

Changyue Hu

Assistant Professor of Actuarial Science

*Zimpleman College of Business
Drake University, Des Moines, IA
✉ changyue.hu@drake.edu
🏠 <https://changyuehu.github.io>*

Academic Experience

- 2026–Present **Assistant Professor of Actuarial Science**, *Drake University, Zimpleman College of Business, Des Moines, Iowa, USA.*
- 2021–2026 **Graduate Teaching Assistant**, *University of Illinois Urbana-Champaign, Program of Actuarial and Risk Management Sciences, Urbana-Champaign, Illinois, USA.*

Education

- 2026 **Ph.D., Mathematics with a Concentration in Actuarial Science and Risk Analytics**, *University of Illinois Urbana-Champaign, USA, Advisor: Dr. Zhiyu Quan.*
Dissertation: Insurance Analytics with Natural Language Processing
- 2021 **M.S., Actuarial Science**, *University of Illinois Urbana-Champaign, USA.*
- 2020 **B.S., Mathematics and Applied Mathematics**, *Nankai University, China.*

Fellowships, Grants & Awards

- 2024–2026 **James C. Hickman Scholar Doctoral Stipend**, *Society of Actuaries.*
- 2021, 2022, 2025 **Actuarial Research Conference Presentation Prize – Honorable Mention**, *Society of Actuaries.*
- 2025 **Committee on Knowledge Extension Research Actuarial Research Conference Travel Grant**, *Society of Actuaries.*
- 2025 **SOA Research Institute University Partnerships for Artificial Intelligence Topics Grant**, *Society of Actuaries.*
- 2024, 2025 **PARM Summer Research Fellowship**, *University of Illinois Urbana-Champaign.*
- 2023, 2025 **Teachers Ranked as Excellent by Their Students**, *University of Illinois Urbana-Champaign.*
- 2023 **Esther Portnoy Actuarial Science Scholarship**, *University of Illinois Urbana-Champaign.*
- 2022 **Illinois Risk Lab Award**, *University of Illinois Urbana-Champaign.*
- 2022 **State Farm Actuarial Science Scholarship**, *University of Illinois Urbana-Champaign.*
- 2018 **Community Service Scholarship**, *Nankai University.*
- 2017 **Nankai University Merit Scholarship (Gong-Neng Scholarship)**, *Nankai University.*

Research Interests

Actuarial Science, Predictive Analytics, Machine Learning, Natural Language Processing and Text Mining, Tree-Based Models, InsurTech

Publications & Manuscripts

Refereed Journal Articles

- 2024 Zhiyu Quan, **Changyue Hu**, Panyi Dong, Emiliano A. Valdez. Improving business insurance loss models by leveraging InsurTech innovation. *North American Actuarial Journal*. <https://doi.org/10.1080/10920277.2024.2400648>
- 2024 Linfeng Zhang, **Changyue Hu**, Zhiyu Quan. NLP-Powered Repository and Search Engine for Academic Papers: A Case Study on Cyber Risk Literature with CyLit. *North American Actuarial Journal*. <https://doi.org/10.1080/10920277.2024.2416903>
- 2022 **Changyue Hu**, Zhiyu Quan, Wing Fung Chong. Imbalanced learning for insurance using modified loss functions in tree-based models. *Insurance: Mathematics and Economics*. <https://doi.org/10.1016/j.insmatheco.2022.04.010>

Working Paper

- 2026 **Changyue Hu**, Zhiyu Quan. NLP-Powered Industry Classification Based on Business Information. *Under review*.

Professional Exams

- SOA Passed Exams P, FM, FAM, SRM, and ALTAM; progressing toward ASA.

Presentations

- 2025 **NLP-Powered Industry Classification Based on Business Information**, *60th Actuarial Research Conference*, York University, Toronto, Ontario, Canada, 29 July–1 August 2025.
- 2024 **NLP-Powered Repository and Search Engine for Academic Papers: A Case Study on Cyber Risk Literature with CyLit**, *27th International Congress on Insurance: Mathematics and Economics*, DePaul University, Chicago, Illinois, USA, 8–11 July 2024.
- 2023 **NLP-Powered Repository and Search Engine for Academic Papers: A Case Study on Cyber Risk Literature with CyLit**, *58th Actuarial Research Conference*, Drake University, Des Moines, Iowa, USA, 30 July–2 August 2023.
- Improving Business Insurance Loss Models by Leveraging InsurTech Innovation**, *National Center for Supercomputing Applications Student Conference*, University of Illinois Urbana-Champaign, Champaign, Illinois, USA, 13 April 2023.
- 2022 **Improving Business Insurance Loss Models by Leveraging InsurTech Innovation**, *57th Actuarial Research Conference*, University of Illinois Urbana-Champaign, Champaign, Illinois, USA, 3–6 August 2022.
- Improving Business Insurance Loss Models by Leveraging InsurTech Innovation**, *Risk Analytics Symposium 2022*, University of Illinois Urbana-Champaign, Champaign, Illinois, USA, 25 March 2022.
- 2021 **Imbalanced Learning using Actuarial Modified Loss Functions in Tree-Based Models**, *2nd Waterloo Student Conference in Statistics, Actuarial Science and Finance*, University of Waterloo, Waterloo, Ontario, Canada, 5–6 November 2021.
- Online

Imbalanced Learning using Actuarial Modified Loss Functions in Tree-Based Models, *56th Actuarial Research Conference*, DePaul University, Chicago, Illinois, USA, 19–21 August 2021.

Online

Imbalanced Learning using Actuarial Modified Loss Functions in Tree-Based Models, *24th International Congress on Insurance: Mathematics and Economics*, Online, 5–9 July 2021.

Teaching Experience

Drake University

ACTS 165 Short-Term Actuarial Mathematics II (UEC ASTAM) — Fall 2026

INS 051 Personal Risk Management — Fall 2026

University of Illinois Urbana-Champaign — Teaching Assistant

ASRM 461 Loss Models (UEC FAM-S) — Fall 2024–Spring 2026, Spring 2021

ASRM 441 Statistics for Risk Modeling I (UEC SRM-I) — Spring 2024

ASRM 469 Casualty Actuarial Mathematics — Spring 2024

ASRM 462/561 Advanced Loss Models (UEC ASTAM) — Fall 2023, Fall 2022

MATH 563 Risk Modeling — Fall 2023

ASRM 195 Foundations of Data Management — Fall 2022

ASRM 210 Theory of Interest — Spring 2022

ASRM 499 Statistics for Risk Modeling — Spring 2022

ASRM 510 Financial Mathematics — Fall 2021

MATH 225 Introductory Matrix Theory — Fall 2021

MATH 461 Probability — Fall 2021

ASRM 455 Predictive Analytics — Spring 2021

Professional Service

Reviewer	North American Actuarial Journal, Risk Sciences, China Finance Review International
Mentoring	Student Research Graduate Supervisor, Illinois Risk Lab, University of Illinois
Conference Service	Volunteer, 24th and 27th International Congress on Insurance: Mathematics and Economics, 57th Actuarial Research Conference