HLH 423K
P.O. Box 880490
Lincoln, NE, US
✉ szhuang3@unl.edu

Shengchao Zhuang

Education

2010-2014 **Ph.D. in Dept of System Engineering & Engineering Management**
The Chinese University of Hong Kong (CUHK), Hong Kong

2006-2010 **B.Sc. in Dept of Mathematics & Statistics**
Nanjing University, China

Academic Position

2017.8- **Assistant Professor in Dept of Finance**
University of Nebraska-Lincoln (UNL), US

2014-2017 **Postdoctoral Fellow in Dept of Statistics & Actuarial Science**
University of Waterloo (UW), Canada

Visiting Experiences

7/2019 Visiting Scholar, Academy of Mathematics and Systems Science, Chinese Academy of Science.

3/2019 Visiting Scholar, Department of Statistics & Actuarial Science, University of Waterloo.

8/2018 Visiting Scholar, Department of Statistics & Actuarial Science, University of Waterloo.

7/2018 Visiting Scholar, Academy of Mathematics and Systems Science, Chinese Academy of Science.

7/2018 Visiting Scholar, China Institute of Actuarial Science, Central University of Finance and Economics.

1/2016 Visiting Scholar, Department of Economics and Business, University of Amsterdam.

8-9/2015 Visiting Scholar, Department of Applied Mathematics, The HK PolyU.

6/2015 Visiting Scholar, Mathematical Institute, University of Oxford.

7-8/2013 Visiting Scholar, Hausdorff Research Institute of Mathematics, Bonn University.

5-6/2013 Visiting Scholar, Business School, East China Normal University.

Fields of Specialization

Behavioral Insurance, Dependence Modeling, Life Insurance, Optimal Insurance/Reinsurance, Portfolio Selection,

Refereed Publications

[1] Zhuang, S.C., Weng, C., Tan, K.S., and Assa, H. (2016): Marginal Indemnification Function Formulation for Optimal Reinsurance. ***Insurance: Mathematics and Economics*** 67, 65-76.

[2] Boonen, T., Tan, K.S., and Zhuang, S.C. (2016): Pricing in Reinsurance Bargaining with Comonotonic Additive Utility Functions. ***Astin Bulletin***, 46(2), 507-530.

[3] Boonen, T., Tan, K.S., and Zhuang, S.C. (2016): The Role of a Representative Reinsurer in Optimal Reinsurance. ***Insurance: Mathematics and Economics***, 70, 196-204.

[4] Weng, C., and Zhuang, S.C. (2017): CDF Formulation for Solving an Optimal Reinsurance Problem. ***Scandinavian Actuarial Journal***, 5, 395-418.

[5] Zhuang, S.C., Boonen, T., Tan, K.S., and Xu, Z. (2017): Optimal Insurance in the Presence of Reinsurance. ***Scandinavian Actuarial Journal***, 6, 535-554.

[6] Xu, Z.Q., Zhou, X.Y., and Zhuang, S.C. (2019): Optimal Insurance with Rank-Dependent Utility and Incentive Compatibility. ***Mathematical Finance***, 29(2), 659-692.

[7] Tan, K.S., Wei, P.Y., Wei, W., and Zhuang, S.C. (2020): Optimal Dynamic Reinsurance Policies under a Generalized Denneberg's Absolute Deviation Principle. ***European Journal of Operational Research***, 282(1), 345-362.

[8] Chi, Y., Tan, K.S., and Zhuang, S.C. (2020): A Bowley Solution with Limited Ceded Risk for a Monopolistic Reinsurer. ***Insurance: Mathematics and Economics***, 91, 188-201.

[9] Chi, Y., and Zhuang, S.C. (2020): Optimal Insurance with Belief Heterogeneity and Incentive Compatibility. ***Insurance: Mathematics and Economics***, 92, 104-114.

[10] Zhuang, S.C. (2020): A hybrid model of optimal reinsurance: a discussion of 'Optimal Reinsurance design based on risk measures: A review'. ***Statistical Theory and Related Fields***, 4(1), 20-22.

[11] Boonen, T., Tan, K.S., and Zhuang, S.C. (2021): Optimal Reinsurance with Multiple Reinsurers: Competitive Pricing and Coalition Stability. ***Insurance: Mathematics and Economics***, 101(B), 302-319.

[12] Chi, Y., and Zhuang, S.C. (2022): Regret-based Optimal Insurance Design. ***Insurance: Mathematics and Economics***, 102, 22-41.

[13] Boyle, P., Tan, K.S., Wei, P.Y., and Zhuang, S.C. (2022): Annuity and Insurance Choice under Habit Formation. ***Insurance: Mathematics and Economics***, 105, 211-237.

[14] Chi, Y., Zheng, J., and Zhuang, S.C. (2022): S-shaped narrow framing, skewness and the demand for insurance. ***Insurance: Mathematics and Economics***, 105, 279-292.

[15] Chi, Y., Xu, Z.Q., and Zhuang, S.C. (2022): Distributionally Robust Goal-reaching Optimization in the Presence of Background Risk. ***North American Actuarial Journal***, Forthcoming.

[16] Meng, H., Wei, P., Zhang, W., and Zhuang, S.C. (2022): Optimal Dynamic Reinsurance under Heterogeneous beliefs and CARA Utility. ***SIAM Journal on Financial Mathematics***, Forthcoming.

Instructor Experience

Spring 2018- ACTS 470 in UNL, Life Contingency I.

Fall 2017- ACTS 471 in UNL, Life Contingency II.

Spring 2017 ACTSC 431/831 in UW, Loss Model I.

Winter 2016 ACTSC 446/846 in UW, Mathematical Methods in Finance.

Teaching Assistant Experience

Spring 2014 SEEM 3440, Operation Research II.

Fall 2013 SEEM 2420, Operation Research I.

Fall 2011/12 SEEM 3590, Investment Science.

Spring 2011/12/13 SEEM 2430, Applied Probability & Statistics.

Fall 2010 SEEM 2530, Systems Engineering & Society.

Professional Service

Referee Operations Research, Mathematics of Operations Research, European Journal of Operational Research, Operations Research and Decisions

Review of Finance, Mathematical Finance, Mathematics and Financial Economics

Insurance: Mathematics and Economics, North American Actuarial Journal, Astin Bulletin, Scandinavian Actuarial Journal, European Actuarial Journal, Risks

	Probability in the Engineering and Informational Sciences, Acta Mathematicae Applicatae Sinica (English Series), Entropy, Review of Economic Analysis, Journal of Industrial and Management Optimisation, Mathematics, Methodology and Computing in Applied Probability
Committee	ARIA Brockett-Shapiro Actuarial Journal Award Committee, American Risk and Insurance Association, 2019, 2020, 2021, 2022.

Other Service Activities

Department	Scientific Committee/Student Presentation Award Committee, The 56th Actuarial Research Conference, 5/2021-8/2021.
Department	Organizing/Scientific/Operations Committee, The 55th Actuarial Research Conference, 6/2018-8/2020.
Department	Academic advisor, The actuarial science program in UNL, 2019-2021.
Department	Coordinator, Snell Actuarial Science and Risk Management Seminar Series, 2018-2019.
University	Invited Speaker on the panel "Thoughts from the Faculty: Tales from the Other Side of the First Year", New Faculty Orientation, 8/15/2018.
University	Invited Speaker on the panel "Thoughts from the Faculty: Redux", New Faculty Development Program, 3/7/2019.

Awards and Distinction

2012-2013	The Best Teaching Assistant Prize, CUHK, Hong Kong.
2005	The First Prize in National Mathematics Contest, China.
2001	The Silver Medal in Hua Luogeng National Young Mathematician Invitation Tournament, China.

Conference and Seminar Presentations

12/2021	Invited Presentation in One World Actuarial Research Seminar, Virtual.
8/2021	Participation in the 2021 ARIA Annual Meeting, Virtual.
8/2021	Presentation in the 56th Virtual Actuarial Research Conference, Chicago, United States.
7/2021	Presentation in the 24th International Congress on IME, Virtual.
4/2021	Invited Presentation in University of Wisconsin-Milwaukee, Milwaukee, United States.
10/2019	Invited Presentation in Informs Annual Meeting, Seattle, United States.
8/2019	Presentation in the 54rd Actuarial Research Conference, Indianapolis, United States.

7/2019 Presentation in the 10th China International Conference on Insurance and Risk Management (CICIRM), Chengdu, China.

8/2018 Presentation in the 53rd Actuarial Research Conference, London, Canada.

7/2018 Invited Presentation in Central University of Finance and Economics, Beijing.

1/2017 Presentation in University of Waterloo, Waterloo, Canada.

1/2017 Presentation in University of Nebraska-Lincoln, Lincoln.

1/2017 Presentation in Arizona State University, Tempe.

12/2016 Presentation in Michigan State University, East Lansing.

7/2016 Presentation in the 51st Actuarial Research Conference, Minnesota.

7/2016 Presentation in the 20th International Congress on IME, Georgia.

5/2016 Presentation in Ludwig Maximilians University, Germany.

1/2016 Presentation in University of Zurich, Zurich.

1/2016 Invited Presentation in University of Amsterdam, Amsterdam.

8/2015 Presentation in the 50th Actuarial Research Conference, Toronto.

6/2015 Presentation in the 19th International Congress on IME, Liverpool.

7-8/2013 Participation in the Hausdorff Research Institute for Mathematics (HIM), Bonn.

2011-2013 Participation in the Hong Kong Consortium for Quantitative Finance, Hong Kong.

6/2013 Participation in “Behavioral Finance" Workshop on Quantitative Finance, Shanghai.

Actuarial Certification

SOA Associate of the Society of Actuaries (ASA), 2018

Passed QFIC exam, Financial Modeling Module, and Scenario Modeling Module.