

MATH FACULTY COMPUTING FACILITY (MFCF)

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

Winter 2025 New year new solutions...

MFCF Team update

In December we said a fond farewell to Professor Marek Stastna after he completed his second term as Director and Associate Dean, Computing here in MFCF. We thank you Marek for another wonderful and successful three year term.

Professor David Saunders of Statistics and Actuarial Science began the role of MFCF Director and Associate Dean, Computing, starting in January 2025. Welcome to our team David!

Windows Changes in 2025

There are two major changes coming for Windows users in 2025.

MFCF will do the regular upgrade of managed Windows 11 systems to the latest release, 24H2. Expect to see the upgrade on your managed machine later in the Winter term. This has become a yearly ritual so we expect most people to be familiar with the process. Look for the announcement as a news item on the [MFCF web site](#) later this term.

Windows 10 will reach its end of life on October 14, 2025. There will be no further security updates for Windows 10 after October 2025 so any newly-detected vulnerabilities will not get fixed. We have published the [announcement](#) as a news item on our web site. We are contacting people we know are running Windows 10 to arrange the upgrade to Windows 11. It is also important to upgrade or replace any personal systems to run Windows 11. Please send in a [request](#) for consultation on replacement equipment.

Regular patching of Windows and macOS computers

Regular updates of your computer's operating system (Windows or macOS) and applications are required for the protection of your computer, your data, and the campus computing environment. Current application updates include:

- replacing WatSAFE with Regroup AdhocAlert
- upgrading vulnerable versions of the 7-Zip application to the current release
- removal of unlicensed applications such as Oracle Java and Cisco WebEx.

To facilitate automatic upgrades, it is important that **your computer is powered-on and connected to the campus network**. If your computer is managed by MFCF and it is off-campus, then you need to connect to the campus VPN for at least four contiguous hours per week. If your computer informs you that you need to reboot to finish applying patches, do so within 24 hours.

If computers in your on-campus office are disconnected from the network, reconnect them and leave them powered on but logged-out so that they will install patches and reboot automatically.

Regular patching and reboots are necessary to ensure the security of University systems. You will save time and inconvenience by routinely allowing system management tasks to run in off hours.

If you have questions or require assistance, please contact mfcfhelp@uwaterloo.ca

GPU Computing for Teaching and Research

Last year, MFCF expanded its support for GPU computing. In the teaching environment the new server has five NVIDIA RTX A6000 (Ada Lovelace) GPUs, while in the research environment we added a server with three NVIDIA L40S GPUs. Both are well-suited for machine learning and artificial intelligence. These supplement earlier machines with P100, A100, and H100 GPUs for work in both ML/AI and HPC.

We strongly recommend that instructors talk to us about their plans for courses involving GPUs so we can be prepared to support them. We also encourage graduate students and researchers to talk to us about their GPU computing needs so we can help with anything from code parallelization to job scheduler training.

In February we hosted two GPU computing workshops organized by the Math Innovation office. These workshops brought NVIDIA experts here to lead participants through hands-on exercises in physics-informed neural networks and large language model guardrails. Both were very well-attended with lengthy waiting lists.

Let us know what would help you get going with GPU computing so that we can provide assistance and organize similar workshops. Contact us at mfcfhelp@uwaterloo.ca

NVidia 4xH100 GPU server - Now easier to access

Faculty of Math researchers and graduate students interested in using MFCF's 4xH100 GPU server (gpu-pr1-03.math) were originally required to submit a research summary prior to being granted access. To make this easier for our users this restriction has been lifted. Please send in a [request](#) with the **subject line 'H100 Server Access'** to gain access to gpu-pr1-03 via the research Slurm head node.

GPU laptops and External GPU enclosure for borrowing

MFCF has several GPU-equipped laptops that you may borrow as well as a GPU in an external enclosure available for borrowing. You can use this with your laptop or desktop PC that does not have its own GPU. This may help you get acquainted with GPU computing before moving up to larger servers. Read about them at <https://uwaterloo.ca/math-faculty-computing-facility/services/gpu-loaner-laptops>.

Send in a [request](#) if you would like to sign out one of our GPUs.

DeepSeek Security Concerns

Thinking of using DeepSeek AI? The SANS security agency has relayed warnings that the DeepSeek apps for iOS and Android have been shown to have many security and privacy vulnerabilities including insecure storage and unencrypted transmission of user and device data back to China. Their advice is that these apps should be removed from all corporate and bring-your-own devices. Several countries have already banned DeepSeek from government devices.

UW has issued advice to avoid the DeepSeek apps and web service. There are other ways to use DeepSeek and other alternatives for AI at UW. For details, refer to IST's announcement

<https://uwaterloo.ca/employees/news/deepseek-app-security-and-privacy-weaknesses>

More information is available at these sites:

<https://www.nowsecure.com/press-releases/nowsecure-urges-enterprises-to-ban-the-deepseek-ios-mobile-app/>

<https://thehackernews.com/2025/02/deepseek-app-transmits-sensitive-user.html>

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