

# Ning Liang-bo



Homepage



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## Education

- Sep. 2023 – Present    **Ph.D., Computing,** **GPA:3.49/4.3**  
The Hong Kong Polytechnic University (PolyU), Hong Kong, China  
**Supervisor: Prof. Qing Li & Prof. Wenqi Fan**
- Sep. 2020 – Jun. 2023    **M.E., Control Science and Engineering,** **GPA:88.00/100 or 3.75/4**  
Northwestern Polytechnical University (NPU), Xi'an, China  
**Supervisor: Prof. Zhun-ga Liu**
- Sep. 2016 – Jun. 2020    **B.E., Automation,** **GPA:83.47/100 or 3.34/4**  
Northwestern Polytechnical University (NPU), Xi'an, China

## Publications (First Author)

- 2026    C. Liu\*, **L. Ning\***, W. Fan, Q. Li, "Inference Cost Attacks for Retrieval-Augmented Large Language Models." *The ACM WEB Conference 2026*, 2025. (CCF-A, Online)
- 2025    **L. Ning**, W. Fan, Q. Li, "Retrieval-Augmented Purifier for Robust LLM-Empowered Recommendation." *Transactions on Information Systems (TOIS)*, 2025. (CCF-A, Online)
- 2025    **L. Ning**, Z. Liang, Z. Jiang, et al., "A Survey of WebAgents: Towards Next-Generation AI Agents for Web Automation with Large Foundation Models." *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD '25)*, 2025. (CCF-A, Online)
- 2025    **L. Ning**, W. Fan, Q. Li, "Exploring Backdoor Attack and Defense for LLM-empowered Recommendations." *arXiv*, 2025. (Preprint)
- 2025    **L. Ning**, Z. Zhang, W. Ding, et al., "Multi-level Distribution Alignment for Multi-source Universal Domain Adaptation." *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2025. (JCR:Q1, IF:10.2, Online) [ESI Highly Cited Paper (2025 Nov / 2026 Jan.)]
- 2024    **L. Ning**, Z. Dai, W. Fan, et al., "Joint Universal Adversarial Perturbations with Interpretations," *arXiv*, 2024. (Preprint)
- 2024    **L. Ning**, S. Wang, W. Fan, et al., "CheatAgent: Attacking LLM-Empowered Recommender Systems via LLM Agent," *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD '24)*, 2024. (CCF-A, Online)
- 2024    **L. Ning**, Z. Dai, J. Su, et al., "Interpretation-Empowered Neural Cleanse for Backdoor Attacks," *The Web Conference (WWW '24)*, 2024. (CCF-A, Online)
- 2022    Z. Liu (**Master Supervisor**), **L. Ning**, and Z. Zhang, "A New Progressive Multi-Source Domain Adaptation Network with Weighted Decision Fusion," *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2022. (JCR:Q1, IF:10.2, Online)
- 2021    **L. Ning**, Z. Liu, and Z. Zhang, "Domain Adaptation Based Multi-Source Data Fusion for Pattern Classification," *CIE International Conference on Radar (Radar)*, 2021. (Online)

## Publications (Collaboration)

- 2025    Y. Zhang, H. Qu, **L. Ning**, et al. "SSD4Rec: a structured state space duality model for efficient sequential recommendation." *Transactions on Information Systems (TOIS)*, 2024. (CCF-A, Online)

## Publications (Collaboration) (continued)

- Z. Zhang, Z. Liu, **L. Ning**, et al. "Belief-based fuzzy and imprecise clustering for arbitrary data distributions." *IEEE Transactions on Fuzzy Systems (TFS)*, 2025. (**JCR:Q1, IF:10.8, Online**)
- X. Yuan, **L. Ning**, W. Fan, and Q. Li. "mKG-RAG: Multimodal Knowledge Graph-Enhanced RAG for Visual Question Answering." *arXiv*, 2025. (**Preprint**)
- J. Huang, S. Wang, **L. Ning**, et al., "Towards Next-Generation Recommender Systems: A Benchmark for Personalized Recommendation Assistant with LLMs." *ACM International Conference on Web Search and Data Mining (WSDM '25)*, 2025. (**CCF B, Online**)
- 2024 ■ H. Qu, **L. Ning**, R. An, W. Fan, et al., "A Survey of Mamba," *arXiv*, 2024. (**Preprint**)
- Y. Ding, W. Fan, **L. Ning**, et al., "A survey on RAG meets LLMs: Towards retrieval-augmented large language models," *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD '24)*, 2024. (**CCF-A, Online**)
- 2023 ■ Z. Zhang, Z. Liu, **L. Ning**, et al., "Representation of Imprecision in Deep Neural Networks for Image Classification," *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, 2022. (**JCR:Q1, IF:10.2, Online**)
- Z. Zhang, **L. Ning**, Z. Liu, et al., "Mining and Reasoning of Data Uncertainty-induced Imprecision in Deep Image Classification," *Information Fusion*, 2023. (**JCR:Q1, IF:10.2, Online**)
- 2022 ■ Z. Liu, Z. Zhang, Q. Pan, and **L. Ning**, "Unsupervised Change Detection From Heterogeneous Data Based on Image Translation," *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, vol. 60, pp. 1-13, 2022. (**JCR:Q1, IF:8.125, Online**)

## Tutorial

- 2025 ■ **L. Ning**, Z. Liang, Z. Jiang, et al., "WebAgents: Towards Next-Generation AI Agents for Web Automation with Large Foundation Models" *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD '25)*, 2025.
- P. Wu, Y. Ding, **L. Ning**, W. Fan, et al., "Towards Retrieval-Augmented Large Language Models: Data Management and System Design," *IEEE International Conference on Data Engineering (ICDE '25)*, 2025.
- 2024 ■ Y. Ding, W. Fan, **L. Ning**, et al., "RAG Meets LLMs: Towards Retrieval-Augmented Large Language Models," *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD '24)*, 2024.
- Y. Ding, W. Fan, **L. Ning**, et al., "Recommender Systems in the Era of Large Language Models (LLMs)," *International Joint Conference on Artificial Intelligence (IJCAI '24)*, 2024.

## Miscellaneous Experience

### Awards and Achievements

- 2024 ■ **KDD 2024 Student Travel Award**, SIGKDD.
- 2023 ■ **Excellent Master's Thesis**, NPU, Xi'an, China.
- **Outstanding Graduates**, NPU, Xi'an, China.
- 2022 ■ **The National Scholarship**, Ministry of Education, China.
- **The First Prize Scholarship**, NPU, Xi'an, China.
- 2019 ■ **The Second Prize Scholarship**, NPU, Xi'an, China.
- 2018 ■ **The First Prize Scholarship**, NPU, Xi'an, China.
- **The Endress+Hauser Scholarship**, NPU, Xi'an, China.

## Miscellaneous Experience (continued)


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2017          **The Second Prize Scholarship**, NPU, Xi'an, China.

### Certifications

2020          **The First Prize of the 15-th National University Students Intelligent Car Race.**

2019          **The First Prize of the 14-th National University Students Intelligent Car Race.**

2018          **The Second Prize of the 13-th National University Students Intelligent Car Race.**  
Awarded by Intelligent Car Race Organization Committee.