User Training

Training Update: March 16, 2020

As part of Harvard Medical School's response to COVID-19, HMS Research Computing is now working remotely.

All training classes will be held online until further notice, via Zoom meetings.

Summer 2020 Part1 Registrations are open!

You must have a Harvard University ID (HUID) to be able to register for a class. This is required to access the Harvard Training Portal.

Those members of the HMS community who do not have HUIDs - such as employees at affiliate hospitals, or collaborators from other institutions - may self-register for one as a "Person of Interest" with their faculty member's sponsorship. The form may take several days to process, so we encourage non-HUID users to fill out this form ASAP in preparation for upcoming training:
(please read through the form for submission details)

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<td>6/10/2020</td>
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Intro to O2

O2 for New Users addresses the needs of users who have very little linux experience, and are just getting started with HPC. More time will be devoted to covering linux basics, and the concepts of schedulers and jobs, and data management best practices. The lecture portion of this class is one hour, the second hour will be spent clinic-style with HMS RC staff to address workflow-specific questions and help convert commands to O2 SLURM syntax.

Intro to Python

Python is a popular scripting language for scientific computing and available across all computer platforms. The course will introduce you to some of the basics of the Python language as well as some of the nuances involved with its use specific to the O2 environment. The goal is to provide users with a foundational level of familiarity. Topics covered include basic data types and declaration, flow control (if/else), loops, a brief introduction to constructing a script, and a brief introduction to modules. The course will be taught on O2, but general concepts are easily transferrable to desktop and local installations.

Intro to R/Bioconductor

Intro to using R and Bioconductor. R is a powerful, open-source, highly adaptable statistical language useful for crunching numbers to datasets like those produced by next-gen sequencing. This class covers R basics and learning to think like/understand R. Users will learn how to set up personal R libraries on O2, and use O2 R for its high memory allocations and parallelization. Topics include how to install packages, learn about variables, data types, data manipulation, flow control, and functions, perform simple statistical tests, and create a variety of plots. Laptops are encouraged.

Class Files Here
Intro to MATLAB

Matlab has become the “language of science” in the past few decades. It is simple to use, yet powerful enough to be productive on large computing infrastructures. If you need: 1) Fast prototyping of research ideas; or 2) avoid spending too much time in coding instead of doing real science by taking advantage of Matlab’s built-in functions; 3) User friendly graphical interface and educational documentation; 4) Simplicity of code; 5) Easy access to GPU computing power; 6) Easy plotting and presentation of data; you will find this introduction course useful. This course will introduce the basics of the MATLAB coding language with O2-scalability and data presentation.

Intro to Parallel Computing

This is a short introduction to Parallel Computing that will include an overview of the basic concepts of parallel programming; from running your job in an embarrassingly parallel way to writing simple shared and distributed memory parallelization codes in different languages. The seminar will cover several examples of actual parallel codes however it will not have any "hands on" components. A basic programming experience (of any language, no parallelization) is preferred in order to better follow the topics presented during the seminar.