Table 1: Performance Results for Zakharov_5D Problem

Optimizer	Mean Final	Std Dev	Best	Worst	Mean Func	Success	Mean Time
	Value		Value	Value	Evals	Rate (%)	(s)
QQN-	2.41e-9	3.17e-9	2.91e-14	9.91e-9	100.3	100.0	0.003
StrongWolfe		4.0-		0.4.0.0		1000	
QQN-Bisection-	1.50e-9	1.97e-9	2.56e-15	6.16e-9	114.7	100.0	0.002
2 CON D:	1 10 10	0.00 10	F FO 14	1 40 11	110.0	100.0	0.000
QQN-Bisection-	1.12e-12	2.99e-12	5.59e-14	1.40e-11	118.0	100.0	0.002
1 00N	0.00 10	0.07 10	0.45 19	1.01 11	190.0	100.0	0.000
QQN-	2.83e-12	2.87e-12	2.45e-13	1.21e-11	138.0	100.0	0.002
GoldenSection	1 50 0	1 500 0	2 50 2 19	5.23e-9	205.0	100.0	0.007
QQN-	1.52e-9	1.59e-9	3.50e-12	5.2 5 e-9	200.0	100.0	0.007
CubicQuadraticIr GD	9.78e-9	9.76e-11	9.63e-9	0.07. 0	477 1	100.0	0.012
L-BFGS-	9.78e-9 7.32e-9	9.76e-11 2.98e-9	9.03e-9 2.42e-10	9.97e-9 9.99e-9	477.1 492.9	100.0 100.0	$0.013 \\ 0.012$
Conservative	7.52e-9	2.98e-9	2.42e-10	9.99e-9	492.9	100.0	0.012
L-BFGS-	9.32e-9	3.60e-10	8.60e-9	9.95e-9	634.6	100.0	0.013
MoreThuente	9.52e-9	3.00e-10	8.00e-9	9.956-9	054.0	100.0	0.015
L-BFGS-	1.94e-8	4.45e-8	7.85e-9	2.13e-7	1078.6	95.0	0.016
Limited	1.946-6	4.456-0	1.656-9	2.136-7	1076.0	95.0	0.010
Adam-	8.64e-3	1.13e-2	9.76e-9	2.86e-2	1586.3	60.0	0.036
WeightDecay	0.046-0	1.136-2	9.700-9	2.000-2	1360.3	00.0	0.030
GD-	7.62e-1	4.69e-1	9.24e-9	1.31e0	52.5	25.0	0.002
WeightDecay	7.026-1	4.096-1	9.246-9	1.3160	52.5	25.0	0.002
Adam	2.82e-3	2.38e-3	2.65e-4	7.47e-3	2502.0	0.0	0.054
Adam-	2.23e-2	1.32e-2	4.59e-3	5.39e-2	2502.0 2502.0	0.0	0.054 0.059
AMSGrad	2.290-2	1.020-2	T.00C-0	0.000-2	2002.0	0.0	0.003
Adam-Robust	7.06e-2	7.45e-2	6.18e-3	2.91e-1	2502.0	0.0	0.059
L-BFGS	2.69e1	2.46e1	2.58e-1	8.10e1	93.0	0.0	0.001
Trust Region-	5.65e1	1.12e2	6.02e-1	4.25e2	2415.8	0.0	0.017
Aggressive	0.0001	1.1202	0.0201	1.2002	2110.0	0.0	0.011
GD-Nesterov	5.05e0	2.73e0	1.42e0	1.10e1	18.1	0.0	0.001
Adam-Fast	9.66e0	1.31e0	7.78e0	1.15e1	34.8	0.0	0.001
L-BFGS-	4.22e1	8.64e0	2.82e1	6.13e1	3309.5	0.0	0.062
Aggressive							
GD-Momentum	5.45e1	1.33e1	3.48e1	9.04e1	18.9	0.0	0.001
GD-	6.97e1	1.64e1	4.83e1	1.09e2	18.5	0.0	0.001
AdaptiveMoment							
Trust Region-	2.28e3	8.27e2	6.92e2	3.84e3	3002.0	0.0	0.020
Standard							
Trust Region-	3.10e3	8.27e2	1.77e3	4.98e3	3002.0	0.0	0.021
Adaptive							
Trust Region-	3.50e3	7.96e2	2.04e3	4.73e3	3002.0	0.0	0.021
Precise							
Trust Region-	3.28e3	6.15e2	2.05e3	4.46e3	3002.0	0.0	0.020
Conservative							