Li Ma

The Hong Kong University of Science and Technology

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🌐 limacv.github.io/homepage/

Biography

Li Ma is a final year Ph.D. student at the Department of Computer Science & Engineering of the Hong Kong University of Science and Technology (HKUST). His supervisor is Prof. Pedro V. Sander, and he works closely with Prof. Liao Jing. Before that, he obtained his Bachelor's degree with honors in 2019 from Electrical Engineering at Zhejiang University. His research focuses on Novel View Synthesis, Neural Rendering, Differentiable Rendering, and other graphics-related vision topics.

Education

The Hong Kong University of Science and Technology — **Hong Kong, China**
Ph.D., Computer Science & Engineering — *Sept. 2019 – Dec. 2023 (expected)*
Advised by: Prof. Pedro V. Sander

Zhejiang University — **Zhejiang, China**
B.Eng. Electrical Engineering — *Sept. 2015 – Jun. 2019*
GPA: 3.95/4.0; RANK: 2/89

Publications

- **Li Ma**, Xiaoyu Li, Jing Liao, Pedro V. Sander, "3D Video Loops from Asynchronous Input", CVPR 2023. *Project Page*

- **Li Ma**, Xiaoyu Li, Jing Liao, Xuan Wang, Qi Zhang, Jue Wang, Pedro V. Sander, "Neural Parameterization for Dynamic Human Head Editing", SIGGRAPH ASIA 2022. *Project Page*

- **Li Ma**, Xiaoyu Li, Jing Liao, Qi Zhang, Xuan Wang, Jue Wang, Pedro V. Sander, "Deblur-NeRF: Neural Radiance Fields from Blurry Images", CVPR 2022. *Project Page*

- Jierun Chen, Tianlang He, Weipeng Zhuo, **Li Ma**, Sangtae Ha, S.-H. Gary Chan, "TVConv: Efficient Translation Variant Convolution", CVPR 2022.

- Yuze He, **Li Ma**, Zhehao Jiang, Yi Tang, Guoliang Xing, "VI-Eye: Semantic-based 3D Point Cloud Registration for Infrastructure-assisted Autonomous Driving", MobiCom 2021.

Research Experience

Research Intern — **Shenzhen, China**
Tencent AI Lab — *Aug. 2021 – Sept. 2022*

- Manager: Dr. Xiaoyu Li
- NeRF reconstruction under non-ideal input
- 3D Digital human face modeling and editing

Research Scientist Intern — **Pittsburgh, US**
Meta Reality Labs — *May. 2023 – Oct. 2023*

- Manager: Dr. Michael Zollhoefer and Dr. Christian Richardt
- Modeling reflections in NeRF and inverse rendering
- Reconstruct NeRF for VR rendering

Selected Honors & Awards

- Postgraduate Scholarship, HKUST, 2019 - 2023
- The First Prize (Rank: 2/67), The NXP Cup Undergraduate Intelligent Car Race of Zhejiang Province, 2018
- The Second Prize, The NXP Cup Undergraduate Intelligent Car Race of China, 2018
- Research and Innovation Scholarship, Zhejiang University, 2018
- UHV Scholarship, China, 2018
- First Class Scholarship for Outstanding Merits, Zhejiang University, 2017
- Excellent Student Awards, Zhejiang University, 2016

Teaching Assistant

- COMP5411 Advanced Computer Graphics, *2022 Fall & 2020 Fall*
- COMP2011 Programming with C++, *2020 Spring*

Skills

I did most of my projects using Python and Pytorch, while some projects also involve TensorFlow, C/C++, OpenGL/WebGL. I use software like Blender, Davinci Resolve, and Photoshop to assist my projects. I'm also a fast learner of new technologies.