Zhihe Lu

🌐 https://zhihelu.github.io/   ✉ zhihelu.academic@gmail.com

EDUCATION

CVSSP, University of Surrey (Top 1 on Computer Vision in UK)   **Supervisor: Prof. Tao Xiang**
Doctoral Degree in Computer Vision   *2019.07 - 2022.09*

Institute of Automation, Chinese Academy of Sciences (CASIA)   **Supervisor: Prof. Ran He**
Master Degree in Computer Vision   *2016.09 - 2019.06*

College of Electrical Engineering, Zhengzhou University
Bachelor of Engineering, Automation   *2010.09 - 2014.06*

WORKING EXPERIENCES

2022.09 - 2024.09: Research Fellow at National University of Singapore, Singapore. Work on CARTIN project (grant **18.4** Million USD) for scene understanding.
2021.10 - 2022.04: Intern at AI center of Samsung, UK.

RESEARCH INTERESTS

Computer Vision: Object Recognition and Semantic Segmentation
Transfer Learning: Unsupervised Domain Adaptation, Source-free Domain Adaptation and Test-time Adaptation
Few-shot Learning: Meta-learning and Generalized Few-shot Models
Efficient Tuning of Foundation Models: Efficient Tuning of Vision-Language Models

PUBLICATIONS

Published (∗: Equal contribution, †: Corresponding author)

[1]. Beyond Sole Strength: Customized Ensembles for Generalized Vision-Language Models
Zhihe Lu, Jiawang Bai, Xin Li, Zeyu Xiao, Xinchao Wang   *ICML 2024*

[2]. Uncertainty-aware Source-free Domain Adaptive Semantic Segmentation
Zhihe Lu, Da Li, Yi-Zhe Song, Tao Xiang, Timothy M. Hospedales   *TIP 2023*

[3]. Prediction Calibration for Generalized Few-shot Semantic Segmentation
Zhihe Lu, Sen He, Da Li, Yi-Zhe Song, Tao Xiang   *TIP 2023*

[4]. Simpler is Better: Few-shot Semantic Segmentation with Classifier Weight Transformer
Zhihe Lu, Sen He, Xiatian Zhu, Li Zhang, Yi-Zhe Song, Tao Xiang   *ICCV 2021*

[5]. Stochastic Classifiers for Unsupervised Domain Adaptation
Zhihe Lu, Yongxin Yang, Xiatian Zhu, Yi-Zhe Song, Tao Xiang   *CVPR 2020*

[6]. Conditional Expression Synthesis with Face Parsing Transformation
Zhihe Lu, Tanhao Hu, Lingxiao Song, Zhaoxiang Zhang, Ran He   *ACM MM 2018*

[7]. Task Residual for Tuning Vision-Language Models
Tao Yu∗, Zhihe Lu∗, Xin Jin, Zhibo Chen, Xinchao Wang   *CVPR 2023*

[8]. GraphAdapter: Tuning Vision-Language Models With Dual Knowledge Graph
Xin Li∗, Dongze Lian∗, Zhihe Lu∗, Jiawang Bai, Zhibo Chen, Xinchao Wang   *NeurIPS 2023*

[9]. Ultra-High-Definition Image Demoireing via Patch Bilateral Compensation
Zeyu Xiao*, Zhihe Lu*, Xinchao Wang   *ACM MM 2024*

[10]. Unraveling Motion Uncertainty for Local Motion Deblurring
Zeyu Xiao*, Zhihe Lu*, Michael Bi Mi, Xinchao Wang   *ACM MM 2024*

[11]. Revisiting Self-Supervised Heterogeneous Graph Learning from Spectral Clustering
Yujie Mo, Zhihe Lu, Runpeng Yu, Xiaofeng Zhu, Xinchao Wang   *NeurIPS 2024*

[12]. Frequency-Enhanced Data Augmentation for Vision-and-Language Navigation
Keji He, Chenyang Si, Zhihe Lu, Yan Huang, Liang Wang, Xinchao Wang   *NeurIPS 2023*

[13]. Parameter-Efficient and Memory-Efficient Tuning for Vision Transformer
Taolin Zhang, Jiawang Bai, Zhihe Lu, et al.   *ECCV 2024*

[14]. Dual-Path Adversarial Lifting for Domain Shift Correction in Online Test-time Adaptation
Yushun Tang, Shuoshuo Chen, Zhihe Lu, Xinchao Wang, et al.   *ECCV 2024*

[15]. Geometry Guided Adversarial Facial Expression Synthesis
Lingxiao Song, Zhihe Lu, Ran He, Zhenan Sun, Tieniu Tan   *ACM MM 2018*

[16]. Memory-adaptive vision-and-language navigation
Keji He, Ya Jing, Yan Huang, Zhihe Lu, Dong An, Liang Wang   *PR 2024*

[17]. Recent Progress of Face Image Synthesis
Zhihe Lu, *Zhihang Li, Jie Cao, Ran He, Zhenan Sun*   *ACPR 2017*

[18]. Person Identification from Lip Texture Analysis
Zhihe Lu, *Xiang Wu, Ran He*   *DSP 2016*

HONORS & AWARDS

Student representative at CVSSP, University of Surrey   *2019 − 2022*

Outstanding Graduate of Henan Province, Zhengzhou University   *2013 − 2014*

National Scholarship, Zhengzhou University   *2012 − 2013*

PROFESSIONAL SERVICES

Journal Reviewer:

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
International Journal of Computer Vision (IJCV)
IEEE Transactions on Image Processing (TIP)
ACM Computing Surveys
IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
Pattern Recognition (PR)

Conference Reviewer / Program Committee Member:

IEEE Conference on Computer Vision and Pattern Recognition (CVPR)	2023 - 2024
International Conference on Computer Vision (ICCV)	2023
European Conference on Computer Vision (ECCV)	2022, 2024
Neural Information Processing Systems (NeurIPS)	2023 - 2024
International Conference on Machine Learning (ICML)	2023
International Conference on Learning Representations (ICLR)	2024 - 2025
AAAI Conference on Artificial Intelligence (AAAI)	2022 - 2025