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Monday, March 7, 2022

Time: 4:00 p.m.

Zoom Link: Zoom Link: <https://us02web.zoom.us/j/88165708439>

Title: Scientific software ecosystems and communities: Why we need them and how each of us can help them thrive

Abstract: Software is a cornerstone of long-term collaboration and scientific progress, but software complexity is increasing due to disruptive changes in computer architectures and the challenges of next-generation science. Thus, the high-performance computing (HPC) community has the unique opportunity to fundamentally change how scientific software is designed, developed, and sustained—embracing community collaboration toward scientific software ecosystems, while fostering a diverse HPC workforce who embody a broad range of skills and perspectives. This presentation will introduce work in the U.S. Exascale Computing Project, where a varied suite of scientific applications builds on programming models and runtimes, math libraries, data and visualization packages, and development tools that comprise the Extreme-scale Scientific Software Stack (E4S). The presentation will introduce crosscutting strategies that are increasing developer productivity and software sustainability, thereby mitigating technical risks by building a firmer foundation for reproducible, sustainable science. The presentation will also mention complementary community efforts and opportunities for involvement.

