# SUNCHENG XIANG

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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]. Deep Multimodal Fusion for Generalizable Person Re-identification
arXiv preprint arXiv:2211.00933, 2022.
**Suncheng Xiang**, Hao Chen, Wei Ran, Zefang Yu, Ting Liu, Dahong Qian, Yuzhuo Fu

[2]. 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[#]

[3]. SubFace: Learning with Softmax Approximation for Face Recognition
arXiv preprint arXiv:2208.11483, 2022.
Hongwei Xu[*], **Suncheng Xiang**[*], Dahong Qian

[4]. 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

[5]. Less is More: Learning from Synthetic Data with Fine-grained Attributes for Person Re-Identification
arXiv preprint arXiv:2109.10498, 2021.
**Suncheng Xiang**, Guanjie You, Mengyuan Guan, Hao Chen, Feng Wang, Ting Liu, 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]. Learning from Self-Discrepancy via Multiple Co-teaching for Cross-Domain Person Re-Identification
Machine Learning (**ML**), 2021. (**Invited Paper, IF=5.414**)
**Suncheng Xiang**, Yuzhuo Fu, Mengyuan Guan, Ting Liu

[8]. Multi-level Feature Learning with Attention for Person Re-Identification
Multimedia Tools and Applications (**MTA**), 2020. (**IF=2.757**)
**Suncheng Xiang**, Yuzhuo Fu, Hao Chen, Wei Ran, Ting Liu

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

[10]. Unsupervised Person Re-Identification by Hierarchical Cluster and Domain Transfer
Multimedia Tools and Applications (**MTA**), 2020. (**IF=2.757**)
**Suncheng Xiang**, Yuzhuo Fu, Mingye Xie, Zefang Yu, Ting Liu

## Conference Publications

[11]. 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[#]

[12]. 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

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

[14]. 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

[15]. 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

[16]. 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

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

[18]. 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

[19]. 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

[20]. 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

[21]. 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**

[22]. 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

[23]. 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

[24]. 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

[25]. 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**

Note: * denotes equal contributions and # represents corresponding author.

## 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 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
- IEEE Access
- Journal of Supercomputing

**Conference Review**

- 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-)
- 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: February 02, 2023