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**Sher B. Chhetri\*** (schhetri@mailbox.sc.edu), **Hongwei Long** (hlong@fau.edu) and **Cory Ball** (ballcbh@gmail.com). *Parameter Estimation for Geometric Lévy Processes with Constant Volatility*. Preliminary report.

The alpha-stable distributions introduced by Paul Lévy play an important role in many areas including finance, economics, and life sciences. In particular, they are important models for data sets reporting extreme events, such as earthquakes or stock market crashes. In finance, various stochastic models are used to model the price movements of financial instruments. After Robert Merton's (1976) seminal work, several jump-diffusion models for option pricing and risk management have been proposed. In this work, we introduce the alpha-stable Geometric Lévy processes where we add alpha-stable Lévy motion to the process related to the dynamics of log-returns in the Black-Scholes model. We use sample characteristic functions approach and study parameter estimation for discretely observed stochastic differential equations driven by Lévy noises. We also discuss the consistency and asymptotic properties of the proposed estimators and establish a Central Limit Theorem. (Received August 18, 2020)