

# MSCS



# Mess

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Department of Mathematics, Statistics and Computer Science  
St. Olaf College, Northfield, MN 55057

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## This Week's Colloquium

|             |   |
|-------------|---|
| Title:      | <b>Knots and Their Invariants</b>       |
| Presenters: | Jeff Boerner '02,<br>Adam McDougall '05 |
| Date:       | Tuesday, March 17 <sup>th</sup>         |
| Time:       | 1:30 pm                                 |
| Location:   | SC 188                                  |

**About the talk:** We will begin by defining what a knot is to a mathematician. Next, the concept of a knot diagram and Reidemeister moves on knot diagrams will be introduced. An important and useful tool for knot theorists is knot invariants. A few specific knot invariants will be introduced in our talk. We will end the talk by bridging the gap between what we have introduced and current research in knot theory.

## Class Next Fall: Directed Undergraduate Research

The following is an announcement from Prof. Jill Dietz about an exciting course offering next fall.

Math 396: Directed Undergraduate Research is dedicated to the joy and challenge of doing original mathematics research. Just imagine how proud you'll be when you prove your first

theorem that no one else has proved before! It may sound daunting, but plenty of students just like you have done successful research projects in the past -- trust me, I've worked with more than 80 students on these kinds of projects so I know what I'm doing.

This is a great course for students who will be getting jobs after graduation, going to graduate school, or going into teaching. You'll certainly learn mathematical content, but you'll also learn to take control over a significant project -- from start to finish -- in a unique setting.

I have a large selection of research topics in the areas of algebra, number theory, and topology from which you can choose, or you can suggest your own project. We'll meet one day a week as a class, and one day a week as individuals or small groups in my office. The pre-requisite is either Elementary Real Analysis or Abstract Algebra, or my permission.

## College Fair at Federated Insurance

Federated Insurance of Owatonna, MN, has a College Fair each April where they introduce undergraduate students to the firm and job possibilities both at Federated and elsewhere. It is a good opportunity to start thinking about the future, especially those students interested in an actuarial career. This year the Fair is the

evening of April 2nd and the day of April 3<sup>rd</sup> at Federated Insurance's home office in Owatonna. Contact Prof. Allen (allen@stolaf.edu) for more information.

### Problem of the Week

Circle B lies wholly in the interior of circle A. Find the loci of points equidistant from the two circles.

Solutions to last week's problem are posted at SC 222. Send your solution to this week's problem to Prof. Gower (SC 222, gower@stolaf.edu) by Friday, March 20, 2009.

### About the ASA

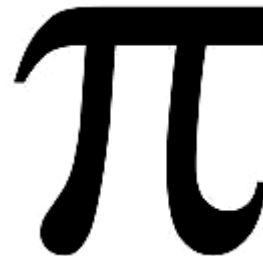
Last week was the Mathematical Association of America's chance to shine. This week we'll be looking at the primary professional society for those interested in statistics, the American Statistical Association (ASA).

The American Statistical Association (ASA) was founded in Boston in 1839 and is the second-oldest, continuously operating professional society in the United States. The ASA began as a society to promote statistical science, especially as it pertains to public welfare and they continue that mission to this day, as well as expanding the statistics profession and improving statistics education. Its membership has included such historical figures as Florence Nightingale, Alexander Graham Bell, Herman Hollerith, Andrew Carnegie, and Martin Van Buren. The ASA currently publishes six scholarly journals; three statistical magazines; and a variety of conference other statistics resources. If you are interested in finding out more information about the ASA, their website is (<http://www.amstat.org>).

Also on the ASA website are opportunities for undergraduates interested in statistics. Go to (<http://www.amstat.org/education/oppsforundergradstudents.cfm>) to find a list of statistics-related internships, scholarships, awards, loans/grants and competitions. If you are already looking beyond college, the ASA website also has a Career Center, with useful information about various careers in statistics and other helpful resources.

### Holidays and Celebrations

Don't forget that this Saturday, March 14<sup>th</sup>, is Pi Day! Come to Regent's Hall 150 at 1:59 PM for food and fun, including Pie (tin) tossing, Pi Carols, Pi Decorations, and most importantly, Pie!



And of course, for the Irish among us, don't forget to wear some green on Tuesday for St. Patrick's Day!



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*If you would like to submit an article or math event to be published in the Math Mess, e-mail [kochc@stolaf.edu](mailto:kochc@stolaf.edu).*