2022

Journal Articles

Deep Learning in Attosecond Metrology,
Optics Express, 2022.

Conference and Workshop Papers

[C1] J. Veraart and 100 coauthors,
A data-driven variability assessment of brain diffusion MRI preprocessing pipelines,

2021

Journal Articles

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

[J2] M. Mozes, M. Schmitt, V. Golkov, H. Schütze and D. Cremers,
Scene Graph Generation for Better Image Captioning?,

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),

PhD Thesis

[PhD1] V. Golkov,
Deep learning and variational analysis for high-dimensional and geometric biomedical data,
Department of Informatics, Technical University of Munich, Germany, 2021.
2020

Journal Articles

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,

[J3] G Fabbro, V Golkov, T Kemp and D Cremers,
Speech Synthesis and Control Using Differentiable DSP,

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

[J1] F. Pasa, V. Golkov, F. Pfeiffer, D. Cremers and D. Pfeiffer,
Efficient Deep Network Architectures for Fast Chest X-Ray Tuberculosis Screening and Visualization,

[J2] J. Schuchardt, V. Golkov and D. Cremers,
Learning to Evolve,

[J3] L. Della Libera, V. Golkov, Y. Zhu, A. Mielke and D. Cremers,
Deep Learning for 2D and 3D Rotatable Data: An Overview of Methods,

Conference and Workshop Papers

[C1] A. Vasilev, V. Golkov, M. Meissner, I. Lipp, E. Sgarlata, V. Tomassini, D. K. Jones and D. Cremers,
q-Space Novelty Detection with Variational Autoencoders,
MICCAI 2019 International Workshop on Computational Diffusion MRI, 2019, Oral Presentation.

[C2] P. Swazinna, V. Golkov, I. Lipp, E. Sgarlata, V. Tomassini, D. K. Jones and D. Cremers,
Negative-Unlabeled Learning for Diffusion MRI,
2018

Journal Articles

[J1] E. Aljalbout, V. Golkov, Y. Siddiqui, M. Strobel and D. Cremers,
*Clustering with Deep Learning: Taxonomy and New Methods*,

Conference and Workshop Papers

[C1] V. Golkov, A. Vasilev, F. Pasa, I. Lipp, W. Boubaker, E. Sgarlata, F. Pfeiffer, V. Tomassini, D. K. Jones and D. Cremers,
*q-Space Novelty Detection in Short Diffusion MRI Scans of Multiple Sclerosis*,

*q-Space Deep Learning for Alzheimer’s Disease Diagnosis: Global Prediction and Weakly-Supervised Localization*,

[C3] B. T. Do, V. Golkov, G. E. Gürel and D. Cremers,
*Precursor microRNA Identification Using Deep Convolutional Neural Networks*,

[C4] P. Haeusser, J. Plapp, V. Golkov, E. Aljalbout and D. Cremers,
*Associative Deep Clustering - Training a Classification Network with no Labels*,
*Proc. of the German Conference on Pattern Recognition (GCPR)*, October 2018.

2017

Journal Articles

[J1] J. Kukacka, V. Golkov and D. Cremers,
*Regularization for Deep Learning: A Taxonomy*,

Conference and Workshop Papers

*Establishment of an interdisciplinary workflow of machine learning-based Radiomics in sarcoma patients*,
2016
Journal Articles


Conference and Workshop Papers


2015
Book Chapters


Conference and Workshop Papers


Author: Golkov—coauthors

List of Publications


2014

Book Chapters


Conference and Workshop Papers


List of Publications

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

2013
Conference and Workshop Papers

Effects of Low-Rank Constraints, Line-Process Denoising, and q-Space Compressed Sensing on Diffusion MR Image Reconstruction and Kurtosis Tensor Estimation,

Line-Process-Based Joint SENSE Reconstruction of Diffusion Images with Intensity Inhomogeneity Correction and Noise Non-Stationarity Correction,
*European Society for Magnetic Resonance in Medicine and Biology (ESMRMB) Annual Meeting*, 2013, Certificate of Merit Award.

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,

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,
2012
Conference and Workshop Papers

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,