

马尔科夫切换型中立型随机泛函微分方程

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Neutral Stochastic Functional Differential Equations with Markovian Switchings

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摘要 尽管具有马尔科夫切换型随机微分方程的稳定性受到了人们的关注,但是关于具有马尔科夫切换型中立型随机泛函微分方程的稳定性研究则很少.本文的主要目的是试图研究这一问题,我们证明了解的存在唯一性,并得到了 p -阶指数稳定性和几乎处处指数稳定性的判据.

关键词: 马尔科夫链 布朗运动 中立型随机泛函微分方程 指数稳定性

Abstract: The stability of stochastic functional differential equation with Markovian switching have an increasing attention, but there is almost no work on the stability of the neutral stochastic functional differential equations with Markovian switching. The main aim of this paper is to close this gap. We establishes the existence and uniqueness of the neutral stochastic functional differential equations with Markovian switching, and obtain criteria for p -th moment exponential stability and almost surely exponential stability for the solutions.

Key words: Markovian chain Brownian motion neutral stochastic functional differential equation exponential stability

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