Huafu Liao

Department of Mathematics
National University of Singapore
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RESEARCH INTERESTS

Applied Probability; Credit Risk Modelling; Portfolio Optimization; Machine Learning.

EDUCATION

University of Science and Technology of China, School of Mathematical Sciences, Hefei, China.

- Ph.D., Mathematics, Nov. 2019.
  Advisor: Prof. Lijun Bo.
- B.S., Information and Computing Science, Jun. 2013.

PROFESSIONAL EXPERIENCE

- *Research Fellow* Oct. 2020 - Present
  Department of Mathematics
  The National University of Singapore, Singapore
- *Research Assistant* Sept. 2018 - Oct. 2018
  Department of Applied Mathematics
  The Hong Kong Polytechnic University, Hong Kong, China
- *Research Assistant* Jan. 2019 - Dec. 2019
  Department of Applied Mathematics
  The Hong Kong Polytechnic University, Hong Kong, China
- *Research Assistant* Sept. 2018 - Oct. 2018
  Department of Applied Mathematics
  The Hong Kong Polytechnic University, Hong Kong, China
- *Teaching Assistant (Part-Time)* Sept. 2013 - Jan. 2016
  School of Mathematical Sciences
  University of Science and Technology of China, Hefei, China

PUBLICATIONS

- L. Bo, and H. Liao (2021): Probabilistic Analysis of Replicator-Mutator Equations. *Advances in Applied Probability*, forthcoming.
- L. Bo, H. Liao and X. Yu (2021): Optimal Tracking Portfolio with a Ratcheting Capital Benchmark. *SIAM Journal on Control and Optimization*, forthcoming.
- Z. Jin, H. Liao, Y. Yang and X. Yu (2021): Optimal Dividend Strategy for an Insurance Group with Contagious Default Risk, *Scandinavian Actuarial Journal*, 2021(4), 335∼361.
- L. Bo, H. Liao, and X. Yu (2019): Risk Sensitive Portfolio Optimization with Default Contagion and Regime-Switching. *SIAM Journal on Control and Optimization*, 57(1), 366∼401.
- L. Bo, H. Liao, and Y. Wang (2019): Optimal credit investment and risk control for an insurer with regime-switching. *Mathematics and Financial Economics*, 13(1), 147∼172.

- L. Bo, H. Liao, and X. Yu (2020): Risk-Sensitive Portfolio Optimization with Partial Observation. *Submitted*.
- A. Capponi, L. Bo, and H. Liao (2020): Deep Residual Learning via Large Sample Mean-Field Stochastic Optimization. *Preprint*.

INVITED TALKS

- **1 - 4 June 2021.** SIAM Conference on Financial Mathematics and Engineering (FM21), virtual, finalist for the 2021 SIAG/FME Conference Paper Prize.
- **17 - 20 November 2020.** The 2nd International Forum for HUASHAN Scholars, Xidian University.
- **12 - 14 October 2018.** The 2nd Young Scholars' Conference on Probability and Statistics, Jiangsu Normal University.
- **10 - 11 May 2018.** The 12th Ph.D. Student Workshop by USTC and CityU, USTC.
- **21 - 23 July 2017.** The 1st Young Scholars' Conference on Probability and Statistics, Jiangsu Normal University.

PROFESSIONAL SKILLS

Programming: Matlab, R