Python for Scientific Computing

a weekly graduate seminar on techniques for scientific programming

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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 should bring laptops to class
- Students are encouraged to share their experience

- 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
- Details:
  - PHY 683*, Spring 2014
  - Mondays, 3:00-3:53pm, ESS 450

*Note: despite the word “Astronomy” in the official PHY 683 course name, this is a general scientific programming course