Seminar

Title：Stochastic differential equations with Markov switchings under nonclassical approximation schemes and application to the information warfare model

Speaker：Prof. Anatolii Nikitin
(National University of Ostroh Academy, Ukraine)

Time：10:30 AM~12:00 PM, Monday, Aug 15, 2022

Place：Auditorium, B1F, Institute of Statistical Science, AS

Abstract

The report is concerned with analyzing the asymptotic properties of evolution models given by stochastic differential equations with Markov switchings and impulse perturbations under the conditions of Levy and Poisson approximation. We consider some prelimit evolution models with a small normalization parameter. The form of the limit generators was constructed for the impulse processes and the dynamical system under the schemes of the Poisson approximation and the Levy approximation. It is important to notice that the asymptotic behavior of the limit process is concluded with the help of the analysis of parameters of the prelimit system. We also offer an application of the developed methods to the analysis of one model for information warfare.

※ The tea reception will be held at 10:10.
※ Lecture in English. Online live streaming through Cisco Webex will be available.