Zhongyang Ren

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Education

Northwestern Polytechnical University — Supervisor: Prof. Yuchao Dai
Ph.D, Neuromorphic Vision — *Sep. 2025 – Present*

Hunan University — Supervisor: Prof. Yi Zhou
Master, Neuromorphic Vision — *Sep. 2022 – Jun. 2025*

Shandong Normal University
Bachelor, Computer Science and Technology — *Sep. 2018 – Jun. 2022*

Research interests: 3D Vision, Event Camera, Robotics.

Publications

* denotes equal contribution, # denotes corresponding author

Zhongyang Ren*, Bangyan Liao*, Delei Kong, Jinghang Li, Peidong Liu, Laurent Kneip, Guillermo Gallego, Yi Zhou#. **Motion and Structure from Event-based Normal Flow**. In Proceedings of the European Conference on Computer Vision (**ECCV** 2024).

Sheng Zhong*, **Zhongyang Ren***, Xiya Zhu, Dehao Yuan, Fermüller Cornelia, Yi Zhou#.**Real-Time Motion Segmentation with Event-based Normal Flow**. IEEE International Conference on Robotics and Automation (**ICRA** 2026)

Yuting He*, Bin Fan*, **Zhongyang Ren**, Qi Liu, Yuchao Dai#.**Learning Spatio-Temporal Dynamic Event Voxels for Robust Event-based Object Tracking**. (Under Review)

Experience

Research on Event-based Motion Segmentation — Nov. 2024 – Aug. 2025
Project Leader — *Advised by Prof. Yi Zhou and Cornelia Fermüller*

Teaching Assistant — Sep. 2024 – Dec. 2024
RO10005: Advanced Practice in Robotics Engineering — *Assist Prof. Yi Zhou*

Research on Geometric Model Fitting on Event Data — Mar. 2023 – Jul. 2024
Project Leader — *Advised by Prof. Yi Zhou and Guillermo Gallego*

Research on Hyperspectral Image Super-Resolution — Dec. 2021 – May 2022
Undergraduate Thesis

Awards

- Excellent Student Scholarship(First Class), Hunan University
- National Second Prize in National Undergraduate Mathematical Contest in Modeling
- Provincial First Prize in Lanqiao Cup Programming Contest
- Excellent Student, Shandong Normal University

Services

Reviewer of ECCV, CVPR and IEEE RA-L

Volunteer of IROS 2025 at Hangzhou

Technical Skills

Programming Languages: MATLAB, C++, Python, Java

Libraries & Tools: PyTorch, NumPy, OpenCV, Git, Docker, ROS, LaTeX