Python for Scientific Computing

a weekly graduate seminar on techniques for scientific programming

instructor: Michael Zingale

Python has seen wide adoption in the scientific community for data analysis, simulation, prototyping, and visualization. It provides a simple yet powerful means to build applications. This seminar introduces python and its use in scientific computing

- Course format:
  - Weekly 1 hour discussions with interactive examples
  - Students will be encouraged to share their knowledge and issues and contribute to the discussion
  - Grading is based on participation
- Students are encouraged to bring laptops to class

- Introductions to:
  - Python
  - The NumPy array package
  - The SciPy tools and basics of numerical methods
  - Matplotlib and MayaVi for visualization
  - SymPy for symbolic mathematics
  - Ipython for workflow management
  - Building applications
  - Interfacing with Fortran/C
  - System operations with python
  - Good programming practices
- Time/Location: