

# CHUAN MENG

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## RESEARCH INTERESTS

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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

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**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

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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<sup>\*</sup>, **Chuan Meng**<sup>\*</sup> (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

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- 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

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- 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

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- 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

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- 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

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I have curated the following 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

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Prof. dr. <a href="#">Maarten de Rijke</a>	University of Amsterdam	<a href="mailto:m.derijke@uva.nl">m.derijke@uva.nl</a>
Dr. <a href="#">Mohammad Aliannejadi</a>	University of Amsterdam	<a href="mailto:m.aliannejadi@uva.nl">m.aliannejadi@uva.nl</a>
Dr. <a href="#">Zhaochun Ren</a>	Leiden University	<a href="mailto:z.ren@liacs.leidenuniv.nl">z.ren@liacs.leidenuniv.nl</a>