非线性振动、动力学系统和矢量场的分叉

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装帧:

From the reviews: "This book is concerned with the application of methods from dynamical systems and bifurcation theories to the study of nonlinear oscillations. Chapter 1 provides a review of basic results in the theory of dynamical systems, covering both ordinary differential equations and discrete mappings. Chapter 2 presents 4 examples from nonlinear oscillations. Chapter 3 contains a discussion of the methods of local bifurcation theory for flows and maps, including center manifolds and normal forms. Chapter 4 develops analytical methods of averaging and perturbation theory. Close analysis of geometrically defined two-dimensional maps with complicated invariant sets is discussed in chapter 5. Chapter 6 covers global homoclinic and heteroclinic bifurcations. The final chapter shows how the global bifurcations reappear in degenerate local bifurcations and ends with several more models of physical problems which display these behaviors." #Book Review - Engineering Societies Library, New York#1

"An attempt to make research tools concerning `strange attractors' developed in the last 20 years available to applied scientists and to make clear to research mathematicians the needs in applied works. Emphasis on geometric and topological solutions of differential equations. Applications mainly drawn from nonlinear

oscillations." #American Mathematical Monthly#2

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