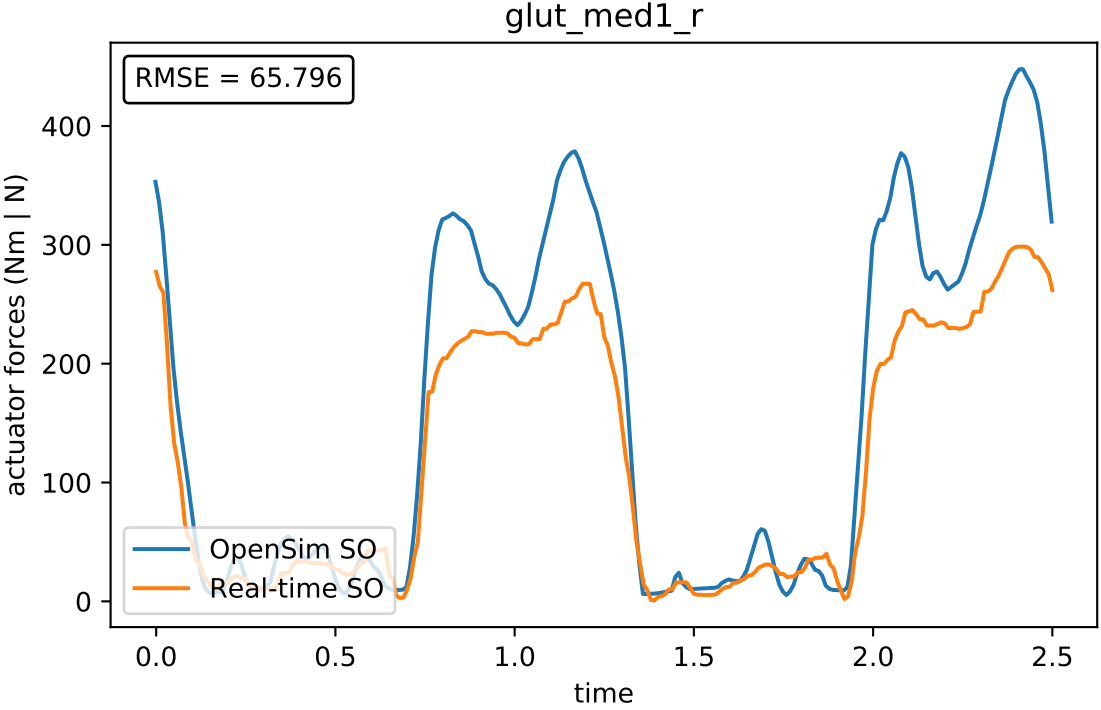
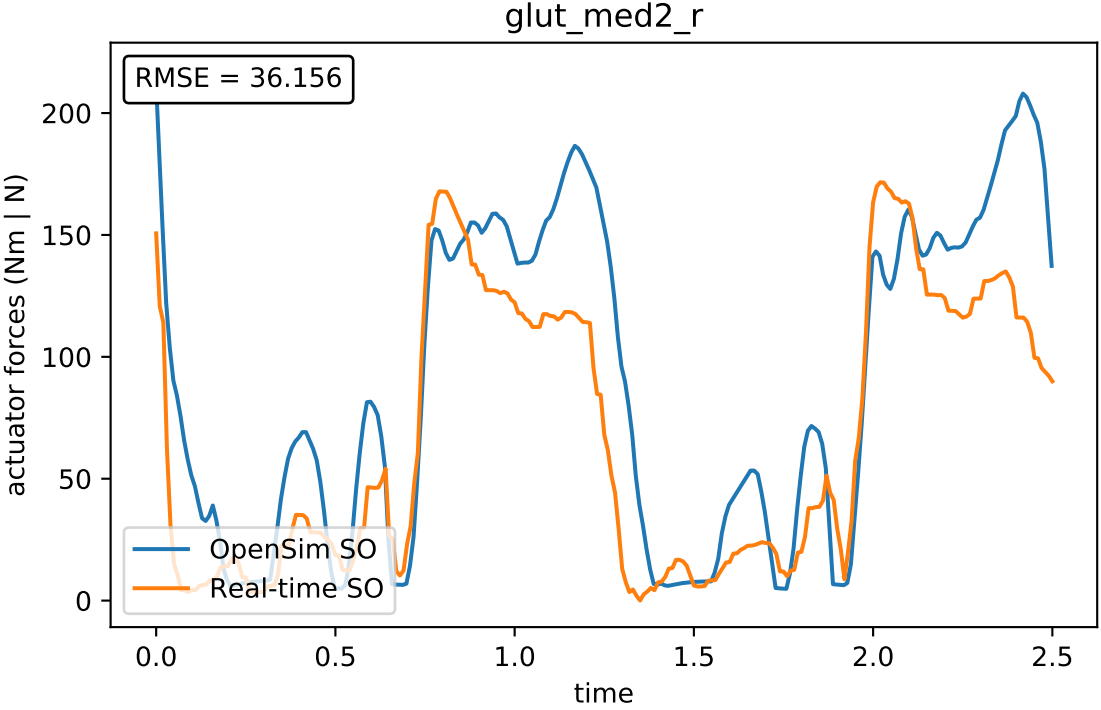
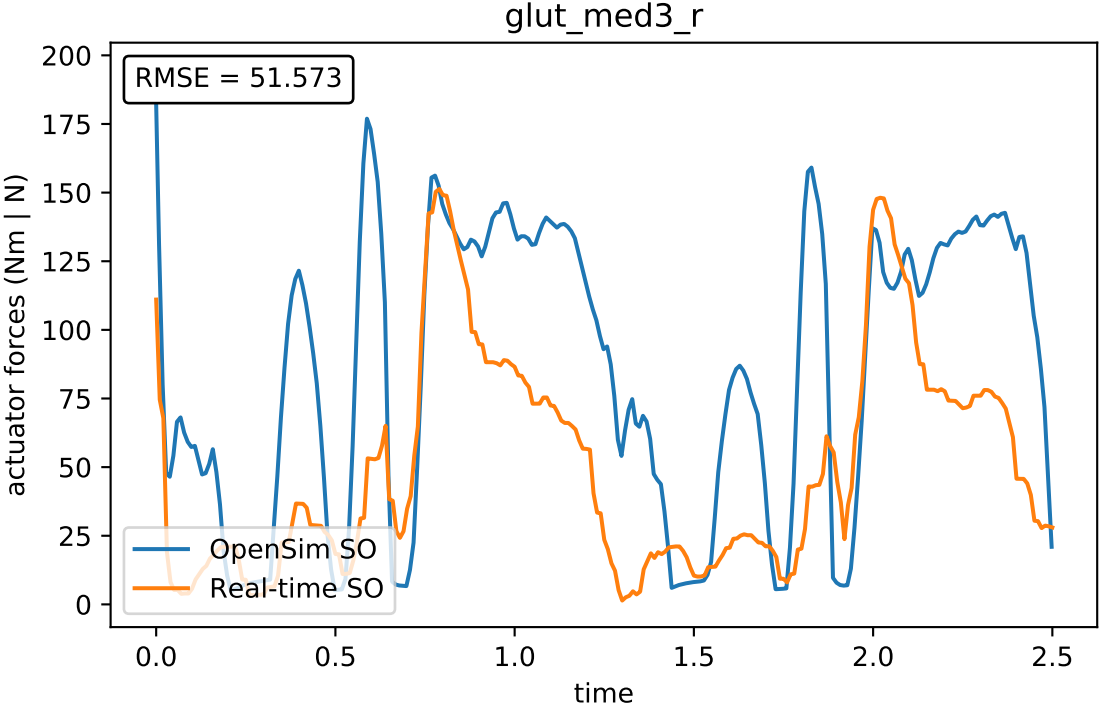
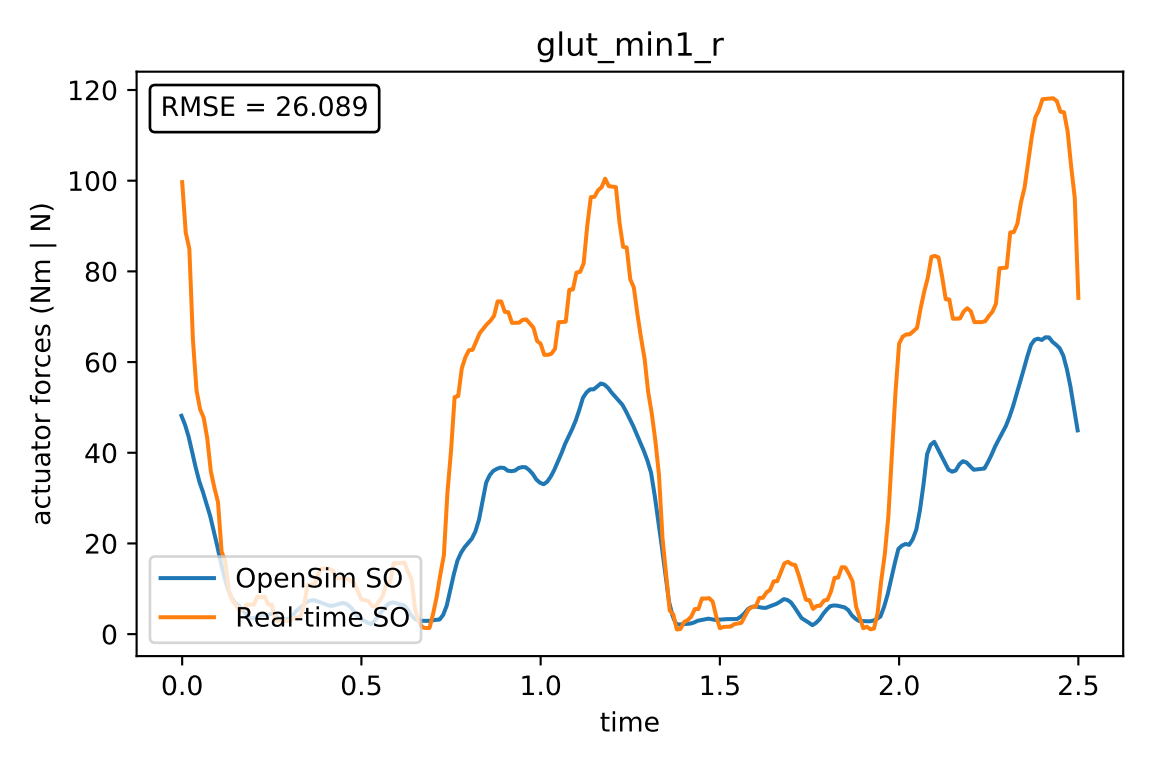
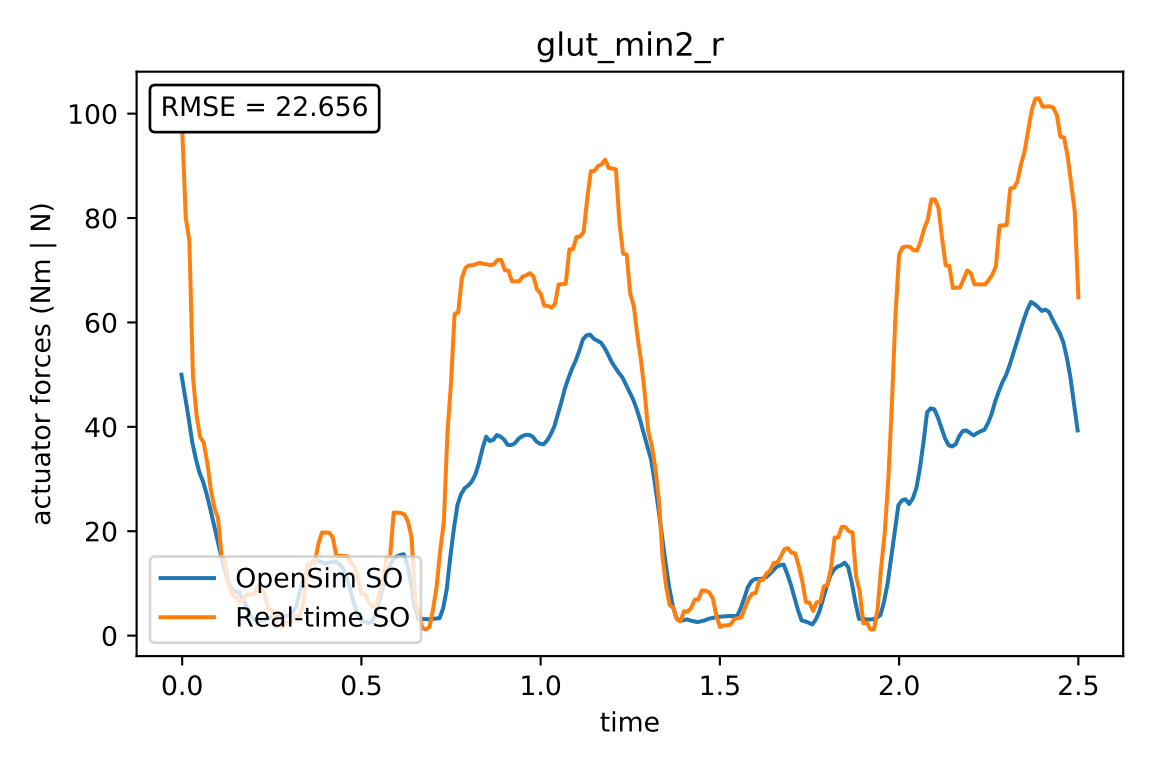
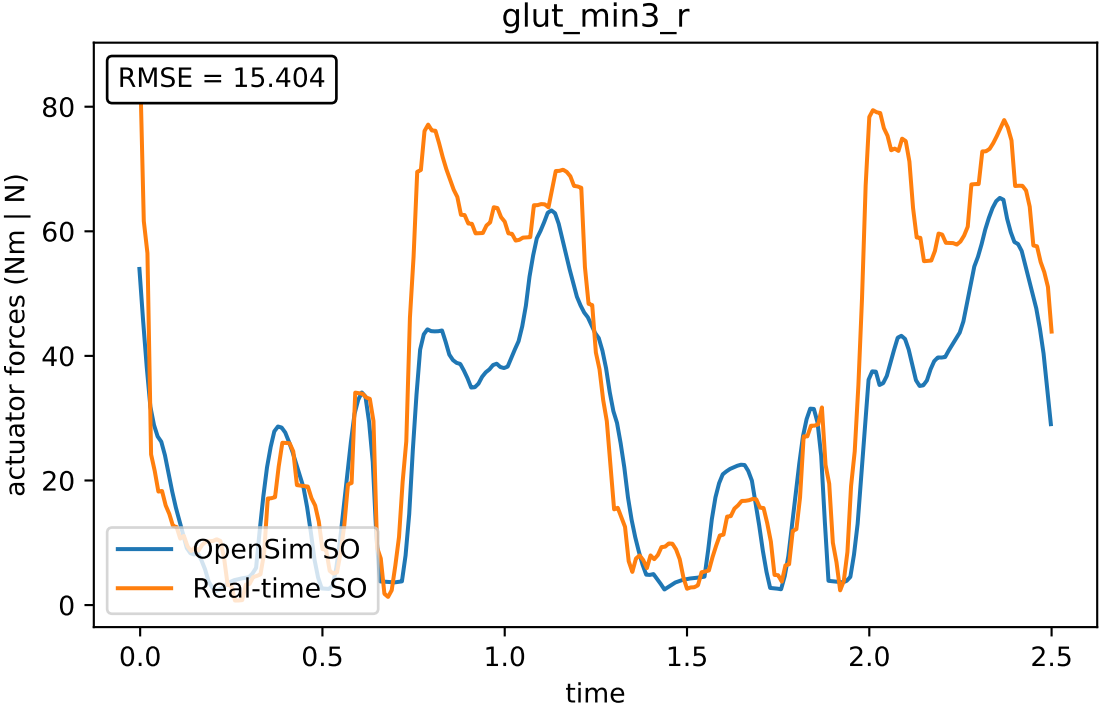

glut_med1_r
RMSE = 65.796
400
300
200
100
0
actuator forces (Nm | N)
OpenSim SO
Real-time SO
0.0
0.5
1.0
1.5
2.0
2.5
time

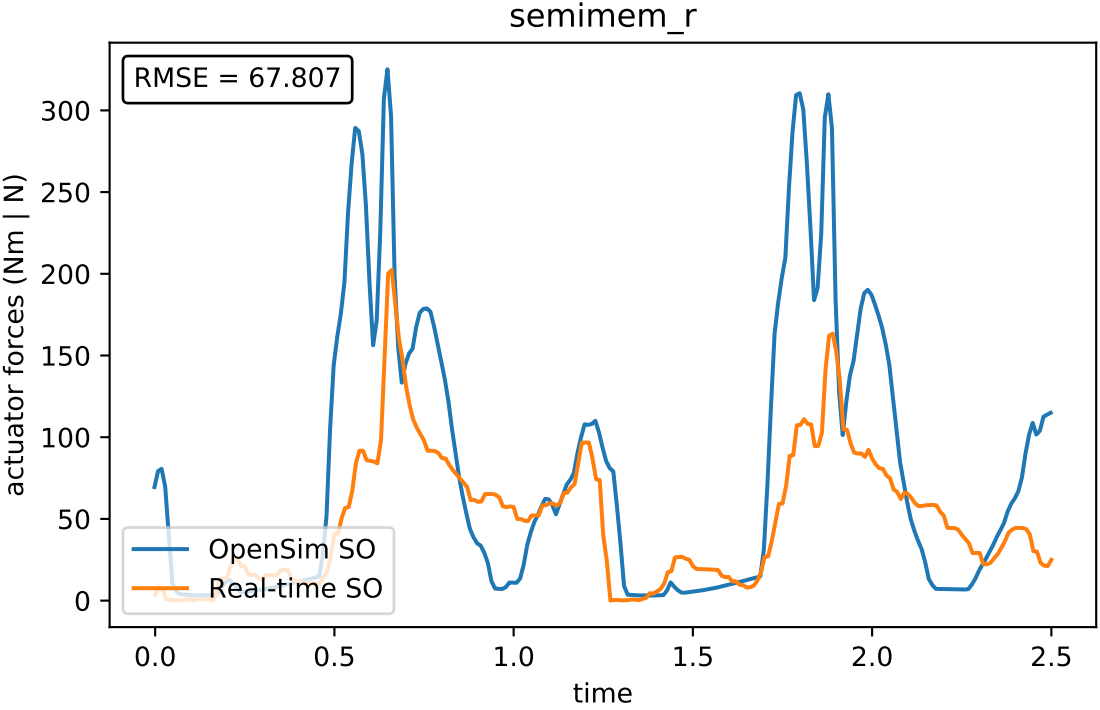

glut_med2_r
RMSE = 36.156
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
50
100
150
200
0.0
0.5
1.0
1.5
2.0
2.5

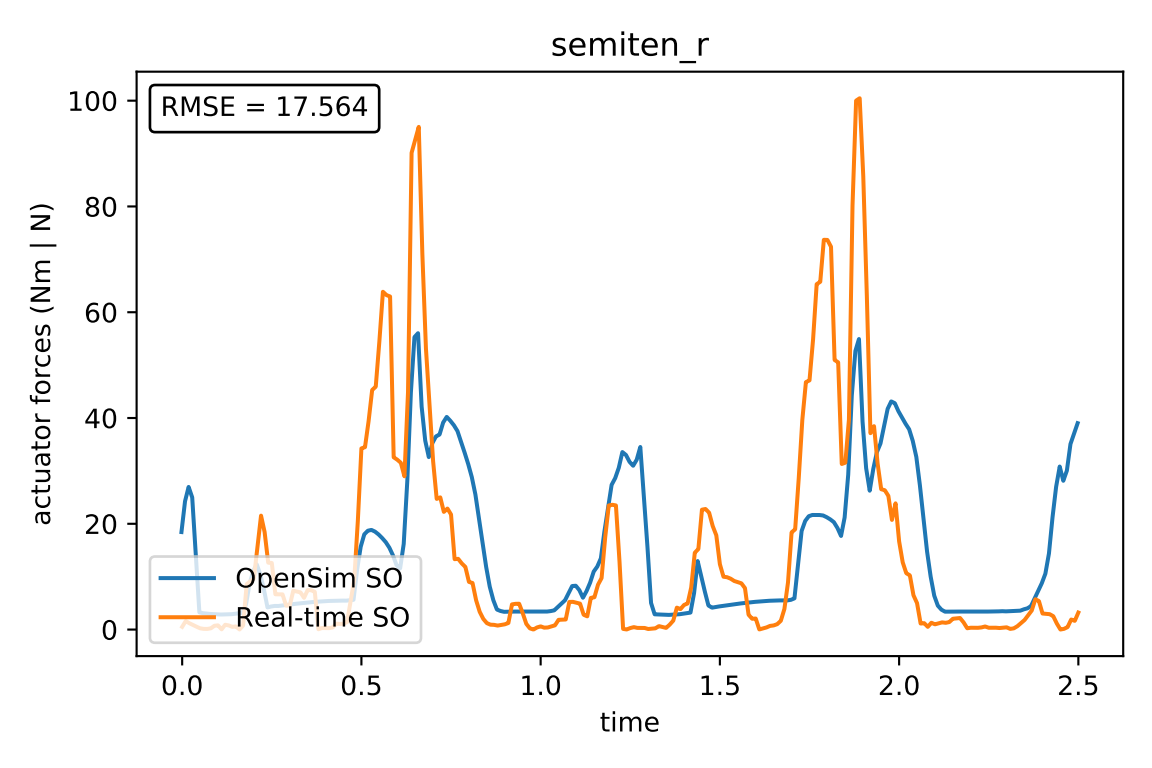

glut_med3_r
RMSE = 51.573
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
200
175
150
125
100
75
50
25
0
0.0
0.5
1.0
1.5
2.0
2.5

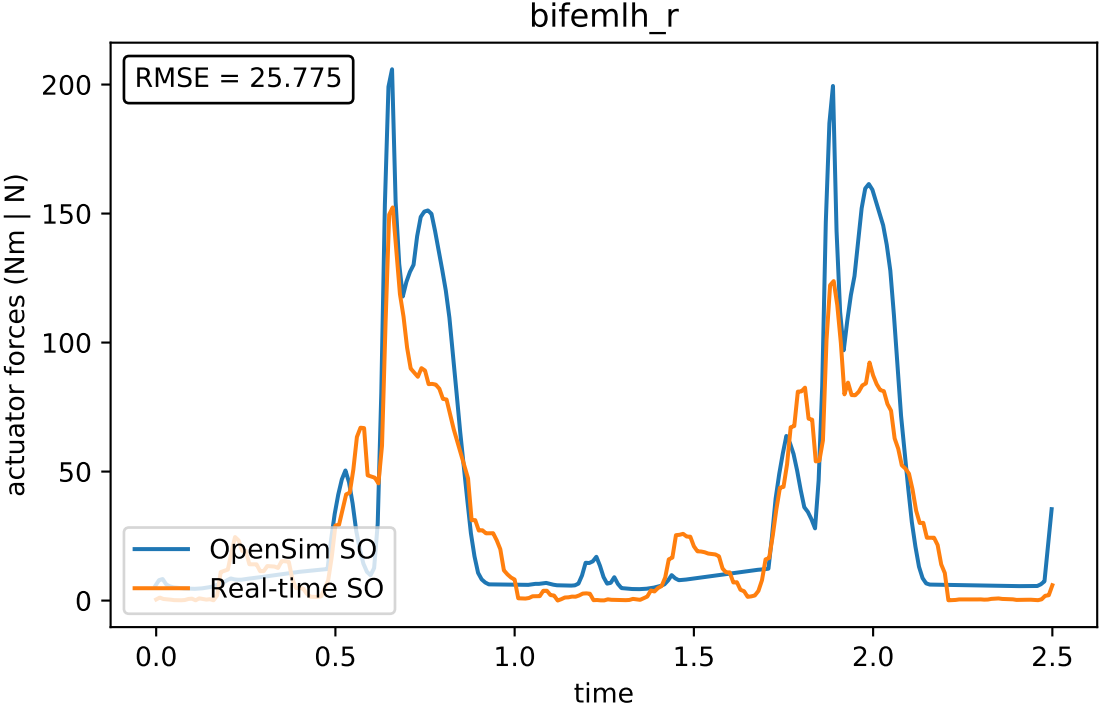

glut_min1_r
RMSE = 26.089
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
120
0.0
0.5
1.0
1.5
2.0
2.5

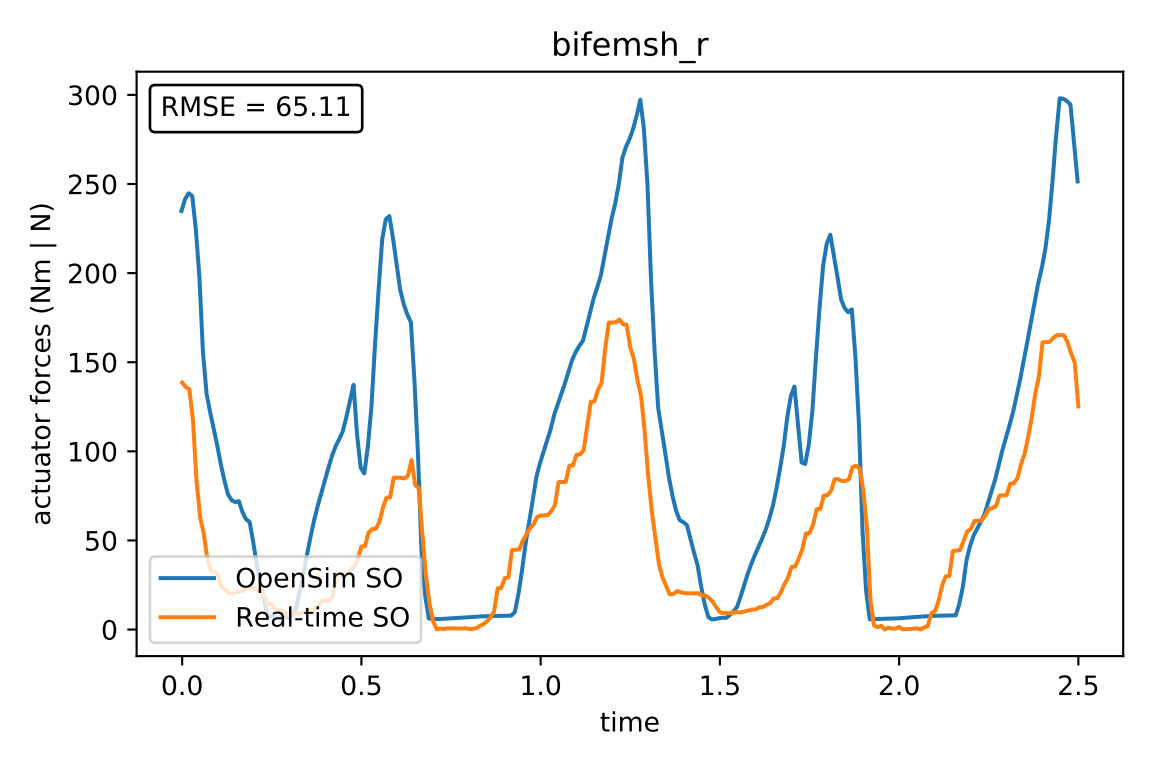

glut_min2_r
RMSE = 22.656
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5

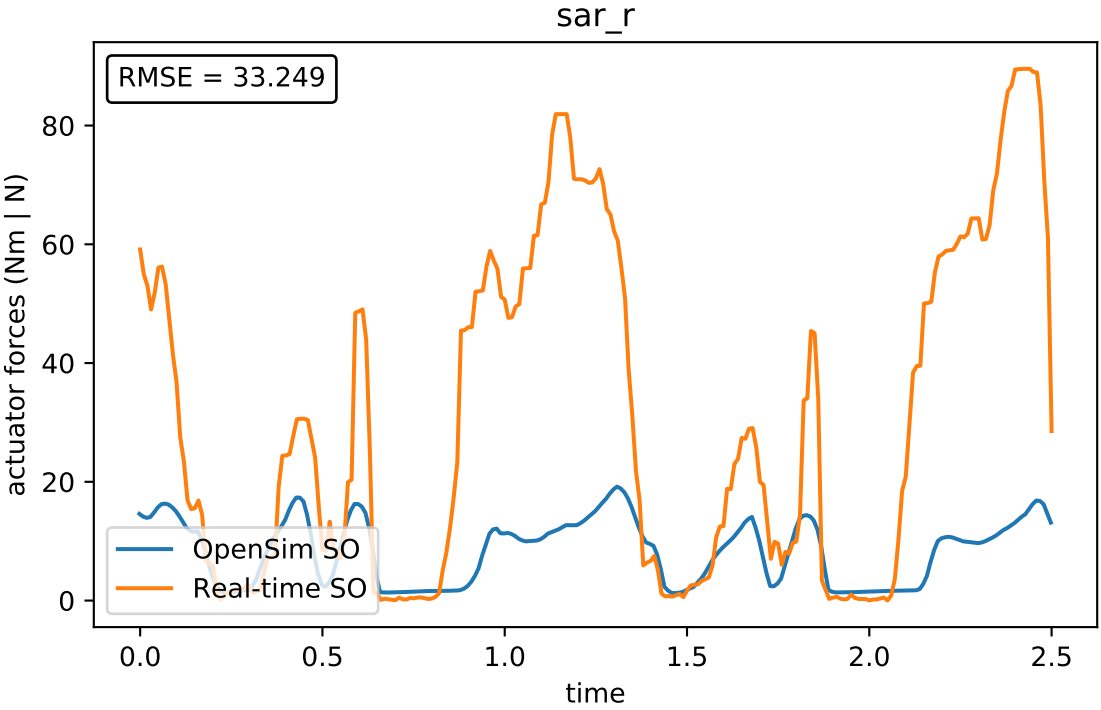

glut_min3_r
RMSE = 15.404
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
0.0
0.5
1.0
1.5
2.0
2.5

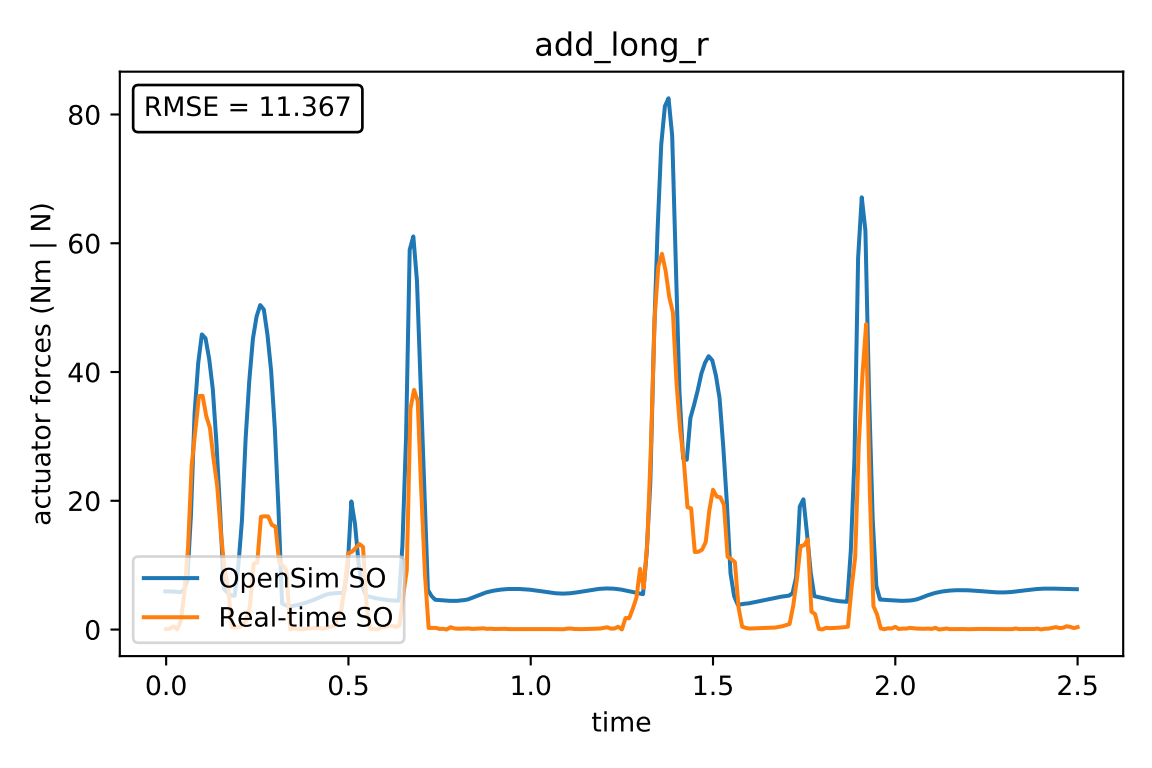

semimem_r
RMSE = 67.807
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
50
100
150
200
250
300
0.0
0.5
1.0
1.5
2.0
2.5

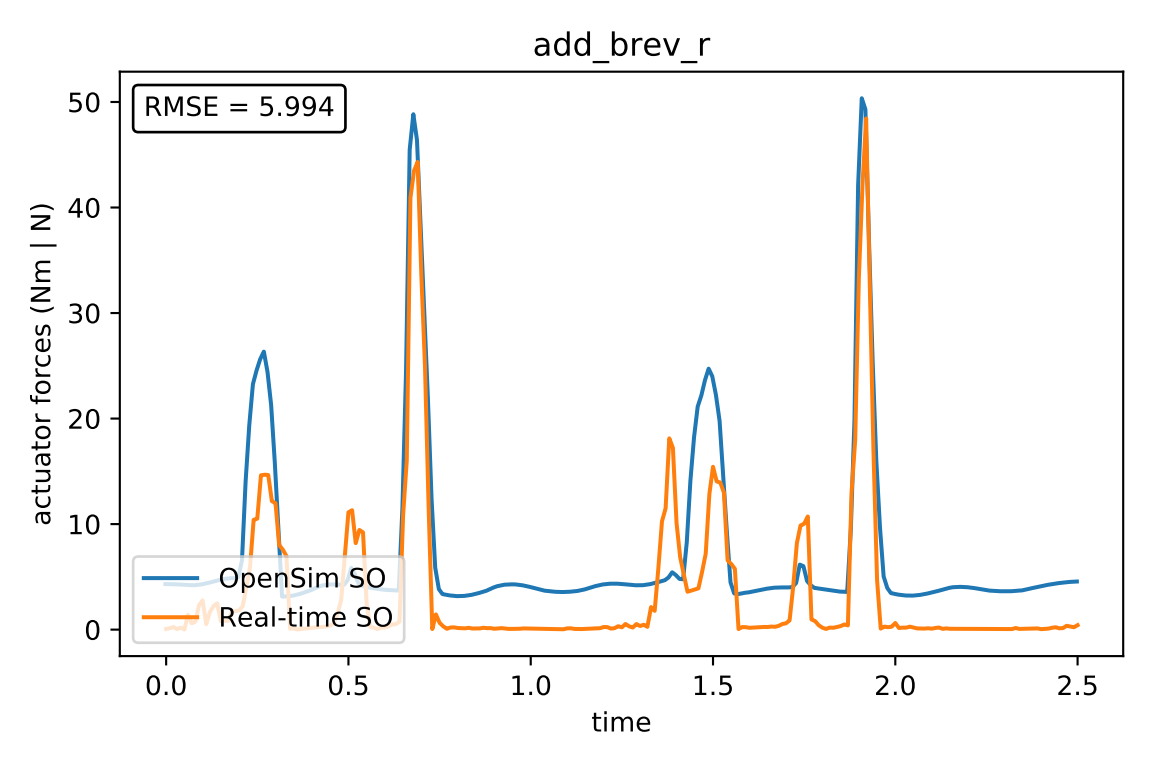

semiten_r
RMSE = 17.564
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5

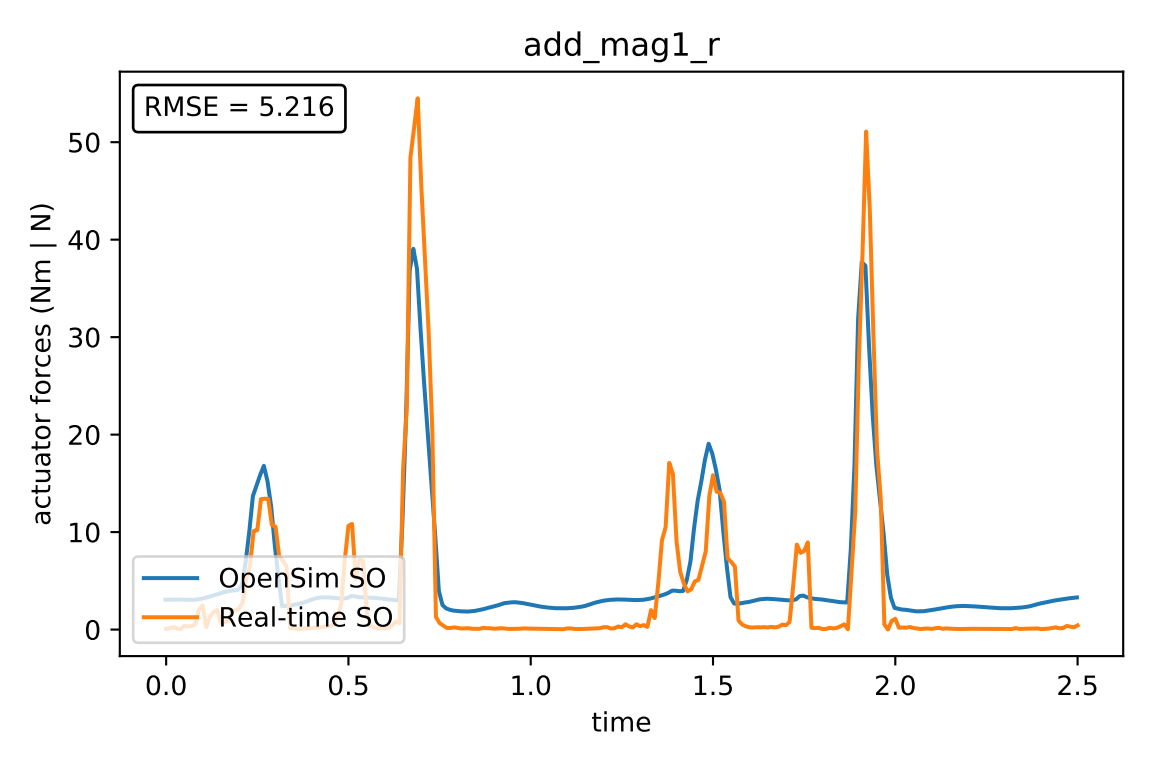

bifemlh_r
RMSE = 25.775
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
50
100
150
200
0.0
0.5
1.0
1.5
2.0
2.5

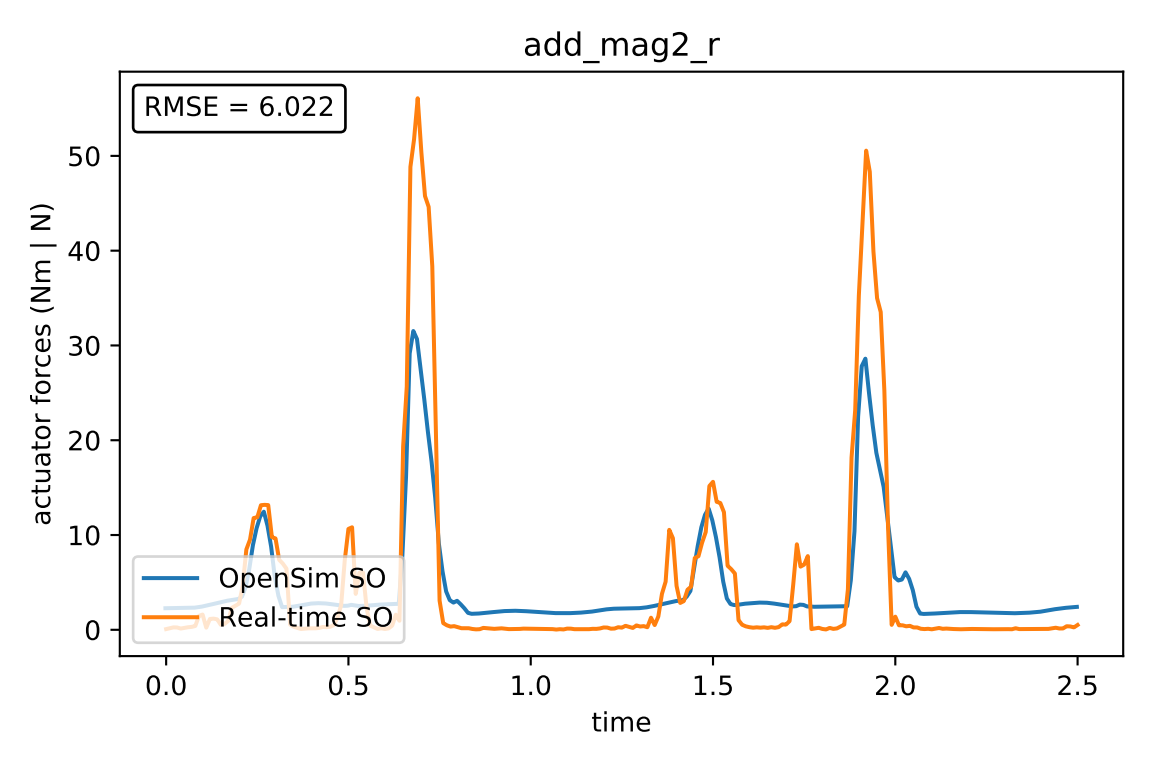

bifemsh_r
RMSE = 65.11
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
300
250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5

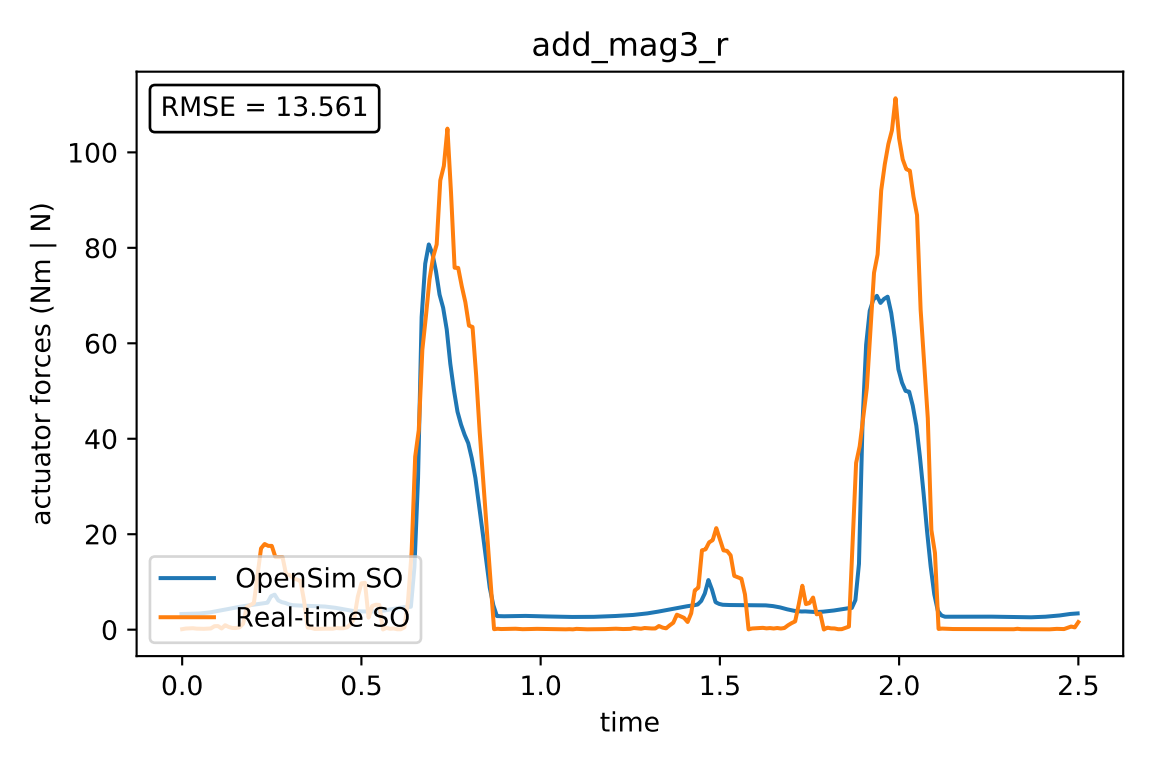

sar_r
RMSE = 33.249
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
0.0
0.5
1.0
1.5
2.0
2.5

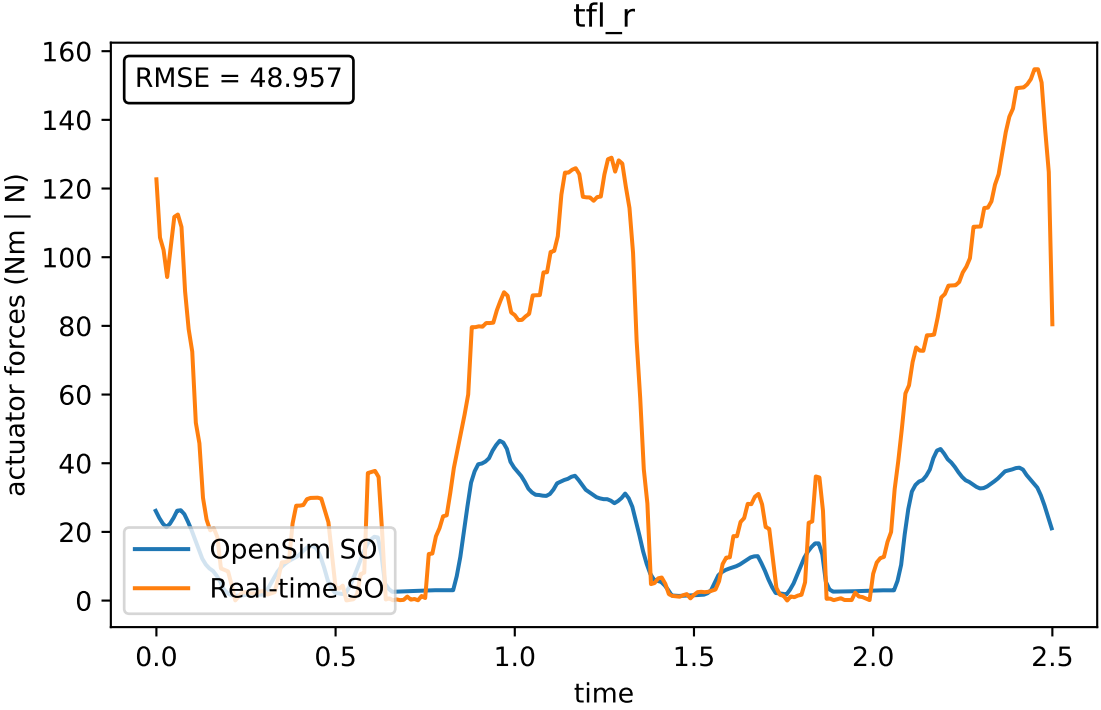

add_long_r
RMSE = 11.367
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
0.0
0.5
1.0
1.5
2.0
2.5

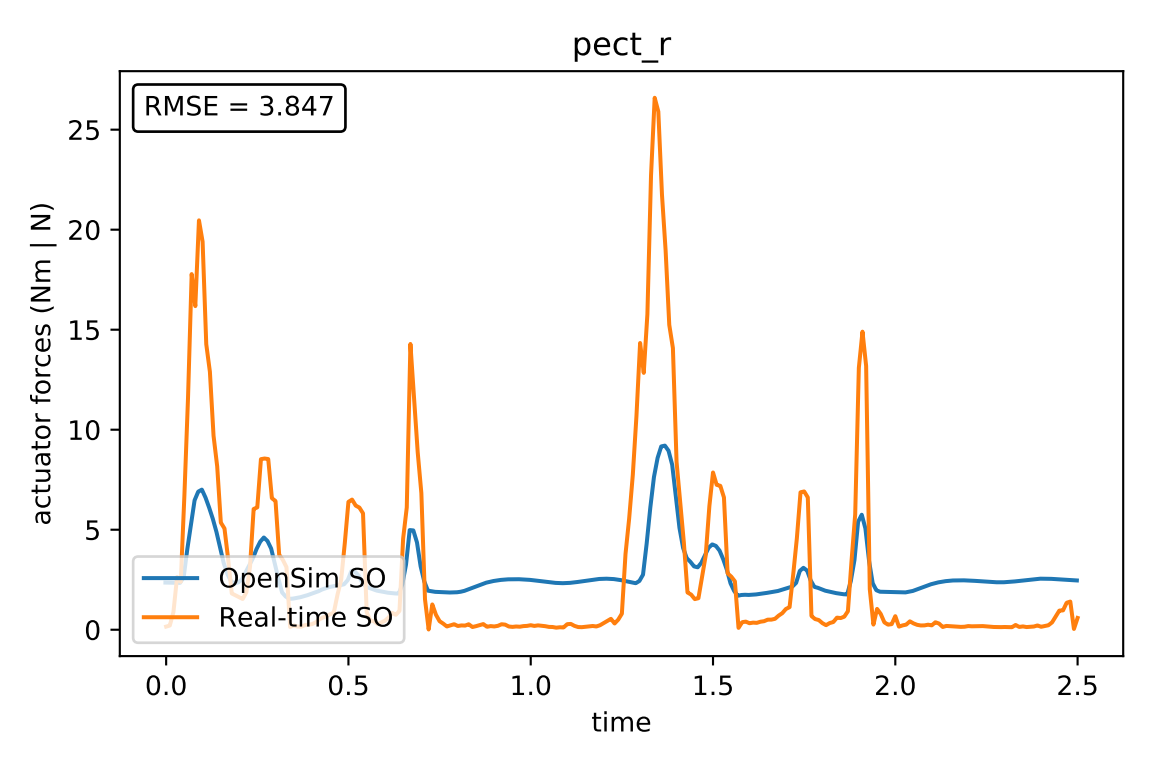

add_brev_r
RMSE = 5.994
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
10
20
30
40
50
0.0
0.5
1.0
1.5
2.0
2.5

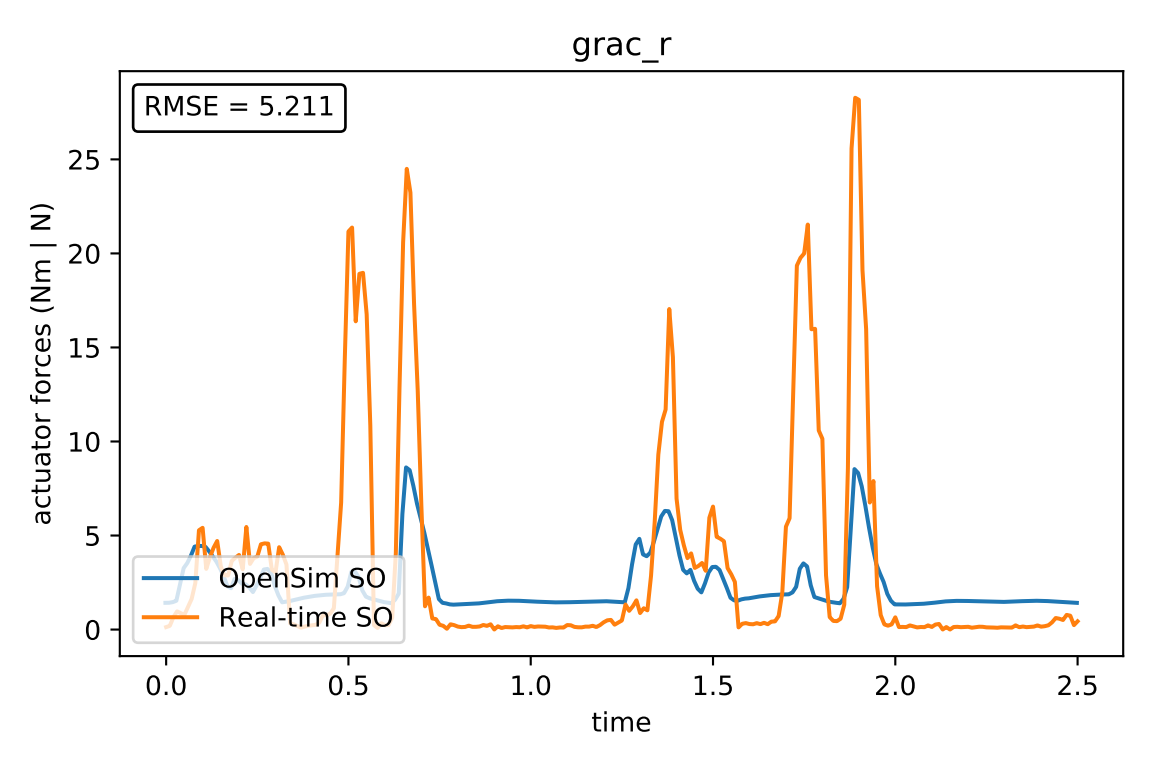

add_mag1_r
RMSE = 5.216
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
10
20
30
40
50
0.0
0.5
1.0
1.5
2.0
2.5

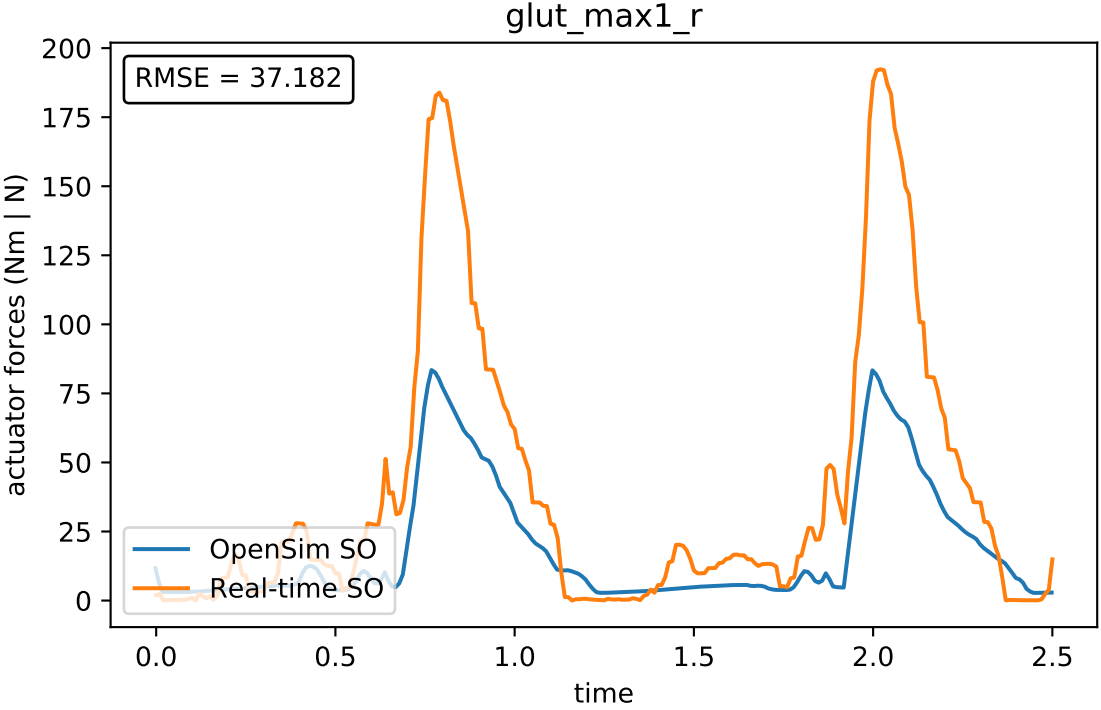

add_mag2_r
RMSE = 6.022
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
10
20
30
40
50
0.0
0.5
1.0
1.5
2.0
2.5

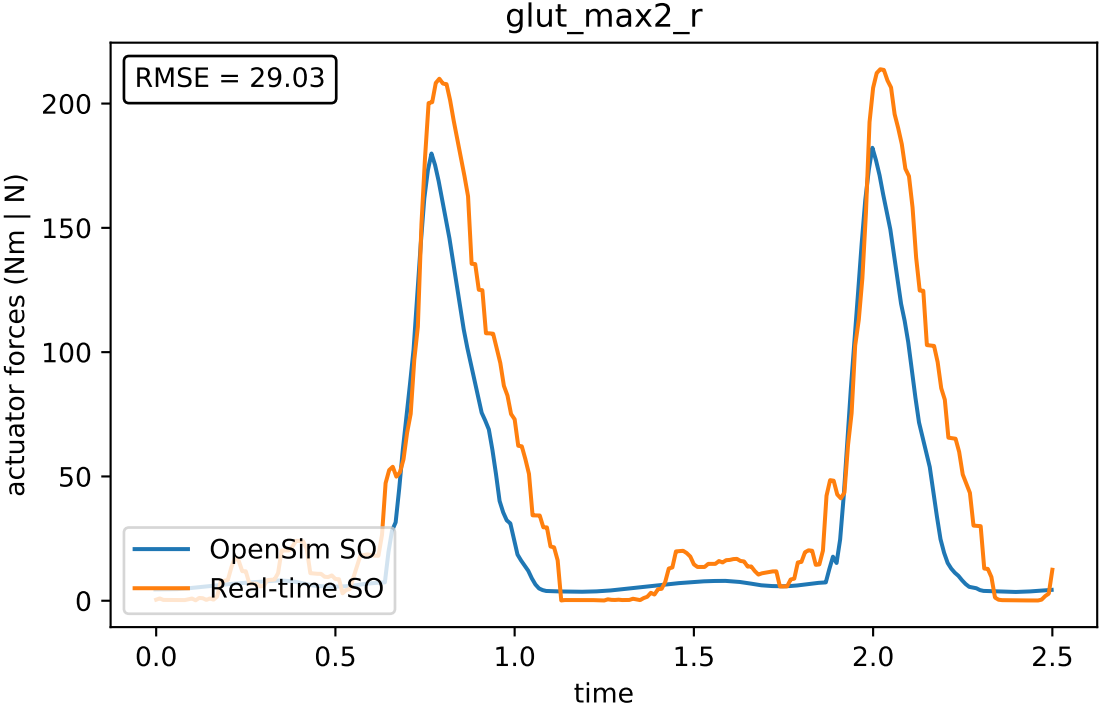

add_mag3_r
RMSE = 13.561
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5

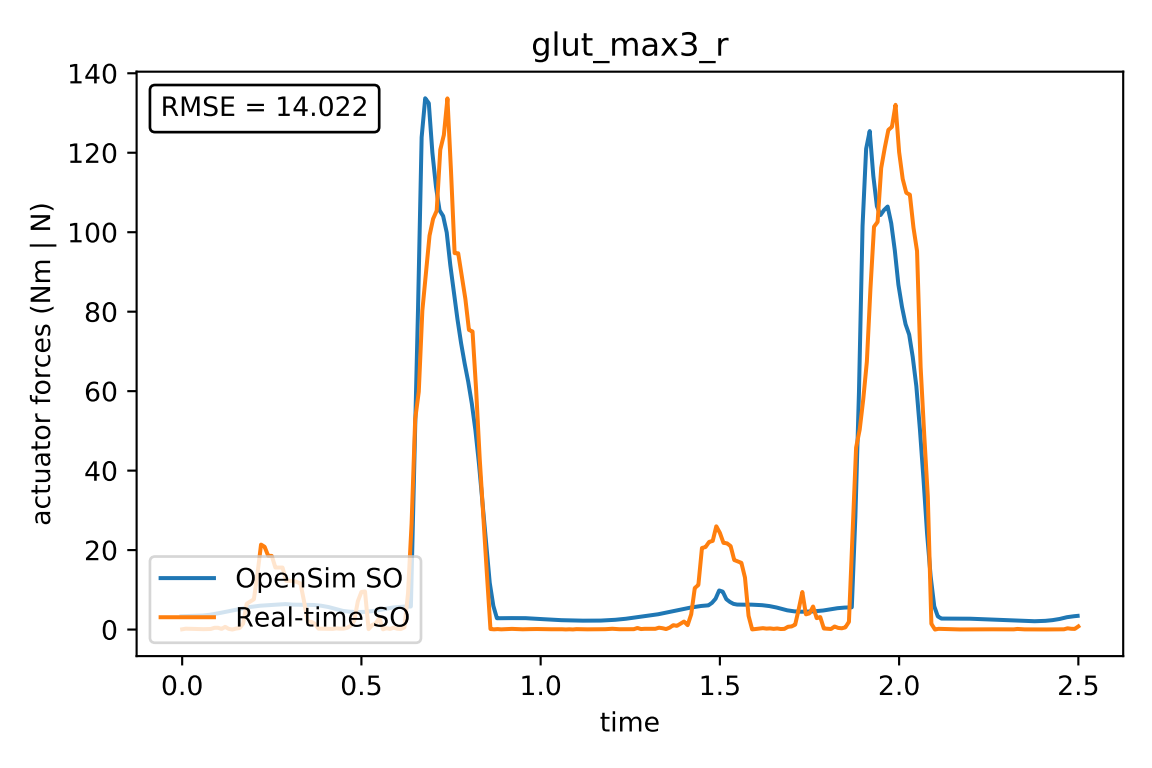

tfl_r
RMSE = 48.957
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
160
140
120
100
80
60
40
20
0
0.0
0.5
1.0
1.5
2.0
2.5

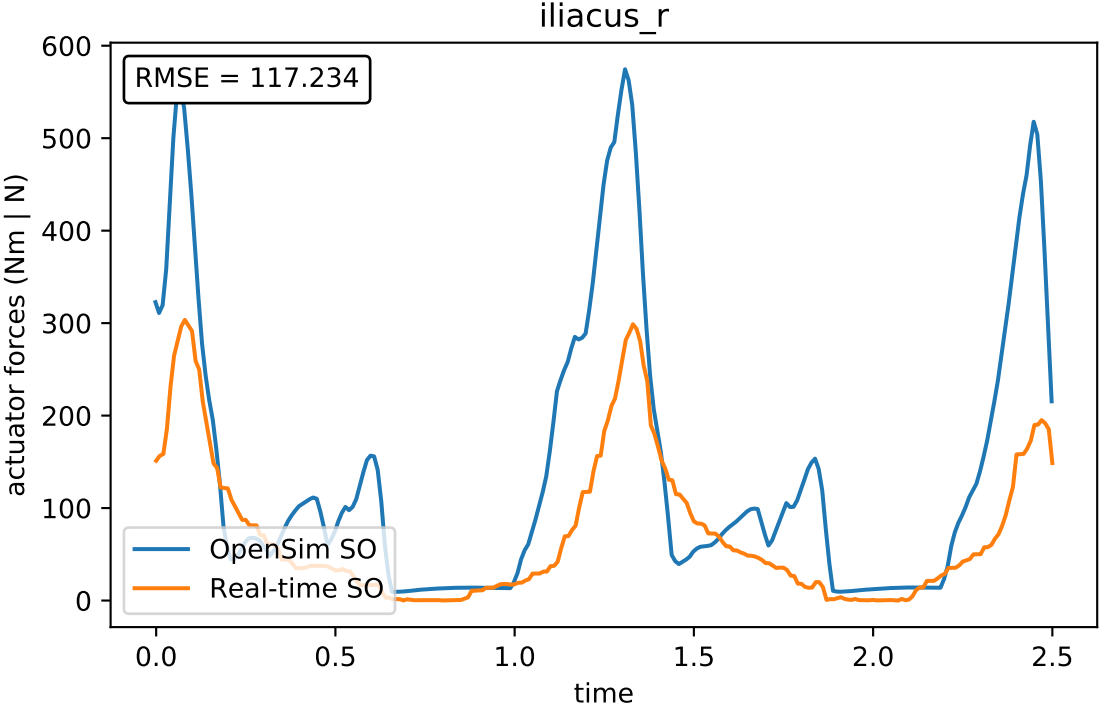

pect_r
RMSE = 3.847
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
5
10
15
20
25
0.0
0.5
1.0
1.5
2.0
2.5

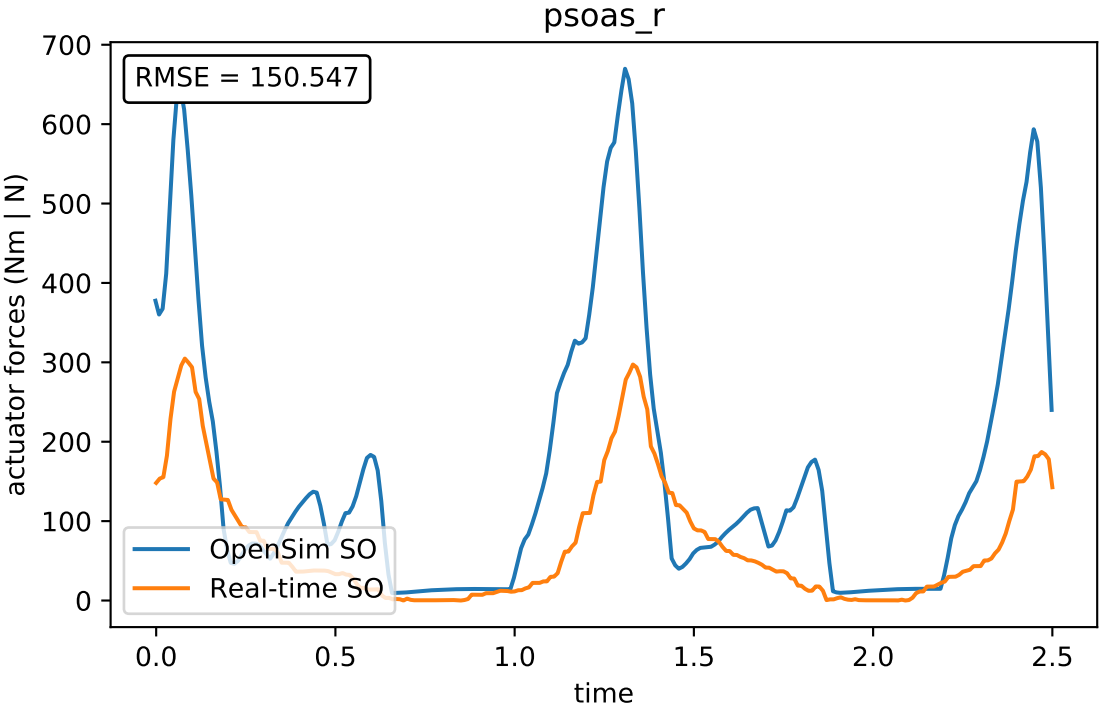

grac_r
RMSE = 5.211
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
5
10
15
20
25
0.0
0.5
1.0
1.5
2.0
2.5

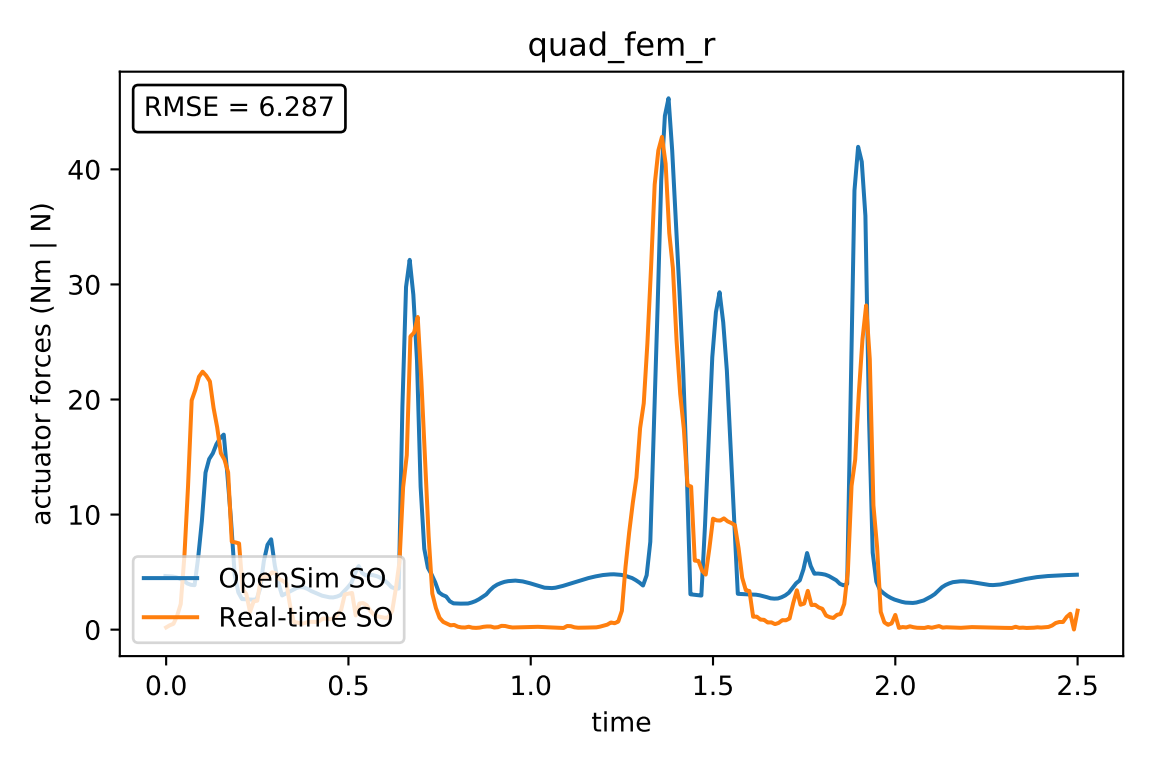

glut_max1_r
RMSE = 37.182
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
200
175
150
125
100
75
50
25
0
0.0
0.5
1.0
1.5
2.0
2.5

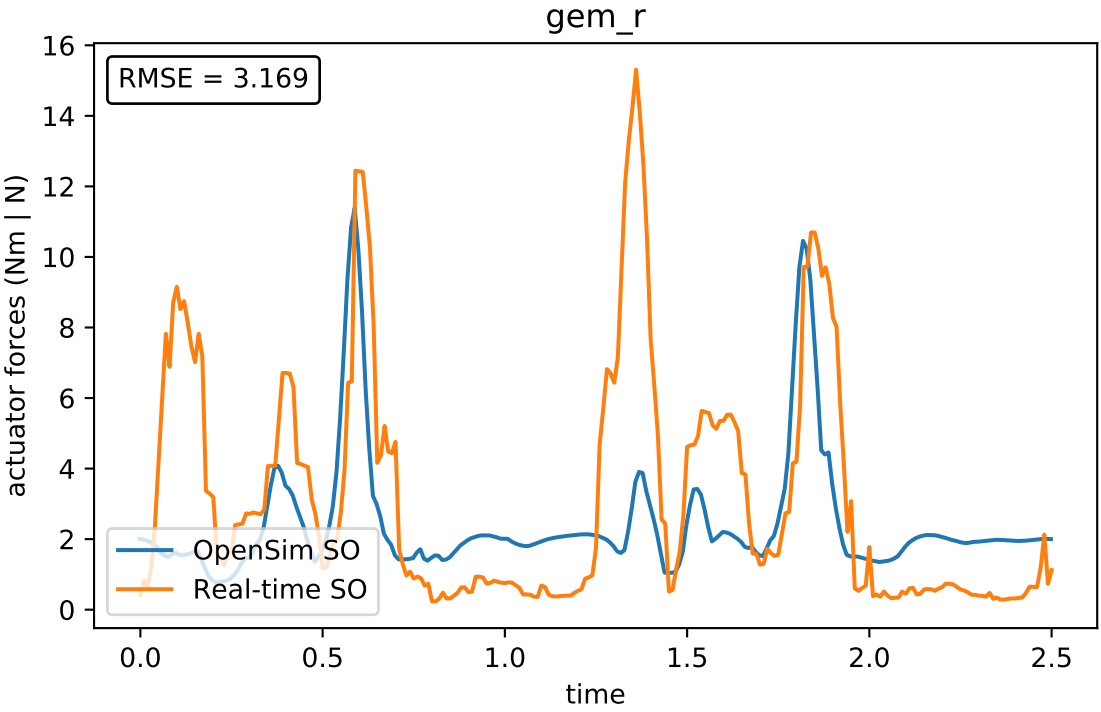

glut_max2_r
RMSE = 29.03
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
50
100
150
200
0.0
0.5
1.0
1.5
2.0
2.5

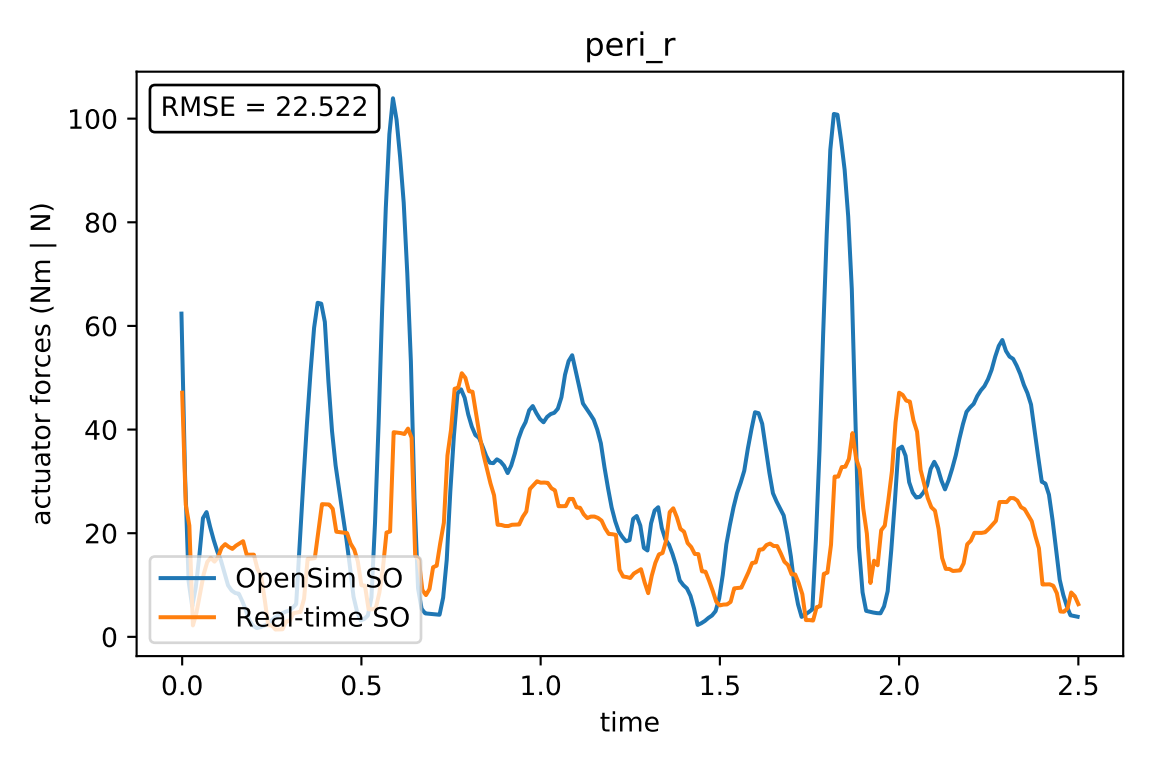

glut_max3_r
RMSE = 14.022
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
120
140
0.0
0.5
1.0
1.5
2.0
2.5

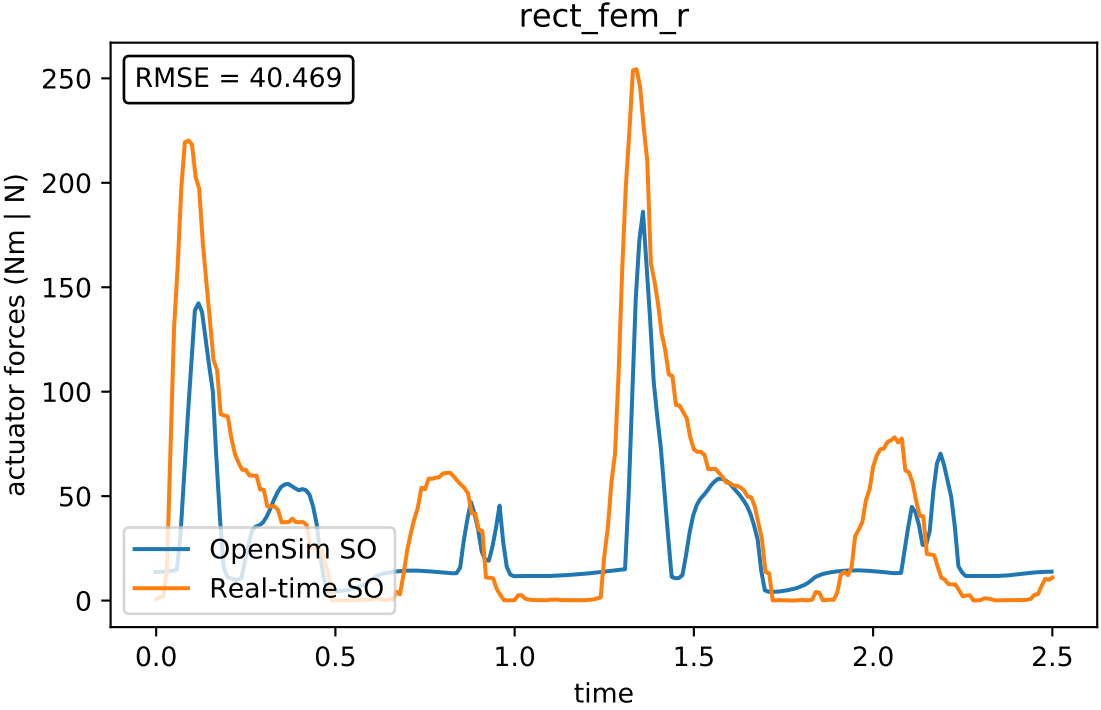

iliacus_r
RMSE = 117.234
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5

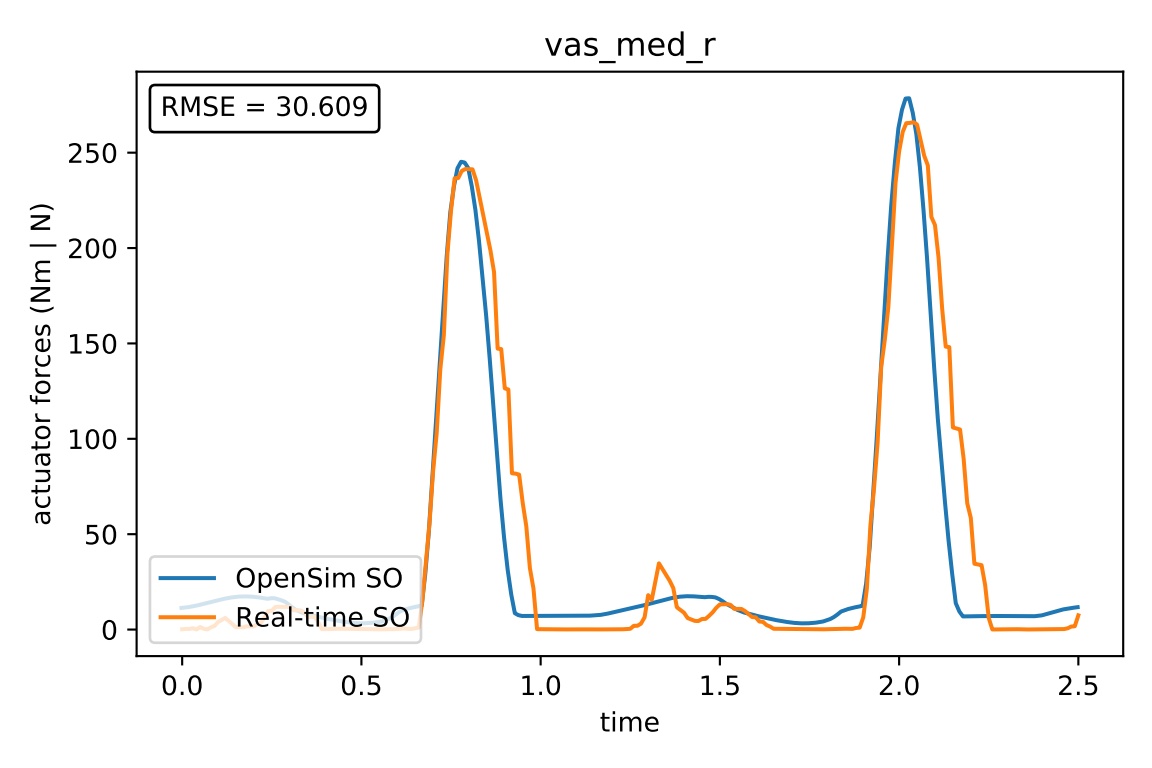

psoas_r
RMSE = 150.547
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
700
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5

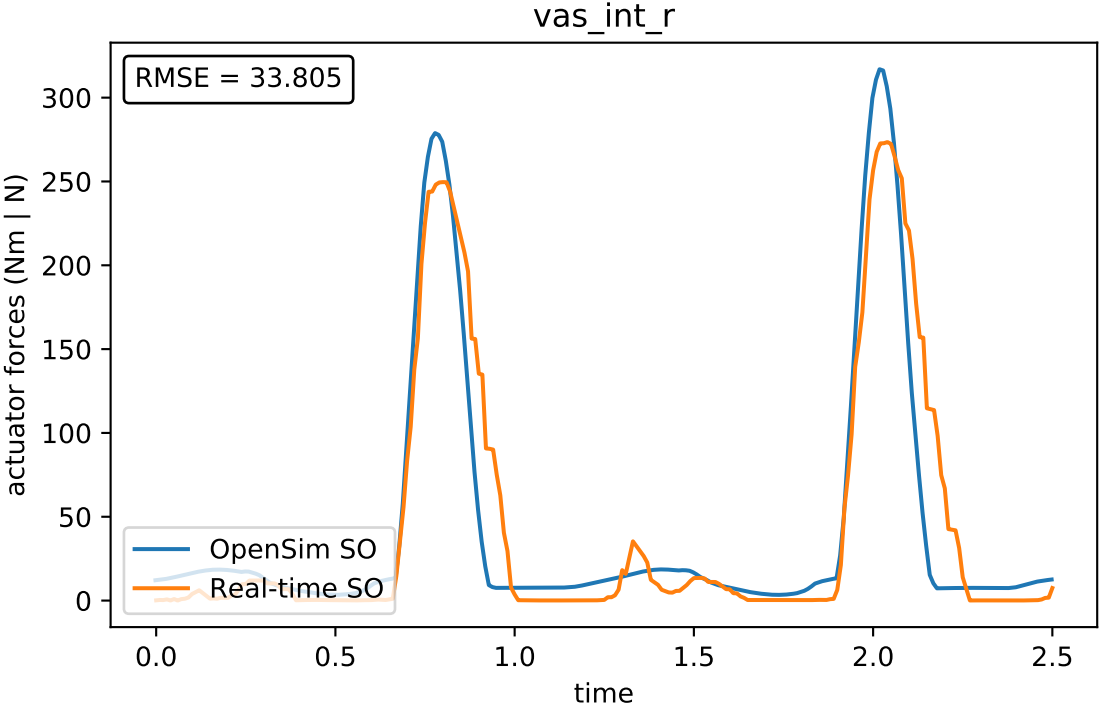

quad_fem_r
RMSE = 6.287
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
10
20
30
40
0.0
0.5
1.0
1.5
2.0
2.5

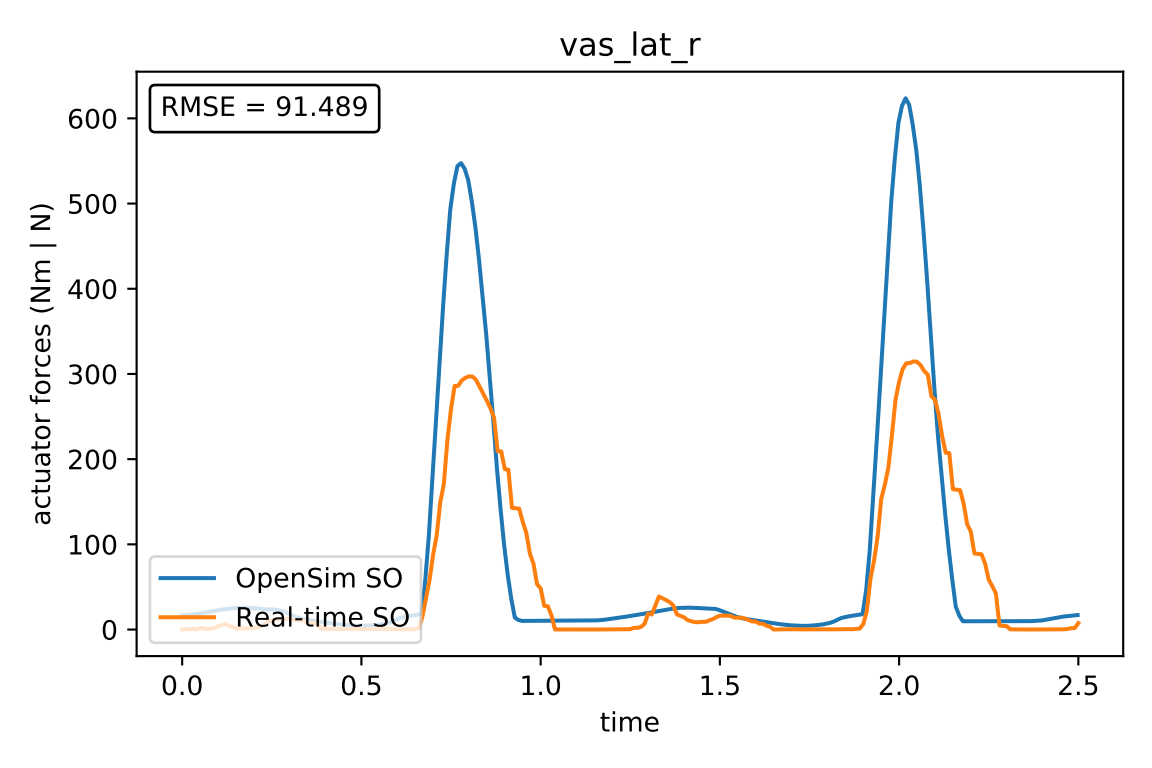

gem_r
RMSE = 3.169
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
2
4
6
8
10
12
14
16
0.0
0.5
1.0
1.5
2.0
2.5

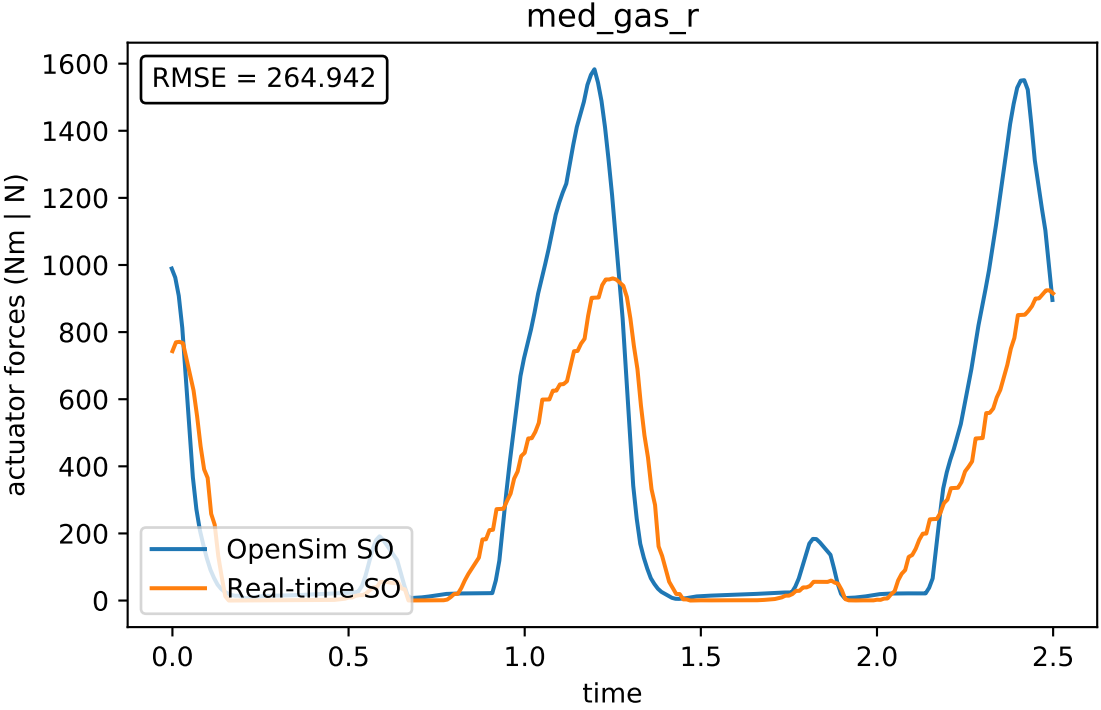

peri_r
RMSE = 22.522
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5

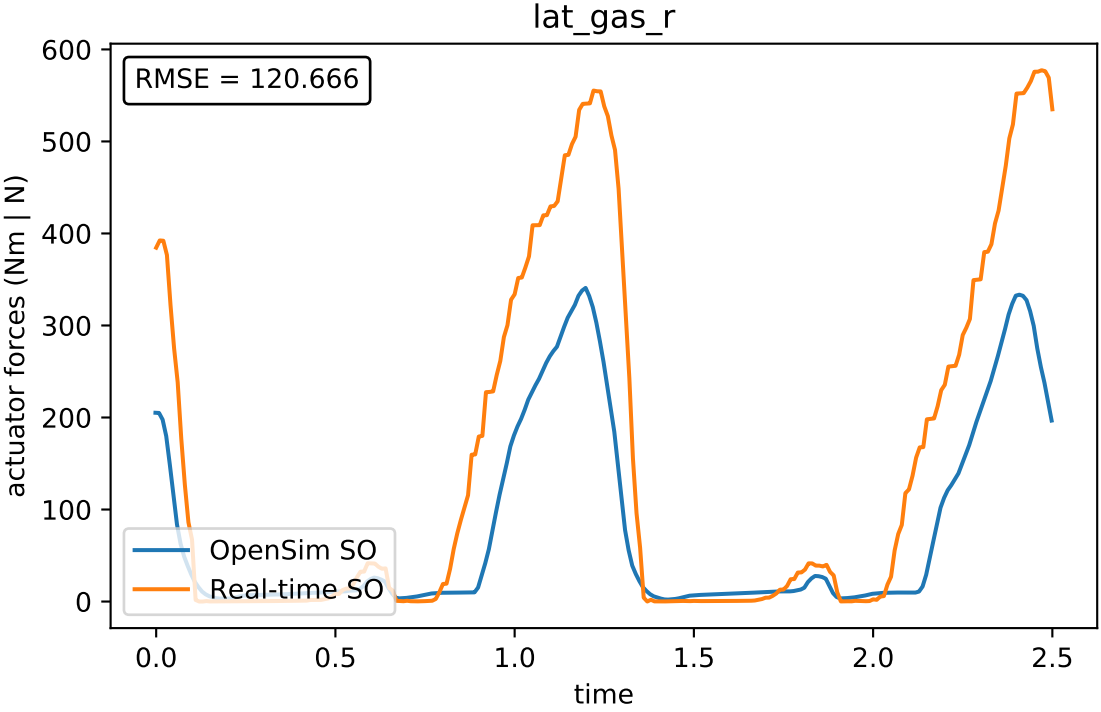

rect_fem_r
RMSE = 40.469
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
50
100
150
200
250
0.0
0.5
1.0
1.5
2.0
2.5

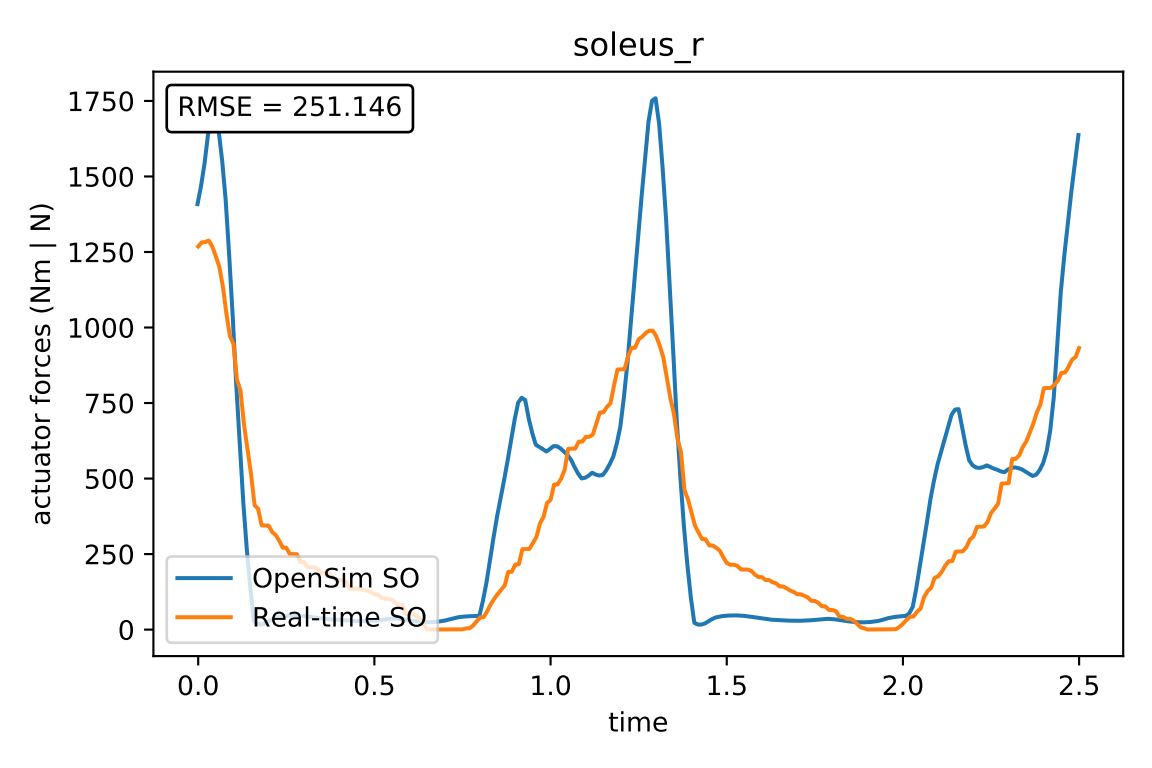

vas_med_r
RMSE = 30.609
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
50
100
150
200
250
0.0
0.5
1.0
1.5
2.0
2.5

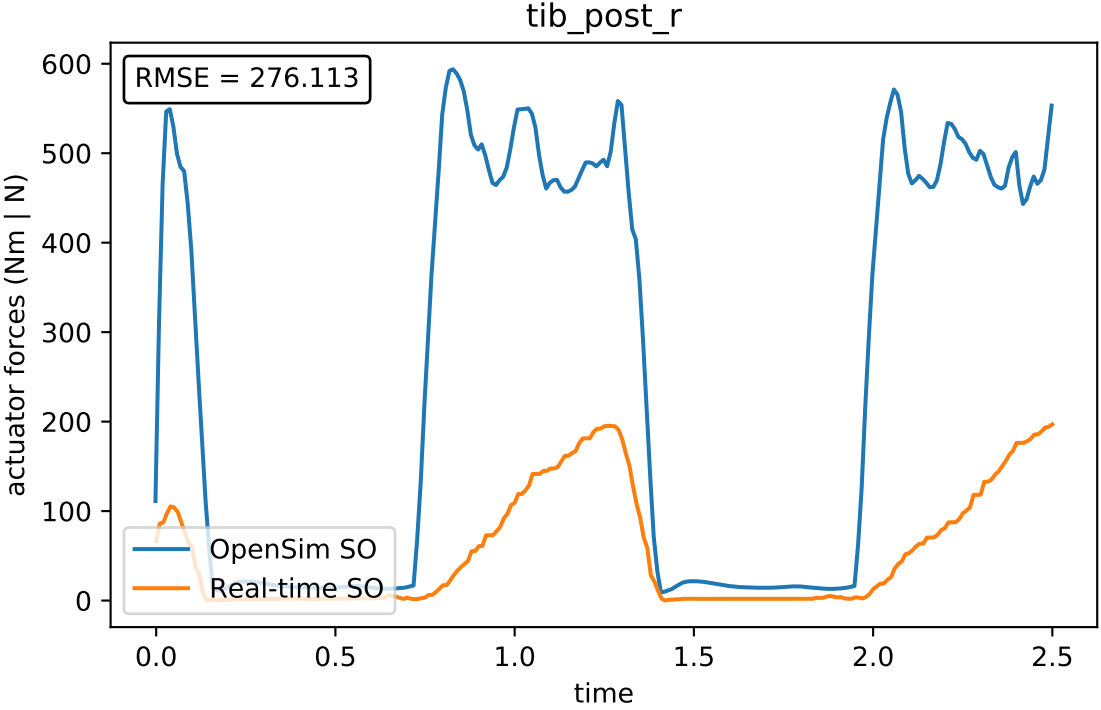

vas_int_r
RMSE = 33.805
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
50
100
150
200
250
300
0.0
0.5
1.0
1.5
2.0
2.5

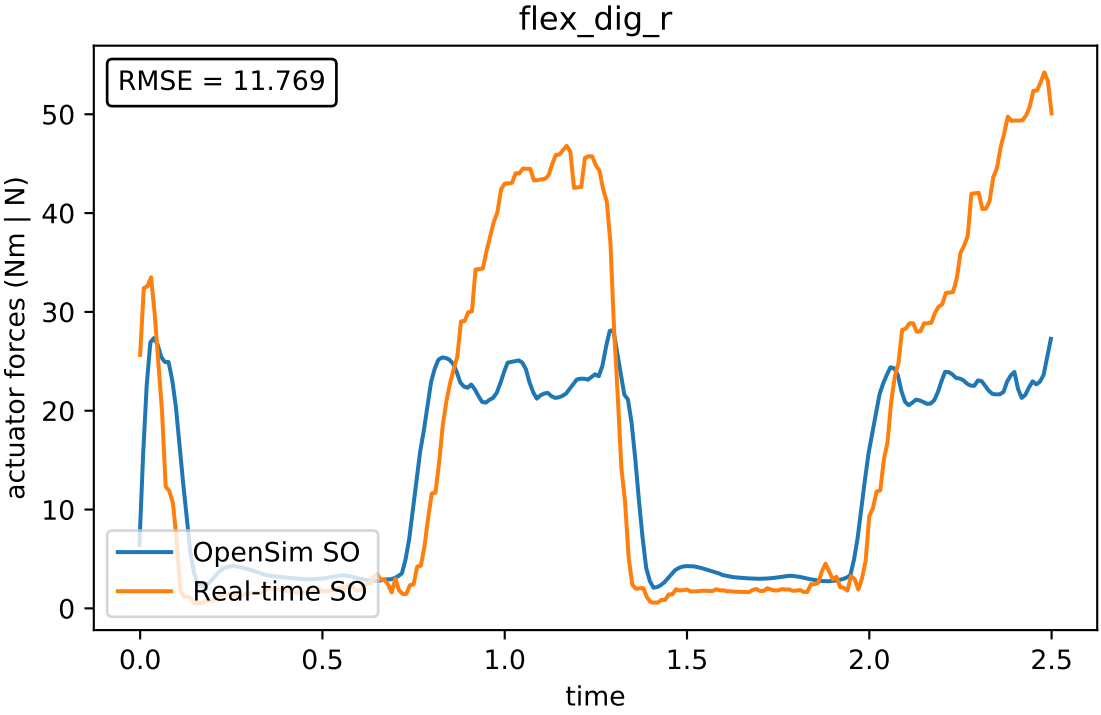

vas_lat_r
RMSE = 91.489
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
100
200
300
400
500
600
0.0
0.5
1.0
1.5
2.0
2.5

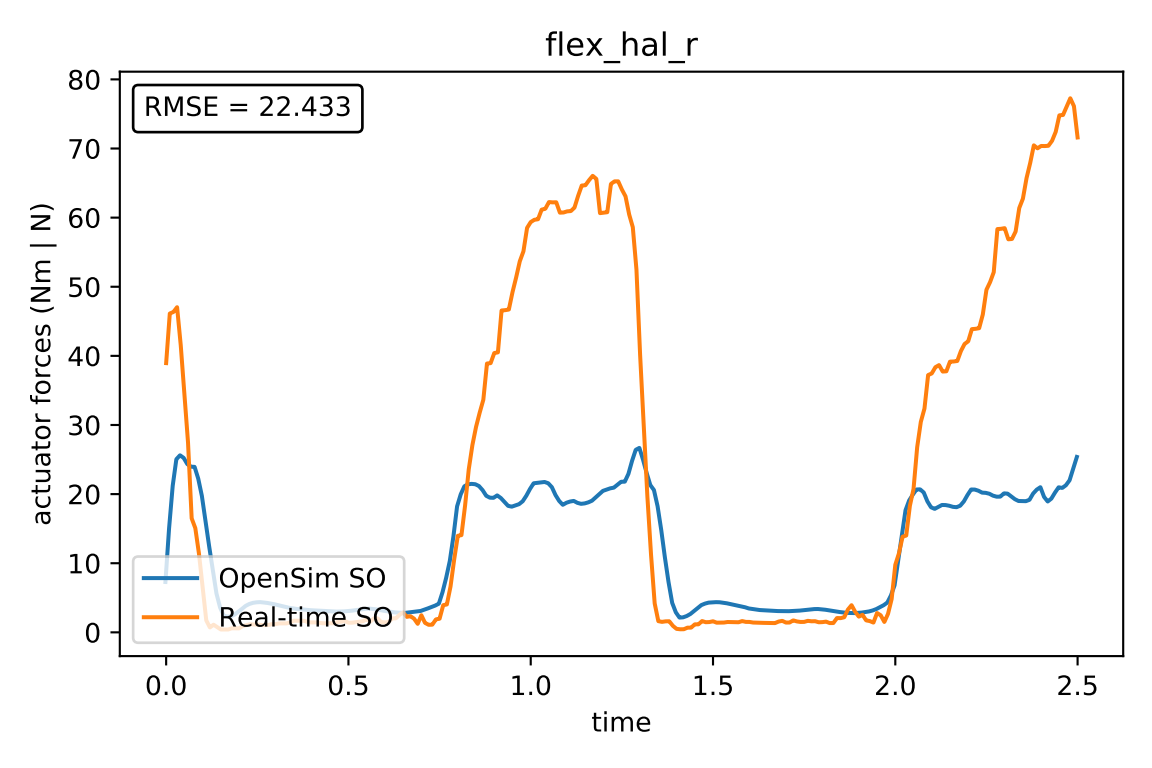

med_gas_r
RMSE = 264.942
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
1600
1400
1200
1000
800
600
400
200
0
0.0
0.5
1.0
1.5
2.0
2.5

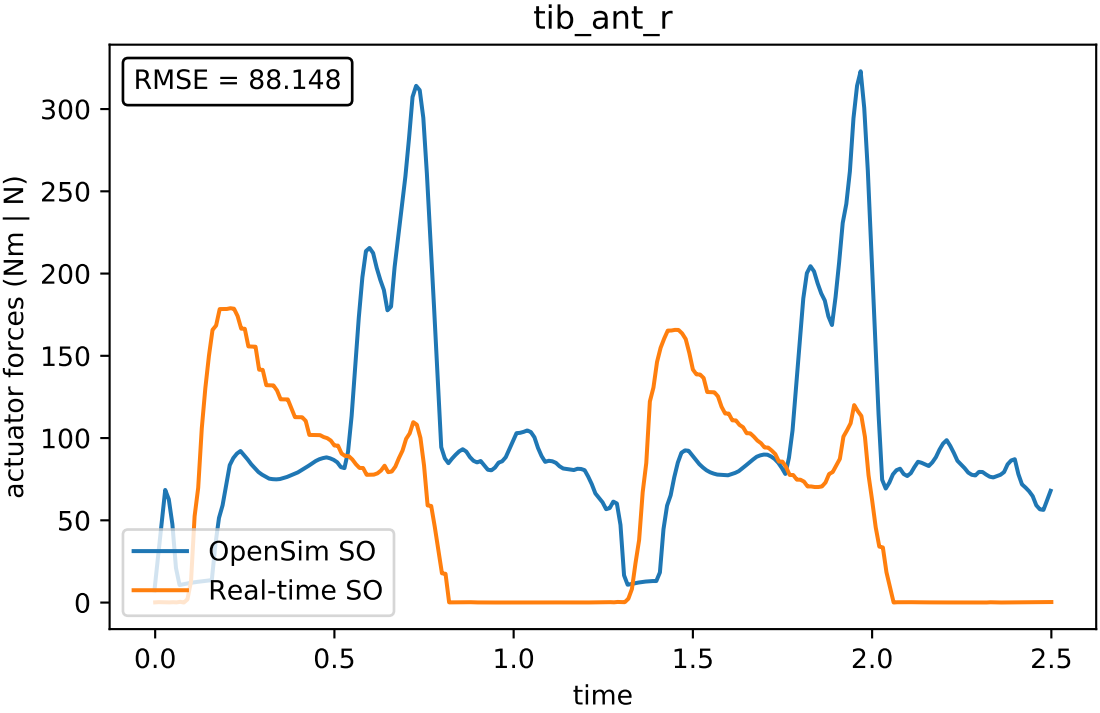

lat_gas_r
RMSE = 120.666
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
600
500
400
300
200
100
0
0.0
0.5
1.0
1.5
2.0
2.5

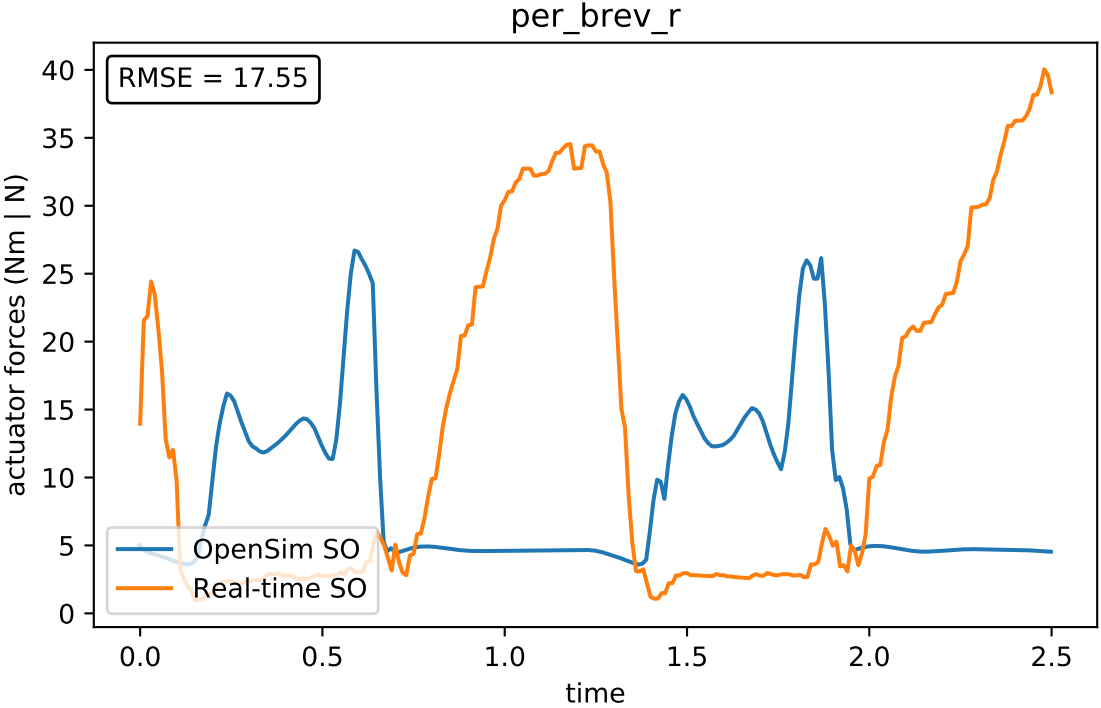

soleus_r
RMSE = 251.146
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
1750
1500
1250
1000
750
500
250
0
0.0
0.5
1.0
1.5
2.0
2.5

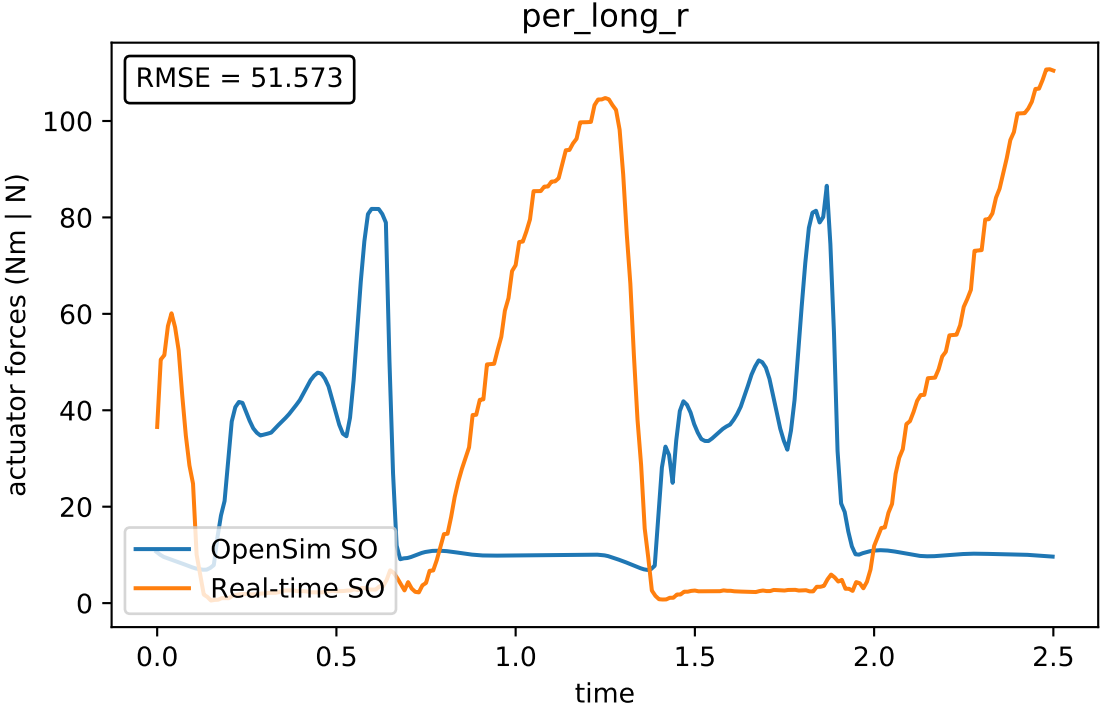

tib_post_r
RMSE = 276.113
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
100
200
300
400
500
600
0.0
0.5
1.0
1.5
2.0
2.5

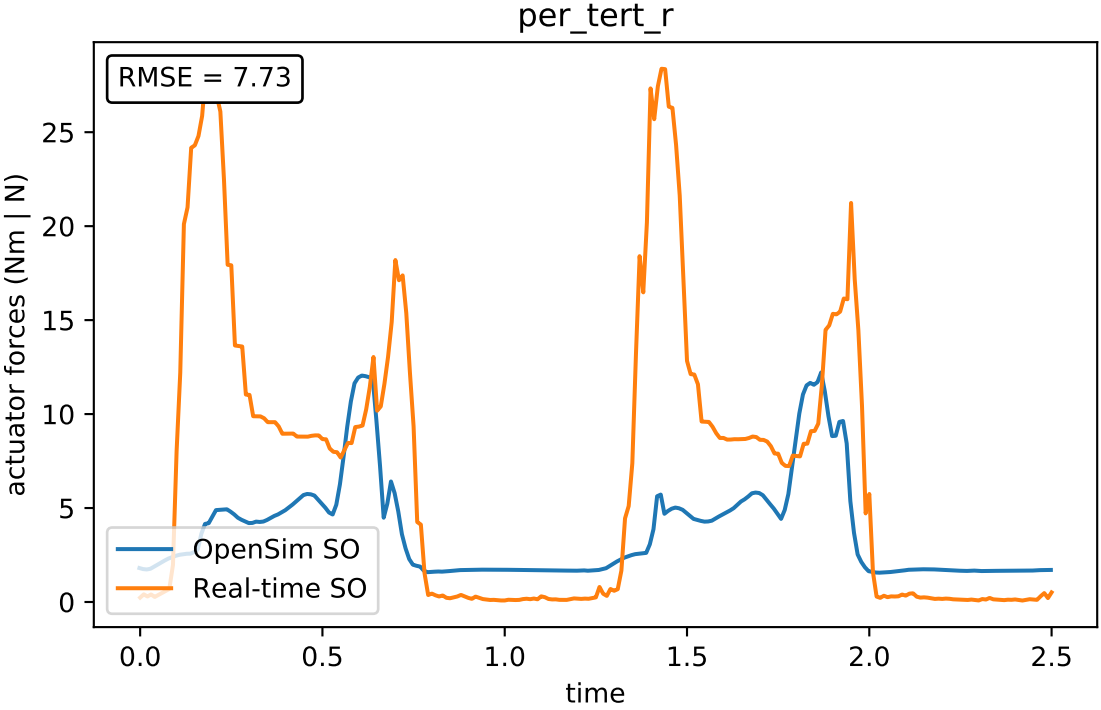

flex_dig_r
RMSE = 11.769
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
10
20
30
40
50
0.0
0.5
1.0
1.5
2.0
2.5

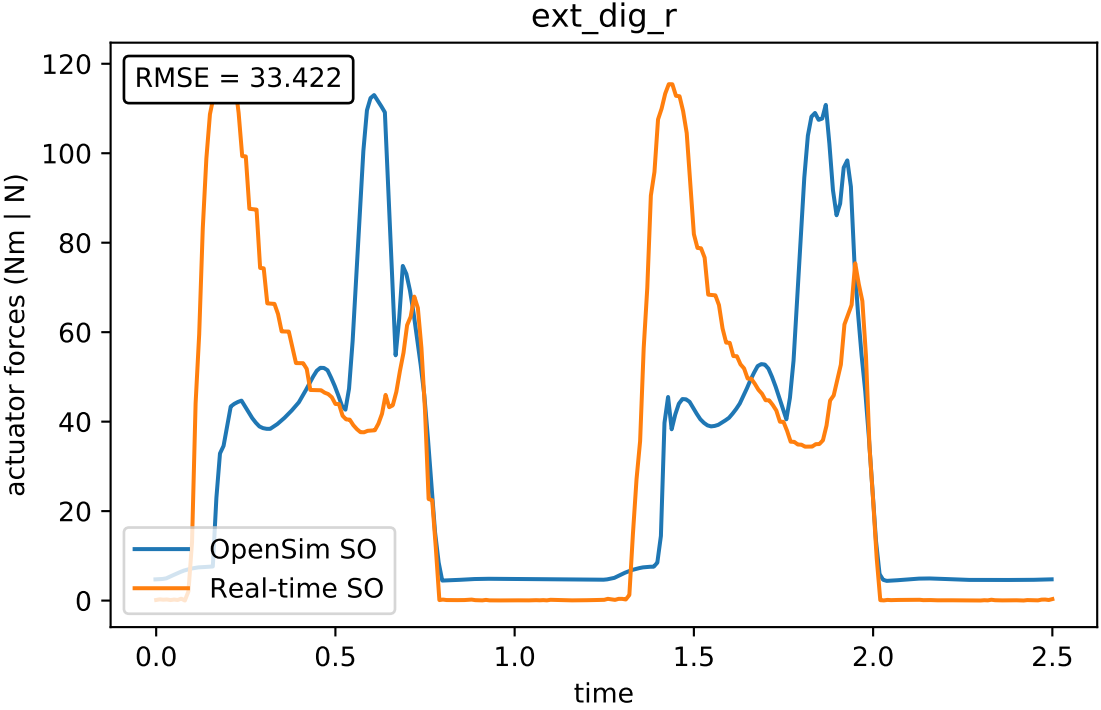

flex_hal_r
RMSE = 22.433
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
10
20
30
40
50
60
70
80
0.0
0.5
1.0
1.5
2.0
2.5

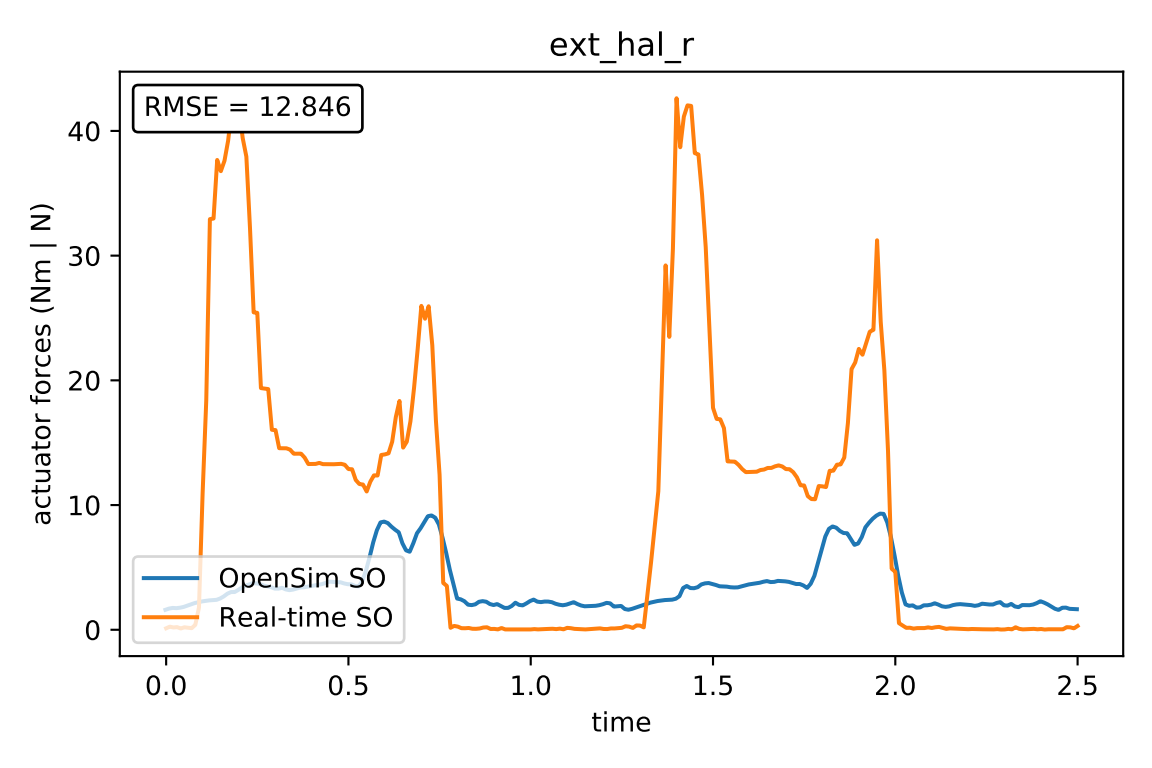

tib_ant_r
RMSE = 88.148
actuator forces (Nm | N)
300
250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5
time
OpenSim SO
Real-time SO

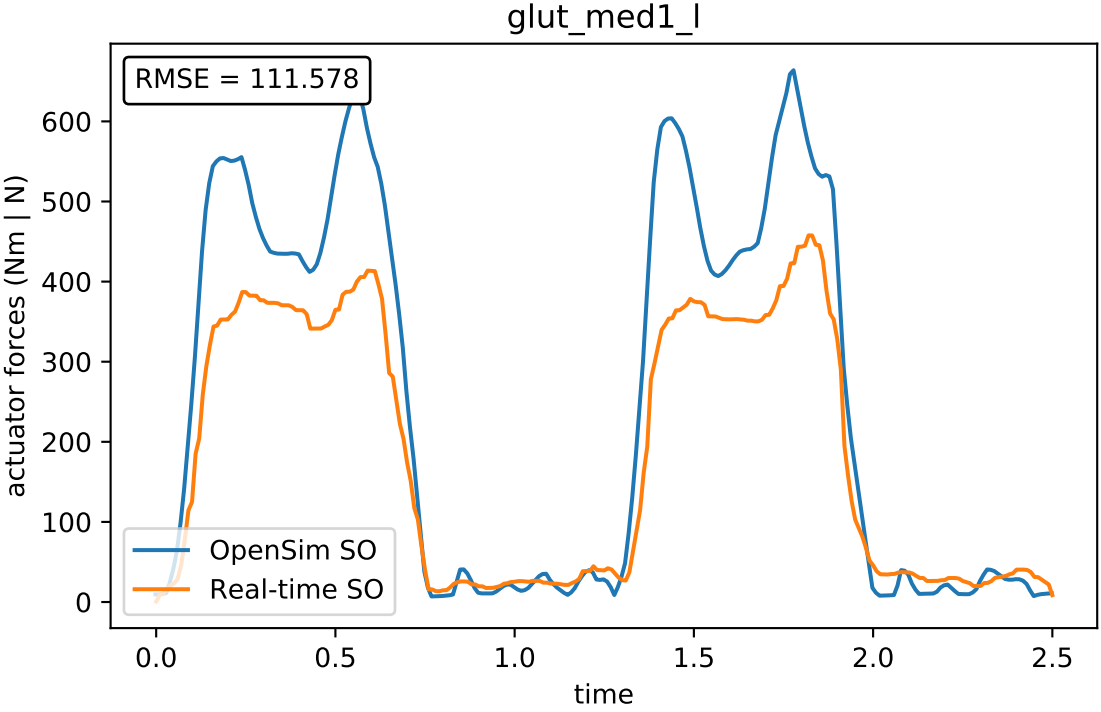

per_brev_r
RMSE = 17.55
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
5
10
15
20
25
30
35
40
0.0
0.5
1.0
1.5
2.0
2.5

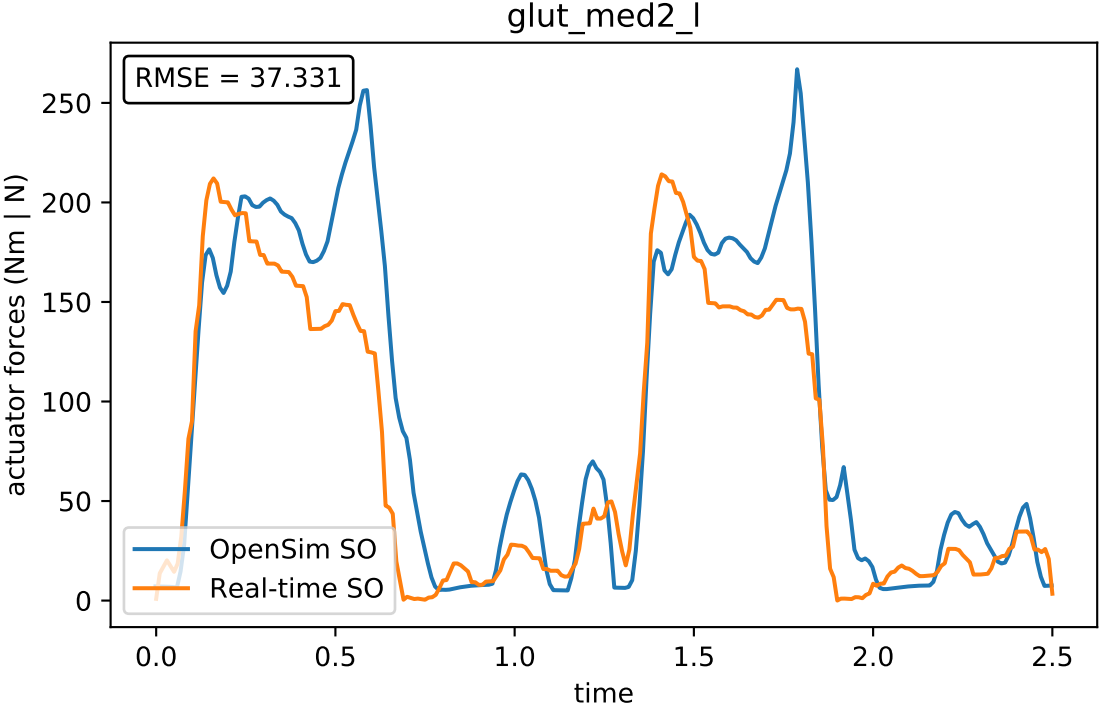

per_long_r
RMSE = 51.573
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5

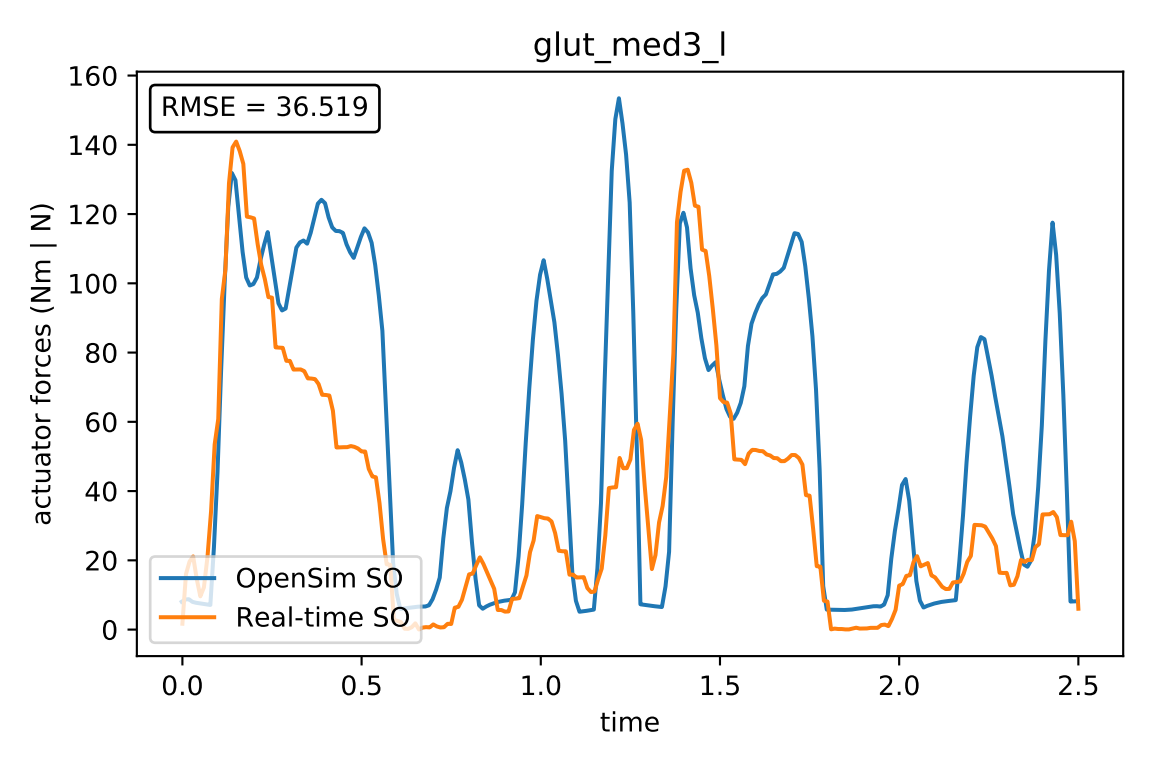

per_tert_r
RMSE = 7.73
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
5
10
15
20
25
0.0
0.5
1.0
1.5
2.0
2.5

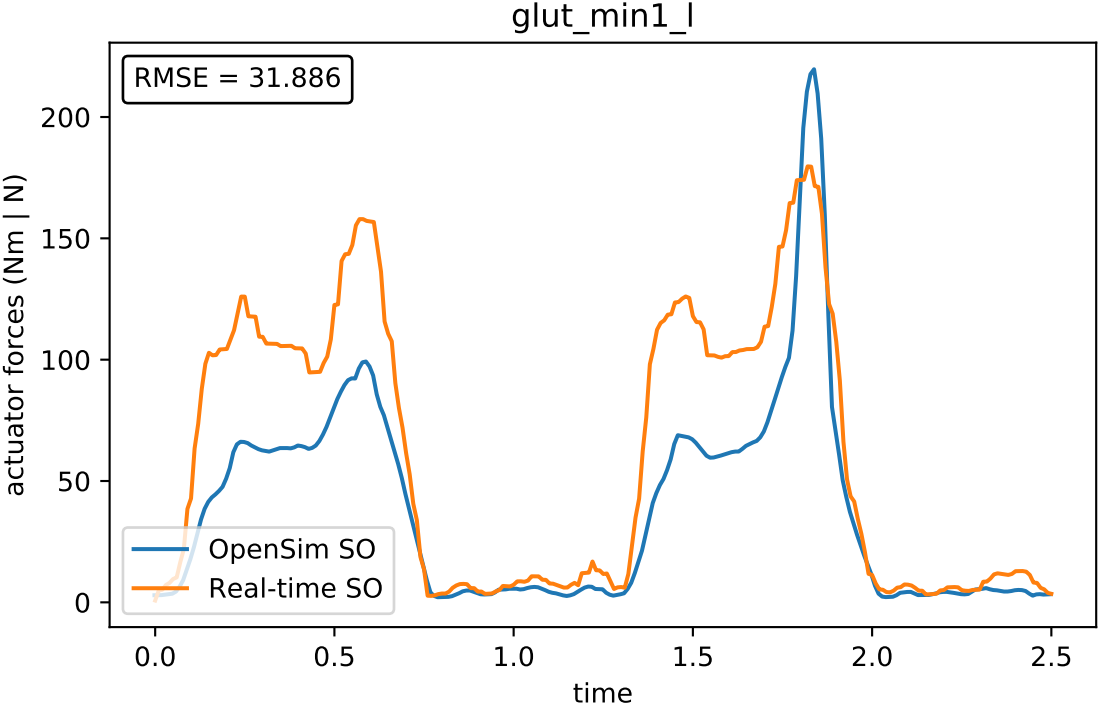

ext_dig_r
RMSE = 33.422
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
120
100
80
60
40
20
0
0.0
0.5
1.0
1.5
2.0
2.5

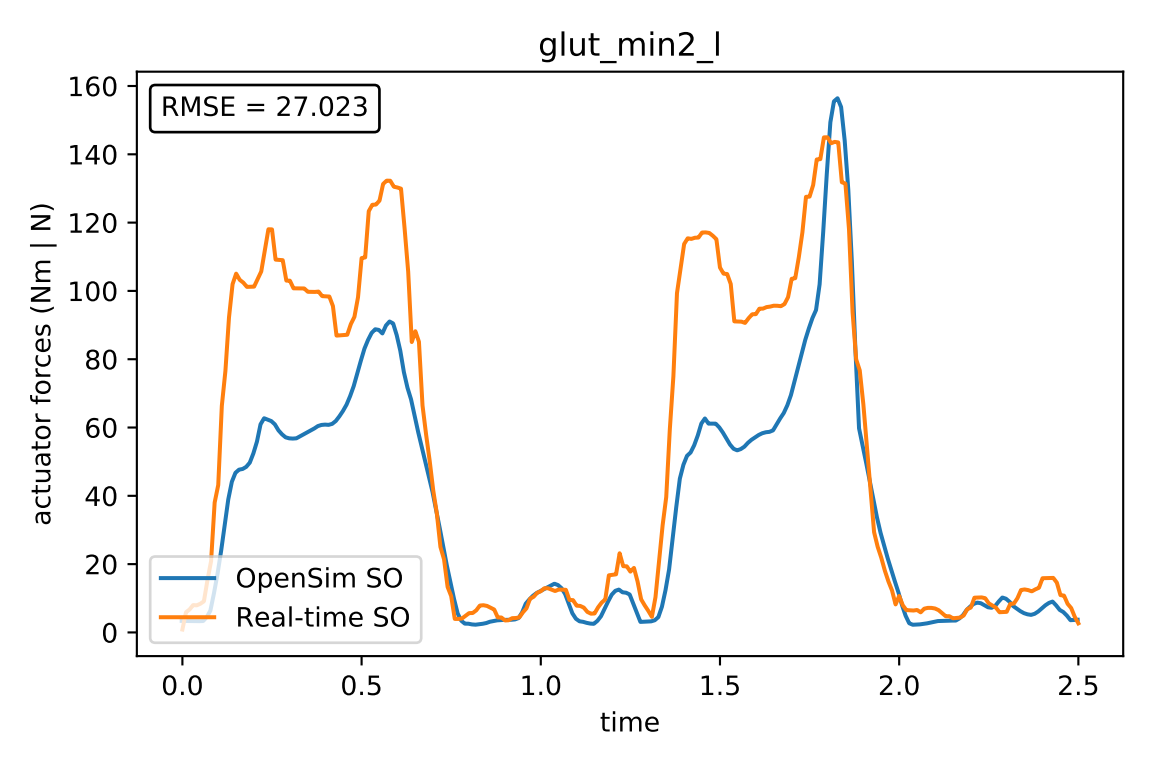

ext_hal_r
RMSE = 12.846
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
10
20
30
40
0.0
0.5
1.0
1.5
2.0
2.5

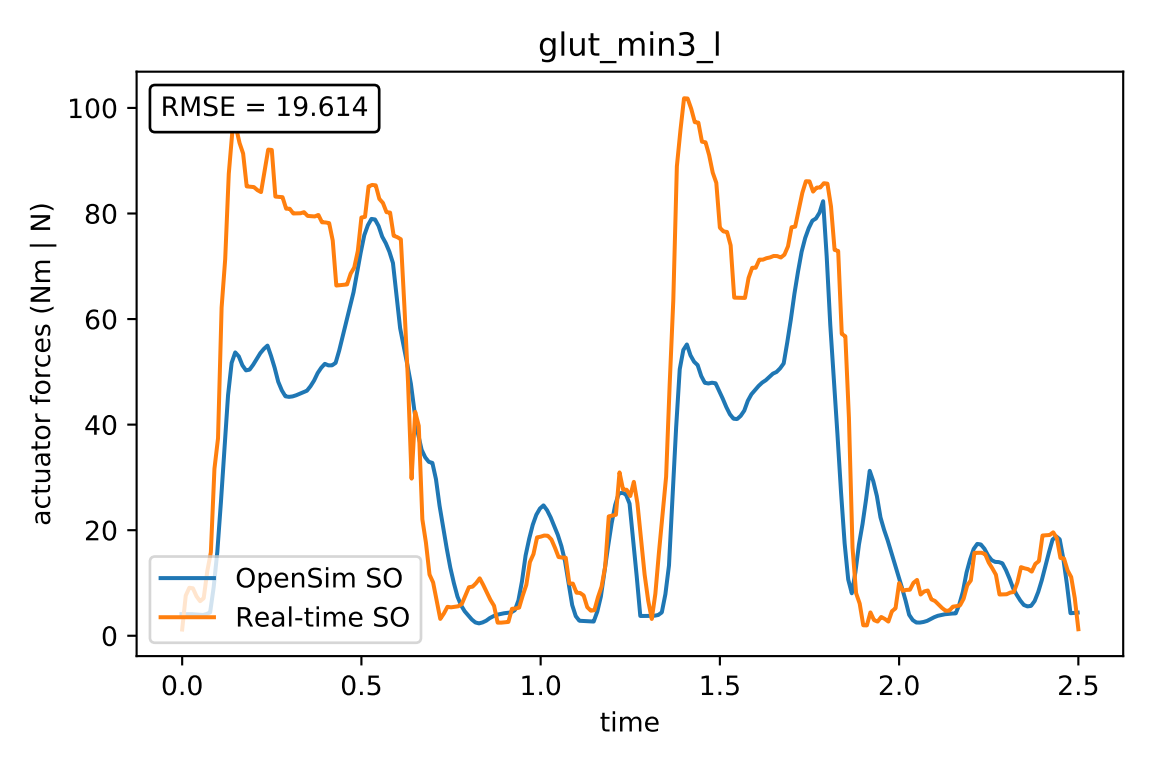

glut_med1_l
RMSE = 111.578
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
100
200
300
400
500
600
0.0
0.5
1.0
1.5
2.0
2.5

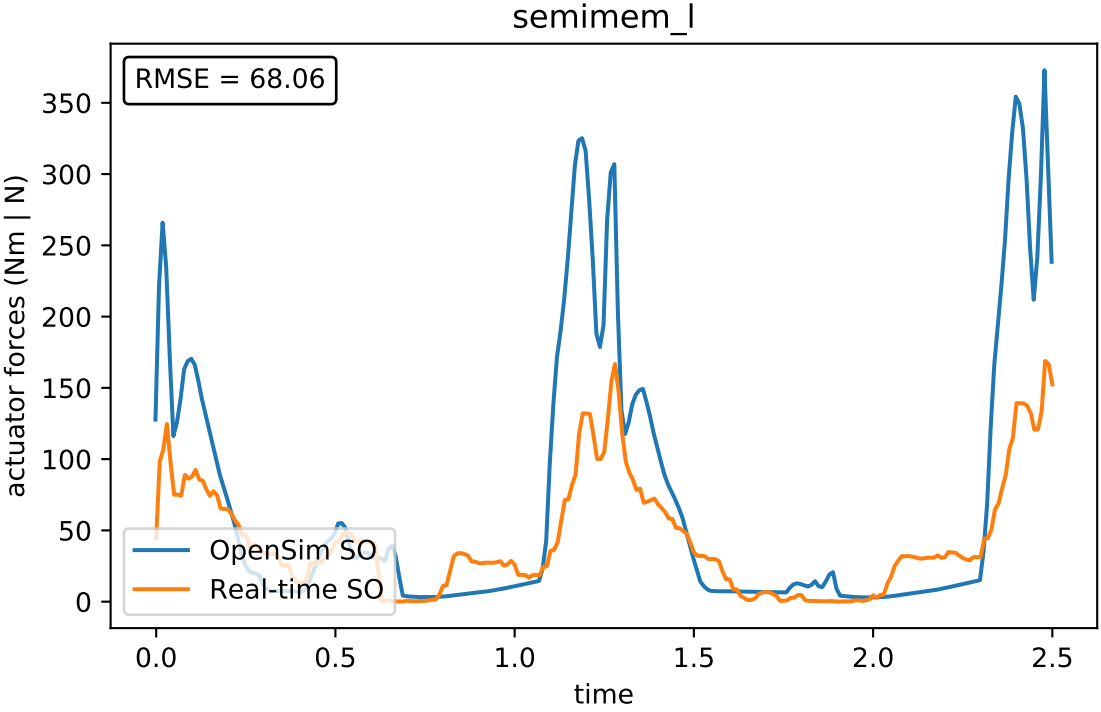

glut_med2_l
RMSE = 37.331
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
50
100
150
200
250
0.0
0.5
1.0
1.5
2.0
2.5

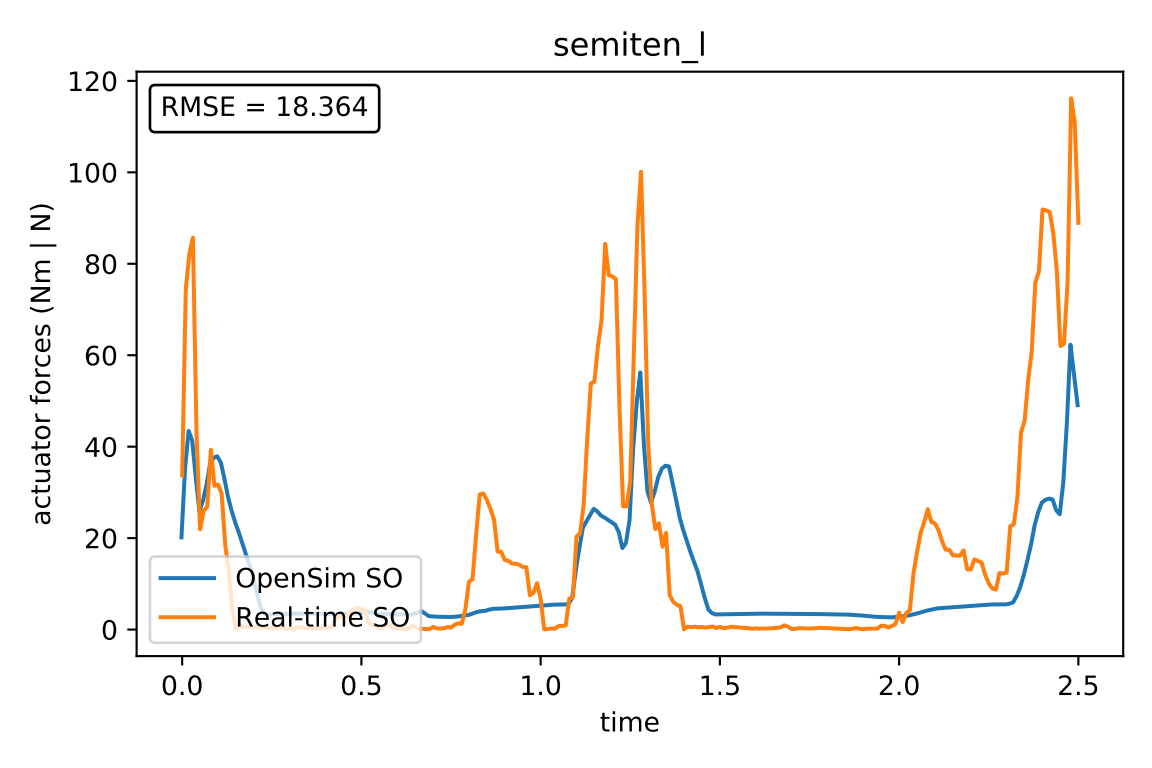

glut_med3_l
RMSE = 36.519
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
160
140
120
100
80
60
40
20
0
0.0
0.5
1.0
1.5
2.0
2.5

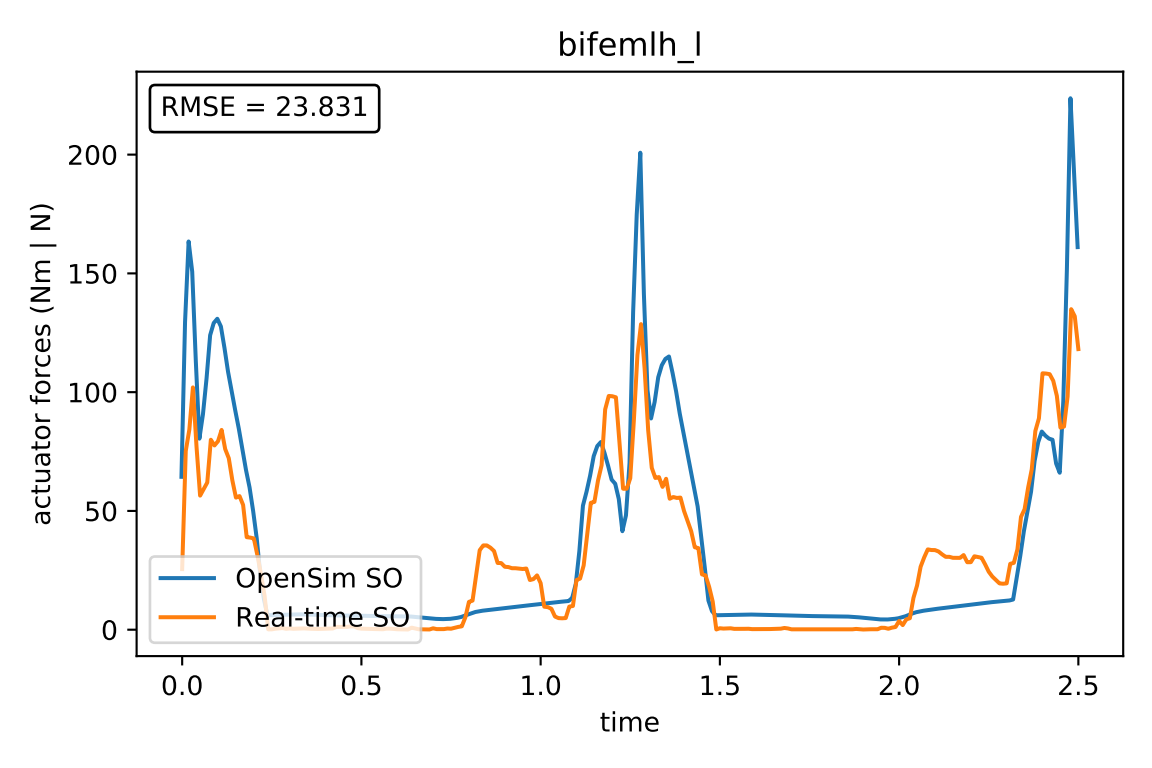

glut_min1_l
RMSE = 31.886
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
50
100
150
200
0.0
0.5
1.0
1.5
2.0
2.5

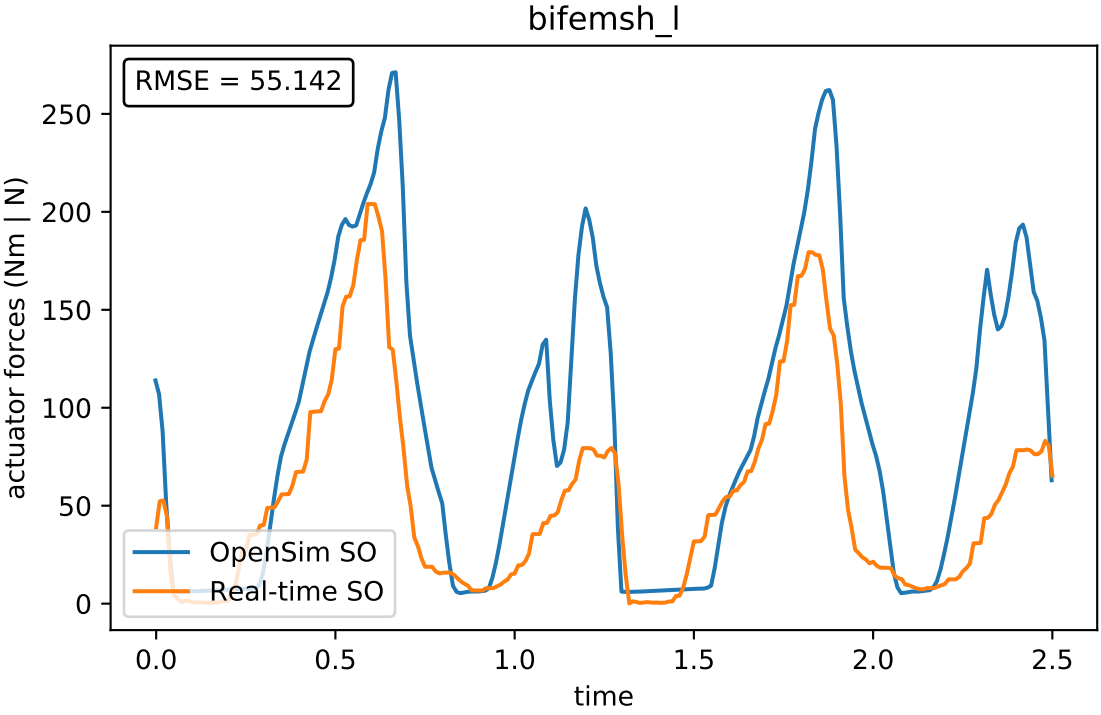

glut_min2_l
RMSE = 27.023
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
120
140
160
0.0
0.5
1.0
1.5
2.0
2.5

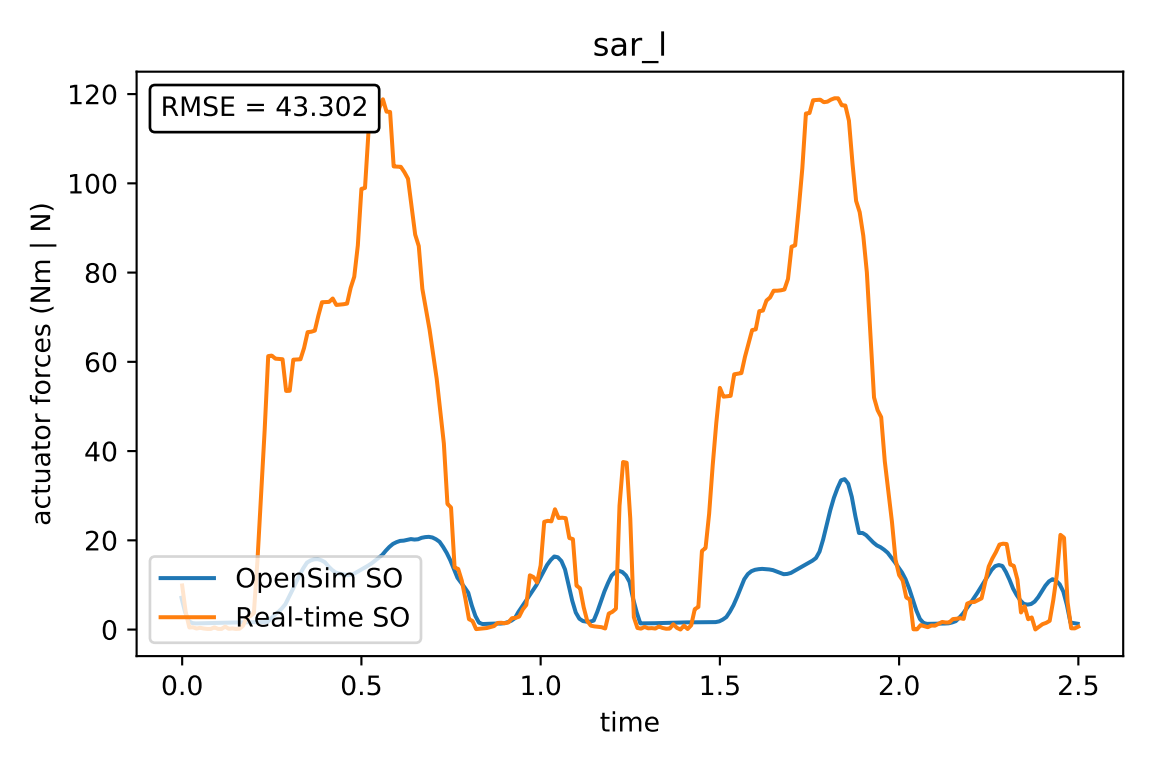

glut_min3_l
RMSE = 19.614
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5

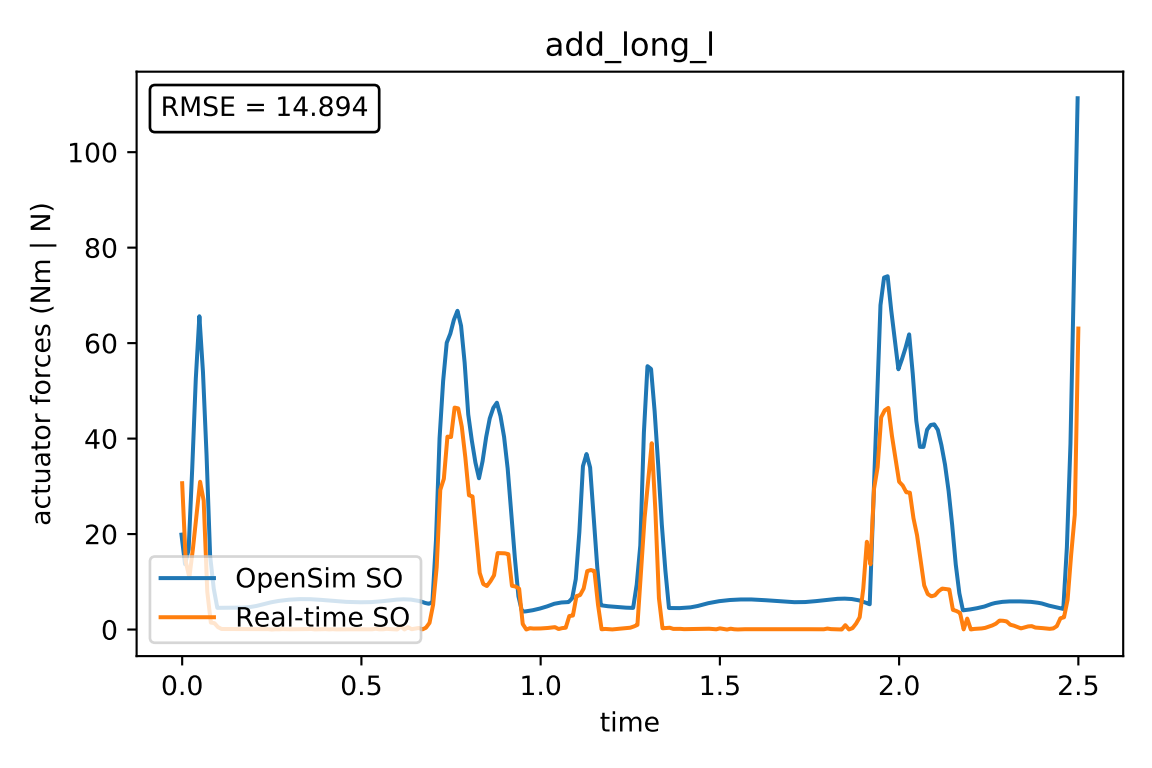

semimem_l
RMSE = 68.06
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
50
100
150
200
250
300
350
0.0
0.5
1.0
1.5
2.0
2.5

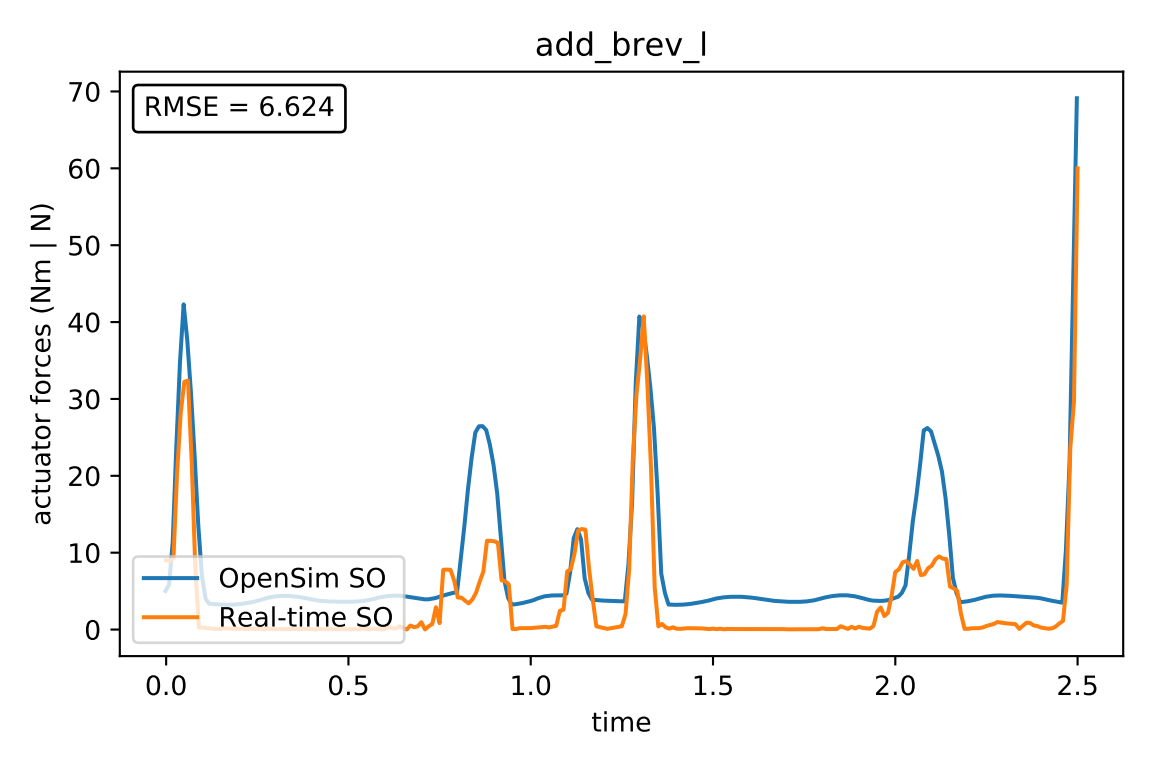

semiten_l
RMSE = 18.364
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
120
100
80
60
40
20
0
0.0
0.5
1.0
1.5
2.0
2.5

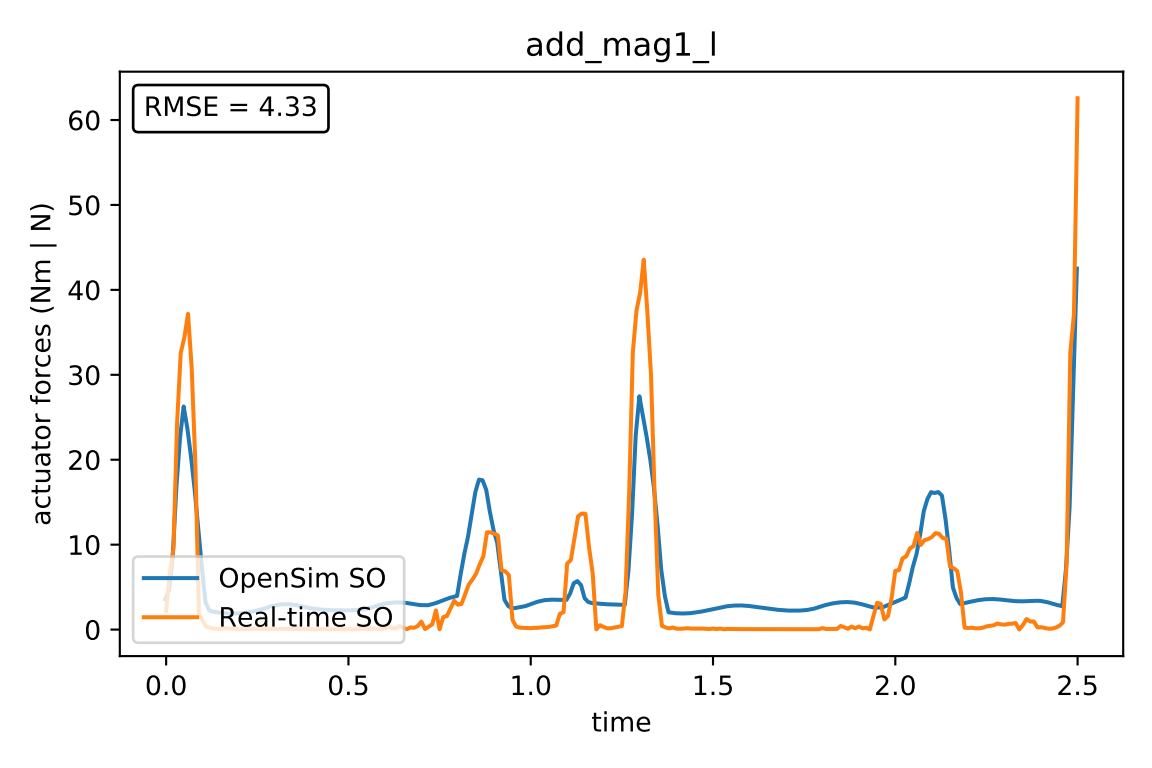

bifemlh_l
RMSE = 23.831
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
50
100
150
200
0.0
0.5
1.0
1.5
2.0
2.5

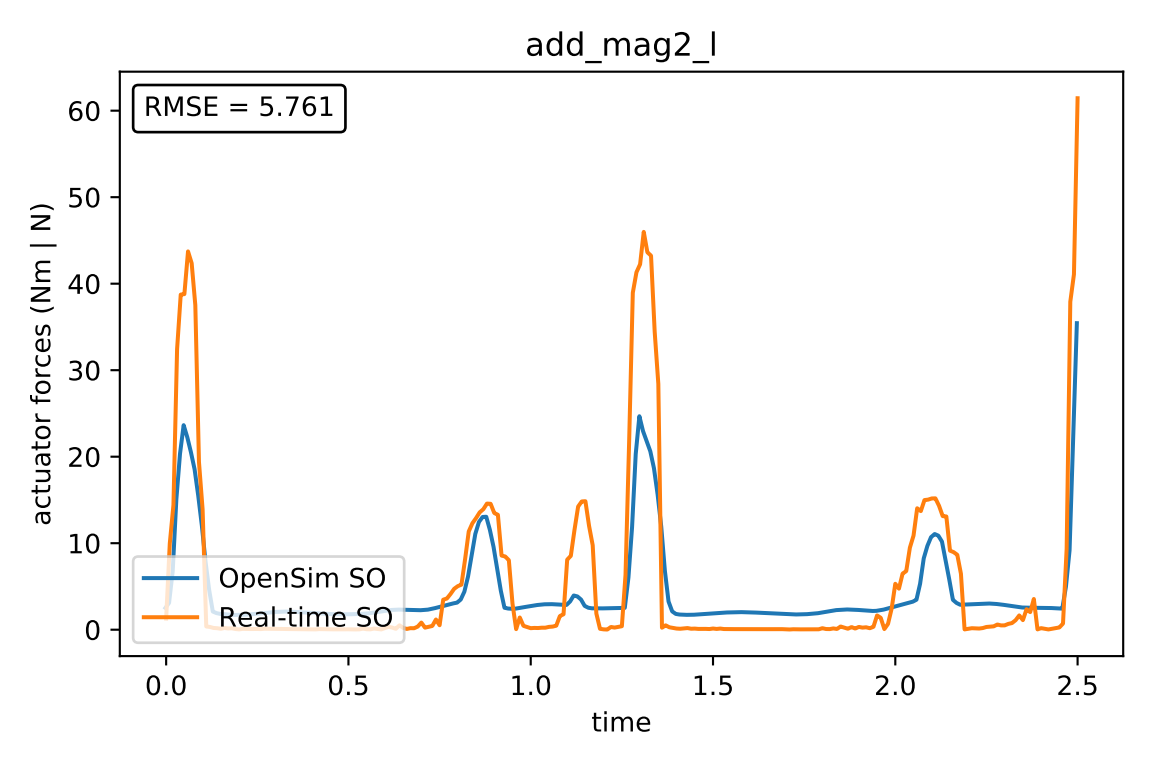

bifemsh_l
RMSE = 55.142
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
50
100
150
200
250
0.0
0.5
1.0
1.5
2.0
2.5

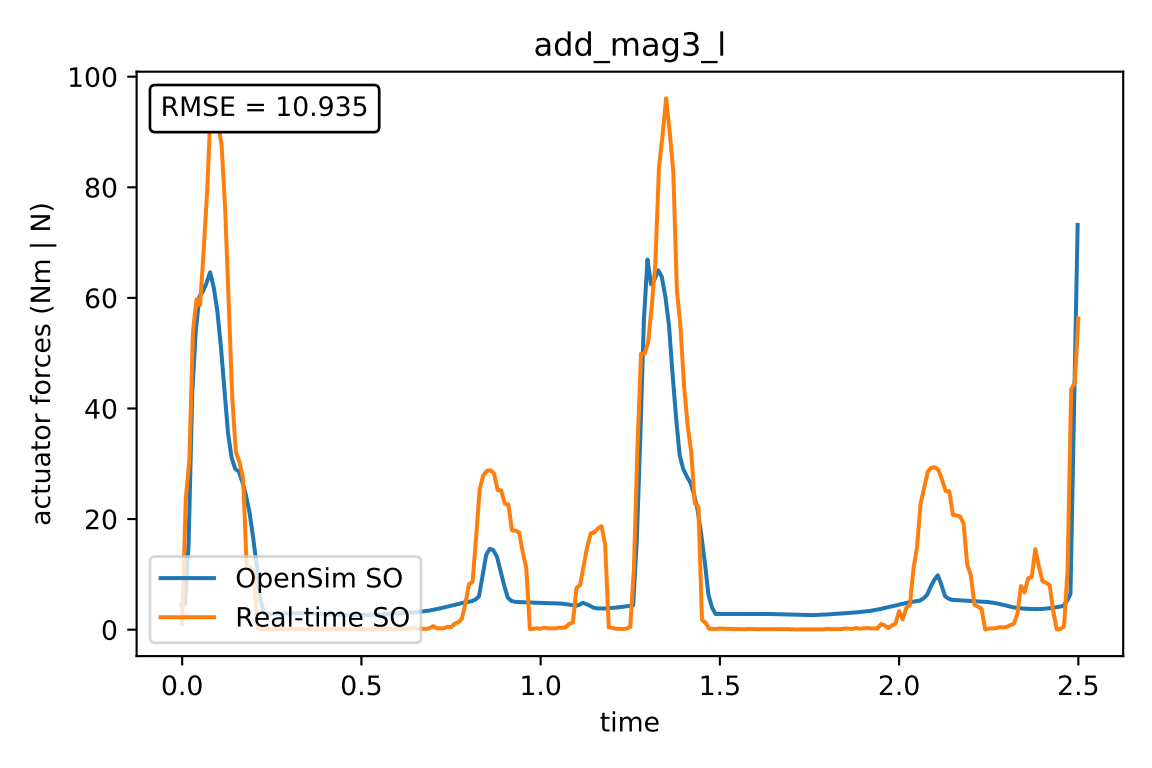

sar_l
RMSE = 43.302
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
120
100
80
60
40
20
0
0.0
0.5
1.0
1.5
2.0
2.5

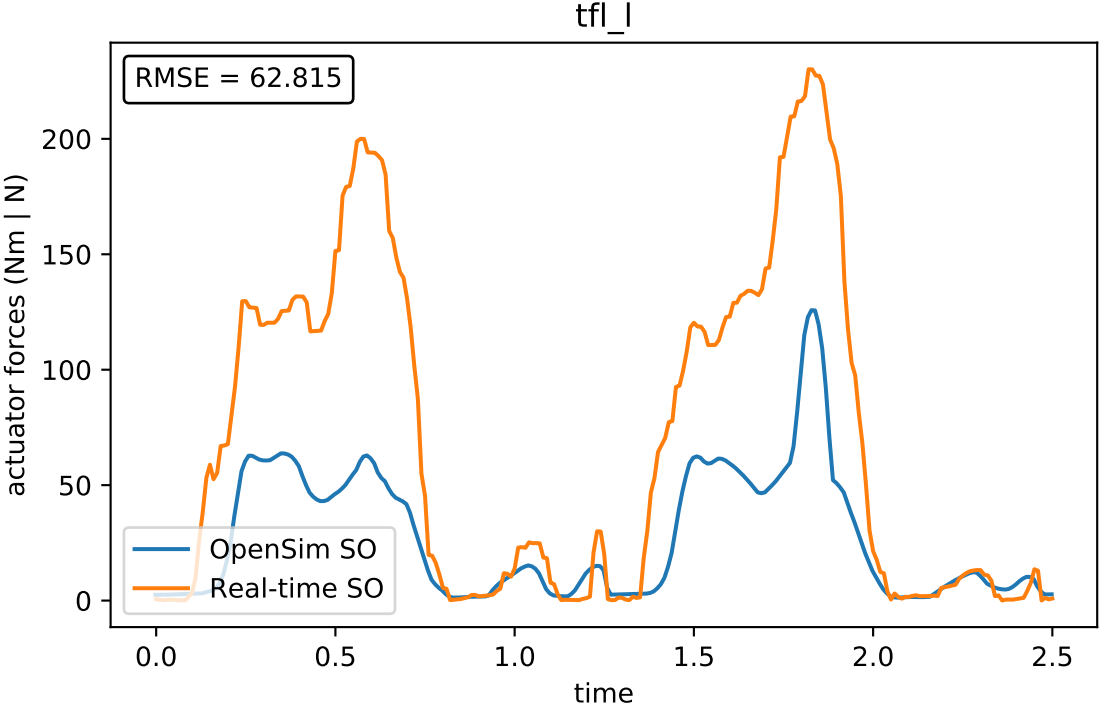

add_long_l
RMSE = 14.894
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5

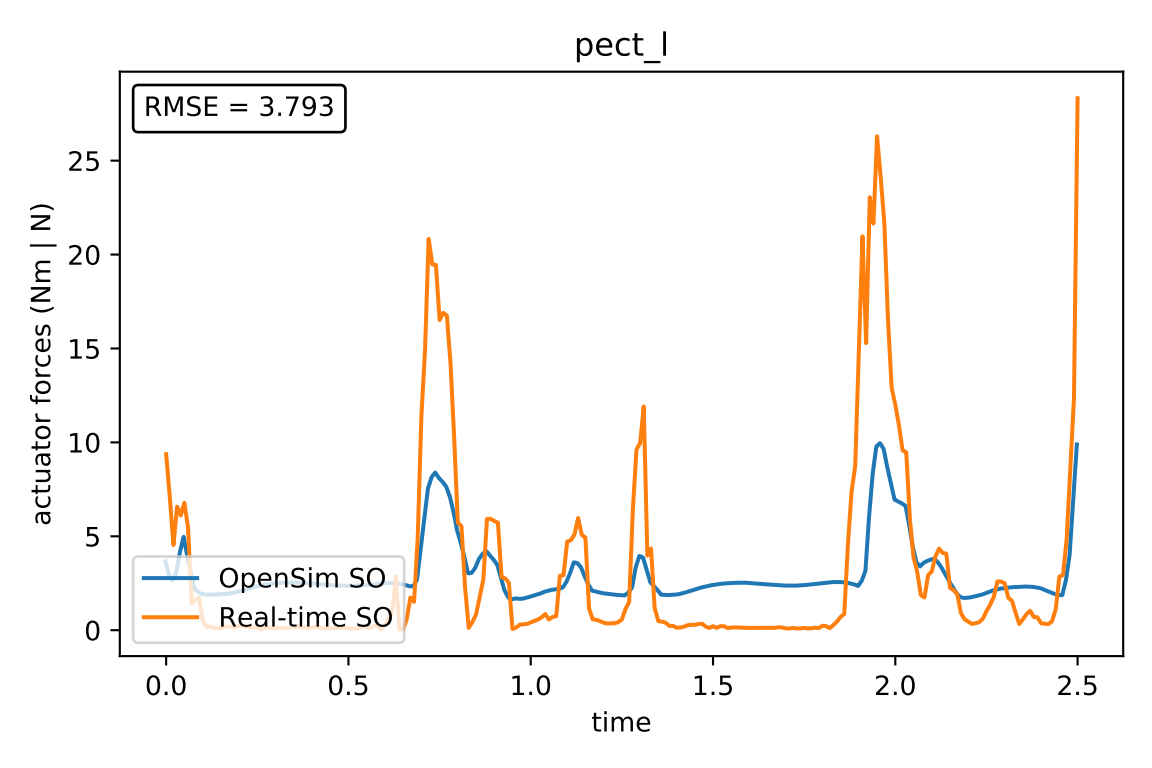

add_brev_l
RMSE = 6.624
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
10
20
30
40
50
60
70
0.0
0.5
1.0
1.5
2.0
2.5

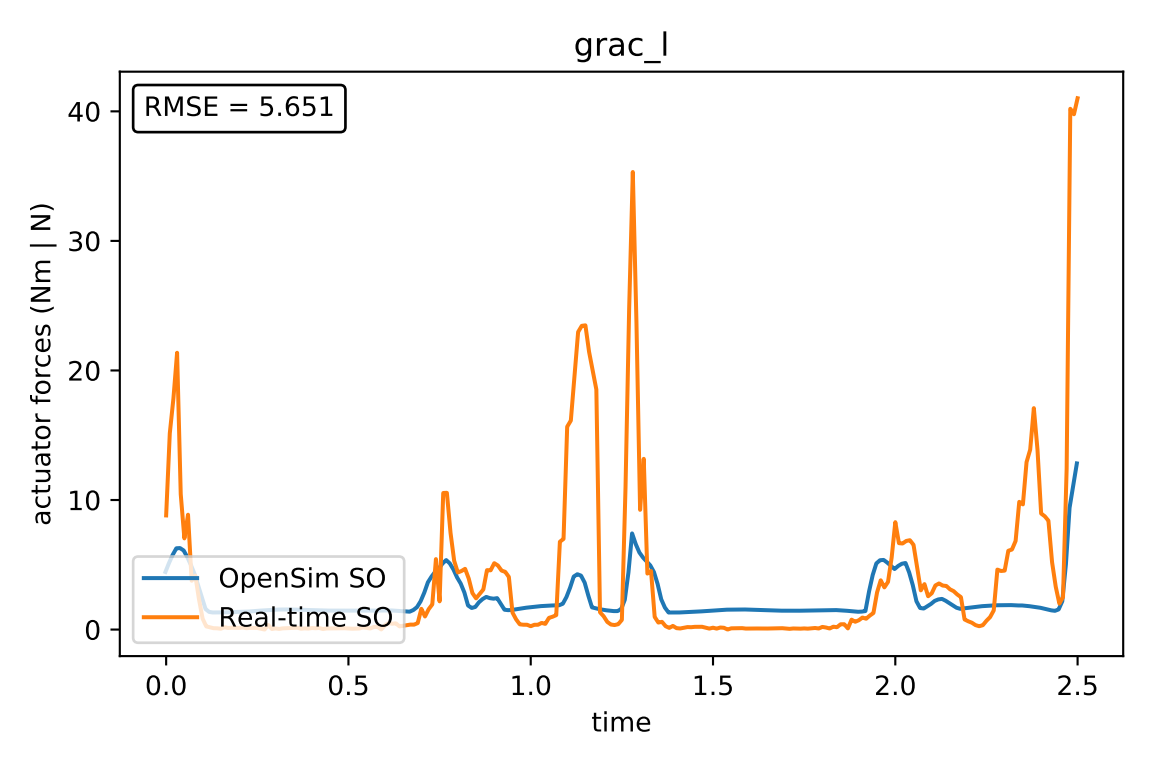

add_mag1_l
RMSE = 4.33
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
10
20
30
40
50
60
0.0
0.5
1.0
1.5
2.0
2.5

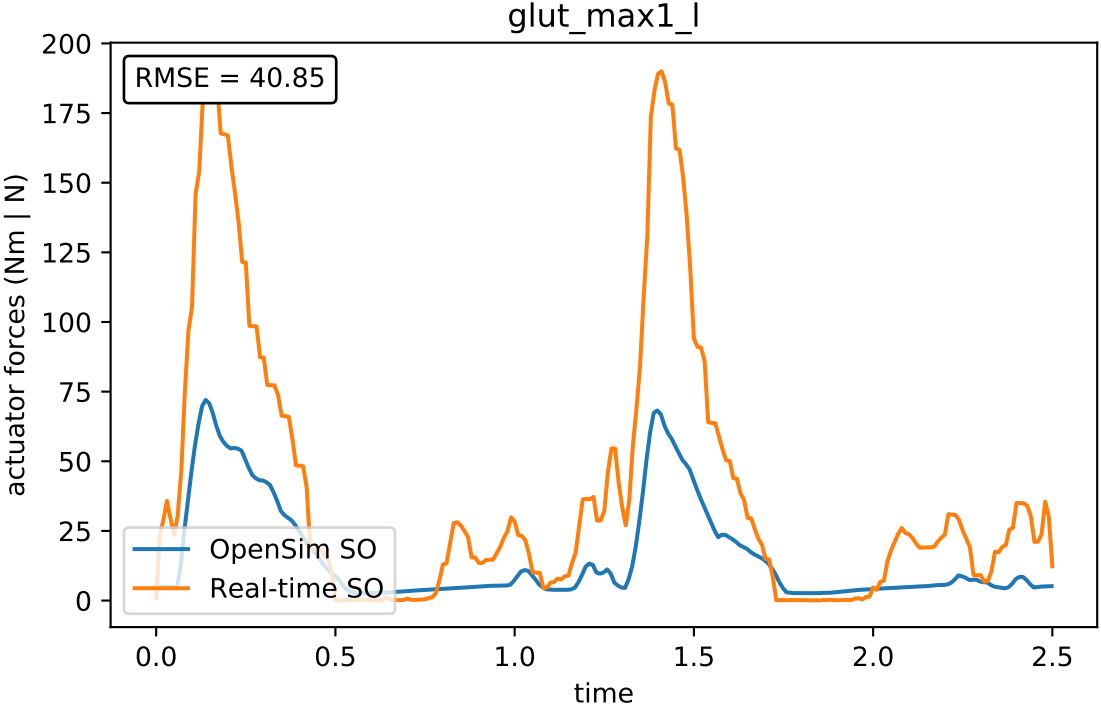

add_mag2_l
RMSE = 5.761
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
10
20
30
40
50
60
0.0
0.5
1.0
1.5
2.0
2.5

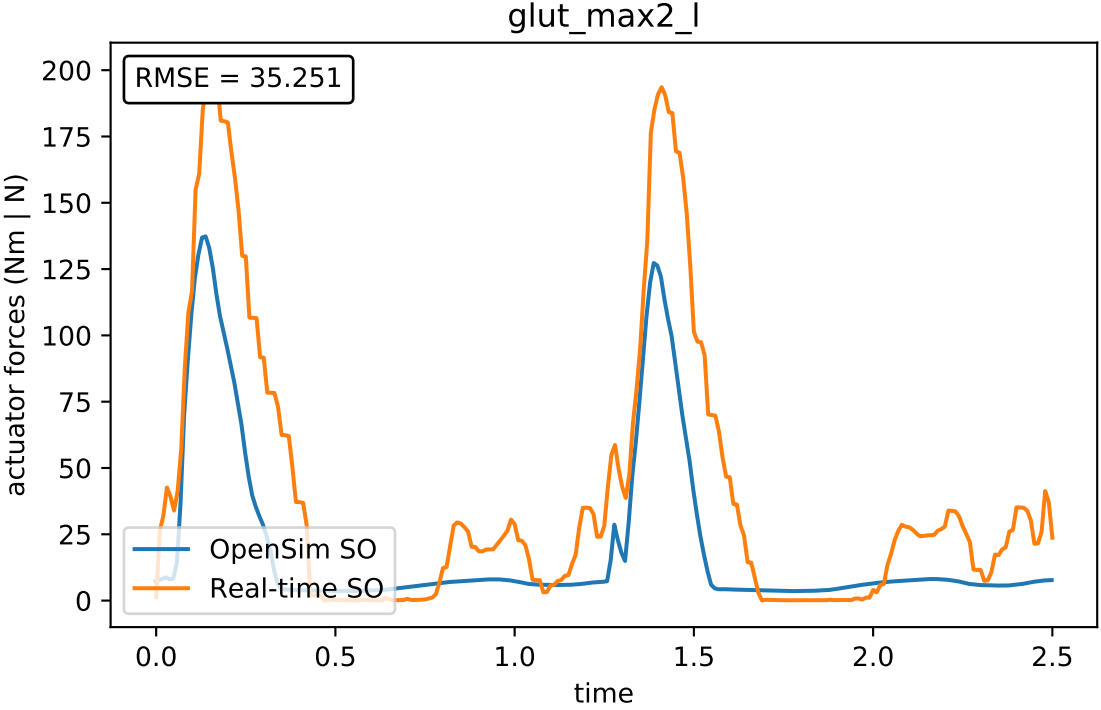

add_mag3_l
RMSE = 10.935
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5

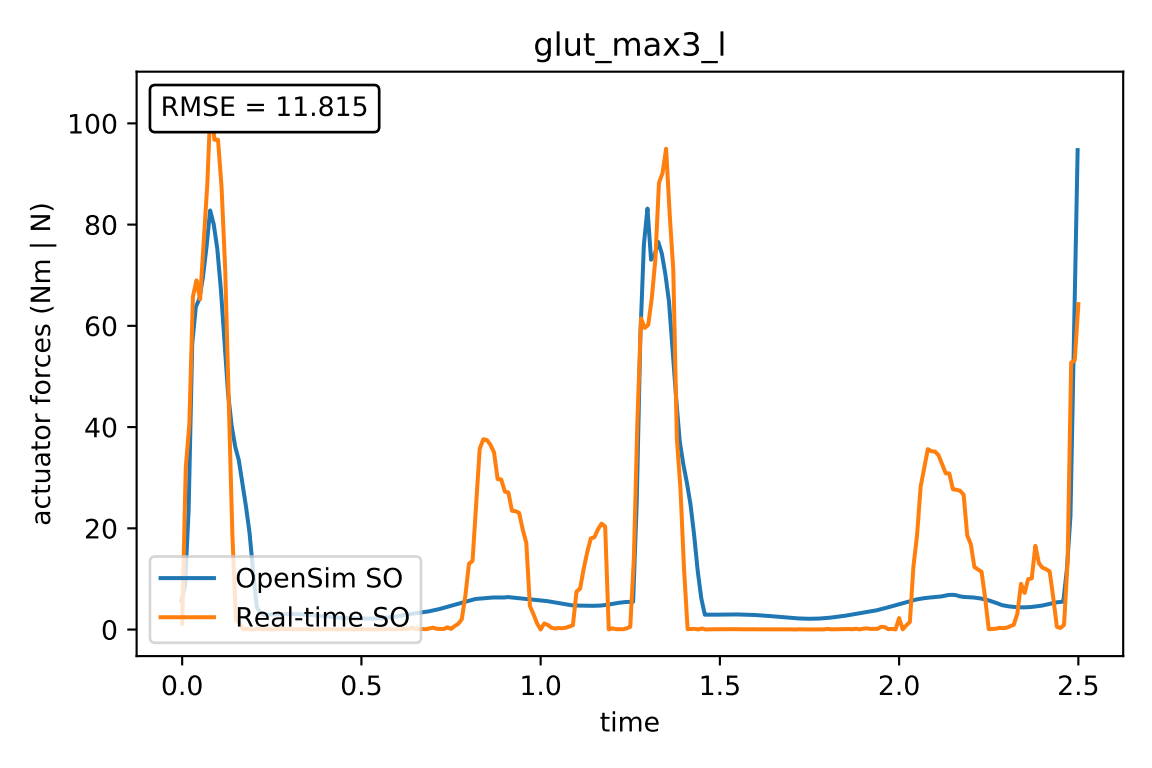

tfl_l
RMSE = 62.815
200
150
100
50
0
actuator forces (Nm | N)
OpenSim SO
Real-time SO
0.0
0.5
1.0
1.5
2.0
2.5
time

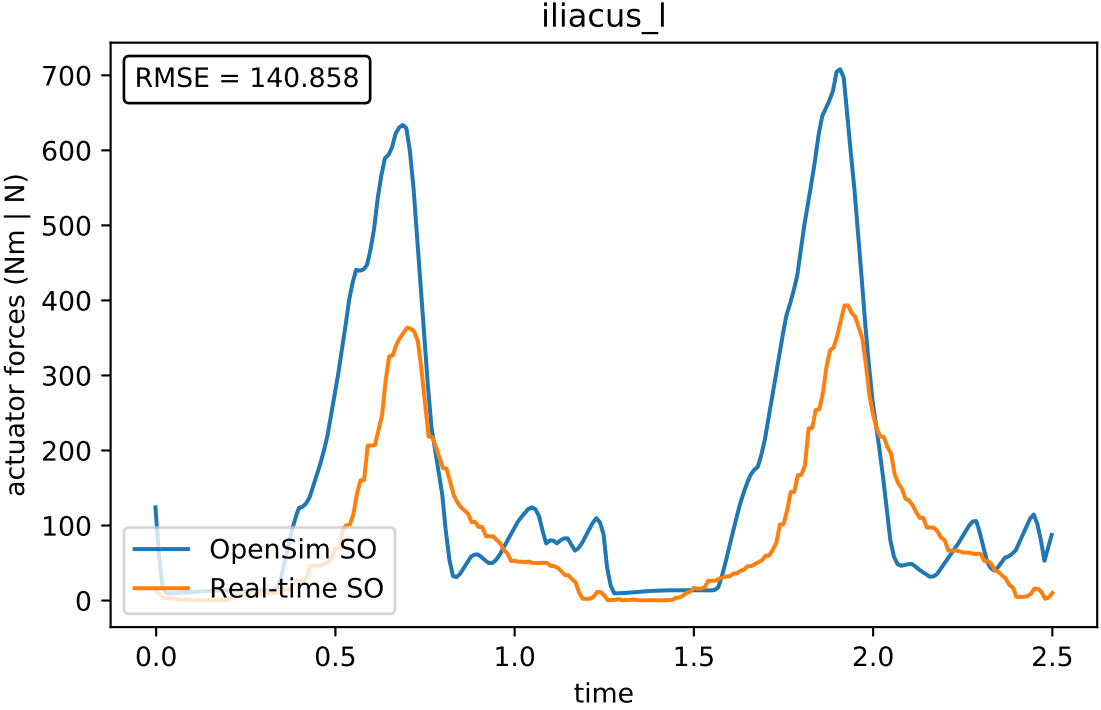

pect_l
RMSE = 3.793
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
5
10
15
20
25
0.0
0.5
1.0
1.5
2.0
2.5

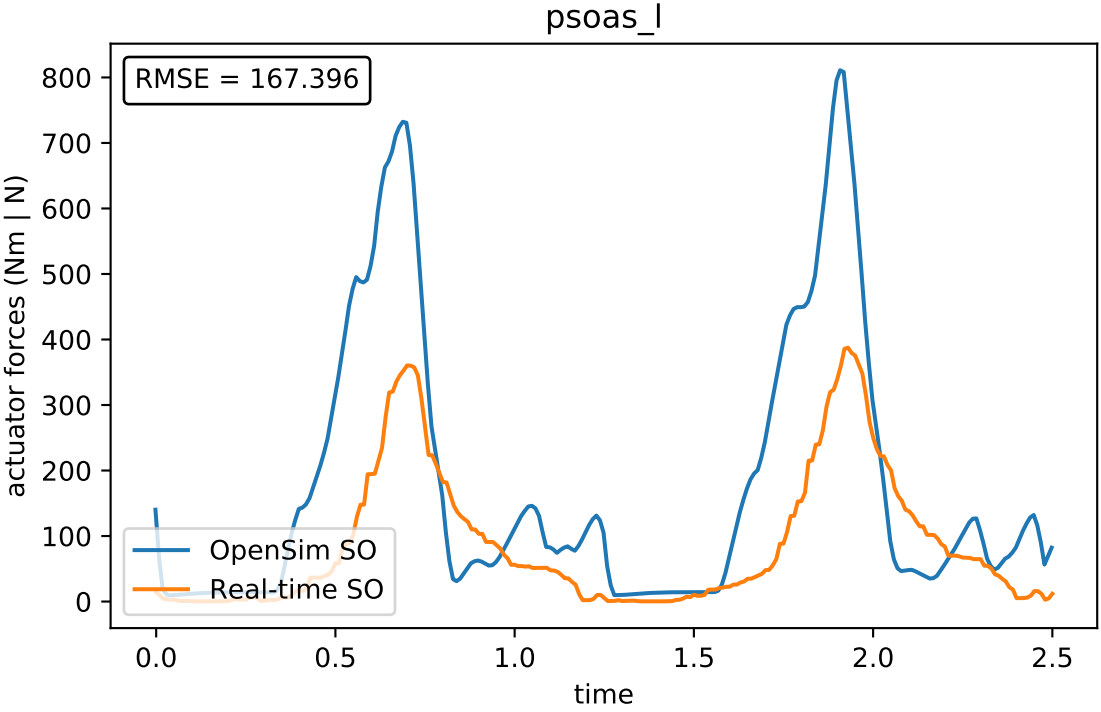

grac_l
RMSE = 5.651
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
10
20
30
40
0.0
0.5
1.0
1.5
2.0
2.5

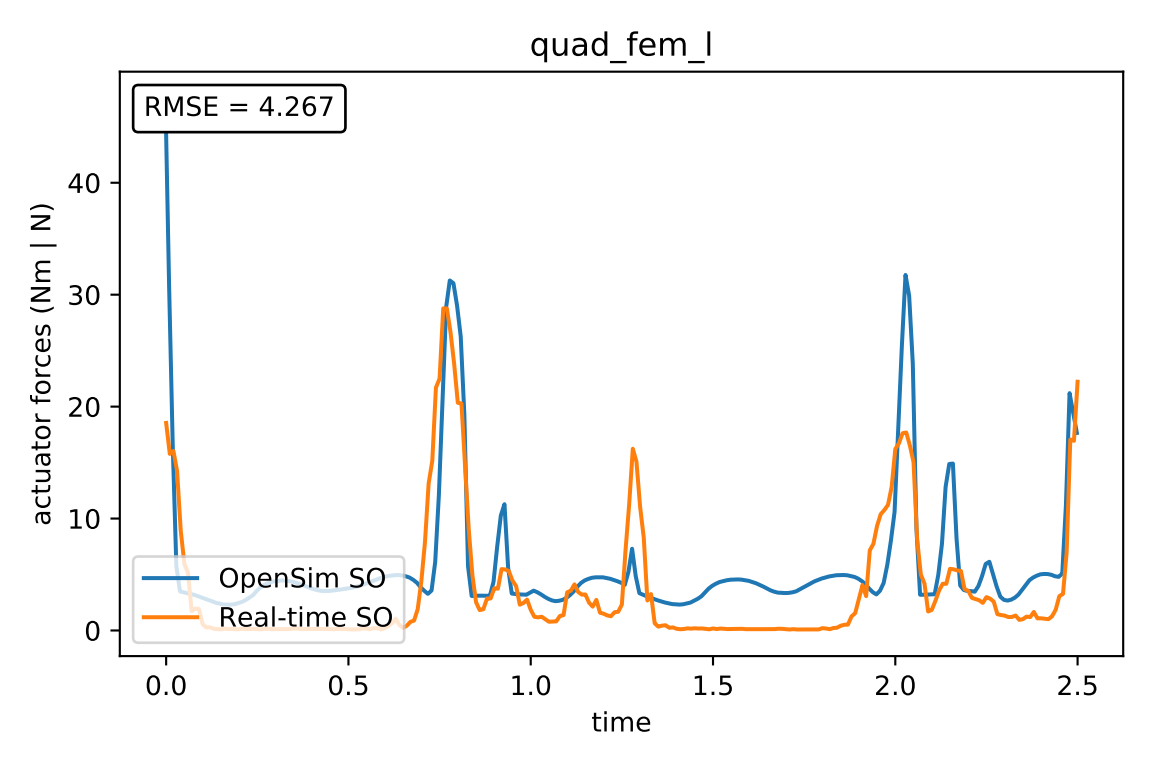

glut_max1_l
RMSE = 40.85
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
200
175
150
125
100
75
50
25
0
0.0
0.5
1.0
1.5
2.0
2.5

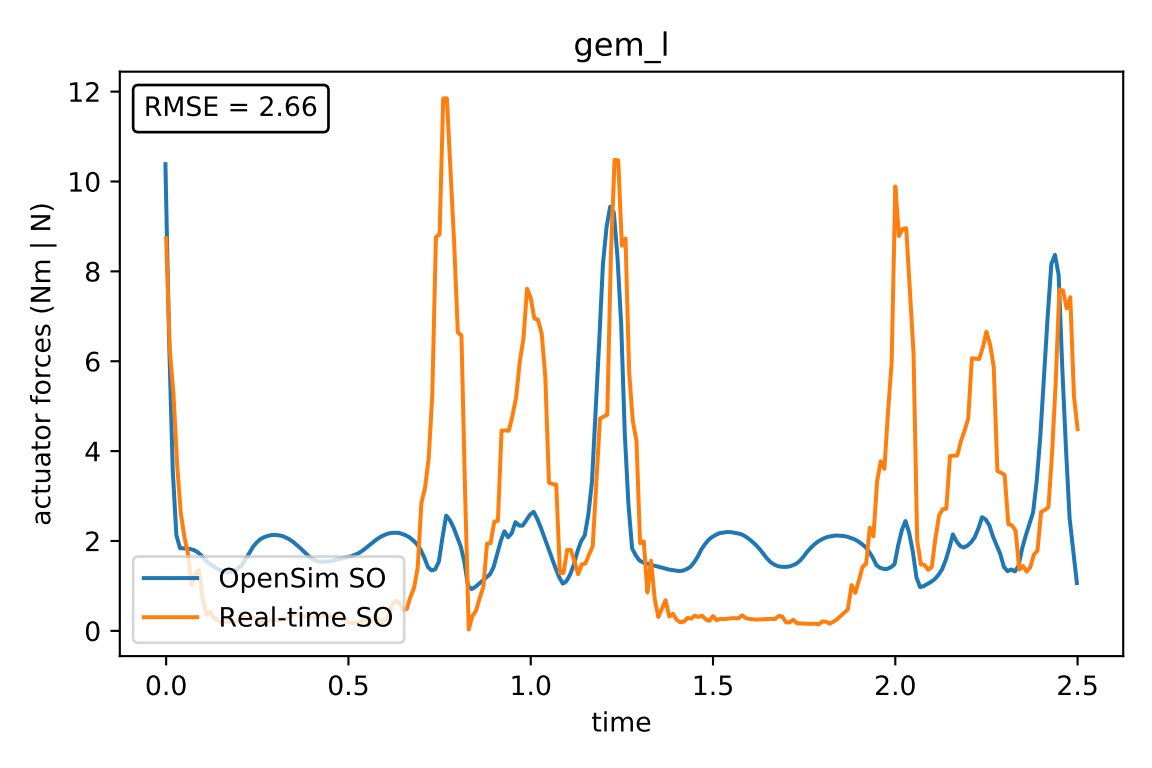

glut_max2_l
RMSE = 35.251
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
200
175
150
125
100
75
50
25
0
0.0
0.5
1.0
1.5
2.0
2.5

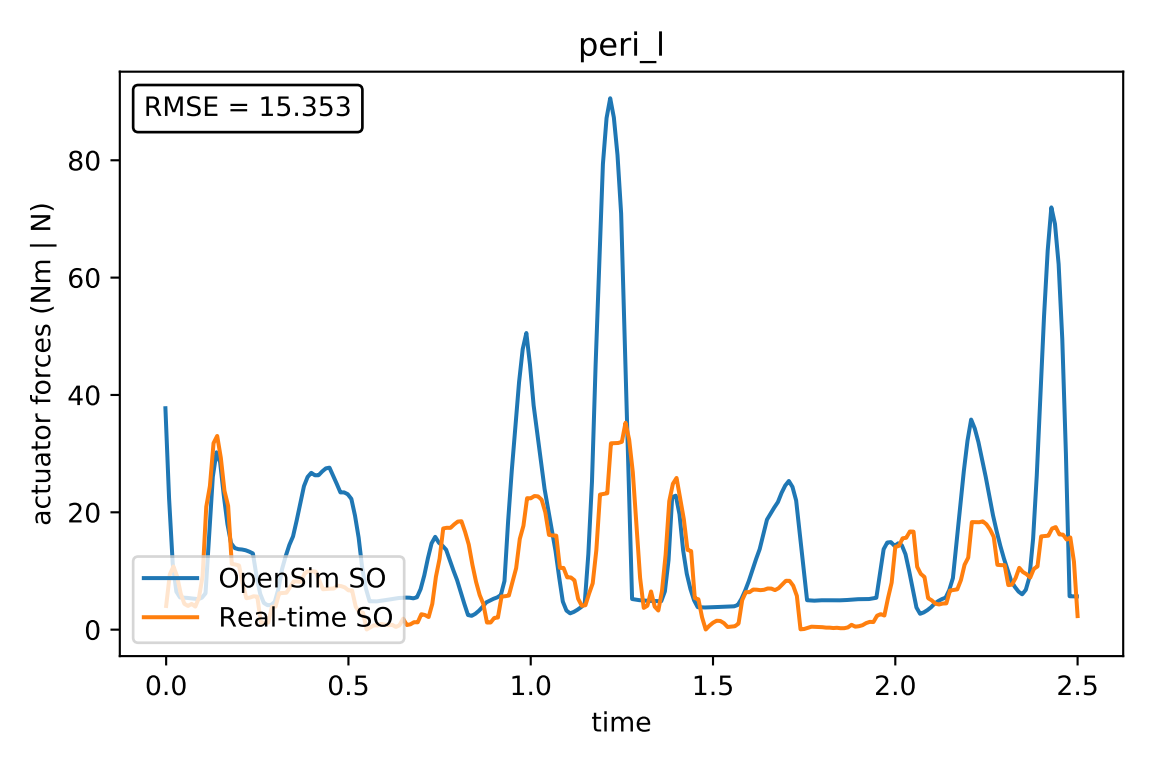

glut_max3_l
RMSE = 11.815
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
0.0
0.5
1.0
1.5
2.0
2.5

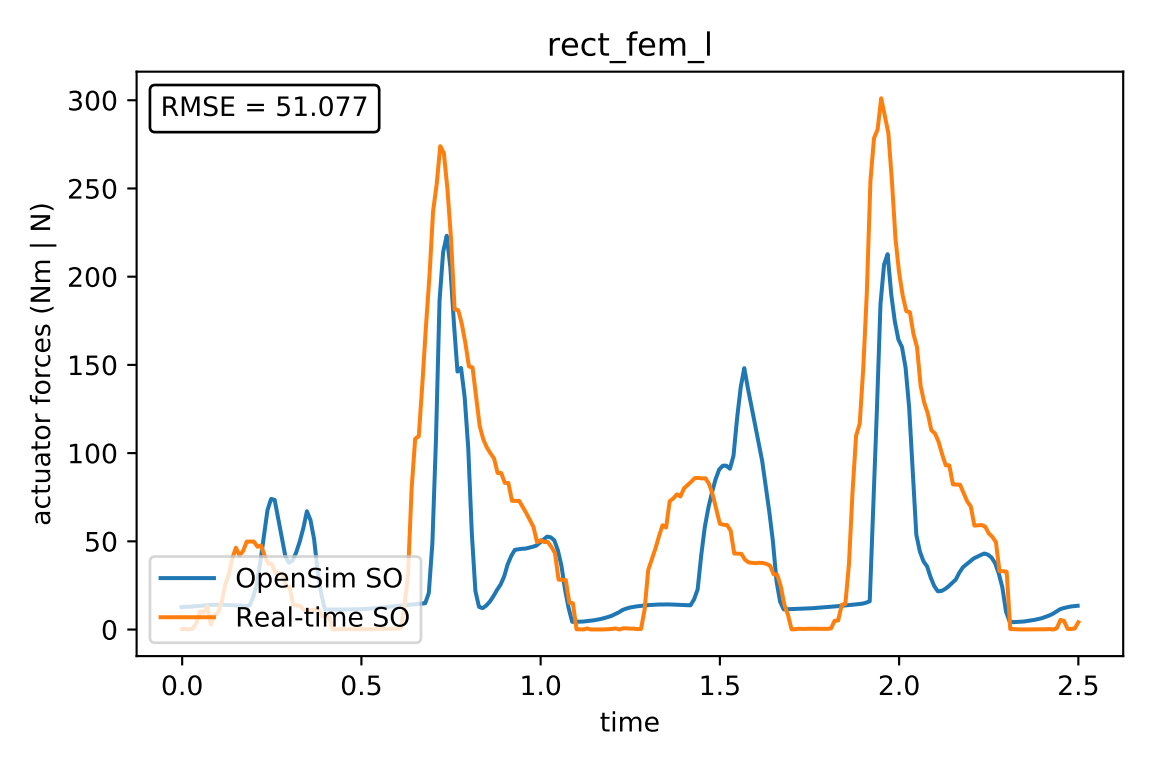

iliacus_l
RMSE = 140.858
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
100
200
300
400
500
600
700
0.0
0.5
1.0
1.5
2.0
2.5

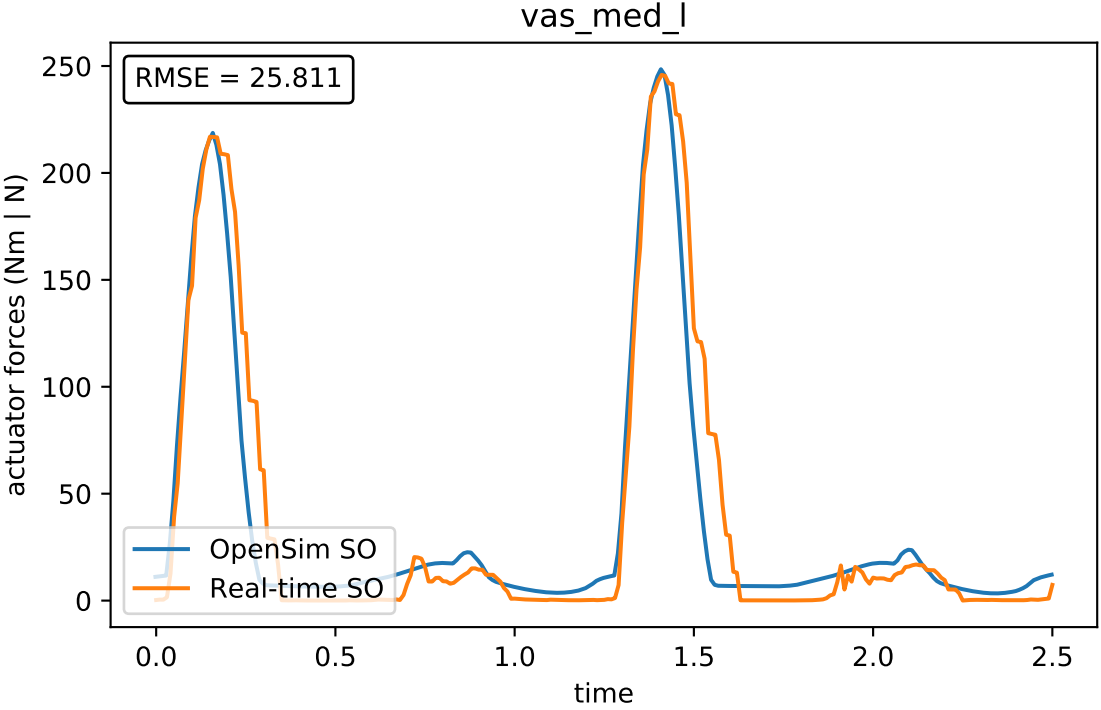

psoas_l
RMSE = 167.396
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
100
200
300
400
500
600
700
800
0.0
0.5
1.0
1.5
2.0
2.5

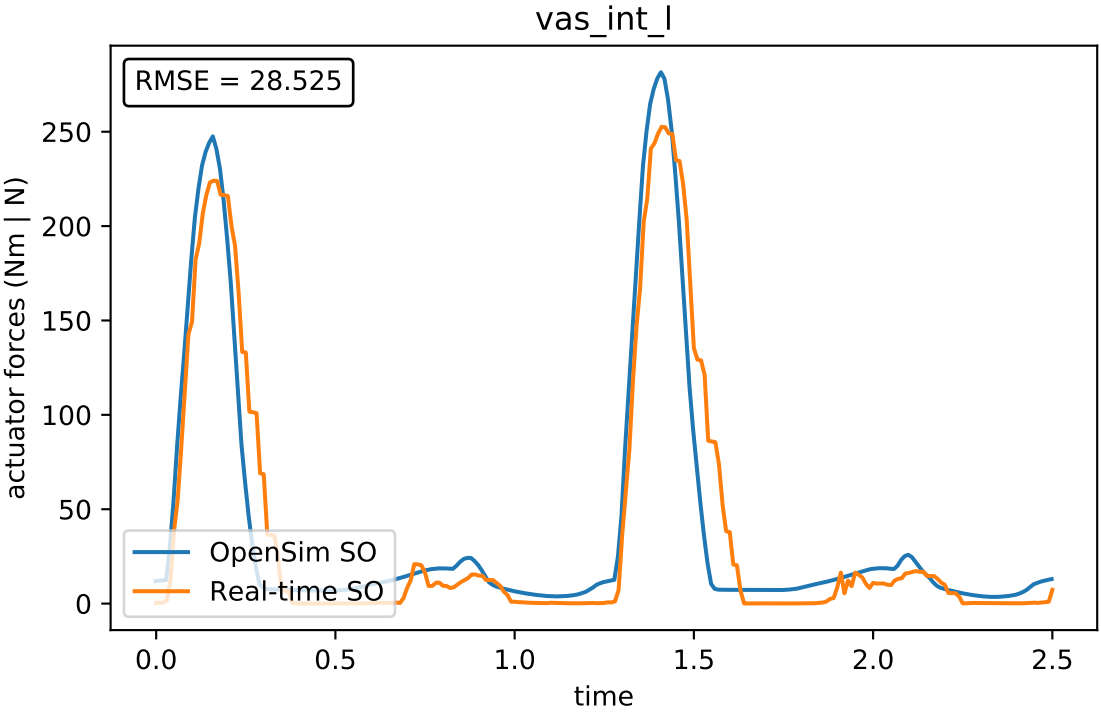

quad_fem_l
RMSE = 4.267
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
10
20
30
40
0.0
0.5
1.0
1.5
2.0
2.5

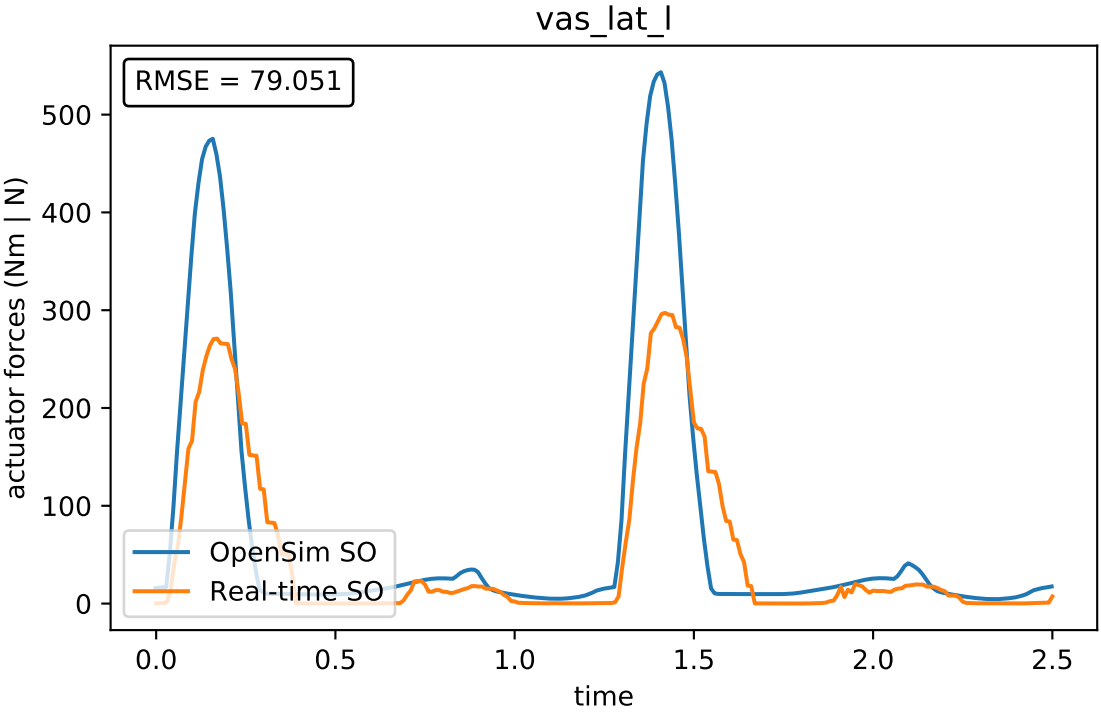

gem_l
RMSE = 2.66
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
2
4
6
8
10
12
0.0
0.5
1.0
1.5
2.0
2.5

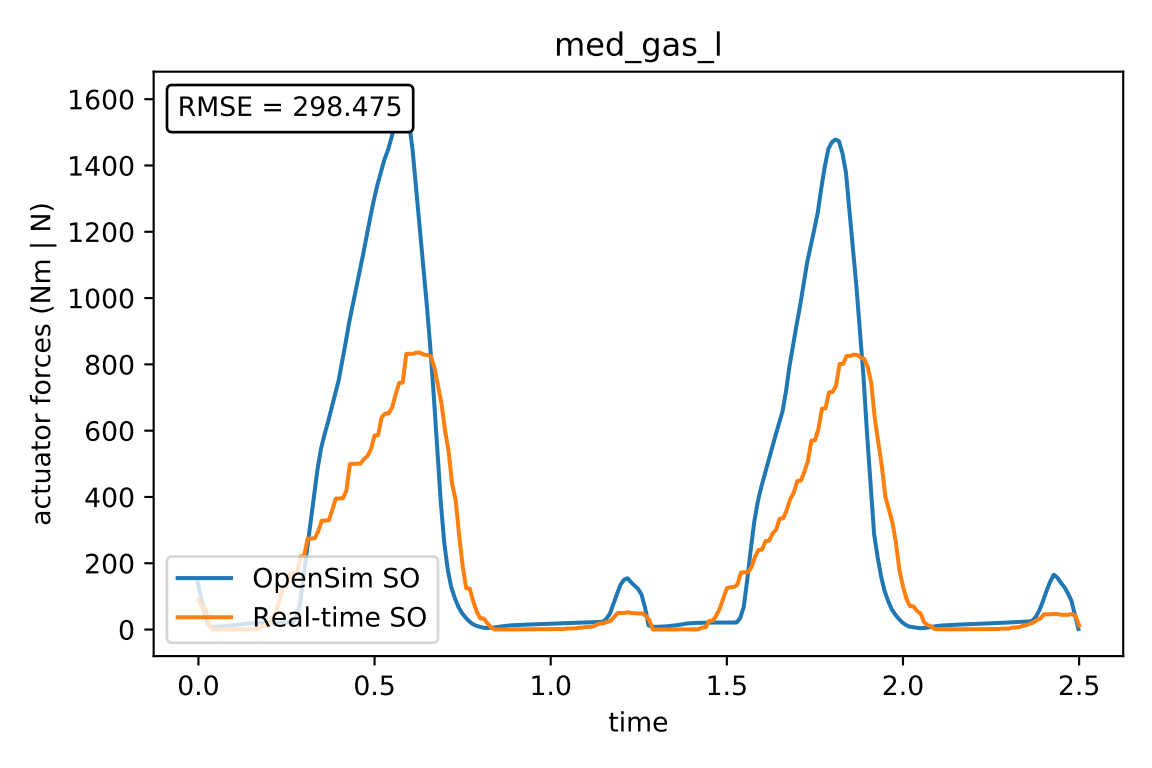

peri_l
RMSE = 15.353
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
0.0
0.5
1.0
1.5
2.0
2.5

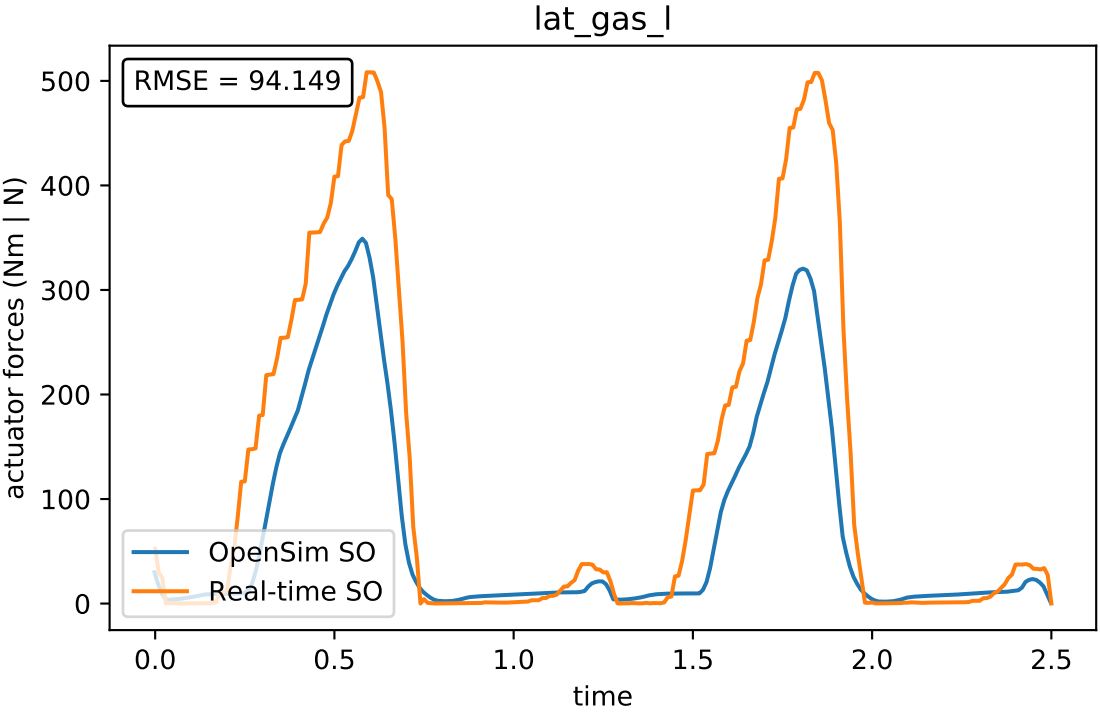

rect_fem_l
RMSE = 51.077
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
300
250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5

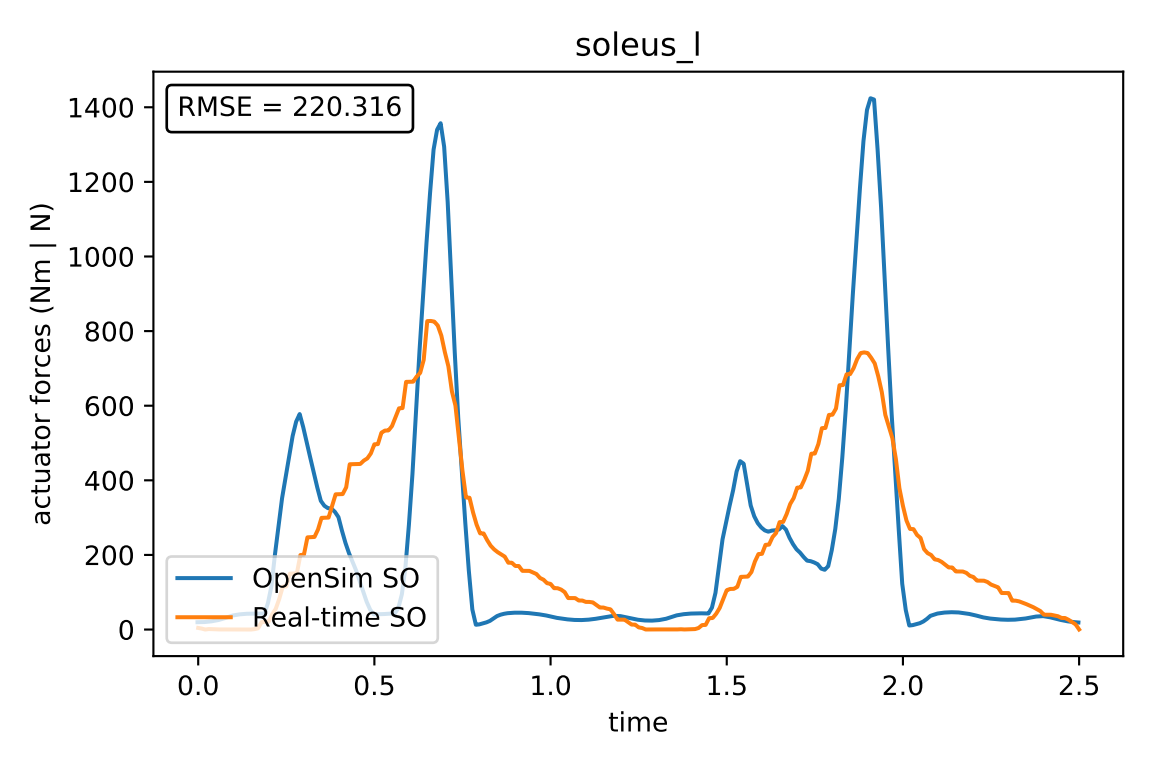

vas_med_l
RMSE = 25.811
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
250
200
150
100
50
0
0.0
0.5
1.0
1.5
2.0
2.5

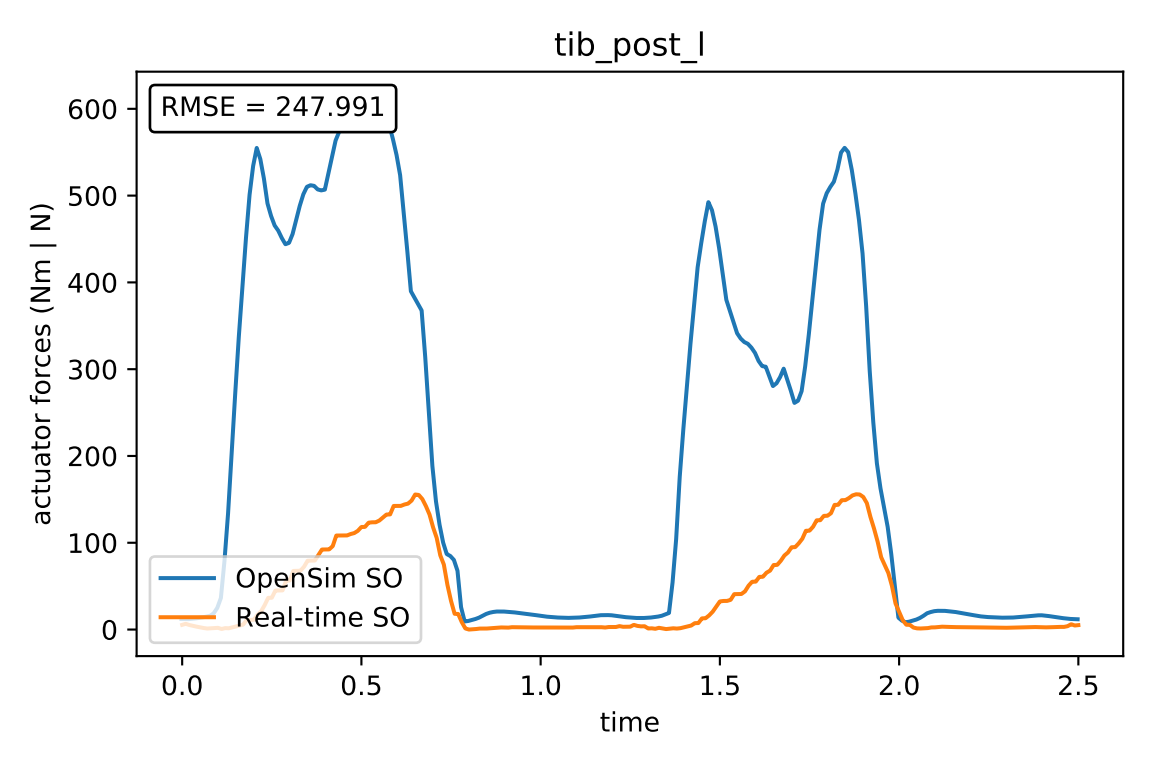

vas_int_l
RMSE = 28.525
actuator forces (Nm | N)
250
200
150
100
50
0
OpenSim SO
Real-time SO
0.0
0.5
1.0
1.5
2.0
2.5
time

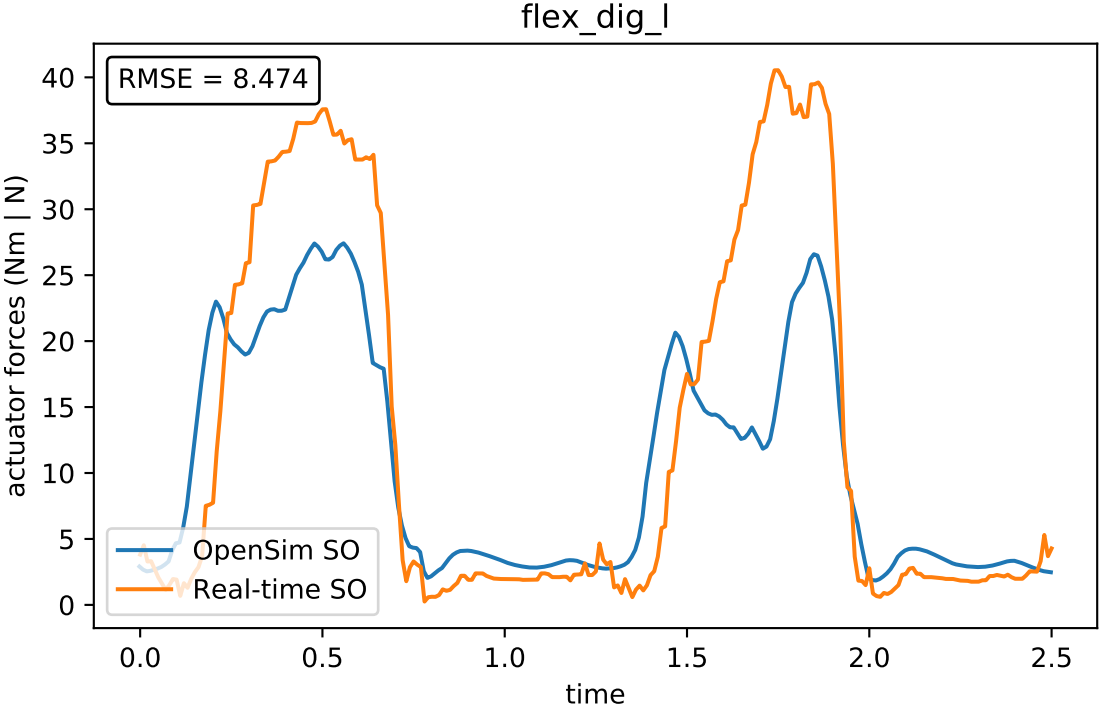

vas_lat_l
RMSE = 79.051
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
100
200
300
400
500
0.0
0.5
1.0
1.5
2.0
2.5

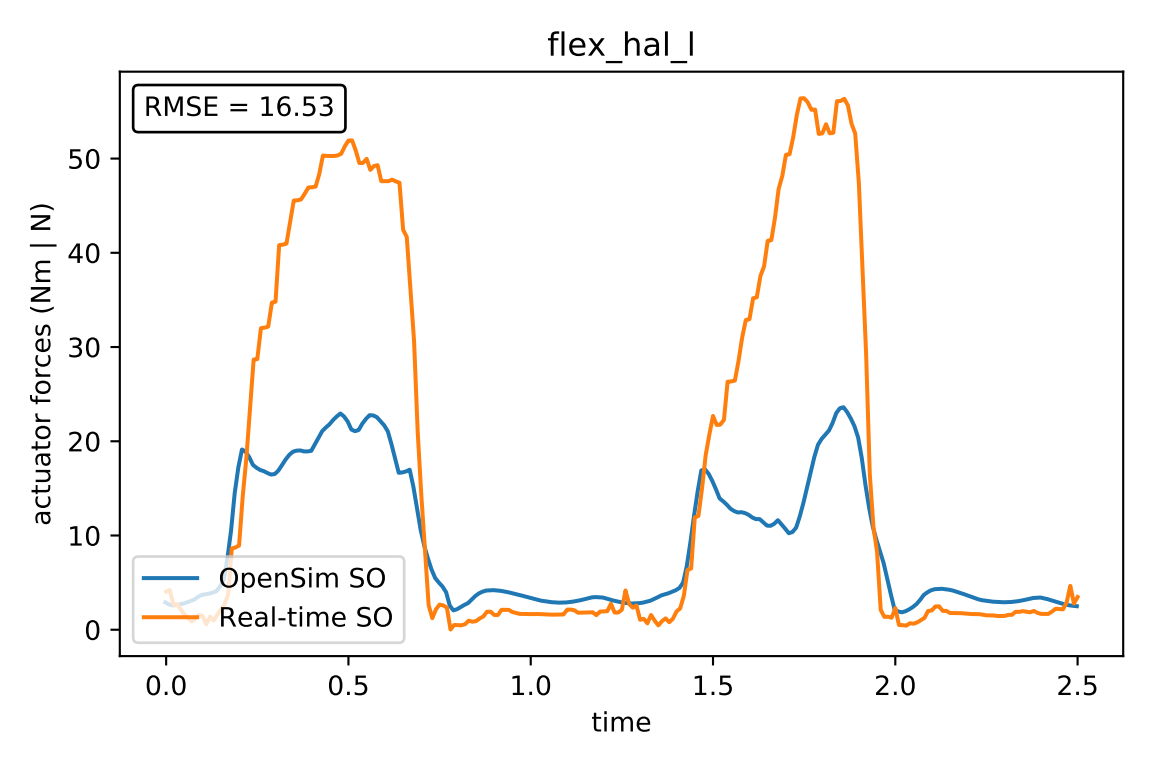

med_gas_l
RMSE = 298.475
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
200
400
600
800
1000
1200
1400
1600
0.0
0.5
1.0
1.5
2.0
2.5

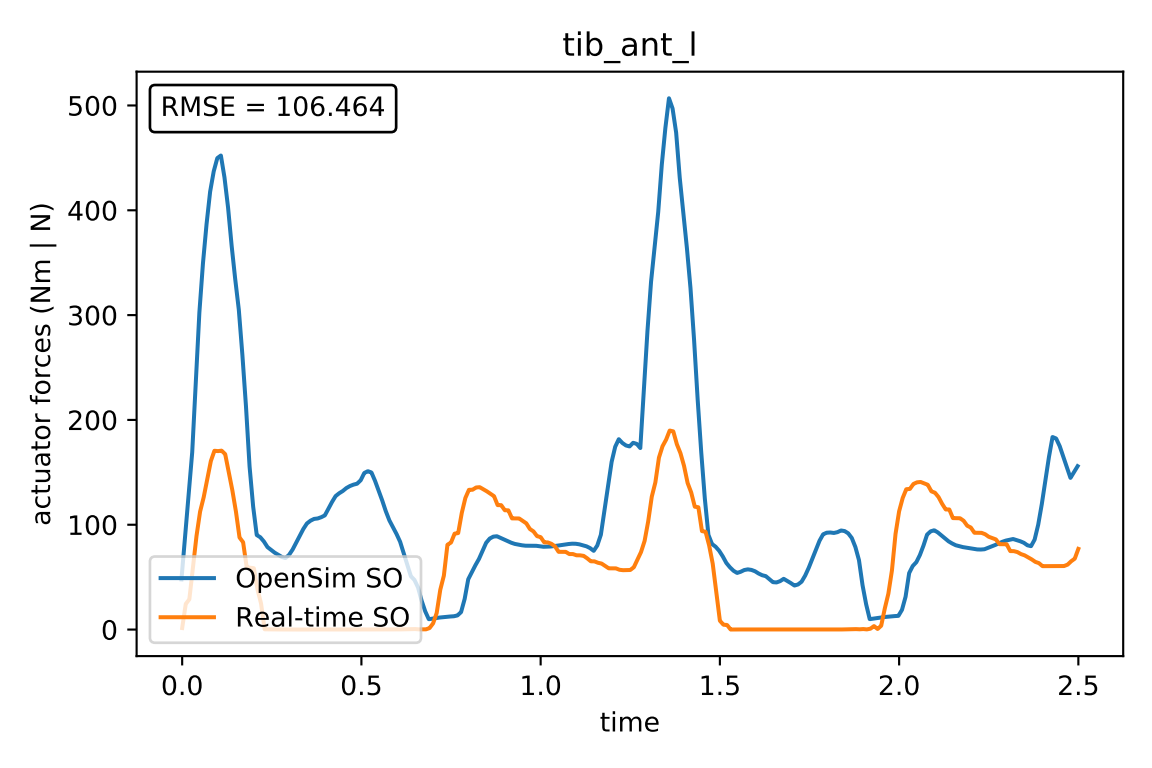

lat_gas_l
RMSE = 94.149
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
100
200
300
400
500
0.0
0.5
1.0
1.5
2.0
2.5

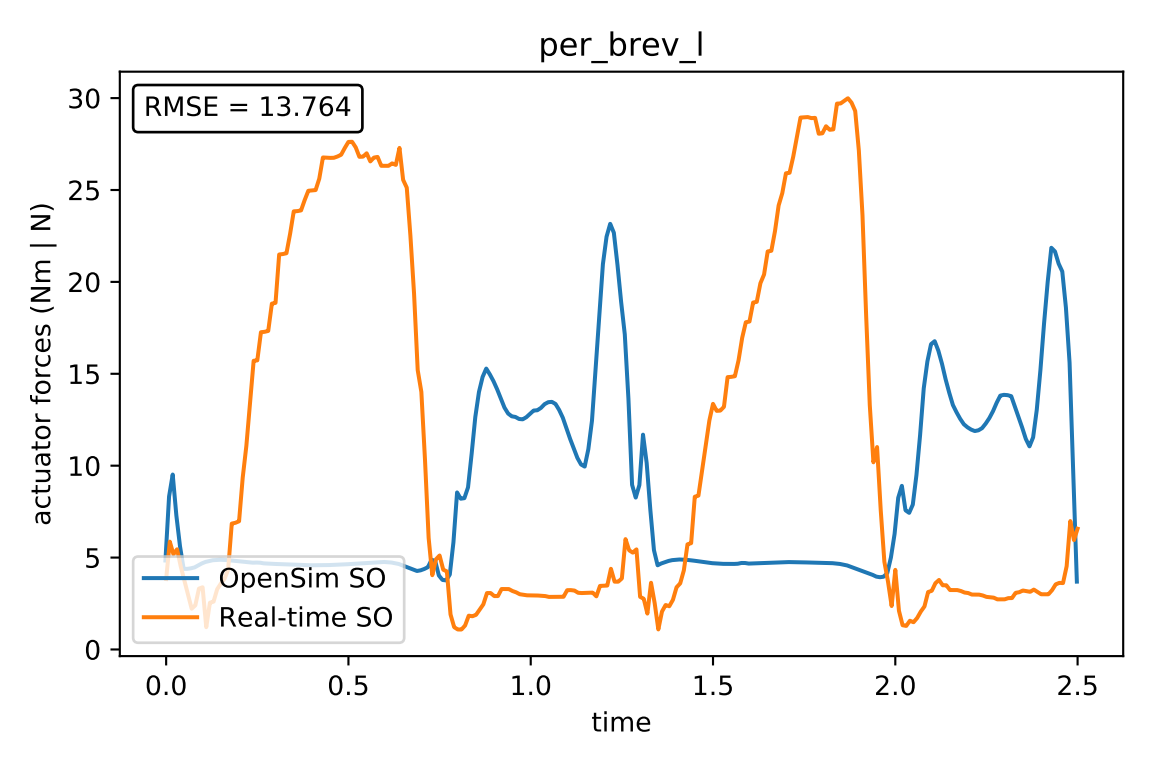

soleus_l
RMSE = 220.316
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
200
400
600
800
1000
1200
1400
0.0
0.5
1.0
1.5
2.0
2.5

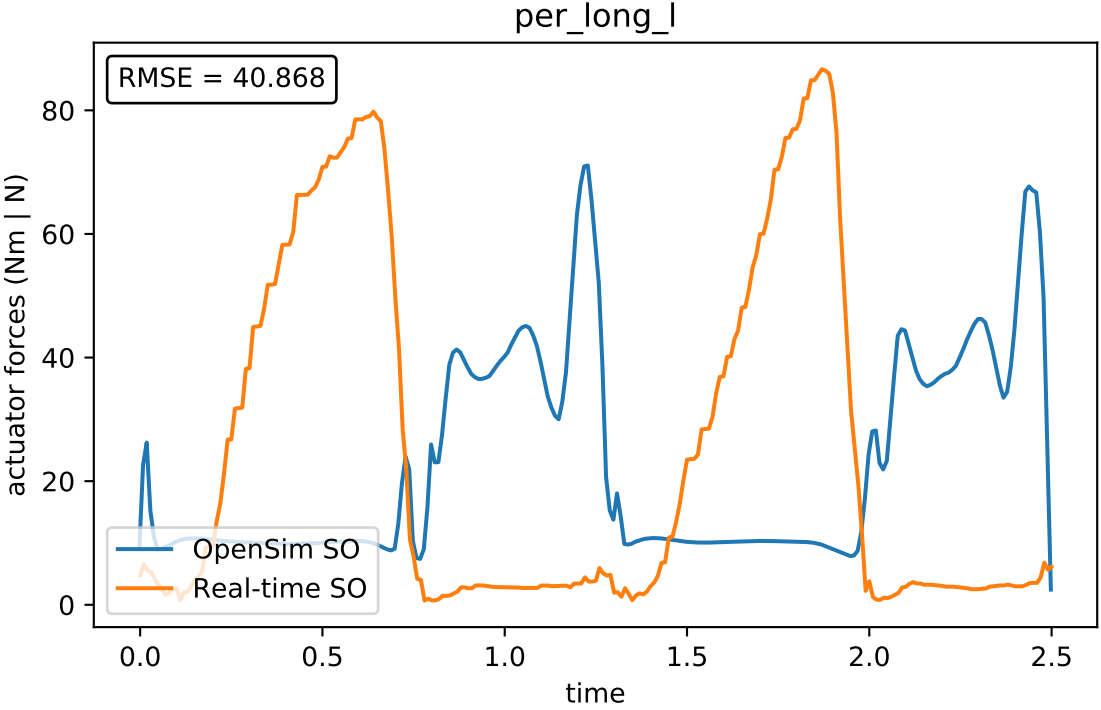

tib_post_l
RMSE = 247.991
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
100
200
300
400
500
600
0.0
0.5
1.0
1.5
2.0
2.5

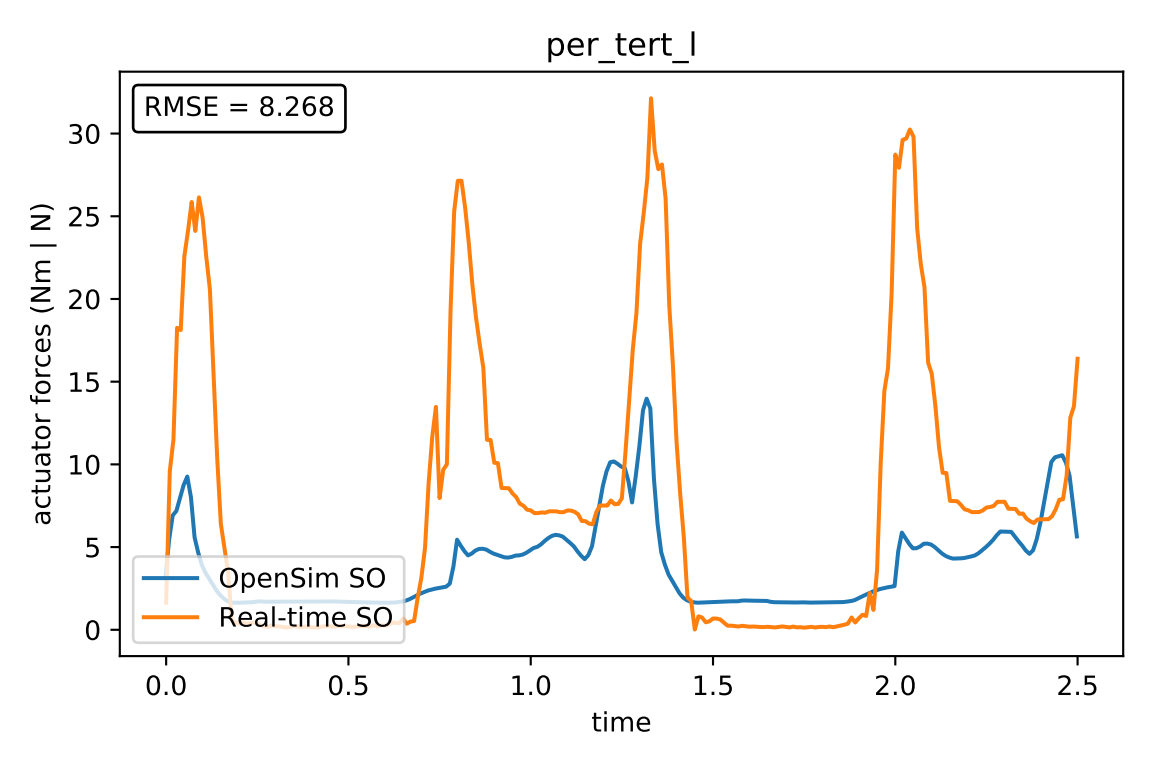

flex_dig_l
RMSE = 8.474
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
5
10
15
20
25
30
35
40
0.0
0.5
1.0
1.5
2.0
2.5

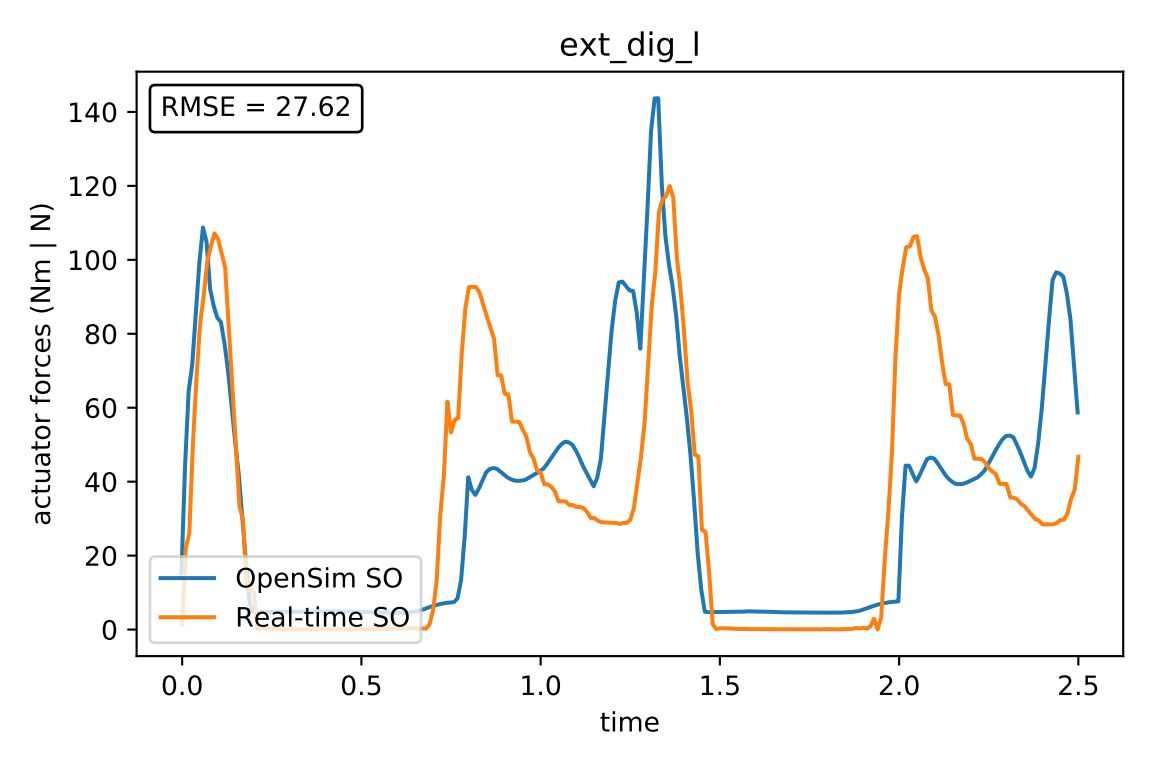

flex_hal_l
RMSE = 16.53
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
10
20
30
40
50
0.0
0.5
1.0
1.5
2.0
2.5

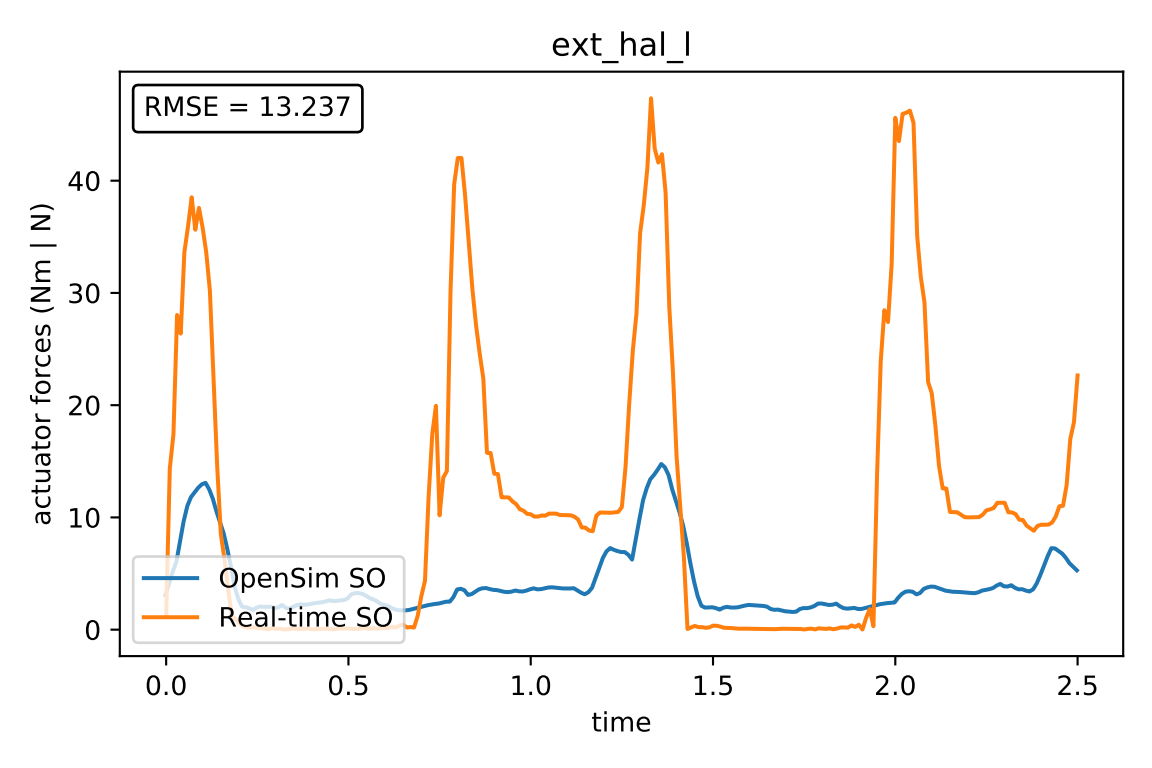

tib_ant_l
RMSE = 106.464
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
100
200
300
400
500
0.0
0.5
1.0
1.5
2.0
2.5

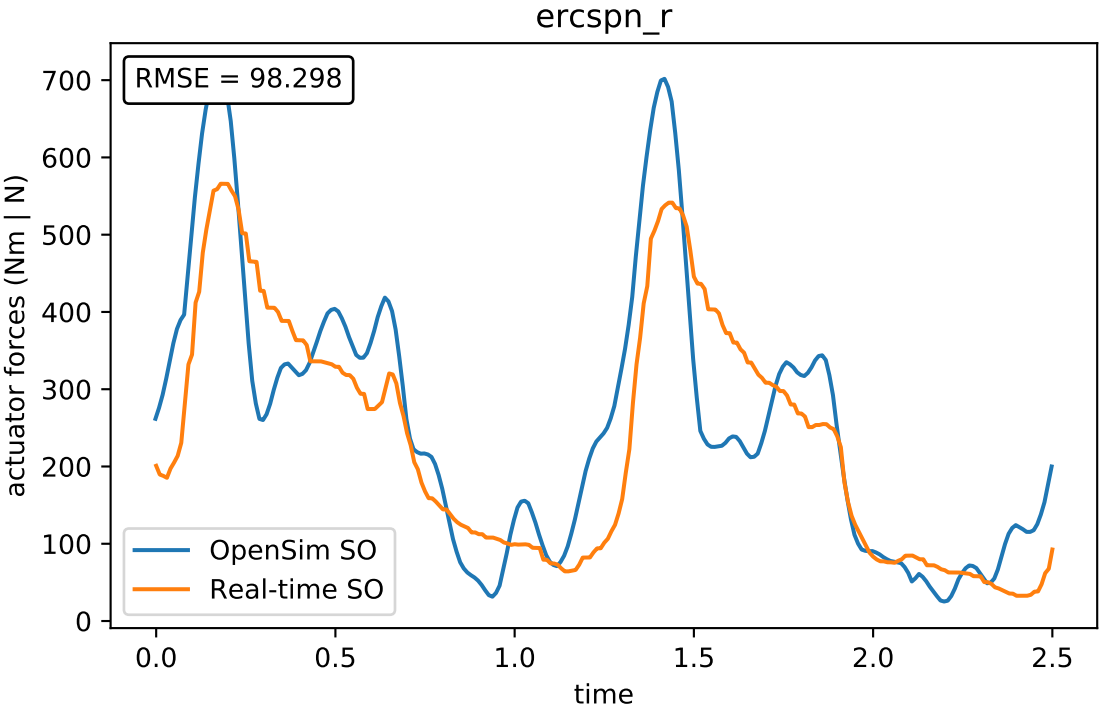

per_brev_l
RMSE = 13.764
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
5
10
15
20
25
30
0.0
0.5
1.0
1.5
2.0
2.5

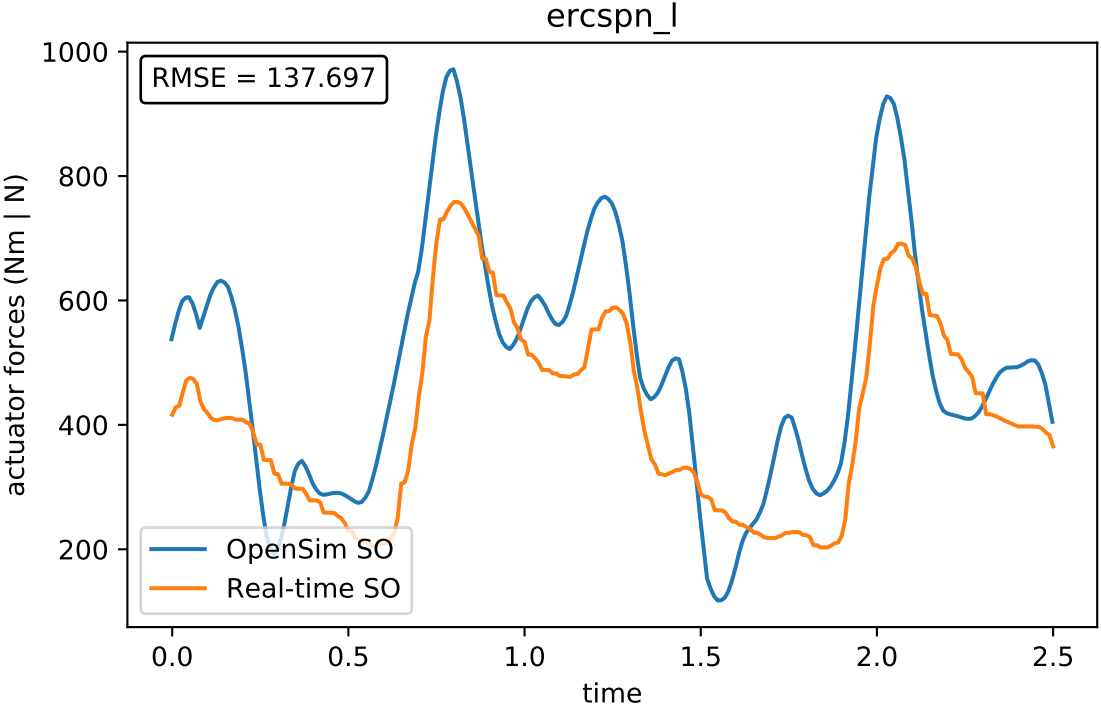

per_long_l
RMSE = 40.868
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
0.0
0.5
1.0
1.5
2.0
2.5

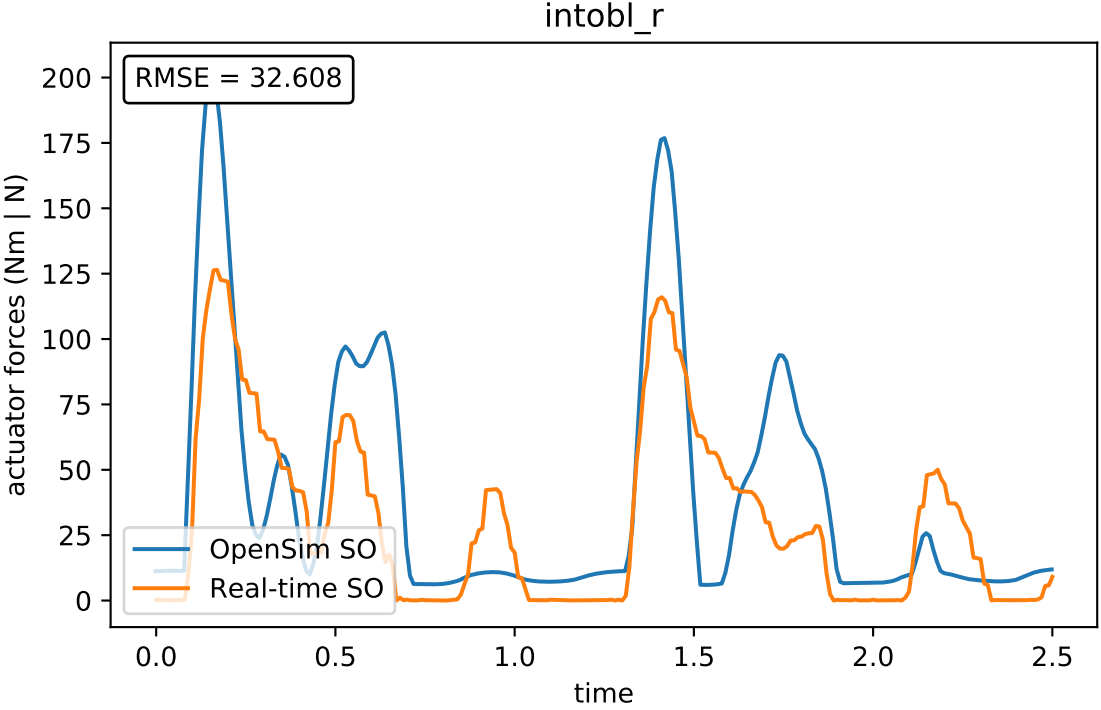

per_tert_l
RMSE = 8.268
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
5
10
15
20
25
30
0.0
0.5
1.0
1.5
2.0
2.5

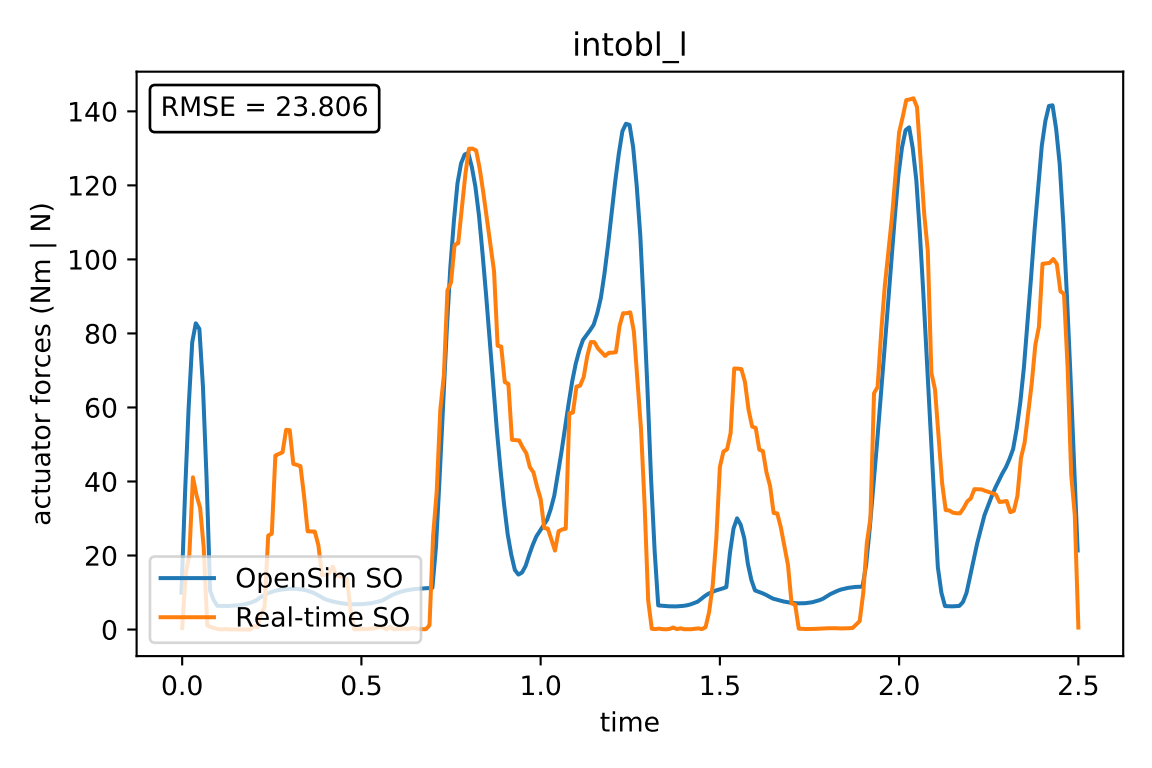

ext_dig_l
RMSE = 27.62
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
120
140
0.0
0.5
1.0
1.5
2.0
2.5

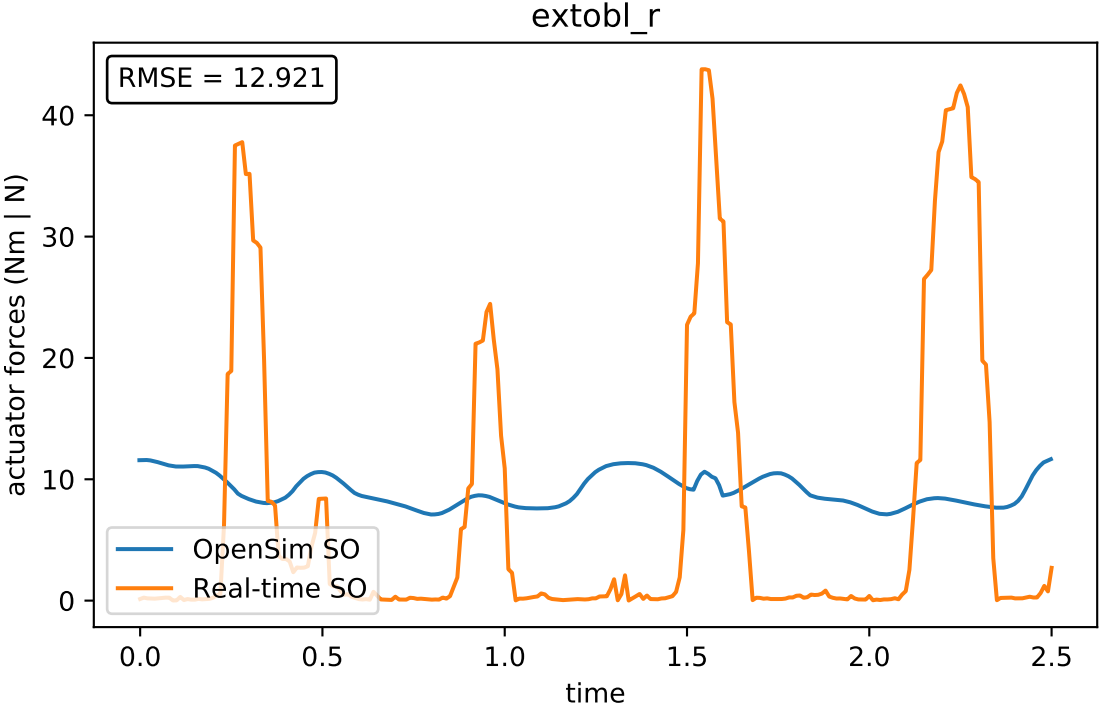

ext_hal_l
RMSE = 13.237
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
10
20
30
40
0.0
0.5
1.0
1.5
2.0
2.5

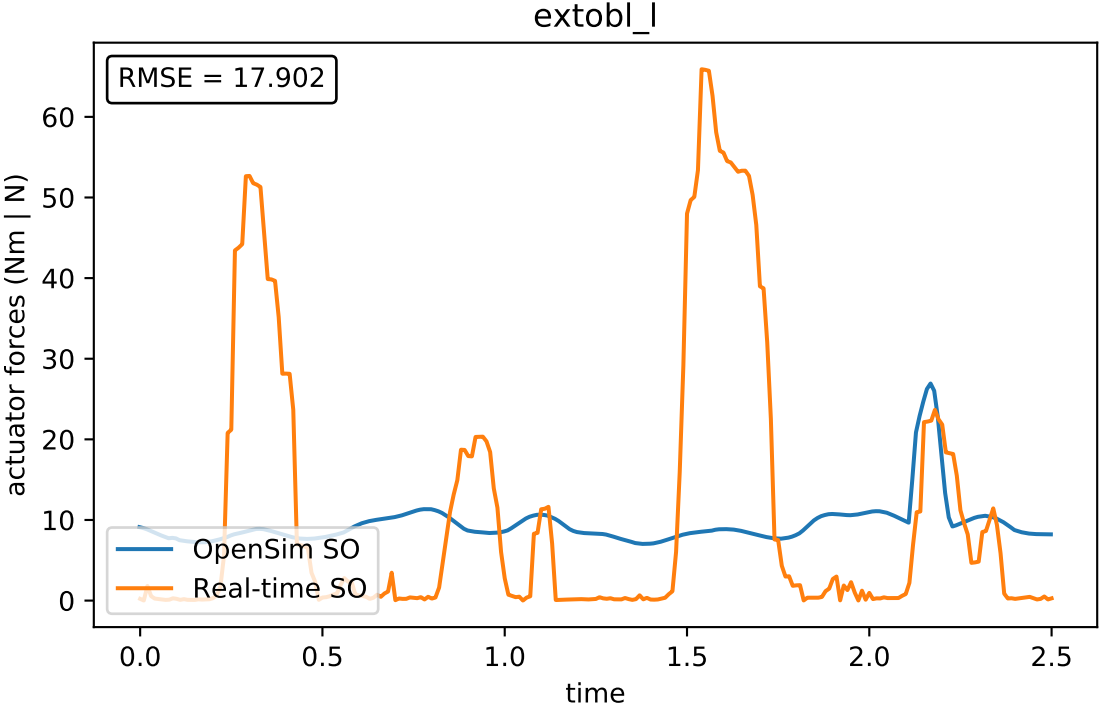

ercspn_r
RMSE = 98.298
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
100
200
300
400
500
600
700
0.0
0.5
1.0
1.5
2.0
2.5


ercspn_l
RMSE = 137.697
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
1000
800
600
400
200
0.0
0.5
1.0
1.5
2.0
2.5


intobl_r
RMSE = 32.608
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
200
175
150
125
100
75
50
25
0
0.0
0.5
1.0
1.5
2.0
2.5


intobl_l
RMSE = 23.806
OpenSim SO
Real-time SO
actuator forces (Nm | N)
time
0
20
40
60
80
100
120
140
0.0
0.5
1.0
1.5
2.0
2.5


extobl_r
RMSE = 12.921
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
10
20
30
40
0.0
0.5
1.0
1.5
2.0
2.5


extobl_l
RMSE = 17.902
actuator forces (Nm | N)
time
OpenSim SO
Real-time SO
0
10
20
30
40
50
60
0.0
0.5
1.0
1.5
2.0
2.5