QIAO FENG

Tianjin University ⋄ Tianjin, 300350, China

(+86) 176 9579 5481 ⋄ fengqiao@tju.edu.cn ⋄ https://fengq1a0.github.io/

EDUCATION

Tianjin University, Tianjin, China *Sept. 2021 – Present*
M.S. in Computer Science and Technology Advisor: Prof. Kun Li

Tianjin University, Tianjin, China *Sept. 2017 – Jul. 2021*
B.Eng. in Computer Science and Technology GPA: 3.63/4.0

RESEARCH EXPERIENCE

Overview: My research area is 3D Vision, the intersection of Computer Vision and Computer Graphics. I focused on 3D human reconstruction during my M.S. studies. I have a good understanding of NeRF, 3D Gaussian, Diffusion model, and other traditional algorithms. Currently, I am expanding my research to explore more general 3D understanding, reconstruction, and generation.

Tianjin University *Oct. 2021 – Present*
M.S. Student Advisor: Prof. Kun Li & Yu-Kun Lai

- **Monocular Real-time 3D Human Reconstruction**
  I proposed an efficient 3D representation, FOF (Fourier Occupancy Field), based on the view of functional analysis, which bridges 2D and 3D domains. This work firstly achieved over 30 FPS reconstruction while maintaining SOTA quality. Based on this, a CVPR2024 paper for generation was accepted. A T-PAMI paper for an improved version of FOF is forthcoming.

- **Other Projects**
  I contributed to projects like NeRF-based style transfer, novel view synthesis, human body representation, and lensless imaging, among others, resulting in several publications.

Tsinghua University *Aug. 2021 – Sept. 2021*
Research Intern Advisor: Prof. Kun Li & Yebin Liu

- **Monocular Multi-Human Reconstruction**
  I proposed an attention-based individual feature extraction framework, eliminating the need of explicit instance segmentation in multi-human reconstruction.

Tianjin University *Sept. 2019 – Jul. 2021*
Undergraduate Researcher Advisor: Prof. Kun Li & Yu-Kun Lai

- **Monocular Human Reconstruction with GNN**
  I proposed a novel architecture for monocular human reconstruction with cascaded multi-scale GCNs. This work contributed a 3D human dataset, D^2Human (Dynamic Detailed Human).

PUBLICATIONS & MANUSCRIPTS

1. **Qiao Feng**, Yebin Liu, Yu-Kun Lai, Jingyu Yang, Kun Li, "FOF: Learning Fourier Occupancy Field for Monocular Real-time Human Reconstruction", in Advances in Neural Information Processing Systems (**NeurIPS**), 2022. [Project Page]

2. Muxin Zhang*, **Qiao Feng***, Zhuo Su, Chao Wen, Zhou Xue, Kun Li, "Joint2Human: High-quality 3D Human Generation via Compact Spherical Embedding of 3D Joints", in Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2024. (* Equal contribution)[Project Page]

3. Haoyang Ge*, **Qiao Feng***, Hailong Jia, Xiongzheng Li, Xiangjun Yin, You Zhou, Jingyu Yang, Kun Li, "LPSNet: End-to-End Human Pose and Shape Estimation with Lensless Imaging", in Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2024. (* Equal contribution) [Project Page]

4. Xiaokun Sun, **Qiao Feng**, Xiongzheng Li, Jinsong Zhang, Yu-Kun Lai, Jingyu Yang, Kun Li, "Learning Semantic-Aware Disentangled Representation for Flexible 3D Human Body Editing", in Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2023. [Project Page]

5. Kun Li, Hao Wen*, **Qiao Feng***, Yuxiang Zhang, Xiongzheng Li, Jing Huang, Cunkuan Yuan, Yu-Kun Lai, Yebin Liu, "Image-Guided Human Reconstruction via Multi-Scale Graph Transformation Networks", IEEE Transactions on Image Processing (**TIP**), 2021. (* Equal contribution) [Project Page]

6. Xinyi Jing*, **Qiao Feng***, Yu-Kun Lai, Jinsong Zhang, Yuanqiang Yu, Kun Li, "STATE: Learning Structure and Texture Representations for Novel View Synthesis", Computational Visual Media (**CVM**), 2023. (* Equal contribution) [Project Page]

7. Yi Wang, Jing-Song Cheng, **Qiao Feng**, Wen-Yuan Tao, Yu-Kun Lai, Kun Li, "TSNeRF: Text-driven stylized neural radiance fields via semantic contrastive learning", in Computers & Graphics, 2022. [ScienceDirect]

8. **Qiao Feng**, Yebin Liu, Yu-Kun Lai, Jingyu Yang, Kun Li, "Monocular Real-Time Human Geometry Reconstruction", in CAAI International Conference on Artificial Intelligence (**CICAI**) Demo paper, 2022. [Springer]

9. **Qiao Feng**, Yebin Liu, Yu-Kun Lai, Jingyu Yang, Kun Li, "FOF-X: Towards Real-time Detailed Human Reconstruction from Single Image", IEEE Transactions on Pattern Analysis and Machine Intelligence (**T-PAMI**), 2023. (Submitted & Under review)

10. **Qiao Feng***, Yuanwang Yang*, Yu-Kun Lai, Kun Li, "R^{2}Human: Real-Time 3D Human Appearance Rendering from a Single Image", Arxiv, 2024. (* Equal contribution)[Project Page]

SCHOLARSHIPS & AWARDS

- National Scholarship (Highest scholarship awarded by the Chinese government), Tianjin University, 2022.
- Excellent Bachelor Thesis, Tianjin University, 2021.
- Weichai Scholarship, Tianjin University, 2019.
- Third Prize in the National Student Computer System Capability Challenge (NSCSCC), 2019.
- Programming Contest
  - Gold medal in the ACM-ICPC Asia Regional Contest, Nanjing Site, 2018.
  - Gold medal in the ACM-ICPC Asia Regional Contest, Qingdao Site, 2018.
  - Silver medal in the ICPC Asia-East Continent Final, Xi'an Site, 2018.
  - First Prize, National Olympiad in Informatics in Provinces (NOIP), 2016.
- First Prize, National High School Math League, 2016.

SERVICE

- Teaching Assistant, Principles of Programming (Bilingual), Tianjin University, 2019.
- Teaching Assistant, Data Structure, Tianjin University, 2020-2022.
- Teaching Assistant, Algorithms Design and Analysis, Tianjin University, 2020-2022.
- As a reviewer of conferences: CVPR, CICAI, NeurIPS.