MSCS ⬡ Mess

This Week's Colloquium

Title:	"But… it's fake data!"
Speakers:	Christine Kohnen
Time:	1:30 pm Tuesday, November 7 (Treats at 1:15)
Place:	SC 182

Abstract: Every time a laptop or data storage device that contains unencrypted personal data is lost or stolen, the potential to become a victim of identity theft becomes a reality for those whose information was misplaced. However, there are other ways individuals can have their personal information exposed and possibly misused, whether it is through their Internet surfing logs or published data sets.

One way to maintain the confidentiality of published data sets is through the application of disclosure limitation techniques. The creation and release of synthetic data is one of the ways to ensure data viability while at the same time protecting individual identities.

This talk will introduce the principles and underlying ideas behind synthetic data generation and discuss why I spend my time studying fake data.

International Research for Undergraduates in Real Analysis and Dynamical Systems

With significant support from the National Science Foundation and St. Olaf College, the Department of Mathematics, Statistics and Computer Science will sponsor three undergraduate research scholars during each of the next two summers. These undergraduates will join teams of professional research real analysis at one of two host institutions, Lodz University in Poland or Selesian University in the Czech Republic. See our website for additional info: www.stolaf.edu/depts/math.

Grant funding allows full support for three International Interns per summer for each of the next three years. This support includes:

??all travel expenses to/from the host sites
??all living expenses while in residence in Europe
??a $4200 research stipend.

The grant also pays for travel and living expenses at one or perhaps two professional conferences upon return. This is a wonderful opportunity and available **only for St. Olaf students**.

Can you miss out on this opportunity? I DON'T THINK SO!

The application is simple:

??Ask 3 professors to write a letter in support of your application. (Two references must be from mathematicians.)
??Complete a 9 question application form on the right hand column of the math website: www.stolaf.edu/depts/math or directly at http://www.stolaf.edu/people/humke/REU2005-2007/REUintro.html

The Deadline for all materials is : *November 10, 2006(negotiable).*

Spotlight on Steve McKelvey

Professor Steve McKelvey received his B.A. at Grinnell College in Mathematics. He went on to get his Masters of Science and Ph.D. at Brown University in Applied Mathematics. His PhD is in operations research, the field of applied mathematics concerned with the efficient utilization of resources with applications in just about every arena. Lately he has become interested in using mathematical modeling to support the preservation and recovery of endangered species populations.

Professor McKelvey has been a member of the St. Olaf faculty for 21 years. The key factor in his decision to join the St. Olaf Mathematics Department was the student turnout at the colloquium he gave as part of his on campus interview. Students at his St. Olaf talk were more numerous, more mathematically literate and more enthusiastic, by far, than the students elsewhere. Professor McKelvey knew that he wanted to teach in a program like Olaf's, and he has felt exceptionally lucky and blessed ever since. He returns to St. Olaf this year from a one-year sabbatical leave at Humboldt State University in California. This year at St. Olaf, Professor

McKelvey is teaching Calculus I, Linear Algebra, Operations Research and the Math Practicum.

Did you know Professor McKelvey is a curler? He likes "sliding rocks down ice and sweeping in front of them". If you're interested in a trying out the sport, let him know. In addition, although he is not new to St. Olaf, he worked with mostly juniors and seniors before leaving for sabbatical, so if you're a math major and see him on campus, he encourages you to stop and introduce yourself.

When asked what mathematical symbol he would be… "a Koch Snowflake because I like being outside in cold weather and have never enjoyed worrying about units of measurement."

Jokes for Geeks

Question: What did one triangle say to the other triangle?

Answer: Let's get together and square dance.

Question: What's the contour integral around Western Europe?

Answer: Zero, because all the Poles are in Eastern Europe!
Addendum: Actually, there ARE some Poles in Western Europe, but they are removable.

Problem of the Week (POW)

The Old Switcheroo: Three prisoners are given an unusual jail sentence. They are taken to three different jail cells, far enough away from each other so that they can't see or hear each other. At random times and in random order, the jailor comes to each of their cells, and takes them into an

empty room with a switch on the wall. The switch controls nothing, and has two positions, up or down. At the beginning of their sentence, the switch is in an unknown position. When a prisoner is in the room, he may choose to switch the switch or leave it the way it is, after which he is returned to his cell. This continues indefinitely, with the jailor visiting each prisoner many times, possibly visiting one of them many times in succession, or each in turn. At any time, a prisoner may bang on the bars of her cell, and announce to the jailor that all three prisoners have been in the room. If she is right, all three are released. If she is wrong, all three are executed. At the beginning of this sentence, the prisoners are explained the rules and have some time to confer on a strategy before they get taken to their cells. What strategy can they use to ensure their eventual release?

Submit all solutions before the appearance of the next problem to Josh Laison in person, by e-mail (laison@stolaf.edu), or by owl post. The first correct solution gets a prize; all correct solutions get fame and glory. Preference for the prize goes to problem-solvers who haven't won one yet.

Update on What's My Line? Josh has not yet received a complete solution for the problem "What's My Line?" Everyone has another week to work on it before the solution gets posted. Take another look…

What's My Line? Given a set of points S in 2-space, define L(S) to be the set of all points on all lines determined by any two points in S. Suppose S={(1,0,0), (0,1,0), (0,0,1), (1,1,1)}. Then L(S) consists of six lines. Find L(L(S)).