Matmat

Base:

N(Grid) N(Matrix) NNZ NRHS COO CSR CSC AOS

64 4096 20224 1 0.667392 3.22302 0.674202 0.674202

128 16384 81408 1 0.649668 3.08214 0.665991 0.637174

256 65536 326656 1 0.575138 1.24613 0.628889 0.480651

512 262144 1308672 1 0.581632 1.11289 0.572213 0.362401

1024 1048576 5238784 1 0.343527 0.725719 0.38187 0.546062

2048 4194304 20963328 1 0.606377 1.23314 0.440671 0.405929

Optimized

N(Grid) N(Matrix) NNZ NRHS COO CSR CSC AOS

64 4096 20224 1 1.13917 3.14628 0.611776 1.21233

128 16384 81408 1 1.09531 3.08214 0.616429 1.14252

256 65536 326656 1 0.735422 1.29406 0.553837 0.575138

512 262144 1308672 1 0.703167 0.968059 0.581632 0.699686

1024 1048576 5238784 1 0.842418 1.25105 0.539039 0.665242

2048 4194304 20963328 1 0.826723 0.998254 0.441333 0.535559

Matvec

Base:

N(Grid) N(Matrix) NNZ COO COO^T CSR CSR^T CSC CSC^T AOS AOS^T

64 4096 20224 0.935218 0.939609 3.45063 0.966844 0.957592 3.33561 0.971537 0.957592

128 16384 81408 0.920134 0.924375 3.34316 0.95066 0.964372 3.34316 0.937333 0.937333

256 65536 326656 0.705668 0.733792 1.26579 0.847392 0.836887 1.09474 0.672846 0.688866

512 262144 1308672 0.722026 0.781297 1.22449 0.844305 0.802251 1.24635 0.662619 0.673272

1024 1048576 5238784 0.710867 0.710867 0.662044 0.424268 0.613191 1.16417 0.575141 0.584913

2048 4194304 20963328 0.753738 0.750365 1.14086 0.722873 0.729159 1.1606 0.450824 0.462002

Optimized:

N(Grid) N(Matrix) NNZ COO COO^T CSR CSR^T CSC CSC^T AOS AOS^T

64 4096 20224 0.948515 0.944041 4.16951 0.981062 0.976277 4.08442 0.981062 0.971537

128 16384 81408 0.941734 0.932974 3.85749 0.959757 0.978484 4.01179 0.96903 0.899504

256 65536 326656 0.71062 0.758527 1.34124 0.81664 0.850953 1.21273 0.708135 0.64499

512 262144 1308672 0.75865 0.778392 1.13798 0.834213 0.858146 1.26902 0.640329 0.684273

1024 1048576 5238784 0.800612 0.739215 1.23582 0.845558 0.790112 1.23582 0.686564 0.647807

2048 4194304 20963328 0.747023 0.716695 1.03523 0.816091 0.830231 1.2022 0.678974 0.630476