

<<Linear functional analysis>>

图书基本信息

书名：<<Linear functional analysis线性泛函分析>>

13位ISBN编号：9781852332570

10位ISBN编号：1852332573

出版时间：2006-09-20

出版时间：Springer

作者：Bryan P. Rynne, Martin A. Youngson

页数：273

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>

<<Linear functional an>>

内容概要

This introduction to the ideas and methods of linear functional analysis shows how familiar and useful concepts from finite-dimensional linear algebra can be extended or generalized to infinite-dimensional spaces. Aimed at advanced undergraduates in mathematics and physics, the book assumes a standard background of linear algebra, real analysis (including the theory of metric spaces), and Lebesgue integration, although an introductory chapter summarizes the requisite material. The initial chapters develop the theory of infinite-dimensional normed spaces, in particular Hilbert spaces, after which the emphasis shifts to studying operators between such spaces. Functional analysis has applications to a vast range of areas of mathematics; the final chapters discuss the particularly important areas of integral and differential equations.

<<Linear functional an>>

书籍目录

1 Preliminaries 1.1 Linear Algebra 1.2 Metric Spaces 1.3 Lebesgue Integration 2 Normed Spaces 2.1 Examples of Normed Spaces 2.2 Finite-dimensional Normed Spaces 2.3 Banach Spaces 3 Inner Product Spaces, Hilbert Spaces 3.1 Inner Products 3.2 Orthogonality 3.3 Orthogonal Complements 3.4 Orthonormal Bases in Infinite Dimensions 3.5 Fourier Series 4 Linear Operators 4.1 Continuous Linear Transformations 4.2 The Norm of a Bounded Linear Operator 4.3 The Space $B(X,Y)$ and Dual Spaces 4.4 Inverses of Operators 5 Linear Operators on Hilbert Spaces 5.1 The Adjoint of an Operator 5.2 Normal, Self-adjoint and Unitary Operators 5.3 The Spectrum of an Operator 5.4 Positive Operators and Projections 6 Compact Operators 6.1 Compact Operators 6.2 Spectral Theory of Compact Operators 6.3 Self-adjoint Compact Operators 7 Integral and Differential Equations 7.1 Fredholm Integral Equations 7.2 Volterra Integral Equations 7.3 Differential Equations 7.4 Eigenvalue Problems and Green's Functions 8 Solutions to Exercises Further Reading References Notation Index Index

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>