**List of Publications**

2021

**Journal Articles**

[J1] P. Müller, V. Golkov, V. Tomassini and D. Cremers,  
*Rotation-Equivariant Deep Learning for Diffusion MRI*,  

**Conference and Workshop Papers**

[C1] M Naeyaert, V Golkov, D Cremers, J Sijbers and M Verhoye,  
*Faster and better HARDI using FSE and holistic reconstruction*,  

[C2] P. Müller, V. Golkov, V. Tomassini and D. Cremers,  
*Rotation-Equivariant Deep Learning for Diffusion MRI (short version)*,  

2020

**Journal Articles**

[J1] V. Golkov, A. Becker, D. T. Plop, D. 38;268uturilo, N. Davoudi, J. Mendenhall, R. Morretti, J. Meiler and D. Cremers,  
*Deep Learning for Virtual Screening: Five Reasons to Use ROC Cost Functions*,  

*Accelerating in vivo fast spin echo high angular resolution diffusion imaging with an isotropic resolution in mice through compressed sensing*,  

**Conference and Workshop Papers**

[C1] 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*,  

2019

**Journal Articles**

*A Non-invasive 3D Body Scanner and Software Tool towards Analysis of Scoliosis*,  
Keywords: Medical Imaging—biology

List of Publications


Conference and Workshop Papers


2018

Conference and Workshop Papers


2017

Journal Articles


Conference and Workshop Papers


2016
Journal Articles


Conference and Workshop Papers


2015
Journal Articles


Book Chapters


Conference and Workshop Papers

**Keywords: Medical Imaging—biology**

**List of Publications**


**2014**

**Book Chapters**


**Conference and Workshop Papers**


Keywords: Medical Imaging—biology
List of Publications

Direct Reconstruction of the Average Diffusion Propagator with Simultaneous
Compressed-Sensing-Accelerated Diffusion Spectrum Imaging and Image De-
noising by Means of Total Generalized Variation Regularization,
International Society for Magnetic Resonance in Medicine (ISMRM) Annual Meeting,
2014.

Semi-Joint Reconstruction for Diffusion MRI Denoising Imposing Similarity
of Edges in Similar Diffusion-Weighted Images,
International Society for Magnetic Resonance in Medicine (ISMRM) Annual Meeting,
2014.

Improved Diffusion Kurtosis Imaging and Direct Propagator Estimation Using
6-D Compressed Sensing,

2013
Journal Articles

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

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 Com-
pressed Sensing on Diffusion MR Image Reconstruction and Kurtosis Tensor
Estimation,
European Society for Magnetic Resonance in Medicine and Biology (ESMRMB) Annual
Meeting, 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 In-
tensity Inhomogeneity Correction and Noise Non-Stationarity Correction,
European Society for Magnetic Resonance in Medicine and Biology (ESMRMB) Annual
Meeting, 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 Ex-
ample of Accelerated Diffusion Spectrum Imaging,
16th Annual Meeting of the German Chapter of the ISMRM, 2013, Oral Presentation.
Keywords: Medical Imaging—biology

List of Publications

Corrected Joint SENSE Reconstruction, Low-Rank Constraints, and Compressed-Sensing-Accelerated Diffusion Spectrum Imaging in Denoising and Kurtosis Tensor Estimation,
ISM RM 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,

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

Noise Reduction in Accelerated Diffusion Spectrum Imaging through Integration of SENSE Reconstruction into Joint Reconstruction in Combination with q-Space Compressed Sensing,

[C8] J. Stühmer, P. Schröder and D. Cremers,
Tree Shape Priors with Connectivity Constraints using Convex Relaxation on General Graphs,
IEEE International Conference on Computer Vision (ICCV), 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,
Keywords: Medical Imaging—biology

List of Publications

Conference and Workshop Papers


2011
Journal Articles


Conference and Workshop Papers


2010
Conference and Workshop Papers


2009
Conference and Workshop Papers

Keywords: Medical Imaging—biology

List of Publications

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,

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,

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 excitation in neural field models: Equivalence of rate descriptions and integrate-and-fire dynamics,