Yiting Liu

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A highly motivated **Ph.D.** student in Control Science and Engineering with strong research background in **sparse optimization**, **remote sensing**, and **evolutionary computation**. Published in top-tier journals including TGRS and TEVC. My research objective is to contribute to cutting-edge research in sparse optimization and intelligent systems.

Education

Xidian University - **Ph.D**.: Control Science and Engineering (Supervisor: Maoguo Gong, Hua Zhong)   Sep 2022 - Now

- Avg Score: 95.14/100, Top 1%
- Outstanding Student Scholarship (2022-2024), Shenglu Scholarship (2024), Ceyear Scholarship (2025)
- Outstanding Doctoral Candidate (2023-2024)

Xidian University - **M.S**.: Electronic Science and Technology (Supervisor: Maoguo Gong)   Sep 2020 - Jun 2022

- Avg Score: 90.64/100, Top 5%
- Special Freshman Scholarship (2020), Outstanding Student Scholarship (2021)
- Peng Cheng Lab OpenI Community Excellent Developer (2022)

Hunan University - **B.S**.: Electronic Information Engineering   Sep 2016 - Jun 2020

- Avg Score: 85.38/100, Top 10%
- Outstanding Student Scholarship (2017-2019)

Publications

- **Y. Liu**, J. Li, M. Gong, et al. "Collaborative Self-Supervised Evolution for Few-Shot Remote Sensing Scene Classification". *IEEE Transactions on Geoscience and Remote Sensing*, 2024, 62:1-15, Art no. 4509215.

- **Y. Liu**, H. Li, M. Gong and A. K. Qin, "Nonzero Degree-Based Multiobjective Cooperative Coevolutionary for Block Sparse Recovery". *IEEE Transactions on Evolutionary Computation*, 2024, 28(2): 374-387.

- **Y. Liu**, H. Li, M. Gong, et al., "Evolutionary Multitasking CNN Architecture Search for Hyperspectral Image Classification". *2022 International Joint Conference on Neural Networks (IJCNN)*, Padua, Italy, 2022:01-08

- Z. Wang, J. Li, **Y. Liu**, F. Xie, P. Li, "An Adaptive Surrogate-Assisted Endmember Extraction Framework Based on Intelligent Optimization Algorithms for Hyperspectral Remote Sensing Images". *Remote Sensing*, 2022, 14(4):892.

- J. Li, H. Li, **Y. Liu**, et al. "Multi-fidelity evolutionary multitasking optimization for hyperspectral endmember extraction". *Applied Soft Computing*, 2021, 111: 107713.

- L. Wei, **Y. Liu**, K. Feng, J. Li, K. Sheng and Y. Wu, "Graph Convolutional Neural Network with Inter-layer Cascade Based on Attention Mechanism". *2021 IEEE 7th International Conference on Cloud Computing and Intelligent Systems (CCIS)*, Xi'an, China, 2021:291-295

Research Project Experience

Target Detection and Recognition Research   Sep 2023 - Mar 2025

- Developed high-fidelity virtual environments using simulation software to generate diverse training datasets.
- Enhanced robustness and generalization under variable conditions (lighting, terrain, weather).

Development of Biological Computing Model Suite Based on MindSpore   Jun 2022 - Jan 2023

- Collaborated with Huawei to develop biological computing models based on the MindSpore framework.
- The relevant achievements have been successfully deployed in the standard library of Huawei MindSpore deep learning framework.

Collaborative Learning and Optimization Research (NSFC Key Program)   Sep 2023 - Sep 2024

- Integrated theoretical foundations from deep learning and evolutionary computation to explore collaborative optimization mechanisms.
- Unified sparse learning, multiobjective optimization, and multitasking optimization to enhance the efficiency, generalization, and interpretability of deep network structures.

Other Skills

Proficient in programming tools such as Matlab, Python, PyTorch