Author: V. Usenko

List of Publications

Journal Articles

[J1] V. Usenko, N. Demmel, D. Schubert, J. Stueckler and D. Cremers,
Visual-Inertial Mapping with Non-Linear Factor Recovery,

Omnidirectional DSO: Direct Sparse Odometry with Fisheye Cameras,

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

Conference and Workshop Papers

[C1] N Demmel, C Sommer, D Cremers and V Usenko,
Square Root Bundle Adjustment for Large-Scale Reconstruction,

[C2] N Demmel, D Schubert, C Sommer, D Cremers and V Usenko,
Square Root Marginalization for Sliding-Window Bundle Adjustment,
IEEE International Conference on Computer Vision (ICCV), 2021.

[C3] C. Sommer, V. Usenko, D. Schubert, N. Demmel and D. Cremers,
Efficient Derivative Computation for Cumulative B-Splines on Lie Groups,

[C4] D. Schubert, N. Demmel, L. von Stumberg, V. Usenko and D. Cremers,
Rolling-Shutter Modelling for Visual-Inertial Odometry,

[C5] L. von Stumberg, V. Usenko and D. Cremers,
Direct Sparse Visual-Inertial Odometry using Dynamic Marginalization,
International Conference on Robotics and Automation (ICRA), May 2018.

The TUM VI Benchmark for Evaluating Visual-Inertial Odometry,

[C7] D. Schubert, N. Demmel, V. Usenko, J. Stueckler and D. Cremers,
Direct Sparse Odometry With Rolling Shutter,
European Conference on Computer Vision (ECCV), September 2018, Oral Presentation.

[C8] V. Usenko, N. Demmel and D. Cremers,
The Double Sphere Camera Model,
[C9] L. von Stumberg, V. Usenko, J. Engel, J. Stueckler and D. Cremers,
*From Monocular SLAM to Autonomous Drone Exploration*,

[C10] 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*,
*International Conference on Intelligent Robots and Systems (IROS)*, Vancouver, Canada, Sep 2017, *Best Paper Award - Finalist* ()

[C11] V. Usenko, J. Engel, J. Stueckler and D. Cremers,
*Direct Visual-Inertial Odometry with Stereo Cameras*,

[C12] J. Engel, V. Usenko and D. Cremers,
*A Photometrically Calibrated Benchmark For Monocular Visual Odometry*,

[C13] V. Usenko, J. Engel, J. Stueckler and D. Cremers,
*Reconstructing Street-Scenes in Real-Time From a Driving Car*,

[C14] V. Usenko, F. Seidel, Z. Marton, D. Pangercic and M. Beetz,
*Furniture Classification using WWW CAD Models*,

**PhDThesis**

[PhD1] V Usenko,
*Visual-Inertial Navigation for Autonomous Vehicles*,
Technische Universität München, München, 2019.