MSCS Mess

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

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This Week's Colloquium

Title: Mathematics Education Research: What Is It? How Is It Done? What Does It Tell Us?
Speaker: Terry Wyberg, University of Minnesota
Time: Tuesday, April 5th, 1:30 pm
(treats at 1:15)
Place: SC182

Have you ever wondered what mathematics education research looks like? This talk will describe a current research project in the learning of fractions. It will illustrate the process of research on how children learn mathematics and convince you that there is much more to fractions than you remember from your younger days. This talk is accessible to anyone who has ever done anything with fractions, so bring your friends who want to see an educational researcher at work!

Dr. Terry Wyberg is a former high school mathematics teacher who now does research on how children learn mathematics and how teachers' content knowledge is related to their teaching approaches. He teaches both undergraduate and graduate mathematics education courses in the College of Education at the University of Minnesota, and conducts workshops on teaching mathematics for teachers throughout the state. He is currently Vice-President for Mathematics Education of the Minnesota Council of Teachers of Mathematics, and is a frequent collaborator with St. Olaf math educator Martha Wallace.

Problem of the Week

At an outdoor concert held on the center of the St. Olaf campus, three speakers were set up in an equilateral triangle; the idea was that the audience would be between the speakers, and anyone at the exact center of the triangle would hear each speaker at an equal "volume" (sound level). Unfortunately, an electronic malfunction caused one of the speakers to play four times as loudly as the other two. As a result, the audience tended to move away from this speaker (with some people going beyond the original triangle). This helped considerably, because the sound level from a speaker is inversely proportional to the square of the distance to that speaker (we are assuming that the sound levels depend only on the distance to the speakers). This raised a question: Where should one sit so that each speaker could be heard at the same sound level?

*** Please submit all solutions by Wednesday at noon to Amelia Taylor (e-mail: ataylor@stolaf.edu) or by placing them in her box at OMH 201.

Math Recital is THIS Wednesday!

The Nth annual Mathematics Recital will be held this Wednesday evening, April 13th at 7:00pm in Ytterboe Lounge. Good food and beverage will be provided by the math faculty, good music and performances will be provided by faculty and students, and good cheer will be provided by you.

The recital is a comfortable, informal gathering of friends of the mathematics department to share music, other talents and a good time. You are welcome to come simply to watch, but are encouraged to participate as well. If you have an act to contribute, please contact Amelia Taylor who is the emcee for this event.

Graduation Distinction in CS

Graduating seniors with a CS major or concentration: consider applying for Distinction in CS, an honor awarded to students whose accomplishments in CS go substantially beyond the basic expectations for a CS major (or concentration). The CS program views a wide range of activities as criteria for distinction, including efforts in undergraduate research, outstanding course work, extra courses taken, CS-related extracurriculars, presentation of papers and talks, and more.

Applications are due on April 20, and consist primarily of a summary list of accomplishments together with example materials that substantiate those accomplishments, assembled into a simple portfolio. Students create their portfolios with the advice of a CS faculty member. Want to apply? Want to know more? Then check out the Distinction page in the CS web site (www.cs.stolaf.edu), and ask your favorite CS faculty member about Distinction in CS.

Last Week's Problem

Keeping with the gaming theme: Three students take turns playing a two person game. To keep the players straight, lets name them Bruce, Matt and Paul. The players decide that the loser of a single game will sit out while the other two play. Each game results in a winner and a loser (i.e. there are no ties). After playing for an afternoon Bruce had played 17 games and Paul played 35 times. Can you say who won the fifteenth game and how many times Matt played?

Congratulations to **William Vorhees '08**, **Carl Carlson '05**, and **Robert Orme '05**, for sending correct solutions. First observe that Bruce, Matt and Paul must all play in any pair of successive games. Paul played 35 games so this is the minimum number of games, and Bruce playing in 17 games implies that the maximum number of games played is 2*17+1 = 35. Since Paul played 35 times, he must have won all the games he played, except possibly the last. Thus Matt played in 18 (35-17) games and since Paul won all but possibly the last game, Paul played Matt in the 15th game and won.

***If you would like to receive a copy of the Math Mess in your P.O. Box weekly, please e-mail Donna Brakke at brakke@stolaf.edu.

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