

Qianyu Zhou

E-Mail: zhouqianyu@sjtu.edu.cn, zhouqy1997@gmail.com

Homepage: <https://qianyuzqy.github.io/>

Education




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| Sept. 2019 ~ June. 2024 | Ph.D, Department of Computer Science and Engineering, Shanghai Jiao Tong University; Zhiyuan Honored Ph.D Fellowship (The Highest Honor) in SJTU; Memeber of Wenjun Wu AI Honored Ph.D Class (Top 1%) in SJTU; Supervisor: Prof. Lizhuang Ma, GPA: 3.95 / 4.0 |
| Aug. 2015. ~ June. 2019 | B.Sc, College of Computer Science and Technology, Jilin University; Top Ten Honorary Undergraduates (The Highest Honor) in Jilin University; Rank in Computer Science and Technology: 1 / 336, GPA: 3.83 / 4.0 |

Research Interests

Computer Vision, Machine Intelligence:

1. Transfer Learning: domain adaptation, domain generalization, and semi-supervised learning;
2. Scene Understanding: semantic segmentation, object detection in images and videos;
3. Multi-Modal Learning: vision-language models, 3D point cloud understanding;
4. Biometrics Security: face anti-spoofing, presentation attack detection.

Internship

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| May.2023 ~ Aug. 2023 | Research Intern at CATL, Ningde, Fujian Province, P.R.China. |  |
| | Worked on surface defect detection with Dr. Jie Hu, and Dr. Guannan Jiang. | |
| July. 2021 ~ Nov. 2022 | Research Intern at Youtu Lab, Tencent, Shanghai, P.R.China |  |
| | Worked on face anti-spoofing with Taiping Yao and Ke-Yue Zhang. | |
| July.2019 ~ Mar. 2021 | Research Intern at Sensetime Research, Beijing & Shanghai, P.R.China |  |
| | Worked on scene understanding with Dr. Guangliang Cheng, and Dr. Jianping Shi. | |

Publication

First Author: 12 papers published in top-tier journals and conferences;

Google Scholar: <https://scholar.google.com/citations?hl=en&pli=1&user=KHg04fkAAAAJ>

DBLP: <https://dblp.uni-trier.de/pid/232/4830-1.html>

First Author/Co-First Author (Published):

1. TransVOD: End-to-End Video Object Detection with Spatial-Temporal Transformers
Qianyu Zhou, Xiangtai Li, Lu He, Yibo Yang, Guangliang Cheng, Yunhai Tong, Lizhuang Ma, Dacheng Tao.
IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 2023. [CCF-A, JCR Q1, IF=23.6]
2. Self-Adversarial Disentangling for Specific Domain Adaptation
Qianyu Zhou, Qiqi Gu, Jiangmiao Pang, Xuequan Lu, Lizhuang Ma.
IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 2023.[CCF-A, JCR Q1, IF=23.6]
3. Test-Time Domain Generalization for Face Anti-Spoofing
Qianyu Zhou, Ke-Yue Zhang, Taiping Yao, Xuequan Lu, Ran Yi, Shouhong Ding, Lizhuang Ma
IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2024.[CCF-A]
4. Instance-Aware Domain Generalization for Face Anti-Spoofing
Qianyu Zhou, Ke-Yue Zhang, Taiping Yao, Xuequan Lu, Ran Yi, Shouhong Ding, Lizhuang Ma
IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2023. [CCF-A]
5. Adaptive Mixture of Experts Learning for Generalizable Face Anti-Spoofing
Qianyu Zhou, Ke-Yue Zhang, Taiping Yao, Ran Yi, Shouhong Ding, Lizhuang Ma.
The 30th ACM International Conference on Multimedia (**ACM MM**), 2022. [CCF-A]

6. Generative Domain Adaptation for Face Anti-Spoofing
Qianyu Zhou, Ke-Yue Zhang, Taiping Yao, Ran Yi, Kekai Sheng, Shouhong Ding, Lizhuang Ma.
European Conference on Computer Vision (ECCV), 2022. [CCF-B, Tsinghua-A]
7. Context-Aware Mixup for Domain Adaptive Semantic Segmentation
Qianyu Zhou, Zhengyang Feng, Qiqi Gu, Jiangmiao Pang, Guangliang Cheng, Xuequan Lu, Jianping Shi, Lizhuang Ma.
IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), 2023. [JCR Q1, IF=8.4]
8. BA-SAM: Scalable Bias-Mode Attention Mask for Segment Anything Model
Yiran Song*, **Qianyu Zhou*(Co-First Author)**, Xiangtai Li, Deng-Ping Fan, Xuequan Lu, Lizhuang Ma.
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024. [CCF-A]
9. PIT: Position-Invariant Transform for Cross-FoV Domain Adaptation
Qiqi Gu*, **Qianyu Zhou*(Co-First Author)**, Minghao Xu, Zhengyang Feng, Guangliang Cheng, Xuequan Lu, Jianping Shi, Lizhuang Ma.
IEEE/CVF International Conference on Computer Vision (ICCV), 2021. [CCF-A]
10. End-to-End Video Object Detection with Spatial-Temporal Transformers
Lu He*, **Qianyu Zhou*(Co-First Author)**, Xiangtai Li, Li Niu, Guangliang Cheng, Xiao Li, Wenxuan Liu, Yunhai Tong, Lizhuang Ma, Liqing Zhang.
The 29th ACM International Conference on Multimedia (ACM MM), 2021. [CCF-A]
11. Uncertainty-Aware Consistency Regularization for Cross-Domain Semantic Segmentation
Qianyu Zhou, Zhengyang Feng, Qiqi Gu, Guangliang Cheng, Xuequan Lu, Jianping Shi, Lizhuang Ma.
Computer Vision and Image Understanding (CVIU), 2022. [CCF-B, JCR Q2, IF=4.5]
12. Domain Adaptive Semantic Segmentation via Regional Contrastive Consistency Regularization
Qianyu Zhou, Chuyun Zhuang, Ran Yi, Xuequan Lu, Lizhuang Ma.
IEEE International Conference on Multimedia and Expo (ICME), 2022. [CCF-B, Oral presentation]
13. DMT: Dynamic Mutual Training for Semi-Supervised Learning
Zhengyang Feng*, **Qianyu Zhou*(Co-First Author)**, Qiqi Gu, Xin Tan, Guangliang Cheng, Xuequan Lu, Jianping Shi, Lizhuang Ma.
Pattern Recognition (PR), 2022. [JCR Q1, IF=8.0] (**More than 180 citations in Google Scholar**)
14. Continuous Piecewise-Affine Based Motion Model for Image Animation
Hexiang Wang*, Fengqi Liu*, **Qianyu Zhou*(Co-First Author)**, Ran Yi, Xin Tan, Lizhuang Ma†.
The 38th AAAI Conference on Artificial Intelligence (AAAI), 2024. [CCF-A]

Corresponding Author (Published)

15. Rethinking Implicit Neural Representations for Vision Learners
Yiran Song, **Qianyu Zhou†**, Lizhuang Ma†.
IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2023. [CCF-B]
(Top 3% Paper Recognition of all papers accepted at ICASSP 2023)
16. Label-free Regional Consistency for Image-to-Image Translation
Shaohua Guo, **Qianyu Zhou†**, Zhou Ye, Qiqi Gu, Junshu Tang, Zhengyang Feng, Lizhuang Ma†.
IEEE International Conference on Multimedia and Expo (ICME), 2021. [CCF-B]
17. Semi-Supervised 3D Object Detection Via Adaptive Pseudo-Labeling
Hongyi Xu, Fengqi Liu, **Qianyu Zhou†**, Jinkun Hao, Zhijie Cao, Zhengyang Feng, Lizhuang Ma†.
IEEE International Conference on Image Processing (ICIP), 2021. [CCF-C]

Co-First Author (Major Revision)

18. Diverse Target and Contribution Scheduling for Domain Generalization
Shaocong Long*, **Qianyu Zhou*(Co-First Author)**, Chenhao Ying, Lizhuang Ma, Yuan Luo.
IEEE Transactions on Image Processing (TIP), 2023 [CCF-A, JCR Q1, IF=10.6]
19. Rethinking Domain Generalization: Discriminability and Generalizability
Shaocong Long*, **Qianyu Zhou*(Co-First Author)**, Chenhao Ying, Lizhuang Ma, Yuan Luo.
IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), 2023. [JCR Q1, IF=8.4]

Other Author (Accepted)

20. CloudMix: Dual Mixup Consistency for Unpaired Point Cloud Completion
Fengqi Liu, Jingyu Gong, **Qianyu Zhou**, Xuequan Lu, Ran Yi, Yuan Xie, and Lizhuang Ma
IEEE Transactions on Visualization and Computer Graphics (TVCG), 2023.[CCF-A, JCR Q1, IF=5.6]
21. ZDL: Zero-shot Degradation Factor Learning for Robust and Efficient Image Enhancement
Hao Yang, Haijun Sun, **Qianyu Zhou**, Ran Yi, Lizhuang Ma.
CAD/Graphics, 2023. [CCF-C] **(Best Paper Awarded in CAD/Graphics 2023)**
22. Dynamic Sampling and Dual Deformable Network for Real-time Video Instance Segmentation
Yiran Song, Qianyu Zhou, Ran Yi, Zhiwen Shao, Lizhuang Ma.
Journal of Zhejiang University (Engineering), 2024

Invention Patent

I have authorized 10 invention patents, of which 4 are the first inventor and 6 are other inventors:

1. **Qianyu Zhou**, Guangliang Cheng, Jianping Shi, Lizhuang Ma. Neural network training method, image processing method, device and electronic equipment (**Issued**, ZL2021102193564)
2. **Qianyu Zhou**, Guangliang Cheng, Jianping Shi, Lizhuang Ma. Training method, image processing method and device of neural network (**Issued**, ZL2020102784292)
3. **Qianyu Zhou**, Guangliang Cheng, Jianping Shi, Lizhuang Ma. Neural network training, image semantic segmentation method and device (**Issued**, ZL2020102961704)
4. **Qianyu Zhou**, Guangliang Cheng, Jianping Shi, Lizhuang Ma. Sample image generation, image processing, intelligent driving control method and device (CN2020111979251)
5. Ke-Yue Zhang, **Qianyu Zhou**, Taiping Yao, Bangjie Yin, Shouhong Ding. Liveness detection method, device, apparatus and medium (CN2022111853820)
6. Ke-Yue Zhang, **Qianyu Zhou**, Taiping Yao, Bangjie Yin, Shouhong Ding. Face liveness detection method, device, electronic device and readable storage medium (CN2022110207154)
7. Ke-Yue Zhang, **Qianyu Zhou**, Taiping Yao, Bangjie Yin, Shouhong Ding. A method, device and storage medium for liveness detection (CN2023103906799)
8. Lu He, **Qianyu Zhou**, Xiangtai Li, Guangliang Cheng, Xiao Li, Lizhuang Ma. Object detection method, device, electronic device and storage medium (CN2021105581561)
9. Qiqi Gu, **Qianyu Zhou**, Guangliang Cheng, Jianping Shi, Lizhuang Ma. Neural network generation, image processing method, device, electronic device and medium (CN2021103493320)
10. Chuyun Zhuang, **Qianyu Zhou**, Xuequan Lu, Lizhuang Ma. An unsupervised domain adaptive semantic segmentation method based on region feature alignment(CN2021111968590)

Academic Services

Journal Reviewer:

1. IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI);
2. International Journal of Computer Vision (IJCV);
3. IEEE Transactions on Image Processing (TIP);
4. IEEE Transactions on Multimedia (TMM);
5. IEEE Transactions on Circuits and Systems for Video Technology (TCSVT);
6. Information Fusion; Neurocomputing;

Conference Reviewer/Program Committee Member:

1. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2022 - 2024;
2. IEEE International Conference on Computer Vision (ICCV), 2023;
3. European Conference on Computer Vision (ECCV), 2022, 2024;
4. International Conference on Machine Learning (ICML), 2024;
5. AAAI Conference on Artificial Intelligence (AAAI), 2023 - 2024;
6. ACM International Conference on Multimedia (ACM MM), 2023 - 2024;
7. IEEE International Conference on Multimedia and Expo (ICME), 2023 - 2024;