2018
Publications at Conferences and Workshops


2017
Publications at Conferences and Workshops


2016

Journal Publications

*Bias and Precision Analysis of Diffusional Kurtosis Imaging for Different Acquisition Schemes*,
2016.

[J2] 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.

Publications at Conferences and Workshops

[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

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.

Publications at Conferences and Workshops

*Using Diffusion and Structural MRI for the Automated Segmentation of Multiple Sclerosis Lesions*,
2015.

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

[C3] A. Menini, V. Golkov and F. Wiesinger,
*Free-Breathing, Self-Navigated RUFIS Lung Imaging with Motion Compensated Image Reconstruction*,
2015.
Author: V. Golkov

List of Publications

q-Space Deep Learning for Twelve-Fold Shorter and Model-Free Diffusion MRI Scans,
Munich, Germany, October 2015.

[C5] 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.

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.

Publications at Conferences and Workshops

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.


2013
Publications at Conferences and Workshops

[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.

2012
Publications at Conferences and Workshops

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.