

New Directions in Financial Mathematics

Tuesday January 5, 2010

- 8:30–9:20 *Check-In/Light Breakfast (Hosted by IPAM)*
- 9:20–9:30 *Welcome and Opening Remarks*
- 9:30–10:30 **René Carmona** (Princeton University)
Short Course on Mathematics of Emissions Markets: Mechanics of the cap-and-trade schemes and first equilibrium models
- 10:30–11:00 *Break*
- 11:00–11:50 **Thaleia Zariphopoulou** (University of Oxford)
Investment performance measurement under time-monotone criteria
- 12:00–2:00 *Lunch (on your own)*
- 2:00–2:50 **René Carmona** (Princeton University)
Short Course on Mathematics of Emissions Markets: Allocation mechanisms, design, and scheme comparisons
- 3:00–3:15 *Break*
- 3:15–4:05 **Nizar Touzi** (École Polytechnique)
Well-posedness of second order BSDEs
- 4:15–4:30 *Coffee Break*
- 4:30–5:30 **Pierre-Louis Lions** (Université de Paris IX (Paris-Dauphine))
Distinguished Lecture, Short Course - Lecture 1: On Mean Field Games
- 5:45–7:30 *Poster Session & Reception (Hosted by IPAM)*

Wednesday January 6, 2010

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **Pierre-Louis Lions** (Université de Paris IX (Paris-Dauphine))
Distinguished Lecture, Short Course - Lecture 2: On Mean Field Games
- 10:00–10:15 *Break*
- 10:15–11:05 **Jin Ma** (University of Southern California (USC))
When Mathematical Finance and Actuarial Science Cross
- 11:15–11:30 *Break*

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- 11:30–12:20 **H. Soner** (ETH Zürich)
Financial markets with uncertain volatility
- 12:30–2:00 *Lunch (on your own)*
- 2:00–2:50 **Pierre-Louis Lions** (Université de Paris IX (Paris-Dauphine))
Distinguished Lecture, Short Course - Lecture 3: On Mean Field Games
- 3:00–3:15 *Break*
- 3:15–4:05 **Alexander Schied** (Universität Mannheim)
Order book resilience, price manipulation, and the positive portfolio problem
- 4:15–4:30 *Break*
- 4:30–5:20 **René Carmona** (Princeton University)
Short Course on Mathematics of Emissions Market: Reduced form models and carbon option pricing

Thursday January 7, 2010

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **Jean-Pierre Fouque** (University of California, Santa Barbara (UC Santa Barbara))
Calibration of Stock Betas from Skews of Implied Volatilities
- 10:00–10:15 *Break*
- 10:15–11:05 **Juri Hinz** (National University of Singapore)
Modeling risk-neutral allowance price evolution with applications to option pricing
- 11:15–11:30 *Break*
- 11:30–12:20 **Umut Cetin** (London School of Economics and Political Science)
Dynamic Markov Bridges Motivated by Models of Insider Trading
- 12:30–2:00 *Lunch (on your own)*
- 2:00–2:50 **Yves Achdou** (Université de Paris VII (Denis Diderot) et Université de Paris VI (Pierre et Marie Curie))
Mean field games: numerical methods
- 3:00–3:15 *Break*
- 3:15–4:05 **Ulrich Horst** (Humboldt-Universität)
Hidden Liquidity

Friday January 8, 2010

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **Sam Howison** (University of Oxford)
Games with Exhaustible Resources
- 10:00–10:15 *Break*
- 10:15–11:05 **Christian Bender** (Universität des Saarlandes)
Dual Pricing of Multiple Exercise Options
- 11:15–11:30 *Break*
- 11:30–12:20 **Christopher Harris** (University of Cambridge)
The Dynamics of Optimal Risk Sharing
- 12:30–1:30 *Lunch (on your own)*
- 1:30–2:20 **Alain Bensoussan** (University of Texas at Dallas)
Real Options in a Stackelberg Game
- 2:30–2:45 *Break*
- 2:45–3:35 **Michael Ludkovski** (University of California, Santa Barbara (UC Santa Barbara))
Stochastic Switching Games and Duopolistic Competition in Emissions Markets
- 3:45–4:00 *Break*
- 4:00–4:50 **Nicole El Karoui** (École Polytechnique)
Non Linear SPDE of Forward Utilities and Stochastic flows: Drift and Volatility Characterization with M.M'rad

