Zhanyi Jiao, ASA

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EMPLOYMENT

Arizona State University, *Tenure-track Assistant Professor - Actuarial Science* 2025.08 – present

Illinois State University, *Tenure-track Assistant Professor - Actuarial Science* 2024.08 – 2025.08

EDUCATION

University of Waterloo, *Ph.D. - Actuarial Science* 2020.09 – 2024.07

- *Supervisors:* 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, FM, SM

RESEARCH INTEREST

Actuarial Science, Quantitative Risk Management, Insurance, Financial Mathematics

PUBLICATION AND MANUSCRIPT

(*Authors are listed in alphabetical order*)

[1] Fan, Y., **Jiao, Z.** and Wang, R. (2025). Testing mean and variance by e-processes. *Biometrika*, **112**(1), asae049.

[2] Cai, J., **Jiao, Z.** and Mao, T. (2025). Worst-case values of target semi-variances with applications to robust portfolio selection. *European Journal of Operational Research*, forthcoming.

[3] Guan, Y., **Jiao, Z.** and Wang, R. (2024). A reverse ES (CVaR) optimization formula. *North American Actuarial Journal*, **28**(3), 611-625.

[4] **Jiao, Z.**, Kou, S., Liu, Y. and Wang, R. (2022). An axiomatic theory for anonymized risk sharing. Submitted to *Journal of Political Economy* (under review). *arXiv:* https://arxiv.org/abs/2208.07533.

ACADEMIC PRESENTATION

Perspectives on Actuarial Risks in Talks of Young Researchers — Liverpool, U.K. (2025)
Title: "Testing mean and variance by e-processes with applications in finance"

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, Arizona State University

ACT 455/555 - Quantitative Risk Management — Fall 2025

Course Instructor, Illinois State University

MAT 280 - Financial Mathematics (SOA Exam FM UEC course) — Fall 2024, Spring 2025
MAT 385/485 - Actuarial Models V (SOA Exam ASTAM UEC course) — Spring 2025

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

PEER-REVIEW SERVICE

ASTIN Bulletin – The Journal of the IAA

North American Actuarial Journal

Statistics and Risk Modeling

IEEE Transactions on Neural Networks and Learning Systems (IEEE TNNLS)

PROFESSIONAL SERVICE

Illinois State University Actuarial Research Seminar 2024 - present

Department of Mathematics, Illinois State University
Organizer of the Seminar

Women in Mathematics (WiM) Directed Reading & Research Programs 2023

Faculty of Mathematics, University of Waterloo
Research Mentor

Weekly Seminars on Risk Management and Actuarial Science 2023

Department of Statistics and Actuarial Science, University of Waterloo
Organizer of the Seminar

Waterloo Student Conference in Statistics, Actuarial Science and Finance 2022 - 2023

University of Waterloo
Conference Coordinator & Session Chair

HONORS AND AWARDS

Selected Honors

- James C. Hickman Fellowship, *Society of Actuaries (SOA)* 2023 - 2024
- MATH Senate Graduate Scholarship, *UW* 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
- Dean's/Headmaster's List of Distinguished Students Scholarship, *CUG* 2015 - 2016
- The Annual Outstanding Student Scholarship(**<1%**), *CUG* 2014

Selected Awards (academic related only)

- Mathematical Contest in Modeling (MCM/ICM), *Honorable Mention* 2017
- Contemporary Undergraduate Mathematical Contest in Modeling, *National Second Prize* 2015
- Central China Mathematical Contest in Modeling (CCMCM), *Second Prize* 2014