

## Journal Articles

- [J1] B. Haefner, S. Peng, A. Verma, Y. Queau and D. Cremers,  
**Photometric Depth Super-Resolution,**  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, 42(10): 2453-2464, 2020.
- [J2] S. Roy, A.T.D. Gruenwald, A. Alves-Pinto, R. Maier, D. Cremers, D. Pfeiffer and R. Lampe,  
**A Non-invasive 3D Body Scanner and Software Tool towards Analysis of Scoliosis,**  
*BioMed Research International (BMRI)*, May 2019.
- [J3] K. Kolev, T. Brox and D. Cremers,  
**Fast Joint Estimation of Silhouettes and Dense 3D Geometry from Multiple Images,**  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, 34(3): 493-505, 2012.
- [J4] D. Cremers and K. Kolev,  
**Multiview Stereo and Silhouette Consistency via Convex Functionals over Convex Domains,**  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, 33(6): 1161-1174, 2011.
- [J5] K. Kolev, N. Kirchgessner, S. Houben, A. Csiszar, W. Rubner, C. Palm, B. Eiben, R. Merkel and D. Cremers,  
**A Variational Approach to Vesicle Membrane Reconstruction from Fluorescence Imaging,**  
*Pattern Recognition*, 44: 2944-2958, 2011.
- [J6] K. Kolev, M. Klodt, T. Brox and D. Cremers,  
**Continuous Global Optimization in Multiview 3D Reconstruction,**  
*International Journal of Computer Vision*, 84(1): 80-96, August 2009.
- [J7] B. Goldluecke, I. Ihrke, C. Linz and M. Magnor,  
**Weighted Minimal Hypersurface Reconstruction,**  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*, 29(7): 1194-1208, July 2007.

## Book Chapters

- [BC1] D. Cremers, T. Pock, K. Kolev and A. Chambolle,  
**Convex Relaxation Techniques for Segmentation, Stereo and Multiview Reconstruction,**  
*Markov Random Fields for Vision and Image Processing*, MIT Press, 2011.

## Conference and Workshop Papers

- [C1] L. Sang, B. Haefner and D. Cremers,  
**Inferring Super-Resolution Depth from a Moving Light-Source Enhanced RGB-D Sensor: A Variational Approach,**  
*IEEE Winter Conference on Applications of Computer Vision (WACV)*, Colorado, USA, March 2020, **Spotlight Presentation.**

- [C2] 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.**
- [C3] 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.**
- [C4] M. Dzitsiuk, J. Sturm, R. Maier, L. Ma and D. Cremers,  
**De-noising, Stabilizing and Completing 3D Reconstructions On-the-go using Plane Priors,**  
*International Conference on Robotics and Automation (ICRA)*, May 2017.
- [C5] R. Maier, R. Schaller and D. Cremers,  
**Efficient Online Surface Correction for Real-time Large-Scale 3D Reconstruction,**  
*British Machine Vision Conference (BMVC)*, London, United Kingdom, September 2017.
- [C6] R. Maier, K. Kim, D. Cremers, J. Kautz and M. Niessner,  
**Intrinsic3D: High-Quality 3D Reconstruction by Joint Appearance and Geometry Optimization with Spatially-Varying Lighting,**  
*International Conference on Computer Vision (ICCV)*, Venice, Italy, October 2017.
- [C7] S. Peng, B. Haefner, Y. Queau and D. Cremers,  
**Depth Super-Resolution Meets Uncalibrated Photometric Stereo,**  
*International Conference on Computer Vision Workshops (ICCVW)*, 2017, **Oral Presentation at ICCV Workshop on Color and Photometry in Computer Vision.**
- [C8] F. Steinbruecker, J. Sturm and D. Cremers,  
**Volumetric 3D Mapping in Real-Time on a CPU,**  
*International Conference on Robotics and Automation (ICRA)*, Hongkong, China, 2014.
- [C9] T. Gurdan, M. R. Oswald, D. Gurdan and D. Cremers,  
**Spatial and Temporal Interpolation of Multi-View Image Sequences,**  
*German Conference on Pattern Recognition (GCPR)*, Münster, Germany, Vol. 36, sep 2014.
- [C10] M. R. Oswald and D. Cremers,  
**Surface Normal Integration for Convex Space-time Multi-view Reconstruction,**  
*British Machine Vision Conference (BMVC)*, 2014.
- [C11] M. R. Oswald, J. Stühmer and D. Cremers,  
**Generalized Connectivity Constraints for Spatio-temporal 3D Reconstruction,**  
*European Conference on Computer Vision (ECCV)*, 32-46, 2014.
- [C12] G. Kuschik and D. Cremers,  
**Fast and Accurate Large-scale Stereo Reconstruction using Variational Methods,**  
*ICCV Workshop on Big Data in 3D Computer Vision*, Sydney, Australia, December 2013.

- [C13] M. R. Oswald and D. Cremers,  
**A Convex Relaxation Approach to Space Time Multi-view 3D Reconstruction,**  
*ICCV Workshop on Dynamic Shape Capture and Analysis (4DMOD)*, 2013.
- [C14] 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.
- [C15] M. Aubry, K. Kolev, B. Goldluecke and D. Cremers,  
**Decoupling Photometry and Geometry in Dense Variational Camera Calibration,**  
*IEEE International Conference on Computer Vision (ICCV)*, 2011.
- [C16] J. Stühmer, S. Gumhold and D. Cremers,  
**Real-Time Dense Geometry from a Handheld Camera,**  
*Pattern Recognition (Proc. DAGM)*, Darmstadt, Germany, 11-20, September 2010.
- [C17] J. Stühmer, 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.
- [C18] B. Goldluecke and D. Cremers,  
**A Superresolution Framework for High-Accuracy Multiview Reconstruction,**  
*Pattern Recognition (Proc. DAGM)*, Jena, Germany, 2009, **Received DAGM Best Paper Award.**
- [C19] M. Klodt, T. Schoenemann, K. Kolev, M. Schikora and D. Cremers,  
**An Experimental Comparison of Discrete and Continuous Shape Optimization Methods,**  
*European Conference on Computer Vision (ECCV)*, Marseille, France, October 2008.
- [C20] K. Kolev, M. Klodt, T. Brox and D. Cremers,  
**Propagated Photoconsistency and Convexity in Variational Multiview 3D Reconstruction,**  
*Workshop on Photometric Analysis for Computer Vision*, Rio de Janeiro, Brazil, oct 2007.
- [C21] K. Kolev, M. Klodt, T. Brox, S. Esedoglu and D. Cremers,  
**Continuous Global Optimization in Multiview 3D Reconstruction,**  
*Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCV-PR)*, Ezhou, China, Springer, LNCS, Vol. 4679, 441-452, aug 2007.
- [C22] K. Kolev, T. Brox and D. Cremers,  
**Robust variational segmentation of 3D objects from multiple views,**  
K. Franke et al.(Ed.), *Pattern Recognition (Proc. DAGM)*, Berlin, Germany, Springer, LNCS, Vol. 4174, 688-697, sep 2006.
- [C23] B. Goldluecke and M. Magnor,  
**Spacetime-Continuous Geometry Meshes from Multi-View Video Sequences,**  
*Proceedings of the IEEE International Conference on Image Processing*, Genoa, Italy, IEEE Computer Society, 516-522, September 2005.

- [C24] I. Ihrke, B. Goldluecke and M. Magnor,  
**Reconstructing the Geometry of Flowing Water,**  
*IEEE International Conference on Computer Vision (ICCV)*, Beijing, PRC, IEEE, 1055-1060, 2005.
- [C25] M. Magnor and B. Goldluecke,  
**Spacetime-coherent Geometry Reconstruction from Multiple Video Streams,**  
Aloimonos and Y.(Ed.), *2nd International Symposium on 3D Data Processing, Visualization, and Transmission (3DPVT)*, Thessaloniki, Greece, IEEE, 365-372, September 2004.
- [C26] B. Goldluecke and M. Magnor,  
**Weighted Minimal Hypersurfaces and Their Applications in Computer Vision,**  
*European Conference on Computer Vision (ECCV)*, Prague, Czech Republic, Springer, Lecture Notes in Computer Science, Vol. 3022, 366-378, May 2004.
- [C27] B. Goldluecke and M. Magnor,  
**Space-Time Isosurface Evolution for Temporally Coherent 3D Reconstruction,**  
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Washington, D.C., USA, IEEE Computer Society, Vol. I, 350-355, July 2004.
- [C28] B. Goldluecke and M. Magnor,  
**Joint 3D Reconstruction and Background Separation in Multiple Views using Graph Cuts,**  
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Madison, Wisconsin, USA, IEEE Computer Society, Vol. I, 683-694, June 2003.