Welcome to the XSEDE OpenMP Workshop

John Urbanic
Parallel Computing Scientist
Pittsburgh Supercomputing Center
Who are we?

Your hosts:
Pittsburgh Supercomputing Center

Our satellite sites:
Tufts University
University of Utah
Howard University
Purdue University
University of Houston
Texas Tech University
University of Delaware
Arizona State University
University of Oklahoma
University of Notre Dame
Michigan State University
George Mason University
Ohio Supercomputer Center
Pennsylvania State University
University of Texas at El Paso
Case Western Reserve University
University of Houston - Clear Lake
National Center for Supercomputing Applications
University of Tennessee, Knoxville - National Institute for Computational Sciences
Who am I?

John Urbanic
Parallel Computing Scientist
Pittsburgh Supercomputing Center

Parallelize codes with

- MPI
- OpenMP
- OpenACC
- Hybrid

- Now Big Data!

Mostly for XSEDE platforms. Mostly to extreme scalability.
XSEDE HPC Monthly Workshop Schedule

- June 6-9: Summer Boot Camp
- August 15: HPC Monthly Workshop: OpenMP
- September 12-13: HPC Monthly Workshop: Big Data
- October 3-4: HPC Monthly Workshop: MPI
- November 7: HPC Monthly Workshop: OpenACC
- December 5-6: HPC Monthly Workshop: Big Data
- **January 9**: HPC Monthly Workshop: OpenMP
- February 7-8: HPC Monthly Workshop: Big Data
- March 6: HPC Monthly Workshop: OpenACC
- April 3-4: HPC Monthly Workshop: MPI
- May 1-2: HPC Monthly Workshop: Big Data
- June 4-7: Summer Boot Camp
- August 7: HPC Monthly Workshop: OpenMP
- September 5-6: HPC Monthly Workshop: Big Data
- October 2-3: HPC Monthly Workshop: MPI
- November 6: HPC Monthly Workshop: OpenACC
- December 4-5: 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 9**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>11:00</td>
<td>Welcome</td>
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<tr>
<td>11:15</td>
<td>Computing Environment</td>
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<tr>
<td>11:30</td>
<td>It’s a Multi-core World</td>
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<td>12:00</td>
<td>Intro to OpenMP</td>
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<td>1:00</td>
<td>Lunch Break</td>
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<tr>
<td>2:00</td>
<td>Exercise 1</td>
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<td>2:45</td>
<td>More OpenMP</td>
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<tr>
<td>3:30</td>
<td>Exercise 2</td>
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<td>4:00</td>
<td>OpenMP Retrospective</td>
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<td>4:15</td>
<td>OpenMP 4.0 Sneak Peek</td>
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<tr>
<td>5:00</td>
<td>Adjourn</td>
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Resources

Your local TAs

Questions from the audience

On-line talks

bit.ly/XSEDE-Workshop
Getting Time on XSEDE

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