

Assignment #2 Part 2: MATLAB Software Profiling

Due Date: Wednesday, February 2 at 5:00 PM

Type of Assignment: Group

Submission Procedure: Please submit your assignment via Canvas. We request you send your files in a single zip archive. *Only one group member needs to submit the assignment.*

Profiling:

Using MATLAB's profiling capabilities, assess the performance of the MATLAB script you wrote for Assignment #2 Part 1. To get full credit for this assignment, you must turn in the following:

- A profile summary presenting statistics about the overall execution of the script and providing summary statistics for each function called.
- A profile detail report for the two most expensive functions called in your script, including busy line results, child function results, code analyzer results, and file coverage results.

Moreover, you must:

- Present and discuss what you believe are the most important results from the MATLAB profiler, and discuss any possible reasons for slow performance.
- Propose potential modifications to improve the runtime. These modifications could be numerical (e.g., introduction of improved time integration methods) or algorithmic (i.e., improved implementation of existing time integration methods) in nature. When proposing potential modifications, keep in mind the relative advantages and disadvantages of MATLAB as a software design environment.