

Jie Wang

Assistant Professor, The Chinese University of Hong Kong, Shenzhen
Email: jwang@cuhk.edu.cn | Homepage: <https://walterbabyrudin.github.io/>

PROFESSIONAL APPOINTMENTS

2025.06 – present	Assistant Professor	Joint appointment in the School of Artificial Intelligence (home department) and the School of Data Science The Chinese University of Hong Kong, Shenzhen <i>Expertise at School of Data Science: Operations Research</i>
2026.04 – 2026.05	Visiting Scholar <i>Hosted by Daniel Kuhn</i>	College of Management of Technology École Polytechnique Fédérale de Lausanne (EPFL)

EDUCATION

Georgia Institute of Technology, Atlanta, Georgia, USA	2020.08-2025.05
Ph.D. in Industrial Engineering at Statistics Track Advisor: Dr. Yao Xie	
The Chinese University of Hong Kong, Shenzhen, China	2016.08-2020.11
B.S in Pure Mathematics Department: School of Science and Engineering (SSE)	

RESEARCH INTERESTS

His research focuses on decision-making under uncertainty, through the lens of statistics and optimization. Especially, he develops robust and computationally efficient methodology with strong performance guarantees using offline/online, noisy, small-sample/ultra-large-sample, and high-dimensional datasets. He also explores the practical applications of his work in machine learning, healthcare, operations management, and wireless communication.

HONOR & AWARDS

Winner, INFORMS 2024 Data Mining Society's Data Competition
Runner-up, INFORMS 2024 Computing Society Student Paper Award
Runner-up, INFORMS 2024 Data Mining Best Paper Award Competition
Finalist, Next-Gen Scholar's Symposium 2024
Finalist, INFORMS 2023 Data Mining Society's Data Competition
Winner, Data Mining Best Theoretical Paper, 2023 INFORMS Workshop on Data Mining and Decision Analytics
Travel Award, Mixed Integer Programming Workshop 2023
2022 ISyE Robert Goodell Brown Research Excellence award (Data Science and Statistics Track)
Honorable Mention, Best Student Poster Award, Georgia Statistics Day 2022
Winner, 2022 INFORMS Poster Competition
Best Performance Award for Ph.D. Comprehensive Exam in Statistics, 2021
Travel Award, 2024 IEEE Information Theory Workshop
Travel Award, IEEE International Symposium on Information Theory 2019 and 2024

FUNDED PROJECTS

1. National Natural Science Foundation of China (NSFC). PI. Theory and Algorithms for Distributionally Robust Optimization.
2. National Natural Science Foundation of China (NSFC) Youth Science Fund (Category C), PI. Generative AI for Distributionally Robust Optimization, 2027 - 2029.
3. National Natural Science Foundation of China (NSFC) Key Project, Co-PI (1 out of 3). A Study on Economic Theory and Policy Evaluation under Multimodal Data Fusion, 2027 - 2031. PI: Bingyi Jing.
4. Guangdong Provincial Key Laboratory of Big Data Computing, CUHK-Shenzhen (Major Participant).

PUBLICATIONS

Journal Articles Published

1. Y. Hu, **J. Wang**, X. Chen, and N. He. Multi-level Monte-Carlo Gradient Methods for Stochastic Optimization with Biased Oracles. *Conditionally Accepted at Operations Research*, 2026.
2. **J. Wang**, R. Gao and Y. Xie. Sinkhorn Distributionally Robust Optimization. *Operations Research*, 2025.
 - Winner of INFORMS 2022 Best Poster Award.
3. **J. Wang**, R. Gao and H. Zha. Reliable Off-policy Evaluation for Reinforcement Learning. *Operations Research*, 2024.
4. **J. Wang**, M. Chen, T. Zhao, W. Liao and Y. Xie. A Manifold Two-Sample Test Study: Integral Probability Metric with Neural Networks. *Information and Inference: A Journal of the IMA*, 2023.
5. **J. Wang**, S. Yang, Y. Dong and Y. Zhang. On Achievable Rates of Line Networks with Generalized Batched Network Coding. *IEEE Journal on Selected Areas in Communication*, 2024.
6. Y. Dong, S. Yang, **J. Wang** and F. Cheng. Throughput and Latency Analysis for Line Networks With Outage Links. *IEEE Journal on Selected Areas in Information Theory*, 2024.

Journal Articles Submitted

1. **J. Wang**, S. Dey and Y. Xie. Variable Selection for Kernel Two-Sample Testing. *Major Revision at Journal of Machine Learning Research*, 2024.
 - Runner-up of the INFORMS 2024 Computing Society (ICS) Student Paper Award
 - Selected for Poster Presentation at Mixed Integer Programming (MIP) Workshop 2023.

Working Papers/Preprints

1. **J. Wang**. Iterative Sampling Methods for Sinkhorn Distributionally Robust Optimization.
2. F. Zhang and **J. Wang**. Contextual Distributionally Robust Optimization with Causal and Continuous Structure: An Interpretable and Tractable Approach.
3. F. Zhang and **J. Wang**. Generative Neural Networks for Sinkhorn Distributionally Robust Hypothesis Testing.
4. Z. Yuan and **J. Wang**. Variable Selection for Feature-Based Newsvendor.
5. **J. Wang**, R. Gao and Y. Xie. Regularization for Adversarial Robust Learning.
 - Winner of the 18th INFORMS Data Mining and Decision Analytics Workshop Best Paper Competition – Theoretical Track.

Conference Papers Published in Machine Learning

1. **J. Wang**, M. Boedihardjo and Y. Xie. Statistical and Computational Guarantees of Kernel Max-Sliced Wasserstein Distances. *International Conference on Machine Learning (ICML) 2025*.
 - Runner-up of the INFORMS 2024 Data Mining Best Paper Award Competition.
2. Y. Hu, **J. Wang**, Y. Xie, A. Krause and D. Kuhn. Contextual Stochastic Bilevel Optimization. *Neural Information Processing Systems (NeurIPS) 2023*.
 - Journal version to be submitted to Operations Research
3. **J. Wang**, R. Moore, R. Kamaleswaran and Y. Xie. Improving Sepsis Prediction Model Generalization With Optimal Transport. *Machine Learning for Health (ML4H) 2022*.
4. **J. Wang**, R. Gao and Y. Xie. Two-sample Test with Kernel Projected Wasserstein Distance. *Artificial Intelligence and Statistics, 2022*.
 - Oral Presentation, acceptance rate $44/1685 = 2.6\%$.

Conference Papers Published in Statistics

1. **J. Wang**, R. Gao and Y. Xie. Non-Convex Robust Hypothesis Testing using Sinkhorn Uncertainty Sets. *IEEE International Symposium on Information Theory (ISIT), 2024*.
2. **J. Wang** and Y. Xie. A Data-Driven Approach to Robust Hypothesis Testing Using Sinkhorn Uncertainty Sets. *IEEE International Symposium on Information Theory (ISIT), 2022*.
3. **J. Wang**, R. Gao and Y. Xie. Two-sample Test using Projected Wasserstein Distance. *IEEE International Symposium on Information Theory (ISIT), 2021*.

Conference Papers Published in Wireless Communication

1. H. H. Yin and **J. Wang**. Sparse Degree Optimization for BATS Codes. *Information Theory Workshop (ITW), 2024*.
2. H. H. Yin, **J. Wang** and S. S. Chow. Distributionally Robust Degree Optimization for BATS Codes. *IEEE International Symposium on Information Theory (ISIT), 2024*.
3. **J. Wang**, T. Bozkus, Y. Xie and U. Mitra. Reliable Adaptive Recoding for Batched Network Coding with Burst-Noise Channels. *Asilomar Conference on Signals, Systems, and Computers 2023*.
 - Journal version to be submitted to IEEE Transactions on Signal Processing
4. **J. Wang**, Z. Jia, H. H. Yin and S. Yang. Small-Sample Inferred Adaptive Recoding for Batched Network Coding. *IEEE International Symposium on Information Theory (ISIT), 2021*.
5. S. Yang and **J. Wang**. Upper Bound Scalability on Achievable Rates of Batched Codes for Line Networks. *IEEE International Symposium on Information Theory (ISIT), 2020*.
6. S. Yang, **J. Wang**, Y. Dong and Y. Zhang. On the Capacity Scalability of Line Networks with Buffer Size Constraints. *IEEE International Symposium on Information Theory (ISIT), 2019*.
7. **J. Wang**, S. Yang and C. Li. On the Tightness of a Cut-Set Bound on Network Function Computation. *IEEE International Symposium on Information Theory (ISIT), 2018*.
8. **J. Wang**, J. Ma, J. Yang and S. Yang. Efficient Underwater Sensor Network Data Collection Employing Unmanned Ships. *The 14th ACM International Conference on Underwater Networks & Systems (uwnet), 2019*.

TEACHING

Instructor at CUHKSZ (In-person)	Fall 2026
Practical AI Education (AIE 8401)	
Instructor at CUHKSZ (In-person)	Fall 2025, 2026
Advanced Mathematics for Artificial Intelligence (AIE 6001)	
Instructor at CUHKSZ (In-person)	Fall 2025, 2026
AI Exploration: Large Language Models for Operations Research (AIE 1901)	
Instructor at Georgia Tech (In-person)	Spring 2025
Methods and Applications of Machine Learning (ISYE 4600)	
Instructor at Georgia Tech (In-person)	Summer 2024
Simulation Analysis and Design (ISYE 3044)	
Overall Evaluation: 4.8 out of 5.0	
Instructor at Georgia Tech (In-person)	Spring 2024
Statistics and Applications (ISYE 3770)	
Overall Evaluation: 4.2 out of 5.0	
Teaching Assistant at Georgia Tech (In-person)	Fall 2021
Design and Analysis of Experiments (ISYE 6413)	
Overall Evaluation: 4.7 out of 5.0	
Teaching Assistant at Georgia Tech (Online)	Fall 2020 - Spring 2021
Engineering Optimization (ISYE 3133)	

PROFESSIONAL SERVICE

Journal Referee for:

- IEEE Transactions on Signal Processing
- IEEE Journal on Selected Areas in Information Theory
- IEEE Transactions on Information Theory
- Mathematical Programming
- Journal of Global Optimization
- Optimization Letters
- Systems & Control Letters
- Statistics and Computing
- Operations Research
- Journal of Machine Learning Research
- Naval Research Logistics

Conference Reviewer for:

- AISTATS 2020, 2021, 2022, 2023, 2024, 2025
- ICLR 2024, 2025
- NeurIPS 2022, 2023, 2024, 2025
- ICML 2023, 2024, 2025

Session Organizer for: INFORMS Optimization Society Conference, Houston, US, 2024

Program Committee for: AAAI 2025

PRESENTATIONS

21 August 2026, Invited Talk, Robust Optimization Methods and Applications Workshop, Shenzhen, China

25 May 2026, Invited Talk, Optimization and Optimal Transport Workshop, Les Diablerets, Switzerland

21 May 2026, Seminar Talk, EPFL, College of Management of Technology

7 May 2026, Seminar Talk, KTH Royal Institute of Technology, Department of Mathematics

21 March 2026, Invited Talk, INFORMS Optimization Society Conference, Atlanta, USA

21 January 2026, Seminar Talk, University of Science and Technology of China, School of Management

16 December 2025, Seminar Talk, The Hong Kong Polytechnic University, Department of Applied Mathematics

6 December 2025, Invited Talk, Shanghai University of Finance and Economics Symposium on Financial Statistics and Risk Management

3 December 2025, Seminar Talk, Shanghai University of Finance and Economics, Research Institute for Interdisciplinary Sciences

29 November 2025, Invited Talk, Association of Asia-Pacific Operational Research Societies Youth Forum, Hong Kong, China

29 October 2025, Invited Talk, INFORMS Annual Meeting, Atlanta, USA

21 August 2025, Invited Talk, Youth Academic Conference of the Operations Research Society of China, Taiyuan, China

24 July 2025, Invited Talk, International Conference on Continuous Optimization, Los Angeles, USA

6 July 2025, Invited Talk, Robust Optimization Methods and Applications Workshop, Shenzhen, China

9 December 2024, Seminar Talk, The Hong Kong University of Science and Technology, Department of Industrial Engineering and Decision Analytics

4 December 2024, Seminar Talk, Shanghai Jiao Tong University, Antai College of Economics and Management

30 November 2024, Seminar Talk, The Chinese University of Hong Kong (Shenzhen), School of Data Science

18 November 2024, Seminar Talk, Tsinghua University, Industrial Engineering Program

12 November 2024, Singapore University of Technology and Design ESD Pillar Seminar

18 October 2024, HKUST(GZ) IoT Thrust Seminar

2024 Asilomar Conference on Signals, Systems, and Computers

2024 SIAM Conference on Mathematics of Data Science

2024 INFORMS Annual Meeting, Oral Talk

2024 Next-Gen Scholar's Symposium

2024 Purdue Operations Conference
2024 IEEE International Symposium on Information Theory (ISIT)
2024 Princeton Workshop on Optimization, Learning, and Control
2024 International Symposium on Mathematical Programming
2024 ISyE Junior Researcher Workshop
2024 INFORMS Optimization Society Conference
2023 Conference on Neural Information Processing Systems, Poster Presentation
2023 INFORMS Annual Meeting, Oral Talk and Poster Presentation
2023 INFORMS Workshop on Data Mining and Decision Analytics
2023 SIAM Conference on Optimization
2023 Mixed Integer Programming (MIP) Workshop
2023 ICERM Linear and Non-Linear Mixed Integer Optimization Workshop
2022 INFORMS Annual Meeting, Oral Talk and Poster Presentation
2022 SIAM Seminar at University of Washington (Invited)
2022 SIAM Conference on Mathematics of Data Science
2022 International Conference on Continuous Optimization
2022 North American School of Information Theory, Poster Presentation
2022 Artificial Intelligence and Statistics, Virtual
2021 INFORMS Annual Meeting, Virtual
2021 IEEE International Symposium on Information Theory (ISIT), Virtual
2020 IEEE International Symposium on Information Theory (ISIT), Virtual
2019 IEEE International Symposium on Information Theory (ISIT)
2019 International Conference on Underwater Networks & Systems
2018 IEEE International Symposium on Information Theory (ISIT)