Chengpiao Huang

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Education

Columbia University — **New York, United States**
PhD student, Industrial Engineering and Operations Research — September 2022 – Present
Advisor: Kaizheng Wang

The Chinese University of Hong Kong, Shenzhen — **Shenzhen, China**
Bachelor of Science, Mathematics and Applied Mathematics — September 2018 – May 2022

Research Papers

- **The Nonstationarity-Complexity Tradeoff in Return Prediction**
  Agostino Capponi, Chengpiao Huang, J. Antonio Sidaoui, Kaizheng Wang, Jiacheng Zou (α-β)
  Preprint, 2025.
- **How Many Human Survey Respondents is a Large Language Model Worth? An Uncertainty Quantification Perspective**
  Chengpiao Huang, Yuhang Wu, Kaizheng Wang
  Preliminary version appeared in *International Conference on Machine Learning (ICML), 2025.*
- **Distribution-Free Predictive Inference under Unknown Temporal Drift**
  Elise Han, Chengpiao Huang, Kaizheng Wang (α-β)
  Preprint, 2024.
- **Model Assessment and Selection under Temporal Distribution Shift**
  Elise Han, Chengpiao Huang, Kaizheng Wang (α-β)
  International Conference on Machine Learning (ICML), 2024.
- **A Stability Principle for Learning under Non-Stationarity**
  Chengpiao Huang, Kaizheng Wang (α-β)
  Operations Research 73 (6), 3044-3064, 2025.
- **Relaxation-Free Min-k-Partition for PCI Assignment in 5G Networks**
  Yeqing Qiu, Chengpiao Huang, Ye Xue, Zhipeng Jiang, Qingjiang Shi, Dong Zhang, Zhi-Quan Luo
  IEEE Transactions on Signal Processing 73, 3931-3946, 2025.

(α-β denotes alphabetical ordering.)

Honors and Awards

- Deming Doctoral Fellowship, Columbia University — 2025-2026
- Best Student Presentation Award, The 38th New England Statistics Symposium — 2025
- Outstanding Teaching Assistant Award in IEOR, Columbia University — 2025
- Second Place, 2023 INFORMS Blue Summit Supplies Data Challenge — 2023
- Samuel N. Rubinstein Fellowship, Columbia University — 2022
- Academic Performance Scholarship, CUHK(SZ) — 2019-2022

Presentations

- Uncertainty Quantification for LLM-Based Survey Simulations

- Talk: NYC Operations Day PhD Colloquium (March 2025), Columbia Foundations of Data Science Workshop (April 2025), New England Statistics Symposium (June 2025), INFORMS Annual Meeting (October 2025)
- Poster: Columbia AI Summit (March 2025), NYC Operations Day (March 2025), Columbia Data Science Day (April 2025), Columbia Optimization and Statistical Learning Workshop (April 2025), Columbia Foundations of Data Science Workshop (April 2025), Cornell ORIE Young Researchers Workshop (October 2025)

- Model Assessment and Selection under Temporal Distribution Shift
  - Talk: New England Statistics Symposium (May 2024)
  - Poster: Columbia Data Science Day (April 2024), Columbia Foundations of Data Science Workshop (April 2024), New York Academy of Sciences Machine Learning Symposium (October 2024)
- A Stability Principle for Learning under Non-Stationarity
  - Talk: NYC Operations Day PhD Colloquium (May 2024), INFORMS Annual Meeting (October 2024)
  - Poster: NYC Operations Day (May 2024), International Conference on Continuous Optimization (July 2025)

Professional Service and Activities

- Reviewer for International Conference on Machine Learning (ICML) and International Conference on Learning Representations (ICLR)
- Co-organizer of NYC Operations Day PhD Student Colloquium
- Student host of Columbia IEOR-DRO Seminar
- Co-organizer of Columbia IEOR Colloquium

Teaching Experience

At Columbia University, as an Instructor:

- IEOR E4502 - Python for Analytics: Fall 2025

At Columbia University, as a Graduate Teaching Assistant:

- IEOR E8100 - High-Dimensional Probability with Applications: Spring 2024
- IEOR E4101 - Probability, Statistics and Simulation: Fall 2024
- IEOR E3658 - Probability for Engineers: Spring 2025
- IEOR E3402 - Production Planning and Inventory Control: Spring 2023
- IEOR E3106 - Stochastic Systems and Applications: Fall 2023, Fall 2025

At The Chinese University of Hong Kong, Shenzhen, as an Undergraduate Student Teaching Fellow:

- MAT3006 - Real Analysis: Spring 2021, Fall 2021
- MAT2006 - Elementary Real Analysis: Fall 2020
- MAT1001 - Calculus: Fall 2019