
**https://bluewaters.ncsa.illinois.edu/petascale-summer-institute**

# Call for Participation

***Do you have a computational problem that would benefit from using a large scale computing system?***

***Do you need to scale your simulation or data analysis to a petascale system?***

Registration is now open for the "Scaling to Petascale Institute" to be held June 26-30, 2017. Details are at https://bluewaters.ncsa.illinois.edu/petascale-summer-institute.

This institute is for people developing, modifying and supporting research projects who seek to enhance their knowledge and skills to scale software to petascale and emerging extreme scale computing systems. Participants should have familiarity with Linux, programming in Fortran, C, C++, Python or similar language, and familiarity with MPI (message passing interface). There will be hands-on activities for many of the sessions.

Presentations will be made by faculty and professionals from Argonne Leadership Computing Facility (ALCF), the Blue Waters project at the National Center for Supercomputing Applications (NCSA), National Energy Research Scientific Computing Center (NERSC), Oak Ridge Leadership Computing Facility (OLCF), Stony Brook University, and the Texas Advanced Computing Center (TACC).

The agenda will address the following topics.

- MPI - Introduction and Advanced topics
- OpenMP
- Scaling, code profiling, and debugging
- GPU programming
- OpenACC
- Phi programming
- Software libraries
- Parallel I/O
- HDF5
- Globus
- Software engineering

There are two options for participation. All options require participants to register.

1. Attend the institute at one of the collaborating host sites to receive full support. Participants will be able to verbally ask questions of the presenters through two-way video conferencing facilities. Participants will receive training accounts on the Blue Waters, NERSC and TACC systems. Staff will be available at each site to assist during hands-on sessions. Seating at each site is limited, and registration is handled on a first-come first-served basis. If your organization is not a collaborating host site, you may encourage your organization to apply to be a host site by May 1.

2. View the institute sessions via YouTube live, but with a reduced level of support. Participants will be able to submit written questions through the social media tools supported by the institute. Due to account allocations policies, participants will NOT be able to receive accounts on the institute computing systems.

The list of collaborating host sites includes:

Brazil
- National Laboratory for Scientific Computing

Costa Rica
- Centro Nacional de Alta Tecnología, CeNAT (Costa Rica National High Technology Center)

Puerto Rico
- University of Puerto Rico-Mayaguez

United States
- California
  - Institute for Digital Research and Education, University of California Los Angeles (UCLA)
  - National Energy Research Scientific Computing Center (NERSC)
  - Stanford Research Computing Center, Stanford University
- Illinois
  - Argonne Leadership Computing Facility (ALCF), Argonne National Laboratory (ANL)
  - National Center for Supercomputing Applications (NCSA), University of Illinois at Urbana-Champaign
  - Research Computing Center, University of Chicago
- New York State
  - Stony Brook University
- Pennsylvania
  - Pittsburgh Supercomputing Center (PSC)
- Tennessee
  - Oak Ridge Leadership Computing Facility (OLCF), Oak Ridge National Laboratory (ORNL)
- Texas
  - High Performance Research Computing, Texas A&M University
  - Texas Advanced Computing Center (TACC)

Please email questions to Scott Lathrop at lathrop@illinois.edu.

The institute is led by Argonne Leadership Computing Facility (ALCF), the Blue Waters project at the National Center for Supercomputing Applications (NCSA), the National Energy Research Scientific Computing Center (NERSC), the Oak Ridge Leadership Computing Facility (OLCF), and the Texas Advanced Computing Center (TACC).


**April 2017**