

From: Lauren E Milechin la25321@mit.edu
Subject: [Supercloud-announce] Practical High Performance Computing IAP Class
Date: December 13, 2021 at 2:16 PM
To: supercloud-announce supercloud-announce@mit.edu

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Hello all,

Are you interested in learning how to use High Performance Computing resources to scale your application or code? This January during IAP we will be offering the Practical High Performance Computing: Scaling Beyond your Laptop class to help get you started. A description of the class, the schedule, and how to sign up are listed below. Please sign up by January 5, space is limited.

Thank you,

Lauren Milechin

Title: Practical High Performance Computing: Scaling Beyond your Laptop (12.091/12.S593)

Instructors: Lauren Milechin (MIT Supercloud/MIT EAPS), Julie Mullen (Lincoln Laboratory Supercomputing Center), Chris Hill (MIT EAPS)

Schedule: 9am-12pm, January 11, 13, 18, 20

Description: The focus of this class is to introduce the role of High Performance Computing (HPC, aka supercomputing) in research. We will discuss the fields where HPC is used and provide concrete examples where we describe the strategies used to scale applications to hundreds of processors. Students will learn when to scale from their laptops to HPC, what challenges that introduces, and how to address those challenges with efficient HPC workflows. The MIT SuperCloud will be used for hands-on examples using C/C++, Julia, Matlab, and/or Python. We will also demonstrate applications using other computing resources on campus, such as the Satori and Engaging clusters. Students should bring an existing research problem/application that they would like to scale as a project.

This is a blended course with asynchronous and in-person live components. Much of the lecture will be available before class in pre-recorded short videos and class time will be spent on hands-on activities and student research project work. Students taking the class for MIT credit are required to complete a short report on their project.

You can access the MIT Events Calendar entry here:

https://calendar.mit.edu/event/practical_high_performance_computing_scaling_beyond_your_laptop.

Prerequisites: Working knowledge of one programming/scripting language. Laptop for hands-on exercises. Participants will get further instruction on how to access MIT Supercloud once registered for the class. Students should bring an existing research problem/application that they would like to scale as a project.

Sign Up: All interested in attending should fill out this form:

<https://forms.gle/rEGfCbbasPwHJGY39>. Students looking to take this class for credit should also sign up for 12.091/12.S593. Please sign up by January 5, space is limited. The Asynchronous content is available on an open online course platform and makes a good self-paced course on its

content is available on an open online course platform and makes a good self-paced course on its own. If you are unable to attend the class and are interested in accessing this content, send email to lauren.milechin@mit.edu.

supercloud-announce mailing list

supercloud-announce@mit.edu

<https://mailman.mit.edu/mailman/listinfo/supercloud-announce>