Benchmark OptimalControl Results

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

Model	Discretization	Variables	Constraints	Iterations	Total Time	Ipopt Time	Objective Value	Flag
cart_pendulum	100	507	405	227	24.29	5.76	1.74413	Solve Succeeded
cart_pendulum	500	2507	2005	524	47.18	31.74	1.74373	Solve Succeeded
robot	100	910	612	75	3.51	0.48	9.14269	Solve Succeeded
robot	500	4510	3012	656	32.85	31.67	9.14099	Solve Succeeded
electrical_vehicle	100	404	305	16	6.38	0.55	1.22905e6	Solve Succeeded
electrical_vehicle	500	2004	1505	1000	35.72	35.35	1.09722e5	Iterations Exceeded
double_oscillator	100	606	503	5	1.45	0.11	0.000908244	Solve Succeeded
double_oscillator	500	3006	2503	5	0.35	0.08	0.000910921	Solve Succeeded
ducted_fan	100	910	713	112	2.94	0.75	1832.94	Solve Succeeded
ducted_fan	500	4510	3513	82	149.01	142.85	0.0109369	Infeasible Problem
steering	100	506	408	11	0.89	0.06	0.554595	Solve Succeeded
steering	500	2506	2008	17	0.49	0.2	0.554572	Solve Succeeded
rocket	100	405	304	21	0.13	0.1	1.01283	Solve Succeeded
rocket	500	2005	1504	77	9.09	8.93	1.01284	Solve Succeeded
chain	100	404	305	7	0.73	0.05	5.06978	Solve Succeeded
chain	500	2004	1505	14	0.29	0.15	5.06858	Solve Succeeded
dielectrophoretic_particle	100	304	203	38	0.79	0.14	-9.97699e-9	Infeasible Problem
dielectrophoretic_particle	500	1504	1003	38	0.53	0.41	-9.99545e-9	Infeasible Problem
truck	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
quadrotorp2p	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
moonlander	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
glider	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
space_shuttle	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN