Sunday, May 4  HARPSICHORD CONCERT, 3:00 pm, Clark Art Museum  
  Victor Hill, Read Professor Emeritus, Williams College

Monday, May 5  THESIS DEFENSE 1–1:45 pm, Bronfman 106 (Refreshments to follow)  
  Matthew Simonson ’08, Williams College

  Cheap Ways to Fence Your Backyard on Hyperbolic Donuts (and Other Surfaces)

Thinking about buying real estate on your local Möbius strip? Ever wondered why igloos, tepees, and yurts are round? Want to know how to turn a couple pairs of trousers into a two-holed donut? In this talk, I will solve the isoperimetric problem—the least-perimeter way to enclose a given area—on various Euclidean, spherical and hyperbolic surfaces. Although the solution is known in the plane, sphere, and cylinder, many intriguing surfaces do not yet have a formal solution...until now. Accessible to all.

Tuesday, May 6  THESIS DEFENSE, 1–1:45 pm, Bronfman 106 (Refreshments to follow)  
  Haydee Lindo ’08, Williams College

  On Computing the Intersection of Algebraic Surfaces

Given any higher codimensional variety in \( \mathbb{C}^n \) we know it is birational to a hypersurface in a smaller dimensional ambient space. We will discuss an algorithm to find this hypersurface and a rational map back to the variety.

Wednesday, May 7  THESIS DEFENSE, 1–1:45 pm, Bronfman 106 (Refreshments to follow)  
  Paul Woodard ’08, Williams College

  On Equivalence Relations on Sequence Spaces

On any sequence space \( S \), we can define an equivalence relation in which two sequences \( x_n \) and \( y_n \) are equivalent if \( x_n - y_n \) is in some other sequence space \( X \), such as \( 1_1 \), the space of all absolutely summable sequences, or \( c_0 \), the space of all sequences convergent to 0. Looking at the quotient space of \( S \) modded out by this relation, we naturally want to study its dual space. We will examine the infinite matrices whose rows as elements of the dual space of \( X \) converge weak* to 0, which act as linear functionals on this quotient space.

Thursday, May 8  No Math Snacks (but see June 1)

Friday, May 9  No Faculty Seminar (but see Announcements below for upcoming summer talks)
Sunday, June 1  GRADUATION BREAKFAST, 8–9 am, Bronfman Math/Stats Library

All welcome at this occasion to honor our graduating seniors and their guests.

Sunday, June 8  MATH/STATS/COMPUTER SCIENCE MINI-CONFERENCE/REUNION
Public welcome.

11 am – 1 pm  Continental brunch in Bronfman Math/Stats Library

2 pm  Invited talk by Bethany McLean ’92, Fortune Magazine, Wege Auditorium
“How Math Makes Me a Better Journalist” (McLean exposed Enron)

Short talks in parallel sessions, Bronfman Science Center 103–106

4:45 pm  Invited talk by Michael Hutchings, SMALL ’92, UC Berkeley, Bronfman 106
“How the Double Bubble Conjecture was Proved”

7 pm  Complimentary dinner

Announcements

SMALL 2008 runs from June 9 through August 9.
Summer science talks Tuesdays at 12:30 pm (preceded by science research students’ lunch)
Summer math colloquia Wednesdays at 1 pm, starting June 11.

Interesting list of theorems of the day at theoremoftheday.org/Theorems.html.

THE MAY CONUNDRUM

This is it. Let $\chi^x$ be the function that gives the rate of fun that the Math and Stats Department is having at time $x$ (in years, measured with last May as $x=0$). Assuming that $o^0=1$, prove that the total amount of fun we had this past year (i.e., the integral of $\chi^x$ from $x=0$ to $x=1$) satisfies

\[
\int_0^1 x^x \, dx = \sum_{n=1}^{\infty} (-1)^n+1 n^{-n}
\]

For fame, for fortune, or just for the fun of it, submit solutions to this final conundrum (for the school year) to Professor Rafalski.