

## <<代数拓扑导论>>

### 图书基本信息

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## &lt;&lt;代数拓扑导论&gt;&gt;

## 前言

This textbook is designed to introduce advanced undergraduate or beginning graduate students to algebraic topology as painlessly as possible. The principal topics treated are 2-dimensional manifolds, the fundamental group, and covering spaces, plus the group theory needed in these topics. The only prerequisites are some group theory, such as that normally contained in an undergraduate algebra course on the junior-senior level, and a one-semester undergraduate course in general topology. The topics discussed in this book are “standard” in the sense that several well-known textbooks and treatises devote a few sections or a chapter to them. This, I believe, is the first textbook giving a straightforward treatment of these topics, stripped of all unnecessary definitions, terminology, etc., and with numerous examples and exercises, thus making them intelligible to advanced undergraduate students. The subject matter is used in several branches of mathematics other than algebraic topology, such as differential geometry, the theory of Lie groups, the theory of Riemann surfaces, or knot theory. In the development of the theory, there is a nice interplay between algebra and topology which causes each to reinforce interpretations of the other. Such an interplay between different topics of mathematics breaks down the often artificial subdivision of mathematics into different “branches” and emphasizes the essential unity of all mathematics.

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## 内容概要

This textbook is designed to introduce advanced undergraduate or beginning graduate students to algebraic topology as painlessly as possible. The principal topics treated are 2-dimensional manifolds , the fundamental group , and covering spaces , plus the group theory needed in these topics. The only prerequisites are some group theory , such as that normally contained in an undergraduate algebra course on the junior-senior level , and a one-semester undergraduate course in general topology. The topics discussed in this book are "standard" in the sense that several well-known textbooks and treatises devote a few sections or a chapter to them. This , I believe , is the first textbook giving a straightforward treatment of these topics , stripped of all unnecessary definitions , terminology , etc. , and with numerous examples and exercises , thus making them intelligible to advanced undergraduate students.

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## 书籍目录

CHAPTER ONE Two-Dimensional Manifolds 1 Introduction 2 Definition and examples of  $n$ -manifolds 3 Orientable vs. nonorientable manifolds 4 Examples of compact, connected 2-manifolds 5 Statement of the classification theorem for compact surfaces 6 Triangulations of compact surfaces 7 Proof of Theorem 5.1 8 The Euler characteristic of a surface 9 Manifolds with boundary 10 The classification of compact, connected 2-manifolds with boundary 11 The Euler characteristic of a bordered surface 12 Models of compact bordered surfaces in Euclidean 3-space 13 Remarks on noncompact surfaces

CHAPTER TWO The Fundamental Group 1 Introduction 2 Basic notation and terminology 3 Definition of the fundamental group of a space 4 The effect of a continuous mapping on the fundamental group 5 The fundamental group of a circle is infinite cyclic 6 Application: The Brouwer fixed-point theorem in dimension 2 7 The fundamental group of a product space 8 Homotopy type and homotopy equivalence of spaces

CHAPTER THREE Free Groups and Free Products of Groups 1 Introduction 2 The weak product of abelian groups 3 Free abelian groups 4 Free products of groups 5 Free groups 6 The presentation of groups by generators and relations 7 Universal mapping problems

CHAPTER FOUR Seifert and Van Kampen Theorem on the Fundamental Group of the Union of Two Spaces. Applications 1 Introduction 2 Statement and proof of the theorem of Seifert and Van Kampen .....CHAPTER FIVE Covering SpacesCHAPTER SIX The Fundamental Group and Covering Spaces of a Graph. Applications to Group TheoryCHAPTER SEVEN The Fundamental Group of Higher Dimensional SpacesCHAPTER EIGHT EpilogueAPPENDIX A The Quotient Space or Identification Space

TopologyPermutation Groups or Transformation GroupsIndex

## <<代数拓扑导论>>

### 章节摘录

插图：

## <<代数拓扑导论>>

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