Zorah Lähner
zorah.laehner@uni-siegen.de
zorah.github.io

ZORAH **LÄHNER**

ACADEMIC EXPERIENCE

since Feb 2021	**Postdoctoral Researcher** supervisor: Prof. Dr. Michael Moeller	University of Siegen, Germany
Nov 2015 - Jan 2021	**Researcher/PhD Candidate** funded under the ERC Consolidator Grant "3D Reloaded" supervisor: Prof. Dr. Daniel Cremers	Technical University Munich, 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
Feb 2015 - Nov 2015	**Student Researcher** resulted in a publication at CVPR 2016 supervisor: Prof. Dr. Emanuele Rodolà	Technical University Munich, Germany

EDUCATION

Nov 2015 - Apr 2021	**Ph.D. in Computer Science (summa cum laude, defense passed, no certificate yet)** supervisor: Prof. Dr. Daniel Cremers · 3D Shape Analysis
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.

[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 2021] **Isometric Multi-Shape Matching**
Maolin Gao, **Zorah Lähner**, Johan Thunberg, Daniel Cremers, Florian Bernard.
Proc. of IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021.

[3DV 2020] **Simulated Annealing for 3D Shape Correspondence**
Benjamin Holzschuh, **Zorah Lähner**, Daniel Cremers.
Proc. of Intl. Conference on 3D Vision (3DV),2020.

[3DV 2020] **Unsupervised Dense Shape Correspondence using Heat Kernels**
Mehmet Aygün, **Zorah Lähner**, Daniel Cremers.
Proc. of Intl. Conference on 3D Vision (3DV), 2020.

[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.

[SGP 2019] **Divergence-Free Shape Correspondence by Deformation**
Marvin Eisenberger, **Zorah Lähner**, Daniel Cremers.
Computer Graphics Forum (Proc. of Symposium on Geometry Processing),2019.

[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.

[CVPR 2016] **Efficient Globally Optimal 2D-to-3D Deformable Shape Matching**
Zorah Lähner, Emanuele Rodolà, Frank R. Schmidt, Michael M. Bronstein, Daniel Cremers.
Proc. of IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016.

REVIEW ACTIVITIES (selection)

Conferences CVPR 2016-2021 • BMVC 2016-2018 • 3DV 2016-2021 • ICCV 2019 - 2021 • NeurIPS 2019-2020 • ECCV 2020 • SIGGRAPH 2020 - 2021 • WACV 2021

Journals JVCI • IJCV • JMIV

INVITED TALKS (selection)

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 2020	**Ecole Polytechnique Paris (virtual)** Smooth Shells: Multi-Scale Shape Registration with Functional Maps	invited by Prof. Dr. Maks Ovsjanikov
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
Jul 2018	**Workshop on Machine Learning for 3D Understanding** Accurate and Realistic Cloth Modeling with Real-Data	TUM Institute for Advanced Studies
Jan 2017	**Dagstuhl Seminar 17021 on Functoriality in Geometric Data** Efficient Globally Optimal 2D-to-3D Deformable Shape Matching	Leibniz Center for Informatics
Feb 2016	**Stanford University** Efficient Globally Optimal 2D-to-3D Deformable Shape Matching	invited by Prof. Dr. Leonidas Guibas

---

TEACHING (selection)

SS 2021	**Recent Advances in Machine Learning** Supervisor, Practical course for computer science and mechanical engineering master students (6 students)	University of Siegen
SS 2021	**Seminar Visual Computing** Supervisor, Seminar for computer science bachelor and master students (1 student)	Technical University Munich
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

Master's Thesis	**Stefan Denner** GPS in the Heart - Towards a Purely Biosignal Based Intracardiac Navigation System (in cooperation with the start-up Ablacon)
Interdisciplinary Project	**Mehmet Aygün** Unsupervised Dense Shape Correspondence using Heat Kernels resulted in publication at 3DV 2020
Guided Research	**Benjamin Holzschuh** A Probabilistic Algorithm for Shape Correspondence Problems resulted in publication at 3DV 2020
Master's Thesis	**Nina Avramova** Uncalibrated photometric 3D Reconstruction with Variable Priors
Master's Thesis	**Maurice Hermwille** Fast Marching on 3D Product Manifolds
Interdisciplinary Project	**Tobias Gurdan** Design and Analysis of Methods for the Visualization of Shapes using Point Clouds
Interdisciplinary Project	**Nina Avramova** Minimum Distortion Conformal Mappings onto 3D Triangle Meshes

EXTRACURRICULAR ACTIVITIES

2018	**Organization committee of the Graduation Ceremony** Technical University Munich The ceremony was held for all computer science graduates (BSc, MSc, PhD) in 2018. My tasks were organizing catering for approximately 1600 participants and planning the program including the speeches and entertainment for the breaks.
2010-2012	**Elected Member of the Student Council** University of Bonn Functions included member of the Department's Managing Board, the Examination Board B.Sc. Computer Science, the Library Committee and tutor in the First Semester Welcoming.