

<<用于边界值问题的拓扑不动点原理>>

图书基本信息

书名：<<用于边界值问题的拓扑不动点原理>>

13位ISBN编号：9787510037597

10位ISBN编号：751003759X

出版时间：2011-7

出版时间：世界图书出版公司

作者：安德里斯

页数：761

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<用于边界值问题的拓扑不动点原理>>

内容概要

安德里斯编著的《用于边界值问题的拓扑不动点原理》旨在系统介绍凸空间上的单值和多值映射的拓扑不动点理论。

内容包括常微分方程的边界值问题和在动力系统中的应用，是第一本用非度量空间讲述拓扑不动点理论的专著。

尽管理论上的讲述和书中精选的应用实例相结合，但本身具有很强的独立性。

本书利用不动点理论求微分方程的解，独具特色。

目次：理论背景；一般原理；在微分方程中的应用。

<<用于边界值问题的拓扑不动点原理>>

书籍目录

- preface
- scheme for the relationship of single sections
- chapter theoretical background
 - .1.structure of locally convex spaces
 - .2.anr-spaces and ar-spaces
 - .3.multivalued mappings and their selections
 - .4.admissible mappings
 - .5.special classes of admissible mappings
 - .6.lefschetz fixed point theorem for admissible mappings
 - .7.lefschetz fixed point theorem for condensing mappings
 - .8.fixed point index and topological degree for admissible maps in
- locally convex spaces
 - .9.noncon/pact case
 - .10.nielsen number
 - .11.nielsen number; noncompact case
 - .12.remarks and comments
- chapter general principles
 - .1.topological structure of fixed point sets:
- aronszajn-browder-gupta-type results
 - .2.topological structure of fixed point sets: inverse limit
- method
 - .3.topological dimension of fixed point sets
 - .4.topological essentiality
 - .5.relative theories of lefschetz and nielsen
 - .6.periodic point principles
 - .7.fixed point index for condensing maps
 - .8.approximation methods in the fixed point theory of multivalued
- mappings
 - .9.topological degree defined by means of approximation
- methods
 - .10.continuation principles based on a fixed point index
 - .11.continuation principles based on a coincidence index
 - .12.remarks and comments
- chapter application to differential equations and inclusions
- inclusions
 - .1.topological approach to differential equations and inclusions
 - .2.topological structure of solution sets: initial value
- problems
 - .3.topological structure of solution sets: boundary value
- problems
 - .4.poincare operators
 - .5.existence results
 - .6.multiplicity results
 - .7.wakewski-type results

<<用于边界值问题的拓扑不动点原理>>

.8.bounding and guiding functions approach

.9.infinitely many subharmonics

.10.almost-periodic problems

.11.some further applications

.12.remarks and comments

appendices

a.1.almost-periodic single-valued and multivalued functions

a.2.derivo-periodic single-valued and multivalued functions

a.3.fractals and multivalued fractals

references

index

章节摘录

版权页：插图： Our book is devoted to the topological fixed point theory both for single-valued and multivalued mappings in locally convex spaces , including its application to boundary value problems for ordinary differential equations (inclusions) and to (multivalued) dynamical systems . It is the first monograph dealing with the topological fixed point theory in non-metric spaces . Although the theoretical material was tententially selected with respect to applications , we wished to have a self-consistent text (see the scheme below) . Therefore , we supplied three appendices concerning almost-periodic and derivo-periodic single-valued (multivalued) functions and (multivalued) fractals . The last topic which is quite new can be also regarded as a contribution to the fixed point theory in hyperspaces . Nevertheless , the reader is assumed to be at least partly familiar in some related sections with the notions like the Bochner integral , the Aumann multivalued integral , the Arzela-Ascoli lemma , the Gronwall inequality , the Brouwer degree , the Leray-Schauder degree , the topological (covering) dimension , the elemens of homological algebra , Otherwise , one can use the recommended literature . Hence , in Chapter I , the topological and analytical background is built . Then , in Chapter II (and partly already in Chapter I) , topological principles necessary for applications are developed , namely : —the fixed point index theory (resp . the topological degree theory) , —the Lefschetz and the Nielsen theories both in absolute and relative cases , —periodic point theorems , —topological essentiality , —continuation-type theorems . All the above topics are related to various classes of mappings including compact absorbing contractions and condensing maps . Besides the (more powerful) homological approach , the approximation techniques are alternatively employed as well .

<<用于边界值问题的拓扑不动点原理>>

编辑推荐

《用于边界值问题的拓扑不动点原理》利用不动点理论求微分方程的解，独具特色。
目次：理论背景；一般原理；在微分方程中的应用。

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>