### CS 473/573 Parallel Computing

### Final Project

The Final Project should contain the technical report and the program project folder (with source code and the executable). Upload everything as a zipped ***Final Project “your name”*** folder to your Canvas account.

CS 473 students

Write a parallel program in OpenMP, MPI, or CUDA to solve one of the following problems (from textbook): 3.13, 3.14, 3.15, or 3.16.

CS 573 students

Solve one problem using two different software platforms (OpenMP, MPI, or CUDA).

Requirements for all students

This is an individual project. The report should contain:

1. Problem description
2. Design (the four steps of Foster’s methodology)
3. Benchmarking, with different values of *n* and *p*, where *n* is the input instance size and *p* is the number of processors (in case of MPI) or threads (in case of OpenMP and CUDA).
4. Theoretical efficiency analysis (parallel vs. sequential asymptotic execution time)
5. Discussion.