

<<同调>>

图书基本信息

书名：<<同调>>

13位ISBN编号：9787510005015

10位ISBN编号：7510005019

出版时间：2009-8

出版时间：世界图书出版公司

作者：Saunders Mac Lane

页数：422

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>

## 前言

In presenting this treatment of homological algebra, it is a pleasure to acknowledge the help and encouragement which I have had from all sides. Homological algebra arose from many sources in algebra and topology. Decisive examples came from the study of group extensions and their factor sets, a subject I learned in joint work with OTTO SCHIL-LING. A further development of homological ideas, with a view to their topological applications, came in my long collaboration with SAHUELEZLENBERG; to both collaborators, especial thanks. For many years the Air Force Office of Scientific Research supported my research projects on various subjects now summarized here; it is a pleasure to acknowledge their lively understanding of basic science.

Both REINHOLD BAER and JOSEF SCHMID read and commented on my entire manuscript; their advice has led to many improvements. ANDERS KOCK and JACQUES RIGUET have read the entire galley proof and caught many slips and obscurities. Among the others whose suggestions have served me well, I note FRANK ADAMS, LOUIS AUSLANDER, WILFRED COCKCROFT, ALBRECHT DOLD, GEOFFREY HORROCKS, FRIED-RICH KASCH, JOHANN LEICHT, ARUNAS LIULEVICIUS, JOHN MOORE, DIETRICH PUFFE, JOSEPH YAO, and a number of my current students at the University of Chicago — not to mention the auditors of my lectures at Chicago, Heidelberg, Bonn, Frankfurt, and Aarhus. My wife, DONOTHY, has cheerfully typed more versions of more chapters than she would like to count. Messrs. SPRINTER have been unfailingly courteous in the preparation of the book; in particular, I am grateful to F. K. SCHMIDT, the Editor of this series, for his support. To all these and others who have helped me, I express my best thanks.

## 内容概要

In presenting this treatment of homological algebra , it is a pleasure to acknowledge the help and encouragement which I have had from all sides. Homological algebra arose from many sources in algebra and topology. Decisive examples came from the study of group extensions and their factor sets , a subject I learned in joint work with OTTO SCHIL-LING. A further development of homological ideas , with a view to their topological applications , came in my long collaboration with SAHUELEZLENBERG; to both collaborators , especial thanks. For many years the Air Force Office of Scientific Research supported my research projects on various subjects now summarized here; it is a pleasure to acknowledge their lively understanding Of basic science.

## 作者简介

Saunders Mac Lane was born on August 4, 1909 in Connecticut. He studied at Yale University and then at the University of Chicago and at Göttingen, where he received the D. Phil. in 1934. He has taught at Harvard, Cornell and the University of Chicago. Mac Lane's initial research was in logic and in algebraic number theory (valuation theory). With Samuel Eilenberg he published fifteen papers on algebraic topology. A number of them involved the initial steps in the cohomology of groups and in other aspects of homological algebra - as well as the discovery of category theory. His famous undergraduate textbook *Survey of modern algebra*, written jointly with G. Birkhoff, has remained in print for over 50 years. Mac Lane is also the author of several other highly successful books.

## 书籍目录

Introduction Chapter I. Modules, Diagrams, and Functors 1. The Arrow Notation 2. Modules 3. Diagrams  
4. Direct Sums 5. Free and Projective Modules 6. The Functor Horn 7. Categories 8. Functors Chapter II.  
Homology of Complexes 1. Differential Groups 2. Complexes 3. Cohomology 4. The Exact Homology  
Sequence 5. Some Diagram Lemmas 6. Additive Relations 7. Singular Homology 8. Homotopy 9.  
Axioms for Homology Chapter III. Extensions and Resolutions 1. Extensions of Modules 2. Addition of  
Extensions 3. Obstructions to the Extension of Homomorphisms 4. The Universal Coefficient Theorem for  
Cohomology 5. Composition of Extensions 6. Resolutions 7. Injective Modules 8. Injective Resolutions  
9. Two Exact Sequences for Ext<sub>n</sub> 10. Axiomatic Description of Ext 11. The Injective Envelope Chapter IV.  
Cohomology of Groups 1. The Group Ring 2. Crossed Homomorphisms 3. Group Extensions 4. Factor  
Sets 5. The Bar Resolution 6. The Characteristic Class of a Group Extension 7. Cohomology of Cyclic and  
Free Groups 8. Obstructions to Extensions 9. Realization of Obstructions 10. SCHUR'S THEOREM 11.  
Spaces with Operators Chapter V. Tensor and Torsion Products 1. Tensor Products 2. Modules over  
Commutative Rings 3. Bimodules 4. Dual Modules 5. Right Exactness of Tensor Products 6. Torsion  
Products of Groups 7. Torsion Products of Modules 8. Torsion Products by Resolutions 9. The Tensor  
Product of Complexes 10. The KÖNIGSBERG Formula 11. Universal Coefficient Theorems Chapter VI. Types of  
Algebras 1. Algebras by Diagrams 2. Graded Modules 3. Graded Algebras 4. Tensor Products of Algebras  
5. Modules over Algebras 6. Cohomology of free Abelian Groups 7. Differential Graded Algebras 8.  
Identities on Horn and 9. Coalgebras and Hopf Algebras Chapter VII. Dimension 1. Homological Dimension  
2. Dimensions in Polynomial Rings 3. Ext and Tor for Algebras 4. Global Dimensions of Polynomial Rings  
5. Separable Algebras 6. Graded Syzygies 7. Local Rings Chapter VIII. Products 1. Homology Products  
2. The Torsion Product of Algebras 3. A Diagram Lemma 4. External Products for Ext 5. Simplicial  
Objects 6. Normalization 7. Acyclic Models 8. The EILENBERG-ZILBER Theorem 9. Cup  
Products Chapter IX. Relative Homological Algebra 1. Additive Categories 2. Abelian Categories 3.  
Categories of Diagrams 4. Comparison of Allowable Resolutions 5. Relative Abelian Categories 6. Relative  
Resolutions 7. The Categorical Bar Resolution 8. Relative Torsion Products 9. Direct Products of  
Rings Chapter X. Cohomology of Algebraic Systems Chapter XI. Spectral Sequences Chapter XII. Derived  
Functors Bibliography List of Standard Symbols Index

#### 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>