

# Fenghui Yu

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<b>Address</b>	HG F 42.1, RiskLab, Department of Mathematics, ETH Zurich, 8092, Zurich, Switzerland.	<b>Email</b>	fenghui.yu@math.ethz.ch
		<b>Tel.</b>	+41 76 520 9639
		<b>Website</b>	<a href="http://fenghuiyu.github.io">http://fenghuiyu.github.io</a>

## Positions

**Jun 2019-Present** *Postdoctoral Researcher*  
- RiskLab and Department of Mathematics, ETH, Zurich, Switzerland

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

## 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*  
*Performance: Outstanding Class (top 5%)*

## Research Interests

- Quantitative Methods in Risk Management, Finance and Actuarial Science
- Applied Probability, Stochastic Modeling and Optimal Stochastic Control
- Machine Learning, Data-driven Innovation and their Applications

## Honors and Awards

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

## Papers

- **Feng-Hui Yu**, Wai-Ki Ching, Chu-Fang Wu and Jia-Wen Gu. *Optimal Pairs Trading Strategies: a Stochastic Mean-Variance Approach*. Submitted, 2021.

- 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**, Wai-Ki Ching, Tak-Kuen Siu. *Multi-Period Optimal Mean-reverting Spread Trading Strategies with Hidden Markovian Regime Switching*. Working Paper.

## Conference/Workshop/Research Experience

<b>Dec 2019</b>	<b>Invited talk</b> , Youth Probability and Statistic Forum - Beijing, China
<b>Dec 2019</b>	<b>Invited talk</b> , Post/Doctoral Seminar in Mathematical Finance - ETH Zurich, Switzerland
<b>Feb 2018</b>	<b>Contributed poster</b> , Actuarial and Financial Mathematics Conference: Interplay between Finance and Insurance - Brussels, Belgium
<b>Feb 2018</b>	<b>Invited talk</b> , Workshop on Computational Science and Optimization - Hong Kong
<b>Nov 2016</b>	<b>Contributed talk</b> , SIAM Conference on Financial Mathematics and Engineering - Austin, Texas, USA
<b>Jul 2016</b>	<b>Contributed talk</b> , The Sixth International IMS-FIPS Workshop - Edmonton, Canada
<b>Jun 2016</b>	<b>Contributed talk</b> , The 11th East Asia SIAM Conference - Macao
<b>May 2016</b>	<b>Participant</b> , International Conference on Applied Mathematics - Hong Kong
<b>Feb 2016</b>	<b>Contributed talk</b> , The Fourth Asian Quantitative Finance Conference - Osaka, Japan
<b>Aug 2015</b>	<b>Academic Visit</b> , Department of Mathematical Sciences, University of Copenhagen - Copenhagen, Denmark

## Other Scientific Activities

<b>Sept 2019&amp;2020</b>	Risk Day - RiskLab, ETH Zurich, Switzerland
<b>Jun-Jul 2016</b>	PIMS Summer School in Mathematical Finance - University of Alberta, Canada

## Teaching Experience

(All of the courses are given in English)

<b>Feb-May 2021</b>	<b>Teaching Assistant</b> , RiskLab - ETH Zurich, Switzerland <i>Course: Quantitative Risk Management</i>
<b>Sep-Nov 2017</b>	<b>Teaching Assistant</b> , Department of Mathematics - The University of Hong Kong, Hong Kong <i>Course: Discrete Mathematics</i>
<b>Sep-Nov 2017</b>	<b>Teaching Assistant</b> , Department of Mathematics - The University of Hong Kong, Hong Kong
<b>Sep-Nov 2016</b>	<i>Course: University Mathematics I</i>
<b>Sep-Nov 2015</b>	
<b>Jan-May 2015</b>	<b>Teaching Assistant</b> , Department of Mathematics - The University of Hong Kong, Hong Kong <i>Course: Computational Methods and Differential Equations with Applications</i>

## Additional Information

<b>Jan 2015</b>	Certificate of Teaching and Learning in Higher Education - <i>The University of Hong Kong, Hong Kong</i>
<b>Referee Service</b>	Automatica
<b>Programming</b>	MATLAB, Python
<b>Language</b>	Chinese (native), English (fluent)