MSCS Mess

MSCS Colloquium

Title:	Snap Cubes, Grid Graphs, Wheels and Unicycles
Speaker:	Jacob Siehler
Date:	Monday, November 4
Time:	3:30 pm- 4:30 pm
Location:	RNS 310

About the talk: The Tutte polynomial is beloved by graph theorists, but rarely appears in the second grade classroom (and is not even mentioned in most state standards at this grade level). However, a simple classroom question about building with Snap Cubes will lead us to graph polynomials, intriguing integer sequences, and excitingly large numbers. We'll also see some lovely examples of linear algebra applied to counting problems. No background in graph theory or algebra will be necessary to appreciate the talk, however.

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Putnam Problem-Solving Contest

This year's Putnam problem-solving contest is coming up right after Thanksgiving break on Saturday, December 5th. This contest takes place in two parts, from 9:00-12:00 and 2:00-5:00. For more information on the Putnam, visit the problem solving group's website: http://pages.stolaf.edu/diveris/category/ps/

or contact Prof. Diveris (diveris@stolaf.edu) or Wright (wright5@stolaf.edu).

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Last MSCS Research Seminar of the Semester

Title:	Solving Partial Differential Equations using the Unified Transform Method
Speaker:	Natalie Sheils
Date:	Friday, December 4
Time:	3:30 pm- 4:30 pm
Location:	RNS 204

About the talk: Classical methods for solving linear partial differential equations with constant coefficients rely on separation of variables and specific integral transforms. These methods are limited to specific equations with special boundary conditions. In my talk I will introduce the Unified Transform Method, due to Fokas, which contains the classical solutions as special cases. This method also allows for explicit solutions of problems which cannot be solved using classical techniques. I will provide examples of problems on the half-line and on the finite interval.

About the speaker: Natalie Sheils is currently a Visiting Assistant Professor in the School of Mathematics at the University of Minnesota. She

earned her Ph.D in Applied Mathematics from the University of Washington in 2015 under the direction of Bernard Deconinck. Her thesis was on analytic solutions of interface problems using the Unified Transform (Fokas) Method.
Prior to studying at UW she earned her undergraduate degree in Mathematics with a specialization in Applied Mathematics at Seattle University. She worked with John Carter on the stability of two-dimensional soliton solutions to the nonlinear Schrödinger equation.

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From the Editor

What did the mathematician say after finishing Thanksgiving dinner?

$$\frac{\sqrt{-1}}{8}$$

HAPPY THANKSGIVING!

Editor-in-Chief:	Akina Khan
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