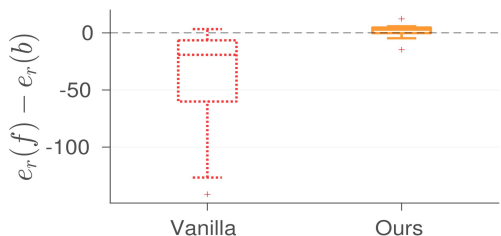




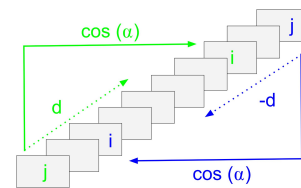
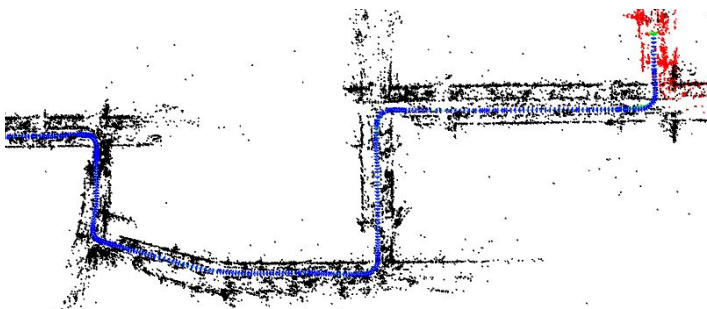
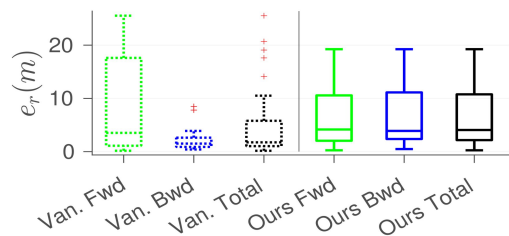
# Motion-Bias-Free Feature-Based SLAM

Alejandro Fontan, Javier Civera, and Michael Milford

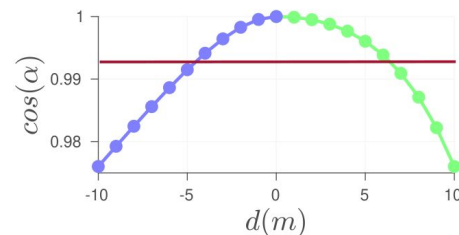
Paper Id: 741



Motion bias and errors in KITTI dataset.



Asymmetry in the angle between observations of a point under fwd/bwd motion.



Current SLAM systems show a significant bias between directions of travel, that is, inconsistency in trajectory estimates on forward and reverse traverses of the same route. We propose several contributions to feature-based SLAM that remedies the motion bias problem which has significant relevance for the wide range of robotics applications where performance consistency is important.

Our deterministic implementation of ORB-SLAM2 can be found in [https://github.com/alejandrofontan/ORB\\_SLAM2\\_Deterministic](https://github.com/alejandrofontan/ORB_SLAM2_Deterministic).