Workshops

Science at Extreme Scales: Where Big Data Meets Large-Scale Computing Tutorials

Part of the Long Program Science at Extreme Scales: Where Big Data Meets Large-Scale Computing

SEPTEMBER 13 - 18, 2018
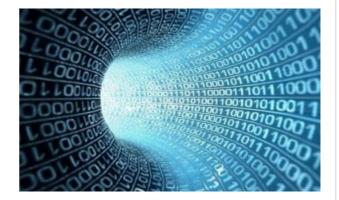
OVERVIEW

SCHEDULE

Overview

The program opens with four days of tutorials that will provide an introduction to major themes of the entire program and the four workshops. The goal is to build a foundation for the participants of this program who have diverse scientific backgrounds. The topics covered during the tutorials will include the following:

Large-scale data analytics

An overview of typical challenges and approaches

Statistical foundations of modern data analytics

A primer on machine learning

Deep learning: Recent successes and next steps

Hardware aspects of large-scale data analytics

Large-scale simulation

An overview of typical challenges and approaches

Scalable algorithms for HPC

Multi-fidelity approaches and model-order reduction

Uncertainty quantification and predictive computational science

Hardware aspects of large-scale simulation

Large-scale data management

An overview of typical challenges and approaches

Handling BD: Efficient data representation and compression

Hardware aspects of large-scale data management

Big Data and HPC Visualization

Please note: there are no activities on Saturday and Sunday, Sept. 15-16. For those participating in the long program, please plan to attend Opening Day on Wednesday, Sept. 12, as well. Others may participate in Opening Day by invitation from the organizing committee.

ORGANIZING COMMITTEE

Joachim Buhmann (ETH Zürich)

Hans-Joachim Bungartz (Technical University Munich (TUM), Computer Science)

Emmanuel Candes (Stanford University, Applied and Computational Mathematics)

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Alan Lee (AMD)

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