Jian Zhao

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Department of ECE   Email: zhaojian90@u.nus.edu
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Singapore 117583

RESEARCH INTERESTS

Artificial intelligence, deep learning and computer vision, including unconstrained/large-scale/low-shot face recognition, image generation with adversarial learning, and human parsing.

EDUCATION

Ph.D. Electrical and Computer Engineering, National University of Singapore, 2016.01-2019.06 (Expected).
Thesis: Deep Learning for Human-Centric Image Analysis.
Advisors: Prof. Jiashi Feng, Prof. Shuicheng Yan.

M.Eng. Computer Science and Technology, School of Computer, National University of Defense Technology, 2012.09-2014.12.
Advisor: Prof. Xucan Chen.

B.Eng. Automation, School of Automation Science and Electrical Engineering, Beihang University, 2008.09-2012.07

ACADEMIC EXPERIENCE

"Texpert" Research Scientist, FiT DeepSea AI Lab, Tencent, Shenzhen, China, Dec 2018 - Present.

Research Intern, Core Technology Group, Learning & Vision, Panasonic R&D Center, Singapore, May 2016 - Sep 2018.

Research Intern, China Aerospace Science and Industry Corporation, Beijing, China, Sep 2011 - Jun 2012.

TEACHING

Graduate Assistant, Programming for Computer Interfaces (EE2024), National University of Singapore, Aug 2016 - Dec 2017.

AWARDS AND HONOURS

Excellent Graduate Award (<2%), National University of Defense Technology, 2019.

Best Student Paper Award, 1st author, ACM MM 2018.

1st-Place Award, 1st author, MS-Celeb-1M face recognition hard set/ random set/low-shot learning challenges with ICCV 2017.

1st-Place Award, 1st author, NIST IJB-A unconstrained face verification/ identification challenges, 2017.

2nd-Place Award, 1st author, L.I.P human parsing/pose estimation challenges with CVPR 2017.

3rd-Place Award, 2nd author, MS-Celeb-1M face recognition hard set challenge with ACM MM 2016.

Excellent Student Award (<10%), School of Computer, National University of Defense Technology, 2016.

Excellent Student Award (<10%), School of Computer, National University of Defense Technology, 2015.

Excellent Graduate Award (<2%), National University of Defense Technology, 2014.

Excellent Student Award (<2%), National University of Defense Technology, 2014.

Guanghua Fellowship (<2%), National University of Defense Technology, 2014.

Contribution Prize, for Engineering Implementation of Tianhe-2 supercomputer (No.1 on Top500, Jun, 2013), National University of Defense Technology, 2013.

3rd-Place Award, 13th "Great Wall Information Cup" challenge, National University of Defense Technology, 2013.

Excellent Student Award (<10%), School of Computer, National University of Defense Technology, 2013.

1st-Place Award, Big Data Processing and Information Sub-Forum of the 6th Graduate Innovation Forum, Provincial Education Department of Hunan Province, 2013.

Excellent Graduate Award (<2%), Beihang University, 2012.

2nd-Place Award, 5th Student Research Training Program (SRTP), Beihang University, 2012.

National Endeavor Fellowship, Central Government & Beijing Government of China, 2011.

3rd-Place Award, "Feng Ru Cup" challenge, School of Automation Science and Electrical Engineering, Beihang University, 2011.

SMC Fellowship, Beihang University, 2010.

PUBLICATIONS
Journal Articles

Jian Zhao, Lin Xiong, Jianshu Li, Junliang Xing, Shuicheng Yan, Jiashi Feng. *3D-Aided Dual-Agent GANs for Unconstrained Face Recognition*. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018. (**T-PAMI**).

Jian Zhao, Junliang Xing, Lin Xiong, Yan Xu, Shuicheng Yan, Jiashi Feng. *Deep Age-Invariant Face Recognition*. Submitted to International Journal of Computer Vision, 2018. (**IJCV**).

Jian Zhao, Junliang Xing, Lin Xiong, Shuicheng Yan, Jiashi Feng. *Recognizing Profile Faces by Imagining Frontal View*. Submitted to International Journal of Computer Vision, 2018. (**IJCV**).

Jian Zhao, Lin Xiong, Junliang Xing, Shuicheng Yan, Jiashi Feng. *3D-Driven Face Frontalization for High-Performance Pose-Invariant Face Recognition*. Submitted to International Journal of Computer Vision, 2018. (**IJCV**).

Jian Zhao, Jianshu Li, Hengzhu Liu, Shuicheng Yan, Jiashi Feng. *Fine-Grained Multi-Human Parsing*. Submitted to International Journal of Computer Vision, 2018. (**IJCV**).

Jianshu Li*, **Jian Zhao***, Yunchao Wei, Congyan Lang, Yidong Li, Terence Sim, Shuicheng Yan, Jiashi Feng. *Fine-Grained Multi-Human Parsing*. Submitted to International Journal of Computer Vision, 2018. (**IJCV**). (* indicates equal contribution).

Fang Zhao, Jiashi Feng, **Jian Zhao**, Wenhan Yang, Shuicheng Yan. *Robust LSTM-Autoencoders for Face De-Occlusion in the Wild*. IEEE Transactions on Image Processing, 2017. (**T-IP**).

Proceedings

Jian Zhao, Yu Cheng, Yi Cheng, Yang Yang, Fang Zhao, Jianshu Li, Hengzhu Liu, Shuicheng Yan, Jiashi Feng. *Look Across Elapse: Disentangled Representation Learning and Photorealistic Cross-Age Face Synthesis for Age-Invariant Face Recognition*. AAAI Conference on Artificial Intelligence (**AAAI** 2019). Oral.

Jianshu Li, Pan Zhou, Yunpeng Chen, **Jian Zhao**, Sujoy Roy, Yan Shuicheng, Jiashi Feng, Terence Sim. *Task Relation Networks*. IEEE Winter Conference on Applications of Computer Vision (**WACV** 2019).

Jian Zhao, Yu Cheng, Yan Xu, Lin Xiong, Jianshu Li, Fang Zhao, Karlekar Jayashree, Sugiri Pranata, Shengmei Shen, Junliang Xing, Shuicheng Yan, Jiashi Feng. *Towards Pose Invariant Face Recognition in the Wild*. IEEE International Conference on Computer Vision and Pattern Recognition (**CVPR** 2018).

Jian Zhao, Lin Xiong, Yu Cheng, Yi Cheng, Jianshu Li, Li Zhou, Yan Xu, Karlekar Jayashree, Sugiri Pranata, Shengmei Shen, Junliang Xing, Shuicheng Yan, Jiashi Feng. *3D-Aided Deep Pose-Invariant Face Recognition*. International Joint Conference on Artificial Intelligence (**IJCAI** 2018). Oral.

Jian Zhao, Jianshu Li, Yu Cheng, Terence Sim, Shuicheng Yan, Jiashi Feng. *Understanding Humans in Crowded Scenes: Deep Nested Adversarial Learning and A New Benchmark for Multi- Human Parsing*. ACM Multimedia Conference (**ACM MM** 2018). Best Student Paper.

Fang Zhao*, **Jian Zhao***, Shuicheng Yan, Jiashi Feng. *Dynamic Conditional Networks for Few-Shot Learning*. European Conference on Computer Vision (**ECCV** 2018). (* indicates equal contribution).

Jianshu Li, **Jian Zhao**, Yunpeng Chen, Sujoy Roy, Shuicheng Yan, Jiashi Feng, Terence Sim. *Multi-Human Parsing Machines*. ACM Multimedia Conference (**ACM MM** 2018).

Fang Zhao, Jianshu Li, **Jian Zhao**, Jiashi Feng. *Weakly Supervised Phrase Localization with Multi-Scale Anchored Transformer Network*. IEEE International Conference on Computer Vi- sion and Pattern Recognition (**CVPR** 2018).

Jian Zhao, Lin Xiong, Karlekar Jayashree, Jianshu Li, Fang Zhao, Zhecan Wang, Sugiri Pranata, Shengmei Shen, Shuicheng Yan, Jiashi Feng. *Dual-Agent GANs for Photorealistic and Identity Preserving Profile Face Synthesis*. Advances in Neural Information Processing Systems (**NIPS** 2017).

Jian Zhao, Jianshu Li, Fang Zhao, Shuicheng Yan, Jiashi Feng. *Marginalized CNN: Learning Deep Invariant Representations*. British Machine Vision Conference (**BMVC** 2017).

Jianshu Li, Shengtao Xiao, Fang Zhao, **Jian Zhao**, Jianan Li, Jiashi Feng, Shuicheng Yan, Terence Sim. *Integrated Face Analytics Networks through Cross-Dataset Hybrid Training*. ACM Multimedia Conference (**ACM MM** 2017). Oral.

Jianshu Li, **Jian Zhao**, Fang Zhao, Hao Liu, Jing Li, Shengmei Shen, Jiashi Feng, and Terence Sim. *Robust Face Recognition with Deep Multi-View Representation Learning*. ACM Multimedia Conference (**ACM MM** 2016).

Workshop

Jian Zhao, Jianshu Li, Xuecheng Nie, Yunpeng Chen, Zhecan Wang, Shuicheng Yan, Jiashi Feng. *Self-Supervised Neural Aggregation Networks for Human Parsing*. Workshop on *Visual Understanding of Humans in Crowd Scene* with with CVPR 2017.

Jian Zhao, Jianshu Li, Xuecheng Nie, Yunpeng Chen, Zhecan Wang, Shuicheng Yan, Jiashi Feng. *Self-Supervised Neural Aggregation Networks for Human Parsing*. Workshop on *Visual Understanding of Humans in Crowd Scene* with with CVPR 2017.

Yu Cheng*, **Jian Zhao***, Zhecan Wang, Yan Xu, Karlekar Jayashree, Shengmei Shen, Jiashi Feng. *Know You at One Glance: A Compact Vector Representation for Low-Shot Learning*. Workshop on *MS-Celeb-1M Challenge* with ICCV 2017. (* indicates equal contribution).

Zhecan Wang*, **Jian Zhao***, Yu Cheng, Shengtao Xiao, Jianshu Li, Fang Zhao, Jiashi Feng, and Ashraf Kassim. *Conditional Dual-Agent GANs for Photorealistic and Annotation Preserving Image Synthesis*. Workshop on *FaceHUB* with BMVC 2017. (* indicates equal contribution).

Yan Xu, Yu Cheng, **Jian Zhao**, Zhecan Wang, Lin Xiong, Karlekar Jayashree, Sugiri Pranata, Shengmei Shen, Jiashi Feng. *High Performance Large Scale Face Recognition with Multi-Cognition Softmax and Feature Retrieval*. Workshop on *MS-Celeb-1M Challenge* with ICCV 2017.

Jianshu Li, Yunpeng Chen, Shengtao Xiao, **Jian Zhao**, Sujoy Roy, Jiashi Feng, Shuicheng Yan, Terence Sim. *Estimation of Affective Level in the Wild with Multiple Memory Networks*. Workshop on *First Faces in-the-wild Challenge* with CVPR 2017.

INVITED TALKS
Deep Learning for Human-Centric Image Understanding

UBTECH, China, 2018.

Jiang Men, China, 2018.

VALSE Webinar, China, 2018.

Facial Analytics

OmniVision, Singapore, 2018.

National University of Singapore, 2018.

TECHNICAL ACTIVITIES
Organizer

Workshop on Visual Understanding of Humans in Crowd Scene, and MHP Challenges on Multi-Human Pose Estimation and Fine-Grained Multi-Human Parsing with CVPR 2018.

Program Committee Member

Workshop on Compact and Efficient Feature Representation Learning in Computer Vision with ECCV 2018.

Reviewers

T-MM, T-IFS, CSSP, NIPS (one of the top 30% highest-scoring reviewers of NIPS 2018), CVPR, ICCV, ACM MM, AAAI, ICLR, ICML.

HOBBIES

Travel, Fitness, Mixed Martial Arts (MMA) and Brazilian Jiu-Jitsu (BJJ, Blue Belt under Prof. Leandro Thomas Issa da Silva of Evolve MMA, Singapore).

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赵健

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新加坡国立大学　　　　　　　　　　　　　　邮箱: zhaojian90@u.nus.edu
Block E4, #08-24　　　　　　　　　　个人主页: https://zhaoj9014.github.io/
新加坡 117583

研究兴趣

　　　人工智能, 深度学习与计算机视觉, 包括非受限/大规模/小样本人脸识别, 基于对抗学习的图像生成, 以及人物解析.

教育经历

　　　博士, 新加坡国立大学电子与计算机工程系, 2016.01-2019.06 (预期).
　　　论文题目: 基于深度学习的人物图像理解.
　　　导师: 冯佳时, 颜水成, 刘衡竹.

　　　硕士, 国防科技大学计算机学院计算机科学与技术专业, 2012.09-2014.12.
　　　导师: 陈旭灿.

　　　学士, 北京航空航天大学自动化科学与电气工程学院自动化专业, 2008.09-2012.07.
　　　导师: 董邵鹏, 袁梅

学术经历

　　　"技术大咖"研究科学家, 腾讯深海人工智能实验室, 2018.12-今.

　　　实习, 新加坡松下研发中心学习与视觉核心技术组, 2016.05-2018.09.

　　　实习, 中国航天科工集团4院17所, 2011.09-2012.06.

教学经历

　　　研究生教学助理, 计算机接口编程 (EE2024), 新加坡国立大学, 2016.08-2017.12.

学术成果 (获奖)

　　　三等功、优秀毕业生 (<2%), 国防科技大学, 2019.

最佳学生论文奖, 第一作者, ACM MM 2018.

冠军, 第一作者, ICCV 2017 MS-Celeb-1M hard set/random set/low-shot learning人脸识别竞赛, 2017.

冠军, 第一作者, 美国国家标准技术研究所IJB-A非受限人脸验证与人脸鉴别比赛, 2017.

亚军, 第一作者, CVPR 2017 L.I.P人物解析/姿态估计竞赛, 2017.

季军, 第二作者, ACM MM 2016 MS-Celeb-1M hard set 人脸识别竞赛, 2016.

优秀学员 (<10%), 国防科技大学计算机学院, 2016.

优秀学员 (<10%), 国防科技大学计算机学院, 2015.

三等功、优秀毕业生 (<2%), 国防科技大学, 2014.

优秀学员 (<2%), 国防科技大学, 2014.

光华奖学金 (<2%), 国防科技大学, 2014.

积极贡献奖, 参与天河二号超级计算机系统工程实现工作 (天河二号在2013年6月国际Top500排名中位居世界第一), 国防科技大学, 2013.

季军, 第十三届长城信息杯科技作品竞赛, 国防科技大学, 2013.

优秀学员 (<10%), 国防科技大学计算机学院, 2013.

一等奖, 湖南省第六届研究生创新论坛大数据处理与信息分论坛, 湖南省人民政府学位委员会办公室, 2013.

优秀毕业生 (<2%), 北京航空航天大学, 2012.

二等奖, 第五届大学生科研训练计划 (SRTP), 北京航空航天大学, 2012.

国家励志奖学金, 北京市政府, 2011.

三等奖, 第二十一届"冯如杯"竞赛, 北京航空航天大学自动化学院, 2011.

SMC奖学金, 北京航空航天大学, 2010.

学术成果（论文）
期刊论文

Jian Zhao, Lin Xiong, Jianshu Li, Junliang Xing, Shuicheng Yan, Jiashi Feng. *3D-Aided Dual-Agent GANs for Unconstrained Face Recognition*. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2018. (**T-PAMI**).

Jian Zhao, Junliang Xing, Lin Xiong, Yan Xu, Shuicheng Yan, Jiashi Feng. *Deep Age-Invariant Face Recognition*. Submitted to International Journal of Computer Vision, 2018. (**IJCV**).

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Jian Zhao, Jianshu Li, Hengzhu Liu, Shuicheng Yan, Jiashi Feng. *Fine-Grained Multi-Human Parsing*. Submitted to International Journal of Computer Vision, 2018. (**IJCV**).

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Fang Zhao, Jiashi Feng, **Jian Zhao**, Wenhan Yang, Shuicheng Yan. *Robust LSTM-Autoencoders for Face De-Occlusion in the Wild*. IEEE Transactions on Image Processing, 2017. (**T-IP**).

会议论文

Jian Zhao, Yu Cheng, Yi Cheng, Yang Yang, Fang Zhao, Jianshu Li, Hengzhu Liu, Shuicheng Yan, Jiashi Feng. *Look Across Elapse: Disentangled Representation Learning and Photorealistic Cross-Age Face Synthesis for Age-Invariant Face Recognition*. AAAI Conference on Artificial Intelligence (**AAAI** 2019). Oral.

Jianshu Li, Pan Zhou, Yunpeng Chen, **Jian Zhao**, Sujoy Roy, Yan Shuicheng, Jiashi Feng, Terence Sim. *Task Relation Networks*. IEEE Winter Conference on Applications of Computer Vision (**WACV** 2019).

Jian Zhao, Yu Cheng, Yan Xu, Lin Xiong, Jianshu Li, Fang Zhao, Karlekar Jayashree, Sugiri Pranata, Shengmei Shen, Junliang Xing, Shuicheng Yan, Jiashi Feng. *Towards Pose Invariant Face Recognition in the Wild*. IEEE International Conference on Computer Vision and Pattern Recognition (**CVPR** 2018).

Jian Zhao, Lin Xiong, Yu Cheng, Yi Cheng, Jianshu Li, Li Zhou, Yan Xu, Karlekar Jayashree, Sugiri Pranata, Shengmei Shen, Junliang Xing, Shuicheng Yan, Jiashi Feng. *3D-Aided Deep Pose-Invariant Face Recognition*. International Joint Conference on Artificial Intelligence (**IJCAI** 2018). Oral.

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Fang Zhao, Jianshu Li, **Jian Zhao**, Jiashi Feng. *Weakly Supervised Phrase Localization with Multi-Scale Anchored Transformer Network*. IEEE International Conference on Computer Vi- sion and Pattern Recognition (**CVPR** 2018).

Jian Zhao, Lin Xiong, Karlekar Jayashree, Jianshu Li, Fang Zhao, Zhecan Wang, Sugiri Pranata, Shengmei Shen, Shuicheng Yan, Jiashi Feng. *Dual-Agent GANs for Photorealistic and Identity Preserving Profile Face Synthesis*. Advances in Neural Information Processing Systems (**NIPS** 2017).

Jian Zhao, Jianshu Li, Fang Zhao, Shuicheng Yan, Jiashi Feng. *Marginalized CNN: Learning Deep Invariant Representations*. British Machine Vision Conference (**BMVC** 2017).

Jianshu Li, Shengtao Xiao, Fang Zhao, **Jian Zhao**, Jianan Li, Jiashi Feng, Shuicheng Yan, Terence Sim. *Integrated Face Analytics Networks through Cross-Dataset Hybrid Training*. ACM Multimedia Conference (**ACM MM** 2017). Oral.

Jianshu Li, **Jian Zhao**, Fang Zhao, Hao Liu, Jing Li, Shengmei Shen, Jiashi Feng, and Terence Sim. *Robust Face Recognition with Deep Multi-View Representation Learning*. ACM Multimedia Conference (**ACM MM** 2016).

*Workshop*论文

Jian Zhao, Jianshu Li, Xuecheng Nie, Yunpeng Chen, Zhecan Wang, Shuicheng Yan, Jiashi Feng. *Self-Supervised Neural Aggregation Networks for Human Parsing*. Workshop on *Visual Understanding of Humans in Crowd Scene* with with CVPR 2017.

Jian Zhao, Jianshu Li, Xuecheng Nie, Yunpeng Chen, Zhecan Wang, Shuicheng Yan, Jiashi Feng. *Self-Supervised Neural Aggregation Networks for Human*

Parsing. Workshop on *Visual Understanding of Humans in Crowd Scene* with with CVPR 2017.

Yu Cheng*, **Jian Zhao***, Zhecan Wang, Yan Xu, Karlekar Jayashree, Shengmei Shen, Jiashi Feng. *Know You at One Glance: A Compact Vector Representation for Low-Shot Learning*. Workshop on *MS-Celeb-1M Challenge* with ICCV 2017. (* indicates equal contribution).

Zhecan Wang*, **Jian Zhao***, Yu Cheng, Shengtao Xiao, Jianshu Li, Fang Zhao, Jiashi Feng, and Ashraf Kassim. *Conditional Dual-Agent GANs for Photorealistic and Annotation Preserving Image Synthesis*. Workshop on *FaceHUB* with BMVC 2017. (* indicates equal contribution).

Yan Xu, Yu Cheng, **Jian Zhao**, Zhecan Wang, Lin Xiong, Karlekar Jayashree, Sugiri Pranata, Shengmei Shen, Jiashi Feng. *High Performance Large Scale Face Recognition with Multi-Cognition Softmax and Feature Retrieval*. Workshop on *MS-Celeb-1M Challenge* with ICCV 2017.

Jianshu Li, Yunpeng Chen, Shengtao Xiao, **Jian Zhao**, Sujoy Roy, Jiashi Feng, Shuicheng Yan, Terence Sim. *Estimation of Affective Level in the Wild with Multiple Memory Networks*. Workshop on *First Faces in-the-wild Challenge* with CVPR 2017.

受邀报告
基于深度学习的人物图像理解

优必选, 中国, 2018.

将门, 中国, 2018.

VALSE Webinar, 中国, 2018.

人脸分析

OmniVision, 新加坡, 2018

新加坡国立大学, 2018.

科研活动
组织者

CVPR 2018群体场景下人物图像理解Workshop以及相应的细粒度多人解析与姿态估计竞赛.

程序委员会成员

ECCV 2018计算机视觉紧致、高效特征表示学习Workshop.

审稿人

T-MM, T-IFS, CSSP, NIPS (获NIPS 2018前30%最佳审稿人), CVPR,
ICCV, ACM MM, AAAI, ICLR, ICML.

爱好

旅行，健身，综合格斗，巴西柔术 (巴西柔术蓝带).

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