MSCS Mess

This Week's Colloquium

Title:	Fighting HIV with Mathematics
Speaker:	Rochelle Pereira, College of St. Catherine
Time:	Tuesday, March 14, 1:30 p.m. (treats at 1:15)
Place:	SC 182

As recently as 20 years ago, an HIV positive diagnosis was considered to be a death sentence. Now, with appropriate treatment, individuals can live fifteen years after receiving such a diagnosis. In this talk, Professor Pereira will look at the role mathematics has played in fighting HIV by examining differential equations that capture aspects of the interaction between HIV and the immune system. In addition to presenting different ways the disease can be modeled, she will reach conclusions that helped usher the development of the current combination-therapy approach to combating HIV.

Rochelle Pereira received her Ph. D in mathematics from the University of Chicago in June 2005 and is a new professor at the College of St. Catherine in St. Paul, Minnesota. An algebraic topologist by training, she is currently studying connections between mathematics and biology. She is excited to visit St. Olaf, particularly because she will officially become part of a family of St. Olaf graduates this summer. (She wants to know what she's getting into!)

Pi Day Festivities

Do you like pi? How about pie? If the answer to either of those questions is yes, come celebrate Pi Day Eve on Monday, March 13! (Pi Day is March 14 because it's 3/14…get it???) Festivities will begin with pie and socializing at 6:30 p.m. in the SC main lobby. At 7:00 p.m. we will move into SC 278, where Luke Anderson will give his annual talk on the history of Pi, followed by a rap—yes, a rap—about pi. Pi, pie, and a rap about pi. It's the only place to be this Monday night.

Problem of the Week (POW)

Find a solution to the following system of simultaneous equations:

$$x^4 - 6x^2y^2 + y^4 = 1$$
$$4x^3y - 4xy^3 = 1$$

where x and y are real numbers.

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

Pi Mu Epsilon Conference

The College of St. Benedict and St. John's University are hosting a Pi Mu Epsilon conference for students on April 7-8, and you are invited to attend! The conference will feature plenary speaker Edward Burger and a variety of talks given by students.

The MSCS department is looking for students who are interested in giving a talk, who want to see what other students are doing for research, or who are simply curious about what this math conference thing is all about. If you are interested, please send an email to Amelia Taylor (ataylor@stolaf.edu) by Friday, March 18 at 5:00 p.m. In the message, include your name, class year, major(s), and a few sentences about why you want to attend the conference and whether or not you would be interested in giving a talk. We plan to take a group of students, so everyone is welcome to apply.

Last Week's Problem, Take 2

We regret to admit that there was an error in last week's Problem of the Week. We are publishing the correct version again this week and leaving it open for submissions for another week. Please submit all solutions to this POW to Amelia Taylor (ataylor@stolaf.edu) by noon on Wednesday.

So let's try this again…

Let S be a set with an associative multiplication, $(x,y) \rightarrow xy$. Suppose that for all x, y in S, $x^3 = x$ and $x^2y = yx^2$. Show that the multiplication is commutative.

What will I do with my Math major???

If you've asked yourself that very question, devote an hour of your time to . . .

IDENTIFYING AND SEARCHING FOR CAREERS: JUST FOR MATH MAJORS
Wednesday, March 15, 4:00-5:00, SC 188

The workshop will introduce you to:

- Skills developed by the Math major that are highly valued by employers
- The variety of careers Math majors pursue
- Strategies for identifying and exploring careers of interest to you
- Successful job search strategies and valuable resources for the search

Workshop sponsored by the Center for Experiential Learning.

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