

WANG HONGRU

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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	<i>2015/09 - 2019/09</i>
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	<i>2019/09 - 2020/11</i>
M.Eng. Computer Science and Engineering	GPA: 3.60/4.0
Data Mining, Big Data Technology, Machine Learning	
The Chinese University of Hong Kong	<i>2021/09 - Now</i>
Ph.D. candidate supervised by Prof Kam-Fai Wong currently	GPA: 3.70/4.0
Dialogue System, Large Language Models, Tool Learning	

PUBLICATIONS

- **Hongru Wang**, Minda Hu, Yang Deng, Rui Wang, Fei Mi, Weichao Wang, Yasheng Wang, Wai-Chung Kwan, Irwin King, Kam-Fai Wong: Large Language Models as Source Planner for Personalized Knowledge-grounded Dialogue, Findings of EMNLP 2023. [Knowledge-grounded DS](#), [LLM](#)
- **Hongru Wang**, Rui Wang, Fei Mi, Yang Deng, Zezhong Wang, Bin Liang, Ruifeng Xu, Kam-Fai Wong: Cue-CoT: Chain-of-thought Prompting for Responding to In-depth Dialogue Questions with LLMs, Findings of EMNLP 2023. [Personalized DS](#), [LLM](#)
- Wai-Chung Kwan*, **Hongru Wang***, Huimin Wang, Kam-Fai Wong: A Survey on Recent Advances and Challenges in Reinforcement Learning Methods for Task-Oriented Dialogue Policy Learning, Machine Intelligence Research 2023 (Journal). [Task-oriented DS](#)
- **Hongru Wang**, Zezhong Wang, Wai-Chung Kwan, Kam-Fai Wong: MCML: A Novel Memory-based Contrastive Meta-Learning Method for Few Shot Slot Tagging, Proceedings of IJCNLP-AAACL 2023. [Task-oriented DS](#)
- **Hongru Wang**, Huimin Wang, Zezhong Wang and Kam-Fai Wong: Integrating Pretrained Language Model for Dialogue Policy Learning. Proceedings of ICASSP 2022. [Task-oriented DS](#), [RLAIF](#)
- **Hongru Wang**, Xiangru Tang, Sunny Lai, Kwong Sak Leung, Jia Zhu, Gabriel Pui Cheong Fung, and Kam-Fai Wong: CUHK at SemEval-2020 Task 4: CommonSense Explanation, Reasoning and Prediction with Multi-task Learning. Proceedings of the Fourteenth Workshop on Semantic Evaluation, pages 391–400, Barcelona (online). International Committee for Computational Linguistics. [Commonsense Knowledge](#)
- Zezhong Wang, Luyao YE, **Hongru Wang**, Wai-Chung Kwan, David Ho, Kam-Fai Wong: Read-Prompt: A Readable Prompting Method for Reliable Knowledge Probing, Findings of EMNLP 2023. [Knowledge Probing](#), [LLM](#)
- Boyang XUE, Weichao Wang, **Hongru Wang**, Fei Mi, Rui Wang, Yasheng Wang, Lifeng Shang, Xin Jiang, Qun Liu, Kam-Fai Wong: Improving Factual Consistency for Knowledge-Grounded Dialogue Systems via Knowledge Enhancement and Alignment, Findings of EMNLP 2023. [Knowledge-grounded DS](#)

- Yang Deng, Lizi Liao, Liang CHEN, **Hongru Wang**, Wenqiang Lei, Tat-Seng Chua: Proactive Dialogue Systems in the Era of Large Language Models: Evaluating from a Prompting Perspective. Findings of EMNLP 2023. [LLM](#)
- Liang Chen, **Hongru Wang**, Yang Deng, Wai Chung Kwan, Zezhong Wang, Kam-Fai Wong: Towards Robust Personalized Dialogue Generation via Order-Insensitive Representation Regularization, Findings of ACL 2023. [Personalized DS](#)
- Rui Wang, Jianzhu Bao, Fei Mi, Yi Chen, **Hongru Wang**, Yasheng Wang, Yitong Li, Lifeng Shang, Kam-Fai Wong, Ruifeng Xu: Retrieval-free Knowledge Injection through Multi-Document Traversal for Dialogue Models, Proceedings of ACL 2023. [Knowledge-grounded DS](#)
- Zhiming Mao, Jian Li, **Hongru Wang**, Xingshan Zeng, Kam-Fai Wong: DIGAT: Modeling News Recommendation with Dual-Graph Interaction, Findings of EMNLP 2022. [Others](#)

PREPRINTS

- **Hongru Wang**, Huimin Wang, Lingzhi Wang, Minda Hu, Rui Wang, Boyang XUE, Hongyuan Lu, Fei Mi, Kam-Fai Wong: TPE: Towards Better Compositional Reasoning over Conceptual Tools with Multi-persona Collaboration (2023) [Tool Learning](#)
- Rui Wang*, **Hongru Wang***, Fei Mi, Yi Chen, Ruifeng Xu, Kam-Fai Wong: Self-Critique Prompting with Large Language Models for Inductive Instructions (2023). [LLM](#)
- Wai-Chung Kwan, Huimin Wang, **Hongru Wang**, Zezhong Wang, Xian Wu, Yefeng Zheng, Kam-Fai Wong: JoTR: A Joint Transformer and Reinforcement Learning Framework for Dialog Policy Learning (2023). [Task-oriented DS](#)
- **Hongru Wang**, Zhijing Jin, Gabriel Pui Cheong Fung, Kam-Fai Wong: Inconsistent Few-Shot Relation Classification via Cross-Attentional Prototype Networks with Contrastive Learning (2020). [Others](#)

EMPLOYMENT

Research Intern	<i>2022/04 - 2023/03</i>
Huawei, Supervisors: Dr. Fei Mi, Dr. Weichao Wang, Dr. Qun Liu	
Research Assistant	<i>2020/03 - 2021/07</i>
MoE Key Lab of High Confidence Software Technologies, Supervisors: Prof. Kam-Fai Wong	
Research Intern	<i>2019/04 - 2019/07</i>
Kuaishou (The biggest competitor with Tiktok in China), Supervisors: Xiang Wan	

COMPETITIONS & PROJECTS

Research and Development of Human Assist AI to Build Customized Task-oriented Dialogue System with Recommendation	<i>2020/05 - 2021/07</i>
<ul style="list-style-type: none"> • Build 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	<i>2020/06 - 2020/08</i>

- Data analysis (intent and slot distribution across different domains); reviewed related work and selected suitable baseline.
- Designed and implemented our approaches with data augmentation, run experiments with weighted sampler according to data distribution, and wrote rules to post-process the output by the model, while leading to our model (96.89% intent F1 and 85.42% slot F1) won third prize.

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 finally.
- 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*

- Collected questionnaires and requirements to confirm the core function of the program, drew a prototype of the product; designed interaction logic and user interface, and responsible for the division of labor, meeting holding, and problem-solving; addressed some problems about 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

AWARDS AND SCHOLARSHIPS

Third Prize of Internet + College Students Innovation and Entrepreneurship Competition	school
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China National Radio Scholarship	school
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A software copyright of “WeCampus WeChat mini-program”(2018SR562540)	national
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Meritorious Winner, Mathematical Contest In Modeling(2018)	international
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