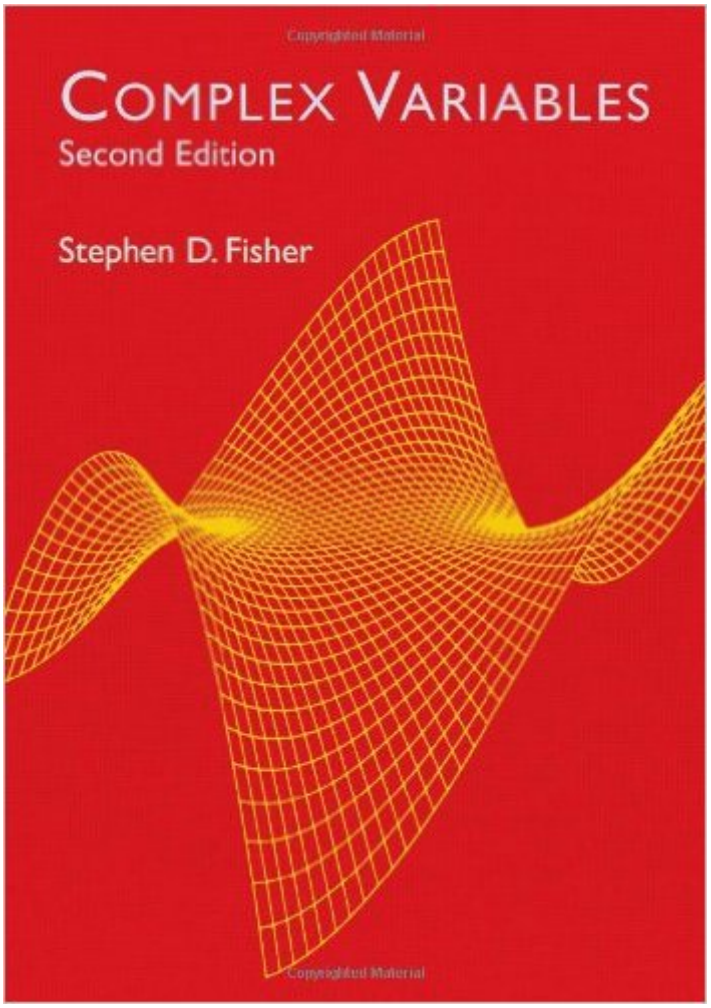
Complex Variables: Second Edition (Dover Books On Mathematics)



Synopsis

The most important topics in the theory and application of complex variables receive a thorough, coherent treatment in this introductory text. Intended for undergraduates or graduate students in science, mathematics, and engineering, this volume features hundreds of solved examples, exercises, and applications designed to foster a complete understanding of complex variables as well as an appreciation of their mathematical beauty and elegance.Prerequisites are minimal; a three-semester course in calculus will suffice to prepare students for discussions of these topics: the complex plane, basic properties of analytic functions (including a rewritten and reorganized discussion of Cauchy's Theorem), analytic functions as mappings, analytic and harmonic functions in applications, and transform methods. Useful appendixes include tables of conformal mappings and Laplace transforms, as well as solutions to odd-numbered exercises.Students and teachers alike will find this volume, with its well-organized text and clear, concise proofs, an outstanding introduction to the intricacies of complex variables.

Book Information

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Customer Reviews

It is wonderful to see this great book on undergraduate complex analysis back in print at even a more affordable price. I've used it in in one of my junior level courses and been totally satisfied with it. I will use a part of it again in a continuation course.What is nice about this book is that it is a textbook, and not a cookbook nor a book that tries to include everything and fails at all of them. This

book never lists too many results; instead it aims at the understanding of the subject matter. Its treatment of Cauchy’s theorem clearly exposes the fact that different points of view (derivatives, series, integrals) in the complex plane lead to the same object, analytic functions. The sections on geometric and applied topics, such as linear fractional transformations and fluid mechanics, are a delight to read.The book assumes nothing other than calculus (Green’s theorem) as background. Topological concepts are kept at a reasonable level and some are introduced later when necessary so as not to hinder the development of its main topic. Some short side issues are discussed in tiny sections within the exercises. There are also plenty of regular exercises ranging from elementary calculations to rigorous proofs. This book also contains an appendix that I love on the zeros of polynomials, including the cubic and the quartic.What attracted me most in this book is that one can read it straight through. There are no secondary undeveloped paths, sections to omit, unnecessary details, or long list of formulas. I recomend it for any course or self-study at the introductory level complex analysis.

This book contains a wealth of information, and at this price, one really shouldn’t complain, but if you’re looking to really understand complex analysis as a mathematical subject, keep looking.My main problem with the book is that while it states plenty of facts on the subject, the explanations for them (i.e. proofs, examples, counterexamples) are unclear, incomplete, or absent. There’s enough "theorem"... "proof" talk to scare off those unaccustomed to it, but the information contained therein is often of little use to those who ARE. In trying to cover both bases, I think the author ends up failing both.If you’re looking to learn complex variables for applications, find a book that covers just that. If you’re looking for analysis, do likewise.I was impressed by Stein and Shakarchi’s "Complex Analysis", which gives an introductory, but thorough and sufficiently rigorous, treatment of the subject.

I used this book for a complex variable course as part of my engineering study. I found this book very insufficient to explain things well as a beginner in the subject. There were often problems I could not understand because the book only offered a couple line explaination and no example. In fact almost all the class thought the book was terrible and didn’t even read it. Now my school Rochester Institute of Technology has returned to its previous book. If you are well versed in math and want to explore another realm, go ahead with this book, but if you are no mathematician try something else.

This book does a very poor job of explaining both proofs and examples. Many steps are skipped or neglected leaving the reader confused until, after much thought, the step is understood (and it is many times a non-obvious step in logic). I would not recommend this book.

This is a very strange book - more like a reference book than a textbook that you can use to learn complex analysis for the first time.The problem with the book is that it offers very little in the way of explanation or motivation for any of the concepts it introduces. It mostly follows the format of: 1) definition, 2) motivation-less symbol pushing proof, 3) several computational examples. Not enlightening. If you're interested in the applications, this book will motivate none of the concepts, so you'll wonder why complex analysis matters at all. For example, there is a section about the Fourier transform - an extremely useful concept; however what the Fourier transform can be used for is relegated to a scanty paragraph at the very beginning of the chapter, and it even fails to mention how it can be used to decompose signals into its component frequencies!! If you're interested in the mathematics behind it, you'll probably be frustrated for the same reason - no motivation anywhere in the book.Its worth mentioning that almost everyone in my class did not like this book, even the instructor thought it was a terrible book! I think the positive reviews here may be from professors how already know the meaning behind the material, so the fact that this is just a reference book that does not really explain the significance of anything is lost on them.

I took a differential equations course in which a week or two of complex analysis was tacked on at the end, and we used the first two chapters of this book. Aside from the simplest topics, I found the text nearly impossible to learn anything from. The problems were good, but I had to pore over lecture and online notes to figure out how to begin to approach them, because the text and the examples therein were just not getting it done for me. And I'm ordinarily a strong math student - I'm not comfortable in classes geared towards math majors, but I'm at a school with an excellent mathematics department and have never struggled at all while taking the typical chemistry-major math courses.Reading the other reviews here, I have to say I'm surprised at the positivity. It may be that my difficulties were less the fault of the book and more the fault of me and/or the material and/or the course I was taking. But hey, I'll still chip in a data point on the negative side of the ledger. It can't hurt.

Mediocrity Book 125) Complex Variables: Second Edition (Dover Books on Mathematics) Schaum's Outline of Complex Variables 2nd (second) edition Text Only A First Course in Complex Analysis with Applications (Jones and Bartlett Publishers Series in Mathematics: Complex) Introductory Complex Analysis (Dover Books on Mathematics) Complex Analysis For Mathematics And Engineering (International Series in Mathematics) THE GRONNEDAL-IKA ALKALINE COMPLEX, SOUTH GREENLAND: THE STRUCTURE AND GEOLOGICAL HISTORY OF THE COMPLEX. How Goats Can Fight Poverty: Complex problems do not always need complex solutions ISO 3951-1:2005, Sampling procedures for inspection by variables - Part 1: Specification for single sampling plans indexed by acceptance quality limit ... quality characteristic and a single AQL Probability, Random Variables and Stochastic Processes Analytic Function Theory of Several Variables: Elements of Oka's Coherence Functions of Several Real Variables Jokes For Kids - Joke Books : Funny Books : Kids Books : Books for kids age 9 12 : Best Jokes 2016 (kids books, jokes for kids, books for kids 9-12, ... funny jokes, funny jokes for kids) (Volume 1) Mathematics and the Imagination (Dover Books on Mathematics) Curvature in Mathematics and Physics (Dover Books on Mathematics) The Historical Roots of Elementary Mathematics (Dover Books on Mathematics) Concepts of Modern Mathematics (Dover Books on Mathematics) Mathematics for the Nonmathematician (Dover Books on Mathematics) Foundations and Fundamental Concepts of Mathematics (Dover Books on Mathematics) Differential Geometry of Curves and Surfaces: Revised and Updated Second Edition (Dover Books on Mathematics)