Uppsala University

HIGH PERFORMANCE AND PARALLEL COMPUTING

Final Project – LU Factorization.

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Optimization

- -O1, -O2, & -O3.
- -funroll-all-loops,
- -O3-funroll-all-loops
- and -O3 -ffast-math.
- Manually optimization.

Parallelization

- OpenMP.

- #pragma omp parallel

- Schedule clause:

-> Static

-> Guided

Time & Space Complexity

- Time complexity is 0(N^3)

- space complexity 0(N^2)

General Information

- 6 measurements – Chose the smallest one.

- Why time command ?

  -> To measure the time for whole program.

  -> we do have a function for wall time calculation.

- Memory bound or computing bound -> computing bound (using high sizes matrices).

- Consistency?

Thank You ☺