Benchmark JuMP Results
max iter = 1000, tol = 1.0e-8, constr viol tol = 1.0e-6, solver = ma57

Model	Discretization	Iterations	Total Time	Ipopt Time	Objective Value	Flag
cart_pendulum	100	16	0.499161	0.494	1.88011e-11	LOCALLY_INFEASIBLE
cart_pendulum	500	34	97.173	97.154	4.42608e-8	LOCALLY_INFEASIBLE
robot	100	18	0.843505	0.837	9.14269	LOCALLY_SOLVED
robot	500	21	0.251514	0.243	9.14099	LOCALLY_SOLVED
electrical_vehicle	100	5	0.120129	0.0350001	1.24629e8	LOCALLY_SOLVED
electrical_vehicle	500	5	0.0185865	0.016	6.16023e8	LOCALLY_SOLVED
double_oscillator	100	4	0.0072194	0.00499988	0.014816	LOCALLY_SOLVED
double_oscillator	500	4	0.012696	0.0110002	0.0728525	LOCALLY_SOLVED
ducted_fan	100	59	0.98826	0.886	1911.53	LOCALLY_SOLVED
ducted_fan	500	67	15.3013	15.294	1909.53	LOCALLY_SOLVED
steering	100	11	0.382826	0.378	0.554595	LOCALLY_SOLVED
steering	500	17	0.100468	0.095	0.554572	LOCALLY_SOLVED
glider	100	223	2.85387	2.846	1254.61	LOCALLY_SOLVED
glider	500	734	16.2692	16.149	1247.98	LOCALLY_SOLVED
rocket	100	19	0.0359671	0.0350001	1.01283	LOCALLY_SOLVED
rocket	500	59	0.427043	0.422	1.01284	LOCALLY_SOLVED
chain	100	7	0.0135139	0.013	5.06978	LOCALLY_SOLVED
chain	500	8	0.0311655	0.027	5.06858	LOCALLY_SOLVED
dielectrophoretic_particle	100	39	0.0242983	0.0250001	-9.97699e-9	LOCALLY_INFEASIBLE
dielectrophoretic_particle	500	39	2.66068	2.659	-9.99545e-9	LOCALLY_INFEASIBLE