

<<图的拓扑理论>>

图书基本信息

书名：<<图的拓扑理论>>

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前言

The subject of this book reflects new developments mainly by the author himself in company with cooperators most of them his former and present graduate students on the foundation established in Liu, Y. P. [33-34]. The central idea is to extract suitable parts of a topological object such as a graph not necessary to be with symmetry, as linear spaces which are all with symmetry for exploiting global properties in construction of the object. This is a way of combinatorization and further algebraization of an object via relationship among their subspaces. Graphs are dealt with three vector spaces over $GF(2)$, the finite field of order 2, generated by 0 (dimensional) -cells, 1 (dimensional) -cells and 2 (dimensional) -cells. The first two spaces were known from, e.g., Lefschetz, S. [2] by taking 0-cells and 1-cells as, respectively, vertices and edges. Of course, a graph is only a 1-complex without two cells.

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内容概要

本书不在于图的拓扑性质本身，而是着意以图为代表的一些组合构形为出发点，揭示与拓扑学中一些典型对偶，如多面形、曲面、嵌入、纽结等的联系，特别是显示了定理有效化的途径对于以拓扑学为代表的基础数学的作用。

同时，也提出了一些新的曲面模型，为超大规模集成电路的布线尝试构建多方面的理论基础。

本书可作为基础数学，应用数学、系统科学、计算机科学等专业高年级本科生和研究生的补充教材，也可供相关专业的教师和科研工作者参考。

书籍目录

Preface
 Chapter 1 Preliminaries 1.1 Sets and relations 1.2 Partitions and permutations 1.3 Graphs and networks 1.4 Groups and spaces 1.5 Notes
 Chapter 2 Polyhedra 2.1 Polygon double covers 2.2 Supports and skeletons 2.3 Orientable polyhedra 2.4 Nonorientable polyhedra 2.5 Classic polyhedra 2.6 Notes
 Chapter 3 Surfaces 3.1 Polyhedrons 3.2 Surface closed curve axiom 3.3 Topological transformations 3.4 Complete invariants 3.5 Graphs on surfaces 3.6 Up-embeddability 3.7 Notes
 Chapter 4 Homology on Polyhedra 4.1 Double cover by travels 4.2 Homology 4.3 Cohomology 4.4 Bicycles 4.5 Notes
 Chapter 5 Polyhedra on the Sphere 5.1 Planar polyhedra 5.2 Jordan closed curve axiom 5.3 Uniqueness 5.4 Straight line representations 5.5 Convex representation 5.6 Notes
 Chapter 6 Automorphisms of a Polyhedron 6.1 Automorphisms 6.2 V-codes and F-codes 6.3 Determination of automorphisms 6.4 Asymmetrization 5.5 Notes
 Chapter 7 Gauss Crossing Sequences 7.1 Crossing polyhedrons 7.2 Dehn's transformation 7.3 Algebraic principles 7.4 Gauss Crossing problem 7.5 Notes
 Chapter 8 Cohomology on Graphs 8.1 Immersions 8.2 Realization of planarity 8.3 Reductions 8.4 Planarity auxiliary graphs 8.5 Basic conclusions 8.6 Notes
 Chapter 9 Embeddability on Surfaces
 Chapter 10 Embeddings on the Sphere
 Chapter 11 Orthogonality on Surfaces
 Chapter 12 Net Embeddings
 Chapter 13 Extremality on Surfaces
 Chapter 14 Matroidal Graphicalness
 Chapter 15 Knot Polynomials
 Bibliography
 Subject Index
 Author Index

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章节摘录

插图：

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