

AM 250, Spring 2022
Homework 2

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Applied Math

Question 2. Parallel Do Loop vs Workshare

I ran the two different parallelizations of the matrix multiplication and finding the minimum value of the resulting matrix for a set of different matrix $N \times N$ sizes. The results are provided in table below.

N	Threads	Do Loop [s]	Workshare [s]
1000	10	1.11	0.74
1500	10	2.61	2.47
2000	10	9.11	8.50
2500	10	17.55	22.15

The work share implementation is clearly faster, albeit not by much. This difference in time between the two methods increases with the size of the problem. Thus the Workshare implementation is the better choice for up-scaled problems.