# Zhedong Zheng

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## Education

**University of Technology Sydney**, Sydney, Australia                    2017 - 2021
Ph.D. in Computer Science (Advisors: Prof. Yi Yang and Dr. Liang Zheng)

**Fudan University**, Shanghai, China                    2012 - 2016
B.S. in Computer Science (Advisor: Prof. Xiangyang Xue)

## Work Experience

**National University of Singapore**, Singapore                    2021 - Present
Postdoctoral Research Fellow (Advisor: Prof. Tat-seng Chua)

**Baidu Research**, Beijing, China                    2020
Remote Research Intern (Hosts: Mr. Minyue Jiang and Dr. Xiao Tan)

**Nvidia Research**, San Jose, United States                    2018
Research Intern (Hosts: Dr. Xiaodong Yang, Dr. Zhiding Yu and Dr. Jan Kautz)

## Research Interests

**Computer Vision and Machine Learning**
Multi-view Object Matching, Novel View Synthesis

## Awards & Competitions

### Awards

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|---|---|
| IEEE Circuits and Systems Society Outstanding Young Author Award (*1 recipient world-wide*) | 2021 |
| Zhejiang Lab's International Talent Fund for Young Professionals (No.ZJ2020GZ021) | 2021 |
| Outstanding Ph.D. Thesis on the Chancellor's List | 2021 |
| UTS Vice-Chancellor's Conference Fund | 2020 |
| UTS AAII Student Best Paper Award | 2020 |
| IEEE ICME Outstanding Reviewer Award | 2020 |
| First-class Scholarship at Fudan University | 2013, 2014, 2015, 2016 |
| EMC Scholarship | 2013 |

### Competitions

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|---|---|
| AICity Challenge: Language-based Vehicle Retrieval Challenge, Rank 1st / 15 teams | CVPR 2021 |
| AICity Challenge: Vehicle Re-identification Challenge, Rank 2nd / 51 teams | CVPR 2021 |
| Evoked Expressions from Videos (EEV) Challenge, Rank 2nd / 11 teams | CVPR 2021 |
| AICity Challenge: Vehicle Re-identification Challenge, Rank 1st / 64 teams | CVPR 2020 |
| AICity Challenge: Vehicle Re-identification Challenge, Rank 4th / 84 teams | CVPR 2019 |
| VisDA: Semi-Supervised Domain Adaptation Challenge, Rank 4th / 57 teams | ICCV 2019 |
| US Patent Application: Image identification using neural networks 16357047 | |

## Professional Services

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|---|---|
| Session Chair | Responsible, Responsive, and Robust Multimedia Retrieval, ICME 2022 |
| Senior PC | IJCAI 2021 |
| Reviewer | TPAMI, IJCV, TIP, TMM, TCSVT, CVPR, ICCV, ECCV, and ACM Multimedia |

## Selected Talk

Keynote speaker at AICity Challenge @ CVPR 2020 and CVPR 2021
Tutorial speaker at Multimedia Content Understanding in Harsh Environments @ ACM MM 2022

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|---|---|
| 2021.08: Data. Data! How to deal with Data Scarcity? | Fudan University |
| 2021.07: Scene Understanding from Aerial View. | Zhejiang University |
| 2021.01: Visual Matching: From Re-identification to Geo-localization. | Fudan University |
| 2020.12: Image Generation for Robust Image Retrieval. | Alibaba Inc. |
| 2020.11: A Multi-view Multi-source Benchmark for Drone-based Geo-localization. [Link] | UTS |

## Publications

*Summary.* As of 16 Spet 2022, 27 papers have been published in top venues such as IJCV, TIP, TMM, ICCV, and CVPR. 5 papers are selected as ESI Highly Cited Paper. SCI Citations = 3284, SCOPUS Citations = 3508, Google Scholar Citations = 6191.

### Refereed Journals

1. Adaptive Boosting for Domain Adaptation: Towards Robust Predictions in Scene Segmentation.
IEEE Transactions on Image Processing (**TIP**), 2022.
**Zhedong Zheng**, Yi Yang

2. Rectifying Pseudo Label Learning via Uncertainty Estimation for Domain Adaptive Semantic Segmentation.
International Journal of Computer Vision (**IJCV**), 2021.
**Zhedong Zheng**, Yi Yang

3. VehicleNet: Learning Robust Visual Representation for Vehicle Re-identification.
IEEE Transactions on Multimedia (**TMM**), 2020.
**Zhedong Zheng**, Tao Ruan, Yunchao Wei, Yi Yang, Tao Mei

4. Dual-Path Convolutional Image-Text Embedding with Instance Loss.
ACM Transactions on Multimedia Computing, Communications, and Applications (**TOMM**), 2020.
**Zhedong Zheng**, Liang Zheng, Michael Garrett, Yi Yang, Mingliang Xu, Yi-Dong Shen

5. Pedestrian Alignment Network for Large-scale Person Re-identification.
IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**), 2019.
**Zhedong Zheng**, Liang Zheng, Yi Yang (**ESI Highly Cited Paper, Cited by** 400+ **times**)

6. A Discriminatively Learned CNN Embedding for Person Re-identification.
ACM Transactions on Multimedia Computing, Communications, and Applications (**TOMM**), 2018.
**Zhedong Zheng**, Liang Zheng, Yi Yang (**ESI Highly Cited Paper, Cited by** 700+ **times**)

7. Point Cloud Pre-training by Mixing and Disentangling.
IEEE Transactions on Multimedia (**TMM**), 2022.
Chao Sun, **Zhedong Zheng**$^*$, Xiaohan Wang, Mingliang Xu, Yi Yang ($^*$: Corresponding Author)

8. Multi-pseudo Regularized Label for Generated Samples in Person Re-Identification.
IEEE Transactions on Image Processing (**TIP**), 2018.
Yan Huang, Jinsong Xu, Qiang Wu, **Zhedong Zheng**, Zhaoxiang Zhang, Jian Zhang

9. Camstyle: a novel data augmentation method for person re-identification.
IEEE Transactions on Image Processing (**TIP**), 2018.
Zhun Zhong, Liang Zheng, **Zhedong Zheng**, Shaozi Li, Yi Yang (**ESI Highly Cited Paper, Cited by** 500+ **times**)

10. Bayesian query expansion for multi-camera person re-identification.
Pattern Recognition Letters, 2018.
Yutian Lin, **Zhedong Zheng**, Hong Zhang, Chenqiang Gao, Yi Yang

11. Improving Person Re-identification by Attribute and Identity Learning.
Pattern Recognition (**PR**), 2019.
Yutian Lin, Liang Zheng, **Zhedong Zheng**, Yu Wu, Zhilan Hu, Chenggang Yan, Yi Yang (**ESI Highly Cited Paper,** Cited by 600+ times)

12. Thorax disease classification with attention guided convolutional neural network.
Pattern Recognition Letters, 2020.
Qingji Guan, Yaping Huang, Zhun Zhong, **Zhedong Zheng**, Liang Zheng, Yi Yang

13. Unsupervised Eyeglasses Removal in the Wild.
IEEE Transactions on Cybernetics (**TCYB**), 2020.
Bingwen Hu, **Zhedong Zheng**, Ping Liu, Wankou Yang, Mingwu Ren

14. Each Part Matters: Local Patterns Facilitate Cross-view Geo-localization.
IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**), 2021.
Tingyu Wang, **Zhedong Zheng**, Chenggang Yan, Jiyong Zhang, Yaoqi Sun, Bolun Zheng, Yi Yang (**ESI Highly Cited Paper**)

15. Soft Person Re-identification Network Pruning via Block-wise Adjacent Filter Decaying.
IEEE Transactions on Cybernetics (**TCYB**), 2021.
Xiaodong Wang, **Zhedong Zheng**, Yang He, Fei Yan, Zhiqiang Zeng, Yi Yang

16. SPG-VTON: Semantic Prediction Guidance for Multi-pose Virtual Try-on.
IEEE Transactions on Multimedia (**TMM**), 2022.
Bingwen Hu, Ping Liu, **Zhedong Zheng**, Mingwu Ren

17. Joint Representation Learning and Keypoint Detection for Cross-view Geo-localization.
IEEE Transactions on Image Processing (**TIP**), 2022.
Jinliang Lin, **Zhedong Zheng**, Zhun Zhong, Zhiming Luo, Shaozi Li, Yi Yang, Nicu Sebe

18. Heterogeneous Feature Alignment and Fusion in Cross-modal Augmented Space for Composed Image Retrieval
IEEE Transactions on Multimedia (**TMM**), 2022.
Xiaohan Wang, Linchao Zhu, **Zhedong Zheng**, Mingliang Xu, Yi Yang


**<u>Refereed Conferences</u>**
1. Unlabeled Samples Generated by GAN Improve the Person Re-identification Baseline in vitro.
IEEE International Conference on Computer Vision (**ICCV**), 2017. (Spotlight)
**Zhedong Zheng**, Liang Zheng, Yi Yang (**Cited by** 1500+ **times**)

2. Joint Discriminative and Generative Learning for Person Re-identification.
IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019. (Oral)
**Zhedong Zheng**, Xiaodong Yang, Zhiding Yu, Liang Zheng, Yi Yang, Jan Kautz (**Cited by** 500+ **times**)

3. University-1652: A Multi-view Multi-source Benchmark for Drone-based Geo-localization.
ACM Multimedia (**ACM MM**), 2020.
**Zhedong Zheng**, Yunchao Wei, Yi Yang

4. Unsupervised Scene Adaptation with Memory Regularization in vivo.
International Joint Conference on Artificial Intelligence (**IJCAI**), 2020.
**Zhedong Zheng**, Yi Yang

5. Macro-Micro Adversarial Network for Human Parsing.
European Conference on Computer Vision (**ECCV**), 2018.
Yawei Luo, **Zhedong Zheng**, Liang Zheng, Tao Guan, Junqing Yu, Yi Yang

6. Camera Style Adaptation for Person Re-identification.
IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2018.
Zhun Zhong, Liang Zheng, **Zhedong Zheng**, Shaozi Li, Yi Yang

7. Real-World Automatic Makeup via Identity Preservation Makeup Net.
International Joint Conference on Artificial Intelligence (**IJCAI**), 2020.
Zhikun Huang, **Zhedong Zheng**, Chenggang Yan, Hongtao Xie, Yaoqi Sun, Jianzhong Wang, Jiyong Zhang

8. Decoupled and Memory-Reinforced Networks: Towards Effective Feature Learning for One-Step Person Search.
The AAAI Conference on Artificial Intelligence (**AAAI**), 2021.
Chuchu Han, **Zhedong Zheng**, Changxin Gao, Nong Sang, Yi Yang

9. Multi-View Consistent Generative Adversarial Networks for 3D-aware Image Synthesis
IEEE Conference on Computer Vision and Pattern Recognition **(CVPR)**, 2022.
Xuanmeng Zhang, **Zhedong Zheng**, Daiheng Gao, Bang Zhang, Pan Pan, Yi Yang

## Open Source

Codes and models for my published papers are available on my GitHub: <https://github.com/layumi>
(7,000 stars and 1,700 followers)