

MSCS Mess

Access the MSCS Mess online at <http://wp.stolaf.edu/mscs/mscs-mess/>. E-mail the editor, Zach Greimann, (greimann@stolaf.edu) if you wish to receive a digital copy every Friday.

Department of Mathematics, Statistics, and Computer Science
St. Olaf College, Northfield, MN 55057

1 May 2015
Vol. 43, No. 28

This Week's Colloquium

Title:	Estimating Velocity for Processive Motor Proteins with Random Detachment
Speaker:	John Hughes University of Minnesota, Biostatistics
Date:	Monday, May 4
Time:	3:30 - 4:30 pm
Location:	RNS 310

About the talk: Processive motor proteins are ATP-powered biological nanomachines that drive many forms of movement in living organisms. The existence of eukaryotic organisms depends on these tiny motors because the passive process of diffusion is not sufficient to transport unwieldy payloads within the cell in a timely fashion. A motor protein overcomes these difficulties by hydrolyzing ATP in order to tow a cargo rapidly and in a directed path along a suitable substrate. Knowledge of these motors could lead to important biomedical applications, e.g., anti-tumor technologies; treatments for neurodegenerative diseases; devices for blood testing and genetic screening; and treatments for diseases caused by motor protein defects.

Professor Hughes will show that, in many cases, standard t -distribution based inference about the velocity of processive motor proteins is sub-optimal. Hughes develops a method that gives more precise inference regarding motor velocity in a one-sample case and significantly increases power to detect differences in velocity between two groups. These results should be of interest to experimentalists who wish to engineer motors with specific functional characteristics.

MSCS Senior Banquet

Seniors, mark your calendars for this Wednesday, May 6. The MSCS department will be holding its

annual Senior Banquet in the Valhalla dining room and your beloved MSCS faculty members would love for you to attend. The event will run 6-8 p.m. and is sure to have some delicious food in your honor.

If you plan on attending, please RSVP for the event at wp.stolaf.edu/mscs/.

The MSCS Mess Needs YOU!

Have you found yourself wishing for some way to contribute to your favorite MSCS newsletter? Well now you can! Unfortunately our Editor-in-Chief, Zach Greimann, will be graduating this May, which means that we need somebody to take the wheel, and that somebody could be *you*.

Editing the Mess is a rewarding way to connect with and contribute to the MSCS community here at St. Olaf. It requires some skill with writing as well as some familiarity—and some patience—with LaTeX. If you think you're up to the task, please contact Zach Greimann (greimann@stolaf.edu) for more information.

Attention Senior MSCS Majors

It's almost graduation time, way to go! The MSCS department would like to honor your accomplishments with a showcase. In order to do so, we need some help from you. Please send Zach Greimann, (greimann@stolaf.edu) a digital photo of yourself along with any other information you would like to share, such as:

- Your name
- Your major(s)
- Your plans for after graduation (this can include grad school, jobs, traveling, future goals, etc.)

Thanks!

and for Your Reading Pleasure...

some Stats Jokes

A statistician's wife gave birth to twins. He was delighted. After phoning his immediate family and close friends, he called up his minister to tell him the good news. The minister was also delighted.

"Bring them to church on Sunday and we'll baptize them," said the minister.

"Oh no," replied the statistician. "Just baptize one. We'll keep the other as a control."

Statistics prove that a person's number of offspring is an inherited trait. If your parents didn't have any kids, the odds are that you won't either.

There are two types of people in this world: Those who can extrapolate from incomplete data

some Math Quotes

"The difference between the poet and the mathematician is that the poet tries to get his head into the heavens while the mathematician tries to get the heavens into his head"

-G.K. Chesterton

"Why are numbers beautiful? It's like asking why is Beethoven's Ninth Symphony beautiful. If you don't see why, someone can't tell you. I know numbers are beautiful. If they aren't beautiful, nothing is."

-Paul Erdős

and some Riddles

Anyone can take it
as long as it's on someone
What is it?

I am placed on the table,
cut,
passed,
but never eaten.
What am I?

What has a tongue that can't taste
a throat that can't swallow,
eyes that can't see,
and a soul that will never die?

(find the answers in next week's Mess!)
(last week's answers: a coat of paint; lettuce)

Editor-in-Chief:	Zach Greimann
Faculty:	Joe Benson
Mess Czar:	Patty Martinez

If you would like to submit an article or event to be published in the MSCS Mess, e-mail greimann@stolaf.edu