

ZORAH LÄHNER

ACADEMIC EXPERIENCE

Since Jan 2024	Assistant Professor (Tenure Track) Member of the Lamarr Institute	University of Bonn, Germany
Feb 2021 - Dec 2023	Postdoctoral Researcher supervisor: Prof. Dr. Michael Moeller	University of Siegen, Germany
Sep 2019 - Dec 2019	Research Intern supervisor: Dr. Roberto Mecca	Toshiba Research Europe, Cambridge, UK
May 2019 - Jun 2019	DAAD Short-Term Scholarship for PhD Students supervisor: Prof. Dr. Emanuele Rodolà	Sapienza Università di Roma, Italy
Sep 2017 - Feb 2018	Research Intern resulted in a patent application and a publication at ECCV 2018 supervisor: Dr. Tony Tung	Facebook Reality Labs, Sausalito, US
Mar 2017	Visiting Researcher resulted in a publication at 3DV 2017 supervisor: Prof. Dr. Alex Bronstein	Technion Israel Institute of Technology, Israel
Nov 2015 - Jan 2021	Researcher/PhD Candidate funded under the ERC Consolidator Grant "3D Reloaded" supervisor: Prof. Dr. Daniel Cremers	Technical University Munich, Germany

EDUCATION

Nov 2015 - Apr 2021	Ph.D. in Computer Science (summa cum laude) supervisor: Prof. Dr. Daniel Cremers · Dissertation title: Continuous Correspondence of Non-Rigid 3D Shapes
Apr 2013 - Oct 2015	M.Sc. in Computer Science with distinction Final Grade: (1.3 / 1.0) · Minor: Mathematics
Oct 2009 - Mar 2013	B.Sc. in Computer Science Final Grade: (1.6 / 1.0) · Minor: Physics and Astronomy

PUBLICATIONS (selection)

Conference papers in computer vision normally have more impact than journal publications. Authors are ordered by their contribution. All publications are peer-reviewed.

- [NeuRIPS '23] **Kissing to Find a Match: Efficient Low-Rank Permutation Representation**
Hannah Dröge, **Zorah Lähner**, Yuval Bahat, Onofre Martorell, Felix Heide, Michael Moeller.
Proc. of Neural Information Processing Systems (NeuRIPS), 2023.
- [CVPR 2023] **Conjugate Product Graphs for Globally Optimal 2D-3D Shape Matching**
Paul Roetzer, **Zorah Lähner**, Florian Bernard.
Proc. of IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023.
- [ICLR 2023] **QuAnt: Quantum Annealing with Learnt Couplings**
Marcel Seelbach Benkner, Maximilian Krahn, Edith Treschk, **Zorah Lähner**, Michael Moeller, Vladislav Golyanik.
Proc. of International Conference on Learning Representations (ICLR), 2023.
- [ECCV 2022] **Intrinsic Neural Fields: Learning Functions on Manifolds**
Lukas Koestler*, Daniel Grittner*, Michael Moeller, Daniel Cremers, **Zorah Lähner**.
Proc. of European Conference on Computer Vision (ECCV), 2022.
- [ICCV 2021] **Q-Match: Iterative Shape Matching via Quantum Annealing**
Marcel Seelbach Benker, **Zorah Lähner**, Vladislav Golyanik, Christof Wunderlich, Christian Theobalt, Michael Moeller.
Proc. of International Conference on Computer Vision (ICCV), 2021.
- [CVPR 2020] **Smooth Shells: Multi-Scale Shape Registration with Functional Maps**
Marvin Eisenberger, **Zorah Lähner**, Daniel Cremers.
Proc. of IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020.
- [CGF 2019] **Functional Map Representation on Product Manifolds**
Emanuele Rodolà, **Zorah Lähner**, Alex M. Bronstein, Michael M. Bronstein, Justin Solomon.
Computer Graphics Forum, 2019.
- [ECCV 2018] **DeepWrinkles: Accurate and Realistic Clothing Modeling**
Zorah Lähner, Daniel Cremers, Tony Tung.
Proc. of European Conference on Computer Vision (ECCV), 2018.
- [3DV 2017] **Efficient Deformable Shape Correspondence via Kernel Matching**
Matthias Vestner*, **Zorah Lähner***, Amit Boyarski*, Or Litany, Ron Slossberg, Tal Remez, Emanuele Rodolà, Alex M. Bronstein, Michael M. Bronstein, Ron Kimmel.
Proc. of Intl. Conference on 3D Vision (3DV), 2017.

FUNDING

DFG	Sachbeihilfe 2024-2026 3 year project "Robust Spectral Non-Rigid Shape Correspondences"	310k Euros
MKW NRW	KI-Starter grant 2022-2024 2 year project "Robust Geometric Deep Learning"	170k Euros

REVIEW ACTIVITIES (selection)

Conferences CVPR 2016-2024 • 3DV 2016-2024 • ICCV 2019 - 2021 • NeurIPS 2019-2020 • ECCV 2020-2022 • SIGGRAPH 2020 - 2021, 2023 • ICLR 2021 • Eurographics 2024

Journals JVCI • IJCV • JMIV

Outstanding Reviewer Award at 3DV 2021 and ECCV 2022

COMMITTEES

ECCV 2024	Area Chair European Conference on Computer Vision ·
ICIAP 2023	Area Chair International Conference on Image Analysis and Processing ·
STAG 2021	Best Thesis Award Committee Matteo Dellepiane Award ·
FGML 2021	Program and Website Chair French-German Machine Learning Symposium ·

INVITED TALKS (selection)

Nov 2023	Tübingen AI Center Permutations in Neural Networks and Quantum Annealing	invited by Dr. Riccardo Marin
Sep 2023	Ecole Polytechnique Paris Permutations in Neural Networks and Quantum Annealing	invited by Prof. Dr. Maks Ovsjanikov
Jan 2023	Mathematics and Image Analysis (MIA) Intrinsic Neural Fields: Learning Functions on Manifolds	Invited Speaker
Nov 2022	University of Hamburg 3D Shape Correspondence	3D Study Day
Jan 2021	Max Planck Institute Tübingen Non-Rigid Shape Correspondence Through Deformation	invited by Dr. Jinlong Yang
Oct 2020	University of Siegen Continuity in Non-Rigid Correspondence	Women in Vision Siegen
May 2019	Sapienza Università di Roma Divergence-Free Correspondence by Deformation	invited by Prof. Dr. Emanuele Rodolà
Feb 2019	Max Planck Institute Saarbrücken DeepWrinkles: Accurate and Realistic Cloth Modeling	invited by Dr. Gerard Pons-Moll
Aug 2018	Symposium on Geometry and Uncertainty in Deep Learning Accurate and Realistic Cloth Modeling with Real-Data	Rank Prize Funds

TEACHING (selection)

SS 2022	Introduction to Visual Computing Teaching Assistant, Lecture for computer science bachelor students (10 students)	University of Siegen
WS 2021/22	Deep Learning Teaching Assistant, Lecture for computer science and mechanical engineering master students (50 students)	University of Siegen
WS 2020/21	Recent Advances in 3D Computer Vision Organizer, Seminar for computer science master students (15 participants)	Technical University Munich
SS 2020	Shape Analysis and Applications in Computer Vision Organizer, Seminar for computer science master students (15 participants)	Technical University Munich
WS 2018/19	Diskrete Strukturen Teaching Assistant, Lecture for computer science bachelor students (50 students)	Technical University Munich
SS 2016 & 2017	Analysis of Three-Dimensional Shapes Teaching Assistant, Lecture for computer science master students (15-20 students)	Technical University Munich
SS 2016	Shape Analysis and Applications in Computer Vision Organizer, Seminar for computer science master students (18 participants)	Technical University Munich
WS 2016/17	Logik und Diskrete Strukturen Teaching Assistant, Lecture for computer science bachelor students (30 students)	University of Bonn

SUPERVISED STUDENT PROJECTS (selection)

Master's Thesis	Unsupervised Learning for Non-Rigid Deformations in 3D Shapes Sharik Siddiqi, Mechanical Engineering, 2022 resulted in a publication at GCPR 2023
Bachelor's Thesis	Intrinsic Neural Fields for Visual Computing on Manifolds Daniel Grittner, Computer Science, 2022 resulted in a publication at ECCV 2022
Master's Thesis	Machine Learning-Based Electroanatomical Mapping of the Heart with Generation of 3D Reconstructions from Biosignals Only Alessa Grund, Biomedical Computing, in cooperation with Ablacon, 2022
Master's Thesis	Automatic Generation of 3D Brick Models Mohammad Khan, Computer Science, 2022
Master's Thesis	Unsupervised Shape Correspondence with Heat Kernels Mehmet Aygün, Computer Science, 2020 resulted in publication at 3DV 2020
Guided Research	A Probabilistic Algorithm for Shape Correspondence Problems Benjamin Holzschuh, Computer Science, 2020 resulted in publication at 3DV 2020
Interdisciplinary Project	Minimum Distortion Conformal Mappings onto 3D Triangle Meshes Nina Avramova, Computer Science, 2017