

# SUNCHENG XIANG

Ph.D. Candidate

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## Research Interests

### **Machine Learning and Computer Vision**

Image Retrieval, Person Re-Identification, Representation Learning

Domain Adaptation, Image Generation, Generative Adversarial Network

Medical Image Analysis, Robotic Surgery, 3D Reconstruction

## 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]. VTBR: Semantic-based Pretraining for Person Re-Identification  
arXiv preprint arXiv:2110.05074, 2021.  
**Suncheng Xiang**, Zirui Zhang, Mengyuan Guan, Hao Chen, Binjie Yan, Ting Liu, Yuzhuo Fu
- [2]. 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
- [3]. 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

- [4]. Learning from Self-Discrepancy via Multiple Co-teaching for Cross-Domain Person Re-Identification  
Machine Learning (ML), 2021. (**Invited Paper, IF=2.940**)  
**Suncheng Xiang**, Yuzhuo Fu, Mengyuan Guan, Ting Liu
- [5]. 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

- [6]. Progressive Learning with Style Transfer for Distant Domain Adaptation  
IET Image Processing (IET-IPR), 2020. (IF=2.373)  
**Suncheng Xiang**, Yuzhuo Fu, Ting Liu
- [7]. 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**

- [8]. 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
- [9]. 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
- [10]. 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
- [11]. 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
- [12]. 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
- [13]. Attention based Facial Expression Manipulation  
IEEE International Conference on Multimedia and Expo Workshops (ICMEW), 2021.  
Feng Wang, **Suncheng Xiang**, Ting Liu, Yuzhuo Fu
- [14]. 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
- [15]. 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
- [16]. 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

- [17]. 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**
- [18]. 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
- [19]. 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
- [20]. 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**

- [21]. 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 Multimedia
- Pattern Recognition
- IET Image Processing
- International Journal of Intelligent Systems
- Signal Processing: Image Communication
- Expert Systems with Applications
- IEEE Access

#### **Conference Review**

- IWACCE 2022

#### **Program Committee**

- ML4CS 2022
- Session Chair of ICTAI 2019

#### **Skills**

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

#### **Teaching**

- 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**

- 2022.03: 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: June 14, 2022