

# Augarithms

Volume 16, Number 1

September 25, 2002

## Colloquium Series Dates for 2002-2003

Colloquia are usually held on Wednesdays from 3:40 to 4:40 p.m. in Science 108. Note that the November 4th talk is on a Monday! Except for the names of all the speakers, here is the schedule for 2002-2003:

Wed. Sept. 25	Anne Goldman, University of Minnesota
Wed. Oct. 9	Steve McKelvey, St. Olaf College
Wed. Oct. 23	Jay Goldman, University of Minnesota
Mon. Nov. 4	Ken Kaminsky, Augsburg College
Wed. Nov. 20	Michael Kac, University of Minnesota
Wed. Dec. 4	Loren Larson, Carleton College
Wed. Jan. 29	Milo Schield, Augsburg College
Wed. Feb. 12	David Molnar, St. Olaf College
Wed. Feb. 26	Tracy Bibelnieks, Augsburg College
Wed. Mar. 12	Laura Chihara, Carleton College
Wed. Mar. 26	Nick Coult, Matt Haines, & Ken Kaminsky, Augsburg College
Wed. Apr. 9	Augsburg Students
Wed. Apr. 16	Augsburg Students

## This week's speaker and talk



Dr. Anne Goldman

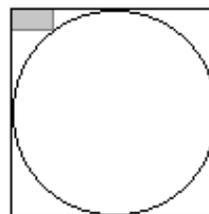
The title of Dr. Anne Ipsen Goldman's talk is titled "Biostatistics and Stem Cell Transplantation Research." She teaches courses to biostatistics graduate students and to non-majors in the School of Public Health.

Her research interests include applications of biostatistics to health sciences research; design, management and analysis of clinical trials; database management of clinical research data; use of "cure models" for design and analysis of studies with long-term survival; simulation of clinical trials using Exemplary data. She has been the senior statistician for many collaborative research projects, including AIDS and cancer, and Director, Biostatistical Support Group for the Blood and Marrow Transplantation Program.

Dr. Goldman received her Ph.D. in Statistics from Harvard University.

A native of Denmark, Dr. Goldman is also the author of *A Child's Tapestry of War, Denmark 1940-1945*, Beaver's Pond Press, 1998.

## Problem of the week



In the figure, at left, the rectangle at the upper left-hand corner measures 1 foot x 2 feet.

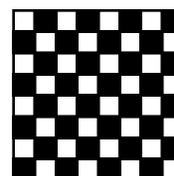
What is the radius of the circle in feet?

Send your solutions to the editor, drop them in the Puzzles & Problems Box just inside the math suite (Sci. 137), or e-mail them to him at [kaminsky@augsborg.edu](mailto:kaminsky@augsborg.edu).

**Cal Q. Less** and **Stew Famosh** solved the problem from volume 15, no. 13, which asked for a proof of which was the larger of  $e^\pi$  or  $\pi^e$  (it's the former).

## Puzzle of the week

If you construct an 8 x 8 checkerboard, how many squares (of any size) would there be in all? Generalize this to an  $n \times n$  checkboard.



Send your solutions to the editor in the Puzzles & Problems box just inside the math suite (Sci. 137), or e-mail them to him at [kaminsky@augsborg.edu](mailto:kaminsky@augsborg.edu).

## Augarithms

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## New Face of 2002



Tracy Bibelnieks

### Tracy Bibelnieks, Ph.D., in her own words...

"A native of Fridley, Minnesota, I did my undergraduate work at St. Olaf College, graduating in 1985. In 1987 I received my M.S. in Mathematical Sciences from Clemson University in Clemson, South Carolina. Continuing in the doctoral program at Clemson I received my Ph.D. in August, 1992. While pursuing my doctorate I had the opportunity to teach mathematics at Clemson, the Univ. of South Carolina at Spartanburg, and the College of William and Mary. After finishing my degree, I spent four years in the Mathematics Department of the

University of Minnesota. There I was very involved with the University of Minnesota Talented Youth Program, curriculum reform initiatives in Calculus within the Institute of Technology, math and science enrichment programs for young students (grades 5-8), educational research on gender issues in mathematics, and grant writing to support educational initiatives. On the mathematical research side, my areas of interest are matrix analysis and applied time series analysis. My thesis was an application of time series analysis within the textile industry. Oddly enough, it could have been subtitled: *How can so much fiber lead to irregularity?*

After the U of MN, I spent a year and a half working as a consultant for IBM using statistics and mathematical models to solve industry problems for actual corporate clients. I then took a few years off to spend time with my children before coming to Augsburg."

## From the Chair's Desk: Su Dorée writes . . .



Su Dorée

"Welcome back! I hope you had a restful summer and that the fall semester is off to a good start. Efforts to increase enrollment in mathematics programs appear to be working as this fall brings some of our largest classes in years. Students are sitting shoulder-to-shoulder in Calculus III (28), Discrete Mathematical Structures (26), and History of Math (26). Our colloquium series kicked off the 2002-2003 season on Monday September 9 with our own Nick Coult introducing students to *Mathematica*®.

We have recently switched from Maple® and are busy integrating *Mathematica*® applications into our courses.

We recently heard the good news that Professor Coult has received a major grant from the National Science Foundation with Professor Engebretsen from the Physics department. (See blurb at upper right.) They'll be recruiting students to help with their research. Last year we had four students doing research: Kaisa Kivilaid worked with Professor Dupont on mortality models, Kevin Sanft studied computer models and analysis of the wave equation with Professor Coult, Chandra Erdman worked with Professor Dupont on population models, and Maria Sieve explored the state graphs of the penny game with me. If you would like to get involved in research, stop by and chat with one of us; we're always looking for new students to work on projects.

Joining the faculty this year is Professor Tracy Bibelnieks (see blurb above). Rebekah Dupont is on leave this fall (see blurb below) and will return for the spring semester in time for me to leave on sabbatical. The math club, *Unbounded*, is organizing events for the fall starting with a pizza party. More details soon.

Planning continues for a new science and math building. Some of our latest ideas will be on display during the Science and Math Alumni Gathering 9:00-11:30 a.m. on Saturday September 28th in the Christensen Center as part of the college's Homecoming activities. Alumni-- mark your calendars and come say hi. If you can't be there in person, drop us an e-mail to let us know what you're doing."

**Bulletin:** On Tuesday, September 10, 2002, Rebekah Dupont gave birth to **Rachel Griffin Dupont**, weighing 6 pounds, 6 ounces (20 inches long) also a redhead like big sister Anna.



Nick Coult

Mark Engebretson

## Coult, Engebretson win NSF Grant

Professor Nicholas Coult, of Augsburg's Mathematics Department, and Professor Mark Engebretson, of the Physics Department, have been awarded a \$214,690 National Science Foundation (NSF) grant to develop mathematical models of electromagnetic waves in Earth's space environment.

The proposal, titled "Multiscale Approach to Wave Propagation through Turbulent Regions of Earth's Space Environment," was based on Professor Coult's previous work in applied and computational mathematics, and on Professor Engebretson's experimental physics experience.

The award is being granted under a new NSF program intended to encourage interdisciplinary research. The program, titled "Opportunities for Research Collaborations Between the Mathematical Sciences and the Geosciences," received 95 proposals from 295 researchers. Coult and Engebretson's was the first proposal to be officially awarded.

The award covers a three-year period starting Jan. 1, 2003. In addition to supporting Coult and Engebretson's research efforts, the award allows for up to two undergraduate research assistants to be employed part-time during the academic year and full-time over summers.