Welcome to the ACCESS OpenACC GPU Programming Workshop

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Who are we?

Your hosts:
Pittsburgh Supercomputing Center

part of
Who am I?

John Urbanic
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Pittsburgh Supercomputing Center

What I mostly do:

Parallelize codes with

• MPI, OpenMP, OpenACC, Hybrid
• Big Data, Machine Learning
ACCESS HPC Monthly Workshop Schedule

- April 7-8  
  HPC Monthly Workshop: Big Data
- May 5-6  
  HPC Monthly Workshop: MPI
- June 2-5  
  Summer Boot Camp
- August 10-11  
  HPC Monthly Workshop: Big Data
- September 14-15  
  HPC Monthly Workshop: MPI
- October 5-6  
  HPC Monthly Workshop: Big Data
- November 3  
  HPC Monthly Workshop: OpenMP
- December 3  
  HPC Monthly Workshop: Big Data
- January 24  
  HPC Monthly Workshop: OpenMP
- February 16,18  
  HPC Monthly Workshop: Big Data
- March 3  
  HPC Monthly Workshop: OpenACC
- April 6,8  
  HPC Monthly Workshop: Big Data
- May 26-27  
  HPC Monthly Workshop: MPI
- August 10-11  
  HPC Monthly Workshop: Big Data
- **November 7**  
  HPC Monthly Workshop: OpenMP
- December  
  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
  - But this is also the first *Wide Area Classroom* in 2 years! So bear with us.
Wednesday, March 16th

11:00   Welcome
11:15   Computing Environment
11:45   Parallel Computing and Accelerators
12:15   Introduction to OpenACC
1:00    Lunch Break
2:00    Introduction to OpenACC and exercises
4:00    Using OpenACC with CUDA Libraries
4:30    Advanced OpenACC and OpenMP 4.0
5:00    Final Notes and Adjourn
Resources

Your local TAs

Questions from the audience

On-line talks:

https://www.psc.edu/resources/training/hpc-workshop-november-2022-gpu-programming-using-openacc/

The old XSEDE YouTube Channel

These are the last WAC versions of these events and have much of this content. Find them on the XSEDE Monthly Workshop Training Channel:

XSEDETraining

They will be incrementally appearing in the coming months on a new channel. Subscribe and give us feedback.

Copying code from PDFs is very error prone. Subtle things like substituting "-" for "," are maddening. I have provided online copies of the codes in a directory that we shall shortly visit. I strongly suggest you copy from there if you are in a cut/paste mood.