

Qiuqi Wang, Ph.D.

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Education

Ph.D. Actuarial Science, University of Waterloo	06/2023
– Advisor: Ruodu Wang	
M.Phil. Mathematics, Hong Kong University of Science and Technology	07/2019
– Advisor: Yue Kuen Kwok	
B.S. Mathematics and Economics, Hong Kong University of Science and Technology	07/2017
International Exchange Student, Technical University of Munich	04/2016 – 09/2016

Research Interests

Actuarial Science; Quantitative Risk Management; Operations Research; Financial Engineering; Game Theory

Publications and Manuscripts

Pre-publication manuscripts

- [1] **Wang, Q.**, Wang, R. and Ziegel, J. (2022). E-backtesting. *arXiv*: <https://arxiv.org/abs/2209.00991>.
- [2] Han, X., **Wang, Q.**, Wang, R. and Xia, J. (2021). Cash-subadditive risk measures without quasi-convexity. *arXiv*: <https://arxiv.org/abs/2110.12198#>.
- [3] Pesenti, S., **Wang, Q.** and Wang, R. (2020). Optimizing distortion riskmetrics with distributional uncertainty. *arXiv*: <https://arxiv.org/abs/2011.04889>.

Peer-reviewed journal articles

- [1] **Wang, Q.**, Wang, R. and Zitikis, R. (2022). Risk measures induced by efficient insurance contracts. *Insurance: Mathematics and Economics*, **103**, 56–65.
- [2] Embrechts, P., Mao, T., **Wang, Q.** and Wang, R. (2021). Bayes risk, elicibility, and the Expected Shortfall. *Mathematical Finance*, **31**(4), 1190–1217.
- [3] **Wang, Q.**, Wang, R. and Wei, Y. (2020). Distortion riskmetrics on general spaces. *ASTIN Bulletin*, **50**(4), 827–851.
- [4] **Wang, Q.** and Kwok, Y. K. (2020). Real option signaling games of debt financing using equity guarantee swaps. *International Journal of Theoretical and Applied Finance*, **23**(5), 2050036.
- [5] **Wang, Q.** and Kwok, Y. K. (2019). Signaling game models of equity financing under information asymmetry and finite project life. *International Journal of Financial Engineering*, **6**(1), 1950002.

Dissertations

- [1] Wang, Q. (2023). Characterizing, optimizing and backtesting metrics of risk. *Ph.D. Thesis*. University of Waterloo, Canada.
- [2] Wang, Q. (2019). Real option signaling games under asymmetric information and finite option life. *M.Phil. Thesis*. Hong Kong University of Science and Technology, Hong Kong.

Selected Honors and Awards

James C. Hickman Scholar Doctoral Stipend (out of 4 recipients), SOA	2021 – 2023
Honorable Mention in ARC Graduate Student Presentation Awards, SOA	2022
SAS Chair's Award, UW	2021 – 2022
Comprehensive Award (out of 2 recipients), UW	2020
International Doctoral Student Award, UW	2019 – 2023
Statistics and Actuarial Science Doctoral Entrance Award, UW	2019
Postgraduate Studentship, HKUST	2017 – 2019
Scholarship Scheme for Continuing Undergraduate Students, HKUST	2015 – 2017
Fong Shu Chuen Scholarship, HKUST	2015 – 2016
School of Science Dean's List, HKUST	2014

Conferences Organized

- 3rd Waterloo Student Conference in Statistics, Actuarial Science and Finance (Co-chair), 2022 (Waterloo, Canada)
- 2nd Waterloo Student Conference in Statistics, Actuarial Science and Finance (Co-chair), 2021 (Online)

Invited Academic Presentations

- Young Data Science Researcher Seminar Zurich, 2022 (Online)
- INFORMS Annual Meeting, 2022 (Indianapolis, US)
- Real Options Seminar, Osaka University, 2021 (Online)
- SIAM Conference on Financial Mathematics and Engineering, 2021 (Online)

Contributed Academic Presentations

- 57th Actuarial Research Conference, 2022 (Urbana-Champaign, US)
- 25th International Congress on Insurance: Mathematics and Economics, 2021 (Online)
- CORS/INFORMS International Conference, 2022 (Vancouver, Canada)
- 56th Actuarial Research Conference, 2021 (Online)
- 24th International Congress on Insurance: Mathematics and Economics, 2021 (Online)

- 5th PKU-NUS Annual International Conference on Quantitative Finance and Economics, 2021 (Online)
- 5th Asian Quantitative Finance Seminar, 2020 (Online)
- 1st Waterloo Student Conference in Statistics, Actuarial Science and Finance, 2019 (Waterloo, Canada)
- 23rd Annual International Real Options Conference, 2019 (London, UK)

Teaching Experience

- Instructor, University of Waterloo

ACTSC 371 - Introduction to Investment Winter 2023

- Teaching Assistant, University of Waterloo

ACTSC 363 - Casualty and Health Insurance Mathematics 1 Fall 2022

ACTSC 964 - Quantitative Risk Management Spring 2022

ACTSC 446/846 - Mathematics of Financial Markets Winter 2022

ACTSC 431 - Casualty and Health Insurance Mathematics 2 Spring 2021

MATBUS 472 - Risk Management Winter 2021 – 2022

ACTSC 431 - Loss Model I Spring 2020

ACTSC 445/845 - Quantitative Enterprise Risk Management Spring 2020

ACTSC 231 - Introductory Financial Mathematics Winter 2020

MATBUS 471 - Fixed Income Securities Fall 2019 – 2021, Winter 2020

MATBUS 470 - Derivatives Fall 2019 – 2022, Winter 2021

- Teaching Assistant, Hong Kong University of Science and Technology

MATH 4321 - Game Theory Spring 2018 – 2019

MATH 4511 - Quantitative Methods for Fixed Income Derivatives Fall 2018

Peer-review Service

- Actuarial science journal(s): *ASTIN Bulletin*, *Insurance: Mathematics and Economics*, *Annals of Actuarial Science*
- Mathematical finance journal(s): *Quantitative Finance*, *Mathematical Finance*
- Operations research journal(s): *Mathematics of Operations Research*
- Economics journal(s): *Economic Modelling*
- Probability journal(s): *Statistics & Probability Letters*

Other Skills

Languages: Mandarin (native), English (fluent, TOEFL iBT: 108), Cantonese (conversational), German (elementary)

Programming: R, MATLAB, C++, HTML, Python, Stata, Excel VBA, MS Office

SOA exams passed: VEE Accounting & Finance, VEE Applied Statistics, VEE Economics, Exam P, Exam FM, Exam IFM, Exam SRM, Exam PA, Exam STAM, Exam LTAM, FAP

SOA exam in progress: APC (expected Jul 2023)

Last updated: June 2023