

# Jun CEN

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Degree	University	Major	Year	Supervisor	GPA
PhD	HKUST	Robotics	2020-now	Qifeng Chen, Michael Wang	3.98/4.3
MSc	HKUST	Mechanical	2019-20	Lilong Cai	3.99/4.3
Bachelor	Zhejiang University	Mechatronics	2015-19	Jinghua Xu	3.82/4.0

## Research Interests

- LLM-based multi-modality learning. Open-set recognition and incremental learning in 2D/3D semantic segmentation, 3D object detection, image/video recognition, etc.

## Experience

- *CVIP Group, Southern University of Science and Technology* (Sep'23-now)
  - Visiting Student, supervised by Prof. Jianguo Zhang
- *NLC Group, Microsoft Research Asia* (Sep'23-Apr'24)
  - Research Intern, supervised by Chenfei Wu, Nan Duan
- *MMLab, Nanyang Technological University; Shanghai AI Lab* (Mar'23-Aug'23)
  - Visiting Student, supervised by Prof. Ziwei Liu
- *DAMO Academy, Alibaba Group* (Mar'22-Mar'23)
  - Research Intern, supervised by Shiwei Zhang, Yingya Zhang, Deli Zhao
- *Autonomous Driving Group, Hikvision* (Mar'20-Jul'20)
  - Algorithm Engineer, supervised by Yushi Zhu
- *Robotics and Artificial Intelligence Laboratory, The Chinese University of Hong Kong (SZ)* (Oct'19-Jan'20)
  - Research Assistant, supervised by Prof. Tin Lun Lam

## Representative Publications

- [1]. **Using Left and Right Brains Together: Towards Vision and Language Planning**  
Jun CEN\*, Chenfei Wu\*, Xiao Liu, Shengming Yin, Yixuan Pei, Jinglong Yang, Qifeng Chen, Nan Duan, Jianguo Zhang  
[Under Review]
- [2]. **CMDFusion: Bidirectional Fusion Network with Cross-modality Knowledge Distillation for LIDAR Semantic Segmentation**  
Jun CEN, Shiwei Zhang, Yixuan Pei, Kun Li, Hang Zheng, Maochun Luo, Yingya Zhang, Qifeng Chen  
*Robotics and Automation Letters* [RA-L 2024]
- [3]. **SAD: Segment Any RGBD**  
Jun CEN, Yizheng Wu, Kewei Wang, Xingyi Li, Jingkang Yang, Yixuan Pei, Lingdong Kong, Ziwei Liu, Qifeng Chen  
*Conference on Neural Information Processing Systems 2023 Workshop* [NeurIPS 2023 Workshop]  
700+ stars on Github, 1K+ Likes and 140K+ Views on Twitter
- [4]. **Enlarge Instance-specific and Class-specific Information for Open-set Action Recognition**  
Jun CEN, Shiwei Zhang, Xiang Wang, Yixuan Pei, Zhiwu Qing, Yingya Zhang, Qifeng Chen  
*Computer Vision and Pattern Recognition Conference 2023* [CVPR 2023]
- [5]. **The Devil is in the Wrongly-classified Samples: Towards Unified Open-set Recognition**  
Jun CEN\*, Di Luan\*, Shiwei Zhang, Yixuan Pei, Yingya Zhang, Deli Zhao, Shaojie Shen, Qifeng Chen  
*International Conference on Learning Representations 2023* [ICLR 2023]

- [6]. **Open-world Semantic Segmentation for LIDAR Point Clouds**  
Jun CEN, Peng Yun, Shiwei Zhang, Junhao Cai, Di Luan, Mingqian Tang, Michael Yu Wang, Ming Liu  
*European Conference on Computer Vision 2022* [ECCV 2022]
- [7]. **Open-set 3D Object Detection**  
Jun CEN, Peng Yun, Junhao Cai, Michael Yu Wang, Ming Liu  
*International Conference on 3D Vision 2021* [3DV 2021]
- [8]. **Deep Metric Learning for Open World Semantic Segmentation**  
Jun CEN, Peng Yun, Junhao Cai, Michael Yu Wang, Ming Liu  
*International Conference on Computer Vision 2021* [ICCV 2021]

#### Other Publications

- [1]. **Consistent Prompting for Rehearsal-Free Continual Learning**  
Zhanxin Gao, Jun CEN, Xiaobin Chang  
*Computer Vision and Pattern Recognition Conference 2024* [CVPR 2024]
- [2]. **Self-Supervised Motion Learning from LiDAR Point Clouds with Spatial and Temporal Consistency**  
Kewei Wang, Yizheng Wu, Jun CEN, Zhiyu Pan, Xingyi Li, Zhiguo Cao, Guosheng Lin  
*Computer Vision and Pattern Recognition Conference 2024* [CVPR 2024]
- [3]. **Segment Any Point Cloud Sequences by Distilling Vision Foundation Models**  
Youquan Liu\*, Lingdong Kong\*, Jun CEN, Runnan Chen, Wenwei Zhang, Liang Pan, Kai Chen, Ziwei Liu  
*Conference on Neural Information Processing Systems 2023* [NeurIPS 2023]
- [4]. **4D Panoptic Scene Graph Generation**  
Jingkang Yang, Jun CEN, Wenxuan Peng, Shuai Liu, Fangzhou Hong, Xiangtai Li, Kaiyang Zhou, Qifeng Chen, Ziwei Liu  
*Conference on Neural Information Processing Systems 2023* [NeurIPS 2023]
- [5]. **Learning a Condensed Frame for Memory-Efficient Video Class-Incremental Learning**  
Yixuan Pei, Zhiwu Qing, Jun CEN, Xiang Wang, Shiwei Zhang, Yaxiong Wang, Mingqian Tang, Nong Sang, Xueming Qian  
*Conference on Neural Information Processing Systems 2022* [NeurIPS 2022]
- [6]. **Real-Time Collision-Free Grasp Pose Detection With Geometry-Aware Refinement Using High-Resolution Volume**  
Junhao Cai, Jun CEN, Haokun Wang, Michael Yu Wang  
*Robotics and Automation Letters 2022* [ICRA with R-AL 2022]
- [7]. **Conflicts between Likelihood and Knowledge Distillation in Task Incremental Learning for 3D Object Detection**  
Peng Yun, Jun CEN, Ming Liu  
*International Conference on 3D Vision 2021* [3DV 2021]
- [8]. **BORM: Bayesian Object Relation Model for Indoor Scene Recognition**  
Liguang Zhou, Jun CEN, Xingchao Wang, Zhenglong Sun, Tin Lun Lam, Yangsheng Xu  
*International Conference on Robotics and Systems 2021* [IROS 2021]
- [9]. **Precision forward design for 3D printing using kinematic sensitivity via Jacobian matrix considering uncertainty**  
Jinghua Xu, Xueqing Feng, Jun CEN, Shuyou Zhang  
*The International Journal of Advanced Manufacturing Technology 2020*

#### Professional Service

- **Reviewer** for TPAMI, TNNLS, NeurIPS, ICML, ICLR, CVPR, ICCV, ICRA, IROS

#### Projects

- **Life-long Learning System for 3D Object Detection in Autonomous Driving** (Jan'21-Jan'22)
  - HKJRI-52, Kaisa Seed Project, supervised by Prof. Michael Yu Wang

## Patents

- 行为识别方法、装置、设备和存储介质, 岑俊、张士伟、吕逸良、赵德丽, 中国发明专利 (已授权), 202210952356X
- 视频处理方法及设备, 岑俊、裴逸璇、张士伟、吕逸良、赵德丽, 中国发明专利 (已授权), 202211099158X

## Awards

- Outstanding Research Intern, Alibaba Group, 2023. (15 candidates per year)
- Overseas Research Award, 2023, HKUST
- Postgraduate Studentship, 2020-2024, HKUST
- School of Engineering Excellent Student Scholarship, 2019-2020, HKUST. (Top 5%)
- School of Engineering Entrance Scholarship, 2019-2020, HKUST. (Top 2%)