Hongyuan Mei

Contact Information

Research Assistant Professor
Toyota Technological Institute at Chicago
6045 S Kenwood Ave, Chicago, IL 60637 USA

hongyuan@ttic.edu
hongyuanmei@gmail.com
https://www.hongyuanmei.com

Education

Johns Hopkins University 2016–2021
PhD in Computer Science
Adviser: Jason Eisner
Thesis: Neural Probabilistic Methods for Event Sequence Modeling

The University of Chicago 2015–2016
MS in Physical Science 2015–2016
Advisers: Mohit Bansal and Matthew R. Walter

The University of Chicago 2012–2013
MS in Financial Mathematics

Huazhong University of Science and Technology 2008–2012
BE in Electrical Engineering, with Minor BA in Finance

Appointments

Toyota Technological Institute at Chicago 2021–
Research Assistant Professor

University of Chicago 2021–
Project Advisor in Financial Mathematics

Bloomberg LP 2019
Research Intern

Microsoft Research 2016
Research Intern

Toyota Technological Institute at Chicago 2015–2016
Research Assistant

Booth School of Business at The University of Chicago 2013–2015
Research Assistant

Funding

Adobe Research Gift (PI, $40K) 2022, 2023

Selected Honors and Awards

Bloomberg Data Science PhD Fellowship 2018–2021
JHU Jelinek Memorial Award (one student per year) 2020
Outstanding Reviewer Awards in ICLR 2021, EMNLP 2020, ICML 2020, ACL 2018
NVIDIA Paper Award, NeurIPS Multimodal Machine Learning Workshop 2015

Advising

Current Research Students
Songcheng Cai (visitor from Zhejiang University) 2023–
Peng Li (visitor from Fudan University) 2023–
Kangrui Wang (UChicago MS) 2022–

MS Thesis Students
Shuo Xie (UChicago MS; now PhD at TTIC) 2021–2023
Hongyu Zhao (UChicago MS; now PhD at UMD) 2021–2023

Teaching

Toyota Technological Institute at Chicago
Lecturer in Convex Optimization 2022

Johns Hopkins University
Lecturer in Bloomberg ML Course on Modeling Irregular Time Series 2020
Guest lecturer in JHU Summer School on Human Language Technology 2018
Guest lecturer in Information Retrieval and Web Agents 2017
Teaching assistant in Natural Language Processing 2017

Service

DEI activities
- Faculty facilitator for Girls Who Code (2023)

Journals
- Reviewer for JMLR (2021, 2022)

Conferences
- Area chair for EMNLP (2022, machine learning), COLING (2024, language modeling)
- Reviewer for AAAI (2018), ACL (2017, 2018), COLING (2022), EMNLP (2018, 2019, 2020), ICLR (2017, 2019, 2020, 2021, 2023, 2024), ICML (2019, 2020), NeurIPS (2018, 2019, 2020, 2022, 2023)

Worshops
- Co-organizer for ACL Workshop on Representation Learning for NLP (RepL4NLP) (2018)
- Reviewer for ACL Workshop on Language Grounding for Robotics (RoboNLP) (2017), AAAI Symposium on Natural Communication for Human-Robot Collaboration (NCHRC) (2018)

Publications

As of October 9, 2023, citations = 1413, h-index = 10, i10-index = 10
Google Scholar: https://scholar.google.com/citations?user=g_zaiVIAAAAJ

Preprints Not Yet Published

2. Statler: State-Maintaining Language Models for Embodied Reasoning
   Takuma Yoneda, Jiading Fang, Peng Li, Huanyu Zhang, Tianchong Jiang, Shengjie Lin, Ben Picker, David Yunis, Hongyuan Mei, Matthew R.W̃alter
   arxiv 2306.17840

1. Autoregressive Modeling with Lookahead Attention
   Li Du, Hongyuan Mei, Jason Eisner
   arxiv 2305.12272

Refereed Publications

19. Explicit Planning Helps Language Models in Logical Reasoning
    Hongyu Zhao, Kangrui Wang, Mo Yu, Hongyuan Mei
    Proceedings of EMNLP 2023

18. Language Models Can Improve Event Prediction by Few-Shot Abductive Reasoning
    Xiaoming Shi, Siqiao Xue, Kangrui Wang, Fan Zhou, James Zhang, Jun Zhou, Chenhao Tan, Hongyuan Mei
    Proceedings of NeurIPS 2023

17. Robustness of Learning from Task Instructions
    Jiasheng Gu, Hongyu Zhao, Hanzi Xu, Liangyu Nie, Hongyuan Mei, Wenpeng Yin
    Findings of ACL 2023

16. Continuous-Time Decision Transformer for Healthcare Applications
    Zhiyue Zhang, Hongyuan Mei, Yanxun Xu

Proceedings of AISTATS 2023

15. Bellman Meets Hawkes: Model-Based Reinforcement Learning via Temporal Point Processes
Chao Qu, Xiaoyu Tan, Siqiao Xue, Xiaoming Shi, James Zhang, Hongyuan Mei
Proceedings of AAAI 2023

14. Hidden State Variability of Pretrained Language Models Can Guide Computation Reduction for Transfer Learning
Shuo Xie, Jiahao Qiu, Ankita Pasad, Li Du, Qing Qu, Hongyuan Mei
Findings of EMNLP 2022

13. Tiny-Attention Adapter: Contexts Are More Important Than the Number of Parameters
Hongyu Zhao, Hao Tan, Hongyuan Mei
Proceedings of EMNLP 2022

12. HYPRO: A Hybridly Normalized Probabilistic Model for Long-Horizon Prediction of Event Sequences
Siqiao Xue, Xiaoming Shi, James Y Zhang, Hongyuan Mei
Proceedings of NeurIPS 2022

11. Transformer Embeddings of Irregularly Spaced Events and Their Participants
Chenghao Yang, Hongyuan Mei, Jason Eisner
Proceedings of ICLR 2022

10. Personalized Dynamic Treatment Regimes in Continuous Time: A Bayesian Joint Model for Optimizing Clinical Decisions with Timing
William Hua, Hongyuan Mei, Sarah Zohar, Magali Giral, Yanxun Xu
Journal of Bayesian Analysis (Vol. 17, NO. 3, 2022)
International Biometric Society ENAR Distinguished Student Paper Award

9. Noise-Contrastive Estimation for Multivariate Point Processes
Hongyuan Mei, Tom Wan, Jason Eisner
Proceedings of NeurIPS 2020

8. Neural Datalog Through Time: Informed Temporal Modeling via Logical Specification
Hongyuan Mei, Guanghui Qin, Minjie Xu, Jason Eisner
Proceedings of ICML 2020

7. Imputing Missing Events in Continuous-Time Event Streams
Hongyuan Mei, Guanghui Qin, Jason Eisner
Proceedings of ICML 2019

6. On the Idiosyncrasies of the Mandarin Chinese Classifier System
Shijia Liu, Hongyuan Mei, Adina Williams, Ryan Cotterell
Proceedings of NAACL 2019

5. Halo: Learning Semantics-Aware Representations for Cross-Lingual Information Extraction
Hongyuan Mei, Sheng Zhang, Kevin Duh, Benjamin Van Durme
Proceedings of *SEM 2018

4. The Neural Hawkes Process: A Neurally Self-Modulating Multivariate Point Process
Hongyuan Mei, Jason Eisner
Proceedings of NeurIPS 2017

3. Coherent Dialogue with Attention-based Language Models
Hongyuan Mei, Mohit Bansal, Matthew R. Walter
Proceedings of AAAI 2017

2. What to talk about and how? Selective Generation using LSTMs with Coarse-to-Fine Alignment
   Hongyuan Mei, Mohit Bansal, Matthew R. Walter
   Proceedings of NAACL 2016

1. Listen, Attend, and Walk: Neural Mapping of Navigational Instructions to Action Sequences
   Hongyuan Mei, Mohit Bansal, Matthew R. Walter
   Proceedings of AAAI 2016
   NVIDIA Paper Award in NeurIPS 2015 Multimodal Machine Learning workshop