The 25th International Congress on Insurance: Mathematics and Economics

July 12th–15th 2022
Online

Conference Organizers

中山大學嶺南學院
LINGNAN COLLEGE SUN YAT-SEN UNIVERSITY

MACQUARIE University
SYDNEY·AUSTRALIA

Co–Organizer

中山大學金融工程与风险管理研究中心
Sun Yat-Sen,Center for Financial Engineering and Risk Management
广东省人文社会科学重点研究基地

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About the Conference

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Zhongfei Li, Southern University of Science and Technology

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Hansjörg Albrecher, University of Lausanne
Bingzheng Chen, Tsinghua University
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Organizing Committee

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Yan Zeng (Co-chair), Sun Yat-sen University

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Christian Hilpert, Sun Yat-sen University

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Jiwook Jang, Macquarie University
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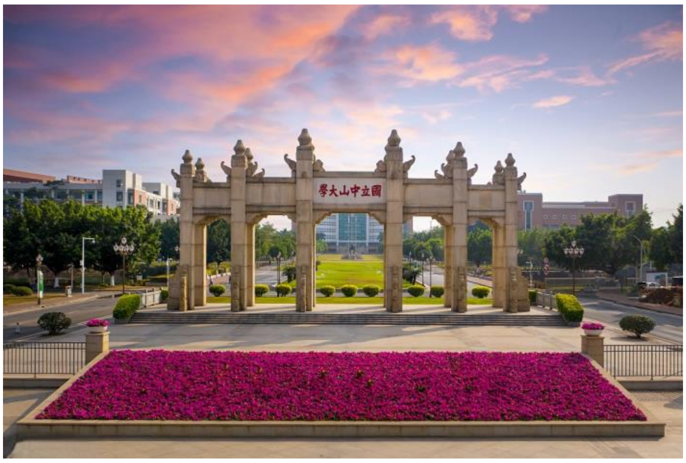
Hanlin Shang, Macquarie University
Shuguang Shen, Sun Yat-sen University
Yanlin Shi, Macquarie University
Shibin Song, Sun Yat-sen University
Ling Sun, Sun Yat-sen University
Chong It Tan, Macquarie University
Zhiwei Tong, The University of Iowa
Chi Truong, Macquarie University
Wenyuan Wang, Xiamen University
Yuantao Xie, University of International Business and Economics
Wenguang Yu, Shandong University of Finance and Economics
Xudong Zeng, Shanghai University of Finance and Economics
Colin Zhang, Macquarie University
Yong Zhang, Sun Yat-sen University
Zhimin Zhang, Chongqing University

Conference Organizers

Lingnan College, Sun Yat-sen University

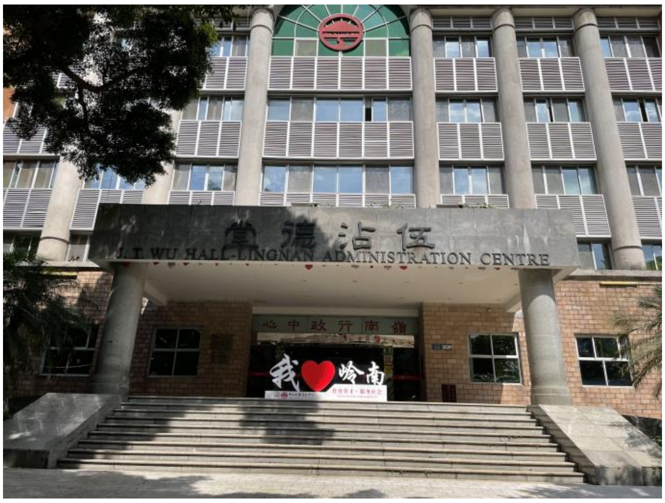
About Sun Yat-sen University



Founded by Dr. Sun Yat-sen and with an educational tradition spanning over 100 years, Sun Yat-sen University is a preeminent research, academic and cultural center and the premier location for talent development in South China. SYSU is under the direct leadership of the MoE and has the "985", "211" and "Double First-Class" marks. With five campuses in the three cities of Guangzhou, Zhuhai and Shenzhen, and ten affiliated hospitals, the University is striving to become a world-class university and global center of learning.Ranked among the top 1% of universities in the world, Macquarie University enjoys an enviable reputation for research excellence – 100 per cent of the research is ranked at world standard or above. Looking to the future, Macquarie has developed five research priorities – Healthy People, Resilient Societies, Prosperous Economies, Secure Planet and Innovative Technologies – that provide a focal point for the cross-disciplinary research approach that's at the heart of Macquarie's ethos.

With about 61,786 students and 17,614 employees the university contributes significantly to the research landscape of China. Built on a solid multidisciplinary foundation of humanities, social sciences, natural sciences, medical sciences, and engineering, Sun Yat-sen University is propelled forward by the continuous pursuit of academic innovation. The University is equipped with a globally aware outlook, and has dedicated itself to being an institution that is "comprehensive, innovative, and open". The goal of talent cultivation is to nurture students who have both ability and moral integrity, able to cultivate charisma and eager to serve their country. The guiding philosophy is to be oriented toward academic frontiers, oriented toward national major strategic needs, and oriented toward national and regional economic and social development. The basic approach is through the construction of big research teams, big platforms and big projects. The University is pushing forward the transformation from external development to internal development, the transformation from routine development to active development, and the transformation from advantages in humanities, social sciences, natural sciences and medical sciences to a university where humanities, social sciences, natural sciences, medical sciences and engineering can integrate and develop while retaining their distinctive characteristics. Now, standing at a new starting point, Sun Yat-sen University strives to foster an academic environment where all disciplines develop distinctively yet systematically, thus blossoming into an institution with influence and impact on a global scale.

About Lingnan College



Lingnan is a school of economics that provides programmes in economics and finance. Currently, the College offers programmes ranging from undergraduate to the Master's and PhD levels. It also provides specialized master's programme in finance, international business and insurance. All those programmes are among the most competitive programmes in China and are considered the best ones in South China. In 2018, Master of Finance programme ranked No. 60 globally. the Global Three Programme (collaborated with the McIntire School of Commerce at the University of Virginia (USA) and ESADE Business School (Spain) to offer a postgraduate program) was ranked No. 1 in Asia Pacific in most recent QS and FT Rankings.

The College currently has about 100 full-time faculty members and continuously strives for academic excellence. The faculty members carry out rigorous and original research with particular focus on China's ongoing economic development by publishing in first tier international and national research journals. To build up a high-quality education brand and forge Lingnan's international reputation, the College is committed to building up a world-caliber faculty team and forging a platform for career development.

Lingnan is triple-crowned in AACSB, EQUIS and AMBA. Lingnan has also established an extensive network of partnerships with over 40 leading universities around the globe. International cooperation focuses on student exchange, faculty exchange, dual degree programmes, joint research, and etc. This global partnership network has provided students and faculty alike with a platform for international exchanges that enhances teaching, learning and research collaboration.

Macquarie Business School, Macquarie University

About Macquarie University

Macquarie University is a public research university based in Sydney, Australia. Uniquely located in the heart of Australia's largest high-tech precinct, Macquarie brings together more than 44,000 students and 3000 staff in one thriving hub of discovery. Since its foundation in 1964, Macquarie has aspired to be a different type of university: one unbound by ivory towers and sandstone walls. Built to break from traditions and work in tandem with industry, Macquarie strives for the extraordinary by challenging convention and embracing different views.

Ranked among the top 1% of universities in the world, Macquarie University enjoys an enviable reputation for research excellence – 100 per cent of the research is ranked at world standard or above. Looking to the future, Macquarie has developed five research priorities – Healthy People, Resilient Societies, Prosperous Economies, Secure Planet and Innovative Technologies – that provide a focal point for the cross-disciplinary research approach that's at the heart of Macquarie's ethos.

With more than 300 leading companies located in the Macquarie Park Innovation District around the Macquarie campus, Macquarie students are able to tap into industry connections that give them an edge in their future careers, while Macquarie staff have access to outstanding research and innovation opportunities with some of the world's leading organisations.

About Macquarie Business School

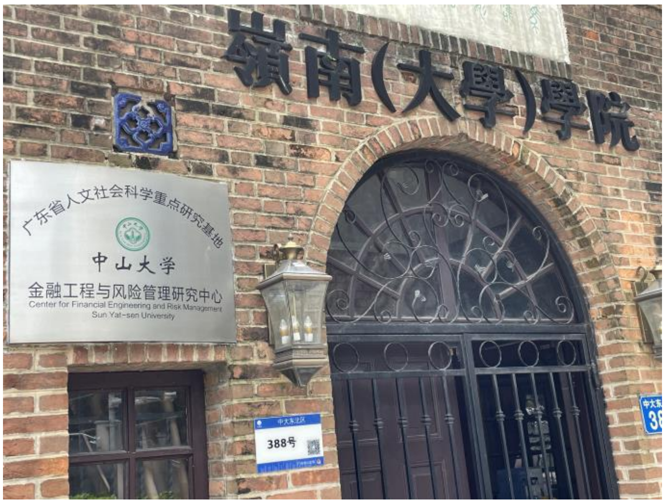
Macquarie University has been a leading provider of actuarial education for over 50 years. As the first university to be accredited with a professional actuarial body in the world, Macquarie University has consistently delivered a first-class experience to our students. In addition to being accredited with the Actuaries Institute, Macquarie University is also recognised as a Center of Actuarial Excellence by the Society of Actuaries.

Macquarie Business School was established in 2019 and is the home for all business, management and economics research and education at Macquarie University. Macquarie Business School is an AACSB accredited and highly engaged business school. Working with our corporate partners, students, and alumni, we create and communicate insights through research that addresses business and societal challenges. Our purpose is to provide inspiring and engaging business education and research that is useful to students throughout their careers and for solving society's biggest problems.

Being one of the six departments in the Macquarie Business School, Department of Actuarial Studies and Busines Analytics is the home for a group of leading actuarial scholars who have produced world-class research at the forefront of the discipline. Our research programs focus on the practical application of advanced quantitative approaches for innovation in insurance and business. Macquarie Business School is ranked fifth globally among business schools in the UNL Global Research Rankings of Actuarial Science and Risk Management & Insurance for the period of 2016-2020.

Co-Organizer

The Center for Financial Engineering and Risk Management of Sun Yat-sen University



The Center for Financial Engineering and Risk Management of Sun Yat-sen University (hereinafter referred to as the Center) is a scientific research institution directly affiliated to Sun Yat-sen University. In June of 2003, the Center was officially established with the approval of Sun Yat-sen University. With the strong support of Sun Yat-sen University, Lingnan College and other sister universities, the Center was authorized as the key research base of Humanities and Social Sciences in Guangdong Province in July of 2010. In 2012, it was rated as an advanced team of the "Thousand-Hundred-Ten Projects" of colleges and universities in Guangdong Province. In 2013, it was rated as outstanding of all key research bases of Humanities and Social Sciences in Guangdong Province.
At present, the Center has 1 Ministry of Education Yangtze River scholar professor, 1 Ministry of Education Young Yangtze River scholar professor, 2 winners of National Science Fund for Distinguished Young Scholars, 1 winner of National Science Fund for Excellent Young Scholars, 2 winners of The 100th excellent doctor degree dissertation in China and 2 Guangdong province universities and colleges Young Peal River scholars. The Center also has a group of outstanding researchers, experts and scholars from academia, politics and industry both domestically and internationally.

The Center is oriented towards the world's scientific and technological frontier, the main economic battlefield, the major needs of the country, and the people's life and health. With the purpose of building a high-level and open research platform for financial engineering and risk management, the center comprehensively applies the theories, methods and technologies of finance, economics, management, mathematics, engineering, behavior and other disciplines in studying and creatively resolving major theoretical and practical problems encountered in financial development. The Center works hard to promote the construction of large projects, teams and platforms, and strives to build a national key research base, a key laboratory and a high-end think tank in the fields of economy, finance and management. Specifically, it conducts academic research on cutting-edge scientific issues in important directions such as digital finance, inclusive finance, digital insurance, supply chain finance, pension finance, real estate finance and risk management. The Centre carries out policy research on major practical issues of national strategies such as financial supply-side structural reform, aging, digital China, financial security, and financial support for the elderly.

Closely centering on the main work of scientific research and policy research, the Center has made full use of its advantages at the forefront of reform and opening up, and established a long-term and extensive academic exchange relationship with internationally renowned universities and academic institutions. The Center has hosted "Sun Yat-sen University Financial Engineering and Risk Management Seminars Series" and "Quantitative Finance and Insurance Branch of Chinese Society of Optimization, Overall Planning and Economic Mathematics Academic Annual Conference" for many years, and has undertaken a large number of major and key national projects, produced plenty of high-caliber treatises, and offered decision-making advisory services for economic and financial realities. Our achievements effectively promote discipline construction and talent training, and play an increasingly important role in scientific research and social services.

Members of the Center have won more than ten important projects, including the Creative Research Groups project, major project and key project of the National Natural Science Foundation of China, major project of the National Social Science Fund of China, major project of the Ministry of Education, National Natural Science Foundation of China/RGC Joint Research Scheme, and research team project of Guangdong Natural Science Foundation. We have published a series of papers in UTD/FT/ domestic top journals, and won more than 20 first or second prizes at the ministerial and provincial levels. Our works have been approved by the premier, the chairman and other central leaders more than 20 times.

The Center is working to enhance its capacity to support local, regional, and national economic and social development. Members of the Center actively offer decision-making consulting services for governments at all levels, enterprises and institutions by undertaking horizontal topics. Members of the center give full play to the role of "think tanks" and "brain trust" by serving as consultants of governments at all levels, enterprises and institutions, and leaders of various academic groups.

Compact Schedule

IME 2022

Schedule

ORGANIZERS:

中山大學嶺南學院

LINGNAN COLLEGE SUN YAT-SEN UNIVERSITY

MACQUARIE University

SYDNEY · AUSTRALIA

25th International Congress on Insurance: Mathematics and Economics

Guangzhou & Sydney, UTC+8, Tue-Fri, July 12–15, 2022

Tuesday, July 12

20:30–21:00	Opening Ceremony
21:00–21:50	Keynote Speech
21:50–22:15	*Break*
22:15–23:55	Parallel Sessions (Eight)

Wednesday, July 13

15:00–16:40	Parallel Sessions (Eight)
16:40–17:00	*Break*
17:00–18:40	Parallel Sessions (Eight)
18:40–20:30	*Break*
20:30–22:00	IME Editorial Board Meeting
22:00–22:15	*Break*
22:15–23:55	Parallel Sessions (Eight)

Thursday, July 14

15:00–16:40	Parallel Sessions (Eight)
16:40–17:00	*Break*
17:00–18:40	Parallel Sessions (Eight)
18:40–21:00	*Break*
21:00–21:50	Keynote Speech
21:50–22:15	*Break*
22:15–23:55	Parallel Sessions (Eight)

Friday, July 15

15:00–16:40	Parallel Sessions (Eight)
16:40–21:00	*Break*
21:00–21:50	Keynote Speech
21:50–22:00	*Break*
22:00–23:00	Closing Ceremony

Biographies of Keynote Speakers

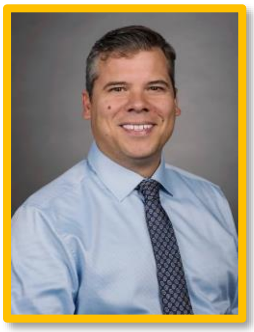
Hazel Bateman

Professor, Deputy Director of the ARC Centre of Excellence in Population Ageing Research (CEPAR)
School of Risk & Actuarial Studies, UNSW Sydney

Hazel Bateman is a Professor in the School of Risk & Actuarial Studies, UNSW Sydney, and Deputy Director of the ARC Centre of Excellence in Population Ageing Research (CEPAR). Hazel's research focusses on consumer financial decision making especially as it relates to retirement accumulation and decumulation with an emphasis on interventions to facilitate better financial decisions. She also works on design of and demand for retirement products including annuities, long-term care insurance and home equity release products. Hazel has consulted on retirement income issues to international organisations including the OECD, the World Bank, the Social Insurance Administration (China) and the Korean Institute of Health and Social Affairs. She is the Chair of Netspar's Scientific Council and President of the International Pension Research Association (IPRA) and serves on the UniSuper Consultative Committee and the Advisory Boards of the Mercer CFA Institute Global Pension Index, the Conexus Institute and MyHomeStream.

Daniel Bauer

Professor, Chairman of the Department of Risk and Insurance, and Hickman-Larson Chair in Actuarial Science
Wisconsin School of Business, University of Wisconsin-Madison



Dani is a Professor of Risk and Insurance and the Hickman-Larson Chair in Actuarial Science at the Wisconsin School of Business at the University of Wisconsin-Madison. He currently serves as the chairman of the Department of Risk and Insurance at UW.

Dani grew up in Germany and received his PhD in Applied Mathematics from Ulm University. He also holds a Master's in Statistics from San Diego State University, where he studied as a Fulbright scholar. Dani was on the faculty at other US Business Schools before joining UW in 2018.

He has published his research in leading journals in insurance, statistics, economics, finance, and management, and he teaches classes in actuarial science, data science, quantitative finance, and quantitative risk management. He currently serves as a senior editor at the Journal of Risk and Insurance, as a co-editor of the North American Actuarial Journal, and as an Associate Editor at several other actuarial journals including Insurance: Mathematics and Economics.

Ka Chun Cheung

Professor, Director of the Actuarial Science Programme
Department of Statistics and Actuarial Science, HKU

Ka Chun Cheung received his Bachelor degree in Actuarial Science and PhD degree from The University of Hong Kong. He rejoined HKU as an Associate Professor in 2008 after being an Assistant Professor at the University of Calgary for four years. He is now a full professor at Department of Statistics and Actuarial Science, HKU, and is the Director of the Actuarial Science Programme. He is an Associate of the Society of Actuaries and an elected member of the International Statistical Institute. He served as the Vice President of the Hong Kong Statistical Society from 2017 to 2019, and is currently an Honourary Advisory Board Member of the Actuarial Society of Hong Kong. His research interests include various topics in actuarial science, including optimal reinsurance, credibility theory, stochastic orders, dependence structures, and extreme value theory.

Short Program

East Asia Time (UTC+8, Beijing, Hong Kong, Singapore, Manila)

Date: Tuesday, 12/Jul/2022								
20:00-20:30	IT Drop-in Session (Optional)							
Opening Ceremony Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402								
	Chair: **Zhuo Jin**							
20:30-20:40	**Conference Chair's Speech by Zhongfei Li**							
20:40-21:00	**SYSU Dean's Speech by Shanmin Li** **MQ Deans' Speeches by Eric Knight & Leonie Tickle**							
Keynote Speech 1 Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402								
	Chair: **Zhongfei Li**							
21:00-21:50	**Keynote Speech by Daniel Bauer, University of Wisconsin-Madison**							
21:50-22:15	**Break**							
Tuesday Parallel Sessions 1								
	TUE1-01: Data science and statistical modelling 1	TUE1-02: Financial modelling 1	TUE1-03: Optimal control in insurance and finance 1	TUE1-04: Risk measures 1	TUE1-05: Ruin theory and related topics 1	TUE1-06: Insurance economics 1	TUE1-07: Life and non-life insurance 1	TUE1-08: Insurance risk models 1
Zoom	Meeting ID: 836 7795 1605 Passcode: 194402	Meeting ID: 891 8739 0955 Passcode: 499695	Meeting ID: 830 7941 4558 Passcode: 744891	Meeting ID: 896 1348 8008 Passcode: 631164	Meeting ID: 835 3269 4794 Passcode: 684635	Meeting ID: 881 0326 2533 Passcode: 377864	Meeting ID: 879 4168 9738 Passcode: 863503	Meeting ID: 817 9899 0334 Passcode: 980248
Chair	**Jianxi Su**	**Yongzeng Lai**	**Bin Zou**	**Fangda Liu**	**Stephane Loisel**	**Zhiwei Tong**	**Ze Chen**	**Qian Zhao**
22:15-22:40	Jianxi Su	Yongzeng Lai	Bin Zou	Fangda Liu	Stephane Loisel	Zhiwei Tong	Jamaal Ahmad	Qian Zhao
22:40-23:05	Zhiyu Quan	Alexandru Badescu	Nora Muler	Yiqing Chen	Barbara Pacchiarotti	Tatjana Miljkovic	Alaric Jules Antoine Müller	Emma Kroell
23:05-23:30	Xing Wang	Haibo Liu	Tsz Hin Ng	Etienne Marceau	Vaios Dermitzakis	Tim Brasch	Aleksandr Shemendyuk	Christopher Blier-Wong
23:30-23:55	Kenneth Zhou	Yang Liu	Tak Wa Ng	Silvana M. Pesenti	José Miguel Flores-Contró	Raviar S. Karim	Nicolaus Grochola	Thai Nguyen
Date: Wednesday, 13/Jul/2022								
14:30-15:00	IT Drop-in Session (Optional)							

Wednesday Parallel Sessions 1								
	WED1-01: Data science and statistical modelling 2	WED1-02: Financial modelling 2	WED1-03: Optimal control in insurance and finance 2	WED1-04: Risk measures 2	WED1-05: Reinsurance and other risk-sharing arrangements 1	WED1-06: Insurance economics 2	WED1-07: Life and non-life insurance 2	WED1-08: Insurance risk models 2
Zoom	Meeting ID: 836 7795 1605 Passcode: 194402	Meeting ID: 891 8739 0955 Passcode: 499695	Meeting ID: 830 7941 4558 Passcode: 744891	Meeting ID: 896 1348 8008 Passcode: 631164	Meeting ID: 835 3269 4794 Passcode: 684635	Meeting ID: 881 0326 2533 Passcode: 377864	Meeting ID: 879 4168 9738 Passcode: 863503	Meeting ID: 817 9899 0334 Passcode: 980248
Chair	**Zhengxiao Li**	**Phillip Yam**	**Shuaiqi Zhang**	**Jinzhu Li**	**Benjamin Avanzi**	**Jiyuan Wang**	**Yichun Chi**	**Peter Vekas**
15:00-15:25	Zhengxiao Li	Phillip Yam	Shuaiqi Zhang	Jinzhu Li	Benjamin Avanzi	Jiyuan Wang	Liang Yang	Naidan Deng
15:25-15:50	Yen-Chih Chen	Yang Zhao	Marina Di Giacinto	Linhai Zhao	Alexandra Bugalho de Moura	Thomas Dudek	Hafidh Afif Ardhi	Yaumil Rizki
15:50-16:15	Jiamin Yu	Hervé Andres	Matteo Brachetta	Yiying Zhang	Niko Ardita	Wenjing Han	Xi Xin	Yifan Hu
16:15-16:40	Chi Truong	Tin Long Ho	Fan Wu	Zinoviy Landsman	Gabriela Zeller	Wanting He	Arif Agung Riyadi	Mustafa Asim Ozalp
16:40-17:00	**Break**							
Wednesday Parallel Sessions 2								
	WED2-01: Data science and statistical modelling 3	WED2-02: Financial modelling 3	WED2-03: Optimal control in insurance and finance 3	WED2-04: Risk measures 3	WED2-05: Reinsurance and other risk-sharing arrangements 2	WED2-06: Mortality modelling 1	WED2-07: Pension and pension mathematics 1	WED2-08: Predictive insurance analytics 1
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Chair	**Alexandra Dias**	**Michèle Vanmaele**	**Pavel Shevchenko**	**Sebastian Schlütter**	**Hoi Ying Wong**	**Chong It Tan**	**Ling Zhang**	**Guangyuan Gao**
17:00-17:25	Alexandra Dias	Michèle Vanmaele	Pavel Shevchenko	Sebastian Schlütter	Hoi Ying Wong	Qingxiao Ma	Ling Zhang	Guangyuan Gao
17:25-17:50	Peter Vekas	Morten Wilke	Yang Shen	Qingyao Xie	Hui-Min Wang	Torsten Kleinow	Danping Li	Jaeyoun Ahn
17:50-18:15	Wenyan Hao	Bilgi Yilmaz	Guo Liu	Tolulope Fadina	Yan Liu	Onofre Alves Simões	Zheng Chen	Yaodi Yong

18:15-18:40	Jorge Yslas	Biwen Ling	Ming Qiu	Fangyuan Zhang	Li Xun	Piotr Sliwka	Zhaojie Ren	Yaojun Zhang
18:40-20:30	**Break**							
20:30-22:00	**IME Editorial Board Meeting**							
22:00-22:15	**Break**							
Wednesday Parallel Sessions 3								
	WED3-01: Data science and statistical modelling 4	WED3-02: Financial modelling 4	WED3-03: Optimal control in insurance and finance 4	WED3-04: Risk measures 4	WED3-05: Insurance products linked to equity 1	WED3-06: Reinsurance and other risk-sharing arrangements 3	WED3-07: Climate change 1	WED3-08: Decentralized insurance and financial technology 1
Zoom	Meeting ID: 836 7795 1605 Passcode: 194402	Meeting ID: 891 8739 0955 Passcode: 499695	Meeting ID: 830 7941 4558 Passcode: 744891	Meeting ID: 896 1348 8008 Passcode: 631164	Meeting ID: 835 3269 4794 Passcode: 684635	Meeting ID: 881 0326 2533 Passcode: 377864	Meeting ID: 879 4168 9738 Passcode: 863503	Meeting ID: 817 9899 0334 Passcode: 980248
Chair	**Torsten Kleinow**	**Arnold F. Shapiro**	**Marina Di Giacinto**	**Yiqing Chen**	**Dongchen Li**	**Jiandong Ren**	**Qi Zhou**	**Runhuan Feng**
22:15-22:40	Ruiting Sun	Arnold F. Shapiro	Shihao Zhu	Corina Birghila	Dongchen Li	Jiandong Ren	Qi Zhou	Runhuan Feng
22:40-23:05	Salvatore Scognamiglio	Anatoliy Swishchuk	Lina Palmborg	Zhanyi Jiao	Zhiyi Shen	Ruodu Wang	Chengxiu Ling	Ze Chen
23:05-23:30	Meng Sun	Zhenzhen Huang	Thijs Kamma	Liyuan Lin	Rosario Maggistro	Haiyan Liu	Ming Chen	Jingchao Li
23:30-23:55	Hong Beng Lim	Sebastian Felipe Calcetero	Feng Zhou	Qiuqi Wang	Peter Hieber	Mingren Yin	Fuwei Freeman Zhang	Yixing Zhao
Date: Thursday, 14/Jul/2022								
14:30-15:00	IT Drop-in Session (Optional)							
Thursday Parallel Sessions 1								
	THUR1-01: Data science and statistical modelling 5	THUR1-02: Financial modelling 5	THUR1-03: Optimal control in insurance and finance 5	THUR1-04: Risk measures 5	THUR1-05: Ruin theory and related topics 2	THUR1-06: Longevity risk 1	THUR1-07: Retirement planning 1	THUR1-08: Insurance economics 3
Zoom	Meeting ID: 836 7795 1605 Passcode: 194402	Meeting ID: 891 8739 0955 Passcode: 499695	Meeting ID: 830 7941 4558 Passcode: 744891	Meeting ID: 896 1348 8008 Passcode: 631164	Meeting ID: 835 3269 4794 Passcode: 684635	Meeting ID: 881 0326 2533 Passcode: 377864	Meeting ID: 879 4168 9738 Passcode: 863503	Meeting ID: 817 9899 0334 Passcode: 980248
Chair	**Zhimin Zhang**	**Tak Kuen Siu**	**Michel Vellekoop**	**Sujin Zheng**	**Jae-Kyung Woo**	**Yanlin Shi**	**Colin Zhang**	**Wei Zhu**

15:00-15:25	Martin Bladt	Tak Kuen Siu	Michel Vellekoop	Sujin Zheng	Jae-Kyung Woo	Yung-Tsung Lee	Huiling Wu	Wei Zhu
15:25-15:50	Zahra Barzegar	Chun-Yang Liu	Wuyuan Jiang	Wanrong Mu	Eric Cheung	Selin Özen	Katja Hanewald	Yuantao Xie
15:50-16:15	Hong Sun	Kai Ding	Xiaoqing Liang	Guosen Yang	M.A. Lkabous	Giovanna Apicella	Kyunghyun Park	Guiyun You
16:15-16:40	Bowen Jia	Gaeun Lee	Zhaoyang Liu	Qinyu Wu	Bükre Yıldırım Külekci	Doreen Kabuche		
16:40-17:00	**Break**							
Thursday Parallel Sessions 2								
	THUR2-01: Data science and statistical modelling 6	THUR2-02: Financial modelling 6	THUR2-03: Optimal control in insurance and finance 6	THUR2-04: Risk measures 6	THUR2-05: Reinsurance and other risk-sharing arrangements 4	THUR2-06: Asset and liability management 1	THUR2-07: Mortality modelling 2	THUR2-08: Insurance risk models 3
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Chair	**Wenyuan Wang**	**Guiyuan Ma**	**Yang Shen**	**Carole Bernard**	**Zuoquan Xu**	**Tingjin Yan**	**Hanlin Shang**	**Yuantao Xie**
17:00-17:25	Xiaoyu Zhang	Guiyuan Ma	Jinhui Han	Carole Bernard	Zuoquan Xu	Tingjin Yan	Hanlin Shang	Yousra Cherkaoui Tangi
17:25-17:50	Rui Xu	Minha Lee	William Lim	Andrea Perchiazzo	Wing Fung Chong	Rui Ma	Len Patrick Dominic Garces	Philipp Aigner
17:50-18:15	Mustafa Asim Ozalp	Giovani Gracianti	Fudong Wang	Jinghui Chen	Chi Feng	Sheng Wang	Ho Yan Joey Yung	Yutaro Takagami
18:15-18:40	Felix Zhu	Qiguan Chen		Peng Liu	Ling Wang	Di Ma	Apostolos Bozikas	Jiaen Xu
18:40-21:00	**Break**							
Keynote Speech 2 Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402								
	Chair: **Yan Zeng**							
21:00-21:50	**Keynote Speech by Hazel Bateman, University of New South Wales**							
21:50-22:15	**Break**							
Thursday Parallel Sessions 3								

	THUR3-01: Valuation of emerging risks 1	THUR3-02: Asset and liability management 2	THUR3-03: Ruin theory and related topics 3	THUR3-04: Pension and pension mathematics 2	THUR3-05: Climate change and others 2	THUR3-06: Loss reserve methods 1	THUR3-07: Life and non-life insurance 3	THUR3-08: Insurance risk models 4
Zoom	Meeting ID: 836 7795 1605 Passcode: 194402	Meeting ID: 891 8739 0955 Passcode: 499695	Meeting ID: 830 7941 4558 Passcode: 744891	Meeting ID: 896 1348 8008 Passcode: 631164	Meeting ID: 835 3269 4794 Passcode: 684635	Meeting ID: 881 0326 2533 Passcode: 377864	Meeting ID: 879 4168 9738 Passcode: 863503	Meeting ID: 817 9899 0334 Passcode: 980248
Chair	**Petar Jevtic**	**Xing Wang**	**Ruodu Wang**	**Ruilin Tian**	**Zhiyu Quan**	**Haiyan Liu**	**Danping Li**	**Yiying Zhang**
22:15-22:40	Petar Jevtic	Minhua He	Zhengjun Jiang	Ruilin Tian	Lili Zheng	Xusheng Deng	Isabel Maria Cordeiro	Raluca Vernic
22:40-23:05	Cheng Tao	Tingting Yang	Ye Teng	Xiaobai Zhu	Ezgi Nevruz	Pengfei Cai	Wei Zhong	Muhsin Tamturk
23:05-23:30	Saeid Safarveisi	Shuai Liu	Zijia Wang	Wenyuan Li	Wenchu Li	Xenxo Vidal-Llana	Nii Okine	Tachfine El Alami
23:30-23:55	Linfeng Zhang	Qi Guo	Mario Sikic	Servaas van Bilsen	Ali Raisolsadat	Jun-Hee An		Hirbod Assa
Date: Friday, 15/Jul/2022								
14:30-15:00	IT Drop-in Session (Optional)							
Friday Parallel Sessions 1								
	FRI1-01: Data science and statistical modelling 7	FRI1-02: Financial modelling 7	FRI1-03: Optimal control in insurance and finance 7	FRI1-04: Valuation of emerging risks 2	FRI1-05: Reinsurance and other risk-sharing arrangements 5	FRI1-06: Catastrophe modelling 1	FRI1-07: Health insurance 1	FRI1-08: Ruin theory and related topics 4
Zoom	Meeting ID: 836 7795 1605 Passcode: 194402	Meeting ID: 891 8739 0955 Passcode: 499695	Meeting ID: 830 7941 4558 Passcode: 744891	Meeting ID: 896 1348 8008 Passcode: 631164	Meeting ID: 835 3269 4794 Passcode: 684635	Meeting ID: 881 0326 2533 Passcode: 377864	Meeting ID: 879 4168 9738 Passcode: 863503	Meeting ID: 817 9899 0334 Passcode: 980248
Chair	**Jingchao Li**	**Zheng Chen**	**Xudong Zeng**	**Jiwook Jang**	**Vali Asimit**	**Chi Truong**	**Chunli Cheng**	**Kazutoshi Yamazaki**
15:00-15:25	Andzar Syafa'atur Rahman	Ozan Evkaya	Pin Wang	Jaehun Cho	Vali Asimit	Chi Truong	Jiyuan Wang	Kazutoshi Yamazaki
15:25-15:50	Singgih Aji Nugroho	Churui Li	Yi Xia	Yunshen Yang	Yinzhi Wang	Yunxian Li	Xiangwen Zheng	Oscar Peralta
15:50-16:15	Gamar Aseffa	Sudan Kumar Oli	Shiqi Yan	Yuhao Liu	Zhaoxia Wu	Jiajun Liu	M. Ivan Ariful Fathoni	José Miguel Flores-Contró

16:15-16:40	Muhammed Taher Al-Mudafer	Gongyue Jiang	Guanxia Zhu	Fera Rusanti	Yuxia Huang	Yanbin Xu	Kyu Hyung Park	Yanfeng Li
16:40-21:00	**Break**							
Keynote Speech 3 Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402								
	Chair: **Zhuo Jin**							
21:00-21:50	**Keynote Speech by Ka Chun Cheung, The University of Hong Kong**							
21:50-22:00	**Break**							
Closing Ceremony Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402								
	Chair: **Yan Zeng**							
22:00-23:00	**IME Editor's Speech & Heriot-Watt's IME2023 Announcement**							

Program Agenda

East Asia Time (UTC+8, Beijing, Hong Kong, Singapore, Manila)

<table>
<tr><td colspan="2">Date: Tuesday, 12/Jul/2022</td></tr>
<tr><td>20:00-20:30</td><td>IT Drop-in Session (Optional)</td></tr>
<tr><td colspan="2">Opening Ceremony
Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402</td></tr>
<tr><td></td><td>Chair: Zhuo Jin</td></tr>
<tr><td>20:30-20:40</td><td>Conference Chair's Speech by Zhongfei Li</td></tr>
<tr><td>20:40-21:00</td><td>SYSU Dean's Speech by Shanmin Li
MQ Deans' Speeches by Eric Knight & Leonie Tickle</td></tr>
<tr><td colspan="2">Keynote Speech 1
Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402</td></tr>
<tr><td></td><td>Chair: Zhongfei Li</td></tr>
<tr><td>21:00-21:50</td><td>Keynote Speech by Daniel Bauer, University of Wisconsin-Madison
Title: Calculation of Enterprise Capital via Least-Squares Monte Carlo -- Regress Now or Later?</td></tr>
<tr><td>21:50-22:15</td><td>Break</td></tr>
<tr><td>22:15-23:55</td><td>Tuesday Parallel Sessions 1</td></tr>
<tr><td rowspan="8">22:15-23:55</td><td>TUE1-01: Data science and statistical modelling 1 Chair: Jianxi Su
Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402</td></tr>
<tr><td>TUE1-02: Financial modelling 1 Chair: Yongzeng Lai
Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695</td></tr>
<tr><td>TUE1-03: Optimal control in insurance and finance 1 Chair: Bin Zou
Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891</td></tr>
<tr><td>TUE1-04: Risk measures 1 Chair: Fangda Liu
Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164</td></tr>
<tr><td>TUE1-05: Ruin theory and related topics 1 Chair: Stephane Loisel
Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635</td></tr>
<tr><td>TUE1-06: Insurance economics 1 Chair: Zhiwei Tong
Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864</td></tr>
<tr><td>TUE1-07: Life and non-life insurance 1 Chair: Ze Chen
Zoom Link: Meeting ID: 879 4168 9738 Passcode: 863503</td></tr>
<tr><td>TUE1-08: Insurance risk models 1 Chair: Qian Zhao
Zoom Link: Meeting ID: 817 9899 0334 Passcode: 980248</td></tr>
<tr><td colspan="2">Date: Wednesday, 13/Jul/2022</td></tr>
<tr><td>14:30-15:00</td><td>IT Drop-in Session (Optional)</td></tr>
<tr><td>15:00-16:40</td><td>Wednesday Parallel Sessions 1</td></tr>
<tr><td rowspan="2">15:00-16:40</td><td>WED1-01: Data science and statistical modelling 2 Chair: Zhengxiao Li
Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402</td></tr>
<tr><td>WED1-02: Financial modelling 2 Chair: Phillip Yam
Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695</td></tr>
</table>

	WED1-03: Optimal control in insurance and finance 2 Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891	**Chair: Shuaiqi Zhang**
	WED1-04: Risk measures 2 Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164	**Chair: Jinzhu Li**
	WED1-05: Reinsurance and other risk-sharing arrangements 1 Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635	**Chair: Benjamin Avanzi**
	WED1-06: Insurance economics 2 Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864	**Chair: Jiyuan Wang**
	WED1-07: Life and non-life insurance 2 Zoom Link: Meeting ID: 879 4168 9738 Passcode: 863503	**Chair: Yichun Chi**
	WED1-08: Insurance risk models 2 Zoom Link: Meeting ID: 817 9899 0334 Passcode: 980248	**Chair: Peter Vekas**
16:40-17:00	**Break**	
17:00-18:40	**Wednesday Parallel Sessions 2**	
17:00-18:40	**WED2-01: Data science and statistical modelling 3** Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402	**Chair: Alexandra Dias**
	WED2-02: Financial modelling 3 Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695	**Chair: Michèle Vanmaele**
	WED2-03: Optimal control in insurance and finance 3 Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891	**Chair: Pavel Shevchenko**
	WED2-04: Risk measures 3 Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164	**Chair: Sebastian Schlütter**
	WED2-05: Reinsurance and other risk-sharing arrangements 2 Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635	**Chair: Hoi Ying Wong**
	WED2-06: Mortality modelling 1 Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864	**Chair: Chong It Tan**
	WED2-07: Pension and pension mathematics 1 Zoom Link: Meeting ID: 879 4168 9738 Passcode: 863503	**Chair: Ling Zhang**
	WED2-08: Predictive insurance analytics 1 Zoom Link: Meeting ID: 817 9899 0334 Passcode: 980248	**Chair: Guangyuan Gao**
18:40-20:30	**Break**	
20:30-22:00	**IME Editorial Board Meeting**	
22:00-22:15	**Break**	
22:15-23:55	**Wednesday Parallel Sessions 3**	
22:15-23:55	**WED3-01: Data science and statistical modelling 4** Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402	**Chair: Torsten Kleinow**
	WED3-02: Financial modelling 4 Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695	**Chair: Arnold F. Shapiro**
	WED3-03: Optimal control in insurance and finance 4 Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891	**Chair: Marina Di Giacinto**
	WED3-04: Risk measures 4 Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164	**Chair: Yiqing Chen**
	WED3-05: Insurance products linked to equity 1	**Chair: Dongchen Li**

	Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635
	WED3-06: Reinsurance and other risk-sharing arrangements 3 **Chair: Jiandong Ren** Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864
	WED3-07: Climate change 1 **Chair: Qi Zhou** Zoom Link: Meeting ID: 879 4168 9738 Passcode: 863503
	WED3-08: Decentralized insurance and financial technology 1 **Chair: Runhuan Feng** Zoom Link: Meeting ID: 817 9899 0334 Passcode: 980248
Date: Thursday, 14/Jul/2022	
14:30-15:00	IT Drop-in Session (Optional)
15:00-16:40	**Thursday Parallel Sessions 1**
15:00-16:40	**THUR1-01: Data science and statistical modelling 5** **Chair: Zhimin Zhang** Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402
	THUR1-02: Financial modelling 5 **Chair: Tak Kuen Siu** Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695
	THUR1-03: Optimal control in insurance and finance 5 **Chair: Michel Vellekoop** Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891
	THUR1-04: Risk measures 5 **Chair: Sujin Zheng** Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164
	THUR1-05: Ruin theory and related topics 2 **Chair: Jae-Kyung Woo** Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635
	THUR1-06: Longevity risk 1 **Chair: Yanlin Shi** Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864
	THUR1-07: Retirement planning 1 **Chair: Colin Zhang** Zoom Link: Meeting ID: 879 4168 9738 Passcode: 863503
	THUR1-08: Insurance economics 3 **Chair: Wei Zhu** Zoom Link: Meeting ID: 817 9899 0334 Passcode: 980248
16:40-17:00	**Break**
17:00-18:40	**Thursday Parallel Sessions 2**
17:00-18:40	**THUR2-01: Data science and statistical modelling 6** **Chair: Wenyuan Wang** Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402
	THUR2-02: Financial modelling 6 **Chair: Guiyuan Ma** Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695
	THUR2-03: Optimal control in insurance and finance 6 **Chair: Yang Shen** Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891
	THUR2-04: Risk measures 6 **Chair: Carole Bernard** Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164
	THUR2-05: Reinsurance and other risk-sharing arrangements 4 **Chair: Zuoquan Xu** Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635
	THUR2-06: Asset and liability management 1 **Chair: Tingjin Yan** Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864
	THUR2-07: Mortality modelling 2 **Chair: Hanlin Shang** Zoom Link: Meeting ID: 879 4168 9738 Passcode: 863503
	THUR2-08: Insurance risk models 3 **Chair: Yuantao Xie** Zoom Link: Meeting ID: 817 9899 0334 Passcode: 980248

18:40-21:00	**Break**	
Keynote Speech 2 Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402		
	Chair: **Yan Zeng**	
21:00-21:50	**Keynote Speech by Hazel Bateman, University of New South Wales** **Title: Why Don't Retirees Spend Their Savings? Behavioural Explanations and Demand-Side Solutions**	
21:50-22:15	**Break**	
22:15-23:55	**Thursday Parallel Sessions 3**	
22:15-23:55	**THUR3-01: Valuation of emerging risks 1** Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402	**Chair: Petar Jevtic**
	THUR3-02: Asset and liability management 2 Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695	**Chair: Xing Wang**
	THUR3-03: Ruin theory and related topics 3 Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891	**Chair: Ruodu Wang**
	THUR3-04: Pension and pension mathematics 2 Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164	**Chair: Ruilin Tian**
	THUR3-05: Climate change and others 2 Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635	**Chair: Zhiyu Quan**
	THUR3-06: Loss reserve methods 1 Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864	**Chair: Haiyan Liu**
	THUR3-07: Life and non-life insurance 3 Zoom Link: Meeting ID: 879 4168 9738 Passcode: 863503	**Chair: Danping Li**
	THUR3-08: Insurance risk models 4 Zoom Link: Meeting ID: 817 9899 0334 Passcode: 980248	**Chair: Yiying Zhang**
Date: Friday, 15/Jul/2022		
14:30-15:00	IT Drop-in Session (Optional)	
15:00-16:40	**Friday Parallel Sessions 1**	
15:00-16:40	**FRI1-01: Data science and statistical modelling 7** Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402	**Chair: Jingchao Li**
	FRI1-02: Financial modelling 7 Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695	**Chair: Zheng Chen**
	FRI1-03: Optimal control in insurance and finance 7 Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891	**Chair: Xudong Zeng**
	FRI1-04: Valuation of emerging risks 2 Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164	**Chair: Jiwook Jang**
	FRI1-05: Reinsurance and other risk-sharing arrangements 5 Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635	**Chair: Vali Asimit**
	FRI1-06: Catastrophe modelling 1 Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864	**Chair: Chi Truong**
	FRI1-07: Health insurance 1 Zoom Link: Meeting ID: 879 4168 9738 Passcode: 863503	**Chair: Chunli Cheng**
	FRI1-08: Ruin theory and related topics 4	**Chair: Kazutoshi Yamazaki**

	Zoom Link: Meeting ID: 817 9899 0334 Passcode: 980248
16:40-21:00	**Break**
Keynote Speech 3 Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402	
	Chair: **Zhuo Jin**
21:00-21:50	**Keynote Speech by Ka Chun Cheung, The University of Hong Kong** **Title: Optimal Design of Reinsurance Contracts Under Adverse Selection with a Continuum of Types**
21:50-22:00	**Break**
Closing Ceremony Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402	
	Chair: **Yan Zeng**
22:00-23:00	**IME Editor's Speech & Heriot-Watt's IME2023 Announcement**

Detailed Program

East Asia Time (UTC+8, Beijing, Hong Kong, Singapore, Manila)

Tuesday parallel sessions 1

TUE1-01: Data science and statistical modelling 1
Time: Tuesday, 12/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402
Chair: Jianxi Su

Inference for the Tail Conditional Allocation: Large Sample Properties and Insurance Risk Assessment
Authors: **Nadezhda Gribkova, Jianxi Su** (Purdue University)**, Ricardas Zitikis**

Improving Business Insurance Loss Models by Leveraging InsurTech Innovation
Authors: **Zhiyu Quan** (University of Illinois at Urbana-Champaign)

Statistical Inference for Bifurcating Autoregression Models
Authors: **Xing Wang** (Illinois State University)

A Bayesian Generalized Additive Model Approach to Forecasting Mortality Improvement with Expert Judgment
Authors: **Xiaobai Zhu, Kenneth Zhou** (Arizona State University)

TUE1-02: Financial modelling 1
Time: Tuesday, 12/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695
Chair: Yongzeng Lai

Asset Price Modeling and Options Pricing with Asymmetric Exponential Power Distribution
Authors: **Yongzeng Lai** (Wilfrid Laurier University)

Long Memory in Option Pricing: A Fractional Discrete-Time Approach
Authors: **Maciej Augustyniak, Alexandru Badescu** (University of Calgary)**, Jean-François Bégin, Sarath Kumar Jayaraman**

Pricing Defaultable Bonds and Credit Derivatives in the Presence of Shock Risk and Unpredictable Recovery
Authors: **Haibo Liu** (Purdue University)**, Qihe Tang**

Uncertainty Aversion and Equity Improvement
Authors: **Yang Liu** (University of Waterloo)**, Tiantian Mao, Ruodu Wang**

TUE1-03: Optimal control in insurance and finance 1
Time: Tuesday, 12/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891
Chair: Bin Zou

Stackelberg Differential Game for Insurance Under Model Ambiguity
Authors: **Bin Zou** (University of Connecticut)**, Jingyi Cao, Dongchen Li, Virginia Young**

Optimal Dividends Under a Drawdown Constraint and a Curious Square-Root Rule
Authors: **Hansjoerg Albrecher, Pablo Azcue, Nora Muler** (Universidad Torcuato di Tella)

Optimal Asset Allocations in DC Pension Funds Under Forward Utility Preferences
Authors: **Tsz Hin Ng** (University of Illinois at Urbana-Champaign), **Wing Fung Chong**

Portfolio Performance Under Benchmarking Relative Loss and Portfolio Insurance: From Omega Ratio to Loss Aversion
Authors: **Tak Wa Ng** (Laval University), **Thai Nguyen**

TUE1-04: Risk measures 1
Time: Tuesday, 12/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164
Chair: Fangda Liu

Inf-Convolution and Optimal Allocations for Tail Risk Measures
Authors: **Fangda Liu** (University of Waterloo), **Tiantian Mao, Linxiao Wei, Ruodu Wang**

An Asymptotic Study of Systemic Expected Shortfall and Marginal Expected Shortfall
Authors: **Yiqing Chen** (Drake University), **Jiajun Liu**

Collective Risk Models with FGM Dependence
Authors: **Etienne Marceau** (Laval University)

Sensitivity Measures Based on Scoring Functions
Authors: **Silvana M. Pesenti** (University of Toronto), **Tobias Fissler**

TUE1-05: Ruin theory and related topics 1
Time: Tuesday, 12/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635
Chair: Stephane Loisel

Optimal Prevention Strategies in Risk Theory
Authors: **Stephane Loisel** (Université Claude Bernard Lyon 1)

Large Deviations and Ruin Problems for Grey Gaussian Processes
Authors: **Barbara Pacchiarotti** (Università degli Studi di Roma Tor Vergata)

Monotonicity Properties for Solutions of Renewal Equations with Applications to Ruin Theory
Authors: **Vaios Dermitzakis** (University of Liverpool), **Konstadinos Politis**

On a Risk Process with Deterministic Investment and Multiplicative Jumps - An Application to Poverty Trapping
Authors: **Kira Henshaw, José Miguel Flores-Contró** (University of Lausanne), **Sooie-Hoe Loke, Corina Constantinescu, Séverine Arnold, Jorge Mario Rámirez Osorio**

TUE1-06: Insurance economics 1
Time: Tuesday, 12/Jul/2022: 22:15-23:55

Zoom Link: Meeting ID: 881 0326 2533   Passcode: 377864
Chair: Zhiwei Tong

An Integrated Study of Cyber Risk and Cyber Security
Authors: **Yang Feng, Zhiwei Tong** (The University of Iowa)

Modeling Economic Cost of Obesity in the United States- State Level Analysis
Authors: **Tatjana Miljkovic** (Miami University)

Determinants and Value of Corporate Social Responsibility Management: Empirical Evidence from the Insurance Industry
Authors: **Tim Brasch** (Coburg University of Applied Sciences and Arts), **Christian Eckert**

Exact and Asymptotic Analysis of Multivariate Hawkes Population Processes
Authors: **Raviar S. Karim** (University of Amsterdam), **Roger J.A. Laeven, Michel R.H. Mandjes**

TUE1-07: Life and non-life insurance 1
Time: Tuesday, 12/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 879 4168 9738   Passcode: 863503
Chair: Ze Chen

Estimating Absorption-Time Distributions of Markov Jump Processes with Piecewise Constant Transition Rates
Authors: **Jamaal Ahmad** (University of Copenhagen), **Martin Bladt, Mogens Bladt**

Joint Lifetime Modeling with mIPH Distributions
Authors: **Hansjörg Albrecher, Martin Bladt, Alaric Jules Antoine Müller** (University of Lausanne)

Study of Institutionalized Elderly Profiles Derived from Multiple Health Factors
Authors: **Aleksandr Shemendyuk** (University of Lausanne), **Joël Wagner**

The Influence of Negative Interest Rates on Life Insurance Companies
Authors: **Nicolaus Grochola** (Goethe University Frankfurt)

TUE1-08: Insurance risk models 1
Time: Tuesday, 12/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 817 9899 0334   Passcode: 980248
Chair: Qian Zhao

Robust Credibility Based on Censored Data
Authors: **Qian Zhao** (Robert Morris University), **Chudamani Poudyal**

Reverse Sensitivity Testing for Compound Poisson Processes
Authors: **Emma Kroell** (University of Toronto), **Silvana M. Pesenti, Sebastian Jaimungal**

Risk Aggregation with FGM Copulas
Authors: **Christopher Blier-Wong** (Université Laval), **Hélène Cossette, Etienne Marceau**

Risk Management Under Weighted Limited Expected Loss
Authors: **Thai Nguyen** (Université Laval), **An Chen**

Wednesday parallel sessions 1

WED1-01: Data science and statistical modelling 2
Time: Wednesday, 13/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402
Chair: Zhengxiao Li

A New Class of Composite GBII Regressions with Varying Threshold for Modelling Heavy-Tailed Data
Authors: **Zhengxiao Li** (University of International Business and Economics), **Fei Wang, Zhengtang Zhao**

Cyber Risk Content Analysis Using Topic Modelling Approach
Authors: **Yin-Yee Leong, Yen-Chih Chen** (Feng-Chia University)

Will Claim Histories Become Deprecated Rating Factors? An Optimal Design Method on Real-Time Road Risk Model
Authors: **Jiamin Yu** (Shanghai Lixin University of Accounting and Finance)

Pricing Renewable Energy Investment in Presence of Trend, Seasonality, Mean Reversion and Price Spikes
Authors: **Chi Truong** (Macquarie University)

WED1-02: Financial modelling 2
Time: Wednesday, 13/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695
Chair: Phillip Yam

Universal Poisson Approximations for Wiener Functionals Arisen in Financial and Insurance Models
Authors: **Jinhui Han, Nicolas Privault, Phillip Yam** (The Chinese University of Hong Kong)

A Volatility Model Based on Adaptive Expectations: An Improvement on the Rational Expectations Model
Authors: **Yang Zhao** (Henan University), **Yuan Yao, Lei Huang**

Signature-Based Validation for Real World Economic Scenarios
Authors: **Alexandre Boumezoued, Benjamin Jourdain, Hervé Andres** (Ecole des Ponts ParisTech)

Optimal Use of Housing Wealth in Retirement: A Simulation Study Comparing Home Equity Release and Downsizing
Authors: **Katja Hanewald, Hazel Bateman, Tin Long Ho** (UNSW Sydney)

WED1-03: Optimal control in insurance and finance 2
Time: Wednesday, 13/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891
Chair: Shuaiqi Zhang

Stochastic Control for Sub-Diffusions and Its Applications in Finance
Authors: **Shuaiqi Zhang** (China University of Mining and Technology)

Optimal Order Execution Under Price Impact: A Hybrid Model
Authors: **Marina Di Giacinto** (Università degli studi di Cassino e del Lazio Meridionale)**, Claudio Tebaldi, Tai-Ho Wang**

Optimal Reinsurance via BSDEs in a Partially Observable Contagion Model
Authors: **Matteo Brachetta** (Politecnico of Milan)

Optimal Reinsurance-Investment Problem for a General Insurance Company of a Contagion Risk Model
Authors: **Fan Wu** (Southeast University)**, Xin Zhang, Zhibin Liang**

WED1-04: Risk measures 2
Time: Wednesday, 13/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164
Chair: Jinzhu Li

Asymptotic Results of Tail Moment and Tail Central Moment for Dependent Risks
Authors: **Jinzhu Li** (Nankai University)

The Identification of Systemically Important Banks Based on Tsallis Entropy with Application to Chinese Banks
Authors: **Linhai Zhao** (Huaqiao University)**, Yajun Wang**

Distortion Risk Contribution Ratio Measures: Definitions and Comparisons
Authors: **Yiying Zhang** (Southern University of Science and Technology)

The Location of a Minimum Variance Squared Distance Risk Functional
Authors: **Zinoviy Landsman** (University of Haifa)**, Tomer Shushi**

WED1-05: Reinsurance and other risk-sharing arrangements 1
Time: Wednesday, 13/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635
Chair: Benjamin Avanzi

Optimal Reinsurance Under Terminal Value Constraints
Authors: **Benjamin Avanzi** (University of Melbourne)**, Hayden Lau, Mogens Steffensen**

Reinsurance Treaty Minimizing the Ruin Probability Using a Diffusion Approximation
Authors: **Alexandra Bugalho de Moura** (Univesity of Lisbon)**, Carlos Oliveira, Adrialina Botnariuc**

Calculation of Return Period for Earthquake Events for Catastrophe Reinsurance Coverage in the Java Island Region
Authors: **Niko Ardita** (University of Indonesia)

Optimal Price Structure of Cyber Insurance Policies with Risk Mitigation Services
Authors: **Gabriela Zeller** (Technical University of Munich)**, Matthias Scherer**

WED1-06: Insurance economics 2
Time: Wednesday, 13/Jul/2022: 15:00-16:40

Zoom Link: Meeting ID: 881 0326 2533   Passcode: 377864
Chair: Jiyuan Wang

The Value of Outside Information: Identifying Asymmetric Information Across Markets Using Evidence from China
Authors: **Jiyuan Wang** (Central University of Finance and Economics)**, Ya Gao, Shouyang Wang, Daiyuan Li**

Demand for Multi-Year Catastrophe Insurance Contracts: Experimental Evidence for Mitigating the Insurance Gap
Authors: **Thomas Dudek** (Victoria University of Wellington)**, Eric Ulm, Ilan Noy**

Study on the Spatial Spillover Effect of Insurance Agglomeration on Regional Economic Growth——Empirical Research from the Yangtze River Economic Belt
Authors: **Wenjing Han** (University of International Business and Economics)**, Guiyun You**

Division or Unification? An Analysis of the Potential Structural Change of the Digital Broker on the Supply Side of the Insurance Market
Authors: **Wanting He** (The University of Hong Kong; Southern University of Science and Technology)**, He Wang, Gene Lai, Hailiang Yang**

WED1-07: Life and non-life insurance 2
Time: Wednesday, 13/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 879 4168 9738   Passcode: 863503
Chair: Yichun Chi

A Modified Classification Tree Method for Imbalanced Insurance Loss Data
Authors: **Liang Yang** (Southwestern University of Finance and Economics)**, Xiang Shu Wu**

Analysis of Crop Insurance Claims Reserve Estimates with Chain Ladder and Bornhuetter-Ferguson Method
Authors: **Hafidh Afif Ardhi** (University of Indonesia)**, Lenny Suardi**

Anti-Discrimination Insurance Pricing: Regulations, Fairness Criteria, and Models
Authors: **Xi Xin** (UNSW Sydney)**, Fei Huang**

Estimation of Reserves for Credit Insurance Claims Using the Munich Chain Ladder & Bornhutter-Ferguson Method
Authors: **Arif Agung Riyadi** (Universitas Indonesia)**, Lenny Suardi**

WED1-08: Insurance risk models 2
Time: Wednesday, 13/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 817 9899 0334   Passcode: 980248
Chair: Peter Vekas

The Perturbed Dual Risk Model with Proportional Investment
Authors: **Naidan Deng** (Henan University of Science and Technology)**, Chuanwei Wang**

Application of Multiple Decrement Tables: Analysis of Pension Security Claims Under Competing Risks
Authors: **Yogo Purwono, Yaumil Rizki** (University of Indonesia)

Modelling Heavy-Tailed Data with Two-Stage Mixture Regression Models
Authors: **Yifan Hu** (University of International Business and Economics)

Aggregate Claims Process Based on the Hidden Markov Model
Authors: **Mustafa Asim Ozalp** (Hacettepe University)**, Sule Sahin, Kasirga Yildirak**

Wednesday parallel sessions 2

WED2-01: Data science and statistical modelling 3
Time: Wednesday, 13/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 836 7795 1605   Passcode: 194402
Chair: Alexandra Dias

On the Finite Sample Properties of the Pseudo-Likelihood Estimator for Copula Model Parameters
Authors: **Alexandra Dias** (University of York)

AI in Longevity Risk Management: Improved Long-Term Projections by Machine Learning
Authors: **Peter Vekas** (Corvinus University of Budapest)**, Ronald Richman, Laszlo Kovacs**

Factor Structure of Cryptocurrencies
Authors: **Wenyan Hao** (University of Leicester)

Phase-Type Mixture-of-Experts Regression for Loss Severities
Authors: **Jorge Yslas** (Institute for Financial and Actuarial Mathematics)**, Martin Bladt**

WED2-02: Financial modelling 3
Time: Wednesday, 13/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 891 8739 0955   Passcode: 499695
Chair: Michèle Vanmaele

Mortality/Longevity Risk-Minimization with or without Securitization
Authors: **Tahir Choulli, Catherine Daveloose, Michèle Vanmaele** (Ghent University)

Novel Executive Stock Options and Their Implications
Authors: **Morten Wilke** (Ulm University)**, An Chen, Steven Vanduffel**

Option Pricing in Emerging Markets Using Pure Jump Processes: Explicit Calibration
Authors: **Bilgi Yilmaz** (TU Kaiserslautern)**, Ali Alper Hekimogulu**

A Note on Dependence and Volatility in P and Q
Authors: **Jan Dhaene, Daniel Linders, Biwen Ling** (KU Leuven)**, Qian Wang**

WED2-03: Optimal control in insurance and finance 3
Time: Wednesday, 13/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 830 7941 4558   Passcode: 744891
Chair: Pavel Shevchenko

A Bias-Corrected Least-Squares Monte Carlo for Utility Based Optimal Decisions in Retirement
Authors: **Pavel Shevchenko** (Macquarie University)**, Johan Andréasson**

Robust Life-Cycle Model with Background Stochastic Mortality Risk
Authors: **Yang Shen** (UNSW Sydney)

Optimal Dividend Policy Under a Contagious Market Until Bankruptcy
Authors: **Guo Liu** (University of Melbourne)

Optimal Dividend Strategies with Reinsurance Under Contagious Systemic Risk
Authors: **Ming Qiu** (University of Melbourne)**, Zhuo Jin, Shuanming Li**

WED2-04: Risk measures 3
Time: Wednesday, 13/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164
Chair: Sebastian Schlütter

Tail Correlations of Sub-Portfolios
Authors: **Joachim Paulusch, Sebastian Schlütter** (Mainz University of Applied Sciences)

Study on Rice Income Insurance Pricing Model and Risk Dispersion Mechanism
Authors: **Qingyao Xie** (Southwestern University of Finance and Economics)

A Framework for Measures of Risk Under Uncertainty
Authors: **Tolulope Fadina** (University of Essex)**, Yang Liu, Ruodu Wang**

On the Equivalence Between Value-at-Risk- and Expected Shortfall-Based Risk Measures in Non-Concave Optimization
Authors: **Fangyuan Zhang** (EURECOM)**, An Chen, Mitja Stadje**

WED2-05: Reinsurance and other risk-sharing arrangements 2
Time: Wednesday, 13/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635
Chair: Hoi Ying Wong

Irreversible Reinsurance: A Singular Control Approach
Authors: **Tingjin Yan , Kyunghyun Park, Hoi Ying Wong** (The Chinese University of Hong Kong)

Measurement of Crop Revenue Insurance on Small Areas: Under China's Insurance Plus Futures
Authors: **Hui-Min Wang** (Shandong University)**, Yang Xiao, Xiao-Dong Yan, Dian-Jiang Yu**

Heterogeneous Reinsurance Premiums Under a Trilateral Stochastic Differential Reinsurance and Investment Game
Authors: **Xiufang Li, Yan Liu** (Nankai University)**, Xiaowei Chen**

Portfolio Risk Analysis of Excess of Loss Reinsurance
Authors: **Qihe Tang, Zhiwei Tong, Li Xun** (Changchun University of Technology)

WED2-06: Mortality modelling 1
Time: Wednesday, 13/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 881 0326 2533   Passcode: 377864
Chair: Chong It Tan

Longevity Risk and the Consumer Price Index
Authors: **Qingxiao Ma** (University of Amsterdam)**, Tim Boonen**

Projecting Life Expectancy Using Cause-of-Death-Specific Mortality Scenarios
Authors: **Torsten Kleinow** (Heriot-Watt University)**, Alexander Yiu, George Streftaris**

Mortality in the United States' Border Regions: A Closer Look at the U.S.-Mexico and U.S.-Canada Borders
Authors: **Onofre Alves Simões** (ISEG-ULisboa)**, Melanie Jean Joerger**

Modeling the Mortality Rates μ(x,t) Using Stochastic, Non-Gaussian Linear Scalar Filter Models with Switches.
Authors: **Piotr Sliwka** (Cardinal S.Wyszynski University, Warsaw)

WED2-07: Pension and pension mathematics 1
Time: Wednesday, 13/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 879 4168 9738   Passcode: 863503
Chair: Ling Zhang

Equilibrium Investment Strategy for a DC Pension Plan with the Return of Premiums Clause and Mispricing Under Imperfect Information
Authors: **Pei Wang, Ling Zhang** (Guangdong University of Finance)**, Yongzeng Lai**

Robust Optimal Investment and Consumption Strategies for Pooled Annuity with Partial Information and Exit Penalty
Authors: **Lin Xie, Lv Chen, Linyi Qian, Danping Li** (East China Normal University)**, Zhinxin Yang**

Dynamic Derivative-Based Pension Investment with Stochastic Volatility: A Behavioral Perspective
Authors: **Zheng Chen** (Guangdong University of Technology)**, Zhongfei Li, Yan Zeng**

Optimal Mix Among PAYGO, EET and Individual Savings
Authors: **Zhaojie Ren** (Tsinghua University)**, Zongxia Liang, Lin He, Yilun Song**

WED2-08: Predictive insurance analytics 1
Time: Wednesday, 13/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 817 9899 0334   Passcode: 980248
Chair: Guangyuan Gao

Double Boosting of Mean and Dispersion in Tweedie's Compound Poisson Model for Insurance Loss Prediction
Authors: **Guangyuan Gao** (Renmin University of China)

The Neural Ratemaking System in Insurance and the Bias
Authors: **Kyongwon Kim, Rosy Oh, Jaeyoun Ahn** (Ewha Womans University)

Credibility Theory for Mean-Variance Premium Principles
Authors: **Yaodi Yong** (The University of Hong Kong)**, Yiying Zhang**

Insurance Claim Frequency Analysis Using Bayesian CART Model
Authors: **Yaojun Zhang** (University of Leeds)**, Lanpeng Ji, Georgios Aivaliotis, Charles Taylor**

Wednesday parallel sessions 3

WED3-01: Data science and statistical modelling 4
Time: Wednesday, 13/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402
Chair: Torsten Kleinow

Research on the Impact of Earthquake Disaster Insurance Literacy on Public Service Satisfaction
Authors: **Qinglu Yuan, Ruiting Sun** (Institute of Disaster Prevention)

Robust Classification via Support Vector Machines
Authors: **Salvatore Scognamiglio** (University of Naples "Parthenope")**, Vali Asimit, Ioannis Kyriakou, Simone Santoni, Rui Zhu**

Statistical Modeling of Data Breaches and Its Application in Cyber Insurance
Authors: **Meng Sun** (Simon Fraser University)**, Yi Lu**

Mortality Forecasting with Neural Tangent Kernel Regression
Authors: **Hong Beng Lim** (The University of Iowa)**, Siyang Tao, Nariankadu Datatreya Shyamalkumar**

WED3-02: Financial modelling 4
Time: Wednesday, 13/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695
Chair: Arnold F. Shapiro

Modeling Life Annuities as Fuzzy Random Variables
Authors: **Arnold F. Shapiro** (The Pennsylvania State University)**, Dabuxilatu . Wang**

Applications of Hawkes Processes in Insurance
Authors: **Anatoliy Swishchuk** (University of Calgary)

Statistical Classification Methods for the Combining Portfolio Strategy
Authors: **Zhenzhen Huang** (University of Waterloo)**, Pengyu Wei, Chengguo Weng**

An Efficient Approach for Computation and Interpretation of Bayesian Credibility Models for Experience Rating
Authors: **Sebastian Felipe Calcetero** (University of Toronto)**, Andrei Badescu, Sheldon Lin**

WED3-03: Optimal control in insurance and finance 4
Time: Wednesday, 13/Jul/2022: 22:15-23:55

Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891

Chair: Marina Di Giacinto

Optimal Consumption, Portfolio and Best Time for Health Investment

Authors: **Shihao Zhu** (Bielefeld University)**, Giorgio Ferrari**

Premium Control with Reinforcement Learning

Authors: **Lina Palmborg** (Stockholm University)

Dual Formulation of the Optimal Consumption Problem with Multiplicative Habit Formation

Authors: **Thijs Kamma** (Maastricht University)**, Antoon Pelsser**

Risk Sharing via Risk Budgeting

Authors: **Feng Zhou** (Bayes Business School)**, Vali Asimit, Wing Fung Chong, Radu Tunaru**

WED3-04: Risk measures 4

Time: Wednesday, 13/Jul/2022: 22:15-23:55

Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164

Chair: Yiqing Chen

Robusts Model in Band Ambiguity

Authors: **Corina Birghila** (University of Waterloo)

A Reverse Expected Shortfall Optimization Formula

Authors: **Zhanyi Jiao** (University of Waterloo)**, Ruodu Wang, Yuanying Guan**

Calibrating Probability Equivalent Level of VaR-ES

Authors: **Liyuan Lin** (University of Waterloo)

E-Backtesting Risk Measures

Authors: **Qiuqi Wang** (University of Waterloo)**, Ruodu Wang, Johanna Ziegel**

WED3-05: Insurance products linked to equity 1

Time: Wednesday, 13/Jul/2022: 22:15-23:55

Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635

Chair: Dongchen Li

Equilibrium Pricing of Variable Annuities with Discount Rate Uncertainty

Authors: **Min Dai, Bin Li, Dongchen Li** (Brock University)**, Yumin Wang**

Out-of-Model Adjustments of Variable Annuities

Authors: **Zhiyi Shen** (Morgan Stanley)

A Dynamic Programming Approach to Price VAs Within a Stochastic Mortality Framework

Authors: **Anna Rita Bacinello, Rosario Maggistro** (University of Trieste)**, Ivan Zoccolan**

Randomization and the Valuation of Guaranteed Minimum Death Benefits

Authors: **Peter Hieber** (Université de Lausanne)**, Griselda Deelstra**

WED3-06: Reinsurance and other risk-sharing arrangements 3
Time: Wednesday, 13/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864
Chair: Jiandong Ren

Evaluating the Tail Risks of Multivariate Aggregate Losses
Authors: **Wenjun jiang, Jiandong Ren** (Western University)

An Axiomatization of Conditional Mean Risk Sharing
Authors: **Ruodu Wang** (University of Waterloo)

Distributionally Robust Reinsurance with Value-at-Risk and Conditional Value-at-Risk
Authors: **Haiyan Liu** (Michigan State University)**, Tiantian Mao**

Optimal Reinsurance Design with Model Uncertainty
Authors: **Mingren Yin** (University of Waterloo)**, Jun Cai, Fangda Liu**

WED3-07: Climate change 1
Time: Wednesday, 13/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 879 4168 9738 Passcode: 863503
Chair: Qi Zhou

Carbon Footprint and Carbon Risk Exposure of China's Social Security Fund
Authors: **Qi Zhou** (South China University of Technology)

Extreme Analysis of Flood Disaster Risks in China with Insurance and Financial Management
Authors: **Chengxiu Ling** (Xi'an Jiaotong-Liverpool University)**, Yixuan Liu, Zhiyan Cai, Jiayi Li**

The Impacts of Carbon Tax on Economy in Production Networks Model
Authors: **Ming Chen** (Sun Yat-sen University)

ESG Green Insurance Action from Underwriting - world's First E-6S (re)Insurance U/W Model
Authors: **Fuwei Freeman Zhang** (Thames Investment Limited)

WED3-08: Decentralized insurance and financial technology 1
Time: Wednesday, 13/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 817 9899 0334 Passcode: 980248
Chair: Runhuan Feng

Distributed Insurance
Authors: **Runhuan Feng** (University of Illinois at Urbana-Champaign)**, Mao Li**

Optimal Risk Pooling for Peer-to-Peer Insurance
Authors: **Ze Chen** (Renmin University of China)

Optimal Design for Network Mutual Aid
Authors: **Jingchao Li** (Shenzhen University)

Impact of Insurance on Capital-Constrained Supply Chain Finance Under Asymmetric Information
Authors: **Yixing Zhao** (Guangdong University of Foreign Studies)**, Yan Zeng**

Thursday Parallel Sessions 1

THUR1-01: Data science and statistical modelling 5
Time: Thursday, 14/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402
Chair: Zhimin Zhang

Randomization and Informed Censoring for Loss Estimation
Authors: **Martin Bladt** (University of Lausanne), **Hansjoerg Albrecher**

Anomality Detection in Health Insurance Data Based on Outlingness Function
Authors: **Zahra Barzegar** (Saman Insurance Company), **Sakineh Dehghan, Shima Ara**

A Multivariate Frequency-Severity Framework for Healthcare Data Breaches
Authors: **Hong Sun** (Lanzhou University)

Machine Learning of Surrender Charge: Optimality and Humanity
Authors: **Bowen Jia** (The Chinese University of Hong Kong), **Ling Wang, Hoi Ying Wong**

THUR1-02: Financial modelling 5
Time: Thursday, 14/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695
Chair: Tak Kuen Siu

European Option Pricing with Market Frictions, Regime Switches and Model Uncertainty
Authors: **Tak Kuen Siu** (Macquarie University)

Pricing Double-Barrier Parisian Options
Authors: **Chun-Yang Liu** (Liaoning University), **Song-Ping Zhu**

Pricing Inflation-Indexed Swaps and Swaptions with Markov Regime-Switching Jump-Diffusion Models
Authors: **Kai Ding** (Southeast University), **Xin Zhang**

Insurance Guaranty Premium via Exchange Options
Authors: **Hangsuck Lee, Seongjoo Song, Gaeun Lee** (Sungkyunkwan University)

THUR1-03: Optimal control in insurance and finance 5
Time: Thursday, 14/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891
Chair: Michel Vellekoop

Optimal Consumption and Investment for General Preferences
Authors: **Michel Vellekoop** (University of Amsterdam), **Marcellino Gaudenzi**

Optimal Robust Reinsurance Contracts with Investment Strategy Under Variance Premium Principle
Authors: **Wuyuan Jiang** (Hunan Institute of Science and Technology), **Zhaojun Yang**

A Simple and Nearly Optimal Investment Strategy for Minimizing the Probability of Lifetime Ruin
Authors: **Xiaoqing Liang** (Hebei University of Technology), **Virginia R. R. Young**

Policy Iteration Algorithm for Optimal Dividend Problem in Cramer-Lundberg Risk Model with Transaction Costs
Authors: **Guoxin Liu, Yuying Liu, Zhaoyang Liu** (Nankai University)

THUR1-04: Risk measures 5
Time: Thursday, 14/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164
Chair: Sujin Zheng

Research on the Contagion and Impact of Reputational Risk --A Case Study of the Zhang Naidan Incident of China Life Insurance
Authors: **Sujin Zheng** (Central University of Finance and Economics), **Hairuo Guo, Haitao Hu, Shuning Song**

CDS Index Tranches Pricing Under Thinning-Dependence Structure with Regime Switching
Authors: **Wanrong Mu** (Soochow University)

Spectral Risk Measures and Portfolio Selection with Additive and Multiplicative Background Risks
Authors: **Yongjun Liu, Guosen Yang** (School of Business Administration), **Weiguo Zhang**

Model Aggregation for Risk Evaluation and Robust Optimization
Authors: **Qinyu Wu** (University of Science and Technology of China), **Tiantian Mao, Ruodu Wang**

THUR1-05: Ruin theory and related topics 2
Time: Thursday, 14/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635
Chair: Jae-Kyung Woo

A Bivariate Laguerre Series for Joint Ruin Probabilities in a Two-Dimensional Risk Process
Authors: **Hansjoerg Albrecher, Eric Cheung, Haibo Liu, Jae-Kyung Woo** (UNSW Sydney)

Finite-Time Ruin Probabilities Using Bivariate Laguerre Series
Authors: **Eric Cheung** (UNSW Sydney), **Hayden Lau, Gordon Willmot, Jae-Kyung Woo**

On the Speed of Recovery of a Lévy Risk Process
Authors: **M.A. Lkabous** (University of Southampton), **Ronnie Loeffen, Z. Palmowski**

Optimal Dynamic Ruin Probabilities for Heavy-Tailed Losses Under Reinsurance Strategies
Authors: **Bükre Yıldırım Külekci** (TU Kaiserslautern), **Ralf Korn, Sevtap Selcuk-Kestel**

THUR1-06: Longevity risk 1
Time: Thursday, 14/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864
Chair: Yanlin Shi

An Innovation of Reverse Mortgages in Taiwan: Crossover Risk Insurance, Deferred Life Annuity, and

Spouse Annuity
Authors: **Yung-Tsung Lee** (National Chiayi University)**, Meng Hsuan Tsai**

A Longevity Basis Risk Hedging Framework Under Collateralization
Authors: **Selin Özen** (Ankara University)**, Şule Şahin**

Longevity and Financial Risk-Taking
Authors: **Giovanna Apicella** (University of St. Gallen)**, Enrico De Giorgi**

Linking Annuity Benefits to Financial and Longevity Experience: A Joint Stochastic Pricing Framework
Authors: **Doreen Kabuche** (UNSW Sydney)**, Annamaria Olivieri**

THUR1-07: Retirement planning 1
Time: Thursday, 14/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 879 4168 9738   Passcode: 863503
Chair: Colin Zhang

Optimal Investment, Consumption and Time of Annuitization Post Retirement with Subjective Evaluations of Mortality Probability
Authors: **Huiling Wu** (Central University of Finance and Economics)**, Pu Liao**

Funding Retirement with Public Reverse Mortgages: An Evaluation of Australia's Home Equity Access Scheme
Authors: **Katja Hanewald** (UNSW Sydney)**, Katie Sun, Hazel Bateman**

Robust Retirement and Life Insurance with Inflation Risk and Model Ambiguity
Authors: **Kyunghyun Park** (The Chinese University of Hong Kong)**, Hoi Ying Wong, Tingjin Yan**

THUR1-08: Insurance economics 3
Time: Thursday, 14/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 817 9899 0334   Passcode: 980248
Chair: Wei Zhu

Selection of Loss Averse Consumers in Life Insurance Market
Authors: **Wei Zhu** (University of International Business and Economics)

Research on the Redistribution Effect of Social Insurance Under Information Asymmetry
Authors: **Yuantao Xie** (University of International Business and Economics)**, Yu Chen, Yue Zhang**

Research of the Effect of Directors' and Officers' Liability Insurance on Corporate Fraud
Authors: **Guiyun You** (University of International Business and Economics)**, Huidan Liu, Ying Sun**

Thursday Parallel Sessions 2

THUR2-01: Data science and statistical modelling 6
Time: Thursday, 14/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 836 7795 1605   Passcode: 194402

Chair: Wenyuan Wang

Modeling and Pricing the Cybersecurity Risks in Fog Computing Based Internet of Things Architectures
Authors: **Xiaoyu Zhang** (University of Science and Technology of China)

The Influence of Survival Expectation on the Demand of Commercial Medical Insurance for the Middle-Aged and Elderly--Based on Both Perceptual and Rational Perspectives
Authors: **Rui Xu** (Central University of Finance and Economics), **Xiaojun Wang, Hui Meng, Ming Zhou**

Interpretable Machine Learning Algorithms for Crop Insurance: Hail Risk in Turkey
Authors: **Mustafa Asim Ozalp** (Hacettepe University), **İsmail Gur, Kasirga Yildirak**

Economic Scenario Generator in a Data-Rich Environment
Authors: **Felix Zhu** (UNSW Sydney), **Fei Huang**

THUR2-02: Financial modelling 6
Time: Thursday, 14/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695
Chair: Guiyuan Ma

Dynamic Mean-Variance Problem with Frictions
Authors: **Alain Bensoussan, Guiyuan Ma** (Xi'an Jiaotong University), **Chi Chung Siu, Sheung Chi Phillip Yam**

Variable Annuities via Piecewise Linear Barrier Options
Authors: **Hangsuck Lee, Hongjun Ha, Minha Lee** (Sungkyunkwan University)

Model Risk in Pricing Wind Speed Derivatives
Authors: **Giovani Gracianti** (University of Melbourne), **Rui Zhou, Johnny Li, Xueyuan Wu**

Optimal Investment Under Ambiguity: The G-Martingale Approach
Authors: **Qiguan Chen** (Nanjing University), **Zengwu Wang, Zengting Yuan, Yulin Song**

THUR2-03: Optimal control in insurance and finance 6
Time: Thursday, 14/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891
Chair: Yang Shen

A probabilistic Method for a Class of Non-Lipschitz BSDEs with Application to Fund Management
Authors: **Jinhui Han** (The Chinese University of Hong Kong), **Sheung Chi Phillip Yam**

Generalised Option-Based Portfolio Insurance Strategy
Authors: **William Lim** (Australian National University), **Gaurav Khemka, Catherine Donnelly**

Optimal Per-Loss Reinsurance and Investment Problem Under Negative Correlation Assumption
Authors: **Fudong Wang** (Nanjing Normal University)

THUR2-04: Risk measures 6
Time: Thursday, 14/Jul/2022: 17:00-18:40

Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164
Chair: Carole Bernard

Assessing Model Uncertainty for Log-Symmetric Distributions
Authors: **Carole Bernard** (Vrije Universiteit Brussel), **Rodrigue Kazzi, Steven Vanduffel**

Implied Value-at-Risk and Model-Free Simulation
Authors: **Carole Bernard, Andrea Perchiazzo** (Vrije Universiteit Brussel), **Steven Vanduffel**

Coskewness Under Dependence Uncertainty
Authors: **Carole Bernard, Jinghui Chen** (Vrije Universiteit Brussel), **Ludger Rüschendorf, Steven Vanduffel**

One Axiom to Rule Them All: A Minimalist Axiomatization of Quantiles
Authors: **Tolulope Fadina, Peng Liu** (University of Essex), **Ruodu Wang**

THUR2-05: Reinsurance and other risk-sharing arrangements 4
Time: Thursday, 14/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635
Chair: Zuoquan Xu

Dynamic Optimal Reinsurance and Dividend-Payout in a Finite Time Horizon
Authors: **Zuoquan Xu** (The Hong Kong Polytechnic University), **Chonghu Guan, Rui Zhou**

Pareto Optimal Risk Sharing for Multiple Policyholders
Authors: **Tim Boonen, Wing Fung Chong** (Heriot-Watt University), **Mario Ghossoub**

The Portfolio Diversification Effect of Catastrophe Bonds
Authors: **Chi Feng** (Shanghai University of Finance and Economics), **Xudong Zeng**

Time-Consistent Mean-Variance Reinsurance-Investment Problem with Long-Range Dependent Mortality Rate
Authors: **Ling Wang** (The Chinese University of Hong Kong), **Mei Choi Chiu, Hoi Ying Wong**

THUR2-06: Asset and liability management 1
Time: Thursday, 14/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864
Chair: Tingjin Yan

Local Mean-Variance Asset-Liability Management with Temporary and Persistent Price Impacts
Authors: **Tingjin Yan** (East China Normal University), **Jinhui Han, Guiyuan Ma, Chi Chung Siu**

Research on the Proportion of Subordinates and the Pricing of Asset Securitization Products in Accounts Receivable in China
Authors: **Rui Ma** (Anhui Polytechnic University), **Chuanyu Wang, Zemin Liu**

Dynamic Optimal Adjustment Policies of Hybrid Pension Plans
Authors: **Sheng Wang** (Tsinghua University), **Zongxia Liang, Lin He**

A New Mean-Variance Model for Uncertain Portfolio Selection with Inflation Taking Linear Uncertainty Distributions

Authors: **Xiaoxia Huang, Di Ma** (University of Science and Technology Beijing)**, Kwang-Il Choe**

THUR2-07: Mortality modelling 2
Time: Thursday, 14/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 879 4168 9738 Passcode: 863503
Chair: Hanlin Shang

Multi-Population Modelling and Forecasting Life-Table Death Counts
Authors: **Hanlin Shang** (Macquarie University)**, Ruofan Xu, Steven Haberman, Ruofan Xu**

Affine Mortality Models with Jumps: Parameter Estimation and Forecasting
Authors: **Len Patrick Dominic Garces** (UNSW Sydney)**, Jovana Kolar, Michael Sherris, Francesco Ungolo, Yuxin Zhou**

Modelling the Mortality of China's Oldest-Old
Authors: **Ho Yan Joey Yung** (UNSW Sydney)**, Katja Hanewald, Andres Villegas**

Mortality Forecasting Under the Non-Linear Credibility Regression Framework
Authors: **Apostolos Bozikas** (University of Piraeus)**, Georgios Pitselis**

THUR2-08: Insurance risk models 3
Time: Thursday, 14/Jul/2022: 17:00-18:40
Zoom Link: Meeting ID: 817 9899 0334 Passcode: 980248
Chair: Yuantao Xie

Dynamic Random Models with Internal and External Excitation for Applications in Cyber Risk Insurance
Authors: **Yousra Cherkaoui Tangi** (Crest)**, Alexandre Boumezoued, Caroline Hillairet**

How Can Insurers Identify Scenarios in Their Own Risk and Solvency Assessment?
Authors: **Philipp Aigner** (Mainz University of Applied Sciences)

Cyber Risk Assessment by Classic Insurance Model
Authors: **Yutaro Takagami** (Graduate School of Waseda)

On a Compound Poisson Risk Model with Two-Sided Jumps and Proportional Investment
Authors: **Jiaen Xu** (Henan University of Science and Technology)**, Chunwei Wang, Naidan Deng**

Thursday Parallel Sessions 3

THUR3-01: Valuation of emerging risks 1
Time: Thursday, 14/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 836 7795 1605 Passcode: 194402
Chair: Petar Jevtic

Framework for Cyber Risk Loss Distribution of Hospital Infrastructure
Authors: **Stefano Chiaradonna, Petar Jevtic** (Arizona State University)**, Nicolas Lanchier**

Investment-Consumption with Unemployment and Reemployment Driven by Regime Switching
Authors: **Ximin Rong, Hui Zhao, Cheng Tao** (Tianjin University)

Actuarially Market Consistent Valuations of Catastrophe Bonds
Authors: **Saeid Safarveisi** (KU Leuven)**, Dixon Domfeh, Arpita Chatterjee**

Pandemic Risk Management: Resources Contingency Planning and Allocation
Authors: **Linfeng Zhang** (University of Illinois at Urbana-Champaign)**, Xiaowei Chen, Wing Fung Chong, Runhuan Feng**

THUR3-02: Asset and liability management 2
Time: Thursday, 14/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695
Chair: Xing Wang

How Financial Disintermediation Affects Commercial Bank Stability
Authors: **Minhua He** (Fudan University)

The Consistency of Mean-Risk Models with Dominance Rules: An Analysis Based on Uncertainty Theory
Authors: **Tingting Yang** (University of Science and Technology Beijing)**, Xiaoxia Huang**

Valuation of Hybrid Pension Scheme Liabilities Under Inflation
Authors: **Shuai Liu** (Anhui Polytechnic University)**, Chuanyu Wang, Juan Xue, Wang Lan**

A Hawkes Type Mean-Variance Portfolio Optimization Model with Liability in Limit Order Book
Authors: **Qi Guo** (University of Calgary)**, Anatoliy Swishchuk**

THUR3-03: Ruin theory and related topics 3
Time: Thursday, 14/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891
Chair: Ruodu Wang

Q-Scale Function and Ultimate Ruin Probability Under a Markov-Modulated Jump-Diffusion Risk Model with Hyperexponential Jumps
Authors: **Zhengjun Jiang** (BNU-HKBU United International College)

On a Time-Changed Lévy Risk Model with Capital Injections and Periodic Observation
Authors: **Ye Teng** (Chongqing University)**, Zhimin Zhang**

Bridging the First and Last Passage Times for Lévy Models
Authors: **David Landriault, Bin Li, Mohamed Amine Lkabous, Zijia Wang** (University of Waterloo)

On Corporate Demand for Insurance: A Dynamic Perspective on Property Insurance
Authors: **Andrea Bergesio, Mario Sikic** (University of Zurich)**, Pablo Koch-Medina**

THUR3-04: Pension and pension mathematics 2
Time: Thursday, 14/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164
Chair: Ruilin Tian

Influence of DB Pension De-Risking on Pension Betas and Firm Value
Authors: **Ruilin Tian** (North Dakota State University), **Jun Chen**

Raising the Normal Retirement Age Gradually
Authors: **Xiaobai Zhu** (Southwestern University of Finance and Economics), **Jingong Zhang**

Optimal Defined-Contribution Pension Management with Financial and Mortality Risks
Authors: **Wenyuan Li** (University of Waterloo), **Ken Seng Tan, Pengyu Wei**

Optimal Savings and Portfolio Choice with Risky Labor Income and Reference-Dependent Preferences
Authors: **Servaas van Bilsen** (University of Amsterdam), **Roger Laeven, Theo Nijman**

THUR3-05: Climate change and others 2
Time: Thursday, 14/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635
Chair: Zhiyu Quan

Inclusive Insurance and Residents' Consumption: Evidence from China
Authors: **Lili Zheng** (Central University of Finance and Economics), **Wenxin Deng**

Sustainability of Agricultural Income Insurance Under Climate Change and Market Uncertainty
Authors: **Ezgi Nevruz** (Hacettepe University)

Sustainable Investing in Corporate Bonds: Evidence from the U.S. Life Insurance Companies
Authors: **Wenchu Li** (Temple University)

Introduction to Switching Loss Distribution for Climate Disasters: A Case Study of United States Climate Disaster Losses
Authors: **Kai Liu, Xander Wang, Ali Raisolsadat** (University of Prince Edward Island)

THUR3-06: Loss reserve methods 1
Time: Thursday, 14/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864
Chair: Haiyan Liu

Estimating the Claims Reserve Using Gaussian Process Regression with Log-Transform Data and Compound Kernel
Authors: **Xusheng Deng** (Tianjin University of Commerce), **Zhiyi Lu**

Dependent Loss Reserving and Risk Capital Modeling with Copula Regression and Recurrent Neural Network
Authors: **Pengfei Cai** (McMaster University), **Anas Abdallah, Pratheepa Jeganathan**

Cross-Sectional Quantile Regression for Estimating Conditional VaR During Periods of High Volatility
Authors: **Xenxo Vidal-Llana** (Universitat de Barcelona), **Montserrat Guillen**

Optimal Annuity Demand Under the Presence of Annuity Costs and Taxes
Authors: **Jun-Hee An** (Tilburg University)

THUR3-07: Life and non-life insurance 3
Time: Thursday, 14/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 879 4168 9738   Passcode: 863503
Chair: Danping Li

Average Time Until First Income Protection Claim
Authors: **Isabel Maria Cordeiro** (Universidade do Minho)

Efficient Valuation of GMMBs in Regime Switching Jump Diffusion Models with Surrender Risk
Authors: **Wei Zhong** (Chongqing university), **Zhenyu Cui, Zhimin Zhang**

Ratemaking in a Changing Environment
Authors: **Nii Okine** (Appalachian State University)

THUR3-08: Insurance risk models 4
Time: Thursday, 14/Jul/2022: 22:15-23:55
Zoom Link: Meeting ID: 817 9899 0334   Passcode: 980248
Chair: Yiying Zhang

On a Bivariate Sarmanov Distribution with Composite Marginals for Bivariate Auto Insurance Costs
Authors: **Raluca Vernic** (Ovidius University of Constanta), **Catalina Bolance, Montserrat Guillen**

An Alternative Insurance Model Against New Emerging Risks
Authors: **Muhsin Tamturk** (University of Leicester)

Risk Aggregation Under IFRS 17: An Ultimate Run-Off Adaptation of Solvency 2 Elliptic Aggregation
Authors: **Tachfine El Alami** (Université Claude Bernard Lyon 1)

Pooling and Systematic Risk
Authors: **Hirbod Assa** (Kent Business School)

Friday Parallel Sessions 1

FRI1-01: Data science and statistical modelling 7
Time: Friday, 15/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 836 7795 1605   Passcode: 194402
Chair: Jingchao Li

Projection of Successor Excellence Branch Manager XYZ Bank Using Survival Model
Authors: **Andzar Syafa'atur Rahman** (University of Indonesia), **Lenny Suardi**

Application of Survival Analysis Method to Find Out Time to Default Salary Based Credit Debtor at XYZ Bank
Authors: **Singgih Aji Nugroho** (Universitas Indonesia), **Lenny Suardi**

Credit Scoring Micro Loan Using Multivariate Adaptive Regression Splines
Authors: **Gamar Aseffa** (University of Indonesia), **Lenny Suardi**

Distributional Forecasting of Outstanding Liabilities with Neural Networks
Authors: **Muhammed Taher Al-Mudafer** (UNSW Sydney)**, Benjamin Avanzi, Greg Taylor, Bernard Wong**

FRI1-02: Financial modelling 7
Time: Friday, 15/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 891 8739 0955 Passcode: 499695
Chair: Zheng Chen

Modeling the Dependency in the Turkish Stock Market via the Dynamic Vine-GARCH Model
Authors: **Ozan Evkaya** (Edinburgh University)**, Gulden Poyraz, Bukre Yildirim Kulekci, Ismail Gur**

Portfolio Selection Criteria Based on Generalized Herd Behavior Index for Bespoke Basket
Authors: **Wing Fung Chong, Churui Li** (KU Leuven)**, Daniël Linders, Gertjan Verdickt**

Domestic Credit Channelization to Private Sector and Economic Growth: An Empirical Analysis
Authors: **Sudan Kumar Oli** (University of International Business and Economics)

OVX Forecasting via SVR-GARCH Method: A New Cross-Market Perspective Based on Stock Market Jumps
Authors: **Gongyue Jiang** (Southwest Jiaotong University)**, Gaoxiu Qiao, Feng Ma, Lu Wang**

FRI1-03: Optimal control in insurance and finance 7
Time: Friday, 15/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 830 7941 4558 Passcode: 744891
Chair: Xudong Zeng

Optimal Investment-Consumption-Insurance Problem with Default Risk
Authors: **Pin Wang** (Soochow University)**, Guojing Wang, Rui Mu**

Optimal Management of DC Pension Fund Under Relative Performance Ratio and VaR Constraint
Authors: **Yi Xia** (Tsinghua University)**, Guohui Guan, Zongxia Liang**

Optimal Strategies with Stochastic Wage and Multi-Payments Critical-Illness Insurance
Authors: **Shiqi Yan** (Central University of Finance and Economics)

The N-Player and Mean-Field Game of Optimal Reinsurance and Investment Strategy
Authors: **Guanxia Zhu** (Shanghai University of Finance and Economics)**, Xudong Zeng**

FRI1-04: Valuation of emerging risks 2
Time: Friday, 15/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 896 1348 8008 Passcode: 631164
Chair: Jiwook Jang

Spatial Dependency and Socio-Economic Impacts on Data Breach Risks: Nation-Wide Analysis in the U.S.
Authors: **Kwangmin Jung, Jaehun Cho** (Pohang University of Science and Technology)

High-Quality Credit Portfolios Under Multilevel Extreme Risks
Authors: **Qihe Tang, Yang Yang, Yunshen Yang** (UNSW Sydney)

Pricing Catastrophe Bonds Under Transitions of the Physical and Economic Environment
Authors: **Haibo Liu, Yuhao Liu** (UNSW Sydney)**, Qihe Tang, Jinxia Zhu**

Survival Analysis of Cardiovascular Patients Participants of National Health Insurance in Indonesia
Authors: **Fera Rusanti** (Indonesia University)**, Lenny Suardi**

FRI1-05: Reinsurance and other risk-sharing arrangements 5
Time: Friday, 15/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 835 3269 4794 Passcode: 684635
Chair: Vali Asimit

Portfolio Risk Mitigation via Risk Parity
Authors: **Vali Asimit** (Bayes Business School)**, Radu Tunaru, Liang Peng, Feng Zhou**

Optimal Reinsurance for Multivariate Risks
Authors: **Yinzhi Wang** (Southwestern University of Finance and Economics)

Deep Insights of Reinsurance Research: A Review of Main Streams and Development Track
Authors: **Wei Zhou, Zhaoxia Wu** (Yunnan University of Finance and Economics)

An Insurer's Optimal Strategy Towards a New Independent Business
Authors: **Yuxia Huang** (Central University of Finance and Economics)**, Yichun Chi, Ken Seng Tan**

FRI1-06: Catastrophe modelling 1
Time: Friday, 15/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 881 0326 2533 Passcode: 377864
Chair: Chi Truong

Flood Risk and the Option to Adapt Under Uncertainty
Authors: **Chi Truong** (Macquarie University)

Earthquake Parametric Insurance with Bayesian Spatial Quantile Regression
Authors: **Yunxian Li** (Yunnan University of Finance and Economics)

Modelling the Joint Extremes of Air Pollution Risks
Authors: **Chengxiu Ling, Jiajun Liu** (Xi'an Jiaotong-Liverpool University)**, Jingyi Xu**

Borrowing Information Across Space and Time: Pricing Flood Risk with Physics-Based Hierarchical Machine Learning Models.
Authors: **Yanbin Xu** (Nanyang Technological University)**, Ken Seng Tan, Wenjun Zhu**

FRI1-07: Health insurance 1
Time: Friday, 15/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 879 4168 9738 Passcode: 863503
Chair: Chunli Cheng

It Is Not Only up to You! The Effect of Retirement on Healthcare Utilization-The Role of Physician Incentives
Authors: **Jiyuan Wang** (Central University of Finance and Economics)**, Ya Gao, Jiankun Lu, Xiaomin Zhong**

The Effect of Childhood Socioeconomic Status on Private Medical Insurance Demand: Evidence from China
Authors: **Xiangwen Zheng** (Central University of Finance and Economics)

Critical Illness Insurance Model for Breast Cancer Patients After Chemotherapy
Authors: **M. Ivan Ariful Fathoni** (Universitas Gadjah Mada), **Gunardi Gunardi, Fajar Adi Kusumo, Susanna Hilda Hutajulu**

Multi-State Modelling of Functional Disability and Health Status Using Australian Cross-Sectional Data
Authors: **Kyu Hyung Park** (The Australian Research Council (ARC) Centre of Excellence in Population Ageing Research (CEPAR)), **Michael Sherris**

FRI1-08: Ruin theory and related topics 4
Time: Friday, 15/Jul/2022: 15:00-16:40
Zoom Link: Meeting ID: 817 9899 0334   Passcode: 980248
Chair: Kazutoshi Yamazaki

Series Expansion Formula for Scale Matrices and Applications in Ruin Theory
Authors: **Kazutoshi Yamazaki** (University of Queensland), **Jevgenijs Ivanovs**

A Multivariate Risk-Theoretic Approach to the Matrix Sequential Probability Ratio Test
Authors: **Oscar Peralta** (University of Lausanne), **Hansjoerg Albrecher**

The Role of Direct Cash Transfers Towards Extreme Poverty Alleviation - An Omega Risk Process
Authors: **José Miguel Flores-Contró** (University of Lausanne), **Séverine Arnold**

Ensemble Distributional Forecasting for Insurance Loss Reserving
Authors: **Benjamin Avanzi, Yanfeng Li** (UNSW Sydney), **Bernard Wong, Alan Xian**

Abstracts of Keynote Speeches

(in alphabetical order)

Why Don't Retirees Spend Their Savings? Behavioural Explanations and Demand-Side Solutions

Hazel Bateman (University of New South Wales)

The life-cycle model predicts that people accumulate wealth during their working life and draw down their assets after retirement. Yet recent empirical studies for many countries show that many retirees hold on to their assets or even keep on saving well into old age. This presentation will draw upon recently published papers and work-in-progress to explore this phenomenon. The focus will be the identification of behavioural explanations for the reluctance to drawdown wealth accumulated during working years and the role of behavioural interventions to encourage people to drawdown their wealth in retirement.

Calculation of Enterprise Capital via Least-Squares Monte Carlo -- Regress Now or Later?

Daniel Bauer (University of Wisconsin-Madison)

There has been substantial interest in applied research and practice on the estimation of risk capital within enterprise risk models via Monte Carlo procedures. The difficulty arises from characterizing the distribution of the company's available capital, which takes the form of a conditional expected value of the firm's future cash flows given the market and company state at the risk horizon.

One prevalent approach that improves on the basic nested simulations estimator, referred to as regression-now, projects realized cash flows corresponding to a product or portfolio on a set of basis functions of the Markov states at the risk horizon. Another approach seeks to approximate the cash-flows based on functions of realizations of a class of tractable processes, and in a second step calculates the conditional expected value of the approximating functional combination at the risk horizon. This approach is referred to as regression-later. Different authors documented advantages and disadvantages to both approaches in specific situations.

This presentation discusses these approaches. We show "optimal" implementations of the different approaches, including the derivation of robust approximating functions for the regress-now and regress-later approach. We also characterize situations in which the different approaches result in a superior performance. This is based on a joint work with Hongjun Ha (St. Josephs University).

Optimal Design of Reinsurance Contracts Under Adverse Selection with a Continuum of Types

Ka Chun Cheung (The University of Hong Kong)

We use the Principal-Agent models to study a monopolistic reinsurance market under adverse selection with a continuum of types. Instead of adopting the classical expected utility paradigm, we model the risk preference of each insurer (agent) by his Value-at-Risk at his own chosen risk tolerance level. Under information asymmetry, the reinsurer (principal) aims to maximize his expected profit by designing an optimal menu of reinsurance contracts for a continuum of insurers with hidden characteristics. The optimization problem is constrained by agents' individual compatibility and rationality constraints. By making use of the notion of indirect utility functions originated from optimal transport theory, the problem is completely solved for the following commonly encountered subclasses of reinsurance indemnities: (i) stop-loss, (ii) quota-share, and (iii) change-loss. This is based on a joint work with S.C.P. Yam, K. Yuen, and Y. Zhang. This is based on a joint work with Hongjun Ha (St. Josephs University).
