Xin Lin

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Education

Sichuan University	**Chengdu, CHINA**
B.Eng. in Electronics and Information Engineering	2021.9–2025.6
University of California San Diego	**La Jolla, CA, USA**
Ph.D. in Electrical and Computer Engineering	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. **One Flight Over the Gap: A Survey from Perspective to Panoramic Vision** [paper] [Project] ($\star$ 324 GitHub stars)
   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.

2. **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. **Depth Any Panoramas: A Foundation Model for Panoramic Depth Estimation** [paper] [Project] ($\star$ 221 GitHub stars)
   Xin Lin, Meixi Song, Dizhe Zhang, Wenxuan Lu, Haodong Li, Bo Du, Ming-Hsuan Yang, Truong Nguyen, Lu Qi
   CVPR 2026.

2. **D^{2}GS: 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

3. **DA^2: 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.

4. **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.

5. **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.

6. **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

7. **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.

8. **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.

9. **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	**Advisor: Dr. Dizhe Zhang and Prof. Lu Qi**
Research Scientist Intern	April 2025 – August 2025
UCSD	**Advisor: Prof. Nuno Vasconcelos**
Research Intern (Remote)	August 2024 – January 2025
UC Merced	**Advisor: Prof. Ming-Hsuan Yang**
Research Intern (Remote)	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).