Zhanyi Jiao, ASA

Department of Statistics and Actuarial Science
University of Waterloo
200 University Avenue West
Waterloo, Ontario, Canada N2L 3G1

Email: z27jiao@uwaterloo.ca
Phone: +1(548)333-8722
Office: M3 Room 4123
Website: https://zhanyij.github.io/

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

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)