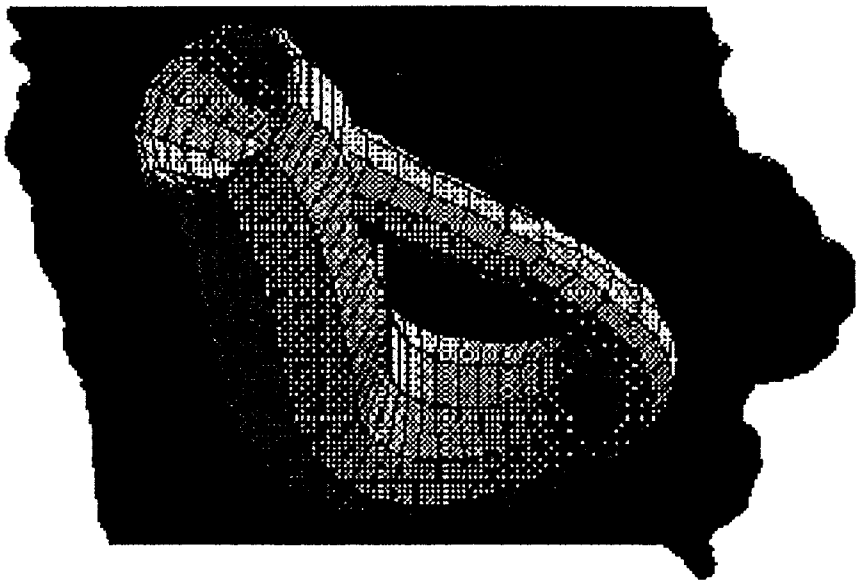
Iowa Section Newsletter



Fall 2000

Iowa Section -- Section Officer List

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MAA Departmental Liaison Coordinator:	Alex Kleiner Dept. of Math and Comp Sci Drake University 2507 University Ave Des Moines, IA 50311	Alexander.Kleiner@drake.edu Voice: 515-271-3041 FAX: 515-271-2055

VOLUME XVII No. 1 November 2000

Annual Meeting of the Iowa Section
Drake University
Des Moines, Iowa
Friday and Saturday
April 6 - 7, 2001

MAA Invited Lecturer: Underwood (Woody) Dudley, DePauw University. Professor Dudley is editor of the College Mathematics Journal and is well known for authoring several books the MAA classifies as "popular exposition."

If you have questions about the meeting or you have suggestions for the meeting program, please contact Luz DeAlba, Chair Elect (**luz.dealba@drake.edu**).

National MAA Meeting:
New Orleans
January 10 - 13, 2001

Visit MAA Online at **www.maa.org**
for more information.

Report of Section Officers Meeting
Los Angeles, California

Cathy Gorini represented the Iowa Section at the MAA Section Officers Meeting that was held in Los Angeles in conjunction with Mathfest 2000. This is her report:

There were four main items discussed at the section officers meeting in Los Angeles this summer---section NExTs, the new MAA administrative software, NSF-supported grant-writing workshops for MAA members, and a new national digital library.

The national NExT program, which provides a limited number of new college faculty with an extended support system, has been so successful that all those involved are trying to find ways to extend the program to every new college mathematics teacher. Many sections have or are developing section NExTs for the benefit of all new faculty in their section. Activities are determined by the section and include workshops, panels, discussions, either in conjunction with the section meeting or separately. For more details, see **http: //archives. math.utk.edu/projnext/**.

Those working with the national MAA office are very excited about the new administrative software that is being acquired. It will provide better service to members by the national office and will also be available online to each section for section business. The new software should be up and running sometime in 2001.

NSF has provided funding to the MAA for a series of grant writing workshops to be offered throughout the country at section meetings. These workshops will include keys to success in grant writing, an overview of the review process, and mock panel reviews of proposals. Comprehensive written materials will also be provided to each participant. The workshops will begin as early as spring 2001 and twenty to thirty people can participate in each workshop.

A very exciting development is the forming of a national digital library by the NSF. The MAA in partnership with the Math Forum will be responsible for developing the mathematics node, which is planned to be a comprehensive resource for use in the undergraduate mathematics curriculum.

Cathy Gorini
Iowa Section MAA Student Chapter Coordinator
Department of Mathematics
Maharishi University of Management

Nominating Committee

Section Chair Bruce Sloan has appointed the Nominating Committee for the Iowa Section. The committee members are:

Elgin Johnston (Chair)
Iowa State
515-294-0303
ehjohnst@iastate.edu

Alex Kleiner
Drake
515-271-3041
Alexander.Kleiner@drake.edu

Mark Mills
Central
641-628-5265
MillsM@central.edu

Cal Van Niewaal
Coe
319-399-8642
cvanniew@coe.edu

The nominating committee is seeking nominations for Chair-Elect. Members of the Iowa Section who would like to suggest possible nominees should contact one of the members of the nominating committee by January 15, 2001.

The nominating committee has also been asked to identify individuals to serve as Newsletter Editor, Collegiate Contest Chair, and Section Liaison Coordinator. Please contact the committee if you are interested in serving the section in one of these roles.

Editor's note: At the time this newsletter went to the printer the names of the nominees for Section Governor were not available. Please check out the Iowa Section website for information on the nominees and be sure to vote when you get your ballot in the mail from the MAA.

Iowa Collegiate Mathematics Contest
Saturday, March 31, 2001
Iowa State University

The seventh annual Iowa Collegiate Mathematics Contest will be held at Iowa State University on Saturday, March 31, 2001. For more information, contact Elgin Johnston (**ehjohnst@iastate.edu**).

Congratulations Elgin

Elgin Johnston has been named Problems Editor for Mathematics Magazine, 2001-2005. He is now in the process of collecting and editing problems and solutions. His first column will appear in Feb. 2001. He invites you to submit any problems that you feel are suitable for the Magazine.

Elgin has also been selected as a member of the Problems Committee for the 2001 International Mathematical Olympiad, to be held in July 2001 in Washington, DC.

Liaison Program

The Mathematical Association of America's Liaison Program is intended to provide a contact person at each educational institution. If you are not aware of who your current liaison is, check the section web pages for an updated list of the current liaisons. If your institution is not represented, consider volunteering for the job. More information can be obtained from Alex Kleiner, Section Liaison Coordinator at **alexander.kleiner@drake.edu**.

Kleiner's term as section liaison coordinator expires at the spring 2001 meeting and the nominating committee will be seeking replacements for this position over the winter. Potential applicants should consider this low stress job as a way of doing something for your section.

From the Editor:

This edition of the Iowa Section Newsletter is the 11^{th} that I have edited over the last six years. The spring edition will be my 12^{th} **and last**. During my tenure as editor the Iowa Section website was created (with the help of Jim Freeman) and electronic versions of the newsletter were made available on the internet.

It is time to pass the job on to someone with fresh ideas. Please consider serving your colleagues across the state as newsletter editor. If you are interested in becoming edtior, or just want some more information about the job, contact me by phone (319-399-8642) or e-mail (cvanniew@coe.edu).

Cal Van Niewaal

Visit the Iowa Section Website:

www.maa.org/iowa

Campus News

Central College — **Mark Johnson**
johnsonm@central.edu

In faculty news, Dave Renfro joined the department in a visiting position for the 2000-2001 year. Mark Johnson was granted tenure and promotion to Associate Professor. He celebrated by deciding to teach computer science full-time.

Al Hibbard was invited to give a presentation to the 2000-2001 Project NExT fellows at the MathFest this past summer. The session focused on issues to consider when teaching an abstract algebra course.

The class of 2000 included 4 students with majors in mathematics and/or computer science. Last spring, the department presented its annual Henry W. Pietenpol Award to Monica Calvert, Andy Menz, and Luke Willis, as our outstanding junior majors.

Coe College — **Cal Van Niewaal**
cvanniew@coe.edu

Coe's math club, which had been dormant for a number of years, was revitalized under the supervision of Rob Krueger. The club is becoming very active. Last year 14 club members participated in the Iowa Collegiate Mathematics Contest at Luther. This month the club sponsored two guest speakers in a two-week period.

There were 4 mathematics majors and 16 computer science majors in the Class of 2000. In addition, 9 students graduated with mathematics minors. Enrollments in upper level mathematics classes have been increasing. Modern Algebra 2 is being taught for the first time in several years, our first-ever advanced course in differential equations is on the schedule for Winter Term, and five students have expressed an interest in studying topology during the spring semester.

Cornell College — **Jim Freeman**
JFreeman@cornell-iowa.edu

Cornell Mathematics Department along with the Computer Science Department is anticipating an exciting year. We have moved into a renovated Law Hall with technology in every classroom. We have a dedicated classroom with 24 PCs in which to teach our statistics courses. Computer Science has a teaching lab of 20 systems. If you are in the area, please stop by to visit and look over our new resources. We also are excited by having Preston Nichols, Ph.D. from Minnesota and Cornell alum, joining us for this academic year. His interests are in differential geometry, mathematical visualization, and (most recently) biomathematics, and he would be happy to communicate with all interested parties. Ann Cannon is busy with her work in statistics education having recently been elected to the Executive Committee of the Statistics Education Section of the American Statistical Association. She is also organizing a session for the sixth International Conference on Teaching Statistics to be held in Durban, South Africa in July, 2002. Leon Tabak and Tony deLaubenfels will be hosts to a meeting of the Iowa Undergraduate Computer Science Consortium on November 4 .

Drake University

Alex Kleiner
Alexander.Kleiner@drake.edu

Milan Randic has retired. He still resides in Ames and receives mail at Drake. Milan has continued his research in Chemical Graph Theory and his travels. He is currently in Europe until the end of the year.

Bernie Baker has been promoted to Associate Professor of Mathematics and Computer Science. She is co-author of "Cooperative Learning in Undergraduate Mathematics: Issues That Matter and Strategies That Work" to be published by the MAA this winter.

Lus DeAlba has returned from sabbatical leave. Luz is the author of *Technology Resource Manual for Calculus.* Although the manual was written to accompany the tenth edition of Thomas' calculus texts it can be used with any comparable book.

Dan Alexander is presently on sabbatical.

We have two new faculty members in the Department. John A. McTaggart is an Associate Professor who teaches Computer Science. John has a BS and a MS in Computer Science from Central Michigan University. He spent six years doing avionics software development for McDonnell-Douglas in St. Louis and followed that with fifteen years teaching computer science at Grand View College. He will be working on his Doctorate in addition to teaching at Drake. John's particular interests are in Computer Science education and artificial intelligence.

Michael Rieck is an Assistant Professor who teaches both Mathematics and Computer Science. He has degrees from Colby College, the University of Oregon and the University of South Florida. He has taught at Rhodes College the University of New Haven and Bucknell University. Between his M. S. and Ph. D., he worked at AM International and Merry Mechanization. Michael's research interests include finite fields, vector spaces, bilinear forms and their applications, including generalized inverses, symbolic computation, combinatorial structures, coding theory, algorithms and formal methods in software engineering.

Graceland College

Lyubomir Boyadjiev
boyadjie@graceland.edu

Lyubomir Boyadjiev has joined the faculty as a visiting professor for 2000-2001. He is a professor at the Technical University of Sofia, Institute for Applied Mathematics. Professor Boyadjiev also visited at Graceland in 1994-1995.

Grinnell College

Marc Chamberland
chamberl@math.grin.edu

Department News:

Emily Moore and Tom Moore were recently promoted to full professor. For the first time in many years, no one is on sabbatical and there are no temporary faculty!

In the spring semester, 2000, Richard Guy was our Noyce Visiting Professor. He taught two half-semester courses, "Combinatorial Games" and "Topics in Number Theory".

Our Faculty:

Arnold Adelberg continues as chair of the Noyce Visiting Professor program. (Last Spring Richard Guy of the University of Calgary was the Noyce visitor). Adelberg's paper "Universal Higher Order Bernoulli Numbers and Kummer and Related Congruences" will appear soon in the Journal of Number Theory. He gave a talk this summer in Luxemburg at the International Conference of the Fibonacci Society on "Universal Bernoulli Polynomials". He will be giving a talk on "Extension of the Universal Kummer Congruence" at the National Meeting in New Orleans. He has also been active as a referee and as a reviewer for Math Reviews.

Marc Chamberland had a busy year in several research-related endeavors. His paper "An Example of Dynamic (In)Consistency in Symmetric Extensive Form Evolutionary Games" (with Ross Cressman, Wilfred Laurier University) has appeared in the journal Games and Economic Behavior, and the note "The Series for e via integration" appeared in the College Mathematics Journal. Marc presented his joint work with Oleksiy Andriychenko concerning Thwaites's Conjecture at the joint meetings in D.C., gave a talk at last year's MAA Iowa section meeting, and spoke at the Math Challenges meeting (UCLA) on Jacobian Conjectures. The summer of 2000 saw him supervising two undergraduate research projects concerning celullar automata, including Conway's Game of Life. He has notes and articles which will appear during the current academic year in Mathematics Magazine, the Mathematical Intelligencer, Proceedings of the AMS, and Math Horizons.

Pamela Ferguson has been asked by the National Science Board to go on an inspection visit to the National Science Foundation station in the Antarctica. She was also a co-author of the National Science Board's paper on Science and Technology for the transition team. This team will form after the Presidential elections. The goal of the paper is to recommend activities that will continue to strengthen mathematics and science during the next administration. Last spring, she also was part of a review team for the mathematics department at Union College. (Union College has a very fine department so it was a pleasure to visit).

Gene Herman and his coauthor Mike Pepe are completing work on the first edition of "Linear Algebra: Modules for Interactive Learning Using Maple" to be published this fall by Addison Wesley Longman.

Charles Jepsen continues to work with students in the general area of geometric configurations and combinatorial geometry, directing projects for two students, Alex Ford and Emily Resseger, in Summer, 2000. The paper "Quadrilaterals with integer sides," written jointly with former students Jennifer Heppner and Daniel Willms, will appear in the October issue of Mathematics Magazine. This paper is the result of a research project in Summer, 1998.

Emily Moore chairs the Department of Mathematics and Computer Science. Her most recent publication is "Extending graph colorings using no extra colors" written with Mike Albertson, and to appear in Discrete Mathematics. This past summer she worked with student Ben Skalland on proving that no difference sets exist in groups of order 70.

Tom Moore is the editor of a new volume in the MAA Notes series (volume 52): Teaching Statistics: Resources for Undergraduate Instructors. He began a three-

year term on the Mathematical Sciences Educational Board (MSEB), for which he also serves on the executive committee. For the past 6 months, he has been involved in collaborative work with Professor Vicki Bentley-Condit of Grinnell's Anthropology Department.

John Stone is continuing to work on a textbook, *Algorithms for functional programming*. During Richard Guy's visit to Grinnell in spring 2000, he designed and wrote some programs for exploring particular combinatorial games; the results will appear in the forthcoming edition of Conway, Guy, and Berlekamp's *Winning ways*. As administrator of the department's local-area network, he organized our transition last summer from Hewlett-Packard workstations to Linux-based machines.

Henry Walker continues his involvement with computer science education on several levels. Beyond the expected activities of teaching and advising, he works with his colleagues on planning future directions for CS. Regionally, he is active in the Iowa Undergraduate Computer Science Consortium, the Iowa Advanced Placement Advisory Committee, and the Iowa NSF/SIGCSE grant Preparing Future Faculty in computer science. At a broader level, he serves as Secretary/Treasurer of SIGCSE, as Symposium Chair for SIGCSE 2001, as Chair of the Pedagogy Focus Group for Supporting Courses for the ACM/IEEE Task Force for Computing Curriculum 2001, as columnist for the "Classroom Issues" section of the SIGCSE Bulletin, as a consultant for the College Board, as a member of the Ad Hoc Advisory Committee for AP CS, and as a member of the Liberal Arts Computer Science Consortium.

Royce Wolf was on sabbatical during the past academic year. During his time off he tackled a new area of mathematics, Knot Theory. He is looking forward to summer research at Grinnell, investigating double torus knots. Approximately eight weeks were spent in Berkeley working with the knot theorists there ("Braid groups are linear" was the big news!!) and his old piano teacher ("Beethoven's op101" and "Chopin's Preludes" was the big news!!

Iowa State University **Dean Isaacson**
Department of Statistics **DLI@iastate.edu**

Our most exciting news came late last fall with the announcement of a combined $10M endowment to the Department of Statistics and the Plant Sciences Institute. The donation came from Norma Baker in honor of her late husband, Laurence H. Baker, who was a 1954 graduate of Iowa State University and a long time employee of Pioneer Hi-Bred International. Ms. Baker's gift endows the Center for Bioinformatics and Biological Statistics, one of eight centers in the Plant Sciences Institute. For the Department of Statistics it establishes the Laurence H. Baker Endowed Chair in Biological Statistics.

Recently Hal Stern, professor in statistics, was named interim director of the Laurence H. Baker Center for Bioinformatics and Biological Statistics.

There are approximately 130 graduate students in statistics at ISU at present. In addition a few employees at General Motors, 3M and at Mayor Clinic are in the distance education M.S. degree program offered by ISU.

CALL FOR NOMINATIONS FOR 2001 IOWA SECTION AWARD FOR DISTINGUISHED COLLEGE OR UNIVERSITY TEACHING OF MATHEMATICS

Nominations for the tenth (2001) 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 2001 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 awardees, each of whom will be honored at the national MAA meeting in January 2002 and receive a $1,000 check and a certificate.

Anyone is entitled to make a nomination, but nominations from chairs or MAA representatives in departments of mathematical sciences are specially solicited. For this reason, this call for nominations is sent to both department chairs and MAA liaisons so that the responsibility for nominations can be shared between them.

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.

In addition to discussing this memo with your colleagues, preferably at a department meeting, please post it in a prominent place in your department.

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.

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:

Professor Mark Johnson
Secretary, Iowa Section
Central College
Pella, IA 50219

so as to be received no later than January 1, 2001.

Nominations for someone from another Section should be sent to the Secretary of the nominee's section.

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.

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

Nomination Form
(Please enlarge to 8.5 x 11 and type all information)

Name of Nominee (first name first) _____

College or University Affiliation _____

College or University Address _____

City _____ State _____ Zip _____

Nominee's number of years of teaching experience in a mathematical science _____

Has the nominee taught at least half time in a mathematical science during the current academic year or during the previous year if on approved leave or sabbatical? _____

In the space below, please briefly describe the unusual personal and professional qualities of the nominee that contribute to his or her extraordinary teaching success.

Name of nominator (first name first) _____

Address of nominator _____

Telephone _____ Email _____

Evidence of Extraordinary Success in Teaching

A nomination for this award should consist only of the materials requested below and should not include any other materials such as curricula vitae or other items. Please prepare all application materials on one side of 8.5 x 11 inch paper, with a type size no smaller than 12 points (pica).

A completed application should contain the following items:

- **Nomination Form:** The complete Nomination Form should form the first page of the application.

- **Narrative:** Please describe the nominee's extraordinary success in teaching by providing a narrative of the nominee's background, experience, teaching style, special contributions, other teaching awards, and any additional evidence of the nominee's unusual achievements in teaching. Please limit this portion to no more than five double spaced pages.

- **Additional Documentation:** Please submit no more than three pages of evidence to document the nominee's extraordinary teaching success. This documentation will vary greatly from institution to institution by may include summaries of peer or student evaluations, comments on teaching, possible increases in number of undergraduate or graduate degrees given in mathematics (with clear evidence of the nominee's substantial responsibility for them), possible student successes in mathematical competitions (with clear evidence of the nominee's substantial responsibility for them), etc.

  Nominators should bear in mind that the National Selection Committee might view a nomination more positively if it is accompanied not just by carefully chosen testimonials from a few selected students and faculty, though they are, of course, welcome, but also by some unfiltered input that is more representative of the whole spectrum of opinion among students and faculty about the nominee.

- **Letters of Recommendation:** Please include no more than five letters of recommendation of no more than one page each, as follows:
  -- Two letters from the nominee's present or former students.
  -- Two letters from the nominee's colleagues (one of whom could be the department chair).
  -- One additional letter from anyone qualified to comment on the nominee's extraordinary teaching success.

At the end of Spring 2000, two long-time faculty members, Richard Groeneveld and Edward Pollak, retired. Dr. Groeneveld was with the department for 30 years and for most of the time had served as the coordinator of undergraduate students. Dr. Pollak joined the staff in 1964 and specialized in genetic statistics in both his teaching and research area. He worked with both M.S. and Ph.D. students through his research program. Two new faculty members have joined the staff: Dan Nettleton and Amy Froelich. Dr. Nettleton, formerly from University of Nebraska-Lincoln, is interested in statistical genetics, order restrictive inference, categorical data analysis and consulting. Dr. Froelich is a recent graduate of the University of Illinois-Urbana-Champaign with a specialization in Educational Measurement.

Awards received by faculty this past year include:

W. Robert Stephenson received a teaching award from General Motors. He received this award for teaching Stat 495 and 496 as part of the distance education program. This award is significant since about 150 instructors teach for General Motors each year and they give only one award annually.

At the Spring Convocation and Awards Ceremony, four faculty members were recognized for their outstanding work with the university. W. Robert Stephenson was named University Professor. Derrick K. Rollins received the Presidential Service Award, which recognizes a member of the faculty for exemplary service that benefits ISU. Mack C. Shelley was a recipient of the Louis Thompson Distinguished Undergraduate Award, which recognizes faculty members who have an outstanding teaching career. Finally, Alicia Carriquiry received the International Service Award, which recognizes a faculty member for outstanding international service in teaching, research or administration.

Dr. Carriquiry was also appointed to a half-time associate provost position.

At the August 2000 Joint Meetings of the American Statistical Association, Ken Koehler was named a Fellow of the American Statistical Association.

Conference announcement:

A conference is in the planning stage to honor Wayne A. Fuller's 70th birthday and his contributions to the statistical sciences. Dates for the conference are: June 21-22, 2001 in Ames, Iowa. More information and regular updates will be posted on the website: **http://www.public.iastate.edu./~stat/.**

Luther College

Ruth Berger
bergerr@luther.edu

Joyce Becker presented a talk in the Luther Paideia Texts and Issues Lecture Series titled "Puzzles & Paradoxes in the World of Mathematics."

This summer Joyce Becker and Ruth Berger attended a Chautauqa Short Course at Harvard University on "Calculus and Precalculus: An Integrative Approach".

Richard Bernatz co-authored the book "Finite Analytic Method in Flows and Heat Transfer", published in 2000 by Taylor & Francis.

Reginald Laursen is completing his last year as department chair.

Alan Macdonald's paper "Einstein's Hole Argument" is in press at the American Journal of Physics. On Oct. 24 Alan will give a Paideia Texts and Issues Lecture titled "Spooky Action at a Distance: The Puzzle of Entanglement in Quantum Theory".

REFORM: This year, in an effort to revitalize and motivate precalculus material, we have changed our curriculum so that we no longer have straight precalculus courses. Instead we have two tracks of Precalculus with Derivative. For a text we are class testing a manuscript by Robin Gottlieb from Harvard. So far the course seems to have evolved into a slow calculus course.

STUDENT DATA: We graduated 3 math/statistic majors, 23 math majors and 17 computer science majors of which 4 were joint. We also graduated 23 math minors.

HIRING: We have a tenure track opening starting next fall. If you have graduates out there in the pipeline who are interested in teaching at a place like Luther have them check out **http://www.luther.edu/~math/Resource/facultyad.htm**.

Maharishi University of Management

Catherine Gorini
cgorini@mum.edu

Eric Hart has been appointed director of the web site "Illuminations," funded by MCI World Com Foundation and developed in conjunction with NCTM. It can be viewed at **http://illuminations.nctm.org**. In April the web site was designated as one of the "Digital Dozen" by the Eisenhower National Clearing House for Mathematics and Science Education. A main purpose of the site is to put online the new national standards for K-12 mathematics developed by NCTM. In addition Eric gave a plenary lecture at the International Congress on Mathematics Education in Tokyo, Japan, in August. His lecture was the opening presentation for the Topic Study Group and will be on the use of multimedia in mathematics education.

David Streid attended a one-week workshop on "Mathematical Activities Using Java" at Emporia State University in June. This workshop, funded by the NSF, provided an intensive introduction to programming Java Applets using the Java Beans developed by Joe Yanik and Chuck Pheatt at ESU. These beans allow mathematicians to create interactive Java Applets that can be used in a wide variety of courses for student exploration of mathematical concepts and their applications. Dave is continuing to develop applets for Calculus and Linear Algebra. For more information on this workshop, the follow-up conference to be held in June 2001, and the work being done at ESU and by the workshop participants, go to **http://mathcsjava.emporia.edu**.

Geometry at Work, a collection of papers in applied geometry edited by Cathy Gorini, has been published by the MAA. It includes a paper by Drake faculty member Milan Randic on connections between geometry and graph theory. The book is described at **http://www.maa.org/pubs/books/nte53.html**.

Mabel Scaroni Fisher has joined the Mathematics Department as Assistant Professor of Mathematics. She has an MS in mathematics from M.U.M. and a PhD in physiology from M.U.M. and is a welcome addition to the department.

Morningside College **Steve Nimmo**
nimmo@morningside.edu

Morningside College has begun a 6.5 million dollar renovation of the Jones/Jacobsen buildings. Upon completion of the project, the facility will have three new computer classrooms. One classroom will have forty computers and the other two classrooms will have 25 computers each. This will allow for all of the mathematics and computer science classes to be taught in a computer classroom.

University of Iowa **David Manderscheid**
Department of Mathematics **david-manderscheid@uiowa.edu**

There have been a few changes in the administration of the department. Bor-Luh (Peter) Lin stepped down after six years as Chair and Jon Simon stepped down as Associate Chair and Director of the Under-graduate Program. Paul Muhly is the new Chair of the department and Tom Branson is new as Associate Chair in charge of the undergraduate program. David Manderscheid continues as Associate Chair and Director of the Graduate Program.

The Department of Mathematics undergraduate program continues to grow, with 168 majors currently. Our undergraduate research program is also growing with 16 students working on projects with faculty in areas such as operator theory, group theory, curriculum development and number theory. Interest in our "Program C" major is strong This major is designed to meet the needs of students who want a degree in mathematics with a clear specialization in some area of application. The key is that certain courses in the area of specialization are counted towards the Mathematics degree. Students can focus on areas for which programs have been approved, such as Optimal Business Decision Making, Economics, Physics, Biomathematics and others, or they can propose new ones. Program C graduates do very well in the job market. We do however see a decline in students interested in pursuing a career in secondary teaching and are looking at how to address this.

We have two graduate programs and they are also growing with 110 students studying for MS and Ph.D. degrees. Of this total 25 students are in the Applied Mathematical and Computational Sciences Ph.D. program. Students in this interdisciplinary program build a strong foundation in theoretical and applied mathematics but also do work in other areas. Some of the current students in the program are writing dissertations in the areas of stochastic optimization in finance, atmospheric chemical models, optimal protein modeling, and image compression. Our graduate students come from Iowa and surrounding states but also from California, Texas and Georgia among others. Our foreign graduate students come from around the world with the most students from Korea, China and Romania. Our

entering class this year is the largest we can remember with 28 students, 12 of whom are women and 8 of whom are minorities who are US citizens from groups underrepresented in mathematics. Currently about 35 % of our graduate students are women and 25% are US minorities from underrepresented groups. Both figures are above the national average and the latter figure is, to our knowledge, the highest in the country at a majority institution. We also have increased our retention rate for graduate students through a number of innovative programs. These include our use of senior TAs to run problem sessions for first year graduate courses and also our use of senior TAs to run Ph.D. comprehensive exam preparation seminars during the summer. These programs also have proved to be an excellent credential for the senior TA when they go out on the job market. This year all our Ph.D. graduates took jobs in academia. Most took jobs teaching at four-year colleges or institutions that offer MS degrees and one is now an assistant professor at UCLA.

For more information about what is going at Iowa, including our seminar schedule and information on our distinguished visitor series, please see our web page: **http://www.math.uiowa.edu/**.

University of Iowa
Department of Statistics and Actuarial Science

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The Department of Statistics and Actuarial Science has thirty-two new graduate students: nine in statistics and twenty-three in actuarial science. In total there are eighty-three graduate majors and seventy-two undergraduates. We kicked off the new school year with a picnic for students, faculty, and staff on the day before classes began. The picnic was a great success with over a hundred people in attendance!

A year ago I estimated that during the 1999-2000 year we would spend between $75,000 and $80,000 on direct awards to students. As the year wore on we found more ways to assist our students and when we finally closed our books in July, the total figure was $85,000. The bulk of this was in scholarships ($39,000 for graduate students and $32,000 for undergraduates). Other high-priced items included professional actuarial exam reimbursements ($9,000) and travel to professional meetings ($3,000).

New grants awarded to our faculty in 1999-2000 totaled $780,000.

In 1999-2000, we awarded 35 degrees. Three students earned Ph.D.s (Serena Tiong, Yeh-Fong Chen, and Ming-Chung Li), two graduate teaching assistants won University teaching awards (Katy Curry and Matt Bognar), two undergraduates earned honors degrees (May-Yee Ng and Curtis Olswold), and one faculty member won a Collegiate Teaching Award (Jon Cryer).

In August, 2000, Bob Hogg began his fifty-first year as a faculty member at the University of Iowa. That is a remarkable achievement, but sadly, Bob will officially retire when the academic year is completed. I never wanted it to happen, but I knew it would some day. Bob has been a wonderful mentor, friend, colleague, and role model. Students will remember Bob as an excellent and caring teacher. Many administrators (including our University presidents), students, faculty, secretaries, and others in the Iowa City community will remember Bob for wearing a red Santa suit and white beard at Christmas time and passing out candy canes. All of us will remember Bob as a practical person with a terrific sense of humor who has fun no matter what task he must tackle. Bob plans to spend most of his time in Colorado, but we hope he will be able to come back to teach once in a while. It's been a great fifty-plus years.

This year we are recruiting for three faculty positions: the Wareham Professorship in Statistics, an assistant professor in actuarial science, and a lecturer in actuarial science. Visiting faculty in spring include Leroy Folks, who chaired the Department of Statistics at Oklahoma State University from 1969 to 1994, and Warren Luckner, who was Director of the Actuarial Science Program at the University of Nebraska (1979 to 1986), and most recently was employed by the Society of Actuaries. Warren served the SOA is various capacities including Education Actuary and Director of Research.

For those who are unaware, the Society of Actuaries and The Casualty Actuarial Society have gone through a major restructuring of their professional exams. The new system, which features fewer total exams but more material per exam, was implemented in the year 2000. Our students finished with a very strong showing in the final exam session under the old system. In November 1999, 54 different Iowa students passed exams. This includes ten students who passed the SoA's difficult exam 150 (actuarial mathematics).

The number of exams under the new system is eight for the SoA and nine for the CAS, with the first four exams being common between the two groups. The table following shows the number of exams that 34 of our actuarial students have passed, either through transition rules using credits earned under the previous system or by passing the new exams in May 2000. These students include 27 who graduated last year plus seven of our more advanced students, most of whom will graduate in December 2000.

# of Exams	#of Students
1	3
2	11
3	10
4	8
5	2
Total	34

University of Northern Iowa

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This year Joel Haack is serving as Interim Dean for the College of Natural Sciences at UNI and Gregory Dotseth is serving as Interim Department Head for the Department of Mathematics.

We have two retirements - John Longnecker retired after Spring 2000 semester and Michael Millar will retire after Spring 2001 semester. Professor Longnecker served since March 1966 and Dr. Millar has served since August of 1962.

We have one new professor - Dr. Jason M. Ribando. Dr. Ribando received a B.S. from Massachusetts Institute of Technology and a Ph.D. from the University of California (San Diego).

We also have a new visiting professor - Dr. Todd Eisworth. Dr. Eisworth received a B.S. from Louisiana State University (Baton Rouge) and a Ph.D. from the University of Michigan.

We are working on the Hari Shankar Lecture Series. Keith Devlin will be our first speaker next March.

Dr. Jack Wilkinson received the Ross Nielsen Service Award. Dr. Syed Kirmani is on leave this semester as a result of receiving the University Research Award. Dr. Mark Ecker received the University Book and Supply Outstanding Teaching Award.

The UNI contract with the Department of Defense Schools (DoDDS) has, for the 7th straight year, received funding. The $400,000. contract calls for the mathematics department to provide an inservice program for secondary mathematics teachers at DoDDS sites worldwide. The teachers come to the UNI campus for 1« weeks of work each summer and project staff conduct follow-up visits to participant schools. A new feature of the project has been in response to a request to develop a 9-week computer science course for 7th grades, an 18-week course for 8th grades and a full year course for 9th grades. UNI staff from computer science will collaborate with DoDDS teachers on the development of the curriculum materials.

Further information about the department, including a position announcement for two open faculty positions, is available on our home page: **http://www.math.uni.edu**.

Our Spring 2000 graduates were as follows:

BA	MA
Mathematics Teaching - 18	Math for Middle Grades - 9
Mathematics Plan A - 1	
Mathematics Plan B - 1	
Mathematics Plan C - 8 (Statistics & Act. Sci.)	

We have some very active student organizations. Kappa Mu Epsilon (KME), Math Club, and TEAM (Teaching Educators About Math) I and II.

This last year, the Math Club's activities included watching (math and fun) films, food and game nights, and presentations by mathematics faculty. Professor Michael Prophet talked about a problem in application theory. Professor Catherine miller conducted a workshop on how to make kaleidoscopes and had each member of the audience make one using the directions and the materials she generously brought with her. In May, Allysen Edwards, Scott Hirschman, LaNel Carey, and Sara Hirschman took over the reigns of the club as President, Vice President, Secretary, and Treasurer, respectively, from the team of Kamilla Guseynova, Gary Spieler, Jenny Baumler and Doug Kinney.

Mark Ecker is the KME advisor. Student member Brad Rolling presented his paper "Investigation into Buffon's Needle" at the first spring KME meeting last February. John Neely presented his paper "Impossible? Prove It! A Treatise on the Impossibility of Trisecting an Angle using a Compass and Straightedge" at the second meeting in March. Douglas Kinney presented "Dyscalculia, More Than Not Being Able to 'Do Math'" at the third meeting in April. Student member Teresa Grothus addressed the spring initiation banquet with "The Mobius Strip". In addition, we were privileged to have honorary guest Lester Artherholt, a 1933 Charter Member, at our April 2000 banquet where we initiated three new student members. Lastly, Douglas Kinney presented his paper "Dyscalculia, More Than Not Being Able to 'Do Math'" at the KME Regional Convention at Benedictine College in Atchison, KS on April 8, 2000.

All Iowa high school students and University of Northern Iowa college students are invited to participate in The Wright Challenge, a web-accessible mathematics contest now entering its 2nd year. Between now and December 15, the mysterious Doctor E will present six interesting puzzles, roughly one every other week. These challenges can be found on the World Wide Web at **http://www.math.uni.edu/~shaw/doctore**, printed in the Northern Iowan, and posted on the University of Northern Iowa campus. Points are given and prizes include certificates, over $100 in cash, and games donated by Kadon Enterprises, a high-end puzzle merchant. The University of Northern Iowa math department is sponsoring this contest in order to encourage Iowa students' enthusiasm for mathematics.

Upper Iowa University

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Dr. Maureen Busta , Associate Professor of Mathematics at Upper Iowa University, is working with Michele Soukup, University of Iowa in developing a Conference Within A Conference to be held in conjunction with the Iowa Council of Teachers of Mathematics Conference January 31 – February 1st in Des Moines, Iowa. All pre-service teachers are invited to attend special sessions designed to help make their teaching experiences positive ones. Dr. Busta is currently Vice-president of Post-Secondary for ICTM and Ms. Soukup is the Student Director for ICTM.

Dr. Busta is also involved in the Middle School Math Initiative, Every Student Counts. Three key mathematical topics in the middle grades are research topics: Fractions, Ratios & Proportions, and Algebraic Reasoning.

Wartburg College

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Our department is a combined Mathematics, Computer Science, and Physics department.

We currently have a great deal of departmental activity on three fronts. First of all we are still in the middle of a general education change. The first-year students are in the new program but we still need to form departmental guidelines for the communication and information literacy components of the plan. We are also expanding our capstone courses in computer science and mathematics to full courses. Secondly we are in the design stages for a new science building and renovation of the existing science and mathematics building. We may be talking to many of you to get your input along these lines. The third is that we have begun the search for two faculty members. We plan to hire a mathematician and a statistician. If you know of anyone who might be interested please have these people contact us or check our web site.

Even though we are excited to begin the search for two new people it is with some degree of sadness that these positions result from two retirements.

Dr. Bill Waltmann and Dr. Glenn Fenneman have announced their intention to retire from their duties as Professors of Mathematics at Wartburg College at the end of the current academic year. Bill joined the faculty at Wartburg in 1958 and served as Chair of the Department of Mathematics from 1971-94. 1958 was also the year that Bill joined the MAA. During his membership years he served as Iowa Section Chair 1966-7 and as Governor of the Iowa section 1980-83. Glenn joined the faculty at Wartburg in 1965 and has been a member of the MAA for 25+ years. He has been a vital component of mathematics education program and he has provided exceptional leadership for our statistics offerings.

Josef Breutzmann was on sabbatical last Fall term and spent the bulk of his time working with his thesis advisor, Jack Lutz, at Iowa State University.

John Zelle continues leading our use of Python as a first language in our CS1 class. This fall the CS1students have been using a draft of a Python book he is writing for the course. You will hear more about the course outcomes in the near future.

Mariah Birgen has been experimenting with Maple Labs for Calculus I, II, III and presented on preliminary results at the Kansas City Regional Mathematics Technology EXPO. She took a team to the MAA student contest at Luther College. But the most important news in her life is that they have a new daughter (Marjorie Birgen).

Lynn Olson was on sabbatical leave last Winter and May Term. He participated in two computer science graduate seminars at the University of Iowa. He also investigated certain sums of unit fractions. In May he and his wife traveled in England, Wales and Ireland with the intent of laying groundwork for a math and science related trip to this area. They met Wartburg physicist Chris Schmidt and his wife for a week in Ireland. The personal highlight was having "hands-on" access to Newton's personal library at the Christopher Wren Library at Trinity College in Cambridge.

We have three active students groups in the department. Missing Bytes is a student chapter of ACM while Psi Phi is a local physics club. The mathematics club is a chapter of KME, the national mathematics honor society. The three groups have common leadership and as a result they are trying to do more things jointly.

This past year we had thirty-nine students graduate with majors within the department. Nineteen were in mathematics or mathematics education, twenty-two were in computer science or computer information systems and seven were in physics.