

Kenneth Tsz Hin Ng

231 W 18th Avenue, Columbus, Ohio

📞 Contact: 217-991-2406 (US)

✉ ng.499@osu.edu

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 2 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.** 2024. Optimal Investment-Withdrawal Strategies for Variable Annuities under a Performance Fee Structure. To appear in *Journal of Economic Dynamics and Control*.
- 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](https://arxiv.org/abs/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](https://doi.org/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), Mandarin Chinese (Proficient), Japanese (Elementary)