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Sommario/riassunto

This book focuses on the development of Melnikov-type methods applied to high dimensional dynamical systems governed by ordinary differential equations. Although the classical Melnikov's technique has found various applications in predicting homoclinic intersections, it is devoted only to the analysis of three-dimensional systems (in the case of mechanics, they represent one-degree-of-freedom nonautonomous systems). This book extends the classical Melnikov's approach to the study of high dimensional dynamical systems, and uses simple models of dry friction to analytically predict the occurren