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Kenneth Tsz Hin Ng

Academic Positions

2024 – **Department of Mathematics, The Ohio State University**
Assistant Professor

Education

2020 – 2024 **The University of Illinois Urbana-Champaign**
Ph.D. in Mathematics, *Concentration in Actuarial Science and Risk Analytics*

2012 – 2018 **The University of Hong Kong**
2018 M.Phil. in Mathematics
2016 B.Sc. in Actuarial Science, *First Class Honours*

Professional Qualifications

2024 Associate of the Society of Actuaries (ASA)
Pursuing Fellowship (QFI track, Completed 3 FSA Modules)

Research Interests

Stochastic Control, Mean Field Games, Forward Utility Preferences, Actuarial Science, Financial Mathematics

Publications and Preprints

5 **Ng, K.T.H.**, Wong, T.K. and Yam, S.C.P. 2023+. Selling High/Buying Low at a Good Chance. Preprint.

4 Chong, W.F., Feng, R. and **Ng, K.T.H.** 2023+. Capital-Allocation-Induced Risk Sharing. Preprint.

3 Feng, R., Jing, X. and **Ng, K.T.H.** 2025. Optimal Investment-Withdrawal Strategies for Variable Annuities under a Performance Fee Structure. *Journal of Economic Dynamics and Control*, Vol. 170. [doi:10.1016/j.jedc.2024.105003]

2 Chu, D., **Ng, K.T.H.**, Yam, S.C.P. and Zheng, H. 2024. Mean-Field Analysis of Two-Party Governance: Cooperation versus Competition among Leaders. To appear in *Automatica*. [arXiv:2311.10354]

1 **Ng, K.T.H.** and Chong, W.F. 2024. Optimal Asset Allocations of DC Pension Plan under Forward Utility Preferences. *Insurance: Mathematics and Economics*, Vol. 114, 192-211. [doi:10.1016/j.insmatheco.2023.12.001]

Ongoing Projects

1 Li, B., Li, W., **Ng, K.T.H.** and Yam, S.C.P. Mean Field Analysis of Mutual Insurance.

2 **Ng, K.T.H.**, Chong, W.F. and Liang G. Exponential Forward Utility under Default Risks.

3 **Ng, K.T.H.** and Chong, W.F. Optimal Investment, Retirement and Consumption under Forward Utility Preferences.

Teaching Experience

OSU MATH 5633 Loss Models I (Autumn 2024)

UIUC (TA) ASRM 472 Life Contingencies II (Spring 2024, **Spring 2023****), ASRM210 Theory of Interest (**Fall 2023***), ASRM 471 Life Contingencies I (Spring 2023), STAT409 Actuarial Statistics II (Fall 2022), STAT408 Actuarial Statistics I (Spring 2022), ASRM410 Investment and Financial Markets (Spring 2021), ASRM406 Linear Algebra and Financial Applications (Grader; Fall 2020, Spring 2021, Fall 2021)

***Listed in "Teachers Ranked as Excellent by Their Students", **with outstanding performance**

HKUST (TA) MATH1012 Calculus 1A (Fall 2018), MATH1012 Calculus 1B (Fall 2018)

HKU (TA) MATH1009 Basic Mathematics for Business and Economics (Spring 2018), MATH1011 University Mathematics I (Fall 2017), MATH4907 Numerical Methods for Financial Calculus (Spring 2017)

Contributed Presentations

2024 **Invited Seminar.** Title: Linear Quadratic Mean Field Games: Two-Party Governance and Mutual Insurance. The Ohio State University, Columbus, Ohio, U.S.

Actuarial Science and Financial Mathematics Seminar. Title: Linear Quadratic Mean Field Games: Two-Party Governance and Mutual Insurance. The University of Illinois at Urbana-Champaign, Champaign, Illinois, U.S.

2023 **Actuarial Science and Financial Mathematics Seminar.** Title: Capital-Allocation Induced Risk Sharing. The University of Illinois at Urbana-Champaign, Champaign, Illinois, U.S.

Actuarial Research Conference. Title: Capital-Allocation Induced Risk Sharing. Drake University, Des Moines, Iowa, U.S.

Actuarial Research Conference. Title: Variable Annuity with a Performance Fee Structure: A Way Out of the Policyholder-Insurer Conflict. Drake University, Des Moines, Iowa, U.S.

2022 **Waterloo Student Conference in Statistics, Actuarial Science and Finance.** Title: When is a Good Time to Sell a Stock? The University of Waterloo, Waterloo, Ontario, Canada

International Congress on Insurance: Mathematics and Economics. Title: Optimal Asset Allocations of DC Pension Plan under Forward Utility Preferences. Online

Awards and Fellowships

2024 Selected as a recipient of James Hickman Doctoral Scholar, The Society of Actuaries

Actuarial Science Alumni Scholarship, The University of Illinois at Urbana Champaign

2023 Committee on Knowledge Extension Research (CKER) Travel Grants, The Society of Actuaries Research Institute

State Farm Actuarial Science Prize, The University of Illinois at Urbana-Champaign

PARM Summer Research Fellow, The University of Illinois at Urbana-Champaign

2018 Postgraduate Scholarship, The University of Hong Kong

2016 Dean's Honor List, Faculty of Science, The University of Hong Kong

Statistics and Actuarial Science Scholarship, The University of Hong Kong

2015 HKSAR Government Scholarship Fund, HKSAR Government

2014 Dean's Honor List, Faculty of Science, The University of Hong Kong

Services

Referee Insurance: Mathematics and Economics (6 papers), Scandinavian Actuarial Journal (1 paper)

Skills

Computer VBA, GGY Axis, Microsoft Office, LaTeX, MATLAB, Mathematica

Language Cantonese (Native), English (Proficient), Mandarian Chinese (Proficient), Japanese (Elementary)