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[C8] N. Yang, L. von Stumberg, R. Wang and D. Cremers,
D3VO: Deep Depth, Deep Pose and Deep Uncertainty for Monocular Visual Odometry,
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020, **Oral Presentation**.

[C9] A. Fontan-Villacampa, J. Civera and R. Triebel,
Information-Driven Direct RGB-D Odometry,
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020, **Oral Presentation**.

Multi-path Learning for Object Pose Estimation Across Domains,

[C11] J. Wenger, H. Kjellström and R. Triebel,
Non-Parametric Calibration for Classification,
*International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2020.

Visual-Inertial Telepresence for Aerial Manipulation,

[C13] Z. Ye, T. Möllenhoff, T. Wu and D. Cremers,
Optimization of Graph Total Variation via Active-Set-based Combinatorial Reconditioning,
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[C14] J Lee, M Humt, J Feng and R Triebel,
Estimating Model Uncertainty of Neural Networks in Sparse Information Form,
[C15] 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.

[C16] M Denninger and R Triebel,  
**3D Scene Reconstruction from a Single Viewport**,  

[C17] J. Du, R. Wang and D. Cremers,  
**DH3D: Deep Hierarchical 3D Descriptors for Robust Large-Scale 6DoF Relocalization**,  
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[C18] M Sewtz, T Bodenmüller and R Triebel,  
**Robust MUSIC-Based Sound Source Localization in Reverberant and Echoic Environments**,  

[C19] CL Gentil, M Vayugundla, R Giubilato, W Stürzl, TA. Vidal-Calleja and R Triebel,  
**Gaussian Process Gradient Maps for Loop-Closure Detection in Unstructured Planetary Environments**,  

[C20] C. Sommer, Y. Sun, E. Bylow and D. Cremers,  
**PrimiTect: Fast Continuous Hough Voting for Primitive Detection**,  

[C21] L. Koestler, N. Yang, R. Wang and D. Cremers,  
**Learning Monocular 3D Vehicle Detection without 3D Bounding Box Labels**,  

[C22] 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**,  

[C23] B Holzschuh, Z Lähner and D Cremers,  
**Simulated Annealing for 3D Shape Correspondence**,  
*International Conference on 3D Vision (3DV)*, 2020, **Oral Presentation**.

[C24] M Aygün, Z Lähner and D Cremers,  
**Unsupervised Dense Shape Correspondence using Heat Kernels**,  

[C25] W Boerdijk, M Sundermeyer, M Durner and R Triebel,  
**Self-Supervised Object-in-Gripper Segmentation from Robotic Motions**,  
*Conference on Robot Learning (CoRL)*, 2020.

[C26] F Schiel, A Hagengruber, J Vogel and R Triebel,  
**Incremental learning of EMG-based control commands using Gaussian Processes**,  
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[C27] M Stoiber, M Pfanne, K Strobl, R Triebel and A Albu-Schaeffer,
A Sparse Gaussian Approach to Region-Based 6DoF Object Tracking,

[C28] L Meyer, K Strobl and R Triebel,
Robust Vision-Based Pose Correction for a Robotic Manipulator using Active Markers,

[C29] N Demmel, M Gao, E Laude, T Wu and D Cremers,
Distributed Photometric Bundle Adjustment,

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.

[C31] B. Haefner, Y. Queau and D. Cremers,
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[C32] B. Haefner, Z. Ye, M. Gao, T. Wu, Y. Queau and D. Cremers,
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International Conference on Computer Vision (ICCV), Seoul, South Korea, October 2019.

[C33] T. Yenamandra, F. Bernard, J. Wang, F. Mueller and C. Theobalt,
Convex Optimisation for Inverse Kinematics,

[C34] 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,
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[C35] P. Swazinna, V. Golkov, I. Lipp, E. Sgarlata, V. Tomassini, D. K. Jones and D. Cremers,
Negative-Unlabeled Learning for Diffusion MRI,

[C36] D. Schubert, N. Demmel, L. von Stumberg, V. Usenko and D. Cremers,
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[C37] E. Bylow, R. Maier, F. Kahl and C. Olsson,
Combining Depth Fusion and Photometric Stereo for Fine-Detailed 3D Models,
Scandinavian Conference on Image Analysis (SCIA), Norrköping, Sweden, June 2019, Oral Presentation, received the SCIA 2019 Honourable Mention award.
[C38] E. Laude, T. Wu and D. Cremers,
Optimization of Inf-Convolution Regularized Nonconvex Composite Problems,
*International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2019.

[C39] 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 Presentation**.

[C40] T. Möllenhoff and D. Cremers,
Flat Metric Minimization with Applications in Generative Modeling,
*International Conference on Machine Learning (ICML)*, 6 2019, **Full Oral Presentation**.

[C41] T. Frerix and J. Bruna,
Approximating Orthogonal Matrices with Effective Givens Factorization,

[C42] Q. Khan, P. Wenzel, D. Cremers and L. Leal-Taixe,
Towards Generalizing Sensorimotor Control Across Weather Conditions,

[C43] E.Y. Puang, P. Lehner, Z.C. Marton, M. Durner, R. Triebel and A. Albu-Schäffer,
Visual Repetition Sampling for Robot Manipulation Planning,

[C44] M. Moeller, T. Möllenhoff and D. Cremers,
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*International Conference on Computer Vision (ICCV)*, Seoul, South Korea, 10 2019.

[C45] 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**.

[C46] S. Weiss, R. Maier, R. Westermann, D. Cremers and N. Thürey,
Sparse Surface Constraints for Combining Physics-based Elasticity Simulation and Correspondence-Free Object Reconstruction,

[C47] P. Brechet, T. Wu, T. Möllenhoff and D. Cremers,
Informative GANs via Structured Regularization of Optimal Transport,

[C48] F. Steidle, W. Stürzl and R. Triebel,
Visual-inertial sensor fusion with a bio-inspired polarization compass for navigation of MAVs,

Introspective Robot Perception using Smoothed Predictions from Bayesian Neural Networks,
[C50] R. Henschel, L. Leal-Taixe, D. Cremers and B. Rosenhahn,
*Fusion of Head and Full-Body Detectors for Multi-Object Tracking*,

[C51] C. Sommer and D. Cremers,
*Joint Representation of Primitive and Non-primitive Objects for 3D Vision*,

[C52] 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.

[C53] B. Haefner, Y. Queau, T. Mollenhoff and D. Cremers,
*Fight ill-posedness with ill-posedness: Single-shot variational depth super-resolution from shading*,

*Discrete-Continuous ADMM for Transductive Inference in Higher-Order MRFs*,

[C55] C Domokos, FR. Schmidt and D Cremers,
*MRF Optimization with Separable Convex Prior on Partially Ordered Labels*,

[C56] E. Laude, T. Wu and D. Cremers,
*A Nonconvex Proximal Splitting Algorithm under Moreau-Yosida Regularization*,
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[C57] T. Möllenhoff, Z. Ye, T. Wu and D. Cremers,
*Combinatorial Preconditioners for Proximal Algorithms on Graphs*,
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[C58] R Scona, M Jaimez, YR. Petillot, M Fallon and D Cremers,
*StaticFusion: Background Reconstruction for Dense RGB-D SLAM in Dynamic Environments*,

[C59] V. Golkov, A. Vasilev, F. Pasa, I. Lipp, W. Boubaker, E. Sgarlata, F. Pfeiffer, V. Tomassini, D. K. Jones and D. Cremers,
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q-Space Deep Learning for Alzheimer’s Disease Diagnosis: Global Prediction and Weakly-Supervised Localization,

[C61] B. T. Do, V. Golkov, G. E. Gürel and D. Cremers,
Precursor microRNA Identification Using Deep Convolutional Neural Networks,

[C62] P. Haeusser, J. Plapp, V. Golkov, E. Aljalbout and D. Cremers,
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[C63] T. Frerix, T. Möllenhoff, M. Moeller and D. Cremers,
Proximal Backpropagation,

Semantic Labeling of Indoor Environments from 3D RGB Maps,

[C65] L. von Stumberg, V. Usenko and D. Cremers,
Direct Sparse Visual-Inertial Odometry using Dynamic Marginalization,
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[C66] D. Schubert, T. Goll, N. Demmel, V. Usenko, J. Stueckler and D. Cremers,
The TUM VI Benchmark for Evaluating Visual-Inertial Odometry,

[C67] X. Gao, R. Wang, N. Demmel and D. Cremers,
LDSO: Direct Sparse Odometry with Loop Closure,

[C68] Z. Lähner, D. Cremers and T. Tung,
DeepWrinkles: Accurate and Realistic Clothing Modeling,
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[C69] N. Yang, R. Wang, J. Stueckler and D. Cremers,
Deep Virtual Stereo Odometry: Leveraging Deep Depth Prediction for Monocular Direct Sparse Odometry,
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[C70] D. Schubert, N. Demmel, V. Usenko, J. Stueckler and D. Cremers,
Direct Sparse Odometry With Rolling Shutter,
European Conference on Computer Vision (ECCV), September 2018, Oral Presentation.

[C71] V. Usenko, N. Demmel and D. Cremers,
The Double Sphere Camera Model,
[C72] M. Sundermeyer, Z. Marton, M. Durner, M. Brucker and R. Triebel,  
Implicit 3D Orientation Learning for 6D Object Detection from RGB Images,  
European Conference on Computer Vision (ECCV), September 2018, Best Paper Award.

[C73] M. Denninger and R. Triebel,  
Persistent Anytime Learning of Objects from Unseen Classes,  

[C74] I. Grixa, P. Schulz, W. Stürzl and R. Triebel,  
Appearance-Based Along-Route Localization for Planetary Missions,  

[C75] I. Chiotellis, F. Zimmermann, D. Cremers and R. Triebel,  
Incremental Semi-Supervised Learning from Streams for Object Classification,  

[C76] 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.

6DoF Pose Estimation for Industrial Manipulation based on Synthetic Data,  

[C78] C. Nissler, M. Durner, Z.-C. Marton and R. Triebel,  
Simultaneous Calibration and Mapping,  

[C79] 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.

[C80] M. Benning, M. Möller, R. Z. Nossek, M. Burger, D. Cremers and G. Gilboa,  
Nonlinear Spectral Image Fusion,  

[C81] D. Bender, W. Koch and D. Cremers,  
Map-based drone homing using shortcuts,  
[C82] G. Kuschk, A. Bozic and D. Cremers,
Real-time variational stereo reconstruction with applications to large-scale
dense SLAM,
*IEEE Intelligent Vehicles Symposium, IV 2017, Los Angeles, CA, USA, June 11-14, 2017*,

[C83] M. Jaimez, C. Kerl, J. Gonzalez-Jimenez and D. Cremers,
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Clustering,
*Proc. of the IEEE Int. Conf. on Robotics and Automation (ICRA)*, 2017.

[C84] 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,

[C85] L. Ma, J. Stueckler, C. Kerl and D. Cremers,
Multi-View Deep Learning for Consistent Semantic Mapping with RGB-D
Cameras,
*International Conference on Intelligent Robots and Systems (IROS)*, Vancouver, Canada,
Sep 2017.

[C86] 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,

[C87] M. Dzitsiuk, J. Sturm, R. Maier, L. Ma and D. Cremers,
De-noising, Stabilizing and Completing 3D Reconstructions On-the-go using
Plane Priors,

[C88] L. von Stumberg, V. Usenko, J. Engel, J. Stueckler and D. Cremers,
From Monocular SLAM to Autonomous Drone Exploration,

[C89] F. Walch, C. Hazirbas, L. Leal-Taixe, T. Sattler, S. Hilsenbeck and D. Cremers,
Image-based localization using LSTMs for structured feature correlation,

[C90] J.C. Peeken, C. Knie, V. Golkov, K. Kessel, F. Pasa, Q. Khan, M. Seroglazov, J. Kukacka,
T. Goldberg, L. Richter, J. Reeb, B. Rost, F. Pfeiffer, D. Cremers, F. Nüsslin and S.E.
Combs,
Establishment of an interdisciplinary workflow of machine learning-based Radiomics in sarcoma patients,

[C91] Y. Queau, M. Pizenberg, J.-D. Durou and D. Cremers,
Microgeometry capture and RGB albedo estimation by photometric stereo
without demosaicing,
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[C92] P. Haeusser, A. Mordvintsev and D. Cremers,
Learning by Association - A versatile semi-supervised training method for neural networks,

[C93] M. Slavcheva, M. Baust, D. Cremers and S. Ilic,
KillingFusion: Non-rigid 3D Reconstruction without Correspondences,

[C94] V. Usenko, L. von Stumberg, A. Pangeric 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 ()

[C95] Y. Queau, T. Wu, F. Lauze, J.-D. Durou and D. Cremers,
A Non-Convex Variational Approach to Photometric Stereo under Inaccurate Lighting,

[C96] T. Meinhardt, M. Moeller, C. Hazirbas and D. Cremers,
Learning Proximal Operators: Using Denoising Networks for Regularizing Inverse Imaging Problems,

[C97] S. Caelles, K.-K. Maninis, J. Pont-Tuset, L. Leal-Taixe, D. Cremers and L. V Gool,
One-Shot Video Object Segmentation,

[C98] Y. Queau, J. Melou, J.-D. Durou and D. Cremers,
Dense Multi-view 3D-reconstruction Without Dense Correspondences,

[C99] K. Kurach, S. Gelly, M. Jastrzebski, P. Haeusser, O. Teytaud, D. Vincent and O. Bousquet,
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[C100] P. Haeusser, T. Frerix, A. Mordvintsev and D. Cremers,
Associative Domain Adaptation,
*IEEE International Conference on Computer Vision (ICCV),* 2017.

[C101] Y. Queau, M. Pizenberg, D. Cremers and J.-D. Durou,
Stereophotometrie microscopique sans demosaïquage,
*GRETSI, Juan-les-Pins, USA, 2017.*

Efficient Deformable Shape Correspondence via Kernel Matching,
*International Conference on 3D Vision (3DV),* Qingdao, China, October 2017, Oral Presentation.
[C103] R. Maier, R. Schaller and D. Cremers,
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[C104] J. Geiping, H. Dirks and D. Cremers,
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[C105] V. Golyanik, K. Kim, R. Maier, M. Niessner, D. Stricker and J. Kautz,
Multiframe Scene Flow with Piecewise Rigid Motion,
International Conference on 3D Vision (3DV), Qingdao, China, October 2017, Spotlight Presentation.

[C106] R. Maier, K. Kim, D. Cremers, J. Kautz and M. Niessner,
Intrinsic3D: High-Quality 3D Reconstruction by Joint Appearance and Geometry Optimization with Spatially-Varying Lighting,
International Conference on Computer Vision (ICCV), Venice, Italy, October 2017.

[C107] S. Peng, B. Haefner, Y. Queau and D. Cremers,
Depth Super-Resolution Meets Uncalibrated Photometric Stereo,
International Conference on Computer Vision Workshops (ICCVW), 2017, Oral Presentation at ICCV Workshop on Color and Photometry in Computer Vision.

[C108] R. Wang, M. Schwörer and D. Cremers,
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[C109] T. Möllenhoff and D. Cremers,
Sublabel-Accurate Discretization of Nonconvex Free-Discontinuity Problems,
International Conference on Computer Vision (ICCV), Venice, Italy, October 2017.

[C110] M Ullrich, H Ali, M Durner, ZC Marton and R Triebel,
Selecting CNN Features for Online Learning of 3D Objects,

[C111] C Nissler, ZC Marton, H Kisner, U Thomas and R Triebel,
A Method for Hand-Eye and Camera-to-Camera Calibration for Limited Fields of View,

[C112] TS Wang, ZC Marton, M Brucker and R Triebel,
How Robots Learn to Classify New Objects Trained from Small Data Sets,
Conference on Robot Learning (CoRL), 2017.

[C113] M Durner, S Kriegel, S Riedel, M Brucker, ZC Marton, F Balint-Benczedi and R Triebel,
Experience-based Optimization of Robotic Perception,
International Conference on Advanced Robotics (ICAR), 2017.
[C114] Y. Queau, J. Melou, F. Castan, D. Cremers and J.-D. Durou,
A Variational Approach to Shape-from-shading Under Natural Illumination,

[C115] F. Bernard, F. R. Schmidt, J. Thunberg and D. Cremers,
A Combinatorial Solution to Non-Rigid 3D Shape-to-Image Matching,

[C116] Y. Kuznietsov, J. Stueckler and B. Leibe,
Semi-Supervised Deep Learning for Monocular Depth Map Prediction,

[C117] A. Kasyanov, F. Engelmann, J. Stueckler and B. Leibe,
Keyframe-Based Visual-Inertial Online SLAM with Relocalization,

[C118] F. Engelmann, J. Stueckler and B. Leibe,
SAMP: Shape and Motion Priors for 4D Vehicle Reconstruction,

[C119] L. Cosmo, A. Albarelli, F. Bergamasco, A. Torsello, E. Rodola and D. Cremers,
A game-theoretical approach for joint matching of multiple feature throughout unordered images,

[C120] M. Jaimez, J. G. Monroy and J. Gonzalez-Jimenez,
Planar Odometry from a Radial Laser Scanner. A Range Flow-based Approach,
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[C121] N. Mayer, E. Ilg, P. Häusser, P. Fischer, D. Cremers, A. Dosovitskiy and T. Brox,
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[C122] V. Golkov, T. Sprenger, J. I. Sperl, M. I. Menzel, M. Czisch, P. Säßmann and D. Cremers,
Model-Free Novelty-Based Diffusion MRI,
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[C123] 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,
Annual Conference on Neural Information Processing Systems (NIPS), Barcelona, Spain, dec 2016, Oral Presentation (acceptance rate: under 2%).

[C124] Z. Lähner, E. Rodola, F. R. Schmidt, M. M. Bronstein and D. Cremers,
Efficient Globally Optimal 2D-to-3D Deformable Shape Matching,
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), May 2016.
[C125] V. Usenko, J. Engel, J. Stueckler and D. Cremers,
Direct Visual-Inertial Odometry with Stereo Cameras,

[C126] A. Narr, R. Triebel and D. Cremers,
Stream-based Active Learning for Efficient and Adaptive Classification of 3D Objects,

SHREC16: Matching of Deformable Shapes with Topological Noise,
*Proc. of Eurographics Workshop on 3D Object Retrieval (3DOR)*, May 2016.

[C128] L. Cosmo, E. Rodola, M. M. Bronstein, A. Torsello, D. Cremers and Y. Sahillioglu,
SHREC16: Partial Matching of Deformable Shapes,
*Proc. of Eurographics Workshop on 3D Object Retrieval (3DOR)*, May 2016.

[C129] T. Möllenhoff, E. Laude, M. Moeller, J. Lellmann and D. Cremers,
Sublabel-Accurate Relaxation of Nonconvex Energies,
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016. Oral Presentation, Received the Best Paper Honorable Mention Award at CVPR 2016.

[C130] L. Ma, C. Kerl, J. Stueckler and D. Cremers,
CPA-SLAM: Consistent Plane-Model Alignment for Direct RGB-D SLAM,

[C131] J. Engel, V. Usenko and D. Cremers,
A Photometrically Calibrated Benchmark For Monocular Visual Odometry,

[C132] J. Engel, V. Koltun and D. Cremers,
Direct Sparse Odometry,

[C133] E. Laude, T. Möllenhoff, M. Moeller, J. Lellmann and D. Cremers,
Sublabel-Accurate Convex Relaxation of Vectorial Multilabel Energies,
*European Conference on Computer Vision (ECCV)*, October 2016.

[C134] D. Bender, D. Cremers and W. Koch,
A position free boresight calibration for INS-camera systems,

[C135] I. Chiotellis, R. Triebel, T. Windheuser and D. Cremers,
Non-Rigid 3D Shape Retrieval via Large Margin Nearest Neighbor Embedding,
*European Conference on Computer Vision (ECCV)*, October 2016.

[C136] T. Windheuser and D. Cremers,
A Convex Solution to Spatially-Regularized Correspondence Problems,
*European Conference on Computer Vision (ECCV)*, October 2016.
[C137] S. Sharifzadeh, I. Chiotellis, R. Triebel and D. Cremers,
Learning to Drive using Inverse Reinforcement Learning and Deep Q-Networks,
NIPS Workshops, December 2016.

[C138] D. Bender, F. Rouatbi, M. Schikora, D. Cremers and W. Koch,
Scaling the world of monocular SLAM with INS-measurements for UAS navigation,

[C139] D. Klostermann, A. Osep, J. Stueckler and B. Leibe,
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British Machine Vision Conference (BMVC), 2016.

[C140] D. Kochanov, A. Osep, J. Stueckler and B. Leibe,
Scene Flow Propagation for Semantic Mapping and Object Discovery in Dynamic Street Scenes,

[C141] F. Engelmann, J. Stueckler and B. Leibe,
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Proc. of the German Conference on Pattern Recognition (GCPR), 2016.

[C142] M. Moeller, J. Diebold, G. Gilboa and D. Cremers,
Learning Nonlinear Spectral Filters for Color Image Reconstruction,
IEEE International Conference on Computer Vision (ICCV), 2015.

[C143] J. Diebold, N. Demmel, C. Hazirbas, M. Möller and D. Cremers,
Interactive Multi-label Segmentation of RGB-D Images,
Scale Space and Variational Methods in Computer Vision (SSVM), june 2015.

[C144] 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.

[C145] A. Kanezaki, E. Rodola and T. Harada,
RGB-D [Graph matching gakushuu wo mochiita RGB-D gazou kara no but-tai kenshutsu] - Learning graph matching for object detection from RGB-D images,
20 - Robotics Symposia (RS), Karuizawa, Japan, mar 2015.

[C146] T. Möllenhoff, E. Strekalovskiy, M. Möller and D. Cremers,
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[C147] M. Jaimez, M. Souiai, J. Gonzalez-Jimenez and D. Cremers,
A Primal-Dual Framework for Real-Time Dense RGB-D Scene Flow,
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[C148] J. Stühmer and D. Cremers, 
A Fast Projection Method for Connectivity Constraints in Image Segmentation, 

[C149] R. Mecca, E. Rodola and D. Cremers, 
Analysis of Surface Parametrizations for Modern Photometric Stereo Modeling, 
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[C150] F. Bergamasco, A. Albarelli, L. Cosmo, A. Torsello, E. Rodola and D. Cremers, 
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[C151] D. Mund, R. Triebel and D. Cremers, 
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[C154] A. Menini, V. Golkov and F. Wiesinger, 
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q-Space Deep Learning for Twelve-Fold Shorter and Model-Free Diffusion MRI Scans, 
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[C156] 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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SPENCER: A Socially Aware Service Robot for Passenger Guidance and Help in Busy Airports,  

[C158] D. Holz, A. Topalidou-Kyniazopoulou, J. Stueckler and S. Behnke,  
Real-Time Object Detection, Localization and Verification for Fast Robotic Depalletizing,  

[C159] J. Engel, J. Stueckler and D. Cremers,  
Large-Scale Direct SLAM with Stereo Cameras,  

[C160] D. Caruso, J. Engel and D. Cremers,  
Large-Scale Direct SLAM for Omnidirectional Cameras,  

[C161] Y. Tao, R. Triebel and D. Cremers,  
Semi-supervised Online Learning for Efficient Classification of Objects in 3D Data Streams,  

[C162] R. Maier, J. Stueckler and D. Cremers,  
Super-Resolution Keyframe Fusion for 3D Modeling with High-Quality Textures,  
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[C163] V. Usenko, J. Engel, J. Stueckler and D. Cremers,  
Reconstructing Street-Scenes in Real-Time From a Driving Car,  

[C164] M. Jaimez, M. Souiai, J. Stueckler, J. Gonzalez-Jimenez and D. Cremers,  
Motion Cooperation: Smooth Piece-Wise Rigid Scene Flow from RGB-D Images,  

[C165] E. Rodola, M. Moeller and D. Cremers,  
Point-wise Map Recovery and Refinement from Functional Correspondence,  
Proceedings Vision, Modeling and Visualization (VMV), Aachen, Germany, 2015, Received the Best Paper Award.

[C166] C. Kerl, J. Stueckler and D. Cremers,  
Dense Continuous-Time Tracking and Mapping with Rolling Shutter RGB-D Cameras,  
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[C167] M. Souiai, M. R. Oswald, Y. Kee, J. Kim, M. Pollefeys and D. Cremers,  
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[C168] F. Stark, C. Hazirbas, R. Triebel and D. Cremers,
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[C169] N. Nagaraja, F. R. Schmidt and T. Brox,
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[C170] J. Stühmer, S. Nowozin, A. Fitzgibbon, R. Szeliski, T. Perry, S. Acharya, D. Cremers and J. Shotton,
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Novel Acquisition Scheme for Diffusion Kurtosis Imaging Based on Compressed-Sensing Accelerated DSI Yielding Superior Image Quality,

Total Variation-Regularized Compressed Sensing Reconstruction for Multi-Shell Diffusion Kurtosis Imaging,

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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[C176] D. B. AD. CJ. C D. Weikersdorfer,
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[C177] F. Steinbruecker, J. Sturm and D. Cremers,
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[C178] E. Rodola, S. R Bulo, T. Windheuser, M. Vestner and D. Cremers,
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[C179] Y. Kee, M. Souiai, D. Cremers and J. Kim,
Sequential Convex Relaxation for Mutual-Information-Based Unsupervised Figure-Ground Segmentation,

[C180] H. Alvarez, L.M. Paz, J. Sturm and D. Cremers,
Collision Avoidance for Quadrotors with a Monocular Camera,

[C181] J. Engel, T. Schöps and D. Cremers,
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[C182] T. Schöps, J. Engel and D. Cremers,
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[C183] T. Windheuser, M. Vestner, E. Rodola, R. Triebel and D. Cremers,
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[C184] M. Strobel, J. Diebold and D. Cremers,
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[C185] R. Maier, J. Sturm and D. Cremers,
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Spatial and Temporal Interpolation of Multi-View Image Sequences,
German Conference on Pattern Recognition (GCPR), Münster, Germany, Vol. 36, sep 2014.

[C187] M. R. Oswald and D. Cremers,
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[C190] E. Strekalovskiy and D. Cremers,
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[C191] A. Kanezaki, E. Rodola and T. Harada,
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[C201] D. Droeschel, J. Stueckler and S. Behnke,
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[C202] J. Stueckler, A. Gutt and S. Behnke,
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[C207] J Bergbauer and S Tari,
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[C208] J Bergbauer and S Tari,
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[C210] M. Souiai, C. Nieuwenhuis, E. Strekalovskiy and D. Cremers,
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*Toward Automated Driving in Cities using Close-to-Market Sensors*,

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*Demo Track of the RGB-D Workshop on Advanced Reasoning with Depth Cameras at the Robotics: Science and Systems Conference (RSS)*, June 2013.

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*Proc. of the International Joint Conference on Artificial Intelligence (IJCAI)*, Track on Best papers in Sister Conferences, 2013.

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*Performance Evaluation of Narrow Band Methods for Variational Stereo*,
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Improving Plane Extraction from 3D Data by Fusing Laser Data and Vision, 

[C488] R. Triebel and W. Burgard, 
Improving Simultaneous Localization and Mapping in 3D Using Global Constraints, 
Proc. of the Twentieth National Conference on Artificial Intelligence (AAAI), 2005.

[C489] R. Triebel, W. Burgard and F. Dellaert, 
Using Hierarchical EM to Extract Planes from 3D Range Scans, 

[C490] D. Cremers, 
Bayesian Approaches to Motion-based Image and Video Segmentation, 

[C491] T. Brox, A. Bruhn, N. Papenberg and J. Weickert, 
High accuracy optical flow estimation based on a theory for warping, 

[C492] T. Brox and J. Weickert, 
A TV flow based local scale measure for texture discrimination, 

[C493] T. Brox and J. Weickert, 
Level set based segmentation of multiple objects, 

[C494] D. Cremers, S. J. Osher and S. Soatto, 
Kernel density estimation and intrinsic alignment for knowledge-driven segmentation: Teaching level sets to walk, 
[C495] D. Cremers, N. Sochen and C. Schnörr,
Multiphase dynamic labeling for variational recognition-driven image segmentation,

[C496] H. Jin, D. Cremers, A. Yezzi and S. Soatto,
Shedding light on stereoscopic segmentation,

[C497] M. Magnor and B. Goldluecke,
Spacetime-coherent Geometry Reconstruction from Multiple Video Streams,

[C498] B. Goldluecke and M. Magnor,
Weighted Minimal Hypersurfaces and Their Applications in Computer Vision,

[C499] B. Goldluecke and M. Magnor,
Space-Time Isosurface Evolution for Temporally Coherent 3D Reconstruction,

[C500] R. Triebel, B. Frank, J. Meyer and W. Burgard,
First steps towards a robotic system for flexible volumetric mapping of indoor environments,

[C501] T. Brox, M. Rousson, R. Deriche and J. Weickert,
Unsupervised segmentation incorporating colour, texture, and motion,

[C502] T. Brox, M. Welk, G. Steidl and J. Weickert,
Equivalence results for TV diffusion and TV regularisation,

[C503] D. Cremers,
A variational framework for image segmentation combining motion estimation and shape regularization,

[C504] D. Cremers,
A multiphase level set framework for variational motion segmentation,
[C505] D. Cremers and S. Soatto,
A pseudo-distance for shape priors in level set segmentation,

[C506] D. Cremers and S. Soatto,
Variational space-time motion segmentation,

[C507] D. Cremers, N. Sochen and C. Schnörr,
Towards Recognition-based Variational Segmentation Using Shape Priors and Dynamic Labeling,

[C508] D. Cremers and A. L. Yuille,
A generative model based approach to motion segmentation,

[C509] G. Doretto, D. Cremers, P. Favaro and S. Soatto,
Dynamic texture segmentation,

[C510] M. Rousson, T. Brox and R. Deriche,
Active unsupervised texture segmentation on a diffusion based feature space,

[C511] B. Goldluecke and M. Magnor,
Joint 3D Reconstruction and Background Separation in Multiple Views using Graph Cuts,

[C512] B. Goldluecke and M. Magnor,
Real-time Microfacet Billboarding for Free-viewpoint Video Rendering,

[C513] B. Goldluecke and M. Magnor,
Real-time, Free-viewpoint Video Rendering from Volumetric Geometry,

[C514] C. Petz, B. Goldluecke and M. Magnor,
Hardware-accelerated Autostereogram Rendering for Interactive 3D Visualization,
A system for volumetric robotic mapping of underground mines, 

[C516] D. Hähnel, R. Triebel, W. Burgard and S. Thrun, 
Map Building with Mobile Robots in Dynamic Environments, 

[C517] T. Brox and J. Weickert, 
Nonlinear matrix diffusion for optic flow estimation, 

[C518] J. Keuchel, C. Schnoerr, C. Schellewald and D. Cremers, 
Unsupervised Image Partitioning with Semidefinite Programming, 

[C519] D. Cremers, T. Kohlberger and C. Schnörr, 
Nonlinear shape statistics in Mumford–Shah based segmentation, 

[C520] D. Cremers and C. Schnörr, 
Motion Competition: variational integration of motion segmentation and shape regularization, 

[C521] D. Cremers and C. Schnörr, 
Statistical shape knowledge in variational motion segmentation, 
A. Pece, Y. N. Wu and R. Larsen(Eds.), 1st Internat. Workshop on Generative-Model-Based Vision, Copenhagen, Univ. of Copenhagen, June, 2 2002.

[C522] J. Weickert and T. Brox, 
Diffusion and regularization of vector- and matrix-valued images, 

[C523] B. Goldluecke, M. Magnor and B. Wilburn, 
Hardware-accelerated Dynamic Light Field Rendering, 

[C524] T. Brox, D. Farin and P. H. N. de With, 
Multi-stage region merging for image segmentation, 
Proc. 22nd Symposium on Information and Communication Theory in the Benelux, Enschede, The Netherlands, 189-196, may 2001, Received the best paper award.

[C525] D. Cremers, T. Kohlberger and C. Schnörr, 
Nonlinear shape statistics via kernel spaces, 
All: 1

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[C526] J. Keuchel, C. Schellewald, D. Cremers and C. Schnoerr,
Convex Relaxations for Binary Image Partitioning and Perceptual Grouping,
Radig, B., Florczyk and S.(Eds.), Pattern Recognition, Munich, Germany, Springer, LNCS,
Vol. 2191, 353-360, Sept. 2001, Received a DAGM Paper Award.

[C527] D. Cremers, C. Schnörr and J. Weickert,
Diffusion Snakes: Combining statistical shape knowledge and image information in a variational framework,
N. Paragios(Ed.), IEEE First Int. Workshop on Variational and Level Set Methods, Vancouver, 137-144, 2001, Best Student Paper Award.

[C528] D. Cremers, C. Schnörr, J. Weickert and C. Schellewald,
Learning of translation invariant shape knowledge for steering diffusion snakes,

[C529] D. Cremers, C. Schnörr, J. Weickert and C. Schellewald,
Diffusion Snakes using statistical shape knowledge,

PhDThesis

[PhD1] R. Maier,
High-Quality 3D Reconstruction from Low-Cost RGB-D Sensors,
Technische Universität München, München, Germany, 2020.

[PhD2] V Usenko,
Visual-Inertial Navigation for Autonomous Vehicles,
Technische Universität München, München, 2019.

[PhD3] J Stühmer,
A Convex Optimization Framework for Connectivity Constraints in Image Segmentation and 3D Reconstruction,
Technische Universität München, München, 2016.

[PhD4] J. Stueckler,
Efficient Dense Registration, Segmentation, and Modeling Methods for RGB-D Environment Perception,
Faculty of Mathematics and Natural Sciences, University of Bonn, Germany, 2014.

[PhD5] K. Kolev,
Convexity in Image-Based 3D Surface Reconstruction,
Department of Computer Science, Technical University Munich, Germany, January 2012.

[PhD6] J. Sturm,
Approaches to Probabilistic Model Learning for Mobile Manipulation Robots,
University of Freiburg, Germany, May 2011, Received the Artificial Intelligence Dissertation Award 2011 (ECCAI) and the Wolfgang-Genter-Award 2011 (University of Freiburg); Finalist at the Georges-Giralt-Award 2012 (EURON); Selected for the Best Paper Track at IJCAI 2013.
[PhD7] C. Nieuwenhuis,
Restoration and Prostprocessing of Optical Flows,
Faculty of Mathematics and Computer Science, Heidelberg University, Germany, jul 2009.

[PhD8] T. Schoenemann,        
Combinatorial Solutions for Shape Optimization in Computer Vision, 
Department of Computer Science, University of Bonn, Germany, 2008.        

[PhD9] B. Goldluecke, 
Multi-Camera Reconstruction and Rendering for Free-viewpoint Video, 
Max-Planck-Institute for Computer Science, Saarbrücken, Germany, jul 2006.        

[PhD10] T. Brox, 
From pixels to regions: partial differential equations in image analysis, 
Faculty of Mathematics and Computer Science, Saarland University, Germany, apr 2005.        

[PhD11] D. Cremers, 
Statistical shape knowledge in variational image segmentation, 
Department of Mathematics and Computer Science, University of Mannheim, Germany, 2002.

MastersThesis

[M1] K. Knese, 
Realizing Online (Self-)Collision Avoidance Based on Inequality Constraints with Hierarchical Inverse Kinematics, 
Technical University of Munich, Germany, July 2014.        

[M2] C Hazirbas, 
Feature Selection and Learning for Semantic Segmentation, 
Technical University Munich, Germany, June 2014.        

[M3] T Schöps, 
Semi-dense visual SLAM on mobile devices, 
Technical University Munich, Germany, May 2014.        

[M4] M. Shelley, 
Monocular Visual Inertial Odometry on a Mobile Device, 
Technical University Munich, Germany, Aug. 2014.        

[M5] OMW Dunkley, 
Visual Inertial Control of a Nano-Quadroto, 
Technical University Munich, Germany, Sept. 2014.        

[M6] R. Maier, 
Out-of-Core Bundle Adjustment for 3D Workpiece Reconstruction, 
Technische Universität München, Germany, September 2013.        

[M7] M. Brandl, 
Face recognition with wave kernel signatures using a depth camera, 
Technical University of Munich, Germany, Aug. 2012.        

[M8] C. Kerl, 
Odometry from RGB-D Cameras for Autonomous Quadrocopters, 
Technical University Munich, Germany, Nov. 2012.
All: 1  

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[M9] J. Engel,  
Autonomous Camera-Based Navigation of a Quadrocopter,  
Technical University Munich, Germany, Dec. 2011, Distinguished with the SIEMENS award for best Master's Thesis 2012.

[M10] M. Souiai,  
Newton Methods for Total Variation Minimization,  
Computer Vision Group, TU Munich, Germany, June 2010.

[M11] J. Stühmer,  
Ein Variationsansatz zur Schätzung von dichten Tiefenkarten im Kontext des Structure-from-Motion,  
TU Dresden, Germany, Jul 2010.

[M12] E. Toeppe,  
Shape Matching mittels Graph Cuts,  
University of Bonn, 2008, Awarded Best Master Thesis of the Year (Bonn Society for Computer Science).

[M13] M. R. Oswald,  
Reliability Estimation Methods and their Efficient Implementation,  
Universidad Tecnica Federico Santa Maria, Valparaiso, Chile, Jun 2008.

[M14] M. R. Oswald,  
Concurrent Stereo Reconstruction,  
Technische Universität Dresden, Germany, Jun 2007.

[M15] A. Wedel,  
Detektion stationaerer Hindernisse in monokularen Bildsequenzen,  
Computer Vision Group, University of Bonn, Germany, April 2006.

[M16] J. Sturm,  
An appearance-based Visual Compass for Mobile Robots,  
University of Amsterdam, the Netherlands, Dec. 2006.

[M17] T. Brox,  
Smoothing of matrix-valued data,  
Department of Mathematics and Computer Science, University of Mannheim, Germany, may 2002.

[M18] B. Goldluecke,  
Nichtkonforme Finite Elemente und Kollokation für elliptische Randwertprobleme,  

Technical Reports

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

[R2] A. Chambolle, D. Cremers and T. Pock,  
A Convex Approach for Computing Minimal Partitions,  
[R3] T. Brox, O. Kleinschmidt and D. Cremers,
Iterated and Efficient Nonlocal Means for Denoising of Textural Patterns,

[R4] A. Visser, J. Sturm, P. van Rossum, J. Westra and T. Bink,
Dutch Aibo Team: Technical Report RoboCup 2006,

[R5] T. Brox, M. Rousson, R. Deriche and J. Weickert,
Colour, texture, and motion in level set based segmentation and tracking,
Technical report 147, Dept. of Mathematics, Saarland University, Saarbrücken, Germany, aug 2005.

[R6] B. Rosenhahn, U. Kersting, L. He, A. Smith, T. Brox, R. Klette and H. P. Seidel,
A silhouette based human motion tracking system,

[R7] J. Sturm, A. Visser and N. Wijngaards,
Dutch Aibo Team: Technical Report RoboCup 2005,

[R8] D. Cremers, C. Schnörr, J. Weickert and C. Schellewald,
Diffusion Snakes using statistical shape knowledge,