



Goodsell Gazette

Carleton College

January 13, 2023

Northfield, MN 55057

The newsletter for the Carleton mathematics and statistics community

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Attend a Tour of Mathematics Talk!

Attending a *Tour of Mathematics* talk is for anyone!

Each winter our department offers a one-credit course called the Tour of Mathematics. Over the course of the term, eight faculty in our department talk about a mathematical idea of interest to them, and students in the course agree to attend at least seven of the eight lectures. If you are interested in exploring more mathematics but aren't able to commit to attending them all, you're still welcome to sit in on whatever lectures you would like.

This **Friday the 13th**, Laura Chihara will be giving a talk: "Mathematics and the Buckyball."

Next **Friday the 20th**, Joseph Johnson will be giving a talk: "Sneetch Theory: Dislike of the Other and Grouping of Coupled Oscillators"

Tour talks are in **Leighton 305, 3:30-4:30pm on Fridays**.

Math and Stats Colloquium

Date: Tuesday, January 24

Time: 4-5pm

Location: CMC 206

Pre-Colloquium Tea at 3:30pm in the MAST Student Space

Our next colloquium speaker will be Alexandra Florea, an assistant professor of mathematics at the University of California Irvine. Alexandra's research is focused on using analysis to study number theoretic functions that arise in the algebraic setting of function fields. She is particularly interested in understanding how these functions behave on average.

Title: Moments of L-function

Abstract: Prime numbers are fundamental objects in number theory, and many deep conjectures in the field concern properties of primes. I will explain how the primes are related, via analysis, to the study of



zeros of a certain class of functions, called L-functions. I will discuss how understanding the analytic properties of the L-functions provides insight into the distribution of primes, and I will focus on studying moments (i.e., averages of powers of L-functions in certain families) and what these tell us about primes.

GeMMS

GeMMS is back for a winter term extravaganza! In addition to a weekly study hall, a book club, and our ongoing mentor/mentee program, we will be hosting TWO study breaks and TWO outside speakers this term! Here's what you can look forward to:

- Weekly Study Hall, Tuesdays 8-9pm, MAST Student Space
- Crafts and Conversations with Alexandra Florea, 4th Tuesday
- Ice Skating & Hot Cocoa, 4th Saturday
- Mentor/Mentee Get-Together, 6th Monday (Midterm Monday)
- Crafts and Conversations with TBA, 8th week
- Finals Study Break, Reading Days

If you want to be added to the GeMMS email list and be kept in the loop of all the awesome things we have coming, please contact MurphyKate Montee. Have questions? Contact MurphyKate Montee, Claire Kelling, or any member of the GeMMS Board.

Data Science Competition

This year MinneAnalytics is reviving the MinneMUDAC student data science competition after a two year hiatus. If you're interested in participating, then please fill out [this form](#) by **January 20** so we can get registration worked out.

What is it? MinneMUDAC is a data science competition where the data will be released to teams in February, teams then have several weeks to analyze the data, then teams will present their findings to judges from the analytics community.

When is it? The data will be released in February. The presentations will be given on March 25th at Target Field.

Are there prizes? Yes! Cash prizes are awarded to the top teams in each division.

What are the benefits? Real world experience with a real world problem - and real data. Career and internship opportunities. Active recruitment at both the event and after. Prize money and bragging rights.

Study Mathematics or Math Education in Budapest

If you are interested in studying abroad in mathematics, the Budapest Semesters in Mathematics program and its sister program BSME in math education are two you should consider.

BSM can be done in the fall semester, spring semester, or over the summer, though Carleton students tend to go in the fall or summer (since to do the spring semester you'd need to miss both winter and spring terms at Carleton). BSME is a summer program for those interested in math education. (BSME used to have academic-year terms as well, but that doesn't exist anymore.)

Because Carleton sends so many students to these programs (Carleton sends more students to these programs than any other college or university!), we have a special arrangement with the directors. Applications for either of these programs come to our department first, and we send on to the directors our recommendations for students all at the same time.

Would you like to learn more about the programs and see how to apply at Carleton? Here's the link: <https://www.carleton.edu/math/further-opportunities/off-campus/>. On **Tuesday, January 17 at 4-5pm in CMC 206**, there will be an information session where directors from both programs will be present to talk about their programs and answer questions. **Applications to our department are due January 27, 8am. However, you do NOT need to ask anyone for a letter of recommendation.**

If you have questions about this process, direct them to Deanna Haunsperger, dhaunspe.

Jobs, Internships and Other Opportunities

Jobs

Camp Counselor and Staff Assistant, Camp Epsilon, apply by February 15 and March 1.

Internships

Research Intern, Los Alamos National Lab, contact Emily Casleton (ecasleton@lanl.gov) with CV/resume and a few sentences about your interest in Statistics and the program by January 21.

Research Intern, Thomas Jefferson University Division of Biostatistics, apply by February 15th.

R&D Research Intern, Cardiac Rhythm Management, Boston Scientific, apply by April 7.

Other

MS Program, George Washington University, register for the Zoom information session on January 20 to learn more.

DOE Scholars Program, U.S. Department of Energy, apply by January 23.

Predoctoral Fellowship, Opportunity Insights, apply by February 2.

Summer Research in LA or Singapore, Institute for Pure and Applied Mathematics, apply by February 13.

Exponent Fellowship, National Museum of Mathematics, apply by February 15th.

Summer Institute in Biostatistics and Data Science, Florida Atlantic University, apply by April 3.

Summer Institute in Biostatistics, University of Michigan, apply by April 28th.

For more information and opportunities, visit the Carleton Career Center!

Upcoming Events

Week 2

Friday, January 13, 3:30-4:30pm, Leighton 305
Tour of Mathematics Talk by Laura Chihara

Week 3

Tuesday, January 17, 4-5pm, CMC 206
Budapest Information Meeting

Friday, January 20, 3:30-4:30pm, Leighton 305
Tour of Mathematics Talk by Joseph Johnson

Week 4

Tuesday, January 24, 4-5pm, CMC 206
Math and Stats Colloquium by Alexandra Florea



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