Curriculum Vitae

Biographical Information:

Personal:

Name:	X. Sheldon Lin
University Address:	Department of Statistical Sciences University of Toronto Toronto, Ontario M5S 3G3 Telephone No.: (416) 946-5969 Email: sheldon@utstat.utoronto.ca

Degrees:

B.Sc.	1980	Xiamen University
M.Sc.	1985	Fuzhou University
M.Math.	1993	University of Waterloo
Ph.D.	1990	University of Alberta

Employment

Appointments

2002-present	Professor, Statistical Sciences, and Full Member of Graduate Faculty, University of Toronto
2013-2014	Acting Chair, Statistical Sciences, University of Toronto
2007-2009	Associate Chair (Graduate), Statistics, University of Toronto
2001-2002	Associate Professor, Statistics, University of Toronto
1997-2000	Associate Professor, Statistics and Actuarial Science, University of Iowa
1997-present	Adjunct Professor, Statistics and Actuarial Science, University of Waterloo
1993-1997	Assistant Professor, Statistics, University of Toronto
1991-1992	Research Associate, Applied Mathematics, University of Waterloo
1990-1991	Postdoctoral Fellow, Mathematics, University of Alberta

Visiting Appointments

4.2015	Warren Chair Distinguished Visiting Scholar Warren Centre for Actuarial Studies and Research, University of Manitoba
2011-2015	Centre for Actuarial Studies, Xiamen University
4.2008	Distinguished Visiting Professor, Mathematics and Actuarial Science

	American University in Cairo
2006-2007	Visiting Professor, Applied Mathematics
	Hong Kong Polytechnic University
7.2006	Invited Professor, Institut de Science Financiere et d'Assurance (ISFA)
	Universite Claude Bernard Lyon I
2004	Visiting Professor, Mathematics, University of Michigan

Honours:

2004 Co-winner, Annual Prize for the best paper published in *North American Actuarial Journal* in 2003, Society of Actuaries.
1998 Co-winner, Annual Prize for the best paper published in *North American Actuarial Journal* in 1997, Society of Actuaries.
1994 Dean's Excellence Award, University of Toronto.
1992 University of Waterloo Graduate Scholarship.
1989-1990 University of Alberta Dissertation Fellowship.

Professional Affiliations and Activities

Editor, *Insurance: Mathematics and Economics,* 2017-present.

Co-Editor, *North American Actuarial Journal,* 2008-2012.

Associate Editor
Insurance: Mathematics and Economics, 2000-2017.
North American Actuarial Journal, 2002-2008.
Management Science, 1998-2001.

Associate, Society of Actuaries, 1993–present.

Associate, Canadian Institute of Actuaries, 2014–present.

Member, Scientific Committee
Twenty second International Congress on Insurance: Mathematics and Economics, Sydney, July 2018.
Advances in Predictive Analytics Conference, Waterloo, December 2017.
Twentieth International Congress on Insurance: Mathematics and Economics, Atlanta, August 2016.
Sixth International Gerber-Shiu Workshop, Remin University, Beijing, June 2016.
Eighteenth International Congress on Insurance: Mathematics and Economics, Shanghai, July 2014.
Sixteenth International Congress on Insurance: Mathematics and Economics, Hong Kong, June 2012.
International Conference on Actuarial Science and Risk Management, Xiamen, China, June 2012.
International Conference on Insurance and Actuarial Mathematics, Chongqing, China,

March 2012.
International Conference on Actuarial Science and Related Fields, Haikou, China, March 2011.
Fourteenth International Congress on Insurance: Mathematics and Economics, Toronto, June 2010.
International Conference on Insurance and Actuarial Science, Chongqing, China, June 2010.
International Conference on Actuarial and Financial Risks, Shanghai, China, January 2010.
Thirteenth International Congress on Insurance: Mathematics and Economics, Istanbul, Turkey, May 2009.
Stochastic Modelling Symposium, Canadian Institute of Actuaries/Society of Actuaries, Montreal, December 2008.
Twelfth International Congress on Insurance: Mathematics and Economics, Dalian, China, July 2008.
Tenth International Congress on Insurance: Mathematics and Economics, Leuven, Belgium, July 2006.
Stochastic Modelling Symposium, Canadian Institute of Actuaries/Society of Actuaries, Toronto, April 2006.
Ninth International Congress on Insurance: Mathematics and Economics, Quebec City, July 2005.
Stochastic Modelling Symposium, Canadian Institute of Actuaries, Toronto, September 2003.
International Conference in Applied Statistics, Actuarial Science and Financial Mathematics, Hong Kong, December 2002.
Eleventh International AFIR Colloquium, Toronto, September 2001.

Member, Organizing Committee
Workshop on Recent Advances in Actuarial Mathematics at Casa Matematica Oaxaca (CMO), Mexico, October 2015.
Second Quebec-Ontario Workshop on Insurance Mathematics, Fields Institute, Toronto, February 2012.
Fourteenth International Congress on Insurance: Mathematics and Economics, Toronto, June 2010.
Data Analysis and Statistical Foundations III, Conference in Honour of Professor D.A.S. Fraser, Toronto, April 2010.
Festkolloquium in Honour of Professor Phelim Boyle, Waterloo, June 2006.

Reviewer for Grant Proposals
Natural Sciences and Engineering Research Council of Canada (NSERC), 2002–2008, 2012–2014, 2016, 2018.
Research Grants Council of Hong Kong, 2002–2014, 2016.
Deutsche-Israel Program, 2015.
Fonds de Recherche du Quebec - Nature et technologies, 2014.
Fonds Wetenschappelijk Onderzoek (FWO), Belgium, 2013, 2015.

Swiss National Science Foundation (SNF), 2008, 2012, 2016.
National Science Foundation (NSF), USA, 2010, 2011.
University of Wisconsin-Milwaukee's Research Growth Initiative, 2012.
Mitacs Accelerate Internship Proposal, 2012.
Mathematics of Information Technology and Complex Systems Network of Centres of Excellence (MITACS-NCE), 2007.
SHARCNET, 2007.
Research Council of Katholieke Universiteit Leuven, Belgium, 2005.
Canada Foundation for Innovation (CFI), 2004.

Referee for

Insurance: Mathematics and Economics, ASTIN Bulletin, North American Actuarial Journal, Scandinavian Actuarial Journal, European Actuarial Journal, Annals of Actuarial Science, Journal of Actuarial Practice, Journal of Risk and Insurance, Variance, Mathematical Finance, Finance and Stochastics, Quantitative Finance, Journal of Computational Finance, Journal of Banking and Finance, Management Science, Journal of Risk, Journal of Financial Engineering, Journal of Applied Probability, Methodology and Computing in Applied Probability, Stochastic Models, Applied Stochastic Models in Business and Industry, Operations Research Letters, Mathematics of Operations Research, Journal of Computational and Applied Mathematics, Applied Mathematics and Computation, Journal of Statistical Planning and Inference, Australian & New Zealand Journal of Statistics, Journal of Multivariate Analysis, Communications in Statistics, Probability and Statistics Letters, Journal of Applied Statistics, Lifetime Data Analysis, Systems and Control Letters, Mathematical and Computer Modeling, Journal of Applied Mathematics and Decision Sciences, Journal of Applied Mathematics and Stochastic Analysis, Journal of Systems Science and Complexity, Applied Mathematics-A Journal of Chinese Universities, Zentralblatt MATH, IMA Journal of Mathematics Applied in Medicine and Biology, International Journal of Production Economics, Journal of Industrial and Management Optimization, Frontiers of Mathematics in China

Member of Academic Research Subcommittee, Canadian Institute of Actuaries, 2016–present.

Member of ASB-Designated Group on Review of Part 5000, Canadian Institute of Actuaries, 2017–present.

President, Actuarial Science Section, Statistical Society of Canada, 2016-2017.

Chair, Academic Relation Committee, Canadian Institute of Actuaries, 2015–2016.

Member, Waterloo Research institute in Insurance, Securities and Quantitative finance (WatRISQ), 2009–present.

External Assessor, University of Malaya, Malaysia, 2011–2014, 2017-2020.

External Reviewer, Department of Statistics and Actuarial Science, Simon Fraser University, 2013.

Member, Adjudication Panel, Ontario Graduate Scholarship Program, Ministry of Training, Colleges and Universities, Province of Ontario, Canada, 2012–2013.

External Reviewer, Program Proposal on Actuarial and Applied Mathematics, Qatar University, 2015.

External Examiner, Actuarial and Financial Mathematics Program, Institute of Mathematical Sciences, University of Malaya, Malaysia, 2009–2014.

External Reviewer, Department of Statistics and Actuarial Science, University of Western Ontario, 2012.

Member, Education and Research Section Council, Society of Actuaries, 2009–2012.

Chair, Halmstad Prize Committee, Actuarial Foundation, 2010-2011.

Member, Mathematics and Statistics Evaluation Group 1508 (Formerly GSC 14), Natural Sciences and Engineering Research Council of Canada (NSERC), 2008–2011.

Member, Institute for Quantitative Finance and Insurance (IQFI), University of Waterloo, 2004–2009.

Member, Preliminary Education Standing Committee, Society of Actuaries, 2005–2009.

External Reviewer, Undergraduate Programs, Faculty of Mathematics, University of Waterloo, 2009.

Member, Halmstad Prize Committee, Actuarial Foundation, 2004–06, 2008.

External Advisor, Department of Applied Mathematics, Hong Kong Polytechnic University, 2006–2007.

Senior Researcher, Project 'Development Schemes for Korean Life Insurance Industry in the Age of Low Interest Rates,' Korean Risk Management Society, 2005.

Member, Professional Examination Committee, Society of Actuaries, 2004.

External Reviewer and Consultant, Actuarial Science Program, University of Jordan, 2004.

Academic Consultant, Casualty Actuarial Society Exam 8, 2001, 2002.

External Reviewer, Research Paper Committee, Society of Actuaries, 1998, 1999.

Member, Society of Actuaries Project Oversight Group on Robust Methods in Actuarial Science, 1998.

Member, Society of Actuaries Project Oversight Group on Cost of Mismatch in Stochastic Interest Rate Models, 1998.

Member, Society of Actuaries Project Oversight Group on Tight Approximation of Basic Characteristics of Classical and Non-Classical Surplus Processes, 1998.

Member, Society of Actuaries Project Oversight Group on Ruin Probabilities in Collective Risk Theory, 1997.

Academic History:

Research Endeavours:

Actuarial Science, Mathematical Finance, and Applied Probability

Research Awards:

2017-2022	230,000(46K/yr)	NSERC. Discovery Grant-Individual
2017-2018	15,000	Committee on Knowledge Extension Research, Society of Actuaries. Research Grant (with Andrei Badescu)
2015-2016	16,000	Society of Actuaries. Research Sponsorship Funding (with Simon Lee)
2013-2014	11,000	Committee on Knowledge Extension Research, Society of Actuaries. Research Grant (with Yichun Chi, Kenseng Tan)
2012-2017	150,000(30K/yr)	NSERC. Discovery Grant-Individual
2011-2012	11,000	Committee on Knowledge Extension Research, Society of Actuaries. Research Grant (with Panpan Wu)
2010-2012	290,000	MITACS. Project on Finsurance (one of 7 core investigators)
2005-2012	147,000(21K/yr)	NSERC. Discovery Grant-Individual
2010-2011	15,000	MITACS. ACCELERATE Ontario Internship (Yuxiang Chong)
2006-2007	11,000	Committee on Knowledge Extension Research, Society of Actuaries. Research Grant (with Xiaoming Liu)
2002-2003	11,050	Committee on Knowledge Extension Research, Society of Actuaries. Research Grant (with Ken Seng Tan)
2001-2005	72,000(18K/yr)	NSERC. Discovery Grant-Individual
1999-2000	10,750	Committee on Knowledge Extension Research, Society of Actuaries. Research Grant (with Ken Seng Tan)
1998-1998	6,600	Old Gold Fellowship, University of Iowa
1998-1999	19,000	Finance Research Committee, Society of Actuaries
1997-1998	14,000	NSERC. Research Grant
1997-1998	10,000	Actuarial Education and Research Fund, Research Grant (with Gordon Willmot)
1995-1996	12,000	Actuarial Education and Research Fund, Research Grant (with Phelim Boyle)
1994-1997	30,000(10K/yr)	NSERC. Research Grant
1994-1994	2,500	Society of Actuaries. Education Grant
1993-1994	6,000	Connaught Fund, University of Toronto. Start-Up Grant

Scholarly & Professional Work:

Refereed Publications:

1. Yin, C., Huang, R., Lin, X.S. and Yuan, H. (2018). "On the consistency of penalized MLEs for Erlang mixtures," *Statistics and Probability Letters*, under minor revision.

2. Gui, W., Huang, R. and Lin, X.S. (2018). "Fitting the Erlang mixture model to data via a GEM-CMM algorithm," *Journal of Computational and Applied Mathematics*, accepted.

3. Lee, S.C.K. and Lin, X.S. (2018). "Delta boosting machine with application to general insurance," *North American Actuarial Journal*, forthcoming.

4. Gui, W., Huang, R., Lin, J., and Lin, X.S. (2017). "Conditional residual lifetimes of $(n-k+1)$-out-of-n systems with mixed Erlang components," *Journal of Mathematical Study*, 50(1), 1–16.

5. Chi, Y., Lin, X.S. and Tan, K.S. (2017). "Optimal reinsurance under an economic premium principle," *North American Actuarial Journal*, 21(3), 417–432.

6. Gan, G. and Lin, X.S. (2017). "Efficient greek calculation of variable annuity portfolios for dynamic hedging: a two-level metamodeling approach, *North American Actuarial Journal*," 21(2), 161–177.

7. Lin, X.S., Wu, P. and Wang, X. (2016). "Move-based hedging of variable annuities: a semi-analytic approach," *Insurance: Mathematics and Economics*, 71, 40–49.

8. Yin, C. and Lin, X.S. (2016). "Efficient estimation of Erlang mixtures using iSCAD penalty with insurance application," *ASTIN Bulletin*, 46(3), 779–799.

9. Badescu, A., Lin, X.S. and Tang, D. (2016). "A marked Cox model for the number of IBNR claims: theory," *Insurance: Mathematics and Economics*, 69, 29–37.

10. Verbelen, R., Gong, L., Antonio, K., Badescu, A. and Lin, X.S. (2015). "Fitting mixtures of Erlangs to censored and truncated data using the EM algorithm," *ASTIN Bulletin*, 45(3), 729-758.

11. Gan, G. and Lin, X.S. (2015). "Valuation of large variable annuity portfolios under nested simulation: a functional data approach," *Insurance: Mathematics and Economics*, 62, 138-150.

12. Badescu, A., Gong, L., Lin, X.S. and Tang, D. (2015). "Modeling correlated frequencies with applications in operational risk management," *Journal of Operational Risk*, 10(1), 1-43.

13. Chi, Y. and Lin, X.S. (2014). "Optimal reinsurance with limited ceded risk: a stochastic dominance approach," *ASTIN Bulletin,* 44(1), 103-126.

14. Chi, Y. and Lin, X.S. (2012). "Are flexible premium variable annuities underpriced?" *ASTIN Bulletin,* 42(2), 559-574.

15. Liu, X. and Lin, X.S. (2012). "A subordinated Markov model for stochastic mortality," *European Actuarial Journal,* 2, 105-127.

16. Lee, S.C.K. and Lin, X.S. (2012). "Modeling dependent risks with multivariate Erlang mixtures," *ASTIN Bulletin*, 42(1), 153-180.

17. Chi, Y. and Lin, X.S. (2011). "On the threshold dividend strategy for a generalized jump-diffusion risk model," *Insurance: Mathematics and Economics*, 48, 326-337.

18. Willmot, G.E. and Lin, X.S. (2011). "Risk modelling with the mixed Erlang distribution," *Applied Stochastic Models in Business and Industry*, 27, 2-22.

19. Lee, S.C.K. and Lin, X.S. (2010). "Modeling and evaluating insurance losses via mixtures of Erlang distributions," *North American Actuarial Journal*, 14(1), 107-130.

20. Chi, Y., Jaimungal, S. and Lin, X.S. (2010). "An insurance risk model with stochastic volatility," *Insurance: Mathematics and Economics*, 46(1), 52-66.

21. Lin, X.S., Tan, K.S. and Yang, H.L. (2009). " Pricing annuity guarantees under a regime-switching model," *North American Actuarial Journal*, 13, 316-338.

22. Lin, X.S. and Wang, T. (2009). "Pricing perpetual American catastrophe put options: a penalty function approach," *Insurance: Mathematics and Economics*, 44, 287-295.

23. Lin, X.S. and Sendova, K. (2008). "The compound Poisson risk model with multiple thresholds," *Insurance: Mathematics and Economics*, 42, 617-627.

24. Lin, X.S. and Liu, X. (2007). "Markov aging process and phase-type law of mortality," *North American Actuarial Journal*, 11(4), 92-109.

25. Gerber, H.U., Lin, X.S. and Yang, H. (2006). "A note on the dividends-penalty identity and the optimal dividend barrier," *ASTIN Bulletin*, 36, 489-503.

26. Gaillardetz, P. and Lin, X.S. (2006). "Valuation of equity-linked insurance and annuity products with binomial models," *North American Actuarial Journal*, 10(4), 117-144.

27. Lin, X.S. and Pavlova, K. (2006). "The compound Poisson risk model with a threshold dividend strategy," *Insurance: Mathematics and Economics*, 38, 57-80.

28. Lin, X.S., Willmot, G.E. and Drekic, S. (2003). " The classical risk model with a constant dividend barrier: analysis of the Gerber-Shiu discounted penalty function," *Insurance: Mathematics and Economics*, 33, 551-566.

29. Lin, X.S. and Tan, K.S. (2003). "Valuation of equity-indexed annuities under stochastic interest rates," *North American Actuarial Journal*, 7(3), 72-91.

30. Willmot, G.E., Cai, J. and Lin, X.S. (2001). "Lundberg inequalities for renewal equations," *Advance in Applied Probability*, 33, 674-689.

31. Lin, X.S. and Willmot, G.E. (2000). "The moments of the time of ruin, the surplus before ruin, and the deficit at ruin," *Insurance: Mathematics and Economics*, 27, 19-44.

32. Lin, X.S. (1999). "Valuation of options on the maximum/minimum of multiple assets, discrete lookback options and equity-indexed annuities," *Finance*, 20, 95-114.

33. Lin, X.S. and Willmot, G.E. (1999) "Analysis of a defective renewal equation arising in ruin theory," *Insurance: Mathematics and Economics*, 25, 63-84.

34. Willmot, G.E. and Lin, X.S. (1998). "Exact and approximate results for the distribution of surplus before and after ruin," *Insurance: Mathematics and Economics*, 23, 91-110.

35. Lin, X.S. (1998). "Double barrier hitting time distributions with applications to exotic options," *Insurance: Mathematics and Economics*, 23, 45-58.

36. Boyle, P. and Lin, X.S. (1997). "Bounds on contingent claims based on several assets," *Journal of Financial Economics*, 46, 383-400.

37. Boyle, P. and Lin, X. (1997). "Optimal portfolio selection with transaction costs, " *North American Actuarial Journal*, 1(2), 27-39.

38. Boyle, P. and Lin, X. (1997). "Valuation of options on several risky assets when there are transactions costs," *Advances in Futures and Options Research*, 9, 111-127.

39. Willmot, G.E. and Lin, X. (1997). "Upper bounds for the tail of the compound negative binomial distribution," *Scandinavian Actuarial Journal*, 97:2, 138-148.

40. Willmot, G.E. and Lin, X. (1997). "Simplified bounds on the tails of compound distributions," *Journal of Applied Probability*, 34, 127-133.

41. Willmot, G.E. and Lin, X. (1996). "Bounds on the tails of convolutions of compound distributions," *Insurance: Mathematics and Economics*, 18, 29-33.

42. Lin, X. (1996). "Tail of compound distributions and excess time," *Journal of Applied Probability*, 33, 184-195.

43. Willmot, G.E. and Lin, X. (1994). "Lundberg bounds on the tails of compound distributions," *Journal of Applied Probability*, 31, 743-756.

44. Lin, X. and Liu, X. (1994). "Qualitative study of an HIV transmission model among IV drug users," *Applied Mathematics and Computation,* 60, 215-236.

45. Lin, X., Hethcote, H.W. and van den Driessche, P. (1993). "An epidemiological model for HIV/AIDS with proportional recruitment," *Mathematical Biosciences*, 118, 181-195.

46. Lin, X. and So, J. (1993). "Global stability of the endemic equilibrium and uniform persistence of epidemic models with subpopulations," *Journal of the Australian Mathematical Society*, Serial B, 34, 282-295.

47. Lin, X. (1992). "On the global stability of a delay epidemic model," *Journal of the Australian Mathematical Society*, Serial B, 34, 26-34.

48. Lin, X. and van den Driessche, P. (1992). "A threshold result for an epidemiological model," *Journal of Mathematical Biology*, 30, 647-654.

49. Lin, X., So, J. and Wu, J. (1992). "Center manifolds for partial differential equations with delays," *Proceedings of the Royal Society of Edinburgh*, 122A, 237-254.

50. Antonelli, P., Bradbury, R., Kazarinoff, N., Lin, X. and Reichet, R. (1992). "Large scale starfish waves and reefal connectance," *Ecological Modeling*, 61, 187-194.

51. Antonelli, P., Bradbury, R. and Lin, X. (1992). "On Hutchingson's competition equations and their homogenization: a high-order principle of competitive exclusion," *Ecological Modeling*, 60, 309-320.

52. Antonelli, P., Bradbury, R. and Lin, X. (1991). "A high-order predator-prey interaction with applications to observed starfish waves and cycles," *Ecological Modeling*, 58, 23-332.

53. Lin, X. (1991). "On the uniqueness of endemic equilibria of an HIV/AIDS transmission model for a heterogeneous population," *Journal of Mathematical Biology*, 29, 779-790.

54. Lin, X. (1991). "Qualitative analysis of an HIV transmission model," *Mathematical Biosciences*, 104, 111-134.

55. Lin, X. and So, J. (1990). "Some results on an SIRS epidemic model with subpopulations," *Mathematical and Computer Modeling*, 14, 659-661.

56. Antonelli, P. and Lin, X. (1990). "Mathematical analysis of a coral-starfish model," *Mathematical and Computer Modeling*, 13, 35-44.

57. Lin, X. (1989). "Time-varying vector fields on a compact Riemannian manifold II," *Chinese Annals of Differential Equations*, 5, 63-73.

58. Lin, X. (1988). "Time-varying vector fields on a compact Riemannian manifold I," *Chinese Annals of Mathematics*, 9B, 95-106.

59. Lin, X. (1985). "Stability and instability of nonautonomous systems," *Journal of Fuzhou University*, No. 3, 16-22.

60. Lin, X. (1984). "Perturbed linear systems and generalized exponential dichotomies," *Journal of Fuzhou University*, No. 1, 35-41.

Books and Chapters in Books:

1. Lin, X.S. and Willmot, G.E. (2015). "Collective Risk Models," *Wiley StatsRef: Statistics Reference Online,* DOI: 10.1002/9781118445112.stat03558.pub2, John Wiley and Sons.

2. Landriault, D., Lin, X.S., and Willmot, G.E. (2015). "Ruin Theory," *Wiley StatsRef: Statistics Reference Online,* DOI: 10.1002/9781118445112.stat03586.pub2, John Wiley and Sons.

3. Lin, X.S. (2010). "Cramér-Lundberg Estimates," in *Encyclopedia of Quantitative Finance,* Cont, R. (Ed.), John Wiley and Sons, 404-407.

4. Lin, X.S. and Willmot, G.E. (2008). "Collective Risk Models," *Encyclopedia of Quantitative Risk Analysis and Assessment,* Volume I, John Wiley and Sons, 255-258.

5. Lin, X.S. and Willmot, G.E. (2008). "Ruin Theory," *Encyclopedia of Quantitative Risk Analysis and Assessment,* Volume IV, John Wiley and Sons, 1591-1598.

6. Lin, X.S. (2006). *Introductory Stochastic Analysis for Finance and Insurance,* John Wiley and Sons, New York.

7. Lin, X.S. (2005). "Valuation of interest rate guarantees using option pricing techniques," *Development Schemes for Korean Life Insurance Industry in the Age of Low Interest Rates,* Volume I, Part III, 422-436, Korean Risk Management Society.

8. Lin, X.S. (2004). "Compound Distributions," *Encyclopedia of Actuarial Science,* Volume I, 314-317, John Wiley and Sons.

9. Lin, X.S. (2004). "Integrated Tail Distributions," *Encyclopedia of Actuarial Science,* Volume II, 909-911, John Wiley and Sons.

10. Lin, X.S. (2004). "Lundberg Approximations, Generalized," *Encyclopedia of Actuarial Science,* Volume II, 1047-1050, Wiley and Sons.

11. Lin, X.S. (2004). "Ruin Theory," *Encyclopedia of Actuarial Science,* Volume III, 1530-1535, John Wiley and Sons.

12. Willmot, G.E. and Lin, X.S. (2001). *Lundberg Approximations for Compound Distributions with Insurance Applications*, Lecture Notes in Statistics 156, Springer-Verlag, New York.

Non-Refereed Publications

1. Kaas, R., Laeven, R., Lin, X.S., Tang, Q., Willmot, G. and Yang, H. (2018). " Editorial: In memoriam Marc Goovaerts," *Insurance: Mathematics and Economics*, forthcoming.

2. Kaas, R., Laeven, R., Lin, X.S., Tang, Q., Willmot, G. and Yang, H. (2018). " Editorial: IME's Editorial Board," *Insurance: Mathematics and Economics*, 78, A1-A3.

3. Lin, X.S. and Liu, X. (2005). Discussion of Ng and Yang's "Lundberg-type bounds for the joint distribution of surplus immediately before ruin and at ruin under the Sparre-Andersen model," *North American Actuarial Journal*, 9(2), 102-107.

4. Lin, X.S. (2004). Review of *Interest Rate Model: an Introduction, North American Actuarial Journal*, 8(3), 154-155.

5. Lin, X.S. (2004). Review of *Generalized Poisson Models and Their Applications in Insurance and Finance*, *Journal of American Statistical Association*, 99, p563.

6. Lin, X.S. (2003). Discussion of Yebin Cheng and Qihe Tang's "Moments of the surplus before ruin and the deficit at ruin in Erlang(2) risk processes," *North American Actuarial Journal*, 7(3), 122-124.

7. Lin, X.S. (2003). Discussion of Hans Gerber and Elias Shiu's "Geometric Brownian motion models for assets and liabilities: from pension funding to optimal dividends," *North American Actuarial Journal*, 7(3), 51-53.

8. Lin, X.S. and Tan, K.S. (2001). "Valuation of equity-indexed annuities under stochastic interest rates," *The 11th International AFIR Colloquium Proceedings*, 2, 473–492, Canadian Institute of Actuaries, Ottawa.

9. Lin, X.S. (2001). Discussion of "Analysis of incremental return of Canadian mutual funds' by J.F. Carriere and C.F. Hill," *North American Actuarial Journal*, 5, 39-40.

10. Lin, X.S. (2000). Review of *Stochastic Processes for Insurance and Finance*, *British Actuarial Journal*, 6, Part IV, 876-877.

11. Lin, X.S. (2000). "Valuation of equity-indexed annuities," *Proceedings of Thirty-fourth Annual Actuarial Research Conference*, Vol 1, 619-622.

12. Lin, X.S. (1999). "Laplace transform and barrier hitting time distributions," *Proceedings of Thirty-third Annual Actuarial Research Conference*, Vol 1, 165-178.

13. Lin, X.S. (1999). Review of *Loss Distributions: From Data to Decisions*, *North American Actuarial Journal*, 3, 150-151.

14. Lin, X.S. (1998). Discussion of Gerber and Shiu's "Pricing perpetual options for jump processes," *North American Actuarial Journal*, 2, 108-109.

15. Lin, X.S. and Willmot, G.E. (1998). " A solution of defective renewal equations with applications to ruin theory," *Proceedings of Thirty-second Annual Actuarial Research Conference*, 365-374.

16. Boyle, P. and Lin, X.S. (1997). "Bounds on multiple contingent claims," *Proceedings of Thirty-first Annual Actuarial Research Conference*, 223-224.

17. Lin, X.S. and Willmot, G.E. (1996). "Nonexponential bounds on the tails of compound distributions," *Proceedings of Thirtieth Annual Actuarial Research Conference*, 501-508.

18. Panjer, H. and Lin, X.S. (1993). Discussion of Plumley's "An actuarial analysis of the AIDS epidemic as it affects heterosexuals", *Transactions of the Society of Actuaries*, XLIV, 417-421.

Invited Talks: Conferences/Workshops

The Canadian Institute of Actuaries Appointed Actuary Symposium, Toronto. September 2016.
Topic Contributed Session, Business and Economic Statistics Section, Joint Statistical Meetings, Boston, August 2014.
Workshop on Risk Analysis, Ruin and Extremes, Co-organized by Nankai University and University of Liverpool, Tianjin, China, July 2014.
Session on Variable Annuity: Current Best Practices in Risk Management and Complexities, SOA 2014 Investment Symposium, New York City, March 2014.
Keynote Speaker, Third Quebec-Ontario Workshop on Insurance Mathematics, Quebec City, January 2014.
TRIA Annual Meeting and International Conference on Risk and Insurance, Kaohsiung, Taiwan, December 2013.
Invited Papers Session (IPS113), 59th ISI World Statistics Congress, Hong Kong, August 2013.
Keynote Speaker, Fourth International Gerber-Shiu Workshop, Centre for Actuarial Studies, University of Melbourne, Melbourne, July 2012.
International Conference on Actuarial Science and Related Fields, Haikou, China, March 2011.
Session 27, Society of Actuaries 2010 Annual Meeting & Exhibit, New York City, October 2010.
International Conference on Insurance and Actuarial Science, Chongqing, China, June 2010.
International Conference on Actuarial and Financial Risks, Shanghai, January 2010.
Stochastic Modelling Symposium, Canadian Institute of Actuaries, Montreal, December 2008.
IFID/MITACS Conference on Financial Engineering for Actuarial Mathematics, Fields Institute, Toronto, November 2008.
Keynote Speaker, Second International Workshop on Gerber-Shiu Functions, Radon Institute of Computational and Applied Mathematics, Austrian Academy of Sciences, Linz, Austria, August 2008.
Workshop in Honor of Hans U. Gerber, Tsinghua University, Beijing, July 2008.
Half-Day Seminar, Actuarial Society of Hong Kong, Hong Kong, May 2007.
First International Workshop on Gerber-Shiu Functions, Montreal, August 2006.
Ruin Theory Session, International Federation of Operational Research Societies (IFORS) Triennial Conference, Honolulu, Hawaii, July 2005.

Workshop on Embedded Options in Insurance Products, University of Hong Kong, February 2005.
Plenary Speaker, Seventh International Congress on Insurance: Mathematics and Economics, Lyon, June 2003.
Conference on Risk Management in Insurance: Tools from Risk Theory, Queuing and Finance, Waterloo, June 2003.
CORS (Canadian Operations Research Society) National Conference, Toronto, June 2002.
Spring Meeting, Society of Actuaries, Hawaii, June 1998.
Computational Finance Workshop, Toronto, May 1996.
Meeting on Risk Theory, Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany, September 1994.
Oktoberfest Finance Conference, Waterloo, Canada, October 1993.

Invited Talks: Universities/Companies

School of Mathematical Sciences, Xiamen University, March 2016.
School of Economics, Xiamen University, February 2016.
Department of Actuarial Science, University of Lausanne, Lausanne, February 2016.
Warren Centre for Actuarial Studies and Research, Aspen School of Business, University of Manitoba, March 2015.
WatRISQ, University of Waterloo, March 2015.
Department of Mathematics, University of Connecticut, March 2015.
School of Finance and Statistics, East China Normal University, January 2015.
School of Mathematical Sciences, Xiamen University, January, 2015.
School of Mathematics and Statistics, Wuhan University, November 2014.
School of Finance and Statistics, East China Normal University, January 2014.
International Excellent Scholar Seminar, Department of Risk Management and Insurance, National Kaohsiung First Univ. of Sci. and Tech., Taiwan, December 2013.
School of Finance, Feng Chia University, Taiwan, December 2013.
Institute of Finance, National Chiao Tung University, Taiwan, December 2013.
Department of Insurance and Risk Management, National Tsing Hua University, Taiwan, December 2013.
School of Mathematical Sciences, Jilin University, Changchun, China, June, 2013.
Institute of Mathematical Sciences, University of Malaya, Kuala Lumpur, Malaysia, February, 2013.
Department of Statistics and Finance, School of Management, University of Science and Technology of China, Hefei, China, January, 2013.
National Center for Mathematics and Interdisciplinary Sciences, CAS and School of Mathematical Sciences, University of Science and Technology of China, Hefei, China, January, 2013.
Risk management Department, Bank of Montreal, Toronto, November 2012.
Joint Actuarial Seminar, Fudan University and Shanghai Insurance Association, Shanghai, China, June 2012.
Joint Actuarial Seminars, ISFA Lyon and ISA-HEC Lausanne, Lausanne, Switzerland, December 2011.

Department of Statistics and Actuarial Science, University of Western Ontario, November 2011.
School of Mathematical Sciences, Central South University, Changsha, China, November, 2011.
Department of Statistics and Actuarial Science, Simon Fraser University, April 2011.
Lecture Series on Insurance Loss Modelling, Xiamen University, Xiamen, China, March 2011.
WatRISQ, University of Waterloo, November 2010.
Nanqiang Lecture, Xiamen University, Xiamen, China, July 2010.
China Institute for Actuarial Science, Central University of Finance and Economics, China, June 2010.
School of Mathematics, Georgia Institute of Technology, November 2009.
Korean Actuarial Association, Seoul, South Korea, July 2009
Department of Mathematics and Statistics, McMaster University, March 2009.
Department of Mathematics and Actuarial Science, American University in Cairo, April 2008.
Department of Mathematics, University of Hong Kong, May 2007.
Faculty of Mathematical and Information Sciences, Guangzhou University, March 2007.
Institut de Science Financière et d'Assurances, Universite Claude Bernard Lyon I, France, July 2006.
Department of Mathematics and Statistics, York University, October 2005.
Risk Management Department, Royal Bank of Canada, March 2005.
Department of Mathematics, University of Jordan, October 2004.
Department of Mathematics, University of Michigan, November 2004.
Department of Mathematics, University of Michigan, September 2004.
Twenty-Third Joint Actuarial Seminars, ISFA Lyon and ISA-HEC Lausanne, Lausanne, January 2003.
Department of Statistics, East China Normal University, December 2003.
Department of Statistics and Actuarial Science, University of Waterloo, February 2003.
Department of Finance, National University of Taiwan, December 2002.
Department of Financial Mathematics, Peking University, May 2002.
Statistics Department, East China Normal University, April 2002.
School of Information, People's University of China, April 2001.
School of Finance, Shanghai University of Finance and Economics, May 2000.
Department of Actuarial Science, Risk Management and Insurance, School of Business, University of Wisconsin at Madison, April 1999.
Department of Statistics and Actuarial Science, University of Waterloo, December 1998.
College of Business Administration, University of Northern Iowa, November 1998.
Department of Statistics, University of Missouri at Columbia, March 1998.
Ten Lectures in Mathematical Finance, Institute of Advanced Economic Studies, Wuhan University, June 1997.
Department of Statistics, University of Hong Kong, May 1997.

Contributions to Conferences:

5th International Gerber-Shiu Workshop, University of Hong Kong, Hong Kong, July 2014.
18th International Congress on Insurance: Mathematics and Economics, Shanghai, July 2014.
48th Annual Actuarial Research Conference, Philadelphia, August 2013.
16th International Congress on Insurance: Mathematics and Economics, Hong Kong, June 2012.
46th Annual Actuarial Research Conference, Storrs, Connecticut, August 2011.
15th International Congress on Insurance: Mathematics and Economics, Trieste, Italy, June 2011.
13th International Congress on Insurance: Mathematics and Economics, Istanbul, Turkey, May 2009.
4th Brazilian Conference on Statistical Modelling in Insurance and Finance, Maresias, Brazil, April 2009.
12th International Congress on Insurance: Mathematics and Economics, Dalian, China, July 2008.
41st Annual Actuarial Research Conference, Montreal, August 2006.
10th International Congress on Insurance: Mathematics and Economics, Leuven, Belgium, July 2006.
40th Annual Actuarial Research Conference, Mexico City, Mexico, August 2005.
37th Annual Actuarial Research Conference, Waterloo, Ontario, August 2002.
11th Annual International AFIR Colloquium, Toronto, September 2001.
36th Annual Actuarial Research Conference, Columbus, Ohio, August 2001.
33rd Annual Actuarial Research Conference, Atlanta, Georgia, August 1998.
32nd Annual Actuarial Research Conference, Calgary, Alberta, August 1997.
31st Annual Actuarial Research Conference, Muncie, Indiana, August 1996.
Actuarial Research Workshop, Statistical Society of Canada Annual Meeting, Waterloo, Canada, June 1996.
30th Annual Actuarial Research Conference, College Park, Pennsylvania, August 1995.
28th Annual Actuarial Research Conference, Madison, Wisconsin, August 1993.

Students:

PhD Students:

In Progress: Tsz Chai Fung, Alex Yang, Xiaoting Zheng (Xiamen U.).
Completed: Wenyoung Gui (Xiamen U.), May 2017; Dameng Tang, June 2016 (with Andrei Badescu); Cuihong Yin (Xiamen U.), June 2016; Yuxiang Chong, January 2015 (with Sebastian Jaimungal); Gong Lan, September 2014 (with Andrei Badescu); Panpan Wu, October 2013; Tao Wang, April 2008; Xiaoming Liu, December 2007; Patrice Gaillardetz, April 2006; Serena Tiong (U. of Iowa), May 2000 (with Elias Shiu).

Postdoctoral Fellows:

Yichun Chi (2012-2013), Alexandru Vali Asimit (2008), Chi Chiu Chu (2005-2006), Kristina Pavlova (2004-2005)

PhD Committee:

Ali Al-Aradi (Statistics, in progress), Philippe Casgrain (Statistics, in progress), Tianyi Jia (Statistics, in progress), David Farahany (Statistics, in progress), Bill Huang (Statistics, 2017), Amir Hejazi (Computer Science, 2016), Eddie Ng (Electronic and Computer Engineering, 2010), Angelo Valov (Statistics, 2009), Chao Yang (Statistics, 2008), Samuel Hikspoors (Statistics, 2008), Wei Liu (Economics, 2007), Xiaofang Ma (Computer Science, 2007), Mylene Bedard (Statistics, 2006)

External Examiner for:

Kun Sophia Fan (PhD, Macquarie, 2014), Stanley Shen (PhD, Macquarie, 2013), Celeste Ming Hui Chai (PhD, Macquarie, 2013), Seung Hwan Chin (PhD, Melbourne, 2010), Ping Chen (PhD, HKU, 2009), Taehan Bae (PhD, Western Ontario, 2008), Kwan Kwok Man (MPhil, HKU, 2007), David Landriault (PhD, Laval, 2005), Chi Chiu Chu (PhD, HKUST, 2005), Andrew Ng (MPhil, HKU, 2005), Kwok Wai Yu (MPhil, HK PolyU, 2005)

List of Courses:

Undergraduate Courses:

2014-2018	ACT 460F	Stochastic Methods for Actuarial Science
2012-2018	ACT 451F	Loss Models
2012-2013	ACT 240F	Mathematics of Investment and Credit
2012-2013	ACT 348F	Intermediate Life Contingencies
2011-2012	ACT 466S	Credibility Theory and Simulation
2011-2012	ACT 452S	Loss Models II
2010-2011	ACT 348F	Intermediate Life Contingencies
2009-2010	ACT 466S	Credibility Theory and Simulation
2008-2010	ACT 452S	Loss Models II
2007-2008	ACT 247S	Introductory Life Contingencies
2005-2007	ACT 348F	Intermediate Life Contingencies
2005-2006	ACT 451F	Risk Theory
2005-2006	ACT 460F	Survival and Loss Models
2002-2003	ACT 348F	Intermediate Life Contingencies
2000-2003	ACT 247S	Introductory Life Contingencies
2001-2004	ACT 460F	Survival and Loss Models
2001-2004	ACT 451F	Risk Theory
2000-2002	ACT 349S	Topics in Actuarial Science: Corporate Finance
2000-2003	ACT 466S	Credibility Theory and Simulation
1994-1997	ACT 247S	Introductory Life Contingencies
1995-1997	ACT 451F	Risk Theory
1993-1997	ACT 467F	Graduation and Demography
1993-1996	ACT 240F	Fundamentals of Business Mathematics
1993-1995	ACT 330S	Operations Research

University of Iowa:

1998-2001	22S:175	Risk Theory
1997-2000	22S:176	Credibility Theory and Loss Distributions
1997-1999	22S:182	Life Contingencies I
1997-1998	22S:182	Life Contingencies II

Graduate Courses

2016-2017	STA 2536S	Non-Life Insurance Mathematics
2016-2017	STA 4510F	Insurance Risk Models II
2016-2017	STA 2501F	Mathematical Risk Theory
2013-2014	STA 4510F	Insurance Risk Models II
2012-2013	STA 2501F	Mathematical Risk Theory
2006-2007	STA 2501F	Mathematical Risk Theory
2003-2004	STA 2503F	
	MMF 1941F	Stochastic Analysis for Finance
	STA 4247S	Research in Mathematical Finance and Actuarial Science
1995-1997	STA 2503F	Applied Probability for Mathematical Finance

University of Michigan:

2004-2005	MATH542/IOE552	Financial Engineering I

University of Iowa:

2000-2001	22S:185	Investments
1999-2000	22S:293	Stochastic Differential Equations in Finance
1998-1999	22S:172	Financial Modeling and Stochastic Calculus

Administrative Positions:

University of Toronto:

2016-2017 Actsci UG, MFI, Promotions, Research, Hiring
2015-2016 Actuarial Science, Hiring (MFI), Graduate, U of T NSERC PGSD Selection Committee
2014-2015 Actuarial Science, Executive, Tenure, Promotions, Graduate
2013-2014 Executive, Promotions, Actuarial Science, UTSC Search
2012-2013 Promotions, Actuarial Science, Graduate
2011-2012 Promotions
2009-2010 Graduate, PTR
2008-2009 Graduate, Executive
2007-2008 Graduate, U of T NSERC PGSD Selection Committee
2006-2007 Graduate
2005-2006 Graduate, Hiring
2003-2004 Dean's representative on Math Hiring, UT Discovery Day, Fields Institute Graduate Study Information Fair, Planning, Graduate, Promotion, Development
2002-2003 Graduate, Development, Promotion, Publicity and Liaison, Undergraduate
2001-2002 Graduate, Chair Search, Hiring (Actsci), Development
1996-1997 Advisory, Master Program in Mathematical Finance
1995-1997 Industrial Liaison, Actuarial Science Program
1996-1997 Graduate

1995-1997 Publicity and Liaison
1993-1995 Undergraduate

University of Iowa:

1999-2000 Executive
1999-2000 Undergraduate Advising
1998-2000 MS Exam-Actuarial
1998-1999 Graduate Advising
1997-1998 Student Awards