

# MSCS MESS

Department of Mathematics, Statistics, and Computer Science

St. Olaf College, Northfield, MN 55057

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## Monday's Colloquium

Title: Q-Q plots: To de-trend, or not to de-trend  
Speaker: Adam Loy  
Date: **Monday, April 11**  
Time: 3:30pm  
Location: RNS 310

## Next Week's Seminar

Title: Past and Future Student Research in Linear Dynamics  
Speaker: Prof. Dave Walmsley  
Date: **Friday, April 15**  
Time: 3:30pm  
Location: RNS 204

**About the talk:** In statistical modeling we strive to specify models that resemble data collected in studies or observed from processes. Consequently, distributional specification and parameter estimation are central to parametric models. Graphical procedures, such as the quantile-quantile (Q-Q) plot, are arguably the most widely used method of distributional assessment, though they suffer from a common perceptual problem. This talk will use the Q-Q plot as an example of how to conduct statistical graphics research. The discussion will include the perceptual problems associated with the standard Q-Q plot often seen in textbooks, possible solutions to this problem, and the experiment used to test these possible solutions.

**About the speaker:** Adam Loy is an assistant professor of statistics at Carleton College. He received his MS and PhD in statistics from Iowa State University. Adam's research interests include incorporating realistic computation and visualization into the classroom, exploring the potential of visual inference, developing better visualizations to explore complex models, and developing useful and useable R packages. In his spare time, Adam walks goes to the dog park with his golden retriever Beary, tries to keep up with his three young children, and tries to convince himself that tomorrow he'll pick up his trumpet after more than a decade away.

**About the talk:** It is an astonishing fact that there exists a function who, along with all of its derivatives, can generate every function you know and love from Calculus! Said a little more precisely, there exists a single function with the property that every continuous function on the unit interval is the (uniform) limit of a sequence of derivatives of this one function.

In the research area of linear dynamics, we focus not so much on this spectacular function but rather on the operation that produces it, which in this case is differentiation. In this talk, we will give an intermediate introduction to the research area of linear dynamics, with the ultimate goal of describing several projects St. Olaf students have recently worked on. We will also mention some future projects students may work on in this dynamic branch of analysis.

**About the speaker:** Dave went to college at St. John's University near his hometown of St. Cloud, Minnesota. He finished his graduate work at Bowling Green State University in 2017 and has been teaching at St. Olaf ever since. He is a pizza enthusiast, amateur hiker, and at one point was a sponsored Halo: CE player. In his spare time, he enjoys spending time with his two young children and letting epsilon be greater than zero.

## Plan Ahead for the Annual MSCS Recital!

Mark your calendars: the annual MSCS Recital is coming up on **Wednesday, April 20 at 7pm** in **the Ytterboe lounge!** This recital is an annual recognition of the talents, of all types, of the members of the MSCS community. Faculty and students will perform, together and separately, for a couple of hours in the evening. Anyone associated with MSCS is encouraged to participate, as a performer or an observer. This is a fun, relaxed gathering of students and faculty on equal footing.

*To submit an article, event, or anything else for publication in the Mess, email mcgowa2@stolaf.edu; to receive the Mess digitally each Friday, email habero1@stolaf.edu; visit <http://wp.stolaf.edu/mscs/mscs-mess/> for a digital archive of previous MSCS Mess issues.*

There will also be **homemade food offerings...** If you're interested in performing, or have questions, email **Steve McKelvey!**

## MSCS Mess Seeking Editor

The MSCS Mess is seeking a new editor for next year, as the current editor is graduating soon! It's a very fun position, and if you're reading this, I highly encourage you to apply! Fill out **this Google Form** to apply, and please email **mcgowa2@stolaf.edu** if you have any questions.

David McGowan, Editor

Laura Boehm Vock, Faculty Adviser

Ellen Haberoth, Mess Czar