Author: Cremers

List of Publications

2019
Journal Articles

[J1] Haefner, B., Ye, Z., Gao, M., Wu, T., Queau, Y., Cremers and D.,
Variational Uncalibrated Photometric Stereo under General Lighting,

[J2] M. Moeller, T. Möllenhoff and D. Cremers,
Controlling Neural Networks via Energy Dissipation,

[J3] F. Pasa, V. Golkov, F. Pfeiffer, D. Cremers and D. Pfeiffer,
Efficient Deep Network Architectures for Fast Chest X-Ray Tuberculosis
Screening and Visualization,

[J4] R. Wang, N. Yang, J. Stueckler and D. Cremers,
DirectShape: Photometric Alignment of Shape Priors for Visual Vehicle Pose
and Shape Estimation,

Conference and Workshop Papers

[C1] P. Swazinna, V. Golkov, I. Lipp, E. Sgarlata, V. Tomassini, D. K. Jones and D. Cremers,
Negative-Unlabeled Learning for Diffusion MRI,
2019.

[C2] T. Möllenhoff and D. Cremers,
Lifting Vectorial Variational Problems: A Natural Formulation based on Geo-
metric Measure Theory and Discrete Exterior Calculus,
2019, Oral Presentation.

[C3] V. Usenko, N. Demmel, D. Schubert, J. Stueckler and D. Cremers,
Visual-Inertial Mapping with Non-Linear Factor Recovery,

2018
Journal Articles

[J1] J. Engel, V. Koltun and D. Cremers,
Direct Sparse Odometry,
March 2018.

[J2] N. Yang, R. Wang, X. Gao and D. Cremers,
Challenges in Monocular Visual Odometry: Photometric Calibration, Motion
Bias and Rolling Shutter Effect,

[J3] Queau, Y., Durix, B., Wu, T., Cremers, D., Lauze, F., Durou and J.-D.,
LED-based Photometric Stereo: Modeling, Calibration and Numerical Solu-
tion,
[J4] P. Bergmann, R. Wang and D. Cremers,
Online Photometric Calibration of Auto Exposure Video for Realtime Visual Odometry and SLAM,

[J5] E. Aljalbout, V. Golkov, Y. Siddiqui and D. Cremers,
Clustering with Deep Learning: Taxonomy and New Methods,

q-Space Novelty Detection with Variational Autoencoders,

[J7] L. Ma,, J. Stueckler, T. Wu and D. Cremers,
Detailed Dense Inference with Convolutional Neural Networks via Discrete Wavelet Transform,
Aug 2018.

[J8] Tjaden, Henning, Schwanecke, Ulrich, Schömer, Elmar, Cremers and Daniel,
A Region-based Gauss-Newton Approach to Real-Time Monocular Multiple Object Tracking,

[J9] Haefner, B., Peng, S., Verma, A., Queau, Y., Cremers and D.,
Photometric Depth Super-Resolution,
*Submitted to IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*

Conference and Workshop Papers

[C1] Caner Hazirbas, Sebastian Georg Soyer, Maximilian Christian Staab, Laura Leal-Taixe and Daniel Cremers,
Deep Depth From Focus,
*Asian Conference on Computer Vision (ACCV)*, December 2018.

[C2] E. Laude, T. Wu and D. Cremers,
A Nonconvex Proximal Splitting Algorithm under Moreau-Yosida Regularization,
*International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2018.

[C3] T. Möllenhoff, Z. Ye, T. Wu and D. Cremers,
Combinatorial Preconditioners for Proximal Algorithms on Graphs,
*International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2018.

D. K. Jones and D. Cremers,
q-Space Novelty Detection in Short Diffusion MRI Scans of Multiple Sclerosis, 2018.

[C6] B. T. Do, V. Golkov, G. E. Gürel and D. Cremers,
Precursor microRNA Identification Using Deep Convolutional Neural Networks,
2018.

[C7] P. Haeusser, J. Plapp, V. Golkov, E. Aljalbout and D. Cremers,
Associative Deep Clustering - Training a Classification Network with no Labels,
Proc. of the German Conference on Pattern Recognition (GCPR), October 2018.

[C8] Nikolaus Mayer, Eddy Ilg, Philipp Fischer, Caner Hazirbas, Daniel Cremers, Alexey Dosovitskiy and Thomas Brox,
What Makes Good Synthetic Training Data for Learning Disparity and Optical Flow Estimation?,
September 2018.

[C9] T. Frerix, T. Möllenhoff, M. Moeller and D. Cremers,
Proximal Backpropagation,

[C10] L. von Stumberg, V. Usenko and D. Cremers,
Direct Sparse Visual-Inertial Odometry using Dynamic Marginalization,
May 2018.

The TUM VI Benchmark for Evaluating Visual-Inertial Odometry,
October 2018.

[C12] X. Gao, R. Wang, N. Demmel and D. Cremers,
LDSO: Direct Sparse Odometry with Loop Closure,
iros, October 2018.

[C13] M. Eisenberger, Z. Lähner and D. Cremers,
Divergence-Free Shape Interpolation and Correspondence,

[C14] Z. Lähner, D. Cremers and T. Tung,
DeepWrinkles: Accurate and Realistic Clothing Modeling,
September 2018, Oral Presentation.

[C15] D. Schubert, N. Demmel, V. Usenko, J. Stueckler and D. Cremers,
Direct Sparse Odometry With Rolling Shutter,
September 2018, Oral Presentation.

[C16] V. Usenko, N. Demmel and D. Cremers,
The Double Sphere Camera Model,

[C17] I. Chiotellis, F. Zimmermann, D. Cremers and R. Triebel,
Incremental Semi-Supervised Learning from Streams for Object Classification,

[C18] P. Wenzel, Q. Khan, D. Cremers and L. Leal-Taixe,
Modular Vehicle Control for Transferring Semantic Information Between Weather Conditions Using GANs,
Conference on Robot Learning (CoRL), 2018.
[C19] Haefner, B., Queau, Y., Möllenhoff, T., Cremers and D.,
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.

2017

Journal Articles

[J1] V. Golkov, M. J. Skwark, A. Mirchev, G. Dikov, A. R. Geanes, J. Mendenhall, J. Meiler and D. Cremers,
3D Deep Learning for Biological Function Prediction from Physical Fields,

Genetic defects in s-spectrin and tau sensitize C. elegans axons to movement-
induced damage via torque-tension coupling,

Tau Like Proteins Reduce Torque Generation in Microtubule Bundles,

[J4] J. Kukacka, V. Golkov and D. Cremers,
Regularization for Deep Learning: A Taxonomy,

Conference and Workshop Papers

[C1] 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,
2017.

[C2] L. Ma, J. Stueckler, C. Kerl and D. Cremers,
Multi-View Deep Learning for Consistent Semantic Mapping with RGB-D Cameras,
Vancouver, Canada, Sep 2017.

[C3] Vestner, M., Litman, R., Rodola, E., Bronstein, A., Cremers and D.,
Product Manifold Filter: Non-Rigid Shape Correspondence via Kernel Density Estimation in the Product Space,
2017.

[C4] Dzitsiuk, M., Sturm, J., Maier, R., Ma, L., Cremers and D.,
De-noising, Stabilizing and Completing 3D Reconstructions On-the-go using Plane Priors,

[C5] L. von Stumberg, V. Usenko, J. Engel, J. Stueckler and D. Cremers,
From Monocular SLAM to Autonomous Drone Exploration,
Author: Cremers

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[C6] Florian Walch, Caner Hazirbas, Laura Leal-Taixe, Torsten Sattler, Sebastian Hilsenbeck and Daniel Cremers,
Image-based localization using LSTMs for structured feature correlation,
October 2017.

Establishment of an interdisciplinary workflow of machine learning-based Radiomics in sarcoma patients,

[C8] Queau, Y., Pizenberg, M., Durou, J.-D., Cremers and D.,
Microgeometry capture and RGB albedo estimation by photometric stereo without demosaicing,
International Conference on Quality Control by Artificial Vision (QCAV), 2017.

[C9] P. Haeusser, A. Mordvintsev and D. Cremers,
Learning by Association - A versatile semi-supervised training method for neural networks,
2017.

[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,
Vancouver, Canada, Sep 2017.

[C11] Tim Meinhardt, Michael Moeller, Caner Hazirbas and Daniel Cremers,
Learning Proximal Operators: Using Denoising Networks for Regularizing Inverse Imaging Problems,
October 2017.

One-Shot Video Object Segmentation,
Honolulu, USA, 2017.

[C13] Queau, Y., Melou, J., Durou, J.-D., Cremers and D.,
Dense Multi-view 3D-reconstruction Without Dense Correspondences,

[C14] P. Haeusser, T. Frerix, A. Mordvintsev and D. Cremers,
Associative Domain Adaptation,
2017.

Efficient Deformable Shape Correspondence via Kernel Matching,
International Conference on 3D Vision (3DV), Qingdao, China, October 2017, Oral Presentation.

[C16] Maier, R., Kim, K., Cremers, D., Kautz and J.,
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.


2016

**Journal Articles**


**Book Chapters**


**Conference and Workshop Papers**
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List of Publications

[C1] N. Mayer, E. Ilg, P. Haeusser, P. Fischer, D. Cremers, A. Dosovitskiy and T. Brox,
A Large Dataset to Train Convolutional Networks for Disparity, Optical Flow, and Scene Flow Estimation,
IEEE International Conference on Computer Vision and Pattern Recognition (CVPR), 2016.

Model-Free Novelty-Based Diffusion MRI,
Prague, Czech Republic, April 2016.

[C3] V. Golkov, M. J. Skwark, A. Golkov, A. Dosovitskiy, T. Brox, J. Meiler and D. Cremers,
Protein Contact Prediction from Amino Acid Co-Evolution Using Convolutional Networks for Graph-Valued Images,
Barcelona, Spain, December 2016.

[C4] Z. Lahner, E. Rodola, F. R. Schmidt, M. M. Bronstein and D. Cremers,
Efficient Globally Optimal 2D-to-3D Deformable Shape Matching,
May 2016.

[C5] A. Narr, R. Triebel and D. Cremers,
Stream-based Active Learning for Efficient and Adaptive Classification of 3D Objects,
May 2016.

SHREC16: Matching of Deformable Shapes with Topological Noise,
May 2016.

SHREC16: Partial Matching of Deformable Shapes,
May 2016.

[C8] T. Möllenhoff, E. Laude, M. Moeller, J. Lellmann and D. Cremers,
Sublabel-Accurate Relaxation of Nonconvex Energies,
2016.

[C9] L. Ma, C. Kerl, J. Stueckler and D. Cremers,
CPA-SLAM: Consistent Plane-Model Alignment for Direct RGB-D SLAM,
May 2016.

[C10] J. Engel, V. Usenko and D. Cremers,
A Photometrically Calibrated Benchmark For Monocular Visual Odometry,

[C11] J. Engel, V. Koltun and D. Cremers,
Direct Sparse Odometry,

[C12] E. Laude, T. Möllenhoff, M. Moeller, J. Lellmann and D. Cremers,
Sublabel-Accurate Convex Relaxation of Vectorial Multilabel Energies,
October 2016.

[C13] T. Windheuser and D. Cremers,
A Convex Solution to Spatially-Regularized Correspondence Problems,
October 2016.
Author: Cremers

List of Publications

[C14] S. Sharifzadeh, I. Chiotellis, R. Triebel and D. Cremers,
Learning to Drive using Inverse Reinforcement Learning and Deep Q-Networks,
NIPS Workshops, December 2016.

2015
Journal Articles

[J1] J. Diebold, C. Nieuwenhuis and D. Cremers,
Midrange Geometric Interactions for Semantic Segmentation,
2015.

[J2] J. Diebold, S. Tari and D. Cremers,
The Role of Diffusion in Figure Hunt Games,

[J3] S. Madhogaria, P. M. Baggenstoss, M. Schikora, W. Koch and D. Cremers,
Car detection by fusion of HOG and causal MRF,

[J4] M. Klodt, K. Herzog, R. Töpfer and D. Cremers,
Field phenotyping of grapevine growth using dense stereo reconstruction,

[J5] E. Rodola, A. Albarelli, D. Cremers and A. Torsello,
A Simple and Effective Relevance-based Point Sampling for 3D Shapes,

[J6] R. Mecca, E. Rodola and D. Cremers,
Realistic Photometric Stereo Using Partial Differential Irradiance Equation Ratios,

[J7] T. Möllenhoff, E. Strekalovskiy, M. Möller and D. Cremers,
The Primal-Dual Hybrid Gradient Method for Semiconvex Splittings,

Book Chapters

[BC1] V. Golkov, J. M. Portegies, A. Golkov, R. Duïts and D. Cremers,
Holistic Image Reconstruction for Diffusion MRI,
Computational Diffusion MRI, Munich, Germany, Springer, October 2015, Book Chapter, and Oral Presentation at MICCAI 2015 Workshop on Computational Diffusion MRI.

Conference and Workshop Papers

[C1] M. Moeller, J. Diebold, G. Gilboa and D. Cremers,
Learning Nonlinear Spectral Filters for Color Image Reconstruction,
2015.

[C2] J. Diebold, N. Demmel, C. Hazirbas, M. Möller and D. Cremers,
Interactive Multi-label Segmentation of RGB-D Images,
2015.


[C14] D. Caruso, J. Engel and D. Cremers,
Large-Scale Direct SLAM for Omnidirectional Cameras, 2015.

[C15] Y. Tao, R. Triebel and D. Cremers,
Semi-supervised Online Learning for Efficient Classification of Objects in 3D Data Streams, 2015.

[C16] R. Maier, J. Stueckler and D. Cremers,
Super-Resolution Keyframe Fusion for 3D Modeling with High-Quality Textures,
International Conference on 3D Vision (3DV), 2015.

[C17] M. Jaimez, M. Souiai, J. Stueckler, J. Gonzalez-Jimenez and D. Cremers,
Motion Cooperation: Smooth Piece-Wise Rigid Scene Flow from RGB-D Images,

[C18] E. Rodola, M. Moeller and D. Cremers,
Point-wise Map Recovery and Refinement from Functional Correspondence, Aachen, Germany, 2015, Received the Best Paper Award.

[C19] C. Kerl, J. Stueckler and D. Cremers,
Dense Continuous-Time Tracking and Mapping with Rolling Shutter RGB-D Cameras, Santiago, Chile, 2015.

[C20] M. Souiai, M. R. Oswald, Y. Kee, J. Kim, M. Pollefeys and D. Cremers,
Entropy Minimization for Convex Relaxation Approaches, Santiago, Chile, 2015.

[C21] F. Stark, C. Hazirbas, R. Triebel and D. Cremers,
CAPTCHA Recognition with Active Deep Learning, GCPR Workshop on New Challenges in Neural Computation, Aachen, Germany, 2015.

[C22] J. Stühmer, S. Nowozin, A. Fitzgibbon, R. Szeliski, T. Perry, S. Acharya, D. Cremers and J. Shotton,
Model-Based Tracking at 300Hz using Raw Time-of-Flight Observations, Santiago, Chile, 2015.

2014
Journal Articles

[J1] B. Goldluecke, M. Aubry, K. Kolev and D. Cremers,

[J2] E. Strekalovskiy, A. Chambolle and D. Cremers,

[J3] J. Engel, J. Sturm and D. Cremers,
[J4] E. Rodola, S. Rota Bulo and D. Cremers,
Robust Region Detection via Consensus Segmentation of Deformable Shapes,

Books
[B1] D. Cremers, I. Reid, H. Saito and M.-S. Yang (Editors),
Computer Vision: ACCV 2014,
Springer 2014.

Book Chapters
Joint Super-Resolution Using Only One Anisotropic Low-Resolution Image per q-Space Coordinate,
Computational Diffusion MRI, Springer, 2014, Book Chapter, and Oral Presentation at MICCAI 2014 Workshop on Computational Diffusion MRI.

Conference and Workshop Papers
[C4] D. Weikersdorfer, D. B. Adrian, D. Cremers and J. Conrad,
Event-based 3D SLAM with a depth-augmented dynamic vision sensor, 2014.
[C5] F. Steinbruecker, J. Sturm and D. Cremers,
Volumetric 3D Mapping in Real-Time on a CPU, Hongkong, China, 2014.
[C6] E. Rodola, S. Rota Bulo, T. Windheuser, M. Vestner and D. Cremers,
Dense Non-Rigid Shape Correspondence Using Random Forests, 2014.
[C7] Y. Kee, M. Souiai, D. Cremers and J. Kim,
Sequential Convex Relaxation for Mutual-Information-Based Unsupervised Figure-Ground Segmentation, 2014.
[C8] H. Alvarez, L.M. Paz, J. Sturm and D. Cremers, 
*Collision Avoidance for Quadrotors with a Monocular Camera*, 

[C9] J. Engel, T. Schöps and D. Cremers, 
*LSD-SLAM: Large-Scale Direct Monocular SLAM*, 
September 2014, *Oral Presentation*.

[C10] T. Schöps, J. Engel and D. Cremers, 
*Semi-Dense Visual Odometry for AR on a Smartphone*, 
September 2014, *Best Short Paper Award*.

[C11] T. Windheuser, M. Vestner, E. Rodola, R. Triebel and D. Cremers, 
*Optimal Intrinsic Descriptors for Non-Rigid Shape Analysis*, 
2014.

[C12] M. Strobel, J. Diebold and D. Cremers, 
*Flow and Color Inpainting for Video Completion*, 
*German Conference on Pattern Recognition (GCPR)*, Münster, Germany, September 2014, *Oral Presentation*.

[C13] 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.

[C14] T. Gurdan, M. R. Oswald, D. Gurdan and D. Cremers, 
*Spatial and Temporal Interpolation of Multi-View Image Sequences*, 
Münster, Germany, Vol. 36, September 2014.

[C15] M. R. Oswald and D. Cremers, 
*Surface Normal Integration for Convex Space-time Multi-view Reconstruction*, 
2014.

[C16] C. Nieuwenhuis, S. Hawe, M. Kleinsteuber and D. Cremers, 
*Co-Sparse Textural Similarity for Interactive Segmentation*, 
2014.

[C17] M. R. Oswald, J. Stühmer and D. Cremers, 
*Generalized Connectivity Constraints for Spatio-temporal 3D Reconstruction*, 

[C18] E. Strekalovskiy and D. Cremers, 
*Real-Time Minimization of the Piecewise Smooth Mumford-Shah Functional*, 

[C19] A. Kanezaki, E. Rodola, D. Cremers and T. Harada, 
[Taiou tenshuugou ruijido gakushuu wo mochiita goutai-higoutai buttai kenshutsu], 

[C20] M. Andreux, E. Rodola, M. Aubry and D. Cremers, 
*Anisotropic Laplace-Beltrami Operators for Shape Analysis*, 
Sixth Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment (NORDIA), 2014.
Author: Cremers

List of Publications

[C21] O. Dunkley, J. Engel, J. Sturm and D. Cremers,
Visual-Inertial Navigation for a Camera-Equipped 25g Nano-Quadrotor,

[C22] R. Triebel, J. Stühmer, M. Souiai and D. Cremers,
Active Online Learning for Interactive Segmentation Using Sparse Gaussian Processes,
German Conference on Pattern Recognition, 2014.

[C23] S. Debnath, S. S. Baishya, R. Triebel, V. Dutt and D. Cremers,
Environment-adaptive Learning: How Clustering Helps to Obtain Good Training Data,

[C24] A. Kanezaki, E. Rodola, D. Cremers and T. Harada,
Learning Similarities for Rigid and Non-Rigid Object Detection,
International Conference on 3D Vision (3DV), 2014.

[C25] D. Bender, M. Schikora, J. Sturm and D. Cremers,
INS-Camera Calibration without Ground Control Points,
9th IEEE ISIF Workshop on Sensor Data Fusion: Trends, Solutions, Applications (SDF), 2014.

[C26] C. Kerl, M. Souiai, J. Sturm and D. Cremers,
Towards Illumination-invariant 3D Reconstruction using ToF RGB-D Cameras,
International Conference on 3D Vision (3DV), 2014.

[C27] F. R. Schmidt, T. Windheuser, U. Schlickewei and D. Cremers,
Dense Elastic 3D Shape Matching,

2013

Journal Articles

[J1] C. Nieuwenhuis and D. Cremers,
Spatially Varying Color Distributions for Interactive Multi-Label Segmentation,

[J2] C. Nieuwenhuis, E. Toeppe and D. Cremers,
A Survey and Comparison of Discrete and Continuous Multi-label Optimization Approaches for the Potts Model,

[J3] B. Goldluecke, E. Strekalovskiy and D. Cremers,
Tight Convex Relaxations for Vector-Valued Labeling,

[J4] F. Endres, J. Hess, J. Sturm, D. Cremers and W. Burgard,
3D Mapping with an RGB-D Camera,
Author: Cremers

List of Publications

[J5] Liu, Z., Beetz, M., Cremers, D., Gall, J., Li, W., Pangercic, D., Sturm, J., Tai and Y.-W.,
Introduction to the special issue on visual understanding and applications with
RGB-D cameras,

Book Chapters

[BC1] M. Klodt, F. Steinbruecker and D. Cremers,
Moment Constraints in Convex Optimization for Segmentation and Tracking,

Conference and Workshop Papers

[C1] M. Souiai, C. Nieuwenhuis, E. Strekalovskiy and D. Cremers,
Convex Optimization for Scene Understanding,
ICCV Workshop on Graphical Models for Scene Understanding, 2013.

[C2] J. Bergbauer, C. Nieuwenhuis, M. Souiai and D. Cremers,
Proximity Priors for Variational Semantic Segmentation and Recognition,
ICCV Workshop on Graphical Models for Scene Understanding, 2013.

[C3] V. Golkov, T. Sprenger, A. Menini, M.I. Menzel, D. Cremers and J.I. Sperl,
Effects of Low-Rank Constraints, Line-Process Denoising, and q-Space Compressed Sensing on Diffusion MR Image Reconstruction and Kurtosis Tensor Estimation,
2013, Oral Presentation.

Line-Process-Based Joint SENSE Reconstruction of Diffusion Images with Intensity Inhomogeneity Correction and Noise Non-Stationarity Correction,
2013, Certificate of Merit Award.

[C5] V. Golkov, M.I. Menzel, T. Sprenger, A. Menini, D. Cremers and J.I. Sperl,
Reconstruction, Regularization, and Quality in Diffusion MRI Using the Example of Accelerated Diffusion Spectrum Imaging,
16th Annual Meeting of the German Chapter of the ISMRM, 2013, Oral Presentation.

[C6] V. Golkov, M.I. Menzel, T. Sprenger, A. Menini, D. Cremers and J.I. Sperl,
Corrected Joint SENSE Reconstruction, Low-Rank Constraints, and Compressed-Sensing-Accelerated Diffusion Spectrum Imaging in Denoising and Kurtosis Tensor Estimation,
ISMRM Workshop on Diffusion as a Probe of Neural Tissue Microstructure, 2013.

Noise Reduction in Accelerated Diffusion Spectrum Imaging through Integration of SENSE Reconstruction into Joint Reconstruction in Combination with q-Space Compressed Sensing,
2013.

[C8] C. Kerl, J. Sturm and D. Cremers,
Robust Odometry Estimation for RGB-D Cameras,
May 2013, Best Vision Paper Award - Finalist.
[C9] E. Toeppe, C. Nieuwenhuis and D. Cremers, 
*Volume Constraints for Single View Reconstruction*, 
Portland, USA, 2013.

[C10] D. Weikersdorfer, A. Schick and D. Cremers, 
*Depth-adative Supervoxels for RGB-D Video Segmentation*, 
2013.

[C11] E. Bylow, J. Sturm, C. Kerl, F. Kahl and D. Cremers, 
*Real-Time Camera Tracking and 3D Reconstruction Using Signed Distance Functions*, 

[C12] 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 

[C13] M. Souiai, E. Strekalovskiy, C. Nieuwenhuis and D. Cremers, 
*A Co-occurrence Prior for Continuous Multi-Label Optimization*, 
2013.

[C14] F. Stangl, M. Souiai and D. Cremers, 
*Performance Evaluation of Narrow Band Methods for Variational Stereo*, 
*35th German Conference on Pattern Recognition (GCPR)*, 2013.

[C15] T. Möllenhoff, C. Nieuwenhuis, E. Toeppe and D. Cremers, 
*Efficient Convex Optimization for Minimal Partition Problems with Volume Constraints*, 
2013.

[C16] C. Kerl, J. Sturm and D. Cremers, 
*Dense Visual SLAM for RGB-D Cameras*, 

[C17] T. Naseer, J. Sturm and D. Cremers, 
*FollowMe: Person Following and Gesture Recognition with a Quadrocopter*, 

[C18] 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.

[C19] 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.

[C20] D. Bender, M. Schikora, J. Sturm and D. Cremers, 
*Graph-based bundle adjustment for INS-camera calibration*, 
*Unmanned Aerial Vehicle in Geomatics (UAV-g)*, Rostock, Germany, September 2013, 
Best research paper award.
[C21] 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.

[C22] E. Rodola, T. Harada, Y. Kuniyoshi and D. Cremers, 
*Efficient Shape Matching using Vector Extrapolation*, 
2013.

[C23] J. Engel, J. Sturm and D. Cremers, 
*Semi-Dense Visual Odometry for a Monocular Camera*, 
Sydney, Australia, December 2013.

[C24] E. Rodola, A. Torsello, T. Harada, Y. Kuniyoshi and D. Cremers, 
*Elastic Net Constraints for Shape Matching*, 
Sydney, Australia, December 2013.

[C25] J. Lellmann, E. Strekalovskiy, S. Koetter and D. Cremers, 
*Total Variation Regularization for Functions with Values in a Manifold*, 
Sydney, Australia, December 2013.

[C26] C. Nieuwenhuis, E. Strekalovskiy and D. Cremers, 
*Proportion Priors for Image Sequence Segmentation*, 
Sydney, Australia, December 2013.

[C27] J. Stähler, P. Schröder and D. Cremers, 
*Tree Shape Priors with Connectivity Constraints using Convex Relaxation on General Graphs*, 
Sydney, Australia, December 2013, *Oral Presentation*.

[C28] G. Kuschk and D. Cremers, 
*Fast and Accurate Large-scale Stereo Reconstruction using Variational Methods*, 
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[C31] T. Naseer, J. Sturm and D. Cremers, 
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*Relaxations for Minimizing Metric Distortion and Elastic Energies for 3D Shape Matching*, 

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[R1] M. Souiai, E. Strekalovskiy, C. Nieuwenhuis and D. Cremers,
Label Configuration Priors for Continuous Multi-Label Optimization,

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[J1] A. Chambolle, D. Cremers and T. Pock,
A Convex Approach to Minimal Partitions,

[J2] T. Schoenemann and D. Cremers,
A Coding Cost Framework for Super-resolution Motion Layer Decomposition,

[J3] T. Schoenemann, F. Kahl, S. Masnou and D. Cremers,
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[J4] D. Cremers,
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[J6] B. Goldluecke, E. Strekalovskiy and D. Cremers,
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[J7] K. Kolev, T. Brox and D. Cremers,
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An image classification approach to analyze the suppression of plant immunity by the human pathogen Salmonella Typhimurium,

[J9] D. Cremers and E. Strekalovskiy,
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[BC1] M. Schikora, W. Koch, R. L. Streit and D. Cremers,
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[C1] F. Endres, J. Hess, N. Engelhard, J. Sturm, D. Cremers and W. Burgard,
An Evaluation of the RGB-D SLAM System,

[C2] T. Ruehr, J. Sturm, D. Pangercic, M. Beetz and D. Cremers,
A Generalized Framework for Opening Doors and Drawers in Kitchen Environments,

[C3] M. Schikora, A. Gning, L. Mihaylova, D. Cremers, W. Koch and R. Streit,
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15th International Conference on Information Fusion (FUSION), Singapore, July 2012.

[C5] L. Zhang, J. Sturm, D. Cremers and D. Lee,
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[C8] T. Windheuser, H. Ishikawa and D. Cremers,
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[C9] M. R. Oswald, E. Toeppe and D. Cremers,
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[C15] N. Ufer, M. Souiai and D. Cremers, 
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[J4] T. Schoenemann, S. Masnou and D. Cremers, 
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[C15] S. Madhogaria, M. Schikora, W. Koch and D. Cremers,
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**Multi-object tracking via high accuracy optical flow and finite set statistics,**

[C18] E. Toeppe, M. R. Oswald, D. Cremers and C. Rother,
**Silhouette-Based Variational Methods for Single View Reconstruction,**
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A Survey on Geometry Recovery from a Single Image with Focus on Curved Object Reconstruction,

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Probabilistic Classification of Disease Symptoms caused by Salmonella on Arabidopsis Plants,
5th IEEE ISIF Workshop on Sensor Data Fusion: Trends, Solutions, Applications (SDF), Leipzig, Germany, September 2010.

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[C3] M. Schikora, D. Bender, W. Koch and D. Cremers,
Multi-target multi-sensor localization and tracking using passive antenna and optical sensors on UAVs,

[C4] E. Toeppe, M. R. Oswald, D. Cremers and C. Rother,
Image-based 3D Modeling via Cheeger Sets,
Queenstown, New Zealand, 53-64, November 2010, Received Honorable Mention Award.
Author: Cremers

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Interactive Motion Segmentation,

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On local region models and a statistical interpretation of the piecewise smooth
Mumford-Shah functional,

[J2] T. Brox, B. Rosenhahn, J. Gall and D. Cremers,
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jects,

[J3] K. Kolev, M. Klodt, T. Brox and D. Cremers,
Continuous Global Optimization in Multiview 3D Reconstruction,

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mation,

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[C3] F. R. Schmidt, E. Toeppe and D. Cremers,
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Miami, Florida, 351-356, June 2009, Received a CVPR Doctoral Spotlight Award.

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[C5] A. Wedel, C. Rabe, A. Meissner, U. Franke and D. Cremers,
Detection and Segmentation of Independently Moving Objects from Dense Scene Flow,

[C6] B. Goldluecke and D. Cremers,
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[J2] D. Cremers,
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[J3] H. Jin, D. Cremers, D. Wang, A. Yezzi, E. Prados and S. Soatto,
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An Improved Algorithm for TV-L1 Optical Flow,
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Modeling and Tracking Line-Constrained Mechanical Systems,

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Kernel density estimation and intrinsic alignment for shape priors in level set segmentation, 

[J3] D. Cremers, N. Sochen and C. Schnörr, 
A multiphase dynamic labeling model for variational recognition-driven image segmentation, 

[J4] S. Manay, D. Cremers, B.-W. Hong, A. Yezzi and S. Soatto, 
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Near Real-time Motion Segmentation using Graph Cuts,

[C3] T. Brox, B. Rosenhahn, U. Kersting and D. Cremers,
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