



Presentation Component of This Course

1 Presentation Requirements

In this class, you are required to make a presentation to the rest of the class. This document describes in detail what you have to do.

The presentation is an oral and visual presentation during a regular class period. You must prepare a set of slides on a topic from the list below and present these slides. Each topic is based on some part of the Quinn book, and in a few cases, my lecture notes. The presentation should be roughly 15 to 20 minutes long. The presentation may include other visual aids besides the slides, such as screenshots or short videos.

Whatever the topic is, the objective is to teach that topic to the rest of the class and to try to answer the questions that students ask. Some topics are parallel algorithms, and a few are theoretical.

- If the topic is an algorithm, you are expected to write a program that implements it, either using MPI, OpenMP, or Pthreads, depending on the topic.
- If the topic is theoretical, you are expected to provide several examples to clarify the theory.

2 Topics

Following are different topics from which you can choose. They are listed in the order in which they must take place during the semester.

- a parallel solution to the Sieve of Eratosthenes (chapter 5, MPI)
- a parallel solution to document classification using the manager/worker paradigm (chapter 9, MPI)
- an overview of random number generators (chapter 10.2, my lecture notes)
- generating non-uniform random numbers (chapter 10, my lecture notes)
- a parallel solution to the room assignment problem using simulated annealing (chapter 10, and either MPI, OpenMP or Pthreads)
- parallel quicksort using PSRS (chapter 15, MPI)
- parallel puzzle solving using backtrack (chapter 16: choice of puzzle left to student, MPI)
- a parallel solution to the Sieve of Eratosthenes (chapter 17, OpenMP)
- computing pi using OpenMP (chapter 17, OpenMP)

3 Scheduling

I will schedule each presentation so that it fits into the class schedule.



4 Grading Rubric

The grade is based on:

- Correctness, completeness, and clarity of slides : 50%
- One of
 - If a program/algorithm is presented, the clarity of its description and its correctness : 25%
 - Choice of examples to illustrate concepts if theoretical topic : 25%
- Speaking ability and pacing : 15%
- Quality of visual aids : 10%