Journal Articles

[J1] B. Haefner, S. Peng, A. Verma, Y. Queau and D. Cremers, 
Photometric Depth Super-Resolution, 

A Non-invasive 3D Body Scanner and Software Tool towards Analysis of Scoliosis, 

Conference and Workshop Papers

[C1] E. Bylow, R. Maier, F. Kahl and C. Olsson, 
Combining Depth Fusion and Photometric Stereo for Fine-Detailed 3D Models, 
*Scandinavian Conference on Image Analysis (SCIA)*, Norrköping, Sweden, June 2019, 
Oral Presentation, received the SCIA 2019 Honourable Mention award.

[C2] B. Haefner, Y. Queau, T. Möllenhoff and D. Cremers, 
Fight ill-posedness with ill-posedness: Single-shot variational depth super-resolution from shading, 
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018, Spotlight Presentation.

[C3] V. Estellers, F. Schmidt and D. Cremers, 
Robust Fitting of Subdivision Surfaces for Smooth Shape Analysis, 
*Proc. of the Int. Conference on 3D Vision (3DV)*, September 2018, Received the Best Paper Award at 3DV 2018.

[C4] M. Jaimez, C. Kerl, J. Gonzalez-Jimenez and D. Cremers, 
Fast Odometry and Scene Flow from RGB-D Cameras based on Geometric Clustering, 
*Proc. of the IEEE Int. Conf. on Robotics and Automation (ICRA)*, 2017.

[C5] M. Jaimez, T. J. Cashman, A. Fitzgibbon, J. Gonzalez-Jimenez and D. Cremers, 
An Efficient Background Term for 3D Reconstruction and Tracking with Smooth Subdivision Surface Models, 

[C6] M. Dzitsiuk, J. Sturm, R. Maier, L. Ma and D. Cremers, 
De-noising, Stabilizing and Completing 3D Reconstructions On-the-go using Plane Priors, 

[C7] R. Maier, R. Schaller and D. Cremers, 
Efficient Online Surface Correction for Real-time Large-Scale 3D Reconstruction, 
Keywords: Rgb-d

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[C20] R. Maier, J. Sturm and D. Cremers,
Submap-based Bundle Adjustment for 3D Reconstruction from RGB-D Data,
*German Conference on Pattern Recognition (GCPR)*, Münster, Germany, September 2014, Oral Presentation.

[C21] C. Kerl, M. Souiai, J. Sturm and D. Cremers,
Towards Illumination-invariant 3D Reconstruction using ToF RGB-D Cameras,

[C22] C. Kerl, J. Sturm and D. Cremers,
Robust Odometry Estimation for RGB-D Cameras,

[C23] E. Bylow, J. Sturm, C. Kerl, F. Kahl and D. Cremers,
Real-Time Camera Tracking and 3D Reconstruction Using Signed Distance Functions,

[C24] E. Bylow, J. Sturm, C. Kerl, F. Kahl and D. Cremers,
Direct Camera Pose Tracking and Mapping With Signed Distance Functions,
Demo Track of the RGB-D Workshop on Advanced Reasoning with Depth Cameras at the Robotics: Science and Systems Conference (RSS), June 2013.

[C25] C. Kerl, J. Sturm and D. Cremers,
Dense Visual SLAM for RGB-D Cameras,

[C26] T. Naseer, J. Sturm and D. Cremers,
FollowMe: Person Following and Gesture Recognition with a Quadrocopter,

[C27] M. Klodt, J. Sturm and D. Cremers,
Scale-Aware Object Tracking with Convex Shape Constraints on RGB-D Images,
*German Conference on Pattern Recognition (GCPR)*, Saarbrücken, Germany, September 2013.

[C28] J. Sturm, E. Bylow, F. Kahl and D. Cremers,
Dense Tracking and Mapping with a Quadrocopter,
*Unmanned Aerial Vehicle in Geomatics (UAV-g)*, Rostock, Germany, September 2013.

[C29] J. Sturm, E. Bylow, F. Kahl and D. Cremers,
CopyMe3D: Scanning and Printing Persons in 3D,
*German Conference on Pattern Recognition (GCPR)*, Saarbrücken, Germany, September 2013.

[C30] J. Engel, J. Sturm and D. Cremers,
Semi-Dense Visual Odometry for a Monocular Camera,
*IEEE International Conference on Computer Vision (ICCV)*, Sydney, Australia, December 2013.
Keywords: Rgb-d

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[C31] F. Steinbruecker, C. Kerl, J. Sturm and D. Cremers,
Large-Scale Multi-Resolution Surface Reconstruction from RGB-D Sequences,
*IEEE International Conference on Computer Vision (ICCV)*, Sydney, Australia, 2013.

[C32] F. Endres, J. Hess, N. Engelhard, J. Sturm, D. Cremers and W. Burgard,
An Evaluation of the RGB-D SLAM System,

[C33] L. Zhang, J. Sturm, D. Cremers and D. Lee,
Real-Time Human Motion Tracking using Multiple Depth Cameras,

[C34] J. Sturm, N. Engelhard, F. Endres, W. Burgard and D. Cremers,
A Benchmark for the Evaluation of RGB-D SLAM Systems,

[C35] J. Sturm, W. Burgard and D. Cremers,
Evaluating Egomotion and Structure-from-Motion Approaches Using the TUM RGB-D Benchmark,

[C36] N. Engelhard, F. Endres, J. Hess, J. Sturm and W. Burgard,
Real-time 3D visual SLAM with a hand-held camera,

[C37] J. Stühr, S. Magenat, N. Engelhard, F. Pomerleau, F. Colas, W. Burgard, D. Cremers and R. Siegwart,
Towards a benchmark for RGB-D SLAM evaluation,

[C38] F. Steinbruecker, J. Sturm and D. Cremers,
Real-Time Visual Odometry from Dense RGB-D Images,
*Workshop on Live Dense Reconstruction with Moving Cameras at the Intl. Conf. on Computer Vision (ICCV)*, 2011.

[C39] J. Stühr, S. Gumhold and D. Cremers,
Real-Time Dense Geometry from a Handheld Camera,
*Pattern Recognition (Proc. DAGM)*, Darmstadt, Germany, 11-20, September 2010.

[C40] J. Stühr, S. Gumhold and D. Cremers,
Parallel Generalized Thresholding Scheme for Live Dense Geometry from a Handheld Camera,
*ECCV Workshop on Computer Vision on GPUs (CVGPU)*, Heraklion, Greece, September 2010.

MastersThesis

[M1] R. Maier,
Out-of-Core Bundle Adjustment for 3D Workpiece Reconstruction,
Technische Universität München, Germany, September 2013.