

## NON-ARBITRAGE FOR A CLASS OF INFORMATIONAL MARKETS

**T. Choulli** and **J. Deng**, University of Alberta, Canada, tchoulli@ualberta.ca

**A. Aksamit** and **M. Jeanblanc**, Université Val d'Essonne, Evry, France

In this talk, I will address the question of how an arbitrage-free semimartingale model is affected when this model is stopped at a random horizon or when a honest time is totally incorporated. Precisely, I will focus on weak form of non-arbitrage that is crucial for the existence of optimal portfolio. This type of non-arbitrage is called the No-unbounded-Profit-with-Bounded-Risk (called NUPBR hereafter) concept. It is also known –in the literature– as the first kind of non-arbitrage. I will present many new results that can be classified into two principal types of results. First, I will provide necessary and sufficient conditions on the random time (default time/exit time/random horizon) such that the Non-arbitrage concept remains valid for any model stopped at this random time. The second type of results consists of considering a fixed (but arbitrary) semimartingale and a random time, and derive the necessary and sufficient conditions under which this semimartingale stopped at this random time still fulfill the non-arbitrage concept. When a class of honest times will be incorporated into the model, we also provide necessary and sufficient conditions that guarantee the preservation of the non-arbitrage concept. Our class of honest times is much larger than the class of all stopping times. More importantly, our condition that defines our class of honest times sounds play important rôle in classifying honest times.