概率论系列报告

报告题目(Title)： Continuous state branching processes with immigration and some applications in finance

报告人(Speaker)： 马春华 副教授 南开大学

时间(Time)： 11 月 17 日(周一) 下午 3:00-4:00

地点(Venue)： 北京大学理科一号楼 1418

摘要(Abstract)： We study a two-dimensional joint distribution related to the first passage time below a level for a continuous-state branching process with immigration (CBI-process). We show an explicit expression of the Laplace transform of the distribution in terms of some special functions and obtain a necessary and sufficient criterion for transience or recurrence. Furthermore the ergodicity property of the process is also proved by using the coupling method. As some applications in finance, we study in more detail the problems of parameter estimation for some special CBI process, the so-called stable Cox-Ingersoll-Ross model. This talk is based on joint works with Xan Duhalde and Cl\'ement Foucart, and with Zenghu Li.

欢迎参加