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论文

细胞神经网络的指数稳定性

沈轶, 江明辉, 姚宏善

摘要:

该文研究了具有可变时滞的随机细胞神经网络的指数 稳定性,应用Razumikhin定理与Lyapunov函数,建立了这种细胞神经网络均方指数稳定与几乎必然指数稳定的两类判据,一类是时滞无关而另一类是时滞相关.

关键词: 细胞神经网络,指数稳定性,Razumikhin定理,Lyapunov函数.

分类号:

Exponential Stability of Cellular Neural Networks

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Abstract:

In this paper the authors investigate the exponential s tability of stochastic cellular neural networks with variable delay. By using th e Razumikhin theorems and Lyapunov functions, the authors present two types of criteria for the exponential stability in the mena square and almost surely expo nential stability of cellular neural networks. One type involves delay independe nt results while the other involves delay dependent results.

Keywords: Cellular neural network,Exponential stability,Razumikhin theorem,Lyapunov function

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