2022

Journal Articles

[J1] C. Tomani and D. Cremers,
Challenger: Training with Attribution Maps,

and R. Kienberger,
Deep Learning in Attosecond Metrology,
Optics Express, 30(9): 15669-15684, 2022, Editor’s Pick.

Conference and Workshop Papers

[C1] F. Müller, Q. Khan and D. Cremers,
Lateral Ego-Vehicle Control Without Supervision Using Point Clouds,

[C2] L. Hang, Q. Khan, V. Tresp and D. Cremers,
Biologically Inspired Neural Path Finding,
Brain Informatics (Accepted), Springer, 2022.

[C3] D. Das, Q. Khan and D. Cremers,
Ventriloquist-Net: Leveraging Speech Cues for Emotive Talking Head Generation,
IEEE International Conference on Image Processing (Accepted), 2022.

2021

Journal Articles

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

[J2] C. Tomani, D. Cremers and F. Buettner,
Parameterized Temperature Scaling for Boosting the Expressive Power in Post-Hoc Uncertainty Calibration,

[J3] M. Mozes, M. Schmitt, V. Golkov, H. Schütze and D. Cremers,
Scene Graph Generation for Better Image Captioning?,

Conference and Workshop Papers

[C1] F. Wimbauer, N. Yang, L. von Stumberg, N. Zeller and D. Cremers,
MonoRec: Semi-Supervised Dense Reconstruction in Dynamic Environments from a Single Moving Camera,
Keywords: Deep Learning

List of Publications

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

[C3] Q. Khan, P. Wenzel and D. Cremers, 
*International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2021.

[C4] Y. Xia, Y. Xu, S. Li, R. Wang, J. Du, D. Cremers and U. Stilla, 
*SOE-Net: A Self-Attention and Orientation Encoding Network for Point Cloud based Place Recognition*, 
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021, *Oral Presentation*.

[C5] P. Wenzel, T. Schön, L. Leal-Taixe and D. Cremers, 
*Vision-Based Mobile Robotics Obstacle Avoidance With Deep Reinforcement Learning*, 

[C6] C Tomani and F Buettner, 
*Towards Trustworthy Predictions from Deep Neural Networks with Fast Adversarial Calibration*, 
*InThirty-FifthAAAIConferenceonArtificialIntelligence(AAAI-2021)*, 2021.

[C7] C Tomani, S Gruber, ME Erdem, D Cremers and F Buettner, 
*Post-hoc Uncertainty Calibration for Domain Drift Scenarios*, 
*IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021, *Oral Presentation*.

[C8] D Schnaus, J Lee and R Triebel, 
*Kronecker-Factored Optimal Curvature*, 

PhDThesis

[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

[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*, 

[J2] L. von Stumberg, P. Wenzel, Q. Khan and D. Cremers, 
Keywords: Deep Learning  

List of Publications

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

[J4] I Chiotellis and D Cremers,
Neural Online Graph Exploration,

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,

[C2] N. Yang, L. von Stumberg, R. Wang and D. Cremers,
D3VO: Deep Depth, Deep Pose and Deep Uncertainty for Monocular Visual Odometry,

[C3] J Liu, I Chiotellis, R Triebel and D Cremers,
Effective Version Space Reduction for Convolutional Neural Networks,
European Conference on Machine Learning and Data Mining (ECML-PKDD), 2020.

4Seasons: A Cross-Season Dataset for Multi-Weather SLAM in Autonomous Driving,

[C5] L. von Stumberg, P. Wenzel, N. Yang and D. Cremers,
LM-Reloc: Levenberg-Marquardt Based Direct Visual Relocalization,

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
Keywords: Deep Learning

List of Publications


2018

Journal Articles


Conference and Workshop Papers


Keywords: Deep Learning

List of Publications

[C6] P. Wenzel, Q. Khan, D. Cremers and L. Leal-Taixe,
Modular Vehicle Control for Transferring Semantic Information Between Weather Conditions Using GANs,
Conference on Robot Learning (CoRL), 2018.

2017
Journal Articles

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

Conference and Workshop Papers

[C1] F. Walch, C. Hazirbas, L. Leal-Taixe, T. Sattler, S. Hilsenbeck and D. Cremers,
Image-based localization using LSTMs for structured feature correlation,

T. Goldberg, L. Richter, J. Reeb, B. Rost, F. Pfeiffer, D. Cremers, F. Nüsslin and S.E. Combs,
Establishment of an interdisciplinary workflow of machine learning-based Radiomics in sarcoma patients,

[C3] P. Haeusser, A. Mordvintsev and D. Cremers,
Learning by Association - A versatile semi-supervised training method for neural networks,

[C4] T. Meinhardt, M. Moeller, C. Hazirbas and D. Cremers,
Learning Proximal Operators: Using Denoising Networks for Regularizing Inverse Imaging Problems,

One-Shot Video Object Segmentation,

[C6] K. Kurach, S. Gelly, M. Jastrzebski, P. Haeusser, O. Teytaud, D. Vincent and O. Bousquet,
Better Text Understanding Through Image-To-Text Transfer,

[C7] P. Haeusser, T. Frerix, A. Mordvintsev and D. Cremers,
Associative Domain Adaptation,
Keywords: Deep Learning

List of Publications

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,
*IEEE Transactions on Medical Imaging, 35*: 2016, Special Issue on Deep Learning.

Conference and Workshop Papers

[C1] 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%).

[C2] C. Hazirbas, L. Ma, C. Domokos and D. Cremers,
, 
*Asian Conference on Computer Vision*, november 2016.

[C3] S. Sharifzadeh, I. Chiotellis, R. Triebel and D. Cremers,
Learning to Drive using Inverse Reinforcement Learning and Deep Q-Networks,
*NIPS Workshops*, December 2016.

2015

Conference and Workshop Papers

q-Space Deep Learning for Twelve-Fold Shorter and Model-Free Diffusion MRI Scans,

[C2] 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,
*IEEE International Conference on Computer Vision (ICCV)*, dec 2015.

[C3] F. Stark, C. Hazirbas, R. Triebel and D. Cremers,
CAPTCHA Recognition with Active Deep Learning,
*GCPR Workshop on New Challenges in Neural Computation*, Aachen, Germany, 2015.