# **FUQIANG ZHAO**

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#### ABOUT ME

I am currently a **PhD** student at **ShanghaiTech University**, focusing on research in the field of 3D Computer Vision. My advisor is Professor **Jingyi Yu** (IEEE Fellow), and my research spans several key areas, including **3D Reconstruction & Rendering**, **Camera-Conditioned Video Generation**, and **3D Generative AI**.

As a researcher in 3D vision, my publications have garnered over **1,400+ citations** on Google Scholar. I am passionate about exploring new technologies and ideas, and I am dedicated to transforming these innovations into practical research outcomes.

## **EDUCATION**

# ShanghaiTech University

2020 - Present

Ph.D. candidate, Major in Computer Science 1,400+ citations on Google Scholar.

# China University of Petroleum

2016-2020

B.Sc, Major in Software Engineering GPA: 3.68/4.0, RANK: 2/125

#### **PUBLICATIONS**

About 10 papers, over 4 as first/co-first author(\*) in total, 1400+ citations on Google Scholar.

• AerialGo: Walking-through City View Generation from Aerial Perspectives Fuqiang Zhao\*, Yijing Guo\*, Siyuan Yang\*, Xi Chen, Luo Wang, Lan Xu, Yingliang Zhang, Yujiao Shi, Jingyi Yu

(Arxiv, 2024) [Paper]

We propose AerialGo, a novel framework that generates realistic walking-through city views from aerial images, leveraging multi-view diffusion models to achieve scalable, photorealistic urban reconstructions without direct ground-level data collection.

• LetsGo: Large-Scale Garage Modeling and Rendering via LiDAR-Assisted Gaussian Primitives Jiadi Cui\*, Junming Cao\*, **Fuqiang Zhao\***, Zhipeng He, Yifan Chen, Yuhui Zhong, Lan Xu, Yujiao Shi, Yingliang Zhang, Jingyi Yu

(SIGGRAPH Asia 2024) [Project | [Paper]

We introduce LetsGo, a LiDAR-assisted Gaussian splatting framework for large-scale garage modeling and rendering. We propose a multi-resolution 3D Gaussian representation designed for Level-of-Detail (LOD) rendering.

- NEPHELE: A Neural Platform for Highly Realistic Cloud Radiance Rendering. Haimin Luo, Siyuan Zhang, **Fuqiang Zhao**, Haotian Jing, Penghao Wang, Zhenxiao Yu, Dongxue Yan, Junran Ding, Boyuan Zhang, Qiang Hu, Shu Yin, Lan Xu, JIngyi Yu **Submitted to (SIGGRAPH 2023))** [Paper]
- Human Performance Modeling and Rendering via Neural Animated Mesh.
   Fuqiang Zhao, Yuheng Jiang, Kaixin Yao, Jiakai Zhang, Liao Wang, Haizhao Dai, Yuhui Zhong, Yingliang Zhang, Minye Wu, Lan Xu, Jingyi Yu
   (SIGGRAPH Asia 2022) [Project | Paper]

We present a comprehensive neural approach for high-quality reconstruction, compression, and rendering of human performances from dense multi-view videos.

• NeuVV: Neural Volumetric Videos with Immersive Rendering and Editing.

Jiakai Zhang, Liao Wang, Xinhang Liu, **Fuqiang Zhao**, Minzhang Li, Haizhao Dai, Boyuan

Zhang, Wei Yang, Lan Xu, Jingyi Yu Submitted to (SIGGRAPH 2022) [Paper]

- Fourier PlenOctrees for Dynamic Radiance Field Rendering in Real-time.
   Liao Wang\*, Jiakai Zhang\*, Xinhang Liu, Fuqiang Zhao, Yanshun Zhang, Yingliang Zhang, Minye Wu Lan Xu, Jingyi Yu
   (CVPR 2022 Oral) [Project | Paper]
- HumanNeRF: Efficiently Generated Human Radiance Field from Sparse Inputs.
   Fuqiang Zhao, Wei Yang, Jiakai Zhang, Pei Lin, Yingliang Zhang, Jingyi Yu, Lan Xu
   (CVPR 2022) [Project | Paper]
   We present HumanNeRF a neural representation with efficient generalization ability for high-fidelity free-view synthesis of dynamic humans.
- MVSNeRF: Fast Generalizable Radiance Field Reconstruction from Multi-View Stereo.
   Anpei Chen, Zexiang Xu, Fuqiang Zhao, Xiaoshuai Zhang, Fanbo Xiang, Jingyi Yu, Hao Su (ICCV 2021) International Conference on Computer Vision [Project | Paper]
- Editable Free-viewpoint Video Using a Layered Neural Representation.
   Jiakai Zhang, Xinhang Liu, Xinyi Ye, Fuqiang Zhao, Yanshun Zhang, Minye Wu, Yingliang Zhang, Lan Xu, Jingyi Yu
   (SIGGRAPH 2021) [Project | Paper]
- MirrorNeRF: One-shot Neural Portrait Radiance Field from Multi-mirror Catadioptric Imaging.
   Ziyu Wang, Liao Wang, Fuqiang Zhao, Minye Wu, Lan Xu, Jingyi Yu
   (ICCP 2021) International Conference on Computational Photography [ Paper]

#### **EXPERIENCE**

## NeuDim Digital Technology Inc.

July. 2022 - Present

**CEO**&Founder. NeuDim aims to substitute classical photogrammetry-based 3D/4D reconstruction with emerging neural approaches. It was incubated from the Visual Data Intelligence (VDI) Center at ShanghaiTech, by a group of fearless PhD students with various expertise on neural modeling, rendering, and tracking.

## DGene Digital Technology Inc.

Jan. 2022 - Sep. 2022

R&D Intern. I work as a part-time research and development intern at DGene Digital Technology Inc.

#### TECHNICAL SKILLS

**Programming Languages** Python (Pytorch, ...), C++, CUDA

Softwares & Tools Visual Studio, Pycharm, Jupyter Notebook

Meshlab, Blender

Adobe Photoshop, Premiere

LanguagesEnglish, CET6, 518OthersLatex, Markdown

# REFERENCES

Prof. Jingyi Yu Supervisor, IEEE Fellow ShanghaiTech University yujingyi@@shanghaitech.edu.cn