1032-60-7 **Robert G Smits*** (rsmits@nmsu.edu), Department of Mathematical Sciences, MSC 3MB, New Mexico State University, Las Cruces, NM 88003-8001. *Asymptotic Analysis of a Cox-Ingersoll-Ross Type Diffusion.*

In their seminal paper, Cox, Ingersoll and Ross described a family of square root diffusions used to model short term interest rates based on the empirically relevant facts such as interest rates are always nonnegative and there is a steady-state distribution for the interest rate. In this talk we will discuss power-law generalizations to the model which additionally have exponential time to equilibrium. The main tools for the large time analysis are large deviation theory together with the calculus of variations. (Received May 11, 2007)