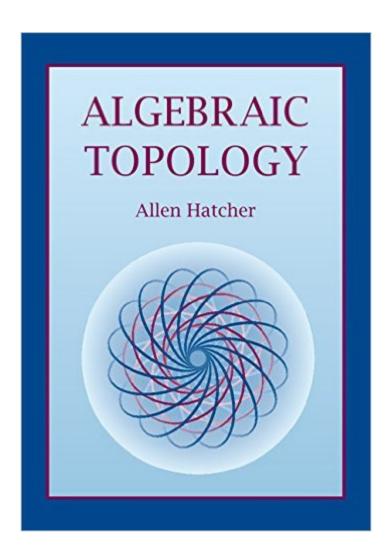
The book was found

Algebraic Topology





Synopsis

In most major universities one of the three or four basic first-year graduate mathematics courses is algebraic topology. This introductory text is suitable for use in a course on the subject or for self-study, featuring broad coverage and a readable exposition, with many examples and exercises. The four main chapters present the basics: fundamental group and covering spaces, homology and cohomology, higher homotopy groups, and homotopy theory generally. The author emphasizes the geometric aspects of the subject, which helps students gain intuition. A unique feature is the inclusion of many optional topics not usually part of a first course due to time constraints: Bockstein and transfer homomorphisms, direct and inverse limits, H-spaces and Hopf algebras, the Brown representability theorem, the James reduced product, the Dold-Thom theorem, and Steenrod squares and powers.

Book Information

Paperback: 556 pages

Publisher: Cambridge University Press; 1 edition (December 3, 2001)

Language: English

ISBN-10: 0521535379

ISBN-13: 978-0521795401

ASIN: 0521795400

Product Dimensions: 7 x 1.3 x 10 inches

Shipping Weight: 2.6 pounds (View shipping rates and policies)

Average Customer Review: 4.0 out of 5 stars Â See all reviews (41 customer reviews)

Best Sellers Rank: #88,824 in Books (See Top 100 in Books) #6 in Books > Science & Math >

Mathematics > Geometry & Topology > Algebraic Geometry #10 in Books > Science & Math >

Mathematics > Geometry & Topology > Topology #39 in Books > Textbooks > Science &

Mathematics > Mathematics > Geometry

Customer Reviews

Allen Hatcher has gone to great length's in order to create a text which, albeit overly verbose, can be used as a gentle introduction to modern Algebraic Topology. Why 'modern'? Compare this text with the tried and tested texts of Spanier, Munkres as well as May and, almost immediately, you will see what I mean. The obvious example is Hatcher's use of CW-complexes as opposed to the more traditional build up beginning with simplices. For the die-hard mathematician who enjoys less fluff, this book is not for you and, in particular, if this is your first venture in Algebriac Topology, you enjoy

the theorem-proof-theorem style with a light sprinkling of explaination, then I would recommend J.J. Rotman's text. Whereas, if you enjoy filler, background information, and lots of side-notes or examples, then Hatcher's text would be a perfect fit. Myself, I fall into the category of those who enjoy the more terse texts but, I purchased Hatcher's (the hardcover) because of the clarity and percision found in the proofs. The majority of other texts have a tendancy to obfuscate the underlying meaning that should be unerstood by the up-and-coming mathematician. Of course this approach has it's merits since, in particular, it forces the reader to fill in the blanks but, as a matter of insight, Hatcher's approach is also beneficial. Another positive strength of Hatcher's text lies in the fact that he effectively breaks the subject into it's prime sub-categories in such a way that the reader can begin with either of the four parts of the text without having to rely too much on previous sections. This novel feature allows someone interested in, say, Cohomology to pick up an begin learning about Cohomology without having to waste time making their way through material they are not interested in.

This book is intended as an "introduction to alegbraic topology" and I rated the book accordingly. found the book refreshing at points and thorougly frustrating at other points. This was one of the first book I approached when trying to learn formal algebraic topology. Prior to reading it I had indirect exposure to algebraic topology in application to physics especially when learning about differential forms where one is usually exposed to homology cohomology and derham cohomology, etc. I found the physics texts MUCH more instructive than this text which is supposed to be from the mathematicians perspective. The book has it's merits:1) it is organized well and attempts to relate the main topics in algebraic topolgy - homotopy and homology2) it has many examples to help solidify the concept presented3) it has plenty of exercises of varying difficulty.4) it genuinely tries to motivate the mathematical ideas of algebraic topology. However it has many faults. I was particulary disturbed by it's lack of definitions. At some point I felt like I was having a conversation or reading a "pop" math books for the dilettante not mathematician. I found myself repeatedly going back and having to REREAD THE TEXT to get the definition of some mathematical object. In my humble opinion a math text should clearly state definitions and properties and not try to "explain" them in prose without the preceding definitions. The author also states minimal prerequisites (algebra and point set topology), however, it is clear alot more is needed. Although there are plenty of examples, the author, simply states conclusions which maybe "self-evident" to someone with previous exposure to algebraic topology but not to a novice.

Download to continue reading...

Algebraic Topology Basic Concepts of Algebraic Topology (Undergraduate Texts in Mathematics)
Topology Optimization Introduction to Topology: Third Edition (Dover Books on Mathematics)
Topology from the Differentiable Viewpoint Geometry, Topology and Physics, Second Edition
(Graduate Student Series in Physics) Topology of Surfaces, Knots, and Manifolds Topology (2nd
Economy Edition) Principles of Topology (Dover Books on Mathematics) Topology (Undergraduate
Texts in Mathematics) Elementary Applied Topology Three-Dimensional Geometry and Topology,
Vol. 1 Topology (2nd Edition) The Infinite-Dimensional Topology of Function Spaces, Volume 64
(North-Holland Mathematical Library) Many-Body Physics, Topology and Geometry
Algebraic-Geometric Codes (Mathematics and its Applications) Logical Chess: Move By Move:
Every Move Explained New Algebraic Edition The K-Book: An Introduction to Algebraic K-Theory
(Graduate Studies in Mathematics) Algebraic Geometry (Graduate Texts in Mathematics) 3264 and
All That: A Second Course in Algebraic Geometry

Dmca