Haiyan Liu

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Department of Mathematics and Department of Statistics and Probability

Michigan State University

EMPLOYMENT

- Assistant Professor, Department of Mathematics and Department of Statistics and Probability, Michigan State University   January, 2018-

VISITING EXPEIRENCE

- University of Science and Technology of China   September 2017, July 2018, July 2019
- University of Waterloo   October - December 2017, May 2019

EDUCATION

- Ph.D. Actuarial Science, University of Waterloo, Canada   April 2017

  Supervisors: Jun Cai and Ruodu Wang

- M.S. Probability and Statistics, Central South University, China   June 2013
- B.S. Mathematics and Applied Mathematics, Central South University, China   June 2011

RESEARCH INTERESTS

- Risk measurement and management, reinsurance, applied probability, model uncertainty

PUBLICATIONS

7. Liu, H. (2020). Weighted comonotonic risk sharing under heterogeneous beliefs. *ASTIN Bulletin*, to appear.

6. Embrechts, P., Liu, H., Mao, T. and Wang, R. (2020). Quantile-based risk sharing with heterogeneous beliefs. *Mathematical Programming*, to appear. `https://link.springer.com/article/10.1007/s10107-018-1313-1`.

5. Mao, T., Hu, J. and Liu, H. (2018). The average risk sharing problem based on risk measure and expected utility theory. *Insurance: Mathematics and Economics*, **83**, 170–179.

4. Embrechts, P., Liu, H. and Wang, R. (2018). Quantile-based risk sharing. *Operations Research*, **66**(4), 936–949.

3. Cai, J., Liu, H. and Wang, R. (2018). Asymptotic equivalence of risk measures under dependence uncertainty. *Mathematical Finance*, **28**(1), 29–49..

2. Cai, J., Liu, H. and Wang, R. (2017). Pareto-optimal reinsurance arrangements under general model settings. *Insurance: Mathematics and Economics*, **77**, 24–37.

1. Liu, H. and Wang, R. (2017). Collective risk models with dependence uncertainty. *ASTIN Bulletin*, **47**(2), 361–389.

MANUSCRIPTS

- Gavagan, J., Hu, L., Lee, G., Liu, H. and Weixel, A. (2019). Optimal reinsurance with model uncertainty. Submitted.

CONFERENCES

- The 54th Actuarial Research Conference, Indianapolis — August 2019
- China International Conference On Insurance And Risk Management, Chengdu — July 2019
- The 2nd International Workshop on Optimal (Re)Insurance, Beijing (invited) — July 2018
- The 21st International Congress on Insurance: Mathematics and Economics, Vienna — July 2017
- The 20th International Congress on Insurance: Mathematics and Economics, Atlanta — July 2016
- The 44th Annual Meeting of the Statistical Society of Canada, St. Catharines, Canada (invited) — May 2016
- The 50th Actuarial Research Conference, Toronto, Canada — August 2015

SEMINARS

- China Institute for Actuarial Science, Central University of Finance and Economics — September 2017
- Department of Statistics and Finance, University of Science and Technology of China — September 2017
- Department of Mathematics, University of Illinois at Urbana-Champaign — January 2017
- Department of Mathematics, Michigan State University — November 2016
- Department of Statistics and Finance, University of Science and Technology of China — August 2015

TEACHING EXPERIENCE

- Courses taught at Michigan State University
    - STT 442, Spring 2020
    - STT 455, MTH 360, Fall 2019
    - STT 455, Fall 2018
    - MTH 361, Spring 2018
- Teaching Assistant at the University of Waterloo — Fall 2013–Winter 2017