

XIAOXIAO LONG (龙霄潇)

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EDUCATION

The University of Hong Kong (HKU) Postdoctoral Supervisor: Prof. Wenping Wang (IEEE Fellow, ACM Fellow)	<i>Present</i>
The University of Hong Kong (HKU) Ph.D. in Computer Science Supervisor: Prof. Wenping Wang and Prof. Taku Komura	<i>2018.09 - 2023.07</i>
Zhejiang University (ZJU) B.S. in Control Science and Engineering	<i>2014.09 - 2018.06</i>

RESEARCH INTERESTS

Computer graphics: 3D content generation, neural rendering, 3D surface modeling
Computer vision: image based depth/normal estimation, image-based 3D reconstruction
Google scholar profile: <https://scholar.google.com/citations?user=W3G5kZEAAAAAJ&hl=en>
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HONORS (SELECTED)

Hong Kong PhD Fellowship Scheme (top 100 PhD students in HK)	<i>2018 - 2023</i>
Computer Science Scholarship of HKU	<i>2018</i>
Scholarship of Zhejiang Province	<i>2016, 2017</i>
Scholarship of Zhejiang University (Top 1%)	<i>2015, 2016, 2017</i>
Supcon Scholarship [Supcon]	<i>2017</i>

PUBLICATIONS AND PRE-PRINTS

* equal contribution; † corresponding author

- Xiaoxiao Long***, Yuhang Zheng*, Yupeng Zheng, Beiwen Tian, Cheng Lin, Lingjie Liu, Hao Zhao, Guyue Zhou, Wenping Wang, *Adaptive Surface Normal Constraint for Geometric Estimation from Monocular Images*, [IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2024]
- Xiaoxiao Long**, Yuan-Chen Guo, Cheng Lin, Yuan Liu, Zhiyang Dou, Lingjie Liu, Yuexin Ma, Song-Hai Zhang, Marc Habermann, Christian Theobalt, Wenping Wang, *Wonder3d: Single image to 3d using cross-domain diffusion*, [CVPR 2024 Highlight] (Github 4.3k stars)
- Xiaoxiao Long**, Cheng Lin, Lingjie Liu, Yuan Liu, Peng Wang, Christian Theobalt, Taku Komura, Wenping Wang, *NeuralUDF: Learning Unsigned Distance Fields for Multi-view Reconstruction of Surfaces with Arbitrary Topologies*, [CVPR23]
- Xiaoxiao Long**, Cheng Lin, Peng Wang, Taku Komura, Wenping Wang, *SparseNeuS: Fast Generalizable Neural Surface Reconstruction from Sparse views*, [ECCV22]

5. **Xiaoxiao Long**, Cheng Lin, Lingjie Liu, Wei Li, Christian Theobalt, Ruigang Yang, Wenping Wang, *Adaptive Surface Normal Constraint for Depth Estimation*, [ICCV21]
6. **Xiaoxiao Long**, Lingjie Liu, Wei Li, Christian Theobalt, Wenping Wang, *Multi-view Depth Estimation using Epipolar Spatio-Temporal Networks*, [CVPR21]
7. **Xiaoxiao Long**, Lingjie Liu, Wei Li, Christian Theobalt, Wenping Wang, *Occlusion-Aware Depth Estimation with Adaptive Normal Constraints*, [ECCV20]
8. Kai Cheng*, **Xiaoxiao Long***, Kaizhi Yang, Yao Yao, Wei Yin, Yuexin Ma, Wenping Wang, Xuejin Chen, *GaussianPro: 3D Gaussian Splatting with Progressive Propagation*, [ICML 2024]
9. Kai Cheng*, **Xiaoxiao Long***, Wei Yin, Jin Wang, Zhiqiang Wu, Yuexin Ma, Kaixuan Wang, Xiaozhi Chen, Xuejin Chen, *UC-NeRF: Neural Radiance Field for Under-Calibrated Multi-view Cameras in Autonomous Driving*, [ICLR24]
10. Zongcheng Li*, **Xiaoxiao Long***, Yusen Wang, Tuo Cao, Wenping Wang, Fei Luo, Chunxia Xiao, *NeTO: Neural Reconstruction of Transparent Objects with Self-Occlusion Aware Refraction-Tracing*, [ICCV23]
11. Yuan Liu, Cheng Lin, Zijiao Zeng, **Xiaoxiao Long**[†], Lingjie Liu, Taku Komura, Wenping Wang[†], *SyncDreamer: Generating Multiview-consistent Images from a Single-view Image*, [ICLR24 spotlight]
12. Anran Liu, Yuan Liu[†], **Xiaoxiao Long**[†], Peng Wang, Cheng Lin, Ping Luo, Wenping Wang, *NeRFBuff: Fast Neural Rendering via Inter-frame Feature Buffering*, [IEEE Transactions on Visualization and Computer Graphics (TVCG) 2024]
13. Yingwenqi Jiang, Jiadong Tu, Yuan Liu, Xifeng Gao, **Xiaoxiao Long**[†], Wenping Wang, Yuexin Ma[†], *GaussianShader: 3D Gaussian Splatting with Shading Functions for Reflective Surfaces*, [CVPR 2024]
14. Anran Liu, Cheng Lin, Yuan Liu, **Xiaoxiao Long**[†], Zhiyang Dou, Hao-xiang Guo, Ping Luo, Wenping Wang[†], *Part123: Part-aware 3D Reconstruction from a Single-view Image*, [ACM SIGGRAPH Conference Proceedings 2024]
15. Ziqi Wang, Fei Luo, **Xiaoxiao Long**, Wenxiao Zhang, Chunxia Xiao, *Learning Long-range Information with Dual-Scale Transformers for Indoor Scene Completion*, [ICCV23]
16. Yupeng Zheng, Xiang Li, **Xiaoxiao Long**, Pengfei Li, Yuhang Zheng, Chengliang Zhong, Bu Jin, Hao Zhao, Guyue Zhou, Qichao Zhang, *MonoOcc: Digging into Monocular Semantic Occupancy Prediction*, [ICRA24]
17. Yuan Liu, Peng Wang, Cheng Lin, **Xiaoxiao Long**, Jiepeng Wang, Lingjie Liu, Taku Komura, Wenping Wang, *NeRO: Neural Geometry and BRDF Reconstruction of Reflective Objects from Multiview Images*, [SIGGRAPH23 (journal track)]
18. Jiepeng Wang, Peng Wang, **Xiaoxiao Long**, Christian Theobalt, Taku Komura, Lingjie Liu, Wenping Wang, *NeuRIS: Neural Reconstruction of Indoor Scenes Using Normal Priors*, [ECCV22]
19. Yuan Liu, Yilin Wen, Sida Peng, Cheng Lin, **Xiaoxiao Long**, Taku Komura, Wenping Wang, *Gen6D: Generalizable Model-Free 6-DoF Object Pose Estimation from RGB Images*, [ECCV22]
20. **龙霄潇**, 程新景, 朱昊, 张朋举, 刘浩敏, 李俊, 郑林涛, 胡庆拥, 刘浩, 曹汛, 杨睿刚, 吴毅红, 章国锋, 刘烨斌, 徐凯, 郭裕兰, 陈宝权, *三维视觉前沿进展*, [中国图象图形学报 2021]

21. Weiyu Li, Jiarui Liu, Rui Chen, Yixun Liang, Xuelin Chen, Ping Tan, **Xiaoxiao Long**[†], *CraftsMan: High-fidelity Mesh Generation with 3D Native Generation and Interactive Geometry Refiner*, [ARXIV 2024]
22. Peng Li, Yuan Liu, **Xiaoxiao Long**[†], Feihu Zhang, Cheng Lin, Mengfei Li, Xingqun Qi, Shanghang Zhang, Wenhan Luo, Ping Tan, Wenping Wang, Qifeng Liu, Yike Guo[†], *Era3D: High-Resolution Multiview Diffusion using Efficient Row-wise Attention*, [ARXIV 2024]
23. Xiao Fu, Wei Yin, Mu Hu, Kaixuan Wang, Yuexin Ma, Ping Tan, Shaojie Shen, Dahua Lin, **Xiaoxiao Long**[†], *GeoWizard: Unleashing the Diffusion Priors for 3D Geometry Estimation from a Single Image*, [ARXIV 2024]
24. Yuhang Zheng, Xiangyu Chen, Yupeng Zheng, Songen Gu, Runyi Yang, Bu Jin, Pengfei Li, Chengliang Zhong, Zengmao Wang, Lina Liu, Chao Yang, Dawei Wang, Zhen Chen, **Xiaoxiao Long**[†], Meiqing Wang[†], *GaussianGrasper: 3D Language Gaussian Splatting for Open-vocabulary Robotic Grasping*, [ARXIV 2024]
25. Mu Hu, Wei Yin[†], Chi Zhang, Zhipeng Cai, **Xiaoxiao Long**[†], Hao Chen, Kaixuan Wang, Gang Yu, Chunhua Shen, Shaojie Shen, *Metric3D v2: A Versatile Monocular Geometric Foundation Model for Zero-shot Metric Depth and Surface Normal Estimation*, [ARXIV 2024]
26. Zhengming Yu*, Zhiyang Dou*, **Xiaoxiao Long**, Cheng Lin, Zekun Li, Yuan Liu, Norman Muller, Taku Komura, Marc Habermann, Christian Theobalt, Xin Li, Wenping Wang, *Surf-D: High-Quality Surface Generation for Arbitrary Topologies using Diffusion Models*, [ARXIV23]

TEACHING

Teaching Assistants:

COMP3278 Introduction to database management systems	[Section 2B, 2018]
COMP3359 Artificial Intelligence Applications	[Section 2A, 2019]
COMP3270 Artificial intelligence	[Section 1A, 2021]

CONFERENCE/JOURNAL REVIEWER

CVPR,ICCV,EUROGRAPHICS, TPAMI, TOG, TIP, TMM, TMC, CVM, Information Fusion, Neurocomputing, Pattern Recognition.