

SUNCHENG XIANG

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School of Biomedical Engineering
(co-affiliated with) Institute of Medical Robotics
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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

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]. SubFace: Learning with Softmax Approximation for Face Recognition
arXiv preprint arXiv:2208.11483, 2022.
Hongwei Xu*, **Suncheng Xiang***, Dahong Qian
- [2]. 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
- [3]. 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
- [4]. 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

- [5]. 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
- [6]. 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
- [7]. Progressive Learning with Style Transfer for Distant Domain Adaptation IET Image Processing (IET-IPR), 2020. (**IF=2.373**)
Suncheng Xiang, Yuzhuo Fu, Ting Liu
- [8]. 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

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

- [16]. 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
- [17]. 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
- [18]. 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**
- [19]. 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
- [20]. 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
- [21]. 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

- [22]. 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
- IET Image Processing
- International Journal of Intelligent Systems
- Signal Processing: Image Communication
- Expert Systems with Applications
- IEEE Access

Conference Review

- IWACCE 2022

Program Committee

- Session Chair of ICME 2022 (Recognition and Retrieval)
- EMNLP 2022
- ML4CS 2022
- Session Chair of ICTAI 2019

Professional Membership

- Member, IEEE
- Student Member, CCF (2018-2021)

Skills

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

Teaching

- BioDesign, SJTU (Lead TA, 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: October 17, 2022