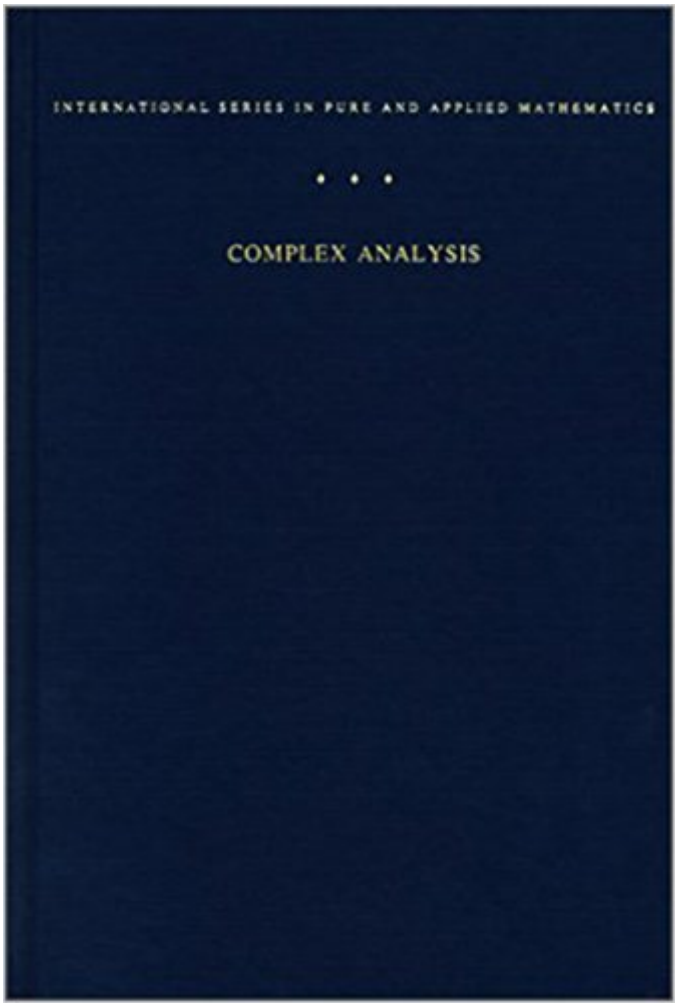
Complex Analysis



Synopsis

A standard source of information of functions of one complex variable, this text has retained its wide popularity in this field by being consistently rigorous without becoming needlessly concerned with advanced or overspecialized material. Difficult points have been clarified, the book has been reviewed for accuracy, and notations and terminology have been modernized. Chapter 2, Complex Functions, features a brief section on the change of length and area under conformal mapping, and much of Chapter 8, Global-Analytic Functions, has been rewritten in order to introduce readers to the terminology of germs and sheaves while still emphasizing that classical concepts are the backbone of the theory. Chapter 4, Complex Integration, now includes a new and simpler proof of the general form of Cauchy's theorem. There is a short section on the Riemann zeta function, showing the use of residues in a more exciting situation than in the computation of definite integrals.

Book Information

Series: International Series in Pure & Applied Mathematics (Book 7)
Hardcover: 336 pages
Publisher: McGraw-Hill Education; 3 edition (January 1, 1979)
Language: English
ISBN-10: 0070006571
ISBN-13: 978-0070006577
Product Dimensions: 6.3 x 1 x 9.1 inches
Shipping Weight: 2.5 pounds (View shipping rates and policies)
Average Customer Review: 3.4 out of 5 starsÂ Â See all reviewsÂ (32 customer reviews)
Best Sellers Rank: #610,623 in Books (See Top 100 in Books) #126 inÂ Books > Science & Math > Mathematics > Pure Mathematics > Functional Analysis #483 inÂ Books > Science & Math > Mathematics > Mathematical Analysis #5794 inÂ Books > Textbooks > Science & Mathematics > Mathematics

Customer Reviews

This book has for decades been THE classic graduate level text in Complex Analysis. It is important to point out that it is not for beginners. To learn complex analysis from the ground up, my own recommendations are the book by Saff & Snider or the somewhat dated, but delightfully conversational book by Stewart and Tall.Not only does this book require some previous understanding of Complex Analysis, but it also requires that mysterious ability called "mathematical maturity" - the ability to fill in omitted steps and details when following an argument. But, for a

person posessing the prerequisites, this is a fine book.However, any review of this book would be incomplete if it didn't address the issue of price. Advanced math books are all expensive, it is true. But this book is a particularly egregious case of price-gouging. For one thing, the book was written many years ago, so the publisher is not trying to recover any recent high cost of paying the author for his work. Secondly, the book is only something like 336 pages long (much shorter, for example, than a mystery novel by Elizabeth George). It comes out to about 40 cents per page!Math students, as a rule, are not wealthy people. The price of this book is simply offensive. You can save more than 25% off the price of this book and get BOTH volumes of the Conway book, "Functions of One Complex Variable". I'm not thoroughly familiar with that Conway book, but I've browsed it online. It seems to be well written and has more material (in the two volumes together) than this (Ahlfors) book has. Furthermore, just in principle, I don't think a publisher should be rewarded for this kind of unwarranted greed and price-gouging. Refuse to buy this until the price becomes more reasonable.

This is a classic complex analysis text, a pleasure to read and covering all the usual topics. The prerequisites are modest; ideally, one will be familiar with the material in Rudin's "Princples of Mathematical Analysis," but a good, mathematically oriented calculus course (Spivak's "Calculus" is beautiful) is quite sufficient.That said, the price tag is ridiculous. It was bad enough at $90 (judging by previous reviewers, that was back in the ancient days of 2001). The last edition of this book is dated 1979. It's used in graduate courses all around the world. That means that used copies are not hard to come by.For $143, one can buy a used copy of Ahlfors, and *new* copies of Conway's and Needham's complex analysis books, and still have pocket change left. That's the course I would recommend.

I was a (French)graduate student in France some 25 years ago and I would have been delighted to use this book if translated in French; I had to rely on Cartan's book which is a very good book too but which takes for granted that one already knows quite a lot on complex numbers, series, convergence and topology...As a substitute to Cartan, there was a translation of Rudin's real and complex analysis which begins with measure theory...Anyway, it is very difficult to learn this subject in any book without advice from instructors and attending lectures.There could be more worked examples in this book but it is not a self teaching book (neither is Cartan's...which is very similar in essence to Ahlfors but more narrow minded). For a more "basic" book in the subject, see Marsden's Basic complex analysis but proofs are often mixed up with exercises...which does not suit everybody. My final point is the following: this book contains much more stuff to work at or to think

about than its French counterpart; moreover,in this book, efforts are made to avoid formalism (Bourbaki?). US maths students are very lucky indeed. But the book is certainly too expensive.

Classic 1st year graduate text which emphasizes treatment by the methods of elementary topology. An approach you should feel comfortable with if you used Rudin’s Principles 3rd edition. In fact the first seven chapters of Rudin constitute better than adequate preparation for this text. The older British texts emphasized the manipulation of power series which is certainly suited to solution of differential equations and development of the transcendental functions-Whittaker and Watson is the standard here. It should be noted that the topological methods were abstracted from these older methods and made systematic. This modern approach at the very least accomplishes the same ends with less clutter and more economy of reasoning. An example of what you’ll find not typically done in analysis texts but proved here is that a metric space is compact if and only if every infinite sequence has a limit point (chapter 3). This text by a great mathematician ranks like Rudin as another "how to think like a mathematician" text.

This classic is a brilliant exposition of the Riemann (geometrical) method of complex analysis as opposed to the Weierstrassian (power series) method. The latter approach is done well by Whittaker & Watson or Henrici. Ahlfors book is the best I know of for the geometrical approach. It is written for senior undergraduates or graduate students majoring in mathematics.

Entropy, Static and Dynamic Stability, and Lyapunov Analysis (Understanding Complex Systems) Bob Books Set 4 - Complex Words Building Complex Documents: Using Microsoft Word 2007, 2010 & 2013 Formatting Legal Documents With Microsoft Office Word 2007: Tips and Tricks for Working With Pleadings, Contracts, and Other Complex Documents LES and DNS of Ignition Process and Complex Structure Flames with Local Extinction (AIP Conference Proceedings / Mathematical and Statistical Physics) A guide from Basic to Complex Embroidery Stitches