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**Liqing Yan\*** (liqing@uf1.edu), Department Of Mathematics, University of Florida, 358 Little Hall, PO Box 118105, Gainesville, FL 32611. *Discretization Error in simulation of the maximum of a Levy process*. Preliminary report.

Discretization errors for maximum and minimum of a Brownian motion has been found through Spitzer's identity and Riemann Zeta's function. In this paper, we try to establish the discretization errors for a Levy process, especially for a stable process.

When the expectation of some function of the maximum is known, this error is useful to approximate the expectation of the function of the maximum over discrete time points, for example, in pricing the barrier options and digital options.

When the expectation of some function of the maximum is unknown (most of time), this error is useful to approximate this expectation by Monte Carlo simulation of the function of the maximum over discrete time points. (Received June 15, 2009)