

MSCS MESS

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

Title: The German Tank Problem
and Statistical Simulation
Speaker: Bob Eisinger
Time: Monday, September 19, 3:30 pm
Place: RNS 204

About the talk: During WWII the Allies were interested in determining the production of German armaments, such as tanks, trucks and rockets. Using clever statistical and mathematical tools, scientists were able to estimate the production of these armaments more accurately than data obtained from industry, interrogation, or spying. We'll use the German Tank Problem to explore estimation, statistical simulation and the dangers of using serial numbers.

Next Friday's Research Seminar

Title: Dance of the Astonished
Topologist.... or how I left
squares and hexes for math
Speaker: Tara Holm
Time: Friday, September 23, 3:30 pm
Place: RNS 204

About the talk: Topology is often called "rubber sheet" geometry. I will give a friendly introduction to some geometric and algebraic techniques in topology, proving along the way that a topologist can turn her trousers inside out without taking them off. I will describe how covering spaces have been useful in my own work in symplectic geometry, and how they can make square dancing more challenging.

About the speaker: Tara Holm teaches at Cornell University and conducts research in symplectic geometry, algebraic geometry and topology. She started square dancing as an undergrad and learned about the link with topology in grad school. When she's not globetrotting in search of the latest cool math, you can find her puttering around the garden with her family.

Upcoming Symposia: Midstates Consortium for Math and Science

In November, the University of Chicago and Washington University in St. Louis will host two symposia for undergraduates to present their research to peers and faculty in oral and poster sessions, historically attended by nearly 100 students each. Both symposia also include graduate student panels to offer insight into graduate school applications and beyond.

This year, the symposium focused on the biological sciences and psychology will be held November 11th and 12th at the University of Chicago, and the symposium for students researching the physical sciences, mathematics, and computer science will be held November 4th and 5th at Washington University in St. Louis. October 3rd is the registration deadline for both symposia; email Professor Berliner for more information.

Picture Days for MSCS

There will be two photo shoots for MSCS majors, concentrators and faculty. If you do not have a photo or want to re-take and/or replace the photo currently on the board this is

time to do it. The pictures will go up on the MSCS bulletin board on 2nd floor, by the TV screen.

The dates and times are: Monday, Sept. 19th and Thursday, Sept. 22 from 2pm - 4pm on both days (you only have to come to one of the photo shoots). Come to RMS 307 on the day you want your picture taken to be directed to the photo-taking location nearby (which will depend on the weather).

Problem Solving: Pizza and Math!

The Math Problem Solving Group meets weekly to enjoy variety of problems, often with a central theme, and to discuss problem-solving strategies. We also participate in the three contests, two of which you can do in small teams with your friends. This is an excellent opportunity for anyone pursuing careers involving problem solving skills or for those who just want to have some fun thinking about interesting problems! All interested students are welcome, regardless of courses taken. Come join us for some pizza, candy, and problem solving during our first meeting of the year, 5-6pm on Wednesday, September 21 in RNS 204.

If you are interested in more information, contact Prof. Berliner (berliner@stolaf.edu), Prof. Wright (wright5@stolaf.edu), or Prof. Diveris (diveris@stoalf.edu) to be added to the email list (no commitment necessary).

Join Math Club

If you're interested in mathematics, statistics, or computer science and you'd like to plan or attend events within the MSCS department, consider joining Math Club! We organize a number of events throughout the year including capture the flag, serving pie on pi day, and designing department t-shirts. If you have any questions, or if you would like to join Math Club, please contact Miranda Tilton (tiltonm@stolaf.edu).

Welcome New Faculty!

In addition to welcoming back Professors

Adam Berliner and Jill Dietz from sabbatical, we greet six new faculty members this year—five this autumn, with another joining the department in the spring.

Peter Blanchard works in algebra and combinatorics, favoring projects that make computers sweat. His current projects include the enumeration and exploration of difference-divisible unit-connected sets in the Integral Octonions. Not one to exclude word play from his work, a pending paper carries the title "On Differing Numbers of Different Differences?". Dr. Blanchard's immediate family includes two intrepid kayakers, one juggling champion, 1.5 anthropologists, a beginning tubist, a theatre director, and many talented cooks.

Deb Czarneski received her Ph.D. in mathematics from Louisiana State University in 2005. She taught mathematics at Simpson College in Indianola, Iowa, for ten years before coming to St. Olaf College. Her mathematical interest is graph theory, and she enjoys working on research with students. Besides mathematics, Deb enjoys reading, watching sports, and spending time with her family.

Robert Eisinger is a St. Olaf graduate who earned his Ph.D in statistics from the University of Illinois at Urbana-Champaign. His research interests include statistical computing and applied statistics. In his spare time he enjoys reading in areas unrelated to statistics, such as history and politics.

Vinayak Elangovan earned his Ph.D. in Computer Information Systems Engineering at Tennessee State University in 2014, and continued his research and teaching there as a Postdoctoral fellow. He worked in The College of New Jersey (TCNJ) teaching various computer science courses for U.G during 2015-2016. He also has considerable work experience in engineering and software industries. His research interest includes computer vision, machine vision, multi-sensor data fusion and activity sequence analysis with keen interest in software applications development and

database management. In free time he likes to play pool, chess, carrom and do hiking to explore more scenic places.

Bruce Pell is originally from Michigan where he earned his B.S. in Applied Mathematics from Oakland University in 2010 and received his Ph.D. in Applied Mathematics from Arizona State University in 2016. He is interested in the mathematical modeling of biological phenomena that arise in ecology and epidemiology. In particular, he has worked on developing models for understanding plant virus disease dynamics and forecasting models for emerging infectious diseases. In his free time, he enjoys playing guitar and spending time outside hiking, camping and biking.

Recognition: Quinton Neville

Quinton Neville, a rising junior math major, received an Outstanding Presentation Award at the MAA MathFest 2016 in Columbus, Ohio (August 3-6, 2016) for his talk “Feedback-Mediated Dynamics in a Model of a Long-Looped Nephron”. During CURI this summer, Quinton collaborated with Professor Hwayeon Ryu in a project that used mathematical modeling to study a regulatory mechanism on a nephron, a functional unit of the kidney. We congratulate Quinton for his recognition as an especially noteworthy presenter among the 120 student participants at the MathFest this summer!

MSCS Help Sessions Are Back

Clinics start up again this Sunday, September 18. Help sessions for Math 119, 120,

126, 128, 220, and 226 will be held regularly from 7:30-9:00pm Sundays through Thursdays in TOH 184; sessions for Stats 212 and 214 will be held Sundays, Tuesdays, and Thursdays in TOH 182 from 7:30-9:00pm. Tutors are also available to answer questions about LaTeX and Mathematics during clinic hours.

A Birth and A Death

This Saturday marks the 190th birthday of Bernhard Riemann. A prime example of versatility, Riemann made integral contributions to calculus, analytic number theory, and other fields. Less fortunately, Sunday is the 233rd anniversary of Leonhard Euler’s death. Also prolific, we have Euler to thank for sigma notation in writing sums (and other things). What a wild weekend for fans of the Euler product formula for the Riemann zeta function!

For Your Pleasure. . .

A flea is sitting on some integer on the number line. Every second, it catapults its little body the same integer distance (possibly negative). Can you come up with a strategy that guarantees catching the pesky flea after some finite number of seconds?

. . . and Displeasure

What do you call a monkey with four brains?
Two square to eat a banana!

This joke was submitted to the Mess by senior math major Maria Macaulay. Hopefully it is forgiven but not forgotten by the time she returns to campus from her semester in Budapest.

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

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