NSERC CREATE **TOP-SET** Un programme *FONCER* du CRSNG

Séminaire

Le mardi 19 novembre 2019, 14h45
Des rafraîchissements seront servis dès 14h15
Complexe de recherche avancée, pièce 233
Université d'Ottawa, 25, rue Templeton
Le séminaire se déroulera en anglais.

Seminar

Tuesday, November 19, 2019, 2:45 p.m.
Refreshments to be served starting at 2:15 p.m.
Advanced Research Complex, room 233
University of Ottawa, 25 Templeton Street

Introduction to high-performance computing and parallel programming

Jarno van der Kolk, University of Ottawa

Abstract: An invaluable tool in today's research, high-performance computing allows performing massive simulations and crunching large amounts of data, leading to breakthroughs in almost every field of research. In this seminar, Jarno van der Kolk will introduce Compute Canada, available for all researchers and eligible Canadian institutions. Compute Canada offers free access to hundreds of thousands of CPUs, thousands of GPUs and petabytes of disk space, as well as virtual machines and other services. Utilizing these systems in the most effective manner is not always easy to do. By default, a program will only use a single CPU unless the programmers have used parallel programming techniques. We will discuss the change in thinking required to use these techniques. To this end, we will explore OpenMP and MPI, which enables the usage of multiple CPUs, and CUDA, which uses the GPU.

Bio: Jarno van der Kolk is originally from the Netherlands where he did his bachelor in physics at the Vrije Universiteit in Amsterdam. He then moved to Germany to do his masters in theoretical and mathematical physics at the Ludwig-Maximilian-Universität in Munich. Afterwards he completed his PhD in computational nanophotonics at the University of Ottawa where he also did a Post-Doc for almost a year and maintained the group's cluster computer. He joined IT Solutions at the university where he uses his skills as a researcher and IT specialist to aid his fellow researchers in finding and using the various computational resources available at the university and throughout Canada.