MSCS Mess

Department of Mathematics, Statistics and Computer Science
St. Olaf College
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This Week's Colloquium

Title:	Geneva Interim Presentation
Speaker:	Students form the Geneva Interim Trip
Time:	1:30 pm (Treats at 1:15) Tuesday, March 6
Place:	SC 170

Abstract: The students from the Geneva Interim on Global Health & Biostatistics will be presenting short summaries of three projects done in collaboration with the World Health Organization researchers. Two projects deal with estimating the Global Burden of Disease (GBD) for food borne disease and rotavirus, respectively. The group working on the food borne disease estimate faced considerable challenges regarding missing data. The rotavirus group performed an analysis to assess the model-dependency of GBDs with rotavirus as an example. The third group worked with pilot survey data from Tanzania, Ghana and India conducted to ascertain associations between happiness and health utilization.

St. Olaf Takes Home the Konhauser Trophy...

Congratulations to Joey Paulsen, Paul Tveite, and Matthias Hunt, who placed first in the Konhauser Problemfest Saturday February 25. Joey, Paul, and Matthias share the $180 first prize, and bring the trophy to St. Olaf this year. The trophy is currently (temporarily) on the table in the MSCS lounge, OMH 201. Stop by and check it out! You can also see a picture of the winning team with the trophy at http://www.stolaf.edu/news/

The Konhauser Problemfest is a team problem-solving competition between students at 7 regional colleges. This year the competition was hosted at St. Olaf, and 15 teams competed from St. Olaf, Carleton, Macalester, and St. Thomas. This is the fifteenth year of the competition, and the first year that St. Olaf has won. Joey, Paul, and Matthias got an amazing 93 out of 100 on the exam, 23 points higher than second place. Carleton teams took both second and third place this year. St. Olaf had a total of five teams in the competition, all with good showings. Next year's competition will be at Macalester in February 2008. Let's start preparing so we can keep the trophy here next year too!

Joke for Geeks

A mathematician went insane and believed that he was the differentiation operator. His friends had him placed in a mental hospital until he got better.

All day he would go around frightening the other patients by staring at them and saying "I differentiate you!"
One day he met a new patient; and true to form he stared at him and said "I differentiate you!" but for once, his victim's expression didn't change. Surprised, the mathematician marshaled his energies, stared fiercely at the new patient and said loudly "I differentiate you!", but still the other man had no reaction. Finally, in frustration, the mathematician screamed out "I DIFFERENTIATE YOU!"

The new patient calmly looked up and said, "You can differentiate me all you like: I'm e to the x."

To which the mathematician exclaimed, "Yeah, but I'm d/dy!"...and poof, the new patient was gone!

Problem of the Week (POW)

Toad in a Field. A toad is sitting in a large flat field. A fly is 100 feet away. The fly is very interested in a flower and is not going anywhere for a while. The toad is very interested in the fly. It knows that the fly is exactly 100 feet away, but not in which direction (of infinitely many possible directions). It can jump a foot at a time in any direction. When it does, the toad can smell whether the fly is closer or farther away (since the situation where the fly is exactly the same distance away happens with probability 0, we can ignore it – the toad has a very accurate nose). When the toad gets within one foot of the fly, it will be close enough to eat it. Give a jumping strategy for the toad which succeeds in catching the fly with as few jumps as possible in the worst case. The prize this week will go to the problem solver who can succeed in the fewest jumps.

Submit all solutions before the appearance of the next problem to Josh Laison in person, by e-mail (laison@stolaf.edu), or by stone tablet. The first correct solution gets a prize; all correct solutions get fame and glory.

Solution to Jumping Mad. Congratulations again to Thomas McConville, who submitted the following correct solution and won a giant peppermint stick, and to Reid Price, who submitted a very pretty diagrammed solution.

Solution: Here is the starting configuration with rows and columns labeled:

```
  A B C D E
1     w
2     w b
3   w
4
5 w     w
```

And here is the sequence of moves that does it:
b E2-C2
w D1-D3
w D2-D4
w D5-D2-B2-B4
w B3-B5
w A5-C5
w B5-D5-D2-B2
w D4-D2-A2
w B2-D2
b C2-E2
w D2-D4
w D3-D5-B5-B3
w B4-B2
w A2-C2
w B2-D2
b E2-B2-B4
w D2-B2
b B4-B1
w B2-B4
w B3-B5-D5-D3
w D4-D2-B2
b B1-B3-B5
w B2-D2-D4

w D3-D5
b B5-E5!!!

Thomas also asks whether there is a shorter solution.

If you would like to submit an article or math event to be published in the Math Mess, e-mail meyerm@stolaf.edu or dolank@stolaf.edu.

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