

The book was found

Functional Analysis (Methods Of Modern Mathematical Physics)



Synopsis

This book is the first of a multivolume series devoted to an exposition of functional analysis methods in modern mathematical physics. It describes the fundamental principles of functional analysis and is essentially self-contained, although there are occasional references to later volumes. We have included a few applications when we thought that they would provide motivation for the reader. Later volumes describe various advanced topics in functional analysis and give numerous applications in classical physics, modern physics, and partial differential equations.

Book Information

Series: Methods of Modern Mathematical Physics (Book 1)

Hardcover: 400 pages

Publisher: Academic Press (January 11, 1980)

Language: English

ISBN-10: 0125850506

ISBN-13: 978-0125850506

Product Dimensions: 6 x 0.9 x 9 inches

Shipping Weight: 1.7 pounds (View shipping rates and policies)

Average Customer Review: 4.3 out of 5 stars [See all reviews](#) (6 customer reviews)

Best Sellers Rank: #627,680 in Books (See Top 100 in Books) #132 in [Books > Science & Math > Mathematics > Pure Mathematics > Functional Analysis](#) #418 in [Books > Science & Math > Physics > Mathematical Physics](#) #1727 in [Books > Textbooks > Science & Mathematics > Physics](#)

Customer Reviews

Books on mathematical methods "for physicists" are often criticized by their superficiality, a sacrifice deemed necessary for achieving completeness. This one is a glaring exception: the first of a set of 4 (!) volumes dealing with the finest tools for dealing with the delicate mathematical questions in quantum theory - namely, functional analysis. Of course, this sounds rather vague, since quantum physics makes use of functional-analytic tools as diverse as distributions, Hilbert, Banach and locally convex spaces, spectral theory, semigroup theory, operator algebras, etc. However, do not expect ready-brew formulae and cookbook recipes: this book gets his job done at least as well as Rudin, Yosida and Riesz-Sz.Nagy, just to mention the classics. Most theorems are rigorously proved, and although the book becomes more and more biased towards mathematical physics (i.e., methods for proving self-adjointness, analysis of spectra and scattering theory, as stated in the

section "Three Mathematical Problems in Quantum Mechanics". These methods occupy most of the three remaining volumes) as it proceeds - this bias becomes the true reason of being for the last two volumes - this particular volume has precisely the most useful stuff: metric, Banach, topological, locally convex, and Hilbert spaces, bounded and unbounded operators. A supplement extracted from the second volume with the basics of Fourier transforms makes it self-contained as a monograph. However, the best things, that make this book nearly unbeatable, are the several wisely chosen examples and counterexamples, the notes at the end of each chapter and the wonderful - and useful - exercises.

[Download to continue reading...](#)

Functional Analysis (Methods of Modern Mathematical Physics) Fourier Analysis, Self-Adjointness (Methods of Modern Mathematical Physics, Vol. 2) Geometrical Methods of Mathematical Physics Methods of Mathematical Physics Functional Programming in JavaScript: How to improve your JavaScript programs using functional techniques Clinical Functional MRI: Presurgical Functional Neuroimaging (Medical Radiology) Wheater's Functional Histology: A Text and Colour Atlas (FUNCTIONAL HISTOLOGY (WHEATER'S)) The Solid State: An Introduction to the Physics of Crystals for Students of Physics, Materials Science, and Engineering (Oxford Physics Series) High Throughput Screening: Methods and Protocols (Methods in Molecular Biology) (Methods in Molecular Biology, 190) Data Analysis & Statistics (Mathematical Analysis for Scientists & Engineers Book 5) Physics for Scientists & Engineers with Modern Physics (4th Edition) Sears and Zemansky's University Physics with Modern Physics, 13th Edition Elementary Cryptanalysis: A Mathematical Approach (Mathematical Association of America Textbooks) Elementary Algebraic Geometry (Student Mathematical Library, Vol. 20) (Student Mathematical Library, V. 20) Handbook of Mathematical Functions: with Formulas, Graphs, and Mathematical Tables (Dover Books on Mathematics) A Course in Mathematical Modeling (Mathematical Association of America Textbooks) The Mathematical Olympiad Handbook: An Introduction to Problem Solving Based on the First 32 British Mathematical Olympiads 1965-1996 (Oxford Science Publications) Mathematical Apocrypha: Stories and Anecdotes of Mathematicians and the Mathematical (Spectrum) Lecture Notes on Mathematical Olympiad Courses: For Junior Section (Mathematical Olympiad Series) Transformation Groups for Beginners (Student Mathematical Library, Vol. 25) (Student Mathematical Library, V. 25)

[Dmca](#)