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工作经历

2022.07–，　南京理工大学, 计算机科学与工程学院　　　　　　　　　**副教授**

2019.10–2022.06，　南京理工大学, 计算机科学与工程学院　　　　　　　**讲师**

2021.12–2023.12，　澳门大学, 科技学院, 导师：周建涛副教授　　**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：钱沄涛教授　　**博士研究生**

2017.11-2018.12, 格里菲斯大学, 信息与通讯学院，导师：Dr. Zhou Jun　**国家公派联培博士**

2010.09-2014.07, 山东大学, 软件学院　　　　　　　　　　　　　　　　**本科生**

2011.09-2012.07, 武汉大学, 国际软件学院　　　　　　　　　　　　　　**本科交流**

研究方向

- **高光谱图像底层处理**：去噪、解混、成像
- **高光谱视频分析**：目标跟踪
- **遥感影像分析**：道路提取、目标检测、变化检测、语义分割
- **机器学习**：深度学习、矩阵/张量分解、字典学习、低秩表示

科研项目

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

论文

1. 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.

2. **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.

3. **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.

4. **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.

5. 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.

6. Xinhai Ye, **Fengchao Xiong***, Jun Zhou, Jianfeng Lu, Yuntao Qian. "$\mathcal{F}^3$-Net: Feature Fusion and Filtration Network for Object Detection in Optical Remote Sensing Images", *Remote Sensing*, vol. 12, no. 24, pp. 4027, 2020.

7. 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 (JS-TARS)*, vol. 14, pp. 2473-2483, 2021.

8. **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)*, vol. 13, pp. 6088-6100, 2020.

9. **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)*, vol. 31, pp. 5469-5483, 2022.

10. **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)*, vol. 60, pp. 1-14, 2022, Art no. 5519414, 2022.

11. **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)*, vol. 60, pp. 1-16, Art no. 5510816, 2022.

12. 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)*, vol. 60, pp. 1-16, 2022, Art no. 5541916, 2022.

13. 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)*, vol. 60, pp. 1-14, Art no. 5522613, 2022.

14. **Fengchao Xiong**, Jun Zhou, Yuntao Qian. "Hyperspectral Imagery Denoising via Reweighed Sparse Low-Rank Nonnegative Tensor Factorization" , *IEEE International Conference on Image Processing (ICIP)*, 2018.

15. **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.

16. 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.

17. **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.

18. Qipeng Qian, **Fengchao Xiong**, Jun Zhou. "Deep Unfolded Iterative Shrinkage-Thresholding Model for Hyperspectral Unmixing", *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, 2019.

19. **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.

20. 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 Ap-*

plications (DICTA), 2020. (**Best Student Paper**)

21. 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.

22. **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.

23. 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.

24. 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.

25. 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.

26. 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.

27. **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.

28. Xiangyu Wu, Jianfeng Lu, Zhuanfeng Li, **Fengchao Xiong**. "Ques-to-Visual Guided Visual Question Answering", *IEEE International Conference on Image Processing (ICIP)*, 2022.

29. **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.

30. 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.

31. 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.

32. Hui Xie, Jun Lu, JingHan, Yi Zhang, **Fengchao Xiong**, Zhuang Zhao. "Fourier space coded hyperspectral imaging system", ***Optics and Lasers in Engineering***, 2022.

33. **Fengchao Xiong**, Tianhan Li, Jun Zhou, Jiantao Zhou, Jianfeng Lu, Yuntao Qian. "Mask-Guided Local-Global Attentive Network for Change Detection in Remote Sensing Images", ***IEEE Transactions on Geoscience and Remote Sensing (TGRS, 在审)***, 2022.

34. **Fengchao Xiong**, Jun Zhou, Jiantao Zhou, Jianfeng Lu,Yuntao Qian. "Deep Parameterized Neural Networks for Hyperspectral Image Denoising", ***IEEE Transactions on Circuits and Systems for Video Technology (TCSVT, 大修)***, 2022.

35. **Fengchao Xiong**, Jiantao Zhou, Jun Zhou, Jianfeng Lu, Yuntao Qian. "Multitask Sparse Representation Inspired Network for Hyperspectral Image Denoising", ***IEEE Transactions on Multimedia (TMM, 大修)***, 2022.

36. Zhuanfeng Li, **Fengchao Xiong***, Jun Zhou, Jianfeng Lu, Yuntao Qian. "Learning a Deep Ensemble Network for Hyperspectral Object Tracking", ***IEEE Transactions on Image Processing (TIP)***, 2023.

37. Zhuang Zhao, Jiutao Mu, Hui Xie, **Fengchao Xiong**, Jun Lu, Jing Han. "Rapid coded aperture spectrometer based on energy concentration characterstic", ***Signal Processing***, 2023.

38. 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 (大修)*, 2022.

39. 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 (在审)*, 2022.

40. 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 (在审)*, 2023.

41. **Fengchao Xiong**, Jun Zhou, Zhuang Zhao, Yuntao Qian. "Iterative Refinement Network for Hyperspectral Image Denoising", *IEEE International Conference on Multimedia & Expo (录用)*, 2023.

42. 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 (在审)*, 2023.

43. **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 (在审)*, 2023.

44. Junbin Chen, Minchao Ye, **Fengchao Xiong**, Yuntao Qian. "Adaptive graph modeling with self-training for heterogeneous cross-scene hyperspectral image classification ", *IEEE Transactions on Geoscience and Remote Sensing (在审)*, 2023.

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社会、学会及学术兼职

审稿人:

- International Journal of Computer Vision (IJCV)
- IEEE Transactions on Signal Processing (TSP)
- IEEE Transactions on Image Processing (TIP)
- IEEE Transactions on Multimedia (TMM)
- IEEE Transactions on Geoscience and Remote Sensing (TGRS)
- IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
- 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 (JS-TARS)
- 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

- IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2022, 2023
- IEEE International Conference on Image Processing (ICIP), 2022, 2023
- International Conference on Digital Image Computing: Techniques and Applications(DICTA), 2020, 2021, 2022
- IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2023
- 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
- 中国计算机学会会员
- 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.
- Review Editor of Frontiers in Imaging
- 领域主席：IEEE International Conference on Multimedia and Expo, 2023

荣誉奖项

华为火花奖	2022.04
DIGIX 大赛江苏赛区亚军 (指导教师)	2021.9
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