

MathRisk Conference on Numerical Methods in Finance Program Schedule

Udine (Italy), June 14-16, 2023



On the morning of the inauguration Wednesday, June 14, 2023, at 9am, the conference will take place in the *Salone del Parlamento* of the Castle of Udine.

The conference will follow at Room 1,2 and 3 of the Department of Economics and Statistics, University of Udine, via Tomadini 30, Udine

The social dinner will take place at Casa della Contadinanza next to the castle of Udine.

Wednesday, June 14, 2023

Time	Room	Session	Speaker
9:00 - 9:30	Salone del Parlamento	Opening, Registration, Coffee	
9:30 - 10:00	Salone del Parlamento	Welcome	
10:00 - 10:50	Salone del Parlamento	Plenary (Chair person: Sulem Agnès) From Lévy's stochastic area formula to universality of affine and polynomial processes	Cuchiero Christa
11:00 - 11:50	Salone del Parlamento	Plenary (Chair person: Lapeyre Bernard) Some quantum algorithms in Finance	Jacquier Antoine
12:00 - 14:00		Lunch Break	
14:00 - 15:30	1	Risk management (Chair person: Vellekoop Michel) - Wrong Way Risk corrections to CVA in CIR reduced-form models - Steady does it? On the impact of tax uncertainty on investment into carbon abatement technologies - A closed form model-free approximation for the Initial Margin of option portfolios	Ramponi Alessandro Colaneri Katia Mingone Arianna
14:00 - 15:30	2	Stochastic volatility, Jump models (Chair person: Guyon Julien) - CBI-time-changed Lévy processes - Joint calibration to SPX and VIX options with signature-based models - Joint SPX-VIX calibration with Gaussian polynomial volatility models: deep pricing with quantization hints	Szulda Guillaume Gazzani Guido Li Shaun
15:30 - 16:00		Coffee Break	
16:00 - 17:30	1	Neural networks, Machine learning (Chair person: Lelong Jérôme) - Universal Approximation of Credit Portfolio Losses using Restricted Boltzmann Machines - Tree-Based Learning in RNNs for Power Consumption Forecasting	Visentin Gabriele Baviera Roberto
16:00 - 17:30	2	Risk, Stochastic control (Chair person: Goudenège Ludovic) - Optimal Consumption and Investment for General Preferences - On the Separation of Estimation and Control in Risk Sensitive Investment Problems under Incomplete Observation - ρ -consistent pricing for convex risk measures	Vellekoop Michel Lleo Sebastien Khan Nazem

Thursday, June 15, 2023

Time	Room	Session	Speaker
9:00 - 9:50	3	Plenary (Chair person: Lamberton Damien) Overcoming the curse of dimensionality: from nonlinear Monte Carlo to the training of neural networks	Jentzen Arnulf
10:00 - 10:30		Coffee Break	
10:30 - 11:30	1	Neural networks, machine learning (Chair person: Baviera Roberto) - Neural network models for housing prices - Low-and-High--Stock Pair-Trading by Reinforcement Learning Policies	Corazza Marco Jahangiri Eshagh
10:30 - 12:00	2	Rough volatility (Chair person: Alfonsi Aurélien) - Statistical Inference for Rough and Persistent Volatility - The rough Hawkes Heston model - Reconciling rough volatility with jumps	Damian Camilla Pulido Sergio De Carvalho Nathan
12:00 - 14:00		Lunch Break	
14:00 - 15:30	1	Mean-field games, Optimal transport (Chair person: Crépey Stéphane) - Dynamical Gibbs principle and associated stochastic control problems - Simulation of McKean-Vlasov BSDEs by Wiener Chaos Expansion - Non-decreasing martingale coupling	Reygner Julien Labart Céline Shao Kexin
14:00 - 15:30	2	Computational Finance (Chair person: Battauz Anna) - High order approximations of the Cox-Ingersoll-Ross process semigroup using random grids - Backward Hedging for American Options with Transaction Costs - Exact simulation of the Hull and White stochastic volatility model	Lombardo Edoardo Molent Andrea Gonzato Luca
15:30 - 16:00		Coffee Break	
16:00 - 17:30	1	Green finance (Chair person: Molent Andrea) - Portfolio optimization with sustainable attitudes under cumulative prospect theory - An evolutionary algorithm for portfolio allocation problems with ESG benefits - Policyholders' Subjective Beliefs: Approaching New Drivers of Insurance ESG Reputational Risk	Piccotto Filippo Sbaiz Gabriele Apicella Giovanna
16:00 - 17:30	2	Risk management (Chair person: Pulido Sergio) - Does the term-structure of equity at-the-money skew really follow a power law? - Learning the Value-at-Risk and Expected Shortfall - A Multilevel Stochastic Approximation Algorithm for Value-at-Risk and Expected Shortfall Estimation	Guyon Julien Crépey Stéphane Louzi Azar
19:30		Social Dinner at Casa della Contadinanza	

Friday, June 16, 2023

Time	Room	Session	Speaker
9:00 - 9:50	3	Plenary (Chair person: Jourdain Benjamin) Corporate Debt Value under Transition Scenario Uncertainty	Tankov Peter
10:00 - 10:30		Coffee Break	
10:30 - 12:00	1	Stochastic volatility, jump models (Chair person: Labart Céline) - Explicit option pricing with additive processes - On the implied volatility skew outside the at-the-money point - Effective binomial discretizations of bivariate diffusion processes	Azzone Michele Torricelli Lorenzo Rotondi Francesco
10:30 - 12:30	2	Quantitative Finance (Chair person: Pressacco Flavio) - American options with acceleration clauses - Good times and the dividend yield - The geometry of interest-rates in a post-crisis framework - Dynamic Portfolio Risk Allocation to Exogenous Risk Factors	Battaaz Anna Sbuelz Alessandro Lanaro Giacomo Mecchina Andrea