

# Cheng Zhang

The Ohio State University  
Dept. of Computer Science & Engineering  
2015 Neil Avenue  
Columbus, OH 43210

Phone: 614-264-0299 (US)  
Email: zhang.7804@osu.edu  
Homepage: <https://czhang0528.github.io/>  
GitHub: <https://github.com/czhang0528/>

## Research Interests

Machine Learning, Computer Vision, and Mobile Sensing

## Education

- The Ohio State University (OSU), OH, U.S.** 01/2017 - present  
Ph.D. in Computer Science and Engineering  
Advisor: Wei-Lun (Harry) Chao and Dong Xuan
- Beijing University of Posts and Telecommunications (BUPT), Beijing, China** 2013 - 2016  
M.S. in Computer Science and Engineering  
Thesis: *Research on Key Techniques of Gait Recognition based on Deep Learning*  
Advisor: Huadong Ma
- Tianjin University (TJU), Tianjin, China** 2009 - 2013  
B.S. in Computer Software  
Thesis: *Minimum Topological Discrepancy Grid of Superpixels for Fast Object Localization*  
Advisor: Wei Feng

## Publications

### Conference Proceedings

1. **MV-Sports: A Motion and Vision Sensor Integration-Based Sports Analysis System**  
**Cheng Zhang**, Fan Yang, Gang Li, Qiang Zhai, Yi Jiang, Dong Xuan  
*IEEE International Conference on Computer Communications (INFOCOM), Honolulu, HI, USA, Apr 2018*
2. **Third-Eye: A Mobilephone-Enabled Crowdsensing System for Air Quality Monitoring**  
Liang Liu, Wu Liu, Yu Zheng, Huadong Ma, **Cheng Zhang**  
*ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp), Singapore, Oct 2018*
3. **Siamese Neural Network based Gait Recognition for Human Identification**  
**Cheng Zhang**, Wu Liu, Huadong Ma, Huiyuan Fu  
*IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Shanghai, China, Mar 2016*

### Journal Articles

1. **Third-Eye: A Mobilephone-Enabled Crowdsensing System for Air Quality Monitoring**  
Liang Liu, Wu Liu, Yu Zheng, Huadong Ma, **Cheng Zhang**  
*Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), Mar 2018*
2. **Learning Efficient Spatial-Temporal Gait Features with Deep Learning for Human Identification**  
Wu Liu, **Cheng Zhang**, Huadong Ma, Shuangqun Li  
*Neuroinformatics, Feb 2018*
3. **Scene-Free Multi-Class Weather Classification on Single Images**  
Zheng Zhang, Huadong Ma, Huiyuan Fu, **Cheng Zhang**  
*Neurocomputing, May 2016*

## Patents

1. **Method and Device for Gait Recognition**  
Huadong Ma, Wu Liu, Huiyuan Fu, **Cheng Zhang**  
US Patent, 9633268

## Research Experience

**Ohio State University**, OH, USA 09/2018 - present  
Research assistant, Advisor: Wei-Lun (Harry) Chao  
*I am working on training with limited data, and vision-language related topics. In particular, I am investigating new models such as graph neural nets and meta learning.*

**DeepCode Robotics**, Shanghai, China 05/2017 - 08/2017, 05/2018 - 08/2018  
Intern, Advisor: Dong Xuan  
*I worked on developing novel algorithms and systems for real-time sports analysis and robot planning. [[INFOCOM'18](#)]*

**Beijing University of Posts and Telecommunications**, Beijing, China 09/2013 - 04/2016  
Graduate Research Assistant, Advisor: Huadong Ma  
*I worked on applying computer vision algorithms to solve real-world problems such as human identification [[ICASSP'16](#)] [[Neuroinformatics'18](#)] and vision-based air quality monitoring [[IMWUT'18](#)].*

**Alibaba**, Beijing, China 07/2015 - 09/2015  
Intern in Multimedia Team (currently DAMO Academy), Mentor: Xian-Sheng Hua and Pan Pan  
*I worked on large-scale image categorization for Pailitao product - the visual search service on Mobile Taobao. [[slides](#)]*

**Huawei**, Beijing, China 08/2014 - 04/2015  
Intern in 2012 Laboratories, Mentor: Ke Xia  
*I worked on using machine learning methods to automatically detect high risk BOM products for Huawei HUMMER early warning system. (Joint project between BUPT and Huawei)*

**Tianjin University**, Tianjin, China 09/2011 - 06/2013  
Undergraduate student in Media Computing Group, Advisor: Wei Feng  
*I worked on superpixel gridization for fast object localization. [[slides](#)]*

## Honors and Awards

### Ph.D. in Ohio State

Ranked No.3 in Look into Person Challenge: [Multi-Human Pose Estimation](#) (with CVPR 2018)  
IEEE INFOCOM Student Travel Grant Award, 2018  
Ranked No.3 in Look into Person Challenge: [Single Person Human Pose Estimation](#) : (with CVPR 2017)

### M.S. in BUPT

Best Master's Thesis, BUPT, 2016  
IEEE ICASSP Student Travel Grant Award, 2016  
Excellent Graduate, Beijing City, 2016  
National Scholarship, Ministry of Education, China, 2015  
VMware Excellent Scholarship, 2014

### B.S. in Tianjin University

Best Undergraduate Thesis, 2013  
Excellent Graduate, TJU, 2013  
Hitachi Scholarship, 2012  
Golden Award, the 8th Challenge Cup Innovation Competition, China, 2012  
Weichai Power Scholarship (twice), 2010 and 2011

## Professional Activities

### Reviewer for Journals

ACM Transactions on Sensor Networks (ToSN)

Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)

Machine Vision and Applications (MVA), Springer

Multimedia Tools and Applications (MTAP), Springer

### Reviewer for Conferences

IEEE ICME<sub>19</sub>, IEEE INFOCOM<sub>19</sub>, IEEE ICIP<sub>17-19</sub>, IEEE GlobalSIP<sub>17-18</sub>

## Teaching

### The Ohio State University

CSE 1222: *Introduction to Computer Programming in C++*, Spring 2019, Instructor

CSE 4471: *Information Security*, Fall 2018, Teaching Assistant

CSE 5432: *Mobile Handset Systems and Networking*, Fall 2018, Teaching Assistant

### Beijing University of Posts and Telecommunications

*Computer Graphics*, Fall 2015, Teaching Assistant

## Skills

### Language

C/C++, Python, Matlab, Scala, Shell, CUDA

### Tool

PyTorch, Caffe, Tensorflow, Darknet

## Graduate Coursework

Machine Learning, Image Processing, Speech and Natural Language Processing, Real-Time Robotics, Advanced Operating System, Foundations of Programming Languages, Algorithm, Advanced Artificial Intelligence, Mobile Robotics with Wireless Technology and Machine Learning