Zhedong Zheng

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Nationality: China • Date of Birth: 12 Oct 1993 • Google Scholar

Academic Qualifications

Jan 2017 - Aug 2021	Ph.D. in Computer Science, University of Technology Sydney, Australia (Advisor: Prof. Yi Yang)
Sep 2012 - Jul 2016	B.S. in Computer Science, Fudan University, China (Advisor: Prof. Xiangyang Xue)

Work Experience

Sep 2021 - Present	Research Fellow, NExT++ Lab, National University of Singapore, Singapore (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

Teaching Record

2022	Teaching Assistant for *Multimedia Analysis* @ National University of Singapore
2015	Teaching Assistant for *Fundamentals of Speech Recognition* @ Fudan University

Professional Services

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

Awards

2021	IEEE Circuits and Systems Society Outstanding Young Author Award (*1 recipient world-wide*) (500 USD) [Link]
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 AAII Student Best Paper Award
2020	IEEE ICME Outstanding Reviewer Award
2013 - 2016	Four-time First-class Scholarship at Fudan University
2013	EMC Corp. Scholarship

Research Recognition

2022	The 3rd Most Cited Paper on ACM TOMM (Lifetime) [Link]
2022	Most Cited Paper in IEEE TCSVT 2019 [Link]
2021	Most Influential 10 ICCV17 papers [Link]

Competitions

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

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]   UTS

Research Interests

Computer Vision and Image Processing
Cross-view Object Matching, Novel View Synthesis and Analysis

Publications

Summary. As of 7 Dec 2022, 30 papers have been published in top venues such as TPAMI, IJCV, TNNLS, TIP, TMM, CVPR, ICCV, and ECCV. 6 papers are selected as ESI Highly Cited Paper. Google Scholar Citations = **6,690**, H-index = **19**.

<u>Refereed Journals</u>

1. 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**)

2. 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**)

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

6. 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

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

8. U-turn: Crafting Adversarial Queries with Opposite-direction Features.
International Journal of Computer Vision (**IJCV**), 2022.
Zhedong Zheng, Liang Zheng, Yi Yang, Fei Wu

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

20. 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)

21. DMRNet++: Learning Discriminative Features with Decoupled Networks and Enriched Pairs for One-Step Person Search.

IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 2022.
Chuchu Han, **Zhedong Zheng**, Kai Su, Dongdong Yu, Zehuan Yuan, Changxin Gao, Nong Sang, 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

1. 3D Magic Mirror: Clothing Reconstruction from a Single Image via a Causal Perspective.
Zhedong Zheng, Jiayin Zhu, Wei Ji, Yi Yang, Tat-Seng Chua

2. PiPa: Pixel-and Patch-wise Self-supervised Learning for Domain Adaptative Semantic Segmentation.
Mu Chen, **Zhedong Zheng**, Yi Yang, Tat-Seng Chua

3. Composed Image Retrieval with Text Feedback via Multi-grained Uncertainty Regularization.
Yiyang Chen, **Zhedong Zheng**, Wei Ji, Leigang Qu, Tat-Seng Chua

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)