

# AMS 595/691: Fundamentals of Computing: Part II

## Lecture 7: Symbolic and Numerical Computations

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# Symbolic Computation with SymPy

- [SymPy](#) is a Python library for symbolic mathematics
- It is computer algebra system (CAS), similar to Maple, Mathematica, and MATLAB's Symbolic Toolbox
- See [Jupyter notebook on SymPy](#)

# Numerical Computation with SciPy

- SciPy library is part of SciPy software stack
- It provides efficient numerical routines such as routines for numerical integration and optimization.
- See [Jupyter notebook on SciPy](#)