

# Fengran Mo

Ph.D. at RALI laboratory

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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 Acquisition in AI for All and Social Goods.

**Recent Focuses:** (1) developing retrieval-augmented interactive AI systems for enhancing effectiveness, robustness, and trustworthiness; (2) facilitating the Human-AI interactions for users with various backgrounds and pursuing knowledge acquisition in AI models 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 Rufus Team, Applied Scientist Intern**, Palo Alto, Bay Area, USA, Aug 2025 - Nov 2025  
*Agentic Interactive Information Accessing Assistant*, Advisor: **Meng Jiang** and **Dakuo Wang**.

**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 Miliots**.

## FUNDING PROPOSAL EXPERIENCE

- Proposal “Local Differentially Private Mechanisms for Text Privacy Protection” received the Canada Montreal Bourses AI Fellowship.
- Proposal “Intelligent Conversational AI System” and “Retrieval and Generation Paradigm Integration” received University of Montreal Doctoral End-of-Study Fellowship and DIRO Bourses d'excellence Merit Student Scholarships.
- Proposal “Conversational Search Engine” via DIRO for Google Doctoral Fellowship.

## FULL PUBLICATION LIST

### **Conversational/Interactive AI, Retrieval-Augmented AI, and Human-AI Interactions**

#### **Journal Articles**

1. [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, 2026.
2. [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.

#### **Conference Proceedings**

1. [WWW] **Fengran Mo**, Zhan Su, Yuchen Hui, Jinghan Zhang, Jia Ao Sun, Zheyuan Liu, Chao Zhang, Tetsuya Sakai, Jian-Yun Nie. *OpenDecoder: Open Large Language Model Decoding to Incorporate Document Quality in Retrieval-Augmented Generation*, In Proceedings of the ACM Web Conference, Dubai, 2026.
2. [AAAI] **Fengran Mo**, Jinghan Zhang, Yuchen Hui, Jia Ao Sun, Zhichao Xu, Zhan Su, Jian-Yun Nie. *ConvMix: A mixed-criteria data augmentation framework for conversational dense retrieval*, In Proceedings of the 40th Conference on Artificial Intelligence, Singapore, 2026.
3. [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.
4. [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.
5. [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.
6. [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.
7. [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.
8. [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.
9. [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.
10. [WWW] **Fengran Mo**, Bole Yi, Kelong Mao, Chen Qu, Kaiyu Huang, Jian-Yun Nie. *ConvSDG: Session Data Generation for Conversational Search*, in Companion Proceedings of the ACM Web Conference 2024.

11. [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.
12. [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 Bench, 2023.
13. [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.
14. [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.
15. [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.
16. [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.
17. [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.
18. [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.
19. [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.
20. [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.
21. [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 Articles

1. [AIR] Kaiyu Huang, **Fengran Mo**<sup>†</sup>, Xinyu Zhang, Hongliang Li, You Li, Yuanchi Zhang, Weijian Yi, Yulong Mao, Jinchen 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. [TMLR] Zhichao Xu, **Fengran Mo**, Zhiqi Huang, Crystina Zhang, Puxuan Yu, Bei Wang Phillips, Jimmy Lin, Vivek Srikumar. *A Survey of Model Architectures in Information Retrieval*, in Transactions on Machine Learning Research, 2025.

3. [TMLR] Zhan Su, **Fengran Mo**, Prayag Tiwari, Benyou Wang, Qiuchi Li, Jian-Yun Nie, Jakob Grue Simonsen. *Mixture of Latent Experts Using Tensor Products*, in Transactions on Machine Learning Research, 2024.
4. [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**<sup>†</sup>, 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. [EACL], Jinghan Zhang, **Fengran Mo**, Tharindu Cyril Weerasooriya, Xinyue Ye, Dongjie Wang, Yanjie Fu, Kunpeng Liu. *Blind Spot Navigation in Large Language Model Reasoning with Thought Space Explorer*, In Proceedings of the 19th Conference of the European Chapter of the Association for Computational Linguistics, Rabat, Morocco, 2026.
4. [EACL], Yuxing Tian, **Fengran Mo**, Weixu Zhang, Yiyan Qi, Jian-Yun Nie. *ReAttn: Improving Attention-based Re-ranking via Attention Re-weighting*, In Proceedings of the 19th Conference of the European Chapter of the Association for Computational Linguistics, Rabat, Morocco, 2026.
5. [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.
6. [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.
7. [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 Acquisition in AI for All and Social Goods (\*: Under my mentoring)

### Conference Proceedings

1. [ACL] Yongan Yu, Qingchen Hu, Xianda Du, Jiayin Wang, **Fengran Mo**<sup>\*</sup>, 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, Ruirong Yang, **Fengran Mo**<sup>\*</sup>, 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**<sup>\*</sup>, 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.

## **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.
- Guest Lecturer, *Integrating LLMs in Conversational AI* at Amazon SFAI University.

## **PROFESSIONAL ACTIVITIES**

### **Tutorial/Workshop Organizers**

- First Leading Organizer and Speaker, Agentic Conversational Search, Tutorial on Web Conference 2026 at Dubai, United Arab Emirates, and ECIR 2026 at Delft, Netherland.
- 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, 2026.

### **Program Committee Members/Reviewers**

- ACM SIG Conference on Research and Development in Information Retrieval (SIGIR), 2025, 2026.
- ACM SIG Conference on Knowledge Discovery and Data Mining (SIGKDD), 2024.
- ACM International Conference on Information and Knowledge Management (CIKM), 2023 - 2025.
- ACM International World Wide Web Conference (WWW), 2024 - 2026.
- ACM International Conference on Web Search and Data Mining (WSDM), 2023 - 2025.
- 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.

### **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)

## **REFERENCE**

Note: I am using Interfolio Dossier Delivery to deliver confidential recommendation letters. You can request the letter using the addresses labeled "Interfolio email" below. If you have questions for my referees, you can contact them directly via their official emails. Thank you!

- Dr. Jian-Yun Nie, ACM SIGIR Academy, Canada Research Chair, Full Professor  
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Room 2241, André-Aisenstadt building, Montreal, QC H3C 3J7, Canada  
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- Dr. Tetsuya Sakai, ACM Distinguished Member, IPSJ Fellow, Professor  
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341 63-05-04, Shinjuku ku Okubo, Tokyo 169-8555, Japan  
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