Abstract

The non-linear action of the system following equation (4) has a globally fixed stable point at , multiple stability and chaotic regions for a range of its parameter a. The fraction of initial conditions going down to , or its basin stability,and the nature of the basins of attraction go as obtained in figure 4. Under nearest-neighbour coupling scheme the system does not show any regular spatiotemporal behaviour, but for small-world and random networks there is a total spatiotemporal coherence for a range of ε(figure 5(a)-(c)).The system is robust under noise and delay (figure 5(d)-(h)). The 2D (a)(b(c)6jijijiφφφdiffusive lattice scheme shows a range of patterns from smooth to chimeras tospatio-temporal chaos