MATH FACULTY COMPUTING FACILITY (MFCF)

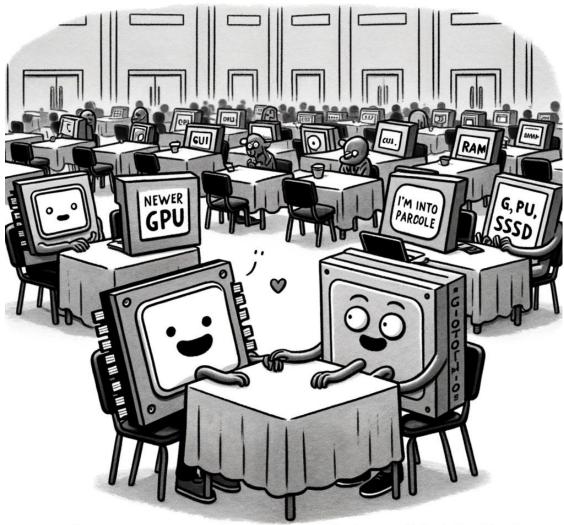MFCF's newsletter with updates on the Math Faculty computing environment.

Winter 2024…GPU GPU GPUs!

MFCF staff changes

In January, MFCF welcomed Michael J. Park, a new Information Technology Specialist who joins us from the UW Centre for Extended Learning. Michael brings with him a wealth of technical experience in the areas of DevOps and Systems Administration from an assortment of prior job positions ranging across industry and academia. Please join us in welcoming Michael to the Faculty of Math.

MFCF also bids a fond farewell to Steve Weber, who has transitioned within main campus to Science Computing. We wish Steve all the best in his future endeavours and continued career growth within the Faculty of Science.

"So, you process one task at a time? Cute. I'm into parallel relationships."

Credits: The cartoon was produced by co-op student Alison Collins using ChatGPT's DALL-E

GPU Computing

We are continuing the expansion of GPU computing in the research environment. This term we will be deploying a very high-performance GPU server equipped with four of NVIDIA's top-of-the-line H100 GPUs and two terabytes of memory. These GPUs are well-suited to high-performance computing and very large machine learning models. Please contact us if you would like to use this system so that we can review your needs and help you get started.

For the Spring term we will be deploying another GPU server with three NVIDIA L40S GPUs. These are particularly well-suited to machine learning. Watch our website for announcements when this is ready.

Upcoming Workshop on High-Performance Computing with Slurm

MFCF invites Math Faculty graduate students and/or researchers that work with High-Performance Computing (HPC) to attend a workshop on the 'Slurm Workload Manager' for HPC. Learning how to use Slurm for HPC job management is already mandatory for anyone who wants to use MFCF's specialty compute resources, including MFCF's GPU cluster environments and forthcoming high-end HPC and GPU servers. You will also need to know Slurm to use computing resources at the Digital Research Alliance (formerly Compute Canada).

We are planning to schedule this workshop for sometime during the Fall 2024 term. If you are interested in attending this workshop, please email us at mfcfhelp@uwaterloo.ca with the subject line "Slurm Workshop" to confirm your interest in this event by April 12. If you have any other ideas for workshop topics, please email us with the subject line "MFCF Workshop Ideas".

GPU lending laptops

We are expanding the pool of GPU-equipped laptops available to borrow.
Included now are two Apple M3 Max laptops. The CUDA programming environment is not supported on Apple machines. Coming soon is a Dell laptop with 32 GB of memory and an NVIDIA RTX5000 Ada GPU. This one will run Linux, and CUDA is supported on the NVIDIA GPU.

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

See our listing of GPU-equipped laptops at https://uwaterloo.ca/math-faculty-computing-facility/services/gpu-loaner-laptops

New GPU enabled Windows workstation coming soon

MFCF is purchasing a Windows workstation with a GPU adapter that can be used for moderate parallel processing. This will compliment our Windows GPU server and offer a springboard to using the Linux GPU servers with multiple high-capability GPUs installed.
The machine is expected to be ready early in the Spring 2024 term.

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 at https://rt.uwaterloo.ca/SelfService/Forms/MFCF/. We'd love to hear what you have to say!

MFCF Webpage   MFCF Help