

Ye Liu

Ph.D. Candidate @ The Hong Kong Polytechnic University

CONTACT INFORMATION

Department of Computing
The Hong Kong Polytechnic University
Hung Hom, Kowloon, Hong Kong

Email: coco.ye.liu@connect.polyu.hk
Google Scholar: bit.ly/2eiaBcsAAAAJ
Homepage: yeliu.dev

RESEARCH INTERESTS

- Foundation Models (NeurIPS'24)
- Computer Vision (CVPR'22, TNNLS'24, ECCV'24)
- Multimedia Systems (ACM MM'20)
- Urban Computing (CIKM'23, arXiv'23)

EDUCATION

The Hong Kong Polytechnic University
Ph.D. in Computer Science
Advisor: Prof. Chang Wen Chen

Hong Kong SAR
Sep. 2021 - Present

Wuhan University
B.S. in Geographical Information Science & B.E. in Computer Science
Advisor: Prof. Huifang Li & Prof. Gui-Song Xia

Wuhan, China
Sep. 2016 - Jun. 2020

Imperial College London
Summer School in Machine Learning, Robotics and Sensor Networks
Advisor: Prof. Guang-Zhong Yang & Dr. Benny Lo

London, UK
Jul. 2018 - Aug. 2018

The University of Hong Kong
Summer School in Mathematical Laboratory and Modeling
Advisor: Dr. Chi-Wing Wong

Hong Kong SAR
Jul. 2017 - Aug. 2017

RESEARCH EXPERIENCES

ARC Lab, Tencent PCG
Research Intern (*Advisor: Dr. Yang Wu & Dr. Zhongang Qi*)
Fine-grained video-language understanding.

Shenzhen, China
Jul. 2021 - Present

Show Lab, National University of Singapore
Visiting Student (*Advisor: Prof. Mike Z. Shou*)
Multi-modal reasoning.

Singapore
Mar. 2024 - Jul. 2024

Visual Computing Group, Harvard University
Associate (*Advisor: Prof. Hanspeter Pfister*)
Parameter- and memory-efficient transfer learning.

Boston, USA
Jun. 2023 - Mar. 2024

LIESMARS, Wuhan University
Research Assistant (*Advisor: Prof. Huifang Li*)
Dense prediction in remote sensing images.

Wuhan, China
Mar. 2020 - Jun. 2021

SUNY Buffalo & The Chinese University of Hong Kong, Shenzhen
Research Intern (*Advisor: Prof. Junsong Yuan & Prof. Chang Wen Chen*)
Zero-shot human-object interaction detection.

Buffalo, USA
Jul. 2019 - Dec. 2019

GNSS Research Center, Wuhan University
Research Assistant (*Advisor: Prof. Chi Guo & Prof. Weiping Jiang*)
Hardware-efficient video object tracking.

Wuhan, China
Sep. 2018 - Jun. 2019

The Hamlyn Centre, Imperial College London

London, UK

Summer Research Intern (*Advisor: Prof. Guang-Zhong Yang*)

Jul. 2018 - Aug. 2018

Voice-controlled visual servoing systems.

PUBLICATIONS

Ye Liu, Zongyang Ma, Zhongang Qi[†], Yang Wu, Ying Shan, and Chang Wen Chen[†]. “E.T. Bench: Towards Open-Ended Event-Level Video-Language Understanding”. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2024.

Ye Liu, Jixuan He, Wanhua Li[†], Junsik Kim, Donglai Wei, Hanspeter Pfister, and Chang Wen Chen[†]. “R²-Tuning: Efficient Image-to-Video Transfer Learning for Video Temporal Grounding”. In *Proceedings of the European Conference on Computer Vision (ECCV)*, 2024.

Ye Liu, Huifang Li[†], Chao Hu, Shuang Luo, Yan Luo, and Chang Wen Chen. “Learning to Aggregate Multi-Scale Context for Instance Segmentation in Remote Sensing Images”. *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2024.

Jixuan He, Wanhua Li[†], **Ye Liu**, Junsik Kim, Donglai Wei, and Hanspeter Pfister. “Affordance-Aware Object Insertion via Mask-Aware Dual Diffusion”. *Under Review (arXiv:2412.14462)*, 2024.

Jingyun Xu*, Yang Liu*, **Ye Liu***, Junnan Yu, Yukang Wang, Bobo Li, and Yi Cai[†]. “Dynamically Incorporating Syntactic and Semantic Knowledge for Sentiment Quadruple Extraction in Dialogues”. *Under Review*, 2024.

Yan Luo, Haoyi Duan, **Ye Liu**[†], and Fu-lai Chung. “Timestamps as Prompts for Geography-Aware Location Recommendation”. In *Proceedings of the ACM International Conference on Information and Knowledge Management (CIKM)*, 2023.

Yan Luo, **Ye Liu**[†], Fu-lai Chung, Takahiro Yabe, Yu Liu, and Chang Wen Chen. “End-to-End Personalized Next Location Recommendation via Contrastive User Preference Modeling”. *Under Review (arXiv:2303.12507)*, 2023.

Ye Liu, Siyuan Li, Yang Wu[†], Chang Wen Chen, Ying Shan, and Xiaohu Qie. “UMT: Unified Multi-modal Transformers for Joint Video Moment Retrieval and Highlight Detection”. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022.

Ye Liu, Junsong Yuan[†], and Chang Wen Chen. “ConsNet: Learning Consistency Graph for Zero-Shot Human-Object Interaction Detection”. In *Proceedings of the ACM International Conference on Multimedia (ACM MM)*, 2020.

* Equal contribution † Corresponding author

PATENTS

Chang Wen Chen, **Ye Liu**, Zongyang Ma, Zhongang Qi, Yang Wu, Ying Shan. “Video-Language Processing Methods, Model Training Methods, and Infrastructures”. *Invention Patent*, 2024.

Chang Wen Chen, **Ye Liu**, Ying Shan, Siyuan Li, Yang Wu, Xiaohu Qie. “A Video Recognition Algorithm, System, Storage Medium, and Server”. *Invention Patent (CN114581821A)*, 2022.

INVITED TALKS

Preparing for Confirmation of Registration, *PolyU Research Student Gathering*

Apr. 2023

TEACHING EXPERIENCES

Teaching Assistant

COMP1004: Introduction to Artificial Intelligence and Data Analytics

Fall 2022, Fall 2024

COMP3122: Information Systems Development

Spring 2023

COMP3334: Computer Systems Security

Spring 2022

COMP1001: Problem Solving Methodology in Information Technology

Fall 2021

Final Year Project Mentoring

Audio-Visual Video Temporal Understanding	2024
Video Moment Retrieval using Deep Learning Models (Best Project Award)	2023
Rotated Object Detection in Remote Sensing Images	2023

HONORS & AWARDS

PolyU International Collaborative Research Fellowship (ICRF)	2024
PolyU Faculty of Engineering Research Highlights	2024
HKSTP Ideation Grant	2023, 2024
PolyU Student Innovation and Entrepreneurship Scholarship	2022, 2023, 2024
PolyU Research Student Attachment Programme (RSAP)	2023
The Most Appreciated Teaching Assistant (MATA) Award - Gold Medal	2022
Special Scholarship for Outstanding Exchange Students, WHU	2017, 2018, 2019
Best Overall Project Award, Imperial College London	2018

SERVICES

Journal Reviewer

IEEE Transactions on Image Processing (TIP)
IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)

Conference Reviewer

The IEEE Conference on Computer Vision and Pattern Recognition (CVPR)	2023, 2024, 2025
The International Conference on Machine Learning (ICML)	2024, 2025
The International Conference on Learning Representations (ICLR)	2024, 2025
The AAAI Conference on Artificial Intelligence (AAAI)	2025
Neural Information Processing Systems (NeurIPS)	2023, 2024
The European Conference on Computer Vision (ECCV)	2024
The Asian Conference on Computer Vision (ACCV)	2024
The IEEE International Conference on Computer Vision (ICCV)	2023
The IEEE International Conference on Image Processing (ICIP)	2023

SKILLS

Programming: Python, PyTorch, Git, Slurm, LaTeX
Languages: English (*fluent*), Chinese (*native*), Cantonese (*native*)