CHUAN MENG

LAB42, Science Park 900, 1098 XH Amsterdam, The Netherlands

+31 644626440 ⋄ c.meng@uva.nl ⋄ [Website] ⋄ [Google Scholar] ⋄ [DBLP] ⋄ [Twitter] ⋄ [LinkedIn]

RESEARCH INTERESTS

Interested in information retrieval (IR) and natural language processing (NLP), with a particular focus on conversational search, query performance prediction (QPP), large language models (LLMs), and knowledge-grounded dialogue systems.

EDUCATION

University of Amsterdam (UvA), The Netherlands   *October 2021 - Present*
Ph.D. in Artificial Intelligence
Information Retrieval Lab (IRLab)
Informatics Institute
Supervisors: Prof. dr. Maarten de Rijke and dr. Mohammad Aliannejadi

Shandong University, China   *September 2018 - June 2021*
Master in Computer Science and Technology
School of Computer Science and Technology
Supervisors: Prof. dr. Zhumin Chen, dr. Pengjie Ren, and dr. Zhaochun Ren
Master's thesis "Research on Knowledge-Grounded Non-Task-Oriented Conversational System" [pdf]

Shandong Normal University, China   *September 2014 - June 2018*
Bachelor in Electronic Commerce
School of Business

PUBLICATIONS

As of May 2024, I have 191 citations (Google Scholar) with an H-index of 6.

I have authored papers published in proceedings, such as SIGIR, EMNLP, CIKM, and AAAI.

1. Zahra Abbasiantaeb, **Chuan Meng**, Leif Azzopardi, Mohammad Aliannejadi. **Can We Use Large Language Models to Fill Relevance Judgment Holes?**. Under review for the First Workshop on Large Language Models (LLMs) for Evaluation in Information Retrieval (LLM4Eval). [pdf]
2. **Chuan Meng**. Query Performance Prediction for Conversational Search and Beyond. The 47th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR 2024**) (to appear).
3. **Chuan Meng**, Negar Arabzadeh, Arian Askari, Mohammad Aliannejadi, and Maarten de Rijke. Ranked List Truncation for Large Language Model-based Re-Ranking. The 47th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR 2024**) [pdf, code].
4. **Chuan Meng**, Negar Arabzadeh, Arian Askari, Mohammad Aliannejadi, and Maarten de Rijke. Query Performance Prediction using Relevance Judgments Generated by Large Language Models. arXiv:2404.01012. [pdf, code]
5. Arian Askari, Roxana Petcu, **Chuan Meng**, Mohammad Aliannejadi, Amin Abolghasemi, Evangelos Kanoulas, and Suzan Verberne. Self-seeding and Multi-intent Self-instructing LLMs for Generating Intent-aware Information-Seeking dialogs. Under review for the 62nd Annual Meeting of the Association for Computational Linguistics (**ACL 2024**). [pdf, code]
6. Zahra Abbasiantaeb, **Chuan Meng**, David Rau, Antonis Krasakis, Hossein A. Rahmani, and Mohammad Aliannejadi. LLM-based Retrieval and Generation Pipelines for TREC Interactive Knowledge Assistance Track (iKAT) 2023. The Thirty-Second Text REtrieval Conference (TREC 2023) (**Our submitted runs ranked 1st**). [pdf]

7. Arian Askari, Mohammad Aliannejadi, **Chuan Meng**, Evangelos Kanoulas, and Suzan Verberne. Expand, Highlight, Generate: RL-driven Document Generation for Passage Reranking. The 2023 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2023**, main conference). [pdf, code]

8. **Chuan Meng**, Mohammad Aliannejadi, and Maarten de Rijke. System Initiative Prediction for Multi-turn Conversational Information Seeking. The 32nd ACM International Conference on Information and Knowledge Management (**CIKM 2023**). [pdf, code]

9. **Chuan Meng**, Negar Arabzadeh, Mohammad Aliannejadi, and Maarten de Rijke. Query Performance Prediction: From Ad-hoc to Conversational Search. The 46th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR 2023**). [pdf, code]

10. **Chuan Meng**, Mohammad Aliannejadi, and Maarten de Rijke. Performance Prediction for Conversational Search Using Perplexities of Query Rewrites. Query Performance Prediction and Its Evaluation in New Tasks Workshop co-located with The 45th European Conference on Information Retrieval (**QPP++ 2023**). [pdf, code]

11. **Chuan Meng**, Pengjie Ren, Zhumin Chen, Zhaochun Ren, Tengxiao Xi, and Maarten de Rijke. Initiative-Aware Self-Supervised Learning for Knowledge-Grounded Conversations. The 44th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR 2021**). [pdf]

12. Weiwei Sun[*], **Chuan Meng**[*] (co-first author), Qi Meng, Zhaochun Ren, Pengjie Ren, Zhumin Chen, and Maarten de Rijke. Conversations Powered by Cross-Lingual Knowledge. The 44th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR 2021**). [pdf, code]

13. **Chuan Meng**, Pengjie Ren, Zhumin Chen, Weiwei Sun, Zhaochun Ren, Zhaopeng Tu, and Maarten de Rijke. DukeNet: A Dual Knowledge Interaction Network for Knowledge-Grounded Conversation. The 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR 2020**). [pdf, code]

14. **Chuan Meng**, Pengjie Ren, Zhumin Chen, Christof Monz, Jun Ma, and Maarten de Rijke. RefNet: A Reference-aware Network for Background Based Conversation. The Thirty-Fourth AAAI Conference on Artificial Intelligence (**AAAI 2020**). [pdf, code]

ACADEMIC SERVICE

- Program committee member: SIGIR 2024, CIKM 2024–2022, ACL 2023, EMNLP 2023–2021, WWW 2024, WSDM 2024–2022, ECIR 2024, ICTIR 2023, SIGKDD 2022, ECML/PKDD 2022–2021, AAAI 2021, COLING 2022 & 2020
- Journal reviewer: Transactions on Information Systems (TOIS), Information Processing and Management (IPM)
- Webmaster for the IRLab website, 2023-present
- Chair for internal seminars at IRLab, 2023

TEACHING & SUPERVISION

- Tutorial organization: Negar Arabzadeh, **Chuan Meng**, Mohammad Aliannejadi, and Ebrahim Bagheri. Query Performance Prediction: From Fundamentals to Advanced Techniques. The 46th European Conference on Information Retrieval (ECIR 2024). [pdf, slides]
- Teaching assistant
  – Information Retrieval, 2023, University of Amsterdam; project design and grading
  – Information Retrieval, 2022, University of Amsterdam; project design and grading
  – Information Retrieval, 2020, Shandong University; assignment/project design and grading
  – Natural Language Processing, 2019, Shandong University; assignment/project design and grading
- PhD mentorship (Research-oriented): Lili Lu, Universit della Svizzera italiana (USI), with Prof. dr. Fabio Crestani

INVITED TALKS

- Opportunities and Challenges of LLMs in Information Retrieval, 17 Apr 2024, Amazon (Seattle) (host: Shervin Malmasi, applied Science Manager at Amazon) [slides]
- System Initiative Prediction and Query Performance Prediction for Conversational Information Seeking, 3 Nov 2023, University College London (UCL) [slides]
- Query Performance Prediction for Conversational Search, 18 May 2023, University of Glasgow [slides]

SCHOLARSHIPS & AWARDS

- Excellent Master's Thesis of Shandong Province, 2022
- National Scholarship (China), 2020/2016
- Outstanding Graduates of Shandong Province, 2021/2017
- SIGIR Student Travel Grant, 2020
- Scholarship for Outstanding Postgraduate Cadres of Shandong University, 2020/2019
- AAAI Student Scholar Scholarship, 2019
- Academic Scholarship for Master students of Shandong University, 2019
- Outstanding Students of Shandong Province, 2017

RESOURCES

I have curated the following code resources:

- a code repository with over 300 visitors, providing scripts for fine-tuning open-source LLMs to generate relevance judgments, within a Python/PyTorch framework.
- a code repository with over 1,500 visitors, providing a comprehensive implementation of query performance prediction (QPP) methods, within a unified Python/PyTorch framework.
- a code repository with over 100 visitors, offering a comprehensive implementation of ranked list truncation methods, within a unified Python/PyTorch framework.
- a paper reading list with over 250 stars, knowledge-grounded dialogue systems.

I also contributed to Pyserini, a Python toolkit (over 1,500 stars) for reproducible information retrieval research.

REFERENCES

Prof. dr. Maarten de Rijke	University of Amsterdam	m.derijke@uva.nl
Dr. Mohammad Aliannejadi	University of Amsterdam	m.aliannejadi@uva.nl
Dr. Zhaochun Ren	Leiden University	z.ren@liacs.leidenuniv.nl