

Fengran Mo

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EDUCATION

PhD, Computer Science, University of Montreal, Advisor: **Jian-Yun Nie**, Sep 2022 - May 2026
MSc, Computer Science, University of Montreal, Sep 2020 - Aug 2022
B.E., Computer Science, Dalian University of Technology, China, Sep 2016 - Aug 2020

RESEARCH INTERESTS

General Interests: Conversational/Interactive AI, Natural Language Processing (NLP), Information Retrieval (IR), Multilingualism, Knowledge Mining in AI for Science and Social Goods.

Recent Focuses: (1) developing new paradigms to enhance the effectiveness, robustness, and trustworthiness of conversational AI systems; (2) facilitating the interactions between users with various backgrounds and interactive AI systems towards the requirements of AI for social goods.

HONORS and AWARDS

- **Best Resource Paper Award**, EMNLP 2024
- **Best Paper Award Nominations**, IEEE ICDM 2025
- **Best Paper Award Nominations**, ACM WWW 2023
- **Canada Montreal Bourses AI Fellowship**, 2022
- **Canada MITACS Globalink Graduate Research Fellowship**, 2021
- **UdeM Doctoral End-of-Study Fellowship**, 2025
- **DIRO Bourses d'excellence Merit Student Scholarships**, 2021, 2022, 2023, 2024, 2025
- **OpenAI Research Program Grant**, 2024

PROFESSIONAL EXPERIENCE

Amazon Nile Team, Applied Scientist Intern, Palo Alto, Bay Area, USA, Jun 2024 - Dec 2024
Unifying Retrieval and Generation for LLMs in Conversations, Advisor: **Meng Jiang** and **Yifan Gao**.

Tsinghua University, AIR, Visiting Student, Beijing, China, Mar 2022 - Jun 2022
Learning to Relate to Previous Turns for Conversational Dependency, Co-Advisor: **Yang Liu**.

Ant Group, Research Intern, Hangzhou, China, May 2021 - Oct 2021
A Customized Text Sanitization Mechanism with Differential Privacy, Co-Advisor: **Cen Chen**.

Dalhousie University and MITACS, Research Intern, Halifax, Canada, Jun 2019 - Sep 2019
Interactive Hierarchical Clustering for Medical Domain, Advisor: **Evangelos Milios**.

TEACHING EXPERIENCE

- Lecturer on Tutorial about *Conversational Search: From Fundamentals to Frontiers in the LLM Era*, at SIGIR 2025, Padova, Italy.
- Guest Lecturer for Information Retrieval (IFT6255) and Modern Natural Language Processing (IFT6289) at the University of Montreal.
- Guest Lecturer for Artificial Intelligence (CSE247) at UC Santa Cruz.
- Guest Lecturer, *Information Retrieval Paradigms and Model Architecture* at Microsoft Research.

PROFESSIONAL ACTIVITIES

Tutorial/Workshop Organizers

- First Leading Organizer and Speaker, Conversational Search: From Fundamentals to Frontiers in the LLM Era, Tutorial on SIGIR 2025 at Padova, Italy.
- First Leading Organizer, Multilinguality in the Era of Large Language Models (MeLLMs), Workshop on ACL 2026 at San Diego, USA.

Senior Program Committee Members/Meta Reviewers

- Area Chair, Association for Computational Linguistics (ACL) Rolling Reviews (ARR), including conference of ACL, EMNLP, NAACL, EACL, and AACL, 2024, 2025.

Program Committee Members/Reviewers

- ACM SIG Conference on Research and Development in Information Retrieval (SIGIR), 2025.
- ACM SIG Conference on Knowledge Discovery and Data Mining (KDD), 2024.
- ACM International Conference on Information and Knowledge Management (CIKM), 2023 - 2025.
- ACM International Conference on Web Search and Data Mining (WSDM), 2023 - 2025.
- ACM International World Wide Web Conference (WWW), 2024, 2026.
- The International Conference on Learning Representations (ICLR), 2026.
- The International Conference on Computational Linguistics (COLING), 2024.
- International Joint Conference on Artificial Intelligence (IJCAI), 2025.
- International Conference on Language Resources and Evaluation (LREC), 2026.
- European Conference on Information Retrieval (ECIR), 2024 - 2026.
- ACM SIG Conference on Research and Development in Information Retrieval in the Asia Pacific Region (SIGIR-AP), 2025.

Journal Reviewers

- ACM Transactions on Information Systems (TOIS)
- ACM Transactions on Intelligent Systems and Technology (TIST)
- ACM Computing Surveys (CSUR)
- Information Processing and Management (IPM), Elsevier
- IEEE Transactions on Human-Machine Systems (THMS)

FULL PUBLICATION LIST

Conversational/Interactive AI, Retrieval-Augmented AI, and User-Centric Interactions

Journal Article

1. [TOIS] **Fengran Mo**, Kelong Mao, Ziliang Zhao, Hongjin Qian, Haonan Chen, Yiruo Cheng, Xiaoxi Li, Yutao Zhu, Zhicheng Dou, Jian-Yun Nie. *A Survey of Conversational Search*, in ACM Transactions on Information Systems Journal, 2025.
2. [IPM] **Fengran Mo**, Yifan Gao, Zhuofeng Wu, Xin Liu, Pei Chen, Zheng Li, Zhengyang Wang, Xian Li, Meng Jiang, Jian-Yun Nie. *Leveraging Historical Information to Boost Retrieval-Augmented Generation in Conversations*, Information Processing & Management Journal, 2025.

Conference Proceedings

1. [ACL] **Fengran Mo**, Yifan Gao, Chuan Meng, Xin Liu, Zhuofeng Wu, Kelong Mao, Pei Chen, Zheng Li, Zhengyang Wang, Xian Li, Bing Yin, Meng Jiang. *UniConv: Unifying Retrieval and Response Generation for Large Language Models in Conversations*, In Proceedings of the 63rd Annual Meeting of the Association for Computational Linguistics, Vienna, 2025.
2. [CIKM] **Fengran Mo**, Yuchen Hui, Yuxing Tian, Zhaoxuan Tan, Chuan Meng, Zhan Su, Kaiyu Huang, Jian-Yun Nie. *Adaptive Personalized Conversational Information Retrieval*, In Proceedings of the 34th ACM International Conference on Information and Knowledge Management, Seoul, Korea, 2025.
3. [SIGIR] **Fengran Mo**, Chuan Meng, Mohammad Aliannejadi, Jian-Yun Nie. *Conversational Search: From Fundamentals to Frontiers in the LLM Era*, In Proceedings of the 48th International ACM SIG Conference on Research and Development in Information Retrieval, Padova, Italy, 2025.
4. [EMNLP] **Fengran Mo**, Abbas Ghaddar, Kelong Mao, Mehdi Rezagholizadeh, Boxing Chen, Qun Liu, Jian-Yun Nie. *CHIQ: Contextual History Enhancement for Improving Query Rewriting in Conversational Search*, In Proceedings of the 29th Conference on Empirical Methods in Natural Language Processing, Miami, USA, 2024.
5. [CIKM] **Fengran Mo**, Chen Qu, Kelong Mao, Yihong Wu, Zhan Su, Kaiyu Huang, Jian-Yun Nie. *Aligning Query Representation with Rewritten Query and Relevance Judgments in Conversational Search*, In Proceedings of the 33rd ACM International Conference on Information and Knowledge Management, Boise, USA, 2024.
6. [CIKM] **Fengran Mo**, Longxiang Zhao, Kaiyu Huang, Yue Dong, Degen Huang, Jian-Yun Nie. *How to Leverage Personal Textual Knowledge for Personalized Conversational Information Retrieval*, In Proceedings of the 33rd ACM International Conference on Information and Knowledge Management, Boise, USA, 2024.
7. [ACL] **Fengran Mo**, Chen Qu, Kelong Mao, Tianyu Zhu, Zhan Su, Kaiyu Huang, Jian-Yun Nie. *History-Aware Conversational Dense Retrieval*, In Findings of the 62nd Annual Meeting of the Association for Computational Linguistics, Bangkok, Thailand, 2024.
8. [WWW] **Fengran Mo**, Bole Yi, Kelong Mao, Chen Qu, Kaiyu Huang, Jian-Yun Nie. *ConvSDG: Session Data Generation for Conversational Search*, in Web Conference 2024 Information Retrieval Meets Large Language Models Workshop.
9. [ACL] **Fengran Mo**, Kelong Mao, Yutao Zhu, Yihong Wu, Kaiyu Huang, Jian-Yun Nie. *ConvGQR: Generative Query Reformulation for Conversational Search*, In Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics, Toronto, 2023.
10. [KDD] **Fengran Mo**, Jian-Yun Nie, Kaiyu Huang, Kelong Mao, Yutao Zhu, Peng Li, Yang Liu. *Learning to Relate to Previous Turns in Conversational Search*, In Proceedings of the 29th ACM Conference on Knowledge Discovery and Data Mining, Long Beach, 2023.
11. [SIGIR] Chuan Meng, Francesco Tonolini, **Fengran Mo**, Nikolaos Aletras, Emine Yilmaz, Gabriella Kazai. *Bridging the Gap: From Ad-hoc to Proactive Search in Conversations*, In Proceedings of the 48th International ACM Conference on Research and Development in Information Retrieval, Padova, Italy, 2025.
12. [CIKM] Yiruo Cheng, Hongjin Qian, **Fengran Mo**, Yongkang Wu, Zhonghua Li, Qi Ye, Ji-Rong Wen, Zhicheng Dou. *Evolving Graph-Based Context Modeling for Multi-Turn Conversational Retrieval-Augmented Generation*, In Proceedings of the 34th ACM International Conference on Information and Knowledge Management, Seoul, Korea, 2025.
13. [EMNLP] Jiayin Wang, **Fengran Mo**, Weizhi Ma, Peijie Sun, Min Zhang, Jian-Yun Nie. *A User-Centric Benchmark for Evaluating Large Language Models*, In Proceedings of the 29th Conference on Empirical Methods in Natural Language Processing, Miami, USA, 2024.

14. [EMNLP] Kelong Mao, Chenlong Deng, Haonan Chen, **Fengran Mo**, Zheng Liu, Tetsuya Sakai, Zhicheng Dou. *ChatRetriever: Adapting Large Language Models for Generalized and Robust Conversational Dense Retrieval*, In Proceedings of the 29th Conference on Empirical Methods in Natural Language Processing, Miami, USA, 2024.
15. [WWW] Kelong Mao, Hongjin Qian, **Fengran Mo**, Zhicheng Dou, Bang Liu, Xiaohua Cheng, Zhao Cao. *Learning Denoised and Interpretable Session Representation for Conversational Search*, In Proceedings of the ACM Web Conference, Austin, USA, 2023.
16. [ACL] Kelong Mao, Zhicheng Dou, Bang Liu, Hongjin Qian, **Fengran Mo**, Xiangli Wu, Xiaohua Cheng, Zhao Cao. *Search-Oriented Conversational Query Editing*, In Findings of the 62nd Annual Meeting of the Association for Computational Linguistics, Toronto, 2023.
17. [EMNLP] Kelong Mao, Zhicheng Dou, **Fengran Mo**, Haonan Chen, Hongjin Qian, Jiewen Hou. *Large Language Models Know Your Contextual Search Intent: A Prompting Framework for Conversational Search*, In Findings of the 28th Conference on Empirical Methods in Natural Language Processing, Singapore, 2023.
18. [EMNLP] Le Zhang, Yihong Wu, **Fengran Mo**, Jian-Yun Nie, Aishwarya Agrawal. *MOQA: Zero-Shot Multi-modal Open-domain Question Answering*, In Findings of the 28th Conference on Empirical Methods in Natural Language Processing, Singapore, 2023.
19. [EMNLP] Kelong Mao, Zhicheng Dou, Hongjin Qian, **Fengran Mo**, Xiaohua Cheng, Zhao Cao. *ConvTrans: Transforming Web Search Sessions for Conversational Dense Retrieval*, In Proceedings of the 27th Conference on Empirical Methods in Natural Language Processing, Abu Dhabi, 2022.

NLP and Multilingualism (†: Co-first Author)

Journal Article

1. [AIR] Kaiyu Huang, **Fengran Mo**[†], Xinyu Zhang, Hongliang Li, You Li, Yuanchi Zhang, Weijian Yi, Yulong Mao, Jincheng Liu, Yuzhuang Xu, Jinan Xu, Jian-Yun Nie, Yang Liu. *A survey on large language models with multilingualism: Recent advances and new frontiers*, 2025, minor revision in Artificial Intelligence Review Journal.
2. [TALLIP] Kaiyu Huang, Keli Xiao, **Fengran Mo**, Bo Jin, Zhuang Liu, Degen Huang. *Domain-Aware Word Segmentation for Chinese Language: A Document-Level Context-Aware Model*, in ACM Transactions on Asian and Low-Resource Language Information Processing, 2021.

Conference Proceedings

1. [ACL] **Fengran Mo**, Xue Zhang, Pinzhen Chen, Zheyuan Liu, Kaiyu Huang, Zhiqi Huang, Koel Dutta Chowdhury, Barry Haddow, Meng Jiang, Alexandra Birch, Jian-Yun Nie. *Multilinguality in the Era of Large Language Models (MeLLMs)*, In Proceedings of the 64th Annual Meeting of the Association for Computational Linguistics, San Diego, USA, 2026.
2. [EMNLP] Chao Huang, **Fengran Mo**[†], Yufeng Chen, Changhao Guan, Zhenrui Yue, Xinyu Wang, Jinan Xu, Kaiyu Huang. *Boosting Data Utilization for Multilingual Dense Retrieval*, In Proceedings of the 30th Conference on Empirical Methods in Natural Language Processing, Suzhou, China, 2025.
3. [EMNLP] Rui Qi, Zhibo Man, Yufeng Chen, **Fengran Mo**, Jinan Xu, Kaiyu Huang. *SoT: Structured-of-Thought Prompting Guides Multilingual Reasoning in Large Language Models*, In Findings of the 30th Conference on Empirical Methods in Natural Language Processing, Suzhou, China, 2025.
4. [EMNLP] Hongliang Li, Jinan Xu, Gengping Cui, Changhao Guan, **Fengran Mo**, Kaiyu Huang. *Multilingual Collaborative Defense for Large Language Models*, In Findings of the 30th Conference on Empirical Methods in Natural Language Processing, Suzhou, China, 2025.
5. [EMNLP] Kaiyu Huang, Degen Huang, Zhuang Liu, **Fengran Mo**. *A Joint Multiple Criteria Model in Transfer Learning for Cross-domain Chinese Word Segmentation*, In Proceedings of

the 25th Conference on Empirical Methods in Natural Language Processing, Dominican Republic, 2020.

Knowledge Mining in AI for Science and Social Goods (*: Under my mentoring)

Conference Proceedings

1. [ACL] Yongan Yu, Qingchen Hu, Xianda Du, Jiayin Wang, **Fengran Mo***, Renée Sieber. *WXImpactBench: A Disruptive Weather Impact Understanding Benchmark for Evaluating Large Language Models*, In Findings of the 63rd Annual Meeting of the Association for Computational Linguistics, Vienna, Austria, 2025.
2. [CIKM] Yu Liu, Zhuoying Li, Ruifeng Yang, **Fengran Mo***, Cen Chen. *CSMD: Curated Multimodal Dataset for Chinese Stock Analysis*, In Proceedings of the 34th ACM International Conference on Information and Knowledge Management, Seoul, Korea, 2025.
3. [CIKM] Xinyu Wang, Jijun Chi, Zhenghan Tai, Tung Sum Thomas Kwok, Hailin He, Zhuhong Li, Yuchen Hua, Muzhi Li, Peng Lu, Suyucheng Wang, Wu Yihong, Huang Jerry, Jingrui Tian, **Fengran Mo***, Yufei Cui, Ling Zhou. *FinSage: A Multi-aspect RAG System for Financial Filings Question Answering*, In Proceedings of the 34th ACM International Conference on Information and Knowledge Management, Seoul, Korea, 2025.
4. [NIPS] Lu Yi, Runlin Lei, **Fengran Mo**, Yanping Zheng, Zhewei Wei, Yuhang Ye. *Future Link Prediction Without Memory or Aggregation*, In Proceedings of the 39th Annual Conference on Neural Information Processing Systems, San Diego, USA, 2025.
5. [ICLR] Lu Yi, Jie Peng, Yanping Zheng, **Fengran Mo**, Zhewei Wei, Yuhang Ye, Yue Zixuan, Zengfeng Huang. *TGB-Seq Benchmark: Challenging Temporal GNNs with Complex Sequential Dynamics*, In Proceedings of the 13th International Conference on Learning Representations, Singapore, 2025.
6. [ACL] Jinghan Zhang, Xiting Wang, **Fengran Mo**, Yeyang Zhou, Wanfu Gao, Kunpeng Liu. *Entropy-based Exploration Conduction for Multi-step Reasoning*, In Findings of the 63rd Annual Meeting of the Association for Computational Linguistics, Vienna, Austria, 2025.
7. [IJCAI] Xinhao Zhang, Jinghan Zhang, **Fengran Mo**, Dongjie Wang, Yanjie Fu, Kunpeng Liu. *LEKA: LLM-Enhanced Knowledge Augmentation*, In Proceedings of the 34th International Joint Conference on Artificial Intelligence, Singapore, 2025.
8. [ICDM] Xinhao Zhang, Jinghan Zhang, **Fengran Mo**, Yuzhong Chen, Kunpeng Liu. *Retrieval-Augmented Feature Generation for Domain-Specific Classification*, In Proceedings of the 25th IEEE International Conference on Data Mining, Washington DC, USA, 2025.
9. [ACL] Yulong Mao, Kaiyu Huang, Changhao Guan, Baoling Gao, **Fengran Mo***, Jinan Xu. *DoRA: Enhancing Parameter-Efficient Fine-Tuning with Dynamic Rank Distribution*, In Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics, Bangkok, Thailand, 2024.
10. [EMNLP] Kelong Mao, Zheng Liu, Hongjin Qian, **Fengran Mo**, Chenlong Deng, Zhicheng Dou. *RAG-Studio: Towards In-Domain Adaptation Of Retrieval-Augmented Generation Through Self-Alignment*, In Findings of the 29th Conference on Empirical Methods in Natural Language Processing, Miami, USA, 2024.
11. [KDD] Yihong Wu, Le Zhang, **Fengran Mo**, Tianyu Zhu, Weizhi Ma, Jian-Yun Nie. *Unifying Graph Convolution and Contrastive Learning in Collaborative Filtering*, In Proceedings of the 30th ACM SIG Conference on Knowledge Discovery and Data Mining, Barcelona, 2024.
12. [WSDM] Tianyu Zhu, Yansong Shi, Yuan Zhang, Yihong Wu, **Fengran Mo**, Jian-Yun Nie. *Collaboration and Transition: Distilling Item Transitions into Multi-Query Self-Attention for Sequential Recommendation*, In Proceedings of the 30th ACM Conference on Knowledge Discovery and Data Mining, Mérida, Mexico, 2024.

13. [ACL] Huimin Chen, **Fengran Mo**, Yanhao Wang, Cen Chen, Jian-Yun Nie, Chengyu Wang, Jamie Cui. *A Customized Text Sanitization Mechanism with Differential Privacy*, In Findings of the 62nd Annual Meeting of the Association for Computational Linguistics, Toronto, 2023.