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List of Third Party Funded Projects

THIRD PARTY FUNDED PROJECTS

- [1] Science and Technology Development Fund (FDCT) and Ministry of Science and Technology (MOST) National Key R&D Program of China: Research on Key Technologies of Embodied Large Multimodal Models for Service Robots, 2026 - 2028, 2M MOP (*Head*)
- [2] Science and Technology Development Fund - International Collaborative Research, Macao SAR: Research on Key Technologies for Urban Intelligent Perception with Remote Sensing, 2026 - 2028, 3.3M MOP (*Head*)
- [3] Science and Technology Development Fund - Basic Research, Macao SAR: AI Interaction Technologies on Digital Twins for Cultural Tourism Experiences, Sep. 2024-Aug. 2027, 2M MOP (*Head*)

List of Publications

PUBLICATIONS *Journal Publications*

- [1] Wei Ye, Wengang Guo, Shuhao Tang, Hao Tian, **Xin Sun**, Xiaofeng Cao, Heng Tao Shen. Distributional Shortest-Path Graph Kernels, IEEE Transactions on Knowledge and Data Engineering, vol. 37, no. 11, pp. 6367-6378, Nov. 2025
- [2] Shanwen Wang, **Xin Sun***, Changrui Chen, Danfeng Hong, Jungong Han. Semi-supervised Semantic Segmentation for Remote Sensing Images via Multi-scale Uncertainty Consistency and Cross-Teacher-Student Attention. IEEE Transactions on Geoscience and Remote Sensing, vol. 63, pp. 1-15, 2025, Art no. 5517115
- [3] Haohan Shi, Fei Zhou, **Xin Sun***, Jungong Han. Rethinking the Upsampling Layer in Hyperspectral Image Super Resolution, IEEE Transactions on Multimedia, 2025
- [4] Yinghao Xu, Hao Wang, Fei Zhou, Chunbo Luo, **Xin Sun**, Susanto Rahardja, Peng Ren. MambaHSISR: Mamba hyperspectral image super-resolution, IEEE Transactions on Geoscience and Remote Sensing, 2025
- [5] Zhaopeng Deng, Zheng Zhou, Haoran Zhao, Xiaolin Chen, Danfeng Hong, **Xin Sun**. Progressive Cluster-Guided Knowledge Distillation for Remote Sensing Image Scene Classification, Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2025
- [6] Jinlong Wang, Min Li, Fanyun Meng, Haoran Zhao, **Xin Sun**, Multi-objective reinforcement learning for dynamic balancing of two-sided human-robot collaborative disassembly lines,

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- Computers & Industrial Engineering, 2025, 111703.
- [7] Hanzhao Pan, Gengshen Wu, **Xin Sun**, Adaptive gradient-oriented sampling and dynamic-blended shadow generation for realistic face relighting, *Neurocomputing*, Volume 665, 2026, 132169
 - [8] Yinghao Xu, Hao Wang, **Xin Sun**, Qianlong Xie, Wenwen Zhang, Peng Ren, Fei Zhou, Susanto Rahardja, A comb concatenation diffusion model for hyperspectral image super-resolution, *Engineering Applications of Artificial Intelligence*, Volume 160, 2025, 111985
 - [9] Jinlong Wang, Xingtao Yang, Haoran Zhao, Yunting Wu, **Xin Sun**, Dynamic density adaptive clustering and blockchain integration for efficient federated learning, *Pattern Recognition Letters*, V. 197, 2025, pp 267-273
 - [10] Xueyu Han, **Xin Sun**, Susanto Rahardja, Fast tone mapping operator for high dynamic range image using prior information, *Signal Processing: Image Communication*, V. 139, 2025, 117395
 - [11] Qiong Li, **Xin Sun***, Junyu Dong. Transductive Zero-Shot Learning via Knowledge Graph and Graph Convolutional Networks, *Scientific Reports*, (2025) 15:28708
 - [12] Zeju Wu, Panxin Ji, Kaiming Chen, Feng Gao, Haoran Zhao, **Xin Sun**, MSCT: Multi-Scale Conv-Transformer for Underwater Image Enhancement, *IEEE MultiMedia*, 2025
 - [13] Wengang Guo, Wei Ye, Chunchun Chen, **Xin Sun**, Christian Böhm, Claudia Plant, Susanto Rahardja, Bootstrap Deep Spectral Clustering with Optimal Transport, *IEEE Transactions on Multimedia*, 2025
 - [14] Haoran Zhao, Shuwen Tian, Jinlong Wang, Zhaopeng Deng, **Xin Sun***, Junyu Dong, Boosting Accuracy of Student Models via Masked Adaptive Self-Distillation Reference, *Neurocomputing*, 2025
 - [15] Zeju Wu, Kaiming Chen, Panxin Ji, Haoran Zhao, **Xin Sun**, MSFFT-Net: A multi-scale feature fusion transformer network for underwater image enhancement, *Journal of Visual Communication and Image Representation* 107, 104355, 2025
 - [16] Yuting Yang, Cong Zhang, Kin-Man Lam, **Xin Sun**, Yu Xue. Abnormal wind speed detection and prediction: methodology and case study. *Intell. Mar. Technol. Syst.* 3, 6 (2025).
 - [17] Yuting Yang, **Xin Sun**, Junyu Dong, Kin-Man Lam, Xiao Xiang Zhu, Attention-ConvNet Network for Ocean Front Prediction via Remote Sensing SST Images, *IEEE Transactions on Geoscience and Remote Sensing*, vol. 62, pp. 1-16, 2024, no. 4212516.
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 - [20] Fei Zhou, **Xin Sun***, Chengze Sun, Junyu Dong and Xiao Xiang Zhu. Adaptive Morphology Filter: A Lightweight Module for Deep Hyperspectral Image Classification, *IEEE Transactions on Geoscience and Remote Sensing*, vol. 61, pp. 1-16, 2023.
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- [23] **Xin Sun**, Zenghui Song, Yongbo Yu, Junyu Dong, Claudia Plant, Christian Böhm. Network Embedding via Deep Prediction Model, in *IEEE Transactions on Big Data*, vol.9, no.2, 2023.
- [24] Qiong Li, Eric Rigall, **Xin Sun***, Kin Man Lam, Junyu Dong*. Dual autoencoder based zero shot learning in special domain. *Pattern Analysis and Applications*, Vol. 26, pp: 797–808, 2023.
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- [28] Haoran Zhao, **Xin Sun***, Feng Gao, and Junyu Dong. Pair-Wise Similarity Knowledge Distillation for RSI Scene Classification, *Remote Sensing* 14, no. 10. 2022.
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Conference Papers

- [66] Chunchun Chen, Xing Wei, Jiayi Yang, Chenrun Wang, Yiwei Fu, Yuxing Zhang, **Xin Sun**, Rui Fan, Wei Ye. Edge Self-Adversarial Augmentation Enhances Graph Contrastive Learning Against Neighborhood Inconsistency. The 40th Annual AAAI Conference on Artificial

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