

Hui Ding

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RESEARCH INTERESTS

My main research interest is computer vision and machine learning. Specifically, deep learning for face analysis, particularly facial expression recognition and attribute detection. I am also interested in generative adversarial models for facial expression editing and facial motion transfer, 3d object detection for autonomous driving.

EDUCATION BACKGROUND

University of Maryland, College Park, MD Fall 2014-Spring 2020

Ph.D., Department of Electrical and Computer Engineering

- Affiliation: University of Maryland Institute for Advanced Computer Studies
- Advisor: Rama Chellappa
- Thesis: *Facial Expression Recognition and Editing with Limited Data*
- GPA: 3.89/4.0

Shanghai Jiao Tong University, Shanghai, China Fall 2010-March 2013

M.S., Department of Electronic Engineering

- Advisor: Chen He
- Thesis: *Research on Relay and CoMP (Coordinated Multi-point Processing) Technologies for Intercell Interference Suppression in 4G Wireless System*
- GPA: 2.96/3.3

Dalian University of Technology, Dalian, China Fall 2006-June 2010

B.S., Department of Biomedical Engineering

- Advisor: Tianshuang Qiu
- Thesis: *Pattern Recognition of Arterial Waveform using Artificial Neural Networks and Support Vector Machine*

WORK EXPERIENCE

Waymo, Mountain View, California June. 2018-Aug. 2018

Software Engineer Intern, Perceptron Team

- Mentor: Qian Yu and Yu Zhang
- Project: *Object Detection from 3D Point Cloud*

Adobe Research, San Jose, California Feb. 2018-May. 2018

Research Intern, Deep Learning Group

- Mentor: Haoxiang Li, Xiaohui Shen, Jimei Yang
- Project: *Facial Motion Transfer with Disentangled Representation Learning*

Palo Alto Research Center, Palo Alto, California May. 2017-Aug. 2017

Research Intern, Machine Learning Group

- Mentor: Kumar Sricharan
- Project: *Generative Adversarial Network for Image Generation*

Siemens Healthineers, Princeton, New Jersey May. 2016-Aug. 2016

Research Intern, Image Analysis Group

- Mentor: Shaohua Kevin Zhou
- Project: *Deep Learning for Image Recognition with Small Dataset*

Spreadtrum Communications, Shanghai, China Dec. 2012-Jul. 2013

Software Development Engineer, TDD Protocol Stack Group

- Mentor: Xianliang Chen
- Project: *None-Access-Module development and Automatic Software Bug Detection*

Intel China Research Center, Shanghai

Feb. 2012-June 2012

Research Assistant, Mobile Wireless Group

- Mentor: Rongzhen, Yang
- Project: *Device-to-Device communication in LTE-A system*

PUBLICATIONS [1] **Hui Ding**, Peng Zhou and Rama Chellappa, *Occlusion-Adaptive Deep Network for Robust Facial Expression Recognition*, submitted to IJCB, 2020.

[2] **Hui Ding**, Jingjing Zheng and Rama Chellappa, *Facial Region-based Attention Network for Unaligned Expression Recognition*, submitted to IJCB, 2020.

[3] **Hui Ding**, Kumar Sricharan and Rama Chellappa, *ExprGAN: Facial Expression Editing with Controllable Expression Intensity*, Association for the Advancement of Artificial Intelligence (AAAI), 2018. (**oral**)

[4] **Hui Ding**, Hao Zhou, Shaohua Kevin Zhou and Rama Chellappa, *A Deep Cascade Network for Unaligned Face Attribute Classification*, Association for the Advancement of Artificial Intelligence (AAAI), 2018.

[5] **Hui Ding**, Shaohua Kevin Zhou and Rama Chellappa, *FaceNet2ExpNet: Regularizing a Deep Face Recognition Net for Expression Recognition*, IEEE International Conference on Automatic Face Gesture Recognition (FG), 2017.

[6] **Hui Ding**, Chen He, and Lingge Jiang, *Performance of Multi-antenna Systems with Fixed Gain AF Relay in the Presence of Co-Channel Interference*, 2012 IEEE International Conference on Communications (ICC), pp. 5538-6642.

[7] **Hui Ding**, Chen He, and Lingge Jiang, *Performance Analysis of Fixed Gain MIMO Relay Systems in the Presence of Co-Channel Interference*, IEEE Commun. Lett., vol. 16, no. 7, pp. 1133-1136, Jul. 2012.

**AWARDS
SCHOLARSHIPS**

- Dec. 2012: Graduate National Scholarship (*Top scholarship for graduate students in China*)
- Oct. 2012: First prize of Kwang-Hua Scholarship by Kwang-Hua Education Foundation
- Sep. 2011: Academic Excellence Scholarship (First-class) of Shanghai Jiao Tong University
- Jun. 2010: Outstanding Graduate of Dalian University of Technology
- Sep. 2007 - 2009: Academic Excellence Scholarship (First-class) of Dalian University of Technology

**COMPUTER
SKILLS**

Language: Python, C++
Tools: Tensorflow, Pytorch, Caffe

**PROFESSIONAL
SERVICE**

Reviewer of International Journal of Computer Vision, IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Image Processing, IEEE Communications Letters

**TEACHING
EXPERIENCE**

ENEE 408G: Capstone Design Project (Multimedia Signal Processing)