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**Sergey Nadtochiy\*** ([sergeyn@umich.edu](mailto:sergeyn@umich.edu)), 530 Church St, Ann Arbor, MI 48109, and **Roman Gayduk**, 530 Church St, Ann Arbor, MI 48109. *Endogenous Formation of Limit Order Books: The Effects of Trading Frequency.*

In this talk, I will present a modeling framework in which the shape and dynamics of a Limit Order Book (LOB) arise endogenously from an equilibrium between multiple market participants (agents). This new framework, on the one hand, captures closely the true, micro-level, mechanics of an auction-style exchange. On the other hand, it uses the standard abstractions of games with continuum of players (in particular, the Mean Field Game theory) to obtain a tractable macro-level description of the LOB. Finally, I will use the proposed modeling framework to analyze the effects of trading frequency on the market microstructure. In particular, I will present a general result that connects the market efficiency and stability of LOB to the martingale properties of agents' beliefs. The theoretical results will be illustrated with numerical simulations. (Received August 09, 2015)