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❖ Education

Ph.D	Department of Computer Science,	Hong Kong Baptist University, China	2017-2021
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](#), [Prof. Chen Change Loy](#) Nov. 2021– Now
- Deepfake generation and 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.
- **SenseTime, Shenzhen, China** July. 2021– Nov. 2021
Algorithm researcher
- OpenMMLab 3D Human Parametric Model.

❖ 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**, Pramuditha Perera, Pong C. Yuen, Vishal M. Patel. "Federated Generalized Face Presentation Attack Detection". *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2022.
 3. **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.
 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.

- **Conference Papers:**

1. **Rui Shao**, Tianxing Wu, Ziwei Liu. "Detecting and Recovering Sequential DeepFake Manipulation". *European Conference on Computer Vision (ECCV)*, 2022
2. **Rui Shao**, Pramuditha Perera, Pong C. Yuen, Vishal M. Patel. "Open-set Adversarial Defense". *European Conference on Computer Vision (ECCV)*, 2020.
3. **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.
4. **Rui Shao**, Xiangyuan Lan, Pong C. Yuen. "Regularized Fine-grained Meta Face Anti-spoofing". *Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI)*, 2020.
5. **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.
6. **Rui Shao**, Xiangyuan Lan, Pong C. Yuen. "Feature Constrained by Pixel: Hierarchical Adversarial Deep Domain Adaptation". *ACM international conference on Multimedia (ACM MM)*, 2018.
7. **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 (IJB)*, 2017.
6. 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 2022

Invited or Anonymous Reviewer:

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

Conference: CVPR, ICCV, ECCV, NeurIPS, AAAI, IJCAI, ACM MM, ICPR, ICB

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