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Fixed-time synchronization of coupled Cohen-Grossberg neural networks with and without parameter uncertainties

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Abstract

This paper is devoted to fixed-time synchronization for coupled Cohen-Grossberg neural networks (CGNNs) with constant coupling and delayed coupling. By constructing suitable Lyapunov functional, a criterion is obtained to guarantee that coupled CGNNs achieves fixed-time synchronization. Furthermore, when parameter uncertainties occur, a sufficient condition for ensuring robust fixed-time synchronization of coupled CGNNs is presented. Similarly, the case that coupled CGNNs including delayed coupling is also discussed. Finally, two numerical examples are provided to show the availability for the acquired results.

Keywords: Delayed coupling, coupled Cohen-Grossberg neural networks,

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