The numpy package

- The Python programming language was not initially designed for numerical computing, but attracted the attention of the scientific/engineering community early on.
- NumPy is an extension to the Python programming language, adding support for large, multi-dimensional arrays and matrices, along with a large library of high-level mathematical functions to operate on these arrays.

The numpy package

- The ancestor of NumPy, Numeric, was originally created by Jim Hugunin with contributions from several other developers.
- In 2005, Travis Oliphant created NumPy by incorporating features of Numarray into Numeric with extensive modifications.

The numpy package

- NumPy is open source and has many contributors.
- **Website** http://www.numpy.org/

Useful Commands for simulation exercises

- `random.randint(a, b)` - Return a random integer N such that $a \leq N \leq b$.
- `random.choice(seq)` - return a random element from the non-empty sequence `seq`. If `seq` is empty, raises `IndexError`.
- `random.sample(population, k)` - Return a k length list of unique elements chosen from the population sequence. Used for random *sampling without replacement*.