

SHAO, Rui (邵睿)

Homepage: <https://rshaojimmy.github.io/>

GitHub: <https://github.com/rshaojimmy>

Email: rshaojimmy@gmail.com

❖ Education

Ph.D	Department of Computer Science,	Hong Kong Baptist University, China	2017-2021
M.S.	School of Computer Science,	Wuhan University, China	2015-2016
B.S.	School of Information and Communication Engineering,		
	University of Electronic Science and Technology of China, China		2011-2015
High School	Shenzhen Foreign Languages School, China		2008-2011

❖ Research Experience

- **Nanyang Technological University, Singapore**
Research fellow Supervisor: [Prof. Ziwei Liu](#) Nov. 2021– Now
- Robustness and generalization of deep learning, with applications to deepfake detection
- **Hong Kong Baptist University, Hong Kong, China** Mar. 2017– May. 2021
Ph.D student Supervisor: [Prof. Pong C. Yuen](#)
- Robustness and generalization of deep learning, with applications to the defense of face presentation attacks and adversarial attacks.
- **Johns Hopkins University, Baltimore, U.S.** Feb. 2020– July. 2020
Visiting scholar Supervisor: [Vishal M Patel](#)
- Adversarial attacks/defense and open-set recognition.
- **Wuhan University, NERCMS, Wuhan, China** July. 2015– June. 2016
Master student Supervisor: [Prof. Ruimin Hu](#)
- Person re-identification and instance search in large scale video applications.

❖ Publications [[Google Scholar](#)]

- **Journal Papers:**
 1. **Rui Shao**, Pramuditha Perera, Pong C. Yuen, Vishal M. Patel. "Open-set Adversarial Defense with Clean-Adversarial Mutual Learning". *International Journal of Computer Vision (IJCV)*, 2022.
 2. **Rui Shao**, Xiangyuan Lan, Pong C. Yuen. "Joint Discriminative Learning of Deep Dynamic Textures for 3D Mask Face Anti-spoofing". *IEEE Transactions on Information Forensics and Security (TIFS)*, 2019.
 3. **Rui Shao**, Pramuditha Perera, Pong C. Yuen, Vishal M. Patel. "Federated Generalized Face Presentation Attack Detection". *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*. (Under Review)
 4. **Rui Shao**, Xiangyuan Lan. "Adversarial Auto-encoder for Unsupervised Deep Domain Adaptation". *IET Image Processing*, 2019.
 5. Xiangyuan Lan, Mang Ye, **Rui Shao**, Bineng Zhong, Pong C. Yuen, Huiyu Zhou. "Learning Modality-Consistency Feature Templates: A Robust RGB-Infrared Tracking System". *IEEE Transactions on Industrial Electronics (TIE)*, 2019.
 6. Xiangyuan Lan, Mang Ye, **Rui Shao**, Bineng Zhong, Deepak Kumar Jain, Huiyu Zhou. "Online Non-Negative Multi-Modality Feature Template Learning for RGB-Assisted Infrared Tracking". *IEEE Access*, 2019.

- **Conference Papers:**

1. **Rui Shao**, Pramuditha Perera, Pong C. Yuen, Vishal M. Patel. "Open-set Adversarial Defense". *European Conference on Computer Vision (ECCV)*, 2020.
2. **Rui Shao**, Bochao Zhang, Pong C. Yuen, Vishal M. Patel. "Federated Test-Time Adaptive Face Presentation Attack Detection with Dual-Phase Privacy Preservation". *IEEE International Conference on Automatic Face and Gesture Recognition (FG)*, 2021.
3. **Rui Shao**, Xiangyuan Lan, Pong C. Yuen. "Regularized Fine-grained Meta Face Anti-spoofing". *Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI)*, 2020.
4. **Rui Shao**, Xiangyuan Lan, Jiawei Li, Pong C. Yuen. "Multi-adversarial Discriminative Deep Domain Generalization for Face Presentation Attack Detection". *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
5. **Rui Shao**, Xiangyuan Lan, Pong C. Yuen. "Feature Constrained by Pixel: Hierarchical Adversarial Deep Domain Adaptation". *ACM international conference on Multimedia (ACM MM)*, 2018.
6. **Rui Shao**, Xiangyuan Lan, Pong C. Yuen. "Deep Convolutional Dynamic Texture Learning with Adaptive Channel-discriminability for 3D Mask Face Anti-spoofing". *International Joint Conference on Biometrics (IJCB)*, 2017.
7. Chong Yin, Siqi Liu, **Rui Shao**, Pong C. Yuen. "Focusing on Clinically Interpretable Features: Selective Attention Regularization for Liver Biopsy Image Classification". *Medical Image Computing and Computer Assisted Interventions (MICCAI)*, 2021.

- **Technical Reports**

1. Lei Yao, Mang Ye, Dongjing Liu, **Rui Shao**, Tao Liu, Jun Liu, Zheng Wang, Chao Liang. "WHU-NERCMS at TRECVID2015: Instance Search Task". *Participant Notebook Paper, TRECVID, 2015. (Ranked 4th/31 teams)*
2. Zheng Wang, Yang Yang, Shuosun Guan, Chenxia Han, Jiamei Lan, **Rui Shao**, Jinqiao Wang, Chao Liang. "WHU-NERCMS at TRECVID2016: Instance Search Task". *Participant Notebook Paper, TRECVID, 2016.*

❖ Professional Services

Program Committee Member: AAAI 2021

Invited or Anonymous Reviewer:

Journal: IEEE Transactions on Information Forensics and Security, Neural Networks, Pattern Recognition, Journal of Selected Topics in Signal Processing

Conference: CVPR 2020 2019, AAAI 2019 2017, IJCAI 2018, ACM MM 2018, ICPR 2018, ICB 2019 2018, ICASSP 2018

Student Volunteer for:

IAPR/IEEE Winter School on Biometrics 2017.

❖ Awards

2019-2020 Computer Science Department RPg Performance Award

2018-2019 Computer Science Department RPg Performance Award

2017-2018 Computer Science Department RPg Performance Award

2013-2014 People's Second-Class Scholarship

2012-2013 People's Second-Class Scholarship

2011-2012 People's Second-Class Scholarship