

<<线性偏微分算子分析 第1卷 第2版(英文)>>

图书基本信息

书名：<<线性偏微分算子分析 第1卷 第2版(英文影印版)>>

13位ISBN编号：9787506272766

10位ISBN编号：7506272768

出版时间：2005-6

出版单位：北京世界图书出版公司

作者：L.Hormander

页数：440

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>

内容概要

The progress in the theory of linear partial differential equations during the past 30 years owes much to the theory of distributions created by Laurent Schwartz at the end of the 1940's. It summed up a great deal of the experience accumulated in the study of partial differential equations up to that time, and it has provided an ideal framework for later developments. "Linear partial differential operators" began with a brief summary of distribution theory for this was still unfamiliar to many analysts 20 years ago. The presentation then proceeded directly to the most general results available on partial differential operators. Thus the reader was expected to have some prior familiarity with the classical theory although it was not appealed to explicitly. Today it may no longer be necessary to include basic distribution theory but it does not seem reasonable to assume a classical background in the theory of partial differential equations since modern treatments are rare. Now the techniques developed in the study of singularities of solutions of differential equations make it possible to regard a fair amount of this material as consequences of extensions of distribution theory. Rather than omitting distribution theory I have therefore decided to make the first volume of this book a greatly expanded treatment of it. The title has been modified so that it indicates the general analytical contents of this volume.

书籍目录

Introduction Chapter Test Functions Summary 1.1 A review of Differential Calculus 1.2 Existence of Test Functions 1.3 Convolution 1.4 Cutoff Functions and Partitions of Unity Notes Chapter Definition and Basic Properties of Distributions Summary 2.1 Basic Definitions 2.2 Localization 2.3 Distributions with Compact Support Notes Chapter Differentiation and Multiplication by Functions Summary 3.1 Definition and Examples 3.2 Homogeneous Distributions 3.3 Some Fundamental Solutions 3.4 Evaluation of Some Integrals Notes Chapter Convolution Summary 4.1 Convolution with a Smooth Function 4.2 Convolution of Distributions 4.3 The Theorem of Supports 4.4 The Role of Fundamental Solutions 4.5 Basic L_p Estimates for Convolutions Notes Chapter Distributions in Product Spaces Summary 5.1 Tensor Products 5.2 The Kernel Theorem Notes Chapter Composition with Smooth Maps Summary 6.1 Definitions 6.2 Some Fundamental Solutions 6.3 Distributions on a Manifold 6.4 The Tangent and Cotangent Bundles Notes Chapter The Fourier Transformation Summary 7.1 The Fourier Transformation in and in \mathbb{R}^n 7.2 Poissons Summation Formula and Periodic Distributions 7.3 The Fourier-Laplace Transformation in \mathbb{R}^n 7.4 More General Fourier-Laplace Transforms 7.5 The Malgrange Preparatio Theorem 7.6 Fourier Transforms of Gaussian Functions 7.7 The Method of Stationary Phase 7.8 Oscillatory Integrals 7.9 $H(s)L_p$ and Holder Estimates Notes Chapter Spectral Analysis of Singularities Summary 8.1 The Wave Front Set 8.2 A Review of Operations with Distributions 8.3 The Wave Front Set of Solutions Of Partial Differential Equations 8.4 THE Wave Front Set With Respect to \mathbb{R}^n 8.5 Rules of Computation for WFL 8.6 WFL for Solutions of Partial Differential Equations 8.7 Microhyperbolicity Notes Chapter Hyperfunctions SummaryExercisesAnswers and Hints to All the ExercisesBibliographyIndexIndex of Notation

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>