Journal Articles

[J1] E. Strekalovskiy, A. Chambolle and D. Cremers,
Convex Relaxation of Vectorial Problems with Coupled Regularization,

[J2] B. Goldluecke, E. Strekalovskiy and D. Cremers,
The Natural Total Variation Which Arises from Geometric Measure Theory,

Stereoscopic Scene Flow Computation for 3D Motion Understanding,

[J4] A. Sellent, M. Eisemann, B. Goldluecke, D. Cremers and M. Magnor,
Motion Field Estimation from Alternate Exposure Images,

[J5] J. Kybic and C. Nieuwenhuis,
Bootstrap Optical Flow and Uncertainty Measure,

[J6] N. Papenberg, A. Bruhn, T. Brox, S. Didas and J. Weickert,
Highly accurate optic flow computation with theoretically justified warping,
67(2): 141-158, April 2006.

[J7] D. Cremers and S. Soatto,
Motion Competition: A variational framework for piecewise parametric motion segmentation,

[J8] D. Cremers and C. Schnörr,
Statistical shape knowledge in variational motion segmentation,

Book Chapters

Adaptive structure tensors and their applications,

[BC2] J. Weickert, A. Bruhn, T. Brox and N. Papenberg,
A survey on variational optic flow methods for small displacements,

Conference and Workshop Papers
Keywords: Optical-flow

List of Publications

[C1] 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.

[C2] N. Mayer, E. Ilg, P. Haeusser, P. Fischer, D. Cremers, A. Dosovitskiy and T. Brox,
A Large Dataset to Train Convolutional Networks for Disparity, Optical Flow, and Scene Flow Estimation,
IEEE International Conference on Computer Vision and Pattern Recognition (CVPR),
2016.

[C3] T. Windheuser and D. Cremers,
A Convex Solution to Spatially-Regularized Correspondence Problems,
October 2016.

[C4] A. Dosovitskiy, P. Fischer, E. Ilg, P. Haeusser, C. Hazirbas, V. Golkov, P. van der Smagt,
D. Cremers and T. Brox,
FlowNet: Learning Optical Flow with Convolutional Networks,
December 2015.

[C5] E. Strekalovskiy, B. Goldluecke and D. Cremers,
Tight Convex Relaxations for Vector-Valued Labeling Problems,
2011.

[C6] M. Schikora, W. Koch and D. Cremers,
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.

[C7] C. Nieuwenhuis and D. Kondermann,
Complex Motion Models for Simple Optical Flow Estimation,

[C8] C. Nieuwenhuis, B. Berkels and M. Rumpf,
Interactive Motion Segmentation,

[C9] A. Sellent, M. Eisemann, B. Goldluecke, T. Pock, D. Cremers and M. Magnor,
Variational Optical Flow from Alternate Exposure Images,
135-143, 2009.

[C10] A. Wedel, D. Cremers, T. Pock and H. Bischof,
Structure- and Motion-adaptive Regularization for High Accuracy Optic Flow,
Kyoto, Japan, 2009.

[C11] F. Steinbruecker, T. Pock and D. Cremers,
Large Displacement Optical Flow Computation without Warping,
Kyoto, Japan, 2009.

[C12] D. Mitzel, T. Pock, T. Schoenemann and D. Cremers,
Video Super Resolution using Duality Based TV-L1 Optical Flow,
Jena, Germany, 2009.
Keywords: Optical-flow

List of Publications

[C13] B. Berkels, C. Nieuwenhuis, C. Garbe and M. Rumpf,
Reconstructing Optical Flow Fields by Motion Inpainting,

[C14] F. Steinbruecker, T. Pock and D. Cremers,
Advanced Data Terms for Variational Optic Flow Estimation,
Braunschweig, Germany, 2009.

Efficient Dense Scene Flow from Sparse or Dense Stereo Data,
Marseille, France, October 2008.

[C16] A. Wedel, T. Pock, J. Braun, U. Franke and D. Cremers,
Duality TV-L1 Flow with Fundamental Matrix Prior,

[C17] A. Wedel, T. Pock, C. Zach, D. Cremers and H. Bischof,
An Improved Algorithm for TV-L1 Optical Flow,

[C18] T. Brox, A. Bruhn and J. Weickert,
Variational motion segmentation with level sets,

[C19] T. Brox, A. Bruhn, N. Papenberg and J. Weickert,
High accuracy optical flow estimation based on a theory for warping,
The Longuet-Higgins Best Paper Award.

[C20] D. Cremers and S. Soatto,
Variational space-time motion segmentation,

[C21] D. Cremers and A. L. Yuille,
A generative model based approach to motion segmentation,

[C22] T. Brox and J. Weickert,
Nonlinear matrix diffusion for optic flow estimation,

[C23] 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.

PhDThesis

[PhD1] C. Nieuwenhuis,
Restoration and Prostprocessing of Optical Flows,
Faculty of Mathematics and Computer Science, Heidelberg University, Germany, July 2009.