Jiali Duan

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Research Interests

Representation Learning, Deep Reinforcement Learning, Adversarial Learning

Education

University of Southern California Los Angeles, USA
PhD. Electrical Engineering Sep. 2017 – May. 2021
Advisor: Prof. C.-C-Jay Kuo
Co-Advisor: Prof. Stefanos Nikolaidis

University of Chinese Academy of Sciences Beijing, China
M.S. Computer Science Sep. 2014 – Jul. 2017
Advisor: Prof. Stan Z. Li (Institute of Automation, Chinese Academy of Sciences)

- 2017 Presidential Award of University of Chinese Academy of Sciences (Top %1 UCAS)
- 2017 Excellent Graduate of Beijing (Top %1 Beijing graduates)
- 2017 Outstanding Graduation Thesis in University of Chinese Academy of Sciences (Top %1 UCAS)

East China University of Science and Technology Shanghai, China
B.E. Information Engineering Sep. 2010 – Jun. 2014
Thesis-Supervisor: Prof. Yu Zhu (East China University of Science and Technology)

- 2014 Outstanding Graduation Thesis in East China University of Science and Technology (Top 3%)
- 2013 Recommended Student for Summer Camp of ShanghaiTech University

Publications

- **Jiali Duan**, Yen-Liang Lin, Son Tran, Larry Davis, C.-C. Jay Kuo. "SLADE: A Self-Training Framework for Distance Metric Learning". Preprint 2020
- **Jiali Duan**, Yilei Zeng, Yang Li, Emilio Ferrara, Lerrel Pinto, C.-C. Jay Kuo, Stefanos Nikolaidis. "Curriculum Reinforcement Learning Guided by Human". Preprint 2020
- **Jiali Duan,** Xiaoyuan Guo, Son Tran, C.-C. Jay Kuo. "Explainable Fashion Compatibility Recommendation via Unsupervised Latent Attribute Discovery". Preprint 2020
- **Jiali Duan,** Xiaoyuan Guo, C.-C. Jay Kuo "PortraitGAN for Flexible Portrait Manipulation". APSIPA 2020
- **Jiali Duan,** Xiaoyuan Guo, Son Tran, C.-C. Jay Kuo. "Fashion Compatibility Recommendation via Unsupervised Metric Graph Learning". SCMLS 2020
- **Jiali Duan*,** Qian Wang*, Lerrel Pinto, C.-C. Jay Kuo, Stefanos Nikolaidis. "Robot Learning via Human Adversarial Games". IROS 2019 (Best Paper Finalist)
- **Jiali Duan**, Qian Wang, Lerrel Pinto, C.-C. Jay Kuo and Stefanos Nikolaidis. "Robust Grasping via Human Adversary". SCR 2019 (Spotlight)
- Yao Zhu, Saksham Suri, Pranav Kulkarni, Yueru Chen, **Jiali Duan**, C.-C. Jay Kuo. "An Interpretable Generative Model for Handwritten Digit Image Synthesis". ICIP 2019
- C.-C. Jay Kuo, Min Zhang, Siyang Li, **Jiali Duan**, Yueru Chen. Interpretable Convolutional Neural Networks via Feedforward Design. JVCI 2018
- **Jiali Duan**, Shuai Zhou, Jun Wan, Xiaoyuan Guo, Stan Z.Li. A Unified Framework for Multi-Modal Isolated Gesture Recognition. ACM-TOMM, 2017
- **Jiali Duan**, Shuai Zhou, Jun Wan, Xiaoyuan Guo, Stan Z.Li. Multi-Modality Fusion based on Consensus-Voting and 3D Convolution for Isolated Gesture Recognition. Arxiv, 2016
- **Jiali Duan**, Shengcai Liao, Shuai Zhou, Stan Z. Li. Face Classification, A Specialized Benchmark Study. CCBR (**Best Student Paper),** 2016
- **Jiali Duan**, Shengcai Liao, Xiaoyuan Guo, Stan Z. Li. Face Detection by Aggregating Visible Components. ACCVW (**Oral**), 2016

Media Coverage

- **Nov. 30, 2019, Express:** AI breakthrough: Showing Machine Learning Robots 'Tough Love' Helps Them Improve (https://www.express.co.uk/news/science/1210543/ai-artificial-intelligence-machine-learning-robots-tough-love-helps-them-improve).
- **Nov.06, 2019, Wired:** If You Want a Robot to Learn Better, Be a Jerk to It (https://www.wired.com/story/if-you-want-a-robot-to-learn-better-be-a-jerk-to-it/).
- **Nov.06, 2019, Daily Mail:** Tough Love! (https://www.dailymail.co.uk/sciencetech/article-7656667/Tug-war-New-research-finds-robots-learn-effectively-humans-provide-physical-resistance.html)
- **Nov.06, 2019, USC News:** Showing Robots 'Tough Love' Helps them Succeed, Finds New USC Study (https://viterbischool.usc.edu/news/2019/11/showing-robots-tough-love-helps-them-succeed-finds-new-usc-study/).

Competition

- 2012 First Prize in Mathematical Modeling Contest in Shanghai.
- 2012 Outstanding Prize in 21st Century Coca-Cola National English Speaking Contest Shanghai Region
- 2012 Second Prize in National Mathematical Modeling Contest in China.
- 2013 Honorable Mention in MCM/ICM Math Modeling Contest for American College Students

Internship

Amazon A9 — Palo Alto, USA
Applied Scientist Intern — May. 2020 – Jan. 2021
Mentor: Applied Scientist YenLiang Lin
Manager: Principal Applied Scientist Son Tran

Amazon A9 — Palo Alto, USA
Applied Scientist Intern — June. 2019 – Sep. 2019
Mentor: Principal Applied Scientist Son Tran

Sensetime Beijing — Beijing, China
Applied Scientist Intern — April. 2017 – Jul. 2017
Mentor: Executive Research Director Jianping Shi

AuthenMetric — Beijing, China
Research Assistant — Sep. 2015 – Mar. 2016
Mentor: Professor Stan.Z.Li