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工作经历

2024.1–2025.4, 工业和信息化部, 高新技术司综合处

2022.07–, 南京理工大学, 计算机科学与工程学院智能科学与技术系

2019.10–2022.06, 南京理工大学, 计算机科学与工程学院

2021.12–2023.12, 澳门大学,智慧城市物联网国家重点实验室, 导师: 周建涛教授

借调

副教授

讲师

澳门青年学者 (博士后)

教育经历

2014.09-2019.09, 浙江大学, 计算机科学与技术学院, 导师: 钱沅涛教授

2017.11-2018.12, 格里菲斯大学, 信息与通讯学院, 导师: Zhou Jun 教授

2010.09-2014.07, 山东大学, 软件学院

2011.09-2012.07, 武汉大学, 国际软件学院

博士研究生

国家公派联培博士

本科生

本科交流

研究方向

- 高光谱视觉：去噪、融合、解混、目标跟踪、目标检测
- 空天信息处理：变化检测、道路提取、目标检测、语义分割
- 机器学习：深度学习、矩阵/张量分解、大模型

科研项目

遥感图像复原

中国科学院空天信息创新研究院

跨模态遥感影像语义特征智能提取、融合增强和鲁棒表示技术

火箭军工程大学智控实验室开放基金项目, 15 万

高光谱目标检测

深圳大学, 20 万

基于视觉感知的高灵敏高分辨率 XXXX 评估技术

基础加强项目子课题, 20 万

天空地一体化酿酒葡萄长势及病虫害智能诊断技术研究

宁夏农林科学院科技创新引导科技攻关项目子课题, 50 万

基于物理信息约束神经网络的高光谱图像去噪方法研究

国家自然科学基金面上项目, 49 万

材质信息引导的高光谱目标时空谱跟踪方法研究

南京理工大学青年人才培养专项, 20 万

基于深度学习的自然资源要素变化发现与监测研究

2025.1 – 2025.12

主持

2024.1 – 2025.12

主持

2023.12 – 2024.12

主持

2023.12 – 2025.12

主持

2023.04 – 2026.06

参与

2024.01 – 2027.12

主持

2023.08 – 2026.08

主持

2023.07 – 2024.07

地理信息工程国家重点实验室开放基金, 3 万	主持
基于模型驱动深度学习的高光谱去噪算法研究	2020.07 – 2023.06
江苏省自然科学基金青年项目, 20 万	主持
高光谱目标跟踪中的张量时空谱表观建模方法研究	2021.01 – 2023.12
国家自然科学基金青年项目, 24 万	主持
高精度多尺度蛋白质残基接触图及距离图预测研究	2021.01 – 2024.12
国家自然科学基金面上项目, 57 万	参与
知识引导的图像去模糊深度学习方法研究	2023.01 – 2026.12
国家自然科学基金面上项目, 55 万	参与

## 社会、学会及学术兼职

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### 审稿人:

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- International Journal of Computer Vision (IJCV)
- IEEE Transactions on Signal Processing (TSP)
- IEEE Transactions on Image Processing (TIP)
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
- IEEE Transactions on Multimedia (TMM)
- IEEE Transactions on Geoscience and Remote Sensing (TGRS)
- ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM)
- IEEE Transactions on Cybernetics (TCYB)
- IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
- IEEE Transactions on Instrumentation and Measurement (TIM)
- IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JSTARS)
- IEEE Journal of Selected Topics in Signal Processing (JSTSP)
- Pattern Recognition (PR)
- IEEE Geoscience and Remote Sensing Society Letters (GRSL)
- Remote Sensing
- Knowledge Based System
- Neural Processing Letters
- International Journal of Remote Sensing
- IET Computer Vision
- IET Image Processing
- AAAI Conference on Artificial Intelligence, 2022, 2023
- IEEE International Conference on Multimedia and Expo (ICME), 2021, 2022, 2023, 2024
- IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2022, 2023, 2024
- IEEE International Conference on Image Processing (ICIP), 2022, 2023, 2024
- International Conference on Digital Image Computing: Techniques and Applications(DICTA), 2020, 2021, 2022
- IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2023, 2024
- 中国图象图形学报

- 信号处理学报

#### 学会:

- IEEE 会员
- 中国电子学会会员
- 中国图象图形学会会员
- 江苏省人工智能学会会员
- 江苏省计算机学会会员

#### 其它:

- 特刊编委: IET Computer Vision (IET CV) for Special Issue "Spectral Imaging Powered Computer Vision" 截止日期 2023 年 3 月 31 日
- 特刊编委: Remote Sensing for Special Issue "Hyperspectral Object Tracking". 截止日期 2023 年 8 月 15 日.
- 主题编委: IEEE TGRS
- Review Editor of Frontiers in Imaging
- 领域主席: IEEE International Conference on Multimedia and Expo, 2023

#### 荣誉奖项

DIGIX 第六年全球校园人工智能算法精英大赛全国二等奖 (指导教师)	2024.11
“挑战杯”全国大学生课外学术科技作品竞赛“揭榜挂帅”专项赛全国二等奖	2024.11
2024 年度江苏省信息技术应用学会青年科技奖	2024.10
2023 年度宁夏回族自治区科学技术进步三等奖	2024.07
2023 年首届全国人工智能应用场景创新挑战赛全国二等奖 (指导教师)	2023.12
2023 年《遥感学报》研究生学术论坛优秀指导教师	2023.11
中国研究生人工智能创新大赛优秀指导教师	2023.09
IEEE TGRS 最佳审稿人 (每年共计 5 人)	2023.04
华为火花奖	2022.04
DICTA 2021 基于深度学习遥感对地观测最佳论文 (指导教师)	2021.12
澳门青年学者	2021.8
高光谱目标跟踪挑战赛第二名 (指导教师)	2021.3
江苏省双创博士	2021.1
DICTA 2020 最佳学生论文 (指导教师)	2020.11
浙江大学优秀博士奖学金	2018.11
浙江大学优秀研究生	2017.9
山东大学第二校园奖学金	2012.9
山东大学优秀学生奖学金	2012.9
国家励志奖学金	2011.9
山东大学优秀学生奖学金	2011.9

1. Shou Feng, Rui Feng, **Fengchao Xiong**, Chunhui Zhao, Wei Li, Ran Tao. "A Transformer-Based Cross-Domain Few-Shot Learning Method for Hyperspectral Target Detection", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2024.
2. Minchao Ye, Jiawei Ling, **Fengchao Xiong\***, Yuntao Qian. "Discriminative Vision Transformer for Heterogeneous Cross-Domain Hyperspectral Image Classification", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2024.
3. Jin Ye, **Fengchao Xiong\***, Jun Zhou, Yuntao Qian. "Iterative Low-rank Network for Hyperspectral Image Restoration", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2024.
4. **Fengchao Xiong\***, Tianhan Li, Yi Yang, Jianfeng Lu, Jun Zhou, Yuntao Qian. "Wavelet Siamese Network with Semi-supervised Domain Adaptation for Change Detection in Remote Sensing Images", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2024.
5. Guanyiman Fu, **Fengchao Xiong\***, Jianfeng Lu, Jun Zhou, Jiantao Zhou, Yuntao Qian. "Hyperspectral Image Denoising via Spatial-Spectral Recurrent Transformer", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2024.
6. Zhuanfeng Li, **Fengchao Xiong\***, Jun Zhou, Jianfeng Lu, Zhuang Zhao, Yuntao Qian. "Material-Guided Multi-View Fusion Network for Hyperspectral Object Tracking", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2024.
7. **Fengchao Xiong**, Tianhan Li, Jingzhou Chen, Jun Zhou, Yuntao Qian. "Mask-Guided Local-Global Attentive Network for Change Detection in Remote Sensing Images", *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JSTARS, ESI 高被引论文)*, 2024.
8. Di Hu, Xia Yuan, Huiying Xi, Jie Li, Zhenbo Song, **Fengchao Xiong**, Kai Zhang, Chunxia Zhao. "Road Structure Based Ground-to-Aerial Pose Estimation", *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JSTARS)*, 2024.
9. Minchao Ye, Junbin Chen, **Fengchao Xiong\***, Yuntao Qian. "Adaptive graph modeling with self-training for heterogeneous cross-scene hyperspectral image classification", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2024.
10. 涂坤, 熊凤超\*, 傅冠夷蛮, 陆建峰, 基于多任务卷积稀疏编码网络的高光谱图像去噪, *中国图象图形学报*, 2024.
11. 涂坤, 熊凤超\*, 侯雪强, 低秩张量嵌入的高光谱图像去噪神经网络, *遥感学报*, 2024.
12. Jingzhou Chen, **Fengchao Xiong\***, Yuntao Qian, Liang Xiao. "Hierarchical Multi-Granularity Ship Classification Using Hierarchical Contrastive Learning with Learnable Class Quires", *IEEE Transactions on Geoscience and Remote Sensing (TGRS, 大修)*, 2024.
13. Zhuang Zhao\*, Yan Zhang, Jing Han, Lianfa Bai, **Fengchao Xiong**, Jun Lu, Shuaifeng Gong, Xin Ke, Shaoxuan Jiang "Self-supervised constrained super-resolution fast coded spectral imaging system", *Optics Express (OE, 在审)*, 2024.
14. Zhuang Zhao\*, Yan Zhang, Jing Han, **Fengchao Xiong**, Jun Lu, Long Zhang "Physics-guided Super-resolution Compressed Encoding Spectral Imaging System", *Optics and Lasers in Engineering (OLEN, 在审)*, 2024.
15. **Fengchao Xiong\***, Yongle Sun, Jun Zhou, Jianfeng Lu, Yuntao Qian. "Spatial-Spectral-Temporal Correlation Filter for Hyperspectral Object Tracking", *IEEE Transactions on Geoscience and Remote Sensing(TGRS, 大修)*, 2024
16. Zhuanfeng Li, **Fengchao Xiong\***, Jianfeng Lu, Jing Wang, Diqi Chen, Jun Zhou, Yuntao Qian. "Towards Universal Representation Learning for Multi-domain Hyperspectral Object Tracking", *Pattern Recognition (PR, 大修)*, 2024.
17. Yang Chen, Xiaoyu Chen, Jing Han, Lianfa Bai, Haotian Yu, Zhuang Zhao, **Fengchao Xiong**. "Single-shot Relocalization of Large Scenes with Photometric Variation Based on NeRF Supervised", *Pattern Recognition (PR, 在审)*, 2024.
18. Jun Zhou, **Fengchao Xiong\***, Lei Tong, Naoto Yokoya, Pedram Ghamisi. "Guest Editorial: Spectral Imaging Powered Computer Vision", *IET Computer Vision*, 2023.

19. **Fengchao Xiong**, Jiantao Zhou, Jun Zhou, Jianfeng Lu, Yuntao Qian. "Multitask Sparse Representation Inspired Network for Hyperspectral Image Denoising", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2023.
20. Minchao Ye, Chenglong Wang, Zhihao Meng, **Fengchao Xiong**, Yuntao Qian. "Domain-invariant attention network for transfer learning between cross-scene hyperspectral images", *IET Computer Vision*, 2023.
21. **Fengchao Xiong**, Jun Zhou, Jiantao Zhou, Jianfeng Lu, Yuntao Qian. "Deep Parameterized Neural Networks for Hyperspectral Image Denoising", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2023.
22. Ziqi Yu, Zhuang Zhao, Haocun Qi, Jing Han, Yi Zhang, Lianfa Bai, **Fengchao Xiong**. "Redundant Compressed Single-Pixel Hyperspectral Imaging System", *Optics Communications*, 2023.
23. Zhuanfeng Li, **Fengchao Xiong\***, Jun Zhou, Jianfeng Lu, Yuntao Qian. "Learning a Deep Ensemble Network with Band Importance for Hyperspectral Object Tracking", *IEEE Transactions on Image Processing (TIP)*, 2023.
24. Zhuang Zhao, Jiutao Mu, Hui Xie, **Fengchao Xiong**, Jun Lu, JingHan. "Rapid coded aperture spectrometer based on energy concentration characteristic", *Signal Processing*, 2023.
25. Hui Xie, Jing Han, Yi Zhang, **Fengchao Xiong**, Zhuang Zhao. "Dual camera snapshot high-resolution-hyperspectral imaging system with parallel joint optimization via physics-informed learning", *Optics Express*, 2023.
26. Shou Feng, Rui Feng, Yiming Yan, Chunhui Zhao, **Fengchao Xiong**, Lifu Zhang. "An Attention-based Multiscale Spectral-Spatial Network for Hyperspectral Target Detection", *IEEE Geoscience and Remote Sensing Letters (GRSL)*, 2023.
27. **Fengchao Xiong**, Jun Zhou, Zhuang Zhao, Yuntao Qian. "Iterative Refinement Network for Hyperspectral Image Denoising", *IEEE International Conference on Multimedia & Expo (ICME)*, 2023.
28. Tianhan Li, **Fengchao Xiong\***, Wenbin Zheng, Zhuanfeng Li, Jun Zhou, Yuntao Qian. "Wavelet Siamese Network for Change Detection in Remote Sensing Images", *International Geoscience and Remote Sensing Symposium (IGARSS)*, 2023.
29. **Fengchao Xiong\***, Zhongyi Gu, Wenbin Zheng, Tianhan Li, Jun Zhou. "Multi-task Attentional U-Net for Hyperspectral Image Denoising", *International Geoscience and Remote Sensing Symposium (IGARSS)*, 2023.
30. **Fengchao Xiong\***, Jun Zhou, Shuyin Tao, Jianfeng Lu, Yuntao Qian. "SNMF-Net: Learning a Deep Alternating Neural Network for Hyperspectral Unmixing", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2022.
31. **Fengchao Xiong\***, Jun Zhou, Qinling Zhao, Jianfeng Lu, Yuntao Qian. "MAC-Net: Model Aided Nonlocal Neural Network for Hyperspectral Imagery Denoising", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2022.
32. Minchao Ye, Junbin Chen, **Fengchao Xiong**, Yuntao Qian. "Learning a deep structural subspace across hyperspectral scenes with cross-domain VAE", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2022.
33. **Fengchao Xiong**, Jun Zhou, Shuyin Tao, Jianfeng Lu, Jiantao Zhou, Yuntao Qian. "SMDS-Net: Model Guided Spectral-Spatial Network for Hyperspectral Image Denoising", *IEEE Transactions on Image Processing (TIP)*, 2022.
34. Guanyiman Fu, **Fengchao Xiong\***, Jianfeng Lu, Jun Zhou, Yuntao Qian. "Hyperspectral Image Denoising via Nonlocal Spatial-Spectral Recurrent Neural Network", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2022.
35. Hui Xie, Jun Lu, JingHan, Yi Zhang, **Fengchao Xiong**, Zhuang Zhao. "Fourier space coded hyperspectral imaging system", *Optics and Lasers in Engineering (OLEN)*, 2022.
36. Zhuanfeng Li, **Fengchao Xiong\***, Jianfeng Lu, Jun Zhou, Yuntao Qian. "Material-Guided Siamese Fusion Network for Hyperspectral Object Tracking", *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2022.

37. **Fengchao Xiong\***, Jun Zhou, Minchao Ye, Jianfeng Lu, Yuntao Qian. "Multitask Sparse Neural Network for Hyperspectral Image Denoising", *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2022.
38. Xiangyu Wu, Jianfeng Lu, Zhuanfeng Li, **Fengchao Xiong**. "Ques-to-Visual Guided Visual Question Answering", *IEEE International Conference on Image Processing (ICIP)*, 2022.
39. **Fengchao Xiong**, Minchao Ye, Jun Zhou, Yuntao Qian. "Spatial-Spectral Convolutional Sparse Neural Network for Hyperspectral Image Denoising", *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, 2022.
40. Zhihao Meng, Minchao Ye, Futian Yao, **Fengchao Xiong**, Yuntao Qian. "Cross-scene Hyperspectral Image Classification Based on Cycle-Consistent Adversarial Networks", *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, 2022.
41. Chenglong Wang, Minchao Ye, Ling Lei, **Fengchao Xiong**, Yuntao Qian. "Cross-domain Attention Network for Hyperspectral Image Classification", *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, 2022.
42. Jianxi Wang, Minchao Ye, **Fengchao Xiong**, Yuntao Qian. "Cross-scene hyperspectral feature selection via hybrid whale optimization algorithm with simulated annealing", *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JSTARS)*, 2021.
43. **Fengchao Xiong**, Jun Zhou, Minchao Ye, Jianfeng Lu, Yuntao Qian. "NMF-SAE: An interpretable sparse autoencoder for hyperspectral unmixing", *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2021.
44. Zhuanfeng Li, Xinhai Ye, **Fengchao Xiong**, Jianfeng Lu, Jun Zhou, Yuntao Qian. "Spectral-Spatial-Temporal Attention Network for Hyperspectral Tracking", *IEEE Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS)*, 2021.
45. Guanyiman Fu, **Fengchao Xiong\***, Shuyin Tao, Jianfeng Lu, Jun Zhou, Yuntao Qian, "Learning a model-based deep hyperspectral denoiser from a single noisy hyperspectral image", *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, 2021.
46. Shide Zou, **Fengchao Xiong\***, Haonan Luo, Jianfeng Lu, Yuntao Qian. "AF-Net: All-scale Feature Fusion Network for Road Extraction from Remote Sensing Images", *International Conference on Digital Image Computing: Techniques and Applications (DICTA)*, 2021.
47. **Fengchao Xiong**, Jun Zhou, Yuntao Qian. "Material Based Object Tracking in Hyperspectral Videos", *IEEE Transactions on Image Processing (TIP)*, vol. 29, no. 1, pp. 3719-3733, 2020.
48. Yuntao Qian, **Fengchao Xiong**, Qipeng Qian, Jun Zhou. "Spectral Mixture Model Inspired Network Architectures for Hyperspectral Unmixing", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, vol. 58, no. 10, pp. 7418-7434, 2020.
49. **Fengchao Xiong**, Kun Qian, Jianfeng Lu, Jun Zhou, Yuntao Qian. "Nonlocal Low-rank Nonnegative Tensor Factorization for Hyperspectral Unmixing", *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, 2020.
50. Xinhai Ye, **Fengchao Xiong\***, Jianfeng Lu, Haifeng Zhao, Jun Zhou. "M2-Net: A Multi-scale Multi-level Feature Enhanced Network for Object Detection in Optical Remote Sensing Images", *International Conference on Digital Image Computing: Techniques and Applications (DICTA)*, 2020. (Best Student Paper)
51. Zhuanfeng Li, **Fengchao Xiong\***, Jun Zhou, Jing Wang, Jianfeng Lu, Yuntao Qian. "BAE-Net: A Band Attention Aware Ensemble Network for Hyperspectral Object Tracking", *IEEE International Conference on Image Processing (ICIP)*, 2020.
52. **Fengchao Xiong\***, Jun Zhou, Jianfeng Lu, Yuntao Qian. "Non-convex Non-separable Sparse Nonnegative Matrix Factorization for Hyperspectral Unmixing", *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JSTARS)*, 2020.

53. Xinhai Ye, **Fengchao Xiong\***, Jun Zhou, Jianfeng Lu, Yuntao Qian. "F<sup>3</sup>-Net: Feature Fusion and Filtration Network for Object Detection in Optical Remote Sensing Images", *Remote Sensing*, 2020.
54. **Fengchao Xiong**, Yuntao Qian, Jun Zhou, Yuan Yan Tang. "Hyperspectral Unmixing via Total Variation Regularized Nonnegative Tensor Factorization", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, vol. 57, no. 4, pp. 2341-2357, 2019.
55. **Fengchao Xiong**, Jun Zhou, Yuntao Qian. "Hyperspectral Restoration via  $L_0$  Gradient Regularized Low-Rank Tensor Factorization", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, vol. 57, no. 12, pp. 10410-10425, 2019.
56. **Fengchao Xiong**, Jun Zhou, Yuntao Qian, Jocelyn Chanussot. "Dynamic Material-Aware Object Tracking in Hyperspectral Videos", *IEEE Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS)*, 2019.
57. Qipeng Qian, **Fengchao Xiong**, Jun Zhou. "Deep Unfolded Iterative Shrinkage-Thresholding Model for Hyperspectral Unmixing", *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, 2019.
58. **Fengchao Xiong**, Jingzhou Chen, Jun Zhou, Yuntao Qian. "Superpixel-Based Nonnegative Tensor Factorization for Hyperspectral Unmixing", *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, 2018.
59. **Fengchao Xiong**, Jun Zhou, Yuntao Qian. "Hyperspectral Imagery Denoising via Reweighted Sparse Low-Rank Nonnegative Tensor Factorization", *IEEE International Conference on Image Processing (ICIP)*, 2018.
60. Kun Qian, Jun Zhou, **Fengchao Xiong**, Huixin Zhou, Juan Du. "Object Tracking in Hyperspectral Videos with Convolutional Features and Kernelized Correlation Filter", *International Conference on Smart Multimedia (ICSM)*, 2018.
61. Yuntao Qian, **Fengchao Xiong**, Shan Zeng, Jun Zhou, Yuan Yan Tang. "Matrix-Vector Nonnegative Tensor Factorization for Blind Unmixing of Hyperspectral Imagery", *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, vol. 55, no. 3, pp. 1776-1792, 2017. \* 表示通讯作者。