Table 1: Performance Results for Michalewicz_5D_m10 Problem

Optimizer Mean Final Value Std Dev Value Best Value Worst Value Mean Func Evals Success Rate (%) Mean Time Rate (%) Adam -2.46e0 5.04e-1 -2.71e0 -8.39e-1 474.6 80.0 0.010 Adam-Fast -2.62e0 4.21e-1 -3.29e0 -1.68e0 70.8 65.0 0.002 Adam-AmsGrad CD -2.00e0 7.11e-1 -2.69e0 -8.39e-1 738.0 45.0 0.019 QQN-Bisection -1.78e0 8.34e-1 -2.89e0 -8.39e-1 738.0 45.0 0.019 L-BFGS- -1.78e0 7.13e-1 -2.69e0 -8.39e-1 1302.2 30.0 0.027 Conservative QQN- -1.76e0 7.40e-1 -2.79e0 -5.69e-5 1288.2 25.0 0.040 StrongWolfe QQN-Bisection- -1.78e0 6.73e-1 -2.79e0 -8.39e-1 1432.2 20.0 0.036 1 Adam-Robust -1.65e0 7.13e-1 -2.69e0 -8.20e-1 83.1
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Precise
Trust Region7.58e-1 6.00e-1 -1.73e0 -4.40e-4 10.8 0.0 0.000
Adaptive 7.56c 1 0.00c 1 1.76c0 4.40c 4 10.5 0.0
Trust Region3.29e-1 4.87e-1 -1.53e0 -4.71e-5 5.5 0.0 0.000
Standard -5.25c-1 4.67c-1 -1.55c0 -4.71c-5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5
L-BFGS4.98e-1 3.88e-1 -1.25e0 1.67e-8 3524.2 0.0 0.027
Aggressive -4.90e-1 5.00e-1 -1.25e0 1.07e-0 5524.2 0.0 0.027
L-BFGS -2.16e-1 2.92e-1 -8.96e-1 -1.24e-6 90.4 0.0 0.001
Trust Region1.81e-1 2.12e-1 -7.69e-1 -2.00e-4 5.0 0.0 0.000
Aggressive -1.81e-1 2.12e-1 -7.09e-1 -2.00e-4 5.0 0.0 0.000
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