>> main\_opt\_v20

---------- START RUNNING: 09-Jun-2023 14:16:28 ----------

---------- INPUT USERS SETTING FOR OPTIMIZATION ----------

---------- PREPROCESS ----------

---------- START OPTIMIZATION ----------

\*\* START: Find x0 with bestfval < 0.05

\* Find x0: 1 times

Best Mean Stall

Iteration f-count f(x) f(x) Iterations

0 60 0.1308 NaN 0

1 120 0.1308 1.01 0

2 180 0.1308 0.9973 1

3 240 0.1308 0.9221 2

4 300 0.1308 0.9309 3

5 360 0.1308 0.9619 4

6 420 0.1308 0.9232 5

7 480 0.1308 0.8644 6

8 540 0.1308 0.9322 7

9 600 0.1308 0.6989 8

10 660 0.1308 0.6516 9

11 720 0.1199 0.5887 0

12 780 0.1127 0.5615 0

13 840 0.1127 0.5802 1

14 900 0.1127 0.5594 2

15 960 0.1124 0.4833 0

16 1020 0.1121 0.469 0

17 1080 0.1107 0.5273 0

18 1140 0.1103 0.371 0

19 1200 0.1103 0.4505 0

20 1260 0.1092 0.3235 0

21 1320 0.07995 0.4512 0

22 1380 0.07995 0.4115 1

23 1440 0.07328 0.3938 0

24 1500 0.06615 0.287 0

25 1560 0.05395 0.381 0

26 1620 0.03608 0.4561 0

Optimization stopped by a plot function or output function.'

\* Find x0: 721.5587 337.2919 0.1021196 0.1358995 0.2958589 0.181932

\* exitflag: -1

\*\* END: Find x0 with bestfval < 0.05

\*\*\* Find x0: 739.9 seconds

\*\* START: Find x with bestfval < 0.0001

\* Find x: 1 times

Max

Iter Func-count f(x) Constraint MeshSize Method

0 1 0.0882205 0.07822 1

1 383 0.00706252 0 0.009772 Update multipliers

2 740 0.00527215 0 0.000955 Update multipliers

3 1086 0.00520206 0 9.333e-05 Update multipliers

4 1446 0.00520206 0 9.12e-06 Update multipliers

5 1826 0.00520206 0 8.913e-07 Update multipliers

Optimization terminated: Change in X less than options.StepTolerance

and constraints violation is less that options.ConstraintTolerance.

\* Find x: 622.9583 387.3658 0.1171749 0.1387519 0.2714023 0.1731798

\* exitflag: 2

\*\* END: Find x

\*\*\* Find x: 1444.5 seconds

OPT parameter: 622.9583 387.3658 0.1171749 0.1387519 0.2714023 0.1731798

---------- SHOW OPTIMAL RESULTS ----------

Target muscle parameter:

624.3000 0.1157 0.2723

435.5600 0.1321 0.1923

Optimal muscle parameter:

622.9583 0.1172 0.2714

387.3658 0.1388 0.1732

Motion 1 joint angle prediction error: 0.002754

Motion 1 joint speed prediction error: 0.005202

---------- VALIDATE OPTIMAL RESULTS ----------

Validate motion joint angle prediction error: 0.1736

Validate motion joint speed prediction error: 0.2935

---------- END RUNNING: 09-Jun-2023 14:52:58 ----------

>> main\_opt\_v20

---------- START RUNNING: 09-Jun-2023 14:53:32 ----------

---------- INPUT USERS SETTING FOR OPTIMIZATION ----------

---------- PREPROCESS ----------

---------- START OPTIMIZATION ----------

\*\* START: Find x0 with bestfval < 0.05

\* Find x0: 1 times

Best Mean Stall

Iteration f-count f(x) f(x) Iterations

0 60 0.1365 NaN 0

1 120 0.1365 1.128 0

2 180 0.1365 0.977 1

3 240 0.1365 0.8752 2

4 300 0.1365 1.008 3

5 360 0.1365 0.9571 4

6 420 0.1258 0.935 0

7 480 0.1258 0.9523 1

8 540 0.1258 0.9663 2

9 600 0.1258 0.8762 3

10 660 0.1258 0.7696 4

11 720 0.08439 0.6035 0

12 780 0.07899 0.5905 0

13 840 0.07771 0.5543 0

14 900 0.07752 0.6071 0

15 960 0.07752 0.5609 1

16 1020 0.07752 0.4525 2

17 1080 0.07607 0.4659 0

18 1140 0.07607 0.7246 1

19 1200 0.07544 0.3234 0

20 1260 0.07191 0.4296 0

21 1320 0.07191 0.3112 1

22 1380 0.07184 0.4362 0

23 1440 0.07034 0.4492 0

24 1500 0.07017 0.3964 0

25 1560 0.07011 0.3546 0

26 1620 0.06922 0.4395 0

27 1680 0.06922 0.3343 1

28 1740 0.06891 0.3825 0

29 1800 0.06832 0.528 0

30 1860 0.06832 0.4114 1

Best Mean Stall

Iteration f-count f(x) f(x) Iterations

31 1920 0.06819 0.3848 0

32 1980 0.06819 0.38 1

33 2040 0.06819 0.3821 2

34 2100 0.06781 0.473 0

35 2160 0.06633 0.5228 0

36 2220 0.06392 0.5595 0

37 2280 0.06392 0.5708 1

38 2340 0.06392 0.6156 2

39 2400 0.06392 0.5998 3

40 2460 0.06392 0.6677 4

41 2520 0.06392 0.64 5

42 2580 0.06392 0.5941 6

43 2640 0.06392 0.6199 7

44 2700 0.06392 0.5256 8

45 2760 0.06392 0.3789 9

46 2820 0.06341 0.4584 0

47 2880 0.06341 0.3907 1

48 2940 0.06341 0.4546 2

49 3000 0.06334 0.3636 0

50 3060 0.06329 0.4146 0

51 3120 0.06327 0.3956 0

52 3180 0.06322 0.2874 0

53 3240 0.06315 0.3694 0

54 3300 0.06242 0.4288 0

55 3360 0.06194 0.3547 0

56 3420 0.06188 0.6377 0

57 3480 0.06188 0.3479 1

58 3540 0.06188 0.4458 2

59 3600 0.06082 0.3294 0

60 3660 0.06034 0.4054 0

Best Mean Stall

Iteration f-count f(x) f(x) Iterations

61 3720 0.06032 0.3284 0

62 3780 0.06027 0.4044 0

63 3840 0.06027 0.4878 1

64 3900 0.06027 0.4127 2

65 3960 0.05921 0.3446 0

66 4020 0.05921 0.5244 1

67 4080 0.05921 0.409 2

68 4140 0.05896 0.4824 0

69 4200 0.05896 0.4181 1

70 4260 0.05582 0.5594 0

71 4320 0.05582 0.4203 1

72 4380 0.05582 0.5843 2

73 4440 0.05582 0.5937 3

74 4500 0.05582 0.6076 4

75 4560 0.05582 0.611 5

76 4620 0.05573 0.4818 0

77 4680 0.05573 0.3403 1

78 4740 0.05385 0.4181 0

79 4800 0.05365 0.3614 0

80 4860 0.05365 0.4169 1

81 4920 0.05365 0.3999 2

82 4980 0.05365 0.4419 0

83 5040 0.05364 0.356 0

84 5100 0.05351 0.3643 0

85 5160 0.05325 0.3425 0

86 5220 0.05303 0.311 0

87 5280 0.05186 0.3132 0

88 5340 0.05186 0.4486 1

89 5400 0.05146 0.3251 0

90 5460 0.05114 0.3998 0

Best Mean Stall

Iteration f-count f(x) f(x) Iterations

91 5520 0.05081 0.4077 0

92 5580 0.05062 0.3956 0

93 5640 0.04962 0.4222 0

Optimization stopped by a plot function or output function.'

\* Find x0: 513.4188 444.4752 0.2004265 0.1753525 0.1710386 0.1395482

\* exitflag: -1

\*\* END: Find x0 with bestfval < 0.05

\*\*\* Find x0: 2797.4 seconds

\*\* START: Find x with bestfval < 0.0001

\* Find x: 1 times

Max

Iter Func-count f(x) Constraint MeshSize Method

0 1 0.0565558 0.04656 1

1 401 0.00217552 0 0.009772 Update multipliers

2 659 0.00217042 0 0.000955 Update multipliers

3 966 0.00217042 0 9.333e-05 Update multipliers

4 1297 0.00217042 0 9.12e-06 Update multipliers

5 1648 0.00217042 0 8.913e-07 Update multipliers

Optimization terminated: Change in X less than options.StepTolerance

and constraints violation is less that options.ConstraintTolerance.

\* Find x: 617.9396 387.5179 0.1222757 0.1183968 0.2680946 0.1916615

\* exitflag: 2

\*\* END: Find x

\*\*\* Find x: 1279.6 seconds

OPT parameter: 617.9396 387.5179 0.1222757 0.1183968 0.2680946 0.1916615

---------- SHOW OPTIMAL RESULTS ----------

Target muscle parameter:

624.3000 0.1157 0.2723

435.5600 0.1321 0.1923

Optimal muscle parameter:

617.9396 0.1223 0.2681

387.5179 0.1184 0.1917

Motion 1 joint angle prediction error: 0.000276

Motion 1 joint speed prediction error: 0.00217

---------- VALIDATE OPTIMAL RESULTS ----------

Validate motion joint angle prediction error: 0.3497

Validate motion joint speed prediction error: 0.5457

---------- END RUNNING: 09-Jun-2023 16:01:34 ----------

>> main\_opt\_v20

---------- START RUNNING: 09-Jun-2023 16:05:07 ----------

---------- INPUT USERS SETTING FOR OPTIMIZATION ----------

---------- PREPROCESS ----------

---------- START OPTIMIZATION ----------

\*\* START: Find x0 with bestfval < 0.05

\* Find x0: 1 times

Best Mean Stall

Iteration f-count f(x) f(x) Iterations

0 60 0.3082 NaN 0

1 120 0.2906 1.068 0

2 180 0.2906 0.9501 1

3 240 0.2906 1.093 2

4 300 0.2906 1.015 3

5 360 0.272 0.8259 0

6 420 0.272 0.8532 1

7 480 0.272 0.9839 2

8 540 0.272 0.9321 3

9 600 0.272 0.9204 4

10 660 0.1614 0.7266 0

11 720 0.05299 0.7402 0

12 780 0.05299 0.8428 1

13 840 0.05299 0.7599 2

14 900 0.05299 0.5191 3

15 960 0.05299 0.4614 4

16 1020 0.05299 0.4819 5

17 1080 0.05269 0.4171 0

18 1140 0.05269 0.3041 1

19 1200 0.0525 0.3095 0

20 1260 0.05245 0.3416 0

21 1320 0.05222 0.3465 0

22 1380 0.05222 0.3111 1

23 1440 0.05187 0.3183 0

24 1500 0.05181 0.3561 0

25 1560 0.05164 0.2872 0

26 1620 0.05123 0.3012 0

27 1680 0.05115 0.2984 0

28 1740 0.05115 0.336 1

29 1800 0.05039 0.4101 0

30 1860 0.05 0.3489 0

Best Mean Stall

Iteration f-count f(x) f(x) Iterations

31 1920 0.05 0.2827 1

32 1980 0.05 0.3429 2

33 2040 0.05 0.4107 3

34 2100 0.05 0.2507 4

35 2160 0.04959 0.2568 0

Optimization stopped by a plot function or output function.'

\* Find x0: 517.3796 745.7284 0.1677592 0.3385809 0.2089399 0.1639366

\* exitflag: -1

\*\* END: Find x0 with bestfval < 0.05

\*\*\* Find x0: 1050.6 seconds

\*\* START: Find x with bestfval < 0.0001

\* Find x: 1 times

Max

Iter Func-count f(x) Constraint MeshSize Method

0 1 0.062869 0.05287 1

1 437 0.0211608 0.01116 0.009772 Update multipliers

2 847 0.0195809 0.009581 0.000955 Update multipliers

3 1188 0.0194538 0.009454 9.333e-05 Update multipliers

4 1736 0.0109806 0.0009806 9.12e-06 Update multipliers

5 2103 0.00995121 0 8.913e-07 Update multipliers

Optimization terminated: mesh size less than options.MeshTolerance

and constraint violation is less than options.ConstraintTolerance.

\* Find x: 627.989 492.4864 0.1087793 0.2043996 0.275136 0.190419

\* exitflag: 1

\*\* END: Find x

\*\*\* Find x: 1431.4 seconds

OPT parameter: 627.989 492.4864 0.1087793 0.2043996 0.275136 0.190419

---------- SHOW OPTIMAL RESULTS ----------

Target muscle parameter:

624.3000 0.1157 0.2723

435.5600 0.1321 0.1923

Optimal muscle parameter:

627.9890 0.1088 0.2751

492.4864 0.2044 0.1904

Motion 1 joint angle prediction error: 0.002295

Motion 1 joint speed prediction error: 0.009951

---------- VALIDATE OPTIMAL RESULTS ----------

Validate motion joint angle prediction error: 0.4126

Validate motion joint speed prediction error: 1.2526

---------- END RUNNING: 09-Jun-2023 16:46:33 ----------

>> main\_opt\_v20

---------- START RUNNING: 09-Jun-2023 17:39:42 ----------

---------- INPUT USERS SETTING FOR OPTIMIZATION ----------

---------- PREPROCESS ----------

---------- START OPTIMIZATION ----------

\*\* START: Find x0 with bestfval < 0.05

\* Find x0: 1 times

Best Mean Stall

Iteration f-count f(x) f(x) Iterations

0 60 0.2428 NaN 0

1 120 0.2428 1.096 0

2 180 0.2428 1.02 1

3 240 0.2428 1.002 2

4 300 0.2428 0.8985 3

5 360 0.2428 0.9268 4

6 420 0.2428 0.9114 5

7 480 0.2428 0.876 6

8 540 0.2132 0.6803 0

9 600 0.1874 0.8508 0

10 660 0.1666 0.6312 0

11 720 0.1634 0.6428 0

12 780 0.1109 0.5945 0

13 840 0.1109 0.6184 1

14 900 0.09748 0.5431 0

15 960 0.07542 0.5019 0

16 1020 0.0722 0.4614 0

17 1080 0.0722 0.4997 1

18 1140 0.06739 0.5979 0

19 1200 0.06739 0.5472 1

20 1260 0.06739 0.6855 2

21 1320 0.06739 0.7586 3

22 1380 0.06739 0.8469 4

23 1440 0.06739 0.8043 5

24 1500 0.06739 0.8812 6

25 1560 0.06739 0.6314 7

26 1620 0.06739 0.6516 8

27 1680 0.06739 0.4708 9

28 1740 0.06739 0.3493 10

29 1800 0.04844 0.4206 0

Optimization stopped by a plot function or output function.'

\* Find x0: 540.643 523.4888 0.172395 0.2371921 0.2230559 0.1696292

\* exitflag: -1

\*\* END: Find x0 with bestfval < 0.05

\*\*\* Find x0: 851.7 seconds

\*\* START: Find x with bestfval < 0.0001

\* Find x: 1 times

Max

Iter Func-count f(x) Constraint MeshSize Method

0 1 0.162569 0.1526 1

1 631 0.0132385 0.003239 0.009772 Update multipliers

2 930 0.0127748 0.002775 0.000955 Update multipliers

3 1274 0.012632 0.002632 9.333e-05 Update multipliers

4 1640 0.0126231 0.002623 9.12e-06 Update multipliers

5 2031 0.0126231 0.002623 8.913e-07 Update multipliers

Optimization terminated: no feasible point found.

\* Failed to find x 1 times

\*\* END: Find x

\*\*\* Find x: 1360.8 seconds

OPT parameter: 618.5745 551.451 0.1098339 0.2291367 0.2731021 0.1913149

---------- SHOW OPTIMAL RESULTS ----------

Target muscle parameter:

624.3000 0.1157 0.2723

435.5600 0.1321 0.1923

Optimal muscle parameter:

618.5745 0.1098 0.2731

551.4510 0.2291 0.1913

Motion 1 joint angle prediction error: 0.002752

Motion 1 joint speed prediction error: 0.012623

---------- VALIDATE OPTIMAL RESULTS ----------

Validate motion joint angle prediction error: 0.4131

Validate motion joint speed prediction error: 1.2898

---------- END RUNNING: 09-Jun-2023 18:16:41 ----------

>> main\_opt\_v20

---------- START RUNNING: 09-Jun-2023 18:26:45 ----------

---------- INPUT USERS SETTING FOR OPTIMIZATION ----------

---------- PREPROCESS ----------

---------- START OPTIMIZATION ----------

\*\* START: Find x0 with bestfval < 0.05

\* Find x0: 1 times

Best Mean Stall

Iteration f-count f(x) f(x) Iterations

0 60 0.1356 NaN 0

1 120 0.1356 1.049 0

2 180 0.1356 1.024 1

3 240 0.1356 0.9961 2

4 300 0.1356 0.9723 3

5 360 0.1356 0.9437 4

6 420 0.1356 1.04 5

7 480 0.1356 0.9078 6

8 540 0.1356 0.8334 7

9 600 0.1166 0.7056 0

10 660 0.1067 0.5804 0

11 720 0.06841 0.573 0

12 780 0.0606 0.5067 0

13 840 0.05826 0.6048 0

14 900 0.05815 0.4785 0

15 960 0.05808 0.3147 0

16 1020 0.05537 0.3898 0

17 1080 0.05323 0.4284 0

18 1140 0.05199 0.3686 0

19 1200 0.05199 0.3108 1

20 1260 0.05199 0.4294 2

21 1320 0.05199 0.4058 3

22 1380 0.05199 0.6046 4

23 1440 0.05199 0.5026 5

24 1500 0.05199 0.4693 6

25 1560 0.05199 0.3481 7

26 1620 0.05151 0.3489 0

27 1680 0.05151 0.4114 1

28 1740 0.05151 0.3808 2

29 1800 0.05128 0.236 0

30 1860 0.05111 0.218 0

Best Mean Stall

Iteration f-count f(x) f(x) Iterations

31 1920 0.05108 0.3316 0

32 1980 0.05108 0.33 1

33 2040 0.05093 0.2867 0

34 2100 0.05046 0.4225 0

35 2160 0.05014 0.3571 0

36 2220 0.04999 0.322 0

Optimization stopped by a plot function or output function.'

\* Find x0: 504.5236 436.3353 0.2259283 0.1541429 0.1576734 0.1565314

\* exitflag: -1

\*\* END: Find x0 with bestfval < 0.05

\*\*\* Find x0: 1246.6 seconds

\*\* START: Find x with bestfval < 0.0001

\* Find x: 1 times

Max

Iter Func-count f(x) Constraint MeshSize Method

0 1 0.0654683 0.05547 1

1 421 0.00522342 0 0.009772 Update multipliers

2 699 0.00514058 0 0.000955 Update multipliers

3 1014 0.00514058 0 9.333e-05 Update multipliers

4 1353 0.00514058 0 9.12e-06 Update multipliers

5 1712 0.00514058 0 8.913e-07 Update multipliers

Optimization terminated: Change in X less than options.StepTolerance

and constraints violation is less that options.ConstraintTolerance.

\* Find x: 574.4904 356.9809 0.1346391 0.107797 0.2326006 0.1948628

\* exitflag: 2

\*\* END: Find x

\*\*\* Find x: 1215.4 seconds

OPT parameter: 574.4904 356.9809 0.1346391 0.107797 0.2326006 0.1948628

---------- SHOW OPTIMAL RESULTS ----------

Target muscle parameter:

624.3000 0.1157 0.2723

435.5600 0.1321 0.1923

Optimal muscle parameter:

574.4904 0.1346 0.2326

356.9809 0.1078 0.1949

Motion 1 joint angle prediction error: 0.000577

Motion 1 joint speed prediction error: 0.005141

---------- VALIDATE OPTIMAL RESULTS ----------

Validate motion joint angle prediction error: 0.4788

Validate motion joint speed prediction error: 0.6855

---------- END RUNNING: 09-Jun-2023 19:07:51 ----------