

Minglong Lei

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Research interests: Machine learning on graphs; Spatial-temporal data analysis; Representation learning.

Education

University of Chinese Academy of Sciences, Beijing, China <i>Doctor of Philosophy in Computer Science and Technology</i> Advisor: Professor Yong Shi	Sep. 2016 – Jun. 2019
Institute of Psychology, CAS (Joint Master Programme), Beijing, China <i>Master in Computer Science and Technology</i> Advisor: Professor Tingshao Zhu	Sep. 2013 – Jun. 2015
North China Computer System Engineering Institute, Beijing, China <i>Master in Computer Science and Technology</i> Advisor: Professor Xinguo Xu	Sep. 2013 – Jun. 2016
China Three Gorges University, Yichang, China <i>Bachelor in Electrical Engineering and Its Automation</i>	Sep. 2009 – Jun. 2013

Work Experience

Beijing University of Technology (Full Time), Beijing, China <i>Postdoctoral Researcher (2019.07-2021.07); Assistant Professor (2019.07-2023.11); Associate Professor (2023.11-Now)</i>	Jul. 2019 – Now
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Publications

- [1] Junzhong Ji, Jing He, **Minglong Lei***, Muhua Wang, and Wei Tang. Spatio-temporal transformer network for weather forecasting. *IEEE Transactions on Big Data*, 2024. doi:10.1109/TBDATA.2024.3378061
- [2] Chengxi Song, Lingfeng Niu, and **Minglong Lei***. Two-level adversarial attacks for graph neural networks. *Information Sciences*, 654:119877, 2024. doi:10.1016/j.ins.2023.119877
- [3] Ruibin Zeng[†], **Minglong Lei[†]**, Lingfeng Niu[†], and Lan Cheng. A unified pre-training and adaptation framework for combinatorial optimization on graphs. *Science China Mathematics*, 2023. doi:10.1007/s11425-023-2247-0
- [4] Junzhong Ji, Hao Jia, Yating Ren, and **Minglong Lei***. Supervised contrastive learning with structure inference for graph classification. *IEEE Transactions on Network Science and Engineering*, 10(3):1684–1695, 2023. doi:10.1109/TNSE.2022.3233479
- [5] Junzhong Ji, Fan Yu, and **Minglong Lei***. Self-supervised spatiotemporal graph neural networks with self-distillation for traffic prediction. *IEEE Transactions on Intelligent Transportation Systems*, 24(2):1580–1593, 2022. doi:10.1109/TITS.2022.3219626
- [6] Jiabin Liu, Biao Li*, **Minglong Lei***, and Yong Shi. Self-supervised knowledge distillation for complementary label learning. *Neural Networks*, 155:318–327, 2022. doi:10.1016/j.neunet.2022.08.014
- [7] **Minglong Lei**, Pei Quan, Rongrong Ma, Yong Shi, and Lingfeng Niu*. DigGCN: Learning compact graph convolutional networks via diffusion aggregation. *IEEE Transactions on Cybernetics*, 52(2):912–924, 2022. doi:10.1109/TCYB.2020.2988791
- [8] Junzhong Ji, Yating Ren, and **Minglong Lei***. FC-HAT: Hypergraph attention network for functional brain network classification. *Information Sciences*, 608:1301–1316, 2022. doi:10.1016/j.ins.2022.07.041
- [9] Junzhong Ji, Ye Liang, and **Minglong Lei***. Deep attributed graph clustering with self-separation regularization and parameter-free cluster estimation. *Neural Networks*, 142:522–533, 2021. doi:10.1016/j.neunet.2021.07.012
- [10] Hong Yang, Ling Chen, **Minglong Lei**, Lingfeng Niu, Chuan Zhou, and Peng Zhang. Discrete embedding for latent networks. In *29th International Joint Conference on Artificial Intelligence*, pages 1223–1229, 7 2020. doi:10.24963/ijcai.2020/170
- [11] Yong Shi, **Minglong Lei**, Hong Yang, and Lingfeng Niu*. Diffusion network embedding. *Pattern Recognition*, 88:518–531, 2019. doi:10.1016/j.patcog.2018.12.004

Grants

- National Natural Science Foundation of China, “Research on Social Network Anomaly User Detection Based on Multi-task Graph Learning”, 100,000 RMB, 2023
- Beijing Natural Science Foundation, “Research on Traffic Prediction Methods Based on Lightweight Spatio-Temporal Graph Neural Networks”, 200,000 RMB, 2022-2024
- Beijing Chaoyang District Postdoctoral Foundation, “Research on High-order Graph Neural Networks for Brain Disease Prediction”, 50,000 RMB, 2020-2021