Abstract: "Levy processes under Sublinear Expectation Spaces"

In many applications we have to deal with the problem of model uncertainty. A relatively new tool to handle that kind of problems is G-Brownian Motion, introduced and developed by S. Peng. G-Brownian Motion is a stochastic process defined on a Sublinear Expectation Space, whose basic properties resemble to that of (classical) Brownian Motion and under which it is possible to develop Stochastic Calculus in that general framework. After that, Hu and Peng proceeded to the definition of Levy Processes under Sublinear Expectation Spaces (G-Levy processes) [1]. In the current talk, Sublinear Expectation Spaces and the aforementioned processes will be presented. Moreover, it will be described the problem that have to be overcome in order to be able to define a stochastic integral with respect to a G-Levy process.

[1] : M. Hu, S. Peng, G-Levy processes under Sublinear Expectation Spaces