

SUNCHENG XIANG

Assistant Professor

School of Biomedical Engineering
(co-affiliated with) Institute of Medical Robotics
Shanghai Jiao Tong University (SJTU)

Email: xiangsuncheng17@sjtu.edu.cn • [Google Scholar](#)

Personal Webpage: <https://JeremyXSC.github.io/>

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

School of Biomedical Engineering

Aug 2022 - Present

Education

Shanghai Jiao Tong University, Shanghai, China

Ph.D in Computer Science and Technology

2017 - 2022

National University of Defense Technology, Changsha, China

M.S in Software Engineering

2014 - 2017

Changsha University of Science & Technology, Changsha, China

B.S in Electrical Engineering and Automation

2010 - 2014

Preprints

- [1]. Learning Discriminative Visual-Text Representation for Polyp Re-Identification
arXiv preprint arXiv:2307.10625, 2023.
Suncheng Xiang, Cang Liu, Sijia Du, Dahong Qian
- [2]. 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
- [3]. MEW-UNet: Multi-axis Representation Learning in Frequency Domain for Medical Image Segmentation
arXiv preprint arXiv:2210.14007, 2022.
Jiacheng Ruan, Mingye Xie, **Suncheng Xiang**✉, Ting Liu, Yuzhuo Fu✉

- [4]. SubFace: Learning with Softmax Approximation for Face Recognition
arXiv preprint arXiv:2208.11483, 2022.
Hongwei Xu*, **Suncheng Xiang***, Dahong Qian
- [5]. Rethinking Person Re-Identification via Semantic-Based Pretraining
arXiv preprint arXiv:2110.05074, 2021.
Suncheng Xiang, Jingsheng Gao, Zirui Zhang, Mengyuan Guan, Binjie Yan, Ting Liu, Dahong Qian, Yuzhuo Fu
- [6]. 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

- [7]. 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
- [8]. 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
- [9]. 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
- [10]. 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=4.094**)
Suncheng Xiang, Guanjie You, Mengyuan Guan, Binjie Yan, Ting Liu, Dahong Qian, Yuzhuo Fu
- [11]. 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
- [12]. 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
- [13]. Progressive Learning with Style Transfer for Distant Domain Adaptation
IET Image Processing (**IET-IPR**), 2020. (**IF=2.373**)
Suncheng Xiang, Yuzhuo Fu, Ting Liu
- [14]. 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

- [15]. 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
- [16]. 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
- [17]. 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**[✉]
- [18]. AutoKary2022: A Large-Scale Densely Annotated Dataset 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[✉]
- [19]. AV-TAD: Audio-Visual Temporal Action Detection with Transformer
IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**), 2023.
(**Oral**)
Yangcheng Li, Zefang Yu, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu
- [20]. MTDL-Net: Morphological and Temporal Discriminative Learning for Heartbeat Classification
IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**), 2023.
Can Han, **Suncheng Xiang**[✉], Dahong Qian[✉]
- [21]. CC-PoseNet: Towards Human Pose Estimation in Crowded Classrooms
IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP**), 2023.
(**Oral**)
Zefang Yu, Yanping Hu, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu
- [22]. 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[✉]
- [23]. 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
- [24]. 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

- [25]. 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
- [26]. 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
- [27]. 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
- [28]. Attention based Facial Expression Manipulation
IEEE International Conference on Multimedia and Expo Workshops (ICMEW), 2021.
Feng Wang, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu
- [29]. 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
- [30]. 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
- [31]. 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
- [32]. Enhancing Model Performance of Person Re-Identification on Unknown Target Domain
International Conference on Software Engineering and Service Science (ICSESS), 2018.
Rongsen Xu, Yuzhuo Fu, Ting Liu, **Suncheng Xiang**
- [33]. 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
- [34]. 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
- [35]. 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

- [36]. 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

Professional Activities

Journal Review

- IEEE Transactions on Image Processing
- IEEE Transactions on Medical Imaging
- IEEE Transactions on Multimedia
- 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
- Neurocomputing
- IEEE Access
- Journal of Supercomputing
- IEEE Open Journal of Signal Processing
- Computers, Materials and Continua

Journal Editorial

- Associate Editor, International Journal of Architectural Engineering Technology, since 2023.

Conference Review

- ACM MM 2023
- ICME 2023
- ICASSP 2023
- CECNet 2022
- IWACCE 2022

Program Committee

- ACL 2023
- Session Chair of ICME 2022 (Recognition and Retrieval)
- EMNLP 2022
- 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 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

- 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: July 22, 2023