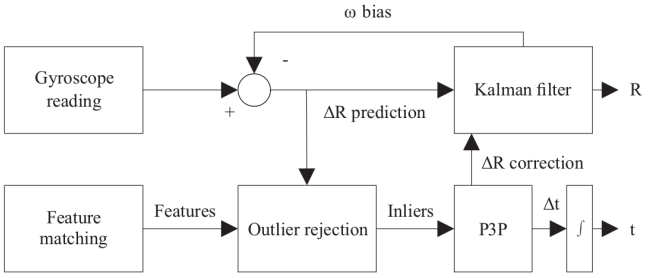
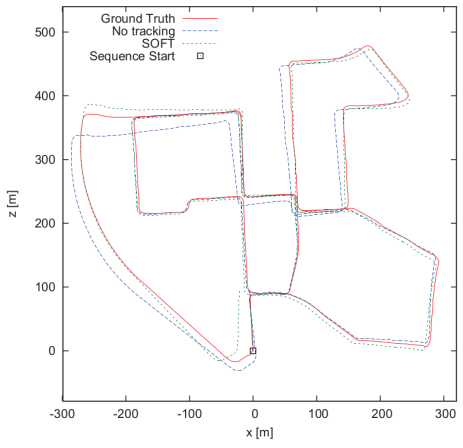
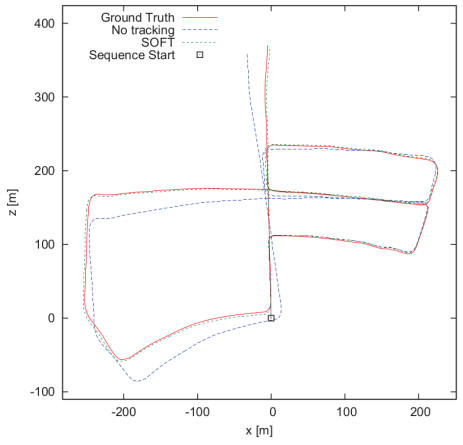
# Stereo Odometry based on Careful Feature Selection and Tracking

## I. Cvišić and I. Petrović (ECMR2015)




- Stereo visual odometry based on feature selection and tracking (SOFT)
  for us: a good taxonomy is provided in intro
- Careful selection of a subset of stable features and their tracking through the frames
- Separate estimation of rotation (the five point) and translation (the three point)
- Evaluated on KITTI, outperforming all
- Pose error of 1.03% with processing speed above 10 Hz
- A modified IMU-aided version of the algorithm
  - An IMU for outlier rejection and Kalman filter for rotation refinement
  - Fast and suitable for embedded systems
    at 20 Hz on an ODROID U3 ARM-based embedded computer