

2025 AICT/CAS Joint Property/Casualty and Health Actuarial Seminar

Session information

Topic	Outline
Session 1 Supercharging EV Pricing and Underwriting with Data	EVs don't drive or charge like ICE vehicles—and they don't break like them either. Fires, failures, and charging mishaps are sparking a new era of risk for auto insurers. While EVs generate vast amounts of telemetry and diagnostic data, meaningful claims experience remains limited. This session explores how actuaries can bridge that gap. From thermal runaway to fault codes and SoC drift, we'll examine what data matters, what doesn't, and how AI-assisted tools can help supercharge pricing and underwriting. Whether you're building a rating model or exploring underwriting rules for EVs, this session will ground you in the data—so you're not shocked by what's coming next.
Session 2 Professionalism Considerations of Using A.I. (Large Language Models, e.g. ChatGPT) in Actuarial Applications	In the last 2 years, an explosion in the usage of large language models (LLMs) has produced widespread excitement but also anxiety about the potential of AI to simplify or perhaps replace human work. In this session we'll briefly review these models and how they might be used for actuarial work, and then focus on the professionalism considerations for any actuaries relying on these models.
Session 3 Will AI and DeFi overtake (re)insurance?	Explore how Artificial Intelligence (AI) and Decentralized Finance (DeFi) are transforming the (re)insurance industry. We will examine AI's capabilities in risk assessment, claims automation, and predictive modeling, as well as DeFi's potential to decentralize risk pooling and insurance underwriting. The discussion will address the disruptive potential of these technologies, their regulatory implications, and the challenges traditional (re)insurance players face in adapting to this paradigm shift. The presentation will conclude with an analysis of whether AI and DeFi can fully replace traditional (re)insurance or if they will act as complementary forces.
Session 4 The Risk Review and Modelling Analytics of Cyber Insurance	Cyber exposure is one of most critical emerging risks in today's deeply connected society. The session will start with an overview of development of cyber insurance and 1 st and 3 rd party coverages – including key clauses & exclusions aiming to manage systemic or catastrophic losses. Risk factors in both technical and governance will be discussed in the session to better understand the evaluation and pricing for cyber risk. At last, I will share the methodology to quantify cyber risk – through modelling analytics, it provides more reliable data to justify PML and further helps to decide proper deductible level and shape future risk management strategy.

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Session 5 IFRS 17 implementation trends for General Insurers in Asia	<p>The transition to IFRS 17 is one of the most impactful events in the industry's history, with actuaries playing a pivotal role in this transition. CAS has recently published a research paper exploring the IFRS 17 adoption challenges, practical implications, and emerging practices among non-life insurers in Asia. In this session, we will share some of the highlights from the research, including the key implementation decisions and next steps for non-life insurers.</p> <ol style="list-style-type: none"> 1. Introduction 2. Lessons learnt and challenges in Asia 3. Emerging IFRS 17 technical decisions 4. Day 2 impact - management reporting and KPIs 5. Q&A
Session 6 Is the Property CAT Reinsurance market becoming irrelevant?	<p>Get an update on the state of the Property CAT (Catastrophe) Reinsurance market. We will delve into the increasing frequency and severity of natural disasters, the rise of alternative capital sources like Insurance-Linked Securities (ILS), and the challenges of pricing adequacy and volatility. The discussion will also consider the role of data-driven risk modeling, regulatory pressures, and the shift towards more diversified risk transfer mechanisms. The presentation will conclude by assessing whether the Property CAT Reinsurance market can adapt to remain relevant or if it risks being displaced by emerging solutions.</p>
Session 7 Seismic Risk Characteristics and Quantitative Assessment Challenges in the High-Tech Industry	<p>Taiwan plays a pivotal role in the global supply chain for high-tech products—particularly semiconductor manufacturing—and is situated along the Pacific Ring of Fire, one of the world's most seismically active regions. The precision manufacturing equipment, in-process wafers, and final products involved in these operations are not only of exceptionally high value but also exhibit significant seismic fragility. In recent years, even moderate-magnitude earthquakes have resulted in considerable insured losses, underscoring the urgent need for more refined seismic risk assessment and underwriting methodologies specific to the high-tech sector.</p> <p>This presentation focuses on the semiconductor wafer fabrication industry as a representative case study. It begins by outlining the intrinsic characteristics of seismic risk in high-tech facilities and the associated challenges faced by the insurance industry in terms of underwriting and actuarial analysis.</p> <p>Subsequently, it introduces the key components of quantitative seismic risk assessment, including modeling frameworks and critical evaluation</p>

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	parameters. Finally, the talk will examine the spatial distribution of Taiwan's high-tech wafer fabs in relation to active seismic sources, providing context for regional risk exposure and implications for loss modeling.