SYNCHRO-CHIMERA STATES

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In [1], Authors consider a ring of N=3 coupled pendulum-like nodes. The nodes are connected to each other to both of their neighbours to the left and right with the same strength.

We observe that, in some specific region of the phase space, the three nodes are synchronized for long time, but a discrepancy appears between the long runs. We try to verify these states and characterize them according to their shapes of phase space or frequency. We call this state as Synchro – chimera state. We classify and define these types of Synchro-chimera states. Moreover, we find Synchro-chimera region according to change phase lag and coupling strength. Our simulations have confirmed when we choose the parameters close to critical point synchronization time S reaches its maximum and vice versa.

References


