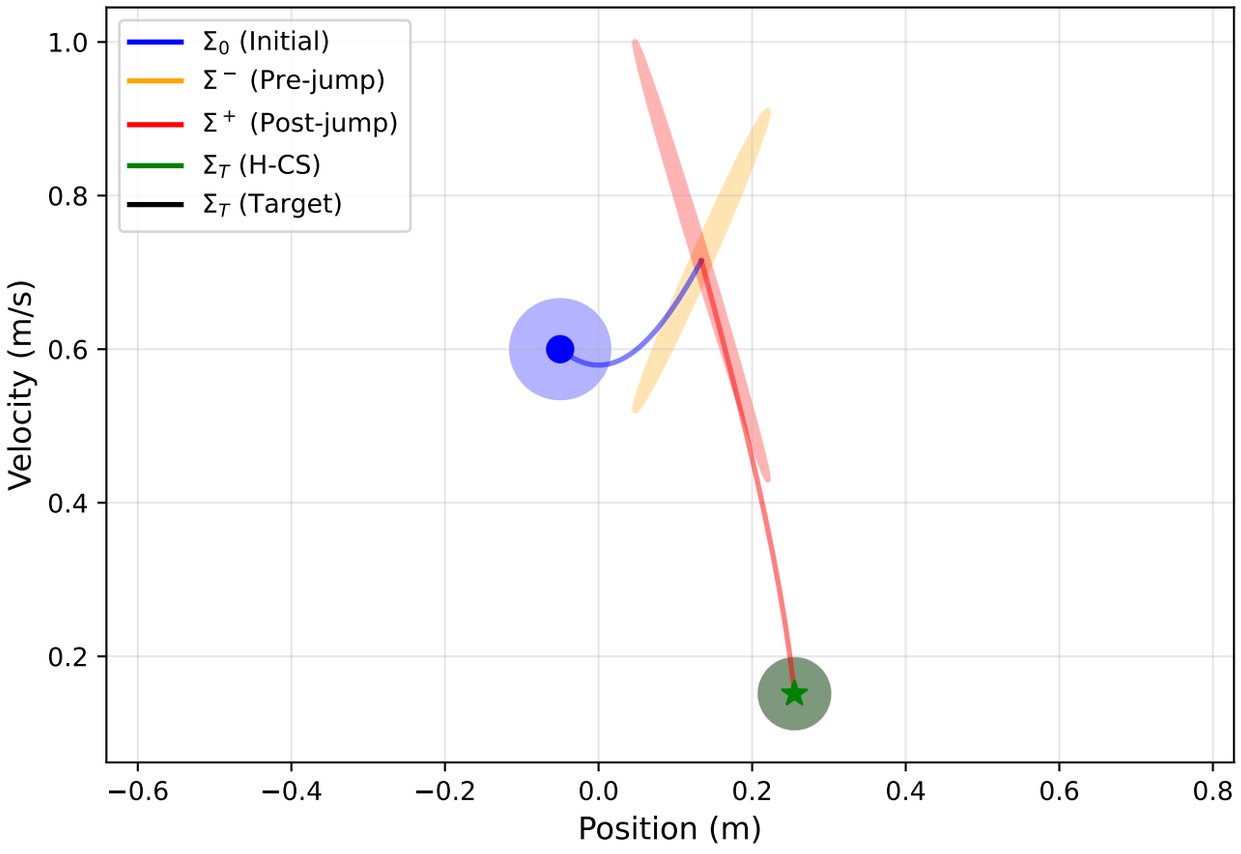
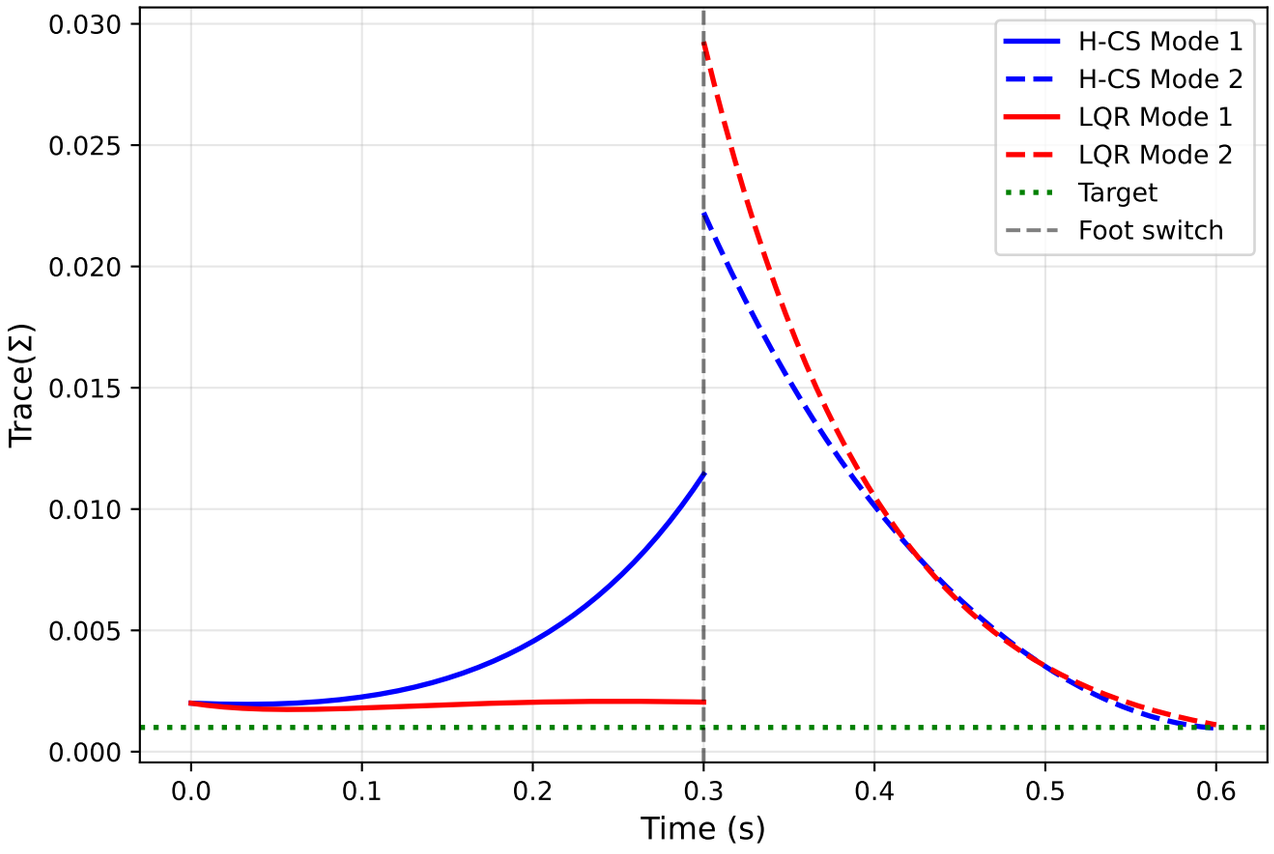
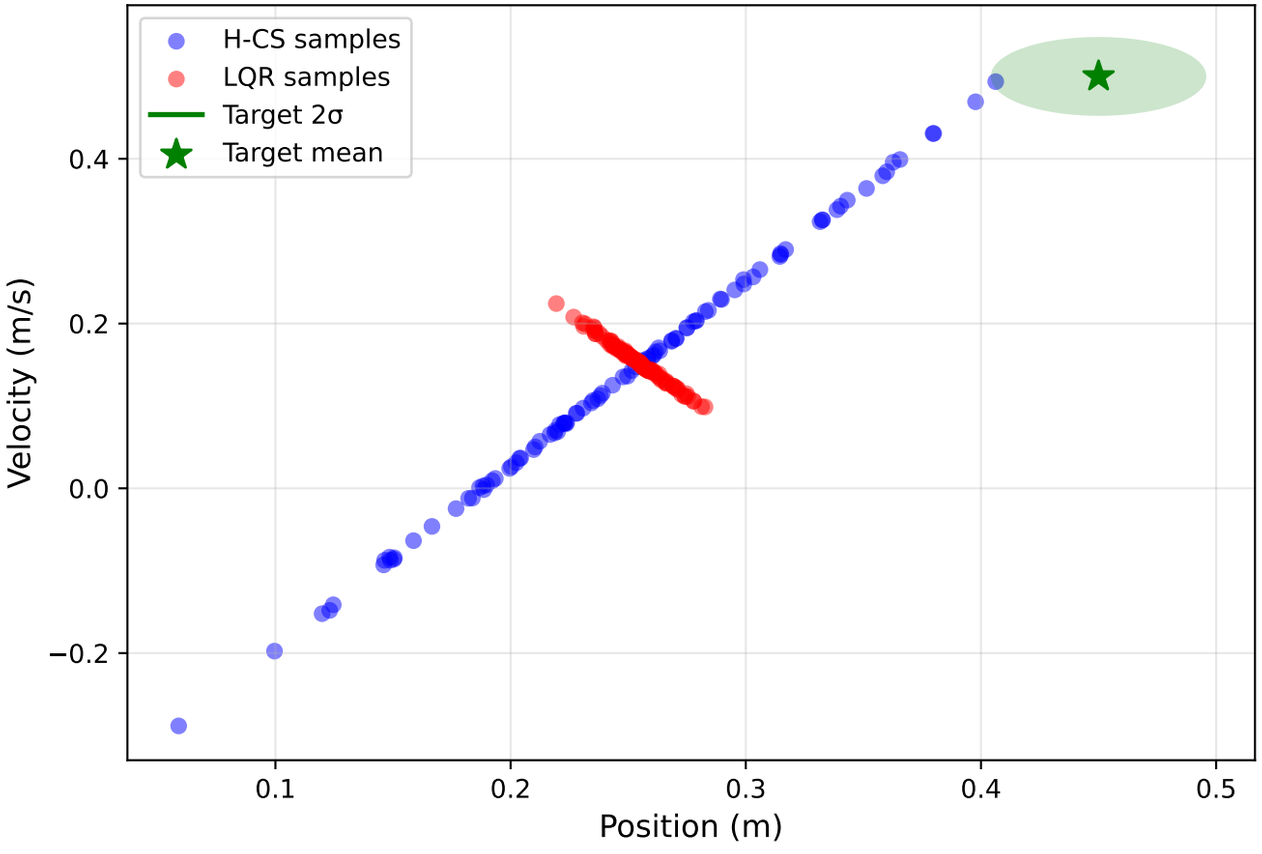
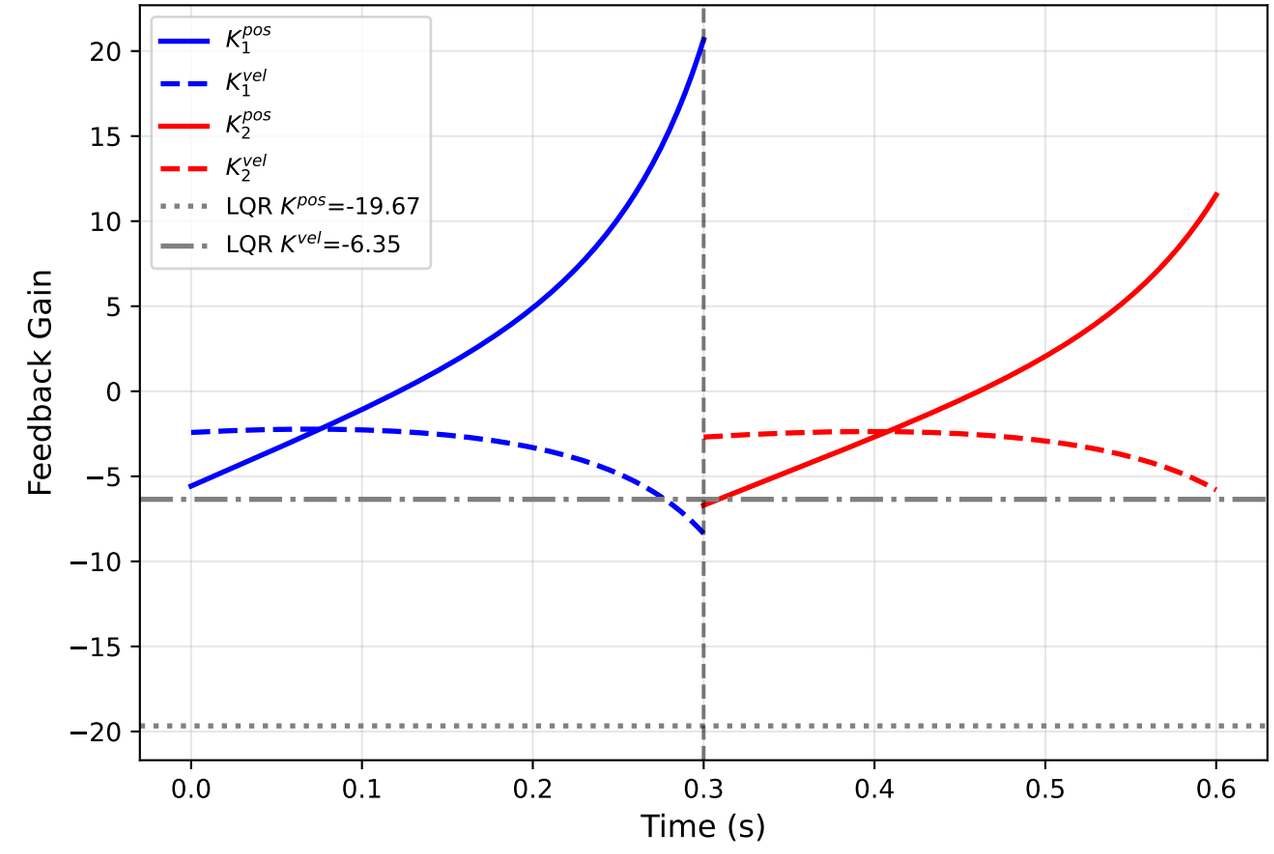

Hybrid Covariance Steering for LIPM
Σ_0 (Initial)
Σ^- (Pre-jump)
Σ^+ (Post-jump)
Σ_T (H-CS)
Σ_T (Target)
Velocity (m/s)
Position (m)


Covariance Trace Evolution
H-CS Mode 1
H-CS Mode 2
LQR Mode 1
LQR Mode 2
Target
Foot switch
Trace(Σ)
Time (s)


Terminal State Distribution (100 samples)
H-CS samples
LQR samples
Target 2σ
Target mean
Velocity (m/s)
Position (m)


Time-Varying Feedback Gains
K_1^{pos}
K_1^{vel}
K_2^{pos}
K_2^{vel}
LQR K^{pos}=-19.67
LQR K^{vel}=-6.35
Feedback Gain
Time (s)