

**Bruno Bouchard** (*Université Paris-Dauphine*)

**Robust hedging under proportional transaction costs and randomization**

We consider the problem of robust hedging under proportional transaction. We prove a version of the super-hedging duality, under the assumption of absence of arbitrage of the second kind, in this non-dominated probabilistic setting. The proof uses a randomization approach which allows to reduce to the classical frictionless setting.

**Marco Maggis** (*Università degli Studi di Milano*)

**The Fatou closedness under model uncertainty**

We provide a characterization in terms of Fatou closedness for weakly closed monotone convex sets in the space of quasisure bounded random variables, for a family of possibly non-dominated probability measures. We illustrate the relevance of our results by applications in the field of mathematical finance.

**Marco Frittelli** (*Università degli Studi di Milano*)

**Pathwise Finance: Arbitrage and Pricing-Hedging Duality**

We develop a pathwise framework for pricing and hedging of derivative securities in discrete-time financial markets. We consider markets with both dynamically and statically traded assets and make minimal measurability assumptions. We obtain an abstract (pointwise) Fundamental Theorem of Asset Pricing and Pricing--Hedging Duality. Our results are general and in particular include so-called model independent results of Acciaio et al. (2016) and Burzoni-Frittelli-Maggis (2016), as well as seminal results of Dalang-Morton-Willinger 1990 in a classical probabilistic approach.  
(joint with M. Burzoni, Z. Hou, M. Maggis, J. Obloj)