

# Zhedong Zheng

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Nationality: China • Date of Birth: 12 Oct 1993 • [Google Scholar](#)

## Academic Qualifications

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|---------------------|---|
| Jan 2017 - Aug 2021 | Ph.D. in Computer Science, University of Technology Sydney, Australia<br>(Advisor: Prof. Yi Yang)             |
| Sep 2012 - Jul 2016 | B.S. in Computer Science, Fudan University, China ( <i>QS Ranking #34</i> )<br>(Advisor: Prof. Xiangyang Xue) |

## Work Experience

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|---------------------|---|
| Sep 2021 - Present  | Research Fellow, NExT++ Lab, National University of Singapore<br>(Advisor: Prof. Tat-seng Chua) |
| Aug 2022 - Present  | Adjunct Scientist at Sea AI Lab, Singapore  |
| Mar 2020 - May 2020 | Research Intern, Baidu Research, China  |
| Sep 2018 - Dec 2018 | Research Intern, Nvidia Research, USA   |

## 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  |

## Research Awards & Recognition & Competitions

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### Awards

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|-------------|---|
| 2021        | IEEE Circuits and Systems Society Outstanding Young Author Award<br>(1 recipient world-wide) (500 USD) <a href="#">[Link]</a> |
| 2021        | Zhejiang Lab's International Talent Fund for Young Professionals (30,000 CNY)   |
| 2021        | Outstanding Ph.D. Thesis on the Chancellor's List   |
| 2020        | UTS Vice-Chancellor's Conference Fund   |
| 2020        | UTS AAIL Student Best Paper Award   |
| 2020        | IEEE ICME Outstanding Reviewer Award  |
| 2013 - 2016 | Four-time First-class Scholarship at Fudan University   |
| 2013        | EMC Corp. Scholarship   |

### 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 (No: US2020/0302176A1) |           |

## Recent Keynote & Invited Presentations

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|--|---------------------|
| Keynote speaker at AICity Challenge @ CVPR 2020 and CVPR 2021                            |                     |
| Tutorial speaker at Multimedia Content Understanding in Harsh Environments @ ACM MM 2022 |                     |
| 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. [\[Link\]](#)

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## Research Interests

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### Computer Vision and Machine Learning

Multi-view Object Matching, Novel View Synthesis and Analysis

## Publications

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*Summary.* As of 4 Oct 2022, 28 papers have been published in top venues such as IJCV, TNNLS, TIP, TMM, CVPR, ICCV, and ECCV. 5 papers are selected as ESI Highly Cited Paper. Google Scholar Citations = **6,317**, H-index = **19**.

### Refereed Journals

1. Parameter-Efficient Person Re-identification in the 3D Space.

IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**), 2022.

**Zhedong Zheng**, Xiaohan Wang Nenggan Zheng, Yi Yang

2. Adaptive Boosting for Domain Adaptation: Towards Robust Predictions in Scene Segmentation.

IEEE Transactions on Image Processing (**TIP**), 2022.

**Zhedong Zheng**, Yi Yang

3. Rectifying Pseudo Label Learning via Uncertainty Estimation for Domain Adaptive Semantic Segmentation.

International Journal of Computer Vision (**IJCV**), 2021.

**Zhedong Zheng**, Yi Yang

4. 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

5. 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

6. 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)

7. 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)

8. 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)

9. 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

10. 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)

11. Bayesian Query Expansion for Multi-camera Person Re-identification.  
Pattern Recognition Letters, 2018.  
Yutian Lin, **Zhedong Zheng**, Hong Zhang, Chenqiang Gao, Yi Yang
12. 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**)
13. 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
14. Unsupervised Eyeglasses Removal in the Wild.  
IEEE Transactions on Cybernetics (**TCYB**), 2020.  
Bingwen Hu, **Zhedong Zheng**, Ping Liu, Wankou Yang, Mingwu Ren
15. 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**)
16. 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
17. 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
18. 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
19. 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

### Refereed Conferences

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 1700+ 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

## Preprint Papers

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1. Query Attack via Opposite-Direction Feature: Towards Robust Image Retrieval.  
**Zhedong Zheng**, Liang Zheng, Yi Yang, Fei Wu
2. 3D Magic Mirror: Clothing Reconstruction from a Single Image via a Causal Perspective.  
**Zhedong Zheng**, Jiayin Zhu, Wei Ji, Yi Yang, Tat-Seng Chua

## Open Source

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