

**Andrew Ahn**

**On the Use of Linear Programming to Control Diffusions**

(joint work with Martin Haugh)

Abstract: Han and Van Roy (2011) proposed a linear programming approach for the approximate control of diffusion processes. We extend that approach and apply it to a class of dynamic portfolio optimization problems with no short-sales and no-borrowing constraints. We also use portfolio optimization duality techniques to establish that the LP approach is capable of essentially solving these problems.