

September 21st, 2020
Zoom Meeting
2:00 P.M. - 3:00 P.M.

Prof. Jose Figueroa-Lopez
(Washington University in St. Louis)

Market Making with Random Linear Demand And Overnight Inventory Costs

Abstract: A market-maker aims to optimize his/her cumulative revenue by recurrently updating his/her bid and ask quotes in a Limit Order Book (LOB) throughout the day. We study an optimal discrete-time market-making decision problem with Poissonian order flow and overnight inventory costs in this work. The number of filled orders during each period is assumed to depend linearly on the distance between the midprice and the market maker's limit order quotes with random coefficients. We explicitly characterize the optimal market making strategy and find conditions for its admissibility. We then undertake the highly nontrivial and often overlooked task of implementing the strategy using real LOB data. We show our approach outperforms other baseline strategies commonly used in practice. This is joint work with Agostino Capponi from Columbia University and Chuyi Yu from Washington University in St. Louis.

Zoom link:

Topic: Math Finance Colloquium

Time: Sep 21, 2020 02:00 PM Pacific Time (US and Canada)

Join Zoom Meeting

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