

MSCS MESS

Department of Mathematics, Statistics, and Computer Science
St. Olaf College, Northfield, MN 55057
February 10, 2017 Volume 45, No. 17

Monday's Colloquium

Title: 3D Printing Singular
Algebraic Surfaces
Time: Monday, February 13, 3:30pm
Place: RNS 310

Tuesday's Research Seminar

Title: Theory and Applications of
Numerical Algebraic Geometry
Time: Tuesday, February 14, 2:00pm
Place: RNS 204

Wednesday's Colloquium

Title: What is Big?
Time: Wednesday, February 15, 3:30pm
Place: RNS 310

Thursday's Research Seminar

Title: Computing Multidimensional
Persistent Homology
Time: Thursday, February 16, 3:00pm
Place: RNS 204

Math candidate talks this week

In February, MSCS faculty candidates will give talks, offering students and faculty the opportunity to hear about their research interests. This week, both speakers are algebraists and will each deliver a colloquium talk and a research seminar. To learn more about the speakers and their talks, hunt around for posters in the RMS halls. We hope to see you at some of the events this week welcoming these two candidates!

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).

Math help session workers needed

The MSCS Department offers help sessions each evening Sundays through Thursdays from 7:30-9:00pm for Math 120, 126, 220, and 226 at which students can ask for help with homework. We currently have openings for tutors to staff these help sessions one or two nights per week.

To qualify, tutors must have completed Calculus I and II (either at St. Olaf or in high school), Linear Algebra, and, ideally, Multi-variable Calculus. Grades received in these courses taken at St. Olaf should be A or A-. Preference is given to students with work awards, but applications are not limited to those on financial aid.

If interested, please contact Prof. Kay Smith at smithk@stolaf.edu or stop by her office, RNS 320.

Black history in MSCS

Each week of Black History Month, the Mess will include some information about an African American who contributed significantly to mathematics, statistics, or computer science. This week, we explore Dr. Kate Okikiolu, a British mathematician who earned her Ph.D. in mathematics from UCLA in 1991 and has established an impressive career since. In 1997, Okikiolu received a Sloan Research Fellowship, a highly-sought source of recognition for early-career scientists and researchers; she was the first black recipient of this award. That same year, President Clinton awarded Dr. Okikiolu the Presidential Early Career Award for Scientists and Engineers for both her mathematical research and in connection to her work developing math curriculum for inner-city students. Since her early successes, Dr. Okikiolu has also deliv-

ered lectures at meetings of the Association for Women in Mathematics and the National Association of Mathematics, an organization that promotes career development for mathematicians from historically underrepresented minority groups. Okikiolu's research, largely rooted in geometric analysis, currently focuses on properties of three-dimensional drums and may offer insight to future quantum physicists. In addition to her work in pure math, Dr. Okikiolu continues to develop interactive tools to help young students understand the foundations and significance of mathematics. To see some of her more playful work, take a look at a theorem Okikiolu proved in 1992 that generalizes the traveling salesperson problem to a continuous context in \mathbb{R}^2 : <http://www.theoremoftheday.org/GeometryAndTrigonometry/ATST/TotDATST.pdf>

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

Corey Brooke, Editor
Bruce Pell, Faculty Adviser
Ellen Haberoth, Mess Czar