

Chen Guo

Incoming AI Research Scientist at Meta Codec Avatars Lab
Dr. sc. ETH Zurich in Computer Science

Email: chen.guo@inf.ethz.ch, Web: [Personal Page](#), Google Scholar: [Link](#), GitHub: [Repos](#)

EDUCATION

ETH Zurich

Mar. 2022 – Aug. 2025

Ph.D. in Computer Science

Advisor: Prof. [Otmar Hilliges](#)

Partially funded by Swiss JRC of Microsoft. Second Advisor: Dr. [Julien Valentin](#)

Thesis Committee: [Marc Pollefeys](#), [Yebin Liu](#), [Justus Thies](#), [Julien Valentin](#)

ETH Zurich

Sep. 2019 – Feb. 2022

M.S. in Robotics, Systems and Control, GPA: 5.86/6.0 (Distinction)

Advisor: Prof. [Otmar Hilliges](#) and Prof. [Luc Van Gool](#)

University of Stuttgart

Oct. 2016 – Aug. 2019

B.S. in Electrical Engineering and Information Technology, GPA: 1.5/1.0

Wuhan University

Sep. 2014 – Aug. 2019

B.E. in Electrical Engineering and Automation, GPA: 91/100

RESEARCH INTEREST

My research interests lie in developing intelligent systems capable of perceiving, digitally reproducing, and understanding humans. At the core of this vision lies a broad spectrum of human-centric computer vision and computer graphics tasks, including 3D human pose and shape estimation, semantic understanding of humans, modeling human-environment and human-human interactions, and photorealistic 3D reconstruction of people. More broadly, I aim to equip machines with human-like perceptual capabilities to interpret metrically grounded human behaviors and reconstruct realistic digital twins using minimal visual input. These advances pave the way toward consumer-grade photorealistic telepresence, connecting people across distances, and toward intelligent robotic systems that can understand humans and interact with them in natural, human-like ways.

EXPERIENCES

Meta Reality Labs Research (Codec Avatars), Pittsburgh, USA

Research Scientist Intern

Jun. 2024 – Dec. 2024

Team: [Yaser Sheikh](#) (Manager), [Chen Cao](#), [Shunsuke Saito](#), [Junxuan Li](#)

Project: *In-the-Wild Drivable Full-Body Avatars*

ETH Zurich (AIT Lab), Zurich, Switzerland

Research Assistant

Apr. 2021 – Jul. 2021

Team: [Otmar Hilliges](#) (Advisor), [Jie Song](#), [Xu Chen](#)

Project: *In-the-Wild Human Performance Capture*

PUBLICATIONS

* - Equal Contribution ; † - Equal Advisory / Corresponding Author

Highlighted Publications

Vid2Avatar-Pro: Authentic Avatar from Videos in the Wild via Universal Prior

Chen Guo*, Junxuan Li*, Yash Kant, Yaser Sheikh, Shunsuke Saito[†], Chen Cao[†]

IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2025.

ReLoo: Reconstructing Humans Dressed in Loose Garments from Monocular Video in the Wild

Chen Guo*, Tianjian Jiang*, Manuel Kaufmann, Chengwei Zheng, Julien Valentin, Jie Song[†], Otmar Hilliges

European Conference on Computer Vision (ECCV), 2024.

MultiPly: Reconstruction of Multiple People from Monocular Video in the Wild (*Oral Presentation, Top 3.3%*)
Zeren Jiang*, **Chen Guo***, Manuel Kaufmann, Tianjian Jiang, Julien Valentin, Otmar Hilliges, Jie Song[†]
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2024.

Vid2Avatar: 3D Avatar Reconstruction from Videos in the Wild via Self-supervised Scene Decomposition
Chen Guo, Tianjian Jiang, Xu Chen, Jie Song[†], Otmar Hilliges
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023.

X-Avatar: Expressive Human Avatars

Kaiyue Shen*, **Chen Guo***, Manuel Kaufmann, Juan Zarate, Julien Valentin, Jie Song[†], Otmar Hilliges
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023.

PINA: Learning a Personalized Implicit Neural Avatar from a Single RGB-D Video Sequence
Zijian Dong*, **Chen Guo***, Jie Song[†], Xu Chen, Andreas Geiger, Otmar Hilliges
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2022.

Human Performance Capture from Monocular Video in the Wild

Chen Guo, Xu Chen, Jie Song, Otmar Hilliges
International Conference on 3D Vision (3DV), 2021.

Other Publications

Gaussian Wardrobe: Compositional 3D Gaussian Avatars for Free-Form Virtual Try-on
Zhiyi Chen*, Hsuan-I Ho*, Tianjian Jiang, Jie Song, Manuel Kaufmann, **Chen Guo**[†]
Under Review, 2025.

PHD: Personalized 3D Human Body Fitting with Point Diffusion

Hsuan-I Ho, **Chen Guo**, Po-Chen Wu, ..., Manuel Kaufmann[†], Linguang Zhang[†]
International Conference on Computer Vision (ICCV), 2025.

HSR: Holistic 3D Human-Scene Reconstruction from Monocular Videos

Lixin Xue, **Chen Guo**, Chengwei Zheng, Fangjinhua Wang, ..., Jie Song[†], Otmar Hilliges
European Conference on Computer Vision (ECCV), 2024.

4D-DRESS: A 4D Dataset of Real-World Human Clothing With Semantic Annotations (*Highlight, Top 11.9%*)
Wenbo Wang*, Hsuan-I Ho*, **Chen Guo**, ..., Jie Song, Juan Zarate[†], Otmar Hilliges
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2024.

EMDB: The Electromagnetic Database of Global 3D Human Pose and Shape in the Wild

Manuel Kaufmann, Jie Song, **Chen Guo**, Kaiyue Shen, ..., Juan Zarate, Otmar Hilliges
International Conference on Computer Vision (ICCV), 2023.

Hi4D: 4D Instance Segmentation of Close Human Interaction

Yifei Yin, **Chen Guo**, Manuel Kaufmann, Juan Zarate, Jie Song, Otmar Hilliges
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023.

Shape-aware Multi-Person Pose Estimation from Multi-view Images

Zijian Dong, Jie Song, Xu Chen, **Chen Guo**, Otmar Hilliges
International Conference on Computer Vision (ICCV), 2021.

PATENTS

Primitive-Based Full-Body Avatars from Mobile Device Scans (Invention disclosure submitted, 2025)
Chen Guo, Junxuan Li, Yash Kant, Yaser Sheikh, Shunsuke Saito, Chen Cao

ACADEMIC SERVICES

Reviewer

Computer Vision: CVPR, ICCV, ECCV, TPAMI, 3DV
Computer Graphics: SIGGRAPH Asia, ACM TOG
Machine Learning: NeurIPS

Organizer

Workshops: Global 3D Human Poses (G3P) Workshop

AWARDS & HONORS

CVPR Outstanding Reviewer	2025
Microsoft Swiss JRC PhD Fellowship	2022
ETH Scholarship	2020
German National Scholarship (Deutschlandstipendium)	2018, 2019

DATASETS & OPENSOURCE

Vid2Avatar: https://github.com/MoyGcc/vid2avatar High-fidelity 3D human digitization code from a monocular in-the-wild video 1.3K stars and 108 forks (as of Sep 2025)
EMDB Dataset: https://ait.ethz.ch/emdb First in-the-wild dataset with accurate SMPL pose/shape and global camera-body trajectories.
X-Humans Dataset: https://ait.ethz.ch/x-avatar First dataset for clothed human capture and modeling with expressive behaviors
Hi4D Dataset: https://ait.ethz.ch/hi4d Dataset of close human interactions with rich multimodal annotations

INVITED TALKS

Tsinghua University, Beijing (hosted by Yebin Liu)	Sep. 2025
Westlake University, Hangzhou (hosted by Yuliang Xiu)	Aug. 2025
Meta, EMEA, remote (hosted by Shiyang Cheng)	Aug. 2025
Meta, Pittsburgh, remote (hosted by Shunsuke Saito)	Mar. 2025
NVIDIA Research, Santa Clara, remote (hosted by Umar Iqbal)	Dec. 2024
Microsoft Swiss Joint Research Center, Zurich (hosted by Marc Pollefeys)	Apr. 2024
Google Research, Zurich (hosted by Thiemo Alldieck)	Aug. 2023
Adobe Research, San Jose, remote (hosted by Jimei Yang)	Jun. 2023
Microsoft Swiss Joint Research Center, Lausanne (hosted by Marc Pollefeys)	Mar. 2022

STUDENT MENTORSHIP

Zhiyi Chen , Now: Ongoing Master Student at ETH Zurich Semester Project & Master Thesis (2024 - 2025)
Zeren Jiang , Now: Ph.D. Student at Oxford VGG Semester Project (2023 - 2024)
Alessandro Burzio , Now: Ph.D. Student at NVIDIA Master Thesis (2023 - 2024)
Kaiyue Shen , Now: Deep Learning Engineer at Arbrea Labs AG. Master Thesis (2022 - 2023)

TEACHING

Teaching Assistant , ETH Zurich Machine Perception, lectured by Prof. Otmar Hilliges	Spring 2023, Spring 2024, Spring 2025
Teaching Assistant , ETH Zurich Computer Science I, lectured by Dr. Manuela Fischer	Fall 2023
Teaching Assistant , ETH Zurich Linear Algebra, lectured by Prof. Olga Sorkine-Hornung	Fall 2022
Teaching Assistant , University of Stuttgart Introduction to Programming, lectured by Dr. Christian Senger	Fall 2017, Fall 2018

SKILLS

Language: Mandarin (native), English (full proficiency), German (full proficiency)
Programming Language: Python, C/C++
Framework: PyTorch, TensorFlow, NumPy, MATLAB, $\text{\LaTeX}$
Adobe: Photoshop, Premiere Pro