1060-35-53 **Gerardo Hernandez-del-Valle*** (gerardo@stat.columbia.edu), 1255 Amsterdam Ave. Room 1005, New York, NY. *Heat Polynomials, boundary crossing probabilities and applications in finance.*

In this talk we will derive sharp bounds to the first crossing probabilities of diffusions, which in turn will be used the pricing of boundary options. We will discuss the relationship between these solutions and the so-called heat polynomials. (Received March 13, 2010)