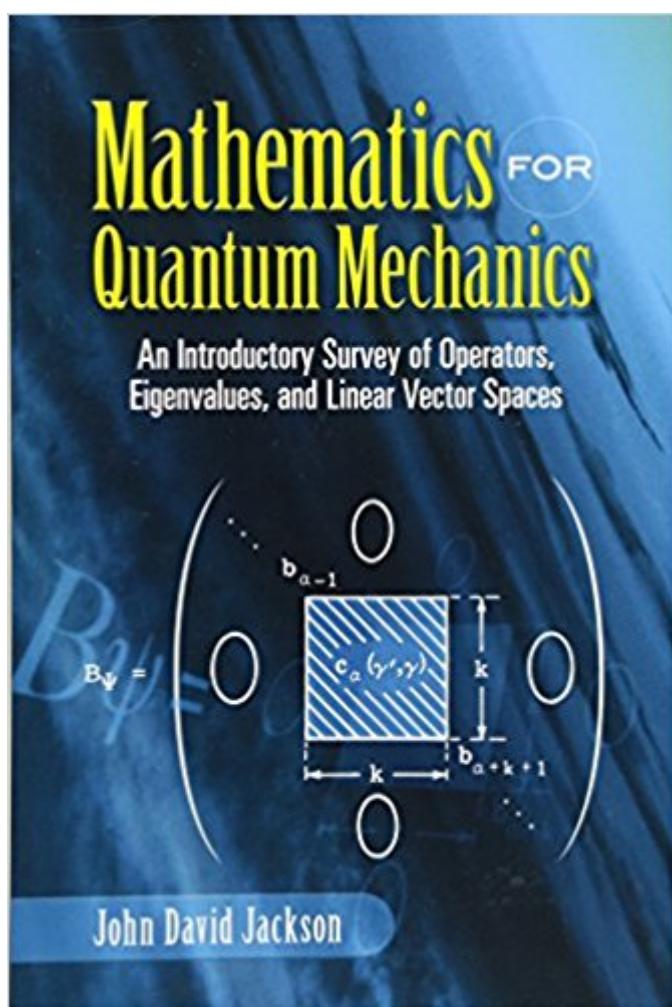


The book was found

Mathematics For Quantum Mechanics: An Introductory Survey Of Operators, Eigenvalues, And Linear Vector Spaces (Dover Books On Mathematics)





Synopsis

Advanced undergraduates and graduate students studying quantum mechanics will find this text a valuable guide to mathematical methods. Emphasizing the unity of a variety of different techniques, it is enduringly relevant to many physical systems outside the domain of quantum theory. Concise in its presentation, this text covers eigenvalue problems in classical physics, orthogonal functions and expansions, the Sturm-Liouville theory and linear operators on functions, and linear vector spaces. Appendixes offer useful information on Bessel functions and Legendre functions and spherical harmonics. This introductory text's teachings offer a solid foundation to students beginning a serious study of quantum mechanics.

Book Information

Series: Dover Books on Mathematics

Paperback: 112 pages

Publisher: Dover Publications; Dover Ed edition (October 6, 2006)

Language: English

ISBN-10: 0486453081

ISBN-13: 978-0486453088

Product Dimensions: 6 x 0.4 x 9.1 inches

Shipping Weight: 4.8 ounces (View shipping rates and policies)

Average Customer Review: 2.9 out of 5 stars 4 customer reviews

Best Sellers Rank: #293,745 in Books (See Top 100 in Books) #29 in Books > Science & Math > Mathematics > Applied > Vector Analysis #161 in Books > Science & Math > Physics > Mathematical Physics #255 in Books > Science & Math > Physics > Quantum Theory

Customer Reviews

John David Jackson is Professor Emeritus at the University of California, Berkeley.

Great book for obtaining/reviewing the math skills needed for quantum mechanics. I love the message: the mathematics needed for quantum mechanics is relevant for many areas of classical physics. In fact, the math was mostly developed in the context of classical physics, enabling quantum mechanics to develop at a remarkable pace once the concepts were discovered. For \$10, it's a great deal for anyone learning quantum mechanics.

This is a brief but good introduction to operators, eigenvalues, and linear vector spaces. The

discussion starts out with motivating the study of eigenvalues, which emerged from problems such as that of a vibrating string, and other problems with boundary conditions. The book then goes on to consider orthogonal functions and expansions, Sturm-Liouville theory and linear operators, and the last chapter is on vector spaces. Plus there are two appendices, one on Bessel cylindrical functions and the other on Legendre functions and spherical harmonics. The vector chapter is over 40 pages and about half of the book, the other chapters being relatively brief, but enough to get your feet wet. I especially enjoyed the chapter on Sturm-Liouville theory, which I didn't know much about before, but had heard about for many years. For a little primer it was fine for that purpose and was money well spent, considering that the book was only eight bucks (with a one dollar discount for paperbacks at B & N). I'm a big fan of the Dover paperbacks which often reprint quality classics at a fraction of what you'd pay for a modern text, and which are often better. Some advanced books in math and engineering these days can be \$80 to \$120, so Dover paperbacks at ten to fifteen dollars are a bargain. I have many of the Dover books in math and the sciences and consider them the foundation of that part of my library, even if I own other more expensive, more recent volumes.

I know the Math of QM, and this book didn't properly explain any of it. Its a waste of money and time.

Unless you have many, many years of advanced mathematics under your belt don't bother. Also, there are no examples actually pertaining to QM.

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

Mathematics for Quantum Mechanics: An Introductory Survey of Operators, Eigenvalues, and Linear Vector Spaces (Dover Books on Mathematics) Advanced Molecular Quantum Mechanics: An Introduction to Relativistic Quantum Mechanics and the Quantum Theory of Radiation (Studies in Chemical Physics) Linear Systems and Operators in Hilbert Space (Dover Books on Mathematics) Theory of Linear Operators in Hilbert Space (Dover Books on Mathematics) Finite-Dimensional Vector Spaces: Second Edition (Dover Books on Mathematics) Modern Methods in Topological Vector Spaces (Dover Books on Mathematics) Quantum Mechanics: Re-engineering Your Life With Quantum Mechanics & Affirmations Spellman's Standard Handbook for Wastewater Operators: Fundamentals, Volume I (Spellman's Standard Handbook for Wastewater Operators Series) (Volume 1) Eigenvalues in Riemannian Geometry (Pure and Applied Mathematics) Linear Algebra and Its Applications plus New MyMathLab with Pearson eText -- Access Card Package (5th Edition) (Featured Titles for Linear Algebra (Introductory)) Linear Algebra with Applications (9th Edition)

(Featured Titles for Linear Algebra (Introductory)) Topological Vector Spaces, Second Edition (Chapman & Hall/CRC Pure and Applied Mathematics) Quantum Ontology: A Guide to the Metaphysics of Quantum Mechanics The Quantum Mechanics Solver: How to Apply Quantum Theory to Modern Physics Vector and Tensor Analysis (Dover Books on Mathematics) Vector and Tensor Analysis with Applications (Dover Books on Mathematics) Introduction to Vector and Tensor Analysis (Dover Books on Mathematics) Tensor and Vector Analysis: With Applications to Differential Geometry (Dover Books on Mathematics) A History of Vector Analysis: The Evolution of the Idea of a Vectorial System (Dover Books on Mathematics) A Vector Space Approach to Geometry (Dover Books on Mathematics)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)