Timetable

Sunday, August 21

19:00-22:00	**Welcome reception at the White Hall of the University of Tartu Museum**

Monday, August 22

KL: Keynote Lecture
PS: Parallel session

8:00–17:30	**Registration is open (at info desk)**		
8:30–9:00	**Morning coffee**		
9:00–9:30	**Opening ceremony**		
9:30–10:30 Room 1037	KL	**Martin Eling** University of St. Gallen	Is cyber risk insurable?
10:30–11:00	**Coffee break**		
11:00–12:40	PS1	Room 1019 Room 1020	Mortality modelling Ruin probabilities
12:40–14:00	**Lunch break**		
14:00–15:20	PS2	Room 1019 Room 1020	Advances in life insurance Special types of risk processes
15:20–15:40	**Coffee break**		
15:40–17:20	PS3	Room 1019 Room 1020	Multi-state models in life insurance Measuring risks
17:30	**Walking tour**		

Parallel session 1, Monday 11:00-12:40

Mortality modelling, Room 1019

Chair: Michèle Vanmaele	
Benjamin Roelants du Vivier	Impact of correlation between interest rates and mortality rates on the value of a zero-coupon survival bond
Jens Robben	Dealing with mortality shocks in a stochastic multi-population mortality model
Alaric J.A. Müller	Joint lifetime modelling with mIPH distributions
Peter Hieber	Mortality credits within large survivor funds

Ruin probabilities, Room 1020

Chair: Alfredo D. Egídio dos Reis	
Stéphane Loisel	Optimal prevention strategies in the classical risk model
Jonas Sprindys	The Gerber-Shiu discounted penalty function for the bi-seasonal discrete time risk model
Naoyuki Ishimura	Efficient numerical computation of the ruin probability
Jonas Šiaulys	Martingale approach to derive Lundberg-type inequalities
Artur Sepp	Modeling implied volatility surfaces of crypto options

Parallel session 2, Monday 14:00-15:20

Advances in life insurance, Room 1019

Chair: Griselda Deelstra	
Jinbo Zhao	A model for multifactorial genetic disorders to quantify the impact of polygenic risk scores on lifeinsurance: a simulation based model using heartattack as a case study
Jannes Tjark Rastedt	Actuarial calculations for reserve-dependent payments in life insurance under information shrinkage
Julian Jetses	A general surplus decomposition principle in life insurance
Jennifer Alonso-García	A hybrid variable annuity contract embedded with living and death benefit riders

Special types of risk processes, Room 1020

Chair: Martin Eling	
Rui Cardoso	On a penalty function in the Erlang renewal dual risk model under independent randomised observations
Dina Finger	Ruin and profitability in Bitcoin mining: analysis of pools and empirical evidence
Jose Miguel Flores-Contró	On a risk process with deterministic investment and multiplicative jumps - an application to poverty trapping
Jose Miguel Flores-Contró	The role of direct cash transfers towards extreme poverty alleviation - an Omega risk process

Parallel session 3, Monday 15:40-17:20

Multi-state models in life insurance, Room 1019

Chair: Jennifer Alonso-García	
Jamaal Ahmad	Statistical inference in an aggregated Markov chain model in life insurance
Theis Bathke	Two-dimensional forward and backward transition rates
Oscar Peralta	Homogeneous approximations of time-inhomogeneous semi-Markov life insurance models
Oliver Lunding Sandqvist	IBNR and RBNS models in multi-state life insurance
Christian Furrer	Extension of as-if-Markov modeling to scaled payments

Measuring risks, Room 1020

Chair: Stéphane Loisel	
Rodrigue Kazzi	Assessing model uncertainty for log-symmetric distributions
Christian Laudagé	Combining multi-asset and intrinsic risk measures
Saulius Paukštys	Tails of moments of sums with heavy-tailed summands and applications to the Haezendonck-Goovaerts risk measure
Gero Junike	Representation of concave distortions and applications
Hang Nguyen	Calculation of risk measures of variable annuity portfolios using neural network

Tuesday, August 23

8:30–14:00	**Registration is open (at info desk)**		
8:30–9:00	**Morning coffee**		
9:00–10:00 Room 1037	KL	**Annamaria Olivieri** University of Parma	Flexibility in annuity benefits in view of mortality/longevity uncertainty and individuals' longevity risk appetite (or unawareness)
10:00–10:30 Room 1037	**Gauss prize/EAJ 2021 best paper session***		
10:30–11:00	**Coffee break**		
11:00–12:40	PS4	Room 1019	Pensions
		Room 1020	Risk management and mitigation
12:40–14:00	**Lunch break**		
14:00–15:40	PS5	Room 1019	Longevity
		Room 1020	Dependence modelling
15:40–16:00	**Coffee break**		
16:00–18:00	PS6	Room 1019	Advances in reinsurance and related areas
		Room 1020	Valuation and reserving
19:00–23:00	**Conference dinner at Barge Hall**		

*Gauss prize/EAJ 2021 best paper session:

Łukasz Delong, Mathias Lindholm and Mario V. Wüthrich
Making Tweedie's compound Poisson model more accessible,
presented by Łukasz Delong and Mathias Lindholm.

Parallel session 4, Tuesday 11:00-12:40

Pensions, Room 1019

Chair: Jaanus Sibul	
Ivan Alexis Fonseca Diaz	Optimal multiperiod mixture between pay-as-you-go and funded financial systems for social security
Onofre Simões	Development of a tool for making projections in DC pension schemes
Abraham Hernández-Pacheco	A probability of ruin approach to optimize pension fund investments
Jennifer Alonso-García	Public pension schemes – intergenerational risk sharing
Marlene Koch	Mandatory pension saving and homeownership

Risk management and mitigation, Room 1020

Chair: Tim Boonen	
Gabriela Zeller	Optimal price structure of cyber insurance policies with risk mitigation services
Griselda Deelstra	A multi-curve HJM factor model for pricing and risk management
Tachfine El Alami	Risk aggregation under IFRS 17: An ultimate run-off adaptation of Solvency 2 elliptic aggregation
Karim Barigou	Surveillance of actuarial assumptions in the Enterprise Risk Management framework
Roberto Carcache Flores	A new approach to Markowitz portfolio optimization using ruin-based outcomes

Parallel session 5, Tuesday 14:00-15:40

Longevity, Room 1019

Chair: Annamaria Olivieri	
Michèle Vanmaele	Mortality/longevity risk-minimization with or without securitization
Indradeb Chatterjee	Social welfare under restricted risk classification
Tahir Choulli	How mortality and/or longevity risks impact log-optimal portfolio?
Wojciech Otto	Model of lifetable evolution Part 1: Extracting calendar and cohort effects form the data
Wojciech Otto	Model of lifetable evolution Part 2: Time series model with stochastically varying drift

Dependence modelling, Room 1020

Chair: Tõnu Kollo	
Martynas Manstavičius	Diversity of bivariate concordance measures
Christopher Blier-Wong	Exchangeable FGM copulas
Christopher Blier-Wong	Micro-level collective risk models under FGM dependence
Alfredo D. Egídio dos Reis	Risk model with dependent frequency and severity, premium and ruin probability calculation
Jorge Yslas	Phase-type mixture-of-experts regression for loss severities

Parallel session 6, Tuesday 16:00-18:00

Advances in reinsurance and related areas, Room 1019

Chair: Kalev Pärna	
Tim J Boonen	Revisiting Arrow's problem in a sequential game
Yevhen Havrylenko	Risk-sharing in equity-linked insurance products: Stackelberg equilibrium between an insurer and a reinsurer
Alexandra Bugalho de Moura	On the impact of dependences and constraints in the optimal reinsurance treaty
Thijs Kamma	Dual formulation of the optimal consumption problem with multiplicative habit formation
Romain Gauchon	On the use of convolution order for expected utility differentiation and optimization
Eva Verschueren	Red light, green light: gaussian process regression to validate capped volatility swaps

Valuation and reserving, Room 1020

Chair: Boualem Djehiche	
Marcin Szatkowski	One-year and ultimate reserve risk in Mack Chain Ladder model
Henning Zakrisson	A collective reserving model with claim openness
Mathias Lindholm	Bias regularisation, dispersion modelling, and auto-tariffication
Filip Lindskog	Multiple-prior valuation of cash flows subject to capital requirements
Nils Engler	Convergence and robustness to model uncertainty in multiple period valuation problems
Lorenzo Marchi	On fair pricing via regularization

Wednesday, August 24

8:30–12:00	**Info desk is open**		
8:30– 9:00	**Morning coffee**		
9:00–10:00 Room 1037	KL	**Julien Trufin** Free University of Brussels	Non-life insurance pricing: boosting trees and diagnostic tools to compare competing models
10:00–10:30	**Coffee break**		
10:30–12:10	PS7	Room 1019	Long-term care
		Room 1020	Machine learning methods in insurance
12:15–12:30 Room 1037	**Closing ceremony**		
12:30–14:00	**Lunch**		

Parallel session 7, Wednesday 10:30-12:10

Long-term care, Room 1019

Chair: Peter Hieber	
Aleksandr Shemendyuk	Study of institutionalized elderly profiles derived from multiple health factors
Aleksandr Shemendyuk	Determinants of institutional long-term care of dependent elderly in Switzerland
Andrey Ugarte	On the drivers of potential customers' interest in long-term care insurance: evidence from Switzerland
Andrey Ugarte	Are long-term care insurance customers likely to come with greater risks for insurers? Reflections and simulations from a survey in Switzerland

Machine learning methods in insurance, Room 1020

Chair: Julien Trufin	
Łukasz Delong	The use of autoencoders for training deep neural networks with mixed categorical and numerical features
Freek Holvoet	Neural networks for frequency-severity modelling: a benchmark study from data preprocessing steps to technical tariff
Bernard Wong	Ensemble distributional forecasting for insurance loss reserving
Lina Palmborg	Premium control with reinforcement learning
Bavo DC Campo	Insurance fraud network data simulation machine: Synthetic data sets and fraud detection strategies

Contents