Scientific Computing and Machine Learning on Multi- and Manycore Architectures Exercise 3

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Analysis

In this exerecise, block version LU decomposition and some of its OpenMP version are implemented. Performance wiht different block size are tested.

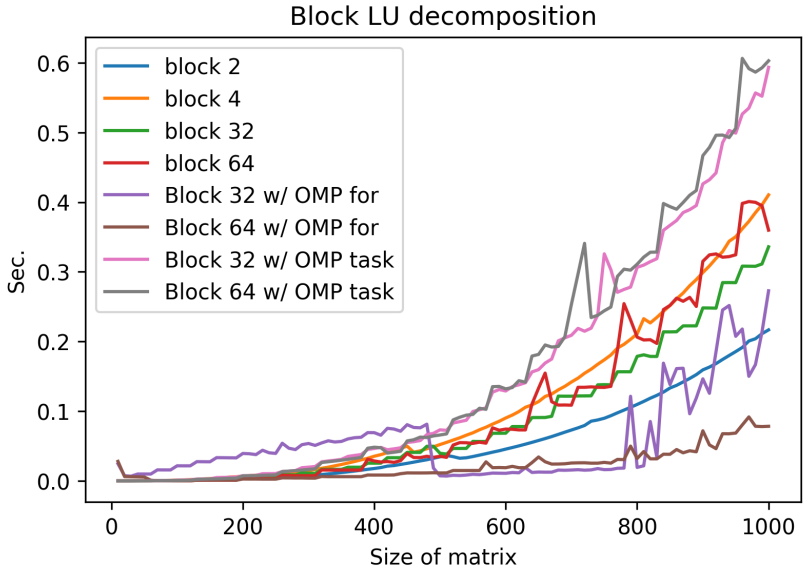

Figure 1: Performace of Block LU decomposition under different setting.

Some interesting result are shown in figure 1. First, with block size 2, the computation of block LU is faster than one with different block size setting. Second, OpenMP could reduce computational time in either 32 or 64 block size. Third, OpenMP task does not reduce the computational time. The reaon is unknown yet, but this might be caused by some bug I did not find yet.