

# Yilie Huang

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**POSITIONS**      **Columbia University**      Jan 2025 - Present  
Fu Foundation School of Engineering and Applied Science      USA  
*Postdoctoral Research Scientist in Industrial Engineering and Operations Research*  
Supervisor: Xunyu Zhou

**EDUCATION**      **Columbia University**      Sept 2019 - Dec 2024  
Fu Foundation School of Engineering and Applied Science      USA  
*Doctor of Philosophy in Industrial Engineering and Operations Research*  
Advisor: Xunyu Zhou

**Columbia University**      Sept 2017 - Dec 2018  
Fu Foundation School of Engineering and Applied Science      USA  
*Master of Science in Operations Research*  
Advisor: Xunyu Zhou

**Zhejiang University**      Sept 2013-Jul 2017  
Chu KoChen Honors College      China  
*Bachelor of Science in Mathematics and Applied Mathematics (Honors Program)*

**The University of Hong Kong**      Sept 2015-May 2016  
Faculty of Science      Hong Kong  
*Exchange student*

**CFA Institute**      Since Feb 2022  
CFA® (Chartered Financial Analyst) charterholder

**RESEARCH INTERESTS**

- Reinforcement Learning and Machine Learning
- Diffusion Models for Generative AI
- Mathematical Finance, Financial Engineering and FinTech
- Stochastic Control and Applied Probability

**RESEARCH PAPERS**      **Publications**  
Huang, Y., Jia, Y., & Zhou, X. (2025). Sublinear Regret for a Class of Continuous-Time Linear-Quadratic Reinforcement Learning Problems. *SIAM Journal on Control and Optimization*, forthcoming.

Huang, Y., Jia, Y., & Zhou, X. (2022). Achieving Mean–Variance Efficiency by Continuous-Time Reinforcement Learning. In Proceedings of the Third ACM International Conference on AI in Finance, 377-385.

### Preprints

Huang, Y. & Zhou, X. (2025). Data-Driven Exploration for a Class of Continuous-Time Indefinite Linear–Quadratic Reinforcement Learning Problems. Submitted.

Huang, Y., Jia, Y., & Zhou, X. (2024). Mean–Variance Portfolio Selection by Continuous-Time Reinforcement Learning: Algorithms, Regret Analysis, and Empirical Study. Submitted.

## PRESENTATIONS

### Invited Talks

Workshop on Stochastic Control, Financial Technology, and Machine Learning (Hong Kong)	Dec 2025
INFORMS Annual Meeting (Atlanta)	Oct 2025
Mathematical Finance and Stochastic Analysis Seminar (HU/TU Berlin)	Oct 2025
Berkeley–Columbia Meeting in Engineering and Statistics (UC Berkeley)	Oct 2025
SIAM Conference on Financial Mathematics and Engineering (Miami)	Jul 2025
World Online Seminar on Machine Learning in Finance (Online)	Feb 2025
Columbia IEOR Colloquium (Columbia University)	Nov 2024
INFORMS Annual Meeting (Seattle)	Oct 2024
INFORMS Conference on Financial Engineering and FinTech (Hong Kong)	Aug 2024
INFORMS Annual Meeting (Indianapolis)	Oct 2022
11th World Congress of Bachelier Finance Society (Online)	Jun 2022

### Posters

NYC Operations Day (New York)	Mar 2025
Columbia AI Summit (Columbia University)	Mar 2025
DSI Financial and Business Analytics Poster Session (Columbia University)	Feb 2025
DSI Financial and Business Analytics Poster Session (Columbia University)	Nov 2022

## ACADEMIC SERVICE

### Referee

Journal of the Operational Research Society  
 Quantitative Finance  
 Mathematics and Financial Economics  
 Digital Finance  
 ACM International Conference on AI in Finance  
 NeurIPS Workshop on Generative AI in Finance

### Session Chair

2024 INFORMS Annual Meeting	Oct 2024
11th World Congress of Bachelier Finance Society	June 2022

<b>INDUSTRY EXPERIENCE</b>	<b>Tower Research Capital</b> , Mako/Ace Trading Team	Feb 2023-May 2023
	Quant Trader Intern	New York, NY, USA
	<ul style="list-style-type: none"> <li>• Built 20,000+ HFT alphas; strategy Sharpe ratio exceeded 5</li> <li>• Created selection algorithm and C++ tools; integrated into pipeline</li> </ul>	
	<b>Millennium Management</b> , Equity Derivatives Quant Team	Jun 2022-Aug 2022
	Quant Researcher Intern	New York, NY, USA
	<ul style="list-style-type: none"> <li>• Solved 2-D PDEs for Asian options with ADI methods</li> <li>• Production-grade C++ code with advanced features</li> </ul>	
	<b>LevelHead Capital, LLC</b> , Quantitative Value Investing	Jan 2018-Jul 2018
	Quant Trader Intern	New York, NY, USA
	<ul style="list-style-type: none"> <li>• Stock prediction with DL</li> <li>• Value investing via ML</li> </ul>	
<b>TEACHING EXPERIENCE</b>	<b>Columbia University</b>	
	Teaching Assistant	New York, NY, USA
	• IEOR E4602, Quantitative Risk Management	Fall 2023
	• IEOR 4630, Asset Allocation	Spring 2023
	• IEORE 4732, Computational Methods in Finance	Spring 2022
	• IEORE 4701-001, Stochastic Models for Financial Engineering	Fall 2021
	• IEORE 4701-002, Stochastic Models for Financial Engineering	Fall 2021
	• IEOR 4524, Analytics in Practice: MSBA Capstone	Spring 2021
	• IEOR 4100, Probability, Statistics and Simulation	Fall 2020
	• IEOR 4101, Probability, Statistics and Simulation	Fall 2020
	• IEOR 4707, Financial Engineering: Continuous Time Models	Spring 2020
	• IEOR 4735 Structured & Hybrid Products	Fall 2018