# SHAO, Rui (邵睿)

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## ❖ 教育背景

- **博士**
  **香港浸会大学** —— 计算机科学系                                    // 2017-2021
- **学士**
  **电子科技大学** —— 电子信息工程学院                              // 2011-2015
- **高中**
  **深圳外国语学校**                                                      // 2008-2011

## ❖ 研究经历

- **南洋理工大学，新加坡**                                             // 2021 – 2023
  **博士后研究员**
  **合作导师**: 刘子纬教授, 吕健勤教授
  (刘教授为 International Journal of Computer Vision (IJCV) 副主编；
    吕教授为 MMLab@NTU 负责人，International Journal of Computer Vision (IJCV) 和
    IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 副主编)

- **香港浸会大学，香港，中国**                                          // 2017-2021
  **博士生**
  **导师**: 阮邦志教授
  (首席讲座教授； 国际模式识别协会(IAPR)会士)
  (2019 年国家教育部自然科学二等奖)
  (2019 年广东省自然科学一等奖)

- **约翰斯霍普金斯大学，美国**                                         // 2020. 02 – 2020. 07
  **访问学者**
  **导师**: Prof. Vishal M Patel
  (Vision & Image Understanding (VIU) Lab 负责人)
  (IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 副主编)

- **商汤科技有限公司，深圳** (人工智能上市公司)                      // 2021.07 – 2021.11
  **算法研究员**

❖ **代表性论文 [谷歌学术]** ━━━━━━━━━━━━━━━━━━━━━━━━━━━━

研究方向：多模态大模型，具身智能

**见刊论文（\*为通讯作者）**

**第一作者/通讯论文**

**期刊论文：**

- **Rui Shao**, Tianxing Wu, Jianlong Wu, Liqiang Nie, Ziwei Liu. "Detecting and Grounding Multi-Modal Media Manipulation and Beyond". *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2024*. **(中科院 SCI 分区：1 区；影响因子：23.6; CCF-A；计算机视觉顶级期刊)**

- **Rui Shao,** Tianxing Wu, Liqiang Nie, Ziwei Liu. "DeepFake-Adapter: Dual-Level Adapter for DeepFake Detection". *International Journal of Computer Vision (IJCV), 2025.* **(JCR 分区：1 区；影响因子：13.369; CCF-A，计算机视觉顶级期刊)**

- **Rui Shao,** Tianxing Wu, Ziwei Liu. "Robust Sequential DeepFake Detection". *International Journal of Computer Vision (IJCV),2025.* **(JCR 分区：1 区；影响因子：13.369; CCF-A，计算机视觉顶级期刊)**

- **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 分区：1 区；影响因子：13.369; CCF-A，计算机视觉顶级期刊)**

- **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.* **(中科院 SCI 分区：1 区；影响因子：14.255; CCF-B；人工智能顶级期刊)**

- **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*. **(中科院 SCI 分区：1 区；影响因子：7.231; CCF-A，人工智能安全顶级期刊)**

- **Rui Shao**, Xiangyuan Lan. "Adversarial Auto-encoder for Unsupervised Deep Domain Adaptation". *IET Image Processing, 2019.* **(中科院 SCI 分区：3 区；CCF-C)**

**会议论文：**

- Hao Li, Qi Lv, **Rui Shao\***, Xiang Deng, Yinchuan Li, Jianye HAO, Liqiang Nie. "STAR: Learning Diverse Robot Skill Abstractions through Rotation-Augmented Vector Quantization". *International Conference on Machine Learning (ICML), 2025. Spotlight*. **(CCF-A；机器学习顶会)**

- Wei Li, Bing Hu, **Rui Shao\***, Leyang Shen, Liqiang Nie. "LION-FS: Fast & Slow Video-Language Thinker as Online Video Assistant." *IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2025.* **(CCF-A；计算机视觉顶会)**

- Zaijing Li, Yuquan Xie, **Rui Shao\***, Gongwei Chen, Dongmei Jiang, Liqiang Nie\*. "Optimus-2: Mulitimodal Minecraft Agent with Goal-Observation-Action Conditioned Policy." *IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2025.* **(CCF-A；计算机视觉顶会)**

- Jingxuan Chen, Derek Yuen, Bin Xie, Yuhao Yang, Gongwei Chen, Zhihao Wu, Li Yixing, Xurui Zhou, Weiwen Liu, Shuai Wang, Kaiwen Zhou, Rui Shao\*, Liqiang Nie, Yasheng Wang, Jianye Hao, Jun Wang, Kun Shao\*. "SPA-Bench: A Comprehensive Benchmark for SmartPhone Agent Evaluation". *The Thirteenth International Conference on Learning Representations (ICLR), 2025. Spotlight*. **(清华推荐分区 A；机器学习顶会)**

- Gongwei Chen, Leyang Shen, **Rui Shao\***, Xiang Deng, Liqiang Nie\*. "LION: Empowering Multimodal Large Language Model with Dual-Level Visual Knowledge". *IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2024.* **(CCF-A；计算机视觉顶会；在多模态大模型 13 个评测任务上达到了国际领先水平)**

- Zaijing Li, Yuquan Xie, **Rui Shao\***, Gongwei Chen, Dongmei Jiang, Liqiang Nie\*. "Optimus-1: Hybrid Multimodal Memory Empowered Agents Excel in Long-Horizon Tasks". *Thirty-eighth Annual Conference on Neural Information Processing Systems (NeurIPS), 2024.* **(CCF-A；机器学习顶会)**

- Leyang Shen, Gongwei Chen, **Rui Shao\***, Weili Guan, Liqiang Nie\*. "MoME: Mixture of Multimodal Experts for Generalist Multimodal Large Language Models". *Thirty-eighth Annual Conference on Neural Information Processing Systems (NeurIPS), 2024.* **(CCF-A；机器学习顶会)**

- **Rui Shao**, Tianxing Wu, Ziwei Liu. "Detecting and Grounding Multi-Modal Media Manipulation". *IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023.* **(CCF-A；计算机视觉顶会)**

- **Rui Shao**, Tianxing Wu, Ziwei Liu. "Detecting and Recovering Sequential DeepFake Manipulation". *European Conference on Computer Vision (ECCV), 2022.* **(清华推荐分区 A; CCF-B；计算机视觉顶会)**

- **Rui Shao**, Pramuditha Perera, Pong C. Yuen, Vishal M. Patel. "Open-set Adversarial Defense". *European Conference on Computer Vision (ECCV), 2020.* **(清华推荐分区 A; CCF-B；计算机视觉顶会)**

- **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；人工智能顶会)**

- **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；计算机视觉顶会)**

- **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；多媒体顶会)**

- **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.* **(清华推荐分区 B; CCF-C；生物特征识别顶会)**

- **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.* **(清华推荐分区 B; CCF-C；生物特征识别顶会)**

## 协同作者论文：

- Qi Lv, Hao Li, Xiang Deng, **Rui Shao**, Yinchuan Li, Jianye HAO, Longxiang Gao, MICHAEL YU WANG, Liqiang Nie. "Spatial-Temporal Graph Diffusion Policy with Kinematics Modeling for Bimanual Robotic Manipulation." *IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2025.* **(CCF-A；计算机视觉顶会)**

- Qilang Ye, Zitong Yu, **Rui Shao**, Xinyu Xie, Philip Torr, Xiaochun Cao, "CAT: Enhancing Multimodal Large Language Model to Answer Questions in Dynamic Audio-Visual Scenarios". *European Conference on Computer Vision (ECCV), 2024.* **(清华推荐分区 A; CCF-B；计算机视觉顶会)**

- Qi Lv, Hao Li, Xiang Deng, **Rui Shao**, Michael Yu Wang, Liqiang Nie. "RoboMP: A Robotic Multimodal Perception-Planning Framework with Multimodal Large Language Models". *International Conference on Machine Learning (ICML), 2024.* **(CCF-A；机器学习顶会)**

- Xinyu Hou, Liming Jiang, **Rui Shao**, Chen Change Loy. "Video Infilling with Rich Motion Prior". *British Machine Vision Conference (BMVC), 2023.* **(清华推荐分区 B; CCF-C；计算机视觉旗舰会议)**

- 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.* **(中科院 SCI 分区：1 区；影响因子：8.236)**

- 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.* **(CCF-B；医学图像顶级会议)**

## 预印版论文

- Renshan Zhang, **Rui Shao\***, Gongwei Chen, Kaiwen Zhou, Weili Guan, Liqiang Nie\*. "FALCON: Resolving Visual Redundancy and Fragmentation in High-resolution Multimodal Large Language Models via Visual Registers." *arXiv preprint, 2025.*

- Renshan Zhang, Yibo Lyu, **Rui Shao\***, Gongwei Chen, Weili Guan, Liqiang Nie\*. "Token-level Correlation-guided Compression for Efficient Multimodal Document Understanding". *arXiv preprint, 2024.*

- Zaijing Li, **Rui Shao\***, Gongwei Chen, Dongmei Jiang, Liqiang Nie\*. "Enhancing Emotional Generation Capability of Large Language Models via Emotional Chain-of-Thought". *arXiv preprint, 2024.*

## ❖ 学术服务 ───────────────

- **大会主席：**
  ICMR 2025 Panel Co-Chairs; ACM Multimedia 2024, BMVC 2024 2025 Area Chairs
- **程序委员会成员**：
  AAAI Conference on Artificial Intelligence (AAAI), 2021, 2022, 2023
  Workshop on Audiovisual Deepfake Generation and Detection, ACM MM 2021
- **特邀审稿人：**
  **期刊**: IEEE Transactions on Pattern Analysis and Machine Intelligence
  International Journal of Computer Vision
  IEEE Transactions on Image Processing
  IEEE Transactions on Neural Networks and Learning Systems
  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
  **会议:** CVPR, ICCV, ECCV, NeurIPS, ICML, ICLR, AAAI, IJCAI, ACM MM, ICPR, ICB
- **学生志愿者：** IAPR/IEEE Winter School on Biometrics 2017

## ❖ 荣誉和奖励 ───────────────

- 华为战略研究院人才 Funding 获得者
- 哈尔滨工业大学（深圳）2023 年度人才新锐奖
- 2019-2020 最佳研究表现奖，香港浸会大学计算机系
- 2018-2019 最佳研究表现奖，香港浸会大学计算机系
- 2017-2018 最佳研究表现奖，香港浸会大学计算机系

## ❖ 比赛经历 ───────────────

- 国际多媒体分析检索比赛 TRECVID2016 平均检索准确率排名世界第一
- 国际多媒体分析检索比赛 TRECVID2015 八项排名世界第一