

# MSCS MESS

Department of Mathematics, Statistics, and Computer Science  
St. Olaf College, Northfield, MN 55057  
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## Next Monday's Colloquium

Title: An Introduction to the  
Mathematics of Juggling

Speaker: Steve Butler

Time: Monday, December 5, 3:30pm

Place: RNS 210

**About the talk:** Juggling and mathematics have been done for thousands of years, but the mathematics of juggling is a relatively new field that dates back a few decades and looks at using the tools of mathematics to analyze, connect, and count various juggling patterns. We will introduce some of the very basic results related to the mathematics of juggling with a particular emphasis at looking at the various methods used to describe juggling patterns.

**About the speaker:** Steve Butler is an associate professor of math at Iowa State University. His mathematical interests include spectral graph theory, enumerative combinatorics, the mathematics of juggling, discrete geometry, and “generally mathematics of fun things.”

## Pi Mu Epsilon applications

Are you interested in joining a mathematics honor society? St. Olaf is home to the Minnesota Kappa chapter of Pi Mu Epsilon (PME), which is a national honor society dedicated to recognizing and promoting scholarly activity in mathematics. To join PME, you must meet the following requirements:

- Be a declared mathematics major
- Complete at least one transition course by induction (i.e. Math 242, 244, or 252)

- Maintain a 3.5 GPA in mathematics and a 3.0 GPA overall
- Pay a one-time national dues fee of \$30

If you have any questions or would like to join Pi Mu Epsilon, please contact the president, Miranda Tilton (tiltonm@stolaf.edu).

## 'Tis the season

Math Club will be hosting a fun holiday event on Thursday, December 8<sup>th</sup>, during community time. Get in the holiday spirit with candy, hot chocolate, some holiday tunes, and snow flake making! The event will be held in the RMS 3<sup>rd</sup> floor lounge; we hope to see you there!

## Putnam exam this Saturday

Don't forget that the Putnam competition is this coming Saturday, December 3<sup>th</sup> from 9am to noon and 2-5pm. This is the most premier and prestigious undergraduate mathematics problem solving contest in the country. While it is difficult, the problems are often quite intriguing and can be very engaging whether or not you end up solving one.

A limited number of students can register at the last minute—be one! Doughnuts will be provided.

## Planning afoot for the Mathematical Contest in Modeling

Each year, the Consortium for Mathematics and its Applications holds a contest that tasks teams of undergraduate students with formulating mathematical approaches to real-world problems. Students of math, statistics, and computer science are all especially encouraged

to participate. This year, the contest will be held from January 19<sup>th</sup> to the 23<sup>th</sup>; the registration deadline is a few hours before the start of the contest.

For more information, students should contact Prof. Joe Benson or attend an information meeting during the next few weeks (precise date and location are to be announced).

### Celebrating MAA/NCS successes!

Congratulations to the following students who participated in the MAA/NCS math contest on November 12: Eric Anderlik, David Besky, Shan Chen, David Crisler, Spencer Eanes, Kristen Edblom, Eve Grabau, Mckenna Hanson, Jakob Hofstad, Sarah Kalsow, Tianyu Pang, Conrad Parker, Kyla Pohl, Marit Rustad, Colin Scheibner, Emily Simmons, Elaine Song, Sean Thompson, Drew Yarger. The contest involved working in teams of up to three students to solve ten math problems in three hours.

Two teams from St. Olaf placed among the top ten teams: the St. Olaf Juniors (Erik Anderlik and Jakob Hofstad) placed first, and St. Olaf Red (Conrad Parker, Drew Yarger, and Colin Scheibner) placed sixth. In all, 61 teams from 25 schools competed.

If you would like to participate in fu-

ture math contests, join the Problem Solving Group on Wednesdays from 5:00 to 6:00 in RNS 204, sign up for the Problem Solving email list, or talk with Professors Berliner, Diveris, or Wright.

### Another summer opportunity

Issues 8 and 9 of the Mess (available in the digital archive) included information about several research and teaching opportunities for undergraduates, respectively. Herein we follow up with another exciting research program.

**ASU MTBI Summer Program:** Arizona State University offers an eight-week research opportunity for students interested in the junction of mathematics, statistics, and the sciences. The program, which touts a collaborative environment facilitated by experienced mentors, is best fit for those students interested in dynamical systems, stochastic processes, and computational modeling. Undergraduate math and biology majors who have completed their sophomore year are eligible to apply; applications are due January 31<sup>st</sup>. Participants receive a \$4000 stipend as well as room and board and reimbursement for transportation costs. For more information, visit <https://mtbi.asu.edu/summerprogram>

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