CS 6230 – High-Performance Computing and Parallelization
Project 2: Due March 31, 2011

This project is a continuation of the effort you initiated in Project 1. In Project 1, your goal was to parallelize using the distributed-computing paradigm a serial algorithm. You implemented your strategies in MPI. In this assignment, you will begin with the same serial algorithm as your starting point, but will instead attempt to parallelize the program using a shared-memory paradigm implemented with OpenMP.

Your task is to parallelize the previously provided serial code using OpenMP using the following strategies:

1. Traditional loop parallelization strategies (component-wise parallelization)
2. Attempting to use OpenMP as a true multi-treaded environment (thread parallelization at the global level using atomic operations, etc)

As with the first project, source-code and a report are required. Scaling results, modeling of performance, etc., must be provided in the report.