Optimal Control of Chaos in RCF Joupsson's Parallel Parallel Coupling Using Generalized Stepless Pathology and Fireflies Algorithm

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Abstract In this thesis, the chaos control is addressed in the RCL-shunted Josephson junction system. For this purpose, this system will first be investigated. Afterwards, it uses a generalized posttransmission method to control the chaos in this system. The designed controller has a number of odds that the inappropriate ion of their value will cause the system to function inappropriately. To obtain optimal response for stabilization, controller optimization is performed by firefighting algorithm. The firefly algorithm minimizes the fitness function to find the appropriate values for controlling interest coefficients. The chosen fitness function is the sum of the squares of the system error, which causes the controller to stabilize the system with less error, faster speed and control input. To demonstrate the controller's performance, we have simulated it and its effectiveness has been shown to control the chaos in the RCL-shunted Josephson junction system.

Keywords : Keywords: RCL-shunted Josephson junction system, turbulence, generalized stealth control, firefly algorithm.

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