

Synchronization of Semiconductor Laser Networks

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Abstract : In this paper, synchronization of multiple chaotic semiconductor lasers is achieved by appealing to complex system theory. In particular, we consider dynamical networks composed by semiconductor laser, as interconnected nodes, where the interaction in the networks are defined by coupling the first state of each node. An interesting case is synchronized with master-slave configuration in star topology. Nodes of these networks are modeled for the laser and simulated by Matlab. These results are applicable to private communication.

Keywords : chaotic laser, network, star topology, synchronization

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