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Abstract

The problem of asynchronous state estimation for Markov jump neural networks taking into account jumping fading channels is investigated in this article. The phenomenon of channel fading which occurs between the system and the **state estimator** is considered and a modified discrete-time Rice fading model with the mode-dependent channel coefficients is adopted. Due to the fact that the modes of system can't be completely accessible to the **state estimator** at any time, the asynchronous **state estimator** which can make full use of the partial information available to **the state estimator** is introduced. By using the mode-dependent Lyapunov functional approach, some sufficient conditions for the existence of asynchronous **state estimator** of the Markov jump neural networks are given to guarantee the stability and dissipativity of the augmented system. The gains of asynchronous state estimator are given via solving a set of linear matrix inequalities. The merits and effectiveness of the developed design scheme are verified by a simulation example.

Index Terms

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