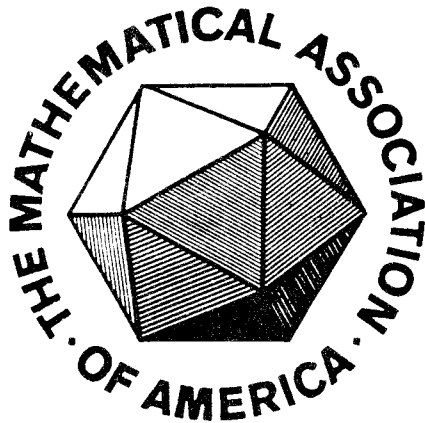


IOWA SECTION MAA



NEWSLETTER

VOLUME IX

NO. 1

Edited by Donald V. Meyer

October 1992

THE GOVERNOR'S REPORT: LYNN OLSON

The Board of Governors met in Quebec, Canada, on August 15 in conjunction with the International Congress on Mathematical Education. (I certainly wish I had studied French.)

As this was my first board meeting I was anxious to see how they would complete a huge agenda in the time allotted. President, Deborah Tepper Haimo quickly moved the meeting over routine issues so that the group was able to discuss more substantive issues. Both she and the Executive Director, Marcia Sward seem to be quite effective leaders.

Indications are that there is an increase in the popularity of the publications of the Association. The sales are about 20% ahead of last year. The reasons seem to be the quality of materials and timely information about new publications. Seven new books are scheduled for publication this fall and MATH HORIZONS, a new quarterly magazine for undergraduates and advanced high school students, is about to be launched (pending NSF support). In March, the Association will begin publishing UME TRENDS. I would also like to note that at the Annual Meeting in San Antonio the MAA will celebrate the Centennial of the MATH MONTHLY.

Don Kreider finished his term as Treasurer and is replaced by Jerry Porter. President Haimo praised Kreider for his professional expertise in organizing and managing the budget. In 1991 we had a surplus of over \$500K in a budget of \$5.5 million. Almost \$1 million was received in grants.

Everyone from the National Office is quite happy they are near the "action" in Washington, D.C. With the location of an AMS office in the headquarters complex, there seems to be a strengthening of the association with AMS as there is with NCTM, AMATYC AND SIAM especially concerning educational issues. Two technological changes that are currently taking place are expanded E-mail access and a new computer installation with data base conversion.

The "hot" topic, though, was the working draft (3rd) of the MAA STRATEGIC PLAN which was written by Lynn Steen and President Haimo but based on input from the Strategic Planning Task Force. The proposed mission statement reads "To advance the mathematical sciences in higher education." With this mission there are four major program goals in the areas of Education, Professional Development, Students and Public Policy. In addition to program goals there are operational goals for Sections, Publications, Governance, Membership and Finance. The program goal in the area of Education is to "Stimulate effective teaching, learning, and assessment in the mathematical sciences." To say the least, the word "assessment" caused a bit of discussion. Based on the discussion the statement will be revised. If you have additional interest in the plan please contact me. If the demand is not too great I will send you a copy.

Hope to see some of you at the Annual Meeting in San Antonio. Also, if you have any concerns that I should pass along to the Association please contact me.

GREETINGS FROM OUR CHAIR: RONALD K. SMITH

Midterm is that time of year when papers on my desk begin their semiannual avalanche to the floor. I'm sure that I could handle it all if it weren't for the exponentially increasing input and bounded output function at my office. With an understanding of the many things competing for your time, let me share with you briefly two thoughts.

(1) There are two things that all of us who are reading this newsletter have in common. We appreciate the beauty of mathematics, and we are concerned with conveying that view to others. For me, being a member of the Iowa MAA is important because it brings these two threads from each of our lives and weaves them into a whole. Membership helps to put my contribution into perspective as a part of the tapestry of the mathematical community. In particular, I find participation in the annual Section meetings important because that contact keeps the mathematical fire alive and lets me know that I am not alone. I hope that all of you will mark your calendars now for the spring section meetings April 16-17. Last year's meetings saw a number of presentations on cooperative learning, alternate methods of assessment, computer aided instruction, and a solid program of interesting mathematical ideas. This year, with your participation, that fine tradition will continue. I hope to see you all in Decorah!

(2) Last August, I was invited as chair of the Iowa MAA to attend the Governor's

Conference on Mathematics Education in Des Moines. The conference featured participatory demonstrations dealing with several aspects of the NCTM standards for mathematics education. I was very impressed by the seriousness of the teachers who were there and the determination to implement what amounts to fairly radical changes in the way that mathematics is presented and learned. I believe that every one of us needs to be aware of the standards. We need to be in touch with students who come through the system. We need to know what kinds of expectations about mathematics classes that the students will have. Also, some of the new techniques are really worth using. If we are to make mathematics available to a broader spectrum of students, we are going to have to understand where they are coming from mathematically. It is not good enough to stand holding the firehose of college mathematical education and expect anyone who wants to know about mathematics to line up for a drink! For more information or copies of the standards, see your mathematics education colleague or contact the National Council of Teachers of Mathematics, 1906 Association Drive, Reston, VA 22901. Phone 703-620-9840.

Good luck with the rest of the semester!

SPRING MEETING ANNOUNCEMENT: REGINALD LAURSEN

The Iowa Section of the MAA will be held at Luther College April 16-17, 1993. The statisticians will not be formally meeting with us but IMATYC will. The national officer who will be with us (with 99% certainty) is Keith Devlin of Colby College, editor of FOCUS.

Get yourself and your students preparing papers for this meeting. Papers can be on almost any topic including pedagogical ideas. **What would you like to see at the section meeting?** Please forward any program suggestions to:

Reginal Laursen
Luther College
Decorah, IA 52101
(319) 382-1171
e-mail: laursen@luther.uni.edu

SECRETARY'S REPORT: DAVID OAKLAND

The 1992 Iowa Mathematics Meetings were organized by Ron Smith and held at Graceland College on April 24-25. There were 58 paid registrants and at least 21 additional students and speakers. Invited speakers were Gerald Alexanderson and A.M. Fink. Seven student papers were presented Friday afternoon; fifteen papers were

presented Saturday afternoon.

Alex Kleiner presided at the business meeting. Governor Anne Steiner reported on several MAA activities. Lynn Olson was announced as the newly elected Governor. Math Awareness Week activities were discussed. Student paper awards were presented to Lawrence Paylor, Mason City High School and NIACC, Jason Golish, NIACC, and Russell Chalfant, Drake. The first Distinguished Teaching Award was presented to Bob Hogg, U of Iowa. Bob was given a \$50 check and was nominated to the MAA for consideration for the national Distinguished Teaching Award.

Reginald Laursen, Luther College, was elected Chair-elect. The 1993 meeting will be at Luther College on April 16-17.

Officers:

Lynn Olson (Wartburg)	Governor
Ronald Smith (Graceland)	Chair
Reginald Laursen (Luther)	Chair-elect
Alex Kleiner (Drake)	Past Chair
David Oakland (Drake)	Sec-Tres
Donald Meyer (Central)	Editor
Catherine Gorini (Maharishi International University)	Student Chapt. Coordinator
Robert M. Buckingham (Waverly)	AHSME Regional Coordinator
George Trytten (Luther)	Information Officer

Treasurer's report:

Balance Dec. 31, 1991: \$1402.52.

Receipts: Interest \$35.23; national dues rebate \$320; registration \$290; exhibitor \$100.

Expenses: F'91 newsltr \$287.58; S'92 newsltr \$126.63; Meeting costs \$80; Award \$50.

Balance October 25, 1992; \$1603.54.

Book sales at spring meeting: \$711.05.

CAMPUS NEWS

BRIAR CLIFF COLLEGE: (Sister Michelle Nemmers Reporting) Perhaps news of our conference for approximately 350 young women, grades 7, 8, 9, would be of interest. The goal of this one-day conference is to motivate girls to continue their study of mathematics and the sciences throughout their high school years.

Briar Cliff College, in cooperation with the local community college, is sponsoring WINGS 1993 (Young Women Investigating Science/Mathematics) to be held on April 23, 1993. It will be similar to WINGS 1992 in that there will be a focus speaker and breakout sessions available, with input from resource women whose careers reflect a mathematics/science background. Parent/teacher sessions run concurrently with the

student program. Women leaders from the area business community are our guests for lunch. A technological component, executed by Briar Cliff's Mass Communications Department and a local music company, make the conference unique.

Our seventeen member planning committee is hard at work brainstorming and negotiating for a renowned focus speaker. WINGS 1992 featured a female astronaut from NASA.

CENTRAL COLLEGE: Professor Allen Hibbard attended the NSF sponsored workshop, "A Computer on Every Desk: Implications for Mathematics Courses," at Ithaca College during the first week of June. He presented a workshop paper entitled An Application of Mathematica in Modern Algebra. Hibbard also conducted a local one week seminar at Central College on the use of Mathematica for faculty in the Science Division.

Professor Robert Franks completed the Ph.D. degree at Iowa State University under the direction of Professor Rex Thomas, writing a thesis entitled Effectiveness of training on algorithms versus notation for indirect addressing comprehension.

Professor Steve Ratering completed the Ph.D. in computer science at the University of Minnesota in August of 1992. His thesis title is Goal Directed Robot Navigation in a Known Environment with Unknown Stationary and Moving Obstacles. In October, Ratering presented a paper "Robot Navigation in a Known Environment with Unknown Moving Obstacles" to the American Association for Artificial Intelligence Fall Symposium on Applications of AI to Real World Autonomous Mobile Robots held in Cambridge, Massachusetts.

In May of 1992, Professor Thomas Iverson was honored with an Outstanding Performance Award in the area of Institutional Service given by Central College.

CLARKE COLLEGE: The Mathematics, Computer Sciences, and Biology Departments at Clarke College have received an NSF ISLI grant to initiate Project ELECT (Effective Learning Environment using Computer Technology), a computer classroom with ten IBMs and teaching station, authoring station, and portable classroom unit. Beginning classes are the first to take full advantage of this system which includes Mathematica for Precalculus and Calculus students.

To prepare for their work in the ELECT Lab, Sisters James Marie Gross and Carol Spiegel attended two workshops during the summer:

Mathematica Across the Curriculum at Vanderbilt, and
Technology Strategies Workshop at Ohio State.

COE COLLEGE: Roger Johanson, Associate Professor of Teacher Education, had a Fulbright to Costa Rica last spring. He did research on Costa Rica's program of using computer instruction with LOGO in the elementary schools.

Cal Van Niewall took over as Chair of the Department of Mathematics and Computer Science last January.

Van Niewaal will have a sabbatical leave this spring. He is planning to work at revising calculus instruction at Coe. The administration has approved installing a computer lab/classroom for use in mathematics instruction at Coe.

Graduating Seniors 1992 --

- 1 math/computer science double major
- 2 additional math majors
- 15 additional computer science majors
- 1 computer science minor
- 6 math minors (2 of whom were computer science majors)

Coe is continuing to experiment with using graphing calculators in precalculus mathematics. Charles Lindsay is using TI-81's with his Algebra and Trigonometry class this fall.

Coe has replaced its common syllabus core course for freshmen with the "Freshman Seminar." Each department designates one section of an appropriate freshman level course as a Freshman Seminar. Enrollment is limited to incoming freshman who must enroll in one freshman seminar section of their choice. The mathematics department selected one section of calculus as a freshman seminar. The freshman seminar classes have an additional writing component (including a portfolio) and students are required to attend certain fine arts events with their classmates and instructors. Cal Van Niewaal is teaching this special class.

DORDT COLLEGE: The Dordt College mathematics department is using the Derive software program as a laboratory tool in the mainstream calculus and business calculus classes. Students use Derive in laboratory sessions held once a week for one hour, using a lab manual written by Professors Calvin Jongsma and Arnold Veldkamp and student Michael Vander Berg during the summer of 1992.

Professor Arnold Veldkamp attended two NSF workshops dealing with the Derive software program during the summer of 1992. The first was at Messiah College in Grantham, PA, the second at Ohio State University. At these workshops, Veldkamp continued Dordt College's effort to integrate Derive into the beginning calculus and linear algebra classes.

Professor Wil Alberda has made the electronic spreadsheet an integral part of his elementary statistics class. The students, 55 in number, use Lotus 1-2-3 on Dordt College's UNIX system to do homework and project assignments.

5 Mathematics majors, 9 Computer Science majors, and 3 Management Information Systems majors graduated from Dordt College in May of 1992.

DRAKE UNIVERSITY: Luz De Alba has returned from her sabbatical spent at the Institute for Mathematics and Applications at the University of Minnesota and at the College of William and Mary.

Milan Randic is recuperating from by-pass surgery on October 5. He spent several weeks this summer at Rugjer at Boskovic Institute in Zagreb, Croatia.

Patsy Fagan was granted tenure. Bernadette Baker was promoted to Assistant Professor.

Grant Izmirlian, ABD-Wisconsin-Madison, and 1984 graduate of Drake, is a Visiting Assistant Professor. His principal interest is probability theory. Grant made student presentations to the 1983 and 1984 Iowa Mathematics meetings.

Ken Kopecky is a participant in the JOVE (Joint Ventures) initiative of NASA. He spent the summer of '92 at the Jet Propulsion Laboratories in Pasadena and is negotiating the purchase of some computer graphics hardware and software.

Guo Xiaofeng, Professor of Mathematics, Xinjiang University, Peoples Republic of China, is a visiting research scholar in our department for six months. His interests are graph theory and combinatorics.

Nenad Trinajstić, Rugjer Bosković Institute, Zagreb, Croatia, will be a visiting research scholar during the month of November.

The Department Colloquium resumed this fall. Both Professors DeAlba and Kopecky have presented some of their recent work. Visiting speakers this fall are Charles Johnson, the College of William and Mary, on October 23 and Richard Guy, University of Calgary, on November 20. (Prof. Guy will also visit Grinnell College beginning November 18.)

ELLSWORTH COMMUNITY COLLEGE: (Maria Hoalt Reporting) I was chosen to participate this summer in the NASA ASEE Summer Faculty Program at the NASA Lewis Research Center. My fellowship experience was to work in the Office of Educational Programs. My summer project was to assist in the development of a Mars based educational curriculum centered around mathematics. To complete this task, I investigated the planet Mars.

As a continuation of my summer experience, I was included as a participant in the Mars Observer Launch Conference at the NASA Kennedy Space Center, Florida. The conference was held September 13, through September 16, 1992. Scheduled events for the conference included a briefing of the Titan III launch preparations and operations of Cape Canaveral. As well as a VIP tour of the Kennedy Space Center, which included the history of the United States space flight program.

Educators were able to share ideas and materials related to space science education during the conference.

Mars Observer personnel provided an overview of its mission from design to launch. We were scheduled to view the launch but because of technical problems it was postponed until September 23, 1992.

GRACELAND COLLEGE: **Jim Hawley** attended the Digital Educational Symposium at Drake on March 26. He also attended the Teaching Standards Conference and Fall Conference for Mathematics Teachers at UNI September 19 and 20. He has recently been involved in consulting in connection with the dissertation research of a colleague from the education department. **Steve Murdock** returned from his last year's leave of absence at the University of Iowa. Congratulations are in order as he just passed his last comprehensive for his Ph.D. in Mathematics Education. **Ron Smith** began his tenure as chairperson of the Iowa section of the MAA this year. In August, he attended the

Governor's Conference on Mathematics Education in Des Moines. He has also been involved in computer consulting for two local newspapers.

IOWA STATE UNIVERSITY: Department of Statistics:

1. Lecture Series

The regular weekly Statistical Laboratory Seminar Series this semester, held on Wednesdays at 4:10 p.m. in 319 Snedecor Hall, includes the following titles through October:

- | | |
|-----------|---|
| August 26 | TQM within a university/Statistics Department.
Dean L. Isaacson, ISU |
| Sept. 2 | The home-court advantage: How large is it and does it vary from team to team? David Harville, ISU |
| 9 | A second-order correct bootstrap procedure for the mean of lattice variables. Soumendra Nath Lahiri, ISU |
| 16 | A natural extension of a stepwise Bayes procedure. Elichiro Funo, Department of Economics, Kanto Gakuin University, Yokohama, Japan |
| 23 | Some problems in ROC studies. Shashikala Sukhatme, ISU |
| 30 | Bayesian monitoring for clinical trials. Thomas A. Louis, Biostatistics Division, University of Minnesota School of Public Health |
| Oct. 7 | Estimation of the parameters of the nontruncated marginal of a truncated bivariate normal distribution. Richard A. Groeneveld, ISU |
| 9 | Statistical inference for heavy tailed distributions. Wei Wu, ISU |
| 14 | Robust tests for survival data involving a single continuous covariate. Michael P. Jones, Biostatistics Division, Department of Preventive Medicine, University of Iowa |
| 21 | Multitiered experiments and their analysis. C. J. Brien, University of Wisconsin |
| 28 | Title to be announced. Mack C. Shelley II, ISU |

This year's George Zyskid Memorial Lecture will be given by Persi Diaconis, Department of Mathematics, Harvard University, at 8 p.m., Tuesday, November 10 in W142 Lagomarcino Hall at Iowa State University. His talk is entitled "The search for randomness." Professor Diaconis will also give a Statistical Laboratory seminar, "Analysis of random algorithms," on Wednesday, November 11 in LeBaron Auditorium.

2. Professional Activities

W. Robert Stephenson is currently serving as president of the Iowa Chapter of the American Statistical Association.

Kenneth J. Koehler received a Service Recognition Award from the American Statistical Association Council of Chapters in August 1992.

When Oscar Kempthorne was invited to give a lecture in the Distinguished Statisticians Lecture Series at Pennsylvania State University, the mayor of Harrisburg issued a proclamation declaring October 8, 1991, as Dr. Oscar Kempthorne Day and the lieutenant governor of the Commonwealth of Pennsylvania sent official greetings. His proclamation read in part: "Educators like Professor Kempthorne play a vital role in fashioning the leaders of tomorrow. They touch the lives of thousands of our young people and are instrumental in providing them with the necessary skills to become a viable part of our workforce . . ."

Mack C. Shelley II and Stephen B. Vardeman are co-authors of new editions of two textbooks: American Government and Politics Today: The Essentials, 1992-93 edition, and A First Course in Statistics, 3rd edition, respectively.

3. Awards, honors, promotions, leaves, resignations, additions

In 1991 Jerome Sacks, for the third consecutive year, received a USDA-ARS Certificate of Merit and a cash award for superior performance. William Q. Meeker, Jr. received a 1991-92 Teaching Excellence Award at Iowa State in December. W. Robert Stephenson received an ISU Foundation Award for Mid-Career Achievement in Teaching in the spring 1992. Roy Hickman received a Faculty Citation in June 1992 in recognition of long, outstanding, and inspiring service.

John Stufken has been promoted to associate professor, with tenure. Mervyn Marasinghe is on faculty improvement leave, working at the School of Statistics, University of Minnesota, from June through December 1992.

Carl Roberts returned from faculty improvement leave on August 31, 1992; he had been at the University of Leiden, the Netherlands. Vincent A. Sposito died in October 1991 after a 20 year battle with cancer; he had been at Iowa State since 1966, completing M.S. and Ph.D. degrees in statistics and then joining the faculty. His fields of specialization were mathematical programming and statistical computing.

Roy Hickman, who chose early retirement and then agreed to supervise the Statistical Laboratory Survey Section on temporary basis until a replacement was found, was honored by a dinner and reception on October 23 and 24. Administrative responsibilities for the Survey Section have been assumed by Sarah Nusser, who returned to the campus as assistant professor last May. She received M.S. and Ph.D. degrees in statistics at ISU and had been working for the Procter & Gamble Company.

Franz Hering was a visiting professor in January and February 1992, on leave from his position as head, Department of Statistics, Universität Dortmund, in Germany. Visiting scholars spending three-week to two-month periods here in the past year included Paul Kvam, now with Sandia Corporation; Caryn Thompson, statistics doctoral

student at Oregon State; Yael Pozin, statistician with the Ministry of Agriculture, Extension Service, Tel-Aviv, Israel, and Nhora Martiniz R., assistant professor, Universidad Nacional de Colombia.

4. Student Information

In the 1991-92 fiscal year, 7 students received B.S. degrees in statistics. There were 165 graduate students in statistics at ISU in that period. Forty-two received M.S. degrees (including two in operations research) and 7, Ph.D. degrees (including one with co-majors--in ecology and evolutionary biology and in statistics).

ISU Graduate College Teaching excellence Awards were given to Bryan Olin (fall 1991) and to Marie Coffin and Laura Schillmoeller (spring 1992), recognizing outstanding contributions in the teaching of undergraduate students while working toward degrees. The Department of Statistics presented its Dan Mowrey Consulting Excellence Awards to Tom Loughin and Bill Harter last May and recognized outstanding contribution in statistical computing by a new award, in memory of Vincent A. Sposito, given to Phil Iversen.

Todd Sanger received the 1992 George W. Snedecor Award as the most outstanding Ph.D. candidate in the Department of Statistics among students completing the doctoral preliminary examination during 1991.

Sara Peterson was selected as the first recipient of the Vera David Graduate Fellowship in Statistics last summer. The award is designated for a woman who has just completed her first year of graduate studies in statistics at Iowa State. Also chosen during the summer was Jaehyung Lee as the first Ph.D. student to receive an award from the new Holly and Beth Fryer Scholarship Fund. Holly Fryer, professor emeritus of statistics at Kansas State (and former director and department head), received the first Ph.D. degree in statistics conferred at Iowa State.

LORAS COLLEGE: Dr. Marvin Papenfuss, after 20 years of teaching at Loras has proceeded north and west to the frontier. He has accepted a teaching position at the University of Alaska, Southeast campus Juneau.

Two new teachers have been added to the department (Mathematics and Computer Science) so once again we are full strength--10 full-time faculty.

Dr. Douglas McDoniel was hired as Assistant Professor. Doug, originally from California, has the Ph.D. in Mathematics from the University of Minnesota. After a post-doctoral stay at M.I.T. in Boston, he taught at Moorehead State in Minnesota.

Also an Assistant Professor, Dr. Daniel Willis joins us from Southern Illinois University at Carbondale. Dan did the Ph.D. at the University of Iowa, originally from upstate New York. His area of expertise is Applied Numerical Analysis and he is currently working on a text book in that subject. Dan is studying the developing use of technology in the classroom and especially uses for DERIVE. He presented an invited talk at the Illinois CTM in Peoria, Oct. 1991, on "Some Thoughts on the Teaching of Calculus." He is currently experimenting in Calculus I with an intuitive, inductive, applied approach to the subject matter.

Elsewhere in the department: Don Marxen is assisting this semester in a Freshman

Honors Seminar on Greek Civilization and Mathematics. He is also involved with a new weekly Freshman Orientation Seminar. Sr. Marlene Pinzka, O.S.F., attended the N.S.F. workshop on Calculus Reform, sponsored by the University of Iowa and Iowa State University, at University of Wisconsin-Lacrosse, July 6-10, 1992.

The first Mathematics Camp for thirty talented junior high school females was held at Loras College, June 21-26, 1992. Brenda Tuomi Litka served as director of the camp and Dr. Donald Marxen and Sr. Marlene Pinzka were two of the faculty members. The students spent a week on campus studying mathematical modeling through graph theory, probability and statistics; stereotypes and societal pressures concerning women in mathematics; and engaging in a variety of problem-solving activities. The camp was made possible by a grant from U.S. West Communications.

Commencement in May saw the graduation of 11 seniors who majored in the department. Six were Mathematics majors (about half in secondary education) and six finished in Computer Science (one double major). Much energy was spent by the whole staff in the process of hiring.

LUTHER COLLEGE: Joyce Becker is very active in ICTM in numerous ways, most notable being re-elected as Vice President and being appointed Program Chair for the State Meeting in Feb. 1993. She also has been active in Mu Alpha Theta, National Mathematics Honor Society and was just installed as Pres-Elect, preceding a two year term as **National President**. She also represented Luther College at the Governors Conference for Math Education Reform and at the UNI Math Methods Conference. She is on the planning committee of the 1993 ELCA Diversity Conference at Luther College on "The Lack of Women and Minorities in Mathematics and Science."

Richard Bernatz presented a paper entitled "Finite Analytic, Regular Grid Solution of Turbulent Fluid Flow and Heat Transfer" at the Second International Conference on Advanced Computational Methods in Heat Transfer held in July, 1992 in Milan, Italy.

Gordon Brill presented a paper entitled "Forecasting Hurricane Tracks Using the Kalman Filter" at the joint meetings of the American Statistical Association in Boston, August 1992.

Reginald Laursen was elected Chairman-Elect of the Iowa Section. He also co-presented a workshop entitled "Home-Grown Software for Calculus Instruction" at the Third Annual Conference on College Mathematics: Teaching, Technology, and Applications, held in Grand Rapids, March, 1992.

Alan Macdonald was co-director of Luther College's Nottingham (England) program last year. He gave two invited lectures at the Department of History and Foundations of Mathematics and Science, at the University of Utrecht, The Netherlands. He will have a paper entitled "On the Marzke-Wheeler and Desloge Constructions" appear in Foundations of Physics Letters.

George Trytten presented a paper entitled "Alexandria: Mother of Mathematics" at the North Central Regional Conference of the NCTM in January, 1992. George will also be retiring after this year and will join Don Pilgrim in Arkansas.

PEW FOUNDATION SPONSORED UNDERGRADUATE RESEARCH: Bril and Bernatz worked with PEW fellows in research during the summer of 1992.

Calculus Reform: In July, 1992, Becker, Laursen and Walt Will participated in an NSF funded workshop at St. Olaf college in preparation for class testing reform materials developed by Arnold Ostebee and Paul Zorn entitled "Calculus from a Graphical, Numerical, and Symbolic Point of View."

Other Departmental Activities: We are currently running a faculty seminar on "Fuzzy Sets." We have a functioning Math Club and a Pi Mu Epsilon chapter. Our modeling team of Jennifer Clark, Eric Melear and Enwei Xie received an Honorable Mention designation for their participation in the Mathematical Contest in Modeling, 1992.

Department Statistics: We graduated 23 mathematics or math/statistics majors and 12 computer science majors of which five were joint.

Open Position: We have a tenure track position open for Fall 1993, with preference given to applicants with a concentration in Algebra. If you know of good candidates with good teaching credentials, please inform them and us.

MAHARISHI INTERNATIONAL UNIVERSITY: The MIU Mathematics Department has switched calculus texts to the new Harvard Consortium text. Dave Streid, Anne Dow, and Cathy Gorini attended a workshop at Harvard in June to learn about the text. So far, everyone seems to love the text--math faculty, students, and faculty in physics, engineering, chemistry, and computer science. This is also the first year we have required students in the calculus courses to have graphing calculators.

Eric Hart continues to be very active in the area of mathematics education. he taught two one-week mathematics education workshops in July, at Boston College and Rutgers University; these workshops were for master high-school teachers. Eric is also part of a six-university consortium that has begun working on a five-year NSF-funded project to develop an entire secondary school mathematics curriculum that will be published by Glencoe. He will be working on the discrete math part of the curriculum.

John Price is nearing completion of a commercial software package that manages risk option portfolios for financial institutions; marketing of the product, entitled Option Manufacture Technology, has begun in Australia.

Paul Corazza is now consulting part-time for Bell Labs in Naperville, IL.

In the spring, Cathy Gorini attended a ten-day geometry conference and workshop at Northeastern University sponsored by COMAP.

The MAA student chapter has gotten off to a great start this year, thanks to the organizing power of the president, Ivica Kalicanin. Activities this year have included two general audience math lectures and weekly Putnam Exam practice sessions.

TEIKYO WESTMAR UNIVERSITY: Dr. Ya Li has replaced Marvin Gamble in the mathematics department. Dr. Li had been teaching at Utah Valley Community College. Marvin Gamble is pursuing a Ph.D. in Mathematics Education at the University of South Dakota. Robert King, Math Chairman, spent the summer teaching at Cornell University.

To encourage students who are enrolled in this semester's College Mathematics course to attend class, the following policy is being implemented.

If a student has NO absences for the days between tests, three percentage points are added to that test score for that student.

If one day is missed, two percentage points will be added to their test score.

If two days are missed, one percentage point will be added to that score.

There are three tests and a comprehensive exam given in the course. The three tests account for 40% of the student's grade; therefore, the maximum net effect on a student's grade would be approximately 1%.

We hope that giving the student a small reward every now and then will encourage students to attend class. Ivan Pavlov would be proud.

UNIVERSITY OF DUBUQUE: Julia K. McDonald, Associate Professor of Mathematics, was one of approximately 350 high school and college teachers selected to read the 1992 AP Calculus Exam. The reading of 93,000 calculus tests took place June 13-18 at Clemson University in South Carolina.

Dr. McDonald will present a paper at the 1993 AMS-MAA Joint Meetings held at San Antonio, January 13-16. The topic of the paper is the role of cooperative learning in a college remedial math class.

THE UNIVERSITY OF IOWA, DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE; A year slips by very quickly and it hardly seems possible that it can be time to report to you on the happenings of the last year. Several changes have occurred since the last time I reported, and one of the most important is the change in the chairmanship. **Dick Dykstra** completed his three year term as chairman and stepped down from the position at the beginning of the fall term. **Bob Hogg** has taken up the reins again and is getting used to the bustle of activity that goes with the job. Bob is an active proponent of the Total Quality Management movement and promises to push for implementation of TQM within the University.

We've seen the arrival of several excellent new faculty members and it has been great having them around. In particular, **Elias Shiu** joined us last January from the University of Manitoba. Elias is a senior actuary who earned his Ph.D. at the California Institute of Technology in mathematics. Elias has a strong reputation in the field of actuarial science and we are delighted to have him join us. **Bruce Jones** is our other new actuary and we are very pleased to welcome Bruce to our faculty. Bruce has just completed his Ph.D. at the University of Waterloo in actuarial science and is a fellow of the Society of Actuaries. Bruce's wife, **Kelly McKeating** is teaching an actuarial science course for us this year as a visitor.

We are also extremely pleased to welcome two new statisticians to the Department. **Joseph Lang** arrived this August from the University of Florida where he earned his Ph.D. under the direction of Alan Agresti. Joe works primarily in the area of categorical data, but has lots of other interests as well. Our other new statistician is **Jens**

Praestgaard who joins us from the University of Washington. Jens has lots of interests including empirical processes, statistical computing and actuarial science. Another person we should mention is not exactly a new face, but we are still very pleased to have him join the Department. **Mike Suelzer** has been named as the Director of the Statistical Consulting Center and will manage consulting operations within the SCC. Mike completed his Ph.D. at the University of Iowa in 1990(?) in the Applied Mathematics Program.

The renovation of MacLean Hall has finally been completed for which we are all relieved and grateful. The renovation has made the building much more pleasant and usable, but enduring the noise and dust was at times difficult. As part of the renovation, the Departmental Office has moved from the first floor to the ground floor, with the old Departmental Office being converted to new faculty offices. The building has acquired a new Instructional Technology Center (a room full of computers and workstations for students to use), two new classrooms, a seminar room, a conference room and an emeritus faculty room as well as 29 additional faculty offices.

Hannes Ledolter served as program chair for the national joint meetings of the IMS, ASA and Biometrics Society this past year. This was an enormous job with nearly 4000 people attending these meetings.

Tim Robertson has returned with his developmental leave at Bowling Green where he was the Eugene Lukacs Professor. Tim organized a very successful conference in order restricted inference during his leave.

Dale Zimmerman and **Marianthi Markatou** have been awarded National Science Foundation grants during the past year. **Kung-Sik Chan** and **Dick Dykstra** were supported by the NSF this year from awards made in previous years.

Dick Dykstra was program chairman of the General Methodology Section at the joint national meetings. This involved organizing six invited sessions, 18 contributed sessions and one poster session.

Bob Hogg has added several additional honors to his already impressive list. In particular, he was given the Iowa MAA's Award for Excellence in Mathematics Teaching this spring, was presented with the American Statistical Association Founders' Award in August of 1991, and given the prestigious Regents' Award by the University in May of 1992.

Bob has also agreed to organize the 1994 winter meetings of the American Statistical Association.

Dale Zimmerman was awarded tenure and promoted to associate professor during 1992. Dale also served as President of the Iowa Chapter of the American Statistical Association during the past year.

Martin Appel has been awarded a multi-year grant by the ONR to pursue studies in percolation theory.

Marianth Markatou is spending this year on leave at Columbia University in New York City.

Jim Broffitt was the primary organizer of the 27th Actuarial Science Conference meetings held this August on the University of Iowa campus. **Bob Hogg** was the after dinner speaker for the conference on Friday night.

Jon Cryer was named as Associate Editor of the Journal of the American Statistical Association.

Special Speakers

Our **Allen T. Craig Lectures** were given on March 18 and 19 by **Herbert Robbins** of **Columbia University**. He spoke on "Big N, little N: minimizing the ethical cost of a clinical trial," and "Estimation under biased allocation."

The program in Quality Management and Productivity in our department was fortunate to be able to sponsor **George Box** of the **University of Wisconsin** to give the Ida Beam Lectures in April. His topics were: "Quality improvement--the new industrial revolution," and "Issues in control as it relates to quality."

UNIVERSITY OF NORTHERN IOWA: Changes--Mathematics and Computer Science are now separate departments. Carl Wehner retired after 31 years of service. The Mathematics Department moved back into Wright Hall last spring after a complete renovation of the building.

New faculty--Maura Mast is a new member of the Mathematics Department. Maura received a Ph.D. from the University of North Carolina - Chapel Hill.

Visiting faculty---Mr. Yue Quinggi is a visiting scholar-in-residence at UNI during the academic year 1992-93. He is a faculty member at Hebei Teacher's University in Shijiazhuang, PRC.

Curricular Activities--John Cross, Greg Dotseth and Augusta Schurrer are continuing to work on the use technology in calculus (IT-81, Derive, Micro-Calc). Department majors are being revised.

A new Masters of Arts degree in Mathematics Education is being developed for middle grades teachers. The program will be set in the world of classroom practice and will help teachers implement new content and teaching strategies.

Faculty activities--Hyo Myung was an invited speaker at the "Workshop on Nonassociative Algebras," University of Oviedo, Spain, in July and at the "Conference on Jordan Algebras," Oberwolfach, Germany in August. He also became Editor-in-Chief for "Nova Journal of Algebra and Geometry" which is published by Nova Science Publishers, New York.

Michael Millar gave a three-week series of lectures in May at Hebei Teachers University in China on "Constructibility in Greek Geometry." He presented the talk "The Renaissance: The Mathematical Awakening" in April at Cameron University and in August at the International History and Pedagogy of Mathematics meeting in Toronto.

Syed Kirmani presented talks at the IMS meeting in Cincinnati in March and at the

Actuarial Research Conference in Iowa City.

John Cross, Joel Haack and Augusta Schurrer attended the Fourth Annual Conference on technology in College Mathematics in Portland, OR.

Russ Campbell presented a paper at the Evolution Meeting at Berkeley in June.

Maura Mast gave two talks for the Differential Geometry seminar at the University of Iowa (Closed Geodesics in 2-step Nilpotent Lie Groups: A Characterization of Resonance in 6-dimensional 2-step Nilpotent Lie Groups).

Paul Trafton and Ed Rathmell received an Eisenhower grant for a Primary Mathematics Project that allowed them to work with 25 teachers of Grades 1-3 on introducing new teaching strategies into the classroom.

Faculty honors--David Duncan received the "Award For Faculty Excellence" from the Board of Regents last April.

Department Graduates--(Spring 1992)

Undergraduates	
Math-Teach	25
Math-A	11
Math-B	5

Graduates	
Math	4
Elem/MS	1

WARTBURG COLLEGE: Our Department has weekly seminars on math and computer science topics, but we have no lecture series of general interest.

Wartburg College has initiated a Faculty Multicultural Global Development Program. As a part of this program Glenn Fenneman and Lynn Olson participated in a two week Mexican Seminar May 25-June 6 with most of their activities centered around Cuernavaca and Mexico City. Bill Waltmann spent the month of June in Israel, Egypt and Jordan participating in an experience equivalent to the Wartburg May Term course entitled "Archaeology and the Bible." He spent two weeks working at the Bethsaida dig site while being housed at a Jewish Kibbutz.

While on a Fall Term 1991 sabbatical leave Augie Waltmann attended several conferences and meetings including the Council of Leaders in Iowa Mathematics meeting, the NCTM Teaching Standards Conference and the UNI Fall Mathematics Conference held September 18-20. On October 8 he attended the AEA7 Mathematics Manipulatives Workshop.

Glenn Fenneman also attended the UNI Fall Mathematics Conference where he gave a talk on "Simulations" on September 20.

Augie Waltmann presided a section meeting held January 30 as a part of NCTM Regional meeting.

Glenn Fenneman attended the annual NCTM Meeting held April 1-5 in Nashville.

Milton Wikstrom completed his Ph.D. in computer science at I.S.U. in December, 1991, with a dissertation paper entitled "The Work Exchange Model: A Generalized Approach to Dynamic Load Balancing."

Glenn Fenneman, Lynn Olson and Augie Waltmann attended the Iowa Section MAA meeting April 24-25 held at Graceland and where Glenn and Lynn presented a section meeting talk.

Josef Breutzmann and Bill Slough attended the Small College Computing Symposium held at the University of North Dakota April 24-25. Bill presented a paper entitled "Using a Sentence Generator to Teach Grammar Construction."

During June 4-6 Augie Waltmann attended the Mathematics Methods Conference at Cedar Falls.

Lynn Olson was a participant in the Faculty Advancement in Mathematics (FAIM) Math Modeling Workshop held at the U.S. Military Academy at West Point July 8-18 co-sponsored by the Academy's Dept. of Mathematical sciences and COMAP. As a result of the workshop he co-authored a module entitled "Population Models with Mutualism" to be published by COMAP.

During August 13-14 Augie Waltmann attended the Governor's Conference on Mathematics Education Reform held in Des Moines. He also participated in the Iowa Mathematics Educators Conference on September 24 and then presented a paper entitled "Probability with 4th Graders-One Way" on September 25 at the UNI Fall Math Conference.

Milton Wikstrom is the lead author for two publications including "Myths of Load Balancing" which appeared in Paralleled Computing '91 by North-Holland (1992) and "The Twin Bottleneck Effect" which was just accepted for publication and presentation at the January 1993, Conference: HICSS-26 (Hawaii International Conference on System Science).

Lynn J. Olson has been elected Governor of the Iowa Section of MAA for the period July 1, 1992 - June 30, 1995.

Dr. Bill Slough resigned and then accepted a position at Eastern Illinois University in Charleston, Illinois.

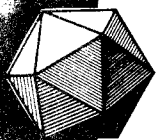
Dr. Milton C. Wikstrom has been appointed to a full-time position as an Assistant Professor of Mathematics and Computer Science.

Karen D. Sabey has been hired as an adjunct to teach two math courses in the Fall Term.

The number of graduating seniors (1991-92) in math are 20 (including seven education), stat 0, in CS and CIS 17 (eight double majors within Dept. of MA/CS and five doubles with a second major in another department. 28 total persons majored in MA/CS Dept.).

We have the Iowa Delta Chapter of Kappa Mu Epsilon national mathematics honor society (18 were initiated last March) on campus and a student chapter of the Association for Computing Machinery with about 20 students interested in computer science.

The Mathematical Association is pleased to announce



A Career Fair in the Mathematical Sciences

When?

Thursday, January 14, 1993; noon–2 pm

Where?

In San Antonio

A special event of the Joint Mathematics Meetings.

Why?

To help our students become aware of the variety of careers open to mathematically trained people.

For more information: Write for a brochure, or watch for the Joint Meetings Program in the October issue of *Focus*.

Mathematical Association of America
San Antonio Career Fair
1529 18th Street, NW
Washington, DC 20036