Journal Articles

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

Conference and Workshop Papers

[C1] D Muhle, L Koestler, N Demmel, F Bernard and D Cremers,
The Probabilistic Normal Epipolar Constraint for Frame-To-Frame Rotation Optimization under Uncertain Feature Positions,
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022.

[C2] S Weber, N Demmel, T Chon Chan and D Cremers,
Power Bundle Adjustment for Large-Scale 3D Reconstruction,
*submission*, 2022.

[C3] N Demmel, C Sommer, D Cremers and V Usenko,
Square Root Bundle Adjustment for Large-Scale Reconstruction,
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021.

[C4] N Demmel, D Schubert, C Sommer, D Cremers and V Usenko,
Square Root Marginalization for Sliding-Window Bundle Adjustment,

[C5] MW Wudenka, MG Müller, N Demmel, A Wedler, R Triebel, D Cremers and W Stuerzl,
Towards Robust Monocular Visual Odometry for Flying Robots on Planetary Missions,

[C6] S Klenk, J Chui, N Demmel and D Cremers,
TUM-VIE: The TUM Stereo Visual-Inertial Event Dataset,

[C7] S Weber, N Demmel and D Cremers,
Multidirectional Conjugate Gradients for Scalable Bundle Adjustment,
*German Conference on Pattern Recognition (GCPR)*, 2021, *Oral Presentation*.

[C8] C. Sommer, V. Usenko, D. Schubert, N. Demmel and D. Cremers,
Efficient Derivative Computation for Cumulative B-Splines on Lie Groups,
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020, *Oral Presentation*.

[C9] N Demmel, M Gao, E Laude, T Wu and D Cremers,
Distributed Photometric Bundle Adjustment,

[C10] D. Schubert, N. Demmel, L. von Stumberg, V. Usenko and D. Cremers,
Rolling-Shutter Modelling for Visual-Inertial Odometry,
**The TUM VI Benchmark for Evaluating Visual-Inertial Odometry,**  

[C12] X. Gao, R. Wang, N. Demmel and D. Cremers,  
**LDSO: Direct Sparse Odometry with Loop Closure,**  

[C13] 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.**

[C14] V. Usenko, N. Demmel and D. Cremers,  
**The Double Sphere Camera Model,**  

[C15] J. Diebold, N. Demmel, C. Hazirbas, M. Möller and D. Cremers,  
**Interactive Multi-label Segmentation of RGB-D Images,**  
*Scale Space and Variational Methods in Computer Vision (SSVM)*, June 2015.

[C16] L. Mösenlechner, N Demmel and M Beetz,  
**Becoming action-aware through reasoning about logged plan execution traces,**  