A Few Words About Final Project

- Purpose:
  - A chance to dig in deeper into a parallel programming model and explore concepts.
  - Present results to work on communication of technical ideas
- Write a non-trivial parallel program that combines two parallel programming languages/models. In some cases, just do two separate implementations.
  - OpenMP + SSE-3
  - OpenMP + CUDA (but need to do this in separate parts of the code)
  - TBB + SSE-3
  - MPI + OpenMP
  - MPI + SSE-3
  - MPI + CUDA
- Present results in a poster session on the last day of class

Example Projects

- Look in the textbook or on-line
  - Recall Red/Blue from Ch. 4
    - Implement in MPI (+ SSE-3)
    - Implement main computation in CUDA
  - Algorithms from Ch. 5
  - SOR from Ch. 7
    - CUDA implementation?
  - FFT from Ch. 10
  - Jacobi from Ch. 10
  - Graph algorithms
  - Image and signal processing algorithms
  - Other domains…

Next Thursday, November 12

- Use handin program on CADE machines
  - handin cs4961 pdesc <file, ascii or PDF ok>
- Projects can be individual or group efforts, with 1 to three students per project.
- Turn in <1 page project proposal
  - Algorithm to be implemented
  - Programming model(s)
  - Implementation plan
  - Validation and measurement plan