

Dan Luo

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RESEARCH INTERESTS

My research primarily focuses on information retrieval and large language models, including search and ranking, recommender systems, and their integration with large language models.

EDUCATION

- **Lehigh University** Pennsylvania, USA
Ph.D. in Computer Science – Advisor: Brian D. Davison Sep 2017 – Jan 2025
- **Huazhong University of Science and Technology** Wuhan, China
M.S. in Computer Science and Technology Sep 2011 – Mar 2014
- **Wuhan University of Science and Technology** Wuhan, China
B.E. in Computer Science and Technology Sep 2007 – Jun 2011

WORK EXPERIENCE

- **Applied Scientist** Adobe
Digital Experience Platform May 2024 – Present
- **Research Fellow** Lehigh University
Institute for Data, Intelligent Systems and Computation Sep 2021 – May 2024
- **Applied Scientist Intern** Amazon
Amazon Fashion May 2023 – Present
- **Applied Scientist Intern** Amazon
Amazon Alexa AI May 2021 – Aug 2021
- **Senior Research Engineer** Baidu
Learning-to-Rank group in Web Search Jun 2014 – May 2017

PUBLICATION (*: EQUAL CONTRIBUTIONS.)

Conference & Journal Publications

- 1) [HCRS@WWW '26] Jingyuan Huang, **Dan Luo**, Zihe Ye, Weixin Chen, Minghao Guo, Yongfeng Zhang, *From Aggregation to Selection: User-Validated Distributed Social Recommendation*, Proceedings of the ACM Web Conference 2026, 2026.
- 2) [WWW'26] Liwei Jin, **Dan Luo**, Lixin Zou, Chenliang Li, Xiangyang Luo, Xixun Lin, Liming Dong and Yifan Zhang, *Scaling Collaborative Filtering with Multimodal Contrastive Fine-tuning*, Proceedings of the ACM Web Conference 2026, 2026.
- 3) [NeurIPS'25] Yanbiao Ji, Yue Ding, **Dan Luo**, Chang Liu, Yuxiang Lu, Xin Xin, Hongtao Lu, *How Does Topology Bias Distort Message Passing in Graph Recommender? A Dirichlet Energy Perspective*, The Thirty-Ninth Annual Conference on Neural Information Processing Systems (NeurIPS), 2025.
- 4) [CIKM'25] Yanbiao Ji, Chang Liu, Xin Chen, **Dan Luo**, Yue Ding, Mei Li, Wenqing Lin and Hongtao Lu, *From Anchors to Answers: A Novel Node Tokenizer for Integrating Graph Structure into Large Language Models*, Proceedings of the 34th ACM International Conference on Information and Knowledge Management (CIKM), 2025.
- 5) [DaSH'25] Yiru Chen*, Sally Fang*, Sai Sree Harsha*, **Dan Luo***, Vaishnavi Muppala*, Fei Wu, Shun Jiang, Kun Qian, Yunyao Li, *Adobe Summit Concierge Evaluation with human in the loop*, The 6th workshop on Data Science with Human-in-the-loop.
- 6) [MM'25] Yanbiao Ji, **Dan Luo**, Chang Liu, Shaokai Wu, Jing Tong, Qichen He, Deyi Ji, Hongtao Lu, Yue Ding, *Generating Negative Samples for Multi-Modal Recommendation*, The 33rd ACM International Conference on Multimedia (ACM MM), 2025.

- 7) [IJCAI'25] Feng Liu, Lixin Zou, Xiangyu Zhao, Min Tang, Liming Dong, **Dan Luo**, Xiangyang Luo, Chenliang Li, *Flow Matching based Sequential Recommender Model*, Proceedings of the 34th International Joint Conference on Artificial Intelligence (IJCAI), 2025.
- 8) [ACL'25] YunfanXie, Lixin Zou, **Dan Luo**, Min Tang, Chenliang Li, *Weak-to-Strong Honesty Alignment via Learning-to-Rank Supervision*, Findings of the Association for Computational Linguistics: ACL 2025
- 9) [Neurocomputing] Qiyuan Li, Chen Qiu, Haijiang Liu, Jinguang Gu, **Dan Luo**, *Decoupled contrastive learning for multilingual multimodal medical pre-trained model*, Neurocomputing, Volume 633, 2025
- 10) [COLING'25] Xie Yunfan, Lixin Zou, **Dan Luo**, Min Tang, Chenliang Li, Xiangyang Luo, Liming Dong, *Mitigating Language Confusion through Inference-time Intervention*, Proceedings of the 31st International Conference on Computational Linguistics
- 11) [COLING'25] Parshin Shojaee, Sai Sree Harsha, **Dan Luo**, Akash Maharaj, Tong Yu, Yunyao Li, *Federated Retrieval Augmented Generation for Multi-Product Question Answering*, The 31st International Conference on Computational Linguistics
- 12) [ACL'24] Chaoran Zhang, Lixin Zou, **Dan Luo**, Xiangyang Luo, Zihao Li, Min Tang, Chenliang Li, *Efficient Sparse Attention needs Adaptive Token Release*, Findings of the Association for Computational Linguistics: ACL 2024
- 13) [SIGIR'24] **Dan Luo**, Lixin Zou, Qingyao Ai, Zhiyu Chen, Dawei Yin, Brian D. Davison, *Unconfounded Propensity Estimation for Unbiased Ranking*, The 47th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2024)
- 14) [WSDM'23] **Dan Luo**, Lixin Zou, Qingyao Ai, Dawei Yin, Brian D. Davison, *Model-based Unbiased Learning to Rank*, The Sixteenth ACM International Conference on Web Search and Data Mining (WSDM 2023)
- 15) [ICTAI'19] Yucheng Shu, Zhenlong Liao, **Dan Luo**, *Robust Point Set Registration with Mixture Re-Weighting Based on Relative Geometric Structures*, The 31st IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2019)
- 16) [JIST'13] Pingfang Tian, **Dan Luo**, Yaoyao Li, and Jinguang Gu, *XML Multi-core Query Optimization based on Task Preemption and Data Partition*, The Joint International Semantic Technology Conference 2013 (JIST 2013)

Preprint

- 1) Eashan Adhikarla*, **Dan Luo***, Brian D. Davison, *Memory Defense: More Robust Classification via a Memory-Masking Autoencoder*, arXiv:2202.02595 (2022)

ACADEMIC SERVICES

Program Committee

- WWW: The Web Conference, 2025
- WSDM: The ACM International Conference on Web Search and Data Mining, 2024, 2025
- SIGIR: The International ACM SIGIR Conference on Research and Development in Information Retrieval, 2025
- CIKM: The Conference on Information and Knowledge Management, 2025
- ICTIR: The International Conference on Innovative Concepts and Theories in Information Retrieval, 2023
- ACL: The International Conference on Innovative Concepts and Theories in Information Retrieval, 2025

Volunteer

- The International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR), 2024

SELECTED HONORS & AWARDS

- **Lehigh University Fellowship** 2017
- **Promoted Twice in Baidu Inc.** 2015, 2016
- **The Golden Start Project Award in Baidu Inc.** 2016
- **Hubei Province Excellence Award for Bachelor's Degree Thesis** 2011
- **Meritorious Winner of 2011 Mathematical Contest in Modeling** 2011
- **Hubei Province Excellence Award for Bachelor's Degree Thesis** 2011
- **Travel grants**
 - **SIGIR NSF Student Travel Award** 2024

TEACHING & MENTORING EXPERIENCE

- **Teaching assistant (TA), CSE 160: Introduction to Data Science** Sep 2020 – Dec 2020
Instructor: Prof. Brian D. Davison
- **Teaching assistant (TA), CSE 160: Introduction to Data Science** Jan 2020 – May 2020
Instructor: Prof. Brian D. Davison
- **Teaching assistant (TA), CSE 160: Introduction to Data Science** Sep 2019 – Dec 2019
Instructor: Prof. Brian D. Davison