SUNCHENG XIANG

Assistant Professor
School of Biomedical Engineering
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Research Interests

Machine Learning and Computer Vision
Domain Adaptation, Image Generation
Medical Image Analysis, Robotic Surgery, 3D Reconstruction
Image Retrieval, Person Re-Identification, Representation Learning

Position

Shanghai Jiao Tong University, Shanghai, China
Assistant Professor — Aug 2022 - Present
School of Biomedical Engineering

Education

Shanghai Jiao Tong University, Shanghai, China — 2017 - 2022
Ph.D in Computer Science and Technology

National University of Defense Technology, Changsha, China — 2014 - 2017
M.S in Software Engineering

Changsha University of Science & Technology, Changsha, China — 2010 - 2014
B.S in Electrical Engineering and Automation

Preprints

[1]. Supervised Contrastive Learning for Fine-grained Chromosome Recognition
arXiv preprint arXiv:2308.00929, 2023.
Ruijia Chang, **Suncheng Xiang**, Chengyu Zhou, Kui Su, Dahong Qian, Jun Wang

[2]. Towards Open-set Gesture Recognition via Feature Activation Enhancement and Orthogonal Prototype Learning
arXiv preprint arXiv:2308.00929, 2023.
Chen Liu, Can Han, Chengfeng Zhou, Crystal Cai, **Suncheng Xiang**, Hualiang Ni, Dahong Qian

[3]. Towards Discriminative Representation with Meta-learning for Colonoscopic Polyp Re-Identification
arXiv preprint arXiv:2308.00929, 2023.
Suncheng Xiang✉, Qingzhong Chen, Shilun Cai, Chengfeng Zhou, Crystal Cai, Sijia Du, Zhengjie Zhang, Yunshi Zhong, Dahong Qian

[4]. Learning Robust Visual-Semantic Embedding for Generalizable Person Re-identification
arXiv preprint arXiv:2304.09498, 2023.
Suncheng Xiang, Jingsheng Gao, Mengyuan Guan, Jiacheng Ruan, Chengfeng Zhou, Ting Liu, Dahong Qian, Yuzhuo Fu

[5]. Attribute Analysis with Synthetic Dataset for Person Re-Identification
arXiv preprint arXiv:2006.07139, 2020.
Suncheng Xiang, Yuzhuo Fu, Guanjie You, Ting Liu

Journal Publications

[6]. SubFace: Learning with Softmax Approximation for Face Recognition
Multimedia Tools and Applications (**MTA**), 2024. (**IF=3.6**)
Suncheng Xiang*, Hongwei Xu, Dahong Qian

[7]. Toward an End-to-End Implicit Addressee Modeling for Dialogue Disentanglement
Multimedia Tools and Applications (**MTA**), 2024. (**IF=3.6**)
Jingsheng Gao, Zeyu Li, **Suncheng Xiang**, Zhuowei Wang, Ting Liu, Yuzhuo Fu

[8]. A Simple Normalization Technique Uing Window Statistics to Improve the Out-Of-Distribution Generalization on Medical Images
IEEE Transactions on Medical Imaging (**IEEE TMI**), 2024. (**IF=10.6**)
Chengfeng Zhou, Jun Wang, **Suncheng Xiang**, Feng Liu, Hefeng Huang, Dahong Qian

[9]. Rethinking Person Re-Identification via Semantic-Based Pretraining
ACM Transactions on Multimedia Computing, Communications and Applications (**ACM TOMM**), 2023. (**IF=5.1**)
Suncheng Xiang, Dahong Qian, Jingsheng Gao, Zirui Zhang, Ting Liu, Yuzhuo Fu

[10]. Editing Outdoor Scenes with A Large Annotated Synthetic Dataset
Multimedia Tools and Applications (**MTA**), 2023. (**IF=3.6**)
Mingye Xie, Zongwei Liu, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu

[11]. Deep Multimodal Representation Learning for Generalizable Person Re-identification
Machine Learning (**ML**), 2023. (**IF=7.5**)
Suncheng Xiang, Hao Chen, Wei Ran, Zefang Yu, Ting Liu, Dahong Qian, Yuzhuo Fu

[12]. Deep Learning-based PET/MR Radiomics for the Classification of Annualized Relapse Rate in Multiple Sclerosis
Multiple Sclerosis and Related Disorders (**MULT SCLER RELAT DIS**), 2023. (**IF=4.808**)
Sijia Du, et al., **Suncheng Xiang**, Dahong Qian, Biao Li, Sheng Chen, Min Zhang

[13]. Less is More: Learning from Synthetic Data with Fine-grained Attributes for Person Re-Identification
ACM Transactions on Multimedia Computing, Communications and Applications (**ACM TOMM**), 2023. (**IF=5.1**)
Suncheng Xiang, Dahong Qian, Mengyuan Guan, Binjie Yan, Ting Liu, Yuzhuo Fu, Guanjie You

[14]. Learning from Self-Discrepancy via Multiple Co-teaching for Cross-Domain Person Re-Identification
Machine Learning (**ML**), 2022. (**Invited Paper, IF=7.5**)
Suncheng Xiang, Yuzhuo Fu, Mengyuan Guan, Ting Liu

[15]. Multi-level Feature Learning with Attention for Person Re-Identification
Multimedia Tools and Applications (**MTA**), 2020. (**IF=3.6**)
Suncheng Xiang, Yuzhuo Fu, Hao Chen, Wei Ran, Ting Liu

[16]. Progressive Learning with Style Transfer for Distant Domain Adaptation
IET Image Processing (**IET-IPR**), 2020. (**IF=2.373**)
Suncheng Xiang, Yuzhuo Fu, Ting Liu

[17]. Unsupervised Person Re-Identification by Hierarchical Cluster and Domain Transfer
Multimedia Tools and Applications (**MTA**), 2020. (**IF=3.6**)
Suncheng Xiang, Yuzhuo Fu, Mingye Xie, Zefang Yu, Ting Liu

Conference Publications

[18]. iDAT: inverse Distillation Adapter-Tuning
IEEE International Conference on Multimedia and Expo (**ICME**), 2024.
Jiacheng Ruan, Jingsheng Gao, Mingye Xie, Daize Dong, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu

[19]. Enhancing Nasopharyngeal Carcinoma Classification Based on Multi-View Cross-Modal Knowledge Distillation
IEEE International Symposium on Biomedical Imaging (**ISBI**), 2024.
Zhengjie Zhang, Crystal Cai, Sijia Du, **Suncheng Xiang**, Dahong Qian

[20]. VT-ReID: Learning Discriminative Visual-Text Representation for Polyp Re-Identification
IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**), 2024. (**Accept rate~45%**, **Oral**)
Suncheng Xiang✉, Cang Liu, Jiacheng Ruan, Shilun Cai, Sijia Du, Dahong Qian

[21]. LAMM: Label Alignment for Multi-Modal Prompt Learning
Thirty-Eighth AAAI Conference on Artificial Intelligence (**AAAI**), 2024. (**Accept rate~23.75%**)
Jingsheng Gao, Jiacheng Ruan, **Suncheng Xiang**, Zefang Yu, Ke Ji, Mingye Xie, Ting Liu, Yuzhuo Fu

[22]. MEW-UNet: Multi-axis Representation Learning in Frequency Domain for Medical Image Segmentation
International Conference on Medical Image Computing and Computer Assisted Intervention Workshop (MLMI), 2023.
Jiacheng Ruan, Mingye Xie, **Suncheng Xiang**✉, Ting Liu, Yuzhuo Fu✉

[23]. SAE-NTM: Sentence-Aware Encoder for Neural Topic Modeling
4th Workshop on Computational Approaches to Discourse (**CODI**), 2023.
Hao Liu, Jingsheng Gao, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu

[24]. CluCDD: Contrastive Dialogue Disentanglement via Clustering
IEEE International Conference on Acoustics, Speech and Signal Processing Satellite Workshop (**IWCIM**), 2023.
Jingsheng Gao, Zeyu Li, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu

[25]. Colo-SCRL: Self-Supervised Contrastive Representation Learning for Colonoscopic Video Retrieval
IEEE International Conference on Multimedia and Expo (**ICME**), 2023. (**Oral**)
Qingzhong Chen, Shilun Cai, Crystal Cai, Zefang Yu, Dahong Qian✉, **Suncheng Xiang**✉

[26]. AutoKary2022: A Large-Scale Densely Annotated Dateset for Chromosome Instance Segmentation
IEEE International Conference on Multimedia and Expo (**ICME**), 2023.
Dan You, Pengcheng Xia, Qiuzhu Chen, Minghui Wu, **Suncheng Xiang**✉, Jun Wang✉

[27]. AV-TAD: Audio-Visual Temporal Action Detection with Transformer
IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**), 2023. (**Accept rate~40+%**, **Oral**)
Yangcheng Li, Zefang Yu, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu

[28]. MTDL-Net: Morphological and Temporal Discriminative Learning for Heartbeat Classification
IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**), 2023. (**Accept rate~40+%**)
Can Han, **Suncheng Xiang**✉, Dahong Qian✉

[29]. CC-PoseNet: Towards Human Pose Estimation in Crowded Classrooms
IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**), 2023. (**Accept rate~40+%**, **Oral**)
Zefang Yu, Yanping Hu, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu

[30]. MALUNet: A Muti-Attention and Light-weight UNet for Skin Lesion Segmentation
International Conference on Bioinformatics and Biomedicine (**BIBM**), 2022. (**Accept rate~19.8%**)
Jiacheng Ruan, **Suncheng Xiang**✉, Mingye Xie, Ting Liu, Yuzhuo Fu✉

[31]. CDTnet: Cross-Domain Transformer based on Attributes for Person Re-Identification
IEEE International Conference on Multimedia and Expo Workshops (**ICMEW**), 2022.
Mengyuan Guan, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu

[32]. Rethinking Illumination for Person Re-Identification: A Unified View
IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (**CVPRW**), 2022.
Suncheng Xiang, Guanjie You, Leqi Li, Mengyuan Guan, Ting Liu, Dahong Qian, Yuzhuo Fu

[33]. Spatial Attention Guided Local Facial Attribute Editing
IEEE International Conference on Multimedia and Expo (**ICME**), 2022. (**Accept rate~29%**)
Mingye Xie, **Suncheng Xiang**, Feng Wang, Ting Liu, Yuzhuo Fu

[34]. Zero-Shot Learning for Skeleton-based Classroom Action Recognition
International Symposium on Computer Science and Intelligent Controls (**ISCSIC**), 2021.
Bin Shi, Luyang Wang, Zefang Yu, **Suncheng Xiang**, Yuzhuo Fu, Ting Liu

[35]. Learning from Self-Discrepancy via Multiple Co-teaching for Cross-Domain Person Re-Identification
International Joint Conference on Artificial Intelligence WSRL Workshop (**IJCAIW**), 2021.
Suncheng Xiang, Yuzhuo Fu, Mengyuan Guan, Ting Liu

[36]. Attention based Facial Expression Manipulation
IEEE International Conference on Multimedia and Expo Workshops (**ICMEW**), 2021.
Feng Wang, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu

[37]. Taking a Closer Look at Synthesis: Fine-grained Attribute Analysis for Person Re-Identification
IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**), 2021. (**Accept rate~48%**)
Suncheng Xiang, Yuzhuo Fu, Guanjie You, Ting Liu

[38]. Unsupervised Domain Adaptation Through Synthesis for Person Re-Identification
IEEE International Conference on Multimedia and Expo (**ICME**), 2020. (**Accept rate~29%**)
Suncheng Xiang, Yuzhuo Fu, Guanjie You, Ting Liu

[39]. Deep Unsupervised Progressive Learning for Distant Domain Adaptation
IEEE International Conference on Tools with Artificial Intelligence (**ICTAI**), 2019. (**Oral, Accept rate~28%**)
Suncheng Xiang, Yuzhuo Fu, Ting Liu

[40]. Enhancing Model Performance of Person Re-Indentification on Unknown Target Domain
International Conference on Software Engineering and Service Science (**ICSESS**), 2018.
Rongsen Xu, Yuzhuo Fu, Ting Liu, **Suncheng Xiang**

[41]. Circuit design and optimization based on EXT, EXTU instruction
International Conference on Design, Manufacturing and Mechatronics (**ICDMM**), 2016.
Suncheng Xiang, Minxuan Zhang, Zuocheng Xing, Cang Liu

[42]. QRD Architecture Using the Modified ILMGS Algorithm for MIMO Systems
International Wireless Internet Conference (**WICON**), 2016.
Cang Liu, Chuan Tang, Zuocheng Xing, Luechao Yuan, Yu Wang, Lirui Chen, Yang Zhang, **Suncheng Xiang**, Wangfeng Zhao, Xing Hu, Jinsong Xu

[43]. Hardware design of ML algorithm in MIMO-OFDM system
International Conference on Systems and Informatics (**ICSAI**), 2016.
Suncheng Xiang, Minxuan Zhang, Zuocheng Xing, Cang Liu

Patents

[44]. A Method, Equipment and Storage Medium for Re-Identification of Inland Water Vessels Based on Transfer Learning
National Invention Patent. Patent No: CN202010053647.6
Yuzhuo Fu, Ting Liu, **Suncheng Xiang**

Awards

- Outstanding Doctoral Graduate, SJTU, 2022
- Leo KoGuan Scholarship, SJTU, 2019 - 2020
- Merit Student, SJTU, 2018-2019
- First-class Academic Scholarship, NUDT, 2016-2017
- Outstanding Student, NUDT, 2015-2016
- Outstanding Student, NUDT, 2014-2015
- Third-class Academic Scholarship, Outstanding League Cadres, CSUST, 2012-2013
- First-class Academic Scholarship, Merit Student, Model Student of Academic Records, CSUST, 2011-2012
- Third-class Academic Scholarship, Excellent League Member, CSUST, 2010-2011

Projects

- Scientific Research Project of Shanghai Municipal Health Commission, 2023 - 2026
- Youth Project of National Natural Science Foundation of China, 2024 - 2026
- Startup Fund for Young Faculty at SJTU, 2023 - 2025

Professional Activities

Journal Review

- IEEE Transactions on Image Processing
- IEEE Transactions on Medical Imaging
- IEEE Transactions on Multimedia
- IEEE Journal of Biomedical and Health Informatics
- Pattern Recognition
- Machine Learning
- Defense Technology
- IET Image Processing
- International Journal of Intelligent Systems

- Signal Processing: Image Communication
- Expert Systems with Applications
- Pattern Recognition Letters
- Computer Vision and Image Understanding
- Neurocomputing
- Machine Vision and Applications
- IEEE Access
- Journal of Supercomputing
- IEEE Open Journal of Signal Processing
- Computers, Materials and Continua
- Mathematical Biosciences and Engineering

Journal Editorial

- Associate Editor, Electronics and Signal Processing, since 2024.
- Associate Editor, Open Access Journal of Data Science and Artificial Intelligence, since 2023.
- Associate Editor, International Journal of Architectural Engineering Technology, since 2023.

Conference Review

- CVPR 2024
- MICCAI 2024
- ISBI 2024
- ACM MM 2023-2024
- ICME 2023
- ICASSP 2023-2024
- CECNet 2022
- IWACCE 2022

Program Committee

- CTMDT
- EACL 2024

- Workshop Chair of CVDL 2024
- ACL 2023
- Session Chair of ICME 2022 (Recognition and Retrieval)
- EMNLP 2022-2023
- ML4CS 2022
- Session Chair of ICTAI 2019

Professional Membership

- Member, IEEE, (2022-)
- Member, ACM, (2023-)
- Student Member, CCF (2018-2021)

Skills

* Programming: Python, MATLAB, C/C++
* Deep Learning: Pytorch, TensorFlow, Caffe

Teaching

- Artificial Intelligence and Medicine, SJTU (Spring 2023-2024)
- Artificial Intelligence and Medicine, SJTU (Spring 2022-2023)
- BioDesign, SJTU (Fall 2022-2023)
- Digital Integrated Circuits, SJTU (Lead TA, Fall 2020-2021)
- Operating System, SJTU (Lead TA, Fall 2018-2019)
- Digital Integrated Circuits, SJTU (Lead TA, Spring 2017-2018)
- Fundamentals of College Computer, NUDT (Lead TA, Fall 2015-2016)

Invited Talks

- 2023.11: The 6th WLA Forum, Shanghai
- 2023.08: Summer Top Science Exploration Camp for ”Future Scientists” Training Program, Shanghai
- 2023.03: T-Workshop of Science and Technology for the Common Destiny of Mankind, Shanghai

- 2022.04: Pedestrian Data Synthesis and Application Based on Deep Learning, Wuhan University
- 2022.03: Learning from Synthetic Data with Fine-grained Attributes, Fudan University
- 2021.12: Leveraging Synthetic Data for Person Re-Identification, Hunan University
- 2021.12: Learning from Synthetic Data for Person Re-Identification, Donghua University

Open Source

Codes and models for my published papers are available on my GitHub:
https://github.com/JeremyXSC/

Last updated: April 03, 2024