annual Meeting, Traverse City, MI
22-25 April 1999	NCTM 77th Annual Meeting, San Francisco CA