Table 1: Performance Results for IllConditionedRosenbrock_2D_alpha100 Problem

Optimizer	Mean Final Value	Std Dev	Best Value	Worst Value	Mean Func Evals	Success Rate (%)	Mean Time (s)
L-BFGS-Conservative	2.69e-4	1.04e-3	2.05e-9	4.76e-3	1800.6	80.0	0.029
L-BFGS-MoreThuente	1.52e-2	6.51e-2	3.79e-9	2.99e-1	1487.5	65.0	0.027
QQN-CubicQuadraticInterpolation	3.48e-2	3.38e-2	4.34e-10	9.89e-2	1722.9	35.0	0.070
QQN-Bisection-2	5.88e-2	7.05e-2	6.64e-9	2.52e-1	479.6	25.0	0.011
QQN-StrongWolfe	5.46e-2	7.38e-2	9.29e-9	3.11e-1	2343.8	20.0	0.068
QQN-Bisection-1	4.65e-1	8.86e-1	1.58e-8	3.18e0	2369.2	5.0	0.052
Adam-Fast	2.13e0	2.75e0	2.59e-5	8.39e0	313.6	0.0	0.006
QQN-GoldenSection	1.25e-1	5.78e-2	6.99e-5	1.93e-1	4459.4	0.0	0.083
Adam-WeightDecay	4.11e0	9.66e-1	1.55e-2	4.69e0	231.9	0.0	0.005
L-BFGS-Limited	3.93e0	5.18e0	3.26e-2	1.96e1	2251.6	0.0	0.025
GD-WeightDecay	3.65e0	3.07e0	3.75e-2	1.07e1	58.7	0.0	0.002
GD-AdaptiveMomentum	8.18e-1	1.24e0	4.17e-2	4.36e0	49.2	0.0	0.002
GD-Nesterov	1.49e0	1.88e0	5.05e-2	5.63e0	46.1	0.0	0.001
Trust Region-Conservative	2.84e1	2.98e1	1.90e-1	1.23e2	2770.7	0.0	0.017
Adam-AMSGrad	3.83e0	1.33e0	4.66e-1	4.75e0	678.1	0.0	0.015
GD-Momentum	5.61e0	3.44e0	4.79e-1	1.33e1	23.8	0.0	0.001
Adam	1.22e0	3.51e-1	4.86e-1	1.76e0	2502.0	0.0	0.049
GD	1.23e0	1.46e0	7.46e-1	6.37e0	854.0	0.0	0.021
L-BFGS	1.36e2	1.58e2	8.12e-1	5.03e2	121.5	0.0	0.002
Adam-Robust	4.04e0	8.59e-1	1.90e0	4.73e0	419.2	0.0	0.009
Trust Region-Precise	7.26e0	8.07e0	3.76e0	3.52e1	946.2	0.0	0.006
Trust Region-Adaptive	4.12e0	2.07e-1	3.83e0	4.42e0	494.4	0.0	0.003
Trust Region-Standard	4.18e0	1.83e-1	3.95e0	4.51e0	89.6	0.0	0.001
Trust Region-Aggressive	4.66e0	3.99e-1	4.01e0	5.49e0	27.6	0.0	0.000
L-BFGS-Aggressive	3.18e1	2.86e1	4.34e0	1.12e2	3852.0	0.0	0.028