

# Manuel Dahnert

📍 Belgradstr. 132, Munich, Germany

@ manuel.dahnert@tum.de

🌐 manuel-dahnert.com

## EDUCATION

- 2018 – ~2022  
Ph.D. **Technische Universität München (TUM)** Munich, Germany  
Ph.D. in Visual Computing with focus on data-driven methods for Shape Generation and Retrieval, and Scene Understanding under the supervision of Prof. Matthias Nießner.
- 2019  
Research Visit **Stanford University** Stanford, California, United States  
Research Visit from April until June 2019 in the Geometric Computation Group of Prof. Leonidas Guibas as part of his TUM-IAS Hans Fischer Senior fellowship.
- 2015 – 2018  
M.Sc. **Technische Universität München (TUM)** Munich, Germany  
M.Sc. in Informatics: Games Engineering with specialization in Computer Graphics and Animation, and Hardware-aware Programming. Thesis "*Transfer Learning between Synthetic and Real Data*".
- 2016 – 2017  
Exchange **Chalmers University of Technology** Göteborg, Sweden  
Exchange student of the Erasmus+ Mobility Program with selected courses in Advanced Computer Graphics, Game Engine Architecture and Mobile Computing.
- 2012 – 2015  
B.Sc. **Technische Universität München (TUM)** Munich, Germany  
B.Sc. in Informatics: Games Engineering. Thesis "*Glyph-based Visualization of Uncertain Scientific Data*".

## EXPERIENCE

- 9/2018 – **Ph.D. Candidate** Technische Universität München (TUM)  
Ph.D. in Visual Computing with focus on Shape Generation, Retrieval and Scene Understanding under the supervision of Prof. Matthias Nießner.
- 6/2018 – 8/2018 **Research Intern** Technische Universität München (TUM)  
Research Internship at the Visual Computing Group about the topic of analyzing geometric similarities between 3D meshes using Deep Learning methods.
- 4/2017 – 7/2017 **Research Assistant** Technische Universität München (TUM)  
Research assistant for a follow-up project to my Bachelor's thesis in which the developed visualization method was compared to other state-of-the-art methods in a quantitative user study.
- 6/2014 – 2/2016 **Software Developer (Working Student)** CCV Deutschland GmbH  
Software developer for embedded payment solutions in a cross platform environment with C++.

## PUBLICATIONS

- NeurIPS 2021** **Manuel Dahnert**, Ji Hou, Matthias Nießner, Angela Dai: ***Panoptic 3D Scene Reconstruction from a Single RGB Image***.
- ICCV 2019** **Manuel Dahnert**, Angela Dai, Leonidas Guibas, Matthias Nießner: ***Joint Embedding of 3D Scan and CAD Objects***.
- CVPR 2019** Armen Avetisyan, **Manuel Dahnert**, Angela Dai, Angel X. Chang, Manolis Savva, Matthias Nießner: ***Scan2CAD: Learning CAD Model Alignment in RGB-D Scans***. **(Oral)**.
- Arxiv 2019** **Manuel Dahnert**, Alexander Rind, Wolfgang Aigner, Johannes Kehler: ***Looking Beyond The Horizon: Evaluation of Four Compact Visualization Techniques for Time Series in a Spatial Context***.
- TUM 2018** **Manuel Dahnert**: ***Master Thesis: Transfer Learning between Synthetic and Real Data***.

## REVIEWING

- CVPR** **IEEE/CVF Computer Vision and Pattern Recognition Conference**  
2022: 2 papers
- ICCV** **IEEE/CVF International Conference on Computer Vision**  
2021: 4 papers, 1 emergency review
- ECCV** **European Conference on Computer Vision**  
2022: 5 papers
- TPAMI** **IEEE Transactions on Pattern Analysis and Machine Intelligence**  
2022: 2 papers

## WACV

### IEEE Winter Conference on Applications of Computer Vision

2021: 5 papers, 1 emergency review

2022: 3 papers

## TEACHING

- 10/2021 – 03/2022 **Co-Head Teaching assistant for the course "Introduction To Deep Learning"**  
Approx. 1500 students, lecture webpage: <https://niessner.github.io/12DL/>
- 04/2021 – 09/2021 **Co-Head Teaching assistant for the course "Introduction To Deep Learning"**  
Approx. 1200 students, lecture webpage: <https://niessner.github.io/12DL/>
- 10/2020 – 4/2021 **Teaching Assistant for practical course "3D Scanning & Spatial Learning"**  
Supervisor of groups of students conducting further research of 3D scanning algorithms.
- 3/2019 – 9/2020 **Teaching Assistant for "3D Scanning & Motion Capture"**  
Teaching Assistant for the practical part of the course. Students had to implement basic concepts of the course as well as a larger group project.
- 10/2018 – 2/2019 **Instructor for the "Visual Computing" seminar**  
Co-instructor for the seminar course "*Visual Computing*" in which students had to present current topics and papers in the field of Visual Computing and related areas.
- 10/2017 – 2/2018 **Tutor for "Game Physics"**  
Student tutor and lab assistant for the lecture "*Game Physics*" in which the students had to implement a mass-spring system, a rigid-body and a balls-in-the-box simulation as well as an open project in C++.

May, 2022