# SHAN (SHAWN) YANG

Email: s.yang@unsw.edu.au | LinkedIn

## EDUCATION

Ph.D. candidate in Risk and Actuarial Studies, UNSW Sydney, Sydney, Australia — 2023–27 (Expected)
*Supervisors: Prof. Qihe Tang, A/Prof. Katja Ignatieva, and A/Prof. Han Li*
Master (Mathematical Finance), Southwestern University of Finance and Economics, Chengdu, China — 2020–23
Bachelor (Financial Mathematics), Southwestern University of Finance and Economics, Chengdu, China — 2016–20

## RESEARCH INTERESTS

Systemic Risk; Reinsurance Networks; Climate Change and Insurance; Bayesian Learning; Electricity Price Forecasting; AI Insurance

## RESEARCH PROJECTS

- *Systemic Risk in Reinsurance Networks.* Hua Chen, Qihe Tang, and **Shawn Yang.** To be submitted in March 2026. Targeted journal: Management Science.
- *Bayesian Learning of Regional Economic Impacts of Climate Change.* Qihe Tang and **Shawn Yang.** To be submitted in October 2026. Targeted journal: Journal of Environmental Economics and Management.
- *Forecasting Australian Electricity Spot Prices with Spatial-temporal Weather Indices.* Katja Ignatieva, Han Li, and **Shawn Yang.** To be submitted in May 2026. Targeted journal: Energy Economics.

## PUBLICATIONS

- Ma, J.T. and **Yang, S.**, 2024. *High-dimensional Stochastic Control Models for Newsvendor Problems and Deep Learning Resolution.* Annals of Operations Research, 339, 789-811.

## CONFERENCE TALKS

- The 2025 World Risk and Insurance Economics Congress (WRIEC), Hyatt Regency Calgary, Calgary, Canada, August 3–7, 2025.
- The 60th Actuarial Research Conference (ARC), York University, Toronto, Canada, July 29–August 1, 2025.
- The 2024 Australasian Actuarial Education and Research Symposium (AAERS), Monash University, Melbourne, Australia, November 20–21, 2024. Presented on "*Systemic Risk in Reinsurance Networks*".
- The 27th International Congress on Insurance: Mathematics and Economics, University of Illinois Urbana-Champaign, Chicago, USA, July 8–11, 2024. Presented on "*The Role of Regional Risk Insurance Pools in Supporting Climate Resilience*".
- The 20th Annual Meeting of the Chinese Society for Industrial and Applied Mathematics (CSIAM 2022), Virtual Conference, November 17–20, 2022. Presented on "*High-dimensional Stochastic Control Models for Newsvendor Problems and Deep Learning Resolution*".

## TEACHING

**Head Tutor, Probability and Mathematical Statistics (ACTL2131)**, 2025 Term 1. *Evaluation*: 5.3/6.0.
- Deliver tutorial classes and consultation sessions.
- Contribute to the development of exams and assignments.

## ENGAGEMENT

**Reviewer, *Insurance: Mathematics and Economics*** — 2024–Present
- Completed three assignments.

## AWARDS AND HONORS

2024–25: UNSW Development and Research Training Grant, AUD 1,500 each year.
2023–25: UNSW School of Risk and Actuarial Studies PhD Research Fund, AUD 3,500 each year.
2023: Outstanding Graduate, Sichuan Province.
2021–23: Outstanding Postgraduate Award, Southwestern University of Finance and Economics.

2021–23: Postgraduate Learning Excellence Scholarship, Southwestern University of Finance and Economics, RMB 10,000 each year.
2022: National Scholarship, RMB 20,000.
2021: First Prize in China Postgraduate Industrial and Financial Big Data Modeling Contest. Team Leader.
2020: Outstanding Undergraduate Thesis Award, Southwestern University of Finance and Economics.
2019: SWUFE Social Practice Award, Southwestern University of Finance and Economics.
2019: Guanghua Academic Achievement Award, Southwestern University of Finance and Economics.
2018: National Second Prize in China Undergraduate Mathematical Contest in Modeling (CUMCM).
2018: Honorable Mention in U.S. Interdisciplinary Contest in Modeling (ICM).
2017: First-class Academic Award, Southwestern University of Finance and Economics.

## GRANTS

2025–2026: UNSW Business School Sustainable Development Goals (SDGs) Research Grant, $4,000 AUD.

2023–24: Research Assistant, a successful proposal for the Australian Research Council Discovery Project (Lead Chief Investigator: Qihe Tang; Chief Investigator: Elise Payzan-LeNestour; Partner Investigator: Jose Blanchet), AUD 538,596 [ARC DP250100078].

## PROFESSIONAL EXPERIENCES

**Bohai Rongsheng Capital Management Co., Ltd. –** *Derivatives Trader*; Shanghai, China Nov 2021–Feb 2022

- Executed *OTC equity* and *commodity derivatives* while actively monitoring market and liquidity exposures to keep positions within firm-wide limits.
- Designed *daily risk-control dashboards* that flagged limit breaches and stress-test outliers, reducing response time and enhancing regulatory readiness.

**Morgan Stanley Capital International –** *Part-time Assistant*; Online July 2019–Oct 2019

- Priced *index-linked options* and analyzed the Greeks to quantify hedging costs.
- Developed a *statistical-arbitrage model* for U.S. equities and back-tested it on Shanghai & Shenzhen A-share data in Python.

**Shenwan Hongyuan Securities Co., Ltd. –** *Research Assistant*; Changsha, China Dec 2018–Feb 2019

- Led surveillance of trading activity, screening for potential *money laundering* patterns, and drafting anti-money laundering compliance reports adopted by the internal audit team.
- Performed *quarterly risk reviews* for the sales department, recommending risk management actions subsequently integrated into firm-wide policies.

**SOA Exam:** P and SRM.