Tianqi Liu

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Education

Huazhong University of Science and Technology *2023 – Present*

Master student in Artificial Intelligence GPA: $95.22/100$, Rank: $1^{st}/90$
Advisor: Prof. Zhiguo Cao

Huazhong University of Science and Technology *2019 – 2023*

B.S. in Artificial Intelligence and Automation GPA: $93.40/100$, Rank: $1^{st}/79$

Experience

MMLAB@NTU *2024.12 – Present*

Project Officier (Research Assistant), advised by Prof. Ziwei Liu

BAAI *2025.1 – Present*

Remote Research Intern, advised by Prof. Hao Zhao

Research Interests

- Neural Representations and Rendering
- 3D / 4D Scene Reconstruction and Generation

Publications

[1] **Tianqi Liu**, Guangcong Wang, Shoukang Hu, Liao Shen, Xinyi Ye, Yuhang Zang, Zhiguo Cao, Wei Li, Ziwei Liu. "MVSGaussian: Fast Generalizable Gaussian Splatting Reconstruction from Multi-View Stereo". *European Conference on Computer Vision (ECCV)*, 2024.
[2] **Tianqi Liu**, Xinyi Ye, Min Shi, Zihao Huang, Zhiyu Pan, Zhan Peng, Zhiguo Cao. "Geometry-aware Reconstruction and Fusion-refined Rendering for Generalizable Neural Radiance Fields". *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.
[3] **Tianqi Liu**, Xinyi Ye, Weiyue Zhao, Zhiyu Pan, Min Shi, Zhiguo Cao. "When Epipolar Constraint Meets Non-local Operators in Multi-View Stereo". *IEEE/CVF International Conference on Computer Vision (ICCV)*, 2023.
[4] **Tianqi Liu**, Zihao Huang, Zhaoxi Chen, Guangcong Wang, Shoukang Hu, Liao Shen, Huiqiang Sun, Zhiguo Cao, Wei Li, Ziwei Liu."Free4D: Tuning-free 4D Scene Generation with Spatial-Temporal Consistency". *arXiv*, 2025.
[5] Liao Shen, **Tianqi Liu**, Huiqiang Sun, Jiaqi Li, Zhiguo Cao, Wei Li, Chen Change Loy. "DoF-Gaussian: Controllable Depth-of-Field for 3D Gaussian Splatting". *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025.
[6] Liao Shen, **Tianqi Liu**, Huiqiang Sun, Xinyi Ye, Baopu Li, Jianming Zhang, Zhiguo Cao. "DreamMover: Leveraging the Prior of Diffusion Models for Image Interpolation with Large Motion". *European Conference on Computer Vision (ECCV)*, 2024.
[7] Xinyi Ye, Weiyue Zhao, **Tianqi Liu**, Zihao Huang, Zhiguo Cao, Xin Li. "Constraining Depth Map Geometry for Multi-View Stereo: A Dual-Depth Approach with Saddle-shaped Depth Cells". *IEEE/CVF International Conference on Computer Vision (ICCV)*, 2023.
[8] Zihao Huang, Shoukang Hu, Guangcong Wang, **Tianqi Liu**, Yuhang Zang, Zhiguo Cao, Wei Li, Ziwei Liu. "WildAvatar: Learning In-the-wild 3D Avatars from the Web". *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025.
[9] Zhan Peng, Xinyi Ye, Weiyue Zhao, **Tianqi Liu**, Huiqiang Sun, Baopu Li, Zhiguo Cao. "3D Multi-frame Fusion for Video Stabilization". *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.

[10] Jiaqi Li, Yiran Wang, Jinghong Zheng, Junrui Zhang, Liao Shen, **Tianqi Liu**, Zhiguo Cao. "CH_3Depth: Efficient and Flexible Depth Foundation Model with Flow Matching". *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025.

COMPETITIONS

- **NTIRE 2024 Challenge on HR Depth from Images of Specular and Transparent Surfaces**
  Winner Award 2024
- **American College Students Mathematical Contest in Modeling**
  Meritorious Winner 2022
- **National Mathematics Competition for College Students**
  First Prize 2021

AWARDS & HONORS

- National Scholarship (Top 0.2%) 2024
- First-Class Scholarship for Postgraduates, HUST 2023
- Honours Degrees, HUST (Top 2%) 2023
- National Scholarship (Top 0.2%) 2022
- Merit Student, HUST (Top 2%) 2022
- Outstanding Undergraduate Student, HUST (Top 2%) 2021

SKILLS

Programming Languages: Python, Matlab, C/C++
Languages: Mandarin - Native speaker, English - Fluent

SERVICES

- **Conference Reviewer**
  CVPR 2025
- **Journal Reviewer**
  IJCV
- **Teaching Assistant**
  - HUST, Pattern Recognition, Fall, 2023
  - HUST, Pattern Recognition, Spring, 2024

LINKS

- **Personal Pages:** https://tqtqliu.github.io/
- **Google Scholar:** https://scholar.google.com/citations?user=mY2Qc7YAAAAJ
- **Github:** https://github.com/TQTQliu
- **DBLP:** https://dblp.org/pid/134/5653-3.html
- **ORCID:** https://orcid.org/0009-0003-0718-0614
- **Twitter:** https://x.com/TianqiLiu664