Keywords: Medical Imaging—biology—biomedical

2019
Conference and Workshop Papers

2018
Conference and Workshop Papers

2017
Journal Articles

Conference and Workshop Papers
Keywords: Medical Imaging—biology—biomedical

[C2] 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,

2016
Journal Articles

[J1] 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.

Conference and Workshop Papers

[C1] V. Golkov, T. Sprenger, J. I. Sperl, M. I. Menzel, M. Czisch, P. Sämann and D. Cremers,
Model-Free Novelty-Based Diffusion MRI,
Prague, Czech Republic, April 2016.

[C2] 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,
Barcelona, Spain, December 2016, Oral Presentation (acceptance rate: under 2%).

2015
Journal Articles

[J1] M. Klodt, K. Herzog, R. Töpfer and D. Cremers,
Field phenotyping of grapevine growth using dense stereo reconstruction,

Book Chapters

[BC1] V. Golkov, J. M. Portegies, A. Golkov, R. Duits and D. Cremers,
Holistic Image Reconstruction for Diffusion MRI,
Computational Diffusion MRI, Munich, Germany, Springer, October 2015, Book Chapter, and Oral Presentation at MICCAI 2015 Workshop on Computational Diffusion MRI.

Conference and Workshop Papers

[C1] J. Stühmer and D. Cremers,
A Fast Projection Method for Connectivity Constraints in Image Segmentation,
X.-C. Tai, E. Bae, T. F. Chan and M. Lysaker(Eds.), , 2015.

Using Diffusion and Structural MRI for the Automated Segmentation of Multiple Sclerosis Lesions,
2015.
Keywords: Medical Imaging—biology—biomed

List of Publications

Robustness of Phase Sensitive Reconstruction in Diffusion Spectrum Imaging, 
2015.

[C4] A. Menini, V. Golkov and F. Wiesinger, 
Free-Breathing, Self-Navigated RUFIS Lung Imaging with Motion Compensated Image Reconstruction, 
2015.

P. A. Gomez, A. Haase, T. Brox and D. Cremers, 
q-Space Deep Learning for Twelve-Fold Shorter and Model-Free Diffusion MRI Scans, 
Munich, Germany, October 2015.

2014

Book Chapters

Joint Super-Resolution Using Only One Anisotropic Low-Resolution Image per q-Space Coordinate, 
Computational Diffusion MRI, Springer, 2014, Book Chapter, and Oral Presentation at MICCAI 2014 Workshop on Computational Diffusion MRI.

Conference and Workshop Papers

Novel Acquisition Scheme for Diffusion Kurtosis Imaging Based on Compressed-Sensing Accelerated DSI Yielding Superior Image Quality, 
2014.

Total Variation-Regularized Compressed Sensing Reconstruction for Multi-Shell Diffusion Kurtosis Imaging, 
2014.

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, 
2014.

Semi-Joint Reconstruction for Diffusion MRI Denoising Imposing Similarity of Edges in Similar Diffusion-Weighted Images, 
2014.

Improved Diffusion Kurtosis Imaging and Direct Propagator Estimation Using 6-D Compressed Sensing, 
2014.
Keywords: Medical Imaging—biology—biomed List of Publications

2013

Journal Articles

[J1] C. Nieuwenhuis and D. Cremers,
Spatially Varying Color Distributions for Interactive Multi-Label Segmentation,

Book Chapters

[BC1] M. Klodt, F. Steinbruecker and D. Cremers,
Moment Constraints in Convex Optimization for Segmentation and Tracking,

Conference and Workshop Papers

[C1] 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 Compressed Sensing on Diffusion MR Image Reconstruction and Kurtosis Tensor Estimation,
2013, Oral Presentation.

[C2] V. Golkov, T. Sprenger, M.I. Menzel, D. Cremers and J.I. Sperl,
Line-Process-Based Joint SENSE Reconstruction of Diffusion Images with Intensity Inhomogeneity Correction and Noise Non-Stationarity Correction,
2013, Certificate of Merit Award.

[C3] V. Golkov, M.I. Menzel, T. Sprenger, A. Menini, D. Cremers and J.I. Sperl,
Reconstruction, Regularization, and Quality in Diffusion MRI Using the Example of Accelerated Diffusion Spectrum Imaging,
16th Annual Meeting of the German Chapter of the ISMRM, 2013, Oral Presentation.

Corrected Joint SENSE Reconstruction, Low-Rank Constraints, and Compressed-Sensing-Accelerated Diffusion Spectrum Imaging in Denoising and Kurtosis Tensor Estimation,
ISMRM Workshop on Diffusion as a Probe of Neural Tissue Microstructure, 2013.

SNR-dependent Quality Assessment of Compressed-Sensing-Accelerated Diffusion Spectrum Imaging Using a Fiber Crossing Phantom,
2013.

Phase Sensitive Reconstruction in Diffusion Spectrum Imaging Enabling Velocity Encoding and Unbiased Noise Distribution,
2013.

Noise Reduction in Accelerated Diffusion Spectrum Imaging through Integration of SENSE Reconstruction into Joint Reconstruction in Combination with q-Space Compressed Sensing,
2013.
Keywords: Medical Imaging—biology—biomed

List of Publications

[8] J. Stühmer, P. Schröder and D. Cremers,
Tree Shape Priors with Connectivity Constraints using Convex Relaxation on General Graphs,
Sydney, Australia, December 2013, Oral Presentation.

Technical Reports

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

2012
Journal Articles

[J1] S. Chen, D. Cremers and R. J. Radke,
Image segmentation with one shape prior - A template-based formulation,

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

Conference and Workshop Papers

Evaluation of DSI Imaging with Compressed Sensing under the Presence of Different Noise Levels on a Diffusion Phantom,
2012.

Comparison of Diffusion Kurtosis Tensor Estimation Methods in an Advanced Quality Assessment Framework,
2012.

2011
Journal Articles

A Variational Approach to Vesicle Membrane Reconstruction from Fluorescence Imaging,
Pattern Recognition, 44: 2944-2958, 2011.

Conference and Workshop Papers

[C1] M. Klodt and D. Cremers,
A Convex Framework for Image Segmentation with Moment Constraints,
2011.
Keywords: Medical Imaging—biology—biomedical

List of Publications

[C2] S. Madhogaria, M. Schikora, W. Koch and D. Cremers,
Pixel-based Classification Method for Detecting Unhealthy Regions in Leaf Images,
6th IEEE ISIF Workshop on Sensor Data Fusion: Trends, Solutions, Applications (SDF),
Berlin, Germany, September 2011.

2010
Conference and Workshop Papers

[C1] M. Schikora, A. Schikora, K.-H. Kogel, W. Koch and D. Cremers,
Probabilistic Classification of Disease Symptoms caused by Salmonella on Arabidopsis Plants,
5th IEEE ISIF Workshop on Sensor Data Fusion: Trends, Solutions, Applications (SDF),
Leipzig, Germany, September 2010.

2009
Conference and Workshop Papers

[C1] T. Pock, A. Chambolle, H. Bischof and D. Cremers,
A Convex Relaxation Approach for Computing Minimal Partitions,

2008
Conference and Workshop Papers

[C1] T. Pock, M. Unger, D. Cremers and H. Bischof,
Fast and Exact Solution of Total Variation Models on the GPU,
CVPR Workshop on Visual Computer Vision on GPU’s, June 2008.

2007
Journal Articles

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

Book Chapters

[BC1] D. Cremers and M. Rousson,
Efficient kernel density estimation of shape and intensity priors for level set segmentation,

Conference and Workshop Papers

[C1] D. Cremers, O. Fluck, M. Rousson and S. Aharon,
A probabilistic level set formulation for interactive organ segmentation,
Keywords: Medical Imaging—biology—biomed

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2006

Journal Articles

[J1] D. Cremers, S. J. Osher and S. Soatto,
Kernel density estimation and intrinsic alignment for shape priors in level set segmentation,

Conference and Workshop Papers

[C1] D. Cremers, C. Guetter and C. Xu,
Nonparametric priors on the space of joint intensity distributions for non-rigid multi-modal image registration,

[C2] T. Kohlberger, D. Cremers, M. Rousson and R. Ramaraj,
4D shape priors for level set segmentation of the left myocardium in SPECT sequences,
Vol. 4190, 92-100, October 2006.

2005

Conference and Workshop Papers

[C1] M. Rousson and D. Cremers,
Efficient kernel density estimation of shape and intensity priors for level set segmentation,

2002

Journal Articles

[J1] D. Cremers and A. V. M. Herz,
Travelling waves of exitation in neural field models: Equivalence of rate descriptions and integrate-and-fire dynamics,