Zhanyi Jiao, ASA

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EDUCATION

University of Waterloo, *Ph.D. Candidate - Actuarial Science* 2020.09 – present
- *Supervisor:* Jun Cai, Ruodu Wang

Central University of Finance and Economics, *M.Sc. - Actuarial Science* 2017.09 – 2020.06
- *Supervisor:* Ming Zhou

The University of Melbourne, *Visiting Student - Actuarial Science* 2019.03 – 2019.06

China University of Geosciences, *B.S. - Mathematics & Applied Math* 2013.09 – 2017.06

Wuhan University, *B.Ec. - Finance (Double Degree)* 2014.09 – 2017.06

PROFESSIONAL DESIGNATION

ASA: Associate of the Society of Actuaries (obtained in July 2022)

FSA (QFI-track, in progress): ERM Module, FM Module

RESEARCH INTEREST

Actuarial Science, Quantitative Risk Management, Insurance, Financial Mathematics

PUBLICATION AND RESEARCH

[1] Fan, Y., **Jiao, Z.** and Wang, R. (2023). Testing mean and variance by e-process. *arXiv:* https://arxiv.org/abs/2301.12480.

[2] Cai, J., **Jiao, Z.** and Mao, T. (2023). Worst-case target semi-variances with applications to robust portfolio selection. Working Paper

[3] **Jiao, Z.**, Kou, S., Liu, Y. and Wang, R. (2022). An axiomatic theory for anonymized risk sharing. *arXiv:* https://arxiv.org/abs/2208.07533.

[4] Guan, Y., **Jiao, Z.** and Wang, R. (2022). A reverse ES (CVaR) optimization formula. *North American Actuarial Journal*, 1–15. https://doi.org/10.1080/10920277.2023.2249524.

ACADEMIC PRESENTATION

The 26th International Congress on Insurance: Mathematics and Economics Edinburgh, U.K. (2023)
Title: "Worst-case upper partial moment risk measures with application to robust portfolio selection"

Waterloo Student Conference in Statistics, Actuarial Science and Finance Waterloo, Canada (2022)
Title: "An axiomatic theory for anonymized risk sharing"

57th Actuarial Research Conference — Urbana-Champaign, U.S. (2022)
Title: "A reverse Expected Shortfall optimization formula"

The 25th International Congress on Insurance: Mathematics and Economics — Online (2022)
Title: "A reverse Expected Shortfall optimization formula"

The 23rd International Congress on Insurance: Mathematics and Economics — Munich, Germany (2019)
Title: "Optimal retention rate in risk pooling arrangement with moral hazard"

TEACHING EXPERIENCE

Course Instructor, University of Waterloo

ACTSC 231 - Introductory Financial Mathematics — Fall 2023

Teaching Assistant, University of Waterloo

ACTSC 454/ACTSC 854 - Longevity and Mortality Using Predictive Analytics	Winter 2022 - 2023
ACTSC 371 - Introduction to Investment	Winter 2023
ACTSC 372 - Corporate Finance	Fall 2022
ACTSC 446/ACTSC 846 - Mathematics of Financial Markets	Winter and Fall 2022
ACTSC 445/ACTSC 845 - Quantitative Enterprise Risk Management	Fall 2021, Spring 2022
ACTSC 431 - Casualty and Health Insurance Mathematics 2	Spring 2023, Spring 2021
MATBUS 371 - Introduction to Corporate Finance	Fall 2021
STAT 230 - Probability	Spring 2021

Teaching Assistant, China University of Geosciences (Wuhan)

Mathematical Analysis I — Fall 2016

PROFESSIONAL SERVICE

Research Mentor, University of Waterloo — 2023

- Served as research mentor and mentored two female undergraduate students from Women in Mathematics (WiM), Faculty of Mathematics, focusing on the topic "An introduction to risk optimization in insurance".

Seminar Organizer, University of Waterloo — 2023

- Organized Weekly Seminars on Risk Management and Actuarial Science at University of Waterloo; invited external speakers from other departments and universities.

Conference Coordinator/Session Chair, University of Waterloo — 2022 - 2023

- Assisted in organizing the 3rd and 4th Waterloo Student Conference in Statistics, Actuarial Science and Finance; served as a session chair.

HONORS AND AWARDS

Selected Honors

James C. Hickman Fellowship, *Society of Actuaries (SOA)*	2023 - 2024
Women in Mathematics Directed Reading Program Mentorship Award, *UW*	2023
University of Waterloo Graduate Scholarship, *UW*	2023
International Doctoral Student Award, *UW*	2020 - 2023
Postgraduate Academic Scholarship, *CUFE*	2017 - 2019
The Outstanding Undergraduate Dissertation(**<5%**), *CUG*	2017
The Outstanding Graduate Award, *CUG*	2017
Dean's List of Distinguished Students Scholarship, *CUG*	2016
Headmaster's List of Distinguished Students Scholarship, *CUG*	2015
The Annual Outstanding Student Scholarship(**<1%**), *CUG*	2014

Selected Awards (academic related only)

Mathematical Contest in Modeling (MCM/ICM), *Honorable Mention*	2017
25th Contemporary Undergraduate Mathematical Contest in Modeling, *Provincial First Prize*	2016
13th May Day Mathematical Contest in Modeling, *Second Prize*	2016
24th Contemporary Undergraduate Mathematical Contest in Modeling, *National Second Prize*	2015
8th Central China Mathematical Contest in Modeling (CCMCM), *Second Prize*	2014

OTHER SKILLS

Language

- **Mandarin**: Native
- **English**: Fluent
- **Spanish**: Beginner (DELE A1 Level)

Programming Skill

- R, Matlab, SPSS, C languange (NCRE certificate)