

Some Results on Cluster Synchronization

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Abstract : This paper investigates cluster synchronization phenomena between community networks. We focus on the situation where a variety of dynamics occur in the clusters. In particular, we show that different synchronization states simultaneously occur between the networks. The controller is designed having an adaptive control gain, and theoretical results are derived via Lyapunov stability. Simulations on well-known dynamical systems are provided to elucidate our results.

Keywords : cluster synchronization, adaptive control, community network, simulation

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