Journal Articles

Cloud-based collaborative 3D mapping in real-time with low-cost robots, 

Conference and Workshop Papers

[C1] V. Usenko, N. Demmel, D. Schubert, J. Stueckler and D. Cremers, 
Visual-Inertial Mapping with Non-Linear Factor Recovery, 

[C2] D. Schubert, N. Demmel, L. von Stumberg, V. Usenko and D. Cremers, 
Rolling-Shutter Modelling for Visual-Inertial Odometry, 
November 2019.

[C3] L. von Stumberg, V. Usenko and D. Cremers, 
Direct Sparse Visual-Inertial Odometry using Dynamic Marginalization, 
May 2018.

The TUM VI Benchmark for Evaluating Visual-Inertial Odometry, 
October 2018.

[C5] D. Schubert, N. Demmel, V. Usenko, J. Stueckler and D. Cremers, 
Direct Sparse Odometry With Rolling Shutter, 
September 2018, Oral Presentation.

[C6] V. Usenko, N. Demmel and D. Cremers, 
The Double Sphere Camera Model, 

From Monocular SLAM to Autonomous Drone Exploration, 
European Conference on Mobile Robots (ECMR), September 2017.

[C8] V. Usenko, L. von Stumberg, A. Pangercic and D. Cremers, 
Real-Time Trajectory Replanning for MAVs using Uniform B-splines and a 3D Circular Buffer, 
Vancouver, Canada, Sep 2017, Best Paper Award - Finalist ()

[C9] V. Usenko, J. Engel, J. Stueckler and D. Cremers, 
Direct Visual-Inertial Odometry with Stereo Cameras, 
May 2016.

[C10] J. Engel, V. Usenko and D. Cremers, 
A Photometrically Calibrated Benchmark For Monocular Visual Odometry, 

[C11] V. Usenko, J. Engel, J. Stueckler and D. Cremers, 
Reconstructing Street-Scenes in Real-Time From a Driving Car, 
[C12] V. Usenko, F. Seidel, Z. Marton, D. Panceric and M. Beetz,
Furniture Classification using WWW CAD Models,

PhDThesis