

TIANXIANG SHI PH.D., FSA

CONTACT INFORMATION

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EDUCATION

Ph.D. in Actuarial Science, University of Waterloo 2013
M.S. in Applied Mathematics, University of Illinois at Urbana-Champaign 2009
B.S. in Mathematics, Zhejiang University 2007

PROFESSIONAL CREDENTIALS

Fellow of the Society of Actuaries (FSA) 2017

EMPLOYMENT

Assistant Professor, Temple University 2016 – Present
Co-Director, M.S. Program in Actuarial Science, Temple University 2017 – Present
Assistant Professor, University of Nebraska-Lincoln 2013 – 2016

REFEREED PUBLICATIONS

- Landriault, D., B. Li, T. Shi and D. Xu (2019). On the distribution of classic and some exotic ruin times. *Insurance: Mathematics and Economics* 89: 38-45.
- Cox, S.H., Y. Lin, and T. Shi (2018). Pension risk management with funding and buyout options, *Insurance: Mathematics and Economics*, 78: 183-200.
- Cai, J., D. Landriault, T. Shi and W. Wei (2017). Joint insolvency analysis of a shared MAP risk process: a capital allocation application, *North American Actuarial Journal*, 21(2): 178-192.
- Lin, Y., T. Shi and A. Arik (2017). Pricing buy-ins and buy-outs. *Journal of Risk and Insurance*, 84: 367-392.
- Huynh, M., D. Landriault, T. Shi and G.E. Willmot (2015). On a risk model with claim investigation. *Insurance: Mathematics and Economics*, 65: 37-45.
- Landriault, D. and T. Shi (2015). Occupation times in the MAP risk model. *Insurance: Mathematics and Economics*, 60: 75-82.
- Landriault, D. and T. Shi (2014). First passage time for compound Poisson processes with diffusion: ruin theoretical and financial applications. *Scandinavian Actuarial Journal*, 2014(4): 368-382.

Shi, T. and D. Landriault (2013). Distribution of the time to ruin in some Sparre Andersen risk models. *ASTIN Bulletin*, 43(1): 39-59.

Landriault, D., T. Shi and G.E. Willmot (2011). Joint densities involving the time to ruin in the Sparre Andersen risk model with exponential claim sizes. *Insurance: Mathematics and Economics*, 49: 371-379.

TEACHING EXPERIENCE

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| Temple University | 2016 – Present |
| AS2101 Actuarial Probability & Statistics II, Fall 2016 – 2018; Spring 2018 | |
| AS2502/5101 Theory of Interest, Fall 2016; Spring 2019 | |
| AS3501/5102 Actuarial Modelling I, Spring 2018; Fall 2018 | |
| AS3502 Actuarial Modelling II, Spring 2017 | |
| AS3503/5104 Actuarial Modelling III, Spring 2019 | |
| University of Nebraska-Lincoln | 2013 – 2016 |
| ActS 470 Life Contingencies I, Spring 2014 – 2016 | |
| ActS 471 Life Contingencies II, Fall 2013 – 2015 | |
| ActS 474/874 Intro to Property/Casualty Actuarial Science, Spring 2014 – 2016 | |
| University of Waterloo | 2011 – 2012 |
| ACTSC 232 Introduction to Actuarial Mathematics, Winter 2012 | |
| ACTSC 221 Mathematics of Investment, Fall 2011 | |

GRANTS

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| Society of Actuaries FSA Institutional Grant (PI, \$7,500) | 2017 |
| 2014 SOA Individual Grant Competition (PI, \$15,000) | 2014 |
| “Economical Capital and Its Optimal Allocations in the Joint-Insolvency Risk Model” (co-PI’s: David Landriault and Wei Wei). Sponsor: CKER of the Society of Actuaries. | |
| CAS & CSAF Educational Grant (PI, \$5,000) | 2013 |
| “Introduction to Property&Casualty Actuarial Science”, University of Nebraska-Lincoln. Sponsor: Casualty Actuarial Society and the Central States Actuarial Forum. | |

AWARDS & SCHOLARSHIPS

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| Temple University | |
| Faculty of the Year, MS Actuarial Science | 2019 |
| The Society of Actuaries | |
| James C. Hickman Scholarship | 2011 – 2013 |

INVITED SEMINARS

“Pension Risk Management with Funding and Buyout Options”

Department of Mathematical Science, Middle Tennessee State University, October 2017

The School of Management, University of Science and Technology of China, May 2017

“Pension De-Risking: Buy-ins and Buy-outs”

Department of Mathematics, Chongqing University, June 2016

Smeal College of Business, Penn State University, January 2016

Department of Mathematics, University of Connecticut, November 2015

“Pricing Pension Buy-ins and Buy-outs”

School of Public Affairs, Zhejiang University, July 2014

“The Time to Ruin: Analysis of an Insurer’s Insolvency Risk”

Department of Statistics and Probability, Michigan State University, 2013

Department of Statistics & Actuarial Science, The University of Iowa, 2013

CONFERENCE PRESENTATIONS

“To Buyout or Not to Buyout?” (joint work with Yijia Lin and Richard MacMinn)

The American Risk and Insurance Association Annual Meeting, Chicago, IL, August 2018 (presented by coauthor)

22nd International Congress on Insurance: Mathematics and Economics, Sydney, Australia, July 2018

“On the Distribution of Classic and Some Exotic Ruin Times” (joint work with David Landriault, Bin Li and Di Xu)

23rd International Congress on Insurance: Mathematics and Economics, Munich, Germany, July 2019

7th International Gerber-Shiu Workshop, Melbourne, Australia, July 2018

“On the Valuation of Reverse Mortgages with Surrender Options” (joint work with Yung-Tsung Lee)

China International Conference on Insurance and Risk Management, Chengdu, China, July 2019

Thirteenth International Longevity Risk and Capital Markets Solutions Conference, Taipei, China, September 2017

21st International Congress on Insurance: Mathematics and Economics, Vienna, Austria, July 2017 (presented by coauthor)

“Joint Insolvency Analysis of a Shared MAP Risk Process: A Capital Allocation Application” (joint work with Jun Cai, David Landriault and Wei Wei)

20th International Congress on Insurance: Mathematics and Economics, Atlanta, GA, July 2016

“Pension Risk Management with Funding and Buyout Options” (joint work with Samuel H. Cox and Yijia Lin)

The American Risk and Insurance Association Annual Meeting, Cambridge, MA, August 2016 (presented by coauthor)

Eleventh International Longevity Risk and Capital Markets Solutions Conference, Lyon, France, September 2015

50th Actuarial Research Conference, Toronto, Canada, August 2015

China International Conference on Insurance and Risk Management, Hangzhou, China, July 2015

19th International Congress on Insurance: Mathematics and Economics, Liverpool, UK, June 2015

- “Experience of Developing the New Casualty Actuarial Science Course at UNL”
Central State Actuarial Forum Annual Meeting, Kansas City, MO, September 2014
- “Pricing Buy-ins and Buy-outs” (joint work with Yijia Lin and Ayşe Arik)
Tenth International Longevity Risk and Capital Markets Solutions Conference, Santiago, Chile, September 2014
18th International Congress on Insurance: Mathematics and Economics, Shanghai, China, July 2014
- “Joint Distribution Involving the Time to Ruin in Sparre Andersen Risk Models” (joint work with David Landriault)
15th International Congress on Insurance: Mathematics and Economics, Trieste, Italy, June 2011
International Conference on Actuarial Science and Related Fields, Hainan, China, March 2011
- “Finite-Time Ruin Problems in Sparre Andersen Models with Arbitrary Interclaim Times” (joint work with David Landriault and Gordon E. Willmot)
45th Actuarial Research Conference, Vancouver, Canada, July 2010

PROFESSIONAL SERVICE

Ad-hoc Referee Service

Insurance: Mathematics and Economics, Journal of Risk and Insurance, North American Actuarial Journal, ASTIN Bulletin, Scandinavian Actuarial Journal, Asia-Pacific Journal of Risk and Insurance, Journal of Insurance Issues, Applied Mathematics and Computation, ESAIM: Probability and Statistics, Risks, and Annals of Actuarial Science.

Doctorial Dissertation Committee

Committee member: Jiang Qiao, Risk and Insurance Ph.D. student 2019–Present
“Does Shareholder Litigation Affect Corporate Risk-Taking: An Evidence from Property-Casualty Insurance Industry?” & “Application of Hidden Markov Model to Auto Telematics Data”.

Committee member: Rui Ju, Ph.D. in Risk and Insurance 2018–2019
“An Analysis of the Impact of Contingent Commission Use on Underwriting Performance in the Property-Liability Insurance Industry” & “Impact of CEO Overconfidence on Capital Structure and Reinsurance Purchase: Evidence from the Property-Liability Insurance Industry”.

Committee member: Myeonghun Choi, Ph.D. in Risk and Insurance 2018–2019
“The Role of Credit Rating Agencies in the U.S. P&C Insurance Market: Monitoring Insurers’ Loss Reserve Management Behaviors” & “The Effect of Financial Crisis and Dodd-Frank Act on Derivative Use in the Insurance Market: Evidence from the US Life Insurance Industry”.

Discussant/Session Chair

China International Conference on Insurance and Risk Management, 2019
The American Risk and Insurance Association Annual Meeting, 2018
22nd International Congress on Insurance: Mathematics and Economics, 2018
50th Actuarial Research Conference, 2015
China International Conference on Insurance and Risk Management, 2015

College/Department Service

Temple University
Co-Director, MS Program in Actuarial Science 2017 – Present
Primary Faculty, Owlympiad Math Competition 2017 – Present

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| Committee member, Department Research Committee | 2018 – Present |
| Committee member, Department PhD Students Committee | 2018 – Present |
| Committee member, Department Students Award Committee | 2019 – Present |
| Committee member, Department Professional Exams and Designations Committee | 2018 – 2019 |
| University of Nebraska-Lincoln | |
| Actuarial Science Undergraduate Student Advisor | 2013 – 2016 |
| Committee member, Actuarial Science Advisory Board, Research Committee | 2014 – 2016 |
| Committee member, CBA Scholarship, Honors and Awards Committee | 2015 – 2016 |
| Committee member, Actuarial Science Search Committee | 2015 |
| Committee member, Finance (PoP) Search Committee | 2014 – 2015 |
| Committee member, Actuarial Science (PoP) Search Committee | 2014 |

Last Updated on Oct, 2019.