Iowa
Section
Newsletter
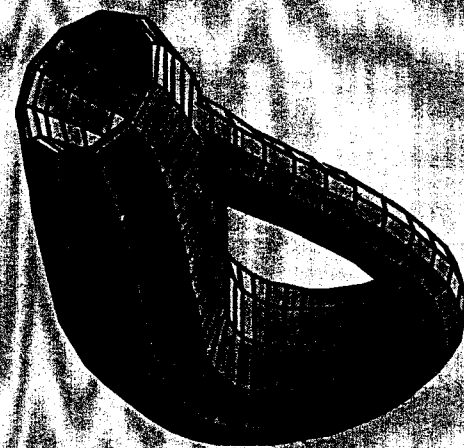
Department of Mathematics and Computer Science
Coe College
Cedar Rapids, IA 50219

Fall 1995

SPRING SECTION MEETING

Cornell College
Friday and Saturday
April 26-27, 1996

Cornell College invites you to the Spring Meeting of the Iowa
Section of the MAA on April 26-27 1996. This year the Iowa
Section of the ASA will also be meeting with us. The ASA officers
are already hard at work to develop a strong statistical component
for the meeting. The featured mathematics talks will be given by
Professor Martha Siegel of Towson State University. In addition
we have verbal agreement from Professor Joel Greenhouse of
Carnegie Mellon University to give a presentation. Professor
Greenhouse is a Biostatistician.

Please encourage your students to start thinking about the
possibility of making presentations at the section meeting. If there
is interest, we will try to arrange for Cornell students to sponsor
students who wish to stay Friday night.

I am looking forward to seeing everyone next April.

Jim Freeman
Chair-Elect

AMS-MAA Joint Meetings
Orlando, Florida
January 10 - 13, 1996

Governor's Report

The big Association news at the Summerfest in Burlington, Vermont was the restructuring of the Washington office staff. This restructuring was carried out in July of this year and involves two components. First, the make up of the headquarters staff was revised to place more emphasis on managerial level positions and less on routine clerical level duties. The second component is the contracting out of the routine membership services, such as new memberships, book orders and subscriptions. These changes are the result of a study by outside auditors on the effectiveness of the headquarters operations. The changes were approved in early July by the Executive and Finance Committees. It is expected that the membership will notice improved service when dealing with the national office on routine matters.

At the Board of Governors meeting, the issue of the selection of Department Representatives to the MAA was hotly debated. In the past, the selection of a representative from each Mathematics Department in the Section was the section governor's job. This has been done inconsistently. Some governor's were not even aware that it was part of their duties and even those who did it in a conscientious fashion, found it hard to keep the lines of communication open when no one is sure exactly what the duties of a Department Representative are. The Board voted to (1) assign the selection of Department Representatives to the National Office and (2) set up a committee to oversee the Department Representatives program. The National Office believes the Department Representatives are an important component of the MAA's mission. Each Department in the Section should be contacted by the National Office sometime in the near future regarding the appointment or reappointment of a Department Representative.

Both of the above issues are driven, in part, by a recent drop in MAA membership. All members are encouraged to make appropriate colleagues who are not members aware of the benefits of MAA membership.

On a personal note, I would like to thank my predecessor as Governor, Lynn Olson, for easing me into the office. The 164 page agenda, with a 25 page addendum and a separate agenda for the new governors' breakfast would have been a shock without Lynn's warning.

Alex Kleiner

Student Chapters

For the past five years, the MAA has sponsored a student chapter program. There are already chapters in Iowa at Clarke College, Grinnell College, Loras College, Maharishi University of Management, Simpson College, and the University of Iowa. There are many advantages to having a student chapter and more are being added all the time. These include:
- Low MAA membership rates for students ($15-20)
- Newsletter for advisors with suggestions for activities

Many schools have found that they can combine an MAA Student Chapter with their Pi Mu Epsilon chapter or other mathematics student club. For more information, contact our Student Chapter coordinator, Cathy Gorini, cgorini@mum.edu, 515-472-1107, or look in the MAA Gopher.

Twenty-five Year Certificates

The MAA has started a policy of recognizing members who have belonged to the organization for twenty-five years. They have provided the Section with a certificate for each such member. Since this is a new program, they have also provided certificates for all Iowa Section members who have been members of the Association for longer than 25 years. The executive board of the section is currently developing plans to distribute these certificates.

Wisconsin Section Meeting

The University of Wisconsin-Platteville will be hosting the Wisconsin MAA Sectional on April 12 & 13. If anyone from the Iowa Section would like additional information about the program for the meeting, please contact:

Fredic Tufte
Mathematics Department
UW-Platteville   e-mail: Tufte@UW-PLATT.edu
Platteville, WI 53818   voice: (608) 342-1943

Mathematics Awareness Week

"Mathematics and Decision Making" is the theme for Mathematics Awareness Week - 1996. This theme will enable us to explore such areas as forecasting, prediction, uncertainty, probability, and risk assessment and analysis.

We are looking for visual expressions of the theme for the theme poster and postcards. Please make suggestions by E-mail (kholmay@nas.edu), phone (301-942-9595) or fax (301-942-2777).

Kathleen Holmay
Public Information Director
Joint Policy Board for Mathematics

4

CALL FOR NOMINATIONS FOR 1996 IOWA SECTION AWARD FOR DISTINGUISHED COLLEGE OR UNIVERSITY TEACHING OF MATHEMATICS

Nominations for the fifth (1996) Iowa Section Awards for Distinguished College or University Teaching of Mathematics are now being accepted. The Iowa Section Selection Committee will choose one of the nominees for the Section Award. The awardee will be honored at the Spring 1996 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 pool of Section awardees from which the national recipients of the MAA Deborah and Franklin Tepper Haimo Awards for Distinguished College or University Teaching of Mathematics will be selected, except that one of the national winners may be selected from another source. There will be at most three national awardees, each of whom will be honored at the national MAA meeting in January 1997 and receive a $1,000 check and a certificate.

We urge you to submit a nomination if you have someone eligible and qualified in your department in order that your candidate has an opportunity to be considered for the Section Award and, if so selected, also for the national award. Even if not selected this year, it is an honor for someone to have been nominated, your department will receive recognition for its commitment to excellence in teaching, and the work done in preparing a nomination folder for your candidate is not wasted since your candidate can be nominated again in a future year. Self- nomination is not permitted.

Eligibility

- College or university teachers 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) in the United States or Canada. Those on approved leave (sabbatical or other) during the academic year in which they are nominated qualify if they fulfilled the requirements in the previous year.

- At least five years teaching experience in a mathematical science.

- Membership in the Mathematical Association of America.

5

Guidelines for Nomination

The nominees should:
- be widely recognized as extraordinarily successful in their teaching*
- have teaching effectiveness that can be documented
- have had influence in their teaching beyond their own institutions**
- foster curiosity and generate excitement about mathematics in their students.

* "teaching" is to be interpreted in its broadest sense, not necessarily limited to classroom teaching (it may include activities such as preparing students for mathematical competitions at the college level, for example, the Putnam Prize Competition or the Mathematical Contest in Modeling, or attracting students to become majors in a mathematical science or to become Ph.D. candidates).

** "influence beyond their own institution" can take many forms, including demonstrated lasting impact on alumni, influence on the profession through curricular revisions in college mathematics teaching with national impact, influential innovative books on the teaching of college mathematics, etc.

Nominations must be submitted on the enclosed "Nomination Form". Please follow the instructions on that form precisely to assure uniformity in the selection process both at the Section and National levels.

If a file on a Section awardee significantly exceeds the prescribed limits (as stated on page 2 of the Nomination Form), it will not be considered for a national award and be returned to the Section.

Please send six copies of each nomination packet to:
> Steve Nimmo, Secretary of the Iowa Section
> Morningside College
> P.O. Box 6400
> Sioux City, IA 51106

so as to be received no later than January 1, 1996.

The Section Selection Committee will select the Section awardee during January and communicate its selection to the national selection committee no later than February 1 so that the national Committee can then make its selections.

We look forward to your participation in this exciting MAA venture of taking substantive action to honor extraordinarily successful teaching. We want to see such teaching recognized at all post-secondary school levels. We depend on you to help us identify those who merit such recognition.

6

MATHEMATICAL ASSOCIATION OF AMERICA
AWARDS FOR DISTINGUISHED COLLEGE OR UNIVERSITY
TEACHING OF MATHEMATICS

Nomination Form
(Please Type)

Name of Nominee (Last name first) _____

Name of College or University _____

College or University Address _____

College Telephone (_____) _____ HomeTelephone(_____)_____

Number of years of teaching experience in a mathematical science _____

Has the nominee taught at least half time in a mathematical science for the past three years (not counting a sabbatical period)?_____

Activities relating to teaching _____

_____

_____

Publications related to teaching if any (list no more than five). _____

_____

_____

_____

Membership and significant activities in relevant professional organizations_____

_____

_____

Previous awards for teaching, if any _____

_____

Additional relevant information _____

_____

Name of nominator (last name first) _____

Address of nominator _____

_____
Signature

7

Evidence of Success in Teaching

Please describe the nominee's success in teaching by providing a narrative of the nominee's background, experience, teaching style, special contribution, and other related information not already included in the Nomination Form. Limit this portion to no more than four pages, which must be typewritten and double-spaced on one side only of an 8 ½ x 11 paper. Type size, whether word processor or typewriter, should be no smaller than 12 (pica) in size.

Your are also required to submit no more than 3 pages of evidence to document the nominee's extraordinary teaching success. Appropriate documentation may vary greatly from institution to institution but may include summaries of peer or student evaluations of teaching, increases in numbers of mathematics majors or Ph.D. candidates, or student successes in mathematical competitions.

In addition, you may include a maximum of five letters of recommendation (limited to one page each) with at least two from the nominee's present or former students and at least two from colleagues (one of whom could be the department chair).

Curricula vitae should not be submitted since the information from them relevant to teaching success should be included in the Nomination Form and the other documents mentioned above.

Campus News

Briar Cliff College

Craig Kalicki
kalicki@briar-cliff.edu

The Mathematics Department at Briar Cliff has a current staff of 2.5 FTE. Chuck Shaffer and Craig Kalicki are full time professors. Beth Westpfahl is a half-time assistant instructor for developmental courses. Sr. Michelle Nemmers OSF, a long-time member of the department, is retired but engaged in other campus responsibilities.

In May of 1995, we graduated 4 mathematics majors. Two have gone on to graduate programs in mathematics and statistics, one is in an MBA program, and the fourth is teaching. We currently have 10 junior or senior mathematics majors; 3 of these are continuing ed; 2 are double majors with computer science.

Enrollment in Calc 1 this term is 17. Calculus courses meet once a week in the PC lab, where students practice cooperative learning with Derive. The software is also used in Linear Algebra and Differential Equations, and our goal is to integrate computer assisted learning into all math courses over the next year or two. We have used Minitab in statistics courses for a number of years.

Central College

Don Meyer
meyerd@central.edu

The class of 95 included 14 students majoring in the Department of Mathematics and Computer Science. Two of these students have taken actuarial trainee positions, one has entered graduate school in statistics, five have begun programmer/analyst careers, one is teaching with the Peace Corps in Cameroon, Africa, one is completing teacher certification, and four are in management trainee positions.

Professor Allen Hibbard was promoted to the rank of Associate Professor and granted tenure in the spring of 1995.

In July, Dr. Robert Franks served on a panel to review proposals for the Undergraduate Faculty Enhancement program for Computer Science. The amount of funds requested from the NSF for these proposals ranged from $100,000 to $500,000. This program provides workshops on new areas in the discipline in which faculty may not have had formal course work.

Allen Hibbard spent a week in June at Calvin College (Grand Rapids, MI) as part of an NSF-funded workshop to develop skills and strategies as a coordinator of the Mathematics Archives (WWW or gopher or ftp to archives.math.utk.edu). This is a repository of software and related materials for mathematicians, as well as containing many links to other sites of interest to mathematicians. In July, Al spent a week in St. Louis at the Interactive Mathematics Text Project Developer's Workshop. Here he continued his work in using Mathematica to develop interactive materials for doing group and ring theory. He attended a two day panel discussion in July with ACT representatives. He represented the liberal arts perspective on the shape future tests should take.

Hibbard is currently working on preparing material for calculus labs. His collection of labs and exercises will be published shortly with Saunders Publishing Company and made available both in print and electronic medium.

Prof. Tom Iverson attended a week long Teaching Institute at Western Oregon State University in Monmouth, Oregon, during the last week of July. This Teaching Institute was sponsored by Pacific Crest Software and focused on process education, cooperative learning and the integration of technology into the curriculum. Dr. Iverson had attended a similar institute two years ago and was invited to participate in the one this summer as a mentor. He plans to incorporate some of the ideas and techniques in his calculus and finite math classes this year. Also, he is teaching a pilot course in Problem Solving during the winter term and plans to use materials developed by Pacific Crest Software for that course.

Professor Mark Johnson attended the national summer mathematics meetings in Vermont as a NExT (New Experiences in Teaching) Fellow. There he took part in a workshop on cooperative learning. Ideas from both workshops are being tried out in Calculus I and Discrete Math this fall.

Professor Meyer attended a National Science Foundation short course for college teachers of statistics at Christian Brothers University in Memphis,Tennessee. The course, entitled "Statistics, An Indispensable Tool for Decision-Making in the Modern World," was held June 1-3, and it emphasized using real data in an elementary statistics course as well as innovative methods that involve the student in the learning process.

The Mathematics Department has chosen to use the Ostebee and Zorn text for calculus. Students are required to use Mathematica, and the sections are taught in the computer lab which was supplied with the help of a recent NSF grant. Also, graphing calculators are being used in the pre-calculus course for the first time. Students are required to purchase their own calculators.

Coe College   Charles Lindsay
                                                    clindsay@coe.edu

Only six students graduated last spring with majors in mathematics or computer science (3 each), but this year we have 12 seniors working on computer science majors and 10 seniors planning to graduate with majors in mathematics (one of these is a double major).

For the 1994 fall term our department had a total enrollment of 270, while this fall the total enrollment is 297. Much of this increase has occurred in statistics courses. This may be due to the fact that Coe now has a real statistician on the faculty.

Gavin Cross joined our department this fall and has begun the process of improving our course offerings in statistics. Gavin earned his Ph.D. at

the University of Iowa in August. (He was Bob Hogg's last Ph.D. student, but of course there is still time for Bob to find another student.) Gavin has advanced degrees in applied statistics and actuarial science and earned his doctorate in Quality Management.

During June the mathematical science faculty at Coe and Cornell joined together to hold a workshop on how graphing calculators have affected instruction. We invited faculty members from our client disciplines to participate in the workshop and introduced them to the wonders of the TI-85. Many faculty in the sciences and social sciences have not had the opportunity to use graphing calculators and see what students are able to do with the machines. (A calculator programmed with chemistry formulas sparked the interest of more than one participant.) Nearly 30 different faculty members from a variety of disciplines participated in this very successful workshop.

The Coe-Cornell seminar is continuing this year. In November students from both colleges will be invited to join faculty members for two seminars. Charles Lindsay plans to share some exciting details from the history of mathematics. The topic for the November 14 seminar is "ISAAC -- Monster, Magician, Mathematician".

Coe's computer programming team was one of thirty-eight teams to qualify for the finals of the 1995 International Collegiate Programming Contest sponsored by Microsoft and the Association for Computing Machinery. Coe and Macalester were the only small colleges to be invited to the finals.

Coe continues to expand the use of technology on campus. This summer the campus network was extended into the residence halls. There is now a network connection "for every pillow" on campus.

Experimentation in calculus and pre-calculus continues. We are using the Harvard Project materials for all levels of calculus this year. Some of our mathematics and statistics classes using Mathematica, Minitab and other software packages this fall, while others are making heavy use of graphing calculators.

Cornell College
Jim Freeman
freeman@cornell-iowa.edu

Hosting the Spring Meetings, April 26 and 27, 1996, of the Iowa Section of the MAA and the Iowa Chapter of the ASA is the exciting news from Cornell this year. Jim Freeman, chair-elect of the Iowa Section of the MAA, and Ann Cannon, secretary/treasurer of the Iowa Chapter of the ASA, are in charge of local preparations. Ed Hill is planning a sabbatical for the spring. Ann Cannon is chair of the faculty salary subcommittee. Jim Freeman continues his work with the world wide web. Tony deLaubenfels is finishing a stint as Director of Academic Computing. Margaret Wogahn is starting her 16th year at Cornell, teaching 5 sections.

Drake University
Alexander Kleiner
Alexander_Kleiner@qmbridge.drake.edu

We have one new faculty member this year. John Zelle has joined the Department from The University of Texas where he received his Ph D in Computer Science last summer. John's areas of interest include Artificial Intelligence and Machine Learning and he had joint presentations last summer at the International Joint Conference on Artificial Intelligence in Montreal and the International Conference on Inductive Logic Programming in Italy. John is a native Iowan who has BS and MS degrees from Iowa State and taught at Wartburg College from 1986 to 1990.

Ken Kopecky and Patsy Fagan are on sabbatical this year. Ken is currently working on setting up a PVM parallel processing system from Oakridge Labs. Patsy is conducting a study on the status of mathematics and science curriculum reforms in Iowa. The study is funded by the Iowa Mathematics and Science Coalition.

Several members of the Department have received recognition recently. The American Chemical Society has announced that Milan Randić will be the 1996 recipient of the Herman Skolnik Award in recognition of

outstanding contributions to and achievements in the theory and practice of chemical information science. Patsy Fagan received a Burlington Northern Award for innovation in teaching. Alex Kleiner received the 1994-95 Madelyn M. Levitt Outstanding Teaching Award.

Several of the faculty have participated in international conferences and meetings recently. Luz DeAlba gave a presentation at the IMA Conference on Linear Algebra and its Applications in Manchester, England. Dan Alexander was an invited speaker at the Sixth Annual Workshop in the History of Modern Mathematics in Gottingen, Germany. Milan Randić had a joint presentation at the VI International Conference of Mathematical Chemistry in Pitlochry, Scotland. Milan also conducted lecture series and seminars in Merida, Venezuela, Dubrovnik, Croatia and Ljubljana, Slovenia over the summer.

At Drake, several courses are currently testing innovative curriculum materials. This fall, the four sections of College Algebra are "class test sites" for the NSF-funded Math Modeling/PreCalculus Reform Project directed by Sheldon and Florence Gordon. In preparation for using the new curriculum Bernie Baker, David Oakland, and Roxie Peterson attended special workshops this past summer. Additionally, Bernie attended a two week MAA-sponsored workshop at Purdue titled Cooperative Learning in Undergraduate Mathematics Education which has proved helpful in implementing the group work component of the course. Dan Alexander and Larry Naylor are class testing the Clemson Project, arguably the first Calculus reform project to focus on Business Calculus. The project was developed by Donald LaTorre, Charles Kennely, Iris Fetta and others at Clemson University and stresses the building and analysis of models via a graphing calculator. Luz DeAlba has class tested the materials from the Linear Algebra Curriculum Study Group. Several of our courses, including College Algebra and Linear Algebra are using student portfolios this fall.

Laura (Peterson) Potter will attend graduate school at North Carolina State University beginning in the fall of 1996. This year she is living in Cedar Falls and taking courses at Northern Iowa. Last summer Laura participated in the Industrial Mathematics Workshop for Graduate Students at NC State. Kartik Parija was a summer intern at NASA-JPL.

Grand View College   Sergio Loch
                                        sloch @gvc.edu

Grand View College just completed a visit by North Central Accreditation for Colleges and we were awarded the maximum extension, 10 years, without any restriction.

The Math Resource Center is into its 18th year in providing free services to all students enrolled in Math or related courses. It is staffed by a Math teacher with experience in teaching, tutoring and in computers. From the center students have access to the network, Internet, mathematical and statistical software.

Professor Erna Jensen, this Summer participated in a Workshop on Workstations at University of North Carolina at Asheville. The workshop was sponsored by NSF. She also went to the Mathfest at University of Vermont and participated in two mini-courses.

Assistant Professor Brian O'Donnell completed his Ph.D. at ISU. He became this Summer, the Chair of the Natural Sciences Division.

Assistant Professor Sergio Loch became, this Summer, the Chair of the Department of Mathematics. He participated in the Approximating Dynamics With Applications to Numerical Analysis Conference at the University of Missouri, Columbia and gave a talk entitled Approximating Dynamics of the Damped Wave Equation. He also went to the workshop on Abstract Algebra with ISETL at Purdue University. He is the only new Project NExT Fellow from the State of Iowa for the next two years. As a Project NExT Fellow, he participated in an intense week of meetings, discussion sessions and Mathfest at University of Vermont from August 3rd through the 10th.

Grinnell College   Emily H. Moore

mooree@mth.grin.edu

Visiting speakers:
Joan Hutchinson of Macalester College will be a visiting speaker to our
department October 26 - 27. Phil Straffin of Beloit College will visit
Grinnell this spring. Jack Lutz from Iowa State's Computer Science
Department visited Grinnell on October 12th, and gave a talk on
"Computation, Complexity, and Randomness."

Departmental seminar:
Our departmental seminar this year is on differential equations. We are
studying material in Blanchard, Devaney, and Hall's "Differential
Equations" (prepublication edition) and Hale and Kocak's "Dynamics and
Bifurcations".

WWW pages:
This past year John Stone organized information about our department on
a collection of Web pages. Access to this information is through
http://www.math.grin.edu/

Our Faculty:
Arnold Adelberg published a paper "A finite difference approach to
degenerate Bernoulli and Stirling polynomials" in the Journal of Discrete
Mathematics, vol. 140 (1995), pp. 1-21. He participated in the
International Conference and Workshop on Special Functions which was
held in Toronto in June, giving a presentation there on "p-adic Integer
Order Bernoulli Polynomials". This article has been accepted for
publication to the Journal of Number Theory.

Gene Herman is working with faculty at the University of Washington
and Seattle Central Community College to create an interactive text in
linear algebra using Maple. Their project, the Linear Algebra Modules
Project (LAMP), is funded by the National Science Foundation. He is
using early versions of some of the project's modules this semester in
Math 215 at Grinnell. The Web page for this course has the URL
http://www.math.grin.edu/~herman/web215/index.html

Charles Jepsen had the paper "Dissections of p:q rectangles" accepted for

publication in Mathematics of Computation. His paper "Equidissections
of Trapezoids" has been accepted for publication in the Monthly. He
directed three students (Allison Carruth, Bao-jun Jiang, and Adam Sales)
this summer on research in problems in geometric configurations. One
student has submitted a paper for publication.

Charles Jones worked with student Jason Parsons this past summer
studying Costas arrays and their three-dimensional analogues. He ran in
the Chicago marathon in October.

Emily Moore is working on graphical user interfaces to mathematical
graphics software in MATLAB. The first versions of this new software
are being used by classes this fall and are available for use off campus.
This summer she worked with student Henry Dorn on a graphical
program to aid in studying combinatorial graph algorithms.

Tom Moore is chair of the Section on Statistical Education for ASA. He
presented a paper "Using student projects in an introductory course for
liberal arts students" at the IMS Regional Conference honoring Bob
Hogg, May 15 - 17 in Iowa City. He also organized the PR/ISM
Conference, Planning Regional Isolated-Statisticians Meetings, held
October 6-8, in Chaska, Minnesota.

Iwan Praton is a visiting lecturer in our department this year.

Anita Solow is chair of the department this year. She recently edited a
new MAA notes volume (``Preparing for a New Calculus"), is chair of the
AP Calculus exam committee, is an editor-designate of the MAA Notes
and Reports Series, is a member of the Advisory Board for Math
Horizons, and is director of Grinnell's New Science Project.

John Stone continues to manage the department's local-area computing
network and has led the effort to obtain and install the new systems and
software. Most recently, he has set up Grinnell College's first World
Wide Web server and is busily constructing WWW pages. In July, he led
a departmental workshop on the Scheme programming language.

Henry Walker is on sabbatical from Grinnell, and is currently a Visiting
Senior Lecturer at the University of Texas at Austin. He is completing
work on the textbook ``Abstract Data Types: Specification,

Senior Lecturer at the University of Texas at Austin. He is completing work on the textbook ``Abstract Data Types: Specification, Implementation, and Application" with Nell Dale, and is very active in Computer Science Education issues. (See his WWW page for more details.)

This past spring Henry participated in the Grinnell-Nanjing Faculty Exchange Program, giving talks on a broad range of topics for the computer science department of Nanjing University.

Royce Wolf worked with Grinnell student Chelsea Smock during the summer of '95 on the word problem from combinatorial group theory. He and Piney Janik '90 recently had a paper, "Axioms for S-pregroups" accepted by <u>Algebra Universalis</u>. Royce is currently working on a recital on 20th century piano music for next spring.

Indian Hills Community College   Janet P. Swaby

Diane Mason, mathematics instructor at Indian Hills Community College, presented her paper "Exploring the Tree of Mathmatics" at the 1995 conference of International Study Group for the History and Pedagogy of Mathmatics, held June 30 through July 4, 1995, at Cairns, Australia. This paper was previously presented at the national H.P.M. meeting held in Indianapolis in April, 1994, in conjunction with the National Council of Teachers of Mathmatics annual convention.

Mason's paper traced the growth of mathmatics into the three main branches of Arithmetic, Geometry, and Algebra using the analogy of a tree's growth. She noted that the growth of mathmatical concepts mirrors the cognitive development of students and observed the implications for teachers in all areas of mathmatics. Mason also illistrated that the three main branches of the "tree" are reflected in the three main philosphies of mathmatics, which historically developed in approximately the same fashion as the branches of mathmatics.

While at the conference, Mason attended many enlightening sessions detailing how the history of mathmatics is used in classrooms around the world.

Iowa State University   Dean L. Isaacson
Department of Statistics   S2.DLI@ISUMVS

Statistics and Biometry--A Conference in Honor of Herbert A. David's 70th Birthday is being presented by the Department of Statistics, Iowa State University, on November 17-18, 1995, in Ames. Friday afternoon sessions (invited talks and contributed papers) are at Starlight Village Best Western Motel. The Friday evening open house and all Saturday sessions are at Holiday Inn Gateway Center. Saturday events include a Festschrift release and review of H. A. David's career, a keynote address by Sir David R. Cox (Nuffield College, England), invited talks, contributed papers, and a banquet address by Robert Hogg (University of Iowa). Invited speakers include Barry C. Arnold (University of California-Riverside), Wayne A. Fuller (Iowa State University), Janos Galambos (Temple University), Norman L. Johnson and Pranab K. Sen (University of North Carolina-Chapel Hill), and Stephen M. Stigler (University of Chicago). For more information, contact the Department of Statistics, 102 Snedecor Hall, Iowa State University, Ames, IA 50011-1210.

The department continues to serve professional societies in various capacities, including editorial positions. Two faculty are journal editors, three are co-editors, and nine are associate editors; still others are serving on editorial boards.

W. Robert Stephenson was one of two faculty members at ISU receiving the James Huntington Ellis Award for Excellence in Undergraduate Introductory Teaching last May. This award recognizes faculty who, in teaching an introductory course, demonstrate creativity in improving the quality of course offerings, excite interest and involvement in courses without compromising scholarship, and enhance student performance in future courses. Stephenson also was named a Fellow of the American Statistical Association at the joint statistical meetings in August in Orlando, Florida. He was cited "for a superb teaching record and outstanding leadership in statistical education; for strong contributions to industrial statistics, quality improvement, and for outreach to industrial groups."

Alicia Carriquiry has been promoted to associate professor of statistics with tenure. Derrick Rollins has been promoted to associate professor of statistics and chemical engineering, with tenure. Carriquiry has been elected as a member of the International Statistical Institute, as a representative of Uruguay.

Three new faculty members joined the Department of Statistics and the Statistical Laboratory in August 1995 as assistant professors. Jean-Didier Opsomer, in the Survey Section, received the M.S. degree in management engineering at Katholieke Universiteit Leuven, Belgium, the M.B.A. degree in finance at the University of Chicago, and M.S. and Ph.D. degrees in operations research at Cornell University. Linda Brant Collins was added to the undergraduate teaching faculty; she completed a Ph.D. degree in statistics at the University of Chicago summer 1995. Yannis G. Bilias has a joint appointment in statistics and economics; he completed an M.A. degree in economic theory and policy at the Economic University of Athens, Greece, and a Ph.D. degree in econometrics at the University of Illinois Urbana-Champaign in 1995. Bilias has four years' experience as an econometric computing consultant at Illinois.

Three faculty members are on faculty improvement leave for part or all of the 1995-96 year. Krishna Athreya will be gone for the full year, primarily to do research at the Indian Statistical Institute, Bangalore, India. Peter Sherman visited the Defense Science & Technology Organization, Adelaide, Australia, during summer 1995 and will be conducting research fall semester at the Cooperative Research Centre for Robust and Adaptive Systems, (CR)² ASys, whose partners include the Australian National University, Australian defense agencies, and industry. Fred Lorenz is visiting the University of North Carolina-Chapel Hill fall semester.

Noel Cressie taught a one-quarter course in spatial statistics as visiting professor in the Department of Statistics, Ohio State University, last spring, while continuing half-time duties at Iowa State.

David Harville is resigning as professor of statistics in December to accept a position at the IBM Thomas J. Watson Research Center, Yorktown Heights, New York.

In the 1994-95 fiscal year, 7 students received B.S. degrees in statistics. There were approximately 135 graduate students in statistics at ISU within that period. Thirty received M.S. degrees and 11 received Ph.D. degrees in statistics (including 2 with co-majors, one of which was in mathematics). At the summer 1995 graduation there were 11 additional M.S. degrees and 2 Ph.D. degrees awarded in statistics.

Two undergraduate statistics majors have been awarded Barry M. Goldwater Scholarships for 1995-96: Vera F. Boulaevskaia (who has a second major in French) and Lingcheng Huang. The scholarships pay for up to $7,000 each in expenses such as tuition, fees, books, and room and board for the academic year.

ISU Graduate College Teaching Excellence Awards, recognizing outstanding contributions in the teaching of undergraduate students while working toward degrees, were presented to Kari Ann Henry in fall 1994 and to Lee Barton and Lisa Wicklund in spring 1995. A Research Excellence Award was given to Jun-ichiro Fukuchi in fall 1994 and to Rohit Deo in August 1995. The Department of Statistics presented the Dan Mowrey Consulting Excellence Award to Kari Ann Jovaag and Claire Tsao, and the Vincent Sposito Statistical Computing Award to Kevin Dodd, in May 1995.

The George W. Snedecor Award to an outstanding doctoral student in statistics went to Hsin-Cheng Huang. The 1995 T. A. Bancroft Award went to Melissa Lopez Reyes, a Ph.D. student co-majoring in psychology and statistics. Pam Abbitt and Deanne Reber received the Vera David Graduate Fellowship in statistics, given for the 1995-96 year. 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 Juan Goyeneche as the Ph.D. student to receive the Holly and Beth Fryer Scholarship Award.

The graduate student organization Iowa STAT-ers continues its activities ranging from a seminar series to intramural sports, a multicultural party, and coordination of paper and can recycling in Snedecor Hall. Seminar speakers this fall include statisticians from Baxter Healthcare, Upjohn, and Wyeth-Ayerst Research.

Kirkwood Community College   Leland Fry

Four members of our faculty attended workshops this summer.

Helen Banes and Joe Sedlacek attended a three day workshop in June on collaborative learning held in Breckenridge, Colorado. The workshop was sponsored by the American Mathmatical Association of Two-Year Colleges.

Kathy Davis attended a week long workshop on TI calculators in Columbus, Ohio. The workshop included experience with the TI-82, TI-85, and the new TI-92 that has a computer algebra system and is capable of 3-D graphing. The workshop was sponsored by Texas Instrument, Ohio State University, and the Ohio affiliate of the American Mathmatical Association of Two-Year Colleges.

Leland Fry attended a two day workshop on the new HP38G graphing calculator in Kansas City, Missouri. The Workshop was sponsored by Hewlett Packard.

Loras College   John C. Friedell
                                     revjcf@lcac1.loras.edu

Much effort was expended this past academic year on a Departmental self-evaluation and program review. After all the facts and figures were compiled, an external review team visited the campus in September. The team: Prof. Martha Siegel of Towson State University, Prof. Paul Zorn of St. Olaf College and Prof. Herb Dershem of Hope College. We're awaiting their recommendations.

This academic year Sr. Marlene Pinzka, O.S.F., is on leave for doctoral work at the University of Minnesota, and Ms. Sheri McDoniel is now teaching full time. Several of the staff attended Chatauqua courses and workshops on Calculus reform.

We had 5 Mathematics majors who received the Bachelor's degree in May 1995 and 3 Computer Science graduates.

Our Mathematics Club of about 20 members was quite active, under the tutelage of Don Marxen and Marlene Pinzka. They toured the Mayo Clinic in Rochester on the way to St. John's University in Collegeville, MN, for the Pi Mu Epsilon Student Mathematics Seminar. One senior presented a paper on Atonal Music. The club held several social events and engaged in a service project. The student A.C.M. chapter was also quite active.

Luther College   Reginald Laursen
                                     laursenr@martin.luther.edu

Joyce Becker chaired or presided at Mu Alpha Theta events in New Oleans, Washington D. C. and Vinalhaven, Maine. She spoke, conducted or represented Luther at seven different NCTM meetings throughout the year.

Ruth Berger spent Sept. 15-17 in Chicago for Project Kaleidoscope, an alliance committed to strengthening undergraduate science and mathematics programs. She was selected to participate in a workshop on cooperative learning: project CLUME at Purdue in July. She also published: "Ideal Class Groups, some computations"; Journal of Number Theory Vol.50 No.2 (1995)

Richard Bernatz won a prize for his Differential Equations project "Things That Bob", which will be forthcoming in Fundamentals of Differential Equations, Third Ed. by Nagle and Staff, Addison-Wesley, 1995. He also conducted a faculty-student collaboration project with Luther student Kurtis Schweitz during the summer.

David Ranum had an article "On Some Application of Fibonacci Numbers" in the Computer Science Sampler section of the Monthly, Aug-Sept 1995.

Gordon Bril gave a lecture Oct 26 entitled "Tree Rings and Decorah Climate", regarding his summer research project.

David Mitchell came from Iowa State to join our faculty, part time. He also works in a talented and gifted program for High School students.

Calculus Reform: We voted to return to the use of Ostebee/Zorn calculus reform materials in our calculus sequence.

Olin Building: We have moved into our new Olin Building. We have the pleasant problem of figuring out how to effectively use an abundance of technology.

Guest Speakers: We will have Donald Knuth from Stanford speaking on Thursday November 16 and William Dunam, a math historian, speaking on March 5th. Come join us then or any other time.

We graduated 2 math/statistic majors, 13 math majors and 10 computer science majors of which 4 were joint. We also graduated 10 math minors.

Maharishi University of Management   Cathy Gorini
cgorini@mum.edu

Maharishi International University has changed its name to Maharishi University of Management to reflect our continuing interest in all areas of management. We began using our new computer lab a year ago and are still adding equipment and software. Virtually all of our courses have some computer component and students are very enthusiastic---in fact, we now have about twice the number of math majors we had at this time last year.

Eric Hart is currently adjunct and full time with Western Michigan University. He is still working out of his office in the Mathematics Department here at Maharishi University of Management.

John Price will be organizing a special session on Derivatives and Financial Management for the American Mathematical Society meeting in Iowa City next March. He will also be visiting the University of New South Wales in Australia during the winter (their summer!) to advise the Mathematics Department on their new program in the mathematics of finance. Anne Dow and Paul Corazza are on leave for this year.

North Iowa Area Community College   Adriana Attleson

Kathy Rogotzke and Adriana Attleson attended a workshop on the new calculator produced by Hewlett Packard - the HP38G. The workshop was held in August in Minneapolis and was attended by about 60 high school, community college, and university teachers.

NIACC will offer Calculus and Analytic Geometry I over the ICN during the spring semester. The class will be taught live to the students on campus and via ICN to students in Charles City, Forest City, and Osage.

Northwestern College   Kim Reginier
regnier@nwiowa.edu

After a period of high turnover, the mathematics department at Northwestern College has the same faculty members this year as last year. Kim Regnier is now in her third year, having completed the PhD at Colorado State University in 1993. Tim Huffman, a 1994 PhD graduate from the University of Nebraska-Lincoln, is in his second year. Tim is a co-author of papers appearing in the International Journal of Mathematics and Mathematical Sciences ("Generalized Transforms and Convolutions") and the Rocky Mountain Journal of Mathematics ("Convolution and Fourier-Feynman Transforms"). Kim is a member of the initial group of Project NExT fellows.

Last year, we graduated three math majors and three math teaching majors. We hope that our new-found stability will continue and will help us attract more majors to the program.

University of Northern Iowa   Greg Dotseth
dotseth@nova.cs.uni.edu

During the 1994-95 academic year, Maura Mast was at Northeastern University in Boston as a recipient of an NSF Visiting Professorship for Women. In addition to teaching and conducting research in Spectral Geometry, she worked to increase the visibility of women in the sciences.

Min Lee will be on Professional Development Leave spring semester. He will be visiting Pohang University of Science and Technology in Korea. This fall Min was the recipient of the College of Natural Sciences Dean's Award for Superior Achievement in Research.

The Mathematics Department at the University of Northern Iowa has a weekly schedule of speakers starting the first week in October. Some of the speakers this fall have been Min Lee, Vani Sundaraiyer, and Elana Joram from UNI, and Art Kirk and Ralph Russo from the University of Iowa.

Hyo Myung is on leave at the Korea Advanced Institute of Science and Technology (KAIST) this academic year. He will deliver lectures on Lie algebras and direct research activities of the Research Center of Algebra and Its Applications. A recent article in NATURE says "KAIST has the potential for becoming one of the top institutions in the world". Hyo will also be participating in a workshop on Jordan algebras to be held in a workshop on Jordan algebras to be held in Oberwolfach, Germany, during February 1996.

Edward C. Rathmell received a Regents Award for Faculty Excellence. Ed has been at UNI since 1972. He was a Fullbright Scholar at Kelvin Grove CAE in Australia and is the co-author of two mathematics textbooks for students K-8. He has also served on several editorial panels related to mathematics education.

UNI Mathematics graduates from Summer 1994 through Spring 1995:

Undergraduates - 33 Graduate Students - 7

UNI has recently begun a revised and updated MA program for teachers of mathematics in the middle grades. This has been designed and implemented as a professional development program with an emphasis on helping the practitioner. The program is built around major ideas, such as teaching and learning mathematics, implementing programs, understanding school mathematics goals and providing leadership in bringing about change. The program is offered through a coordinated schedule of courses over a period of three summer sessions and two academic years. The program started with 22 teachers in the summer of 1994. An additional 19 began during the summer of 1995, and it is anticipated another 20 will begin during the summer of 1996. Although the summer program will only be offered at UNI, for those teachers beginning next summer, there will be two ICN locations for the academic year portion of the program.

KME Activities - John Cross, Faculty Sponsor: Students presenting papers at local KME meetings include Lisa Gaskell on "Fractals, the Geometry of Nature", Darci Lindeman on "Archimedes: The Sand Reckoner", and Saylor Craig on "I Think Knot". Mary Pittman addressed the Spring initiation banquet on "An Introduction to Mayan Mathematics". The KME National Convention was held in Durango, CO. Saylor Craig, Lisa Gaskell and Michelle Ruse each presented their KME papers to the convention. Michelle's presentation on "An Introduction to Multiquadric Interpolation" was judged among the top four at the convention. She was presented with a check for $100.00 and an HP calculator.

Bonnie Litwiller received the UNI Outstanding Service Award for 1995. Bonnie has been at UNI since 1968. During that time she has served on many departmental, university, and national committees. She has made numerous presentations at NCTM, SSMA, ICTM, NCSM, and AMTE meetings and has served on the Board of Directors of NCTM, SSMA, and AMTE. She is also the co- author of over 645 articles and 4 books.

Larry Leutzinger is a new member of the Mathematics Department at UNI. Larry has his PhD from the University of Iowa and currently directs the Iowa Mathematics/Science Coalition. Professor Leutzinger is well known in Iowa and the midwest as an effective consultant and inservice leader. His current interests in research involve teaching basic facts in grades 1-4 and the problem solving abilities of primary and middle school students.

Wartburg College   Lynn Olson
                                        olson a ns.wartburg.edu

Robin Pennington spent one week this summer in Florida as a participant in an NSF funded Consortium for ODE Experiments workshop. Besides general discussions of curriculum, one objective of the workshop was to develop a project for use in differential equation

classes. In addition, Robin attended the joint meetings in Vermont as part of Project NEXT. The Project had its own seminars and workshops. This was her last formal meeting with this group but they are committed to continue in some form and Robin has volunteered to serve in this new group.

Augie Waltmann attended several teacher education conferences this past year most notable of which were the NCTM Regional meeting in Omaha last October and the Conference for the Advancement of Mathematics Teaching in San Antonio last August.

Glenn Fenneman served as a mentor at a one-week Process Education Teaching Institute at Teikyo Marycrest College. The institute, put on by Pacific Crest Software, engaged the participants in activities and discussions related to group learning, journaling, and assessment.

Bill Waltmann was one of twenty-one faculty to participate in the Workshop on Calculus, Concepts, Commuters and Cooperative Learning. This sixteen day summer workshop was sponsored by NSF and held at Purdue University. It provided an opportunity to experience a new approach to helping students learn calculus.

Milton Wikstrom again spent the summer as a visiting scientist at the scalable computing lab which is located at the Ames Lab, DOE.

Lynn Olson participated in the MAA Ohio Section short course on Symmetry and Group Theory held at the University of Dayton in June. The major goal of the course was to investigate ways in which symmetry could enhance understanding in abstract algebra.

Calculus Reform: We continue to use Maple in our calculus courses but also started to use the Harvard Project materials this fall. Bill Waltmann and Robin Pennington have been very active in leading our reform efforts.

In the 1994-95 graduating class there were 18 seniors with majors in the department.

1996 SUMMER SHORT COURSE HOST SITE OPPORTUNITY

The Ohio State University Technology Summer College Short Course [T(SC)^2] Program founded by Bert Waits and Frank Demana will again be co-sponsoring a variety of week-long short courses designed for college mathematics faculty at selected college sites throughout the United States during the summer of 1996. Short courses will focus on calculus reform and AMATYC Standards mathematical content. All short courses will feature instruction on the Texas Instruments graphing calculators including the TI-92. T(SC)^2 instructors are all highly qualified college faculty with experience in the teaching and learning of mathematics enhanced with technology.

Short course options include:

Mathematics in the foundation, developmental, and college preparatory levels (TI-82 and CBL)

College algebra and data analysis (TI-82 and CBL)

Precalculus and calculus (TI-82 and/or TI-85 and CBL)

Calculus enhanced with computer algebra (TI-92)

Grants of up to $4000 are available from Ohio State to selected host sites. If you are interested in hosting a T(SC)^2 short course at your college or university during the summer of 1996, please contact:

Ed Laughbaum
Department of Mathematics
Room 342 Math Tower
The Ohio State University
231 West 18th Avenue
Columbus, OH 43210

Phone: 614-292-7223 FAX 614-292-0694
E-mail: waitsb@math.ohio-state.edu (Ed Laughbaum)

Call for Papers
The Second Biannual
Symposium on Mathematical Modeling
in the
Undergraduate Curriculum

University of Wisconsin/La Crosse
June 13-15, 1996

The Mathematics Department of the University of Wisconsin/La Crosse is hosting this three-day Symposium to bring together mathematicians, scientists and university educators for the purpose of sharing ideas, projects and problems related to mathematical modeling in the undergraduate curriculum.

We invite submissions for 25-minute and 50-minute presentations focusing on any aspect of mathematical modeling. Both mathematical and pedagogical themes are welcome. Publication of the Proceedings of the Symposium is planned and registration fees for presenters are waived.

The University of Wisconsin/La Crosse is located halfway between Madison and Minneapolis in the heart of "Coulee" country, a popular vacation area. You may wish to attend the Symposium and spend a few extra days touring this unique part of the country. Dormitory rooms on campus will be available at nominal cost for participants and their families.

For more information please call Professor Helen Skala at 608-785-6614 or e-mail to skala@math.uwlax.edu You may also leave a message with the Mathematics Department at 608-785-8382. If you are interested in attending the Symposium or presenting a paper, please return the form below to: **Mathematical Modeling Symposium, Mathematics Department, University of Wisconsin/La Crosse, La Crosse, WI 54601** or e-mail Dr. Skala with this same information.

_____ I am interested in attending the Symposium. Be sure to include my name on your mailing list for further information.

_____ I would like to present a _____ 25-minute _____ 50-minute paper.

Title of Paper _____

Description _____

_____

_____

Name _____

Institution _____

Address _____

_____

Telephone _____ E-mail _____

(Deadline for submission of paper presentations: Mar. 15, 1996)

math
HORIZONS

What is Math Horizons?

Math Horizons is the MAA's new magazine for undergraduates (and others) interested in mathematics. The purpose of *Math Horizons* is twofold:

* To provide students with career information long before they graduate; and,
* To broaden their intellectual horizons through lively articles about contemporary mathematics.

Who is Math Horizons For?

Math Horizons is aimed at undergraduate students and others interested in mathematics. Certainly that means mathematics majors, but it also means calculus students, upper division seminars, lower division classes, honors classes, and faculty.

Many high school are ordering bulk subscriptions for their advanced placement students.

How Can Math Horizons Be Distributed to Students?

* Copies can be distributed by faculty in selected classes.
* Use lists of mathematics majors to distribute individually.
* Copies can be placed in strategic locations—math commons rooms, department offices, and math libraries.

How To Pay for Math Horizons

To keep *Math Horizons* inexpensive, it is available in bulk subscriptions to departments and other groups. It only takes 20 people to form a bulk subscription. Some ways that departments are obtaining bulk subscription funds are as follows:
* Use department supply or course funds.
* Ask students to share in costs.
* Ask your dean to pay.
* Sponsor special fund-raising events—car washes, used book sales, dances, etc.
* Enlist alumni and local business support in sponsoring bulk subscriptions.
* Attach *Math Horizons* to grant proposals.

Questions? Please call us at 1-800-331-1622 or e-mail: horizons@maa.org

Don't Be Left Out!

Math Horizons has just completed its first year of publication and we are getting ready for another year filled with exciting issues. Students across the country have responded that they love the career information, profiles of mathematicians, problems, and "just plain fun" which are found in each issue of *Math Horizons*. Don't let the students in your section miss out on any of the action. More than 22,000 students now receive *Math Horizons*.

If you are having trouble deciding how many copies to order or need a little inspiration on ways to pay for the subscription, we have given you some pointers on the other side of this page.

In order to guarantee receiving all four issues of the next year of *Math Horizons*, we must receive your order by July 1, 1995. Just fill out the form below and send it in. . . Now!

Yes! I want Math Horizons.

Individual Subscription (Individual subscriptions must be pre-paid) Please send _____ copies.

	MAA Member	Non-Member	Library	Foreign
Price	$20 per year	$35 per year	$35 per year	$28 per year

Bulk Subscription

Minimum order is 20 copies with additional copies available in multiples of 10.

Copies	20	30	40	50	60	...	10n
Price	$100	$150	$200	$250	$300	...	$50n

Note: Foreign bulk subscribers should add $2.00 (U.S.) to every copy ordered.

Please send _____ copies of all four issues at $5 per student to the address below:

___ Bill me ___ Payment enclosed   Or order by phone at 1-800-331-1622.

___ Visa ___ MC _____
                  Card Number   Expiration date

Name _____

Address _____

Address _____ City _____ State _____ Zip _____

Signature _____   Date _____

Mail to: Math Horizons, 1529 Eighteenth Street, N.W., Washington, DC 20036

sec595

Questions? Please call us at 1-800-331-1622 or e-mail: horizons@maa.org

32