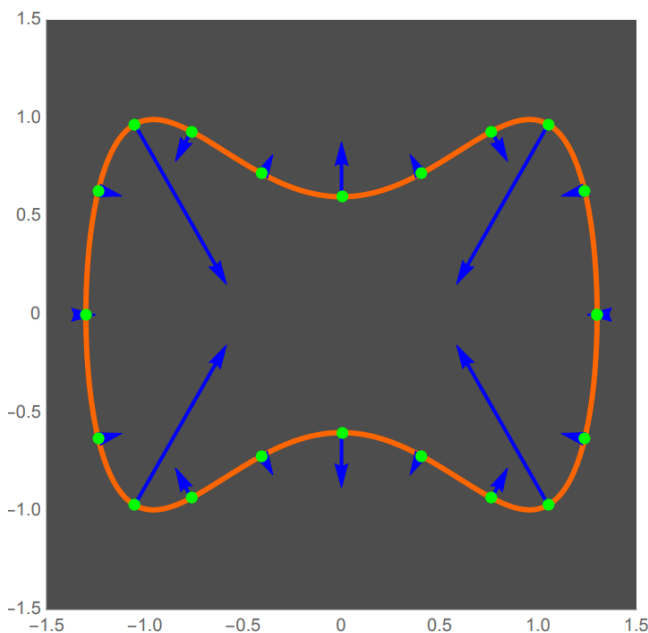


MSCS MESS

Department of Mathematics, Statistics, and Computer Science
St. Olaf College, Northfield, MN 55057
30 November 2018 | Volume 47, No. 11

Today's Research Seminar

Title: Geometric Flows
Speaker: Joe Benson
Time: 3:40 PM
Date: November 30 (Today!)
Place: RNS 204



About the Talk: Geometric flows are evolutions of curves and surface dictated solely by geometric characteristics of the evolving object. Examples include the grassfire flow, the curve shortening flow, and the vortex filament flow. This talk will discuss some of the interesting features of geometric flows, as well as discuss a discrete analog of them. Along the way, we will define what it means to take a geometric viewpoint and how it relates to symmetry.

About the Speaker: Joe Benson currently teaches mathematics at Macalester College, but is excited to return to St. Olaf where he taught for

three years. His research interests include differential geometry, differential equations, and mathematical modeling. When he is not working, he enjoys spending time with his three young children, ages 6, 3 and 11 months.

Next Monday's Colloquium

Title: Industrial Statistics
at Medtronic
Speaker: Carrie Strief, '03
Time: 3:30 PM
Date: December 3
Place: RNS 310

Medtronic

About the talk: Within the Medical Device Industry, statisticians are critical to a broad range of business activities. Although clinical trials and medical research provide the greatest number of statistical job openings, Medical Device companies also offer statistical careers focused on engineering, physical sciences, and other non-clinical areas. This talk will provide a day-in-the-life overview of the mathematical methods and career opportunities in non-clinical statistics. The first half of the talk will focus on high-level career information, and the second half will delve into a real-life example, to illustrate the sort of critical thinking and statistical methods which industrial statisticians practice daily.

About the Speaker: Carrie Strief is a Senior Principal Statistician and Technical Fellow, serving as a consulting statistician to a variety of

Medtronic manufacturing sites. Her statistical interests span the range of classical industrial methods: statistical process control, reliability analysis, designed experiments, lot acceptance sampling, and measurement systems analysis. Prior to entering the medical device industry, Carrie earned a Ph.D. in statistics from the University of Minnesota, and a B.A. in Mathematics from St. Olaf College. In her spare time, Carrie is a doting parent to her two charming future statisticians, she helps to sponsor transgender arts/literary events, and she attempts to create mathematical models of her boyfriend's cat's behavior. In the latter case, R-squared is quite low

Math Club Holiday Function: Festive Fractal Flakes

Hot cocoa and snowflakes and ice cream oh my!
 If these be your liking then you should drop by,
 be there sun sleet or pow
 in six days from now,
 Since there's food and it's free so please don't be shy!

Who: Anyone and everyone!
What: Math Club Holiday Event
When: December 6 during Community Time
Where: Third floor lounge of RMS
 Be there or be \square

Math Graduate School Panel

Date: Thursday, December 6
Time: 6:30-7:30 PM
Where: Tomson Hall 212
What: Two Ole alum who are currently in graduate programs in mathematics, along with our own Prof. Bozeman, will provide insights and answer questions such as: what is graduate school like? how does one choose a program? how does St. Olaf

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prepare you? and, is it true they really pay you to go to grad school? Pizza will be provided!

The Panelists are

Adam Wood '16 - University of Iowa
 Ryan Coopergard '15 - University of Minnesota
 Chassidy Bozeman - PhD from Iowa State University

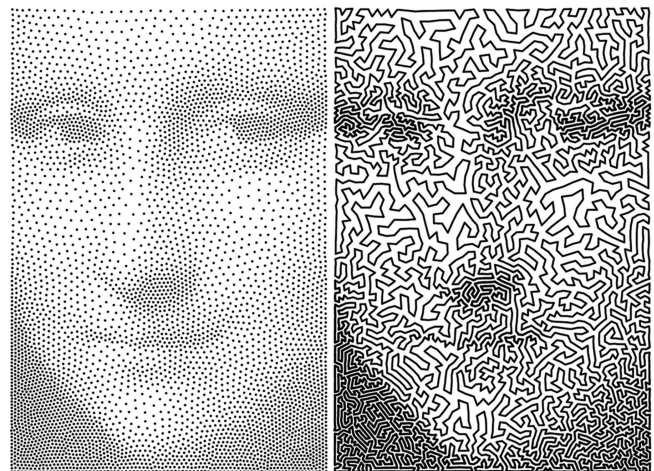
Theorem of the Week

With the the recent snow and chill, we thought another theorem might help warm your spirits!

Imagine Theorem: John Lennon sang about factor rings.

Proof: Let $agine : G \rightarrow H$ be a ring homomorphism. Then, by the first isomorphism theorem, $G/\ker(agine) \cong Im(agine)$. Following the associative property, $Im(agine) = Imagine$. Thus, $Imagine \cong G/\ker(agine)$, so John Lennon was clearly singing about factor rings. \square

Math & Art



Interested in learning about the mathematics behind this algorithmic replication of the Mona Lisa? Read <http://www.pnas.org/content/113/52/14873>

Will Jadkowski, Editor
 Dave Walmsley, Faculty Adviser
 Ellen Haberoth, Mess Czar