SE(2) Filter Comparisons EKF: x EKF: y EKF: θ **Example Trajectory** 7.5 0.75 0.0 5.0 8.0 0.50 2.5 -0.50.25 0.6 0.0 0.00 -1.02.5 -0.25 0.4 0 0 IEKF: θ IEKF: x IEKF: y 0.2 0.2 0.6 0.0 0.4 -0.20.0 0.2 -0.4**Actual Location** Measurements -0.60.0 -0.2**EKF Results** -0.8iEKF Results -0.2

Seconds

-0.8

-0.6

-0.4

-0.2

0.0

0.2

0

Seconds

0

Seconds