

<<不连续动力系统>>

图书基本信息

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内容概要

本书是关于不连续动力系统动力学及其流转换性理论的专著、本专著提供了研究动力系统网络动力学及其行为复杂性的数学基础。

书中介绍的不连续动力系统障碍向量场理论将彻底改变人们在动力学系统中传统的思维方式；棱上动力学及其流转换复杂性理论是人们讨论动力学系统的低维网络通道吸引的数学基础；具有多值向量场的流对其边界、棱和顶点的跳跃流理论给小厂动力系统网络的“台球”理论的数学基础；动力系统的相互作用理论是动力系统网络中的普适性原理，并应用于动力系统同步。

本书可作为应用数学、物理、力学及控制领域的大学师生及科研人员的参考书。

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作者简介

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版权页：插图：In this Chapter , the passability of a flow to the boundary of two different dynamical systems will be presented. The accessible and inaccessible sub-domains will be introduced first for a theory of discontinuous dynamic systems. On the accessible domains, the corresponding dynamic systems will be introduced. The flow orientation and singular sets of boundary will be discussed. The passability and tangency (grazing) of a flow to the separation boundary between two adjacent accessible domains will be presented, and the necessary and sufficient conditions for such passability and tangency of the flow to the boundary will be presented. An L-function of flows will be introduced, and the switching bifurcation conditions for the flow passability to the boundary will be discussed. Finally, a friction-induced oscillator will be presented as an example.

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