

COMPUTATIONAL RESEARCH in BOSTON and BEYOND SEMINAR

How to Personalize a Supercomputer? Configurable and Adaptable Framework, leveraging Moore's Law for Real Applications

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ABSTRACT:

A supercomputer is defined as a computer with a high level of performance for scientific and engineering applications compared to a general-purpose computer. Since the 1960s, supercomputers have played roles in using computing to the frontiers of real applications in weather forecasting; climate research; oil and gas exploration; molecular, materials, and biological modeling for computing the structures and properties of chemical compounds, biological macromolecules, polymers, and crystals; and physical simulations of airplane and spacecraft aerodynamics, the detonation of nuclear weapons, and nuclear fission and fusion.

In this talk, we describe a new framework, with which we will be able to accelerate the designing a "computer" for every application at scale. This will help in dispersing the benefits of computing to wider humanity rather than to niche scientific communities with dedicated mainframes. In this vein, we will also briefly discuss a new hands-on class that we have developed in which students are taught about using extreme high-end computing to address real applications.

**FRIDAY, JUNE 1, 2018
12:00 PM – 1:00 PM
Building 32, Room 124
(STATA)**

Pizza and beverages will be provided.

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