4th Australasian Commodity Markets Conference

PROGRAM

7-8 April 2022
MACQUARIE UNIVERSITY CITY CAMPUS
LEVEL 24/123 PITT STREET, SYDNEY, NSW
<table>
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<tbody>
<tr>
<td>9.00 am</td>
<td>Registration</td>
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<tr>
<td>9.20 am</td>
<td>Welcome</td>
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| 9.30 - 10.15 am | Keynote speech: Political connections and the transition to low-carbon sources in China: Evidence from a quasi-natural experiment  
Tom Smith (Macquarie University) |
| 10.15 - 11.00 am| Keynote speech: The transition of the National Electricity Market (NEM)  
Sal Tringali (Snowy Hydro) |
| 11.00 - 11.30 am| Morning tea                                                          |
| 11.30 - 12.15 pm| Session 1: Commodity Futures Markets  
Chair: Stefan Trueck  
Speaker: Thanh Vu  
Title: Hidden in the spotlight: Media emotion intensity and commodity futures pricing  
Discussant: John Fan |
|                | Session 2: Seasonality, Comovement and Contagion  
Chair: Ken Siu  
Speaker: Chi Truong  
Title: Pricing Renewable Energy Investment in Presence of Trend, Seasonality, Mean Reversion and Price Spikes  
Discussant: Ken Siu |
| 12.15 - 13.00 pm| Session 3: Electricity Markets I  
Chair: Lin Han  
Speaker: Muthe Mwampashi  
Title: Large-scale and rooftop solar generation in the NEM: A tale of two renewables strategies  
Discussant: Lin Han |
|                | Session 4: Carbon Pricing and CO2 Emissions from the Transport Sector  
Chair: Hamid Yahyaei  
Speaker: Marjan Nazifi  
Title: Carbon pricing co-benefits for countries  
Discussant: John Inekwe |
| 13.00 - 14.00 pm| Lunch                                                                |
| 14.00 - 14.45 pm| Session 5: Quantitative Finance in Commodity Markets  
Chair: Pavel Shevchenko  
Speaker: Peilun He  
Title: Multi-Factor Polynomial Diffusion Models and Inter-Temporal Futures Dynamics in Energy Markets |
|                | Session 6: High-Frequency Analysis of Commodity Markets  
Chair: Chi Truong  
Speaker: Katja Ignatieva  
Title: Modelling High Frequency Crude Oil Dynamics using Affine and Non-Affine Jump-Diffusion Models |
| 14.45 - 15.30 pm| Speaker: Rohan Best  
Title: The impact of income on household solar panel uptake: exploring diverse results using Australian data  
Discussant: Muthe Mwampashi  
Speaker: John Inekwe  
Title: Transport infrastructure, CO2 emissions, mortality, and life expectancy in the Global South  
Discussant: Hamid Yahyaei |
| 15.30 - 16.00 pm| Afternoon tea                                                       |
| 16.00 - 16.30 pm| Speaker: Jun Han  
Title: Modelling of Logarithmic Returns of Futures Prices via Schwartz-Smith Model with Correlated Measurement Errors  
Speaker: Nikolay Gudkov  
Title: Non-parametric Estimation of High-Frequency Commodity Dynamics |
<p>| 16.30 - 17.00 pm| Conference dinner, Little Snail Restaurant, 3/50 Murray St, Pyrmont NSW 2009 |</p>
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<tr>
<td>9.00 - 11.00 am</td>
<td>Plenary session</td>
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<td>11.00 - 11.30 am</td>
<td>Morning tea</td>
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| 9.00 - 9.40 am | Speaker: Vladimir Strezow (Macquarie University)  
**Title:** Energy from Biomass for a Sustainable Future |                            | 11.30 - 12.15 pm | Speaker: Anastasios Panagiotelis  
**Title:** Detecting anomalies in smart meter data via manifold learning  
**Discussant:** Zhuo Jin |                            |
| 9.40 - 10.20 am | Speaker: Daniel Hynes (Australia and New Zealand Banking Group)  
**Title:** Emerging Dislocations in Energy Markets |                            | 12.15 - 13.00 pm | Speaker: Lin Han  
**Title:** Average Dispatch Prices and Earnings-at-Risk for Renewable and Fossil-Fuel Generators in Australia  
**Discussant:** Christina Nikitopoulos |                            |
| 10.20 - 11.00 am | Speaker: Dirk Baur (University of Western Australia)  
**Title:** Gold and Bitcoin |                            |              | Speaker: Raymond Li  
**Title:** Price responsiveness of residential demand for natural gas in the US  
**Discussant:** Natalia Ponomareva |                            |
| 11.00 - 11.30 am |                                        |                            |              | Speaker: Natalia Ponomareva  
**Title:** Energy and metal price uncertainties and the global economy  
**Discussant:** Rabindra Nepal |                            |
| 11.30 - 12.15 pm |                                        |                            |              |                                        |                            |
| 12.15 - 13.00 pm |                                        |                            |              |                                        |                            |
| 13.00 - 14.00 pm | Lunch                                      |                            | 14.00 - 14.30 pm | Session 9: Electric Markets II  
**Chair:** Stefan Trueck |                            |
|              |                                        |                            |              | Session 10: Climate Change and Commodity Markets  
**Chair:** Lurion De Mello |                            |
| 14.00 - 14.30 pm | Speaker: Santosh Sapkota  
**Title:** Price-Setting Generation Technologies in the Australian National Electricity Market |                            |              | Speaker: Hamid Yahyaei  
**Title:** The Impacts of the El Niño–Southern Oscillation on Global Food Security – An Implied Volatility Approach |                            |
| 14.30 - 15.00 pm | Speaker: Ming Wei  
**Title:** The Financial Analysis of Power Systems: Plug-in Hybrid Vehicle, Thermal Generation Expansion and Wind Power |                            |              | Speaker: Pavel Shevchenko  
**Title:** Impact of COVID-19 type events on the economy and climate under the stochastic DICE model |                            |
|              |                                        |                            |              |                                        |                            |

**Closing remarks**
The Risk Analytics Lab at Macquarie University is a cross-disciplinary research team collaborating with academia and industry on innovative risk analytics solutions across several domains: demography, economics, energy, environmental finance, finance, insurance and superannuation. It was established by the Department of Applied Finance and Actuarial Studies at Macquarie University in 2016 with the following objectives:

- Develop and apply innovative risk analytics solutions through fundamental research and industry-linked projects
- Facilitate knowledge exchange between academia, industry and policymakers
- Strengthen and promote the connection between fundamental research and industry practice.

**OUR MAIN RESEARCH AREAS**

- Claims reserving in insurance
- Energy and commodity markets
- Financial derivatives
- Mortality modelling
- Operational risk, credit risk, market risk
- Portfolio optimisation
- Retirement income products

For more information, visit the Risk Analytics Lab website [mq.edu.au/research/risk-lab](http://mq.edu.au/research/risk-lab)

If you are interested in joining the lab or in collaboration opportunities on industry or research projects, contact Lab Director Professor Pavel Shevchenko, email: pavel.shevchenko@mq.edu.au

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The Centre for Risk Analytics investigates uncertainty in capital markets. Our researchers examine the spectrum of financial risks faced at all levels of the economy. We collaborate with industry, regulators, governments and leading universities overseas to ensure research outcomes are robust, realistic and relevant. We offer optimal value to our research partners through our pragmatic, commercially aware and creative approach. The nature and management of financial risks are investigated by a team of leading interdisciplinary researchers with expertise in financial economics, econometrics and innovative modelling approaches.

**OUR RESEARCH FOCUS**

- Banking, finance and asset pricing
- Behavioural economics and financial literacy
- Climatic change and catastrophic risks
- Complex industry and corporate issues
- Energy and utility markets
- Insurance and risk analysis
- International and domestic issues
- Regulation and government policy
- Superannuation

For more information, visit [mq.edu.au/research/centre-for-risk-analytics](http://mq.edu.au/research/centre-for-risk-analytics)