Hanxiao Wang

Research Fellow
Department of Mathematics
National University of Singapore

Date of Birth: May 6, 1992
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Professional Experience

- Research Fellow, Department of Mathematics, National University of Singapore, Sep. 2020-Now.
- Visiting Scholar, Department of Mathematics, Southern University of Science and Technology, Jul.. 2020 - Sep. 2020.

Education

School of Mathematical Science, Fudan University, Sep. 2014-Jun. 2020

- PhD of Science in Operational Research and Control Theory
- Advisor: Jiongmin Yong

Department of Mathematics, University of Central Florida, Oct. 2017-May 2019

- Adjoint PhD. Student: Operational Research and Control Theory
- Advisor：Qiyu Sun

Department of Mathematics, Jilin University, Sep. 2010- Jun. 2014

- Bachelor of Science in Mathematics and Applied Mathematics

Research Interest

- Time-inconsistent Problems
- Stochastic Control and Differential Game
- Stochastic Differential Equations and Stochastic Volterra Integral Equations
- Path-dependent Partial Differential Equations
- Mean-field Games and Master Equations

Publications:

[1] **Hanxiao Wang**, Jingrui Sun, and Jiongmin Yong, *Weak closed-loop solvability of stochastic linear-quadratic optimal control problems*, Discrete and Continuous Dynamical Systems A, 39 (2019), 2785-2805.

[2] **Hanxiao Wang,** Jingrui Sun, and Jiongmin Yong, *Recursive Utility Processes, Dynamic Risk Measures, and Quadratic Backward Stochastic Volterra Integral Equations*, Applied Mathematics and Optimization, Published online, doi.org/10.1007/s00245-019-09641-7.

[3] **Hanxiao Wang***, *Extended Backward Stochastic Volterra Integral Equations, Quasilinear Parabolic Equations, and Feynman-Kac Formula,* Stochastic and Dynamics, 21 (2021), 2150004.

[4] Jingrui Sun and **Hanxiao Wang***, *Mean-Field Stochastic Linear-Quadratic Optimal Control Problems: Weak Closed-Loop Solvability*, Mathematical Control and Related Fields, 11 (2021), 47-71.

[5] **Hanxiao Wang*** and Jiongmin Yong, *Time-inconsistent Stochastic Optimal Control Problems and Backward Stochastic Volterra Integral Equations*, ESAIM: Control, Optimization and Calculus of Variations, Published online, doi.org/10.1051/cocv/202102.

[6] Jingrui Sun and **Hanxiao Wang***, *Linear Quadratic Optimal Control for Backward Stochastic Differential Equations with Random Coefficients*, ESAIM: Control, Optimization and Calculus of Variations, Published online, doi.org/10.1051/cocv/2021049.

[7] **Hanxiao Wang***, Jiongmin Yong, and Jianfeng Zhang, *Path Dependent Feynman-Kac Formula for Forward Backward Stochastic Volterra Integral Equations*, Annales de l'Institut Henri Poincaré (B) Probabilités et Statistiques, Published online, doi.org/10.1214/21-AIHP1158.

[8] Jingrui Sun, **Hanxiao Wang***, and Zhen Wu, *Mean-field Linear Quadratic Stochastic Differential Games,* Journal of Differential Equation, 296 (2021), 299-334.

Manuscripts in Preparation：

[9] Jingrui Sun, **Hanxiao Wang***, and Jiaqiang Wen, *Zero-Sum Stackelberg Stochastic Linear-Quadratic Differential Games,* to be submitted.

[10] **Hanxiao Wang**, Jiongmin Yong, and Chao Zhou, *Time-consistent Solutions for Controlled Forward Backward Stochastic Differential Equations*, in preparation.

Conferences:

9-th Western Conference on Mathematical Finance, Los Angeles, USA, 2018.11

Mathematics in the City Beautiful: PDEs, SDEs, Control Theory, and Applications to Finance and Life Sciences, Orlando, USA, 2018.12

Stochastic Filtering and Control Workshop, Shenzhen, China, 2019.10

Extracurricular Activities and Awards

Outstanding Students of PhD.'s Degrees	Fudan University	2015, 2017, 2018
Fudan-Taiping Award	Fudan University	2016
Second Grade Scholarship	Jilin University	2011, 2012, 2013
Funded by China Scholarship Council		From 2017.10 to 2019. 05

Referee:

Applied Mathematics and Optimization

ESAIM: Control, Optimization and Calculus of Variations

Mathematics and Financial Economics

Mathematical Control and Related Fields

SIAM Journal of Control and Optimization

Statistic and Probability Letters

Stochastic and Dynamics