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# Bifurcation and Chaos in a Weakly Nonlinear System Subjected to Combined Parametric and External Excitation

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摘要 In this paper the dynamics of a weakly nonlinear system subjected to combined parametric and external excitation are discussed. The existence of transversal homoclinic orbits resulting in chaotic dynamics and bifurcation are established by using the averaging method and Melnikov method. Numerical simulations are also provided to demonstrate the theoretical analysis.

关键词 bifurcation chaos transversal homoclinic orbit

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