2020
Conference and Workshop Papers
[C1] Sang, L., Haefner, B., Cremers and D.,
Inferring Super-Resolution Depth from a Moving Light-Source Enhanced RGB-D Sensor: A Variational Approach,

2019
Journal Articles
[J1] F. Pasa, V. Golkov, F. Pfeiffer, D. Cremers and D. Pfeiffer,
Efficient Deep Network Architectures for Fast Chest X-Ray Tuberculosis Screening and Visualization,

[J2] R. Wang, N. Yang, J. Stueckler and D. Cremers,
DirectShape: Photometric Alignment of Shape Priors for Visual Vehicle Pose and Shape Estimation,

[J3] J. Schuchardt, V. Golkov and D. Cremers,
Learning to Evolve,

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

[J5] L. von Stumberg, P. Wenzel, Q. Khan and D. Cremers,
GN-Net: The Gauss-Newton Loss for Multi-Weather Relocalization,

[J6] M. Eisenberger, Z. Lähner and D. Cremers,
Smooth Shells: Multi-Scale Shape Registration with Functional Maps,

[J7] Haefner, B., Peng, S., Verma, A., Queau, Y., Cremers and D.,
Photometric Depth Super-Resolution,

[J8] Brahimi, M., Queau, Y., Haefner, B., Cremers and D.,
On well-posedness of uncalibrated photometric stereo under general lighting,

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[C1] A. Vasilev, V. Golkov, M. Meissner, I. Lipp, E. Sgarlata, V. Tomassini, D. K. Jones and D. Cremers,
q-Space Novelty Detection with Variational Autoencoders,
*MICCAI 2019 International Workshop on Computational Diffusion MRI*, 2019, Oral Presentation.

[C2] P. Swazinna, V. Golkov, I. Lipp, E. Sgarlata, V. Tomassini, D. K. Jones and D. Cremers,
Negative-Unlabeled Learning for Diffusion MRI,
2019.

[C3] T. Möllenhoff and D. Cremers,
Lifting Vectorial Variational Problems: A Natural Formulation based on Geometric Measure Theory and Discrete Exterior Calculus,
2019, Oral Presentation.

[C4] V. Usenko, N. Demmel, D. Schubert, J. Stueckler and D. Cremers,
Visual-Inertial Mapping with Non-Linear Factor Recovery,

[C5] Haefner, B., Ye, Z., Gao, M., Wu, T., Queau, Y., Cremers and D.,
Variational Uncalibrated Photometric Stereo under General Lighting,
*International Conference on Computer Vision (ICCV)*, Seoul, South Korea, October 2019.

[C6] Q. Khan, P. Wenzel, D. Cremers and L. Leal-Taixe,
Towards Generalizing Sensorimotor Control Across Weather Conditions,

[C7] M. Moeller, T. Möllenhoff and D. Cremers,
Controlling Neural Networks via Energy Dissipation,
*International Conference on Computer Vision (ICCV)*, Seoul, South Korea, 10 2019.

[C8] E. Jung, N. Yang and D. Cremers,
Multi-Frame GAN: Image Enhancement for Stereo Visual Odometry in Low Light,
*Conference on Robot Learning (CoRL)*, 2019, Full Oral Presentation.

[C9] Weiss, S., Maier, R., Westermann, R., Cremers, D., Thuerey and N.,
Sparse Surface Constraints for Combining Physics-based Elasticity Simulation and Correspondence-Free Object Reconstruction,

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 Solution,

[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, M. Strobel and D. Cremers,
Clustering with Deep Learning: Taxonomy and New Methods,

[J6] L. Ma,, J. Stueckler, T. Wu and D. Cremers,
Detailed Dense Inference with Convolutional Neural Networks via Discrete Wavelet Transform,
Aug 2018.

[J7] Tjaden, Henning, Schwanecke, Ulrich, Schömer, Elmar, Cremers and Daniel,
A Region-based Gauss-Newton Approach to Real-Time Monocular Multiple Object Tracking,

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[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.

q-Space Novelty Detection in Short Diffusion MRI Scans of Multiple Sclerosis, 2018.

q-Space Deep Learning for Alzheimer’s Disease Diagnosis: Global Prediction and Weakly-Supervised Localization,
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] Z. Lähner, D. Cremers and T. Tung,
DeepWrinkles: Accurate and Realistic Clothing Modeling,
September 2018, Oral Presentation.

[C14] D. Schubert, N. Demmel, V. Usenko, J. Stueckler and D. Cremers,
Direct Sparse Odometry With Rolling Shutter,
September 2018, Oral Presentation.

[C15] V. Usenko, N. Demmel and D. Cremers,
The Double Sphere Camera Model,

[C16] I. Chiotellis, F. Zimmermann, D. Cremers and R. Triebel,
Incremental Semi-Supervised Learning from Streams for Object Classification,

[C17] 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.
[C18] Haefner, B., Queau, Y., Möllenhoff, T., Cremers and D.,
Fight ill-posedness with ill-posedness: Single-shot variational depth super-resolution from shading,

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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,

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[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] M. Dzitsiuk, J. Sturm, R. Maier, L. Ma and D. Cremers,
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**,  

[C9] P. Haeusser, A. Mordvintsev and D. Cremers,  
**Learning by Association - A versatile semi-supervised training method for neural networks**,  
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[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] 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**,  
[C17] T. Möllenhoff and D. Cremers,
Sublabel-Accurate Discretization of Nonconvex Free-Discontinuity Problems,

[C18] Queau, Y., Melou, J., Castan, F., Cremers, D., Durou and J.-D.,
A Variational Approach to Shape-from-shading Under Natural Illumination,

[C19] F. Bernard, F. R. Schmidt, J. Thunberg and D. Cremers,
A Combinatorial Solution to Non-Rigid 3D Shape-to-Image Matching,

[C20] Peng, S., Haefner, B., Queau, Y., Cremers and D.,
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.

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[J1] L. Cosmo, E. Rodola, A. Albarelli, F. Memoli and D. Cremers,
Consistent Partial Matching of Shape Collections via Sparse Modeling,

Anisotropic Diffusion Descriptors,

[J3] V. Golkov, A. Dosovitskiy, J. I. Sperl, M. I. Menzel, M. Czisch, P. Sämann, T. Brox and D. Cremers,
q-Space Deep Learning: Twelve-Fold Shorter and Model-Free Diffusion MRI Scans,
35: 2016, Special Issue on Deep Learning.

[J4] O. Litany, E. Rodola, A. M. Bronstein, M. M. Bronstein and D. Cremers,
Non-Rigid Puzzles,

[J5] Vestner, M., Litman, R., Bronstein, A., Rodola, E., Cremers and D.,
Bayesian Inference of Bijective Non-Rigid Shape Correspondence,

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[BC1] Vestner, M., Rodola, E., Windheuser, T., Bulo, Rota Bulo, S., Cremers and D.,
Applying Random Forests to the Problem of Dense Non-rigid Shape Correspondence,

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A Large Dataset to Train Convolutional Networks for Disparity, Optical Flow, 
and Scene Flow Estimation, 
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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, 
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[C4] Z. Lähner, E. Rodola, F. R. Schmidt, M. M. Bronstein and D. Cremers, 
Efficient Globally Optimal 2D-to-3D Deformable Shape Matching, 
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[C5] A. Narr, R. Triebel and D. Cremers, 
Stream-based Active Learning for Efficient and Adaptive Classification of 3D 
Objects, 
May 2016.

R. Klein and Y. Sahillioglu, 
SHREC16: Matching of Deformable Shapes with Topological Noise, 
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SHREC16: Partial Matching of Deformable Shapes, 
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[C8] T. Möllenhoff, E. Laude, M. Moeller, J. Lellmann and D. Cremers, 
Sublabel-Accurate Relaxation of Nonconvex Energies, 
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[C9] L. Ma, C. Kerl, J. Stueckler and D. Cremers, 
CPA-SLAM: Consistent Plane-Model Alignment for Direct RGB-D SLAM, 
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[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, 
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[C13] T. Windheuser and D. Cremers, 
A Convex Solution to Spatially-Regularized Correspondence Problems, 
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[C14] S. Sharifzadeh, I. Chiotellis, R. Triebel and D. Cremers,
Learning to Drive using Inverse Reinforcement Learning and Deep Q-Networks,
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[J1] J. Diebold, C. Nieuwenhuis and D. Cremers,
Midrange Geometric Interactions for Semantic Segmentation,
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[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,
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[J7] T. Möllenhoff, E. Strekalovskiy, M. Möller and D. Cremers,
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[BC1] V. Golkov, J. M. Portegies, A. Golkov, R. Duits and D. Cremers,
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Conference and Workshop Papers

[C1] M. Moeller, J. Diebold, G. Gilboa and D. Cremers,
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2015.

[C2] J. Diebold, N. Demmel, C. Hazirbas, M. Möller and D. Cremers,
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[C3] C. Hazirbas, J. Diebold and D. Cremers,
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2015.

[C4] T. Möllenhoff, E. Strekalovskiy, M. Möller and D. Cremers,
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[C5] M. Jaimez, M. Souiai, J. Gonzalez-Jimenez and D. Cremers,
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[C6] J. Stühmer and D. Cremers,
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[C7] R. Mecca, E. Rodola and D. Cremers,
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[C8] F. Bergamasco, A. Albarelli, L. Cosmo, A. Torsello, E. Rodola and D. Cremers,
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[C9] D. Mund, R. Triebel and D. Cremers,
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[C13] J. Engel, J. Stueckler and D. Cremers,
Large-Scale Direct SLAM with Stereo Cameras,
2015.
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[C14] D. Caruso, J. Engel and D. Cremers,
Large-Scale Direct SLAM for Omnidirectional Cameras,
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[C15] Y. Tao, R. Triebel and D. Cremers,
Semi-supervised Online Learning for Efficient Classification of Objects in 3D Data Streams,
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[C16] R. Maier, J. Stueckler and D. Cremers,
Super-Resolution Keyframe Fusion for 3D Modeling with High-Quality Textures,
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[C18] E. Rodola, M. Moeller and D. Cremers,
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[C19] C. Kerl, J. Stueckler and D. Cremers,
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[C20] M. Souiai, M. R. Oswald, Y. Kee, J. Kim, M. Pollefeys and D. Cremers,
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[C21] F. Stark, C. Hazirbas, R. Triebel and D. Cremers,
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[J2] E. Strekalovskiy, A. Chambolle and D. Cremers,
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Scale-Aware Navigation of a Low-Cost Quadrocopter with a Monocular Camera,
[J4] E. Rodola, S. Rota Bulo and D. Cremers,  
Robust Region Detection via Consensus Segmentation of Deformable Shapes,  

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[C4] D. Weikersdorfer, D. B. Adrian, D. Cremers and J. Conrad,  
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[C6] E. Rodola, S. Rota Bulo, T. Windheuser, M. Vestner and D. Cremers,  
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[C8] H. Alvarez, L.M. Paz, J. Sturm and D. Cremers,
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[C10] T. Schöps, J. Engel and D. Cremers,
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[C11] T. Windheuser, M. Vestner, E. Rodola, R. Triebel and D. Cremers,
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[C14] T. Gurdan, M. R. Oswald, D. Gurdan and D. Cremers,
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[C15] M. R. Oswald and D. Cremers,
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[C17] M. R. Oswald, J. Stühmer and D. Cremers,
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Real-Time Minimization of the Piecewise Smooth Mumford-Shah Functional,

[C19] A. Kanezaki, E. Rodola, D. Cremers and T. Harada,
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2013

Journal Articles

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[B1] M. Klodt, F. Steinbruecker and D. Cremers,
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[C5] V. Golkov, M.I. Menzel, T. Sprenger, A. Menini, D. Cremers and J.I. Sperl,
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[C6] V. Golkov, M.I. Menzel, T. Sprenger, A. Menini, D. Cremers and J.I. Sperl,
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[C8] C. Kerl, J. Sturm and D. Cremers,
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May 2013, Best Vision Paper Award - Finalist.
[C9] E. Toeppe, C. Nieuwenhuis and D. Cremers,
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[C10] D. Weikersdorfer, A. Schick and D. Cremers,
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[C11] E. Bylow, J. Sturm, C. Kerl, F. Kahl and D. Cremers,
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[C12] E. Bylow, J. Sturm, C. Kerl, F. Kahl and D. Cremers,
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[C13] M. Souiai, E. Strekalovskiy, C. Nieuwenhuis and D. Cremers,
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[C14] F. Stangl, M. Souiai and D. Cremers,
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[C15] T. Möllenhoff, C. Nieuwenhuis, E. Toeppe and D. Cremers,
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[C18] M. Klodt, J. Sturm and D. Cremers,
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Graph-based bundle adjustment for INS-camera calibration,
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Best research paper award.
[C21] J. Sturm, E. Bylow, F. Kahl and D. Cremers, 
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[C22] E. Rodola, T. Harada, Y. Kuniyoshi and D. Cremers, 
*Efficient Shape Matching using Vector Extrapolation*, 
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[C23] J. Engel, J. Sturm and D. Cremers, 
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[C25] J. Lellmann, E. Strekalovskiy, S. Koetter and D. Cremers, 
*Total Variation Regularization for Functions with Values in a Manifold*, 
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*Proportion Priors for Image Sequence Segmentation*, 
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[C28] G. Kuschk and D. Cremers, 
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[C30] F. Steinbruecker, C. Kerl, J. Sturm and D. Cremers, 
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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,
Optimal Solutions for Semantic Image Decomposition,

[J5] S. Chen, D. Cremers and R. J. Radke,
Image segmentation with one shape prior - A template-based formulation,

[J6] B. Goldluecke, E. Strekalovskiy and D. Cremers,
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[J7] K. Kolev, T. Brox and D. Cremers,
Fast Joint Estimation of Silhouettes and Dense 3D Geometry from Multiple Images,

An image classification approach to analyze the suppression of plant immunity by the human pathogen Salmonella Typhimurium,

[J9] D. Cremers and E. Strekalovskiy,
Total Cyclic Variation and Generalizations,

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[BC1] M. Schikora, W. Koch, R. L. Streit and D. Cremers,
A Sequential Monte Carlo Method for Multi-Target Tracking with the Intensity Filter,
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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,
Box-Particle Intensity Filter,

[C4] M. Schikora, A. Gning, L. Mihaylova, D. Cremers and W. Koch,
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Meeting on Image Recognition and Understanding, Fukuoka, Japan, August 2012.

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[C10] E. Strekalovskiy, A. Chambolle and D. Cremers,
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[C15] N. Ufer, M. Souiai and D. Cremers,
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[C16] G. M. Garcia, D. A. Klein, J. Stueckler, S. Frintrop and A. B. Cremers,
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[J2] D. Cremers and K. Kolev,
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[J4] T. Schoenemann, S. Masnou and D. Cremers,
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A Variational Approach to Vesicle Membrane Reconstruction from Fluorescence Imaging,
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Stereoscopic Scene Flow for 3D Motion Analysis,
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[BC2] D. Cremers,
Image Segmentation with Shape Priors: Explicit Versus Implicit Representations,

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[C1] T. Windheuser, U. Schlickewei, F. R. Schmidt and D. Cremers,
Geometrically Consistent Elastic Matching of 3D Shapes: A Linear Programming Solution,
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[C2] M. Aubry, U. Schlickewei and D. Cremers,
Pose-Consistent 3D Shape Segmentation Based on a Quantum Mechanical Feature Descriptor,
Frankfurt, Germany, Springer, 2011.

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On a linear programming approach to the discrete Willmore boundary value problem and generalizations,

[C4] E. Strekalovskiy and D. Cremers,
Total Variation for Cyclic Structures: Convex Relaxation and Efficient Minimization,

[C5] B. Goldluecke and D. Cremers,
Introducing Total Curvature for Image Processing,
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Decoupling Photometry and Geometry in Dense Variational Camera Calibration,
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Towards a benchmark for RGB-D SLAM evaluation,

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A Convex Framework for Image Segmentation with Moment Constraints,
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Multiple Source Localization Based on Biased Bearings Using the Intensity Filter - Approach and Experimental Results,
4th IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing, San Juan, Puerto Rico, December 2011.

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[C16] M. Schikora, W. Koch, R.L. Streit and D. Cremers,
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14th International Conference on Information Fusion (FUSION), Chicago, IL, USA, July 2011.

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Multi-object tracking via high accuracy optical flow and finite set statistics,
International Conference on Acoustics, Speech and Signal Processing (ICASSP), Prag, Czech Republic, Mai 2011.

[C18] E. Toeppe, M. R. Oswald, D. Cremers and C. Rother,
Silhouette-Based Variational Methods for Single View Reconstruction,
Author: Cremers

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[C19] M. R. Oswald, E. Toeppe, C. Nieuwenhuis and D. Cremers,
A Survey on Geometry Recovery from a Single Image with Focus on Curved Object Reconstruction,

2010

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[J1] T. Pock, D. Cremers, H. Bischof and A. Chambolle,
Global Solutions of Variational Models with Convex Regularization,

[J2] T. Schoenemann and D. Cremers,
A Combinatorial Solution for Model-based Image Segmentation and Real-time Tracking,

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An Introduction to Total Variation for Image Analysis,

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[C1] M. Schikora, A. Schikora, K.-H. Kogel, W. Koch and D. Cremers,
Probabilistic Classification of Disease Symptoms caused by Salmonella on Arabidopsis Plants,
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Leipzig, Germany, September 2010.

[C2] M. Schikora, D. Bender, D. Cremers and W. Koch,
Passive Multi-Object Localization and Tracking Using Bearing Data,

[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,
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Queenstown, New Zealand, 53-64, November 2010, Received Honorable Mention Award.
Author: Cremers

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Darmstadt, Germany, 11-20, September 2010.

[C6] J. Stühmer, S. Gumhold and D. Cremers,
Parallel Generalized Thresholding Scheme for Live Dense Geometry from a
Handheld Camera,
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[C9] C. Nieuwenhuis, B. Berkels and M. Rumpf,
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[J1] T. Brox and D. Cremers,
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,
Combined region- and motion-based 3D tracking of rigid and articulated objects,

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

B-Spline Modeling of Road Surfaces with an Application to Free Space Esti-
mation,

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[B1] D. Cremers, Y. Boykov, A. Blake and F. R. Schmidt (Editors),
Energy Minimization Methods for Computer Vision and Pattern Recognition
(EMMCVPR),
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Springer 2009.
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[C1] M. R. Oswald, E. Toeppe, K. Kolev and D. Cremers,
Non-Parametric Single View Reconstruction of Curved Objects using Convex Optimization,
Jena, Germany, 171-180, September 2009, Received a DAGM Paper Award.

[C2] F. R. Schmidt and D. Cremers,
A Closed-Form Solution for Image Sequence Segmentation with Dynamical Shape Priors,
Jena, Germany, September 2009.

[C3] F. R. Schmidt, E. Toeppe and D. Cremers,
Efficient Planar Graph Cuts with Applications in Computer Vision,
Miami, Florida, 351-356, June 2009, Received a CVPR Doctoral Spotlight Award.

[C4] T. Pock, A. Chambolle, H. Bischof and D. Cremers,
A Convex Relaxation Approach for Computing Minimal Partitions,

[C5] A. Wedel, C. Rabe, A. Meissner, U. Franke and D. Cremers,
Detection and Segmentation of Independently Moving Objects from Dense Scene Flow,
D. Cremers, Y. Boykov, A. Blake and F. R. Schmidt(Eds.), Vol. 5681, 2009.

[C6] B. Goldluecke and D. Cremers,
A Superresolution Framework for High-Accuracy Multiview Reconstruction,
Jena, Germany, 2009, Received DAGM Best Paper Award.

[C7] B. Goldluecke and D. Cremers,
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Kyoto, Japan, 2009.

[C8] A. Sellent, M. Eisemann, B. Goldluecke, T. Pock, D. Cremers and M. Magnor,
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[C12] T. Windheuser, T. Schoenemann and D. Cremers,
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[C13] F. Steinbruecker, T. Pock and D. Cremers,
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[C14] D. Mitzel, T. Pock, T. Schoenemann and D. Cremers,
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[C15] F. Steinbruecker, T. Pock and D. Cremers,
Advanced Data Terms for Variational Optic Flow Estimation,
Braunschweig, Germany, 2009.

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[J1] T. Brox, O. Kleinschmidt and D. Cremers,
Efficient Nonlocal Means for Denoising of Textural Patterns,

[J2] D. Cremers,
Nonlinear Dynamical Shape Priors for Level Set Segmentation,

[J3] H. Jin, D. Cremers, D. Wang, A. Yezzi, E. Prados and S. Soatto,
3-D Reconstruction of Shaded Objects from Multiple Images Under Unknown Illumination,

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[C1] T. Schoenemann, F. R. Schmidt and D. Cremers,
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[C2] T. Pock, T. Schoenemann, G. Graber, H. Bischof and D. Cremers,
A Convex Formulation of Continuous Multi-Label Problems,
Marseille, France, October 2008.

[C3] A. Wedel, C. Rabe, T. Vaudrey, T. Brox, U. Franke and D. Cremers,
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[C4] A. Wedel, T. Pock, J. Braun, U. Franke and D. Cremers,
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[C5] M. Klodt, T. Schoenemann, K. Kolev, M. Schikora and D. Cremers,
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An Improved Algorithm for TV-L1 Optical Flow,
Author: Cremers

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An Unbiased Second-Order Prior for High-Accuracy Motion Estimation, 
Munich, Germany, Springer, , June 2008.

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Anchorage, Alaska, June 2008.

[C9] T. Schoenemann and D. Cremers, 
Matching Non-rigidly Deformable Shapes Across Images: A Globally Optimal Solution, 
Anchorage, Alaska, June 2008.

[C10] T. Schoenemann and D. Cremers, 
Globally Optimal Shape-based Tracking in Real-time, 
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[C11] T. Schoenemann and D. Cremers, 
High Resolution Motion Layer Decomposition using Dual-space Graph Cuts, 
Anchorage, Alaska, June 2008.

[C12] B. Rosenhahn, T. Brox, D. Cremers and H.-P. Seidel, 
Modeling and Tracking Line-Constrained Mechanical Systems, 

[C13] O. Kleinschmidt, T. Brox and D. Cremers, 
Nonlocal texture filtering with efficient tree structures and invariant patch similarity measures, 
Int. Workshop on Local and Nonlocal Approximation, Lausanne, Switzerland, August 2008.

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[J1] D. Cremers, 
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[J2] D. Cremers, M. Rousson and R. Deriche, 
A review of statistical approaches to level set segmentation: integrating color, texture, motion and shape, 

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Energy Minimization Methods for Computer Vision and Pattern Recognition (EMMCVPR), 
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[BC1] T. Brox, B. Rosenhahn and D. Cremers,
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[BC2] D. Cremers and M. Rousson,
Efficient kernel density estimation of shape and intensity priors for level set segmentation,

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[C1] K. Kolev, M. Klodt, T. Brox and D. Cremers,
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[C3] T. Brox, B. Rosenhahn, D. Cremers and H.-P. Seidel,
Nonparametric density estimation with adaptive anisotropic kernels for human motion tracking,

[C4] T. Schoenemann and D. Cremers,
Globally Optimal Image Segmentation with an Elastic Shape Prior,
Rio de Janeiro, Brazil, October 2007.

[C5] T. Schoenemann and D. Cremers,
Introducing Curvature into Globally Optimal Image Segmentation: Minimum Ratio Cycles on Product Graphs,
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[C6] F. R. Schmidt, Dirk Farin and D. Cremers,
Fast Matching of Planar Shapes in Sub-cubic Runtime,
Rio de Janeiro, Brazil, October 2007.

[C7] F. R. Schmidt, E. Toeppe, D. Cremers and Y. Boykov,
Intrinsic Mean for Semimetric Shape Retrieval via Graph Cuts,

[C8] A. Wedel, T. Schoenemann, T. Brox and D. Cremers,
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[C9] B. Rosenhahn, T. Brox, D. Cremers and H.-P. Seidel,
Online smoothing for markerless motion capture,
Cremers List of Publications


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2006

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D. Cremers and T. Kohlberger, 
*Probabilistic kernel PCA and its application to statistical shape modeling and inference*, 

S. Manay, D. Cremers, B. W. Hong, A. Yezzi and S. Soatto, 
*Integral Invariants and Shape Matching*, 

**Conference and Workshop Papers**

F. R. Schmidt, M. Clausen and D. Cremers, 
*Shape Matching by Variational Computation of Geodesics on a Manifold*, 

T. Schoenemann and D. Cremers, 
*Near Real-time Motion Segmentation using Graph Cuts*, 

T. Brox, B. Rosenhahn, U. Kersting and D. Cremers, 
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A. Wedel, U. Franke, J. Klappstein, T. Brox and D. Cremers, 
*Realtime depth estimation and obstacle detection from monocular video*, 

Y. Boykov, V. Kolmogorov, D. Cremers and A. Delong, 
*An integral solution to surface evolution PDEs via Geo-Cuts*, 

B. Rosenhahn, T. Brox, D. Cremers and H.-P. Seidel, 
*A comparison of shape matching methods for contour based pose estimation*, 

T. Brox, B. Rosenhahn, D. Cremers and H.-P. Seidel, 
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