

YUAN ZHUANG

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EDUCATION

Nankai University, School of Finance

Sep. 2022 – Present

M.S., Major: Actuarial Sciences, GPA: 94.6/100, Rank: 1/165

Tianjin

Southwestern University of Finance and Economics, School of Insurance

Sep. 2018 – Jun. 2022

B.S., Major: Actuarial Sciences, GPA: 90.4/100, Rank: 3/46

Chengdu, Sichuan

PUBLICATIONS

Under Review

- Luo, L., & Zhang, L., & **Zhuang, Y.** (2024). Assessing Regional Flood Risks under Climate Change: A Machine Learning and Spatial Clustering Approach. *The Geneva Papers on Risk and Insurance - Issues and Practice* (Under Review)
- Zhang, L., & **Zhuang, Y.** (2024). What KAN Mortality Say: Smooth and Interpretable Mortality Modeling Using Kolmogorov–Arnold Networks. *ASTIN Bulletin* (Under Review)

In Journals, with Peer Review

- Zhang, L., & **Zhuang, Y.** (2023). Scenario Analysis of Correlation Matrix for Minimum Capital Requirement of Non-Life Insurance Risk under C-ROSS. *Insurance Studies (In Chinese)*, 202307:3-16.

Book Chapters

- Zhang, L., & **Zhuang, Y.** (2024). *Multiple-State Models*, Chapter 8 in Actuarial Mathematics in Life Insurance: Textbook for China's Association of Actuaries. (Editor: Lianzeng Zhang). China Financial & Economic Publishing House
- Zhang, L., & **Zhuang, Y.** (2024). *Reserving in Non-Life Insurance*, Chapter 4 in Actuarial Mathematics in Non-Life Insurance: Textbook for China's Association of Actuaries. (Editor: Lianzeng Zhang). China Financial & Economic Publishing House
- Zhang, L., & **Zhuang, Y.** (2024). *Annuities*, Chapter 2 in Interest Theory: Textbook for China's Association of Actuaries. (Editor: Lianzeng Zhang). China Financial & Economic Publishing House

CONFERENCE PRESENTATIONS

2024 SOA China Symposium

May. 2024

Wuhan, China

- Title “What KAN Mortality Say: Using KAN to Model Mortality”

2023 CCISSR Forum

August. 2023

Beijing, China

- Title “An Actuarial Evaluation of Financial Subsidies and Raising the Age of Entitlement in Urban and Rural Residence Insurance”

2022 China Forum for Risk Management and Actuarial Science

Nov. 2022

Chengdu, China

- Title “Nearest Correlation Matrix Methods and Minimum Capital Sensitivities”

RESEARCH EXPERIENCE & ACADEMIC PROJECTS

Rate Factors and Risk Prediction of New Energy Automobiles (Tianjin's Graduate Research Program) 2023 – 2024

Mortality under Climate Change: a Machine Learning Perspective (National College Student Training Program) 2020 – 2021

Blockchain in Accounting: a Trust-Cost Perspective (National College Student Training Program) 2019 – 2020

PRIZES IN COMPETITIONS

First Place in China Re. Case Study Challenge, Title: On Graduation of Mortality in Practice Aug. 2023

Second-Class Prize of Shanghai Smart New Energy Vehicle Big Data Competition Dec. 2023

Finalist in Interdisciplinary Contest In Modeling, Title: Towards Greener and Fairer Food Systems May. 2021

Semi-Finalist in SOA Case Study Challenge, Title: Health Parametric Insurance Jan. 2021

Second Place in CAS China Case Study Challenge, Title: Machine Learning and Pricing Competitiveness Nov. 2020

SCHOLARSHIPS

China National Scholarship , Ministry of Education of P.R.C	Oct. 2023 & Oct. 2024
First-Class Academic Scholarship for M.S. , Nankai University	Oct. 2023 & Oct. 2024
Freshman Scholarship for M.S. , Nankai University	Oct. 2022
SINO Life Scholarship , Southwestern University of Finance and Economics	June. 2021
Scholarship for Actuaries , Southwestern University of Finance and Economics	May. 2021
First-Class Scholarship for B.S. , Southwestern University of Finance and Economics	Nov. 2019 & Nov. 2020

TEACHING SKILLS

Basic Actuarial Science , Best TA Award	Spring 2024 in Nankai University
Insurance Investment and Financial Markets , Best TA Award	Spring 2024 in Nankai University
Big Data in Actuarial Sciences and Matlab Programming , Best TA Award	Spring 2024 in Nankai University
Actuarial Modelling , Best TA Award	Fall 2023 in Nankai University
Machine Learning with R , Best TA Award	Spring 2023 in Nankai University

INDUSTRY PROJECTS & INTERNSHIP

China Re , Analysis of Mortality in China (Leader: Asso. Prof. Jiamei Sun)	Mar. 2023 – May. 2023
PingAn Property Insurance , New Energy Vehicle Risk Analysis (Leader: Prof. Lianzeng Zhang)	Jan. 2023 – Mar. 2023
SCOR , Vitality Insurance in China (Leader: Prof. Lianzeng Zhang)	Oct. 2022 – Dec. 2022
PwC , Life Insurance Consulting Intern	Jan. 2022 – Mar. 2022
SINO Life , Life Products Reserving Intern	Aug. 2021 – Nov. 2021
Taikang Life , Life Products Modelling Intern	Jun. 2021 – Aug. 2021

PROFESSIONAL SKILLS AND CREDENTIALS

Programming: Python, Matlab, R, JAVA, \LaTeX

Language: English (IELTS 8.0, Reading 8.5, Listening 8.5, Writing 6.5, Speaking 7.5); Chinese, mother tongue; Cantonese, mother tongue

Associate Membership: Society of Actuaries (ASA)

OTHER STUDENT POSITIONS

Orchestra Conductor of Southwestern University of Finance and Economics	2020 – 2022
Lead Clarinetist of Southwestern University of Finance and Economics	2018 – 2020

REFEREES

- Prof. Lianzeng Zhang, Professor, School of Finance, Nankai University.
Email: zhlz@nankai.edu.cn
- Prof. Xiaowei Chen, Professor, School of Finance, Nankai University.
Email: chenx@nankai.edu.cn