Speedup Heatmap of All Algorithms Relative to Naive Algorithm 5.01 4.72 blocked (□□□=128) 1.11 2.58 2.33 blocked ( $\square\square\square=16$ ) 1.33 2.56 4.99 6.23 6.95 12 4.73 blocked (□□□=256) 2.57 2.14 4.45 1.33 blocked (<u>□</u><u>□</u><u>□</u>=32) 2.32 2.48 2.38 3.37 1.39 10 3.06 blocked (□□□=64) 1.19 2.72 2.23 4.63 blocked\_optimized (□□□=128) 2.82 5.27 8.08 6.75 7.29 8 blocked\_optimized ( $\square\square$ =16) 2.80 5.61 5.61 12.84 12.99 blocked\_optimized (□□□=256) 2.35 4.78 6.62 5.48 5.56 6 blocked\_optimized (□□□=32) 2.76 5.44 3.55 6.74 7.44 blocked optimized (□□□=64) 2.94 3.87 3.31 5.52 5.07 4 cache\_optimized 4.73 6.30 12.00 12.70 12.55 openmp optimized 4.78 8.31 10.39 13.32 13.73 2 openmp\_simple 4.12 9.28 10.53 11.85 13.15 2000 500 1000 3000 4000

Matrix Size

Algorithm