

MSCS



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Department of Mathematics, Statistics, and Computer Science
St. Olaf College, Northfield, MN 55057
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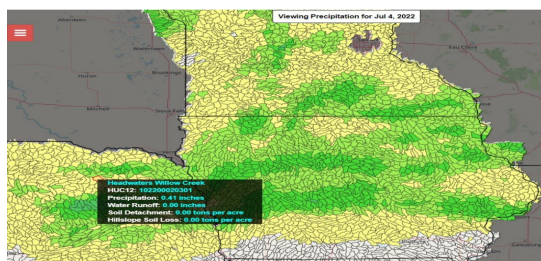
Monday's Colloquium

Title: **Building Statistical Emulators
of Computer Models**

Speaker: Dr. Jarad Niemi

Date: 11/14/22, 3:30pm

Place: RNS 310



Scientists build complicated differential equations, called computer models, to represent reality. These models allow scientists to run computer experiments that augment real-world experiments. High fidelity models are often extremely computationally expensive and therefore take a long time to run. Statistical models, aka emulators, can be constructed to provide predictions with uncertainties for these computer models. We utilize a Gaussian Process (GP) as a theoretically founded emulator that often performs best in out-of-sample predictions. We are working on applying these GP

emulators to the USDA Water Erosion Prediction Project computer model. When implemented these emulators will help expand the usage of the Daily Erosion Project.

MSCS Math Grad School Night!

The MSCS Department will be hosting a Math Graduate Information School Night this Thursday, **Nov. 10, at 7 pm** in TOH 188! Prof. Hanhart and Prof. Mercurio have invited alumni to join the event. Please join us and enjoy some *conversation, pizza, and cookies!* You'll be free to ask questions.

Graders and TAs for MSCS Spring 2023!

The Interim positions are filled, however **Spring TA's applications are still open until 11/17!** Here is the [link!](#) The qualifications include:

- Completed the course you are applying for with an A or B grade
- Ability to maintain confidentiality
- Capability to complete work in a timely manner

Once the deadline has passed, with guidance from the professors, I will start matching courses and student workers. When the

matches are completed and if you are chosen, Ellen Haberoth will contact you to see if you're still available. Please note this process may go into December and January. If there are any questions please email habero1@stolaf.edu.

Attention Math Majors! Undergraduate Resource Fair - Nov 19th & 20th [Zoom]

You are invited to the **Online Undergraduate Resource Fair for the Advancement and Alliance of Marginalized Mathematicians (OURFA²M²)**, taking place via Zoom November 19th and the 20th.

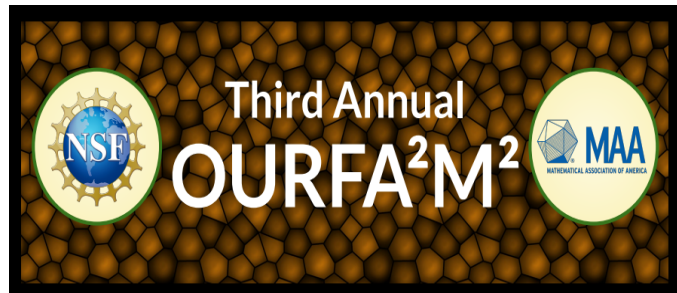
This conference aims to help students start or develop a math career (in research, teaching, or industry). Anyone is welcome to attend, and we are especially aimed at students from underrepresented and marginalized groups in mathematics.

This conference is for:

- Students at all levels, from pre-calculus up.
- Students who want to learn about career building opportunities.
- Students who want to connect with peers and potential mentors.

This event will also include a crash course of areas of math common to undergraduate research, various programs for undergrads, a resource presentation on mentorship and math organizations, and networking lunches.

Please see more details on our [website](#), and register [here](#)!



Attention CS TAs! Lead CS TAs Needed!

The CS Program is looking for new Lead CS TAs! We're planning to hire 2 Lead CS TAs who would be responsible for updating TA training materials and running CS TA training at the beginning of each semester. The primary time commitment will be during interim 2023, when update to the handbook will be made, and at the start of spring and fall semesters when CS TA training occurs.

The qualifications required:

- Current or past CS TA,
- Willing and able to commit to the position from Interim 2023 through Spring 2024, (**No current seniors, sorry!**) Interest in helping train new CS TAs.

If you're interested, please **fill out [this form](#) by 5pm on Tuesday Nov. 22**. We are looking forward to seeing your applications! Please reach out to newcom3@stolaf.edu and getche1@stolaf.edu with any questions.

MSCS Students - St. Olaf Hackathon Volunteer Sign ups

We are still looking for more volunteers who can help us run a hackathon. Typically a hackathon works to tackle a particular problem, puzzle, or a challenge to create a particular application. OleHacks will be a 36-hour long Hackathon starting on Friday night and ending on Sunday afternoon. We hope to have volunteers with a variety of skill sets which means ***you do not need to have the ability to carry out every responsibility written below!*** We also welcome volunteers who cannot stay during the entire 36 hours.

Responsibilities of volunteers include:

- Logistics help (Help greeting guests, setting up and cleaning up venue, organizing meal breaks, etc).
- Providing technical mentorship for participants.
- Facilitating group sessions happening during the Hackathon.

- Facilitating game sessions during the Hackathon.
- Helping guest speakers and sponsors set up their presentations.
- Reaching out to potential sponsorships for funding.

Here is one example of a previous [hackathon](#) held at St. Olaf! And here is another example of a previous [hackathon](#)!

CS Undergraduate Research

St. Olaf CS invites applicants for undergraduate research student work during Fall '22 and possibly Spring '23, for work on projects involving cloud computing or Raspberry Pi units, as part of the CSinParallel research group. Specifically, the work relates to (1) “Runestone Backend”, an automated containerized parallel/cluster computations on Google Cloud using Kubernetes, and (2) the Self-Organizing Cluster system for the Raspberry Pi, including system image development. Qualifications depend on the particular project, as described in the application details. Both are ongoing projects with flexible expectations for hours per week, and strong applicants who may have partial qualifications are encouraged to apply for one or both projects.

Please apply [here](#), applications will be accepted and considered until further notice.

REUs: Summer Research in MSCS

If you are interested in being paid to collaborate on a research project with students from around the country off campus this summer, keep reading! To look through the programs available for Research Experiences for Undergraduates (REU's), check out this [link](#)! Most of them are done over the course of 8 – 10 weeks during the summer and include stipends around \$4,000. Applications will open in November and most will be due between late January and early March.

Read the eligibility for each because many are restricted to certain years in school, certain majors, or US citizenship. The website has a variety of tabs at the top to help you find programs that apply to you! In particular, there are lots available for international as well as domestic students!

Most applications require a personal statement about why you would like to participate in the REU as well as letters of recommendation, so start looking into these sooner rather than later! And keep an eye on your email for an invitation to an REU application workshop coming later in November!

These are great opportunities so, as you are planning for next semester during this quiet week, be sure to think ahead towards next summer as well.

Make sure to reach out to us (mercur1@stolaf.edu and maine1@stolaf.edu) if you have any questions!

To submit an article, event, or anything else for publication in the Mess, email hilst1@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.

Jacob Hilst, Editor
Daniel Stoertz, Faculty Adviser
Ellen Haberoth, Mess Czar