High Performance Computing with Python

Date/times/location/instructor:
Friday 10:20 AM – 12:10 PM in 1455A, BPS, C. Kopenhafer

Prerequisites:
- **Required:** ICER’s Intro to Linux workshop (or equivalent experience)
- **Required:** Experience programming in Python (CMSE 201, CSE 231, CMSE 801, or equivalent experience)
- Familiarity with scientific Python packages (e.g. NumPy, SciPy, Pandas) recommended
- Experience using Git for version control is recommended

Contact: Dr. Claire Kopenhafer ([kopenhaf@msu.edu](mailto:kopenhaf@msu.edu)) for any questions

Course description:
Python already supports a wide range of packages that can assist in your research. Now, learn a variety of techniques for making your software more efficient, reducing the time it takes to get research results.

Through this course, you will:
- Understand multiple approaches for improving Python performance
- Implement these approaches in your own Python code
- Understand the basic structure of high performance computers (both at ICER and beyond)
- Synthesize software- and system-level understanding to effectively execute performant Python software

**Students are encouraged to use their own research software as the basis for their class projects.**