

# Program Quantitative Finance Workshop 2019

Organizers: Christa Cuchiero and Josef Teichmann  
supported by  
Matteo Burzoni, Linda Koller, Denise Künzli and Cosimo Murani

- The conference is structured in 25 minute talks followed by a 5 minute discussion and 15 minute talks.
- There is a poster session which takes place in parallel to the talks in the back of the lecture hall. Posters are exhibited for one day.

**ETH** Foundation  
Zürich



WIENER WISSENSCHAFTS-,  
FORSCHUNGS- UND  
TECHNOLOGIEFONDS

	<b>Wednesday 23.01.2019 Morning</b>
8:30	<b>Registration</b>
9:00	<b>Opening Remarks</b>
9:15	<p><b>Frederic Bucci, Iacopo Mastromatteo, Zoltan Eisler, Fabrizio Lillo, Jean-Philippe Bouchaud and Charles-Albert Leshalles</b>  Co-impact: Crowding effects in institutional trading activity  <b>Discussant:</b> Francesco Cesarone</p>
9:45	<p style="text-align: center;"><b>Xue Dong He and Moris Strub</b>  Mental Adjustment of the Reference Point  and its Affect on Portfolio Selection under Loss Aversion</p>
10:00	<p style="text-align: center;"><b>Alexander Barzykin and Fabrizio Lillo</b>  Optimal VWAP execution under transient price impact  <b>Discussant:</b> Giacomo Bormetti</p>
10:30	<b>Coffee break</b>
11:00	<p><b>Emanuele Nastasi, Andrea Pallavicini and Giulio Sartorelli</b>  Smile Modelling in Commodity Markets  <b>Discussant:</b> Tiziano Vargiolu</p>
11:30	<p style="text-align: center;"><b>Mariia Soloviova and Tiziano Vargiolu</b>  Efficient representation of supply and demand curves on one  day-ahead electricity markets</p>
11:45	<p style="text-align: center;"><b>Luciano Campi, Maddalena Ghio and Giulia Livieri</b>  <i>N</i>-player games and mean-field games  with smooth dependence on past absorptions</p>
12:00	<p style="text-align: center;"><b>Gechun Liang and Haodong Sun</b>  Dynkin games with Poisson random intervention times  <b>Discussant:</b> Maddalena Ghio</p>
12:30	<b>Lunch</b>

	<b>Wednesday 23.01.2019 Afternoon</b>
14:00	<b>Aleksey Kolokolov, Giulia Livieri and Davide Pirino</b> Statistical inferences for price staleness <b>Discussant:</b> Roberto Reno
14:30	<b>Imma Curato and Simona Sanfelici</b> Designing a Fourier transform method to estimate the stochastic leverage effect in the presence of noise
14:45	<b>Giulia Livieri, Maria Elvira Mancino and Stefano Marmi</b> Asymptotic results for the Fourier estimator of the integrated quarticity <b>Discussant:</b> Christa Cuchiero
15:15	<b>Coffee break</b>
16:00	<b>Francesco Rocciolo, Andrea Gheno and Chris Brooks</b> Explaining Abnormal Returns in Stock Markets: An Alpha-Neutral Version of the CAPM <b>Discussant:</b> Claudia Ceci (to be confirmed)
16:30	<b>Matthias Kaldorf and Dominik Wied</b> Testing Constant Cross-Sectional Dependence with Time-Varying Marginal Distributions in Parametric Models
16:45	<b>Claudio Morana</b> Regularized semiparametric estimation of high dimensional dynamic conditional covariance matrices
17:00	<b>Fabio Bellini, Francesco Cesarone, Christian Colombo and Fabio Tardella</b> Risk Parity with Expectiles
17:15	<b>Fabio Bellini, Edit Rroji and Carlo Sala</b> Information content of implicit quantile and implicit expectile curves
17:30 (until 18:00)	<b>Giuseppe Buccheri, Davide Pirino and Luca Trapin</b> Managing liquidity with portfolio staleness <b>Discussant:</b> Fabrizio Lillo
18:30	<b>Apero</b>

	<b>Wednesday 23.01.2019 Poster Session</b>
all day	<b>Anne-Florence Allard, Hamza Hanbali and Kristien Smedts</b> COAALA: Beware of the beast with four tails in stock-bond co-movement
all day	<b>Antonella Basso, Giorgia Oggioni and Rossana Riccardi</b> Efficiency valuation of stocks and Green portfolio construction: a two stage approach
all day	<b>Shuo Huang, Gechun Liang and Thaleia Zariphopoulou</b> An approximation scheme for semilinear parabolic PDEs with convex and coercive Hamiltonians
all day	<b>Yves Rakotonratsimba and S Lajili-Jarjir</b> Bond sensitivities under large shifts of the interest rates
all day	<b>Sabrina Mulinacci and Umberto Cherubini</b> Extensions and distortions of lambda-fuzzy measures

	<b>Thursday 24.01.2019 Morning</b>
9:00	<p style="text-align: center;"><b>Piero Mazzarisi, Paolo Barucca, Fabrizio Lillo and Daniele Tantari</b>  A dynamic network model with persistent links and node-specific latent variables  with an application to the interbank market  <b>Discussant:</b> Claudio Tebaldi</p>
9:30	<p style="text-align: center;"><b>Felix-Benedikt Liebrich and Gregor Svindland</b>  Risk Sharing for Capital Requirements with Multidimensional Security Markets</p>
9:45	<p style="text-align: center;"><b>Alessandro Calvia and Emanuela Rosazza Gianin</b>  Risk measures and progressive enlargement of filtrations: a BSDE approach</p>
10:00	<p style="text-align: center;"><b>Claudio Tebaldi and Andrea Buraschi</b>  Asset Pricing Implications of Systemic Risk in Network Economies  <b>Discussant:</b> Emanuela Rosazza</p>
10:30	<b>Coffee break</b>
11:00	<p style="text-align: center;"><b>Roberto Reno, Lorian Pelizzon, Aleksey Kolokolov,  Mario Bellia and Kim Christensen</b>  High-Frequency Trading During Flash Crashes: Walk of Fame or Hall of Shame?  <b>Discussant:</b> Matteo Burzoni</p>
11:30	<p style="text-align: center;"><b>Cecilia Mancini</b>  Measuring the relevance of the microstructure noise in financial data</p>
11:45	<p style="text-align: center;"><b>Annalisa Fabretti and Samantha Leorato</b>  Random distributions via Sequential Quantile Barycenter Array</p>
12:00	<p style="text-align: center;"><b>Johann Nicolle, Huyen Pham and Carmine De Franco</b>  Bayesian learning for the Markowitz portfolio selection problem  <b>Discussant:</b> Come Hure</p>
12:30	<b>Lunch</b>

	<b>Thursday 24.01.2019 Afternoon</b>
14:00	<b>Claudia Ceci and Lijun Bo</b> Locally Risk-Minimizing Hedging of Counterparty Risk for Portfolio of Credit Derivatives <b>Discussant:</b> Alessandro Gnoatto
14:30	<b>Francesca Biagini, Alessandro Gnoatto and Immacolata Oliva</b> BSDEs of counterparty risk in the presence of multiple discounting rules and aggregation levels.
14:45	<b>Fabio Antonelli and Alessandro Ramponi</b> <b>Sergio Scarlatti and Elisa Alos</b> CVA and vulnerable options in stochastic volatility models
15:00	<b>Claudio Fontana, Zorana Grbac,</b> <b>Sandrine Gmbel and Thorsten Schmidt</b> Term structure modeling for multiple curves with stochastic discontinuities <b>Discussant:</b> Andrea Pallavicini
15:30	<b>Coffee break</b>
16:00	<b>Aitor Muguruza Gonzalez, Elisa Alos Alcalde,</b> <b>and David Garcia Lorite</b> On smile properties of volatility derivatives and exotic products: understanding the VIX skew <b>Discussant:</b> Jim Gatheral
16:30	<b>Christa Cuchiero and Sara Svaluto-Ferro</b> Infinite dimensional polynomial jump-diffusions
16:45	<b>Yue Kuen Kwok, Pingping Zeng and Wendong Zheng</b> Fast Hilbert transform algorithms for pricing discrete timer options under stochastic volatility models
17:00	<b>Lorenzo Torricelli</b> Anomalous diffusions in equity prices and the volatility term structure
17:15 (until 17:45)	<b>Jim Gatheral (supported by the <i>Baffi-CAREFIN Research Center</i>)</b> Diamond trees, forests, and the exponentiation theorem <b>Discussant:</b> Josef Teichmann
19:00	<b>Conference Dinner</b>

	<b>Thursday 24.01.2019 Poster Session</b>
all day	<b>Stefano Colucci</b> On Estimating Bitcoin Value at Risk: a comparative analysis
all day	<b>Anna Maria Fiori, Ilenia Foroni and Alessandro Avellone</b> Portfolio optimization with nonlinear loss aversion
all day	<b>Benjamin Loveless, Carolyn Phelan and Guido Germano</b> Numerical inversion of the z-transform with applications in the pricing of discretely monitored exotic options
all day	<b>Immacolata Oliva, Luca Di Persio and Kai Wallbaum</b> Constant Proportion-Portfolio Insurance with Guaranteed Minimum Equity Exposure
all day	<b>Andrey Pankratov</b> Leverage effect puzzle: a rational explanation
all day	<b>Damiano Rossello and Christos E. Kountzakis</b> Path-Dependent Acceptability Indexes of Performance

	<b>Friday 25.01.2019 Morning</b>
9:00	<p style="text-align: center;"><b>Come Hure, Huyen Pham, Nicolas Langrene and Achref Bachouch</b>            Deep learning algorithms for stochastic control problems  <b>Discussant:</b> Johann Nicolle</p>
9:30	<p style="text-align: center;"><b>Giuseppe Buccheri, Giacomo Bormetti, Fulvio Corsi and Fabrizio Lillo</b>            A General Class of Score-Driven Smoothers</p>
9:45	<p style="text-align: center;"><b>Roberto Daluiso</b>            Second order sensitivities in linear or constant time</p>
10:00	<p style="text-align: center;"><b>Giorgia Callegaro, Martino Grasselli and Gilles Pages</b>            Fast Hybrid Schemes for Fractional Riccati Equations            (Rough is not so Tough)  <b>Discussant:</b> Marco Maggis</p>
10:30	<b>Coffee break</b>
11:00	<p style="text-align: center;"><b>Stefano Herzel, Marco Nicolosi and Katia Colaneri</b>            The value of information for optimal portfolio management  <b>Discussant:</b> Claudio Fontana</p>
11:30	<p style="text-align: center;"><b>Vathana Ly Vath, Luca Prezioso and Simone Scotti</b>            Growth Opportunities            and Dividend Control Problem under Financing Constraints</p>
11:45	<p style="text-align: center;"><b>Francesco Caloia, Andrea Cipollini and Silvia Muzzioli</b>            On the financial connectedness of the commodity market            a replication of the Diebold and Yilmaz (2012) study</p>
12:00	<p style="text-align: center;"><b>Thomas Bernhardt and Catherine Donnelly</b>            How much to put in a tontine  <b>Discussant:</b> Cosimo Munari</p>
12:30	<b>Lunch</b>



	<b>Friday 25.01.2019 Afternoon</b>
14:00	<p style="text-align: center;"><b>Deniz Erdemlioglu, Xiye Yang and Mardi Dungey</b>  Testing for intensity jumps in high frequency data  with new information arrivals  <b>Discussant:</b> Maria Elvira Mancino</p>
14:30	<p style="text-align: center;"><b>Waseem Toraubally</b>  Arbitrage Equilibria in Large Games with Many Commodities</p>
14:45	<p style="text-align: center;"><b>Alexander Molitor and Christoph Kühn</b>  Prospective strict no-arbitrage  and the fundamental theorem of asset pricing under transaction costs</p>
15:00	<p style="text-align: center;"><b>Francesca Biagini, Andrea Mazzon and Thilo Mayer-Brandis</b>  Liquidity induced bubbles via flows of ELMs  <b>Discussant:</b> Oleksii Mostovyi</p>
15:30	<b>Coffee break</b>
16:00	<p style="text-align: center;"><b>Ambrogio Dalo, Rocco Ciciretti and Lammertjan Dam</b>  The Contribution of Betas versus Characteristics in the ESG premium  <b>Discussant:</b> Johannes Muhle-Karbe</p>
16:30	<p style="text-align: center;"><b>Matteo Madotto and Federico Severino</b>  Heterogeneous awareness in financial markets</p>
16:45	<p style="text-align: center;"><b>Oleksii Mostovyi and Mihai Sirbu</b>  Sensitivity analysis of the utility maximization problem  with respect to model perturbations  <b>Discussant:</b> Giorgia Callegaro</p>
17:15	<p style="text-align: center;"><b>Roberto Baviera and Giulia Bianchi</b>  Model risk in mean-variance portfolio selection:  an analytic solution to the worst-case approach</p>
17:30	<p style="text-align: center;"><b>Giacomo Bormetti, Fabrizio Lillo and Danilo Vassallo</b>  A tale of two sentiment scales:  Disentangling short-run and long-run components in multivariate sentiment dynamics</p>
17:45	<p style="text-align: center;"><b>Matteo Pisati, Giovanni Barone-Adesi and Carlo Sala</b>  Greed and Fear: The Nature of Sentiment  <b>Discussant:</b> Massimo Morini</p>

	<b>Friday 25.01.2019 Poster Session</b>
all day	<b>Matteo Brachetta and Claudia Ceci</b> Optimal Excess-of-loss reinsurance problem for stochastic factor models
all day	<b>Jiaqi Liang, Carolyn E. Phelan, Daniele Marazzina and Guido Germano</b> Pricing of discretely monitored barrier options with stochastic volatility using the Wiener-Hopf method
all day	<b>Fabrizio Di Scorio and Raffaele Mattera</b> Option pricing under multifractional Brownian motion with Hurst random exponent