

MATH FACULTY COMPUTING FACILITY (MFCF)

MFCF's newsletter with updates on the Math Faculty computing environment.

Fall 2024 Your computing needs at your fingertips...

Fall Training Sessions

MFCF will be holding its annual 'Math Graduate Student Orientation' sessions to introduce new graduate students to our computing environments. Links to past presentations are available here: [Past Graduate Student Orientation Presentations](#).

An additional Fall workshop is being planned for those students and faculty members interested in using [MFCF Specialty Research Servers](#) via the Slurm Workload Manager. If interested, please contact mfcfhelp@uwaterloo.ca with the words "Slurm Workshop" in the subject line.

NVIDIA training during the Winter term

NVIDIA will be holding a one-day workshop on February 4, 2025 on training LLM's, for those wanting to learn about GPU computing workflows. If interested, please contact mfcfhelp@uwaterloo.ca with the words "NVIDIA Workshop" in the subject line.

GPU Computing

Accelerate your code - test it now and experience the difference

GPUs can help speed up computations quite significantly. Many mathematical software applications you're already using are GPU-enabled. Our website offers articles that show how to use GPUs with **MATLAB** and **Python**. Performance comparisons are included so you can see the benefit.

[Accelerate MATLAB Code using a GPU](#)

[Accelerating Physics Calculations with CUDA in Python using Numba: A Monte-Carlo Example](#)

GPU lending laptops

We are expanding the pool of GPU-equipped laptops available to borrow, the newest additions:

- One Dell Precision 7680 Linux Laptop with Intel Core i9-13950HX, 24-core in the 8P+16E format, 32 GB RAM, 1 TB M.2 SSD, and RTX 5000 GPU.
- Two new Apple M3 Max laptops. The CUDA programming environment is not supported on Apple machines.

Also another reminder, we have an NVIDIA RTX3070 GPU in an external enclosure that you may borrow to attach to your own laptop or desktop.

Click on the link for our listing of [GPU-equipped laptops](#) and if interested please complete a [request form](#).

Windows GPU Workstation

MFCF has added a [Windows desktop](#) computer with a NVIDIA GeForce RTX 4090 GPU to the growing collection of GPU computing capabilities. See the full list of [GPU computing systems](#) and contact us if you are interested in using any of them.

GPU Servers

Later in the Fall term we will be deploying two more GPU servers, one with NVIDIA H100 GPUs for scientific computing and the other with NVIDIA L40S GPUs for machine learning/AI. Watch the [MFCF News page](#) for announcements about these.

New Emergency Notification System

You may have seen the recent email from the Vice-President, Administration and Finance advising that the University of Waterloo is retiring WatSAFE and launching a new emergency notification system, **Regroup Mobile**. As of October 1, 2024, Regroup Mobile will be the sole emergency notification system at UWaterloo.

We strongly encourage all employees and students to download and configure the new

app on your mobile device. Take a moment to download Regroup Mobile by following [these straightforward instructions](#). It should take just a few minutes.

Research Data Management and Archival

Research data management (RDM) is a topic of increasing importance. The tri-council funding agencies are emphasizing expectations for researchers and institutions to have an RDM plan. The Library has published a guide to RDM planning at <https://subjectguides.uwaterloo.ca/rdm/plan>. Rebecca Hutchinson is the Library's liaison to Math who can help with that.

MFCF now offers an archival service at no charge for long-term storage of large volumes of static research data. See more about our [archival service](#).

Help us help you

Questions or problems to report? Do you know a way we could make math computing better? Is there something you'd like to hear about in these newsletters? Do you want to write an article? Email Krista Denny at kdenny@uwaterloo.ca or fill out a [request](#). We'd love to hear what you have to say!



[MFCF Webpage](#)



[MFCF Help](#)
