Chin-Yang Lin

linjohn0903@gmail.com | linjohnss.github.io | linjohnss | chin-yang-lin | Chin-Yang Lin

Education

National Yang Ming Chiao Tung University — *Hsinchu, Taiwan*
PH.D. IN COMPUTER SCIENCE AND ENGINEERING — *Aug. 2023 – Present*
- Advisor: Prof. Yu-Lun Liu and Prof. Wei-Chen Chiu

National Cheng Kung University — *Tainan, Taiwan*
B.S. IN COMPUTER SCIENCE AND GEOMATICS (DOUBLE MAJOR) — *Aug. 2018 – Jun. 2023*

Research Interests

My research lies at the intersection of **vision**, **learning**, and **geometry**. I focus on enabling machines to perceive, reconstruct, and render the 3D world with **efficiency**, **robustness**, and **scalability**. I am passionate about building **3D perception systems** that are accessible enough for anyone to use and general enough to work anywhere in the wild.

Publications

CONFERENCE PAPERS

ECCV 2026 **Scal3R: Learning Efficient Multi-Relative Pose Query for Scalable Online 3D Reconstruction**
Chin-Yang Lin, Yang-Che Sun, Cheng Sun, Fu-En Yang, Min-Hung Chen, Yen-Yu Lin, Wei-Chen Chiu, Yu-Lun Liu
The 19th European Conference on Computer Vision, 2026 [Paper]

ECCV 2026 **Stream-DiffVSR: Low-Latency Streamable Video Super-Resolution via Auto-Regressive Diffusion**
Hau-Shiang Shiu, Chin-Yang Lin, Zhixiang Wang, Chi-Wei Hsiao, Po-Fan Yu, Yu-Chih Chen, Yu-Lun Liu
The 19th European Conference on Computer Vision, 2026 [Paper]

SIGGRAPH 2026 **LongE2V: Long-Horizon Event-based Video Reconstruction, Prediction, and Frame Interpolation with Video Diffusion Models**
Cheng-De Fan, Chun-Wei Tuan Mu, Chen-Wei Chang, Chin-Yang Lin, Kun-Ru Wu, Yu-Chee Tseng, Yu-Lun Liu
ACM SIGGRAPH 2026 Conference Papers, 2026 [Paper]

ICCV 2025 **LongSplat: Robust Unposed 3D Gaussian Splatting for Casual Long Videos**
Chin-Yang Lin, Cheng Sun, Fu-En Yang, Min-Hung Chen, Yen-Yu Lin, Yu-Lun Liu
IEEE International Conference on Computer Vision, 2025 [Paper]

CoRL 2025 **See, Point, Fly: A Learning-Free VLM Framework for Universal Unmanned Aerial Navigation**
Chih Yao Hu*, Yang-Sen Lin*, Yuna Lee, Chih-Hai Su, Jie-Ying Lee, Shr-Ruei Tsai, Chin-Yang Lin, Kuan-Wen Chen, Tsung-Wei Ke, Yu-Lun Liu
9th Annual Conference on Robot Learning, 2025 [Paper]

CVPR 2025 **FrugalNeRF: Fast Convergence for Extreme Few-shot Novel View Synthesis without Learned Priors**
Chin-Yang Lin*, Chung-Ho Wu*, Chang-Han Yeh, Shih-Han Yen, Cheng Sun, Yu-Lun Liu
IEEE Conference on Computer Vision and Pattern Recognition, 2025 [Paper]

CVPR 2025 **AuraFusion360: Augmented Unseen Region Alignment for Reference-based 360° Unbounded Scene Inpainting**
Chung-Ho Wu*, Yang-Jung Chen*, Ying-Huan Chen, Jie-Ying Lee, Bo-Hsu Ke, Chun-Wei Tuan Mu, Yi-Chuan Huang, Chin-Yang Lin, Min-Hung Chen, Yen-Yu Lin, Yu-Lun Liu
IEEE Conference on Computer Vision and Pattern Recognition, 2025 [Paper]

SIGGRAPH 2024 **BoostMVSNeRFs: Boosting MVS-based NeRFs to Generalizable View Synthesis in Large-scale Scenes**
Chih-Hai Su, Chih-Yao Hu, Shr-Ruei Tsai, Jie-Ying Lee, Chin-Yang Lin, Yu-Lun Liu
ACM SIGGRAPH 2024 Conference Papers, 2024 [Paper]

Preprints

arXiv 2026 **3AM: 3egment Anything with Geometric Consistency in Videos**
Yang-Che Sun, Cheng Sun, Chin-Yang Lin, Fu-En Yang, Min-Hung Chen, Yen-Yu Lin, Yu-Lun Liu
arXiv preprint, 2026 [Paper]

arXiv 2025 **GaMO: Geometry-aware Multi-view Diffusion Outpainting for Sparse-View 3D Reconstruction**
Yi-Chuan Huang, Hao-Jen Chien, Chin-Yang Lin, Ying-Huan Chen, Yu-Lun Liu
arXiv preprint, 2025 [Paper]

arXiv 2024 **DiffIR2VR-Zero: Zero-Shot Video Restoration with Diffusion-based Image Restoration Models**
Chang-Han Yeh, Chin-Yang Lin, Zhi-Xiang Wang, Chi-Wei Hsiao, Ting-Hsuan Chen, Yu-Lun Liu
arXiv preprint, 2024 [Paper]

Experience

NVIDIA Research *Taipei, Taiwan*
Research Intern *Feb. 2026 – Present*

- Developed Scal3R, a parameter-efficient framework for scalable online 3D reconstruction that **reduces camera pose estimation error by over 60% on kilometer-scale sequences** via multi-reference relative pose querying on frozen backbones.
- Developed a test-time baking framework that bakes cross-view attention into fast-weight MLPs for **constant-time rendering with up to 23× speedup** at state-of-the-art quality.

Logitech *Hsinchu, Taiwan*
Image Processing Engineer Intern *Jul. 2024 – Dec. 2025*

- Developed a GPU-based image quality enhancement module for Logitech's Rally Board 65 Video Collaboration system, achieving up to **30× speedup** over CPU-based processing (1080p video at 30 FPS real-time processing).

HDMap Center *Tainan, Taiwan*
Research Assistant, Advised by Prof. Kai-Wei Chiang *Feb. 2021 - Jun. 2023*

- Developed real-time localization algorithms and sensor modules for autonomous vehicles, with a focus on stereo camera localization leveraging pre-built LiDAR maps and fusing GPS-IMU data for enhanced accuracy.

Projects

Human Interaction Robot Controller
[Code] / [Video] *Sep. 2021 - Jun. 2022*

- Developed an automated industrial robot with 3D LiDAR navigation, obstacle avoidance, real-time face recognition, robot arm gripping, and pedestrian following using YOLO and depth imaging techniques.

Real-time Camera localization in 3D LiDAR Map
[Code] / [Video] *Feb. 2020 - Jan. 2021*

- Created a low-cost localization system integrating Visual SLAM and visual point cloud registration within a pre-built 3D LiDAR map, significantly reducing trajectory drift and improving accuracy by 65%.

Honors

2026 **Foxconn Technology Award**
2025 **National Science and Technology Council (NSTC) Graduate Research Fellowship**
2021 **National Science and Technology Council (NSTC) College Student Research Scholarship**

Academic Services

Reviewer NeurIPS 2026, ECCV 2026 (Outstanding Reviewer), CVPR 2026, ICLR 2026, ICLR 2025
Student Volunteer SIGGRAPH Asia's 2024