

OMEinsum Contraction Orders Benchmark Results

Note: the Treewidth optimizer is greedy, only a subset of backends (MF, MMD, AMF) are tested (check [Issue 2](#)).

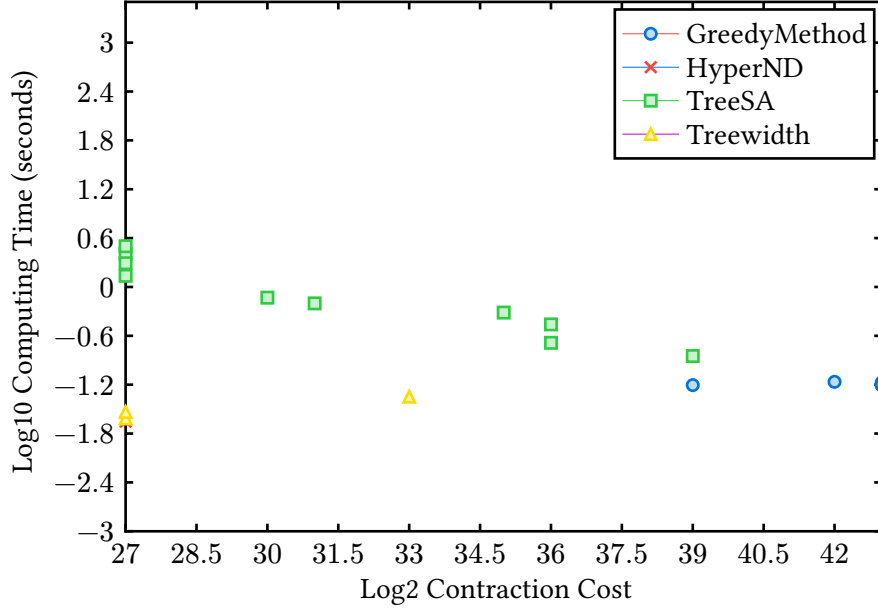


Figure 1: Scatter plot for **einsumorg/qc_qft_27** showing contraction cost ($1*sc + 0*tc + 0*rcw$) vs computing time for different optimizers.

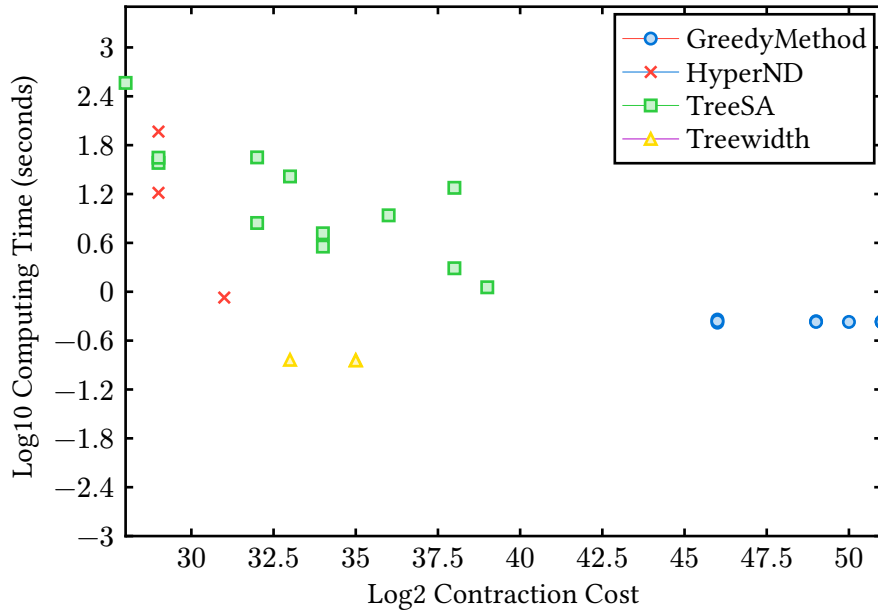


Figure 2: Scatter plot for **independentset/ksg** showing contraction cost ($1*sc + 0*tc + 0*rcw$) vs computing time for different optimizers.

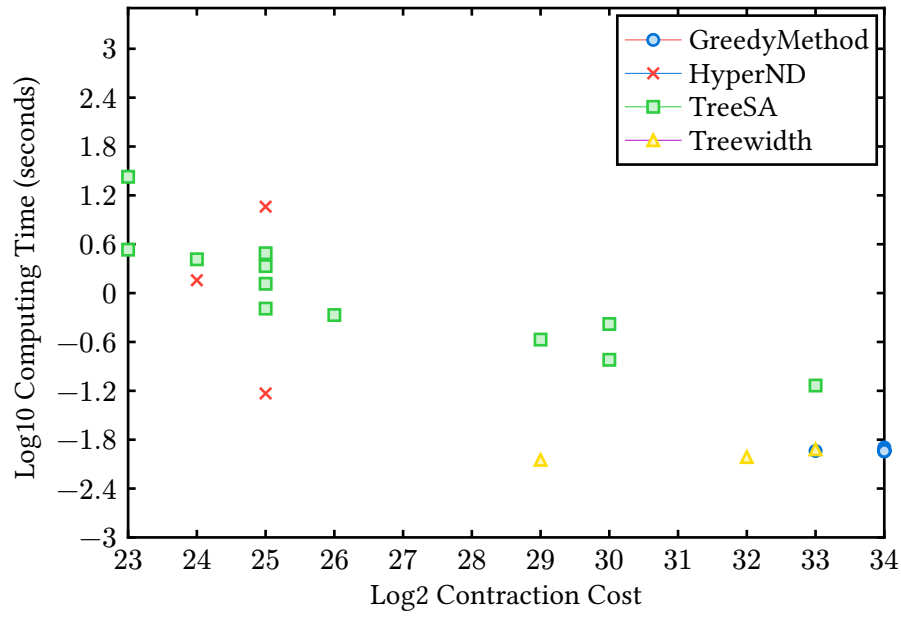


Figure 3: Scatter plot for **independentset/rg3** showing contraction cost ($1 \cdot sc + 0 \cdot tc + 0 \cdot rwc$) vs computing time for different optimizers.

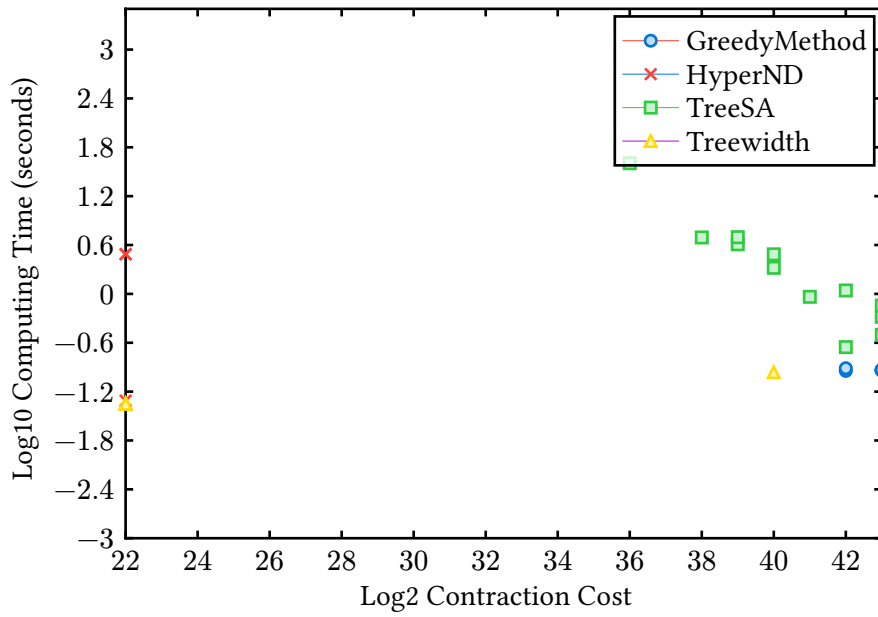


Figure 4: Scatter plot for **inference/DBN_13** showing contraction cost ($1 \cdot sc + 0 \cdot tc + 0 \cdot rwc$) vs computing time for different optimizers.

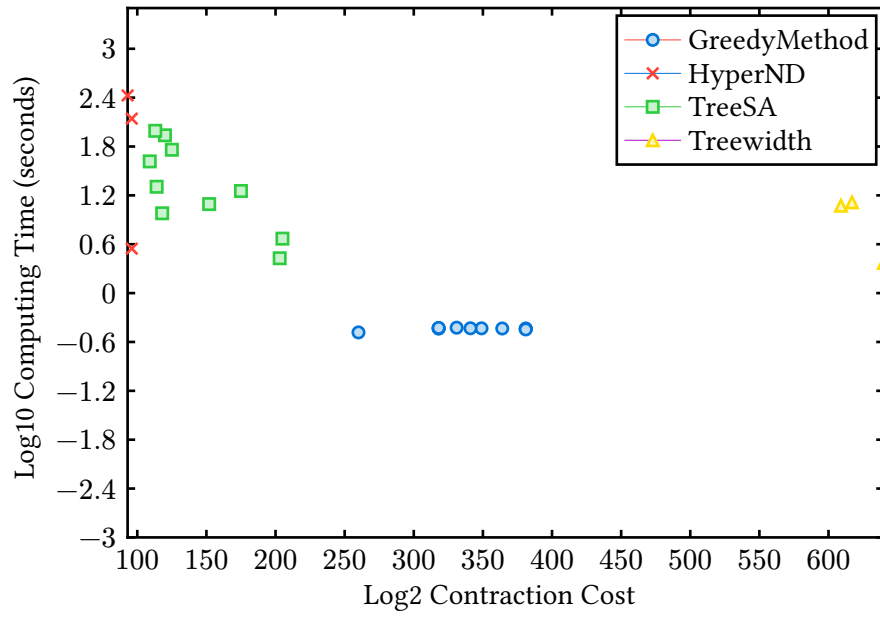


Figure 5: Scatter plot for **nqueens/nqueens_n=28** showing contraction cost ($1*sc + 0*tc + 0*rcw$) vs computing time for different optimizers.

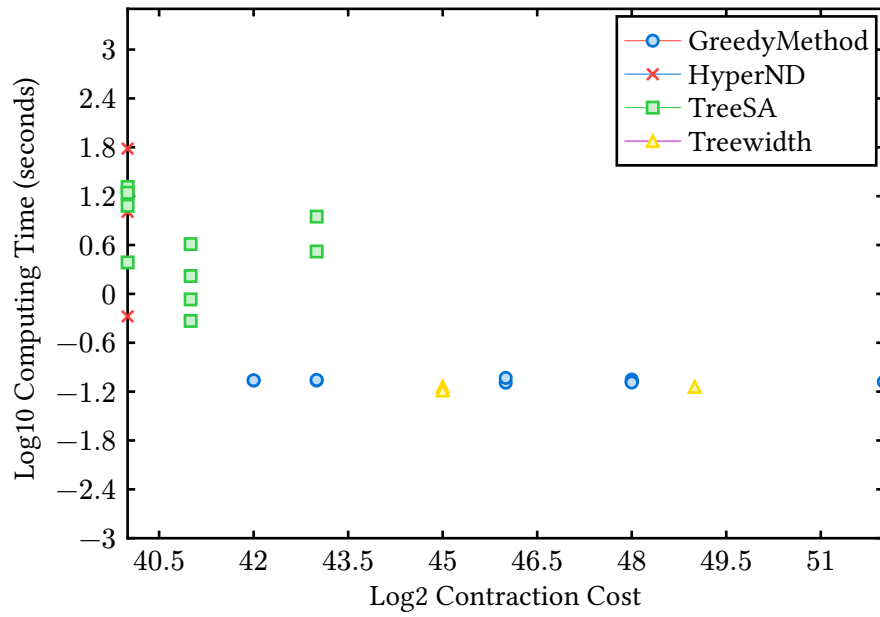


Figure 6: Scatter plot for **qec/surfacecode_d=21** showing contraction cost ($1*sc + 0*tc + 0*rcw$) vs computing time for different optimizers.

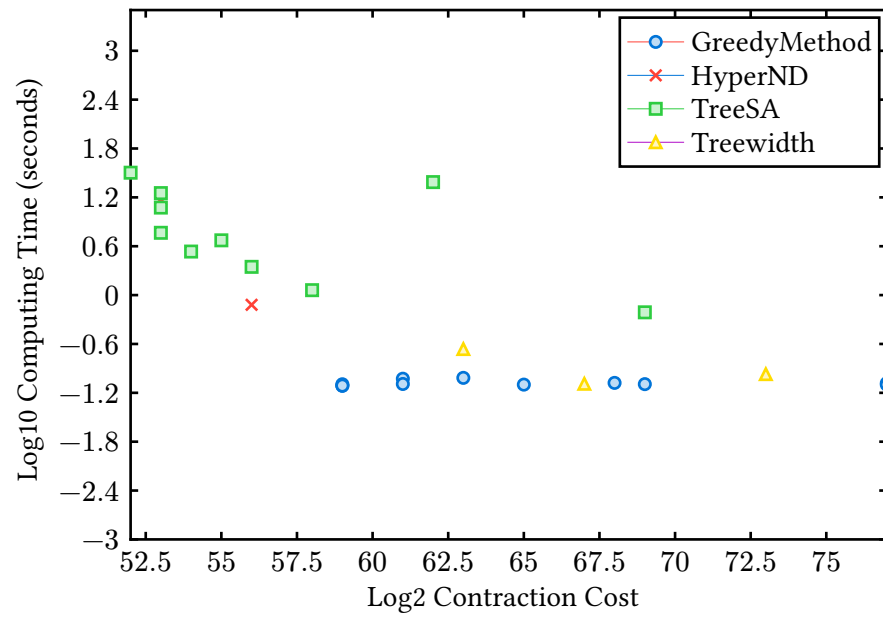


Figure 7: Scatter plot for **quantumcircuit/sycamore_53_20_0** showing contraction cost ($1 \cdot sc + 0 \cdot tc + 0 \cdot rwc$) vs computing time for different optimizers.