Jinyu Xie

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Education

2021/09 – 2025/06   **B.S., UESTC** in Mathematics-Physics Fundamental Science

2025-09 – Present   **Ph.D., OSU** in Artificial Intelligence, under the supervision of Prof. Xiao Fu.

Research Publications

1. **J.-Y. Xie**, H. Zhang, X. Zhao, and Y. Luo, "IRTF: A new tensor factorization for irregular multidimensional data recovery," *Knowledge-Based Systems*, under review.

2. J.-Y. Li *, **J.-Y. Xie***, Y.-S. Luo, X.-L. Zhao, and J.-L. Wang, "H2TF for hyperspectral image denoising: Where hierarchical nonlinear transform meets hierarchical matrix factorization," *IEEE Geoscience and Remote Sensing Letters*, vol. 20, 2023. 🔗 DOI: 10.1109/LGRS.2023.3294933.

3. Y.-Y. Liu, X.-L. Zhao, **J.-Y. Xie**, Z. Xu, and G. Vivone, "Bi-level tensor decomposition for hyperspectral image restoration," in *IEEE International Geoscience and Remote Sensing Symposium*, 2024. 🔗 DOI: 10.1109/IGARSS53475.2024.10640494.

4. H. Zhang, T.-Z. Huang, X.-L. Zhao, S. Zhang, **J.-Y. Xie**, T.-X. Jiang, and M. K. Ng, "Learnable transform-assisted tensor decomposition for spatio-irregular multidimensional data recovery," *ACM Transactions on Knowledge Discovery from Data*, 2024. 🔗 DOI: 10.1145/3701235.

Research Experience

2022/07 – 2025/06   **Topic: Design of advanced tensor decomposition**.   Supervised by Prof. Xile Zhao. I studied tensor decomposition algorithms and developed a couple of novel tensor decompositions for data (e.g., spatial transcriptomics data, multi-spectral image) reconstruction.

Patents

2024/04   H. Zhang, T.-Z. Huang, X.-L. Zhao, S. Zhang, **J.-Y. Xie**, T.-X. Jiang, and M. K. Ng. "Irregular high-dimensional data restoration method and system based on transform domain tensor decomposition". CN117911802A, filed January 17, 2024, and issued April 19, 2024.

Awards

2023/03   **Second Prize**, 14th Mathematics Competition of Chinese College Students (Mathematics Class A).

2023/12   **Excellent**, University Student Innovation and Entrepreneurship Competition (continuous funding).

2023/05   **First Prize**, 23rd Mathematical Modeling Contest, UESTC.

2022/12   **Outstanding**, 2021 Freshman Extracurricular Innovation Project, UESTC.

2023/06   **Outstanding**, University Student Innovation and Entrepreneurship Training Program, UESTC.

2024/06   **Exemplary Student Scholarship**, Exemplary Student Scholarship, UESTC (three times).

Skills

Coding   Python, Matlab, LaTeX, Markdown.