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**Gerard Brunick\***, brunick@pstat.ucsb.edu, and **Mihai Sirbu** and **Karel Janecek**. *Optimal Investment in the Presence of High-water Mark Fees*.

In this talk, we will consider the problem of optimal asset allocation for an agent who may invest in a money market fund, a stock, and a hedge fund. We model the risky assets as correlated geometric Brownian motions and we assume that our investor maximizes discounted CRRA utility from consumption on an infinite horizon. We further suppose that the investment in the hedge fund is subject to a proportional performance fee that is assessed each time the cumulative profit-to-date derived from the investment in the hedge fund reaches a new running maximum. We will see that this problem reduces to the optimal control of a reflected diffusion. We will examine the regularity of the associated Hamilton-Jacobi-Bellman equation and show the existence of optimal controls. Finally, we will examine some qualitative properties of the optimal investment strategy. (Received August 06, 2012)