

Xin Lin

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Education

Sichuan University

B.Eng. in Electronics and Information Engineering

University of California San Diego

Ph.D. in Electrical and Computer Engineering

Chengdu, CHINA

2021.9–2025.6

La Jolla, CA, USA

2025.9 –

Research Interests

My research interests mainly lie in computer vision, especially 3D Vision, Panoramic Vision, and Video Generation.

Submitted Papers (* indicates equal contribution.)

1. **Depth Any Panoramas: A Foundation Model for Panoramic Metric Depth Estimation**
Xin Lin, Meixi Song, Dizhe Zhang, Wenxuan Lu, Haodong Li, Bo Du, Ming-Hsuan Yang, Truong Nguyen, Lu Qi
Submitted to CVPR 2026.
2. **Degradation-Perceptive Routing for All-in-One Image Restoration**
Shurui Peng*, Xin Lin*, Shi Luo*, Jincen Ou, Dizhe Zhang, Lu Qi, Chao Ren
Submitted to CVPR 2026
3. **One Flight Over the Gap: A Survey from Perspective to Panoramic Vision** [paper] [Project]
Xin Lin*, Xian Ge*, Dizhe Zhang, Zhaoliang Wan, Xianshun Wang, Xiangtai Li, Wenjie Jiang, Bo Du, Dacheng Tao, Ming-Hsuan Yang, Lu Qi
Submitted to CSUR.
4. **OmniRoam: World Wandering via Long-Horizon Panoramic Video Generation** [paper]
Yuheng Liu, Xin Lin, Xinke Li, Baihan Yang, Chen Wang, Kalyan Sunkavalli, Yannick Hold-Geoffroy, Hao Tan, Kai Zhang, Xiaohui Xie, Zifan Shi, Yiwei Hu
Submitted to SIGGRAPH 2026.

Publications

1. **D²GS: Depth-and-Density Guided Gaussian Splatting for Stable and Accurate Sparse-View Reconstruction** [paper]
Meixi Song*, Xin Lin*, Haodong Li, Dizhe Zhang, Xiangtai Li, Bo Du, Lu Qi
ICLR 2026
2. **DA²: Depth Anything in Any Direction** [paper]
Haodong Li, Wangguandong Zheng, Jing He, Yuhao Liu, Xin Lin, Xin Yang, Ying-Cong Chen, Chunchao Guo.
ICLR 2026.
3. **Re-boosting Self-Collaboration Parallel Prompt GAN for Unsupervised Image Restoration** [paper]
Xin Lin*, Yuyan Zhou*, Jingtong Yue, Chao Ren, Kelvin C.K. Chan, Lu Qi, Ming-Hsuan Yang.
TPAMI 2025.
4. **HQGS: High-Quality Novel View Synthesis with Gaussian Splatting in Degraded Scenes** [paper]
Xin Lin*, Shi Luo*, Xiaojun Shan, Xiaoyu Zhou, Chao Ren, Lu Qi, Ming-Hsuan Yang and Nuno Vasconcelos.
ICLR 25.
5. **RobuRCDet: Enhancing Robustness of Radar-Camera Fusion in Bird's Eye View for 3D Object Detection**
Jingtong Yue*, Zhiwei Lin*, Xin Lin*, Xiaoyu Zhou, Xiangtai Li, Lu Qi, Yongtao Wang and Ming-Hsuan Yang.
[paper]
ICLR 25
6. **Dual Degradation Representation for Joint Deraining and Low-Light Enhancement in the Dark** [paper]
Xin Lin*, Jingtong Yue*, Sixian Ding, Chao Ren, Lu Qi and Ming-Hsuan Yang.
TCSVT 2024.
7. **Restore Anything with Masks: Leveraging Mask Image Modeling for Blind All-in-One Image Restoration** [paper]
Chujie Qin, Ruiqi Wu, Zikun Liu, Xin Lin, Chun-Le Guo, Hyun Hee Park and Chongyi Li.
ECCV 2024.

8. **Unsupervised Image Denoising in Real-World Scenarios via Self-Collaboration Parallel Generative Adversarial Branches** [paper]
Xin Lin, Xiao Liu, Jie Huang, Chao Ren and Yinjie Lei.
ICCV 2023.

Research Experience

Insta360

Research Scientist Intern

UCSD

Research Intern (Remote)

UC Merced

Research Intern (Remote)

Advisor: Dr. Dizhe Zhang and Prof. Lu Qi

April 2025 – August 2025

Advisor: Prof. Nuno Vasconcelos

August 2024 – January 2025

Advisor: Prof. Ming-Hsuan Yang

June 2023 – April 2025

Awards

Jacobs Fellowship; UCSD, USA.

SenseTime Scholarship; 25 Talented undergraduates in China.

National Scholarship; (Top 0.2% nationwide, highest scholarship in China).

Top 10 Students in Sichuan University; (10/60,000+).

Chinese Mathematics Competitions first prize; (Top 0.08% in Sichuan province).