

Benxuan Shi, ASA

Email: benxuan.shi1@uwaterloo.ca

EDUCATION

Ph.D. in Actuarial Science, University of Waterloo

September 2020 - Present

Supervisor: Bin Li and Mario Ghossoub

M.Sc. in Statistics, Chongqing University

September 2017 - June 2020

Supervisor: Zhimin Zhang

B.Sc. in Statistics, Chongqing University

September 2013 - June 2017

PUBLICATIONS

[1] Wen Su, Benxuan Shi, and Yunyun Wang. Estimating the Gerber-Shiu function under a risk model with stochastic income by Laguerre series expansion. *Communications in Statistics - Theory and Methods*, 49:5686 – 5708, 2019.

[2] Benxuan Shi and Zhimin Zhang. Pricing equity-linked annuities with cliquet-style guarantees under time-changed Lévy models by frame duality projection. *Communications in Nonlinear Science and Numerical Simulation*, 95:105651, 2021.

[3] Wei Zhong, Benxuan Shi, and Zhimin Zhang. Valuation of guaranteed minimum maturity benefits under mean reversion and jump models with surrender risk. *Journal of Computational and Applied Mathematics*, 440:115646, 2024.

[4] Mario Ghossoub, Bin Li, and Benxuan Shi. Bowley-optimal convex-loaded premium principles. Revised and resubmitted to *Insurance: Mathematics and Economics*, 2024.

[5] Mario Ghossoub, Bin Li, and Benxuan Shi. Optimal insurance in a monopoly: dual utilities with hidden risk attitudes. To be submitted to *Economic Theory*.

[6] Mario Ghossoub, Bin Li, and Benxuan Shi. Bowley-optimal distortion premium principles under rank-dependent utility (Working Paper).

[7] Mario Ghossoub, Bin Li, and Benxuan Shi. Bowley-optimal premium principles in general form (Working Paper).

PROFESSIONAL DESIGNATIONS

Associate of the Society of Actuaries (ASA)

December 2023

Fellow of the Society of Actuaries (FSA) Designation Requirements

ERM Module (in progress)

AWARDS

James C. Hickman Scholarship, Society of Actuaries, USD 20,000 per year

2023–2025

Stats & Actuarial Science Chair's Award, University of Waterloo

Winter 2023, Spring 2023

International Doctoral Student Award, University of Waterloo

2020–2024

Provost Doctoral Entrance Award for Women , University of Waterloo	2020
Excellent Master's Thesis Award , Chongqing City	2020
National Scholarship for Graduate Students , Ministry of Education, PRC	2018
Outstanding Graduate Cadres , Chongqing University	2017
Third-Class Comprehensive Scholarship , Chongqing University	2017
Second-Class Comprehensive Scholarship , Chongqing University	2014, 2016

TEACHING ASSISTANT EXPERIENCE

ACTSC 232 Life Contingencies 1	Winter 2024
ACTSC 431 Casualty & Hlth Insur Math 2	Fall 2023
ACTSC 372 Investment Sci & Corporate Fin	Fall 2023
ACTSC 454/ACTSC 854 Longevity & Mortality Using PA	Winter 2023
ACTSC 221 Intro Fin Math (Non-Spec)	Winter 2023
ACTSC 446/ACTSC 846 Math of Financial Markets	Fall 2022
ACTSC 231 Intro Financial Mathematics	Fall 2022, Spring 2023
ACTSC 432 Property & Cas Insur: Pricing	Spring 2022
ACTSC 331 Life Contingencies 2	Spring 2022
STAT 231 Statistics	Winter 2022, Winter 2024
STAT 230 Probability	Winter 2022, Fall 2021
SYDE 212 Probability & Statistics	Fall 2021

CONFERENCE PRESENTATIONS

Optimal insurance with uncertain risk attitudes and adverse selection.	July 2024
The 27th International Congress on Insurance: Mathematics and Economic	
Bowley optimal premium principle under exponential utility.	July 2023
The 26th International Congress on Insurance: Mathematics and Economics	
Bowley optimal premium principle under exponential utility.	October 2022
The 3rd Waterloo Student Conference in Statistics	
Equity-indexed annuities pricing with cliquet-style guarantees under time-changed Lévy models.	November 2019
China Forum for Risk Management and Actuarial Science	