SEMINAR FALL 2013 SERIES

WestGrid

compute • calcul
CANADA

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British Columbia	11:30
Alberta	12:30
Saskatchewan	12:30*
Manitoba	13:30

* Saskatchewan's NOV 06 session will be at 13:30 due to Daylight Savings.

SEPT 25
INTRODUCTION TO WESTGRID

Interested in expanding HPC use within your research? This session will provide an overview of WestGrid and Compute Canada, and covers the basics of getting started with an account.

OCT 09
TUTORIAL: USING WESTGRID

This session provides a step-by-step tutorial on using WestGrid's computational resources, including demonstrations of how to log in, submit jobs, and move data.

OCT 23
TUTORIAL: DEVELOPMENT TOOLS

This session will review the compilers and development tools available at WestGrid facilities, with an emphasis on the Intel Compiler Suite for C/C++ and Fortran. The first half of the talk will discuss common compiler flags and strategies for optimizing and debugging codes within the WestGrid computing environment. We will then provide a brief introduction to advanced topics, including parallelization, vectorization with SIMD instructions, and the Intel Kernel Math Library.

NOV 06
CASE STUDY: HPC LENDS NEW INSIGHTS INTO INFECTIOUS DISEASE CONTROL

Fiona Brinkman is a Professor with the Department of Molecular Biology and Biochemistry at Simon Fraser University. Her lab's research projects generate large volumes of data in the form of DNA/RNA sequences, molecular structures, and molecular network changes. In this talk, Brinkman will highlight some of her lab's current projects, outline their top computational challenges, and explain how the use of WestGrid helps them overcome those challenges.

Image Caption:
One of Brinkman's current projects is the InnateDB project, which involves collecting information about molecular interactions associated with the immune system, to facilitate more systems-based analyses of immune responses to infection. Shown at left is a collection of molecular interactions associated with innate immunity, with those added in 2011 and 2012 highlighted in red.