

Maxime Morariu-Patrichi

Reduced-Form Limit Order Book Modelling With Point Processes

Joint work with Mikko Pakkanen

My aim is to introduce the research objective and approach that I am currently following in the area of limit order book (LOB) modelling. After explaining the LOB mechanism, I will discuss the use of point processes to model the relation between the price moves, the order flow and the LOB's state. First, I will explain how one can reduce the dimensionality of the modelled objects. Second, I will argue using empirical results that one should track the LOB's state in the reduced-form model. In particular, I will show that there is an interaction between the order flow and the LOB's state that needs to be modelled. Third, I will give some hints about the kind of point process that one could use for the modelling.