1020-60-191   **Yaozhong Hu*** (`hu@math.ku.edu`), Department of Mathematics, University of Kansas, Lawrence, KS 66049. *Optimal Anticipative Stopping.* Preliminary report.

The problem of optimal stopping is an important problem in applied probability. Explicit solution exists only in some special cases. Here we consider the problem of optimal stopping when the investor has insider information.

Let $(B_t, t \geq 0)$ be a standard Brownian motion and $(\mathcal{F}_t, t \geq 0)$ be the filtration generated by the Brownian motion. Namely, $\mathcal{F}_t = \sigma(B_s, s \leq t)$ is the σ-algebra generated by $B_s, s \leq t$. Let τ be an $\mathcal{F}_{\cdot + \delta}$ stopping time, where $\delta > 0$. This means that the investor knows information in the future. We would like to find the optimal stopping time τ^* such that

$$E\left[e^{-\rho \tau^*}(B_{\tau^*} - a)\right] = \sup_{\tau} E\left[e^{-\rho \tau}(B_\tau - a)\right]$$

An interesting fact is that in this case $EB_\tau \neq 0$ usually. We shall use the Malliavin calculus to partially solve the problem. (Received August 28, 2006)

1