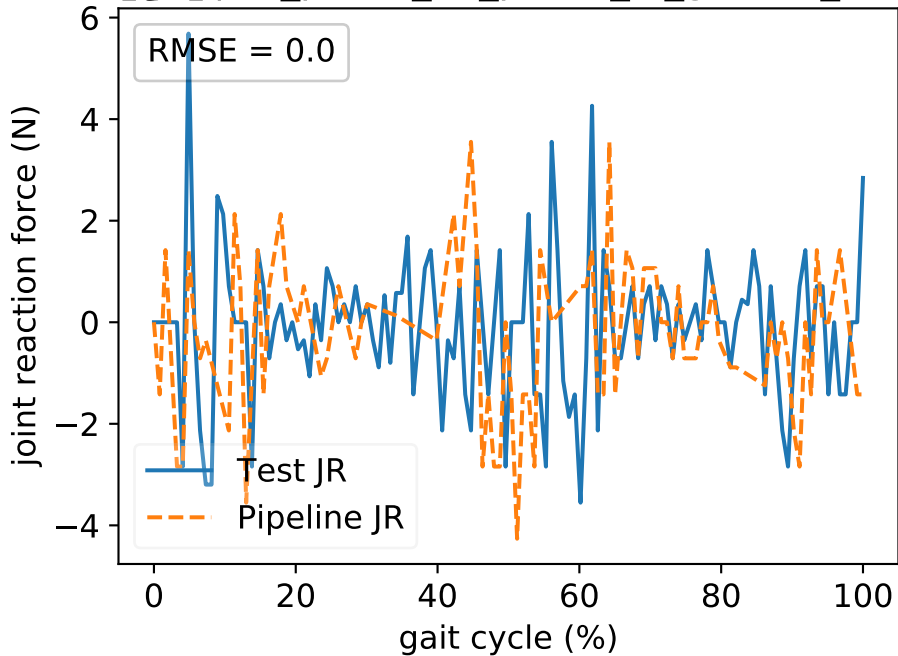
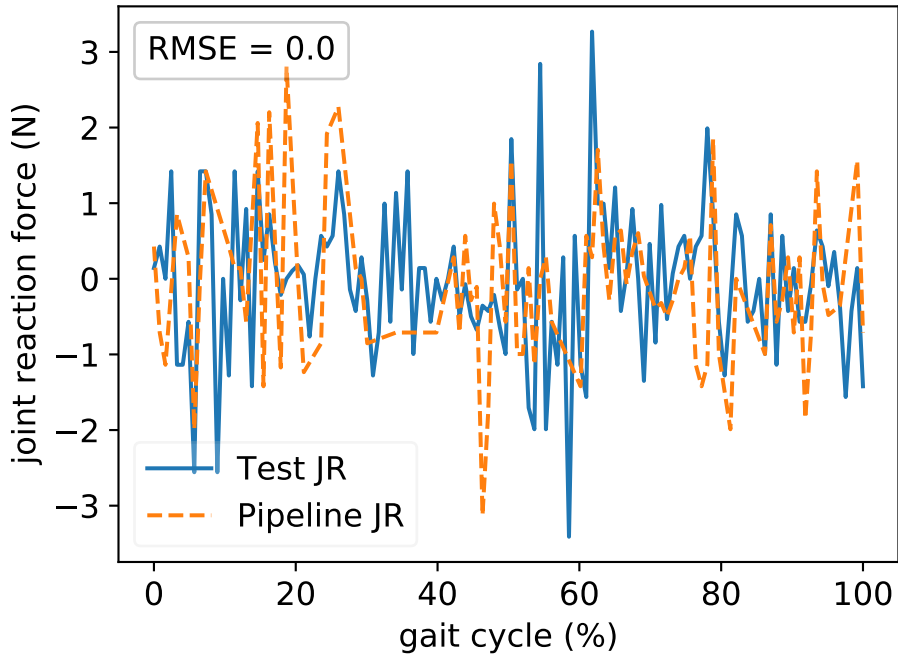


19 ground_pelvis_on_pelvis_in_ground_fx



19 ground_pelvis_on_pelvis_in_ground_fy



ground_pelvis_on_pelvis_in_ground_fz

RMSE = 0.0

joint reaction force (N)

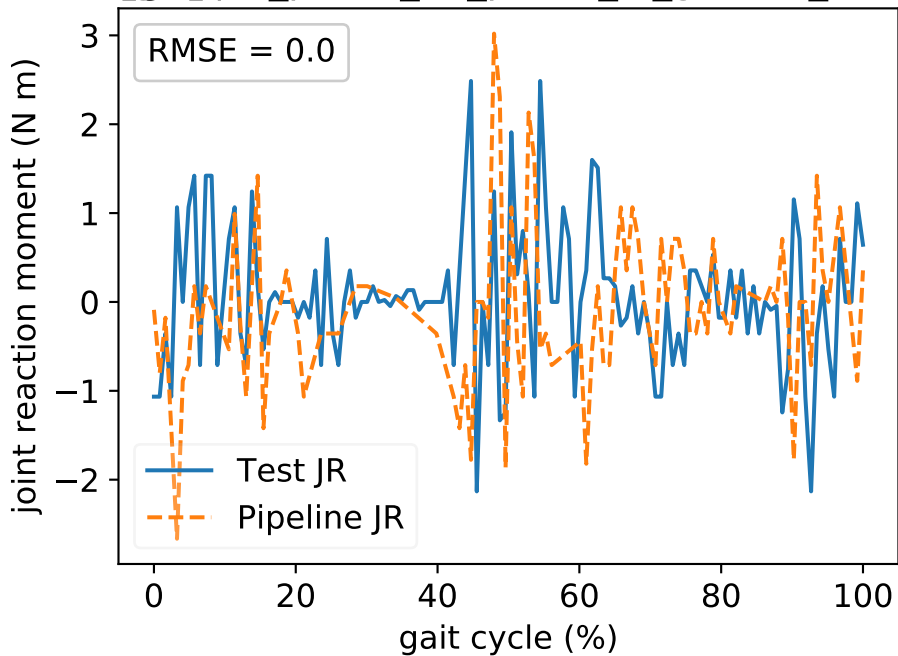
1.0
0.5
0.0
-0.5
-1.0

Test JR
Pipeline JR

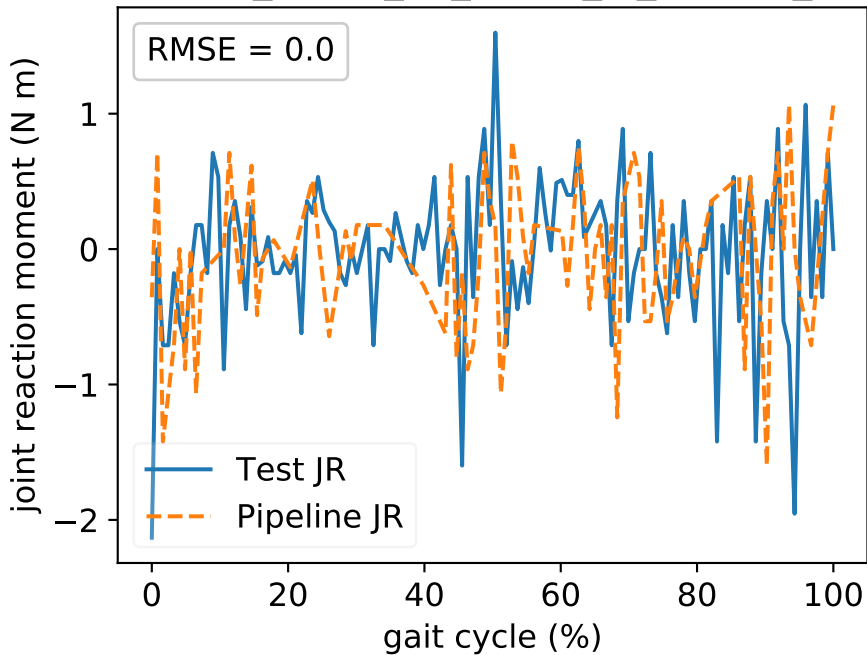
gait cycle (%)

100
80
60
40
20
0

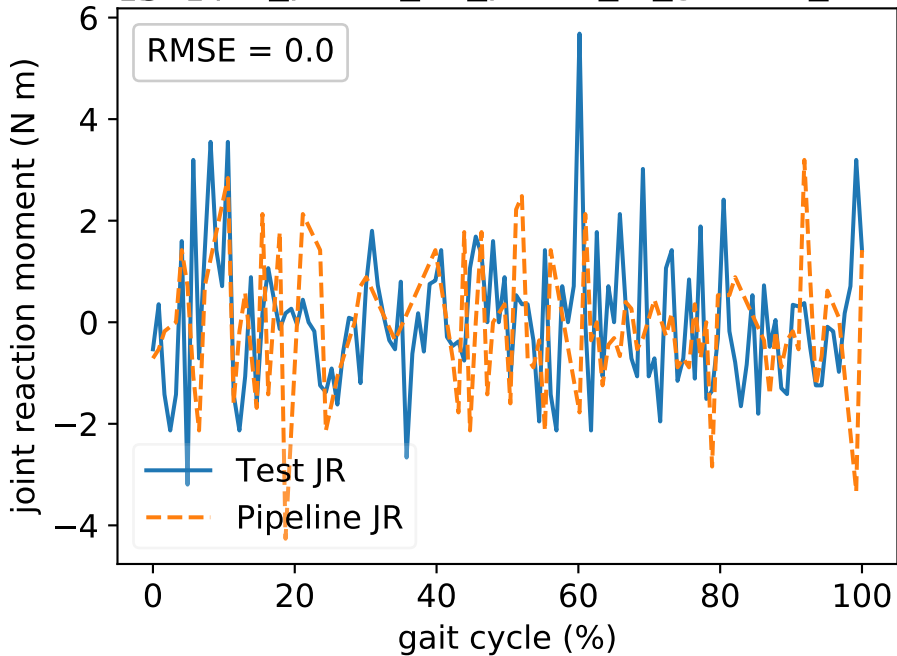
ground_pelvis_on_pelvis_in_ground_mx



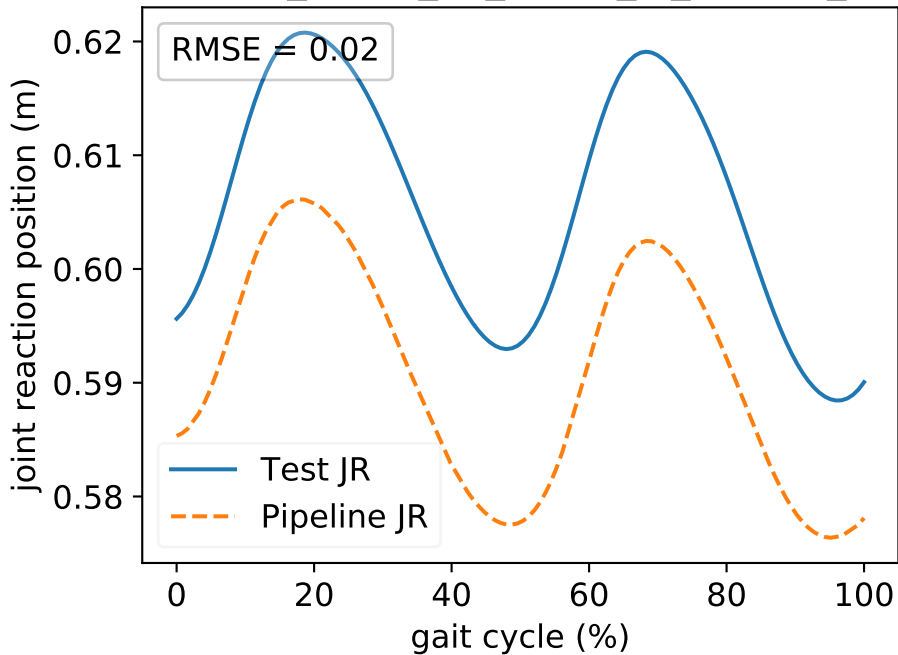
ground_pelvis_on_pelvis_in_ground_my



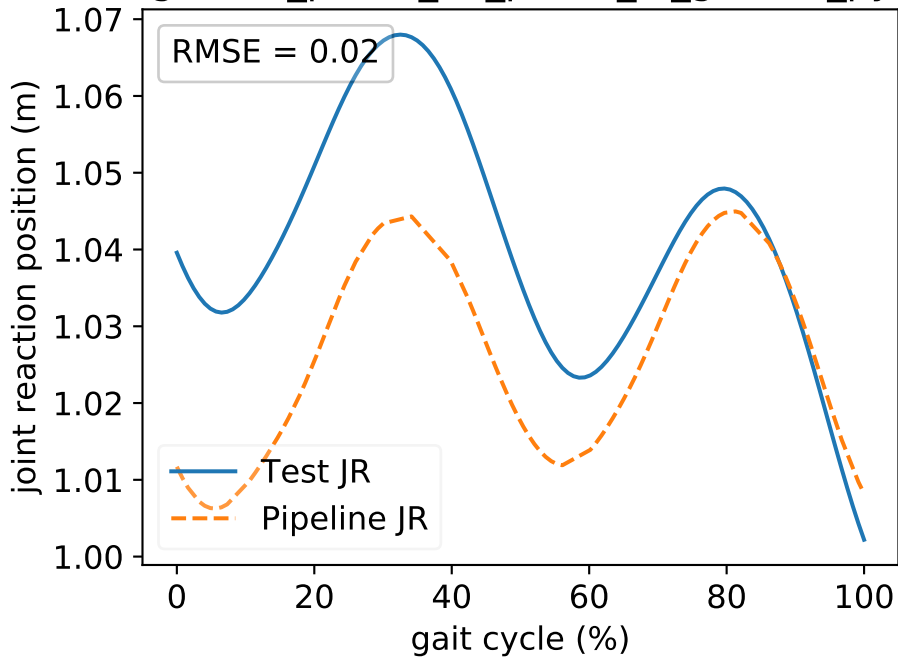
ground_pelvis_on_pelvis_in_ground_mz



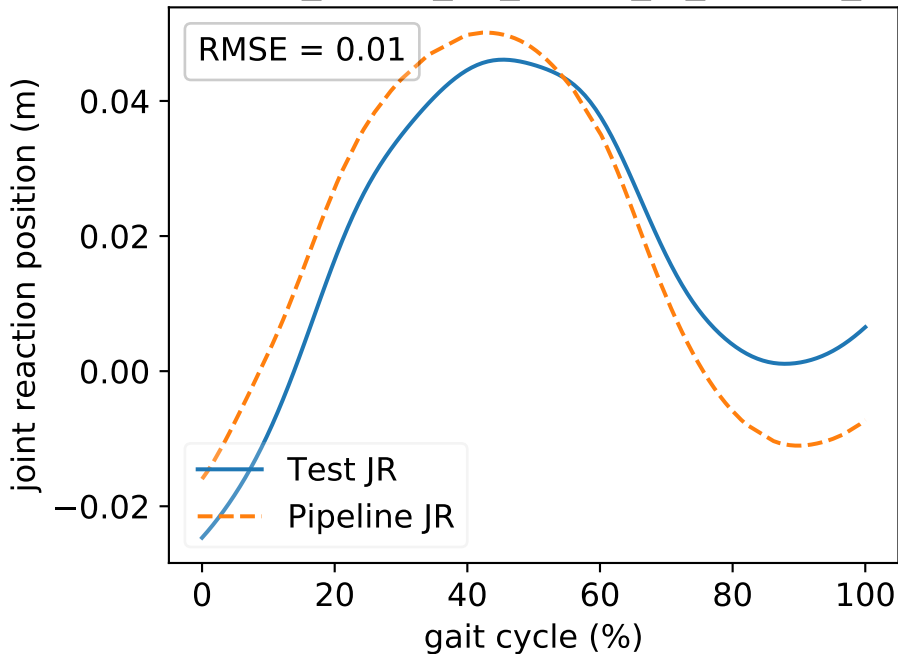
ground_pelvis_on_pelvis_in_ground_px



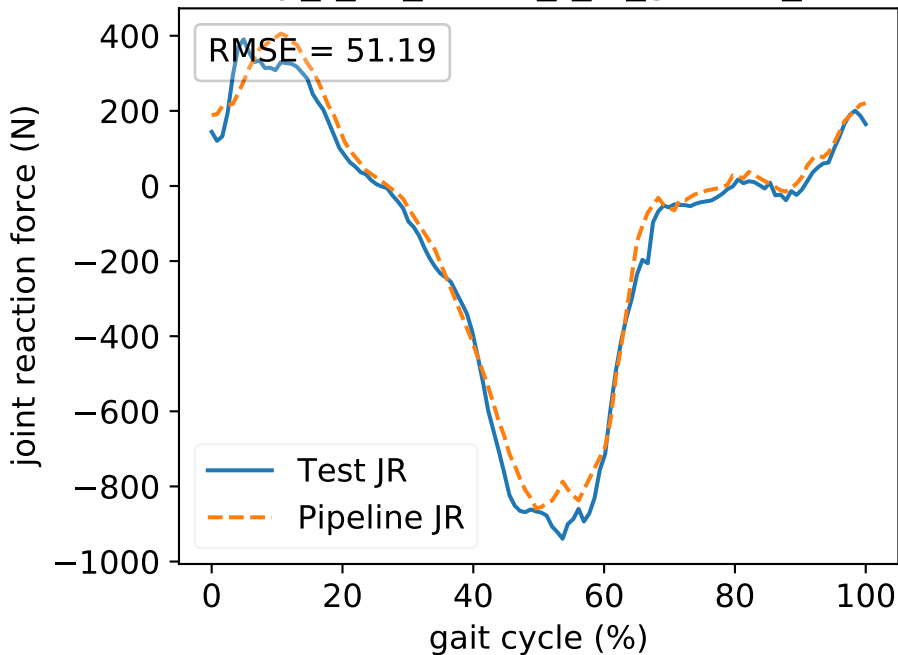
ground_pelvis_on_pelvis_in_ground_py



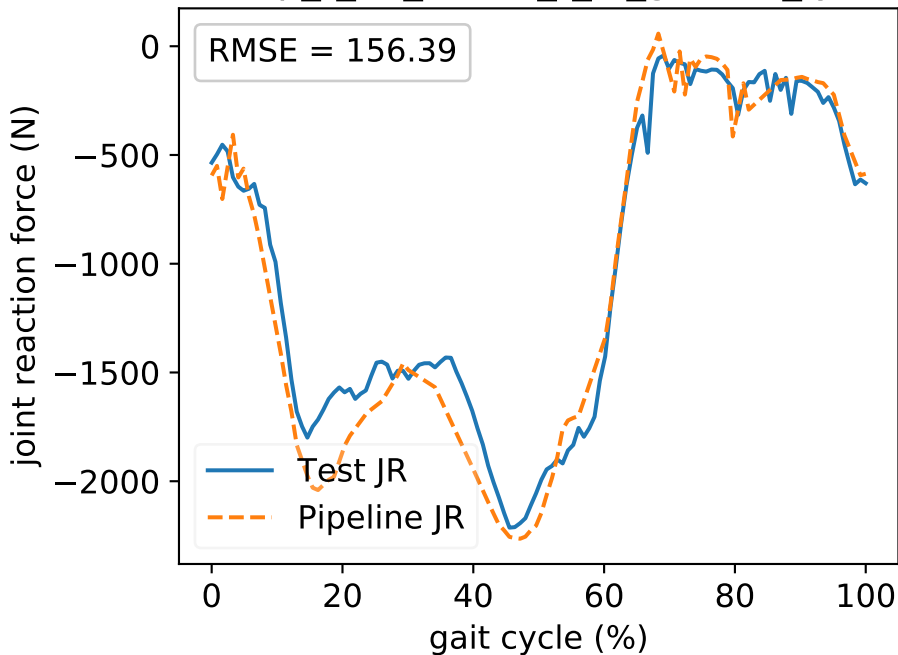
ground_pelvis_on_pelvis_in_ground_pz



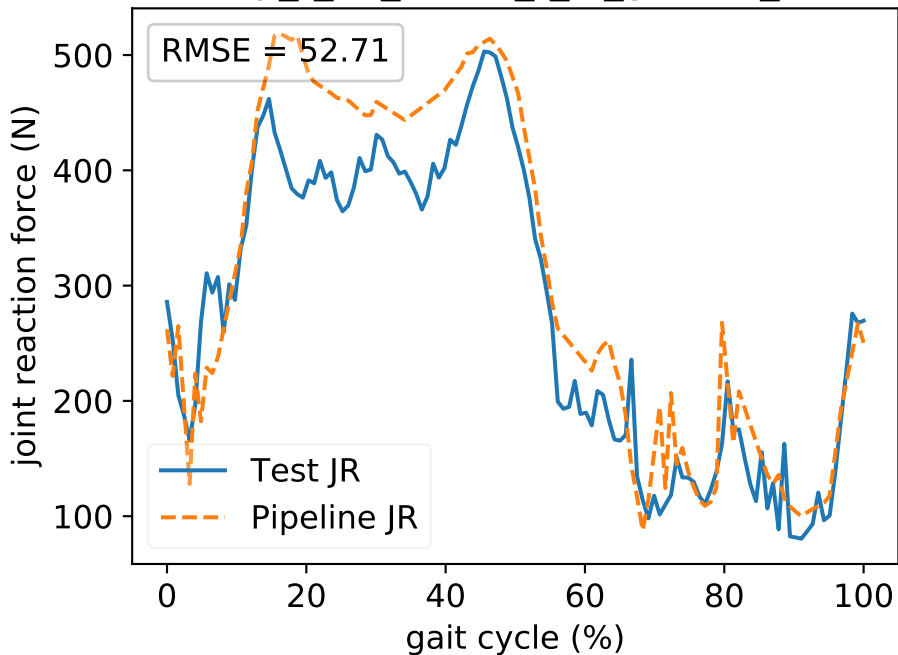
hip_r_on_femur_r_in_ground_fx



hip_r_on_femur_r_in_ground_fy



hip_r_on_femur_r_in_ground_fz



hip_r_on_femur_r_in_ground_mx

RMSE = 0.0

joint reaction moment (N m)

Test JR
Pipeline JR

gait cycle (%)

2

1

0

-1

0

20

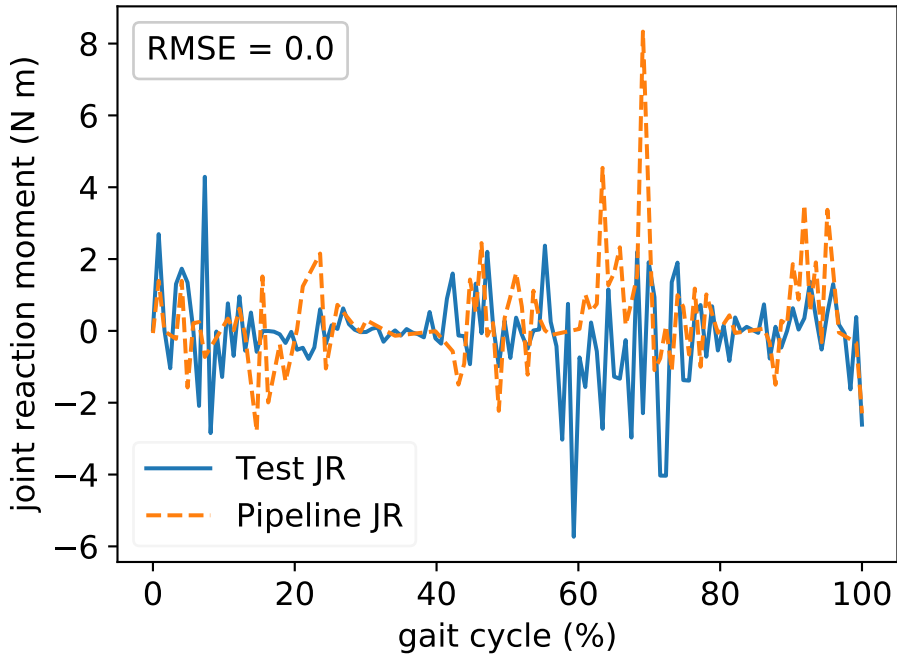
40

60

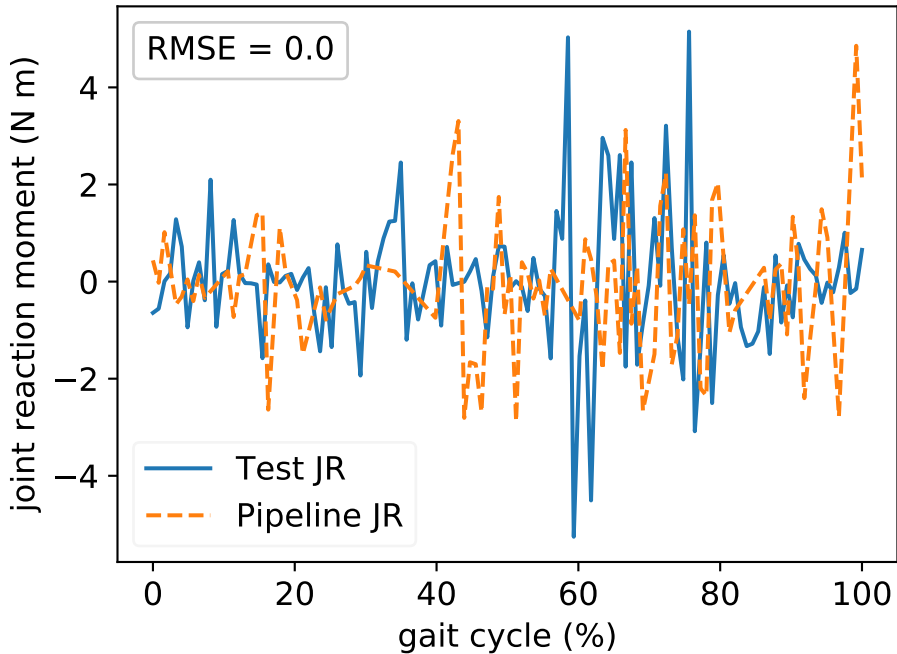
80

100

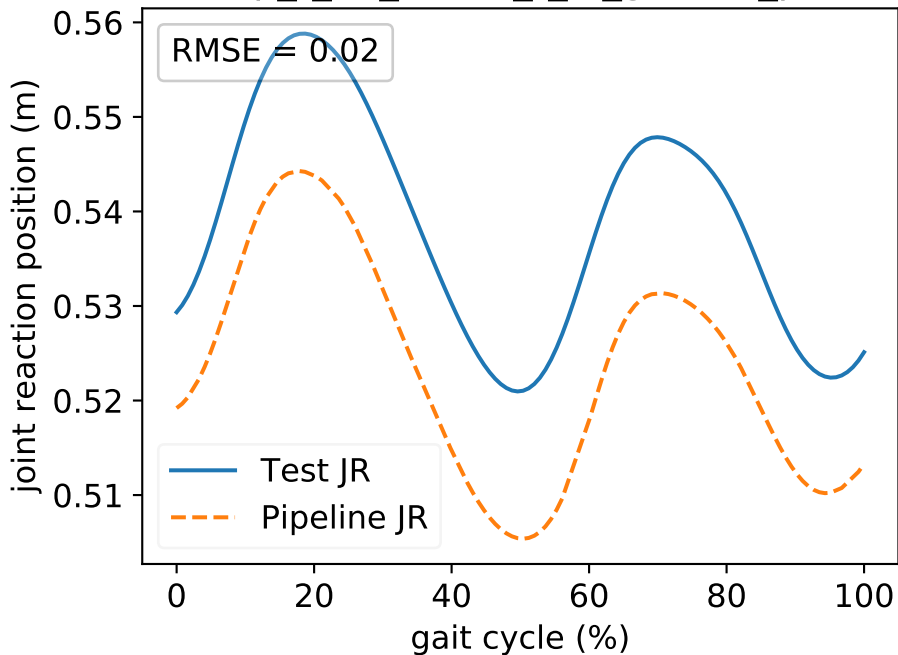
1e-14 hip_r_on_femur_r_in_ground_my



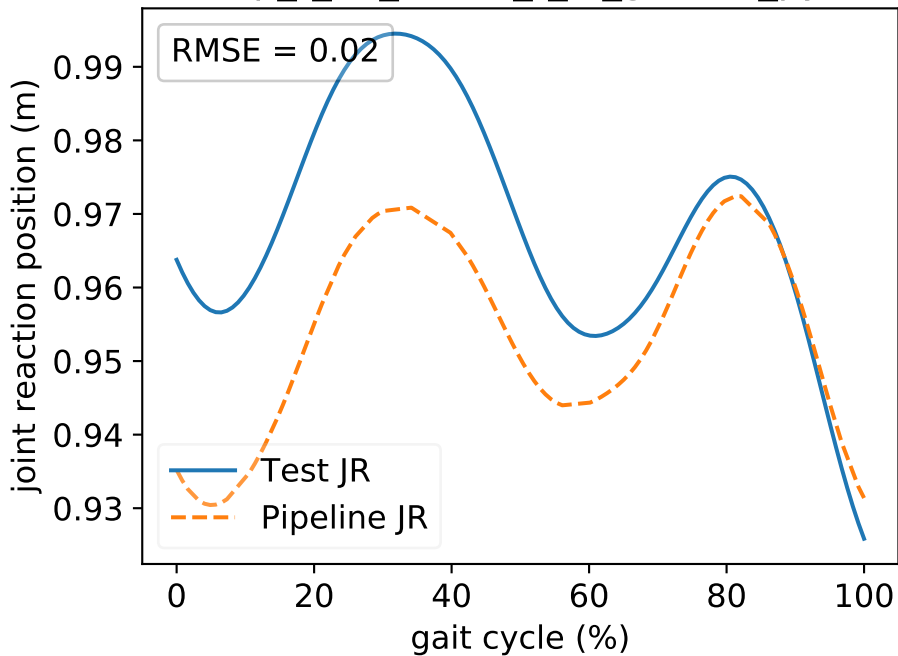
1e-14 hip_r_on_femur_r_in_ground_mz



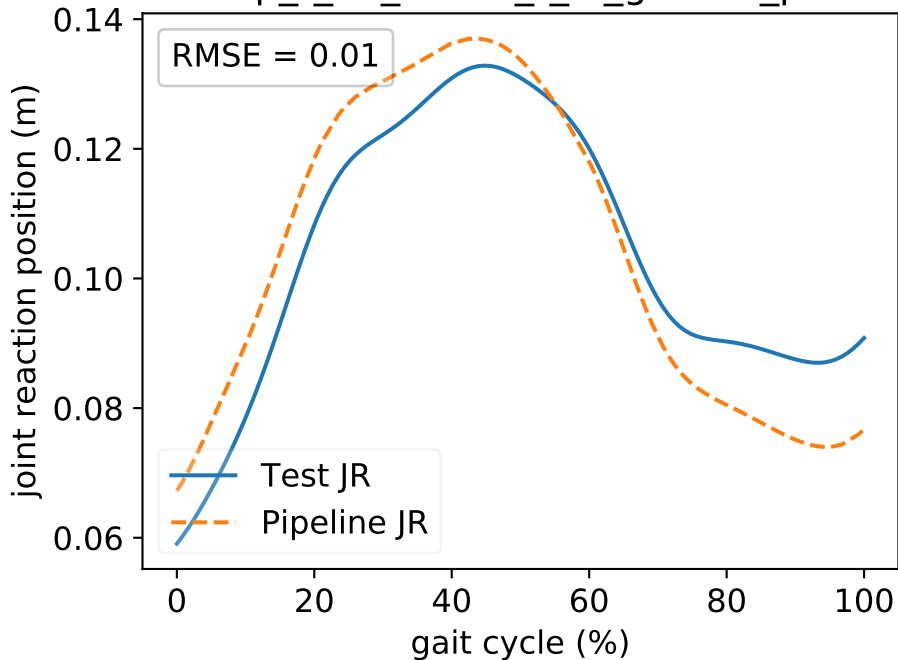
hip_r_on_femur_r_in_ground_px



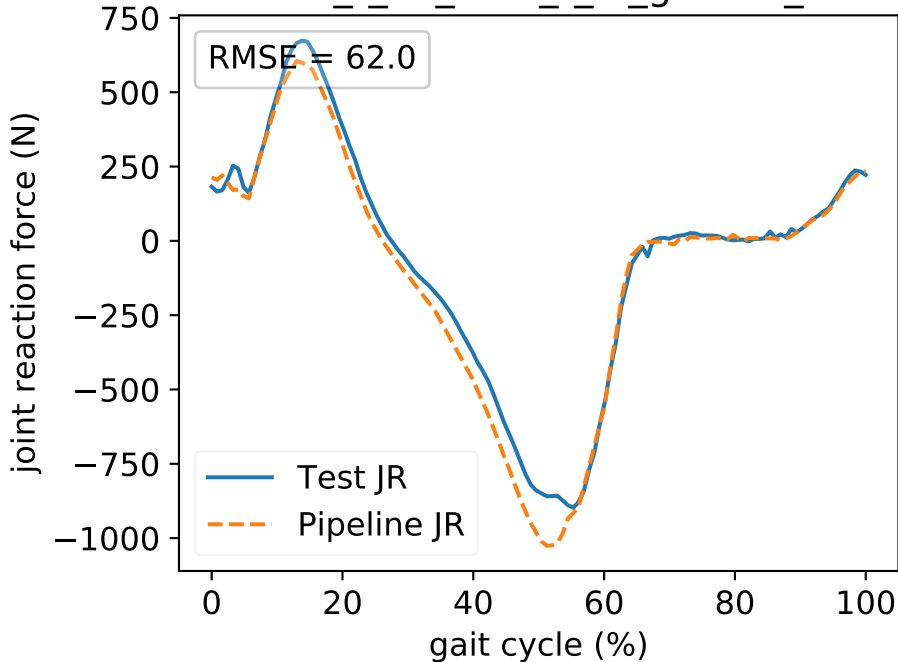
hip_r_on_femur_r_in_ground_py



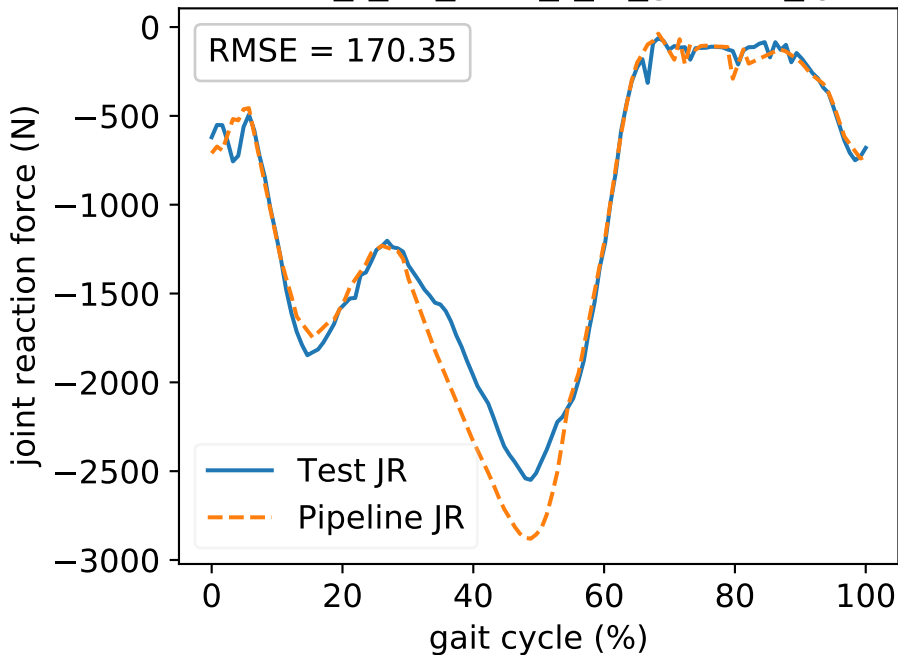
hip_r_on_femur_r_in_ground_pz



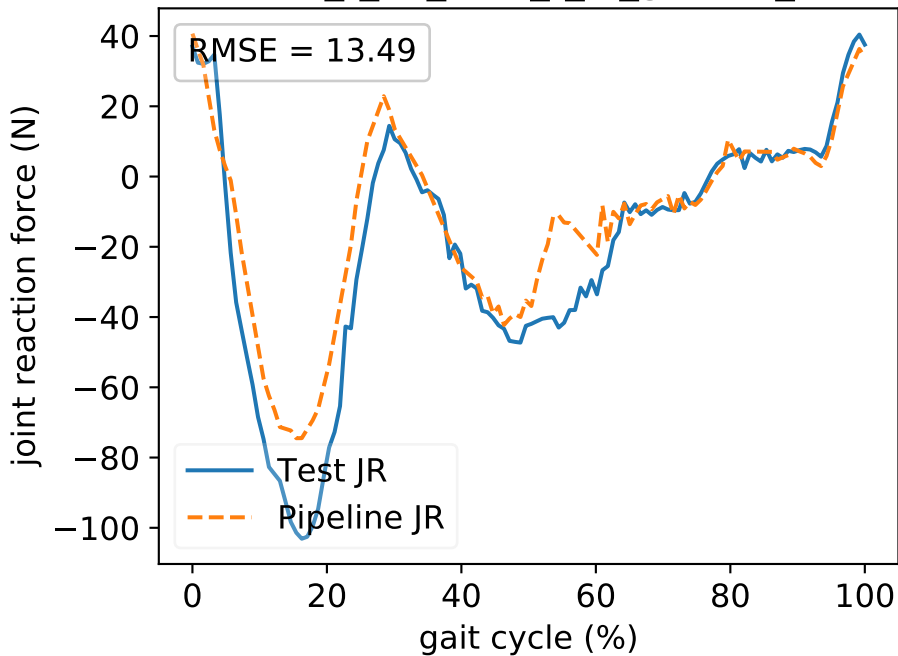
knee_r_on_tibia_r_in_ground_fx



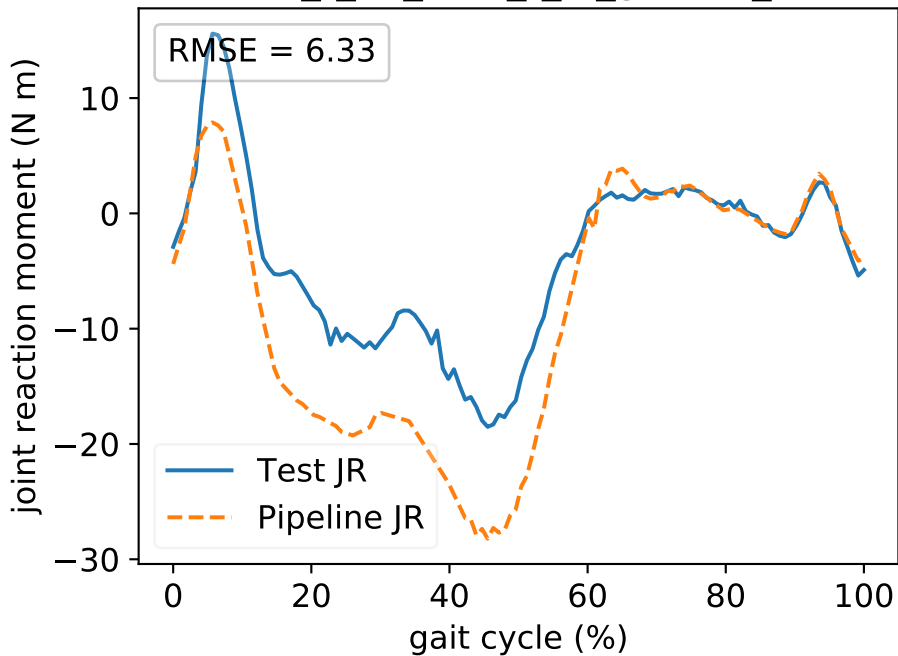
knee_r_on_tibia_r_in_ground_fy



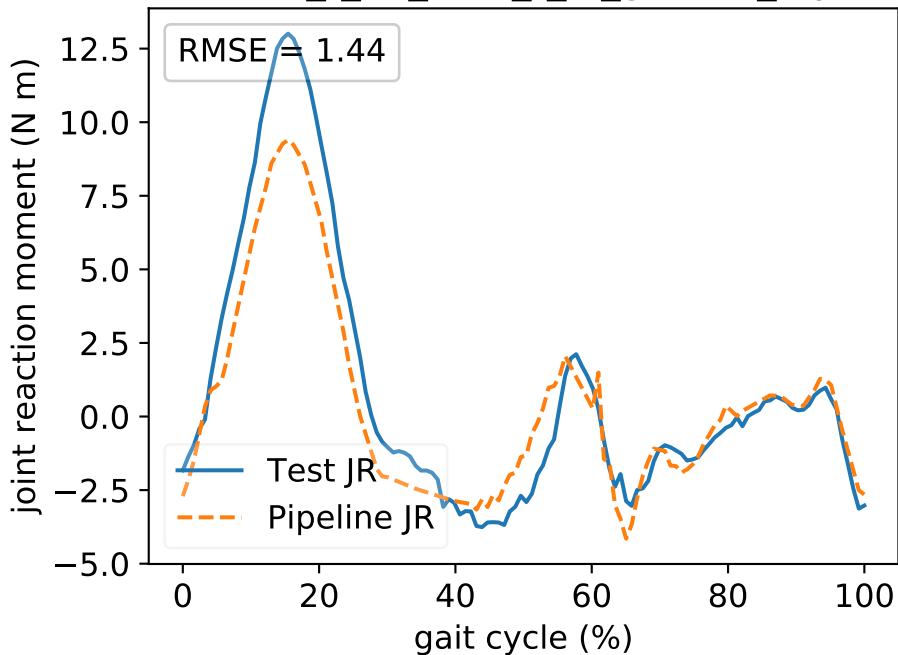
knee_r_on_tibia_r_in_ground_fz



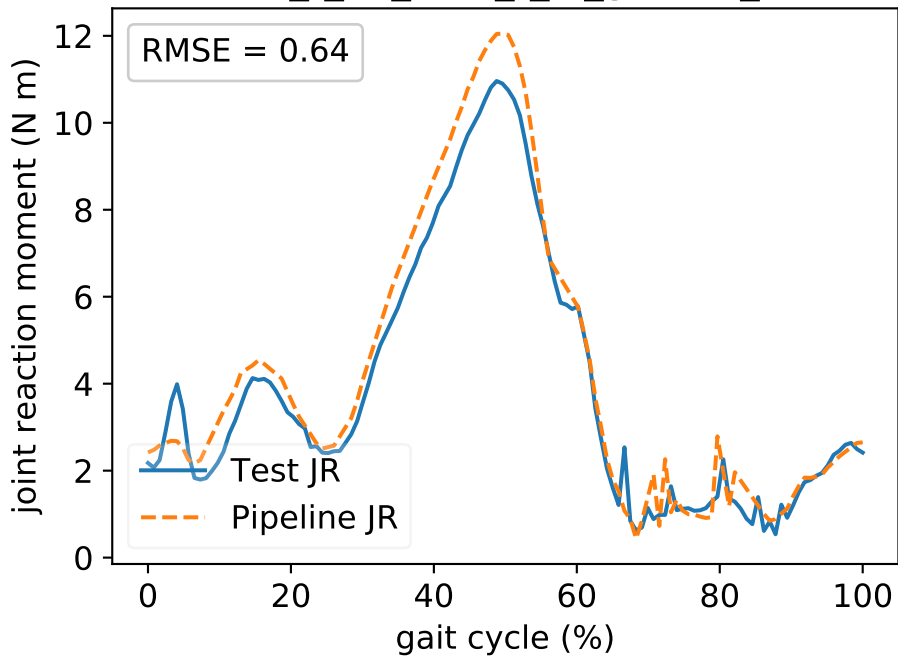
knee_r_on_tibia_r_in_ground_mx



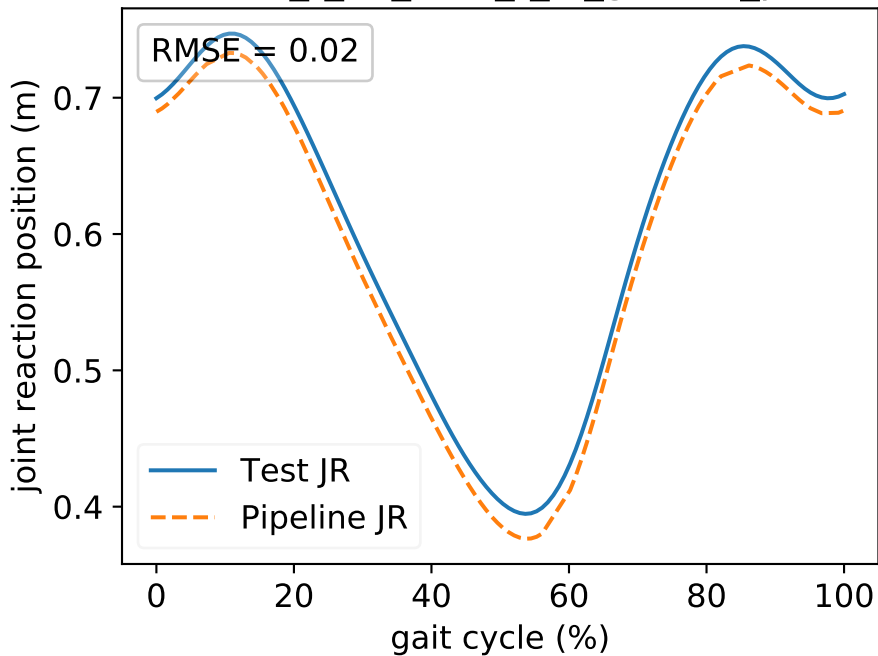
knee_r_on_tibia_r_in_ground_my



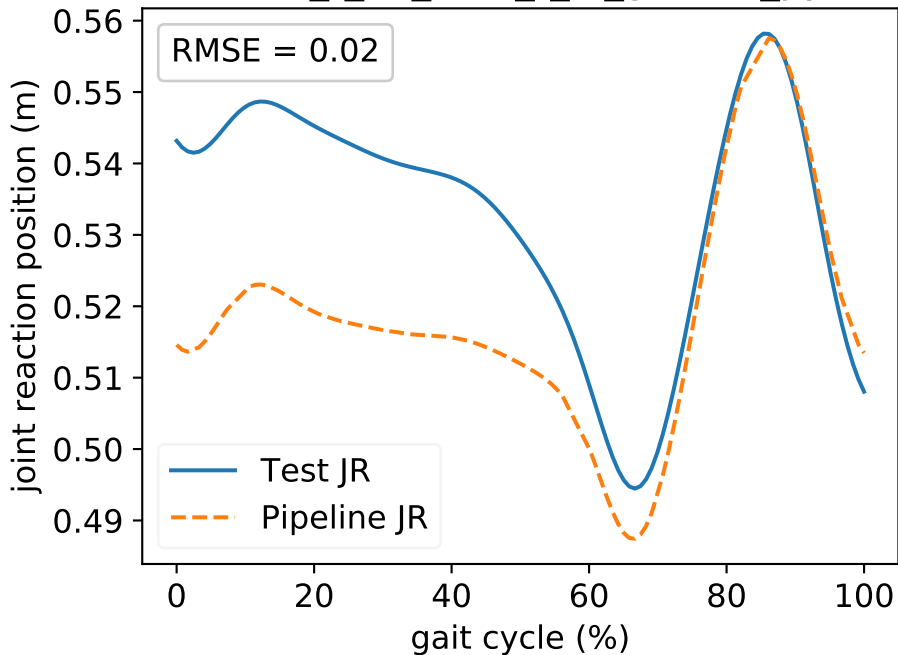
knee_r_on_tibia_r_in_ground_mz



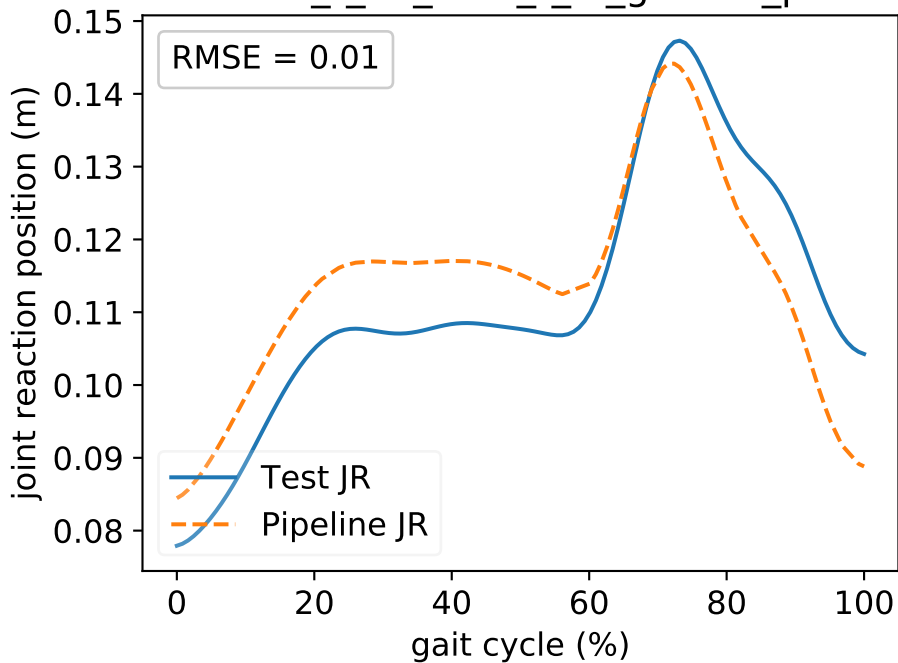
knee_r_on_tibia_r_in_ground_px



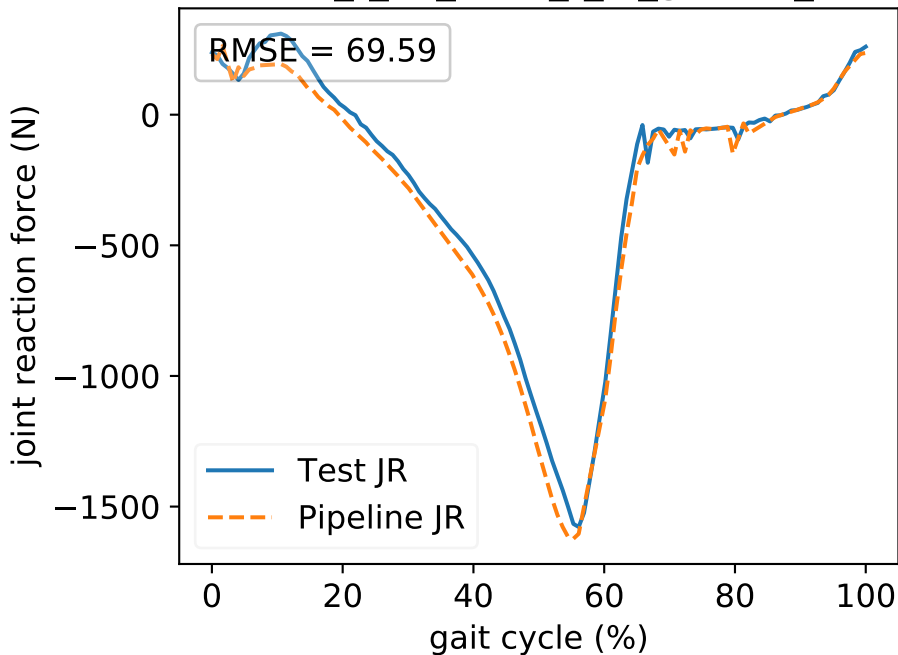
knee_r_on_tibia_r_in_ground_py



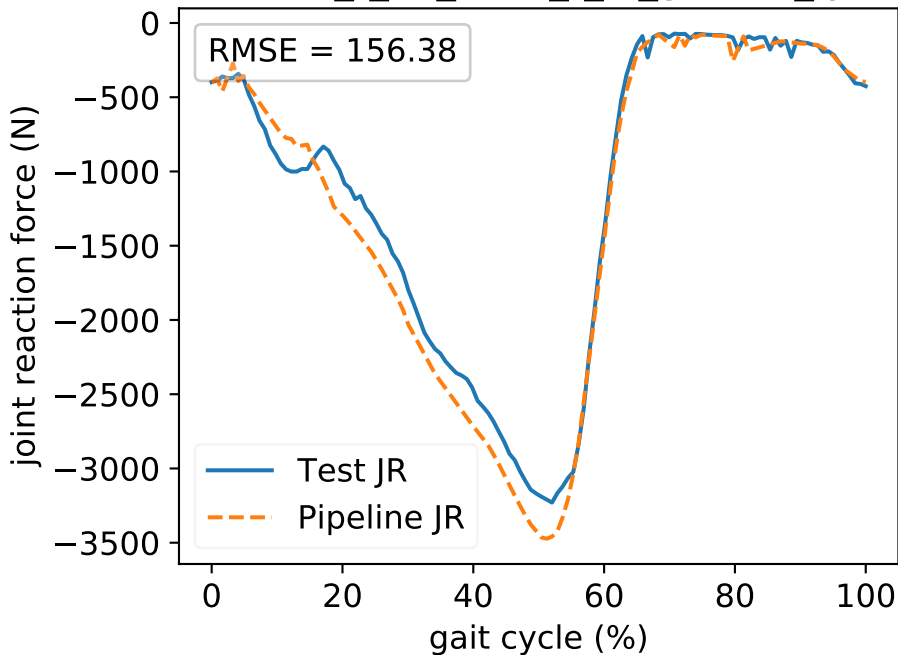
knee_r_on_tibia_r_in_ground_pz



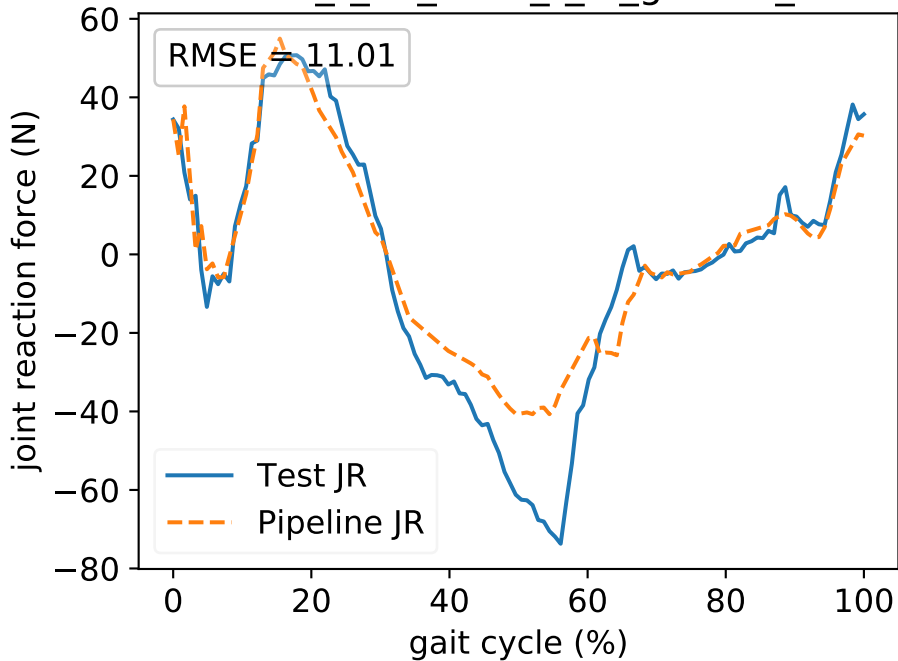
ankle_r_on_talus_r_in_ground_fx



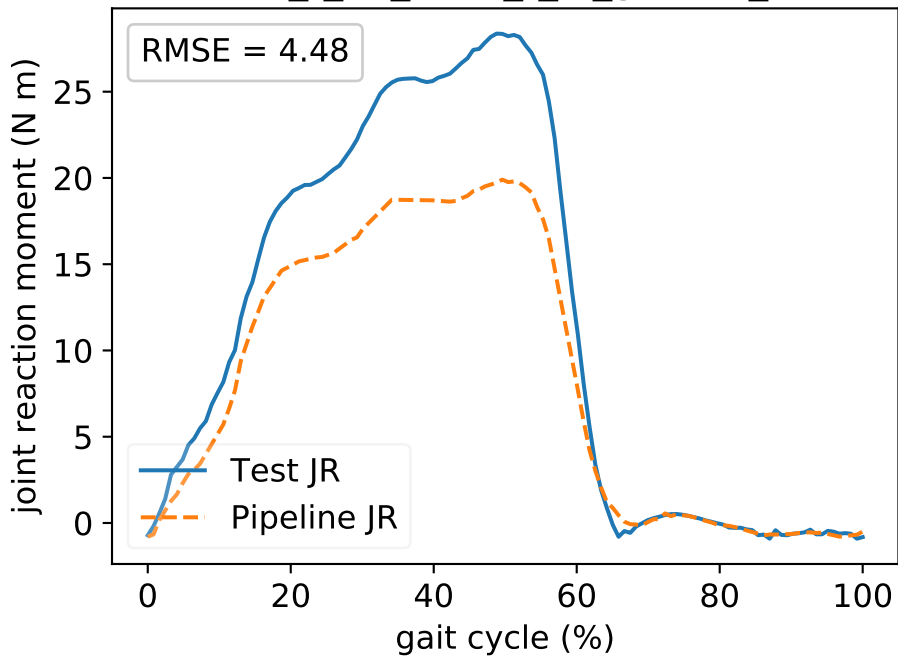
ankle_r_on_talus_r_in_ground_fy



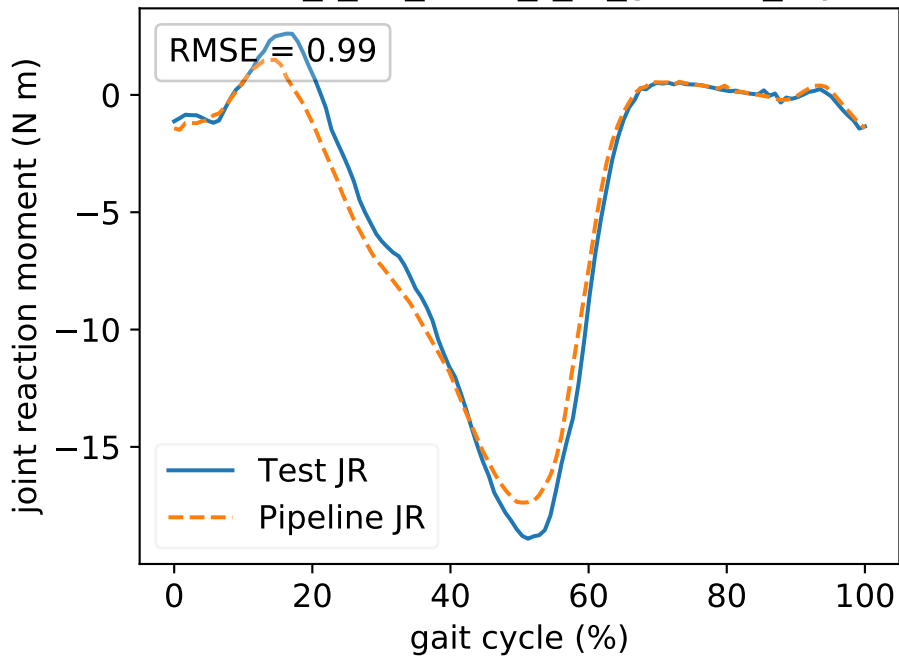
ankle_r_on_talus_r_in_ground_fz



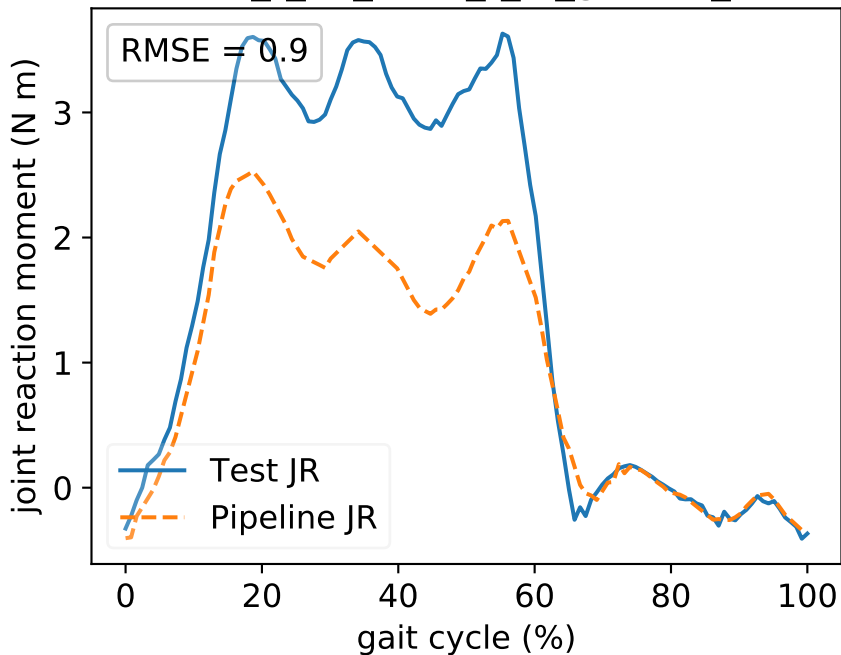
ankle_r_on_talus_r_in_ground_mx



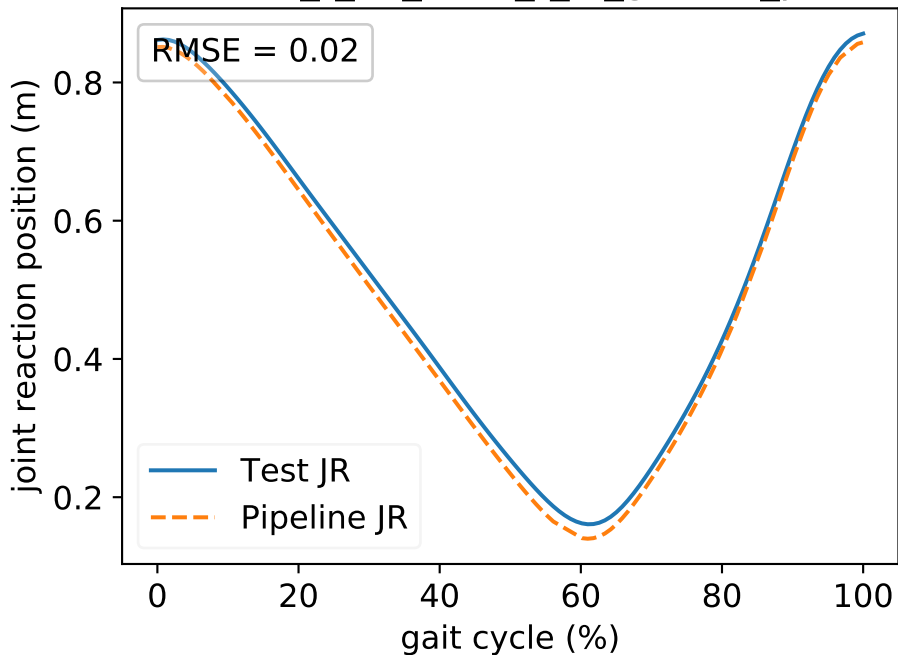
ankle_r_on_talus_r_in_ground_my



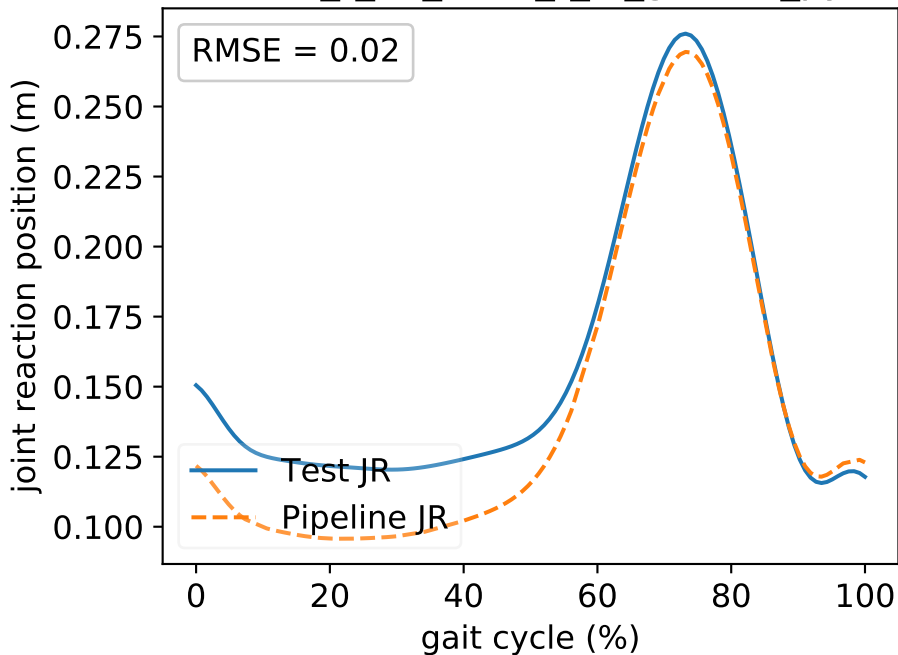
ankle_r_on_talus_r_in_ground_mz



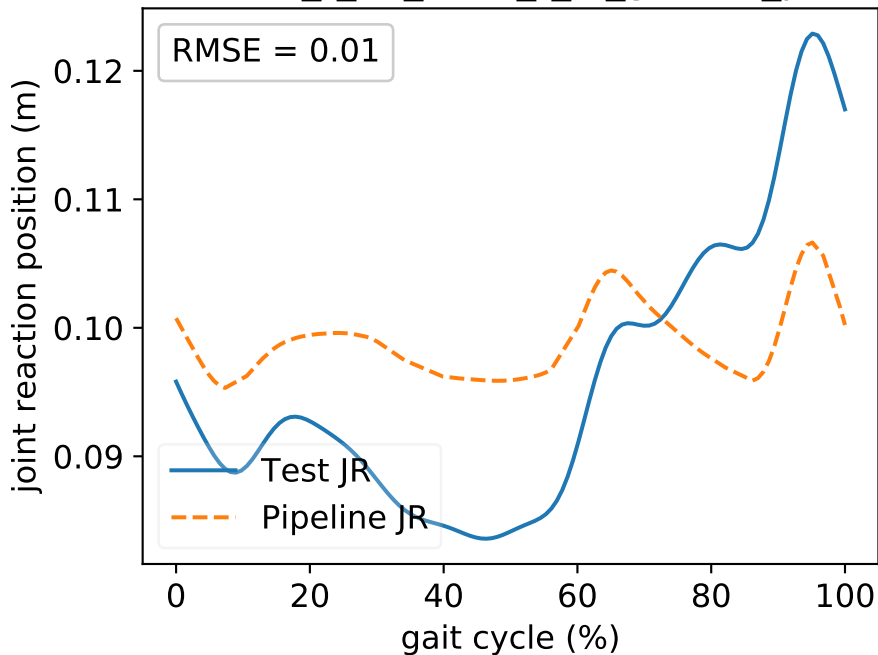
ankle_r_on_talus_r_in_ground_px



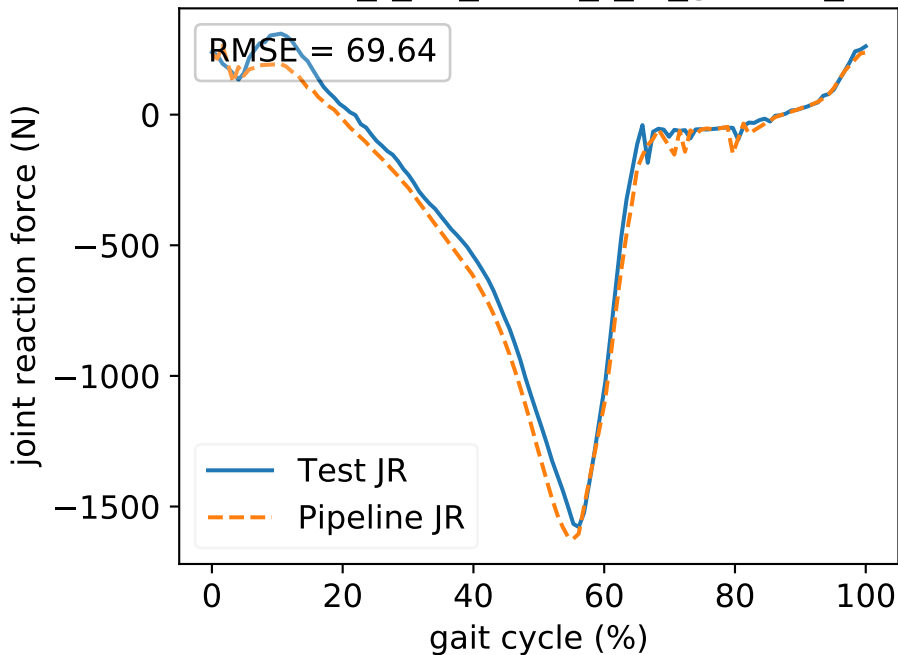
ankle_r_on_talus_r_in_ground_py



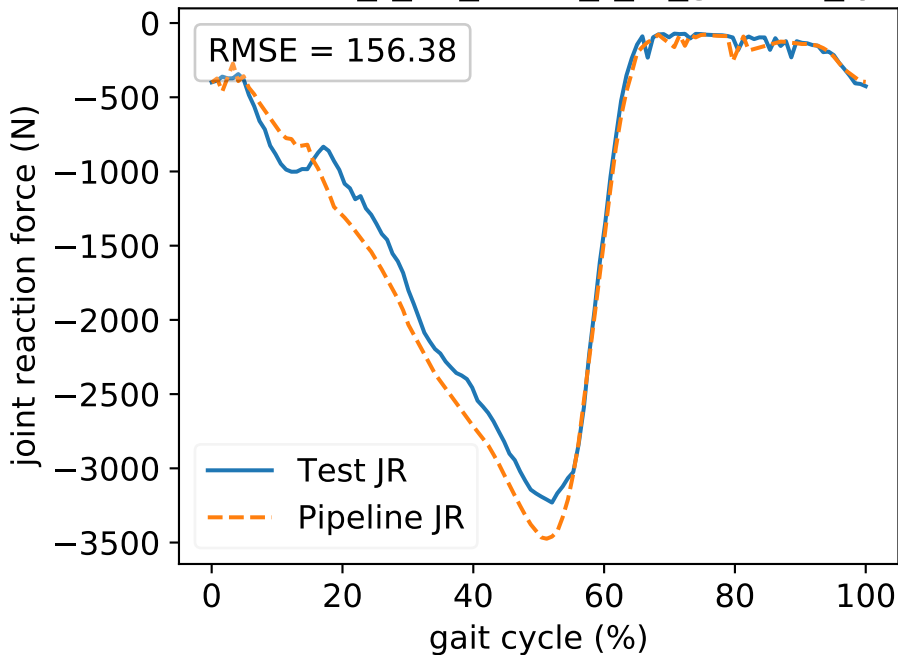
ankle_r_on_talus_r_in_ground_pz



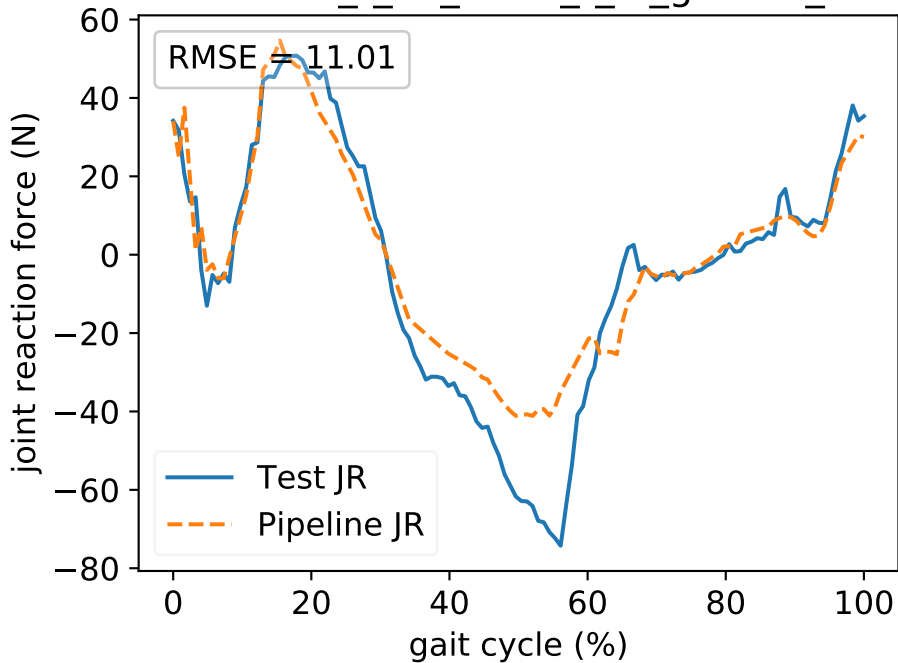
subtalar_r_on_calcn_r_in_ground_fx



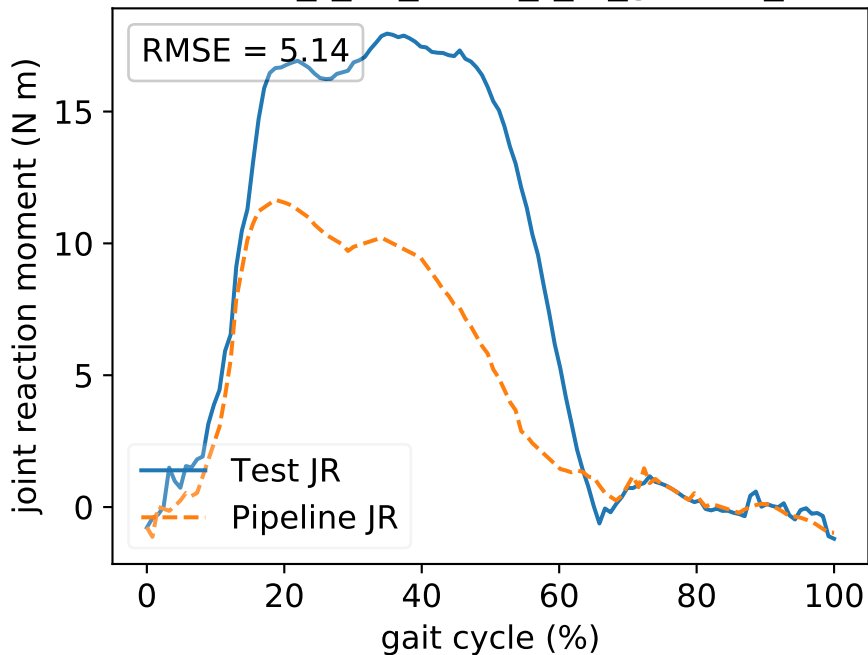
subtalar_r_on_calcn_r_in_ground_fy



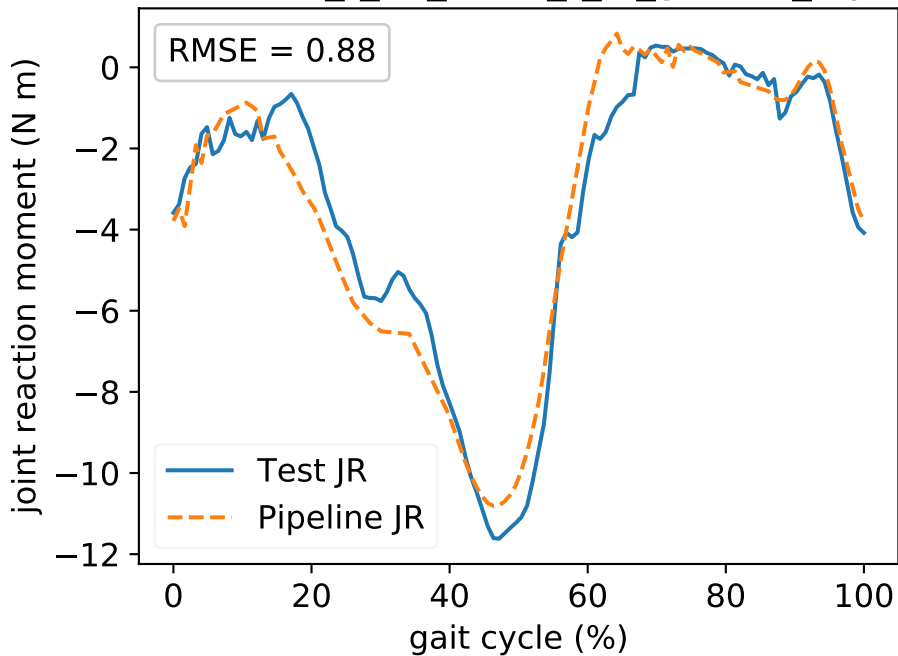
subtalar_r_on_calcn_r_in_ground_fz



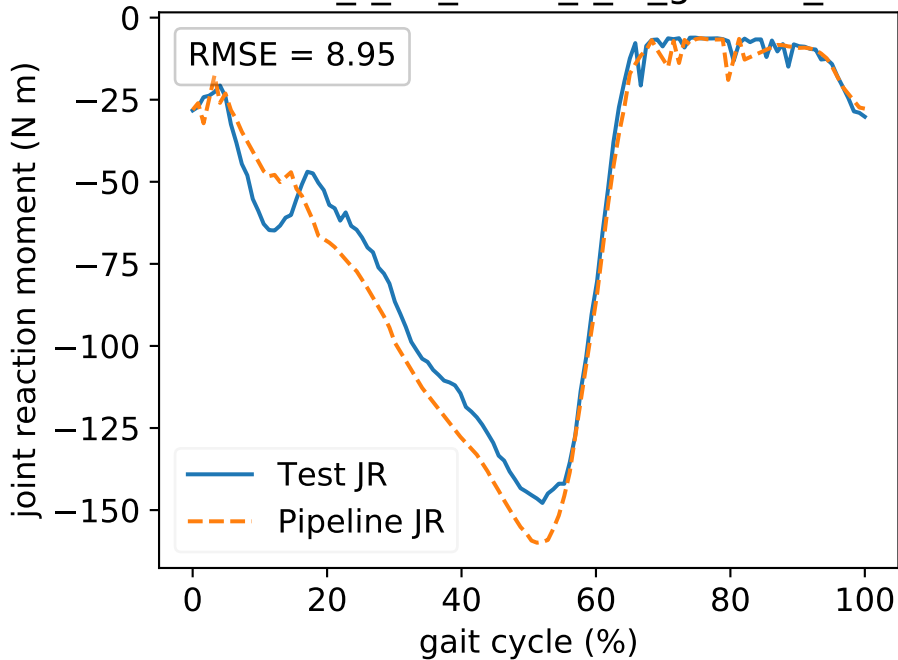
subtalar_r_on_calcn_r_in_ground_mx



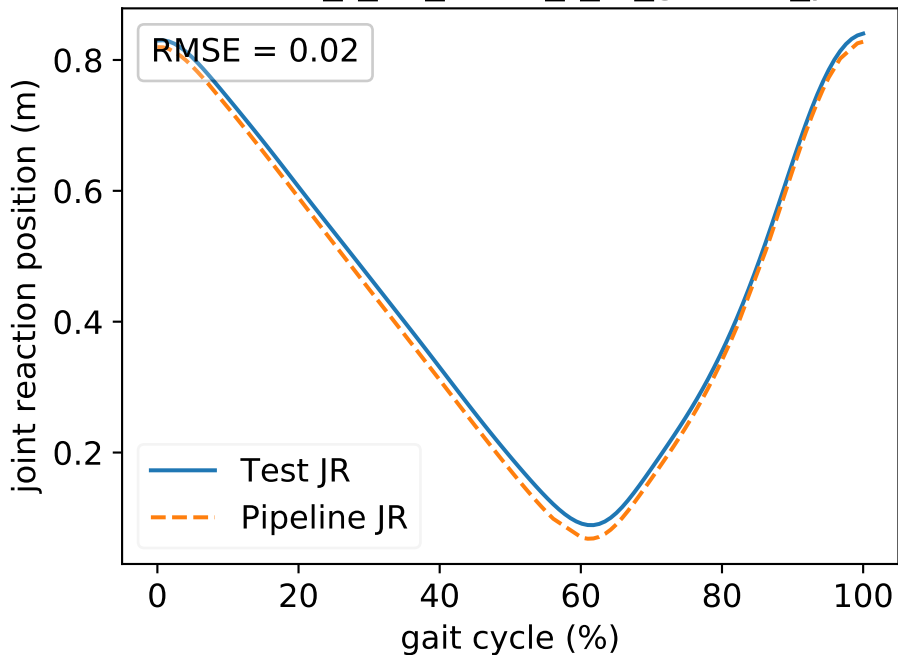
subtalar_r_on_calcn_r_in_ground_my



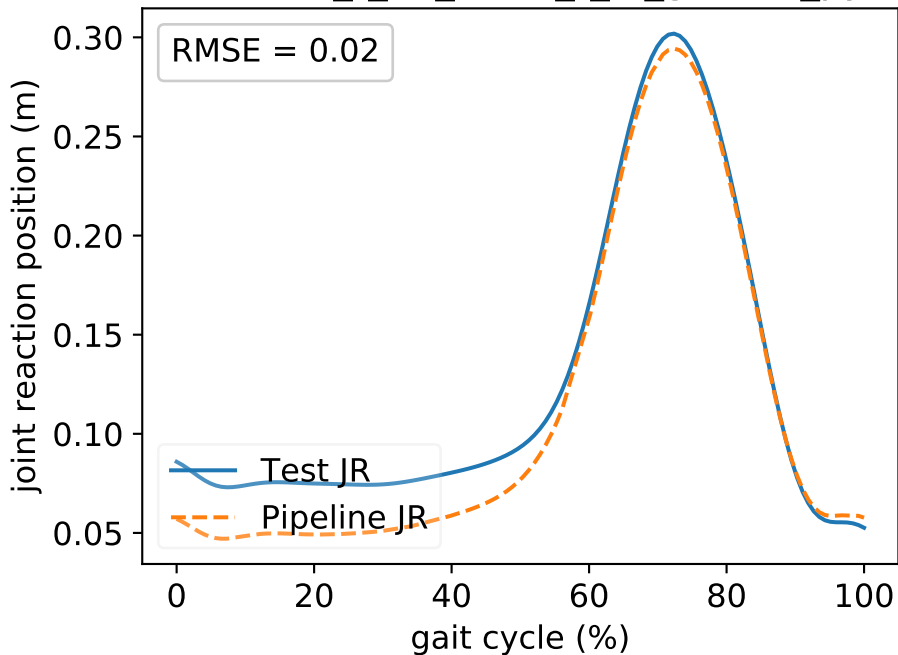
subtalar_r_on_calcn_r_in_ground_mz



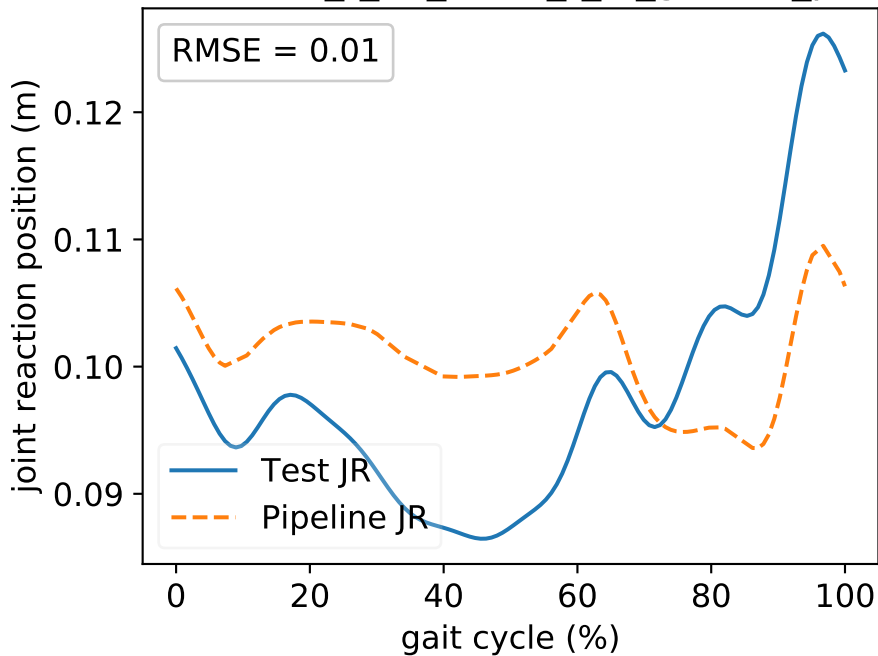
subtalar_r_on_calcn_r_in_ground_px



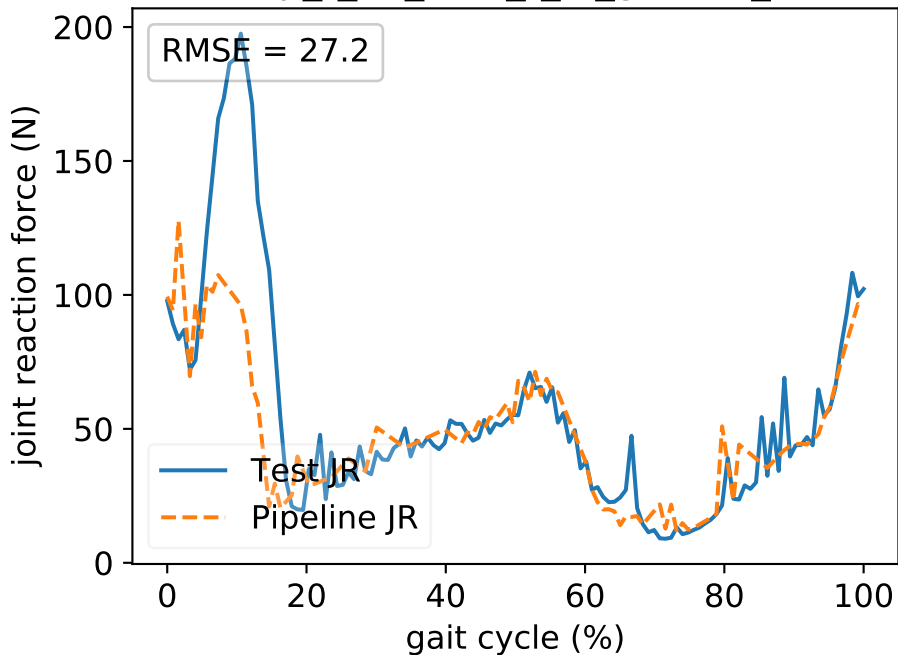
subtalar_r_on_calcn_r_in_ground_py



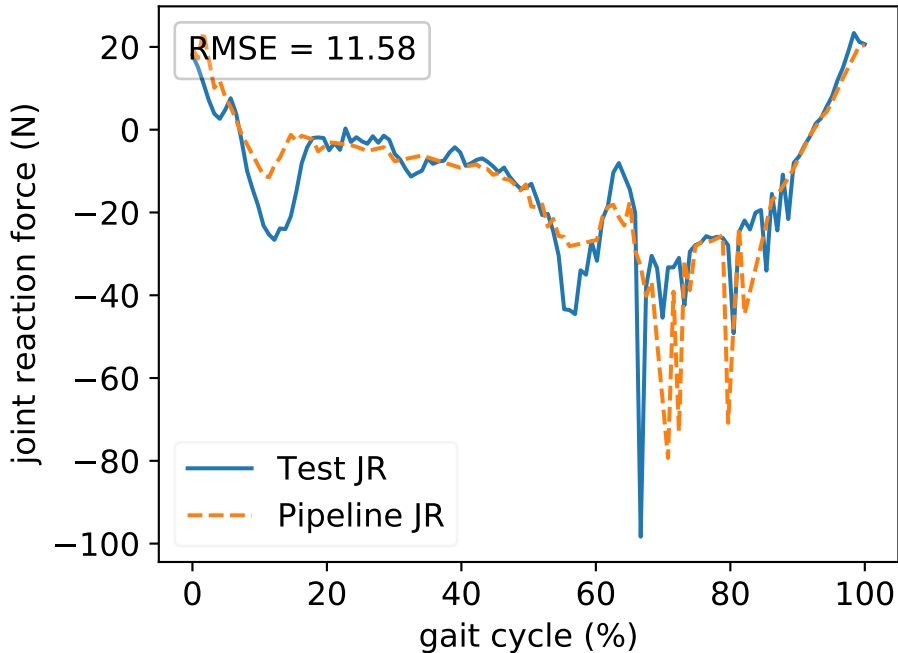
subtalar_r_on_calcn_r_in_ground_pz



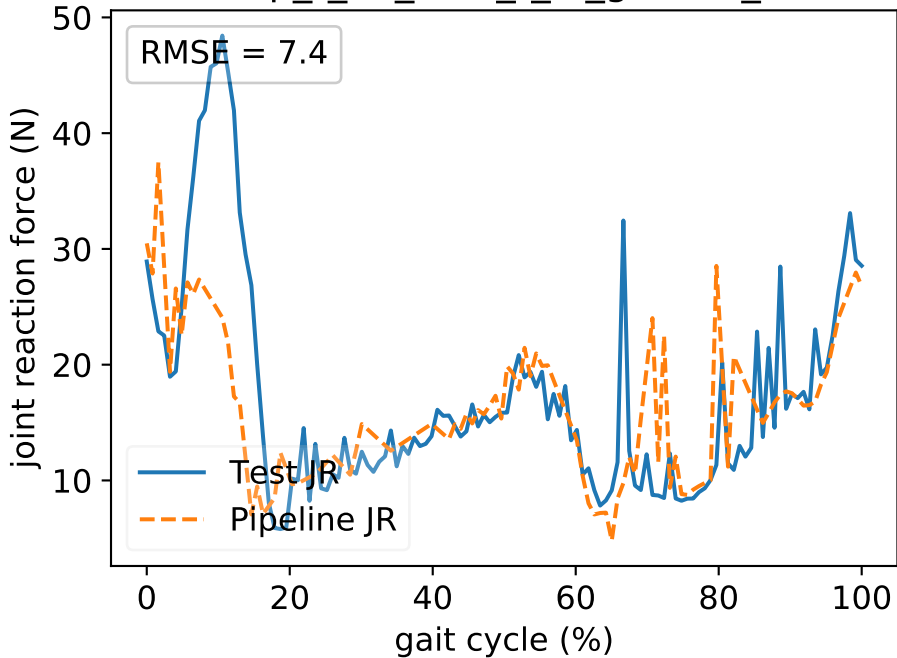
mtp_r_on_toes_r_in_ground_fx



mtp_r_on_toes_r_in_ground_fy



mtp_r_on_toes_r_in_ground_fz



mtp_r_on_toes_r_in_ground_mx

RMSE = 0.08

joint reaction moment (N m)

0.2

0.0

-0.2

-0.4

-0.6

Test JR

Pipeline JR

gait cycle (%)

0

20

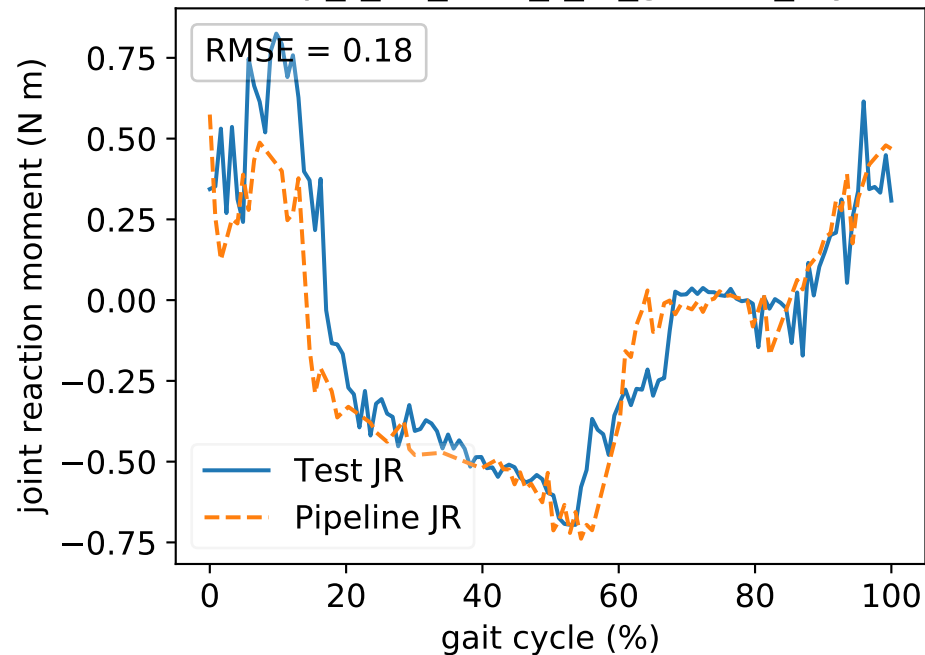
40

60

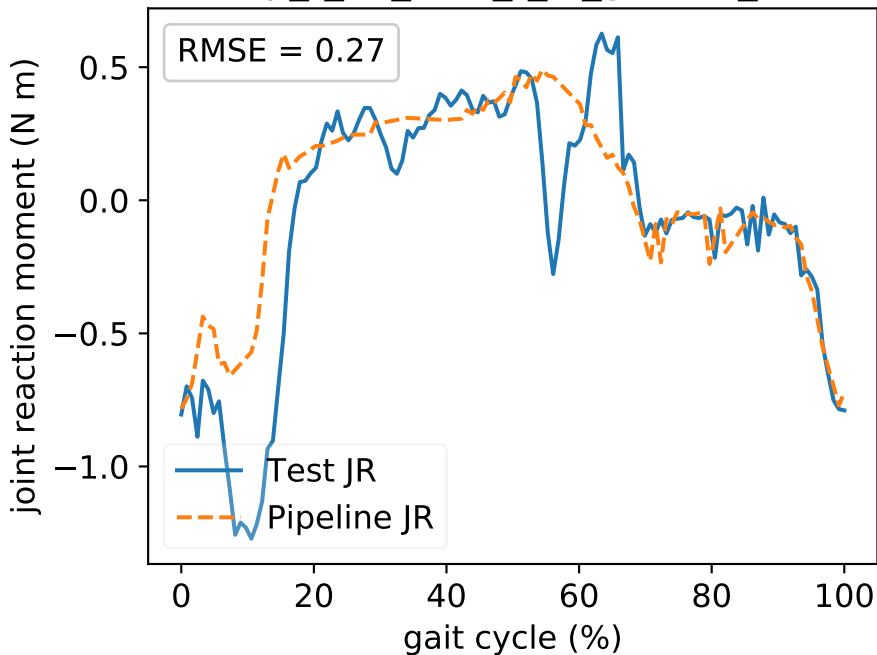
80

100

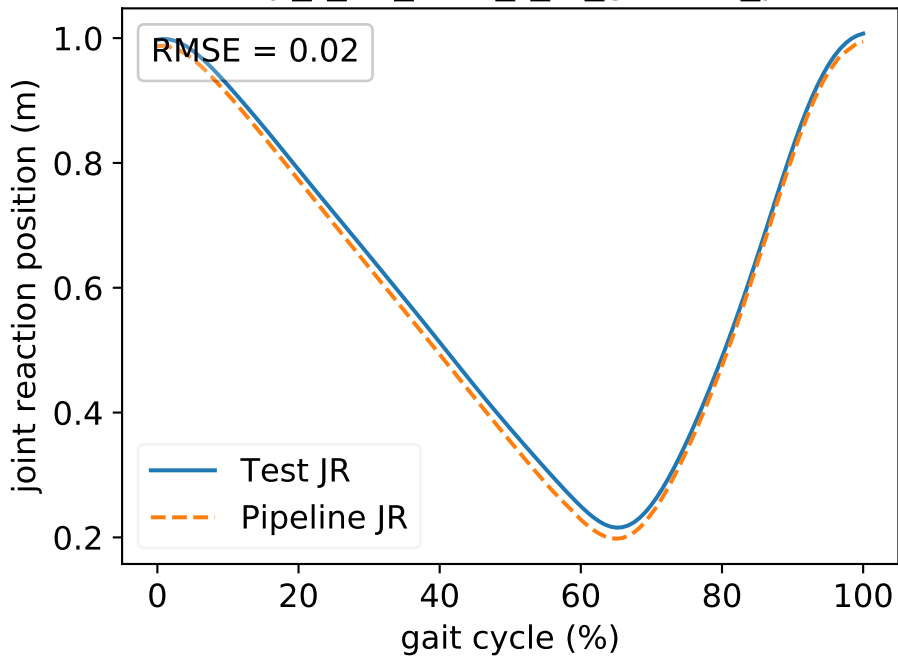
mtp_r_on_toes_r_in_ground_my



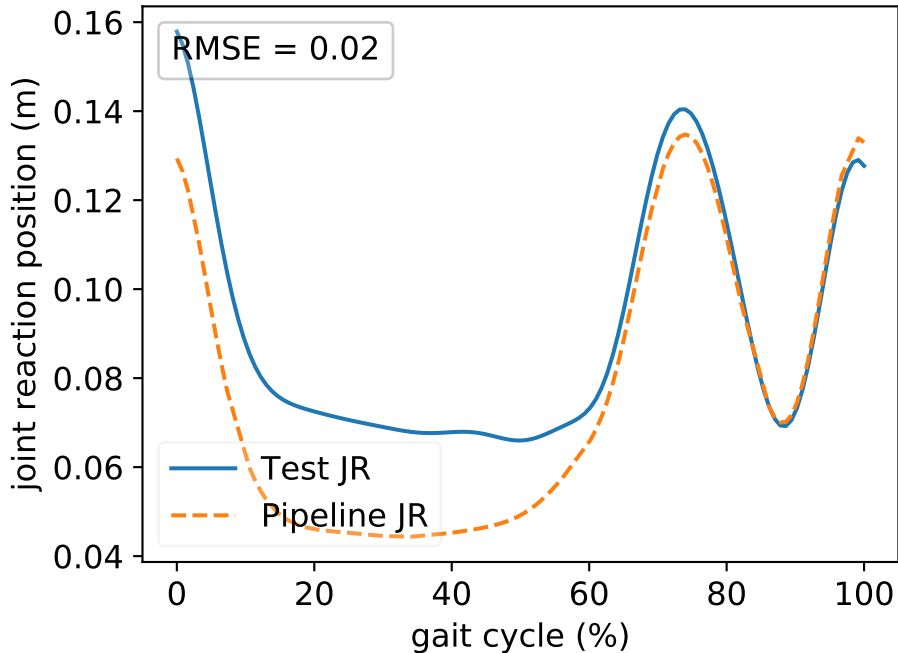
mtp_r_on_toes_r_in_ground_mz



mtp_r_on_toes_r_in_ground_px



mtp_r_on_toes_r_in_ground_py



mtp_r_on_toes_r_in_ground_pz

RMSE = 0.01

joint reaction position (m)

0

20

40

60

80

100

gait cycle (%)

Test JR

Pipeline JR

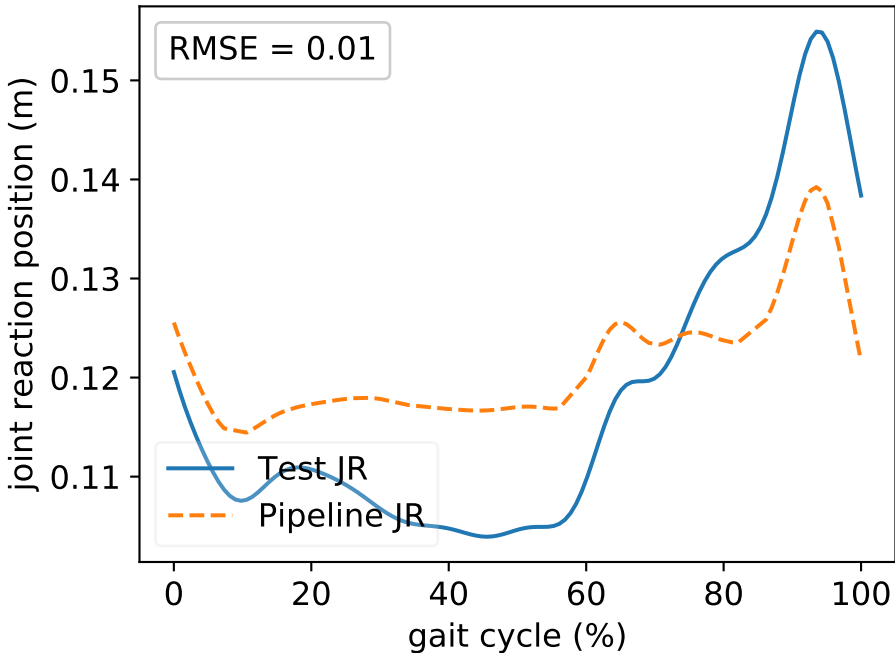
0.15

0.14

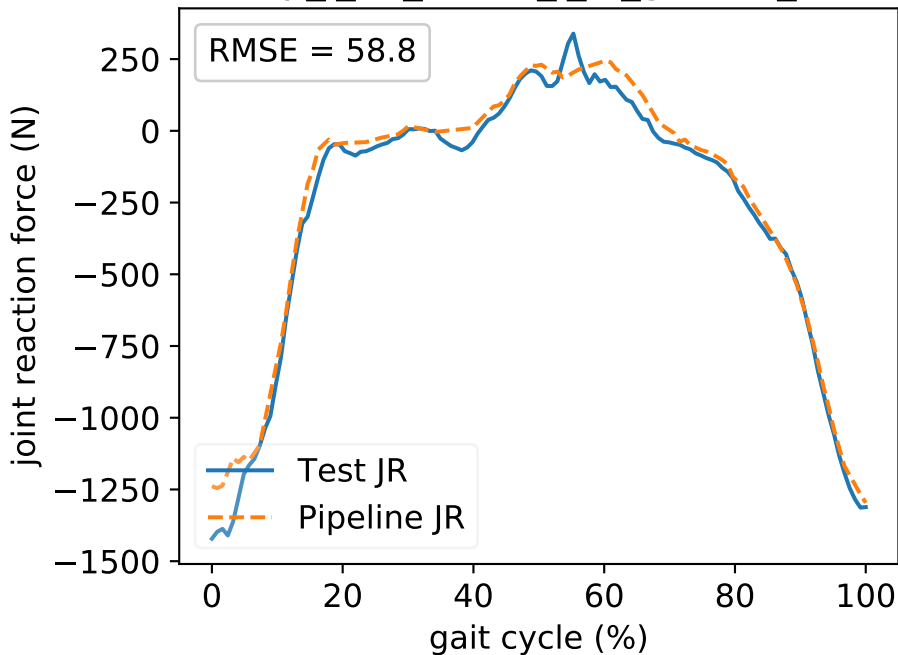
0.13

0.12

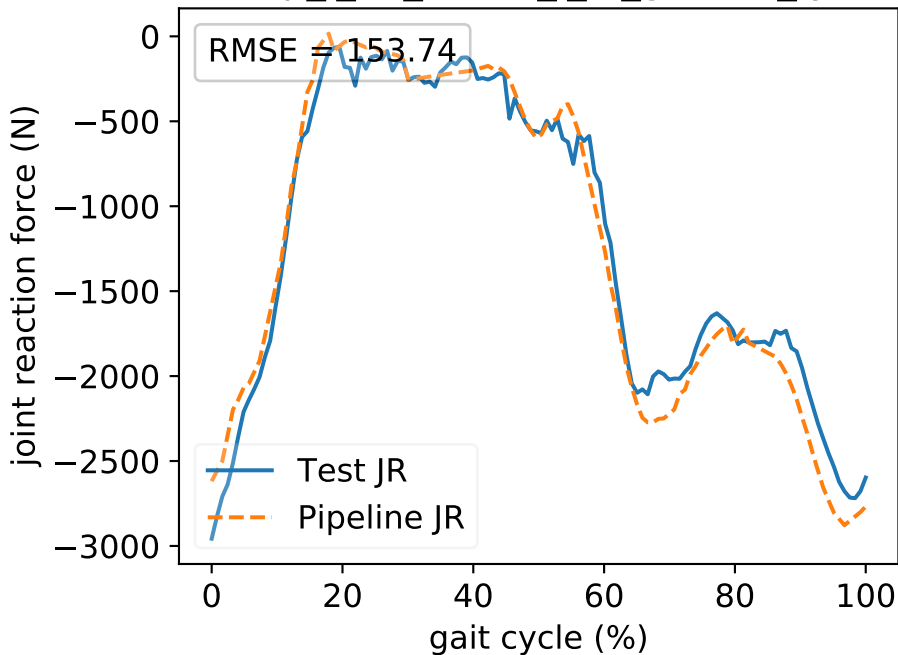
0.11



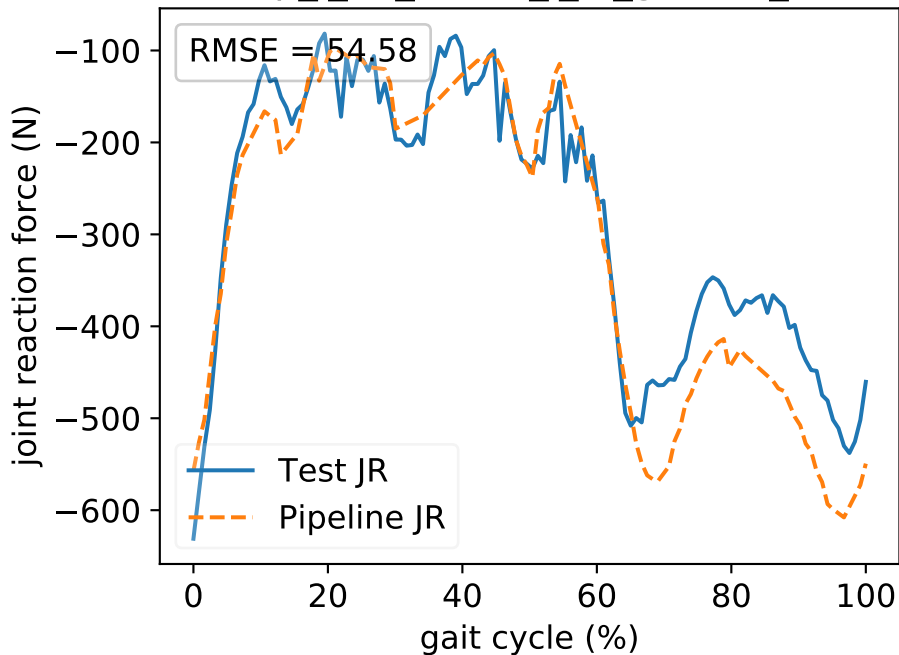
hip_l_on_femur_l_in_ground_fx



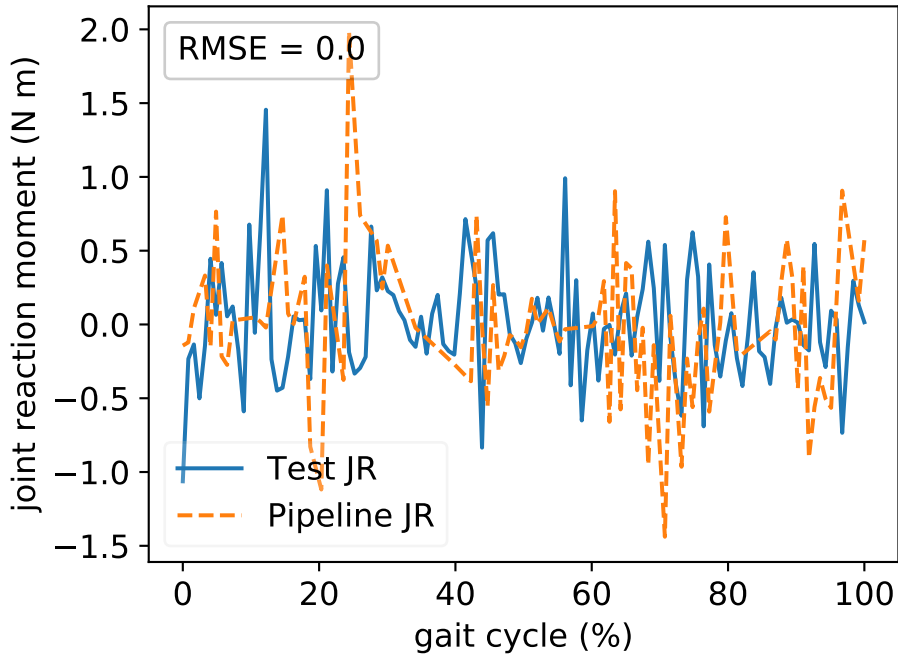
hip_l_on_femur_l_in_ground_fy

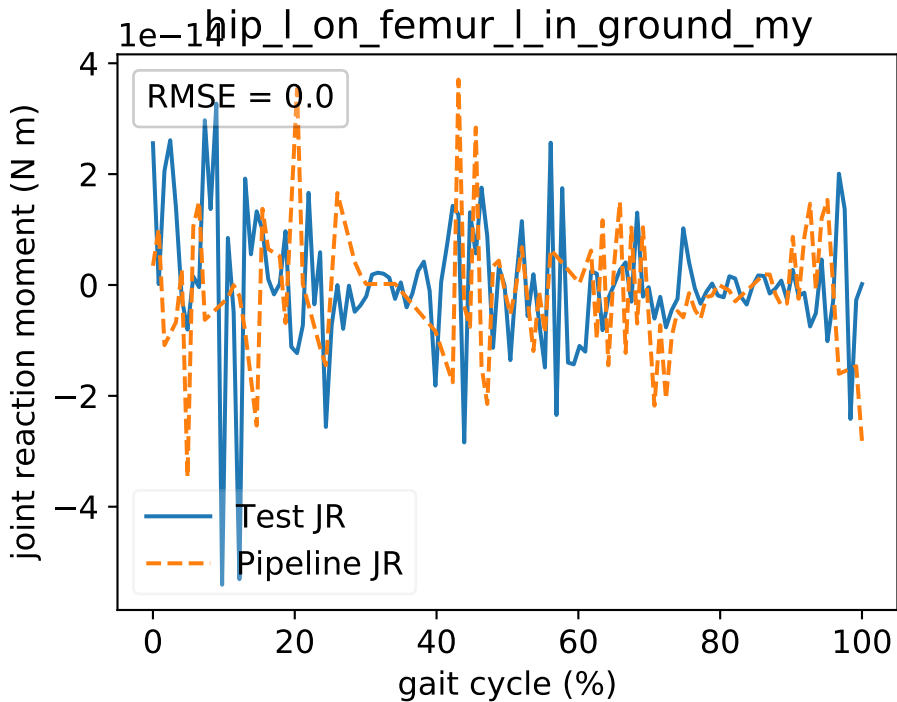


hip_l_on_femur_l_in_ground_fz

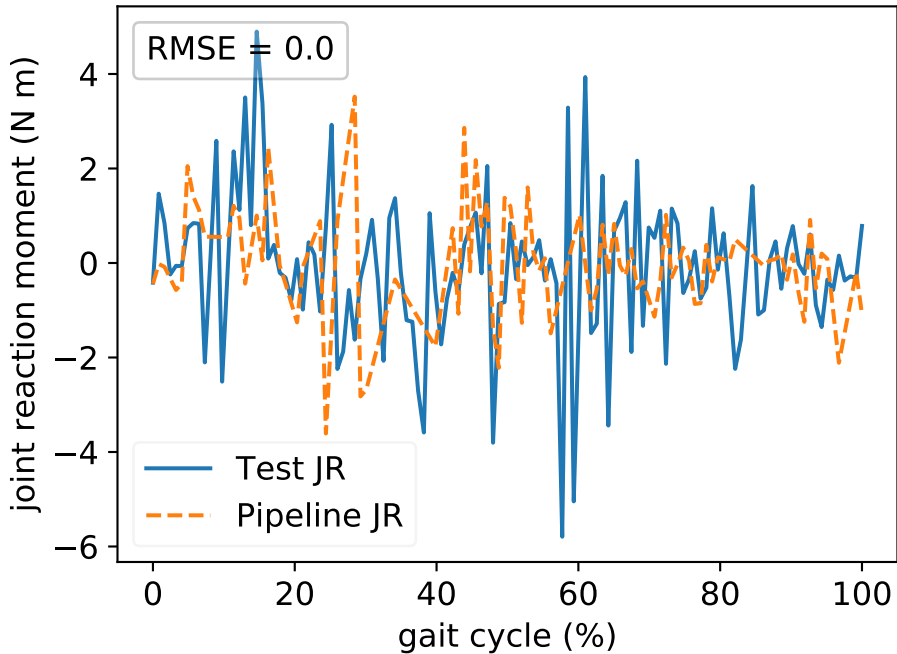


1e-13 hip_l_on_femur_l_in_ground_mx

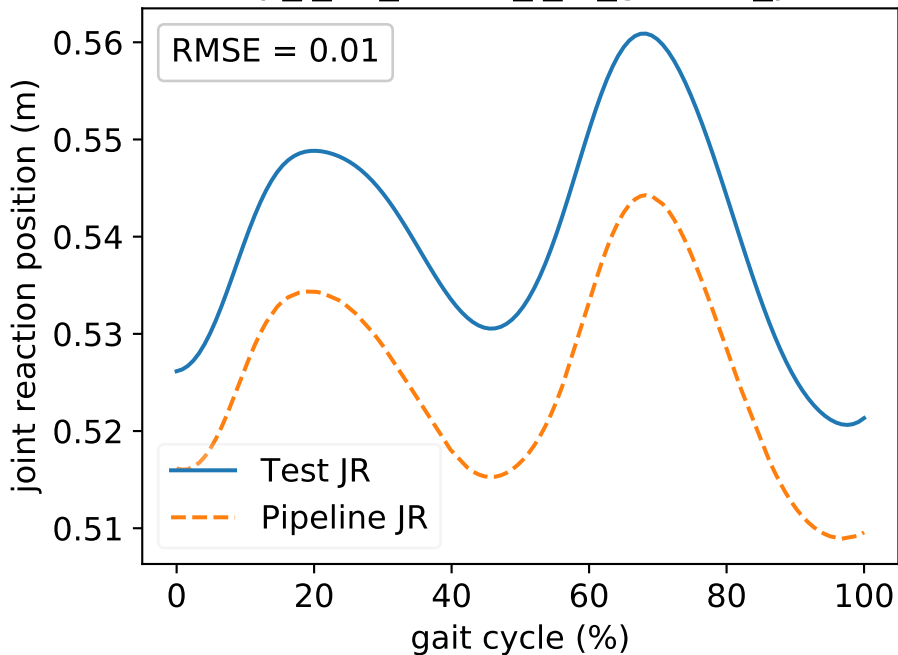




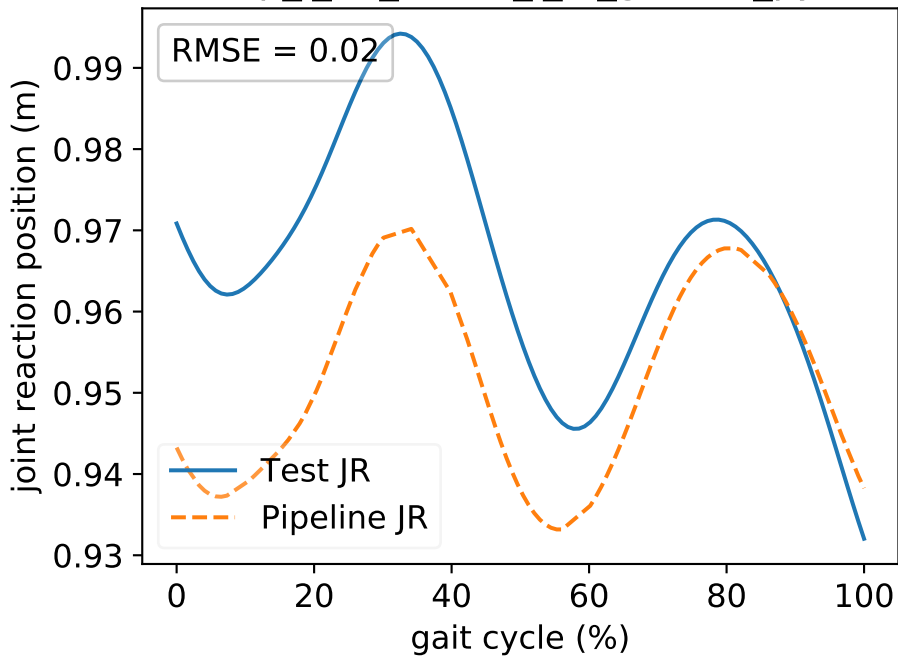
1e-14 hip_l_on_femur_l_in_ground_mz



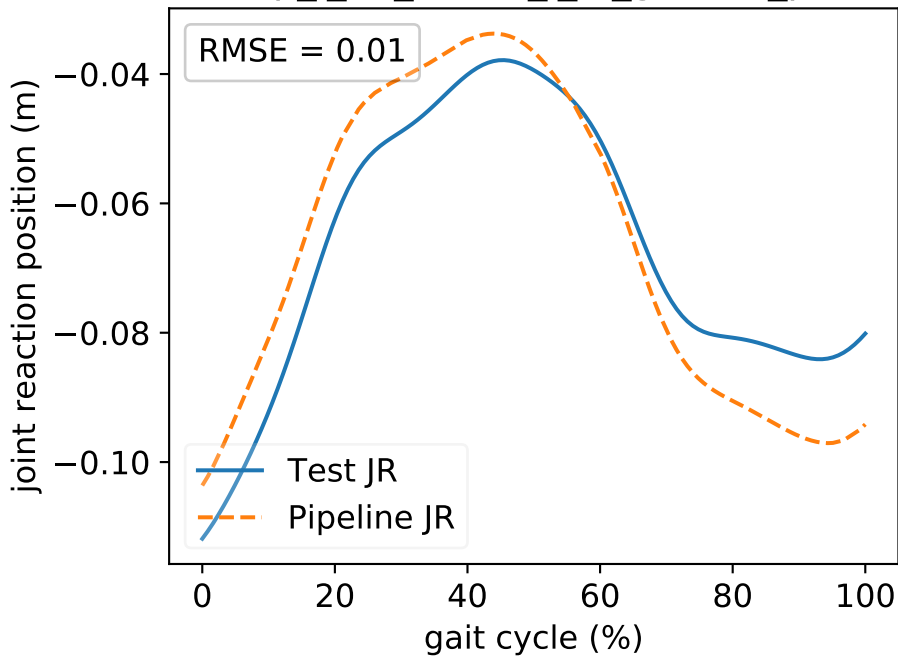
hip_l_on_femur_l_in_ground_px



hip_l_on_femur_l_in_ground_py



hip_l_on_femur_l_in_ground_pz



knee_l_on_tibia_l_in_ground_fx

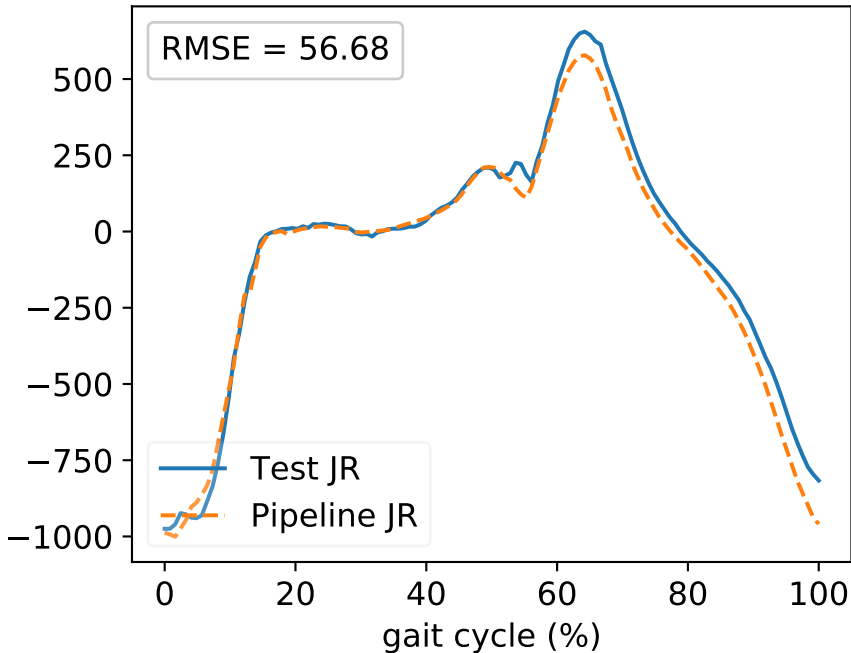
RMSE = 56.68

joint reaction force (N)

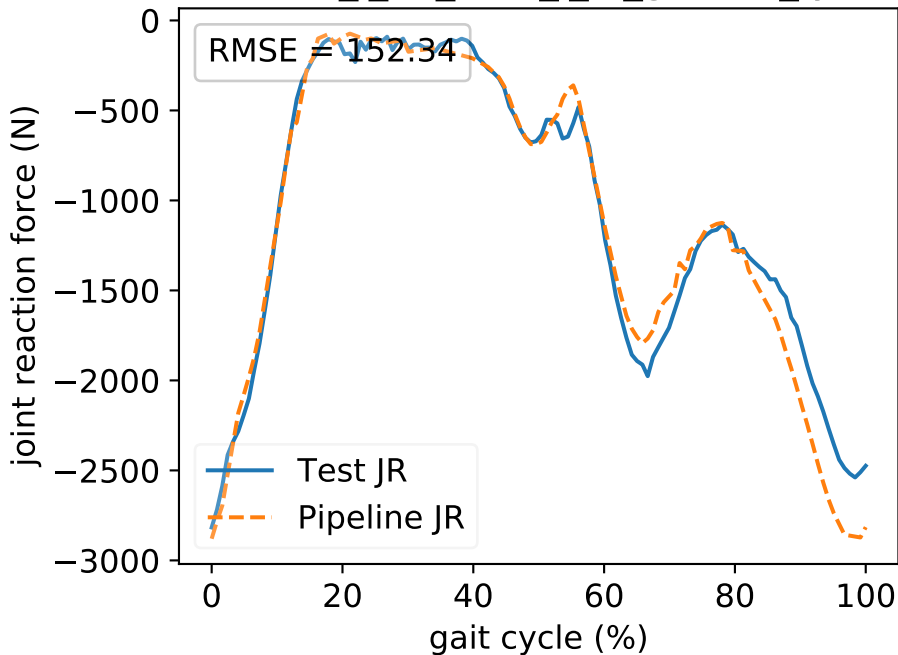
500
250
0
-250
-500
-750
-1000

Test JR
Pipeline JR

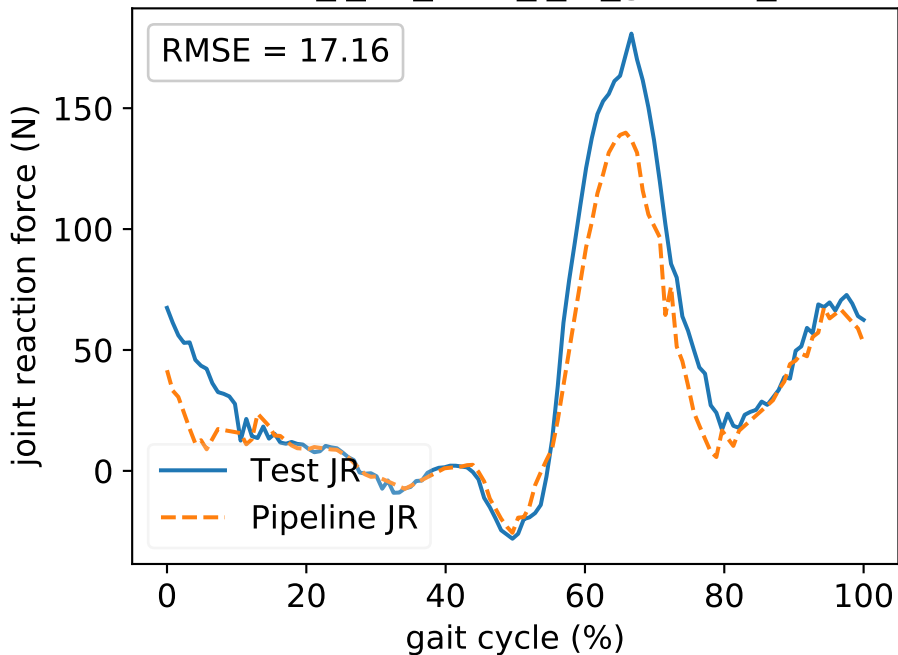
0 20 40 60 80 100
gait cycle (%)



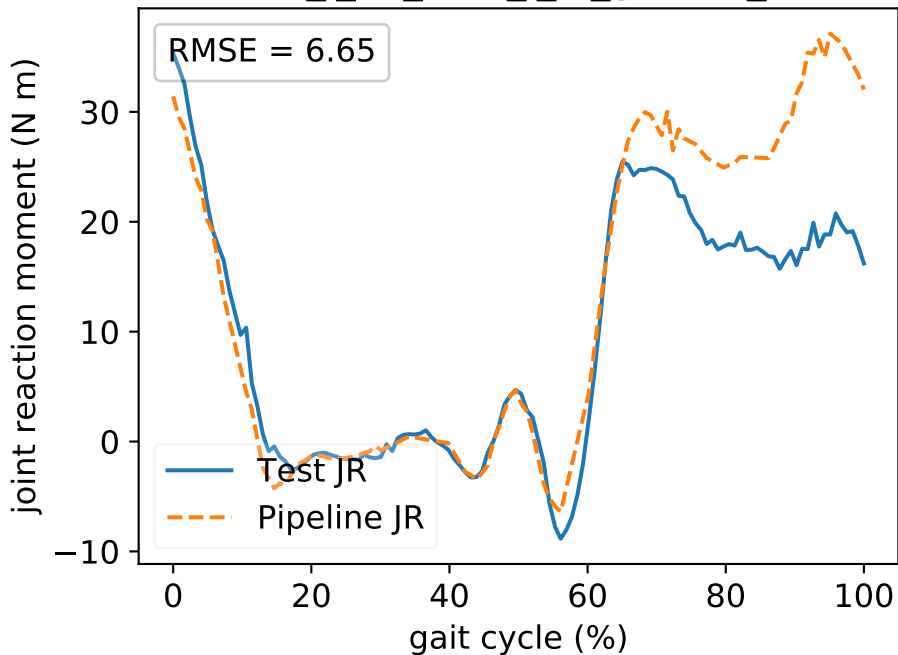
knee_l_on_tibia_l_in_ground_fy



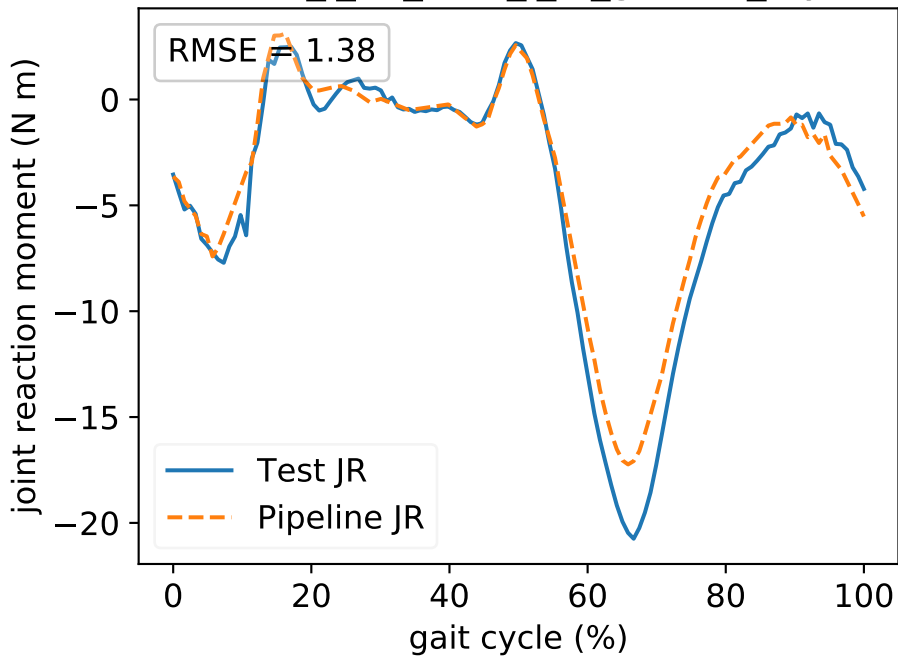
knee_l_on_tibia_l_in_ground_fz



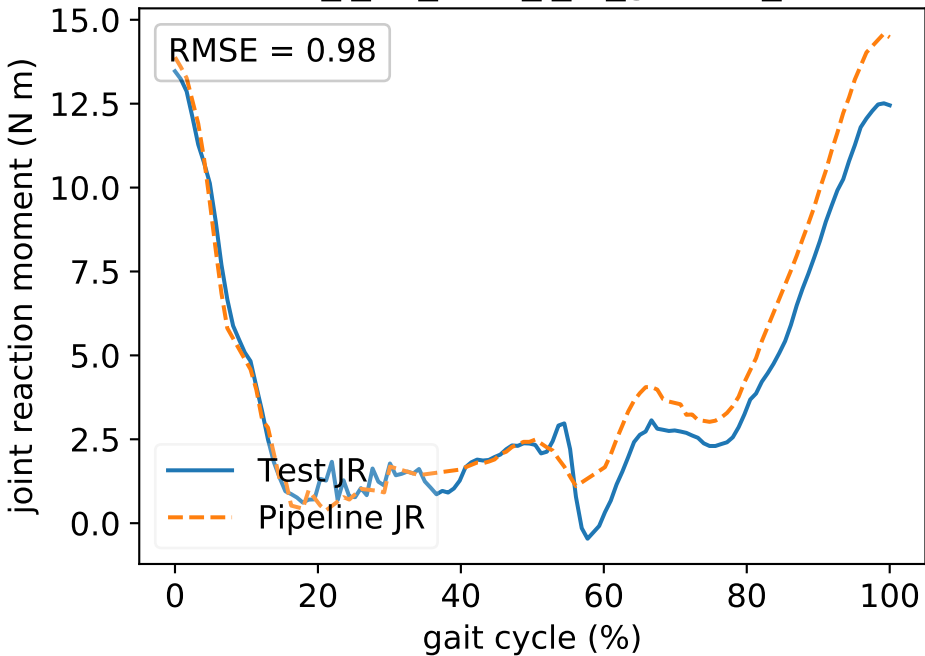
knee_l_on_tibia_l_in_ground_mx



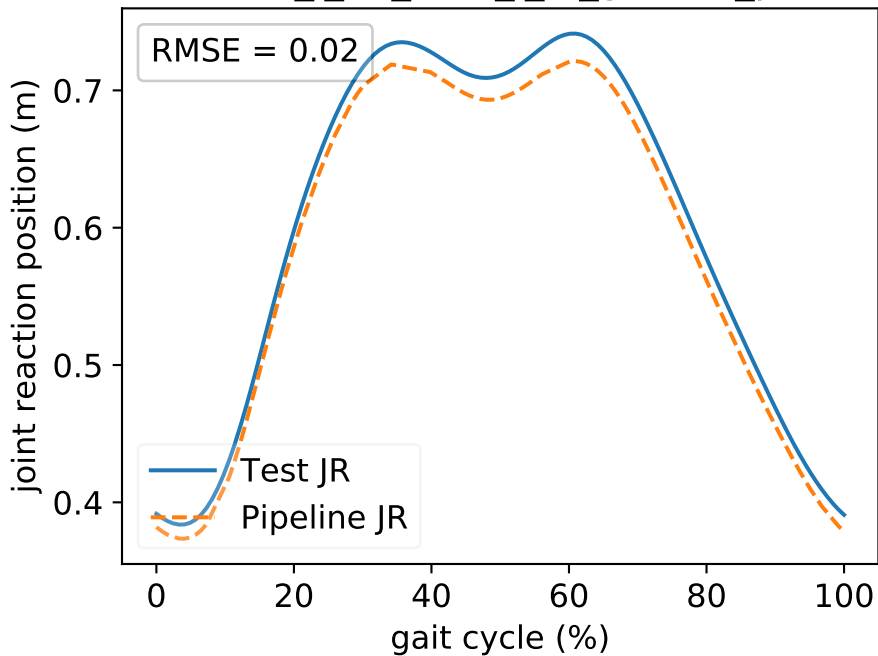
knee_l_on_tibia_l_in_ground_my



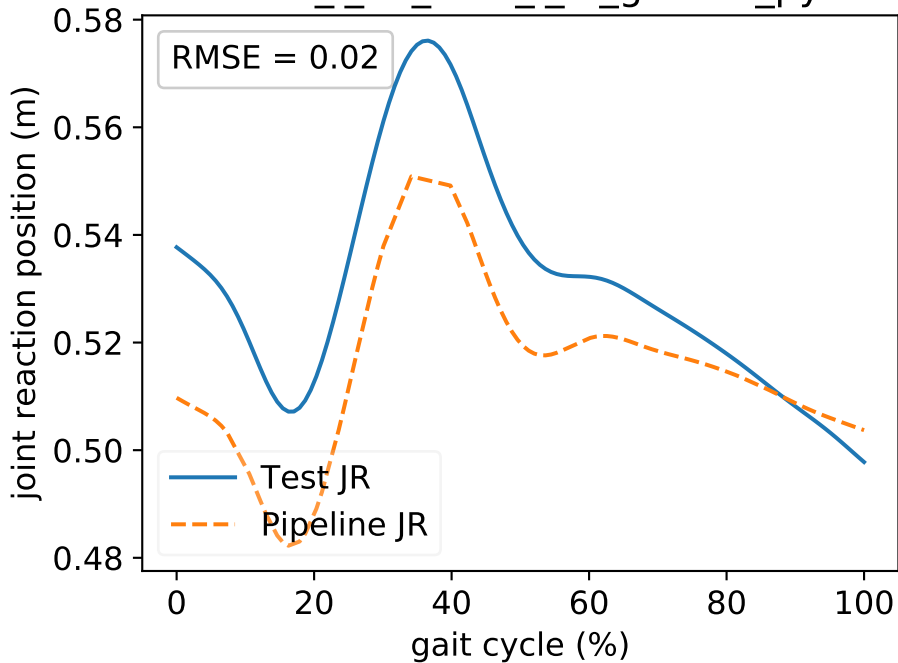
knee_l_on_tibia_l_in_ground_mz



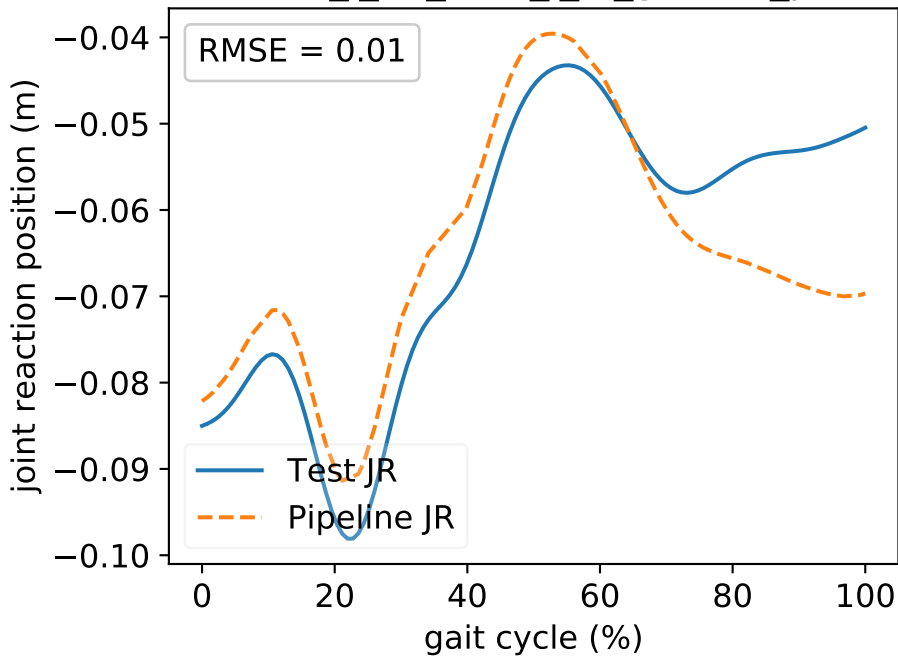
knee_l_on_tibia_l_in_ground_px



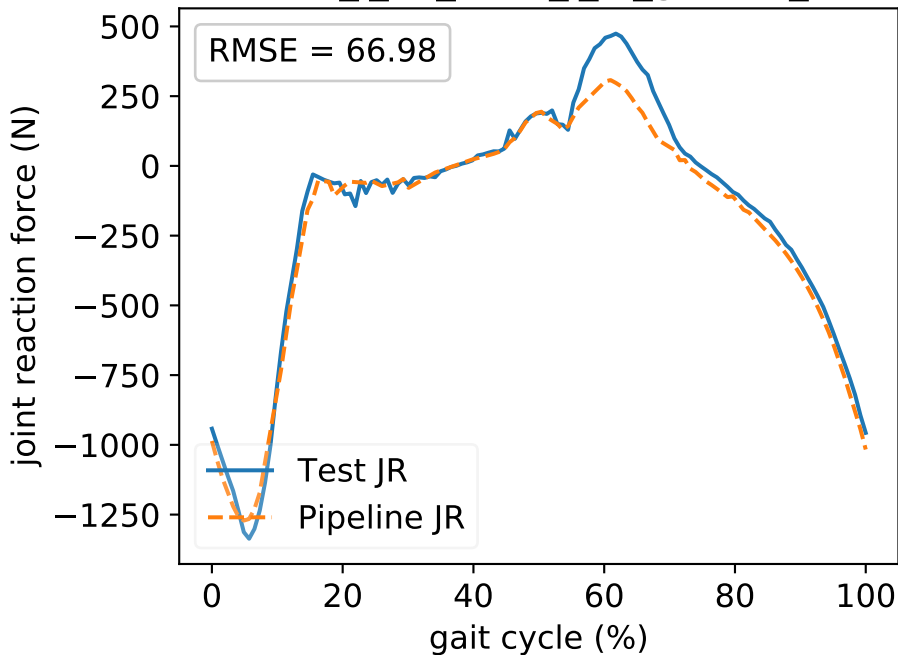
knee_l_on_tibia_l_in_ground_py



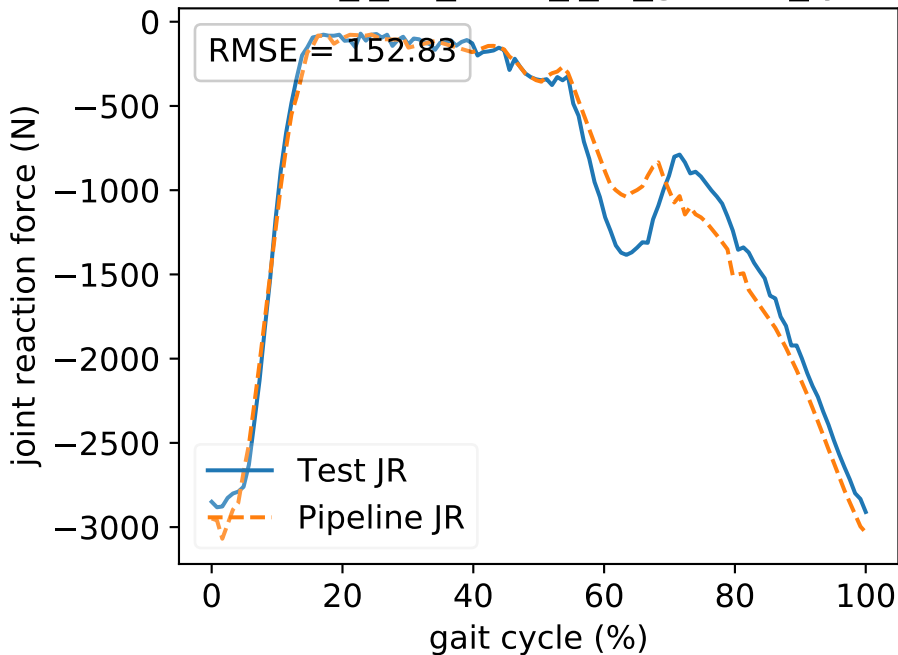
knee_l_on_tibia_l_in_ground_pz



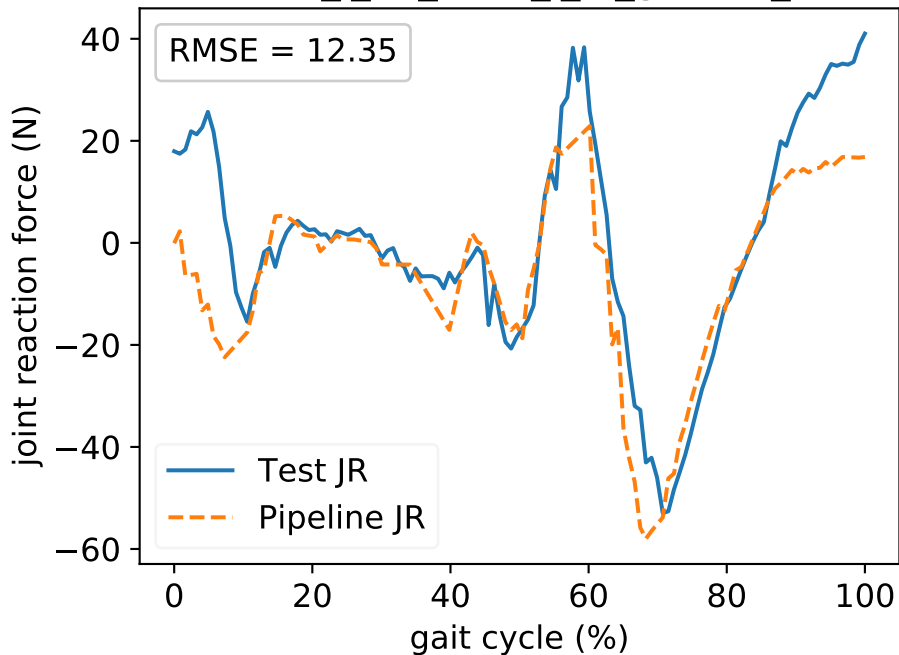
ankle_l_on_talus_l_in_ground_fx



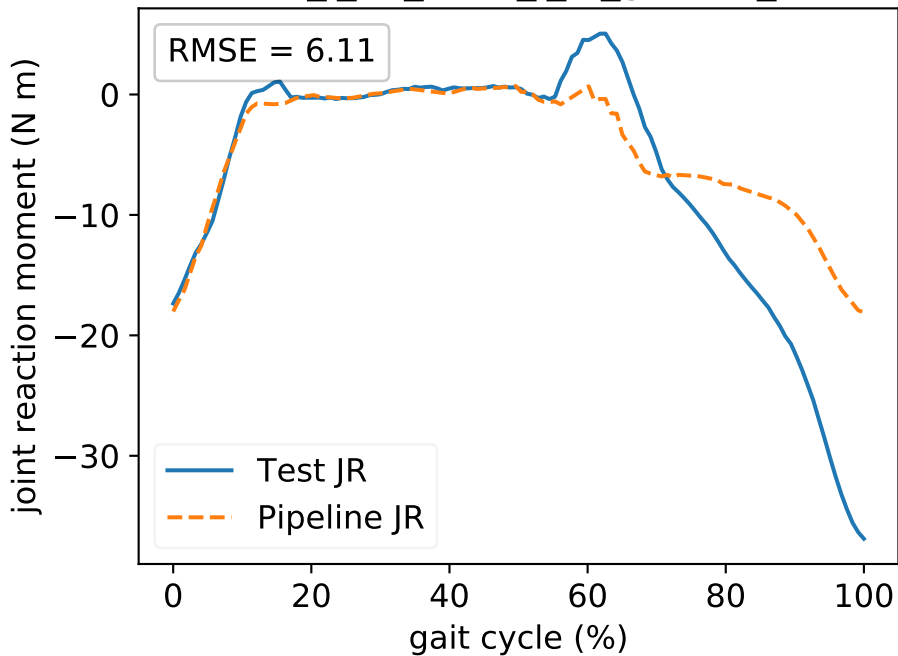
ankle_l_on_talus_l_in_ground_fy



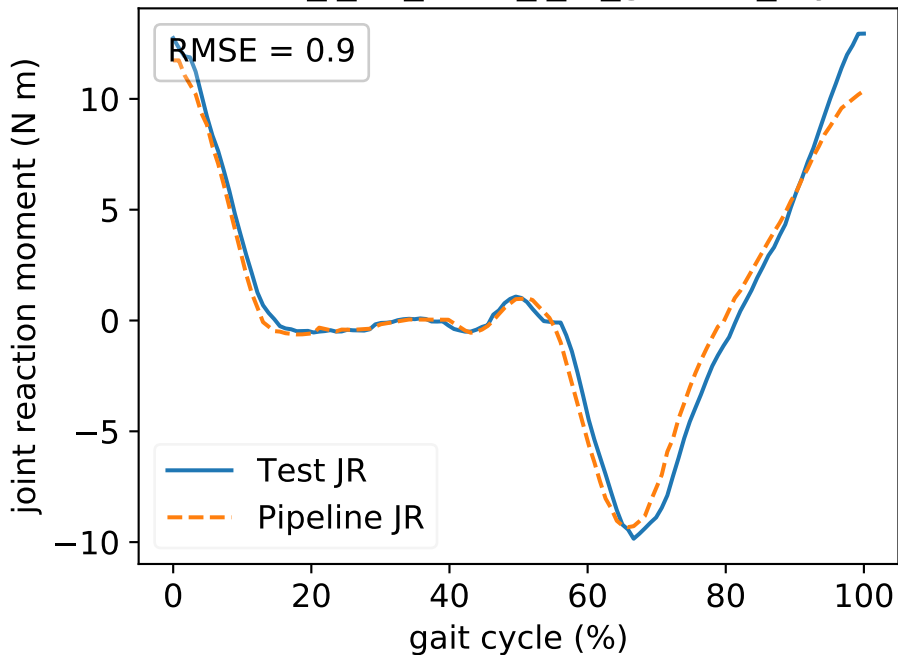
ankle_l_on_talus_l_in_ground_fz



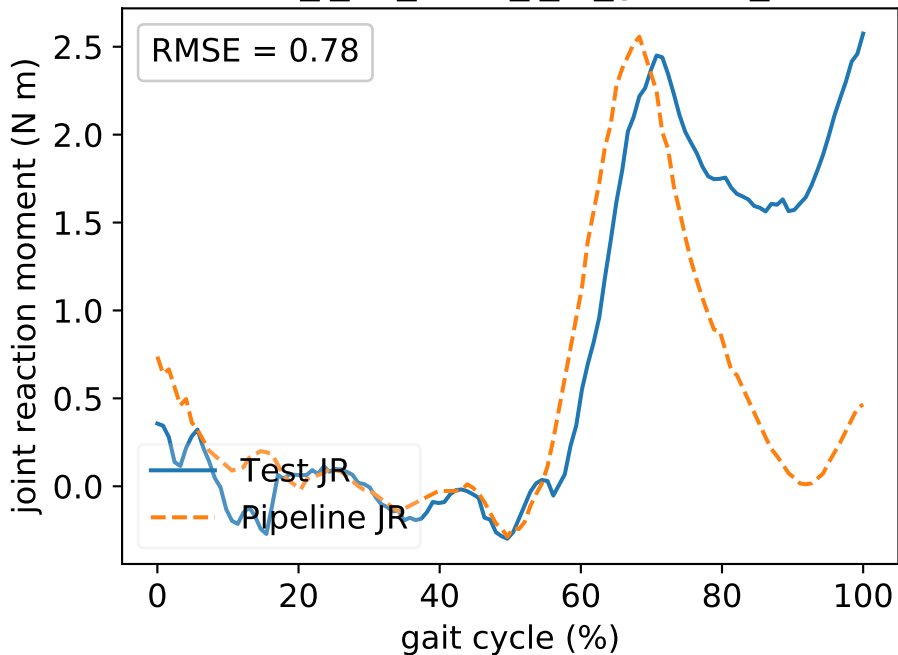
ankle_l_on_talus_l_in_ground_mx



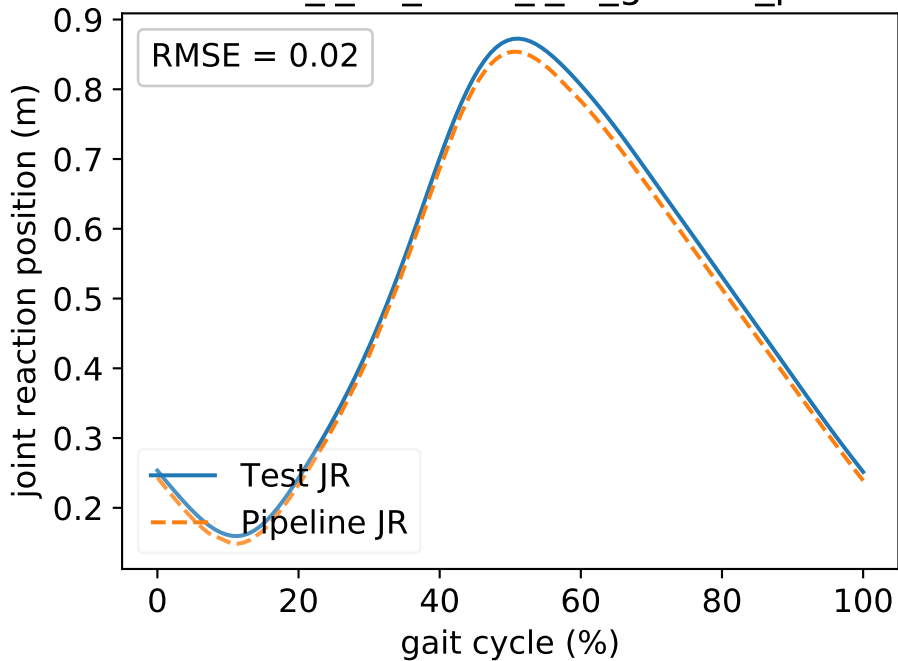
ankle_l_on_talus_l_in_ground_my



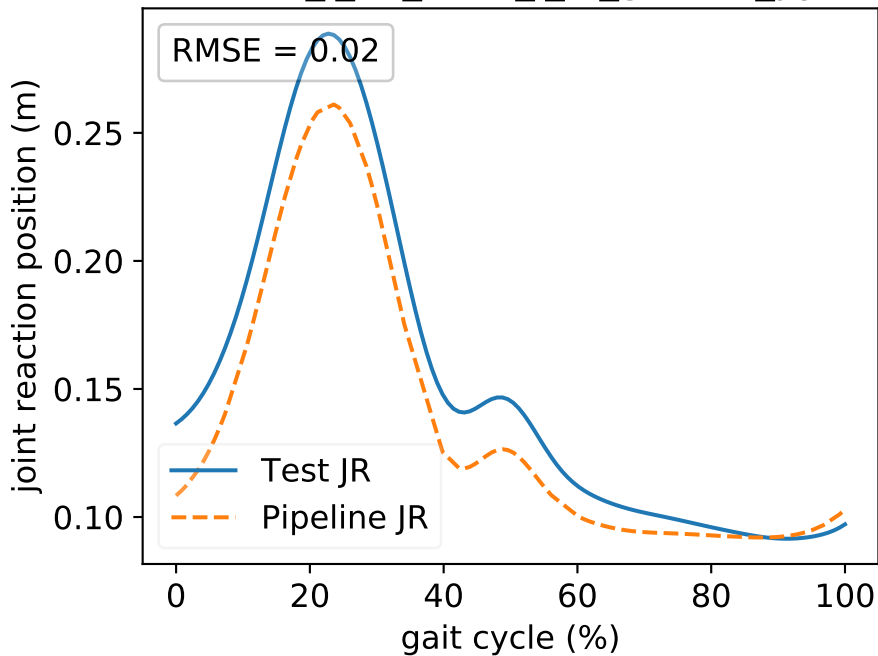
ankle_l_on_talus_l_in_ground_mz



ankle_l_on_talus_l_in_ground_px



ankle_l_on_talus_l_in_ground_py



ankle_l_on_talus_l_in_ground_pz

RMSE = 0.01

joint reaction position (m)

−0.03
−0.04
−0.05
−0.06
−0.07

Test JR

Pipeline JR

gait cycle (%)

0

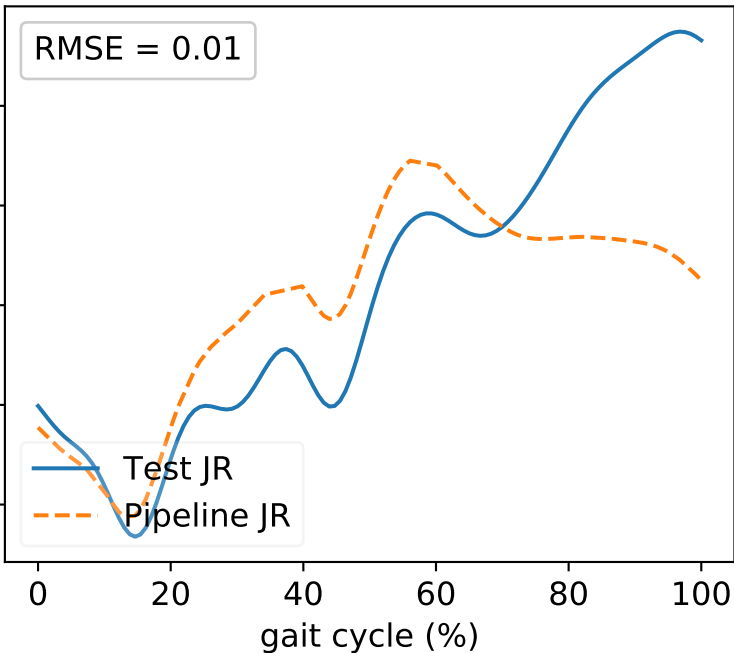
20

40

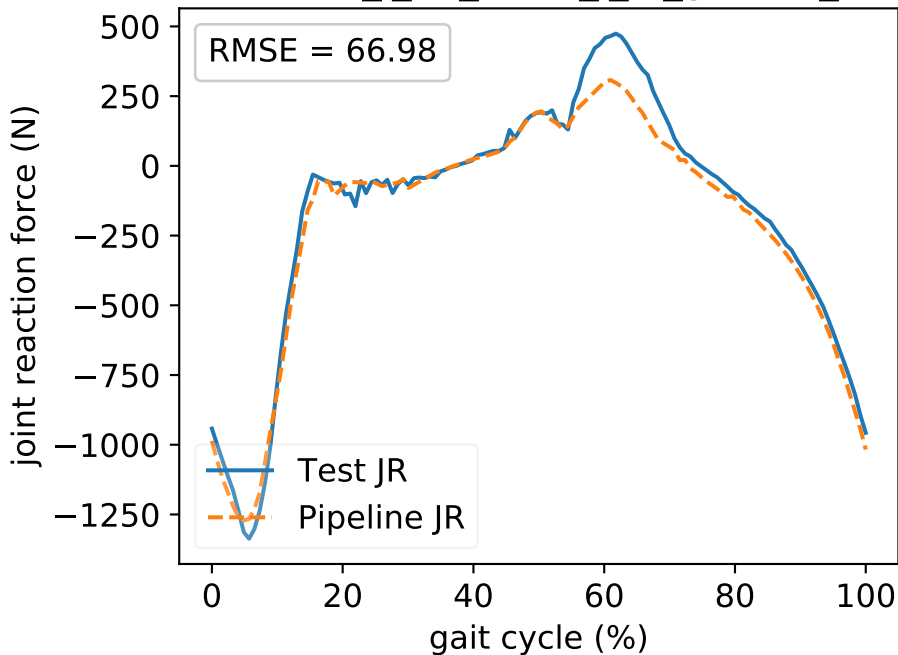
60

80

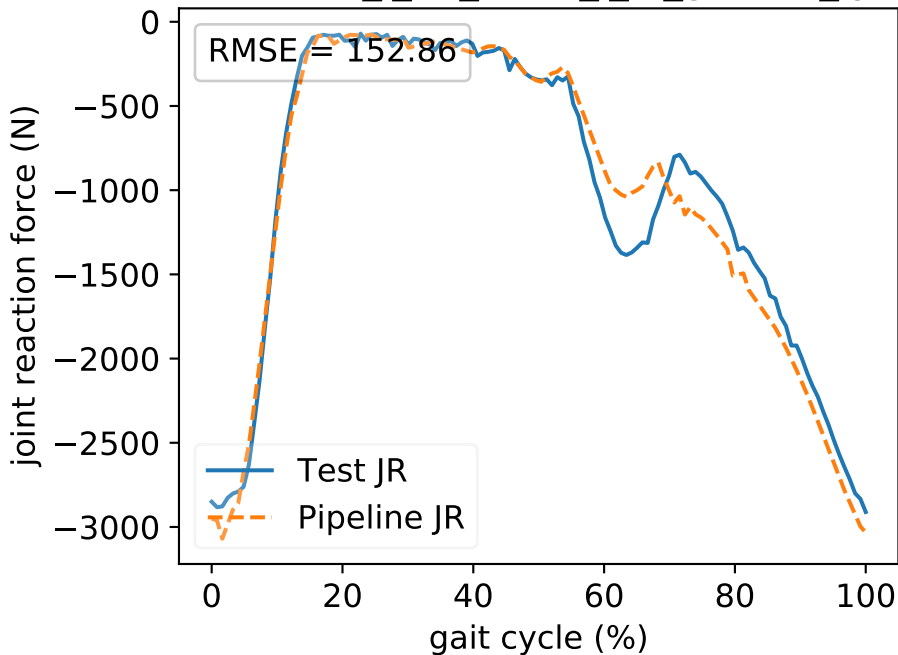
100



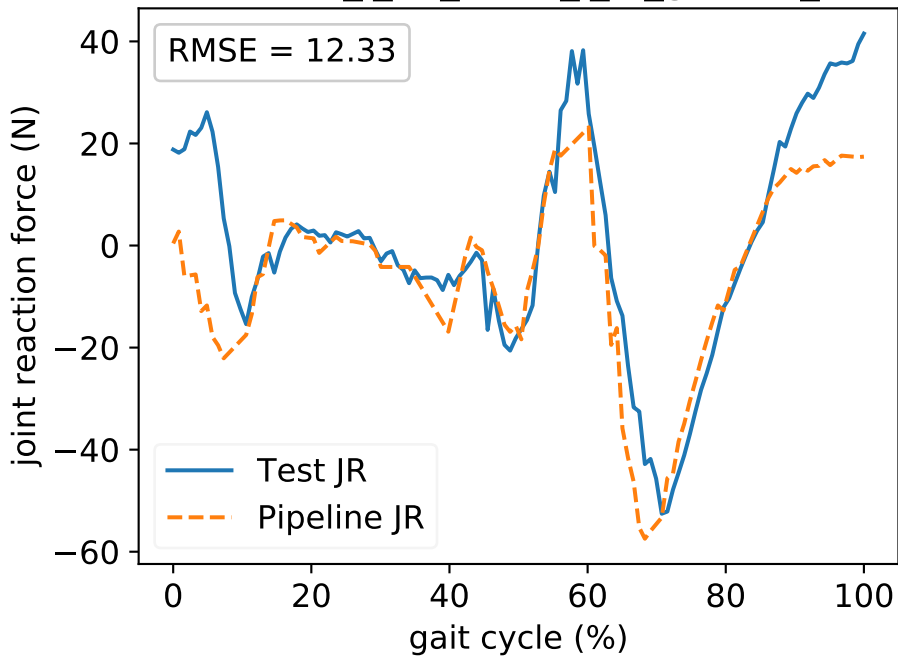
subtalar_l_on_calcn_l_in_ground_fx



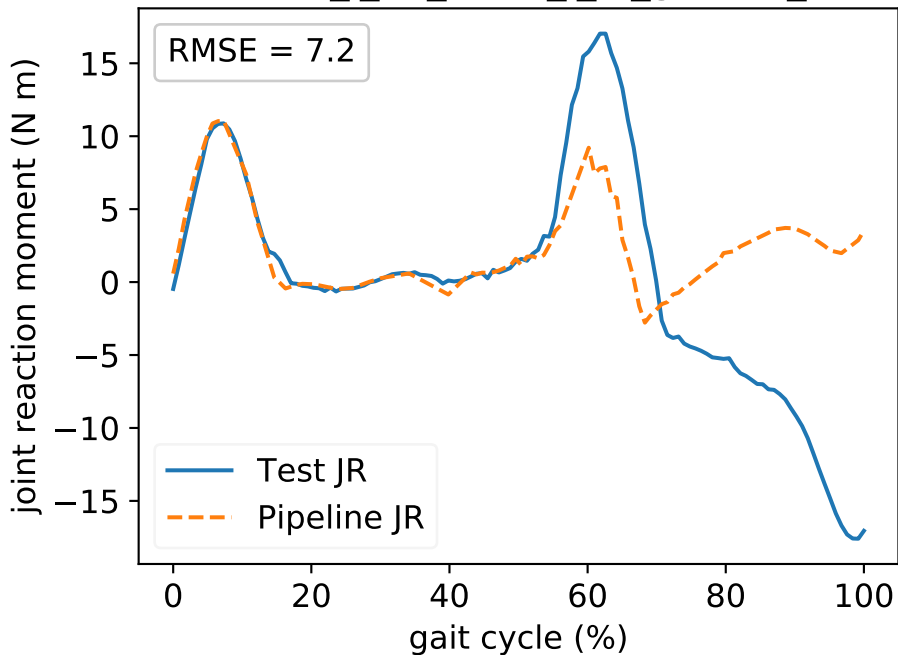
subtalar_l_on_calcn_l_in_ground_fy



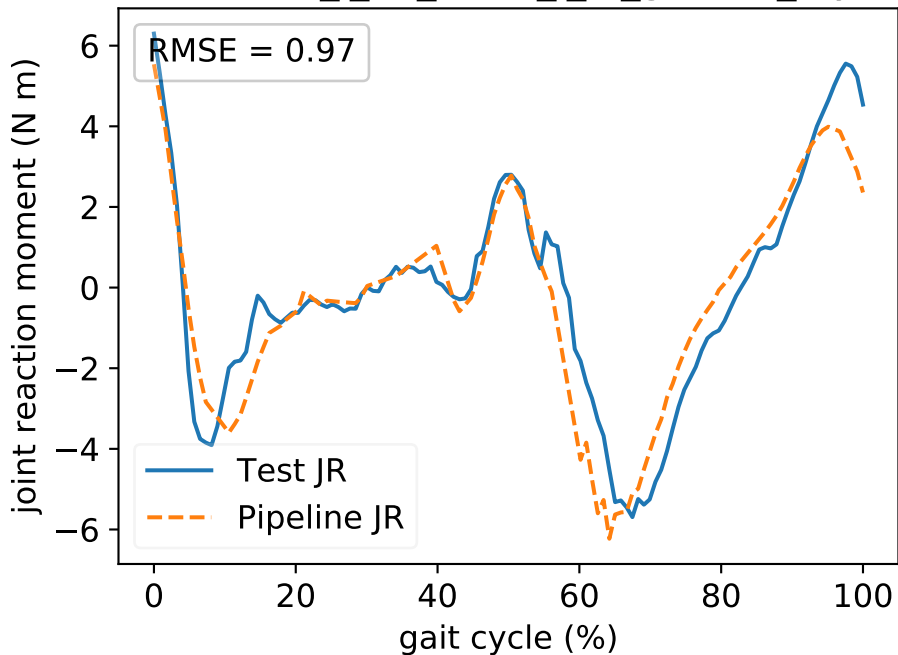
subtalar_l_on_calcn_l_in_ground_fz



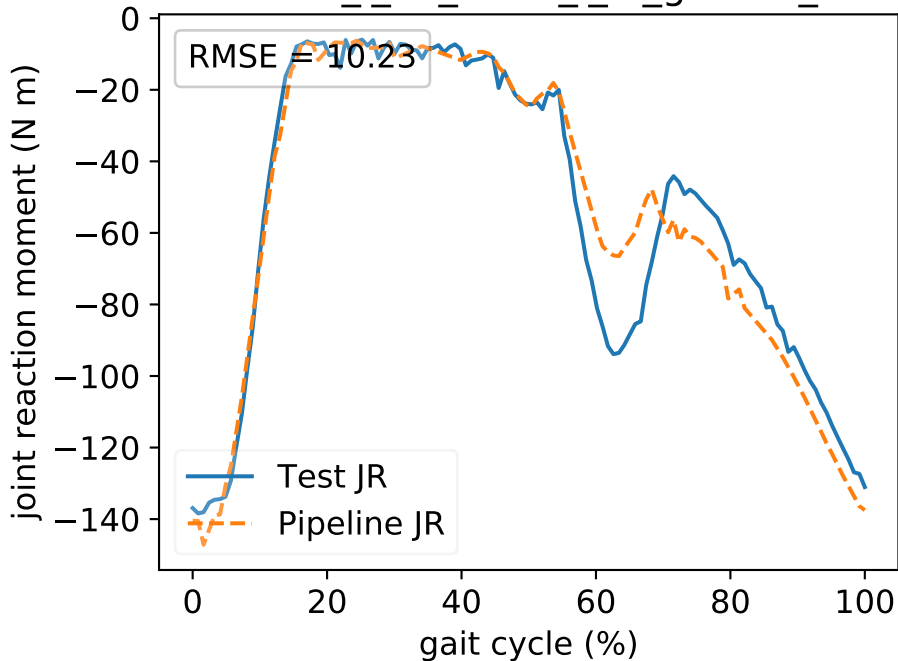
subtalar_l_on_calcn_l_in_ground_mx



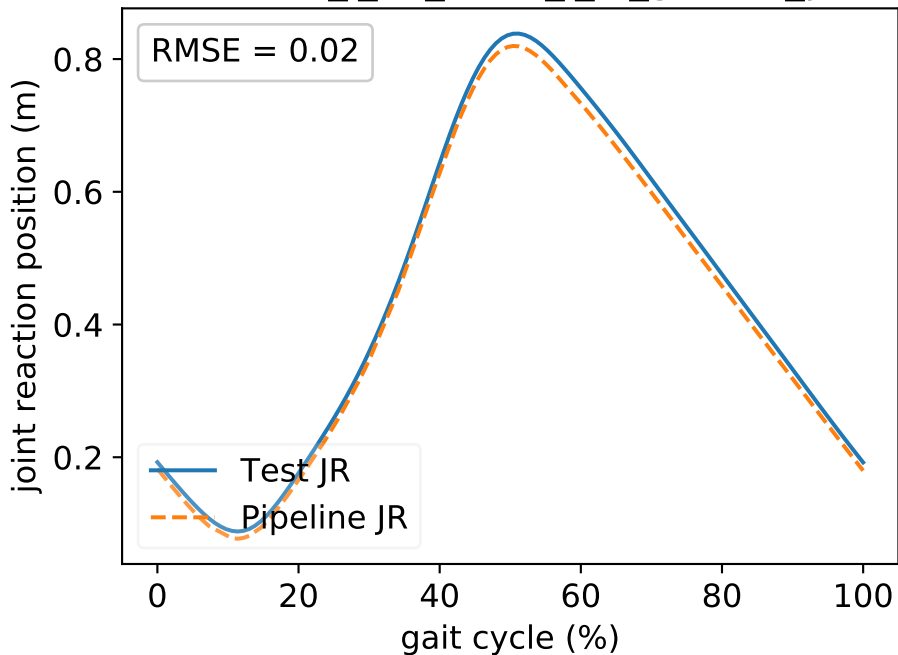
subtalar_l_on_calcn_l_in_ground_my



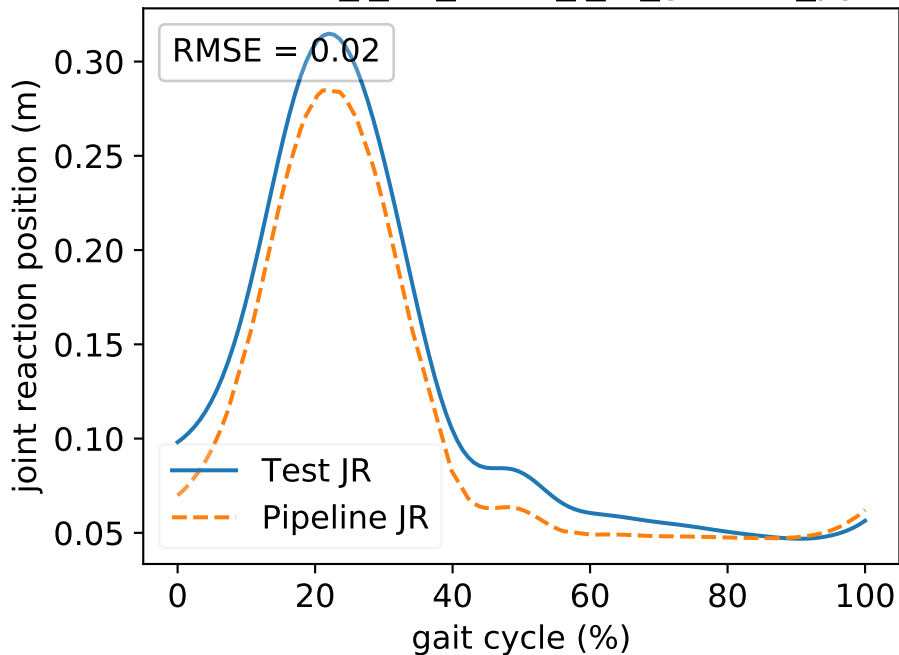
subtalar_l_on_calcn_l_in_ground_mz



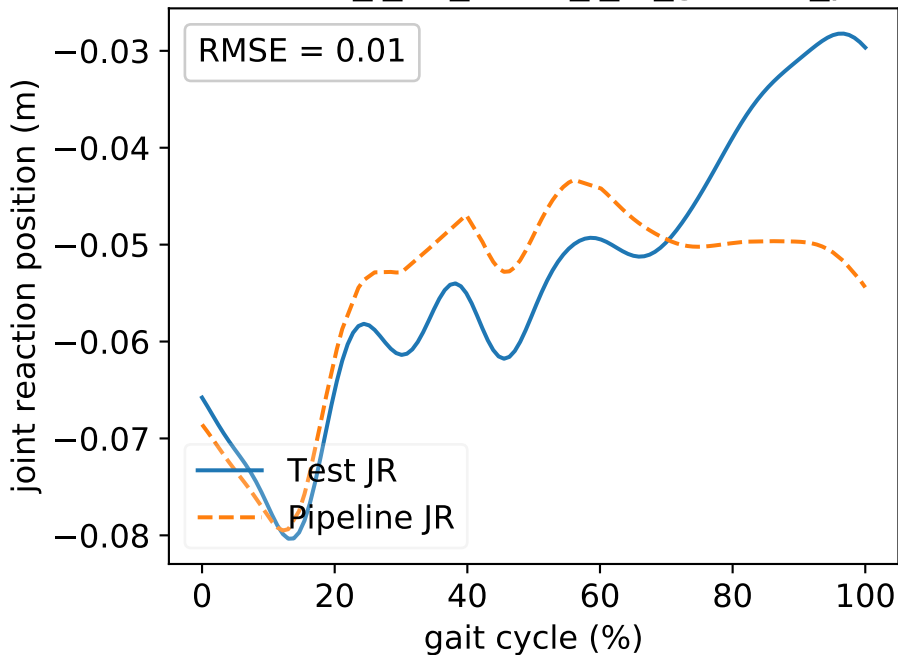
subtalar_l_on_calcn_l_in_ground_px



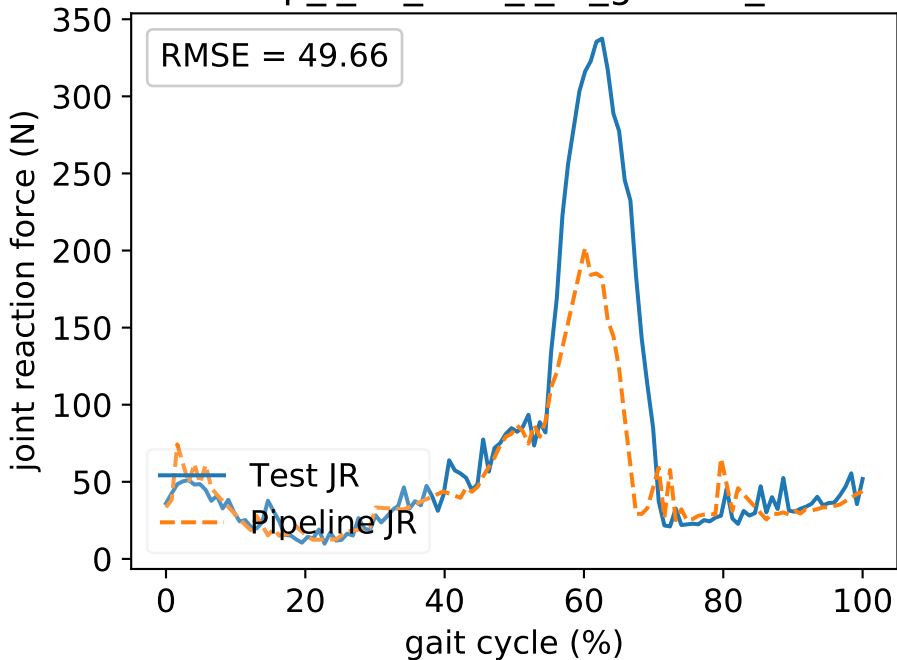
subtalar_l_on_calcn_l_in_ground_py



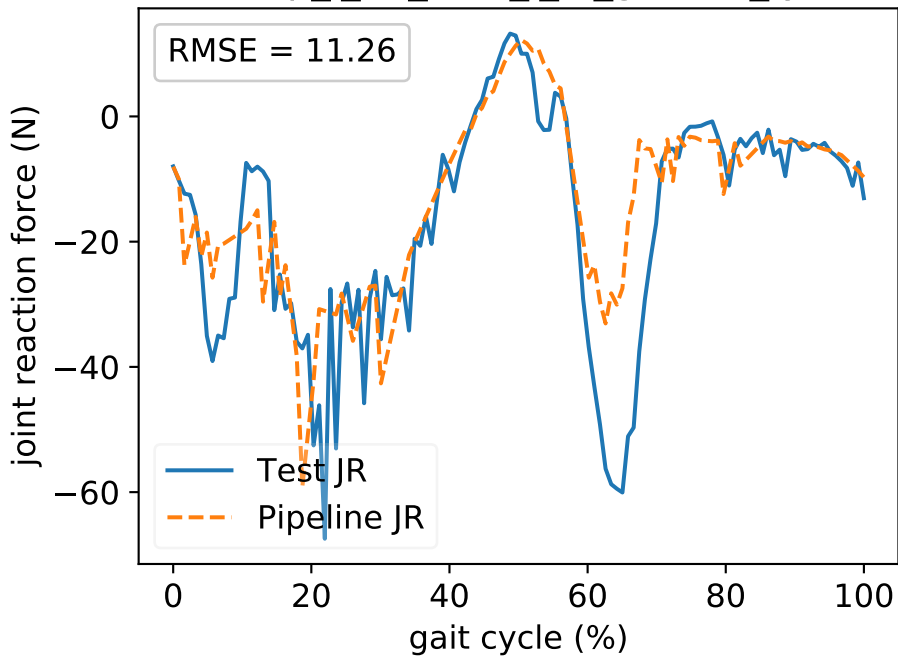
subtalar_l_on_calcn_l_in_ground_pz



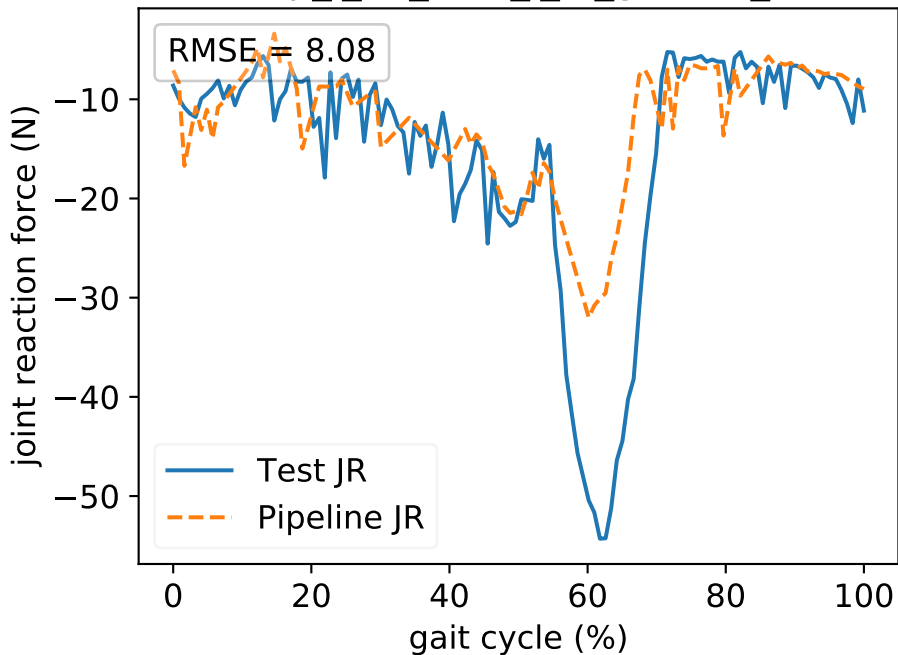
mtp_l_on_toes_l_in_ground_fx



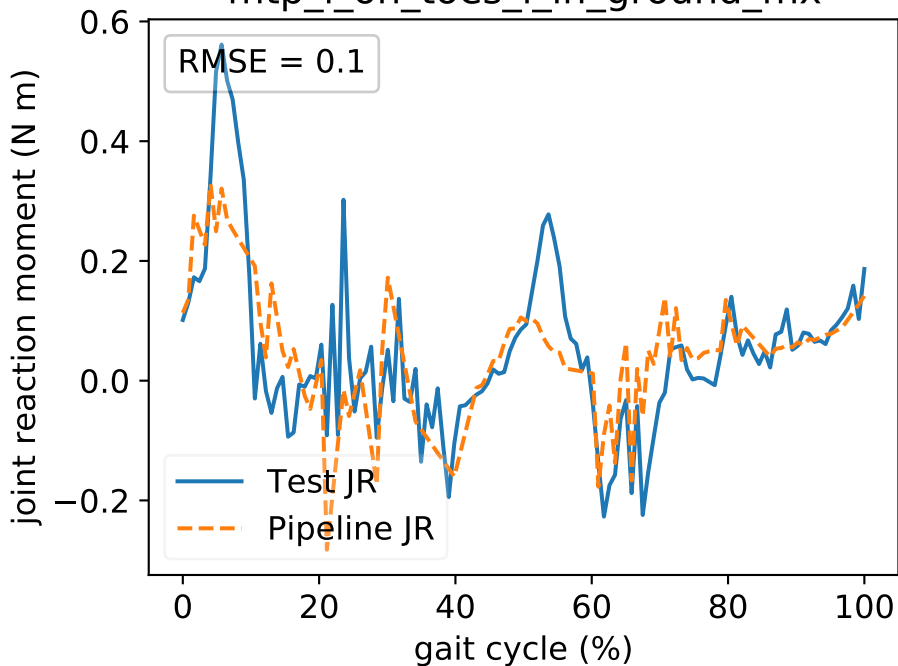
mtp_l_on_toes_l_in_ground_fy



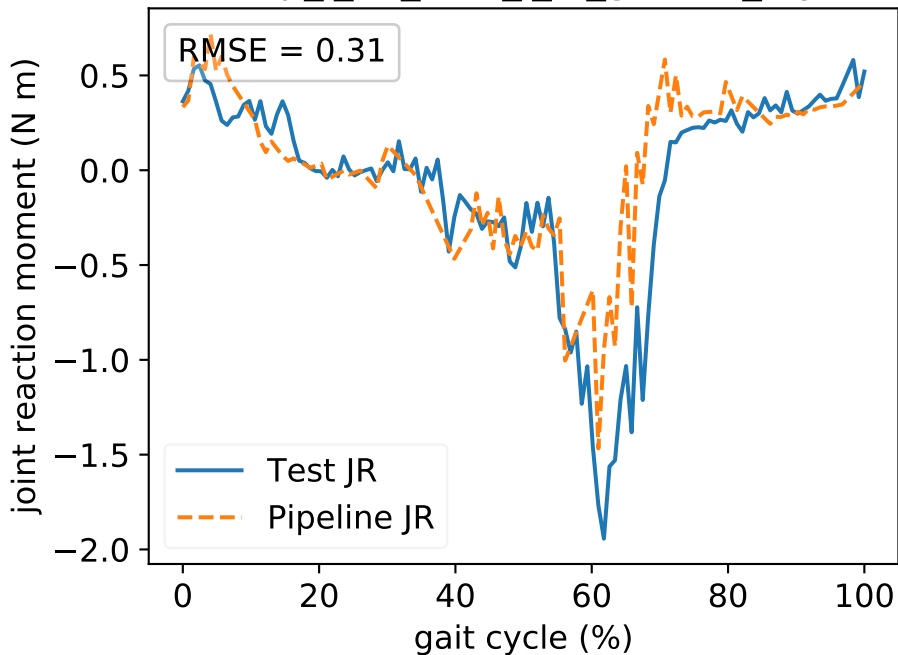
mtp_l_on_toes_l_in_ground_fz



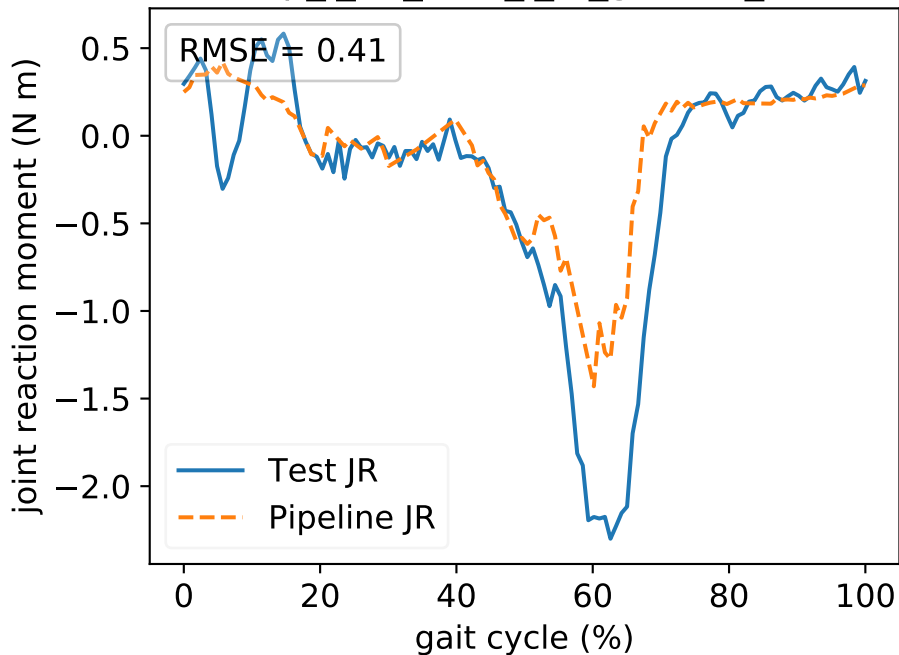
mtp_l_on_toes_l_in_ground_mx



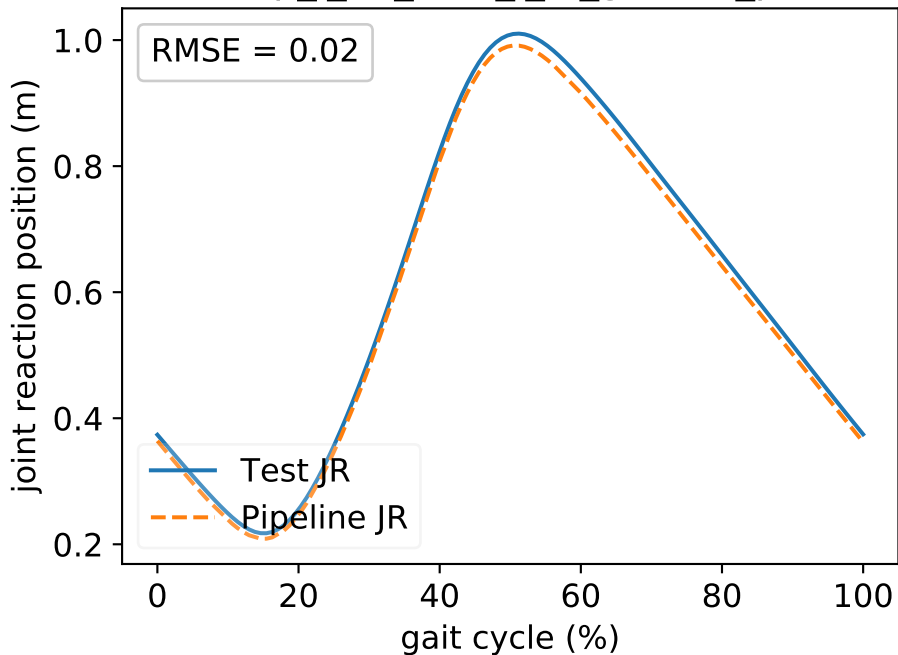
mtp_l_on_toes_l_in_ground_my



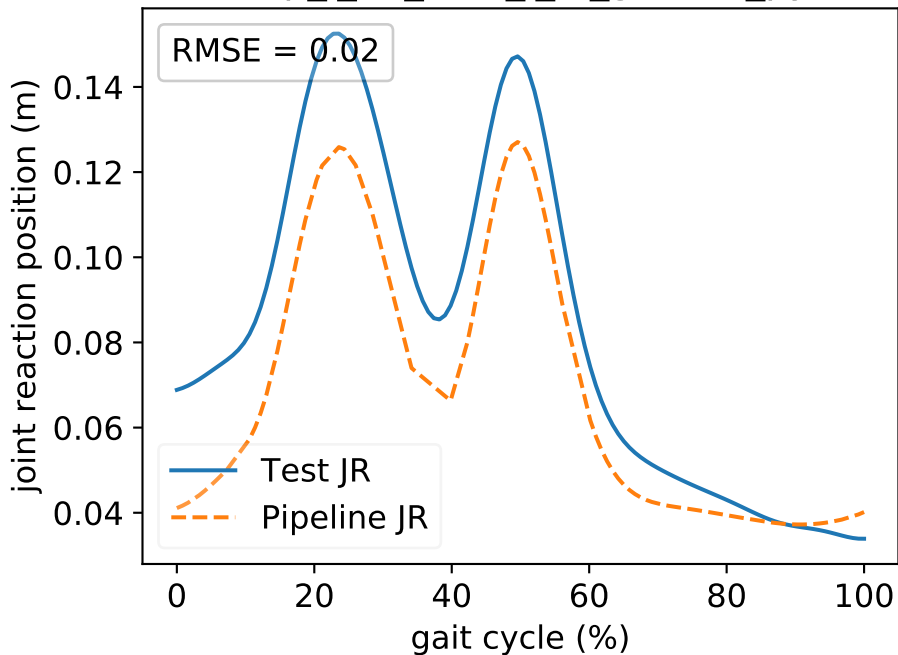
mtp_l_on_toes_l_in_ground_mz



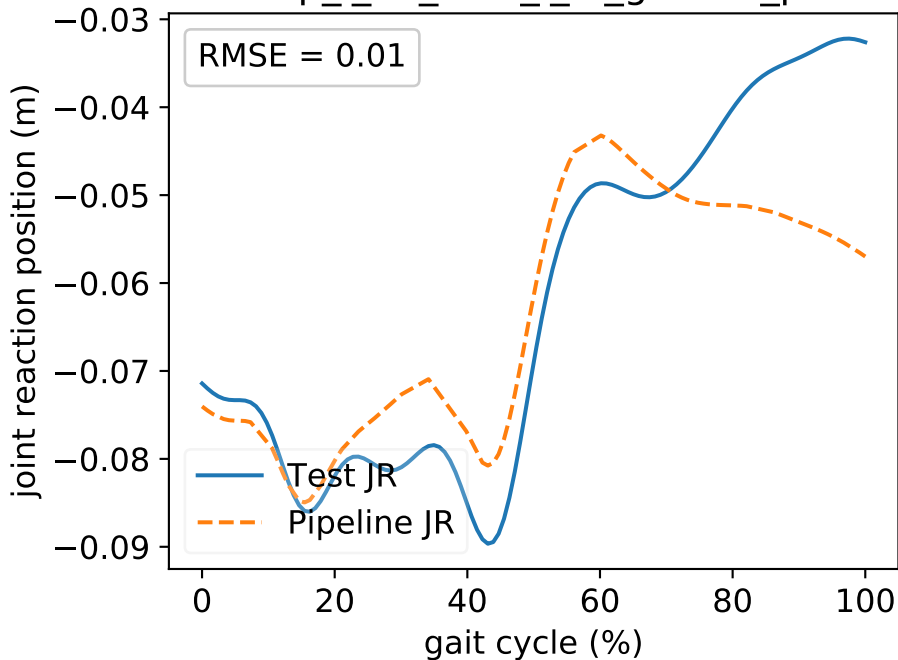
mtp_l_on_toes_l_in_ground_px



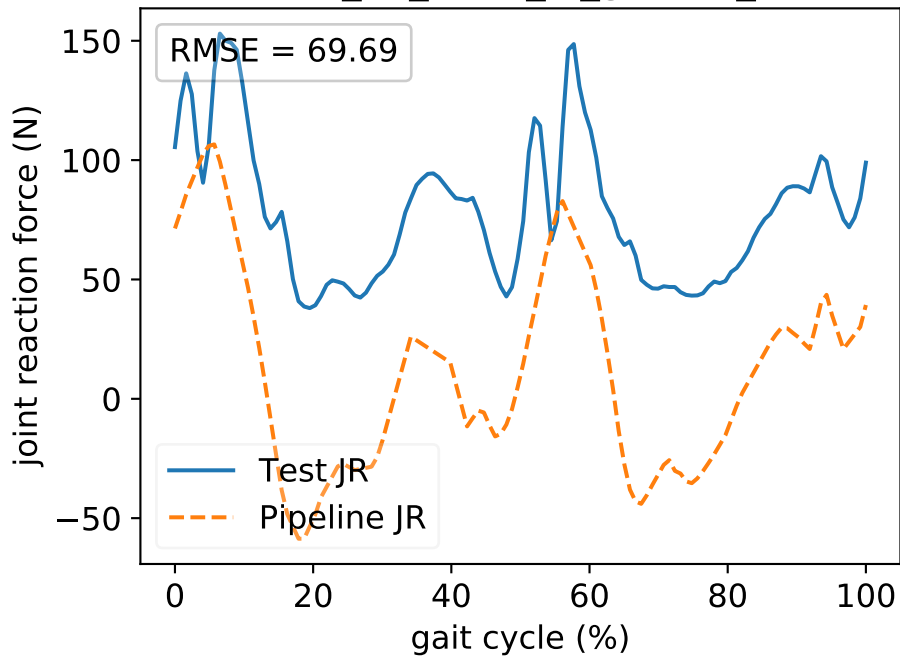
mtp_l_on_toes_l_in_ground_py



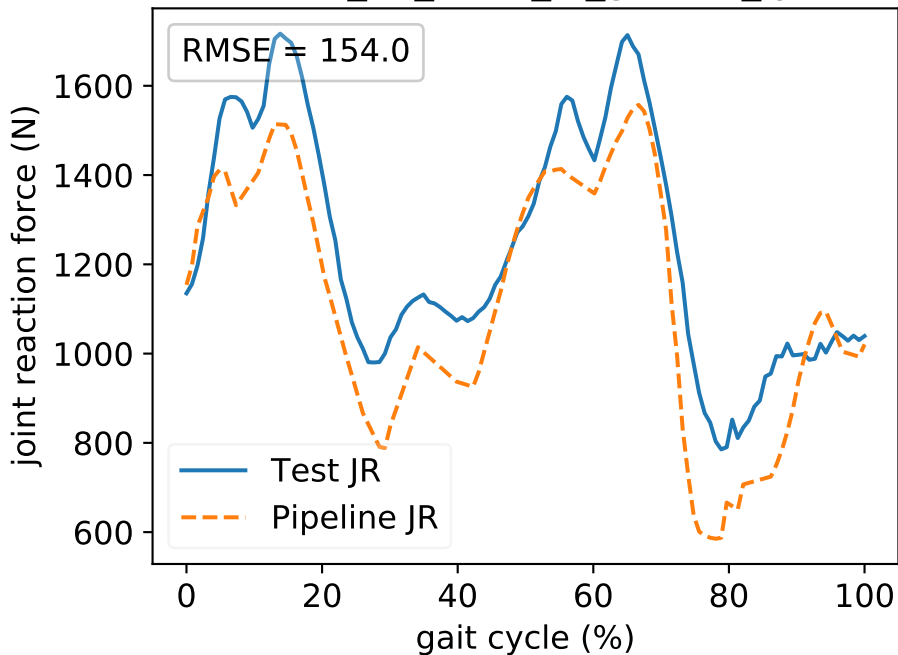
mtp_l_on_toes_l_in_ground_pz



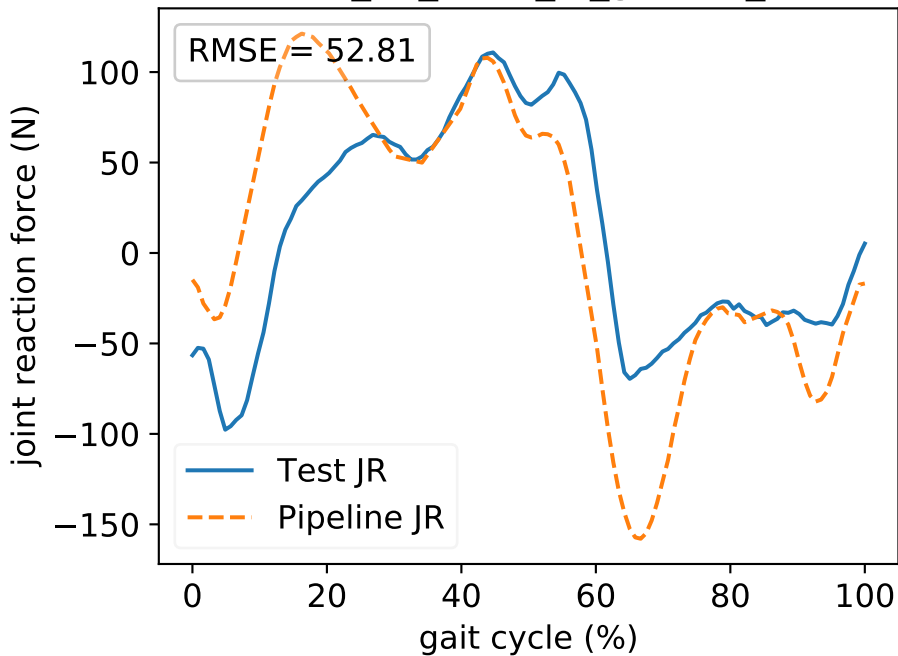
back_on_torso_in_ground_fx

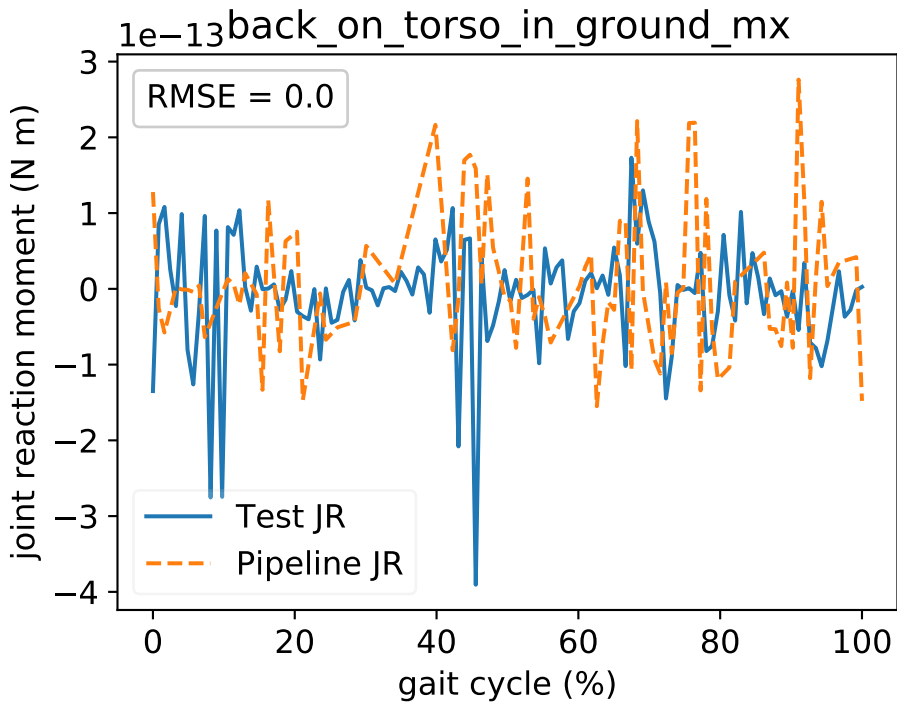


back_on_torso_in_ground_fy



back_on_torso_in_ground_fz





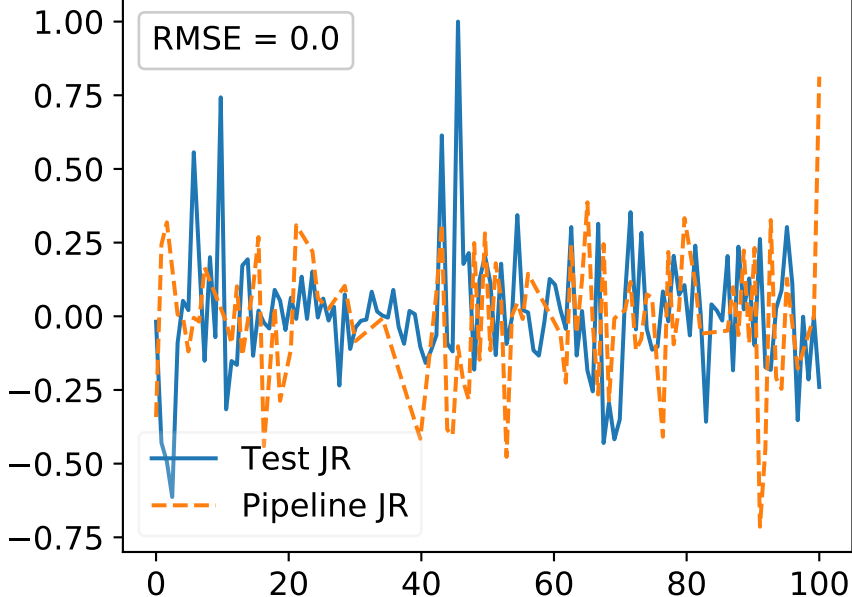
back_on_torso_in_ground_my

RMSE = 0.0

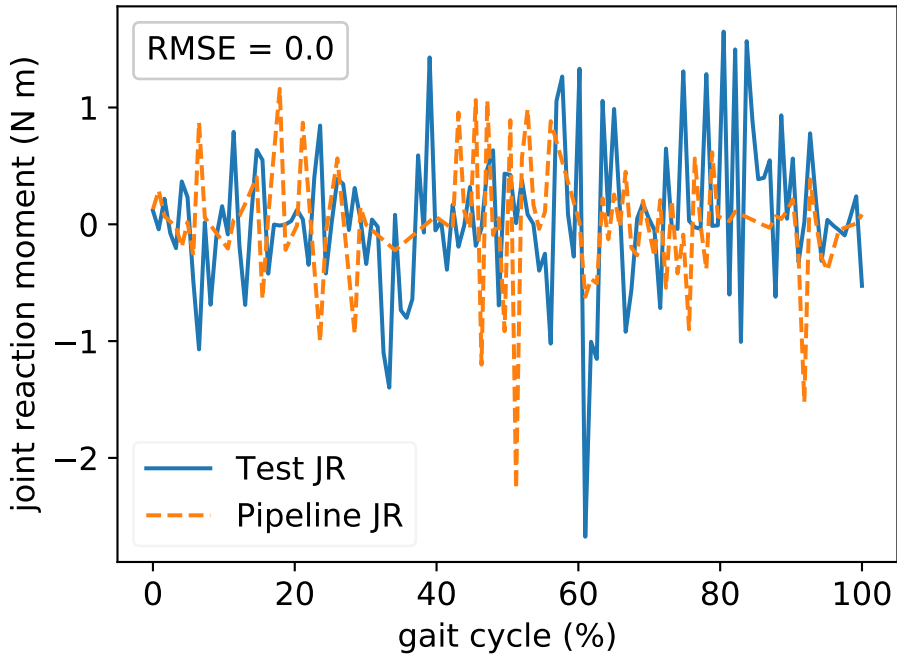
joint reaction moment (N m)

Test JR
Pipeline JR

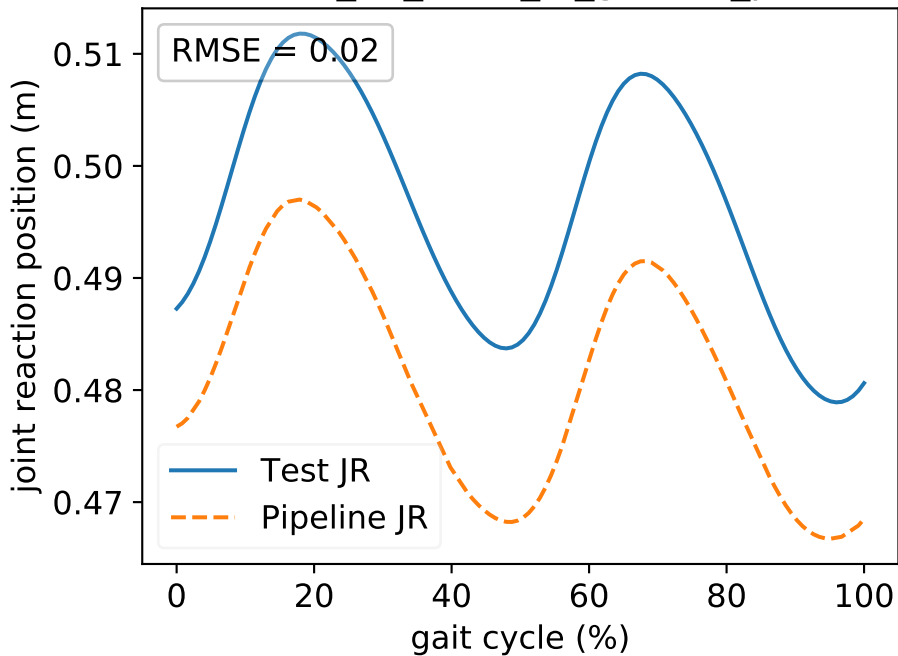
gait cycle (%)



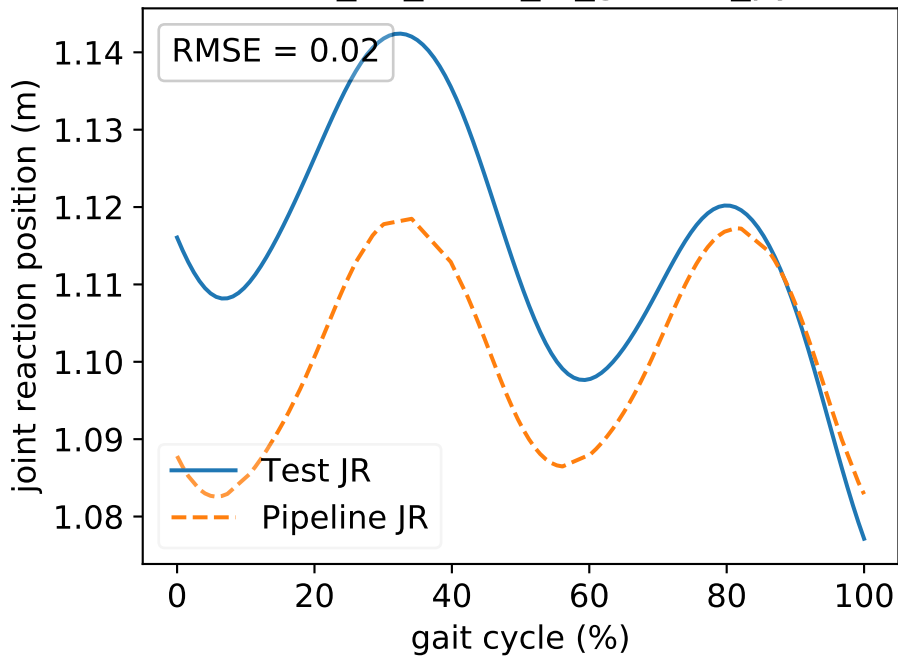
1e-13back_on_torso_in_ground_mz



back_on_torso_in_ground_px



back_on_torso_in_ground_py



back_on_torso_in_ground_pz

