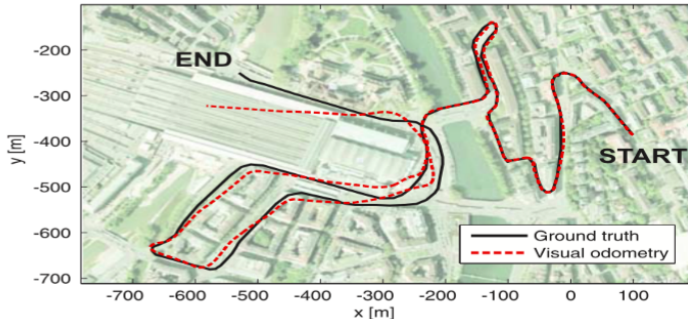


Real-Time Monocular Visual Odometry for On-Road Vehicles with 1-Point RANSAC

D. Scaramuzza, F. Fraundorfer, R. Siegwart (ICRA 2009)



- ▶ Presents a system capable of recovering the trajectory of a vehicle from the video input of a single camera at a very high frame-rate
- ▶ Contributions:
 - ▶ The algorithm proposes a novel way of removing the outliers of the feature matching process
 - ▶ Show that by exploiting the nonholonomic constraints of wheeled vehicles it is possible to use a restrictive motion model
 - ▶ This allows to parameterize the motion with only 1 feature correspondence
- ▶ Evaluates on real traffic sequences in the city center of Zurich