

第四届精算、量化金融与风险管理国际会议

The Fourth International Conference on Actuarial Science, Quantitative Finance and Risk Management

Conference Agenda

Saturday, July 4, Afternoon 15:00-18:00		Room 202, North Building, Academic Hall
Registration		
Sunday, July 5, Morning		Room 202, North Building, Academic Hall
08:00-10:00	Registration	Outside Room 202
08:30-08:45	Photo	Outside Academic Hall
08:45-09:15	Opening Ceremony Yanyan Cai Vice President, Central University of Finance and Economics Xiaolei Zhang Secretary General, China Association of Actuaries (CAA) Leon Cai CEO, Old Mutual-CHN Energy Life Insurance Company	Moderator: Hua Zhou CUFÉ
09:15-10:00	Plenary Session Plenary Speaker: Yongmiao Hong , University of Chinese Academy of Sciences Title: Model Averaging with Real-Time Frequency Decomposition	Moderator: Sujin Zheng CUFÉ
10:00-10:30 Tea Break		Outside Room 202
10:30-11:15	Plenary Speaker: An Chen , Ulm University Title: Insurance Decisions under Ambiguity: A Unified View of Optimal State Allocations	Moderator: Peng Shi UW-Madison
11:15-12:00	Plenary Speaker: Leonie Tickle , Macquarie University Title: Actuarial Science, Risk and Business Education in a Transforming World	Moderator: Zhuo Jin MQ
12:00-13:20	Lunch	Zijin Cafeteria (子衿食堂), CUFÉ

Sunday, July 5, Afternoon		Academic Hall					
13:30-15:30 Parallel Session 1							
Theme	Cyber Risk	Quantitative Finance-I	Pension-I	Stochastic Control-I	Risk Measures-I	Loss Models	Catastrophe Risk
Room	202	712*	603	604	606	702	706
Moderator	Tim Boonen	Xiao Wei	Huiling Wu	Hui Meng	Yijun Hu	Zhimin Zhang	Lizhen Wang
13:30-14:00	Maochao Xu	Ludovic Goudenège	Yunlong Li	Ming Zhou	Wenjun Jiang	Jing Yao	Xiaowei Chen
14:00-14:30	Yu Yuan	Weihua Geng	Tianyu Yang	Mi Chen	Yongzhao Chen	Zhiyu (Frank) Quan	Ming Pu
14:30-15:00	Ran Xu	Gongqiu Zhang	Cheng Tao	Yike Wang	Nan Guo	Lisa Gao	Jingchao Li
15:00-15:30	Zhuo Jin	Zhanyi Jiao	Huiling Wu	Siyi Liu	Yijun Hu	Mengni Yang	Yaodi Yong
15:30-16:00 Tea Break		Outside Room 202/ Room 602/Room 702					

Sunday, July 5, Afternoon							Academic Hall
16:00-17:30 Parallel Session 2							
Theme	Insurance Design	Variable Annuities-I	Risk Measures-II	Stochastic Control-II	Reinsurance	Variable Annuities-II	Health Risk
Room	202	602	603	604	606	702	706
Moderator	Ming Pu	Hui Zhao	Qian Lin	Ming Zhou	Xiaowei Chen	Ling Wang	Zining Liu
16:00-16:30	Yiying Zhang	Zhimin Zhang	Jinzhu Li	Danping Li	Wei Liu	Antonino Zanette	Jinhui (Colin) Zhang
16:30-17:00	Xiang Hu	Xiao Wei	Liyuan Lin	Ping Chen	Junna Bi	Ling Wang	Xin Zhong
17:00-17:30	Jing Zhang	Zijia Wang	Baishuai Zuo	Kaixin Yan	Baichuan Fei	Patrick Wong	Univa Song
18:00-21:00 Conference Banquet							

Monday, July 6, Morning							Academic Hall
08:30-10:00 Parallel Session 3							
Theme	Insurance Pricing	Finance & Annuities	Sustainability	Risk Management	Quantitative Finance-II	Pension-II	Ambiguity
Room	202	602	603	604	606	702	706
Moderator	Jing Yao	Nannan Zhang	Jinzhu Li	Junna Bi	Maochao Xu	Lianzeng Zhang	Bing Ma
08:30-09:00	Tim Boonen	Chenxin Lv	Hui Zhao	Hua Chen	Dan Zhu	Lianzeng Zhang	Qian Lin
09:00-09:30	Peng Shi	Qiqi Li	Liqin Hu	Xia Han	Ruixun Zhang	Dekun Zhai	Shihao Zhu
09:30-10:00	Fei Huang	Yan Yu	Yilun Song	Le (Hayley) Ma	Andrea Molent	Yusha Chen	Ning Wang
10:00-10:30 Tea Break							Outside Room 202
10:30-11:15	Plenary Session Plenary Speaker: Edward (Jed) Frees , University of Wisconsin–Madison Title: Spatially Dependent Risk Pools					Moderator: Hua Chen UHM	
11:15-12:00	Plenary Speaker: Phillip Yam , The Chinese University of Hong Kong Title: Effective Cyber Risk Modelling via Superposed Marked Hawkes Process					Moderator: Jingzhen Liu CUFE	
12:00-12:20	Closing Ceremony Hua Zhou Dean of the School of Insurance and the China Institute for Actuarial Science, Central University of Finance and Economics (CUFE)					Moderator: Sujin Zheng CUFE	
12:30-14:00 Lunch							Zijin Cafeteria (子衿食堂), CUFE

Parallel Session Details

Sunday, July 5, 13:30–15:30 Parallel Session 1

Cyber Risk

Room 202

Moderator: Tim Boonen, The University of Hong Kong

13:30-14:00 CADA-Flow: Capturing Complex Dependence in Cyber Breach Risk via Deep Learning
Maochao Xu, Illinois State University

14:00-14:30 Equilibrium Reinsurance Contract with Prevention and Incentive Clauses in a Sequential Game

Yu Yuan, Nanjing University of Information Science and Technology

14:30-15:00 Cyber Risk Management and Mitigation via Controlled Stochastic SIS Dynamics: An Optimal Control Approach

Ran Xu, Xi'an Jiaotong-Liverpool University

15:00-15:30 Optimal Cybersecurity Investment with Risk Sharing

Zhuo Jin, Macquarie University

Quantitative Finance-I

Room 712*

Moderator: Xiao Wei, Central University of Finance and Economics

(South Tower)

13:30-14:00 Signature Methods for Pricing Path-Dependent Derivatives in Bergomi and Rough Bergomi Models

Ludovic Goudenège, The French National Centre for Scientific Research (CNRS)

14:00-14:30 Fast Hierarchical Algorithms for Financial Risk Analytics: A Barycentric Lagrange Treecode Framework

Weihua Geng, Southern Methodist University

14:30-15:00 Deep Learning of Derivatives Pricing Functions in Jump-Diffusion Models

Gongqiu Zhang, The Chinese University of Hong Kong, Shenzhen

15:00-15:30 Testing Mean and Variance by E-Processes with Applications in Finance

Zhanyi Jiao, Arizona State University

* Room 712 is in the South Tower of the Academic Hall, accessible via the 7th floor corridor from the North Tower.

Parallel Session Details

Sunday, July 5, 13:30–15:30 Parallel Session 1

Pension-I

Room 603

Moderator: Huiling Wu, Central University of Finance and Economics

13:30-14:00 Cohort Life Expectancy Forecasting and Pension Liability Reassessment for the Elderly in China

Yunlong Li, University of International Business and Economics

14:00-14:30 Coping with Longevity via Hedging: Fair Dynamic Valuation of Variable Annuities

Tianyu Yang, Shanghai University of Finance and Economics

14:30-15:00 Resilience Design for Risk Sharing in a Target Benefit Pension Plan with Market-Driven Target-Reverting Benefits

Cheng Tao, Nankai University

15:00-15:30 Optimal Investment Strategy in a Defined Contribution Pension Plan with Intermediate Investment Return Constraints

Huiling Wu, Central University of Finance and Economics

Stochastic Control-I

Room 604

Moderator: Hui Meng, Central University of Finance and Economics

13:30-14:00 Optimal Investment Under Risk-Adjusted Return on Utility with Convex Risk Functionals

Ming Zhou, Renmin University of China

14:00-14:30 Optimal Reinsurance and Investment Strategies for Stackelberg Games with Jump-Diffusion Assets Under Stochastic Risk Aversion

Mi Chen, Fujian Normal University

14:30-15:00 Strictly Monotone Mean-Variance Preferences with Applications to Portfolio Selection

Yike Wang, Chongqing Technology and Business University

15:00-15:30 Investor Sentiment, Heterogeneous Beliefs, and the Disposition Effect: A Study Based on a Three-Generation OLG Model

Siyi Liu, Minzu University of China

Parallel Session Details

Sunday, July 5, 13:30–15:30 Parallel Session 1

Risk Measures-I

Room 606

Moderator: Yijun Hu, Wuhan University

13:30-14:00 Distributional Robust Insurance Under Bregman-Wasserstein Divergence
Wenjun Jiang, University of Calgary

14:00-14:30 On the Diversification Effect in Solvency II for Extremely Dependent Risks
Yongzhao Chen, The Hang Seng University of Hong Kong

14:30-15:00 Choquet Rating Criteria, Risk Measures, and Risk Consistency
Nan Guo, Nankai University

15:00-15:30 On Data-Driven Robust Distortion Risk Measures for Non-Negative Risks with Partial Information
Yijun Hu, Wuhan University

Loss Models

Room 702

Moderator: Zhimin Zhang, Chongqing University

13:30-14:00 Individual Bodily Injury Loss Assessment in Auto Insurance: A Group-Adaptive Quantile Combination Approach
Jing Yao, Soochow University

14:00-14:30 Hybrid Tree-Based Interpretable Pricing
Zhiyu (Frank) Quan, University of Illinois Urbana-Champaign

14:30-15:00 A Zero-Inflated Mixed-Effects Spatial Point Process for Grouped Storm Loss Data
Lisa Gao, University of Waterloo

15:00-15:30 On a Range-Based Functional of Drifted Brownian Motion with an Application
Mengni Yang, University of Southampton

Parallel Session Details

Sunday, July 5, 13:30–15:30 Parallel Session 1

Catastrophe Risk

Room 706

Moderator: Lizhen Wang, Central University of Finance and Economics

13:30-14:00 Adaptive Robust Optimization for Multi-Period P2P Risk Sharing Under Catastrophe Risk

Xiaowei Chen, Nankai University

14:00-14:30 Fiscal Smoothing and Catastrophe Insurance: Willingness-to-Purchase Thresholds of Local Governments

Ming Pu, Southwestern University of Finance and Economics

14:30-15:00 Optimal Risk Sharing for Catastrophe Risk

Jingchao Li, Shenzhen University

15:00-15:30 Optimal Relief in Catastrophe Insurance with Premium Subsidies: A Welfare-Based Analysis

Yaodi Yong, Nankai University

Sunday, July 5, 16:00–17:30 Parallel Session 2

Insurance Design

Room 202

Moderator: Ming Pu, Southwestern University of Finance and Economics

16:00-16:30 Preference Robust Insurance Design

Yiying Zhang, Southern University of Science and Technology

16:30-17:00 From Administrative Boundaries to Phenological Zones: Reducing Basis Risk in Weather Index Insurance

Xiang Hu, Zhongnan University of Economics and Law

17:00-17:30 Optimal Government-Subsidized Public-Private Partnership Insurance Design

Jing Zhang, The University of Hong Kong

Parallel Session Details

Sunday, July 5, 16:00–17:30 Parallel Session 2

Variable Annuities-I

Room 602

Moderator: Hui Zhao, Nankai University

16:00-16:30 Fourier–RQMC Valuation of Multi-Asset GMBs Under Merton Jump-Diffusion Model
Zhimin Zhang, Chongqing University

16:30-17:00 Demand for Inflation-Linked Variable Annuities Under the Money Illusion
Xiao Wei, Central University of Finance and Economics

17:00-17:30 Life-Cycle Portfolio Choice with GLWB Variable Annuities
Zijia Wang, The Chinese University of Hong Kong

Risk Measures-II

Room 603

Moderator: Qian Lin, Xi'an Jiaotong University

16:00-16:30 The Principle of a Single Big Jump from the Perspective of Tail Moment Risk Measure
Jinzhu Li, Nankai University

16:30-17:00 Beyond Tail Risks: On the Universal Superadditivity of Value-at-Risk
Liyuan Lin, Monash University

17:00-17:30 Robust Distortion Riskmetrics Under Wasserstein and Symmetric Constraints
Baishuai Zuo, Southern University of Science and Technology

Stochastic Control-II

Room 604

Moderator: Ming Zhou, Renmin University of China

16:00-16:30 Equilibrium Price Mechanism for Carbon Emission Allowance Markets Based on Mean-Field Games
Danping Li, East China Normal University

16:30-17:00 Optimal Investment, Contribution, and Benefit Policies in Collective Defined Contribution Pensions with Declining Fertility
Ping Chen, The University of Melbourne

17:00-17:30 De Finetti's Control Problem with Fixed Transaction Costs and Regime Switching
Kaixin Yan, Xiamen University

Parallel Session Details

Sunday, July 5, 16:00–17:30 Parallel Session 2

Reinsurance

Room 606

Moderator: Xiaowei Chen, Nankai University

16:00-16:30 Equilibrium Analysis in Multi-Agent Reinsurance Chain
Wei Liu, Xinjiang University

16:30-17:00 Optimal Underwriting, Reinsurance, and Investment in a Stackelberg–Nash Insurance Market with Endogenous Liability and Heterogeneous Insurers
Junna Bi, East China Normal University

17:00-17:30 Optimal Dividend, Reinvestment and Proportional Reinsurance Strategies with Transaction Costs
Baichuan Fei, East China Normal University

Variable Annuities-II

Room 702

Moderator: Ling Wang, Central University of Finance and Economics

16:00-16:30 Robust Pricing of Equity-Indexed Annuities Under Uncertain Volatility and Stochastic Interest Rate
Antonino Zanette, University of Udine

16:30-17:00 Generative Adversarial Network Stopping for Robust Surrendering
Ling Wang, Central University of Finance and Economics

17:00-17:30 Valuation of Variable Annuities in a General Stochastic Environment
Patrick Wong, Monash University

Health Risk

Room 706

Moderator: Zining Liu, Central University of Finance and Economics

16:00-16:30 Predicting Length of Stay in Australian Residential Aged Care Using Assessment and Diagnosis Data and a Machine Learning Framework
Jinhui (Colin) Zhang, Macquarie University

16:30-17:00 Disability Risk Prediction for Long-Term Care Insurance Under Actuarial Constraints
Xin Zhong, Xi'an Jiaotong-Liverpool University

17:00-17:30 Health Risk Aversion in Dynamic Economic Models
Univa Song, Bentley University

Parallel Session Details

Monday, July 6, 8:30–10:00 Parallel Session 3

Insurance Pricing

Room 202

Moderator: Jing Yao, Soochow University

8:30-9:00 Monopoly Pricing of Weather Index Insurance
Tim Boonen, The University of Hong Kong

9:00-9:30 α -Fair Insurance Pricing
Peng Shi, University of Wisconsin–Madison

9:30-10:00 Fairness Testing for Algorithmic Pricing
Fei Huang, The University of New South Wales

Finance & Annuities

Room 602

Moderator: Nannan Zhang, Central University of Finance and Economics

8:30-9:00 Adaptive Window Selection for Financial Risk Forecasting
Chenxin Lv, University of Waterloo

9:00-9:30 Bequest Motives and Demand for Deferred Annuities
Qiqi Li, Southern University of Science and Technology

9:30-10:00 Variable Annuity Pricing with Limited Attention
Yan Yu, University of Waterloo

Sustainability

Room 603

Moderator: Jinzhu Li, Nankai University

8:30-9:00 Portfolio Selection Problem with Periodic Performance Evaluation Under Model Uncertainty
Hui Zhao, Nankai University

9:00-9:30 Priced but Not Free: How Bond Markets Capitalize Green Certification
Liqin Hu, Wuhan University

9:30-10:00 The ESG Rating Game: Deviation, Disagreement, and Greenwashing
Yilun Song, University of International Business and Economics

Parallel Session Details

Monday, July 6, 8:30–10:00 Parallel Session 3

Risk Management

Room 604

Moderator: Junna Bi, East China Normal University

8:30-9:00 Opening the Black Box of Internal Capital Markets: Evidence from M&A and Internal Reinsurance

Hua Chen, University of Hawaii at Manoa

9:00-9:30 Higher-Order Gini Indices: An Axiomatic Approach

Xia Han, Nankai University

9:30-10:00 Innovation Ambidexterity and Risk-Mitigated Growth: Performance and Valuation Implications

Le (Hayley) Ma, University of Technology Sydney

Quantitative Finance-II

Room 606

Moderator: Maochao Xu, Illinois State University

8:30-9:00 Structural Macroeconomics with Daily Data: A Matrix-Free Mixed-Frequency VAR Approach

Dan Zhu, Monash University

9:00-9:30 Generalizable and Interpretable Dynamic Hedging Strategies Using Itô Signatures as Tradable Bases

Ruixun Zhang, Peking University

9:30-10:00 Neural Calibration of Arbitrage-Free Recombining Binomial Trees from Option Prices

Andrea Molent, University of Udine

Pension-II

Room 702

Moderator: Lianzeng Zhang, Nankai University

8:30-9:00 The Pricing of the Perpetuity in CIR Model

Lianzeng Zhang, Nankai University

9:00-9:30 The Effect of PBGC Premium Structure on Corporate Pension Funding Strategies

Dekun Zhai, Bryant University

9:30-10:00 Present Bias Under Lifetime Uncertainty: From Consumptions to Pension Contributions

Yusha Chen, Southwestern University of Finance and Economics

Parallel Session Details

Monday, July 6, 8:30–10:00 Parallel Session 3

Ambiguity

Room 706

Moderator: Bing Ma, Central University of Finance and Economics

8:30-9:00 Ambiguity Overprecision and Optimal Capital Requirements in Continuous Time
Qian Lin, Xi'an Jiaotong University

9:00-9:30 Nonconcave Portfolio Choice Under Smooth Ambiguity
Shihao Zhu, Ulm University

9:30-10:00 Robust Optimal Decisions with Rational Inattention and Regret Aversion
Ning Wang, Australian National University
