

# Xi Xia Wang (王夏霞)

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## About Me

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Currently, I am a Ph.D. student in the [Department of Computer Science](#) of [University of Oxford](#). I am a member of the [Data and Knowledge Group](#), advised by Prof. [Bernardo Cuenca Grau](#), Prof. [Ian Horrocks](#), and Dr. [David Tena Cucala](#). Before that, I achieved my M.S. degree of Computer Technology from [Nanjing University](#) in 2022. I worked in [Websoft Research Group](#), supervised by Prof. [Gong Cheng](#) and Prof. [Yuzhong Qu](#). I obtained my B.S. degree of Information and Computing Science from [Nanjing University of Aeronautics and Astronautics](#) in 2019.

## Education

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<b>University of Oxford</b> Ph.D. student of Computer Science Advisors: Prof. Bernardo Cuenca Grau, Prof. Ian Horrocks, Dr. David Tena Cucala	<i>Jan. 2023 – Now</i>
<b>Nanjing University</b> M.S. degree of Computer Technology Supervisors: Prof. Gong Cheng and Prof. Yuzhong Qu	<i>Sept. 2019 – June 2022</i>
<b>Nanjing University of Aeronautics and Astronautics</b> B.S. degree of Information and Computing Science GPA: 4.5/5.0, Ranking: 1/70	<i>Sept. 2015 – June 2019</i>

## Research Interests

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My research interests include **neuro-symbolic reasoning**, **knowledge graphs**, and **semantic search** technologies applied in intelligent systems.

Currently I focus on interpreting machine learning models for knowledge graph reasoning using symbolic rules, aiming to achieve both **effective** and **explainable** systems. I have also worked on semantic search approaches applied in dataset search systems, including data summarization, query analysis, and information retrieval.

## Publications (Reverse Chronological)

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1. **Xi Xia Wang**, David Tena Cucala, Bernardo Cuenca Grau, Ian Horrocks  
[Faithful Rule Extraction for Differentiable Rule Learning Models](#).  
In Proc. of the 12th International Conference on Learning Representations (ICLR 2024).
2. **Xi Xia Wang**, Gong Cheng  
[A Survey on Extractive Knowledge Graph Summarization: Applications, Approaches, Evaluation, and Future Directions](#).  
In Proc. of the 33rd International Joint Conference on Artificial Intelligence (IJCAI 2024).
3. Qiaosheng Chen, Weiqing Luo, Zixian Huang, Tengting Lin, **Xi Xia Wang**, Ahmet Soylu, Basil Ell, Baifan Zhou, Evgeny Kharlamov, Gong Cheng  
[ACORDAR 2.0: A Test Collection for Ad Hoc Dataset Retrieval with Densely Pooled Datasets and Question-Style Queries](#).  
In Proc. of the 47th International ACM SIGIR Conference (SIGIR 2024).

4. Zixian Huang, Xinwei Huang, Ao Wu, **Xiaxia Wang**, Gong Cheng  
[Transforming decoder-only models into encoder-only models with improved understanding capabilities.](#)  
 In Knowledge-Based Systems 309 (KBS).
  5. **Xiaxia Wang**, Gong Cheng, Jeff Z. Pan, Evgeny Kharlamov, Yuzhong Qu  
[BANDAR: Benchmarking Snippet Generation Algorithms for \(RDF\) Dataset Search.](#)  
 In IEEE Transactions on Knowledge and Data Engineering 35(2) (TKDE 2023).
  6. Tengting Lin, Qiaosheng Chen, Gong Cheng, Ahmet Soylu, Basil Ell, Ruoqi Zhao, Qing Shi, **Xiaxia Wang**, Yu Gu, Evgeny Kharlamov  
[ACORDAR: A Test Collection for Ad Hoc Content-Based \(RDF\) Dataset Retrieval.](#)  
 In Proc. of the 45th International ACM SIGIR Conference (SIGIR 2022).
  7. **Xiaxia Wang**, Tengting Lin, Weiqing Luo, Gong Cheng, Yuzhong Qu  
[CKGSE: A Prototype Search Engine for Chinese Knowledge Graphs.](#)  
 In Data Intelligence 4(1) (DI 2022).
  8. **Xiaxia Wang**, Gong Cheng, Tengting Lin, Jing Xu, Jeff Z. Pan, Evgeny Kharlamov, Yuzhong Qu  
[PCSG: Pattern-Coverage Snippet Generation for RDF Datasets.](#)  
 In Proc. of the 20th International Semantic Web Conference (ISWC 2021).
  9. **Xiaxia Wang**, Tengting Lin, Weiqing Luo, Gong Cheng, Yuzhong Qu  
[Content-Based Open Knowledge Graph Search: A Preliminary Study with OpenKG.CN.](#)  
 In Proc. of the 2021 China Conference on Knowledge Graph and Semantic Computing (CCKS 2021).
  10. **Xiaxia Wang**, Jinchi Chen, Shuxin Li, Gong Cheng, Jeff Z. Pan, Evgeny Kharlamov, Yuzhong Qu  
[A Framework for Evaluating Snippet Generation for Dataset Search.](#)  
 In Proc. of the 18th International Semantic Web Conference (ISWC 2019).
  11. **Xiaxia Wang**, Gong Cheng, Evgeny Kharlamov  
[Towards Multi-Facet Snippets for Dataset Search.](#)  
 In Proc. of the 6th International Workshop on Dataset PROFILING and Search (PROFILES 2019).
  12. Jinchi Chen, **Xiaxia Wang**, Gong Cheng, Evgeny Kharlamov, Yuzhong Qu  
[Towards More Usable Dataset Search: From Query Characterization to Snippet Generation.](#)  
 In Proc. of the 28th ACM International Conference on Information and Knowledge Management (CIKM 2019).
- [\[DBLP Page\]](#)      [\[Google Scholar\]](#)      [\[Semantic Scholar\]](#)

## Awards and Honors

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• IJCAI-AIJ Travel Grant	<i>2024</i>
• Outstanding Master Thesis of Jiangsu Computer Society	<i>2023</i>
• Outstanding Master Thesis of Nanjing University	<i>2023</i>
• Bosch Scholarship on ‘Collaborative AI in Production’ (fully funded for Ph.D. program)	<i>2022</i>
• National Scholarship	<i>2021</i>
• ISWC Student Grant	<i>2021</i>
• First-Class Academic Scholarship of Nanjing University	<i>2020 – 2022</i>
• Outstanding Graduate Student of Nanjing University	<i>2019, 2021</i>
• Jiangsu Financial Leasing Scholarship	<i>2019</i>
• Huawei Scholarship	<i>2018</i>
• First-Class Outstanding Student Scholarship	<i>2016 – 2019</i>

## Teaching Assistant

- Databases *Hilary Term 2025*
  - Giving weekly classes and marking problem sheets
- Database Systems Implementation *Hilary Term 2024*
  - Giving weekly classes and marking problem sheets
  - Classes rated by students: 4.27/5.00
- Graph Theory and Algorithms *Spring 2022*
- Graph Theory *Spring 2021, Spring 2020*
  - Marking problem sheets, answering questions, and invigilation
  - For about 70 undergraduate and graduate students

## Academic Services

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### Program Committee for Conferences

- International ACM SIGIR Conference (SIGIR) *2025*
- International Conference on Information and Knowledge Management (CIKM) *2020 – 2024*
- International Conference on Knowledge Representation and Reasoning (KR) *2024*
- International Conference on Learning Representations (ICLR) *2025*
- International Conference on Machine Learning (ICML) *2025*
- International Joint Conference on Artificial Intelligence (IJCAI) *2025*
- International Semantic Web Conference (ISWC) *2022 – 2023*

### Review Committee for Journals

- Journal of Web Semantics (JoWS)
- Transactions on Graph Data and Knowledge (TGDK)

### Others

- Conference Officer of Oxford Women in Computer Science Society (OxWoCS)
  - Co-chair of the 10th OxBridge Conference (held in Oxford) *2024*
  - Co-chair of the 11th OxBridge Conference (held in Cambridge) *2025*
- Assistant Workflow Chair of IJCAI *2023*

## Language Skills

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- Chinese (Mandarin): Native
- Chinese (Wu language, 吴语): Native
- English: Proficient

Updated at: *March 2025*