Yapeng TIAN

Contact Information

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Research Interests

- Multimodal Learning: audio-visual video understanding
- Low-Level Vision: image/video restoration

Education

University of Rochester, Rochester, USA — Sep. 2017 – Exp. 2022
- *PhD student* in The Department of Computer Science
- Advisor: *Prof.* Chenliang Xu

Tsinghua University, Beijing, China — Sep. 2014 – July 2017
- *M.E.* in The Department of Electronic Engineering
- GPA: 90.55/100 (Rank: 3/52)
- Outstanding Graduate of Tsinghua University Award (Top 1%)

Xidian University, Xi'an, China — Aug. 2009 – July 2013
- *B.E.* in Intelligence Science and Technology (School of Electronic Engineering)

Work Experience

Adobe Research, Seattle, USA — May 2019 – Nov. 2019
- *Research Intern* in the Creative Intelligence Lab
- Mentor: *Dr.* Dingzeyu Li

Research Experience

CS, University of Rochester — Aug. 2017 – Present
- *Research Assistant* with *Prof.* Chenliang Xu

EE, Tsinghua University — Mar. 2015 – Aug. 2017
- *Research Assistant* with *Prof.* Wenming Yang

SIAT, Chinese Academy of Sciences — Nov. 2016 – May 2017
- *Visiting Student* with *Prof.* Yu Qiao

Conference Publications

- **Yapeng Tian**, and Chenliang Xu, "Can audio-visual integration strengthen robustness under multimodal attacks?" CVPR, 2021.
- **Yapeng Tian**, Di Hu, and Chenliang Xu, "Cyclic Co-Learning of Sounding Object Visual Grounding and Sound Separation" CVPR, 2021.
- **Yapeng Tian**, Dingzeyu Li, and Chenliang Xu, "Unified Multisensory Perception: Weakly-Supervised Audio-Visual Video Parsing", ECCV, 2020. (**Spotlight**, top 5% out of 5000+ submissions)
- **Yapeng Tian**, Yulun Zhang, Yun Fu, and Chenliang Xu, "TDAN: Temporally Deformable Alignment Network for Video Super-Resolution", CVPR, 2020.

- 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 ", CVPR, 2020. (***Equal contribution. +Equal advising***)
- **Yapeng Tian**, Jing Shi, Bochen Li, Zhiyao Duan, and Chenliang Xu, "Audio-Visual Event Localization in Unconstrained Videos", ECCV, 2018.
- **Yapeng Tian**, Chenliang Xu, Dingzeyu Li. "Deep Audio Prior: Learning Sound Source Separation from a Single Audio Mixture", Sight and Sound Workshop, CVPR, 2020.
- **Yapeng Tian***, Di Hu*, Chenliang Xu. "Co-Learn Sounding Object Visual Grounding and Visually Indicated Sound Separation in A Cycle". Sight and Sound Workshop, CVPR, 2020. (***Equal contribution.***)
- **Yapeng Tian**, Dingzeyu Li, and Chenliang Xu. "Weakly-Supervised Audio-Visual Video Parsing Toward Unified Multisensory Perception", Sight and Sound Workshop, CVPR, 2020.
- **Yapeng Tian**, Chenxiao Guan, Goodman Justin, Marc Moore, and Chenliang Xu, "Audio-Visual Interpretable and Controllable Video Captioning", Sight and Sound Workshop, CVPR, 2019.
- **Yapeng Tian**, Jing Shi, Bochen Li, Zhiyao Duan, and Chenliang Xu, "Audio-Visual Event Localization in the Wild", Sight and Sound Workshop, CVPR, 2019. (**Oral**)
- Wei Wang*, Ruiming Guo*, **Yapeng Tian**, and Wenming Yang, "CFSNet: Toward a Controllable Feature Space for Image Restoration", ICCV, 2019. (***Equal contribution.***)
- Yulun Zhang,**Yapeng Tian**, Yu Kong, Bineng Zhong, Yun Fu, "Residual Dense Network for Image Super-Resolution," CVPR, 2018. (**Spotlight**)
- Radu Timofte, Eirikur Agustsson, Luc Van Gool, ..., **Yapeng Tian**, ..., "NTIRE 2017 Challenge on Single Image Super-Resolution: Methods and Results," Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2017.
- Xuesen Shang, Wenming Yang, Shuifa Sun, **Yapeng Tian**, Hai Chen, Kaiquan Chen, "Adaptive Anchor-Point Selection for Single Image Super-Resolution," VCIP, 2017.
- **Yapeng Tian**, Fei Zhou, Wenming Yang*, Xuesen Shang and Qingmin Liao, "Anchored Neighborhood Regression based Single Image Super-Resolution from Self-Examples," ICIP, 2016.
- Wenming Yang, **Yapeng Tian**, Fei Zhou, Tingrong Yuan, Xuesen Shang and Qingmin Liao, "Single-Image Super-Resolution Using Clustering-Based Global Regression and Propagation Filtering," ACPR, 2015. (**Oral**)

Journal Publications

- Yulun Zhang,**Yapeng Tian**, Yu Kong, Bineng Zhong, Yun Fu, "Residual Dense Network for Image Restoration," IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2020.
- Wenming Yang, Xuechen Zhang, **Yapeng Tian**, Wei Wang, Jing-Hao Xue, Qingmin Liao, "LCSCNet: Linear Compressing Based Skip-Connecting Network for Image

Super-Resolution ," IEEE Trans. Image Process. (TIP), 2019.

- Wenming Yang, Xuechen Zhang, **Yapeng Tian**, Wei Wang, Jing-Hao Xue, Qingmin Liao, "Deep Learning for Single Image Super-Resolution: A Brief Review," IEEE Trans. Multimedia (TMM), 2019.
- Wenming Yang,**Yapeng Tian***, Fei Zhou, Qingmin Liao, Hai Chen and Chenglin Zheng, "Consistent Coding Scheme for Single-Image Super-Resolution Via Independent Dictionaries," IEEE Trans. Multimedia (TMM), 2016. (first student author)

Teaching Experience

Teaching Assistant

- Spring 2019 CSC249/449: Machine Vision, University of Rochester
- Fall 2018 CSC577: Advanced Topics in Computer Vision, University of Rochester
- Spring 2018 CSC249/449: Machine Vision, University of Rochester
- Fall 2015: Digital image processing and its applications, Tsinghua University
- Spring 2016: Practice of digital image processing, Tsinghua University

Honors and Awards

- Top 10% of high-scoring reviewers for NeurIPS 2020
- Amazon Graduate Student Symposium, Seattle, USA (invited) 2019
- Outstanding Graduate of Tsinghua University (Top 1%) 2017
- Outstanding Master Thesis Award, Tsinghua University 2017
- National Scholarship (Top 2%), Tsinghua University, China 2016
- Second-class Scholarship, Tsinghua University, China 2015

Professional Activities

Reviewers

- Conferences: CVPR 2019, ICCV 2019, AAAI 2020, CVPR 2020, ECCV 2020, NeurIPS 2020, ICLR 2021, WACV 2020, ACCV 2021, AAAI 2021, CVPR 2021, ICML 2021, ICCV 2021.
- Journals: IEEE TPAMI, CVIU, IEEE TMM, IEEE TCSVT, IEEE Access, Signal Processing: Image Communication, Neurocomputing,Computer Graphics Forum

Attended Conferences and Symposiums

- ECCV, Virtual Conference Aug. 2020
- CVPR, Virtual Conference June 2020
- CVPR, Long Beach, USA June 2019
- Amazon Graduate Student Symposium, Seattle, USA Mar. 2019
- ECCV, Munich, Germany Sep. 2018
- IEEE International Conference on Image Processing, Phoenix, America Sep. 2016
- Asian Conference on Pattern Recognition, Kuala Lumpur, Malaysia Nov. 2015

Workshop and Tutorial

- Co-organizing Audio-Visual Scene Understanding Tutorial at CVPR 2021
- Co-organizing Audio-Visual Scene Understanding Tutorial at WACV 2021

Membership

- IEEE Student Member

Skills

- Languages: Mandarin (native), English.
- Programming: Python, Pytorch, Keras, MATLAB, C/C++, Opencv, LaTeX.