CURRICULUM VITAE

YIQING CHEN

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Education Background

- **Ph.D.**, Department of Statistics and Actuarial Science, University of Hong Kong, 2009

  Thesis: *Study on Insurance Risk Models with Subexponential Tails and Dependence Structures*

  Supervisors: Prof. Kam C. Yuen and Prof. Kai W. Ng

- **M.A.**, School of Economics and Management, Guangdong University of Technology, 2006

  Thesis: *Ruin Theory with Risky Investment and Subexponential Claims*

  Supervisor: Prof. Xiangsheng Xie

- **B.E.**, Department of Computer Science, Hefei University, 2001

Employment History

- August 2014 – Present: Associate Professor of Actuarial Science with Tenure, College of Business and Public Administration, Drake University
- June 2013 – July 2014: Permanent Lecturer[1] of Actuarial Science, Department of Mathematical Sciences, the University of Liverpool
- June 2010 – June 2013: Lecturer of Actuarial Science on Probation, Department of Mathematical Sciences, the University of Liverpool
- October 2009 – June 2010: Lecturer of Actuarial Science on Fixed Two-year Term, Department of Mathematical Sciences, the University of Liverpool
- September 2005 – June 2009: Teaching Assistant, Department of Statistics and Actuarial Science, the University of Hong Kong
- September 2001 – June 2002: Lecturer, Hefei College of Technology

Awards

- Departmental Teaching Award 2013- 2014: the Best 2nd Year Lecturer in Department of Mathematical Sciences, the University of Liverpool

[1]This position in British system is equivalent to a Tenured Associate Professor position in North America.

Research Interests

- Heavy-tailed distributions in insurance, finance, and risk management
- Dependent insurance and financial risks
- Solvency in the presence of risky investments

Professional Designation

I am actively working towards the designation of **Associate of the Society of Actuaries (ASA)**. So far I have completed

- the preliminary education component: Exams P, FM, MFE, MLC and C,
- all requirements of the Validation by Educational Experience (VEE): Economics, Corporate Finance, and Applied Statistics.

I expect to complete Fundamentals of Actuarial Practice (FAP) and Associateship Professionalism Course (APC) and to attain the ASA designation in two years.

Refereed Journal Publications

Papers submitted or in progress

- **Chen, Y.**; Yuen, K. C. Inversion for heavy-tailedness of the product of two independent random variables. Semi-finished, expected to submit to *Insurance: Mathematics and Economics* in Winter 2014.
- **Chen, Y.** A random difference equation with dependent and heavy-tailed inputs. Semi-finished, expected to submit to *Journal of Applied Probability* in Spring 2015.
- **Chen, Y.**; Liu, J.; Liu, F. Ruin with insurance and financial risks following a special dependence structure. Submitted to *Insurance: Mathematics and Economics* on October 18, 2014.

Papers published

[16] Asimit, A.; **Chen, Y.** Asymptotic results for conditional measures of association of a random sum. *Insurance: Mathematics and Economics*, **60** (2015), no. **1**, 11–18.

[15] Chen, A.; Li, J.; **Chen, Y.**; Zhou, D. Asymptotic behaviour of extinction probability of interacting branching collision processes. *Journal of Applied Probability* **51** (2014), no. **1**, 219–234.

[14] **Chen, Y.**; Yuen, K. C. Precise large deviations of aggregate claims in a time-dependent renewal risk model. *Insurance: Mathematics and Economics* **51** (2012), no. **2**, 457–461.

[13] Chen, A.; Li, J.; **Chen, Y.**; Zhou, D. Extinction probability of interacting branching collision processes. *Advances in Applied Probability* **44** (2012), no. **1**, 226–259.

[12] **Chen, Y.** The finite-time ruin probability with dependent insurance and financial risks. *Journal of Applied Probability* **48** (2011), no. **4**, 1035–1048.

[11] **Chen, Y.**; Yuen, K. C.; Ng, K. W. Precise large deviations of random sums in presence of negative dependence and consistent variation. *Methodology and Computing in Applied Probability* **13** (2011), no. **4**, 821–833.

[10] **Chen, Y.**; Ng, K. W.; Yuen, K. C. On the maximum of randomly weighted sums of long-tailed random variables in insurance. *Stochastic Analysis and Applications* **29** (2011), no. **6**, 1033–1044.

[9] **Chen, Y.**; Yuen, K. C.; Ng, K. W. Asymptotics for ruin probabilities of a two-dimensional renewal risk model with heavy-tailed claims. *Applied Stochastic Models in Business and Industry* **27** (2011), no. **3**, 290–300.

[8] **Chen, Y.**; Chen, A.; Ng, K. W. The strong law of large numbers for extended negatively dependent random variables. *Journal of Applied Probability* **47** (2010), no. **4**, 908–922.

[7] **Chen, Y.**; Yuen, K. C. Sums of pairwise quasi-asymptotically independent random variables with consistent variation. *Stochastic Models* **25** (2009), no. **1**, 76–89.

[6] **Chen, Y.**; Ng, K. W. The ruin probability of the renewal model with constant interest force and negatively dependent heavy-tailed claims. *Insurance: Mathematics and Economics* **40** (2007), no. **3**, 415–423.

[5] **Chen, Y.**; Dong, X.; Xie, X. Explicit asymptotics for the ruin probability with risky investment included. *Chinese Journal of Applied Probability and Statistics* **22** (2006), no. **2**, 151–158.

[4] **Chen, Y.**; Ng, K. W.; Xie, X. On the maximum of randomly weighted sums with regularly varying tails. *Statistics and Probability Letters* **76** (2006), no. **10**, 971–975.

[3] **Chen, Y.**; Ng, K. W.; Tang, Q. Weighted sums of subexponential random variables and their maxima. *Advances in Applied Probability* **37** (2005), no. **2**, 510–522.

[2] **Chen, Y.**; Xie, X. The finite time ruin probability with the same heavy-tailed insurance and financial risks. *Acta Mathematicae Applicatae Sinica (English Series)* **21** (2005), no. **1**, 153–156.

[1] Jiang, T.; **Chen, Y.** Local asymptotic behavior of the survival probability of the equilibrium renewal model with heavy tails. *Science in China. Series A. Mathematics* **48** (2005), no. **3**, 300–306.

Teaching Activities

- Associate Professor at Drake University, August 2014 – Present
  - Fall 2014:
    - ACTS150: Life Insurance Mathematics I
    - ACTS151: Life Insurance Mathematics II
  - Spring 2015:
    - ACTS150: Life Insurance Mathematics I

- Renmin University of China, July 2013.
  - Summer school professor
    - Financial Mathematics
- Lecturer at the University of Liverpool, October 2009 – July 2014
  - Fall 2009:
    - MATH268: Operational Research-Probabilistic Models
  - Spring 2010:
    - MATH263: Statistical Theory and Methods I
  - Fall 2010:
    - MATH264: Statistical Theory and Methods II
  - Spring 2011:
    - MATH482: Stochastic Modelling in Finance (a new course for master students developed by me)
  - Fall 2011:
    - MATH264: Statistical Theory and Methods II
  - Spring 2012:
    - MATH482: Stochastic Modelling in Finance
  - Fall 2012:
    - MATH267: Financial Mathematics I (a new course for undergraduates developed by me)
  - Spring 2013:
    - MATH264: Statistical Theory and Methods II
  - Fall 2013:
    - MATH267: Financial Mathematics I
- Teaching Assistant at the University of Hong Kong, September 2005 – June 2009

  Tutor for: Business Forecasting; Risk Theory; Financial Mathematics; Practical Mathematics for Investment; Derivatives Markets; Financial Engineering
- Lecturer at Hefei College of Technology, September 2001 – June 2002

  Taught: Calculus; Probability Theory; Numerical Calculations

Postgraduate Students Supervision and Examination

- Woked with six PhD students, Jiajun Liu, Jing Xu, Elliott Tjia, Jin Zheng, Lu Zong, and Fangzhou Liu, among whom the last four are under joint supervision with other colleagues at the University of Liverpool or at the Xi'an Jiaotong-Liverpool University in China from September 2011 to August 2014.
- Supervised one two-year MPhil student, Fei Liu, who graduated in December 2013, two MSc students, Amani Alsalem and Fangzhou Liu, in 2011, and three MSc students, Bingyun Lu, Jitao Fang, and Rui Wang, in 2012
- Internal Examiner for Christopher Pearce, Ph.D. candidate, Department of Mathematical Sciences, University of Liverpool, December 2011

Short-term Research Visits

- Department of Statistics and Actuarial Science, University of Hong Kong, July 3 – 9, 2014
- Department of Statistics and Actuarial Science, University of Hong Kong, August 13 – 19, 2013
- Department of Insurance, Renmin University of China, July 14 – 30, 2013
- Department of Statistics and Actuarial Science, University of Hong Kong, June 27 – July 3, 2012
- Department of Statistics and Actuarial Science, University of Hong Kong, September 2009
- Department of Statistics and Actuarial Science, University of Iowa, June – July 2006
- Department of Statistics and Actuarial Science, University of Hong Kong, January – March 2004

Conferences and Talks

- The 18th International Congress on Insurance: Mathematics and Economics, 10 – 12 July 2014, Shanghai, China

  Talk: Ruin with insurance and financial risks following a general dependent structure
- The 16th International Congress on Insurance: Mathematics and Economics, 28 – 30 June 2012, The University of Hong Kong, Hong Kong

  Talk: Precise large deviations of aggregate claims in a size-dependent renewal risk model (based on a joint work with Kam C. Yuen)
- The 7th Conference in Actuarial Science & Finance on Samos, 28 May – 3 June 2012, Samos, Greece

  Talk: Precise large deviations of aggregate claims in a size-dependent renewal risk model
- Finance & Stochastics seminar, Department of Mathematics, Imperial College London, 23 May 2012, United Kingdom

  Talk: Ruin in the presence of dependent insurance and financial risks
- Seminar, Department of Statistics and Actuarial Science, The University of Hong Kong, 23 April 2012, Hong Kong

  Talk: Interplay of dependent insurance and financial risks
- Mathematics Colloquia, Department of Mathematics, University of Illinois at Urbana-Champaign, 17 January 2012, USA

  Talk: Interplay of dependent insurance and financial risks
- Colloquia, Division of Statistics, Northern Illinois University, 6 January 2012, USA

  Talk: Interplay of dependent insurance and financial risks

- The 15th International Congress on Insurance: Mathematics and Economics, 14–17 June 2011, Trieste, Italy

  Talk: The finite-time ruin probability with dependent insurance and financial risks

- The 1st Chinese Workshop on Heavy-tailed Models and Applications, 26–27 June 2010, Nanjing, China

  Talk: The strong law of large numbers for extended negatively dependent random variables (based on a joint work with Anyue Chen and Kai W. Ng)

- The 6th Samos Conference in Actuarial Science and Finance, 31 May – 6 June 2010, Samos, Greece

  Talk: The strong law of large numbers for extended negatively dependent random variables (based on a joint work with Anyue Chen and Kai W. Ng)

- Workshop on Modelling Spatial and Temporal Dependence and Applications to Risk, 26–30 April 2010, Luminy, France

- The 12th International Congress on Insurance: Mathematics and Economics, 16–18 July 2008, Dalian, China

  Talk: Sums of pairwise tail independent random variables with consistent variation (based on a joint work with Kam C. Yuen)

- The 2007 Shanghai and Hong Kong Insurance and Actuarial Forum, Shanghai, China, 18–19 August 2007

- The 11th International Congress on Insurance: Mathematics and Economics, 10–12 July 2007, Piraeus, Greece

  Talk: Asymptotics for ruin probabilities of a two-dimensional renewal risk model with heavy-tailed claims (based on a joint work with Kam C. Yuen and Kai W. Ng)

Service to Profession

Service to the Committees for

- The 19th International Congress on Insurance: Mathematics and Economics (IME), University of Liverpool, United Kingdom, June 24–26, 2015 (Member of the Organizing Committee)

External Reviewer of Applications and Proposals

- 2014: Three grant proposals for the Natural Sciences and Engineering Research Council (NSERC) of Canada

Service on Editorial Board

- Member of Editorial Board of *Current Advances in Mathematics*, 2013 – Present
- Member of Editorial Board of *Journal of Mathematical Research and Applications*, 2013 – Present
- External Reviewer for *Insurance Markets and Companies: Analyses and Actuarial Computations*, 2011 – Present

Reviewer for the Mathematical Reviews

- Reviewer for the *Mathematical Reviews* of the American Mathematical Society, 2005 – Present

  Published 24 reviews so far

Reviewer for Scientific Journals

- 2014: Refereed 5 papers for
  Abstract and Applied Analysis (1)
  Acta Mathematicae Applicatae Sinica, English Series (2)
  Insurance: Mathematics and Economics (2)
  TEST (1)
- 2013: Refereed 11 papers for
  Acta Mathematicae Applicatae Sinica (1)
  Applied Mathematics - A Journal of Chinese Universities (1)
  Applied Stochastic Models in Business and Industry (1)
  Insurance: Mathematics and Economics (2)
  Journal of the Korean Mathematical Society (1)
  Journal of Korean Statistical Society (1)
  Scandinavian Actuarial Journal (1)
  Statistics and Probability Letters (2)
  TEST (1)
- 2012: Refereed 16 papers for
  Journal of Mathematical Analysis and Applications (1)
  Acta Mathematicae Applicatae Sinica (1)
  Applied Stochastic Models in Business and Industry (1)
  Bulletin of the Korean Mathematical Society (1)
  Communications in Statistics – Theory and Methods (2)
  Insurance: Mathematics and Economics (2)
  Journal of Inequalities and Applications (1)
  Journal of Korean Statistical Society (2)
  Journal of Mathematical Analysis and Applications (1)
  Scandinavian Actuarial Journal (1)
  Statistics and Probability Letters (2)
  Stochastics (1)

- 2011: Refereed 11 papers for
  Applied Stochastic Models in Business and Industry (2)
  Asia Pacific Journal of Risk and Insurance (1)
  Bulletin of the Korean Mathematical Society (1)
  Communications in Statistics - Theory and Methods (1)
  Computers and Mathematics with Applications (1)
  Insurance Markets and Companies: Analyses and Actuarial Computations (1)
  Journal of Lithuanian Association of Nonlinear Analysts (1)
  Lithuanian Mathematical Journal (1)
  Nonlinear Analysis: Modelling and Control (2)
- 2010: Refereed 1 paper for
  Journal of Systems Science and Systems Engineering (1)
- 2009: Refereed 4 papers for
  Acta Mathematicae Applicatae Sinica (English Series) (3)
  Statistics and Probability Letters (1)
- 2008: Refereed 2 papers for
  Acta Mathematicae Applicatae Sinica (English Series) (1)
  Journal of Systems Science and Complexity (1)
- 2006: Refereed 2 papers for
  Acta Mathematicae Applicatae Sinica (English Series) (2)

Service at the University of Liverpool

- September 2012 – July 2014: Departmental Disability Contact, Department of Mathematical Sciences
- January 2012 – July 2014: Departmental Internationalization Committee, Department of Mathematical Sciences
- September 2010 – August 2012: Athena SWAN Coordinator, Department of Mathematical Sciences
- September 2010 – July 2013: Staff-Student Committee, Department of Mathematical Sciences
- September 2010 – July 2014: Examination and Assessment Officer, Department of Mathematical Sciences
- October 2009 – June 2010: Colloquia Organizer, Department of Mathematical Sciences

Last updated by Yiqing Chen on December 10, 2014