Curriculum Vitae

Xueyuan Wu (B.Sc, M.Sc, PhD, AIAA)

Centre for Actuarial Studies
Department of Economics
The University of Melbourne
VIC 3010, Australia
Web: http://www.economics.unimelb.edu.au/who/profile.cfm?sid=76

Tel.: 61 3 8344 7939
Email: xueyuanw@unimelb.edu.au

EDUCATION:

PhD (Actuarial Science)
The University of Hong Kong 2004
PhD thesis "Insurance Risk Models with Correlated Classes of Business"

M.Sc (Probability & Statistics)
Nankai University, China 2000

B.Sc (Probability & Statistics)
Nankai University, China 1997

WORKING EXPERIENCE:

Teaching Experience

09/10 – present The University of Melbourne
Senior Lecturer at the Centre for Actuarial Studies.

01/06 – 08/10 The University of Melbourne
Lecturer at the Centre for Actuarial Studies.
Lecturing in Financial Mathematics I, Actuarial Modelling II, Contingencies, Risk Theory II, Actuarial Studies Projects and supervising Actuarial Studies Research Essay.

01/05 –12/05 The University of South Australia
Casual Lecturer at the School of Mathematics and Statistics.
Coordinating and lecturing in Statistical Analysis in Business (a large scale service teaching subject with around 1000 enrolled students per year) and Life Contingencies.

08/03 –12/05 The University of South Australia
Tutor at the School of Mathematics and Statistics.
Tutoring in Statistical Analysis in Business and Statistics for Laboratory Sciences 101.

08/03 –12/05 The University of South Australia
Tutor for the Aboriginal Tutorial Assistance Scheme (ATAS)
Conducting tuition sessions for Statistics for Laboratory Sciences 101 and Applied Research and Evaluation.

10/00 – 08/03 The University of Hong Kong
Part-time tutor at the Department of Statistics and Actuarial Science.
Conducting tutorials for Financial Mathematics, Risk Theory, Probability Modeling, and Stochastic Models.

Research Assistant

06/05 – 07/05 University of South Australia
Research Assistant at the School of Mathematics and statistics.
Using SPSS and R to analyse elderly citizens' suicide rates by fitting the generalised additive model.

ACADEMIC ACHIEVEMENTS:

Working Papers

Liu, Q., Pitt, D. and Wu, X. Data mining for income protection insurance.

Refereed Publications in Journals

[1] Liu, Q., Pitt, D., Wang, Y. and Wu, X. (2013). Survival Analysis of Left Truncated Income Protection Insurance Data. Asia-Pacific Journal of Risk and Insurance, in press.

[2] Wu, X. (2013). Equilibrium distributions of discrete phase type. Stochastic Models, in press.

[3] Wu, X. and Li, S. (2012). On a discrete time risk model with time-delayed claims and a constant dividend barrier. Insurance Markets and Companies: Analysis and Actuarial Computations, 3 (1), 50-57.

[4] Liu, Q., Pitt, D., Zhang, X. and Wu, X. (2011). A Bayesian approach to parameter estimation for kernel density estimation via transformations. Annals of Actuarial Science, 5(2), 181-193.

[5] Siaw, K.K., Wu, X., Pitt, D. and Wang, Y. (2011). Matrix-form Recursive Evaluation of the Aggregate Claims Distribution Revisited. Annals of Actuarial Science, 5(2), 163-179.

[6] Wu X. (2010). Ruin probabilities for a risk model with two classes of risk processes. Australian Actuarial Journal, 16, 87-108.

[7] Wu, X. and Li, S. (2010). Matrix-form recursive evaluations of compound distributions. ASTIN Bulletin, 40, 351-368.

[8] Yip, P.S.F., Pitt, D., Wang, Y., Wu, X., Ratson, R., Huggins, R. and Xu, Y. (2010). Assessing the Impact of Suicide Exclusion Periods on Life Insurance. CRISIS: The Journal of Crisis Intervention and Suicide Prevention, 31, 217-223.

[9] Wu, X. and Li, S. (2009). On the discounted penalty function in a discrete time renewal risk model with general interclaim times. Scandinavian Actuarial Journal, 4, 281-294.

[10] Beveridge, C.J., Dickson, D.C.M. and Wu, X. (2008). Optimal dividends under reinsurance. Bulletin of the Swiss Association of Actuaries, 2, 149-166.

[11] Yuen, K.C., Guo, J.Y. and Wu, X. (2006). On the first time of ruin in the bivariate compound Poisson model. Insurance: Mathematics and Economics, 38, 298-308.

[12] Wu, X. and Yuen, K.C. (2003). A discrete-time risk model with interaction between classes of business. Insurance: Mathematics and Economics, 33, 117-133.

[13] Yuen, K.C., Guo, J.Y. and Wu, X. (2002). On a correlated aggregate claims model with Poisson and Erlang risk processes. Insurance: Mathematics and Economics, 31, 205-214.

Discussions

Wu, X. (2008) Discussion of “The Time of Recovery and the Maximum Severity of Ruin in a Sparre Andersen Model”. North American Actuarial Journal 12(4): 425-427.

Conference Papers and Other Research Output

Wu, X. and Li, S. (2008). On a discrete-time Sparre Anderson model with phase-type claims. Centre for Actuarial Studies: the research paper series, No 169, University of Melbourne.

Wu, X.Y., Yuen, K.C. (2004) “An interaction risk model with delayed claims,” The XXXV ASTIN Colloquium, 17 pages.

Yuen, K.C., Guo, J.Y., Wu, X.Y. (2002) “Ruin probabilities for a correlated claims model,” Transactions of the 27th: International Congress of Actuaries and the 33rd International ASTIN Colloquium, 15 pages.

Conference Presentation and Seminars

"Equilibrium distributions of discrete phase type" (2013). Invited speaker, The 2013 International Conference on Actuarial Risk and Related Topics, 15-17 March, Nankai University, China.

“Equilibrium distributions of discrete phase type” (2012). The 4th International Gerber-Shiu Workshop, 4-5 July, Melbourne.

“Matrix-form Recursions for a family of compound distributions” (2010). School of Mathematical Sciences, 9 June, Nankai University, Tianjin, China.

“Matrix-form Recursive Evaluation of the Aggregate Claims Distribution Revisited” (2010). The 14th International Congress on Insurance: Mathematics and Economics, June 17-19, Canada.

“Matrix-form Recursions for a family of compound distributions” (2009). Australasian Actuarial Education and Research Symposium 2009, Dec 14-15, UNSW, Australia.

"Some discussions on discrete phase-type claims" (2008). Invited talk, Department of Econometrics and Business Statistics, Oct 17, Monash University.

"On a discrete-time Sparre Andersen model with Phase-type claims" (2008). The 12th International Congress on Insurance: Mathematics and Economics, July 16-18, China.

"On the discounted penalty function in a discrete time renewal risk model with general interclaim times" (2007). Invited talk, The Department of Statistics and Applied Probability, NUS, Dec 13, Singapore.

"On the discounted penalty function in a discrete time renewal risk model with general interclaim times" (2007). The 11th International Congress on Insurance: Mathematics and Economics, July 10-12, Greece.

"On the discounted penalty function in a discrete time renewal risk model with general interclaim times" (2007). Invited Speaker, International Workshop on Insurance Risk Theory and Related Topics, April 16-18, China.

"On a discrete-time risk model with delayed claims and a constant dividend barrier" (2006). The 10th International Congress on Insurance: Mathematics and Economics, July 18-20, Belgium.

"On Risk Models with Interactive Correlation" (2003). The University of Hong Kong PhD Seminar.

"Recursive Calculation of Finite-time Survival Probabilities in Discrete-time Risk Models" (2003). Invited talk, School of Math and Statistics, University of South Australia.

"On the Interaction Risk Model with Delayed Claims" (2002). International Conference on Applied Statistics, Actuarial Science and Financial Mathematics (ICAAF2002).

RESEARCH INTERESTS:

Discrete time risk models
Actuarial statistics
Phase-type distributions in Risk Theory
Matrix Analytical Methods

RESEARCH GRANTS:

Title: On the Recursive Evaluation of Aggregate Claims for a Large Family of Claim Number Distributions
Funding Body: IAAust
Start Date: 01 Jan 2010 End Date: 31 Dec 2010
Amount Awarded: $7,000
Chief Investigators: Dr Xueyuan Wu and Dr Shuanming Li

Title: The applications of Phase-type Distributions in Risk Theory

Funding Body: Faculty of Economics and Commerce, University of Melbourne
Start Date: 01 Jan 2009 End Date: 31 Dec 2009
Amount Awarded: $7,000
Chief Investigators: Dr Shuanming Li and Dr Xueyuan Wu

Title: The impact of suicide exclusion clauses on life insurer profitability
Funding Body: Division of Information Technology, Engineering and the Environment (UniSA)
Start Date: 01 Jan 2008 End Date: 31 Dec 2008
Amount Awarded: $7,000
Chief Investigators: Dr Yan Wang, Dr David Pitt and Dr Xueyuan Wu

Title: Determinants of the Longevity of Workers' Compensation Insurance Claims
Funding Body: Early Career Research Grant (Melbourne U)
Start Date: 01 Jan 2007 End Date: 31 Dec 2007
Amount Awarded: $10,000
Chief Investigators: Dr David Pitt, Dr Xueyuan Wu and Dr Shuanming Li

STUDENT SUPERVISION:

Honours

Student: Jeremiah Cheung
Year(s): 2012
Thesis: Evaluating the effectiveness of two stochastic mortality models using Hong Kong Data
Student: Yao Cheng
Year(s): 2011
Thesis: Annuity Puzzle in Australia
Student: Michael Raphael Rozenblit
Year(s): 2010 (First class Honours)
Thesis: Modelling of Motor Vehicle Accident Frequency

Student: Kok Keng Siaw
Year(s): 2009 (First class Honours)
Thesis: Further Results on Matrix-form Recursions for Aggregate Claims Distribution

Student: Qing Liu
Year(s): 2008 (First class Honours)
Thesis: The effect of suicide exclusion clause on death claims for Australian life policies

Student: Kim Hoong Wong
Year(s): 2007
Thesis: Income Protection Insurance Experience in the UK

Student: Jaan Simpson
Year(s): 2007

Thesis: A discrete time renewal risk model with general interclaim times and its application to modelling insurance risk

Student: Christopher J. Beveridge
Year(s): 2006 (First class Honours)
Thesis: Optimal Levels of Reinsurance in the Classical Risk Model

Student: Anna Kuleshova
Year(s): 2006
Thesis: Model of Aggregate Flood Claims for a Portfolio of Commercial Buildings in Coastal New South Wales

PhD co-supervision

Student: Qing Liu

Time of commencement: Mar 2009

Time of completion: Mar 2013.

Institute: Centre for Actuarial Studies, Department of Economics, University of Melbourne

MEMBERSHIP IN PROFESSIONAL ORGANISATION:

Associate of the Actuaries Institute (since August 2011)

PROFESSIONAL ACTIVITIES:

Referee for Journals

Acta Mathematicae Applicatae Sinica (English Series)
Acta Mathematica Scientia
Applied Mathematics and Computation
ASTIN Bulletin
Insurance: Mathematics and Economics
Performance Evaluation
Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales
Statistics and Probability Letters
Stochastic Environmental Research and Risk Assessment