COLLOQUIUM

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Series Expansions for the First Passage Distribution of Pearson-Kolmogorov Jump Diffusions

Thursday, April 1, 2010
A405 Wells Hall
10:20 a.m. - 11:10 a.m.
Refreshments: 10:00 a.m.

Abstract

We explore the Erlang series approach to the first-time passage problem for a particular class of jump diffusions with polynomial state dependent coefficients. This approach may be viewed as a discrete analog of the Laplace transform, which replaces the differential equations with polynomial coefficients by algebraic recurrences. We identify cases in which the expansion is finite and cases in which the recurrence is of second order, and thus the equations can be solved.

This is joint work with F. Avram (Pau, France), L. Rabehasaina (Besancon, France) and N. Suvak (Osijek, Croatia).

To request an interpretor or other accompdations for people with disabilities, please call the Department of Statistics and Probability at 517-355-9589.