<<地图计数通论>>

图书基本信息

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内容概要

Since the first monograph titled Enumerative Theory of Maps appeared on the subject considered in 1999, many advances have been made by the author himself and those directed by him under such a theoretical foundation. Because of that book with much attention to maps on surface of genus zero, this monograph is in principle concerned with maps on surfaces of genus not zero. Via main theoretical lines, this book is divided into four parts except Chapter 1 for preliminaries. Part one contains Chapters 2 through 10. The theory is presented for maps on general surfaces of genus not necessary to be zero. For the theory on a surface of genus zero is comprehensively improved for investigating maps on all surfaces of genera not zero. Part two consists of only Chapter 11. Relationships are established for building up a bridge between super maps and embeddings of a graph via their automorphism groups. Part three consists of Chapters 12 and 13. A general theory for finding genus distribution of graph embeddings, handle polynomials and crosscap polynomials of super maps are constructed on the basis of the joint tree method which enables us to transform a problem in a high dimensional space into a problem on a polygon. All other chapters, i.e., Chapters 14 through 17, as part four are concerned with several aspects of main extensions to distinct directions. An appendix serves as atlas of super maps of typical graphs of small size on surfaces for the convenience of readers to check their understanding.

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书籍目录

章节摘录

插图：

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编辑推荐

《地图计数通论(精)》是由科学出版社出版的。

This monograph is for theory and its extensions related to census of maps on general surfaces established on the basis of what has been done on the surface of genus zero. In spite of a number of improved results with maps on a surface of genus zero for surfaces of genus not zero, two new theoretical lines via exploiting the relationship between super maps and embeddings of a graph on surfaces and via the joint tree technique are investigated for a variety of topics such as those in the determination of handle and crosscap polynomials of maps, genus distribution of embeddings, and others related. In particular, an appendix serves as the exhaustive counting super maps (rooted and nonrooted) including these polynomials with under graphs of small size for the reader's digests.

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