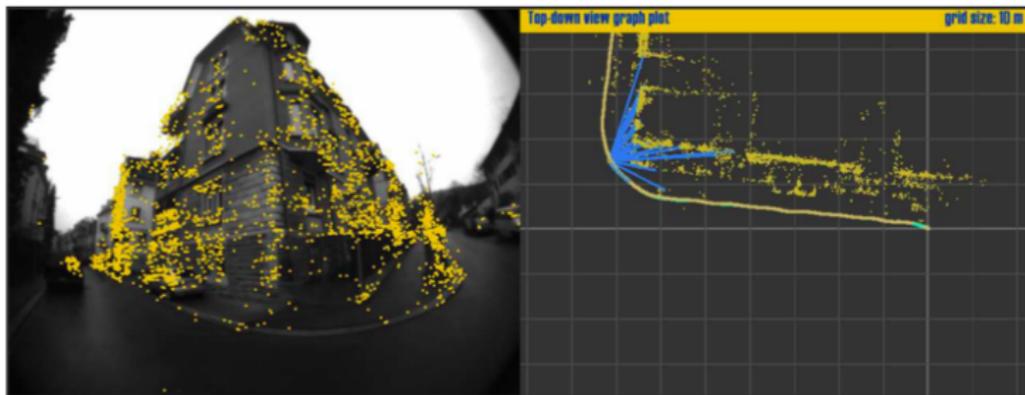


Get Out of My Lab: Large-scale, Real-Time Visual-Inertial Localization

S. Lynen, T. Sattler, M. Bosse, J. Hesch, M. Pollefeys, R. Siegwart (RSS 2015)



- ▶ Demonstrates that large-scale, real-time pose estimation and tracking can be performed on mobile platforms with limited resources without the use of an external server
- ▶ Contributions:
 - ▶ Proposes a large-scale system that entirely runs on devices with limited computational & memory resources while offering accurate, real-time localization
 - ▶ Proposes a direct inclusion of 2D-3D matches from global localization into the local visual-inertial estimator
 - ▶ Leads to smoother trajectories & faster run-times compared to sliding window Bundle Adjustment
- ▶ Evaluates on dataset introduced in the paper