



Yong Zhang

Education

- Sep. 2012 **Ph.D.**, National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, Beijing, China.
-June 2018 Major: Pattern Recognition and Intelligence System
Supervisor: Prof. Bao-Gang Hu
- Sep. 2015 **Joint Ph.D Student**, Rensselaer Polytechnic Institute, NY, USA.
-Sep. 2017 Major: Computer Vision
Supervisor: Prof. Qiang Ji
- Sep. 2008 **B.Eng.**, Hunan University, Changsha, China.
-June 2012 Major: Automation

Work Experience

- July. 2018 - **Senior Researcher**, Tencent AI Lab, Shenzhen, China

Research Interest

I am currently working on AI for content creation, *e.g.*, using generative models (GANs and diffusion models) for image and video synthesis. I have interest in several applications, *e.g.*, text-guided image/video generation and editing, face swapping, video dubbing, etc.

Selected Publications

(NAME¹ indicates co-first author. ✉ indicates corresponding author)

- [29] **OST: Improving Generalization of DeepFake Detection via One-Shot Test-Time Training.**
Liang Chen, **Yong Zhang**✉, Yibing Song, Jue Wang, Lingqiao Liu.
Thirty-Sixth Conference on Neural Information Processing Systems (NeurIPS), 2022.
- [28] **Boosting the Transferability of Adversarial Attacks with Reverse Adversarial Perturbation.**
Zeyu Qin, Yanbo Fan, Yi Liu, Li Shen, **Yong Zhang**, Jue Wang, Baoyuan Wu.
Thirty-Sixth Conference on Neural Information Processing Systems (NeurIPS), 2022.
- [27] **VideoReTalking: Audio-based Lip Synchronization for Talking Head Video Editing In the Wild.**
Kun Cheng, Xiaodong Cun, **Yong Zhang**, Menghan Xia, Fei Yin, Mingrui Zhu, Xuan Wang, Jue Wang, Nannan Wang.
SIGGRAPH Asia (Conference Track), 2022.
- [26] **Generalizable Black-Box Adversarial Attack with Meta Learning.**
Fei Yin¹, **Yong Zhang**¹, Baoyuan Wu¹, Yan Feng, Jingyi Zhang, Yanbo Fan, Yujiu Yang
IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2022.

- [25] **StyleHEAT: One-Shot High-Resolution Editable Talking Face Generation via Pre-trained StyleGAN.**
Fei Yin, **Yong Zhang**, Xiaodong Cun, Mingdeng Cao, Yanbo Fan, Xuan Wang, Qingyan Bai, Baoyuan Wu, Jue Wang, Yujiu Yang
European Conference on Computer Vision (ECCV), 2022.
- [24] **Prior-Guided Adversarial Initialization for Fast Adversarial Training.**
Xiaojun Jia, **Yong Zhang**, Xingxing Wei, Baoyuan Wu, Ke Ma, Jue Wang, Xiaochun Cao
European Conference on Computer Vision (ECCV), 2022.
- [23] **Boosting Fast Adversarial Training with Learnable Adversarial Initialization.**
Xiaojun Jia, **Yong Zhang**, Baoyuan Wu, Jue Wang, Xiaochun Cao
IEEE Transactions on image processing (TIP), 2022.
- [22] **FNErF: Face Editing in Neural Radiance Fields.**
Jingxiang Sun, Xuan Wang, **Yong Zhang**, Xiaoyu Li, Qi Zhang, Yebing Liu, Jue Wang.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2022.
- [21] **LAS-AT: Adversarial Training with Learnable Attack Strategy.**
Xiaojun Jia¹, **Yong Zhang**¹, Baoyuan Wu, Ke Ma, Jue Wang, Xiaochun Cao.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2022 (Oral).
- [20] **High-Fidelity GAN Inversion for Image Attribute Editing.**
Tengfei Wang, **Yong Zhang**, Yanbo Fan, Jue Wang, Qifeng Chen.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2022.
- [19] **Self-supervised Learning of Adversarial Examples: Towards Good Generalizations for DeepFake Detections.**
Liang Chen, **Yong Zhang**, Yibing Song, Lingqiao Liu, Jue Wang.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2022 (Oral).
- [18] **Image Inpainting with Local and Global Refinement.**
Weize Quan, Ruisong Zhang, **Yong Zhang**, Zhifeng Li, Jue Wang, Dong-Ming Yan.
IEEE Transactions on image processing (TIP), 2022.
- [17] **Aesthetic-guided Outward Image Cropping.**
Lei Zhong, Feng-Heng Li, Hao-Zhi Huang, **Yong Zhang**, Shao-Ping Lu, Jue Wang.
ACM Transactions on Graphics (TOG), 2021. (SIGGRPAH ASIA)
- [16] **DAE-GAN: Dynamic Aspect-aware GAN for Text-to-Image Synthesis.**
Shulan Ruan, **Yong Zhang**, Kun Zhang, Yanbo Fan, Fan Tang, Qi Liu, Enhong Chen.
IEEE International Conference on Computer Vision (ICCV), 2021.
- [15] **Meta-Attack: Class-agnostic and Model-agnostic Physical Adversarial Attack.**
Weiwei Feng, Baoyuan Wu, Tianzhu Zhang, **Yong Zhang**, Yongdong Zhang.
IEEE International Conference on Computer Vision (ICCV), 2021.
- [14] **Generalizing Face Forgery Detection with High-frequency Features.**
Yuchen Luo¹, **Yong Zhang**¹, Junchi Yan, and Wei Liu.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2021.
- [13] **Probabilistic Modeling of Semantic Ambiguity for Scene Graph Generation.**
Gengcong Yang, Jingyi Zhang, **Yong Zhang**, Baoyuan Wu, Yujiu Yang.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2021.
- [12] **Targeted Attack Against DNNs via Flipping Limited Weight Bits.**
Jiawang Bai, Baoyuan Wu, **Yong Zhang**, Yiming Li, Zhifeng Li, Shu-Tao Xia.
International Conference on Learning Representations (ICLR) 2021.
- [11] **Sparse adversarial attack via perturbation factorization.**
Yanbo Fan, Baoyuan Wu, Tuanhui Li, **Yong Zhang**, Mingyang Li, Zhifeng Li, Yujiu Yang.
Proceedings of European Conference on Computer Vision (ECCV) 2020.
- [10] **Label Error Correction and Generation Through Label Relationships.**
Zijun Cui, **Yong Zhang**, Qiang Ji.
Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI) 2020.

- [9] **Context-aware Feature and Label Fusion for Facial Action Unit Intensity Estimation with Partially Labeled Data.**
Yong Zhang, Haiyong Jiang, Baoyuan Wu, Yanbo Fan, Qiang Ji.
International Conference on Computer Vision (ICCV) 2019.
- [8] **Joint Representation and Estimator Learning for FAU Intensity Estimation.**
Yong Zhang, Baoyuan Wu, Weiming Dong, Zhifeng Li, Wei Liu, Bao-Gang Hu, Qiang Ji.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2019.
- [7] **Adversarial Attack to Image Captioning via Structured Output Learning with Latent Variables.**
Yan Xu, Baoyuan Wu, Fumin Shen, Yanbo Fan, Yong Zhang, Heng Tao Shen, Wei Liu.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2019.
- [6] **Compressing Convolutional Neural Networks via Factorized Convolutional Filters.**
Tuanhui Li, Baoyuan Wu, Yujiu Yang, Yanbo Fan, Yong Zhang, Wei Liu.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2019.
- [5] **Bilateral Ordinal Relevance Multi-instance Regression for Facial Action Unit Intensity Estimation.**
Yong Zhang, Rui Zhao, Weiming Dong, Bao-Gang Hu, Qiang Ji.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2018.
- [4] **Classifier Learning with Prior Probabilities for Facial Action Unit Recognition.**
Yong Zhang, Weiming Dong, Bao-Gang Hu, Qiang Ji.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2018.
- [3] **Weakly-supervised Deep Convolutional Neural Network for Facial Action Unit Intensity Estimation.**
Yong Zhang, Weiming Dong, Bao-Gang Hu, Qiang Ji.
IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2018.
- [2] **Data-Driven Synthesis of Cartoon Faces Using Different Styles.**
Yong Zhang, Weiming Dong, Chongyang Ma, Xing Mei, Ke Li, Feiyue Huang, Bao-Gang Hu, and Oliver Deussen.
IEEE Transactions on Image Processing (TIP), 2017.
- [1] **Data-driven Face Cartoon Stylization.**
Yong Zhang, Weiming Dong, Oliver Deussen, Feiyue Huang, Ke Li, and Bao-Gang Hu.
Siggraph Asia Technical Briefs, 2014.

Services

Reviewer ICCV, CVPR, ECCV, AAAI, NeurIPS
 IEEE Transactions on Affective Computing
 IEEE Transactions on Image Processing
 IEEE Transactions on Circuits and Systems for Video Technology
 IEEE Transactions on Pattern Analysis and Machine Intelligence

Honors

Doctoral Consortium, CVPR 2018
 Chinese Scholarship Council (CSC) Scholarship, 2015-2017

Skills

Programming Python, Matlab, C++, Latex
 Toolbox Tensorflow, Caffe, OpenCV