

<<纤维丛>>

图书基本信息

书名：<<纤维丛>>

13位ISBN编号：9787510004452

10位ISBN编号：7510004454

出版时间：2009-4

出版时间：世界图书出版公司

作者：休斯莫勒

页数：352

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 this edition , we have added two new chapters , Chapter 7 on the gauge group of a principal bundle and Chapter 19 on the definition of Chern classes by differential forms. These subjects have taken on special importance when we consider new applications of the fibre bundle theory especially to mathematical physics. For these two chapters, the author profited from discussions with Professor M.S.Narasimhan. The idea of using the term bundle for what is just a map , but is eventually a fibre bundle projection , is due to Grothendieck. The bibliography has been enlarged and updated. For example , in the Seifert reference [1932] we find one of the first explicit references to the concept of fibrings. The first edition of the Fibre Bundles was translated into Russian under the title “ ПаккИОеHHble пocTpaHcTpa ” in 1970 by B.A.CKOBCKHX with general editor M.M.OCTHHKOBa. The remarks and additions of the editor have been very useful in this edition of the book. The author is very grateful to A.Voronov, who helped with translations of the additions from the Russian text. Part of this revision was made while the author was a guest of the Max Planck Institut from 1988 to 89 , the ETH during the summers of 1990 and 1991 , the University of Heidelberg during the summer of 1992 , and the Tata Institute for Fundamental Research during January 1990 , 1991 and 1992. It is a pleasure to acknowledge all these institutions as well as the Haverford College Faculty Research Fund.

内容概要

The notion of a fibre bundle first arose out of questions posed in the 1930s on the topology and geometry of manifolds. By the year 1950, the definition of fibre bundle had been clearly formulated, the homotopy classification of fibre bundles achieved, and the theory of characteristic classes of fibre bundles developed by several mathematicians: Chern, Pontrjagin, Stiefel, and Whitney. Steenrod's book, which appeared in 1950, gave a coherent treatment of the subject up to that time. About 1955, Milnor gave a construction of a universal fibre bundle for any topological group. This construction is also included in Part I along with an elementary proof that the bundle is universal.

书籍目录

Preface to the Third Edition Preface to the Second Edition Preface to the First Edition

CHAPTER 1 Preliminaries on Homotopy Theory 1. Category Theory and Homotopy Theory 2. Complexes 3. The Spaces Map (X, Y) and $\text{Map}_0(X, Y)$ 4. Homotopy Groups of Spaces 5. Fibre Maps

PART I THE GENERAL THEORY OF FIBRE BUNDLES

CHAPTER 2 Generalities on Bundles 1. Definition of Bundles and Cross Sections 2. Examples of Bundles and Cross Sections 3. Morphisms of Bundles 4. Products and Fibre Products 5. Restrictions of Bundles and Induced Bundles 6. Local Properties of Bundles 7. Prolongation of Cross Sections Exercises

CHAPTER 3 Vector Bundles 1. Definition and Examples of Vector Bundles 2. Morphisms of Vector Bundles 3. induced Vector Bundles 4. Homotopy Properties of Vector Bundles 5. Construction of Gauss Maps 6. Homotopies of Gauss Maps 7. Functorial Description of the Homotopy Classification of Vector Bundles 8. Kernel, Image, and Cokernel of Morphisms with Constant Rank 9. Riemannian and Hermitian Metrics on Vector Bundles Exercises

CHAPTER 4 General Fibre Bundles 1. Bundles Defined by Transformation Groups 2. Definition and Examples of Principal Bundles 3. Categories of Principal Bundles 4. Induced Bundles of Principal Bundles 5. Definition of Fibre Bundles 6. Functorial Properties of Fibre Bundles 7. Trivial and Locally Trivial Fibre Bundles 8. Description of Cross Sections of a Fibre Bundle 9. Numerable Principal Bundles over $B \times [0, 1]$ 10. The Cofunctor k 11. The Milnor Construction 12. Homotopy Classification of Numerable Principal G -Bundles 13. Homotopy Classification of Principal G -Bundles over CW -Complexes Exercises

CHAPTER 5 Local Coordinate Description of Fibre Bundles 1. Automorphisms of Trivial Fibre Bundles 2. Charts and Transition Functions 3. Construction of Bundles with Given Transition Functions 4. Transition Functions and Induced Bundles 5. Local Representation of Vector Bundle Morphisms 6. Operations on Vector Bundles 7. Transition Functions for Bundles with Metrics Exercises

CHAPTER 6 Change of Structure Group in Fibre Bundles 1. Fibre Bundles with Homogeneous Spaces as Fibres.....

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>