1098-60-210 **Tim Leung**, **Kazutoshi Yamazaki** and **Hongzhong Zhang*** (hzhang@stat.coumbia.edu), 1255 Amsterdam Ave, New York, NY 10027. *Optimal Stopping with Negative Discount Rate and Random Refraction Times under Levy Models.*

This paper studies a class of optimal single and multiple stopping problems driven by a Levy process. With the reward function resembling the call option payoff, our analysis is applicable to a number of financial applications, including stock loans and real options. A key feature of our model is allowing the effective discount rate to be negative, which arises when the strike price grows at a higher rate than the original discount factor. When multiple stopping opportunities are allowed, the admissible exercise times are separated by i.i.d. random refraction times. For Levy processes with both positive and negative jumps, we show that the optimal timing strategy for the optimal multiple stopping problem is characterized by a decreasing sequence of exercise thresholds. For spectrally negative Levy processes with phase-type jumps with Erlang distributed refraction periods, we further derive analytic expressions for the optimal multiple stopping value functions. Our solution naturally gives rise to a numerical algorithm for computing successively the value functions and optimal exercise thresholds. (Received January 26, 2014)