

WANG HONGRU

hrwang@se.cuhk.edu.hk ◊ The Chinese University of Hong Kong

Homepage: <https://rulegreen.github.io/> Github: <https://github.com/ruleGreen>

Google Scholar: <https://scholar.google.com/citations?hl=en&user=s6UtVYUAAAAJ>

EDUCATION

Communication University of China	2015/09 - 2019/09
B.Eng. Computer Science and Technology	GPA: 3.27/4.00
Computer Operation System, Computer Networks, Data Structures and Algorithms	
The Chinese University of Hong Kong	2019/09 - 2020/11
M.Eng. Computer Science and Engineering	GPA: 3.60/4.00
Data Mining, Big Data Technology, Machine Learning	
The Chinese University of Hong Kong	2021/09 - Now
Ph.D. candidate supervised by Prof. Kam-Fai Wong	GPA: 3.70/4.00
Dialogue System, Large Language Models, Tool Learning	

CONFERENCES

- [15] UniRetriever: Multi-task Candidates Selection for Various Context-Adaptive Conversational Retrieval: **Hongru Wang**, Boyang Xue, Baohang Zhou, Rui Wang, Fei Mi, Weichao Wang, Yasheng Wang and Kam-Fai Wong, **LREC-COLING 2024** [Knowledge-grounded DS](#) [Tool Learning](#)
- [14] JoTR: A Joint Transformer and Reinforcement Learning Framework for Dialog Policy Learning: Wai-Chung Kwan, Huimin Wang, **Hongru Wang**, Zezhong Wang, Xian Wu, Yefeng Zheng, Kam-Fai Wong, **LREC-COLING 2024** [Task-oriented DS](#)
- [13] MCIL: Multimodal Counterfactual Instance Learning for Low-resource Entity-based Multimodal Information Extraction: Baohang Zhou, Ying Zhang, Kehui Song, **Hongru Wang**, Yu Zhao, Xuhui Sui and Xiaojie Yuan, **LREC-COLING 2024** [LLM](#) [MM](#)
- [12] M3Sum: A Novel Unsupervised Language-guided Video Summarization: **Hongru Wang**, Baohang Zhou, Zhengkun Zhang, Yiming Du, David Ho, Kam-Fai Wong, **ICASSP 2024** [LLM](#) [MM](#)
- [11] Large Language Models as Source Planner for Personalized Knowledge-grounded Dialogue: **Hongru Wang**, Minda Hu, Yang Deng, Rui Wang, Fei Mi, Weichao Wang, Yasheng Wang, Wai-Chung Kwan, Irwin King, Kam-Fai Wong, Findings of **EMNLP 2023** [Knowledge-grounded DS](#), [LLM](#)
- [10] Cue-CoT: Chain-of-thought Prompting for Responding to In-depth Dialogue Questions with LLMs: **Hongru Wang***, Rui Wang*, Fei Mi, Yang Deng, Zezhong Wang, Bin Liang, Ruifeng Xu, Kam-Fai Wong, Findings of **EMNLP 2023**. [Personalized DS](#), [LLM](#)
- [9] MCML: A Novel Memory-based Contrastive Meta-Learning Method for Few Shot Slot Tagging: **Hongru Wang**, Zezhong Wang, Wai-Chung Kwan, Kam-Fai Wong, Proceedings of **IJCNLP-AACL 2023**. [Task-oriented DS](#)
- [8] ReadPrompt: A Readable Prompting Method for Reliable Knowledge Probing: Zezhong Wang*, Luyao YE*, **Hongru Wang**, Wai-Chung Kwan, David Ho, Kam-Fai Wong, Findings of **EMNLP 2023**. [Knowledge Probing](#), [LLM](#)
- [7] Improving Factual Consistency for Knowledge-Grounded Dialogue Systems via Knowledge Enhancement and Alignment: Boyang XUE*, Weichao Wang*, **Hongru Wang**, Fei Mi, Rui Wang, Yasheng Wang, Lifeng Shang, Xin Jiang, Qun Liu, Kam-Fai Wong, Findings of **EMNLP 2023**. [Knowledge-grounded DS](#)

- [6] Prompting and Evaluating Large Language Models for Proactive Dialogues: Clarification, Target-guided, and Non-collaboration: Yang Deng, Lizi Liao, Liang CHEN, **Hongru Wang**, Wenqiang Lei and Tat-Seng Chua, Findings of **EMNLP 2023**. [LLM](#)
- [5] Towards Robust Personalized Dialogue Generation via Order-Insensitive Representation Regularization: Liang Chen, **Hongru Wang**, Yang Deng, Wai Chung Kwan, Zezhong Wang and Kam-Fai Wong, Findings of **ACL 2023**. [Personalized DS](#)
- [4] Retrieval-free Knowledge Injection through Multi-Document Traversal for Dialogue Models: Rui Wang, Jianzhu Bao, Fei Mi, Yi Chen, **Hongru Wang**, Yasheng Wang, Yitong Li, Lifeng Shang, Kam-Fai Wong and Ruifeng Xu, Proceedings of **ACL 2023**. [Knowledge-grounded DS](#)
- [3] DIGAT: Modeling News Recommendation with Dual-Graph Interaction: Zhiming Mao, Jian Li, **Hongru Wang**, Xingshan Zeng and Kam-Fai Wong, Findings of **EMNLP 2022**. [Others](#)
- [2] Integrating Pretrained Language Model for Dialogue Policy Learning: **Hongru Wang**, Huimin Wang, Zezhong Wang and Kam-Fai Wong, **ICASSP 2022**. [Task-oriented DS](#), [RLAIF](#)
- [1] CUHK at SemEval-2020 Task 4: CommonSense Explanation, Reasoning and Prediction with Multi-task Learning: **Hongru Wang**, Xiangru Tang, Sunny Lai, Kwong Sak Leung, Jia Zhu, Gabriel Pui Cheong Fung and Kam-Fai Wong, Proceedings of **SemEval 2020**. [Commonsense Knowledge](#)

JOURNAL

- [1] A Survey on Recent Advances and Challenges in Reinforcement Learning Methods for Task-Oriented Dialogue Policy Learning: Wai-Chung Kwan*, **Hongru Wang***, Huimin Wang and Kam-Fai Wong, **Machine Intelligence Research 2023**. [Task-oriented DS](#)

PREPRINTS

- [3] TPE: Towards Better Compositional Reasoning over Conceptual Tools with Multi-persona Collaboration: **Hongru Wang**, Huimin Wang, Lingzhi Wang, Minda Hu, Rui Wang, Boyang XUE, Hongyuan Lu, Fei Mi, Kam-Fai Wong, [Tool Learning](#)
- [2] Self-Critique Prompting with Large Language Models for Inductive Instructions: Rui Wang*, **Hongru Wang***, Fei Mi, Yi Chen, Ruifeng Xu, Kam-Fai Wong, [LLM](#)
- [1] Inconsistent Few-Shot Relation Classification via Cross-Attentional Prototype Networks with Contrastive Learning: **Hongru Wang**, Zhijing Jin, Gabriel Pui Cheong Fung and Kam-Fai Wong [Others](#)

EXPERIMENTENCE

- Research Intern at **Huawei Noah's Lab** *2022/04 - 2023/03*
- Mentor: Dr. Fei Mi, Dr. Weichao Wang, Prof. Qun Liu
- Research Assistant at **The Chinese University of Hong Kong** *2020/03 - 2021/07*
- Mentor: Prof. Kam-Fai Wong at MoE Key Lab of High Confidence Software Technologies
- Research Intern at **Kuaishou** *2019/04 - 2019/07*
- Mentor: Xiang Wan. **Note:** Kuaishou is the biggest competitor with Tiktok in China,

PROJECTS

- Research and Development of Human Assist AI to Build Customized Task-oriented Dialogue System with Recommendation** *2020/05 - 2021/07*

- Built a data collection platform to mimic human-to-human dialogue in restaurants; designed corresponding intents and slots in the conversation and set up the interface; post-processed collected dataset such as cleaning, filtering, and correcting typos.
- Implemented task-oriented dialogue system based on ConvLab2 platform; designed dialogue flow and templates for natural language generation; conducted experiments based on our new datasets.

SMP 2020 ECDT Few-shot Spoken Language Understanding *2020/06 - 2020/08*

- Data analysis (intent and slot distribution across different domains); reviewed related work and selected suitable baseline.
- Designed and implemented data augmentation strategies, conducted experiments with weighted sampling, and implemented post-processing rules. Led the team to achieve a third prize with our model, boasting an impressive 96.89% intent F1 and 85.42% slot F1.

SemEval 2020 Task 4: CommonSense Detection and Explanation *2019/09 - 2020/05*

- Proposed an effective and interpretable “Explain, Reason and Predict” (ERP) system to solve the three sub-tasks about commonsense and ranked top 10 at the competition.
- Implemented our approaches; conducted multiple experiments under multi-task setting; wrote the draft of the paper.

Interdisciplinary/Mathematical Contest In Modeling of America *2018/02 - 2018/03*

- Applied raw data correction to establish mathematical model using MATLAB and developed an analog simulation to the existing energy usages.
- Predicted the profile of energy in the next 15, 50, and 100 years; proposed sustainable development strategies

Undergraduate Program for Entrepreneurship *2017/03 - 2018/03*

- Gathered requirements through questionnaires, designed product prototypes, formulated interaction logic, and crafted user interfaces. Led team efforts, facilitated meetings, and resolved challenges. Addressed some code issues such as data transmission.
- Analyzed feedback from students, teachers and staff; improved functions and published new version of the platform

TEACHING ASSISTANT

SEEM 3450 Engineering Innovation and Entrepreneurship
 SEEM 3490 Information Systems Management
 SEEM 5730 / ECLT 5910 Information Technology Management

COMPETITIONS & AWARDS

Top 10 at ICLR 2021 Workshop MLPCP Track 1 (rank 7th)	international
Third Price at SMP2020-ECDT Few-shot Spoken Language Understanding	international
Top 10 at SemEval2020-Task4: CommonSense Detection and Explanations	international
Meritorious Winner, Mathematical Contest In Modeling(2018)	international
A software copyright of “WeCampus WeChat mini-program”(2018SR562540)	national
Third Prize of Internet + College Students Innovation and Entrepreneurship Competition	school
China National Radio Scholarship	school