Welcome to the Pittsburgh Supercomputing Center OpenMP Workshop

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Who are we?

- If you find this a useful resource, you are welcome to apply for time to continue as a member of our research community.
- It is free.
- It is easy.

Who am I?

John Urbanic

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Carnegie Mellon University

Undergrad Advanced Computational Physics
Graduate Large Scale Computing
Data Science Capstone Projects

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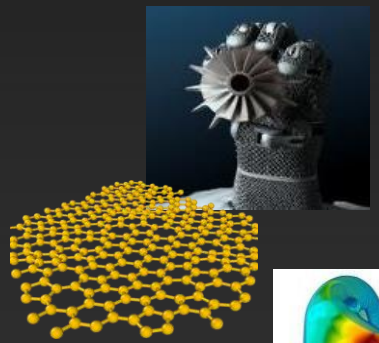
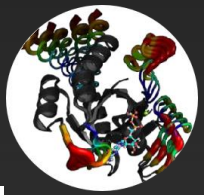
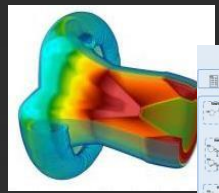
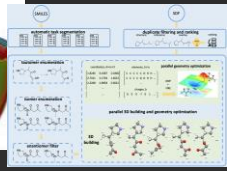
Code, code, code, on
Parallel platforms: MPI, OpenMP, OpenACC, ...
Big Data platforms: Spark, ...
Machine Learning: Spark, TensorFlow, PyTorch, ...









PSC HPC Monthly Workshop Schedule

- October 15-16 — *HPC Monthly Workshop*: Big Data & Machine Learning
- November 13 — *HPC Monthly Workshop*: GPU
- December 10-11 — *HPC Monthly Workshop*: MPI
- January 7-8 — *HPC Monthly Workshop*: Big Data & Machine Learning
- February 19 — *HPC Monthly Workshop*: OpenMP
- March 4-5 — *HPC Monthly Workshop*: MPI
- April 9 — *HPC Monthly Workshop*: GPU
- May 13-14 — *HPC Monthly Workshop*: Big Data & Machine Learning

- More to come!

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!

Biggest Potential For Disappointment

- We absolutely, definitely, without question, wish we had more hands-on exercise time.
- This is by design and demand. The topics we cover are all greatly requested and attempts to delete any of them provoke outrage in our surveys. This demand has compressed our hands-on sessions.
- One solution is for you to use the remainder of our short days to do further work.
- We also assume you will use your extended access to do exercises. Usually this is just a bonus.
- Use your time wisely, and ask questions relentlessly.

Agenda

Wednesday, February 19th

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	Advanced OpenMP
4:00	Exercise 2
4:30	OpenMP and GPUs
5:00	Adjourn