

<<代数拓扑基础教程>>

图书基本信息

书名：<<代数拓扑基础教程>>

13位ISBN编号：9787510004803

10位ISBN编号：7510004802

出版时间：2009-8

出版公司：世界图书出版公司

作者：曼斯

页数：428

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>

<<代数拓扑基础教程>>

内容概要

This book is intended to serve as a textbook for a course in algebraic topology at the beginning graduate level. The main topics covered are the classification of compact 2-manifolds, the fundamental group, covering spaces, singular homology theory, and singular cohomology theory (including cup products and the duality theorems of Poincaré and Alexander). It consists of material from the first five chapters of the author's earlier book Algebraic Topology: An Introduction (GTM 56) together with almost all of his book Singular Homology Theory (GTM 70). This material from the two earlier books has been revised, corrected, and brought up to date. There is enough here for a full-year course. The author has tried to give a straightforward treatment of the subject matter, stripped of all unnecessary definitions, terminology, and technical machinery. He has also tried, wherever feasible, to emphasize the geometric motivation behind the various concepts. Several applications of the methods of algebraic topology to concrete geometrical-topological problems are given (e.g., Brouwer fixed point theorem, Brouwer-Jordan separation theorem, Invariance of Domain, Borsuk-Ulam theorems).

<<代数拓扑基础教程>>

书籍目录

Preface
 Notation and Terminology
 CHAPTER 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 References
 CHAPTER 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 References
 CHAPTER 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 References
 CHAPTER 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 3. First Application of Theorem 2.1 4. Second Application of Theorem 2.1 5. Structure of the Fundamental Group of a Compact Surface 6. Application to Knot Theory 7. Proof of Lemma 2.4 References
 CHAPTER Covering Spaces 1. Introduction 2. Definition and Some Examples of Covering Spaces 3. Lifting of Paths to a Covering Space 4. The Fundamental Group of a Covering Space 5. Lifting of Arbitrary Maps to a Covering Space 6. Homomorphisms and Automorphisms of Covering Spaces.....

<<代数拓扑基础教程>>

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>