

<<代数拓扑基础教程>>

图书基本信息

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作者：曼斯

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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 Poincare 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 theorem).

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