60th Actuarial Research Conference

Program and Abstracts

Toronto, Ontario, Canada

July 29 – August 1, 2025

Venue Information

- **Bldg 1 Seymour Schulich Building (SSB)** – W141 Auditorium.
- **Bldg 2 Executive Learning Centre (ELC)** – X106, X206, X211 Classrooms; Executive Dining Room (EDR) for morning refreshments, coffee breaks, and lunches.
- **Bldg 3 Rob and Cheryl McEwen Graduate Study & Research Building (MB)** – G101, G102, G105 Classrooms.
- **Bldg 4 Second Student Center (SSC)** – Convention Centre (CC) for the banquet.

Wi-Fi Information

- **eduroam** provides wireless internet access throughout all buildings to York community members and to visitors from eduroam-member institutions.
- Alternatively, a **Wi-Fi pass** will be provided with your name badge. It includes a unique username, password, and connection instructions, and can be used in the SSB, ELC, and MB.

Tuesday, July 29

	New Frontiers of Systemic Risk | RISC Forum 2025	
8:00 a.m. - 8:40 a.m.	Breakfast	ELC EDR
8:40 a.m. - 9:00 a.m.	Opening Remarks	SSB W141
9:00 a.m. - 10:00 a.m.	**Plenary Session on AI Risks** Speakers: Zhiyu Quan, University of Illinois Urbana-Champaign, and Yuanyuan Li, Munich Re Moderator: Alicia Guo, E&Y	SSB W141
10:00 a.m. – 10:30 a.m.	Coffee Break	ELC EDR
10:30 a.m. – 11:30 a.m.	**Plenary Session on Financial Disruption Risks** Speakers: Runhuan Feng, Tsinghua University, and Urs Uhlmann, Aviva Canada Moderator: Paulo Salomao, Accenture	SSB W141
11:30 a.m. – 1:00 p.m.	Lunch	ELC EDR
1:00 p.m. – 2:00 p.m.	**Keynote Presentation** Measuring Impacts of Systemic Risks on Canada Pension Plan Sustainability Speaker: Assia Billig, Government of Canada Moderator: Daniel Bauer, University of Wisconsin - Madison	SSB W141
2:00 p.m. – 3:00 p.m.	**Plenary Session on Climate Risks** Speakers: Fan Yang, University of Waterloo and RISC Foundation, and Sonia Kundi, Zurich Cover More Group Moderator: Juntao Zhang, PwC	SSB W141
3:00 p.m. – 3:30 p.m.	Coffee Break	ELC EDR
3:30 p.m. – 4:30 p.m.	**Plenary Session on Cyber Risks** Speakers: Jianxi Su, Purdue University, and Lasith Lansakara, HSB Canada	SSB W141
4:30 p.m. – 4:45 p.m.	**Closing Remarks** Speaker: Edward Furman, York University and RISC Foundation	SSB W141
6:00 p.m. - 8:00 p.m.	Welcome Reception	ELC EDR

Wednesday, July 30

8:00 a.m. - 8:30 a.m.	Morning Refreshments & Registration	ELC EDR
8:30 a.m. - 9:00 a.m.	Opening Remarks	SSB W141
9:00 a.m. - 10:00 a.m.	**Keynote Session I** Key Findings from the PACICC Global Failed Insurer Catalogue Speaker: Alister Campbell, Property and Casualty Insurance Compensation Corporation Moderator: Moshe Milevsky, York University	SSB W141
10:00 a.m. - 10:30 a.m.	Coffee Break	ELC EDR
	Parallel Sessions 30A	
	Cyber Risk I Chair: Linfeng Zhang	ELC X106
10:30 a.m. - 11:00 a.m.	On the Design of Optimal Multiple-peril Cyber Insurance Speaker: Linfeng Zhang, The Ohio State University	
11:00 a.m. - 11:30 a.m.	Systemic Cyber Risks and Insurance Regulatory Capital Speaker: Kwangmin Jung, Pohang University of Science and Technology	
11:30 a.m. - 12:00 p.m.	Can Market Effectively Price Cyber Risk? Evidence from a Blockchain Insurance Platform Speaker: Zhonghe Wan, University of Illinois Urbana-Champaign	
	Life Insurance I Chair: Moshe Milevsky	ELC X206
10:30 a.m. - 11:00 a.m.	Benjamin Gompertz the Financial Economist Speaker: Moshe Milevsky, York University	
11:00 a.m. - 11:30 a.m.	A Simulation-based Framework for Estimating Risk Adjustment under Ifrs 17 for Life Insurance Contracts Speaker: Hossam Mohamed, Cairo University	
11:30 a.m. - 12:00 p.m.	Insurance Organizational Structure in Pension Risk Transfer Market Speaker: Wenchu Li, St. John's University	
	CIA Invited Session I: Data-Driven Solutions in Insurance Chair: Hong Li	ELC X211
10:30 a.m. - 11:00 a.m.	A Population Sampling Framework for Claim Reserving in General Insurance Speaker: Sebastián Calcetero Vanegas, University of Toronto	
11:00 a.m. - 11:30 a.m.	Predicting Classification Errors Using Nlp-based Machine Learning Algorithms and Expert Opinions Speaker: Peiheng Gao, Western University	
11:30 a.m. - 12:00 p.m.	Integration of Traditional and Telematics Data for Efficient Insurance Claims Prediction Speaker: Hashan Peiris, Simon Fraser University	
	Invited Session I: Artificial Intelligence in Insurance Chair: Arthur Charpentier	MB G101
10:30 a.m. - 12:00 p.m.	Balance and Calibration of Probabilistic Scores Speaker: Arthur Charpentier, Université du Québec à Montréal Tree-based Machine Learning Survival Models for Right-censored Actuarial Time-to-event Data Speaker: Marie-Pier Côté, Université Laval	

	Reinsurance I	MB G102
	Chair: Mario Ghossoub	
10:30 a.m. - 11:00 a.m.	Index-based Reinsurance Design in a Dynamic Setting	
	Speaker: Jinggong Zhang, Nanyang Technological University	
11:00 a.m. - 11:30 a.m.	Moral Hazard in Insurance Markets with Distortion Risk Measures	
	Speaker: Tim Boonen, The University of Hong Kong	
11:30 a.m. - 12:00 p.m.	Co-opetition in Reinsurance Markets: When Pareto Meets Stackelberg and Nash	
	Speaker: Bin Zou, University of Connecticut	
	Mortality and Longevity Modeling I	MB G105
	Chair: Kristina Sendova	
10:30 a.m. - 11:00 a.m.	The Impact of Anxiety and Depression on Mortality in the Us	
	Speaker: Brian Hartman, Brigham Young University	
11:00 a.m. - 11:30 a.m.	Longevity Trends in Canada	
	Speaker: Kristina Sendova, University of Western Ontario	
11:30 a.m. - 12:00 p.m.	Joint Modeling of Excess Mortality and Interest Rates Using Mixed Fractional Brownian Motions	
	Speaker: Hongjuan Zhou, Arizona State University	
	Retirement and Pension Mathematics I	SSB W141
	Chair: Runhuan Feng	
10:30 a.m. - 11:00 a.m.	Generalized Design Framework for Collective Defined Contribution Pension Plans and Benefit Smoothing Mechanisms	
	Speaker: Vatsal Desai, Simon Fraser University	
11:00 a.m. - 11:30 a.m.	Benefit Volatility-targeting Strategies in Lifetime Pension Pools	
	Speaker: Jean-François Bégin, Simon Fraser University	
11:30 a.m. - 12:00 p.m.	Decentralized Annuity: a Quest for the Holy Grail of Lifetime Financial Security	
	Speaker: Runhuan Feng, Tsinghua University	
12:00 p.m. - 1:30 p.m.	Lunch	ELC EDR
	Parallel Sessions 30B	
	Blockchain, Telematics, and InsurTech I	ELC X106
	Chair: Zhiyu Quan	
01:30 p.m. - 02:00 p.m.	Speculative Risk Attitude Versus Pure Risk Attitude: Estimation from Cryptomarket Decision	
	Speaker: Xinjie Ge, Peking University	
02:00 p.m. - 02:30 p.m.	Development of Telematics Safety Scores in Accordance with Regulatory Compliance	
	Speaker: Hashan Peiris, Simon Fraser University	
02:30 p.m. - 03:00 p.m.	Insurance-linked Tokenization: Leveraging Crypto Solvency Capital for Mitigating Real-world Risks	
	Speaker: Youxi Zhang, Tsinghua University	

	CIA Invited Session II: Innovative Tools for Pension and Life Insurance	ELC X206
	Chair: Jean-François Bégin	
01:30 p.m. - 02:00 p.m.	Optimal Hurdle Rate and Investment Policies in Lifetime Pension Pools	
	Speaker: Yingfei Sun, Simon Fraser University	
02:00 p.m. - 02:30 p.m.	Hedging Targeted Risks with Reinforcement Learning: Application to Life Insurance Contracts with Embedded Guarantees	
	Speaker: Carlos Octavio Pérez Mendoza, Concordia University	
02:30 p.m. - 03:00 p.m.	Mortality Prediction via Transfer Learning-based Approaches	
	Speaker: Yechao Meng, University of Prince Edward Island	
	CAS Invited Session I: A Scalable Toolbox for Exposing Indirect Discrimination in Insurance Rates	ELC X211
	Chair: Arthur Charpentier	
01:30 p.m. - 03:00 p.m.	A Scalable Toolbox for Exposing Indirect Discrimination in Insurance Rates	
	Speakers: Arthur Charpentier, Université du Québec à Montréal	
	Marie-Pier Côté, Université Laval	
	Oliver Côté, Université Laval	
	Catastrophic Risk Modeling I	MB G101
	Chair: Hong Li	
01:30 p.m. - 02:00 p.m.	An Actuarial Analysis of a Canadian Flood Insurance Program for Residential Properties	
	Speaker: Mathieu Boudreault, Université du Québec à Montréal	
02:00 p.m. - 02:30 p.m.	An Improved Catastrophe Bond Pricing Model	
	Speaker: Hong Li, University of Guelph	
02:30 p.m. - 03:00 p.m.	Enhancing Stochastic Variability in Natural Catastrophe Models: Application to Tropical Cyclones in Australia	
	Speaker: Bernard Wong, University of New South Wales	
	Invited Session II: Innovative Insurance Design	MB G102
	Chair: Tom Salisbury	
01:30 p.m. - 02:00 p.m.	The Riccati Tontine	
	Speaker: Tom Salisbury, York University	
02:00 p.m. - 02:30 p.m.	An Assessment Framework For Equitable Longevity Pooling Arrangements	
	Speaker: Andrés Villegas, University of New South Wales	
02:30 p.m. - 03:00 p.m.	Optimal Insurance Design under Fairness Constraints: Generalized Demographic Parity and Zero Correlation Standard	
	Speaker: Chengguo Weng, University of Waterloo	
	Risk Modeling and Measurement I	MB G105
	Chair: Yiqing Chen	
01:30 p.m. - 02:00 p.m.	Differential Quantile-Based Sensitivity in Discontinuous Models	
	Speaker: Silvana Pesenti, University of Toronto	
02:00 p.m. - 02:30 p.m.	L-Estimation of Claim Severity Models: A Flexible Weighting Approach	
	Speaker: Chudamani Poudyal, University of Central Florida	
02:30 p.m. - 03:00 p.m.	An Asymptotic Study of Multivariate Extensions Of CoVaR	
	Speaker: Yiqing Chen, Drake University	

	Quantitative Finance I Chair: Patrice Gaillardetz	SSB W141
01:30 p.m. - 02:00 p.m.	A Global Time-Consistent CVaR Hedging Strategy Speaker: Patrice Gaillardetz, Concordia University	
02:00 p.m. - 02:30 p.m.	Outperforming A Benchmark with α-Bregman Wasserstein Divergence Speaker: Thai Nguyen, Université Laval	
02:30 p.m. - 03:00 p.m.	Discrete-Time Hedging, Basis Risk, and Covariance-Dependent Pricing Kernels Speaker: Maciej Augustyniak, University of Montreal	
3:00 p.m. - 3:30 p.m.	Coffee Break	ELC EDR
	Parallel Sessions 30C	
	Health Insurance I Chair: Kenneth Zhou	ELC X106
03:30 p.m. - 04:00 p.m.	Impact of Privatisation on US Hospice Sector Speaker: Phelim Boyle, Retired	
04:00 p.m. - 04:30 p.m.	Fairness Issues In Long-Term Care Insurance via AI-Inspired Methods Speaker: Mengyi Xu, Purdue University	
	AAA Invited Session II: Professionalism	ELC X206
03:30 p.m. - 05:00 p.m.	From Code to Culture: Living Professionalism Every Day Speaker: Annette James, American Academy of Actuaries	
	CAS Invited Session II: Accelerating Actuarial Research	ELC X211
03:30 p.m. - 05:00 p.m.	Accelerating Actuarial Research: the CAS Quick Start Program and Beyond Speaker: Ken Williams, Casualty Actuarial Society	
	Climate Risk and Sustainability I Chair: Frédéric Godin	MB G101
03:30 p.m. - 04:00 p.m.	Comparative Analysis of Weather-based Indexes and the Actuaries Climate Index™ for Crop Yield Prediction Speaker: Jose Garrido, Concordia University	
04:00 p.m. - 04:30 p.m.	Greenhouse-Gas-Emission-Aware Portfolio Optimization with Deep Reinforcement Learning Speaker: Frédéric Godin, Concordia University	
04:30 p.m. - 05:00 p.m.	Why Insurers Price Carbon Low: an Analysis of Financed Emissions and Investment Decisions Speaker: Haibo Liu, Purdue University	
	Optimal Control and Optimization I Chair: Ankush Agarwal	MB G102
03:30 p.m. - 04:00 p.m.	Optimal Income Drawdown and Investment with Longevity Basis Risk Speaker: Ankush Agarwal, Western University	
04:00 p.m. - 04:30 p.m.	Mean Field Analysis of Mutual Insurance Speaker: Kenneth Ng, The Ohio State University	
04:30 p.m. - 05:00 p.m.	Optimal Insurance Design with Lambda-value-at-risk Speaker: Qiuqi Wang, Georgia State University	

	Statistical and Machine Learning I Chair: Arnold Shapiro	MB G105
03:30 p.m. - 04:00 p.m.	Workers' Compensation Case Outcomes and Large Language Models Speaker: Vajira Manathunga, Middle Tennessee State University	
04:00 p.m. - 04:30 p.m.	Agentic RAG Models Straight-Through Underwriting and Actuarial Applications Speaker: Robert Richardson, Brigham Young University	
04:30 p.m. - 05:00 p.m.	The Technical Concepts and Training Approaches That Power Generative Pre-Trained Transformer (GPT) Models Speaker: Arnold Shapiro, Penn State University	
	Loss Reserving and Rate Making I Chair: Roxane Turcotte	SSB W141
03:30 p.m. - 04:00 p.m.	Individual Loss Reserving for Multi-coverage Insurance Speaker: Roxane Turcotte, Université du Québec à Montréal	
04:00 p.m. - 04:30 p.m.	From Black Box to Glass Box: Enhancing Actuarial Models with GA2Ms Speaker: Philippe Meunier, TD Insurance	
04:30 p.m. - 05:00 p.m.	Bayesian-Enhanced Multivariate Loss Reserving Using Glm-based Erlang Mixtures Speaker: Mohammadhossein Nezhadhaghighi, University of New South Wales	
5:00 p.m. - 6:00 p.m.	Poster Session	ELC EDR

Thursday, July 31

8:30 a.m. - 9:00 a.m.	Morning Refreshments	ELC EDR
9:00 a.m. - 10:00 a.m.	**Keynote Session II** Multivariate Bernoulli Distributions with Actuarial Applications Speaker: Étienne Marceau, Université Laval Moderator: Tom Salisbury, York University	SSB W141
10:00 a.m. - 10:30 a.m.	Coffee Break	ELC EDR
	Parallel Sessions 31A	
	Invited Session III: Sustainable Development Goals Chair: Corina Constantinescu	ELC X106
10:30 a.m. - 11:00 a.m.	Microinsurance and Poverty Resilience in Low-Income Communities Speaker: Corina Constantinescu, University of Liverpool	
11:00 a.m. - 11:30 a.m.	Stochastic Optimisation in Social Protection: Improving Targeting and Reducing Costs of Cash Transfer Programmes Speaker: Jose Miguel Contro, University of Lausanne	
11:30 a.m. - 12:00 p.m.	Evaluating Transition Rules for Enhancing Fairness in Bonus–Malus Systems: an Application to the Saudi Arabian Auto Insurance Market Speaker: Jorge Yslas, University of Liverpool	

	Education Updates from CAS, CIA, and SOA	ELC X206
10:30 a.m. - 11:00 a.m.	Pathway to P/C Success: Exploring 2025 CAS Opportunities Speaker: Ken Williams, Casualty Actuarial Society	
11:00 a.m. - 11:30 a.m.	CIA Qualification Pathways - Options and Opportunities for All! Speaker: Michael Stinchcombe, Canadian Institute of Actuaries	
11:30 a.m. - 12:00 p.m.	Update on Society of Actuaries Education Speaker: Stuart A. Klugman, Society of Actuaries	
	Blockchain, Telematics, and InsurTech II Chair: Wei Wei	ELC X211
10:30 a.m. - 11:00 a.m.	Pricing by Stake in DeFi Insurance: Consensus Approach, Flaws and Implications Speaker: Maxim Bichuch, University at Buffalo	
11:00 a.m. - 11:30 a.m.	InsurTech Innovation Using Natural Language Processing Speaker: Zhiyu Quan, University of Illinois Urbana-Champaign	
11:30 a.m. - 12:00 p.m.	On the Optimality of Linear Residual Risk Sharing Speaker: Wei Wei, University of Illinois Urbana-Champaign	
	Education and Professional Development I Chair: Jiacheng Cai	MB G101
10:30 a.m. - 11:00 a.m.	Beyond Exams: Exploring Research Opportunities for Small Actuarial Programs Speakers: Jiacheng Cai, Salisbury University, and Zhixin Wu, DePauw University	
11:00 a.m. - 11:30 a.m.	Basics of the Analysis of Life Insurance Profits by Source for Educators Speaker: Colin Ramsay, University of Nebraska-Lincoln	
11:30 a.m. - 12:00 p.m.	Rethinking Actuarial Education in a Global World: the Role of Actuarial Education Companies Speaker: Bill Marella and Gabe Necoechea, ACTEX Learning	
	Statistical and Machine Learning II Chair: Liang Hong	MB G102
10:30 a.m. - 11:00 a.m.	Multi-View Spatial Embeddings for Insurance Speaker: Christopher Blier-Wong, University of Toronto	
11:00 a.m. - 11:30 a.m.	Diagnostic Tests Before Modeling Longitudinal Actuarial Data Speaker: Tsz Chai Fung, Georgia State University	
11:30 a.m. - 12:00 p.m.	A New Approach to Detecting Insurance Fraud Speaker: Liang Hong, University of Texas at Dallas	
	Dependence Modeling I Chair: Lisa Gao	MB G105
10:30 a.m. - 11:00 a.m.	Seemingly Unrelated Regression (SUR) Copula Mixed Models for Multivariate Loss Reserving Speaker: Pengfei Cai, McMaster University	
11:00 a.m. - 11:30 a.m.	Asymptotic Behavior of Risk-sharing Contributions in Heterogeneous and Dependent Insurance Portfolios. Speaker: Omar Essakine, Université Laval	
11:30 a.m. - 12:00 p.m.	Counter-monotonic Risk Sharing with Heterogeneous Distortion Risk Measures Speaker: Qinghua Ren, University of Waterloo	

	Quantitative Finance II	SSB W141
	Chair: Zhenzhen Huang	
10:30 a.m. - 11:00 a.m.	Log-Optimal Portfolio under Regime Switching Mechanisms Speaker: Xunbai Yin, University of Alberta	
11:00 a.m. - 11:30 a.m.	Optimal Investment and Entropy-Regularized Learning under Stochastic Volatility Models with Portfolio Constraints Speaker: Pertiny Wilfried Nkuize Ketchiekmen, Université Laval	
11:30 a.m. - 12:00 p.m.	ESG-constrained Portfolio Choice with Estimation Risk Speaker: Zhenzhen Huang, The Ohio State University	
12:00 p.m. - 1:30 p.m.	Lunch	ELC EDR
	Parallel Sessions 31B	
	AAA Invited Session I: Bias in Assessing Financial Risk	ELC X106
	Chair: Grace Lattyak	
1:30 p.m. - 2:00 p.m.	Anti-Discrimination Insurance Pricing: Regulations, Fairness Criteria, and Models Speaker: Xi Xin, University of New South Wales	
2:00 p.m. - 2:30 p.m.	A Fair Price to Pay: Exploiting Causal Graphs for Fairness in Insurance Speaker: Olivier Côté, Université Laval	
2:30 p.m. - 3:00 p.m.	Discrimination-Free Insurance Pricing with Privatized Sensitive Attributes Speaker: Tianhe Zhang, University of Wisconsin-Madison	
	Education and Professional Development II	ELC X206
	Chair: Russell Hendel	
1:30 p.m. - 2:00 p.m.	Teaching Multi-Parameter Subjects Speaker: Russell Hendel, Towson University	
2:00 p.m. - 2:30 p.m.	Actuarial Education Around the World Speaker: Diana Skrzydlo, University of Waterloo	
2:30 p.m. - 3:00 p.m.	Academic Interests in Global Risks Speaker: Rongtao Duan, Peking University	
	Climate Risk and Sustainability II	ELC X211
	Chair: Jose Garrido	
1:30 p.m. - 2:00 p.m.	Bayesian Learning of Regional Economic Impacts of Climate Change Speaker: Shawn Yang, University of New South Wales	
2:00 p.m. - 2:30 p.m.	Future Insurance Losses Caused by Fluvial Flooding in Canada and the U.S. Using Climate Models and Non-stationary Generalized Extreme Value Distributions Speaker: Karim Larre, Université du Québec à Montréal	
2:30 p.m. - 3:00 p.m.	Evaluating the Resilience of Pension Glidepaths in a Climate-Sensitive Economy Speaker: Rhoda Dadzie-Dennis, University of Waterloo	

	P&C Insurance I	MB G101
	Chair: Edward (Jed) Frees	
1:30 p.m. - 2:00 p.m.	Diversifying Spatially Dependent Portfolios Speaker: Edward (Jed) Frees, University of Wisconsin-Madision	
2:00 p.m. - 2:30 p.m.	Risk Portfolio Sensitivities and Data Uncertainty Speaker: Peng Shi, University of Wisconsin-Madison	
2:30 p.m. - 3:00 p.m.	Beyond P-Values: What the American Statistical Association Statement Means for the Actuarial Community Speaker: Tatjana Miljkovic, Miami University	
	Mortality and Longevity Modeling II	MB G102
	Chair: Mike Ludkovski	
1:30 p.m. - 2:00 p.m.	Mortality Analysis of Small Pension Fund Datasets Speaker: Mike Ludkovski, University of California - Santa Barbara	
2:00 p.m. - 2:30 p.m.	Modeling Subnational Mortality in the Presence of Aggregated Data Speaker: Barbara Sanders, Simon Fraser University	
2:30 p.m. - 3:00 p.m.	The Long Shadow of Pandemic: Understanding the Lingering Effects of Cause-Specific Mortality Shocks Speaker: Kenneth Zhou, University of Waterloo	
	Optimal Control and Optimization II	MB G105
	Chair: Qiuqi Wang	
1:30 p.m. - 2:00 p.m.	Dimension Reduction of Distributionally Robust Optimization Problems Speaker: Brandon Tam, University of Toronto	
2:00 p.m. - 2:30 p.m.	Model Ambiguity in Risk Sharing with Monotone Mean-Variance Speaker: Emma Kroell, University of Toronto	
2:30 p.m. - 3:00 p.m.	Continuous Time Reinforcement Learning for Actuarial Problems Speaker: Austin Riis-Due, University of Waterloo	
	Ruin Theory I	SSB W141
	Chair: Shu Li	
1:30 p.m. - 2:00 p.m.	Forecasting the Wealth of Investors at Retirement Using an Advanced Ruin-theory Approach Speaker: Diba Daraei, Western University	
2:00 p.m. - 2:30 p.m.	The Theory and Applications of the Number of Claims Until First Passage Times Speaker: Shu Li, Western University	
2:30 p.m. - 3:00 p.m.	The Valuation of Variable Annuities with Drawdown-Dependent Fee Speaker: Duo Xu, Western University	
	Parallel Sessions 31C	
	Risk Modeling and Measurement II	ELC X106
	Chair: Madhuka Samanthi Ranadeera Gamage	
3:30 p.m. - 4:00 p.m.	Methods for Generating Coherent Distortion Risk Measures Speaker: Madhuka Samanthi Ranadeera Gamage, University of Delaware	
4:00 p.m. - 4:30 p.m.	Adaptive Window Selection for Financial Risk Forecasting Speaker: Yinhuan Li, University of Waterloo	
4:30 p.m. - 5:00 p.m.	Robustifying Choquet Risk Measures by Bridging Pure Risk and Ambiguity Speaker: Zachary Van Oosten, University of Waterloo	

	CIA Invited Session III: Research Opportunities with the Canadian Institute of Actuaries	ELC X206
3:30 p.m. – 5:00 p.m.	Research Opportunities with the Canadian Institute of Actuaries Speaker: Michael Bean, Canadian Institute of Actuaries	
	Loss Reserving and Rate Making II Chair: Peng Shi	ELC X211
3:30 p.m. – 4:00 p.m.	Discrimination-insensitive Insurance Premia Speaker: Kathleen Miao, University of Toronto	
4:00 p.m. – 4:30 p.m.	QUBO Formulation in the Cart Algorithm for Individual Reserve Modeling in P&C Insurance. Speaker: Iro René Kouarfate, Université de Sherbrooke	
4:30 p.m. – 5:00 p.m.	Insurance Ratemaking with an Endogenous Deductible Speaker: Dongha Lee, Simon Fraser University	
	P&C Insurance II Chair: Sébastien Jessup	MB G101
3:30 p.m. – 4:00 p.m.	Accounting for Model Risk in Property and Casualty Insurance Speaker: Hanieh Amjadian, Concordia University	
4:00 p.m. – 4:30 p.m.	Addressing Antidiscrimination with Bayesian Variational Inference Speaker: Lydia Gabric, Arizona State University	
4:30 p.m. – 5:00 p.m.	A Zero-inflated Mixed-Effects Spatial Point Process for Grouped Storm Loss Data Speaker: Sébastien Jessup, University of Waterloo	
	Reinsurance II Chair: Fang Yang	MB G102
3:30 p.m. – 4:00 p.m.	Optimal Reinsurance Design with Belief Heterogeneity and Default Risk Speaker: Qianyu Chen, University of Waterloo	
4:00 p.m. – 4:30 p.m.	Diversification Effect in Multivariate Optimal Risk Transfer Speaker: Fang Yang, Georgia State University	
4:30 p.m. – 5:00 p.m.	Subgame Perfect Nash Equilibria in Insurance Markets with Multiple Policyholders Speaker: Maria Andraos, University of Waterloo	
	Statistical and Machine Learning III Chair: Xiaobai Zhu	MB G105
3:30 p.m. – 4:00 p.m.	Entity-Specific Cyber Risk Assessment Using Insurtech Empowered Risk Factors Speaker: Jiayi Guo, University of Illinois Urbana-Champaign	
4:00 p.m. – 4:30 p.m.	Geo-Spatial Modelling of Vehicle Crime in Northern Ireland Using Computer Vision to Identify Environmental Factors. Speaker: James Hannon, University College Dublin	
4:30 p.m. – 5:00 p.m.	Multi-Strategy Economic Consciousness: Extending Credibility Theory Through Quantum Attention Mechanisms Speaker: Ramzi Abujamra, ActuariAI LLC	

	Insurance Economics I	SSB W141
	Chair: Bin Li	
3:30 p.m. – 4:00 p.m.	Optimal Risk Sharing, Equilibria, and Welfare with Empirically Realistic Risk Attitudes”	
	Speaker: Jean-Gabriel Lauzier, Memorial University of Newfoundland	
4:00 p.m. – 4:30 p.m.	On Prevention Efforts in Peer-to-Peer Risk Sharing	
	Speaker: Tak Wa Ng, Université Laval	
4:30 p.m. – 5:00 p.m.	Optimal Insurance in a Monopoly: Dual Utilities with Hidden Risk Attitudes	
	Speaker: Bin Li, University of Waterloo	
5:00 p.m. - 6:00 p.m.	Group Photo	TBD
6:00 p.m. - 9:00 p.m.	Banquet Dinner	SSC CC

Friday, August 1

8:30 a.m. - 9:00 a.m.	Morning Refreshments	ELC EDR
9:00 a.m. - 10:00 a.m.	**Keynote Session III**	SSB W141
	Acturies Serving Congress: Research at the U.S. Government Accountability Office	
	Speaker: Frank Todisco, U.S. Government Accountability Office	
	Moderator: Wei Wei, University of Illinois Urbana-Champaign	
10:00 a.m. - 10:30 a.m.	Coffee Break	ELC EDR
	Parallel Sessions 01A	
	Catastrophic Risk Modeling II	ELC X106
	Chair: Shu Li	
10:30 a.m. – 11:00 a.m.	Catastrophe Risk Pooling with Common Shock	
	Speaker: Yuxuan Guo, University of Waterloo	
11:00 a.m. – 11:30 a.m.	Optimal Catastrophe Bond Design and Its Applications to Climate-Change Risk	
	Speaker: Andres Medina, University of Illinois Urbana-Champaign	
11:30 a.m. – 12:00 p.m.	Optimal Catastrophe Risk Pooling	
	Speaker: Minh Chau Nguyen, University of Waterloo	
	Risk Modeling and Measurement III	ELC X206
	Chair: Jinghui Chen	
10:30 a.m. – 11:00 a.m.	Multivariate Compound Tree-Structured Markov Random Fields, with Risk Sharing Applications	
	Speaker: Alexandre Dubeau, Université Laval	
11:00 a.m. – 11:30 a.m.	Marginal Expected Shortfall: Systemic Risk Measurement under Dependence Uncertainty	
	Speaker: Jinghui Chen, York University	
11:30 a.m. – 12:00 p.m.	Dynamic Bond Ladder Investment Decision Making	
	Speakers: Minxing Xu and Avery Anderson, University of California Santa Barbara	

	Climate Risk and Sustainability III Chair: Haibo Liu	ELC X211
10:30 a.m. – 11:00 a.m.	Climate Change and Insurer Performance Speaker: Canchun He, Peking University	
11:00 a.m. – 11:30 a.m.	Measuring Systemic Climate Risk in Insurance Speaker: Eugenia Fang, University of New South Wales	
11:30 a.m. – 12:00 p.m.	On the Insurance of Environmental Risks: Modeling and Pricing with Mean-Reverting Regime-Switching Lévy Processes Speaker: Pak Aleksandr, EM Lyon	
	Quantitative Finance III Chair: Thai Nguyen	MB G101
10:30 a.m. – 11:00 a.m.	Conditional Value-at-Risk under Reward-Penalty Mechanism with Applications to Robust Portfolio Management Speaker: Zhiqiao Song, University of Waterloo	
11:00 a.m. – 11:30 a.m.	Arbitrage-Free Valuation in Fractional Brownian Motion Markets Speaker: Jayen Tan, Cornell University	
11:30 a.m. – 12:00 p.m.	Pricing American Option with Quantum Computers Speaker: Julie Bélanger, Université de Sherbrooke	
	Statistical and Machine Learning IV Chair: Christopher Blier-Wong	MB G102
10:30 a.m. – 11:00 a.m.	NLP-Powered Industry Classification Based on Business Information Speaker: Changyue Hu, University of Illinois Urbana-Champaign	
11:00 a.m. – 11:30 a.m.	Hybrid Tree-based Interpretable Pricing Speaker: Panyi Dong, University of Illinois Urbana-Champaign	
11:30 a.m. – 12:00 p.m.	A Transformer-Based Approach to Weather Index Insurance Design Speaker: Deyu Bai, Nanyang Technological University	
	Retirement and Pension Mathematics II Chair: Jean-François Bégin	MB G105
10:30 a.m. – 11:00 a.m.	Forecasting Wealth of Investors at Retirement Using ARIMA and Transition Matrices Speaker: Xinghan Zhu, Western University	
11:00 a.m. – 11:30 a.m.	Modelling the Impacts of Climate Change on Deaths Caused by Heat and Cold Waves with Age-Period-Cohort Models Speaker: Thomas Landry, Université du Québec à Montréal	
12:00 p.m. - 1:00 p.m.	Boxed Lunch	ELC EDR
1:00 p.m. - 4:30 p.m.	Casa Loma Tour	