Zhaoliang Chen 陈赵亮

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Research Interests

Graph Neural Network and its applications Differentiable/Explainable Neural Network Multi-view Learning Low-rank Optimization Matrix Completion Machine Learning



Education

09/2019—06/2024 Ph.D. in Computer Science and Technology

College of Computer and Data Science, Fuzhou University, China (*Master-doctor combined program without a master degree*)
Supervisor: Prof. Wenzhong Guo and Prof. Shiping Wang

10/2022—10/2023 Visiting Student funded by China Scholarship Council (CSC)

Faculty of Computer Science, University of Vienna, Austria.

Supervisor: Prof. Claudia Plant

09/2015—06/2019 B.S. in Software Engineering

College of Mathematics and Computer Sciences, Fuzhou University, China

Supervisor: Prof. Fei Chen

Professional Skills

Programming/Software: Python, MATLAB, LaTex, etc.

Deep Learning Toolkit: Pytorch, Tensorflow, etc.

Selected Publications

Advisor as the first author † Master students I advised

- 1. **Zhaoliang Chen**, Zhihao Wu, Zhenghong Lin, Shiping Wang, Claudia Plant and Wenzhong Guo. AGNN: Alternating Graph-Regularized Neural Networks to Alleviate Over-Smoothing. *IEEE Transactions on Neural Network and Learning Systems (TNNLS)* (SCI Q1, CCF Rank B).
- 2. **Zhaoliang Chen**, Zhihao Wu, Shiping Wang, and Wenzhong Guo. Dual Low-Rank Graph Autoencoder for Semantic and Topological Networks. *The Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI)*, 2023, 37 (4): 4191-4198 (CCF Rank A, Acceptance rate = 19.6%).
- 3. **Zhaoliang Chen**, Lele Fu, Jie Yao, Wenzhong Guo, Claudia Plant, Shiping Wang. Learnable Graph Convolutional Network and Feature Fusion for Multi-view Learning. *Information Fusion*, 2023, 95: 109-119 (SCI Q1, CCF Rank B, ESI Highly Cited Paper).

- 4. Shiping Wang[#], **Zhaoliang Chen**[#], Shide Du, Zhouchen Lin. Learning Deep Sparse Regularizers with Applications to Multi-View Clustering and Semi-Supervised Classification. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2022, 44 (9): 5042—5055 (SCI Q1, CCF Rank A).
- 5. **Zhaoliang Chen**, Lele Fu, Shunxin Xiao, Shiping Wang, Claudia Plant, Wenzhong Guo. Multi-Channel Graph Convolutional Network with Differentiable Node Selection. *ACM Transactions on Knowledge Discovery from Data (TKDD)*, 2024, 18(1): 1-21 (CCF Rank B, SCI Q2).
- 6. **Zhaoliang Chen**, Jie Yao, Guobao Xiao, Shiping Wang. Efficient and Differentiable Low-rank Matrix Completion with Back Propagation. *IEEE Transactions on Multimedia (TMM)*, 2023, 25: 228-242 (SCI Q1, CCF Rank B).
- 7. **Zhaoliang Chen**, Shiping Wang. A Review on Matrix Completion for Recommender Systems. *Knowledge and Information Systems* (*KAIS*), 2022, 64 (1): 1-34 (CCF Rank B, SCI Q3).
- 8. **Zhaoliang Chen**, Wei Zhao, Shiping Wang. Kernel Meets Recommender Systems: A Multi-kernel Interpolation for Matrix Completion. *Expert Systems with Applications*, 2021, 168: 114436 (SCI Q1).
- 9. Luying Zhong[†], **Zhaoliang Chen**, Zhihao Wu, Shide Du, Zheyi Chen, and Shiping Wang. Learnable Graph Convolutional Network with Semi-supervised Graph Information Bottleneck. *IEEE Transactions on Neural Network and Learning Systems (TNNLS)*, 2023. (SCI Q1, CCF Rank B)
- 10. Yuhong Chen[†], Zhihao Wu[†], **Zhaoliang Chen**, Mianxiong Dong, Shiping Wang. Joint Learning of Feature and Topology for Multi-view Graph Convolutional Network, *Neural Networks*, 2023, 168: 161-170. (SCI Q1, CCF Rank B).
- 11. Shunxin Xiao, Shide Du, **Zhaoliang Chen**, Yunhe Zhang, Shiping Wang. Dual Fusion-Propagation Graph Neural Network for Multi-View Clustering. *IEEE Transactions on Multimedia (TMM)*, 2023 (SCI Q1, CCF Rank B).
- 12. Zhihao Wu[†], Xincan Lin, Zhenghong Lin, **Zhaoliang Chen**, Shiping Wang. Interpretable Graph Convolutional Network for Multi-view Semi-supervised Learning. *IEEE Transactions on Multimedia (TMM)*, 2023 (SCI Q1, CCF Rank B).
- 13. Luying Zhong[†], Jinbin Yang, **Zhaoliang Chen**, and Shiping Wang. Contrastive Graph Convolutional Networks with Generative Adjacency Matrix. *IEEE Transactions on Signal Processing (TSP)*, 2023 (SCI Q1).
- 14. Lele Fu, **Zhaoliang Chen**, Yongyong Chen, and Shiping Wang. Unified Low-Rank Tensor Learning and Spectral Embedding for Multi-View Subspace Clustering. *IEEE Transactions on Multimedia* (*TMM*), 2022 (SCI Q1, CCF Rank B).
- 15. Zexi Chen, Pengfei Lin, **Zhaoliang Chen**, Dongyi Ye, and Shiping Wang. Diversity Embedding Deep Matrix Factorization for Multi-view Clustering. *Information Sciences*, 2022, 610: 114-125 (SCI Q1, CCF Rank B).

- 16. Shiping Wang[#], **Zhaoliang Chen**[#], William Zhu, Fei-Yue Wang. Deep Random Walk of Unitary Invariance for Large-scale Data Representation. *Information Sciences*, 2021, 554: 1-14 (SCI Q1, CCF Rank B).
- 17. Lele Fu, **Zhaoliang Chen**, S Huang, S Huang, Shiping Wang. Multi-View Learning via Low-Rank Tensor Optimization. *IEEE International Conference on Multimedia and Expo (ICME)*, 2021, 1-6 (CCF Rank B, Acceptance rate = 30%).
- 18. Shide Du, Zhanghui Liu, **Zhaoliang Chen**, Wenyuan Yang, Shiping Wang. Differentiable Bi-sparse Multi-view Co-clustering. *IEEE Transactions on Signal Processing (TSP)*, 2021, 69: 4623 4636 (SCI Q1).

Preprints

- Zhaoliang Chen, Zhihao Wu, Claudia Plant, Shiping Wang, Wenzhong Guo. Attributed Multi-order Graph Convolutional Network for Heterogeneous Graphs. *Neural Networks*. (Major Revision, SCI Q1, CCF Rank B)
- 2. **Zhaoliang Chen**, Zhihao Wu, Ylli Sadikaj, Claudia Plant, Hong-Ning Dai, Shiping Wang, Wenzhong Guo. ADEdgeDrop: Adversarial Edge Dropping for Robust Graph Neural Networks. *Submitted to AAAI* (CCF Rank A).

Academic Services

• **Reviewer:** IEEE TSMC, Artificial Intelligence Review, Information Sciences, Journal of Supercomputing.

Awards & Honors

- 2022: China National Scholarship for Postgraduates China Scholarship Council Funding
- 2021: Special Prize of Outstanding Freshman Scholarship for Ph.D. Student; Second Prize of Excellent Academic Scholarship of Master Student;
- 2019: Special Prize of Outstanding Freshman Scholarship for Master Student; Excellent Undergraduate Thesis for Undergraduates of Fuzhou University; Third Prize of "China Software Cup" Software Design Competition for College Student. First Prize Scholarship of Fuzhou University