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

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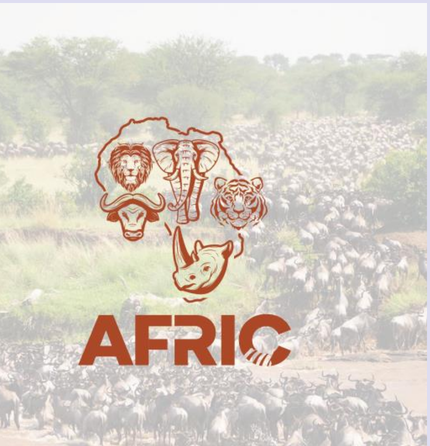

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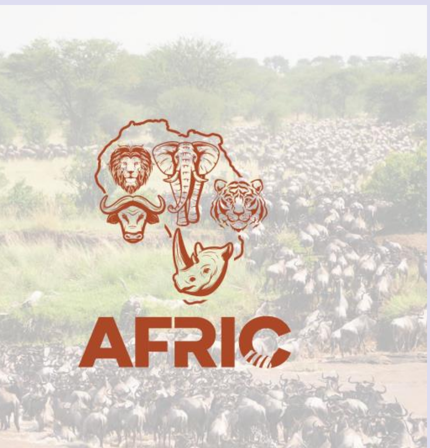
Sunday, 8 June 2025

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

Monday, 9 June 2025

Time	Session Details
08:30 - 08:50	Official Opening & Welcome Remarks & Housekeeping Maasai Welcome
08:50 - 09:10	**Plenary Session Guest of Honour Address: Vice Chancellor, University of Nairobi Professor Margaret J. Hutchinson** Chair: Patrick Weke
09:10 – 10:00	**Plenary Session: Hansjorg Albrecher** Chair: Mukami Njeru
10:00 - 10:30	**Coffee Break**
10:30 - 11:30	**Round Table Discussion on AI and Climate Setting tone for the workshop** Chair: Catherine Nyakundi
11:30 - 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: Emmah Feyani	
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: Rhoda Dadzie-Dennis	
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	**Katlholo** - 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: Isaac Takaidza	
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**	
	Contributed Talk Parallel Session T2.1: Machine Learning	**Room 1**
	Chair: Patrick Laub	
11:00	**Riis-Due** Compensation-based risk-sharing	
11:20	**Wei** - Periodic Evaluation of DC Pension Fund - a Reinforcement Learning Approach	
11:40	**Laub** - Actuarial Neural Networks and Uncertainty	

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	Contributed Talk Parallel Session T2.2: Reserving	**Room 2**
	Chair: Collin Ramsay	
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: Sure Mataramvura	
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: Isabel Zulu	
14:00	**Sibanda** - Impacts of ESG on the financial performance of JSE-listed companies	
14:20	**Ahmad** - Purchasing Power Parity theory in exchange rate determination: Evidences from the G-20 Nations	
14:40	**Irangi** - The effect of investor sentiment and geopolitical risks on the nature of stock returns volatility in East African stock markets	
15:00	**Zulu** - Leveraging Insurance Customer Analytic Dashboards for Sustainable Growth in the AI-Powered Future	
	Contributed Talk Parallel Session T3.2: Climate Risk II	**Room 2**
	Chair: Reinaldo Marques	
14:00	**Wang** - Multi-output Extreme Spatial Model for Climate Risk Assessment and Management	
14:20	**Afitile** - Integrating climate data into claims forecasting for a general insurance company	
14:40	**Marques** - Pricing parametric insurance for extreme weather events	
15:20 - late	**Afternoon Tea + Networking**	

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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: Gayani Thalagoda	
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: Margus Pihlak	
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: Hélène Cossette	
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	

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15:00 - 16:20	**Contributed Talks**	
	Contributed Talk Parallel Session W3.1: Mortality II	**Room 1**
	Chair: Jean-François Begin	
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	**Smart** - 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: Jeniffer Alonso-Garcia	
15:00	**Vanmaele** - Multi-step fair valuation	
15:20	A**dekambi** - 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: Knowledge Sonono	
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	
16:20 - 16:30	**Afternoon Tea**	
16:30 - 17:50	**Contributed Talks**	
	Contributed Talk Parallel Session W4.1: Finance I	**Room 1**
	Chair: Cara Vansteenkiste	
16:30	**Sojli** - The Under-Disclosure of Environmental Innovations	
16:50	**Darolles** - Managing Hedge Fund Liquidity Risk	
17:10	**Adinya** - Optimal Investment Strategy with Currency Uncertainty	
17:30	**Mau** - Enhanced Stock Market Volatility Forecasting: A Comparative Analysis of Asymmetric EGARCH, Neural Networks, and Fuzzy Inference Systems at the Nairobi Securities Exchange	
17:50	**Vansteenkiste** - Buying Local Favor? Establishment-Level Evidence on Strategic Non-Market Responses to Regulatory Risk	
	Contributed Talk Parallel Session W4.2: Risk Sharing	

	Chair: Beatrice Acciaio	**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**	

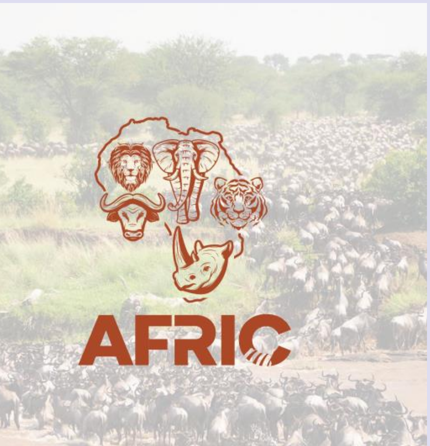
Thursday, 12 June 2025

Time	Session Details
08:30 - 10:30	**Decentralized Insurance and Risk Sharing Workshop** **Facilitators:** Jan Dhaene, Runhuan Feng, Marco Mirabella and Rodrigue Kazzi **Chair:** Jan Dhaene
10:30 - 11:00	**Coffee Break**
11:00 - 13:00	**Decentralized Insurance and Risk Sharing Workshop** **Facilitators:** Jan Dhaene, Runhuan Feng, Marco Mirabella and Rodrigue Kazzi **Chair:** Jan Dhaene
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 **Chair: Calvin Maina**	**Room 1**
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	**Maina** - Measuring the Ultimate Probability of Ruin Using Exponential-Weighted Inverse Gaussian Claim Size Distributions	
	Contributed Talk Parallel Session F1.2 Finance II **Chair: Patrick Wong**	**Room 2**
09:20	**Agarwal** - Fractional Differentiation in Finance: A Case Study on the Interest Rate Volatility	
09:40	**Bakundana** - The opioid crisis and the US mutual fund industry: Evidence from mutual fund flows	
10:00	**Wong:** Wishart conditional tail risk measures: A dynamic and analytic approach	
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**	



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