

*Mark your calendar . . .*

## Mathematics Colloquia Fall 2004

Mathematics colloquium talks are Wednesdays 3:40-4:40 p.m. in Science 108. Refreshments are provided.

- Sept. 15 Introduction to colloquium and math faculty. Also, Lynda Olson, Center for Service, Work, & Learning
- Sept. 29 Dan Wolf, student, Augsburg College**
- Oct. 13 Kevin Anderson, Carlson Companies
- Oct. 27 Andy Mack, Trident Financial Services
- Nov. 10 Colloquium #5
- Dec. 1 Colloquium #6
- Dec. 15 Colloquium #7

## Hot Southern Mathematics

Dan Wolf earned a spot in the Mississippi State University Mathematics Department 2004 Summer Research Experience for Undergraduates (REU). REU's are sponsored by the federal government to encourage students to engage in research projects in mathematics and the

sciences; they pay you to work on interesting mathematics problems with other students from all around the country! Dan will tell us about the process of applying to and getting accepted in an REU; arriving and getting to know the students and faculty; learning a lot of new mathematics; and studying some challenging, interesting problems in an area called 'inverse scattering theory.' Sophomore/junior math majors are especially encouraged to come and hear more about Dan's experience.

## Puzzle 2: Turn out the lights!

There are seven lights on in the lecture hall and we want to turn them all off so we can watch a video. The trouble is the electrician wired the switches strangely. We can change any five lights at a time, turning off those that are on and turning on any that may subsequently be off. The switches operate exactly five lights at a time – no more and no fewer. Is there a way to turn out all the lights at once?

## Problem 2: Rewired

The electrician volunteered to rewire the lecture hall so that we could change any four lights at a time, instead of five. Would that improve the situation? Explain.

**Send your solutions (not just answers, please) to the editors at [haines@augsb.org](mailto:haines@augsb.org) or drop them in the "Puzzles & Problems" box in the Mathematics Department Suite, Science 137. Getting the Augarithms after we've published the answers? The puzzles are available at publication date on the web.**

*Congratulations to Andy Held who found all seven different ways to write 105 as the sum of consecutive integers and who correctly determined that the only integers that cannot be written this way are the powers of 2.*

*Augarithms* is available on-line at [augsb.org/math/augarithms/](http://augsb.org/math/augarithms/). Click on the date you want to see.

### *Augarithms*

*The Bi-weekly Newsletter of the Department of Mathematics at Augsburg College*

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## Math Team Contest Nov. 13

The eighth annual NCS/MAA Team Contest will be held on Saturday, Nov. 13, 2004, from 9:00 a.m. to noon. Augsburg has fielded teams for the last few years. Last year one of the teams came in 4<sup>th</sup> place of the nearly 70 teams from Minnesota, the Dakotas, and Manitoba. For questions and results, see <http://www.usiouxfalls.edu/academic/maa/contest/ncsteam.htm>



If you see this man, please contact local math authorities.

Interested in competing? Contact Matt Haines, [haines@augsborg.edu](mailto:haines@augsborg.edu) by October 15.

## K-12 Math Teachers Conference & Membership

A regional conference of the National Council of Teachers of Mathematics (NCTM) will be held Nov. 11-13, 2004 in Minneapolis, MN. Sessions are appropriate for anyone interested in K-12 mathematics education. See <http://www.nctm.org/meetings/minneapolis/>

The conference registration fee is \$62 for students but it is FREE for student members of the NCTM. Student membership is only \$36! Hmm. Pay \$62 or pay \$36 and receive journals. [www.nctm.org/membership/application/student.asp](http://www.nctm.org/membership/application/student.asp) AND if you get a \$10 NCTM starter kit, you get some past journals and a \$5 coupon for membership. See <http://www.nctm.org/starterkit/>

## Eye to the Future Volunteers Needed

The 2004 *Eye to the Future Career Conference for Young Women in Mathematics and Science* will take place Saturday, Nov. 13, 2004 at Augsburg College. Close to 400 middle school girls and their parents will participate in sessions presented by women in science, mathematics and technology professions. Many volunteers are needed. Interested female students, staff, or faculty should contact Prof. Jeanine Gregoire at [gregoire@augsborg.edu](mailto:gregoire@augsborg.edu) or at 612-330-1551. Know a 4<sup>th</sup>-8<sup>th</sup> grade girl interested in math, science, computers, or engineering? Registration information will be available Oct. 8 at: [http://www.augsburg.edu/nasa\\_space\\_grant](http://www.augsburg.edu/nasa_space_grant)

## Thinking about Grad School?

Wherever you are in your undergraduate career, you may want to think about graduate school. Talk to your math advisor, professors, and other math majors, and attend colloquia. See the departmental bulletin board on graduate opportunities and look at the resources in the bookshelf below. View web pages that provide an overview (see links), or go directly to program sites. Most fulltime graduate students in mathematics are paid to go to school through a research assistantship, teaching assistantship or fellowship, and also receive tuition reimbursement. To learn more about funding opportunities, see *Assistantships and Graduate Fellowships in the Mathematical Science* in Science 137 or the AMS website.

Want to know more? Check out:

<http://www.maa.org/students/undergrad/gradstudy.html>

<http://www.ams.org/employment/undergrad.html>

[www.phds.org](http://www.phds.org)

<http://www.siam.org/students/education.htm>

<http://www.informs.org/Edu/Programs/>

**Upcoming GRE Workshops:** The Office of Undergraduate Research and Graduate Opportunity is sponsoring a series of GRE prep workshops. To register for any (or all!) of the following workshops, contact Dixie Shafer at [shafer@augsborg.edu](mailto:shafer@augsborg.edu). All sessions will be held in Science 123.

*General Overview.* 6:00-7:30. September 28.

*Math Success Keys 1.* 6:00-8:00. October 5.

*Math Success Keys 2.* 6:00-8:00. October 12. Check the next edition of *Augarithms* for more workshop dates!

For more info. on the exam itself see: <http://www.gre.org/>