

LIAO WANG

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INTRODUCTION

I received my Bachelor of Computer Science and Technology at ShanghaiTech University. Now I am the Ph.D. candidate at ShanghaiTech University where I am advised by Prof. Jingyi Yu and Prof. Lan Xu. I am passionate about exploring novel ideas and implementing them. My research interest lies in 3d reconstruction and computer graphics, including neural rendering, and dynamic scene reconstruction. Recently, I am focused on using neural radiance field based methods to perform efficient dynamic scene reconstruction.

EDUCATION

ShanghaiTech University Ph.D. Candidate, Major in Computer Graphics Advisor: Professor Jingyi Yu, Professor Lan Xu	<i>2020 - Present</i>
University of California, Berkeley Summer Session	<i>2018.7 - 2018.8</i>
ShanghaiTech University Bachelor, Major in Computer Science	<i>2016-2020</i>

EXPERIENCE

Meta Research Scientist Intern	<i>2022.9.19 - 2023.3.3</i>
I work as a full-time research scientist intern at Meta Reality Lab in Pittsburgh. I aim to disentangle lighting information to increase the generalization of the full-body codec avatar.	
Teaching Assistant of Deep Learning	<i>2021.9 - 2022.1</i>
Shared responsibility for recitations, coursework and project consulting.	

PUBLICATIONS

- VideoRF: Rendering Dynamic Radiance Fields as 2D Feature Video Streams
Liao Wang, Kaixin Yao, Chengcheng Guo Zhirui Zhang, Qiang Hu, Jingyi Yu, Lan Xu, Minye Wu
(CVPR 2024) [[Project](#) | [Paper](#)]
- Neural Residual Radiance Fields for Streamably Free-Viewpoint Videos.
Liao Wang, Qiang Hu, Qihan He, Ziyu Wang, Jingyi Yu, Tinne Tuytelaars, Lan Xu, Minye Wu
(CVPR 2023) [[Project](#) | [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 Aisa 2022) [[Project](#) | [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, Jingyi Yu, Lan Xu
(CVPR 2022 Oral) [[Project](#) | [Paper](#)]

- iButter: Neural Interactive Bullet Time Generator for Human Free-viewpoint Rendering.
Liao Wang, Ziyu Wang, Pei Lin, Yuheng Jiang, Xin Suo, Minye Wu, Lan Xu, Jingyi Yu
(ACM MM 2021 Oral) ACM Multimedia [[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](#)]
- Neural Opacity Point Cloud.
Cen Wang, Minye Wu, Ziyu Wang, **Liao Wang** , Hao Sheng, Jingyi Yu
(TPAMI 2020)IEEE Transactions on Pattern Analysis and Machine Intelligence [[Project](#) | [Paper](#)]

PROJECTS

Residual Gaussian Representation for Large-Scale Garage Modeling

Propose a hybrid representation for efficient memory training and rendering of large-scale garages.

Rendering radiance field on Looking Glass in Real-time

Built up a Looking Glass Radiance Field Viewer. It enables an immersive and interactive viewing experience for the neural radiance field on the light field displays.

Neural Reflectance Fields for Appearance Acquisition ++

Reproduce Neural Reflectance Fields for Appearance Acquisition and improve its results.

3D Human Reconstruction using a Dome System

Using more than 60 cameras to construct a dome system for multi-view stereo reconstruction. My work focuses on 3D human modeling and rendering.

AWARDS

National Undergraduate Mathematical Modeling Competition Undergraduate Group 2nd Prize *2018.10*
 National College Students Mathematical Modeling Competition Shanghai Division Undergraduate Group 1st Prize *2018.10*
 Shanghaitech University Excellent Student title *2018*
 Shanghaitech University Excellent Scholarship *2017*
 Shanghai International Geek Competition Hard Technology · Creating Future Vehicle Network Smart Application Darkhorse Competition 3rd Prize *2018.10*

TECHNICAL SKILLS

Programming Languages	Python (Pytorch), C, C++ (CUDA)
Softwares & Tools	Visual Studio, Pycharm, Jupyter Notebook, Android Studio Matlab, Agisoft, RealityCapture
Others	Adobe Photoshop, Premiere Latex, Markdown