

# Jian Wang

Department of Computing, The Hong Kong Polytechnic University

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🌐 Homepage: <https://iwangjian.github.io>

## EDUCATION

**The Hong Kong Polytechnic University (PolyU)**

**Hong Kong, China**

*PhD in Computer Science*

*2021/09 – Present*

◦ **Supervisor:** Prof. Maggie Wenjie Li

◦ **Research Interests:** Natural Language Processing (NLP), Dialogue Systems, Conversational AI

**South China University of Technology (SCUT)**

**Guangzhou, China**

*MSc in Computer Science and Technology*

*2017/09 – 2020/06*

**South China University of Technology (SCUT)**

**Guangzhou, China**

*BEng in Computer Science and Engineering*

*2013/09 – 2017/06*

*BEC in Finance (Minor degree)*

## RESEARCH EXPERIENCES

**University of Michigan**

**Ann Arbor, MI, USA**

*Visiting PhD Student*

*2024/02 – Present*

◦ Advisor: Prof. Joyce Y. Chai

◦ Worked on situated dialogue and embodied agents

**The Hong Kong Polytechnic University**

**Hong Kong, China**

*Research Assistant*

*2020/11 – 2021/08*

◦ Advisor: Prof. Maggie Wenjie Li

◦ Worked on Web search clarification and recommendation-oriented dialogue

**Rulai Inc.**

**Campbell, CA, USA (Remotely)**

*Research Intern*

*2020/07 – 2020/10*

◦ Advisor: Dr. Yi Zhang

◦ Worked on Text-to-SQL for task-oriented QA systems

**SIAT, Chinese Academy of Sciences**

**Shenzhen, China**

*Visiting Student*

*2018/08 – 2019/09*

◦ Advisor: Prof. Min Yang

◦ Worked on knowledge-grounded and task-oriented dialogue generation

## PUBLICATIONS

- Yi Cheng, Wenge Liu, **Jian Wang**, Chak Tou Leong, Yi Ouyang, Wenjie Li, Xian Wu, and Yefeng Zheng. 2024. COOPER: Coordinating Specialized Agents towards a Complex Dialogue Goal. In *Proceedings of the 38th AAAI Conference on Artificial Intelligence (AAAI'24)*.
- **Jian Wang**, Yi Cheng, Dongding Lin, Chak Tou Leong, and Wenjie Li. 2023. Target-oriented Proactive Dialogue Systems with Personalization: Problem Formulation and Dataset Curation. In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP'2023)*.
- Chak Tou Leong, Yi Cheng, Jiashuo Wang, **Jian Wang**, and Wenjie Li. 2023. Self-Detoxifying Language Models via Toxification Reversal. In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP'2023)*.
- **Jian Wang**, Dongding Lin, and Wenjie Li. 2023. Dialogue Planning via Brownian Bridge Stochas-

tic Process for Goal-directed Proactive Dialogue. In *Findings of the Association for Computational Linguistics: ACL 2023*.

- Kaishuai Xu, Wenjun Hou, Yi Cheng, **Jian Wang**, and Wenjie Li. 2023. Medical Dialogue Generation via Dual Flow Modeling. In *Findings of the Association for Computational Linguistics: ACL 2023*.
- **Jian Wang**, Dongding Lin, and Wenjie Li. 2023. A Target-Driven Planning Approach for Goal-Directed Dialog Systems. *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*.
- Dongding Lin\*, **Jian Wang\***, and Wenjie Li. 2023. COLA: Improving Conversational Recommender Systems by Collaborative Augmentation. In *Proceedings of the 37th AAAI Conference on Artificial Intelligence (AAAI'23)*. (\*: Equal contribution)
- **Jian Wang** and Wenjie Li. 2021. Template-guided Clarifying Question Generation for Web Search Clarification. In *Proceedings of the 30th ACM International Conference on Information & Knowledge Management (CIKM'21)*.
- Dongding Lin, **Jian Wang**, and Wenjie Li. 2021. Target-guided Knowledge-aware Recommendation Dialogue System: An Empirical Investigation. In *Proceedings of the Joint KaRS & ComplexRec Workshop @ RecSys 2021*.
- **Jian Wang**, Junhao Liu, Wei Bi, Xiaojiang Liu, Kejing He, Ruifeng Xu, and Min Yang. 2020. Dual Dynamic Memory Network for End-to-End Multi-turn Task-oriented Dialog Systems. In *Proceedings of the 28th International Conference on Computational Linguistics (COLING'20)*.
- **Jian Wang**, Junhao Liu, Wei Bi, Xiaojiang Liu, Kejing He, Ruifeng Xu, and Min Yang. 2020. Improving Knowledge-Aware Dialogue Generation via Knowledge Base Question Answering. In *Proceedings of the 34th AAAI Conference on Artificial Intelligence (AAAI'20)*.
- **Jian Wang**, Kejing He, and Min Yang. 2020. Topic Discovery by Spectral Decomposition and Clustering with Coordinated Global and Local Contexts. *International Journal of Machine Learning and Cybernetics (JMLC)*.

## PROJECTS

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| <b>SMART SPACE for Coffee Break</b>  | 2022/06 |
| <ul style="list-style-type: none"><li>○ An intelligent demo for coffee breaks based on vision, language, and robotics techniques (@ COMP, PolyU)</li><li>○ Focus on building dialogue agents for human-robot conversations</li></ul> |         |
| <b>Multi-skill Dialogue Generation</b>   | 2021/05 |
| <ul style="list-style-type: none"><li>○ 2021 Language and Intelligence Challenge: Track 2 (Hosted by Baidu)</li><li>○ Focus on dialogue modeling with multiple skills (knowledge grounding, persona, and recommendation)</li></ul>   |         |
| <b>Automatic Title Generation for News Articles</b>  | 2018/12 |
| <ul style="list-style-type: none"><li>○ Byte Cup 2018 International Machine Learning Contest (Hosted by ByteDance)</li><li>○ Focus on document summarization with a hybrid extractive-abstractive approach</li></ul>                 |         |

## HONORS & AWARDS

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| ○ Third Prize of 2021 Baidu Language and Intelligence Challenge                      | 2021       |
| ○ AAAI 2020 Student Scholarship  | 2020       |
| ○ First Class of Academic Scholarship at SCUT  | 2018, 2017 |
| ○ Third Prize of Byte Cup 2018 International Machine Learning Contest                | 2018       |
| ○ Global Ranking of 50/2121 on IEEE Xtreme 11.0 Programming Competition              | 2017       |
| ○ National Scholarship ( <b>Top 1%</b> , the highest scholarship for undergraduates) | 2016       |
| ○ Bronze Medal of 2016 HUAWEI Code Craft (Shenzhen Area Site)                        | 2016       |
| ○ National Encouragement Scholarship   | 2015, 2014 |

- Merit Student of SCUT & Outstanding Student Leader of SCUT-CS

2015, 2014

## TEACHING EXPERIENCES

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- COMP 6709: Advanced Natural Language Processing, TA, PolyU Spring 2023, 2022
- COMP 2021: Object-Oriented Programming, TA, PolyU Fall 2022, 2021
- Design and Analysis of Algorithms, TA, SCUT Spring, 2018
- Advanced Programming Language (C++), TA, SCUT Fall, 2017

## PROFESSIONAL ACTIVITIES

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- Conference Reviewer: ACL (2023), EMNLP (2022, 2023), COLING (2020, 2022)

## TECHNICAL SKILLS

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- Coding: Python, C/C++, Java, Shell, SQL, HTML, CSS, JavaScript
- Tools: PyTorch, Tensorflow, Git, Docker, L<sup>A</sup>T<sub>E</sub>X, Markdown, Vim