

<<Steenrod Squares in >>

图书基本信息

书名：<<Steenrod Squares in Spectral Sequences谱序列中的斯廷罗德正方形>>

13位ISBN编号：9780821841419

10位ISBN编号：0821841416

出版时间：2006-8

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页数：152

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内容概要

This book develops a general theory of Steenrod operations in spectral sequences. It gives special attention to the change-of-rings spectral sequence for the cohomology of an extension of Hopf algebras and to the Eilenberg-Moore spectral sequence for the cohomology of classifying spaces and homotopy orbit spaces. In treating the change-of-rings spectral sequence, the book develops from scratch the necessary properties of extensions of Hopf algebras and constructs the spectral sequence in a form particularly suited to the introduction of Steenrod squares. The resulting theory can be used effectively for the computation of the cohomology rings of groups and Hopf algebras, and of the Steenrod algebra in particular, and so should play a useful role in stable homotopy theory. Similarly the book offers a self-contained construction of the Eilenberg-Moore spectral sequence, in a form suitable for the introduction of Steenrod operations. The corresponding theory is an effective tool for the computation of the cohomology rings of the classifying spaces of the exceptional Lie groups, and it promises to be equally useful for the computation of the cohomology rings of homotopy orbit spaces and of the classifying spaces of loop groups.

<<Steenrod Squares in >>

书籍目录

Preface Chapter 1. Conventions 1. Vector Spaces 2. Algebras, Coalgebras, and Modules 3. Dual Modules
 4. Bialgebras and Hopf Algebras 5. \mathcal{O} - Modules and Relative Homological Algebra 6. Algebras with
 Coproducts 7. Chains and Cochains 8. Differential Algebras and Coalgebras 9. Simplicial \mathcal{O} -Modules
 10. Homology of Simplicial Sets and Simplicial Groups 11. Cotriples, Simplicial Objects, and Projective
 Resolutions 12. Simplicial \mathcal{O} -Coalgebras and Steenrod Operations 13. Steenrod Operations on the
 Cohomology of Simplicial Sets 14. Steenrod Operations on the Cohomology of Hopf Algebras 15. Bisimplicial
 Objects 16. The Spectral Sequence of a Bisimplicial \mathcal{O} -Module 17. Cup- k Products and Bisimplicial
 \mathcal{O} -Modules Chapter 2. The Spectral Sequence of a Bisimplicial Coalgebra 1. Bisimplicial \mathcal{O} -Coalgebras
 2. Filtrations 3. The Spectral Sequence 4. Bisimplicial Sets with Group Action 5. Application to the Serre
 Spectral Sequence 6. Application to Andre-Quillen Cohomology Chapter 3. Bialgebra Actions on the
 Cohomology of Algebras 1. Left Action by a Bialgebra 2. Left Action by an Algebra with Coproducts 3. Right
 Action by a Hopf algebra Chapter 4. Extensions of Hopf Algebras 1. Convolutions and Conjugations 2. Some
 Properties of Extensions 3. Adjunction Isomorphism and Change-of-Rings Spectral Sequence Chapter 5. Steenrod
 Operations in the Change-of-Rings Spectral Sequence 1. The Spectral Sequence with its Products and Steenrod
 Squares 2. Steenrod Operations on Ext 3. Central Extensions 4. The Operations at the E_2 -level 5. A Simple
 Example 6. Application to the Cohomology of the Steenrod Algebra 7. Application to Finite sub-Hopf Algebras
 of the Steenrod Algebra 8. Applications to the Cohomology of Groups Chapter 6. The Eilenberg-Moore Spectral
 Sequence 1. Kan Fibrations and Twisted Cartesian Products 2. Bisimplicial Models for Fiber Bundles
 3. Construction of the Spectral Sequence 4. Calculation of the E_2 -Term Chapter 7. Steenrod Operations in the
 Eilenberg-Moore Spectral Sequence 1. The Spectral Sequence with its Products and Steenrod Squares 2.
 Steenrod Operations on Ext 3. The Operations at the E_2 -level 4. Applications Bibliography Index

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