

COMP 322: Lab 5: Loop Chunking and Barrier Synchronization

February 11, 2015



- STIC setup
- Get a better understanding of barriers and loop chunking
- Understand the overhead of barriers
- Chunking to mitigate task creation overhead and barriers

- STIC(Shared Tightly-Integrated Cluster)
- STIC allows you to gain access to compute nodes to obtain reliable performance timings for your programming assignments
- Login to STIC as `ssh netid@stic.rice.edu`
- `source /home/smi1/dev/hjLibSource.txt`
- `java -version`, `mvn -version`
- Sbatch, Slurm, Squeue, Scancel - Operations on jobs on STIC

Implement the parallel versions of one dimensional iterative averaging

- Forseq-Forpar
- Forseq-Forpar chunking
- Forpar-Forseq
- Forpar chunking - Forseq

For more details of parallel versions, please refer to lecture 12 slides.

Fix from Slide 10 from Lecture 12 slides

- // n - array size, m- number of iterations
- 3. `HjRegion1D iterSpace = newRectangularRegion1D(1,n);`
- 4. `int nc = numWorkerThreads();`
- 5. `forallPhased(0, nc-1, (jj) ...`