

Manuel Dahnert

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EDUCATION

- 2018 – 2024 *expected* **Technische Universität München (TUM)** **Munich, Germany**
Ph.D. Student Ph.D. in Visual Computing with focus on data-driven methods for Scene Understanding, Shape Generation, and Diffusion Models under the supervision of Prof. Matthias Nießner.
- 2019 **Stanford University** **Stanford, California, United States**
Research Visit 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 **Technische Universität München (TUM)** **Munich, Germany**
M.Sc. 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 **Chalmers University of Technology** **Göteborg, Sweden**
Exchange Exchange student of the Erasmus+ Mobility Program with selected courses in Advanced Computer Graphics, Game Engine Architecture and Mobile Computing.
- 2012 – 2015 **Technische Universität München (TUM)** **Munich, Germany**
B.Sc. B.Sc. in Informatics: Games Engineering. Thesis "*Glyph-based Visualization of Uncertain Scientific Data*".

EXPERIENCE

- 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 2024** **Manuel Dahnert**, Angela Dai, Norman Müller Matthias Nießner:
Coherent 3D Scene Diffusion From a Single RGB Image.
- 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 Kehrer:
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

NeurIPS	Conference on Neural Information Processing Systems 2024
CVPR	IEEE/CVF Computer Vision and Pattern Recognition Conference 2022, 2023, 2024
ICCV	IEEE/CVF International Conference on Computer Vision 2021
ECCV	European Conference on Computer Vision 2022
TPAMI	IEEE Transactions on Pattern Analysis and Machine Intelligence 2022
WACV	IEEE Winter Conference on Applications of Computer Vision 2021, 2022, 2024

TEACHING

Summer 2024 Winter '23/'24 Summer 2023 Winter '22/'23 Winter '21/'22 Summer 2021	"Introduction To Deep Learning" (Head Teaching Assistant) 1200 (Summer '21) - 1900 (Summer '24) students lecture webpage: https://niessner.github.io/I2DL/ lecture webpage: https://www.3dunderstanding.org/i2dl-w22/ (Winter '22/'23) Organize course staff (5 - 15 student assistants), design and organize exam, handle and diligent organizational matters. Improve and implement automatic programming exercise evaluation system.
Winter '20/'21	"3D Scanning & Spatial Learning Practical Course" (Teaching Assistant) Supervisor of groups of students conducting further research of 3D scanning algorithms.
Summer 2020 Winter '19/'20 Summer 2019	"3D Scanning & Motion Capture" (Teaching Assistant) 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.
Winter '18/'19	"Visual Computing seminar" (Instructor) Co-instructor for the seminar course " <i>Visual Computing</i> " in which students had to present current topics and papers in the field of Visual Computing and related areas.
Winter '17/'18	"Game Physics" (Student Tutor) Student tutor and lab assistant for the lecture " <i>Game Physics</i> " 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++.