Keywords: Medical Imaging—biology

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. Moretti, 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

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2018

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2017

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Establishment of an interdisciplinary workflow of machine learning-based Radiomics in sarcoma patients,

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,
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[C1] V. Golkov, T. Sprenger, J. I. Sperl, M. I. Menzel, M. Czisch, P. Sämann and D. Cremers,
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[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,
Annual Conference on Neural Information Processing Systems (NIPS), Barcelona, Spain, dec 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, oct 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,
Keywords: Medical Imaging—biology  

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2014

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2013

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Corrected Joint SENSE Reconstruction, Low-Rank Constraints, and Compressed-Sensing-Accelerated Diffusion Spectrum Imaging in Denoising and Kurtosis Tensor Estimation,
ISMRRM 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,
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An image classification approach to analyze the suppression of plant immunity by the human pathogen Salmonella Typhimurium,
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Evaluation of DSI Imaging with Compressed Sensing under the Presence of Different Noise Levels on a Diffusion Phantom,

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

2011

Journal Articles

A Variational Approach to Vesicle Membrane Reconstruction from Fluorescence Imaging,

Conference and Workshop Papers

[C1] M. Klodt and D. Cremers,
A Convex Framework for Image Segmentation with Moment Constraints,
*IEEE International Conference on Computer Vision (ICCV)*, 2011.

[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

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[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

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[C1] T. Pock, A. Chambolle, H. Bischof and D. Cremers,
A Convex Relaxation Approach for Computing Minimal Partitions,
Keywords: Medical Imaging—biology

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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,
Keywords: Medical Imaging—biology

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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,