

Journal Articles

- [J1] J. Engel, V. Koltun and D. Cremers,
Direct Sparse Odometry,
IEEE Transactions on Pattern Analysis and Machine Intelligence, mar 2018.
- [J2] P. Bergmann, R. Wang and D. Cremers,
Online Photometric Calibration of Auto Exposure Video for Realtime Visual Odometry and SLAM,
IEEE Robotics and Automation Letters (RA-L), 3: 627-634, April 2018, **ICRA'18 Best Vision Paper Award - Finalist.**
- [J3] H. Matsuki, L. von Stumberg, V. Usenko, J. Stueckler and D. Cremers,
Omnidirectional DSO: Direct Sparse Odometry with Fisheye Cameras,
IEEE Robotics and Automation Letters 38; Int. Conference on Intelligent Robots and Systems (IROS), 2018.

Conference and Workshop Papers

- [C1] M. Gladkova, R. Wang, N. Zeller and D. Cremers,
Tight Integration of Feature-based Relocalization in Monocular Direct Visual Odometry,
Proc. of the IEEE International Conference on Robotics and Automation (ICRA), 2021.
- [C2] N. Yang, L. von Stumberg, R. Wang and D. Cremers,
D3VO: Deep Depth, Deep Pose and Deep Uncertainty for Monocular Visual Odometry,
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020, **Oral Presentation.**
- [C3] D. Schubert, N. Demmel, L. von Stumberg, V. Usenko and D. Cremers,
Rolling-Shutter Modelling for Visual-Inertial Odometry,
International Conference on Intelligent Robots and Systems (IROS), November 2019.
- [C4] 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.
- [C5] X. Gao, R. Wang, N. Demmel and D. Cremers,
LDSO: Direct Sparse Odometry with Loop Closure,
International Conference on Intelligent Robots and Systems (IROS), October 2018.
- [C6] N. Yang, R. Wang, J. Stueckler and D. Cremers,
Deep Virtual Stereo Odometry: Leveraging Deep Depth Prediction for Monocular Direct Sparse Odometry,
European Conference on Computer Vision (ECCV), September 2018, **Oral Presentation.**
- [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] R. Wang, M. Schwörer and D. Cremers,
Stereo DSO: Large-Scale Direct Sparse Visual Odometry with Stereo Cameras,
International Conference on Computer Vision (ICCV), Venice, Italy, October 2017.
- [C9] J. Engel, V. Usenko and D. Cremers,
A Photometrically Calibrated Benchmark For Monocular Visual Odometry,
arXiv:1607.02555, July 2016.
- [C10] J. Engel, V. Koltun and D. Cremers,
Direct Sparse Odometry,
arXiv:1607.02565, July 2016.