

YUSHUO CHEN

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Education

Tsinghua University

Sep. 2019 – Jun. 2023

Bachelor, Yao Class, Institute for Interdisciplinary Information Sciences (IIIS)

Beijing, China

- GPA 3.85/4.0.

Tsinghua University

Sep. 2023 – Present

PhD, Department of Automation

Beijing, China

- Advised by Prof. Yebin Liu.

Honors and Awards

National Olympiad in Informatics (NOI), Gold Medal

2018

OI National Training Team Selected, Rank 48/50

2018

Suzhou Wuzhong Talent Scholarship, Second Prize

2025

Experience

Kuaishou Technology

Nov. 2025 – Present

Intern at Kling AI

Shenzhen, China

- Conducted research on controllable egocentric video generation, developing to learn 3D hand trajectories from large-scale in-the-wild monocular videos and enable accurate interaction synthesis through 3D head-hand motion disentanglement.

Tencent

Jun. 2025 – Aug. 2025

Intern at Lightspeed Studios

Shenzhen, China

- Developed an automated pose rectification algorithm for user-generated 3D pistol models, improving alignment and usability in downstream gaming applications.

Tencent

Mar. 2019 – Jun. 2019

Intern at YouTu AI Lab

Shenzhen, China

- Assisted to develop a similar-image-retrieval system based on the learned features from ImageNet.
- Based on WordNet, integrated the semantic labels from many different image datasets in order to make use of the datasets without semantic error on labels.

Projects

HandsOnWorld: Unconstrained Egocentric Video Generation with Camera-Disentangled Hand Control (Under Review)

- Developed a 3D hand-controlled egocentric video generation framework that does not rely on multi-view or marker-based motion capture, enabling training on unconstrained monocular video and generalization to diverse everyday scenes.
- Constructed **EgoVid-Pro**, comprising 103,032 video clips and approximately 12M annotated frames, through a three-stage semantic, image-quality, and 3D-geometric filtering pipeline for clean protagonist-centered hand trajectories.
- Designed **Plücker Hand Map** for controllable video generation, which disentangle 3D hand motion from camera ego-motion at the representation level, achieving state-of-the-art results across all the metrics.

HomePage: <https://shad0wta9.github.io/handsonworld-page/>

DevilSight: Augmenting Monocular Human Avatar Reconstruction through a Virtual Perspective 3DV 2026

- Proposed a novel framework for high-fidelity dynamic human-centric reconstruction from monocular video, which leverage the capability of video generative model Human4DiT to complement the unseen perspective.
- Introduced Physical Identity Inversion fine-tuning strategy, enabling accurate generation of identical human motions from the rear-view perspective.
- Presented a patch-based denoising strategy for super-resolution video generation, effectively bridging the resolution gap between real captured and generated videos.

MeshAvatar: Learning High-quality Triangular Human Avatars from Multi-view Videos ECCV 2024

- Proposed an end-to-end pipeline for learning mesh-based human avatars from multi-view videos. The learned triangular-mesh avatar is compatible with traditional graphics pipeline for rendering, editing and simulation.
- Achieved high-quality geometry and material recovery of dynamic humans by differentiable Physics-based rendering.
- Proposed a stereo-based normal estimation module and used it as a weak supervision to improve the method.

HomePage: <https://shad0wta9.github.io/meshavatar-page/>

Publications

- [1] HandsOnWorld: Unconstrained Egocentric Video Generation with Camera-Disentangled Hand Control
Yushuo Chen, Xiaoyu Shi, Xiaoshi Wu, Xintao Wang, Pengfei Wan, Yebin Liu
arXiv Preprint, 2026
- [2] DevilSight: Augmenting Monocular Human Avatar Reconstruction through a Virtual Perspective
Yushuo Chen, Ruizhi Shao, Youxin Pang, Hongwen Zhang, Xinyi Wu, Rihui Wu, Yebin Liu
International Conference on 3D Vision (3DV), 2026
- [3] Parametric Gaussian Human Model: Generalizable Prior for Efficient and Realistic Human Avatar Modeling
Cheng Peng*, Jingxiang Sun*, **Yushuo Chen**, Zhaoqi Su, Zhuo Su, Yebin Liu
International Conference on 3D Vision (3DV), 2026
- [4] MeshAvatar: Learning High-quality Triangular Human Avatars from Multi-view Videos
Yushuo Chen, Zerong Zheng, Zhe Li, Chao Xu, Yebin Liu
European Conference on Computer Vision (ECCV), 2024

Interest

- 3D Computer Vision
- Computer Graphics