H_∞ State Estimation of Delayed Recurrent Memristive Neural Networks: continuous-time case and discrete-time case

fangyuan Ma¹ and Xingbao Gao¹

¹Shaanxi Normal University

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Abstract

This paper investigates the problem of H_∞ state estimation of delayed recurrent memristive neural networks (DRMNNs) with both continuous-time and discrete-time cases. By utilizing Lyapunov-Krasovskii functional (LKF) and linear matrix inequalities (LMIs), two criteria are provided to guarantee the asymptotically stable of the estimation error systems with a H_∞ performance. The connection weight parameters of DRMNNs are dealt with logical switching signals, which greatly reduces the computational complexity. The given conditions can be easily checked by solving LMIs, the obtained theoretical results are supported demonstrated by two numerical examples.

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