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# A f t e r m a t h

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## From the Chair

by Jim Carlson



It has been a privilege to serve as chair of the Mathematics Department for the last seven years, and to have worked with such a great faculty, talented staff, and promising students. Despite the challenges of

budget cuts, we have accomplished many things of which we can be proud.

Among these are the new Math Circle and the Summer Mathematics Program for High School Students; the T. Benny Rushing Mathematics Student Center, funded through the generosity of the George S. and Dolores Doré Eccles Foundation; the departmental honors program, which is at its inception; the undergraduate and graduate colloquia; the new graduate recruitment and TA training programs; the John E. and Marva M. Warnock Endowed Chair; and the VIGRE program. Each one of these initiatives required the energy and commitment of many people.

It is the Department's long-standing tradition of excellence, dedication to service, and working together that made all of this possible. It is this tradition that will make it possible to surmount the very great challenge of sustaining these and other programs over the long run.

This is perhaps a good time to reflect on just how deep-rooted this tradition is. When I came to Utah in 1975, Ed Burgess was chairman. The first Ph.D. was awarded in 1954, and Ed, to name just one faculty member, had already produced a stream of excellent Ph.D. students, chief among which was Jim Cannon, who later was named to the National Academy of Sciences. A postdoctoral instructorship program was begun in 1970, and it developed rapidly into one of national prominence. Many of its alumni now occupy important faculty positions across the country. The Department was also in the midst

of a major build-up, establishing new fields such as algebraic geometry, representation theory, and mathematical biology. With the quality of new faculty members – their accomplishments and potential for future contributions – as the foremost criterion, the Department made a long series of wise and successful hiring decisions. The result was a rapid transformation to the nationally and internationally recognized department in which we now work. The recent hires that we have made, both of faculty and postdoctoral instructors, follow in that tradition and augur well for a continued bright future for this department.

It is almost *de rigueur* for chairs to grumble about the burdens with which an administrator must inevitably deal. But what stands out in my mind are the joys of working with fellow faculty members and the staff to solve problems, start new projects, and make things better; the joy of an occasional new insight into that most beautiful of all fields, mathematics; and the joy of discovering and nurturing talent in a new student, whether he or she be in high school, or here at the university as an undergraduate or graduate. There was the satisfaction of a class that went particularly well, when students minds and faces lit up with understanding, and there was the pleasure of conversation with colleagues about mathematics, a new result, or a new way of looking at an old problem. Finally, there is the enduring satisfaction of having been able to add to the work of the previous chairs, most recently Benny Rushing and Paul Fife, and then to pass the work on to such a distinguished colleague and dear friend as Graeme Milton, our incoming chair. Let us give Graeme our fullest support.

## Degrees Awarded

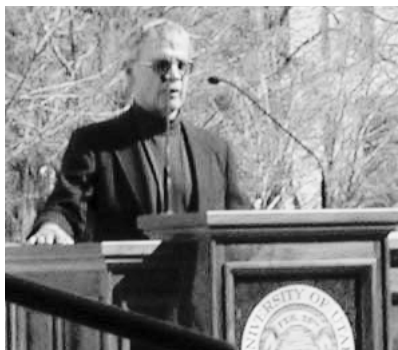


This May, 30 of the approximately 160 undergraduate math majors will receive a baccalaureate degree. A total of 10 Masters degrees will be awarded. Students receiving the Ph.D. in 2001-2002 are Nick Cogan, Michael Hohn, Sonjong Hwang, Ismail Kucuk, Blake Thornton, Chung-Seon Yi, and Sung Yil Yoon.

## Building Dedications

On Friday, April 5, 2002 the University celebrated the rededication of the Leroy E. Cowles building and the dedication of the T. Benny Rushing Mathematics Student center. Speakers at the event included University of Utah President J. Bernard Machen, College of Science Dean Peter Stang, Mathematics Department Chair Jim Carlson, Mathematics Professor Joe Taylor, George S. and Dolores Doré Eccles Foundation trustee Lon Watson, and Lucynthia Robbins, an undergraduate math major. Dan Waldis and his band, Sol Music, performed "Inversion," a musical number that Mr. Waldis wrote for the occasion. Gail Rushing was in attendance, and unveiled the name of the new T. Benny Rushing Mathematics Student Center. She also participated in the ribbon cutting, along with Bob Graham of the Eccles Foundation, President Machen, Dean Stang, and Jim Carlson.

After the ceremony, guests were invited to take student guided tours of the new facilities. Many students have already expressed their appreciation for the new Rushing Student Center, which was made possible by a generous donation from the George S. and Dolores Doré Eccles Foundation.



Joe Taylor gives a history of the Math Department's relationship with the LCB at the dedication ceremony.

## Problem Solving Contest

This year the Math Department at the University of Utah has been participating in the national Problem Solving Competition. Problems appear roughly monthly, and monthly winners have been selected. The overall winner, Brian Knaeble, and the student representative who helped run the contest on our campus, Weishou Hsu, will be attending the national finals of the Problem Solving Competition. The finals will be held in Burlington, VT during Mathfest this August.

## Changes to the Faculty

There will be three new assistant professors this upcoming year. David A. Levin, Ph.D. Berkeley, 1999, will be the Wylie Assistant Professor (Lecturer). He specializes in probability and statistics. The new VIGRE Assistant Professor Lecturer is Nancy Sundell, Ph.D. Cornell, 2002, and she focuses in theoretical ecology. Evan Haskell, Ph.D. Courant, 2000, will be the new Scott Assistant Professor (Lecturer) and his interests are in math biology.



There are also a few people who will not be with us next year. Mark Lewis is leaving but will be reappointed as an Adjunct Professor. Jim Carlson and Alexander Balk will be on sabbatical and Peter Trapa will be on leave without pay.

## Calculus Challenge

The third annual Calculus Challenge for undergraduates was held on Saturday, April 13, 2002. Seventeen students took part in this three hour exam which consisted of six calculus problems. Morgan Dennis took first place, Todd Hummell and Taemin Kim shared second place, and Julia Ma received an honorable mention.

## Math Circle

by Peter Trapa

May 8th marks the last meeting of the inaugural year of the University of Utah Math Circle, an after-school program for mathematically talented high school students. The Circle met each week for two hours during the Fall and Spring semesters, and dealt with topics as diverse as counting techniques, plane and hyperbolic geometry, and the classification of compact surfaces without boundary. Attendance stabilized at about 15 to 20 regular students, most of whom I consider quite strong, and a couple of whom were exceptional. As testament to the quality of these students, four were finalists in the Sterling Scholar competition (with one eventually winning), and three of the four top spots in this year's departmental Calculus Challenge were awarded to Math Circle participants. One of the most pleasant surprises came as two of the

strongest students decided to attend the U next year as math majors.

Next year I will be on leave, but I am pleased to announce that Nick Korevaar (with the assistance of David Hartenstine and Renzo Cavalieri) will lead the program. Under the guidance of such committed people, I am confident that the Math Circle will continue to gain momentum and evolve not only as an educational enrichment program, but also as a mechanism to recruit strong undergraduate majors.



The 2001-2002 Math Circlers.

## Faculty Awards

Alastair Crow is receiving the Outstanding Instructor Award, given for distinction in both teaching and research.

## Graduate Student Awards

Emina Alibegovic has been awarded a University Research Fellowship, and Matthew Clay, Robert Guy, Brynja Kohler and Matthew Rudd have been awarded VIGRE fellowships for the 2002-2003 academic year.

Cameron Soelberg is the recipient of the award for outstanding teaching by a graduate student.

## Undergraduate Awards

The recipients of Continuing Departmental Scholarships are Rex Butler, Song Du, Les Kartchner and Ryan Rettberg.

Elyse Woodbury is receiving an Entering Departmental Scholarship.

The Susan C. Christiansen Memorial Scholarship has been awarded to Haley Petersen.

Wendy Muir is the recipient of the Thomas Andrew Hurd Mathematics Scholarship.

Michael Woodbury is receiving the Ferdinand Biesele Scholarship.

The J.L. Gibson, Sr. Scholarship goes to Jaekyoon Oh.

Ben Murphy has been awarded the D. Keith Reed Memorial Scholarship.

The recipient of the C. Bryant and Clara C. Copley Scholarship is Jenny Jacobs.

Erik Larson is the recipient of the Calvin H. Wilcox Memorial Scholarship.

The Stephen E. Newman, Jr. Math Alumni Scholarship recipient is Ron McKay.

Ryan Rettberg was awarded a Kennecott Scholarship.

David Ayala received a Dean's Scholarship from the College of Science.

David Ayala and Andrew Reinkoester tied for this year's Putnam Contest Award.

The winners of this year's Calculus Challenge are Morgan Dennis, Todd Hummell, and Taemin Kim. Honorable mention goes to Julia Ma.

Our Top Problem Solver in the Undergraduate Problem Solving Contest is Brian Knaeble. Our student representative was Wei-shou Hsu.

Russell Howes, Jonathan Deeth and Julia Ma placed 1st, 2nd, and 3rd respectively among high school seniors in the State Math Contest. If they attend the University of Utah next fall they will receive a scholarship.

The new members of Pi Mu Epsilon are Rhett Christensen, Gary Crum, Song Du, Amanda Ellis, John Faust, Rebecca Gentry, Tara Henriksen, Joel Kramer, Predrag Krtolica, Ron McKay, Wendy Muir and J. Michael Peterson.

Joseph Brubaker joined Phi Kappa Phi this year.

Maria Bell is graduating Summa Cum Laude.

Jeremiah Perry is graduating Magna Cum Laude.

William Cano, Sunny Laws, Benjamin Jones and Brent Sallay are graduating Cum Laude.

# Dates to Remember

**Friday, May 3** - Math Department Barbecue at Canyon Rim Park 4:00 p.m.

**Friday, May 10** - University Commencement. The Math Department will be having a pre-convocation reception from 3:30 - 5:00 p.m. on the plaza.

**Monday, May 13 - Friday, May 24** - Mini-course on Complex Hyperbolic Geometry run by Jim Carlson and Domingo Toledo.

**Monday, May 13 - Friday, August 9** - Prelim Boot Camps. It is possible the boot camps will run a few days longer depending on the dates of the prelims.

**Monday, May 20** - Summer courses begin.

**Monday, May 27** - Memorial Day Holiday. The University will be closed.

**Tuesday, May 28 - Saturday, June 8** - Mini-Course on Variational Methods and Nonlinear PDE run by Klaus Schmitt.

**Monday, June 10 - Thursday, June 27** - Summer Mathematics Program for High School Students begins.

**Wednesday, July 3 - Friday, August 16** - Summer REU on Random Walks and Simulation run by Davar Khoshnevisan.

**Thursday, July 4** - Independence Day Holiday. The University will be closed.

**Wednesday, July 24** - Pioneer Day Holiday. The University will be closed.

**Wednesday, August 7** - Summer classes end.

**Wednesday, August 21** - Fall classes begin.

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*[www.math.utah.edu/newsletter](http://www.math.utah.edu/newsletter)*

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