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Xuemiao Hao

Assistant Professor, Ph.D.

Personal Information

Date of Birth March 12, 1980

Place of Birth Wuhan, Hubei, China

Nationality Chinese citizen and Canadian permanent resident

Language Chinese (mother tongue), English

Marital Status Married

Education

2005–2009 Ph.D. in Statistics, The University of Iowa, US
Thesis: "Asymptotic Tail Probabilities of Risk Processes in Insurance and Finance"
Advisor: Dr. Qihe Tang

2002–2003 M.Sc. in Statistics, University of Toronto, Canada

1999–2002 B.Econ., China Center for Economic Research, Peking University, China

1998–2002 B.Sc. in Mathematics, Peking University, China
Thesis: "Pointwise Convergence of Inversion Transform Formula of Jacobi Function"
Advisor: Dr. Jianming Liu

Professional Designation

2012 Working toward Associate of the Society of Actuaries

Employment

2009–now Assistant Professor, Warren Centre for Actuarial Studies and Research
Asper School of Business, University of Manitoba, Canada

2012–2015 Adjunct Professor, Department of Statistics
University of Manitoba, Canada

2005–2009 Instructor and Teaching Assistant, Department of Statistics and Actuarial Science
The University of Iowa, US

2003–2005 Civil Servant, Hubei Provincial Department of Finance, China

2002–2003 Teaching Assistant, Department of Statistics, University of Toronto, Canada

Awards and Honors

2010–2015 Natural Sciences and Engineering Research Council of Canada
Individual Discovery Grant (CA$75,000)
"Stochastic Risk Processes with Economic Factors"

2009–2013 Research Start-up Funds (CA$20,000)
Asper School of Business, University of Manitoba

2008 Graduate College Summer Fellowship (US$3,000)
The University of Iowa

2008 Robert H. Taylor Award in Actuarial Analysis (US$3,000)
The University of Iowa

2005–2009 Graduate Assistantship
The University of Iowa

2005–2007 Full Tuition Scholarship
The University of Iowa

2002–2003 Graduate Fellowship
University of Toronto

2001 Prize for Innovation of Science and Technology
Peking University

2000 National Second Prize
China Undergraduate Mathematical Contest in Modeling
China Society for Industrial and Applied Mathematics

Publications

Refereed Journal Publications

JAP Hao, X.; Tang, Q. "Asymptotic Ruin Probabilities for a Bivariate Lévy-driven Risk Model with Heavy-tailed Claims and Risky Investments". *Journal of Applied Probability*, 49 (2012), no. 4, to appear.

ASTIN Hao, X.; Tang, Q. "Asymptotic ruin probabilities of the Lévy insurance model under periodic taxation". *ASTIN Bulletin: The Journal of the International Actuarial Association* 39 (2009), no. 2, 479–494.

JAP Hao, X.; Tang, Q.; Wei, L. "On the maximum exceedance of a sequence of random variables over a renewal threshold". *Journal of Applied Probability* 46 (2009), no. 2, 559–570.

IME Hao, X.; Tang, Q. "A uniform asymptotic estimate for discounted aggregate claims with subexponential tails". *Insurance: Mathematics & Economics* 43 (2008), no. 1, 116–120.

Working Paper

Hao, X.; Li, X.; Shimizu, Y. "Finite-time survival probability and Credit Default Swaps pricing under geometric Lévy markets".

Book Solutions Manual

Cryer, J. D.; Hao, X. Solutions Manual for *Time Series Analysis: With Applications in R* by Jonathan D. Cryer and Kung-Sik Chan, published by Springer-Verlag in 2008.

Theses

PhD Thesis — Hao, X. "Asymptotic tail probabilities of risk processes in insurance and finance". Ph.D. Thesis, The University of Iowa, published by *ProQuest LLC* in 2009.

Senior Thesis — Hao, X. "Pointwise Convergence of Inversion Transform Formula of Jacobi Function". Senior Thesis, School of Mathematical Sciences, Peking University, 2002.

Conferences and Talks

Aug. 2012 — The 47th Actuarial Research Conference, University of Manitoba, Winnipeg, Canada.

July 2012 — Internatonal Conference on Quantitative Finance and Risk Management, Jilin University, Changchun, China. Invited talk: "Finite-time Survival Probability and Credit Default Swaps Pricing under Geometric Lévy Markets".

June 2012 — The 16th International Congress on Insurance: Mathematics and Economics, The University of Hong Kong, Hong Kong. Contributed talk: "Finite-time Survival Probability and Credit Default Swaps Pricing under Geometric Lévy Markets".

Dec. 2011 — School of Mathematics and Statistics, Wuhan University, China. Invited talk: "Finite-time Survival Probability and Credit Default Swaps Pricing under Geometric Lévy Markets".

Aug. 2011 — The 46th Actuarial Research Conference, University of Connecticut, Storrs, US.

Dec. 2010 — International Conference on Applied Statistics and Financial Mathematics, The Hong Kong Polytechnic University, Hong Kong. Invited talk: "The Finite-time and Infinite-time Ruin Probabilities of a Bivariate Lévy-driven Risk Process with Heavy Tails".

June 2010 — The 14th International Congress on Insurance: Mathematics and Economics, University of Toronto, Canada. Contributed talk: "The Finite-time and Infinite-time Ruin Probabilities of a Bivariate Lévy-driven Risk Process with Heavy Tails".

June 2010 — The 3rd International Gerber-Shiu Workshop, University of Waterloo, Canada. Contributed talk: "On the Impact of Periodic Tax Payments on Asymptotic Ruin Probabilities of the Lévy Insurance Model".

Dec. 2009 — School of Mathematics and Statistics, Wuhan University, China. Invited talk: "On Paulsen's Conjecture".

May 2009 — The 3rd Annual Graduate Student Conference in Probability, University of North Carolina–Chapel Hill, US. Contributed talk: "Asymptotic Tail Probability of the Maximum Exceedance over a Renewal Threshold and Its Application in Insurance Mathematics".

Feb. 2009 — Department of Statistics and Actuarial Science, The University of Iowa, US. Colloquium talk: "On the Impact of Periodic Tax Payments on Asymptotic Ruin Probabilities of the Lévy Insurance Model".

Jan. 2009 — Asper School of Business, University of Manitoba, Canada. Invited talk: "Asymptotic Ruin Probabilities of Lévy Insurance Model under Periodic Taxation".

July 2008 — The 12th International Congress on Insurance: Mathematics and Economics, Dalian, China. Contributed talk: "A Uniform Asymptotic Estimate for Discounted Aggregate Claims with Subexponential Tails".

Aug. 2007 — The 42nd Actuarial Research Conference, Robert Morris University, Pennsylvania, US. Contributed talk: "Subexponential Tail of Discounted Aggragate Claims".

Apr. 2007 — The 1st Graduate Student Conference in Probability, University of Wisconsin–Madison, US. Contributed talk: "Heavy-tail Behavior of Discounted Aggragate Claims".

Teaching

Courses Taught at University of Manitoba

2012–2013 Actuarial Aspects of Investment Practice (ACT 4060)
Actuarial Models 2 (ACT 3230)

2011–2012 Actuarial Modeling Methods 1 (ACT 4140)
Actuarial Models 1 & 2 (ACT 3130 & 3230)

2010–2011 Actuarial Modeling Methods 1 (ACT 4140)
Actuarial Models 1 & 2 (ACT 3130 & 3230)
Introduction to Financial Derivatives for Actuarial Practice (ACT 4000)

2009–2010 Actuarial Modeling Methods 1 & 2 (ACT 4140 & 4240)
Actuarial Models 2 (ACT 3230)

Courses Taught at The University of Iowa

2009 Discussion session of Statistics for Business (22S:008:A15)

2008 Actuarial Exam Preparation (22S:188:001)

2007 Actuarial Exam Preparation (22S:188:001)

Courses Taught at University of Toronto

2003 Discussion session of Probability and Statistics (STA 257H1)

2002 Discussion session of Probability (STA 347H1)

Research Assistant

2011–2012 Xuan Li, Ph.D. candidate, Department of Statistics, University of Manitoba

Committee Member

2011–now You Liang, Ph.D. Thesis, Department of Statistics, University of Manitoba

Professional Service

Departmental/School

2012 Organization Committee and Scientific Committee
The 47th Actuarial Research Conference
Asper School of Business, University of Manitoba

2011–2013 Nominating Committee, Asper School of Business, University of Manitoba

2011–2012 Search Committee, Warren Centre for Actuarial Studies and Research
Asper School of Business, University of Manitoba

2009–2010 Social Committee, Asper School of Business, University of Manitoba

2009 Manulife Actuarial Scholarship Selection Committee
Warren Centre for Actuarial Studies and Research
Asper School of Business, University of Manitoba

Ad-hoc Journal Reviewing

Acta Mathematicae Applicatae Sinica, English Series (3)
Applied Mathematics and Computation (1)
Applied Stochastic Models in Business and Industry (2)
Insurance: Mathematics & Economics (1)

Reviewing: Book Proposal for Publishing Houses

Cambridge University Press, New York, US

Last updated on May 21, 2012.