1120-60-22　　　　　**Sebastian Jaimungal*** (`sebastian.jaimungal@utoronto.ca`), University of Toronto, Sidney Smith Hall, 100 St. George St., Toronto, Ontario M5S 3G3, Canada, and **Luhui Gan** and **Álvaro Cartea**. *Option pricing and hedging with limit and market orders.*

Traditionally, option valuation is carried out using continuous time models for the underlier which are based on diffusive models, sometimes augmented with jump processes. However, if one's aim is to hedge options intraday, such models are far from the reality. For example, stock prices are inherently discrete, and there is a bid-ask spread. The spread acts as cost when trading with market orders while it is a source of income when trading with limit orders. In this paper, we introduce a class of pure jump models, in continuous time, that reflect a number of features seen in real intraday markets (such as volatility clustering and adverse selection), develop a statistically sound calibration methodology, and demonstrate how to simultaneously value and hedge an option using an optimal mix of limit and market orders. Finally, we investigate some of the qualitative features of the strategies, and demonstrate how they differ from the naïve ones resulting from ignoring the bid-ask spread and optimal mix of limit and market orders. (Received January 19, 2016)

1