

MA/CSSE Homework 6

Due 4/24

Directions

Download `julia_parallel_stripped.c`. Rename it to `julia_parallel.c`. Use it, your existing `complex.h`, and the file `julia_parallel_helpers.c` to implement the escape-time algorithm to make a program that creates an image of a Julia set in parallel. The exact coloring details are left up to you (correctness is demanded, but beauty is much appreciated!).

Your program should support all the options that I provided with `julia_parallel_stripped.c`. Importantly, this includes an option to force static or dynamic resource allocation, and a chunksize control for dynamic allocation. Note that you only need to support a greyscale bitmap format output. Most of those options are taken care of for you already.

In addition to producing the output file, you should print how many pixels (or lines of pixels if you prefer) each node processed, and how long it took.

Turn in any necessary code (`complex.h`, `julia_parallel.c`, `julia_parallel_helpers.h`) to the Moodle dropbox.

Make sure that your code will compile with only the command `gcc julia_parallel.c -o julia`.