2023
Conference and Workshop Papers

[C1] F Hofherr, L Koestler, F Bernard and D Cremers,
Neural Implicit Representations for Physical Parameter Inference from a Single Video,

[C2] L Sang, B Haefner, X Zuo and D Cremers,
High-Quality RGB-D Reconstruction via Multi-View Uncalibrated Photometric Stereo and Gradient-SDF,
IEEE Winter Conference on Applications of Computer Vision (WACV), Hawaii, USA, January 2023.

2022
Journal Articles

[J1] Z. Ye, B. Haefner, Y. Queau, T. Möllenhoff and D. Cremers,
A Cutting-Plane Method for Sublabel-Accurate Relaxation of Problems with Product Label Spaces,
International Journal of Computer Vision (IJCV), 2022.

[J2] C Tomani and D Cremers,
Challenger: Training with Attribution Maps,

[J3] L. von Stumberg and D. Cremers,
DM-VIO: Delayed Marginalization Visual-Inertial Odometry,

Deep Learning in Attosecond Metrology,
Optics Express, 30(9): 15669-15684, 2022, Editor’s Pick.

[J5] T Yenamandra, A Tewari, N Yang, F Bernard, C Theobalt and D Cremers,
HDSDF: Hybrid Directional and Signed Distance Functions for Fast Inverse Rendering,
2022.

Conference and Workshop Papers

[C1] M. Eisenberger, A. Toker, L. Leal-Taixe, F. Bernard and D. Cremers,
A Unified Framework for Implicit Sinkhorn Differentiation,
IEEE International Conference on Computer Vision and Pattern Recognition (CVPR), 2022.

[C2] C Tomani, D Cremers and F Buettner,
Parameterized Temperature Scaling for Boosting the Expressive Power in Post-Hoc Uncertainty Calibration,
European Conference on Computer Vision (ECCV), 2022.
[C3] J. Veraart and 100 coauthors,  
A data-driven variability assessment of brain diffusion MRI preprocessing pipelines,  

[C4] C Sommer, L Sang, D Schubert and D Cremers,  
*Gradient-SDF: A Semi-Implicit Surface Representation for 3D Reconstruction*,  
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022.

[C5] Z Ye, T Yenamandra, F Bernard and D Cremers,  
*Joint Deep Multi-Graph Matching and 3D Geometry Learning from Inhomogeneous 2D Image Collections*,  
*AAAI*, 2022.

[C6] 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.

[C7] S Weber, N Demmel, T Chon Chan and D Cremers,  
*Power Bundle Adjustment for Large-Scale 3D Reconstruction*,  
*submission*, 2022.

[C8] F Müller, Q Khan and D Cremers,  
*Lateral Ego-Vehicle Control Without Supervision Using Point Clouds*,  

[C9] L Hang, Q Khan, V Tresp and D Cremers,  
*Biologically Inspired Neural Path Finding*,  
*Brain Informatics (Accepted)*, Springer, 2022.

[C10] D Das, Q Khan and D Cremers,  
*Ventriloquist-Net: Leveraging Speech Cues for Emotive Talking Head Generation*,  
*IEEE International Conference on Image Processing (Accepted)*, 2022.

[C11] L Koestler, D Grittner, M Moeller, D Cremers and Z Lähner,  
*Intrinsic Neural Fields: Learning Functions on Manifolds*,  
*European Conference on Computer Vision (ECCV)*, 2022.

[C12] M Gladkova, N Korobov, N Demmel, A Osep, L Leal-Taixe and D Cremers,  
*DirectTracker: 3D Multi-Object Tracking Using Direct Image Alignment and Photometric Bundle Adjustment*,  

[C13] HHH Hsu, Y Shen, C Tomani and D Cremers,  
*What Makes Graph Neural Networks Miscalibrated?*,  
*NeurIPS*, 2022.

[C14] Y Shen and D Cremers,  
*Deep Combinatorial Aggregation*,  
*NeurIPS*, 2022.
[C15] HHH Hsu, Y Shen and D Cremers,  
A Graph Is More Than Its Nodes: Towards Structured Uncertainty-Aware Learning on Graphs,  

2021

Journal Articles

[J1] H. Bauermeister, E. Laude, T. Moellenhoff, M. Moeller and D. Cremers,  
Lifting the convex conjugate in Lagrangian relaxations: A Tractable Approach for Continuous Markov Random Fields,  

[J2] P. Müller, V. Golkov, V. Tomassini and D. Cremers,  
Rotation-Equivariant Deep Learning for Diffusion MRI,  

[J3] J. Chui, S. Klenk and D. Cremers,  
Event-Based Feature Tracking in Continuous Time with Sliding Window Optimization,  

[J4] M. Mozes, M. Schmitt, V. Golkov, H. Schütze and D. Cremers,  
Scene Graph Generation for Better Image Captioning?,  

Conference and Workshop Papers

[C1] B. Haefner, S. Green, A. Oursland, D. Andersen, M. Goesele, D. Cremers, R. Newcombe and T. Whelan,  
Recovering Real-world Reflectance Properties and Shading from HDR Imagery,  

[C2] T Frerix, D Kochkov, J Smith, D Cremers, M Brenner and S Hoyer,  
Variational Data Assimilation with a Learned Inverse Observation Operator,  

[C3] M. Eisenberger, D. Novotny, G. Kerchenbaum, P. Labatut, N. Neverova, D. Cremers and A. Vedaldi,  
NeuroMorph: Unsupervised Shape Interpolation and Correspondence in One Go,  
*IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021.

[C4] M. C. Mukkamala, F. Westerkamp, E. Laude, D. Cremers and P. Ochs,  
Bregman Proximal Gradient Algorithms for Deep Matrix Factorization,  
Elmoataz, Abderrahim, Fadili, Jalal, Quéau, Yvain, Rabin, Julien, Simon and Loïc(Eds.),  

[C5] Z. Ye, B. Haefner, Y. Queau, T. Möllenhoff and D. Cremers,  
Sublabel-Accurate Multilabeling Meets Product Label Spaces,  
*DAGM German Conference on Pattern Recognition (GCPR)*, 2021.
[C6] F. Wimbauer, N. Yang, L. von Stumberg, N. Zeller and D Cremers, 
MonoRec: Semi-Supervised Dense Reconstruction in Dynamic Environments from a Single Moving Camera, 

[C7] T Yenamandra, A Tewari, F Bernard, HP Seidel, M Elgharib, D Cremers and C Theobalt, 
i3DMM: Deep Implicit 3D Morphable Model of Human Heads, 

[C8] M Gao, Z Lähner, J Thunberg, D Cremers and F Bernard, 
Isometric Multi-Shape Matching, 

[C9] M Naeyaert, V Golkov, D Cremers, J Sijbers and M Verhoye, 
Faster and better HARDI using FSE and holistic reconstruction, 

[C10] P. Müller, V. Golkov, V. Tomassini and D. Cremers, 
Rotation-Equivariant Deep Learning for Diffusion MRI (short version), 

[C11] Q. Khan, P. Wenzel and D. Cremers, 
Self-Supervised Steering Angle Prediction for Vehicle Control Using Visual Odometry, 
International Conference on Artificial Intelligence and Statistics (AISTATS), 2021.

[C12] M Gladkova, R Wang, N Zeller and D Cremers, 
Tight Integration of Feature-based Relocalization in Monocular Direct Visual Odometry, 

[C13] Y. Xia, Y. Xu, S. Li, R. Wang, J. Du, D. Cremers and U. Stilla, 
SOE-Net: A Self-Attention and Orientation Encoding Network for Point Cloud based Place Recognition, 

[C14] P. Wenzel, T. Schön, L. Leal-Taixe and D. Cremers, 
Vision-Based Mobile Robotics Obstacle Avoidance With Deep Reinforcement Learning, 

[C15] N Demmel, C Sommer, D Cremers and V Usenko, 
Square Root Bundle Adjustment for Large-Scale Reconstruction, 

[C16] C Tomani, S Gruber, ME Erdem, D Cremers and F Buettner, 
Post-hoc Uncertainty Calibration for Domain Drift Scenarios, 
List of Publications

[C17] N Demmel, D Schubert, C Sommer, D Cremers and V Usenko, 
Square Root Marginalization for Sliding-Window Bundle Adjustment, 
IEEE International Conference on Computer Vision (ICCV), 2021.

[C18] 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, 

[C19] S Klenk, J Chui, N Demmel and D Cremers, 
TUM-VIE: The TUM Stereo Visual-Inertial Event Dataset, 

[C20] L Koestler, N Yang, N Zeller and D Cremers, 
TANDEM: Tracking and Dense Mapping in Real-time using Deep Multi-view Stereo, 
Conference on Robot Learning (CoRL), 2021, 3DV’21 Best Demo Award.

[C21] S Weber, N Demmel and D Cremers, 
Multidirectional Conjugate Gradients for Scalable Bundle Adjustment, 
German Conference on Pattern Recognition (GCPR), 2021, Oral Presentation.

[C22] Y Wang, Y Shen and D Cremers, 
Explicit pairwise factorized graph neural network for semi-supervised node classification, 
UAI, 2021.

2020 
Journal Articles

[J1] E. Laude, P. Ochs and D. Cremers, 
Bregman Proximal Mappings and Bregman-Moreau Envelopes under Relative Prox-Regularity, 

[J2] B. Haefner, S. Peng, A. Verma, Y. Queau and D. Cremers, 
Photometric Depth Super-Resolution, 

Deep Learning for Virtual Screening: Five Reasons to Use ROC Cost Functions, 

Visual-Inertial Mapping with Non-Linear Factor Recovery, 

[J5] L. von Stumberg, P. Wenzel, Q. Khan and D. Cremers, 
GN-Net: The Gauss-Newton Loss for Multi-Weather Relocalization, 
[J6] C. Sommer, Y. Sun, L. J. Guibas, D. Cremers and T. Birdal, 
From Planes to Corners: Multi-Purpose Primitive Detection in Unorganized 3D Point Clouds, 

Accelerating in vivo fast spin echo high angular resolution diffusion imaging with an isotropic resolution in mice through compressed sensing, 

[J8] G Fabbro, V Golkov, T Kemp and D Cremers, 
Speech Synthesis and Control Using Differentiable DSP, 

[J9] I Chiotellis and D Cremers, 
Neural Online Graph Exploration, 

Conference and Workshop Papers

[C1] 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, 

[C2] 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.

[C3] T Frerix, M Niesner and D Cremers, 
Homogeneous Linear Inequality Constraints for Neural Network Activations, 

[C4] R. Wang, N. Yang, J. Stueckler and D. Cremers, 
DirectShape: Photometric Alignment of Shape Priors for Visual Vehicle Pose and Shape Estimation, 

[C5] M. Eisenberger, Z. Lähner and D. Cremers, 
Smooth Shells: Multi-Scale Shape Registration with Functional Maps, 
*IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020, Oral Presentation.

[C6] M. Eisenberger and D. Cremers, 
Hamiltonian Dynamics for Real-World Shape Interpolation, 
*European Conference on Computer Vision (ECCV)*, 2020, Spotlight Presentation.
[C7] M. Eisenberger, A. Toker, L. Leal-Taixe and D. Cremers, 
Deep Shells: Unsupervised Shape Correspondence with Optimal Transport, 

[C8] S. Weiss, R. Maier, D. Cremers, R. Westermann and N. Thuerey, 
Correspondence-Free Material Reconstruction using Sparse Surface Constraints, 

[C9] C. Sommer, V. Usenko, D. Schubert, N. Demmel and D. Cremers, 
Efficient Derivative Computation for Cumulative B-Splines on Lie Groups, 

[C10] N. Yang, L. von Stumberg, R. Wang and D. Cremers, 
D3VO: Deep Depth, Deep Pose and Deep Uncertainty for Monocular Visual Odometry, 

[C11] Z. Ye, T. Möllenhoff, T. Wu and D. Cremers, 
Optimization of Graph Total Variation via Active-Set-based Combinatorial Reconditioning, 
International Conference on Artificial Intelligence and Statistics (AISTATS), 2020.

[C12] J Liu, I Chiotellis, R Triebel and D Cremers, 
Effective Version Space Reduction for Convolutional Neural Networks, 
European Conference on Machine Learning and Data Mining (ECML-PKDD), 2020.

[C13] J. Du, R. Wang and D. Cremers, 
DH3D: Deep Hierarchical 3D Descriptors for Robust Large-Scale 6DoF Relocalization, 
European Conference on Computer Vision (ECCV), 2020, Spotlight Presentation.

[C14] C. Sommer, Y. Sun, E. Bylow and D. Cremers, 
PrimiTect: Fast Continuous Hough Voting for Primitive Detection, 

[C15] L. Koestler, N. Yang, R. Wang and D. Cremers, 
Learning Monocular 3D Vehicle Detection without 3D Bounding Box Labels, 

[C16] P. Wenzel, R. Wang, N. Yang, Q. Cheng, Q. Khan, L. von Stumberg, N. Zeller and D. Cremers, 
4Seasons: A Cross-Season Dataset for Multi-Weather SLAM in Autonomous Driving, 

[C17] B Holzschuh, Z Lähner and D Cremers, 
Simulated Annealing for 3D Shape Correspondence, 
## List of Publications

### 2020

#### Journal Articles

[C18] M Aygün, Z Lähner and D Cremers,  
*Unsupervised Dense Shape Correspondence using Heat Kernels*,  

[C19] N Demmel, M Gao, E Laude, T Wu and D Cremers,  
*Distributed Photometric Bundle Adjustment*,  

[C20] L. von Stumberg, P. Wenzel, N. Yang and D. Cremers,  
*LM-Reloc: Levenberg-Marquardt Based Direct Visual Relocalization*,  

#### Conference and Workshop Papers

*Shape Correspondence with Isometric and Non-Isometric Deformations*,  
Silvia Biasotti, Guillaume Lavoué and Remco C. Veltkamp(Eds.), 12th Eurographics Workshop on 3D Object Retrieval, 3DOR@Eurographics 2019, Genoa, Italy, May 5-6, 2019, Eurographics Association, 111-119, 2019.

### 2019

#### Journal Articles

*Video Object Segmentation without Temporal Information*,  

[J2] H Tjaden, U Schwanecke, E Schömer and D Cremers,  
*A Region-based Gauss-Newton Approach to Real-Time Monocular Multiple Object Tracking*,  

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

[J4] F. Pasa, V. Golkov, F. Pfeiffer, D. Cremers and D. Pfeiffer,  
*Efficient Deep Network Architectures for Fast Chest X-Ray Tuberculosis Screening and Visualization*,  

[J5] J. Schuchardt, V. Golkov and D. Cremers,  
*Learning to Evolve*,  

[J6] L. Della Libera, V. Golkov, Y. Zhu, A. Mielke and D. Cremers,  
*Deep Learning for 2D and 3D Rotatable Data: An Overview of Methods*,  

#### Conference and Workshop Papers

*Shape Correspondence with Isometric and Non-Isometric Deformations*,  
Silvia Biasotti, Guillaume Lavoué and Remco C. Veltkamp(Eds.), 12th Eurographics Workshop on 3D Object Retrieval, 3DOR@Eurographics 2019, Genoa, Italy, May 5-6, 2019, Eurographics Association, 111-119, 2019.
[C2] B. Haefner, Y. Queau and D. Cremers,
Photometric Segmentation: Simultaneous Photometric Stereo and Masking,
*International Conference on 3D Vision (3DV)*, Quebec City, Canada, September 2019, 
Spotlight Presentation.

[C3] B. Haefner, Z. Ye, M. Gao, T. Wu, Y. Queau and D. Cremers,
Variational Uncalibrated Photometric Stereo under General Lighting,
*IEEE/CVF International Conference on Computer Vision (ICCV)*, Seoul, South Korea, 
October 2019.

[C4] 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 Presenta-
tion.

[C5] P. Swazinna, V. Golkov, I. Lipp, E. Sgarlata, V. Tomassini, D. K. Jones and D. Cremers,
Negative-Unlabeled Learning for Diffusion MRI,
*International Society for Magnetic Resonance in Medicine (ISMRM) Annual Meeting*, 
2019.

[C6] D. Schubert, N. Demmel, L. von Stumberg, V. Usenko and D. Cremers,
Rolling-Shutter Modelling for Visual-Inertial Odometry,

[C7] M. Eisenberger, Z. Lähner and D. Cremers,
Divergence-Free Shape Correspondence by Deformation,

[C8] E. Laude, T. Wu and D. Cremers,
Optimization of Inf-Convolution Regularized Nonconvex Composite Problems,
*International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2019.

[C9] T. Möllenhoff and D. Cremers,
Lifting Vectorial Variational Problems: A Natural Formulation based on Geometric Measure Theory and Discrete Exterior Calculus,
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019, Oral Presenta-
tion.

[C10] T. Möllenhoff and D. Cremers,
Flat Metric Minimization with Applications in Generative Modeling,

[C11] Q. Khan, P. Wenzel, D. Cremers and L. Leal-Taixe,
Towards Generalizing Sensorimotor Control Across Weather Conditions,

[C12] M. Moeller, T. Möllenhoff and D. Cremers,
Controlling Neural Networks via Energy Dissipation,
*International Conference on Computer Vision (ICCV)*, Seoul, South Korea, 10 2019.

[C13] 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.


2018
Journal Articles


List of Publications

[J10] L. Ma, J. Stueckler, T. Wu and D. Cremers,
Detailed Dense Inference with Convolutional Neural Networks via Discrete
Wavelet Transform,
Aug 2018.

Conference and Workshop Papers

[C1] R. Henschel, L. Leal-Taixe, D. Cremers and B. Rosenhahn,
Fusion of Head and Full-Body Detectors for Multi-Object Tracking,
2018 IEEE Conference on Computer Vision and Pattern Recognition Workshops, CVPR
Workshops 2018, Salt Lake City, UT, USA, June 18-22, 2018, IEEE Computer Society,

[C2] C. Sommer and D. Cremers,
Joint Representation of Primitive and Non-primitive Objects for 3D Vision,
2018 International Conference on 3D Vision, 3DV 2018, Verona, Italy, September 5-8,

[C3] C. Hazirbas, S. G. Soyer, M. C. Staab, L. Leal-Taixe and D. Cremers,
Deep Depth From Focus,
Asian Conference on Computer Vision (ACCV), December 2018.

[C4] B. Haefner, Y. Queau, T. Möllenhoff and D. Cremers,
Fight ill-posedness with ill-posedness: Single-shot variational depth super-
resolution from shading,
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2018,
Spotlight Presentation.

and D. Cremers,
Discrete-Continuous ADMM for Transductive Inference in Higher-Order
MRFs,

[C6] C Domokos, FR. Schmidt and D Cremers,
MRF Optimization with Separable Convex Prior on Partially Ordered Labels,
Vittorio Ferrari, Martial Hebert, Cristian Sminchisescu and Yair Weiss(Eds.), Computer
Vision - ECCV 2018 - 15th European Conference, Munich, Germany, September 8-14,

[C7] 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.

[C8] 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.

[C9] R Scona, M Jaimez, YR. Petillot, M Fallon and D Cremers,
StaticFusion: Background Reconstruction for Dense RGB-D SLAM in Dynamic
Environments,
2018 IEEE International Conference on Robotics and Automation, ICRA 2018, Brisbane,
q-Space Novelty Detection in Short Diffusion MRI Scans of Multiple Sclerosis, 

q-Space Deep Learning for Alzheimer’s Disease Diagnosis: Global Prediction and Weakly-Supervised Localization, 

[C12] B. T. Do, V. Golkov, G. E. Gürel and D. Cremers, 
Precursor microRNA Identification Using Deep Convolutional Neural Networks, 

[C13] 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.

[C14] T. Frerix, T. Möllenhoff, M. Moeller and D. Cremers, 
Proximal Backpropagation, 

[C15] L. von Stumberg, V. Usenko and D. Cremers, 
Direct Sparse Visual-Inertial Odometry using Dynamic Marginalization, 

[C16] D. Schubert, T. Goll, N. Demmel, V. Usenko, J. Stueckler and D. Cremers, 
The TUM VI Benchmark for Evaluating Visual-Inertial Odometry, 

[C17] X. Gao, R. Wang, N. Demmel and D. Cremers, 
LDSO: Direct Sparse Odometry with Loop Closure, 

[C18] Z. Lähner, D. Cremers and T. Tung, 
DeepWrinkles: Accurate and Realistic Clothing Modeling, 

[C19] N. Yang, R. Wang, J. Stueckler and D. Cremers, 
Deep Virtual Stereo Odometry: Leveraging Deep Depth Prediction for Monocular Direct Sparse Odometry, 

[C20] D. Schubert, N. Demmel, V. Usenko, J. Stueckler and D. Cremers, 
Direct Sparse Odometry With Rolling Shutter, 
[C21] V. Usenko, N. Demmel and D. Cremers, 
**The Double Sphere Camera Model**, 

[C22] I. Chiotellis, F. Zimmermann, D. Cremers and R. Triebel, 
**Incremental Semi-Supervised Learning from Streams for Object Classification**, 

[C23] 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.

[C24] 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.

2017

**Journal Articles**

[J1] G. Kuschk, P. d’Angelo, D. Gaudrie, P. Reinartz and D. Cremers, 
**Spatially Regularized Fusion of Multiresolution Digital Surface Models**, 

[J2] D. Cremers, L. Leal-Taixe and R. Vidal, 
**Deep Learning for Computer Vision (Dagstuhl Seminar 17391)**, 

[J3] Y. Kee, Y. Lee, M. Souiai, D. Cremers and J. Kim, 
**Sequential Convex Programming for Computing Information-Theoretic Minimal Partitions: Nonconvex Nonsmooth Optimization**, 

[J4] D Cremers, 
**Computer Vision für 3-D-Rekonstruktion - Vom Nischenthema zum Mainstream**, 

[J5] E. Rodola, L. Cosmo, M. M. Bronstein, A. Torsello and D. Cremers, 
**Partial Functional Correspondence**, 

[J6] L. Cosmo, E. Rodola, A. Albarelli, F. Memoli and D. Cremers, 
**Consistent Partial Matching of Shape Collections via Sparse Modeling**, 

**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,

[J9] E Rodola, M Möller and D Cremers,
Regularized Pointwise Map Recovery from Functional Correspondence,

[J10] J. Kukacka, V. Golkov and D. Cremers,
Regularization for Deep Learning: A Taxonomy,

Conference and Workshop Papers

[C1] M. Benning, M. Möller, R. Z. Nossek, M. Burger, D. Cremers and G. Gilboa,
Nonlinear Spectral Image Fusion,

[C2] D. Bender, W. Koch and D. Cremers,
Map-based drone homing using shortcuts,

[C3] G. Kuschk, A. Bozic and D. Cremers,
Real-time variational stereo reconstruction with applications to large-scale dense SLAM,

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

[C7] M. Vestner, R. Litman, E. Rodola, A. Bronstein and D. Cremers,
Product Manifold Filter: Non-Rigid Shape Correspondence via Kernel Density Estimation in the Product Space,
[C8] M. Dzitsiuk, J. Sturm, R. Maier, L. Ma and D. Cremers, 
De-noising, Stabilizing and Completing 3D Reconstructions On-the-go using Plane Priors, 

[C9] L. von Stumberg, V. Usenko, J. Engel, J. Stueckler and D. Cremers, 
From Monocular SLAM to Autonomous Drone Exploration, 

[C10] F. Walch, C. Hazirbas, L. Leal-Taixe, T. Sattler, S. Hilsenbeck and D. Cremers, 
Image-based localization using LSTMs for structured feature correlation, 

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

[C12] Y. Queau, M. Pizenberg, J.-D. Durou and D. Cremers, 
Microgeometry capture and RGB albedo estimation by photometric stereo without demosaicing, 

[C13] P. Haeusser, A. Mordvintsev and D. Cremers, 
Learning by Association - A versatile semi-supervised training method for neural networks, 

[C14] M. Slavcheva, M. Baust, D. Cremers and S. Ilic, 
KillingFusion: Non-rigid 3D Reconstruction without Correspondences, 

[C15] 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, 
*International Conference on Intelligent Robots and Systems (IROS)*, Vancouver, Canada, Sep 2017, Best Paper Award - Finalist ()

[C16] Y. Queau, T. Wu, F. Lauze, J.-D. Durou and D. Cremers, 
A Non-Convex Variational Approach to Photometric Stereo under Inaccurate Lighting, 
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Honolulu, USA, 2017.

[C17] T. Meinhardt, M. Moeller, C. Hazirbas and D. Cremers, 
Learning Proximal Operators: Using Denoising Networks for Regularizing Inverse Imaging Problems, 

One-Shot Video Object Segmentation, 
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Honolulu, USA, 2017.
[C19] Y. Queau, J. Melou, J.-D. Durou and D. Cremers, 
Dense Multi-view 3D-reconstruction Without Dense Correspondences, 

[C20] P. Haeusser, T. Frerix, A. Mordvintsev and D. Cremers, 
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[C21] Y. Queau, M. Pizenberg, D. Cremers and J.-D. Durou, 
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[C23] R. Maier, R. Schaller and D. Cremers, 
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[C24] J. Geiping, H. Dirks and D. Cremers, 
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[C25] R. Maier, K. Kim, D. Cremers, J. Kautz and M. Niessner, 
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[C26] S. Peng, B. Haefner, Y. Queau and D. Cremers, 
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[C27] R. Wang, M. Schwörer and D. Cremers, 
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[C28] T. Möllenhoff and D. Cremers, 
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L. Cosmo, A. Albarelli, F. Bergamasco, A. Torsello, E. Rodola and D. Cremers,
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[C2] N. Mayer, E. Ilg, P. Häusser, P. Fischer, D. Cremers, A. Dosovitskiy and T. Brox,
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[C3] V. Golkov, T. Sprenger, J. I. Sperl, M. I. Menzel, M. Czisch, P. Sämann and D. Cremers,
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[C4] 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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[C5] Z. Lähner, E. Rodola, F. R. Schmidt, M. M. Bronstein and D. Cremers,
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[C7] T. Möllenhoff, E. Laude, M. Moeller, J. Lellmann and D. Cremers,
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[C14] E. Laude, T. Möllenhoff, M. Moeller, J. Lellmann and D. Cremers,
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[C15] D. Bender, D. Cremers and W. Koch,
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[C16] I. Chiotellis, R. Triebel, T. Windheuser and D. Cremers,
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[C19] D. Bender, F. Rouatbi, M. Schikora, D. Cremers and W. Koch,
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y, July 5-8, 2016, IEEE, 1493-1500, 2016.

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[J1] J. Diebold, S. Tari and D. Cremers,
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[J2] S. Madhogaria, P. M. Baggenstoss, M. Schikora, W. Koch and D. Cremers,
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[J7] Y. Kee, H. Lee, J. Yim, D. Cremers and J. Kim,
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[J8] M. Möller, M. Benning, C. Schönlieb and D. Cremers,
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[BC1] D. Cremers,
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[BC2] V. Golkov, J. M. Portegies, A. Golkov, R. Duits and D. Cremers,
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[C2] J. Diebold, N. Demmel, C. Hazirbas, M. Möller and D. Cremers,
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*Scale Space and Variational Methods in Computer Vision (SSVM)*, june 2015.

[C3] C. Hazirbas, J. Diebold and D. Cremers,
Optimizing the Relevance-Redundancy Tradeoff for Efficient Semantic Segmentation,
*Scale Space and Variational Methods in Computer Vision (SSVM)*, june 2015, Oral Presentation.

[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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[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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[C11] A. Dosovitskiy, P. Fischer, E. Ilg, P. Haeusser, C. Hazirbas, V. Golkov, P. van der Smagt, D. Cremers and T. Brox, 
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[C14] D. Caruso, J. Engel and D. Cremers, 
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[C15] Y. Tao, R. Triebel and D. Cremers, 
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[C16] R. Maier, J. Stueckler and D. Cremers,
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[C17] V. Usenko, J. Engel, J. Stueckler and D. Cremers,
Reconstructing Street-Scenes in Real-Time From a Driving Car,

[C18] M. Jaimez, M. Souiai, J. Stueckler, J. Gonzalez-Jimenez and D. Cremers,
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[C20] C. Kerl, J. Stueckler and D. Cremers,
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[J1] B. Goldluecke, M. Aubry, K. Kolev and D. Cremers,
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[J2] E. Strelkalovskiy, A. Chambolle and D. Cremers,
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[J3] J. Engel, J. Sturm and D. Cremers,
Scale-Aware Navigation of a Low-Cost Quadrocopter with a Monocular Camera,

[J4] E. Rodola, S. R Bulo and D. Cremers,
Robust Region Detection via Consensus Segmentation of Deformable Shapes,

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[B1] E: D. Cremers, I. Reid, H. Saito and M.-S. Yang,
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Springer 2014.

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Direct Reconstruction of the Average Diffusion Propagator with Simultaneous Compressed-Sensing-Accelerated Diffusion Spectrum Imaging and Image Denoising by Means of Total Generalized Variation Regularization,

Semi-Joint Reconstruction for Diffusion MRI Denoising Imposing Similarity of Edges in Similar Diffusion-Weighted Images,

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[C10] T. Windheuser, M. Vestner, E. Rodola, R. Triebel and D. Cremers, 
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[C11] M. Strobel, J. Diebold and D. Cremers, 
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[C12] R. Maier, J. Sturm and D. Cremers, 
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[C14] M. R. Oswald and D. Cremers, 
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[C15] C. Nieuwenhuis, S. Hawe, M. Kleinsteuber and D. Cremers, 
Co-Sparse Textural Similarity for Interactive Segmentation,

[C16] M. R. Oswald, J. Stühmer and D. Cremers, 
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[C17] E. Strekalovskiy and D. Cremers, 
Real-Time Minimization of the Piecewise Smooth Mumford-Shah Functional,
Author: Cremers—coauthors

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[C18] A. Kanezaki, E. Rodola, D. Cremers and T. Harada,
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[C19] M. Andreux, E. Rodola, M. Aubry and D. Cremers,
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[C21] R. Triebel, J. Stühmer, M. Souiai and D. Cremers,
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[C22] S. Debath, S. S. Baishya, R. Triebel, V. Dutt and D. Cremers,
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[C23] A. Kanezaki, E. Rodola, D. Cremers and T. Harada,
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[C24] D. Bender, M. Schikora, J. Sturm and D. Cremers,
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[J1] C. Nieuwenhuis and D. Cremers,
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[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,
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[J4] F. Endres, J. Hess, J. Sturm, D. Cremers and W. Burgard,
3D Mapping with an RGB-D Camera,

[J5] Z. Liu, M. Beetz, D. Cremers, J. Gall, W. Li, D. Pangercic, J. Sturm and Y.-W. Tai,
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[BC1] M. Klodt, F. Steinbruecker and D. Cremers,
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[C1] M. Souiai, C. Nieuwenhuis, E. Strekalovskiy and D. Cremers,
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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,
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[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 Com-
pressed Sensing on Diffusion MR Image Reconstruction and Kurtosis Tensor
Estimation,
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Meeting, 2013, Oral Presentation.

Line-Process-Based Joint SENSE Reconstruction of Diffusion Images with In-
tensity Inhomogeneity Correction and Noise Non-Stationarity Correction,
European Society for Magnetic Resonance in Medicine and Biology (ESMRMB) Annual
Meeting, 2013, Certificate of Merit Award.

[C5] V. Golkov, M.I. Menzel, T. Sprenger, A. Menini, D. Cremers and J.I. Sperl,
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ample of Accelerated Diffusion Spectrum Imaging,
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[C6] V. Golkov, M.I. Menzel, T. Sprenger, A. Menini, D. Cremers and J.I. Sperl,
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[C18] J. Sturm, E. Bylow, F. Kahl and D. Cremers,
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*Unmanned Aerial Vehicle in Geomatics (UAV-g)*, Rostock, Germany, September 2013.

[C19] 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.

[C20] J. Sturm, E. Bylow, F. Kahl and D. Cremers,
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[C25] C. Nieuwenhuis, E. Strekalovskiy and D. Cremers,
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[C26] J. Stühmer, P. Schröder and D. Cremers,
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[C27] G. Kuschk 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.
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[C28] M. R. Oswald and D. Cremers,
A Convex Relaxation Approach to Space Time Multi-view 3D Reconstruction,
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[C29] F. Steinbruecker, C. Kerl, J. Sturm and D. Cremers,
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[C30] T. Naseer, J. Sturm and D. Cremers,
Interactive Person Following and Gesture Recognition with a Flying Robot,
Proc. of the Assistance and Service Robotics Workshop (ASROB) at the IE-
EE. Int. Conf. on Intelligent Robots and Systems (IROS), Nov. 2013.

[C31] D. Cremers, E. Rodola and T. Windheuser,
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pe 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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vling curvature penalization,

[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,
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[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,
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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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[C4] M. Schikora, A. Gning, L. Mihaylova, D. Cremers and W. Koch,
Box-Particle PHD Filter for Multi-Target Tracking,
15th International Conference on Information Fusion (FUSION), Singapore, July 2012.

[C5] L. Zhang, J. Sturm, D. Cremers and D. Lee,
Real-Time Human Motion Tracking using Multiple Depth Cameras,

[C6] E. Strekalovskiy, C. Nieuwenhuis and D. Cremers,
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[C7] T. Windheuser, H. Ishikawa and D. Cremers,
Generalized Roof Duality for Multi-Label Optimization: Optimal Lower Bounds and Persistency,
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