

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

Don't miss this year's first special mathematical/social event! Please note the special time and place, as well as dinner following.



Title: **Do Dogs Know Calculus? - Bifurcations at the Beach**

Presenter: Tim Pennings and Elvis
Date: Thursday, September 25th
Time: 4:30 pm
Location: SC 280 and lobby

Dinner (pizza or hot dogs) will follow the talk. Students please submit your ID number to Donna Brakke to attend.

About the talk:

We will show that dogs - at least my dog, Elvis - know calculus. That is, Elvis can find the optimal - fastest - route to a ball thrown into the water some distance down the beach. But what happens when Elvis is positioned in the water

and retrieves a ball that is also in the water? When should he swim straight to the ball, and when should he swim in to the shore, run along the shore, and then swim back out to the ball? What is the bifurcation point for the change in optimal strategy? Does Elvis bifurcate? Does his fur bicate? Dr. Elvis (he has an honorary doctorate degree) will be in the building demonstrating that he's indeed the King of Calculus - and much more than a hound dog.

About the speaker:

Tim Pennings is a professor of mathematics at Hope College in Holland, Michigan. His research, done collaboratively with undergraduate students, is in dynamical systems and modeling. He also directs the Hope College NSF-REU Mathematics Summer Research Program. His other reasons for living include ultimate frisbee, racquetball, nature photography, choral music, folk song guitar gigs, and playing with Elvis at the beach.

Math Department T-Shirts

This year, instead of waiting until near the end of second semester to make the department t-shirts, St. Olaf's MAA chapter is planning to have the designs done, t-shirts ordered, and available to buy before Christmas Fest! To make that happen, we need YOUR design submissions and ideas! The deadline for submitting a design is Sunday October 5th, so

you've got almost 3 weeks to send in your designs. Designs can be submitted electronically (preferred) to (woolums@stolaf.edu) or on paper to PO 2091.

Director's Summer Math Program

It's never too early to start thinking ahead! For those math majors who are already thinking about next summer and are interested in a unique and prestigious summer internship opportunity, consider the Director's Summer Math Program through the National Security Agency. Each summer, the DSP invites 24 exceptional students to put their problem-solving skills to the test in mathematics, cryptology, and communications technology. These problems often involve applications of abstract algebra, geometry, number theory, probability, statistics, combinatorics, graph theory, algorithms, computer science, and analysis. For more information, visit: http://www.nsa.gov/careers/students_1.cfm?#dsp

Actuarial Science Info Session

For those students interested in careers in actuarial science, a representative from Traveler's Insurance, Nathan Hubbell, will be on campus next week to give an information session. Be at the Sun Ballroom on Thursday, September 25th, from 7:30-8:30 PM to learn about actuarial science and meet someone in the field.

Math Tutors

If you like the material taught in first and second semester calculus, are proficient with it, and enjoy helping people 'get it,' the Math Clinics could use you! Currently seeking someone to work Wednesday and Thursday evenings 7:30 to 9:00 p.m. helping current calculus students with the ideas and problems

arising in beginning calculus. If interested, call Peder Bolstad at 507-786-3288 or fill out the application form at:

<http://fusion.stolaf.edu/asc/forms/clinics/tutorApplicationSem1.cfm>

Also looking for students willing to substitute in the Clinics when regular tutors are unable to work. If interested, fill out the form listed above.

Art Exhibit in Dittman

"*Science, Art, and the Imagination*," the current exhibit in Flaten Art Gallery in Dittman Center, displays some of the relations between math and art. Daniel Kelm designs folding books, many of them based on three dimensional shapes including the cube, tetrahedron, and dodecahedron. In her large photos of leaves, Amanda Means explores the shapes and lines created by leaves. Merrill Steiger includes circular mandalas in many of her paintings. The exhibit is open M - F 10 - 5 (Thursday until 8) and Sat. and Sun. 2 - 5 until October 26.

Professor in MN Monthly

If you open up a copy of the October issue of Minnesota Monthly, you will see a photo featuring the department's own Mike Weimerskirch. Mike is an avid player of croquet and is pictured in conjunction with an article on the "Best of..." to include playing croquet at Centennial Lakes

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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.