

CONTACT INFORMATION	427 Richard Hall, 360 Huntington Ave., Northeastern University, Boston, MA 02115, USA Homepage: http://yulunzhang.com	yulun100@gmail.com Tel: +1-(617)849-0935 Google Scholar, Github
RESEARCH INTERESTS	Machine Learning: deep learning. Computer Vision: image/video restoration (e.g., super-resolution, denoising, deblurring), synthesis (e.g., style transfer, texture transfer), biomedical image analysis.	
EDUCATION	Northeastern University , Boston, USA	Sep 2017 – Now
	Ph.D., Department of ECE, College of Engineering	
	<ul style="list-style-type: none"> • Major in Computer Engineering • Advisor: <i>Prof. Yun Fu</i> • Committee: <i>Prof. Yun Fu, Prof. Octavia Camps, Prof. Hanspeter Pfister</i> • Overall GPA: 3.92/4.0 	
	Tsinghua University , Beijing, China	Sep 2014 – Jul 2017
	M.E., Department of Automation	
RESEARCH EXPERIENCE	<ul style="list-style-type: none"> • Major in Control Engineering • Advisor: <i>Prof. Yongbing Zhang</i> • Overall GPA: 3.73/4.0, Major GPA: 3.75/4.0 	
	Xidian University , Xi'an, China	Sep 2009 – Jul 2013
	B.S., School of Electronic Engineering	
	<ul style="list-style-type: none"> • Major in Intelligence Science and Technology • Overall GPA: 3.36/4.0, Major GPA: 3.63/4.0 	
	SMILE lab, Northeastern University, Boston, USA	Sep 2017 – Now
	Research Assistant	Supervisor: <i>Prof. Yun Fu</i>
	Projects: Deep learning for image restoration and generation.	
	VCG, SEAS, Harvard University, Cambridge, USA	May 2020 – Aug 2020
	Research Fellow	Supervisor: <i>Prof. Hanspeter Pfister</i>
	Projects: Biomedical image restoration and analysis.	
	Adobe Research, San Jose, USA	Jun 2019 – Aug 2019
	Research Intern Mentors: <i>Zhifei Zhang, Stephen DiVerdi, Zhaowen Wang, Jose Echevarria</i>	
	Projects: Painting super-resolution.	
	Adobe Research, San Jose, USA	May 2018 – Aug 2018
	Research Intern Mentors: <i>Chen Fang, Zhaowen Wang, Yilin Wang, Jimei Yang, Zhe Lin</i>	
	Projects: Image style transfer.	
	Tsinghua University, China	Mar 2014 – Jul 2017
	Research Assistant	Supervisor: <i>Prof. Yongbing Zhang</i>
	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	Supervisor: <i>Prof. Yu Qiao</i>
	Projects: Generative adversarial networks (GAN) for image restoration/generation.	
	The University of Sydney, Sydney, Australia	Jan 2016 – Jun 2016
	Visiting Student	Supervisor: <i>Prof. Dong Xu</i> and <i>Prof. Wen Li</i>
	Projects: Research on metric learning with privileged information for visual recognition.	
	Nanyang Technological University, Singapore	Nov 2015 – Jan 2016
	Project Officer	Supervisor: <i>Prof. Dong Xu</i> and <i>Prof. Li Niu</i>
	Projects: Exploiting privileged information from web data for visual recognition.	

TEACHING

Instructor

- EECE5642 Data Visualization, Northeastern University, USA
Work as an independent instructor throughout the whole semester

Spring 2020

Teaching Assistant

- EECE5639 Computer Vision, Northeastern University, USA
Instructor: *Prof. Octavia Camps*
- Modern Signal Processing, Tsinghua University, China
Instructor: *Prof. Yongbing Zhang*

Fall 2018

Fall 2015

HONORS AND
AWARDS

- **Best Paper Award**, RLQ workshop, IEEE ICCV, 2019
- ICCV Travel Award, 2019
- ICLR Travel Award, 2019
- PhD Network Travel Grant, Northeastern University, USA, 2018, 2019
- Dean's Fellowship in Northeastern University, USA, 2017
- Shenzhen Universiade International Scholarship, China, 2017
- Excellent Graduate of Beijing, China, 2017
- Excellent Graduate of Department of Automation, Tsinghua University, 2017
- Excellent Master Thesis of Tsinghua University, 2017
- **Second Place Award**, NTIRE workshop, IEEE CVPR, 2017
- National Scholarship (Ministry of Education, China, Top 2%), 2016
- **Best Student Paper Award**, IEEE VCIP, 2015
- Jingzhi Research Award in Tsinghua University (Top 5%), 2015
- Second Prize Scholarship of Xidian University, 2011, 2012
- Third Prize Scholarship of Xidian University, 2010

PUBLICATIONS

Citations: **2613**, *h-index*: **13**, *i10-index*: **14** (*Google Scholar*, Oct 26, 2020)

- **Journal Papers**

1 TPAMI, 2 TNNLS, 3 TIP, 2 TMM, 1 TSMC

1. **Yulun Zhang**, Yapeng Tian, Yu Kong, Bineng Zhong, and Yun Fu, "Residual Dense Network for Image Restoration", *IEEE Transactions on Pattern Analysis and Machine Intelligence* (**TPAMI**), 2020. (IF: 17.861, citations: 74+)
2. Kai Li, Zhengming Ding, Kunpeng Li, **Yulun Zhang**, and Yun Fu, "Vehicle and Person Re-Identification with Support Neighbor Loss", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), 2020. (IF: 8.793)
3. Qinqin Zhou, Bineng Zhong, Xiangyuan Lan, Gan Sun, **Yulun Zhang**, Baochang Zhang, and Rongrong Ji, "Fine-Grained Spatial Alignment Model for Person Re-Identification with Focal Triplet Loss", *IEEE Transactions on Image Processing* (**TIP**), 2020. (IF: 9.340)
4. Gan Sun, Yang Cong, **Yulun Zhang**, Guoshuai Zhao, and Yun Fu, "Continual Multi-view Task Learning via Deep Matrix Factorization", *IEEE Transactions on Neural Networks and Learning Systems* (**TNNLS**), 2020. (IF: 8.793)
5. Xiaole Zhao, **Yulun Zhang**, Tao Zhang, and Xueming Zou, "Channel Splitting Network for Single MR Image Super-Resolution", *IEEE Transactions on Image Processing* (**TIP**), 2019. (IF: 9.340)
6. Bineng Zhong, Bing Bai, Jun Li, **Yulun Zhang**, and Yun Fu, "Hierarchical Tracking by Reinforcement Learning based Searching and Coarse-to-fine Verifying", *IEEE Transactions on Image Processing* (**TIP**), 2019. (IF: 9.340)
7. Qinqin Zhou, Bineng Zhong, **Yulun Zhang**, Jun Li, and Yun Fu, "Deep Alignment Network Based Multi-person Tracking with Occlusion and Motion Reasoning", *IEEE Transactions Multimedia* (**TMM**), 2018. (IF: 6.051)

8. Yongbing Zhang, **Yulun Zhang***, 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. (IF: 9.309)
 9. Yongbing Zhang, **Yulun Zhang***, Jian Zhang, and Qionghai Dai, “CCR: Clustering and Collaborative Representation for Fast Single Image Super-Resolution”, *IEEE Transactions Multimedia (TMM)*, 2016. (IF: 6.051, citations: 51+)
- **Conference Papers**
 4 CVPR, 3 ICCV, 3 ECCV, 1 ICLR, 1 NeurIPS, 1 AAAI, 1 IJCAI, 1 ACM MM, 1 VCIP
1. Yuchen Fan, Jiahui Yu, Yiqun Mei, **Yulun Zhang**, Yun Fu, Ding Liu, Thomas S Huang, “Neural Sparse Representation for Image Restoration”, *Conference on Neural Information Processing Systems (NeurIPS)*, 2020.
 2. **Yulun Zhang**, Zhifei Zhang, Stephen DiVerdi, Zhaowen Wang, Jose Echevarria, and Yun Fu, “Texture Hallucination for Large-Factor Painting Super-Resolution”, *European Conference on Computer Vision (ECCV)*, 2020.
 3. Xiaotong Luo, Yuan Xie, **Yulun Zhang**, Yanyun Qu, Cuihua Li, and Yun Fu, “LatticeNet: Towards Lightweight Image Super-resolution with Lattice Block”, *European Conference on Computer Vision (ECCV)*, 2020.
 4. Kai Li, **Yulun Zhang**, Kunpeng Li, and Yun Fu, “Adversarial Feature Hallucination Networks for Few-Shot Learning”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
 5. Yapeng Tian, **Yulun Zhang**, Yun Fu, and Chenliang Xu, “TDAN: Temporally Deformable Alignment Network for Video Super-Resolution”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
 6. Xiaoyu Xiang, Yapeng Tian, **Yulun Zhang**, Yun Fu, Jan Allebach, and Chenliang Xu, “Zooming Slow-Mo: Fast and Accurate One-Stage Space-Time Video Super-Resolution”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
 7. Yu Yin, Joseph Robinson, **Yulun Zhang**, and Yun Fu, “Joint Super-Resolution and Alignment of Tiny Faces”, *The AAAI Conference on Artificial Intelligence (AAAI)*, 2020.
 8. **Yulun Zhang**, Chen Fang, Yilin Wang, Zhaowen Wang, Zhe Lin, Yun Fu, and Jimei Yang, “Multimodal Style Transfer via Graph Cuts”, *IEEE International Conference on Computer Vision (ICCV)*, 2019.
 9. Kunpeng Li, **Yulun Zhang**, Kai Li, Yuanyuan Li, and Yun Fu, “Visual Semantic Reasoning for Image-Text Matching”, *IEEE International Conference on Computer Vision (ICCV)*, 2019. (**Oral, 4.3%**)
 10. Kunpeng Li, **Yulun Zhang**, Kai Li, Yuanyuan Li, and Yun Fu, “Attention Bridging Network for Knowledge Transfer”, *IEEE International Conference on Computer Vision (ICCV)*, 2019.
 11. Qinqin Zhou, Bineng Zhong, Xiangyuan Lan, Gan Sun, **Yulun Zhang**, Mengran Gou, “LRDNN: Local-refining based Deep Neural Network for Person Re-Identification with Attribute Discerning”, *International Joint Conference on Artificial Intelligence (IJCAI)*, 2019. (**Oral, 13.7%**)

12. **Yulun Zhang**, Kunpeng Li, Kai Li, Bineng Zhong, and Yun Fu, “Residual Non-local Attention Networks for Image Restoration”, *International Conference on Learning Representations (ICLR)*, 2019. (Citations: 95+)
13. **Yulun Zhang**, 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. (Citations: 715+)
14. **Yulun Zhang**, Yapeng Tian, Yu Kong, Bineng Zhong, and Yun Fu, “Residual Dense Network for Image Super-Resolution”, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018. (**Spotlight, 6.6%**, citations: 857+)
15. Kai Li, Zhengming Ding, Kunpeng Li, **Yulun Zhang**, and Yun Fu, “Support Neighbor Loss for Person Re-Identification”, *ACM International Conference on Multimedia (ACM MM)*, 2018.
16. **Yulun Zhang**, 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**)

- **Workshop Papers**

1 CVPR Workshop, 1 ICCV Workshop

1. Can Qin, Lichen Wang, **Yulun Zhang**, and Yun Fu, “Generatively Inferential Co-Training for Unsupervised Domain Adaptation”, *IEEE ICCV Real-World Recognition from Low-Quality Images and Videos (RLQ) workshop (ICCV Workshop)*, 2019. (**Best Paper Award**)
2. Radu Timofte, ..., **Yulun Zhang**, ..., 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 Workshop)*, 2017. (**Second Place Award**)

- **Preprints**

1. Yiqun Mei, Yuchen Fan, **Yulun Zhang**, Jiahui Yu, Yuqian Zhou, Ding Liu, Yun Fu, Thomas S. Huang, Humphrey Shi, “Pyramid Attention Networks for Image Restoration”, *arXiv preprint arXiv:2004.13824*, 2020

- **Patents**

1. Zhifei Zhang, **Yulun Zhang**, Stephen DiVerdi, Zhaowen Wang, and Jose Echevarria, “Texture Hallucination for Large-Scale Painting Super-Resolution”, Filed by Adobe Systems Incorporated, 2020
2. Chen Fang, Zhe Lin, Zhaowen Wang, **Yulun Zhang**, Yilin Wang, and Jimei Yang, “Transferring Image Style to Content of a Digital Image”, Filed by Adobe Systems Incorporated, 2019
3. Chen Fang, Zhe Lin, Zhaowen Wang, **Yulun Zhang**, Yilin Wang, and Jimei Yang, “Hierarchical Scale Matching and Patch Estimation for Image Style Transfer with Arbitrary Resolution”, Filed by Adobe Systems Incorporated, 2019

ACADEMIC
SERVICE

Conference Reviewer

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
- International Conference on Computer Vision (ICCV)
- European Conference on Computer Vision (ECCV)
- International Conference on Learning Representations (ICLR)
- Neural Information Processing Systems (NeurIPS)
- AAAI Conference on Artificial Intelligence (AAAI)
- International Joint Conferences on Artificial Intelligence (IJCAI)
- International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)
- Winter Conference on Applications of Computer Vision (WACV)

Journal Reviewer

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- International Journal of Computer Vision (IJCV)
- IEEE Transactions on Image Processing (TIP)
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
- IEEE Transactions on Multimedia (TMM)
- IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
- IEEE Transactions on Computational Imaging (TCI)
- IEEE Transactions on Medical Imaging (TMI)
- Computer Vision and Image Understanding (CVIU)
- Neurocomputing (NEUCOM)
- Signal Processing (SIGPRO)
- Journal of Electronic Imaging (JEI)
- IEEE/CAA Journal of Automatica Sinica (JAS)
- The Visual Computer (TVCJ)
- IEEE Signal Processing Letters (SPL)

INVITED TALKS

- “Learning for image restoration and synthesis”,
Tsinghua University, Sep 2020
Xidian University, Jul 2020
Rochester Institute of Technology, May 2020
- “Residual dense network for image super-resolution”,
IEEE Conference on Computer Vision and Pattern Recognition, Salt Lake City, Utah,
Jun 2018
- “Adaptive local nonparametric regression for fast single image super-resolution”,
IEEE International Conference on Visual Communications and Image Processing, Singapore,
Dec 2015
- “Single image super-resolution via iterative collaborative representation”,
Pacific-Rim Conference on Multimedia, Gwangju, Korea, Sep 2015
- “Single depth image super resolution via a dual sparsity model”,
IEEE International Conference on Multimedia and Expo, Torino, Italy, Jun 2015

SKILLS

- Programming: Matlab, Python, Lua, C/C++, L^AT_EX, Visual Studio, OpenCV, Linux.
- Deep learning tools: PyTorch, TensorFlow, Caffe, Torch, Keras, MatConvNet.