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# A f t e r m a t h

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## Mathematics Education

by Anne Roberts



The Mathematics Department plays an important role in the education of the next generation of mathematics teachers, and in enhancing the skills of current teachers. Next year the University of

Utah will have an accreditation review as a teacher education institution and all departments with teaching majors are currently preparing a review of their program. The Mathematics Department offers a number of programs for K12 mathematics teachers. Over the years these programs have been refined gradually to meet local and national guidelines, paying particular attention to developing a strong foundation in mathematics that is linked to classroom teaching issues. Some ways to accomplish this goal are discussed in a very interesting report by the MAA, *Mathematical Education of Teachers, Part I*, that is available on reserve in the Math Library.

Probably the best-known program for teachers in the department is the mathematics teaching major. Students in this program take the same mathematics courses that all math majors take through the Foundations of Analysis sequence. In addition they take six mathematics courses specifically for future secondary teachers (7-12), several of which require significant amounts of time spent in local secondary schools. To finish their degree, math teaching majors complete a teaching minor in another area as well as a set of education courses that culminate in a semester of student teaching. About 25% of graduating math majors are math teaching majors. (Students can also earn a math teaching minor.)

The Mathematics Department also serves those students who plan to teach in elementary school. These students are majors in other departments,

but they take a year of mathematics through the Math 4010-20 courses. Many students begin this sequence assuming they already know all the math they will teach. However, they quickly find out otherwise as they work to develop a conceptual understanding of the mathematics they will teach. As generalists, these students take courses in many other areas, completing their education with a semester of student teaching. Enrollment in these courses has grown significantly over the last three years with 144 students enrolled in the sequence this semester. An increasing number of these students have taken AP Calculus or Calculus at the university but interestingly, most of these students prefer to teach in grades 1-8 rather than in high school.

In addition to preparing beginning teachers, the Mathematics Department offers professional teachers a way to enrich their own math background and to earn a masters degree through the College of Science MS program for secondary school teachers. In this program secondary mathematics teachers earn a masters degree by completing 30-32 credits in mathematics or science including a final project supervised by a mathematics faculty member. Last year the enrollment in this program grew dramatically when the Utah State Legislature passed Bill 61 providing stipends for secondary math and science teachers to earn a graduate degree. There are now 12 new candidates in this program with more anticipated this year.

There is a growing need for well-prepared math and science teachers. Salaries and working conditions in K12 schools are improving and that, combined with a desire to contribute to society, is attracting more students to the teaching profession. Through the programs described above, the Mathematics Department can help meet these needs. If you would like more information about the mathematics courses for teachers or even better, would like to become involved in these courses, please speak to one of us on the Math Ed Committee: Fred Adler, Aaron Bertram, Marilyn Keir, Anne Roberts, Ruth Ann Stefanussen, Domingo Toledo . We welcome your input!

# AMS Conference

by Aaron Bertram

On the weekend of October 26-27 the University of Utah sponsored the 981st meeting of the American Mathematical Society. There are about eight of these sectional meetings of the AMS per year, and the last time we hosted one was in the Fall of 1999. Unlike last time, though, we had the LCB building and so the entire conference took place in the two mathematics buildings, to the delight of everyone.

It was, according to my informal poll, a great success. There were 24 special sessions on topics ranging from number theory to topology to PDE's to numerical analysis. The lounge was converted into an AMS gift shop, with a tantalizing display of tee shirts and the latest mathematical publications of the AMS (including Joe Taylor's just-published book).

It was also an occasion to welcome back some old faces and keep in touch with some future colleagues. Former graduate students Jon Jacobsen, Pavle Pandzic and Sandor Kovacs made an appearance, as well as YP Lee and Ken Bromberg, who will join us as assistant professors next Fall.

Many thanks to Annetta, Paula and Mary for all of their help on the administrative side, and for getting up so early on Saturday and Sunday mornings to help us out!

## Spring Semester Course Announcement

Math 2900  
Freshman/Sophomore Seminar  
Thursdays 2:00 - 3:30

\*Required for the Mathematics Honors Degree\*

## Welcome!

We want to welcome our new Executive Secretary, **Ruth Kazanski**, to the department. Ruth will be working with the faculty in LCB as well as being very involved in web design.

Ruth attended Michigan State University and majored in Business, Communication, and Computer Science. Ruth comes to us with a great deal of experience in administration as well as internet development, software support,

and project management. She was employed for fourteen years at Novell in California as well as here in Salt Lake.

We have found Ruth to have a very positive and pleasant attitude and feel she will be a great addition to the department. She can be reached at [ruth@math.utah.edu](mailto:ruth@math.utah.edu).

Dr. **Mohamed Camar-Eddine** will join the department as a Research Associate working with Professor Graeme Milton. Dr. Camar-Eddine received his Ph.D. from the University of Toulon in France. His field of interest is Applied Mathematics.

Applications for the  
**Barry M. Goldwater Scholarship**  
are now available from Henryk Hecht (JWB 329)  
or Aleksandra Jovanovic-Hacon (JWB 205).

To be considered for this scholarship, you must be a current sophomore or junior pursuing a bachelor's degree full time with a B average or better, and be a US citizen, national, or resident alien.

Applications must be received at the College of Science, Office of the Dean, by November 8, 2002.

## Upcoming Events

**Nov. 28-29:** Thanksgiving Break - no classes.

**Nov. 15:** Deadline for submission of NCUR (National Conference on Undergraduate Research) abstracts. See Hugo Rossi for the appropriate forms.

**Nov. 15:** Deadline for submission of AIM workshop proposals.

**Nov. 20:** Math Career Day, 1:00 - 3:30, ASB 210.

**Dec. 11:** Department Holiday Party.

Aftermath is published monthly during the academic year. Issues of the newsletter will be archived on the web at:

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

**Angie Gardiner, Editor.** Please contact her if you have an idea or article to submit ([gardiner@math.utah.edu](mailto:gardiner@math.utah.edu)).