

# Welcome to the XSEDE OpenMP Workshop

John Urbanic  
Parallel Computing Scientist  
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# Who are we?

*Your hosts:*

Pittsburgh Supercomputing Center

*Our satellite sites:*

Tufts University

Purdue University

New York University

Texas Tech University

Oral Roberts University

Arizona State University

East Carolina University

Northwestern University

Pennsylvania State University

Georgia Institute of Technology

University of Houston - Clear Lake

National Center for Supercomputing Applications

University of Tennessee, Knoxville - National Institute for Computational Sciences

**XSEDE**

Extreme Science and Engineering  
Discovery Environment

 **PITTSBURGH  
SUPERCOMPUTING  
CENTER**

# Who am I?

John Urbanic  
Parallel Computing Scientist  
Pittsburgh Supercomputing Center

Parallelize codes with

- MPI
- OpenMP
- OpenACC
- Hybrid
- Big Data and Machine Learning

Mostly for XSEDE platforms. Mostly to extreme scalability.

# XSEDE HPC Monthly Workshop Schedule

- September 3-4 *HPC Monthly Workshop: MPI*
- October 1-2 *HPC Monthly Workshop: Big Data*
- November 5 *HPC Monthly Workshop: OpenMP*
- December 3-4 *HPC Monthly Workshop: Big Data*
- **January 21** ***HPC Monthly Workshop: OpenMP***
- February 19-20 *HPC Monthly Workshop: Big Data*
- March 3 *HPC Monthly Workshop: OpenACC*
- April 7-8 *HPC Monthly Workshop: Big Data*
- May 5-6 *HPC Monthly Workshop: MPI*
- June 2-5 *Summer Boot Camp*
- August 4-5 *HPC Monthly Workshop: Big Data*
- September 1-2 *HPC Monthly Workshop: MPI*
- October 6-7 *HPC Monthly Workshop: Big Data*
- November 3 *HPC Monthly Workshop: OpenMP*
- December 1-2 *HPC Monthly Workshop: Big Data*

# HPC Monthly Workshop Philosophy

- Workshops as long as they should be.
- You have real lives...
  - in different time zones...
  - that don't come to a halt.
- Learning is a social process
  - This is not a MOOC
  - This is the **Wide Area Classroom**  
so raise your expectations

# Agenda

Tuesday, January 21<sup>st</sup>

- 11:00 Welcome
- 11:15 Computing Environment
- 11:30 It's a Multi-core World
- 12:00 Intro to OpenMP
- 1:00 Lunch Break
- 2:00 Exercise 1
- 2:45 More OpenMP
- 3:30 Exercise 2
- 4:00 OpenMP Retrospective
- 4:15 OpenMP 4.0 Sneak Peek
- 5:00 Adjourn

# Resources

Your local TAs

Questions from the audience

On-line talks

[bit.ly/XSEDE-Workshop](http://bit.ly/XSEDE-Workshop)

## The YouTube Channel Has Arrived!

Due to overwhelming demand, and a lot of editing, we have begun to post workshop videos on the XSEDE Monthly Workshop Training Channel:

***XSEDETraining***

They will be incrementally appearing in the coming months. Subscribe and give us feedback.

# Code of Conduct

XSEDE has an external code of conduct for XSEDE sponsored events which represents XSEDE's commitment to providing an inclusive and harassment-free environment in all interactions regardless of gender, sexual orientation, disability, physical appearance, race, or religion. The code of conduct extends to all XSEDE-sponsored events, services, and interactions.

Code of Conduct: <https://www.xsede.org/codeofconduct>

## Contact:

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# *Getting Time on XSEDE*

# XSEDE

Extreme Science and Engineering  
Discovery Environment

<https://portal.xsede.org/web/guest/allocations>

even simpler:

<https://psc.edu/apply-for-an-xsede-startup-grant>



## **Check your email now for the post-event survey.**

Surveys are conducted by an external evaluation team. XSEDE staff will not know who said what. If you have questions regarding the evaluation please contact: Lorna Rivera, [lorna.rivera@gatech.edu](mailto:lorna.rivera@gatech.edu), or Lizanne DeStefano, [ldestefano6@gatech.edu](mailto:ldestefano6@gatech.edu)