



The 2nd Actuarial, Finance, Risk and Insurance Congress (AFRIC 2)

- SUMMARY** 2nd Actuarial, Finance, Risk and Insurance Congress
- DATE** Sunday, 08 June 2025 – Friday, 13 June 2025
- VENUE** Muthu Keekorok Lodge, Maasai Mara, Kenya
- Co-hosts** School of Risk and Actuarial Studies, UNSW Sydney
The Actuarial Academy of East Africa
The University of Nairobi
Jomo Kenyatta University of Agriculture and Technology
The Actuarial Society of Kenya
- CONTACT** School of Risk & Actuarial Studies, UNSW Sydney
- Jonathan Ziveyi, j.ziveyi@unsw.edu.au



Sunday, 8 June 2025

Time	Session Details
13:00 - 17:00	Registration
18:00 - late	Welcome Reception Bush Dinner

Monday, 9 June 2025

Time	Session Details
08:30 - 08:45	Official Opening & Welcome Remarks & Housekeeping Maasai Welcome
08:45 - 09:10	Plenary Session Guest of Honour Address: UNSW and cohosts Chair: Patrick Weke
09:10 – 10:30	Plenary Session: Hansjorg Albrecher Chair: Mukami Njeru
10:30 - 11:00	Coffee Break
11:00 - 12:00	Round Table Discussion on AI and Climate Setting tone for the workshop Chair: Evie Calcutt
12:00 - 13:00	Artificial Intelligence, Climate Change and Geographical Information Systems Workshop Facilitators: Microsoft Chair: Samuel Chege Maina
13:00 - 14:00	Lunch
14:00 - 16:30	Artificial Intelligence, Climate Change and Geographical Information Systems Workshop Facilitators: Microsoft
16:30 - 19:00	Afternoon Tea + Networking



Tuesday, 10 June 2025

Time	Session Details	
08:30 - 09:50	Contributed Talks	
	Contributed Talk Parallel Session T1.1: Mortality I	Room 1
	Chair	
8:30	Fadina - Stochastic mortality in the light of pandemic risk	
8:50	Villegas - Post-Retirement Age Mortality in Australia: A Quantification of Socio-Economic Differences	
9:10	Vekas - Mortality forecasting in geographical space and time – spatial and panel, econometric techniques in the Lee–Carter and Li–Lee models	
9:30	Mwau - Modeling Pricing and Profit Testing of Chronic Disease's Insurance Policies Using Prostate Cancer data in Kenya	
	Contributed Talk Parallel Session T1.2: Climate Risk I	Room 2
	Chair:	
08:30	Malavasi - Climate Risks and Their Influence on Environmental Beliefs and Actions Across Australia	
08:50	Kiesel - A probabilistic approach to assess Net-Zero commitments	
09:10	Katholo - Actuaries in Sustainability: A focus on incorporating environmental, social, and governance (ESG) and Climate Risks in Short-Term Insurance, Bornhuetter-Ferguson Loss Reserving Method	
09:30	Collins - Financial Disclosures related to Climate Change and Nature Loss	
	Contributed Talk Parallel Session T1.3: Risk Management	Room 3
	Chair:	
08:30	Watambwa - Operational risk management within financial institutions	
08:50	Muiruri - Reproducibility in Risk	
09:10	Krutto - Navigating Biosecurity Risks in Aquaculture: Implications for Food Security	
09:30	Takaidza - Mathematical Modelling and Optimal Control of Creditworthiness	
10:00 - 10:40	Plenary Session: Andrew Cairns	
	Chair: Ayse Arik	
10:40 - 11:00	Coffee Break	
11:00 - 12:00	Contributed Talk Parallel Session T2.1: Machine Learning	Room 1
	Chair:	
11:00	Riis-Due - Reinforcement Learning in Continuous Time for Optimal Reinsurance	
11:20	Laub - Actuarial Neural Networks and Uncertainty	
11:40	Wei - Periodic Evaluation of DC Pension Fund - a Reinforcement Learning Approach	


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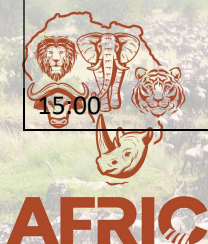
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	Contributed Talk Parallel Session T2.2: Reserving	Room 2
	Chair:	
11:00	Badescu - Marked Cox Models for IBNR Claims Count: continuous versus discretized approaches	
11:20	Angoua - Mechanism Design for the acceleration claims recourse in third party liability in Cote d'Ivoire, and the restauration of the population's trust in the insurance industry	
11:40	Ramsay - Beyond the Chain Ladder: A Different Approach to Calculating Loss Reserves	
	Contributed Talk Parallel Session T2.3: Pensions - Optimal life-cycle	Room 3
	Chair:	
11:00	van Bilsen - Optimal Savings and Portfolio Choice with Risky Income and Loss-Aversion	
11:20	Liu - Optimal Investment, Constraint, and Capital Allocation Strategy for Collective Pension Schemes during the Decumulation Phase	
11:40	Mataramvura - The two pot retirement scheme in South Africa, a stochastic game theoretical analysis	
12:05 - 13:00	Panel/ Roundtable Discussion	
	Chair: George Odera	
13:00 - 14:00	Lunch	
14:00 - 15:20	Contributed Talks	
	Contributed Talk Parallel Session T3.1: Finance and Energy	Room 1
	Chair:	
14:00	Zulu - Leveraging Insurance Customer Analytic Dashboards for Sustainable Growth in the AI-Powered Future	
14:20	Li - Managing the gas price risk via the buffered-price gas contract	
14:40	Ahmad - Purchasing Power Parity theory in exchange rate determination: Evidences from the G-20 Nations	
15:00	Irangi - The effect of investor sentiment and geopolitical risks on the nature of stock returns volatility in East African stock markets	
15:20	Sibanda - Impacts of ESG on the financial performance of JSE-listed companies	
	Contributed Talk Parallel Session T3.2: Climate Risk II	Room 2
	Chair:	
14:00	Wang - Multi-output Extreme Spatial Model for Climate Risk Assessment and Management	
14:20	Ndlovu & Calcutt - Value for Money of Insuring Climate and Disaster Risk	
14:40	Afitile - Integrating climate data into claims forecasting for a general insurance company	
15:00	Marques - Pricing parametric insurance for extreme weather events	

15:20 - late	Afternoon Tea + Networking
19:00 - 22:00	Dinner

Wednesday, 11 June 2025

Time	Session Details	
11:00 - 11:40	Plenary Session: Gordon Phillips Chair: Elvira Sojli	
11:40 - 12:00	Coffee Break	
12:00 - 13:00	Contributed Talks	
	Contributed Talk Parallel Session W2.1: Pensions - Pooling	Room 1
	Chair:	
12:00	Olivieri - Markov Ageing multi-state group self-annuitization	
12:20	Feng - Pension Parity: Are Current Systems Detrimental Amidst Population Aging for Future Generations?	
12:40	Thalagoda - An assessment framework for equitable longevity pooling arrangements	
	Contributed Talk Parallel Session W2.2: Non-life	Room 2
	Chair:	
12:00	Ibrahim - The integration of telematics data into traditional insurance pricing	
12:20	Blier-Wong - Multi-view spatial embeddings for insurance portfolio analytics	
12:40	Pihlak - Dynamic modeling using Metropolis algorithm	
	Contributed Talk Parallel Session W2.3: Applied Probability	Room 3
	Chair:	
12:00	Konstantinides - Random vectors in the presence of a single big jump	
12:20	Cossette - Risk models from tree-structured Markov random fields following multivariate Poisson Distribution	
12:40	Marceau - Actuarial Fire-Spreading Model Based on Tree-Structured Markov Random Fields, with Insurance Applications	
13:00 - 14:00	Lunch	
14:00 - 15:00	Panel Discussion: Africa's Access to global financial markets Chair: Jerry Parwada	
15:00 - 16:20	Contributed Talks	
	Contributed Talk Parallel Session W3.1: Mortality II	Room 1
	Chair:	
15:00	Begin - Modelling seasonal mortality: An age-period-cohort approach	



- 15:20 **Barigou** - Granular mortality modelling with temperature-and epidemiological-related shocks: a three-state regime-switching approach
- 15:40 **Bhagwandeem** - Creating Complete Mortality Life Tables for CARICOM: The Cases of Trinidad & Tobago and Jamaica
- 16:00 **Arik** - An analysis on mortality improvements: how to estimate the future trends after COVID-19?

Contributed Talk Parallel Session W3.2: Life insurance valuation

Room 2

Chair:

- 15:00 **Vanmaele** - Multi-step fair valuation
- 15:20 **Adekambi** - Valuation of equity-linked death benefits with time until-death following a Bivariate Sarmanov Phase-Type Distribution
- 15:40 **Ungolo** - An Augmented Variable Dirichlet Process Mixture model for the analysis of dependent lifetimes
- 16:00 **Alonso-Garcia** - Variable annuities: a closer look at ratchet guarantees, hybrid contract designs, and taxation

Contributed Talk Parallel Session W3.3: Market Efficiency

Room 3

Chair:

- 15:00 **Mare** - Market Efficiency and Equity Index Futures Arbitrage in South Africa
- 15:20 **Twongirwe** - Can Foreign Investors Predict Better? Investment Horizons, Investor Domicile, and Stock Return Predictability
- 15:40 **Sonono** - Stock price directional forecasting using Bayesian AI
- 16:00 **Gyamerah** - Volatility Forecasting – An Ensemble of Machine Learning and Rough Volatility

16:20 - 16:30 **Afternoon Tea**

16:30 - 17:50 **Contributed Talks**

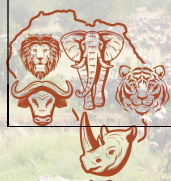
Contributed Talk Parallel Session W4.1: Finance I

Room 1

Chair:

- 16:30 **Sojli** - Optimal Investment Strategy with Currency Uncertainty
- 16:50 **Darolles** - Enhanced Stock Market Volatility Forecasting: A Comparative Analysis of Asymmetric EGARCH, Neural Networks, and Fuzzy Inference Systems at the Nairobi Securities Exchange
- 17:10 **Adinya** - Fractional Differentiation in Finance: A Case Study on the Interest Rate Volatility
- 17:30 **Mau** - Buying Local Favor? Establishment-Level Evidence on Strategic Non-Market Responses to Regulatory Risk
- 17:50 **Gyamerah** - Systemic risk and optimal control within an interconnected homogenous banking system

Contributed Talk Parallel Session W4.2: Risk Sharing



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	Chair:	Room 2
16:30	Acciaio - Stretched processes for optimal reinsurance	
16:50	Bernard - Risk Sharing under Ambiguity	
17:10	Chaudhry - Collaborative Risk Sharing Principles for Sub-Groups	
17:30	Salahnejhad Ghalehjooghi - A Preliminary View on Ergodic Risk Sharing and Intergenerational Fairness in Pension Schemes	
17:50	Wang - Optimal Hedging of Longevity Risks for Group Self-Annuity Portfolios	
19:00 - 22:00	Gala Dinner	

Thursday, 12 June 2025

Time	Session Details
08:30 - 10:30	Decentralized Insurance and Risk Sharing Workshop
10:30 - 11:00	Coffee Break
11:00 - 13:00	Decentralized Insurance and Risk Sharing Workshop
13:00 - 14:00	Lunch
14:00 - 17:00	Village Tour/ Conference excursion
19:00 - 22:00	Dinner

Friday, 13 June 2025

Time	Session Details	
08:30 - 09:10	Plenary Session: Adelaide Adhiambo Chair: Diana Skrzydlo	
09:20 – 10:20	Contributed Talks	
	Contributed Talk Parallel Session F1.1 Pensions	Room 1
	Chair:	
09:20	Afazali - To withdraw or not to: What we learn from early access to retirement savings of the Makerere University Retirement Benefits Scheme (MURBS) in Uganda	
09:40	Dadzie-Dennis - Evaluating the resilience of pension glidepaths in a climate-sensitive economy	
10:00	Alcoforado - Socioeconomic benefits of the Brazilian INSS AtestMed Programme	
	Contributed Talk Parallel Session F1.2 Finance II	Room 2
	Chair:	



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09:20	Agarwal - Fractional Differentiation in Finance: A Case Study on the Interest Rate Volatility
09:40	Vansteenkiste - Buying Local Favor? Establishment-Level Evidence on Strategic Non-Market Responses to Regulatory Risk
10:00	Bakundana - The opioid crisis and the US mutual fund industry: Evidence from mutual fund flows
10:20 - 11:00	Coffee Break
11:00 - 12:50	Teaching session
11:00	Leung - Welcome Remarks
11:05	Skrzydlo – Topic TBA
11:25	Liu - A Demo of the Excelerate Platform for Educators
11:45	Amorim - Rethinking Actuarial Education in a Global World: The Role of Actuarial Education Companies.
12:05	Panel/ Roundtable Discussion on exploring AI tools to enhance teaching methodologies and assessments
12:50 - 13:00	Conference Closing and vote of thanks and reflection + next AFRIC
13:00 - 14:00	Lunch

