

# Wuyang Li

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## PREVIOUS RESEARCH TOPICS

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### Object Detection, Graph-based Learning

## EDUCATION

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- **The Chinese University of Hong Kong (CUHK)** Jan 2024 - Aug 2024 (Expected)  
*Postdoc in Computer Science*  
**Supervisor:** Prof. Yixuan Yuan
- **City University of Hong Kong (CityU)** Aug 2020 - Dec 2023 (Expected, 3.5 years)  
*Ph.D. in Electrical Engineering*  
**Supervisor:** Prof. Yixuan Yuan  
*Early Graduation Approved by the College*
- **Tianjin University (TJU)** Sep 2016 - Jun 2020  
*B.E. in Electrical Engineering*  
**GPA:** 3.83/4.0 (Top 2%)

**Highlighted Events.** This year, I have established a start-up team as Person-in-Charge (PIC) to create a fantastic educational product with AIGC. We have received seed funding from HK Tech 300 and HKSTP.

**More About Me.** My publication is nothing for me because of its large gap with real-world applications. I cannot fully decide my publication style (some works are not in my taste) and topics in my research period (PhD). My life-long goal is to create (or participate in) a worldwide product to meet the demands of billions of users. That is also why I never considered stepping into academia and struggling for the tenure track.

## SELECTED CONFERENCE PAPERS

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- **Novel Scenes & Classes: Towards Adaptive Open-set Object Detection**  
Wuyang Li, Xiaoqing Guo, Yixuan Yuan  
IEEE International Conference on Computer Vision (ICCV), 2023, **Oral (1.8%)**
- **Adjustment and Alignment for Unbiased Open Set Domain Adaptation**  
Wuyang Li, Jie Liu, Bo Han, Yixuan Yuan  
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023
- **SIGMA: Semantic-complete Graph Matching for Domain Adaptive Object Detection**  
Wuyang Li, Xinyu Liu, Yixuan Yuan  
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2022, **Oral, Best Paper Finalist (Top 33 Papers in the Main Track), 0.4%**
- **SCAN: Cross Domain Object Detection with Semantic Conditioned Adaptation**  
Wuyang Li, Xinyu Liu, Xiwen, Yao, Yixuan Yuan  
The Association for the Advance of Artificial Intelligence (AAAI), 2022, **Oral**
- **MRM: Masked Relation Modeling for Medical Image Pre-Training with Genetics**  
Qiushi Yang, Wuyang Li, Baopu, Li Yixuan Yuan  
IEEE International Conference on Computer Vision (ICCV), 2023
- **H2GM: A Hierarchical Hypergraph Matching Framework for Brain Landmark Alignment**  
Zhibin He, Wuyang Li, Tuo Zhang, Yixuan Yuan  
Medical Image Computing and Computer Assisted Intervention (MICCAI), 2023
- **Towards Robust Adaptive Object Detection under Noisy Annotations**  
Xinyu Liu, Wuyang Li, Qiushi Yang, Baopu Li, Yixuan Yuann  
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2022
- **Intervention & Interaction Federated Abnormality Detection with Noisy Clients**  
Xinyu Liu, Wuyang Li, Yixuan Yuan  
Medical Image Computing and Computer Assisted Intervention (MICCAI), 2022, **Oral**
- **(Under Review) About Diffusion Model**  
Wuyang Li, Xinyu Liu, Yixuan Yuan  
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2024
- **(Under Review) About SAM**  
Yifan Liu, Wuyang Li, Yixuan Yuan  
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2024

## SELECTED JOURNAL PAPERS

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- **SIGMA++: Improved Semantic-complete Graph Matching for Domain Adaptive Object Detection**  
Wuyang Li, Xinyu Liu, Yixuan Yuan  
IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2023
- **SCAN++: Enhanced Semantic Conditioned Adaptation for Domain Adaptive Object Detection**  
Wuyang Li, Xinyu Liu, Yixuan Yuan  
IEEE Transactions on Multimedia (TMM), 2022
- **HTD: Heterogeneous Task Decoupling for Two-Stage Object Detection**  
Wuyang Li, Zhen Chen, Baopu Li, Dingwen Zhang, Yixuan Yuan  
IEEE Transactions on Image Processing (TIP), 2021
- **Medical Federated Learning with Joint Graph Purification for Noisy Label Learning**  
Zhen Chen, Wuyang Li, Xiaohan Xing, Yixuan Yuan  
IEEE Transactions on Neural Networks and Learning Systems (TNNLS), 2023
- **Decoupled Unbiased Teacher for Source-free Domain Adaptive Medical Object Detection**  
Xinyu Liu, Wuyang Li, Yixuan Yuan  
Medical Image Analysis (MIA), 2023
- **GRAB-Net: Graph-based Boundary-aware Network for Medical Point Cloud Segmentation**  
Yifan Liu, Wuyang Li, Jie Liu, Hui Chen, Yixuan Yuan  
IEEE Transactions on Medical Imaging (TMI), 2023
- **(Under Review) About Diffusion Model**  
Xinyu Liu, Wuyang Li, Yixuan Yuan  
International Journal of Computer Vision (IJCV), 2024
- **(Under Review) About Zero-shot Semantic Segmentation**  
Xiaoqing Guo, Wuyang Li, Yixuan Yuan  
International Journal of Computer Vision (IJCV), 2024
- **(Under Review) About Brain Landmark Matching**  
Zhibin He, Wuyang Li, Tuo Zhang, Yixuan Yuan  
IEEE Transactions on Medical Imaging (TMI), 2024
- **(Under Review) About LLM Application**  
Yiwen Luo, Wuyang Li, Yixuan Yuan  
IEEE Transactions on Medical Imaging (TMI), 2024

## RESEARCH EXPERIENCE

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- **AIM Group, City University of Hong Kong** Aug 2020 - Present  
*Develop high-performance and domain/noise-robust object detectors.*  
Supervisor: Prof. Yixuan Yuan
- **NUS (Suzhou) Research Institute (NUSRI)** Sep 2019 - Jun 2020  
*Develop a web-page-based Augmentation Reality (AR) framework.*  
Supervisor: Prof. Zhiying, Zhou

## SELECTED AWARDS

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- **Outstanding Academic Performance Award (OAPA), CityU** 2023  
*Outstanding research achievements in EE department.*
- **Research Tuition Scholarship (RTS), CityU** 2023  
*Outstanding research achievements in EE department.*
- **Outstanding Academic Performance Award (OAPA), CityU** 2022  
*Outstanding research achievements in EE department.*
- **Research Tuition Scholarship (RTS), CityU** 2022  
*Outstanding research achievements in EE department.*
- **Rank First in Polyp Detection Challenge** May 2021  
*3rd International Endoscopy Computer Vision Challenge and Workshop (EndoCV2021)*
- **National Scholarship** Aug 2018  
*The Highest Honor for a Student in China (Top 2%)*
- **National Scholarship** Aug 2017  
*The Highest Honor for a Student in China (Top 2%)*

- **Silver Award in Tianjin Advanced Mathematical Competition** Jun 2017  
*As a Selected Participant Representing Tianjin University (Top 5%)*
- **First-class Student Awards** 2017-2019  
*Outstanding Students Selected in Tianjin University (Top 10%)*

#### LEADERSHIP

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- **PIC of a Start-up Team** 2023 - Present  
*I have established a team and worked on a new educational product.*
- **Student Union Chairman, Tianjin University** Sep. 2018 - Jun. 2020  
*I was fortunate to be selected as the chairman of the student union.*
- **Freshman Leader, Tianjin University** Jun 2017 - Jun 2018  
*I was fortunate to be one of the eight freshman leaders in the department.*