On the relationship between the synchronizability of a network and some graph invariants

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Abstract

In this paper we establish the relation between some graph parameters, particularly, clustering coefficients and conductance, with the synchronization of the network.

There is a recent interest in the study of how the parameters relating the topology of the graph affect the synchronizability of the network associated with the graph. As results between the conductance and the synchronizability are known, we address our work to the relations between clustering and conductance of a graph in order to analyze the effect of clustering in the amplitude of the synchronization interval.

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