

APS Scientific Computation Seminar Series

Speakers: Kyle Chard
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Title: Introducing Parsl: A Parallel Scripting Library for Python

Date: Wednesday, December 20, 2017

Time: 2:00 p.m.

Location: 401/A1100

Hosts: Nicholas Schwarz and Brian Toby

Abstract:

Researchers frequently rely on large-scale and domain-specific workflows to conduct their science. These workflows may integrate a variety of independent software functions and external applications. However, developing and executing such workflows can be difficult, requiring complex orchestration and management of applications and data as well as customization for specific execution environments. In this talk, we introduce Parsl (Parallel Scripting Library), a Python library for programming and executing data-oriented workflows in parallel, addresses these problems. Developers simply annotate a Python script with Parsl directives; Parsl manages the execution of the script on clusters, clouds, grids, and other resources. Parsl orchestrates required data movement and manages the execution of Python functions and external applications in parallel.