

# Partial synchronization in networks of systems with linear time-delay coupling

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Sometimes a network of coupled systems shows a form of incomplete synchronization characterized by an asymptotic match of the states of some, but not all, of its systems. This type of synchronization, called partial synchronization, requires the existence of positively invariant manifolds in the coupled systems' state-space. We present a number of conditions for the existence of such positively invariant manifolds for networks of systems with linear time-delay coupling. Some conditions for stability of these manifolds are presented.