SHAO, Rui

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(Birthday: 1992.12)

❖ Education

- **Doctor of Philosophy**
  Hong Kong Baptist University
  —— Department of Computer Science //2017-2021
- **Bachelor of Science**
  University of Electronic Science and Technology of China
  —— School of Information and Communication Engineering // 2011-2015
- **High School**
  Shenzhen Foreign Languages School // 2008-2011

❖ Research

- **Nanyang Technological University, Singapore** (2022 U.S. New Ranking: 33) // 2021 – Now
  Research fellow
  Advisor: Prof. Ziwei Liu, Prof. Chen Change Loy
  (Prof. Chen Change Loy serves as an Associate Editor of International Journal of Computer Vision and IEEE Transactions on Pattern Analysis and Machine Intelligence)

- **Hong Kong Baptist University，Hong Kong, China** //2017-2021
  Ph.D
  Advisor: Prof. Pong C. Yuen
  (Chair Professor; IAPR Fellow)

- **Johns Hopkins University, Baltimore, U.S.** (2022 U.S. New Ranking: 9) // 2020.02 – 2020.07
  Visiting scholar
  Advisor: Prof. Vishal M Patel
  (Associate Editor of IEEE Transactions on Pattern Analysis and Machine Intelligence)

- **SenseTime, Shenzhen, China** // 2021.07 – 2021.11
  Researcher

❖ Publication [Google Scholar]

Research Direction: Trustworthy Artificial Intelligence

First Author Papers:
Journal Papers:

- **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.*
  (JCR Q1; Impact Factor: 13.369; CCF-A; Top Journal in Computer Vision)

- **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.*
  (SCI Q1; Impact Factor: 14.255; CCF-B; Top Journal in Artificial Intelligence)

- **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*.
  (SCI Q1; Impact Factor: 7.231; CCF-A; Top Journal in Security of Artificial Intelligence)

  Rui Shao, Xiangyuan Lan. "Adversarial Auto-encoder for Unsupervised Deep Domain Adaptation". *IET Image Processing, 2019*. **(SCI Q3; Impact Factor: 2.373; CCF-C)**

Conference Papers:

- **Rui Shao**, Tianxing Wu, Ziwei Liu. "Detecting and Recovering Sequential DeepFake Manipulation". *European Conference on Computer Vision (**ECCV**), 2022*. **(TH-CPL-A; CCF-B; Top Conference in Computer Vision)**

- **Rui Shao**, Pramuditha Perera, Pong C. Yuen, Vishal M. Patel. "Open-set Adversarial Defense". *European Conference on Computer Vision (**ECCV**), 2020.* **(TH-CPL-A; CCF-B; Top Conference in Computer Vision)**

- **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.* **(CCF-C; Top Conference in Biometrics)**

- **Rui Shao**, Xiangyuan Lan, Pong C. Yuen. "Regularized Fine-grained Meta Face Anti-spoofing". *Thirty-Fourth AAAI Conference on Artificial Intelligence (**AAAI**), 2020.* **(CCF-A; Top Conference in Artificial Intelligence)**

- **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*. **(CCF-A; Top Conference in Computer Vision)**

- **Rui Shao**, Xiangyuan Lan, Pong C. Yuen. "Feature Constrained by Pixel: Hierarchical Adversarial Deep Domain Adaptation". *ACM international conference on Multimedia (**ACM MM**), 2018.* **(CCF-A; Top Conference in Multimedia)**

- **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.* **(TH-CPL-B; CCF-C; Top Conference in Biometrics)**

Co-Author Papers:

- 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.* **(SCI Q1; Impact Factor: 8.236)**

- 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.* **(SCI Q3; Impact Factor: 3.367)**

- 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.* **(Top Conference in Medical Imaging)**

- **Rui Shao**, Tianxing Wu, Ziwei Liu. "DeepFake-Adapter: Dual-Level Adapter for DeepFake Detection". *AAAI Conference on Artificial Intelligence (**AAAI**), 2023*. **(CCF-A; Top Conference in Artificial Intelligence)**

❖ Competition

- **Ranked 4th in TRECVID, 2016**

  Zheng Wang, Yang Yang, Shuosen Guan, Chenxia Han, Jiamei Lan, **Rui Shao**, Jinqiao Wang, Chao Liang. "WHU-NERCMS at TRECVID2016: Instance Search Task". *Participant Notebook Paper, TRECVID, 2016.*

- **Ranked 8th in AI Singapore Trusted Media Challenge, 2021.**

❖ Services

- **Program Committee Member:**

  AAAI Conference on Artificial Intelligence (AAAI), 2021, 2022, 2023

  Workshop on Audiovisual Deepfake Generation and Detection, ACM MM 2021
- **Invited Reviewer:**

  Journal: IEEE Transactions on Pattern Analysis and Machine Intelligence

  International Journal of Computer Vision

  IEEE Transactions on Information Forensics and Security

  IEEE Transactions on Circuits and Systems for Video Technology

  Journal of Selected Topics in Signal Processing

  Neural Networks

  Pattern Recognition

  Conference: CVPR, ICCV, ECCV, NeurIPS, AAAI, IJCAI, ACM MM, ICPR, ICB
- **Student Volunteer:** 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