

HANG LI

Room 634, General Purpose South, The University of Queensland, QLD, Australia, 4066
(+61) 4 328 66662 ◇ hang.li@uq.edu.au ◇ hangli.me

EDUCATIONAL BACKGROUND

University of Queensland, Brisbane, Australia Doctor of Philosophy Research Focus: Information Retrieval, Large Language Models Thesis: "Advanced Query Representation and Feedback Methods for Neural Information Retrieval"	<i>04/2020 - Present</i>
University of Queensland, Brisbane, Australia Master of Science in Computer Science Awarded for <i>Dean's Commendation for Academic Excellence</i> in 2019	<i>07/2019 - 03/2020</i> Overall GPA: 6.7/7.0
University of Minnesota Twin-Cities, Minneapolis, United States Bachelor of Science in Computer Science Winner of <i>Global Excellence Scholarship</i> for four consecutive years from 2012 - 2016	<i>08/2012 - 05/2016</i>

AWARDS AND RECOGNITION

- SIGIR Student Travel Grant in SIGIR 2022
- Championship in Huawei DIGIX Global AI Challenge 2021 (Team IELab)
- Best Student Paper Award in ADCS 2021
- SIGIR Student Travel Grant in SIGIR 2020
- Research Training Program Stipend (2020 - 2024)
- University of Queensland: Awarded for *Dean's Commendation for Academic Excellence* in 2019
- University of Minnesota Twin-Cities: Winner of *Global Excellence Scholarship* in 2012 - 2016

RESEARCH PUBLICATION

- **Hang Li** and Xiao Wang and Bevan Koopman and Guido Zuccon (2025). Extending Zero-shot LLM-based Dense Retrieval with Pseudo-Relevance Feedback Capabilities. In *Proceedings of the 48th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2025)* [Submitted, Under Review]
- **Hang Li** and Shengyao Zhuang and Bevan Koopman and Guido Zuccon (2025). LLM-VPRF: Large Language Model Based Vector Pseudo Relevance Feedback. In *Proceedings of the 47th European Conference on Information Retrieval (ECIR 2025)* [Submitted, Under Review]
- **Hang Li*** and Chuting Yu* and Ahmed Mourad and Bevan Koopman and Guido Zuccon (2023). TPRF: A Transformer-based Pseudo-Relevance Feedback Model for Efficient and Effective Retrieval. In *Proceedings of arXiv preprint arXiv:2401.13509*
- Bevan Koopman and Ahmed Mourad and **Hang Li** and Anton van der Vegt and Shengyao Zhuang and Simon Gibson and Yash Dang and David Lawrence and Guido Zuccon (2023). AgAsk: An Agent to Help Answer Farmers Questions From Scientific Documents. In *Proceedings of the International Journal on Digital Libraries (IJDL)*
- Shuai Wang and **Hang Li** and Guido Zuccon (2023). MeSH Suggester: A Library and System for MeSH Term Suggestion for Systematic Review Boolean Query Construction. In *Proceedings of the 16th ACM International Conference on Web Search and Data Mining (WSDM 2023)*

- **Hang Li** and Bevan Koopman and Ahmed Mourad and Guido Zuccon (2023). AgAsk: A Conversational Search Agent for Answering Agricultural Questions. In *Proceedings of the 16th ACM International Conference on Web Search and Data Mining (WSDM 2023)*
- **Hang Li*** and Shengyao Zhuang* and Xueguang Ma and Jimmy Lin and Guido Zuccon (2022). Pseudo-Relevance Feedback with Dense Retrievers in Pyserini. In *Proceedings of 26th Australasian Document Computing Symposium (ADCS 2022)*
- **Hang Li*** and Shuai Wang* and Shengyao Zhuang and Ahmed Mourad and Xueguang Ma and Jimmy Lin and Guido Zuccon (2022). To Interpolate or not to Interpolate: PRF, Dense and Sparse Retrievers. In *Proceedings of the 45th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2022)*
- **Hang Li** and Ahmed Mourad and Bevan Koopman and Guido Zuccon (2022). How does Feedback Signal Quality Impact Effectiveness of Pseudo Relevance Feedback for Passage Retrieval. In *Proceedings of the 45th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2022)*
- Shengyao Zhuang and **Hang Li** and Guido Zuccon (2022). Implicit Feedback for Dense Passage Retrieval: A Counterfactual Approach. In *Proceedings of The 45th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2022)*
- **Hang Li** and Shengyao Zhuang and Ahmed Mourad and Xueguang Ma and Jimmy Lin and Guido Zuccon (2022). Improving Query Representations for Dense Retrieval with Pseudo Relevance Feedback: A Reproducibility Study. In *Proceedings of the 44rd European Conference on Information Retrieval (ECIR 2022)*
- **Hang Li** and Guido Zuccon and Bevan Koopman and Ahmed Mourad (2022). Agvaluate: A New Test Collection for Both Passage and Document Retrieval in the Agriculture Domain. In *UQ eSpace, Data Collection*, <https://doi.org/10.48610/0160dc7>
- **Hang Li** and Ahmed Mourad and Shengyao Zhuang and Bevan Koopman and Guido Zuccon (2022). Pseudo Relevance Feedback with Deep Language Models and Dense Retrievers: Successes and Pitfalls. *ACM Transaction of Information Systems (TOIS)*
- Shuai Wang and **Hang Li** and Harris Scells and Daniel Locke and Guido Zuccon (2021). MeSH Term Suggestion for Systematic Review Literature Search. In *Proceedings of 25th Australasian Document Computing Symposium (ADCS 2021)* (Best Student Paper Award)
- Zhijun Yang and Yang Wang and Jianhou Gan and **Hang Li** and Ning Lei (2021). Design and research of intelligent Question-Answering (Q&A) System Based on High School Course Knowledge Graph. In *Proceedings of the Mobile Networks and Applications (MNA)*
- Shengyao Zhuang* and **Hang Li*** and Guido Zuccon (2021). Deep Query Likelihood Model for Information Retrieval. In *Proceedings of the 43rd European Conference on IR Research. (ECIR 2021)*
- Shengyao Zhuang and **Hang Li** and Shuai Wang and Guido Zuccon (2021) IELAB at TREC Deep Learning Track 2021. In *Proceedings of the Text REtrieval Conference Deep Learning Track (DL) 2021 (TREC DL 2021)*
- Sebastian Cross and **Hang Li** and Shengyao Zhuang and Ahmed Mourad and Bevan Koopman and Guido Zuccon. 2020. UQ IELab at TREC 2020 CAsT Track. In *Proceedings of The Twenty-Ninth Text REtrieval Conference (TREC CAsT 2020)*
- **Hang Li** and Harris Scells and Guido Zuccon (2020). Systematic Review Automation Tools for End-to-End Query Formulation. In *Proceedings of The 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2020)*

TECHNICAL SKILLS

- **Machine Learning Frameworks:** PyTorch, TensorFlow
- **Deep Learning:** Transformer-based Models (BERT, T5), Large Language Models
- **ML Operations:** Distributed Training, Model Evaluation, Data Pipeline Development
- **Programming Languages:** Python (Advanced), Web Development, Server-side Coding, Database
- **Tools & Platforms:** Git, Docker, Linux, GPU Computing, GPU Clusters

PROFESSIONAL SERVICES

- Serving as PC Member for ECIR 2023/2024
- Serving as PC Member for Resource Track at SIGIR 2022/2023
- Serving as PC Member for Reproducibility Track at SIGIR 2022/2023
- Serving as Proceeding Chair at CIKM 2021

TEACHING EXPERIENCE

University of Queensland, St. Lucia, Australia

- *INFS3202/7202 Web Information System* - Teaching Assistant 2020-2023
- *INFS7410 Information Retrieval* - Teaching Assistant 2020-2023
- *INFS3202/7202 Web Information System* - Head of Teaching Assistant 2021

EMPLOYMENT HISTORY

The University of Queensland IELab (Brisbane, Australia) Research Assistant	<i>12/2020 - 02/2024</i>
The University of Queensland IELab (Brisbane, Australia) Summer Research Scholar	<i>11/2019 - 03/2020</i>
Henan She Chuan Technology Co., Ltd. (Zhengzhou, China) Full Stack Developer Lead	<i>07/2018 - 07/2019</i>
LuWeiLin Decoration and Design Engineering (Guangzhou, China) Software Developer and Backend Software Developer	<i>03/2018 - 07/2018</i>
Shenzhen Dianmao Technology Group (Shenzhen, China) Backend Developer	<i>06/2017 - 03/2018</i>
First Capital Fund Management Co., Ltd (Shenzhen, China) Full Stack Developer	<i>08/2016 - 06/2017</i>
The Velocity Tech Solutions Inc. (Minnesota, United States) Software Developer	<i>02/2016 - 07/2016</i>

ACADEMIC REFEREES

(Professor) Guido Zuccon
The University of Queensland, Australia
Email: g.zuccon@uq.edu.au

(Associate Professor) Bevan Koopman
The University of Queensland/CSIRO, Australia
Email: bevan.koopman@csiro.au

(Adjunct Faculty Member) Ahmed Mourad
Newgiza University, Egypt
Email: ahmad.mourad@ngu.edu.eg