

ZHONGDAO WANG

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RESEARCH INTEREST

I am a third-year Ph.D candidate at Department of Electronic Engineering, Tsinghua University. My research mainly focuses on computer vision and deep learning, specifically, I am interested in the following aspects:

- Discriminative representation learning, *e.g.*, face recognition, person/vehicle re-identification, image retrieval.
- Application systems that requires representation learning as a component module, such as multiple-object tracking (MOT) which needs to combine a detection model and a re-identification model.
- Task-oriented self-supervised learning.

EDUCATION

Department of Electronic Engineering, Tsinghua University
Ph.D student

Sep. 2017 - Now
Adviser: Shengjin Wang

Research interest: Representation learning (face/pedestrian recognition), multi-object tracking, multi-task learning.

Department of Physics, Tsinghua University
Bachelor student

Sep. 2013 - Jul. 2017

PUBLICATIONS

Conference: (* indicates equal contribution.)

8. [AAAI'20 (Oral)] Lanqing He*, **Zhongdao Wang***, Yali Li, Shengjin Wang. "Softmax Dissection: Towards Understanding Intra- and Inter-class Objective for Embedding Learning." , 2019. [\[pdf\]](#)
7. [CVPR'19] **Zhongdao Wang**, Liang Zheng, Yali Li, Shengjin Wang. "Linkage Based Face Clustering via Graph Convolution Network." , 2019. [\[pdf\]](#)[\[code\]](#)
6. [ICCV'17] **Zhongdao Wang**, Luming Tang, *et al.*. "Orientation Invariant Feature Embedding and Spatial Temporal Regularization for Vehicle Re-identification." , 2017. [\[pdf\]](#)[\[data\]](#)
5. [SPIE'17 Commercial + Scientific Sensing and Imaging] Tiebiao Zhao, **Zhongdao Wang**, Qi Yang, YangQuan Chen. "Melon yield prediction using small unmanned aerial vehicles." , 2017. [\[pdf\]](#)
4. [CVPR'20 (Oral)] Yifan Sun, Changmao Cheng, Yuhan Zhang, Chi Zhang, Liang Zheng, **Zhongdao Wang**, Yichen Wei. "Circle Loss: A Unified Perspective of Pair Similarity Optimization." , 2020. [\[pdf\]](#)

Preprint:

3. [Under review] **Zhongdao Wang**, Jingwei Zhang, Liang Zheng, Yixuan Liu, Shengjin Wang . "CycAs:Self-supervised Cycle Association for Learning Re-identifiable Person Descriptions." , 2020.
2. [Under review] **Zhongdao Wang**, Liang Zheng, Shengjin Wang. "Towards Real-Time Multiple-Object Tracking." , 2019. [\[pdf\]](#) [\[code\]](#)
1. [Arxiv] **Zhongdao Wang**, Liang Zheng, Shengjin Wang. "Query Adaptive Late Fusion for Image Retrieval." , 2018. [\[pdf\]](#)

WORK EXPERIENCES

Microsoft Rsearch Asian (MSRA), Media Computing Group

2020.2- Present

Research Intern

Advisor: Yan Lu, Jinglu Wang

- Self-supervised video correspondence learning and its applications on dense tracking.

Megvii Inc., Face Recognition Group

2017.12-2018.4

Research Intern

Advisor: Erjin Zhou, Dong Li

- Face recognition with dense supervision: Apply multiple supervisions on top of a dense feature map to train a deep network for face recognition. Reach state-of-the-art face recognition accuracy.

SenseTime Inc., Intelligent Video Group

2016.11-2017.3

Research Intern

Advisor: Junjin Yan, Shuai Yi

- Fine-grained Vehicle re-identification: Exploiting fine-grained feature around local key points of vehicles to help learn better feature for vehicle re-identification. One paper accepted by ICCV'17.

VL-Lab UC Merced, USA

2016.7-2016.9

Research Intern

Advisor: Ming-Hsuan Yang, Sifei Liu

- Multiple-object tracking: Implement stae-of-art algorithms.
- Video based face recognition.

ACADEMIC SERVICES

Reviewer of ICME 2019, ACM Multimedia 2020.

HONORS AND AWARDS

Friends of Tsinghua - Asia-Pacific President Scholarship, 2015

TA EXPERIENCE

2. Media and Cognition. Department of Electronic Engineering, Tsinghua University. 2019

1. Media and Cognition. Department of Electronic Engineering, Tsinghua University. 2018