MATHEMATICS DEPARTMENT NEWSLETTER
(1986-1987)

A WORD FROM THE CHAIRMAN

The past year has been one of substantial progress for the Mathematics Department, which is now well positioned for improvement next year. In the last year and a half, the Department computing facilities have moved from poor to one of the best of any mathematics department in the country, with a VAX 8600 supermini, 13 Sun workstations (with fileserver, etc.), a graphics lab (with a mini computer), an instructional computing lab (which includes 20 Macintosh Pluses networked to a DEC 20 as well as 20 terminals to the DEC, a faculty microcomputer network with approximately 50 microcomputers and other devices, and a staff word processing network. Also, the Department now manages the University's Remote User's Access Center (a high-speed link to the San Diego CRAY Supercomputer). A VAX 750 drives the CRAY node. The Department also manages a DEC 20 mainframe for the College of Science as well as the College of Science Ethernet. The full-time computing staff includes a systems manager, a scientific software manager, a secretary and two operators. In addition, the Department employs several part-time operators and instructional computing personnel.

This year we were highly successful in recruiting graduate students, with 19 new teaching assistants and fellows accepting from 26 offers made, out of a pool of 131 applicants. There has also been a recent dramatic increase in the number of undergraduate majors.

The Department is soon to acquire space in two adjacent buildings which will alleviate our short-term space problems. The Department's base funding has improved due partially to the University's reallocation program and is scheduled to improve further as a result of that program. We have the potential to recruit outstanding faculty at competitive salaries. Our financial outlook seems quite good in view of the fact that the local economy has recently passed through a low point.

Our Department is already ranked among the top mathematics departments in the country and is positioned to continue to climb. (We were recently ranked as the most improved mathematics department in the United States.) We made a striking appointment in the person of Prof. Janos Kollar, one of the world's leading algebraic geometers. Next year we will be engaged in a vigorous faculty recruitment program and thus expect further improvement.

The Mathematics Department at the University of Utah continues to be one of the most congenial departments in the country and has the added advantage of being in one of the most pleasant environments. The faculty pulls together for the betterment of the Department. I am bullish on the future.

T. Benny Rushing

D. KEITH REED (1933-1986)

Professor Keith Reed, a member of the faculty for twenty-one years, died of leukemia in September, 1986. He served as Associate Chairman and Summer Chairman during many of those years. His main interests were the undergraduate program and developing and teaching courses for it.

The University honored him with the Distinguished Teaching Award in 1973, and the Liberal Arts Program recognized his achievements in 1976 with an award for a course which he developed, the "Mathematics of Chance." More than just an excellent teacher, Keith was a good man and he will be missed. His colleagues and friends have established an undergraduate scholarship fund in his memory and honor. Anyone who wishes to contribute to it may do so with a check payable to "KEITH REED SCHOLARSHIP FUND," addressed either to the Department of Mathematics or to Development Office, University of Utah, Salt Lake City, Utah 84112.

DEGREES AWARDED IN 1987

At least seventy-five students plan to complete degrees in the Department this year, including twenty graduate degrees. Paul Arner, Phillip Barry, Bernard Bialecki, Roger Chen, Gregory Harris, Nela Lakos, Dennis Malm, Bruce Piper, Mark Stromberg, Masaji Watanabe, and Miljenko Zabcic, all of whom have served as teaching fellows in the Department, expect to complete the requirements for the Ph.D. degree during 1987.

SUMMER MATHEMATICS MEETING

The University of Utah will host the joint national meetings of the American Mathematical Society and the Mathematical Association of America, August 5-8, 1987. The last such meeting at the University was in the Summer of 1959.

NSF GRADUATE FELLOWSHIPS

Two graduating seniors, Bart Giddings and Andrew Iverson, have been awarded National Science Foundation Graduate Fellowships for their graduate study. Iverson will study mathematics at the University of California at Berkeley while Giddings will study molecular biology at the Massachusetts Institute of Technology.

GRADUATE STUDENT AWARDS

The University Research Committee has awarded Graduate Research Fellowships for 1987–1988 to David Austin and Mladen Bozicevic.

POSTDOCTORAL AWARDS

Miljenko Zabcic, who is completing his Ph.D. thesis this year under the direction of Professor Henryk Hecht, has been awarded both a Visiting Membership at the Institute for Advanced Study in Princeton and a C. L. E. Moore Instructorship at M. I. T. He will be at the Institute for Advanced Study for the academic year 1987-88 followed by two years at M. I. T.

Gordana Matic, who completed her Ph.D. degree last year under the direction of Professor Ron Stern, has been at M. I. T. this year with a Moore Instructorship. She plans to be at the Institute for Advanced Study next year and then at M. I. T. for the second year of her Moore Instructorship in 1988-89.

FACULTY AWARDS AND ACTIVITIES

Joseph Taylor, Dean of the College of Science for 1985–87 and Chairman of the Mathematics Department before that, has recently been appointed Academic Vice President of the University.

Assistant Professor Aaron Fogelson has been awarded a research fellowship for the next two years by the Alfred P. Sloan Foundation. These awards are made, on a highly selective basis, to young scientists who have demonstrated potential for outstanding research achievement. Fogelson is the ninth member of the departmental faculty who has received this award.

Jim Carlson has received a faculty fellowship for one quarter of released time.

Peter Li was an invited hour speaker at a meeting of the American Mathematical Society in October, 1986, and Paul Roberts and Henryk Hecht have been invited to present hour talks at meetings during 1987.

Ron Stern accepted an invitation to deliver a series of lectures in China last October.

Robert Barnhill has been appointed Chairman of the Department of Computer Science at Arizona State University.

Frank Hoppensteadt has been appointed Dean of the College of Natural Sciences at Michigan State University.

As in the past, a number of faculty will be on leave at other institutions to pursue their research: Jim Carlson, Max Planck Institute, Bonn; Dragan Milicic, Mathematical Sciences Research Institute, Berkeley; Kenneth Goodearl, University of California, Santa Barbara; Frank Stenger, University of Tsukuba, Japan; and Simon Tavaré, University of Southern California. Milicic is a major participant in the program in Group Representation Theory at the Berkeley Institute.

A new addition to the department is Janos Kollar of Harvard University who has been appointed Associate Professor. We also welcome four new instructors: Douglas Blount, University of Wisconsin; Tie Luo, Brandeis University; Kelly McArthur, Montana State University; and Andreas Stahel, University of Zurich.

The Department will host several visitors from other universities: Eusebius Doedel, Concordia University, Montreal; Vivian Hutson, Sheffield University; Yasuhiko Ikebe, University of Tsukuba, Japan; Valentin Iliev, Bulgarian Academy of Sciences; Marek Kowalski, University of Warsaw; Renate Schaaf, University of Heidelberg; and Geraldo

Welters, University of Barcelona. In addition, Shigefumi Mori of Columbia University will be at the University during July and August for a seminar on threefold theory.

NATIONAL SCIENCE FOUNDATION

Nineteen members of the faculty hold research grants with the National Science Foundation and other research agencies, with a total annual dollar amount of $1,303,946. With support from the Foundation, Professors Hugo Rossi, Simon Tavaré and Robert Brooks will conduct a research program for eleven undergraduate students during the eight week period of June 29–August 21. The focus of the program is applications of algebra to problems in probability and statistics. Eleven participants have been selected for this program — five from the University of Utah and six from other schools.

OUTSTANDING TEACHING AWARDS

The Department is presenting awards for outstanding teaching to two of our graduate students. In the Department's regular evaluation of teaching, both of the recipients received highly complimentary comments from their students. Margaret Russell, a teaching assistant who came to the University in 1985 from Middlebury College in Vermont, is recognized for her outstanding teaching of elementary courses during 1986-87. She plans to complete the requirements for a masters degree this year. Miljenko Zabcic, a teaching fellow who came to the University in 1981 from the University of Zagreb in Yugoslavia, is recognized for outstanding teaching of elementary courses over a period of several years. He will complete the requirements for his Ph.D. degree this year.

DISTINGUISHED TEACHING AWARD

Professor Ron Stern has received the University's Distinguished Teaching Award. He is the third mathematician to have been chosen for this award since it was first awarded about twenty years ago.

UNIVERSITY FUND DRIVE

In cooperation with the fund drive which the University has just launched, the Department seeks to establish an endowed chair and one or more named postdoctoral instructorships. An endowed chair would require about $1,000,000 in funds from donors, while each named instructorship would require $100,000. With the latter, the donor could specify, as in the Moore instructorships at M. I. T., the name which the position would carry. Named instructorships would carry a more attractive salary and would have funds available to aid research activities. Establishment of these would enable the Department to be more competitive with other universities which already have similar positions.

UNDERGRADUATE AWARDS

Entering Departmental Scholarships:
Constance Marie Brough and Yan (Christopher) Cai.

Continuing Departmental Scholarships:
Brett K. Bloomquist, Jon Patrick Daley, and Patrick R. McCabe.

University of Utah Presidential Scholarship:
Brian Jackson.

High score on the Putnam Mathematics test:
Andrew Iverson and Denise White (tie).

Susan Catherine Christianson Memorial Award:
Shawna Baker Haider.

Hurd Award (outstanding sophomore Mathematics major):
Margaret Anne Keener.

Biesele Award:
Craig C. Tingey.

Gibson Award (outstanding senior Mathematics major):
Andrew Iverson.

D. Keith Reed Memorial Award:
John Bruce Johnston.

INFORMATION FROM ALUMNI

The Department welcomes news and information from alumni. If you have any special news, please send it to us and we will try to include it in a similar newsletter next year. Address correspondence to Newsletter, Department of Mathematics, University of Utah, Salt Lake City, UT 84112.

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