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Norman Richert, Editor
Michigan Section–MAA *Newsletter*
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University of Michigan
P.O. Box 8604
Ann Arbor, MI 48107-8604

Michigan Section – MAA

NEWSLETTER

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One Hundred Years of Mathematics at WMU

ALSO IN THIS ISSUE:
Mathematics and Operations Research in Industry

Mathematical Association of America
Michigan Section Newsletter
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Editor: Norman Richert, Mathematical Reviews, P.O. Box 8604, Ann Arbor, MI 48107-8604; 734-996-5254; fax 734-996-2916, nrichert@ams.org

Advertising Manager: Matthew Boelkins, Department of Mathematics and Statistics, Grand Valley State University, Allendale, MI 49401-9403; 616-331-3384; fax 616-331-3120, boelkinm@gvsu.edu

Abbreviations

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

Calendar of Events

January 7–10, 2004	MAA/AMS Annual Meeting, Phoenix
January 17, 2004	MMPC Grading Day, Delta C Planetarium
April 22–24, 2004	NCTM Annual Meeting, Philadelphia
May 7–8, 2004	Michigan Section Meeting, OU, Rochester
August 12–14, 2004	MAA MathFest, Providence
October 1–2, 2004	MichMATYC Fall Conference, GRCC
November 18–21, 2004	AMATYC Annual Meeting, Orlando
March 20, 2004	Conversations Among Colleagues, GVSU
January 5–8, 2005	MAA/AMS Annual Meeting, Atlanta
April 7–9, 2005	NCTM Annual Meeting, Anaheim
April or May, 2005	Michigan Section Meeting, Alma C, Alma
August 4–6, 2005	MAA MathFest, Albuquerque
November 10–13, 2005	AMATYC Annual Meeting, San Diego
January 12–15, 2006	MAA/AMS Annual Meeting, San Antonio
April 26–29, 2006	NCTM Annual Meeting, St. Louis
April or May, 2006	Michigan Section Meeting, Calvin C, Gr. Rapids
August 10–12, 2006	MAA MathFest, Knoxville
November 15–18, 2006	AMATYC Annual Meeting, Cincinnati
January 4–7, 2007	MAA/AMS Annual Meeting, New Orleans
August 3–5, 2007	MAA MathFest, San Jose
January 6–9, 2008	MAA/AMS Annual Meeting, San Diego

The Web has all the information

Detailed information about most of the events shown above can be obtained from the relevant organizations' Web sites, such as www.maa.org (with links for all the sections), www.nctm.org, www.mictm.org, and www.amatyc.org.

Chairperson's Report

The Michigan Section functions well because of the commitment of the many people who volunteer time, effort, and ideas. I want to take this opportunity to recognize just a few of these wonderful individuals.

Jerry Grossman (OU) ends his three-year term as Section Governor in July, 2004. **John Mooningham** (SVSU), **Janet Andersen** (Hope C), and Jerry form the Nominating Committee for the new Governor. We will submit at least two nominations for Sectional Governor to the national MAA by November 14. The election will be conducted by a mail vote in the winter.

John Mooningham (SVSU) is Past Chair of the Section this year. On behalf of the Michigan Section, I want to thank John for his service as Section Chair and in many other capacities over a long period of time.

Tom Zerger (SVSU) and the other members of the Local Arrangements Committee did a superb job at last May's meeting at Saginaw Valley State University. **Gerard Venema** (Calvin C), the new Four-year Vice Chair and Co-Chair of the Program Committee, will guide the development of the program for the 2004 Section meeting, which will be hosted by Oakland University on May 7 and 8. The members of the Local Arrangements Committee this year are **Jack Nachman** (chair), **Kevin Andrews**, **Eddie Cheng**, **Jerry Grossman**, and **Serge Kruk** (all of OU).

Scott Barnett (Henry Ford CC) was reelected to another term as Two-year College Vice Chair. I enjoyed working with Scott on the conference program last year—he was instrumental in putting the Section meeting program together last year and did a great job. I am sure he will do the same again this year. **Chris Gardiner** (EMU) has agreed to serve on the Section Audit Committee this year and **Margret Höft** (UM-Dearborn) was reelected as Secretary/Treasurer for one more year.

Thanks also go to the Ad Manager **Matthew Boelkins** (GVSU), Public Information Officer **Bob Xeras** (SHU, retired), Webmaster **Earl Fife** (Calvin C), MMPC Director **David Redman** (Delta C), HSVLP Directors **Brian Snyder** and **Evan Schemm** (LSSU), *Newsletter* Editor **Norman Richert**

(Math. Reviews), and all the others whose continuing contributions to the section deserve recognition.

As you can see, the efforts of many people are needed to keep the Section running smoothly. I encourage you to volunteer (or volunteer a colleague) to serve on a Section committee or in some other capacity. The Nominating Committee this year consists of John Mooningham, Scott Barnett, and **Jody Sorensen** (GVSU). I am sure they will be happy to consider any names you submit.

Steve Schlicker, Four-year College Vice Chair

Annual Meeting in May

The next meeting of the Michigan Section of the MAA and MichMATYC will take place May 7–8, 2004 at Oakland University in Rochester, Michigan. The Program Committee is planning an exciting and informative meeting with 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

- **Charlene Beckmann**, Professor of Mathematics and Mathematics Education at Grand Valley State University and President of the Michigan Council of Teachers of Mathematics
- **William Dunham**, Truman Koehler Professor of Mathematics at Muhlenberg College, Allentown, Pennsylvania
- **Karen Smith**, Professor of Mathematics, UM-Ann Arbor
- **Michael Starbird**, Distinguished Teaching Professor, University of Texas, Austin
- **Margaret Wright**, Silver Professor of Applied Mathematics and Computer Science at the Courant Institute of New York University.

More details about the program will appear in the Spring Newsletter.

In addition to the 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. Instructions for contributing abstracts for one of the sessions are included in the "Call for Papers" on page 32.

The meeting is scheduled to run all day Friday and through noon 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 **Gerard Venema** (Calvin C) and **Scott Barnett** (Henry Ford CC), along with **Kevin T. Andrews** (OU)**, Deborah Loewenberg Ball** (UM-Ann Arbor), and **Earl Fife** (Calvin C), , and . Please notify one of us if you have a suggestion regarding the program. **Jack Bachman** (OU) is the chair of the Local Arrangements Committee. Contact information for all of us may be found on page 34.

Governor's Report

My term as your Governor is nearing its end. You will soon receive a ballot to elect the Governor of the Michigan Section for 2004–2007. There are excellent candidates from whom to choose (no actors or bodybuilders, though), and I urge everyone to vote. Let me also urge you to do some or all of the following: obviously, join the MAA if you are not already a member, and contribute to Michigan Section activities by paying your voluntary Section dues; nominate a colleague for the Section's Distinguished Teaching Award; nominate a colleague for the MAA's new Henry L. Alder Award for Distinguished Teaching by a Beginning College or University Mathematics Faculty Member; buy a book from the MAA on-line; look up old articles in MAA journals using JSTOR; join a SIGMAA (special interest group—the newest one deals with mathematics on the Web); take a mathematical tour of England in May; volunteer to serve on an MAA national committee; make plans to attend the Joint Meetings in Phoenix in January, the Section

meeting at Oakland University in May, and/or the MathFest in Providence in August. Details for most of these activities can be found, of course, on the redesigned MAA Web site, www.maa.org.

At the national level, the organization is in fine shape, with a $6 million endowment, a $6 million annual budget, and $6 million of currently active externally-funded projects. The Board approved upcoming summer MathFests in Knoxville (2006), San Jose (2007), and Madison (2008); the 2005 MathFest will be in Albuquerque.

As you enjoy reading the rest of this *Newsletter*, please join me in thanking **Norman Richert** for doing a great job as editor. While maintaining its long tradition as one of the best Section newsletters in the country, he has brought about improvements and increased efficiency on the printing and distribution end and saved the Section a nontrivial amount of money as well.

Jerrold W. Grossman, Governor

Secretary/Treasurer's Report

As of October 1, 2003, the Michigan Section's current account balance was $6,434, somewhat higher than last year's figure of $5,150. This is mostly due to the fact that the printing of the *Newsletter* has been less expensive during the last two years. Previous balances were $5,242 and $5,039, respectively, on October 1, 2002 and 2001. The figures indicate that we have a fairly stable balance of income and expenses.

One of the major expenses, which benefits the entire mathematical community in Michigan, is the printing and mailing of the Section's *Newsletter*. It is mailed to all faculty in mathematical sciences departments in Michigan colleges and universities, in addition to MAA members in Michigan. The annual Section meeting in the spring used to be a major expense, but during the last couple of years, due to contributions from publishers and exhibitors, it has been mostly self-supporting. The Section also provided financial support for the Michigan Undergraduate Mathematics Conference, which was held on October 20, 2003 at Grand Valley State University. In addition, the Fall Upper Peninsula Meeting received some support.

The Section's income derives mostly from voluntary dues payments

of the Section's members, supplemented by an occasional grant and by a $1,100 contribution from the national MAA. The annual request for dues was sent out in early October to each member of the MAA in Michigan and to department chairs of mathematical sciences departments in Michigan. The dues structure is the same as last year: $15 for a regular, individual membership, $30 (or more) for a contributing individual membership, and either $40 or $70 for an institutional membership, depending on the size of the institution. Last year, only 20 departments paid institutional dues. In the past this number has been consistently around 30, and I hope we can see a return to the figures of the past during the budget year 2003–04. You can find a dues form on page 9 and also on the Section's site www.michmaa.org. Please encourage your colleagues, especially new department faculty, to support the activities of the Section by paying Section dues, and remind your department chair to submit an institutional dues payment.

Margret Höft, Secretary/Treasurer

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*). The MAA also has a Web site for employment opportunities (*www.maa.org/pubs/employ.html*). All openings are for Fall 2004 unless otherwise stated, and further information is available from the department.*

Albion College (www.albion.edu/mathcs/Position0304_Math.asp and www.albion.edu/mathcs/Position0304_CS.asp) is recruiting for two tenure-track positions, one in mathematics and a second in computer science.

Grand Valley State University (www.gvsu.edu/math/jobs.html) anticipates filling tenure-track positions in mathematics and mathematics education as well as a possible postdoctoral teaching fellowship in either mathematics or mathematics education.

Lake Superior State University (math.lssu.edu) expects to hire two tenure-track faculty for August 2004.

Western Michigan University (www.wmich.edu/math/positions) is permitted to search for three tenure-track positions: applied mathematics, ordinary or partial differential equations, and secondary mathematics education. The positions are contingent upon authorization of funding.

CITATION
for
MELVIN A. NYMAN
for the
Michigan Section
Mathematical Association of America
DISTINGUISHED SERVICE AWARD

The Michigan Section of the Mathematical Association of America is pleased to recognize Professor Melvin A. Nyman, Professor of Mathematics, Alma College, as the 2003 recipient of its Distinguished Service Award. We gratefully acknowledge the many contributions he has made both to our Section and to the larger mathematical community for many years.

Between 1988 and 1992 Professor Nyman served the Michigan Section as Secretary/Treasurer, Vice Chair and Program Chair, Chair, and Past Chair. Mel chaired several committees for the Section, including the Nominating Committee, Distinguished Service Award Committee, and Governor Nominating Committee. He served on the Distinguished Teaching Award Committee and the Finance Committee, and chaired the Local Arrangements Committee when the 1994 Section Meeting was held at Alma College. From 1983 to 1986 he was a member of the MMPC Exam Committee, becoming its chair in 1986.

At Alma College, Mel was Department of Mathematics & Computer Science Chair, Natural Sciences Division Chair, and Vice Chair of the Alma College Faculty. He has served on editorial boards and refereed for several journals, published numerous articles in modeling botanical phenomena, statistics, and teaching issues, and traveled the world from New Zealand to England for his research and teaching. In 1986 the students of Alma College elected Mel to the Distinguished Faculty Award in Natural Sciences. Outside of academia, Mel has served the City of Alma on a number of committees and served on the City Commission. He was elected the Mayor of Alma in 2002.

For his many years of dedicated service and outstanding leadership, the Michigan Section is proud to present the

2003 DISTINGUISHED SERVICE AWARD
to
PROFESSOR MELVIN A. NYMAN

Award for Distinguished College or University Teaching of Mathematics presented to

Steven Kahn

The Michigan Section of the Mathematical Association of America is pleased to announce that Professor Steven Kahn of Wayne State University has been selected as the 2003–2004 recipient of the Award for Distinguished College or University Teaching of Mathematics.

Steve Kahn is a native of Brooklyn, New York. He did his undergraduate work at SUNY at Stony Brook and his graduate work at the University of Maryland, where he earned a Ph.D. in algebraic topology. He came to Wayne State University in 1981, where he has had a profound influence on Wayne State University students both through the Emerging Scholars Program, which he initiated, and through his unique teaching style. He has also made a major impact on the K–12 Detroit Public Schools through the Wayne State University Math Corps (summer camp) program.

Troubled by the low success rate for students in calculus and pre-calculus courses, particularly for minority students, Steve created an Emerging Scholars Program at WSU similar to the programs Uri Treisman created elsewhere, except tailored to Wayne State University. The program has been spectacularly successful and WSU has the statistical data to prove it.

Steve understood very well that academic life does not begin at the college or university level. Back in 1987 he began his involvement with K–12 students, and in 1992 he started the WSU Math Corps for Detroit Public School students. The heart of the Math Corps is an intense six-week-long summer camp. This is a large-scale operation; for example, 180 DPS middle and high school students attended camp in summer 2002. In the camp the middle schoolers are tutored by high school students, who, in turn, are mentored by college students. All of the DPS students take classes taught by WSU faculty.

All of the programs began with Steve's personal involvement, but he managed to institutionalize them so that they continue to thrive with other instructors.

Regarding Steve Kahn and the Math Corps program, one of Professor Kahn's former ESP students says, "He has some sort of a hyper drive button that he pushes when it comes to motivating children to take charge of their education and to do the work necessary to get ahead."

Another student, talking about Steve's teaching, says, "…he translates the lessons from the book into stories and adventures. He spends a great deal of time thinking about how to explain things in the simplest terms."

Finally, two other students put it this way. "Professor Kahn always says that as a teacher, you are there to touch and change lives. Well, he has definitely touched and changed ours."

A Brief History of Mathematics at WMU

The history of the Department of Mathematics at Western Michigan University closely parallels the history of the University as a whole. Mathematics has played a central role in the University, from its humble beginnings on May 27, 1903 as a two-year normal school to train rural elementary school teachers, to a century later when it is a national university with a Carnegie Foundation classification as a Doctoral/Research University-Extensive.

The Department of Mathematics was one of the twelve departments listed in Western State Normal School's first bulletin, published in 1904. The math courses listed were Elementary Geometry, Elementary Algebra, College Algebra, and the Teaching of Geometry. A Training School for grades one to eight was established to provide teaching experiences for college students, and the Normal High School was established in 1911–12. Upper-level high school mathematics classes were co-listed as college courses and were available to many college students who came to the college with weak backgrounds in mathematics. In the same manner, stronger high school students frequently took lower-level college mathematics courses. The instructors frequently crossed over and taught mathematics classes in both the high school and college domains.

Bachelor of Arts degrees were offered through the University of Michigan beginning in 1913 and independently in 1918. **John P. Everett** joined the faculty in 1914 as the first Ph.D. on the mathematics faculty and served as the Head of the Department until his retirement in 1945. Enrollments at Western increased steadily in the post World War I period. In the 1924 spring quarter term, college students had a choice of Algebra 1, General Math 1, General Math 2, Algebra 2, Solid Geometry 3, Trigonometry 100, Arithmetic 101, College Algebra and Geometry 103, College Algebra and Geometry 104, Calculus 107, Teaching of Secondary Mathematics 109, Surveying 110, Applied Math 112, and Differential Equations 121.

The institution was renamed Western State Teachers College on May 12, 1927. The subsequent Depression years were very hard on Western, but the institution survived. On May 20, 1941 the name of the institution was changed to Western Michigan College of Education. The post-World War II era brought a new surge of students, including many veterans who enrolled in college under the G.I. Bill. During the 1952–53 academic year the State Board of Education authorized Western to grant its own M.A. degree for students in Teacher Education. In fall of 1953, at the end of the first fifty years of the University, the central focus of the institution and of the Math Department, with its seven faculty members, was teacher training. On June 2, 1955 the institution became Western Michigan College, and on February 26, 1957 it became Western Michigan University.

Major changes were occurring at this time in the Department and the University, paralleling the changes that were happening in the larger society. Western was poised to develop into a major institution. Although the first wave of G.I. students was finished with their undergraduate education, there was a population explosion under way with the first generation of post-World War II children clogging the public school system and destined to be on campus by the early 1960's. As a direct response to the Sputnik rocket launched by the Soviet Union in the late 1950's, there was an urgency to improve mathematics and science education throughout America. The Department was successful in obtaining several NSF grants for three-year summer institutes for secondary mathematics teachers, beginning in the summer of 1959. A Masters of Science degree in the Teaching of Mathematics was granted to the students who completed the program.

Major changes in the Department occurred under the leadership of **James Powell**, who was appointed Head in 1960. Research oriented faculty were hired who brought new enthusiasm to the Department with a whole new bevy of goals. Faculty quickly formed into area groups and offered regular seminars. Graduate teaching assistants were hired to support the graduate program and to teach service courses. A colloquium program was started

***WMC** continued on page 16*

Section Dues: Individual • Institutional

The 2003–2004 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.

Enclosed is a check for:	Regular Dues	@ $15 ☐
	Contributing Membership	@ $30 ☐
	Small Institutional Dues	@ $40 ☐
	Large Institutional Dues	@ $70 ☐

Name: _____

_____

Institution: _____

_____

Mailing Address _____

_____

E-mail Address _____

Make checks payable to the Michigan Section–MAA, and mail them to: **Margret**

Student Chapter News

Grand Valley State University

The GVSU Mathematics and Statistics Club has big plans for the upcoming year. Its first goal is to help GVSU pull off a successful Michigan Undergraduate Mathematics Conference this October. Other activities will include a visit from a math major alum who went on to become a medical doctor, a panel of students discussing how to succeed as a math major, and the ongoing student-faculty problem solving groups.

Michigan Technological University

David Slater is the president of the MTU Math Club.

Oakland University

The Math Club, known as S.A.M. (Students for the Advancement of Mathematics), hopes to organize various activities this year, including a Rubik's Cube seminar and an Integration Bee. They will also help out with the MAA Section meeting at OU, May 7–8. See their site, www.oakland.edu/org/sam, for a list of officers and other goodies.

Siena Heights University

New officers of the Siena Heights Student Chapter are **Brian Gimalski**, President, **Mike Husband**, Treasurer, **Melissa Beebe**, Secretary, **Stacey Kohler**, Vice President, and **Tammy Posa**, Sergeant-at-Arms.

University of Michigan-Flint

The officers of the Student Union of Mathematics (SUM) are **Anthony Thomas**, President; **Andy Spiece**, Vice-President; **Eva Morgan**, Secretary; and **Jennifer Stuber**, Treasurer. The club plans to attend the Michigan Undergraduate Mathematics Conference at UM-Dearborn.

Michigan Section-MAA World Wide Web Site
www.michmaa.org

National MAA Headquarters, Washington, DC
www.maa.org, 800-741-9415

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 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 the beginning of October to be considered for inclusion in the December issue and by the beginning of 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.

Mathematics and Operations Research in Industry

Dennis E. Blumenfeld
Debra A. Elkins
Manufacturing Systems Research Lab
General Motors R&D Center
Jeffrey M. Alden
Operations Engineering Group
General Motors Engineering

Students majoring in mathematics might wonder whether they will ever use the mathematics they are learning, once they graduate and get a job. Is any of the analysis, calculus, algebra, numerical methods, combinatorics, math programming, etc. really going to be of value in the real world? An exciting area of applied mathematics called Operations Research (OR) combines mathematics, statistics, computer science, physics, engineering, economics, and social sciences to solve real-world business problems.

Operations Research can be defined as the science of decision-making. It has been successful in providing a systematic and scientific approach to all kinds of government, military, manufacturing, and service operations. Operations Research is a splendid area for graduates of mathematics to use their knowledge and skills in creative ways to solve complex problems and have an impact on critical decisions.

Some key steps in OR that are needed for effective decision-making are:

- Problem Formulation (motivation, short- and long-term objectives, decision variables, control parameters, constraints);
- Mathematical Modeling (representation of complex systems by analytical or numerical models, relationships between variables, performance metrics);
- Data Collection (model inputs, system observations, validation, tracking of performance metrics);
- Solution Methods;
- Validation and Analysis (model testing, calibration, sensitivity analysis, model robustness);
- Interpretation and Implementation (solution ranges, trade-offs, visual or graphical representation of results, decision support systems).

These steps all require a solid background in mathematics and familiarity with other disciplines (such as physics, economics, and engineering), as well as clear thinking and intuition. The mathematical sciences prepare students to apply tools and techniques and use a logical process to analyze and solve problems.

OR became an established discipline during World War II, when the British government recruited scientists to solve problems in critical military operations. Following the end of World War II, interest in OR turned to peacetime applications.

There are now many OR departments in industry, government, and academia throughout the world. Areas where OR has been successful in recent years include:

- Airline Industry (routing and flight plans, crew scheduling, revenue management);
- Telecommunications (network routing, queue control);
- Manufacturing (system throughput and bottleneck analysis, inventory control, production scheduling, capacity planning);
- Healthcare (hospital management, facility design);
- Transportation (traffic control, logistics, network flow, airport terminal layout, location planning).

There are many mathematical techniques that were developed specifically for OR applications. These techniques arose from basic mathematical ideas and became major areas of expertise for industrial operations.

One important area of such techniques is optimization. Many problems in industry require finding the maximum or minimum of an objective function of a set of decision variables, subject to a set of constraints on those variables. Typical objectives are maximum profit, minimum cost, or minimum delay. Frequently there are many decision variables and the solution is not obvious. Techniques of mathematical programming for optimization include linear programming (optimization where both the objective function and constraints depend linearly on the decision variables), non-linear programming (nonlinear objective function or constraints), integer programming (decision variables restricted to integer solutions), stochastic programming (uncertainty in model parameter values) and dynamic programming (stage-wise, nested, and periodic decision-making).

Another area is the analysis of stochastic processes (i.e., processes with

random variability), which relies on results from applied probability and statistical modeling. Many real-world problems involve uncertainty, and mathematics has been extremely useful in identifying ways to manage it. Modeling uncertainty is important in risk analysis for complex systems, such as space shuttle flights, large dam operations, or nuclear power generation.

Related to the topic of stochastic processes is queueing theory (i.e., the analysis of waiting lines). Mathematical analysis has been essential in understanding queue behavior and quantifying impacts of decisions. Equations have been derived for the queue length, waiting times, probability of no delay, and other measures. The results have applications in many types of queues, such as customers at a bank or supermarket checkout, orders waiting for production, ships docking at a harbor, users of the Internet, and customers served at a restaurant. Examples of decisions in managing queues are how much space to allocate for waiting customers, what lead times to promise for production orders, and what server count to assign to ensure short waiting times.

An important mathematical problem in manufacturing is the performance analysis of a production line. A typical production line consists of a series of workstations that perform different operations. Jobs flow through the line to be processed at each station. Buffers between stations hold the output of one station and allow it to wait as input to the next. A finite buffer can fill and block output from an upstream station or can empty and starve a downstream station for input. Blocking and starving are key mechanisms of the complex interactions between queues that form in the line. A critical measure of performance is throughput, defined as the number of jobs per unit time that can flow through the line. Throughput is reduced when stations experience random machine failures, a common practical situation. Mathematical modeling is needed to capture the impact on throughput of station reliabilities, as well as processing rates and buffer sizes. A model can support operating decisions, such as how to improve a line to meet a throughput target, how to identify bottlenecks, and how much buffer space to allocate in line design.

OR analysts can model difficult practical problems and offer valuable solutions and policy guidance for decision-makers. Constraints involving budgets, capital investments, and organizational considerations can make the successful implementation of results as challenging as the development of mathematical models and solution methods.

In general, Operations Research requires the use of mathematics to model complex systems, analyze trade-offs between key system variables, identify robust solutions, and develop decision support tools. Students of mathematics can be sure there are plenty of uses for the knowledge and skills they are developing. As the world becomes more complex and more dependent on new technology, mathematics applied to business problems is likely to play an increasingly important role in decision-making in industry.

On a personal note

All three of us developed an interest in the mathematical sciences early on, and took undergraduate degrees in math, or math and physics. We each got into the field of Operations Research as a result of looking for practical ways to use our math training. Below, we each answer the question: "How did you decide on a career in math and decide to join GM?"

Dennis: The math courses I liked best were the ones on applied topics. I found Operations Research an especially appealing subject, since it uses basic mathematical principles in clever ways to solve all kinds of complex problems in everyday life, such as queueing, reliability, scheduling, and optimization. I was intrigued by applications of OR models to traffic flow and congestion, and as a graduate student at University College London I focused on modeling of transportation systems. I continued research on this topic in engineering school faculty positions at Princeton University and University College London. I knew of the traffic studies and other research at GM R&D through meetings and their publications, and was interested in gaining experience in applied research in industry. I joined GM R&D, where I have had the opportunity to work in a variety of research areas, including traffic safety, logistics, inventory control, and production system design, and to see results used in practice. It always impresses me how powerful even simple mathematical models can be in providing insight into system behavior.

Debra: I took a lot of classes in math, computer science, physics, and chemistry, and finally realized I liked sport computing and slick mathematics applied to real world industrial problems. I ended up in Operations Research, which lets me combine my interests in probability, super computing and high performance computing, simulation, and so forth. As a graduate student in the Industrial Engineering/Operations Research Program at Texas A&M University, I found out about working at GM R&D when I was at a technical conference. I decided to interview out of curiosity. I was really surprised and delighted with the people and the caliber of research going on within GM. My first major research project was to explore financial implications of agile machining systems for GM. While working on that project, I was poking around in risk analysis work, and connected with GM Corporate Risk Management, a group that wanted some help with probabilistic modeling of risks. Now I'm working on strategic supply chain risk analysis. I'm examining how to model the GM manufacturing enterprise, exploring the frequency and severity of business interruption events—anything that interrupts production operations—and considering strategic mitigation options that can reduce GM's risk exposure. What excites me about my research is combining ideas from different subject areas, like math, computer science, statistics, and operations research, to develop novel modeling approaches and solutions for large-scale problems.

From the Origin: A Section for Opinion

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

Jeff: I pursued areas that I liked, excelled in, and seemed good for a future career. I'm adept at problem solving and math modeling, and I love having a positive impact for people. Operations Research pulls all that together to solve real-world problems—not just mathematical curiosities—and to help people make decisions. It was the right match for me. While I was a graduate student at the University of Michigan, I heard a presentation about the research opportunities at GM R&D. It seemed like a great position, so after the meeting I submitted my resume. About two weeks later I had a job offer. I modeled production systems, including throughput analysis, maintenance systems, production leveling/stability metrics, and manufacturing-related cost-driver studies. I'm now on a two-year rotation in GM Engineering to learn other GM operations, contribute in new ways, and develop new bridges and topic areas for research. My current assignment is leading the development of decision-support tools and methods for engineering issues that include test scheduling, engineering capacity assessment, and engineering process improvements. I like helping people make decisions via decision-support tools, analysis methods, and insights—and then seeing my work produce a positive impact.

WMC *continued from page 9*

and a series of conferences and symposia was initiated, which through the years has brought many world-class mathematicians to the campus.

T. H. Hildebrand, Professor Emeritus from UM, spent a semester in 1962 as a visitor in the Department, the same year that the M.A. in Mathematics was introduced. In 1967, **A. Bruce Clarke** left UM to become the Head of the Department. **Eric Rothe**, also Professor Emeritus from UM, spent the full 1967–68 academic year in the Department as a visitor, a visit that was particularly timely for the development of the Department's Ph.D. program. The first Ph.D. in Mathematics was awarded in December 1969. In the summer of 1970 the Department moved into offices in the newly completed John P. Everett Tower, appropriately named in honor of the first Head of the Department.

The Department has played a major role in the overall success of the University over its first century. In addition to holding true to its original teacher-training mission, the Department has developed strong programs in pure, applied, and computational mathematics. It has nurtured fledging

programs in Computer Science and Statistics and brought them to the point of establishing themselves as mature departments in their own right. It has cultivated and supported a strong research-oriented faculty that has distinguished itself in many ways. Teaching has always been important, and thousands of students have been the benefactors through the years of dedicated instructors. The Department has met the challenges of the first century of the University and is ready to take on the challenges of the second century. For additional information about the history of the Department, especially the period since 1970, please read a more complete history on the Department's Web site, www.wmich.edu/math/alumni/history.

John W. Petro, Professor of Mathematics, Emeritus

Conversations Among Colleagues
Collaborating to Improve the Mathematics Education of Our Students

Conference for College and University Mathematicians and Mathematics Educators and K–12 Mentors of Teacher Interns

Grand Valley State University—DeVos Center
Grand Rapids, MI
March 20, 2004
8:30 AM–4:30 PM

Highlights

- How do college students learn mathematics?
- What mathematics do K–12 teachers need to know and how should they learn mathematics so that they are prepared to teach it well?
- The high mathematical level of activities in current K–12 curricula
- Impact of No Child Left Behind, the MEAP, and Michigan Framework on the mathematical education of teachers
- Mathematical Education of Teachers projects occurring around the state

Sponsored by:

- Michigan Mathematics Teacher Educators (MMTE)
- Michigan Council of Teachers of Mathematics
- Michigan Section–MAA
- GVSU Department of Mathematics
- Center for Proficiency in Teaching Mathematics
- MSU Division of Science and Mathematics Education

For more information, contact

Charlene Beckmann
GVSU Department of Mathematics
Beckmannc21@aol.com

Annual Meeting at Saginaw Valley State University, May 2–3, 2003

Larry King presents the Distinguished Teaching Award to Steve Kahn.

Groening Commons at SVSU, 79th Annual Meeting site.

Special glasses were required to examine the Curvature of Space with Jeff Weeks.

Tim Sipka presents the Distinguished Service Award to Mel Nyman.

Deborah Ball (UM-AA) speaks on the preparation of teachers.

Jeff Weeks, Saturday luncheon speaker.

Ran Mikkelson from Kalamazoo C gave a student presentation.

Victor Katz at the Social Hour.

Three LTU students.

Shandelle Henson (Andrews U).

The 47th MMPC is Underway

The 47th Annual MMPC is underway. **David Redman** (Delta C) is the director of the 46th, 47th and 48th MMPC. All information related to the MMPC is posted at the MMPC Web site, www.delta.edu/math/mmpc.

Part I took place on Wednesday, October 8. Results have been tabulated and invitations will be extended to approximately 1,000 students to participate in Part II on Wednesday, December 3.

The exam committee of **Edward Aboufadel** (chair, GVSU), **Eddie Cheng** (OU), **John Clifford** (UM-Dearborn), and **Patrick Pan** (SVSU) has worked very hard to prepare Part I and Part II.

Grading Day is Saturday, January 17, 2004 at the Delta College Planetarium in Bay City. Teams of 10 to 12 people will work on each of the five problems of Part II. The tentative schedule is:

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 (bdredman@alpha.delta.edu) and watch the MMPC site for more information.

The speakers on Awards Day (February 28, 2004) will be **George Andrews** (Penn State U) and **John Conway** (Princeton U). Awards Day presentations and banquet will be held on the campus of Delta College located in the tri-city area of Saginaw, Bay City, and Midland near I-75 and US-10.

David Redman, Delta College

Contest News

The seventeenth American Mathematics Contest AMC 8 was held November 19, 2002, and Michigan again was near the top of the nation in school participation and student participation with 10,460 students from 154 schools taking the exam. A total of 562 Michigan students earned scores of 18 or higher and were cited as 2002 Michigan AMC 8 Honor Roll Students (those with scores of 19 or higher have additional USA Honor Roll standing), and a total of 459 students in grades six and below earned scores of 10 or higher to become 2002 Michigan AMC 8 Merit Roll Students (those with scores of 13 or higher also have USA Merit Roll standing).

This year, three Michigan students, including a sixth grader, achieved perfect scores of 25 on the AMC 8: **Alan Huang**, from Detroit Country Day Middle School in Beverly Hills, **Alan Pezeshki**, from the Indus Center for Academic Excellence in Troy, and **Kunal Patel**, from Smith Middle School, also in Troy.

The Edith May Sliffe Award recognizes the excellence of exam managers whose students are most successful on the AMC 8. This year's Michigan recipients of the award were **Kishore Ahuja**, from the Indus Center for Academic Excellence, and **Diane N. Lenderman**, from Smith Middle School.

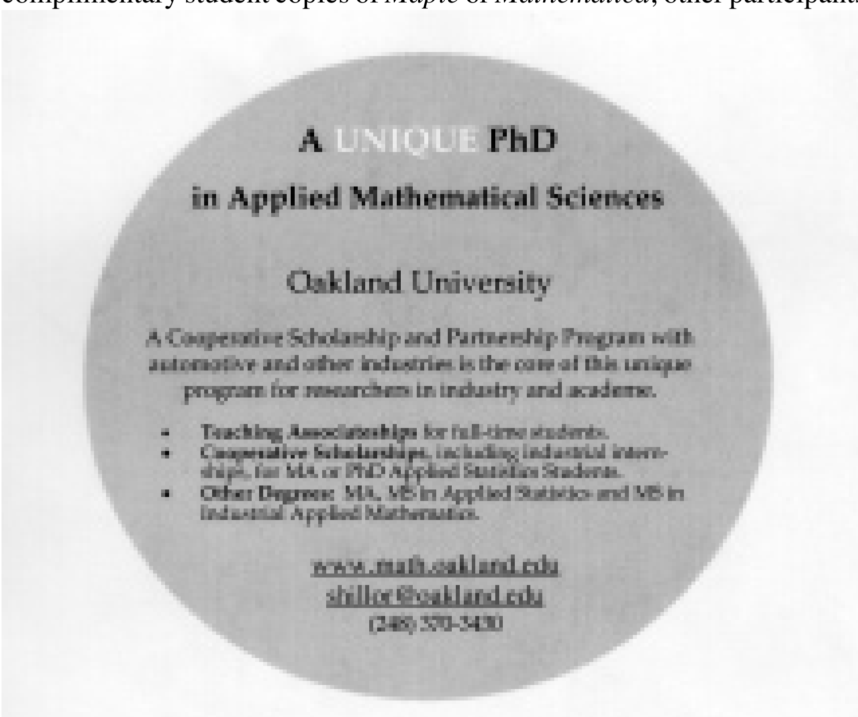
Three Michigan college students were honored by the Section for their outstanding performances on the 2002 William Lowell Putnam Examination. They were **Vivek V. Shende** (H, ranks 26–61), a UM-Ann Arbor junior from Beverly Hills; **Brian L. Schroeder** (I, ranks 71.5–99), an MSU senior from Okemos; and **Joel R. Lauwsma** (II, ranks 104–210), a junior attending UM-Ann Arbor, from Holland.

Michigan Undergraduate Mathematics Conference

On Saturday, October 25, more than 140 students and faculty from 19 universities across the state and surrounding region gathered at Grand Valley State University's DeVos Center in Grand Rapids for the 6th Annual Michigan Undergraduate Mathematics Conference. Approximately 100 of the attendees were students, and 27 of these undergraduates gave presentations on scholarly work done in summer research programs or special class projects.

In addition to the student talks, eight different graduate programs gave presentations on opportunities at their universities, two schools gave talks on their REUs (NSF-funded Research Experiences for Undergraduates), and six people gave talks on career opportunities in mathematics. **Suzanne Lenhart** of the University of Tennessee and Oak Ridge National Laboratory gave a keynote address on her research in applied mathematics involving differential equations and optimal control.

The day concluded with a one-hour mathematical game show: *Hollywood Equiangular Rhombi*. Hosted by GVSU's **Will Dickinson**, nine celebrity mathematicians from across the state teamed up to attempt to befuddle students in four intriguing games of tic-tac-toe. Student winners left with complimentary student copies of *Maple* or *Mathematica*; other participants



won t-shirts or books. The celebrity mathematicians were **Ed Aboufadel** (GVSU), **Janet Andersen** (Hope C), **Ruth Favro** (LTU), **Sid Graham** (CMU), **Mike McDaniel** (Aquinas C), **Michele Intermont** (Kalamazoo C), **Randy Pruim** (Calvin C), **Tim Pennings** (Hope C), and **John Clifford** (UM-Dearborn). The game show was written and developed by Will Dickinson, **Jon Hodge**, and **Reva Kasman** (all of GVSU).

More information about the conference can be found at www.gvsu.edu/math/mumc.html.

Everyone involved with MUMC expresses their gratitude to the Michigan Section of the MAA for its generous financial support of the conference. We are currently seeking a university to volunteer to host the 7th edition of the conference in Fall 2004. Interested parties should contact **Matt Boelkins** (boelkinm@gvsu.edu) or Randy Pruim (rpruim@calvin.edu) to discuss this possibility.

Matthew Boelkins, GVSU

Members Honored with Highest Awards

Professor St**even Kahn (W**SU) and Professor Melvin **Nyman (Alma** C) were presented with the Michigan Sections's Awards for Distinguished College or University Teaching of Mathematics and for Distinguished Service, respectively, at the banquet during the 2003 Annual Meeting last May at Saginaw Valley State University.

Steve was honored for his impact on K–12 mathematics education in Detroit and beyond through the Emerging Scholars Program, which he initiated, and the Wayne State University Math Corps program. The citation presented to Steve is reproduced on page 7.

Mel was honored for his many contributions to the Section and to the larger mathematical community. The citation presented to Mel is reproduced on page 6.

Photograph of both Steve and Mel appear in the Annual Meeting photo spread pages on 18 and 19.

High School Visiting Lecture Program

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 20 volunteer speakers from 13 institutions, offering 45 titles. There were five requests for visits, all of which were honored.

HSVLP continued on page 18

News from the Campuses

Adrian College [reported by Cindy Bosio]

Lakshmi Dalwalla has joined the mathematics department. She received her Ph.D. from Bowling Green State U. [cbosio@adrian.edu]

Albion College [reported by Robert Messer]

Paul Anderson is acting chair of the Math/CS Department during **Dave Reimann's** sabbatical leave this year. • **Dawn Sadir** from CMU is a Visiting Assistant Prof. and **Howard Whitston** from LTU is a Visiting Instructor for the academic year. • The department has a weekly colloquium series (Thursdays at 4:10 p.m.). Visit www.albion.edu/MathCS/archive/0304/Calendar.asp for details. [ram@albion.edu]

Alma College [reported by Mel Nyman]

On February 14 **Spencer Wideman**, a recent mathematics graduate of Alma C, spoke on his work as an actuarial trainee at CAN Insurance. On September 29 **Paulus Gerdes**, Universidade Pedogogica, Mozambique, spoke on "Symmetries in African Cultural Practices". On September 26 a panel of three Pi Mu Epsilon members discussed their summer research experiences. On November 7 **Sandra Speiser**, National Security Agency, will visit classes and give a colloquium talk on her work as a cryptologic mathematician at NSA. Ms. Speiser is a 1989 alumna of Alma with majors in mathematics and computer science. • **Tim Sipka** and **Robert Molina** have begun a high school MATH Challenge. Students are invited to submit solutions to monthly problems posed by the organizers. Response has been very good so far. For details contact either Tim (Sipka@alma.edu) or Robert (Molina@alma.edu). • **Aklilu Zeleke** is on sabbatical leave for the academic year. He is visiting the Probability and Statistics Department at MSU. **Jane Thorsen**, a long time adjunct faculty member in our department, has retired. [nyman@alma.edu]

Alpena Community College [reported by Dan Rothe]

We have started another busy school year at ACC. We are pleased to welcome **Mary Ann Carlson** as our new Vice President for Academic Affairs. She replaces **Curt Davis** who retired. • **Jim** (math/engineering instructor) and **Kristin Berles** were pleased to welcome their daughter **Amelia Kate** in August. • **Sarah Ewing** joins us this year at the Learning Center and as an adjunct math instructor. • We have created two new engineering courses in our department: Dynamics and Strength of Materials. • We look forward to a productive semester. [rothed@alpena.cc.mi.us]

Andrews University [reported by Donald Rhoads]

Yun Myung Oh is on leave and is a Visiting Assistant Prof. at MSU. • The NSF awarded Andrews U a three-year grant for interdisciplinary research in mathematical ecology. The principal investigators are **Shandelle Henson** (mathematics) and **James Hayward** (biology). The research involves mathematically modeling the spatial and temporal dynamics of marine birds and mammals in the Strait of Juan de Fuca, Washington. A curriculum in mathematical modeling, an undergraduate

research team, and graduate students form an integral part of the interdisciplinary work. NSF also awarded Andrews a five-year grant to build an interdisciplinary program in neurobiology. The program will have three tracks, with emphases in psychology, biology, and mathematics. [dhr@andrews.edu]

Central Michigan University

Ans Dias (Math Education) and **John Daniels** (Statistics) are new Assistant Profs. They are graduates of Indiana U and WMU, respectively. **Shana Trzeciak** is a new full time instructor. **Steve Sepanski** (SVSU) is a Visiting Associate Prof. **Doug Lapp** received tenure, and **Azita Manouchehri** was promoted to Associate Prof. • **Donna Erickson**, **Sing Ong**, and **Yury Ionin** are on sabbatical this Fall. **Ahmed Assaf** will be on sabbatical in the spring. • **Siviram Narayan** will have a research professorship in the spring semester. • Colloquium speakers this semester include **Paulus Gerdes** (Mozambique) and **Ruth Gornet** (U of Texas at Arlington). [assaf1am@cmich.edu]

Ferris State University [reported by James Howard]

Darrell Allgaier, who was our Chair last year, is now teaching at Grove CC in Pennsylvania. **David Frank** from the Department of Physical Sciences is acting Chair for this year. **Holly Price**, **Enoch Lee**, and **Michael Decker** have joined the Department as tenure-track faculty. [James_Howard@ferris.edu]

Grand Valley State University [reported by Paul Fishback]

The Department of Mathematics hosted a NSF REU site in the summer of 2003. Eight students worked with four faculty members on research problems in wavelets, Lie algebras, orthogonal polynomials, and the Hausdorff metric geometry. In addition, two students worked with department faculty as part of the GVSU student summer scholars program. Eight of the students gave talks at the MAA Student Paper Session at MathFest. Of the 53 student speakers at the conference, two students who conducted research at GVSU received awards for their presentations. The first student was **Christopher Bay**, who worked with **Steve Schlicker** and gave a talk titled "When Lines Go Bad: The Geometry of the Hausdorff Metric". The second student, **Kristina Lund**, is a junior mathematics major at GVSU who studied spherical geometry with **Will Dickinson** and gave a talk titled "The Generalized Area Principle." Students interested in participating in the 2004 REU are invited to obtain further program information at www.gvsu.edu/mathreu. • **Matt Boelkins** was named the recipient of the GVSU Science and Mathematics Division Pew Excellence in Teaching Award. **Don VanderJagt** was named recipient of the GVSU Distinguished Service Award for his many years of service to the university. In particular, Don has served for several years as the institutional NCAA representative. **Charlene Beckmann** has been elected president of the MCTM. • **Ernie Palmer** has retired. **Alverna Champion** has resigned. The department welcomes three new members: **Filiz Dogru**, Assistant Prof., (Ph. D. Penn State U), **Paul Yu**, Assistant Prof. (Ph.D. Illinois State U), and **Nathan Wodarz**, Visiting Assistant Prof. (Ph.D. U of Minnesota). In addition, **Karen Heidenreich** (Ph.D. Notre Dame), who served as a postdoctoral teaching fellow

for three years, has joined the department as an Assistant Prof. **John Golden**, **Jane Mays**, and **Clark Wells** all received tenure. John and Clark have been promoted to the rank of Associate Prof. Sabbatical leaves during the 2003–04 academic year have been granted to John Golden, Clark Wells, **Carl Arendsen**, and **David Austin**. • **Jonathan Hodge** and **Reva Kasman** have been named Project NExT Fellows. [fishbacp@gvsu.edu]

Hope College [reported by Todd Swanson]

We have three new faculty this year. **Airat Bekmetjev** (Ph.D. Arizona State U) joins us as an Assistant Prof. from Gettysburg C, where he held a visiting position last year. **Mike Catalano** (Ph.D. U of Minnesota) is on sabbatical from South Dakota Wesleyan U and comes to Hope as an NSF/AIRE Fellow this year. **Mark Pearson** (Ph.D. Northwestern U) joins us as an Assistant Prof. after recently completing his graduate work. • **Dyana Harrelson** is on a one-year leave of absence this year. [swansont@hope.edu]

Kalamazoo College [reported by John Fink]

John Fink is spending the semester at Universidad San Francisco de Quito on a Fulbright Lectureship. [johnf@mail.usfq.edu.ec]

Lake Superior State University [reported by Brian Snyder]

Lorraine Gregory (Ed.D. Duquesne U, 2001, Mathematics Education) has joined the faculty. **Scott Lewis** has returned to Utah Valley State C. **Tom Mickewich** has been named Prof. Emeritus. [bsnyder@lssu.edu]

Lawrence Technological University [reported by M. Merscher]

The department is happy to welcome **Chris Cartwright**, our new faculty member. We are hosting a visiting professor, **Wenhua Deng**, from Wenzhou U in China, who will be with us through the spring semester. The LTU Open House on April 26–27 will include the 34th Annual LTU Mathematics Competition for High School Students, headed up by **Mike Merscher**, and Robofest 2003, led by **Chan-Jin Chung**. [merscher@ltu.edu]

Michigan Technological University [reported by Lynn Murphy]

Fernanda Pambianco and **Stefano Marcugini**, from the U of Perugia (Italy), gave a joint colloquium entitled "Classification and Construction Algorithms for Arcs, Codes and Caps" on August 29. **Stoyan N. Kapralov**, from the Technical U of Gabrovo, Bulgaria, gave a colloquium entitled "Error-Correcting Codes: Bounds, Constructions and Enumeration" on September 4. **Walter Wallis**, from Southern Illinois U, gave a colloquium entitled "Triple Arrays" on September 12. **Jeremy M. G. Taylor**, from the Department of Biostatistics, UM-AA, gave a colloquium entitled "Multiple Imputation in Survival Analysis" on September 16. **Wolfgang Ch. Schmid**, from U of Salzburg, Austria, gave a colloquium entitled "On the Analysis and Testing of Linear (t,m,s)-Nets" on September 19. • **Mangalam Gopal** retired August. **Jianping Dong**, was promoted to Full Prof. **Kathleen Feigl** and **Franz Tanner** were promoted from Associate to Full Prof. with tenure. • **Vladimir Tonchev** was the recipient of the MTU Research Award. [murph@mtu.edu]

Oakland University [reported by Jerry Grossman]

Ravi Khattree has been elected a Fellow of the American Statistical Association, an honor given annually to at most one third of one percent of ASA members. He was cited for promoting statistics by writing for diverse audiences, for editorial work, and for innovative contributions to statistical education. **Bo-nan Jiang** has received an NSF grant for his research on the least squares finite element method. • On October 1 the Department and the Honors College put on a two-hour AP Calculus Workshop to give tips to students taking AP calculus this year. **Jerrold Grossman**, student **Dan Steffy**, and a local high school teacher shared their ideas with students from Detroit area high schools. A follow-up is planned for March. • The ninth annual Summer Mathematics Institute will be held next summer. Thanks to the generosity of an anonymous donor, there is no cost to the students for this six-week program, in which 36 bright high school students come to campus daily to take two special college-level courses (such as Number Theory or Operations Research) and work on challenging math problems. There is usually a significant overlap between participants in this program and the Top 100 on the MMPC. Further details and application information are available on the Department site, www.math.oakland.edu. • The Department hosted the Fifth Annual Midwest Optimization Seminar on October 4, a gathering of two dozen researchers from Michigan, Ohio, and Ontario in various fields of continuous optimization and control theory. We are excited about hosting the Section Spring meeting on May 7–8. A highlight will be the setting for the Friday banquet: historic Meadow Brook Hall. • **László Lipták** has joined the faculty as Assistant Prof.; he works in combinatorics and discrete optimization and was most recently a post-doc at Waterloo. **Mark Werner** (Ph.D. U of Colorado) is a visiting Assistant Prof. In addition to statistics, his interests include long-distance running. **Ananda Sen** has begun a two-year leave of absence to work at the Center for Statistical Consulting and Research (UM-AA). **Alan Park** will do the same at the Korea Institute for Advanced Study, starting in January. **Steve Wright**, **Rob Kushler**, Ravi Khattree, **Baruch Cahlon**, and **Eddie Cheng** are taking sabbatical leaves for all or part of this academic year. [grossman@oakland.edu]

Saginaw Valley State University [reported by Thomas Zerger]

John Mooningham received the Faculty Association award for service to the university and community. **Steve Sepanski** received the Faculty Association Award for Research. **Patrick Pan** received the SVSU Earl L. Warrick Excellence in Research Award. • The department welcomes new department members Assistant Prof. **Nancy Colwell**, Algebraic Number Theory (LSU, 1996) and Lecturer **Jennifer Beecher** (MA, Indiana U, 2003). **Bing Liu** was promoted to Associate Prof. and granted tenure. **Rose Novey** and **Tim Weier** have retired from the department. Steve Sepanski is on sabbatical leave at CMU. • SVSU High School Math Olympics Competition will be held on March 26, 2004. [Zerger@svsu.edu]

Siena Heights University [reported by Toni Carroll]

Bette Warren, EMU, spoke to student groups, Pi Mu Epsilon, and Women and Mathematics about "Day of Reckoning". The main question was "Why is it so hard to count?" • **Brian Gimalski**, president of PME, received the Miriam Schaeffer award for prospective teachers of mathematics at the elementary and secondary level. [toni@sienahts.edu]

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

Ron Mosier has changed from full-time to part-time teacher. **Nancy Dwyer** has moved with her family to Oregon. **Jeff Boats** has been promoted to Associate Prof. **Katy Snyder** received tenure. **Lazaros Kikas**, **Betty Cousey-Lee**, and **Ruth Miller** have joined our department as Instructors. • Together with other sciences in the school we run a number of Science-Awareness programs for students in grades 4–12. Among them are: Technology Day on October 17, Dapceps on Saturdays until November15, and the First Lego League on November 22 and December 6. For information on these programs contact **Dan Maggio** (maggiodd@udmercy.edu). [oneilljd@udmercy.edu]

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

The mathematics department welcomes a new faculty member, **Rama Chidambaram**, who received her Ph.D. at Arizona State U in 2003. Her research interests are in modeling supply chains in manufacturing processes with genetic algorithms. **John Gillespie** will be on sabbatical in the winter term of 2004. **Joan Remski** was promoted to Associate Prof. with tenure. Associate Prof. **Rheta Rubenstein** was awarded tenure. Mathematics faculty won three campus-wide awards during the academic year 2002–03: **Terri Faitel** won the distinguished teaching award, John Gillespie won the distinguished service award, and **Jennifer Zhao** won the distinguished research award. • In March of this year McGraw-Hill published the seventh edition of *Complex Variables and Applications* in the well-known series of texts by the authors **J. W. Brown** and R. V. Churchill. [fjpapp@umd.umich.edu]

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

The 37th annual Math Field Day, a competition for high school students from throughout Michigan, will be held on March 2. Thirty-two teams participated in 2003; the team from Grosse Pointe North won the championship. For more information, visit the event's site, www.flint.umich.edu/Departments/math/Field_Day. [salthoen@umflint.edu]

Wayne State University [reported by Daniel Frohardt]

The department hosted an NSF-CBMS Regional Conference in Mathematical Sciences on Free Boundary Problems in Partial Differential Equations and Applications, May 18–22, 2003. The conference was partially supported by the IMA. • The department is concluding its periodic seven-year review. In connection with this, external reviewers **Avner Friedman** and **Wendell Fleming** visited campus in October. • The Mathematics Pipeline continues to grow under the direction of **Steve Kahn**. It incorporates the **Uri Treisman**-inspired Emerging Scholars Program as well as the Math Corps Summer Camp, and Super Saturdays for students in the Detroit Public Schools. • This Fall, the department will be working with the University Preparatory Academy and University Preparatory

High School, which are charter schools founded by **Doug Ross**. • **Lowell Hansen** is in the fourth and final year of his term as department chair. • **Leon Brown** has retired. A "Brownfest" was held last spring to celebrate his career. **Sarah Ferguson** has resigned. The personnel committee is now working to fill one opening for next year at the Assistant Prof. level. Former department chair **Bert Eisenstadt** passed away in February. There was a memorial dinner in his honor in March. • New Assistant Profs.: **Daniel Isaksen** (Ph.D. U of Chicago), post-doc at U of Notre Dame, algebraic topology; Catherine Lebiedzik (Ph.D. U of Virginia), post-doc at Universitaire Leonar de Vinci, France, applied mathematics. • Visitors this year: **Fon-Che Liu**, National Taiwan U and Academia Sinica, analysis; **Caitlin Wang**, U of California, San Diego, non-linear partial differential equations and geometry; **Suk Jong Lee**, Chungbuk U, Korea, topology; **Bong-shin Baik**, Woosuk U, Korea, topology. • **Robert Berman** is on a leave of absence to work in the provost's office. **Robert Bruner** and **Guozhen Lu** are on sabbatical this semester. **George Yin** will be on sabbatical leave in Winter, 2004. **Rafail Khasminskii** has been elected to the WSU Academy of Scholars. **John Klein** and **Peter Malcolmson** have been promoted to Full Prof. [danf@math.wayne.edu]

HSVLP *continued from page 23*

This number is down from the six requests during the 2001–2002 academic year. 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.

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 (see page 34).

Brian Snyder, LSSU

Call for Papers

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

Oakland University
Rochester, MI
May 7–8, 2004

Please send the title and an abstract (100 words or less) to:

Professor Gerard Venema E-mail: venema@calvin.edu
Department of Mathematics and Statistics
Calvin College
Grand Rapids, MI 49546
Phone: 616-526-6402 FAX: 616-526-6501

E-mail submission is preferred. Papers should normally be at most 20 minutes in length. Please include your name, affiliation, home or office address, phone numbers, and e-mail address. There will be a separate session for **undergraduate papers**. You will receive a form asking you about the equipment you need for your presentation. If you have any question, please contact Gerard Venema.

The deadline for abstracts is Friday, January 23, 2004.

Undergraduate papers may be submitted until March 21, 2004. However, only those received by the January 23 deadline will be assured of inclusion in the advance program.

Nominations Sought for Awards and Offices

Nominations for the thirteenth (2004) 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 2005 and receive a $1000 check and certificate. The Section awardees for the past three years, **Steve Kahn** (WSU), **Charlene Beckmann** (GVSU)**,** and **John Fink** (Kalamazoo C), 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 Charlene Beckmann, Department of Mathematics, Grand Valley State University, Allendale, MI 49401-9403 (beckmannc21@aol.com, 616-331-2066). **Deadline for completed dossiers is January 1, 2004**. Further information and copies of the nomination forms can be found on the Section's Web site at 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 17 to **John Mooningham** (SVSU); 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 4) 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, and a Secretary/Treasurer for a three-year term.

COMMITTEES AND APPOINTMENTS

Michigan Section
Mathematical Association of America

Contact Information

Executive Committee

Chair	Steve Schlicker (04)	Grand Valley SU	schlicks@gvsu.edu	616-331-2305
Vice Chair	Scott Barnett (04)	Henry Ford CC	sebarnett@hfcc.edu	313-845-6496
Vice Chair	Gerard Venema (04)	Calvin C	venema@calvin.edu	616-526-6402
Sec/Treas	Margret Höft (04)	UM-Dearborn	mhoft@umich.edu	313-593-5007
Past Chair	John Mooningham (04)	Saginaw Val. SU	jwm@svsu.edu	989-964-4183
Governor	Jerrold W. Grossman (04)	Oakland U	grossman@oakland.edu	248-370-3443

High School Visiting Lecture Program (HSVLP)

Co-Dir.	Brian Snyder (05)	LSSU	bsnyder@lssu.edu	906-635-2658
Co-Dir.	Evan Schemm (05)	LSSU	eschemm@lssu.edu	906-635-2633

Michigan Mathematics Prize Competition (MMPC)

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Member	Serge Kruk (04)	Oakland U	kruk@oakland.edu	248-370-3428

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Editor	Norman Richert	Math. Reviews	nrichert@ams.org	734-996-5254
Assoc. Ed.	Jerrold W. Grossman	Oakland U	grossman@oakland.edu	248-370-3443
Ad Manager	Matthew Boelkins	Grand Valley SU	boelkinm@gvsu.edu	616-331-3384

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Member	Steve Schlicker (06)	Grand Valley SU	schlicks@gvsu.edu	616-331-2305

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Member	Steve Kahn (06)	WSU	skahn@math.wayne.edu	313-577-3471

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Co-Chair	John O. Kiltinen	Northern Mich U	kiltinen@nmu.edu	906-227-1600
Co-Chair	Andrew Poe	Northern Mich U	apoe@nmu.edu	906-227-1598

Other Appointments and Contacts

Webmaster	Earl D. Fife	Calvin C	fife@calvin.edu	616-526-6403
Pub. Inf. Off.	Bob Xeras	Siena Heights U	rxeras@sienahts.edu	517-265-5832
St. Act. Coord.	Randall Pruim	Calvin C	rpruim@calvin.edu	616-526-7113
AMC 8 Co-Dir.	Kristina D. Hansen	U of Mich-Flint	khansen@umich.edu	810-762-3304
AMC 8 Co-Dir.	Ricardo Alfaro	U of Mich-Flint	ralfaro@umich.edu	810-762-3247
WAM	Toni Carroll	Siena Heights U	toni@alpha.sienahts.edu	517-264-7658
MiSMA	Matthew F. Wyneken	UM-Flint	mwyneken@umich.edu	810-762-3313
Liaison Coord.	Robert Molina	Alma C	molina@alma.edu	517-463-7197
Archivist	John W. Petro	Western Mich U	john.petro@wmich.edu	616-387-4591
MCTM Rep.	Renate McLaughlin	UM-Flint	RMcL@umich.edu	810-762-3177
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