

# Xin Lin

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## Education

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### 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 –2029

## Research Interests

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

## Submitted Papers (\* indicates equal contribution.)

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1. **One Flight Over the Gap: A Survey from Perspective to Panoramic Vision** [paper] [Project]  
(★ 330 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. **SLER-IR: Spherical Layer-wise Expert Routing for All-in-One Image Restoration** [paper]  
PENG Shurui\*, **Xin Lin\***, Shi Luo\*, Jincen Ou, Dizhe Zhang, Lu Qi, Truong Nguyen, Chao Ren  
*Submitted to ECCV 2026.*

## Publications

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1. **Depth Any Panoramas: A Foundation Model for Panoramic Depth Estimation** [paper] [Project]  
(★ 261 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<sup>2</sup>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. **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  
*SIGGRAPH 2026.*
4. **DA<sup>2</sup>: 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.*
5. **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.*
6. **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.*
7. **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*
8. **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.*

9. **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.*
10. **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.*
11. **Airsim360: A panoramic simulation platform within drone view** [paper]  
Xian Ge, Yuling Pan, Yuhang Zhang, Xiang Li, Weijun Zhang, Dizhe Zhang, Zhaoliang Wan, **Xin Lin**, Xiangkai Zhang, Juntao Liang, Jason Li, Wenjie Jiang, Bo Du, Ming-Hsuan Yang, Lu Qi  
*CVPR 2026.*

## Research Experience

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### **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

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**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).