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Finite-time H_∞ control for a class of Markovian jumping neural networks with distributed time varying delays-LMI approach. (English) Zbl 1399.93051

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Summary: In this article, we investigates finite-time H_∞ control problem of Markovian jumping neural networks of neutral type with distributed time varying delays. The mathematical model of the Markovian jumping neural networks with distributed delays is established in which a set of neural networks are used as individual subsystems. Finite time stability analysis for such neural networks is addressed based on the linear matrix inequality approach. Numerical examples are given to illustrate the usefulness of our proposed method. The results obtained are compared with the results in the literature to show the conservativeness.

MSC:

93B36 H^∞-control
93C10 Nonlinear systems in control theory
93D05 Lyapunov and other classical stabilities (Lagrange, Poisson, L^p, l^p, etc.) in control theory
93D20 Asymptotic stability in control theory
68T05 Learning and adaptive systems in artificial intelligence

Keywords:

finite-time H_∞ control; Markovian jumping neural networks; Lyapunov stability

Full Text: DOI

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