



# Risk Workshop 2019

UNSW-MACQUARIE UNIVERSITY

## Risk: modelling, optimization and inference with applications in finance, insurance and superannuation

Macquarie University City Campus,  
Level 24 Angel Place 123 Pitt Street, Sydney



### PROGRAM: DAY 1, Thursday 12 December

8.15 – 8.45	Registration	
8:45 – 9:00	Opening Speech	
9:00 – 9:45	Jean-Pierre Fouque	Optimal portfolio under fractional stochastic environment
9:45 – 10:30	Rüdiger Frey	Value adjustments and dynamic hedging of reinsurance counterparty risk
10:30 – 11:00	Coffee Break	
11:00 – 11:45	Runhuan Feng	Peer-to-peer multi-risk mutual aid plans
11:45 – 12:30	Katja Hanewald	Long-term care insurance financing using home equity release: evidence from an experimental study
12:30 – 13:30	Lunch	
13:30 – 14:15	Michael Hanke	Numeraire dependence in risk-neutral probabilities of event outcomes
14:15 – 15:00	Katja Ignatieva	Quantifying credit contagion through numbers of defaults
15:00 – 15:30	Coffee Break	
15:30 – 16:15	Han Li	Analyzing mortality bond indexes via hierarchical forecast reconciliation
16:15 – 17:00	Gery Geenens	Copula modelling for discrete random variables; or how to pour new wine into old bottles



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## PROGRAM: DAY 2 Friday 13 December

9:00 – 9:45	Robert Elliott	The semimartingale representation of a semi Markov chain
9:45 – 10:30	Susan Thorp	Communicating risk
<b>10.30 – 11.00</b>	<b>Coffee Break</b>	
11.00 – 11.45	Stéphane Loisel	Longevity risk and quickest detection in practice
11.45 – 12.30	Pavel Shevchenko	Optimal decisions in retirement under expected utility stochastic control framework
<b>12.30 – 13.30</b>	<b>Lunch</b>	
13.30 – 14.15	Spiridon Penev	On robust index tracking
14.15 – 15.00	Jae Kyung Woo	Bayesian credibility under a bivariate prior on the frequency and the severity of claims
<b>15.00 – 15.30</b>	<b>Coffee Break</b>	
15.30 – 16.15	Qihe Tang	CAT bond pricing under a product probability measure with POT risk characterization
16.15 – 17.00	Peter Tankov	Price formation and optimal trading in intraday electricity markets
<b>17.00 – 17.05</b>	<b>Closing remarks</b>	

The joint UNSW - Macquarie University Workshop “*Risk: modelling, optimization and inference*” with applications in finance, insurance and superannuation is held every second year. We discuss high quality research in areas of risk modelling with particular emphasis on applications for finance, insurance and superannuation. Presentations reflect recent events and issues facing those managing risk across different sectors, allowing academic research to be profiled while considering its direct application to industry.

*Workshop organizers:*

**Professor Pavel Shevchenko**, Department of Actuarial Studies and Business Analytics, Macquarie University

**Associate Professor Spiridon Penev**, School of Mathematics and Statistics, UNSW

**Associate Professor Benjamin Avanzi**, School of Risk and Actuarial Studies, UNSW Business School