

Destruction of Spiral Wave Using External Electric Field Modulated by Logistic Map

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Abstract: Evolution of spiral wave generated from the excitable media within the Barkley model is investigated. The external gradient electric field modulated by the logistic map is imposed on the media (along x- and y-axes). Drift and break up of spiral wave are observed when the amplitude of the electric field is modulated by the chaotic signal from the logistic map, and the whole system could become homogeneous finally and the relevant results are compared when the gradient electric field is modulated by the Lorenz or Rössler chaotic signal.

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