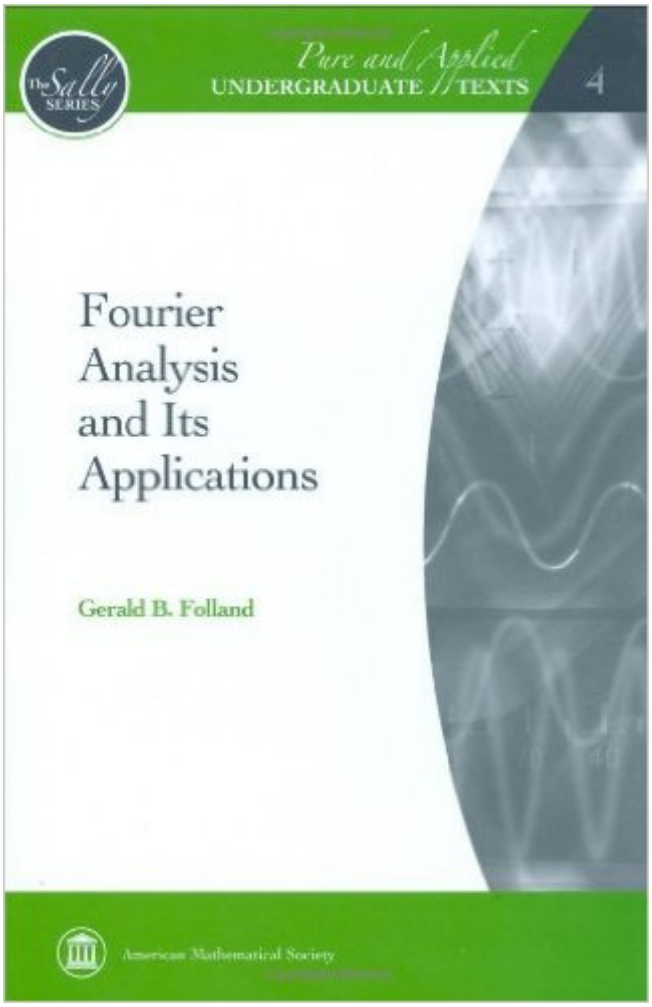
Fourier Analysis And Its Applications (Pure And Applied Undergraduate Texts)



Synopsis

This book presents the theory and applications of Fourier series and integrals, eigenfunction expansions, and related topics, on a level suitable for advanced undergraduates. It includes material on Bessel functions, orthogonal polynomials, and Laplace transforms, and it concludes with chapters on generalized functions and Green's functions for ordinary and partial differential equations. The book deals almost exclusively with aspects of these subjects that are useful in physics and engineering, and includes a wide variety of applications. On the theoretical side, it uses ideas from modern analysis to develop the concepts and reasoning behind the techniques without getting bogged down in the technicalities of rigorous proofs.

Book Information

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Customer Reviews

Concepts are not hidden under obscure mathematical notation: they are stated explicitly in plain english and illustrated with examples. I read a couple of other books on this topic (and PDE) without really understanding the subtleties. With this book everything becomes magically clear and obvious -as you read- and don't feel like you need take another course in real analysis to understand this topic. Bonus: you get solutions to exercices.

I've been asked to teach a course on Fourier analysis,I knew nothing on the subject so I took about 15 books on this subject and went over all of them. My conclusion was that Folland's book is the best!. He explain the theory yet never forget for a minute the intuitive side of the subject. The book

contains almost all the important issues and notions of the subject. If you have a solid background in vector calculus and you know some basic facts about ODE this is a very good book to learn the subject from. Moreover the book give the reader some of the important motivations to the basic ideas of functional analysis such as generating functions distrbutions it gives the connection also between linear algebra and the basic ideas that lies at the foundations for understanding normed function spaces and more. Moreover the book draw the line , in a very elegant way, between functional analysis PDE and Fourier analysis. Main subjects are:Fourier series,orthogonal sets Fourier and Laplace transforms,convolution, generating functions,Green functions, and more. Very recommended!.

The book wasn't quite new as advertised. It had pen marks on a few pages, but other than that it was in perfect condition. The book itself is great as long as you have a good background in mathematics. A lot of prior knowledge is assumed, as it should be. There is a nice balance of detail and brevity. The book is nicely bound and the print is very easy on the eyes.

Great quality. Not a pure harmonic analysis book, though, just as the title states.

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