Haimin Luo

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BIO

I am a second-year PhD student in Computer Science at ShanghaiTech University, working with Prof. Jingyi Yu. I also work closely with Prof. Lan Xu. I received my bachelor's degree in 2019 from Huazhong University of Science and Technology. My research interest lies in Neural Modeling and Rendering, 3D Reconstruction, Motion Capture and Animation, and Digital Humans and Animals.

EDUCATION

- **ShanghaiTech University** — Shanghai, China
  PhD in Computer Science and Technology; *Fall 2022 - Now*
  Advisor: *Prof. Jingyi Yu*
  Major: *Computer Vison / Graphics / Photography*

- **ShanghaiTech University** — Shanghai, China
  MEng in Computer Science and Technology; *Fall 2019 - Spring 2022*
  Advisor: *Prof. Jingyi Yu*
  Major: *Computer Vison / Graphics / Photography*
  TA: *CS286 Applications of artificial intelligence in science and engineering Fall 2019*

- **Huazhong University of Science and Technology** — Wuhan, Hubei, China
  BSc in Computer Science and Technology; GPA: 3.93 *Fall 2015 - Spring 2019*
  Advisor: *Prof. Hanhua Chen*
  Awards: *Scholarship for National Encouragement (2018); Outstanding Graduate (2019)*

TECHNICAL SKILLS

- **Research**: Image Synthesis; Neural Modeling and Rendering; Motion Capture & Synthesis; 3D Reconstruction; Digital Human & Animals
- **Languages**: Python, C/C++, OpenGL, CUDA, Matlab, SQL, Bash, JAVA, c#
- **Frameworks**: Pytorch, Numpy, Scikit, TensorFlow, OpenCV, QT
- **Tools**: Docker, GIT, Blender, MySQL, LaTex, Word, PowerPoint, Premiere

PUBLICATIONS

- **GaussianHair: Hair Modeling and Rendering with Light-aware Gaussians**: arXiv 2024
  Haimin Luo, Min Ouyang, Zijun Zhao, Suyi Jiang, Longwen Zhang, Qixuan Zhang, Wei Yang, Lan Xu, Jingyi Yu
  [project page] [paper] [video]

- **MVHuman: Tailoring 2D Diffusion with Multi-view Sampling For Realistic 3D Human Generation**: arXiv 2023

  Suyi Jiang, **Haimin Luo**, Haimin Luo, Haoran Jiang, Ziyu Wang, Jingyi Yu, Lan Xu
  [project page] [paper]

- **NeuralDome: A Neural Modeling Pipeline on Multi-View Human-Object Interactions**: 2023 IEEE/CVF Conference on Computer Vision and Pattern Recognition
  Juze Zhang*, **Haimin Luo***, Hongdi Yang, Xinru Xu, Qianyang Wu, Ye Shi, Jingyi Yu, Lan Xu, Jingya Wang
  [project page] [paper] [code] [video]

- **Instant-NVR: Instant Neural Volumetric Rendering for Human-object Interactions from Monocular RGBD Stream**: 2023 IEEE/CVF Conference on Computer Vision and Pattern Recognition
  Yuheng Jiang, Kaixin Yao, Zhuo Su, Zehao Shen, **Haimin Luo**, Lan Xu
  [project page] [paper] [video]

- **HumanGen: Generating Human Radiance Fields with Explicit Priors**: 2023 IEEE/CVF Conference on Computer Vision and Pattern Recognition
  Suyi Jiang, Haoran Jiang, Ziyu Wang, **Haimin Luo**, Wenzheng Chen, Lan Xu
  [project page] [paper] [video]

- **NEPHELE: A Neural Platform for Highly Realistic Cloud Radiance Rendering**: arXiv 2023
  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
  [project page] [paper]

- **Artemis: Articulated Neural Pets with Appearance and Motion Synthesis**: ACM Transactions on Graphics (Proc. of SIGGRAPH 2022)
  Haimin Luo, Teng Xu, Yuheng Jiang, Chenglin Zhou, Qiwei Qiu, Yingliang Zhang, Wei Yang, Lan Xu, Jingyi Yu
  [project page] [paper] [code] [video]

- **Convolutional Neural Opacity Radiance Fields**: 2021 IEEE International Conference on Computational Photography (ICCP)
  Haimin Luo, Anpei Chen, Qixuan Zhang, Bai Pang, Minye Wu, Lan Xu, Jingyi Yu
  [project page] [paper] [code] [video]

- **Gnerf: Gan-based neural radiance field without posed camera**: Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV oral), 2021
  Quan Meng, Anpei Chen, **Haimin Luo**, Minye Wu, Hao Su, Lan Xu, Xuming He, Jingyi Yu
  [paper] [code]

- **Few-shot Neural Human Performance Rendering from Sparse RGBD Videos**: 2021 International Joint Conference on Artificial Intelligence (IJCAI)
  Anqi Pang, Xin Chen, **Haimin Luo**, Minye Wu, Jingyi Yu, Lan Xu
  [paper]