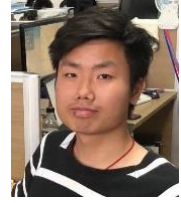


Lei Sun

Address: No. 38 Zheda Road, 310058 Hangzhou, China

E-mail: leo_sun@zju.edu.cn; leisun@ee.ethz.ch

Tel: (+86) 152 7904 0587 [Page: ahupujr.github.io](https://github.com/ahupujr) [Scholar](#)



ACADEMIC HISTORY



University of Zurich

Visiting Ph.D. student, **Robotics & Perception Group, UZH**
Jan. 2023 to Aug. 2023, Supervisor: Davide Scaramuzza



Visiting Ph.D. student, **Computer Vision Lab, ETH Zurich**
Sep. 2021 to Jan. 2023, Supervisor: Luc Van Gool



浙江大学
ZHEJIANG UNIVERSITY

Ph.D. student, **Zhejiang University**
Sep. 2018 to Jul.2024 (expected), Supervisor: Kaiwei Wang



北京理工大学
BEIJING INSTITUTE OF TECHNOLOGY

B.S. in Optical Engineering, **Beijing Institution of Technology**
Sep. 2014 to Jun. 2018

SKILLS & LANGUAGES

- Languages: C/C++, Python, Matlab
- Framework: Deep learning (Pytorch), Computer Vision (OpenCV, PIL, PointCloudLibrary)
- Others: ROS, Git, SolidWorks, Zemax, Unity3D
- More than 20 SCI/EI paper published, over 500 citations.

RESEARCH INTERESTS

- Low-level vision, image restoration, computational imaging, image & video segmentation.
- Event-camera-based algorithms.

SELECTED RESEARCH EXPERIENCE

Real-time RGB-D fusion semantic segmentation incorporating unexpected obstacle detection for road-driving images (2019-2020)

- The proposed RFNet outperforms all other real-time SOTA RGB-D fusion methods.
- Designed a multi-dataset training strategy for incompatible datasets.
- Designed an RGB-D fusion module to extract complementary information from depth maps.

[Event-based Image Deblurring](#) (ECCV 2022 Oral, rate: 2.7%)

- Proposed a SOTA event-based image deblurring model, surpassing previous best by 2.47dB.

- Proposed a novel event representation for image deblurring.
- Introduce a blurry-sharp paired image dataset from event camera.

Video Semantic Segmentation (VSS) (2022, submitted to T-PAMI)

- Designed a SOTA VSS model by reducing computational cost in transformer-architecture.
- Proposed global feature compacting method to compact the redundant features in VSS.

Event-based frame interpolation (CVPR 2023)

- Deblur and frame interpolation with events.
- Unified framework for video frame interpolation method for both sharp and blurry frame.
- Proposed the first high-resolution chromatic event-based dataset for video deblurring.

Self-supervised event-based image deblurring (submitted to T-PAMI)

- Event-based deblurring in self-supervised manner.
- More suitable to individual real-world event-cameras.

Practical big model for general image restoration (submitted to ECCV2024)

- Designed a GAN-based image restoration model for real image degradation.
- Trained on LIAON5B High-Res dataset with more than 170 million samples.
- Trained with more than 64 A100 GPUS
- Unifying distortion (PSNR) and realism (FID) with prompt.

HONORS / AWARDS

- First grade scholarship (TOP 5%), 2017
- Graduate of Merit (TOP 10%), 2019, 2020
- Xiaomi Special Scholarship (TOP 1%), 2020
- China Scholarship Council foundation award for PhD.

SELECTED PUBLICATIONS

1. Lei Sun, et al. "Event-Based Frame Interpolation with Ad-hoc Deblurring." *CVPR 2023*.
2. Lei Sun, Christos Sakaridis, Jingyun Liang, Qi Jiang, Kailun Yang, Peng Sun, Yaozu Ye, Kaiwei Wang, and Luc Van Gool. "Event-Based Fusion for Motion Deblurring with Cross-modal Attention." *ECCV 2022. Oral presentation (rate:2.7%)*.
3. L. Sun, K. Yang, X. Hu, W. Hu and K. Wang, "Real-time Fusion Network for RGB-D Semantic Segmentation Incorporating Unexpected Obstacle Detection for Road-driving Images." *IEEE Robotics and Automation Letters, and IROS 2020*.
4. L. Sun, K. Wang, K. Yang, and K. Xiang, "See clearer at night: towards robust nighttime semantic segmentation through day-night image conversion." *Artificial Intelligence and Machine Learning in Defense Applications, vol. 11169. International Society for Optics and Photonics, 2019, p. 111690A*.