Optical Flow Estimation

List of Publications

[C1] P. Fischer, A. Dosovitskiy, E. Ilg, P. Husser, C. Hazrba, V. Golkov, P. van der Smagt, D. Cremers and T. Brox,
FlowNet: Learning Optical Flow with Convolutional Networks,
IEEE International Conference on Computer Vision (ICCV), December 2015.

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

[J1] B. Goldluecke, E. Strekalovskiy and D. Cremers,
The Natural Total Variation Which Arises from Geometric Measure Theory,

[J1] A. Wedel, T. Brox, T. Vaudrey, C. Rabe, U. Franke and D. Cremers,
Stereoscopic Scene Flow Computation for 3D Motion Understanding,

[J2] A. Sellent, M. Eisemann, B. Goldluecke, D. Cremers and M. Magnor,
Motion Field Estimation from Alternate Exposure Images,

[C1] E. Strekalovskiy, B. Goldluecke and D. Cremers,
Tight Convex Relaxations for Vector-Valued Labeling Problems,
IEEE International Conference on Computer Vision (ICCV), 2011.

[C1] C. Nieuwenhuis, D. Kondermann and C. Garbe,
Complex Motion Models for Simple Optical Flow Estimation,

[C2] C. Nieuwenhuis, B. Berkels, M. Rumpf and D. Cremers,
Interactive Motion Segmentation,

[C1] A. Sellent, M. Eisemann, B. Goldluecke, T. Pock, D. Cremers and M. Magnor,
Variational Optical Flow from Alternate Exposure Images,

[C2] A. Wedel, D. Cremers, T. Pock and H. Bischof,
Structure- and Motion-adaptive Regularization for High Accuracy Optic Flow,
IEEE International Conference on Computer Vision (ICCV), Kyoto, Japan, 2009.
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[C3] F. Steinbruecker, T. Pock and D. Cremers,
Large Displacement Optical Flow Computation without Warping,
IEEE International Conference on Computer Vision (ICCV), Kyoto, Japan, 2009.

[C4] B. Berkels, C. Nieuwenhuis, C. Garbe and M. Rumpf,
Reconstructing Optical Flow Fields by Motion Inpainting,

[C5] F. Steinbruecker, T. Pock and D. Cremers,
Advanced Data Terms for Variational Optic Flow Estimation,

[C1] A. Wedel, C. Rabe, T. Vaudrey, T. Brox, U. Franke and D. Cremers,
Efficient Dense Scene Flow from Sparse or Dense Stereo Data,
European Conference on Computer Vision (ECCV), Marseille, France, October 2008.

[C2] A. Wedel, T. Pock, J. Braun, U. Franke and D. Cremers,
Duality TV-L1 Flow with Fundamental Matrix Prior,

[C3] A. Wedel, T. Pock, C. Zach, D. Cremers and H. Bischof,
An Improved Algorithm for TV-L1 Optical Flow,

[C1] C. Zach, T. Pock and H. Bischof,
A Duality Based Approach for Realtime TV-L1 Optical Flow,

[C2] T. Pock, M. Urschler, C. Zach, R. Beichel and H. Bischof,
A Duality Based Algorithm for TV-L1-Optical-Flow Image Registration,

[J1] N. Papenberg, A. Bruhn, T. Brox, S. Didas and J. Weickert,
Highly accurate optic flow computation with theoretically justified warping,

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,
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List of Publications

[C1] T. Brox, A. Bruhn and J. Weickert,

*Variational motion segmentation with level sets,*

[J1] D. Cremers and S. Soatto,

*Motion Competition: A variational framework for piecewise parametric motion segmentation,*

[C1] T. Brox, A. Bruhn, N. Papenberg and J. Weickert,

*High accuracy optical flow estimation based on a theory for warping,*
Received 'The Longuet-Higgins Best Paper Award' .

[J1] D. Cremers and C. Schnörr,

*Statistical shape knowledge in variational motion segmentation,*

[C1] D. Cremers and S. Soatto,

*Variational space-time motion segmentation,*

[C2] D. Cremers and A. L. Yuille,

*A generative model based approach to motion segmentation,*

[C1] T. Brox and J. Weickert,

*Nonlinear matrix diffusion for optic flow estimation,*

[C2] 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.