

# ECE 420 Assignment 2

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## 1 Trapezoidal Rule

### 1.1 static

`schedule(static, 2)` means that OpenMP will divide the iterations into chunks of size 2, and the chunks are distributed to the threads in round robin fashion. So thread 0 will get iterations 1, 3, 5, . . . 9999 while thread 1 will get iterations 2, 4, 6, . . . 9998.

### 1.2 guided

`schedule(guided)` means that OpenMP will divide the iterations into chunks, and each thread executes a chunk of iterations and requests another chunk until no more chunks are available. The default chunk size is 1. The chunk size decreases each time a chunk of work is given to a thread. The initial

chunk size is proportional to num iterations / num threads, while subsequent chunks are proportional to the remaining number of iterations / num threads. The iterations will look like this:

Thread	Chunk	Sizeof Chunk	Remaining Iterations
0	1-5000	5000	4999
1	5001-7500	$4999/2 = 2500$	2499
1		$2499/2 = 1250$	1249
1		$1249/2 = 625$	624
0		$624/2 = 312$	312
1		$312/2 = 156$	156
0		$156/2 = 78$	78
1		$78/2 = 39$	39
1		$39/2 = 20$	19
1		$20/2 = 10$	9
1		$10/2 = 5$	4
0		$5/2 = 2$	2
1		$2/2 = 1$	1
0		1	0

## 2 Odd-Even Transposition Sort

## 3 Maximum Value

## 4 Matrix Vector Multiplication

## 5 Output of Program

## 6 Fibonacci