Yulun ZHANG

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CONTACT
INFORMATION

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RESEARCH
INTERESTS

Machine Learning: deep learning.
Computer Vision: image processing (image restoration/generation)

EDUCATION

Northeastern University, Boston, USA   Sep 2017 – Now

Ph.D., Department of ECE, College of Engineering
- Major in Computer Engineering
- Advisor: *Prof.* Yun Raymond Fu

Tsinghua University, Beijing, China   Sep 2014 – Jul 2017

M.E., Department of Automation
- Major in Control Engineering
- Advisor: *Prof.* Yongbing Zhang
- Overall GPA: 3.73/4.0, Major GPA: 3.75/4.0

The University of Sydney, Sydney, Australia   Jan 2016 – Jul 2016

Visiting Student, School of Electrical and Information Engineering
- Advisors: *Prof.* Dong Xu and Dr. Wen Li
- Research on metric learning with privileged information for visual recognition.

Xidian University, Xi'an, China   Sep 2009 – Jul 2013

B.S., School of Electronic Engineering
- Major in Intelligence Science and Technology
- Overall GPA: 3.36/4.0, Major GPA: 3.63/4.0

RESEARCH
EXPERIENCE

SMILE lab, Northeastern University, Boston, USA   Sep 2017 – Now
Research Assistant. Advisor: Yun Raymond Fu
Projects: Deep learning for image restoration and generation.

Adobe Research, San Jose, USA   May 2018 – Aug 2018
Research Intern. Mentors: Chen Fang, Zhaowen Wang, Yilin Wang, Jimei Yang, Zhe Lin
Projects: High-resolution and efficient style transfer.

Tsinghua University, China   Mar 2014 – Jul 2017
Research Assistant. Advisor: Yongbing Zhang
Projects: Image super-resolution and compression artifact removal via sparse/collaborative
representation and deep learning.

SIAT, Chinese Academy of Sciences, China   Oct 2016 – Jun 2017
Research Assistant. Advisor: Yu Qiao
Projects: Generative adversarial networks (GAN) for image restoration/generation.

Nanyang Technological University, Singapore   Nov 2015 – Jan 2016
Project Officer. Advisors: Li Niu and Dong Xu
Projects: Exploiting privileged information from web data for visual recognition.

Xidian University, China   Jun – Aug 2012, Dec 2012 – Jun 2013
Research Assistant. Advisor: Shuyuan Yang
Projects: 1. Learning efficient features for action recognition in video domain. 2. Depth
extraction from natural images using optical flow.

JOURNAL
PUBLICATIONS

(* means corresponding author and *Prof. Yongbing Zhang is my master supervisor.*)

1. Yongbing Zhang, <u>**Yulun Zhang**</u>*, Jian Zhang, and Qionghai Dai, "CCR: Clustering and Collaborative Representation for Fast Single Image Super-Resolution," *IEEE Transactions on Multimedia* (**TMM**), vol. 18, no. 3, pp. 405–417, Mar. 2016.

2. Yongbing Zhang, <u>**Yulun Zhang**</u>*, Jian Zhang, Dong Xu, Yun Fu, Xiangyang Ji, and Qionghai Dai, "Collaborative Representation Cascade for Single Image Super-Resolution," *IEEE Transactions on Systems, Man, and Cybernetics: Systems* (**TSMC**), 2017.

CONFERENCE
PUBLICATIONS

1. <u>**Yulun Zhang**</u>, Kunpeng Li, Kai Li, Lichen Wang, Bineng Zhong, and Yun Fu,, "Image Super-Resolution Using Very Deep Residual Channel Attention Networks," *European Conference on Computer Vision* (**ECCV**), 2018.

2. Kai Li, Zhengming Ding, Kunpeng Li, <u>**Yulun Zhang**</u>, and Yun Fu, "Support Neighbor Loss for Person Re-Identification," *ACM International Conference on Multimedia* (**ACM MM**), 2018.

3. <u>**Yulun Zhang**</u>, Yapeng Tian, Yu Kong, Bineng Zhong, and Yun Fu, "Residual Dense Network for Image Super-Resolution," *IEEE Computer Vision and Pattern Recognition* (**CVPR**), 2018, (**Spotlight, 6.6%**)

4. <u>**Yulun Zhang**</u>, Yongbing Zhang, Jian Zhang, Haoqian Wang, and Qionghai Dai, "Adaptive Local Nonparametric Regression for Fast Single Image Super-Resolution," *IEEE International Conference on Visual Communications and Image Processing* (**VCIP**), 2015. (**Best Student Paper Award**, **1** out of over **313** submissions.)

5. <u>**Yulun Zhang**</u>, Kaiyu Gu, Yongbing Zhang, Jian Zhang, and Qionghai Dai, "Image Super-Resolution Based on Dictionary Learning and Anchored Neighborhood Regression with Mutual Incoherence," *IEEE International Conference on Image Processing* (**ICIP**), 2015.

6. <u>**Yulun Zhang**</u>, Yongbing Zhang, Jian Zhang, Haoqian Wang, and Qionghai Dai, "Single Image Super-Resolution via Iterative Collaborative Representation," *Pacific-Rim Conference on Multimedia* (**PCM**), 2015.

7. <u>**Yulun Zhang**</u>, Yongbing Zhang, and Qionghai Dai, "Single Depth Image Super-Resolution via A Dual Sparsity Model," *IEEE International Conference on Multimedia and Expo* (**ICME**) *Workshop on Hot Topics in 3D* (**Hot3D**), 2015.

8. Tao Shen, <u>**Yulun Zhang**</u>, Yongbing Zhang, Xingzheng Wang, Haoqian Wang, and Qionghai Dai, "Decompressed Video Enhancement via Accurate Regression Prior," *IEEE International Conference on Visual Communications and Image Processing* (**VCIP**), 2016.

9. Yihui Feng, Yongbing Zhang, <u>**Yulun Zhang**</u>, Tao Shen, and Qionghai Dai, "Decompressed Video Enhancement via Accurate Regression Prior," *IEEE International Conference on Visual Communications and Image Processing* (**VCIP**), 2016.

10. Radu Timofte, ..., <u>**Yulun Zhang**</u>, ..., et al., "NTIRE 2017 Challenge on Single Image Super-Resolution: Methods and Results," *IEEE CVPR New Trends in Image Restoration and Enhancement workshop and challenge on image super-resolution* (**CVPR NTIRE**), 2017. (Our team ranked 2nd place.)

11. Wangpeng An, Haoqian Wang, <u>**Yulun Zhang**</u>, and Qionghai Dai, "Exponential Decay Sine Wave Learning Rate for Fast Deep Neural Network Training," *IEEE International Conference on Visual Communications and Image Processing* (**VCIP**), 2017.

HONORS AND AWARDS	• PhD Network Travel Grant, Northeastern University, USA,	2018
	• Dean's Fellowship in Northeastern University, USA,	2017
	• Shenzhen Universiade International Scholarship, China,	2017
	• Excellent Graduate of Beijing, China,	2017
	• Excellent Graduate in Department of Automation, Tsinghua University,	2017
	• Excellent Master Thesis of Tsinghua University,	2017
	• National Scholarship (Ministry of Education, China, Top 2%),	2016
	• **Best Student Paper Award** at IEEE **VCIP**,	2015
	• Jingzhi Research Award in Tsinghua University (Top 5%),	2015
	• Second Prize Scholarship of Xidian University,	2011, 2012
	• Advanced Individual of Social Work,	2011
	• Third Prize Scholarship of Xidian University,	2010
	• Advanced Individual of Civilized Dormitory Contribution,	2010
	• Excellent Student in Xidian University (Top 5%),	2009

PROFESSIONAL ACTIVITIES

Program Committee Member
- AAAI 2019

Journal Reviewer
- IEEE Trans. Image Process. (**TIP**)
- IEEE Trans. Circuits Syst. Video Technol. (**TCSVT**)
- IEEE Trans. Neural Netw. and Learn. Syst. (**TNNLS**)

Oral Presentations or Posters at Conferences

• Conference on Computer Vision and Pattern Recognition, Salt Lake City, Utah	Jun 2018
• IEEE Int. Conf. on Visual Communications and Image Processing, Singapore	Dec 2015
• IEEE International Conference on Image Processing, Quebec, Canada	Sep 2015
• Pacific-Rim Conference on Multimedia, Gwangju, Korea	Sep 2015
• IEEE International Conference on Multimedia and Expo, Torino, Italy	Jun 2015

TEACHING	• Teaching Assistant, Computer Vision, Northeastern University	Fall 2018
	• Teaching Assistant, Modern Signal Processing, Tsinghua University	Fall 2015

SKILLS
- Programming: Matlab, C/C++, Python, Lua, LaTeX, Visual Studio, OpenCV, Linux.
- Deep learning tools: PyTorch, Tensorflow, Caffe, Torch, Keras, MatConvNet.