Hongming ZHANG

PERSONAL DETAILS

Phone	(1) (856) 883-0473 / (86) 18664577938
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Webpage	https://panda0881.github.io/Hongming_Homepage/
Google Scholar	https://scholar.google.com/citations?user=i5ETuuQAAAAJ

EDUCATION

Ph.D. Computer Science   **Sep 2018-Jul 2021**
HKUST
> Commonsense Reasoning; Selectional Preference; Coreference Resolution
> Supervisor: Prof. Yangqiu Song

Visiting Ph.D. Computer Science   **Feb 2020-Jul 2021**
University of Pennsylvania
> Open Domain Event Understanding
> Supervisor: Prof. Dan Roth

MPhil. Technology, Leadership and Entrepreneurship   **Sep 2016-Aug 2018**
HKUST
> Major in Computer Science

BSc. Electronic Engineering   **Sep 2012-Aug 2016**
HKUST
> Minor in Information Technology
> Minor in Entrepreneurship
> Cumulative Grade Average: 3.91/4.30
> Ranking in major: 3/74

Exchange Student   **Jan 2015- Jun 2015**
University of Wisconsin, Madison

ACADEMIC REWARDS

Engineering PhD Research Excellence Finalist Award, HKUST	**Feb 2022**
SENG Academic Award for Continuing PhD students, HKUST	**Sep 2020**
Microsoft Research Asia Fellowship, Microsoft	**Nov 2019**
Tencent Rhino-Bird Scholarship, Tencent	**Oct 2019**
Hong Kong PhD Fellowship, HK Government	**2018-Present**
Excellent Research Award, HKUST	**Sep 2018**
Academic Achievement Medal, HKUST	**May 2016**

> Highest academic award for undergraduates at HKUST

Dean's List, HKUST	**2012-2015**

> Semester CGA is greater than 3.70.

Academic Excellence Award, HKUST	**Apr 2014**

Keep in the Dean's list at least twice during the preceding three semesters.

WORK EXPERIENCE

Senior Researcher   **Nov 2021-Now**
Tencent inc., AI Lab Seattle, Full-time
    Knowledge graph and Natural Language Understanding.

NLP Research Intern   **Oct 2018-Jan 2019**
Tencent inc., AI Lab, NLP Group, Full-time
    Design NLP algorithms to resolve the pronoun coreference task.

Summer Intern   **Jun 2017-Sep 2017**
Tencent inc., Wechat, Data Center, Full-time
    Design the multiplexity network embedding algorithm, which is used to predict user's behavior based their past behavior record.

INVITED TALKS

1. Event-centric Towards Commonsense Reasoning from the Angle of Eventualities. USC-ISI AI Seminar. Oct 2021.

2. Event-centric Natural Language Processing. ACL 2021 Tutorial. Aug 2021.

3. Event-centric Towards Commonsense Reasoning from the Angle of Eventualities. Tencent. Jul 2021.

4. Event-centric Towards Commonsense Reasoning from the Angle of Eventualities. MILA AI Seminar, Jun 2021.

5. Towards Commonsense Reasoning from the Angle of Eventualities. Amazon Research. Apr 2021.

6. Event-centric Natural Language Understanding. AAAI 2021 Tutorial. Feb 2021.

7. Commonsense Reasoning from the Angle of Eventualities. NLP with Friends. Sep 2020.

8. Event-centric Commonsense Reasoning with Structured Knowledge. Microsoft Research Asia. Oct 2019.

PUBLICATIONS

Hongming Zhang*, Xin Liu*, Haojie Pan*, Haowen Ke, Tianqing Fang, Jiefu Ou, Yangqiu Song. ASER: Towards Large-scale Commonsense Knowledge Acquisition via Higher-order Selectional Preference over Eventualities. Artificial Intelligence. 2022.

Yinya Huang, **Hongming Zhang**, Ruixin Hong, Xiaodan Liang, Changshui Zhang, and Dong Yu MetaLogic: Logical Reasoning Explanations with Fine-Grained Structure. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2022.

Zhaowei Wang, **Hongming Zhang**, Tianqing Fang, Yangqiu Song, Ginny Y. Wong, and Simon See. SubeventWriter: Iterative Sub-event Sequence Generation with Coherence Controller Conference on Empirical Methods in Natural Language Processing (EMNLP). 2022.

Fei Wang, Kaiqiang Song, **Hongming Zhang**, Lifeng Jin, Sangwoo Cho, Wenlin Yao, Xiaoyang Wang, Muhao Chen, and Dong Yu. Salience Allocation as Guidance for Abstractive Summarization. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2022.

Yue Yang, Wenlin Yao, **Hongming Zhang**, Xiaoyang Wang, Dong Yu, and Jianshu Chen. Z-LaVI: Zero-Shot Language Solver Fueled by Visual Imagination. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2022.

Hongming Zhang, Wenlin Yao, and Dong Yu. Efficient Zero-shot Event Extraction with Context-Definition Alignment. Findings of Conference on Empirical Methods in Natural Language Processing (EMNLP). 2022.

Tianqing Fang, Quyet V. Do, **Hongming Zhang**, Yangqiu Song, Ginny Y. Wong, and Simon See. PseudoReasoner: Leveraging Pseudo Labels for Commonsense Knowledge Base Population. Findings of Conference on Empirical Methods in Natural Language Processing (EMNLP). 2022.

Ying Su, Zihao Wang, Tianqing Fang, **Hongming Zhang**, Yangqiu Song, and Tong Zhang MICO: A Multi-alternative Contrastive Learning Framework for Commonsense Knowledge Representation. Findings of Conference on Empirical Methods in Natural Language Processing (EMNLP). 2022.

Ying Su, **Hongming Zhang**, Yangqiu Song, and Tong Zhang. Multilingual Word Sense Disambiguation with Unified Sense Representation. International Conference on Computational Linguistics (COLING). 2022.

Jiayao Zhang, **Hongming Zhang**, Weijie Su, and Dan Roth. Causal Inference Principles for Reasoning about Commonsense Causality. International Conference of Machine Learning (ICML). 2022.

Hantian Ding, Jinrui Yang, Yuqian Deng, **Hongming Zhang**, and Dan Roth. Towards Open-Domain Topic Classification. NAACL 2022 Demo Track.

Ruixin Hong, **Hongming Zhang**, Xintong Yu, and Changshui Zhang. METGEN: A Module-based Entailment Tree Generation Framework for Answer Explanation. Findings of NAACL 2022.

Jiaxin Bai, Zihao Wang, **Hongming Zhang**, and Yangqiu Song. Query2Particles: Knowledge Graph Reasoning with Particle Embeddings. Findings of NAACL 2022.

Xinran Zhao, **Hongming Zhang**, and Yangqiu Song. PCR4ALL: A Comprehensive Evaluation Benchmark for Pronoun Coreference Resolution in English. Language Resources and Evaluation (LREC). 2022.

Changlong Yu*, **Hongming Zhang***, Yangqiu Song, and Wilfred Ng. CoCoLM: COmplex COmmonsense Enhanced Language Model. Annual Meeting of the Association for Computational Linguistics (ACL) Findings. 2022.

Ying Su, **Hongming Zhang**, Yangqiu Song, and Tong Zhang. Rare and Zero-shot Word Sense Disambiguation using Z-Reweighting. Annual Meeting of the Association for Computational Linguistics (ACL). 2022.

Ruixin Hong, **Hongming Zhang**, Xintong Yu, and Changshui Zhang. Learning Event Extraction From a Few Guideline Examples. IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP). 2022.

Xintong Yu, **Hongming Zhang**, Ruixing Hong, Yangqiu Song, and Changshui Zhang. CD-PCR: Improving Visual Dialog with Pronoun Coreference Resolution. Pattern Recognition (PR). 2022.

Yintong Huo, Yuxin Su, **Hongming Zhang**, and Michael Lyu. ARCLIN: Automated API Mention Resolution for Unformatted Texts. the IEEE/ACM International Conference on Software Engineering (ICSE). 2022.

Haoyu Wang, **Hongming Zhang**, Muhao Chen and Dan Roth. Learning Constraints and Descriptive Segmentation for Subevent Detection. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2021.

Yanai Elazar, **Hongming Zhang**, Yoav Goldberg and Dan Roth . Back to Square One: Bias Detection, Training and Commonsense Disentanglement in the Winograd Schema. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2021.

Xintong Yu, **Hongming Zhang**, Yangqiu Song, Changshui Zhang, Kun Xu and Dong Yu . Exophoric Pronoun Resolution in Dialogues with Topic Regularization. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2021.

Tianqing Fang, Weiqi Wang, Sehyun Choi, Shibo Hao, **Hongming Zhang**, Yangqiu Song and Bin He . Benchmarking Commonsense Knowledge Base Population with an Effective Evaluation Dataset. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2021.

Tianqing Fang, Haojie Pan, **Hongming Zhang**, Yangqiu Song, Kun Xu, Dong Yu. Do Boat and Ocean Suggest Beach? Dialogue Summarization with External Knowledge. Conference on Automated Knowledge Base Construction (AKBC). 2021.

Hongming Zhang, Haoyu Wang, and Dan Roth. Zero-shot Label-Aware Event Trigger and Argument Classification. Annual Meeting of the Association for Computational Linguistics (ACL) Findings. 2021.

Qing Lyu, **Hongming Zhang**, Elior Sulem, and Dan Roth. Zero-shot Event Extraction via Transfer Learning: Challenges and Insights. Annual Meeting of the Association for Computational Linguistics (ACL). 2021. (Short Paper)

Xinran Zhao, Esin Durmus, **Hongming Zhang**, and Claire Cardie. Leveraging Topic Relatedness for Argument Persuasion. Annual Meeting of the Association for Computational Linguistics (ACL) Findings. 2021. (Short Paper)

Tianqing Fang, **Hongming Zhang**, Weiqi Wang, Yangqiu Song, and Bin He. DISCOS: Bridging the Gap between Discourse Knowledge and Commonsense Knowledge. The Web Conference (WWW). 2021.

Jiaxin Bai, **Hongming Zhang**, Yangqiu Song, and Kun Xu. Joint Coreference Resolution and Character Linking for Multiparty Conversation. The European Chapter of the Association for Computational Linguistics (EACL). 2021.

Muhao Chen, **Hongming Zhang**, Haoyu Wang, and Dan Roth. What Are You Trying to Do? Semantic Typing of Event Processes. The SIGNLL Conference on Computational Natural Language Learning (CoNLL). 2020.

Hongming Zhang, Muhao Chen, Haoyu Wang, Yangqiu Song, and Dan Roth. Analogous Process Structure Induction for Sub-event Sequence Prediction. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2020.

Haoyu Wang, Muhao Chen, **Hongming Zhang**, and Dan Roth. Joint Constrained Learning for Event-Event Relation Extraction. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2020.

Changlong Yu, Jialong Han, Peifeng Wang, Yangqiu Song, **Hongming Zhang**, Wilfred Ng, and Shuming Shi. When Hearst Is not Enough: Improving Hypernymy Detection from Corpus with Distributional Models. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2020.

Changlong Yu, **Hongming Zhang**, Yangqiu Song, Wilfred Ng, and Lifeng Shang. Enriching Large-Scale Eventuality Knowledge Graph with Entailment Relations. Conference on Automated Knowledge Base Construction (AKBC). 2020.

Hongming Zhang, Daniel Khashabi, Yangqiu Song, and Dan Roth. TransOMCS: From Linguistic Graphs to Commonsense Knowledge. International Joint Conference on Artificial Intelligence (IJCAI). 2020.

Hongming Zhang*, Xinran Zhao*, and Yangqiu Song. WinoWhy: A Deep Diagnosis of Essential Commonsense Knowledge for Answering Winograd Schema Challenge. Annual Meeting of the Association for Computational Linguistics (ACL). 2020.

Hongming Zhang*, Xin Liu*, Haojie Pan, Yangqiu Song, and Cane Wing-Ki Leung. ASER: A Large-scale Eventuality Knowledge Graph. The Web Conference (WWW). 2020.

Hongming Zhang*, Jiaxin Bai*, Yan Song, Kun Xu, Changlong Yu, Yangqiu Song, Wilfred Ng, and Dong Yu. Multiplex Word Embeddings for Selectional Preference Acquisition. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2019.

Xintong Yu*, **Hongming Zhang***, Yangqiu Song, Yan Song, and Changshui Zhang. What You See is What You Get: Visual Pronoun Coreference Resolution in Conversations. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2019.

Nedjma Ousidhoum, Zizheng Lin, **Hongming Zhang**, Yangqiu Song, and Dit-Yan Yeung. Multilingual and Multi-aspect Hate Speech Analysis. Conference on Empirical Methods in Natural Language Processing (EMNLP). 2019.

Hongming Zhang, Hantian Ding, Yangqiu Song. SP-10K: A Large-Scale Evaluation Set for Selectional Preference Acquisition. Annual Meeting of the Association for Computational Linguistics (ACL). 2019.

Hongming Zhang, Yan Song, Yangqiu Song, Dong Yu. Knowledge-aware Pronoun Coreference Resolution. Annual Meeting of the Association for Computational Linguistics (ACL). 2019.

Hongming Zhang, Yan Song, Yangqiu Song. Incorporating Context and External Knowledge for Pronoun Coreference Resolution. North American Chapter of the Association for Computational Linguistics (NAACL-HLT). 2019.

Hongming Zhang, Liwei Qiu, Lingling Yi, Yangqiu Song. Scalable Multiplex Network Embedding. International Joint Conference on Artificial Intelligence (IJCAI). 2018

COMPETITION

First Runner-up   **Apr 2018**
Hackust 2018(Fintech)
> The largest hackathon competition in Great China area.

ACADEMIC SERVICES

Journal Reviewer: Applied Network Science; Computer Science and Language; IEEE Transactions on Neural Networks and Learning Systems; NeuralComputing.

Senior Conference Reviewer: IJCAI'21.

Conference Reviewer: ACL'21; AAAI'21-22; IJCAI'22; EMNLP'21; NAACL'21; COLING'20; AACL'20; CIKM'19; NLPCC'19.

Conference External Reviewer: ACL'18-19; AAAI'19; KDD'18; NIPS'18; ICDM'18; CIKM'18.

Others: IJCAI 2019 WebMaster.

SKILLS

Languages	Mandarin (native)
	English (fluent)
Software	PYTHON, Natural Language Processing
Github	https://github.com/panda0881