Training, Education and Outreach (TEOS)  
Mission  
To be the national resource center for training, education and outreach for computation and data-enabled science and engineering, and a pro-active team focused on connecting the national community to XSEDE’s digital resources and services.
Training of Researchers and Practitioners

- Total trainees to date: 9,620
- More than 50 live events per year; 224 to date
- Over 200 web-cast and high-definition video sessions
- Expanding the list of 137 self-paced and online tutorials with 5 new topics/year
- 12 new sets of training materials tailored to domain specific needs, adding 2 more domain topics per year
- Course satisfaction always over 4 (out of 5) each year
- Closed captioning to be added
- Peer reviewed quality training materials and roadmap for learning HPC skills catering to multiple audiences
Locations of SP Specific Trainings

• National Center for Supercomputing Applications, Urbana-Champaign, IL
  https://bluewaters.ncsa.illinois.edu/training

• Texas Advanced Computing Center, Austin TX
  https://www.tacc.utexas.edu/user-services/training

• Pittsburgh Supercomputing Center, Pittsburgh PA
  http://www.psc.edu/index.php/users/training

• National Institute for Computational Sciences, Knoxville TN
  http://www.nics.tennessee.edu/hpc-seminar-series

• San Diego Supercomputing Center, San Diego CA
  http://www.sdsc.edu/us/training/
Self Paced Learning

• Cornell Virtual Workshop

https://www.cac.cornell.edu/VW/
Self Paced Learning

• CI Tutor

http://www.citutor.org
Self Paced Learning

- HPC University

http://www.hpcuniversity.org/
Now, all in one convenient spot!

- XSEDE User Portal
  – https://portal.xsede.org/training
XUP: A One stop shop!

• Register for live and webcast trainings

• Search for trainings by topic, center, or title

• View the course calendar for upcoming events

• *Coming soon*: Link to assessments for certification

• Sign in to CI Tutor and Cornell Virtual Workshop courses with your XUP username and password
Training resources

• Exceeded annual goal of 50 live training sessions
  – 224 in person and web cast events, with 9620 registrations
• 137 online, asynchronous training modules developed by CI-Tutor and Cornell Virtual Workshop (self-paced) and SPs (online recordings and slide decks), building on work done in TeraGrid, and co-located in a central repository
• In PY3 23,629 unique registrants utilized CI-Tutor and 52,254 unique registrants utilized CVW
• Multiple outside institutions, including MIT, UC-Berkeley, Open MPI, and Dalhousie University, link to CI Tutor and CVW for formative instruction of students as part of their courses, giving training a reach far beyond just XSEDE users and complementing university missions to educate the next generation
Training resources

• Developed and revised policy and procedures for PIs and staff to request XSEDE resources in support of education and training activities

• Created roadmaps for Campus Champions as well as Users, to assist them in finding a path that meets their needs
Educational Allocations

https://portal.xsede.org/allocations-overview#writing-startupeducation

- Allows an instructor of record to request compute resources for entire course with one allocation request.

- Multiple resources are available, so likely something with the architecture of interest will be available to use.

- Other than proof of course and explanation of what the resources will be used for, only a very small final report is required.

- Renewable on a semester basis, if needed.
Training roadmaps

XSEDE Campus Champion Training Roadmaps
- Basic Proficiencies
  - XSEDE Introduction Courses (allocations, XUP, etc.)
    - Linux/Unix Basics and Environments
      - Job Submission and Management

"Techie" CC Proficiencies
- Architectures, Accelerators, and Coprocessors
- Programming and Libraries
- Parallel and High Throughput Programming
- Visualization
- Debuggers, Profilers, and Optimization Tools
- Big Data, File Movement, and Workflows

"HPC Evangelist" CC Proficiencies
- Technical Writing and Speaking
- How to Run a Successful Outreach Event
- How to work with administration to broaden HPC use and awareness on your campus
- Domain Specific Courses
Training Plans for PY4

• Expand reach of training activities
  – Develop more domain specific content
  – Work closely with Education to assure complimentary offerings
  – Assure that all live activities are catalogued for later viewing

• Develop training modules to support Campus Bridging and Software Testing & Deployment efforts

• Identify and address staff training and professional development (certification) needs in response to staff climate survey
Training Plans for PY4

- Work with External Relations to increase availability and visibility of training events, along with tying the new master catalogue to registration
- Disseminate new training roadmaps for users, Champions, and staff, as well as interface them with master catalogue
- Create certification assessments based on community standards, as well as a monthly challenge to increase interest and traffic to the site
- Use the newly created review process and rubrics to vet online courses
Any questions?

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Our reach will forever exceed our grasp, but, in stretching our horizon, we forever improve our world.

XSEDE
Extreme Science and Engineering Discovery Environment