# UNIVERSITY OF UTAH

# AFTERMATH
## MATHEMATICS DEPARTMENT NEWSLETTER
### (1996-1997)

**A WORD FROM THE CHAIRMAN**

As summer draws near with its promise of a different rhythm for both students and faculty, we look back in satisfaction to the work done: the classes prepared and taught, the theorems discovered and proved, the papers written and submitted. While this, the creation, preservation, and transmission of mathematical knowledge is our most important work, we have faced some special challenges this year. Foremost among them is the upcoming change to the semester system. With the outstanding leadership of Associate Chair Bob Brooks and the many long hours of difficult work by the members of the curriculum committee chaired by Nick Korevaar, we have accomplished the most thorough-going curriculum revision in years, one that we think will serve our students well.

There are many individuals in the department whom I'd like to recognize here, but with space so short, I can only mention a few. Paul Fife, back from a sabbatical year after his term as chair, was awarded the rank of Distinguished Professor. With his life-long record of accomplishment and his continued prolific research activity, it is recognition richly deserved. Hugo Rossi, who has served as editor of the AMS Notices, will be on leave next year as Deputy Director of MSRI. He welcomes all to come visit him in Berkeley. Misha Kapovich was promoted to professor, Gordan Savin received a Faculty Fellowship, and Mark Lewis received both a Faculty Fellowship and a Seed Grant. Rich McLaughlin, who was promoted to assistant professor last year, received an NSF Career Development Award. Congratulations to all!

This past year we have an outstanding Graduate SAC committee, and John Jacobsen and Sean Sather-Wagstaff have sacrificed many hours of thesis research to bring us the much-appreciated afternoon tea, where we can discuss mathematics at leisure. Cindy Soderstrom, chairwoman of the Under-graduate SAC committee has energized that body and plans even more activities for next year. Les Glaser has done a wonderful job of identifying talented undergraduate students for scholarship support, and his efforts have helped more than one very able student to complete his or her studies in mathematics.

This year we lost one faculty member, Yongbin Ruan, to the University of Wisconsin. We regret his departure, but wish him well. We also welcome three new instructors: Jaume Amoros from the University of Barcelona, Goran Muic from the University of Zagreb, and Knut Solna from Stanford.

Everything that the Mathematics Department does depends on our able staff: Annetta Cochran, our administrative assistant, and Eleen Collins, Jill Heersink, Frances Hill, Marilyn Olsen, and Pat Sorenson. We are much saddened by the illness of Sherry Dymock and we wish for her recovery. Janice Thomas and now Nancy Demello have done a superb job of filling in for her. Jill, who has completed her master's degree in speech therapy will be leaving us soon for her new profession. We wish her well. Two new staff members have joined us: Tami Whisenant and Kelli Radican. We welcome Tami, and we welcome back Kelli, who has found our department irresistible.

Our computing operation continues to be run by Nelson Beebe, Pieter Bowman, and by Michael Shields, who joined us last year. Those who have worked in other Mathematics Departments will recognize by comparison what a superb job they do.

Our space problems continue, and will continue, I fear, into the next millennium. Happily, there will be some relief with the completion of the INSCC building, which will house a group composed mostly of math biologists. Many thanks to Hans Othmer for the leadership and many hours he has devoted to this project.

In closing, I'd like to recognize Bob Brooks, who is stepping down as Associate Chair. During his two years on the firing line he has helped the department to meet its financial and academic challenges, to manage the transition to semesters, and, in general, to make the trains run on time. I'd also like to thank Peter Alfeld, who is stepping up to the job. Colleagues like Fletcher Gross, Bob Brooks, and Peter Alfeld make a tremendous and under appreciated contribution in this position, sacrificing what is by comparison the tranquil life of the professor.

Finally, I'd like, on behalf of the entire department, to express the deepest appreciation to our colleague, former chair, and dean, Benny Rushing. Over the past five years he has given the College of Science the best leadership that anyone could ask for.

Jim Carlson

## DOUGLAS WILLETT RETIRES

Professor Douglas Willett is retiring after over 30 years of service to the department. Doug received his B.S. degree from South Dakota School of Mines and Technology and then did graduate work at the California Institute of Technology, receiving the Ph.D. in 1963. Prior to coming to Utah in 1966, he was on the faculty of the University of Alberta in Edmonton, Alberta, Canada.

He has published over 30 research papers in his specialty Differential Equations. He has participated in Symposia held in Hungary, Canada, Wisconsin, and Colorado.

We extend our best wishes to Doug and his wife Moon for a most pleasant retirement.

## DEGREES AWARDED IN 1997

Including teaching majors, there are slightly under 200 undergraduates majoring in Mathematics. In June, 42 students will receive a baccalaureate degree in Mathematics. A total of 8 M.S. degrees will be awarded. Students receiving the Ph.D. in Mathematics in 1996-1997 are: Yongnam Lee, Richard Mayer, Laura Smithies, and Nien-Tzu Wang.

## IDA MAE HANKS SCHOLARSHIP

A new scholarship is being offered this year due to the generosity of Ida Mae Hanks. She has created scholarships in 7 different academic areas (American History, Family and Consumer Studies, Journalism and Mass Communication, Science and Mathematics, Elementary Education, Architecture and Electrical Engineering, and Civil Engineering) to honor various members of her family. The award in Science and Mathematics is in memory of Theodore Verender Hanks. The scholarship is to be made to an academically outstanding student from Idaho. The first Theodore Verender Hanks Scholarship is awarded to Zeeshan K. Yoonas.

## BARRY GOLDWATER SCHOLARSHIP

The Barry M. Goldwater Scholarships were established by Congress in 1986 for students who will be college juniors or seniors and who have outstanding potential for a career in mathematics, the natural sciences, or engineering. Each 4-year college

and university may nominate up to four students and the final selection of 285 winners is made by a national foundation set up for this purpose. This year, Jessica Shepherd, who is a dual major in Mathematics and Computer Science, won one of these coveted awards for next year.

### PUTNAM MATH CONTEST

Every December, the William Lowell Putnam Mathematics Test is open to all undergraduates. The test is famous for its difficulty and only the best undergraduate mathematicians compete. Even finishing in the top 500 (over 2,400 students took the exam last December) is a significant achievement. This year Jun Zhang, a junior, tied for 42nd and received honorable mention. This represents the best result of anyone locally for many years.

### MODELING CONTEST

Two teams of 3 undergraduates each participated in a national contest in mathematical modeling sponsored jointly by The Consortium for Mathematics and Its Application and the Mathematics Association of America. Working against time (they were allowed no more than 72 hours from first reading the problem to devising a solution) and competing against over 390 other teams from Asia, Europe, and the United States, both teams achieved the status of successful participant. The members of the teams were Stephen E. C. George, Ronald E. Lundeen, Jr., John H. Moeller, Aleksandra Kuswik, Greg Piepmeyer, and Jun Zhang. Don Tucker served as faculty sponsor for both teams.

### PI MU EPSILON

This year the Undergraduate Student Advisory Committee, under the direction of Cindy Soderstrom, has worked diligently to resurrect the local chapter of Pi Mu Epsilon. Pi Mu Epsilon is a national mathematical honor society whose purpose is the promotion of scholarly activity in mathematics by students in academic institutions.

An opening dinner was held on May 15, 1997, where new members were introduced to the purpose, history, motto, and pledge of the organization. Keynote speaker for the evening was Professor James Carlson, Chairman of the Mathematics Deparment. The officers of Pi Mu Epsilon have many plans for the coming year and would like to involve as many undergraduate and graduate students as possible. Anyone wanting more information should contact the faculty advisor, Professor Les Glaser.

### CHANGES TO THE FACULTY

New Instructors for 1997 (and the year, University and specialty of their Ph.D.'s) are Goran Muic (1997, University of Zagreb, Representation Theory), Knut Solna (1997, Stanford, Partial Differential Equations), and Jaume Amoros (1996, University of Barcelona, Kahler Geometry).

Gabor Megyesi has finished his 3-year term as an Instructor and will be leaving.

Assistant Professor Yongbin Ruan has resigned to accept a position at the University of Wisconsin.

Professor Douglas Willett has retired.

### PROMOTIONS

Professor Paul Fife was named to a Distinguished Professorship.

Associate Professor Michael Kapovich was promoted to Professor.

Adjunct Assistant Professor Jennifer Johnson was promoted to Adjunct Associate Professor.

## FACULTY AWARDS AND ACTIVITIES

Associate Professor Mark Lewis received both a Faculty Fellow Award for Spring of 1998 and a Seed Grant Award.

Associate Professor Gordan Savin was awarded a Faculty Fellow Award for Autumn of 1997.

Assistant Professor Rich McLaughlin received the National Science Foundation Career Award for the period 1997–2002.

The Outstanding Instructor Award, given for distinction in both teaching and research in the Mathematics Department, goes to Holger Kley and Yimin Xiao.

Professors Mladen Bestvina, Stewart Ethier, and T. Benny Rushing will be on sabbatical for the academic year 1997-98.

Professor Hugo Rossi will be on leave for the academic year 1997-98 and will be serving as the Deputy Director of MSRI at Berkeley.

## GRADUATE STUDENT AWARDS

The University Research Committee has awarded a Graduate Research Fellowship for 1997-1998 to Eric Marland.

The recipients of the awards for outstanding teaching by a graduate student are Alastair Craw and Arthur Lim.

## UNDERGRADUATE AWARDS

Presidential Scholarships: Joseph Brubaker and Michelle Adams.

Departmental Scholarships: Daniel W. Burn and Mike J. Elifritz.

Continuing Departmental Scholarships: Toby M. Enniss and Elijah Newren.

Special Departmental Scholarship: Nathan M. Simpson.

Susan Catherine Christiansen Memorial Award: Rachelle R. Foster.

Hurd Award: Greg Piepmeyer.

Biesele Award: Brooks A. Brady.

Barry M. Goldwater Scholarship: Jessica Sheperd.

Kennecott Scholarship: Greg Piepmeyer.

Copley Scholarship: Caroline Hutchings.

Gibson Award: E. McKay Hyde.

D. Keith Reed Memorial Award: Chris T. Bessey.

George C. Barton Award: Karen N. Blount.

Theodore Verender Hanks Scholarship: Zeeshan K. Yoonas

Putnam Contest Award: Jun Zhang.

Phi Kappa Phi Membership: Rachelle T. Foster, E. McKay Hyde, Cynthia R. Soderstrom, and Jun Zhang.

Phi Beta Kappa Membership: Miyako Atherley, Brooks A. Brady, Angela Gardiner, and E. McKay Hyde.

Cum Laude: Miyako Atherley and Brooks A. Brady.

Magna Cum Laude: E. McKay Hyde.

Honors Bachelor's Degree: E. McKay Hyde ("Random walks and their relation to Brownian motion").

## WEB SITE

Information concerning the department and its activities can be found at the web site www.math.utah.edu

## 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.