

Fenghui Yu

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Date of Birth December 20, 1992

Positions

Oct 2023–Present *Assistant Professor (Tenured)*

Aug 2022–Sept 2023 *Assistant Professor (Tenure-Track)*
- Delft Institute of Applied Mathematics, TU Delft, the Netherlands

Jun 2019–July 2022 *Postdoctoral Researcher*
- RiskLab and Department of Mathematics, ETH Zurich, Switzerland

Jan 2019–May 2019 *IMR Postdoctoral Fellow*
- Department of Mathematics, The University of Hong Kong, Hong Kong

Experience

Aug 2015 *Academic Visitor*
Department of Mathematical Sciences, University of Copenhagen, Denmark

Education

Sept 2014–Dec 2018 Ph.D., Mathematics - The University of Hong Kong, Hong Kong

Research Field: Mathematical and Computational Finance

Supervisor: Prof. Wai-Ki Ching

Thesis: On Pricing, Hedging and Trading in Financial Management

Sept 2010–Jul 2014 B.S. Mathematics; B.E. Finance (Double Degree) - Jilin University, China
Major: Computational Mathematics; Minor: Finance and Financial Management

Research Interests

- Quantitative Methods in Finance, Algorithmic Trading and Market Microstructure
- Applied Probability, Stochastic Modeling and Stochastic Optimal Control
- Machine Learning, Data-driven Innovation and their Applications in Finance

Honors and Awards

2018 Scientific Research Network (WOG) Grant - *Research Foundation Flanders (FWO), Belgium*
2016, 2018 Conference Grant for Research Postgraduate Students
- *The University of Hong Kong, Hong Kong*
2016 SIAM Student Travel Award - *SIAM, USA*
2016 Doris Chen Postgraduate Travel Grant - *The University of Hong Kong, Hong Kong*
2016 International Student Travel Award - *PIMS, Canada*
2014–2018 HKU Foundation Postgraduate Fellowship - *The University of Hong Kong, Hong Kong*
2014–2018 Postgraduate Scholarship - *The University of Hong Kong, Hong Kong*
2012–2014 First Rank Scholarship - *Jilin University, China*
2011–2014 Outstanding Undergraduate - *Jilin University, China*

Papers

- Felix Lokin and **Fenghui Yu**. *Fill Probabilities in a Limit Order Book with State-Dependent Stochastic Order Flows*. Preprint, 2024.
- **Feng-Hui Yu**, Wai-Ki Ching, Chu-Fang Wu and Jia-Wen Gu. *Optimal Pairs Trading Strategies: a Stochastic Mean-Variance Approach*. Journal of Optimization Theory and Applications, 196, 36–55, 2023.
- Dong-Mei Zhu, Jia-Wen Gu, **Feng-Hui Yu**, Tak-Kuen Siu and Wai-Ki Ching. *Optimal Pairs Trading with Dynamic Mean-Variance Objective*. Mathematical Methods of Operations Research, 94(1), 145–168, 2021.
- Dong-Mei Zhu, Jia-Wen Gu, **Feng-Hui Yu**, Wai-Ki Ching and Tak-Kuen Siu. *How Correlation Risk in Basket Credit Derivatives Might be Priced and Managed?* IMA Journal of Management Mathematics, 32(2), 195–219, 2021.
- **Feng-Hui Yu**, Jie-Jun Lu, Jia-Wen Gu and Wai-Ki Ching. *Modeling Credit Risk with Hidden Markov Default Intensity*. Computational Economics, 54(3), 1213–1229, 2019.
- **Feng-Hui Yu**, Wai-Ki Ching, Jia-Wen Gu and Tak-Kuen Siu. *Interacting Default Intensity with Hidden Markov Process*. Quantitative Finance, 7(5), 781–794, 2017.
- Tak-Kuen Siu, **Feng-Hui Yu**, Qing-Qing Yang, Jia-Wen Gu and Wai-Ki Ching. *Pricing Participating Policies Under Hidden Markov Models via Neural Networks*. Preprint, 2019.
- **Feng-Hui Yu** and Wai-Ki Ching. *Multi-Period Optimal Mean-reverting Spread Trading Strategies with Hidden Markovian Regime Switching*. Working Paper.
- **Feng-Hui Yu**. *Optimal Convergence Trading Strategies with Cutting Loss Exit*. Working Paper.

Co-organized Events

July 2024	Minisymposium: <i>Control, Optimization and Market Microstructure</i> 12th Bachelier World Congress - Rio de Janeiro, Brazil
Sept 2023	15th European Summer School in Financial Mathematics - Delft, the Netherlands

Academic Talks

June 2024	Invited talk , Statistics and Machine Learning in Finance Seminar - University of Oxford, UK
April 2024	Invited talk , Recent Advances in Stochastic Control, Machine Learning and Quantitative Finance - Shanghai, China
April 2024	Invited talk , International Conference on Computational Finance - Amsterdam, the Netherlands
June 2023	Invited talk , 4TU.Applied Mathematics Institutes Summer Event - Delft, the Netherlands
Mar 2023	Invited talk , Dutch Mathematical Finance Seminars - TU Delft, the Netherlands
Feb 2023	Invited talk , Seminar in Mathematical Finance - McMaster University, Canada
Nov 2022	Invited talk , 14th DIAM Research Day - TU Delft, the Netherlands
Oct 2022	Invited talk , Finance Research Day - TU Delft, the Netherlands
Oct 2020	Invited talk , Seminar of Josef Teichmann's Group - ETH Zurich, Switzerland
Dec 2019	Invited talk , Youth Probability and Statistics Forum - Beijing, China
Dec 2019	Invited talk , Post/Doctoral Seminar in Mathematical Finance - ETH Zurich, Switzerland
Feb 2018	Invited talk , Workshop on Computational Science and Optimization - Hong Kong

Nov 2016	Contributed talk , SIAM Conference on Financial Mathematics and Engineering - Austin, USA
Jul 2016	Contributed talk , 6th International IMS-FIPS Workshop - Edmonton, Canada
Jun 2016	Contributed talk , 11th East Asia SIAM Conference - Macao
Feb 2016	Contributed talk , 4th Asian Quantitative Finance Conference - Osaka, Japan

Teaching

(All of the courses were given in English)

Feb–July 2024 Apr–July 2023	Lecturer , Delft Institute of Applied Mathematics - TU Delft, the Netherlands <i>Special Topics in Financial Engineering (Machine Learning in Finance)</i>
Apr–July 2024 Apr–July 2023	Lecturer , Delft Institute of Applied Mathematics - TU Delft, the Netherlands <i>Quantitative Risk Management</i>
Feb–May 2022 Feb–May 2021	Teaching Assistant , RiskLab - ETH Zurich, Switzerland <i>Quantitative Risk Management</i>
Sep–Nov 2017	Teaching Assistant , Department of Mathematics - The University of Hong Kong, Hong Kong <i>Discrete Mathematics</i>
Sep–Nov 2017 Sep–Nov 2016 Sep–Nov 2015	Teaching Assistant , Department of Mathematics - The University of Hong Kong, Hong Kong <i>University Mathematics I</i>
Jan–May 2015	Teaching Assistant , Department of Mathematics - The University of Hong Kong, Hong Kong <i>Computational Methods and Differential Equations with Applications</i>

Supervision

Master Students	Laurens Chin-A-Pauw, Mar, 2024 - <i>TU Delft, The Netherlands</i> Felix Lokin (jointly with MN), Sept, 2023 - <i>TU Delft, the Netherlands</i> Vangelis Nakos, Sept, 2023 - <i>TU Delft, the Netherlands</i>
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Additional Information

Jan 2015	Certificate of Teaching and Learning in Higher Education - <i>The University of Hong Kong, Hong Kong</i>
Referee Service	Automatica, Mathematical Methods of Operations Research, International Journal of Theoretical and Applied Finance
Languages	Chinese (native), English (fluent)