MSCS MESS

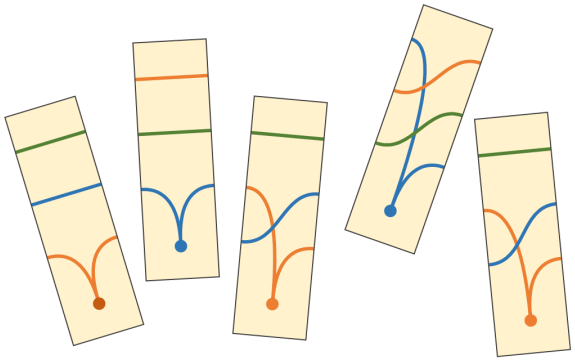
Department of Mathematics, Statistics, and Computer Science
St. Olaf College, Northfield, MN 55057
September 15, 2017 | Volume 46, No. 1

Monday's Colloquium

Title: How Many Ways Are There to Juggle?
Speaker: Mathew Wright
Date: Monday, Sept. 18 | 3:30 p.m.
Place: RNS 310

About the talk: If you watch a skilled juggler, you may see balls (or other objects) flying through the air in intricate patterns. What patterns are possible? Starting with a few basic axioms about juggling, we can use mathematics to describe all "jugglable" patterns. In this talk, I will explain how integer sequences can help us enumerate all such patterns. This talk will feature modular arithmetic, Möbius inversion, and—of course—live juggling.

About the speaker: Matthew Wright has been juggling (not continuously) for 13 years, after learning to juggle while a student at Messiah College. After graduating with a degree in math and computer science, he went on to complete a Ph.D. in mathematics at the University of Pennsylvania. He was a Postdoctoral Fellow at the Institute for Mathematics and its Applications (at the U of M), and is now beginning his third year teaching at St. Olaf College. Matthew can juggle up to 5 balls, 4 clubs, or 3 torches.



Juggling Cards

Friday's Research Seminar

Title: Continuity and chaos in discrete dynamical systems
Speaker: T.H. Steele
Time: Friday, Sept. 22 | 3:30 p.m.
Place: RNS 210

About the talk: Originally focused on describing stability in planetary motion, chaotic dynamical systems are now used to model many systems in the physical and life sciences. Disseminating from Poincare's original work, this talk will focus on how Omega-limit sets react to perturbations in initial conditions and provide a description of functional behavior over these sets.

About the speaker: "1. I grew up in So Cal. Richard Nixon and I attended the same high school. That's not my fault. **2.** I graduated from the United State Military Academy at West Point.

About the speaker (con't)
Ranger school sucked. I commanded a company in the 82nd Airborne. **3.** I went to graduate school at UC Santa Barbara, where I worked with Andy Bruckner. I was really fortunate to work with such a wonderful person. **4.** I teach at Weber State University. It's in Ogden, Utah. Think the gold spike of the first transcontinental railroad. **5.** I spend an inordinate amount of time climbing and hiking. **6.**I have two cats: Leonardo da Faltona and Maria. **7.** My favorite color is yellow.**"**

Conduct Research Last Summer?

Did you participate in a CURI, REU, or other summer research program? Then there is a FREE opportunity to present your research in Chicago or St. Louis!

Symposium on Physical Sciences, Math, and Computer Science

University of Chicago, Nov. 3-4

Symposium in Biological Sciences and Psychology

Washington University, Nov 10-11

Also, our own Julie Legler is being honored with the prestigious Janet Andersen Lecture Award for her leadership, teaching, and interdisciplinary work at the symposium in St. Louis. Congrats Julie! Application deadline is **Sept. 29**, so don't wait! If interested, contact Professor Berliner *berliner@stolaf.edu.*

Actuarial Announcement

Ameriprise Financial Information Session on Sept 19, 7:30-8:30 PM in TOH 214.

Traveler's Insurance Information Session Sept 21, 7-8 PM in BC 143

This Week in MSCS History

On Sept. 19, 1648, Blaise Pascal proved the theory of atmospheric pressure and the existence of a vacuum.

On Sept. 20, 1633, Galileo went on trial for teaching that the Earth orbits the Sun.

Weekly Words of Wisdom

"At a job interview, always tell them you're willing to give 110%. Unless that job is a statistician."

Weekly Theorem

Cat Theorem– A cat has nine tails
Proof. No cat has eight tails. A cat has one tail more than no cat. Therefore, a cat has nine tails. ■

To submit an article or event for publication in the mess, email nevilleq@stolaf.edu; *to receive the Mess digitally each Friday, email* frecking@stolaf.edu; *visit* http://wp.stolaf.edu/mscs/mscs-mess/ *for a digital archive of previous MSCS Mess issues.*

Quinton Neville, Editor
Bruce Pell, Faculty Adviser
Ellen Haberoth, Mess Czar