Xiaonyu Xia

College of Mathematics and Physics, Wenzhou University

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EDUCATION

Ph.D., Mathematics, Humboldt-Universität zu Berlin, Germany, 2020
Dissertation: Singular BSDEs and PDEs Arising in Optimal Liquidation Problems, mit Summa Cum Laude (with the highest distinction)
Dissertation Advisor: Prof. Dr. Ulrich Horst

M.A., Mathematics, Fudan University, China, 2016
Thesis: Adapted Solution of Three Types of Backward Stochastic Partial Differential Equations
Thesis Advisor: Prof. Dr. Shanjian Tang

B.A., Mathematics, Xiamen University, China, 2013

WORK EXPERIENCE

- Mar 2021–present: Lecturer, College of Mathematics and Physics, Wenzhou University, Zhejiang
- Feb 2020–Feb 2021: Postdoctoral Scholar, Department of Mathematics, Humboldt-Universität zu Berlin

MAJOR RESEARCH INTERESTS

- Optimal Liquidation Problem
- Stochastic Control Problem
- Mean Field Game
- Partial Differential Equation (PDE)
- Backward Stochastic Differential Equation (BSDE)
- Financial Mathematics

GRANT

- National Natural Science Foundation of China for young scholars" Robust optimal liquidation problems under uncertainty" (Jan 2022-Dec 2024)

PUBLICATIONS

- Guanxing Fu, Ulrich Horst and Xiaonyu Xia, A Mean-Field Control Problem of Optimal Portfolio Liquidation with Semimartingale Strategies, Mathematics of Operations Research (To appear)
- Guanxing Fu, Ulrich Horst and Xiaonyu Xia, Portfolio Liquidation Games with Self-Exciting Order Flow, Mathematical Finance, 2022, 32: 1020-1065
- Ulrich Horst, Xiaonyu Xia and Chao Zhou, Portfolio liquidation under factor uncertainty, Annals of Applied Probability, 32(1): 80-123, 2022
- Ulrich Horst and Xiaonyu Xia, Continuous viscosity solutions to linear-quadratic stochastic control problems with singular terminal state constraint, Applied Mathematics and Optimization, 84(1): 1159-1184, 2021
- Ulrich Horst and Xiaonyu Xia, Multi-dimensional Optimal Trade Execution under Stochastic Resilience, Finance & Stochastics, 23(4), 889-923, 2019

RESEARCH VISITS & PRESENTATIONS

- Visiting researcher, Department of Mathematics, NUS (Duration: Nov 2018, Mar 2019, Nov 2019; Collaborator: Professor Chao Zhou)
- Suzhou Area Youth Mathematicians 4th Annual Workshop：Data and Finance, Duke Kunshan University, Oct 20-22, 2023
- 2nd Workshop on Financial Mathematics &Financial Engineering & Insurance Actuary CSIAM 2022, Nov 11-12
- 9th colloquium on Backward Stochastic Differential Equations and Mean Field Systems (Online), Jun 27-Jul 01, 2022
- Berlin winter semester seminar" Stochastic Analysis and Stochastics in Financial Markets", Jan 2020
- 4th Berlin-Princeton-Singapore Workshop on Quantitative Finance, National University of Singapore, Mar 18–20, 2019