

MA/CSSE Homework 8

Due 5/15

Directions

The goal of this project is to create a working parallel linear systems of equations solver.

You may use my code posted on Moodle to help you. There you will find `solve_system_helpers.h`, which provides a `matrix` struct and convenient functions for initializing, reading, writing matrices.

You will also find `solve_system.c`, which provides the shell of a linear system solver. Your code should take command line arguments in the order specified by `solve_system.c` and should generate the output file using `write_matrix`.

Your program should use the pipelining algorithm for performing Gaussian elimination and back-substitution discussed in class. However, you may **not** assume that you have one processor per row of the array. You should consider carefully how to distribute rows of the array among processors in order to minimize the number of processors that are idle at a given time.