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Exponentially Synchronization of BAM Neural Networks with Delay on Arbitrary Time Domain

Content

We study the exponential synchronization of bi-directional associative memory neural networks (BAMNNs) with delays on arbitrary time domains. Resorting to the theory of time scales, we provide stabilization results that apply to continuous-time, discrete-time, and general non-uniform hybrid time domains. For proving exponential synchronization and for designing performant feedback laws, we employ a unified matrix-measure theory that has been recently established as an alternative to Lyapunov functions. The effectiveness and generality of the obtained analytical results are illustrated by several numerical examples.

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