Jingjie Zhang

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Research Interest

Mathematical finance, stochastic control, financial economics, FinTech.

Employment

Assistant Professor, China School of Banking and Finance, University of International Business and Economics, Oct. 2021-.

Education

University of Michigan, Ann Arbor, Michigan, USA — Sept. 2016 — Aug. 2021
Ph.D., Applied and Interdisciplinary Mathematics
Co-advisors: Prof. Erhan Bayraktar (Mathematics), Prof. Indrajit Mitra (Finance).
University of Science and Technology of China , Hefei, Anhui, P.R.China — Sept. 2012 — June 2016
B.S., Mathematics and Applied Mathematics, School of the Gifted Young

Grants

Young Scientists Fund of the National Natural Science Foundation of China, Grant no: 12201113, 2023 — 2025, RMB 300,000.
Rackham Conference Travel Grant, University of Michigan, 2020.

Publications

Countercyclical unemployment benefits: a general equilibrium analysis of transition dynamics, with Erhan Bayraktar and Indrajit Mitra. **Mathematics and Financial Economics**, 2024.[Article]
Equilibrium concepts for time-inconsistent stopping problems in continuous time, with Erhan Bayraktar and Zhou Zhou. **Mathematical Finance**, 2020; 1-23.[Article]
Time Consistent Stopping for the Mean-Standard Deviation Problem — the Discrete Time Case, with Erhan Bayraktar, and Zhou Zhou. **SIAM Journal on Financial Mathematics**, 10(3), 667-697, 2019.[Article]

Working Papers

Walsh Diffusions as Time Changed Multi-parameter Processes, with Erhan Bayraktar and Xin Zhang. [arXiv]
A Quantitative Comparison of Unemployment Benefit Extension and Level Increase, with Erhan Bayraktar and Indrajit Mitra. [SSRN]
Markov and Pre-commitment strategies for a Stackelberg Game with competitive agents, with Xin Zhang and Zhou Zhou. (*working in progress*)

Invited Talks

Recent Advances in Stochastic Control, Machine Learning and Quantitative Finance, Shanghai, China, Apr. 16, 2024.
Optimal Stopping and Free Boundary Problems, University of Leeds, UK, Jan. 15, 2020.
Mean Field Games and Related Topics, Levico Terme, Italy, Sept.10, 2019.
Financial/Actuarial Mathematics Seminar, University of Michigan, Mar. 27, 2018.

Teaching Experience

University of International Business and Economics

- Applied Stochastic Process (CUR204), Spring 2023, Spring 2024.
- Programming in Python (IFI102), Spring 2022, Spring 2023, Spring 2024.
- Microeconomics (ECON104), Fall 2022, Fall 2023.
- Topics in FinTech (SCUR303), Fall 2023, Spring 2024.

University of Michigan

- Calculus I (Math 115), Winter 2017, Winter 2019.
- Pre-Calculus (Math 105), Fall 2016.
- Teaching Assistant

- Stochastic Analysis for Finance (Math 506), Winter 2021.
- Computational Finance (Math 623), Fall 2018, Fall 2020.
- Financial Mathematics II (Math 574), Winter 2018.
- Discrete State Stochastic Processes (Math 526/Stats 526), Fall 2017, Fall 2019.