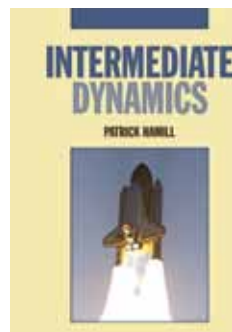
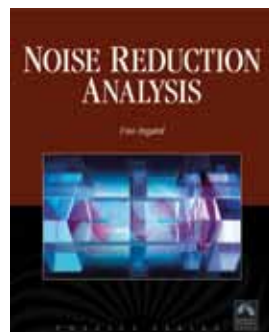
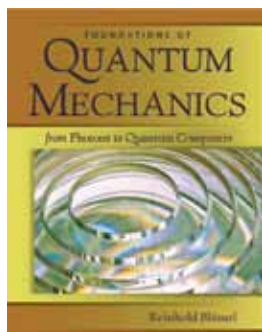
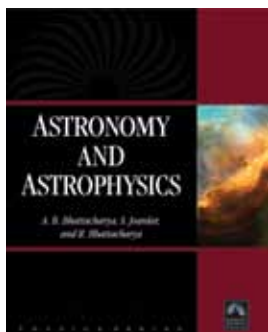
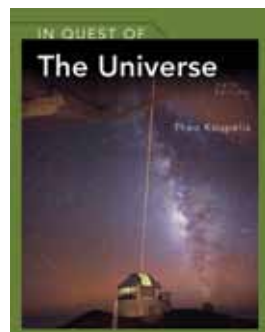
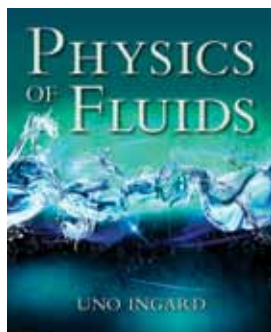
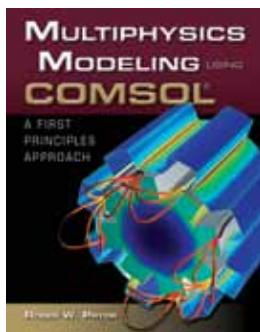
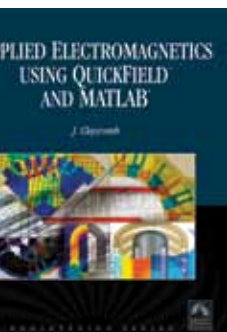
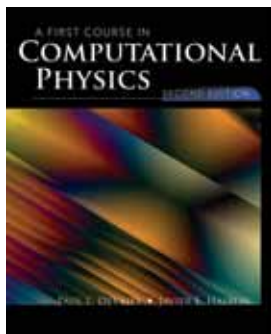
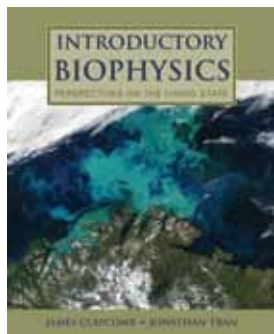


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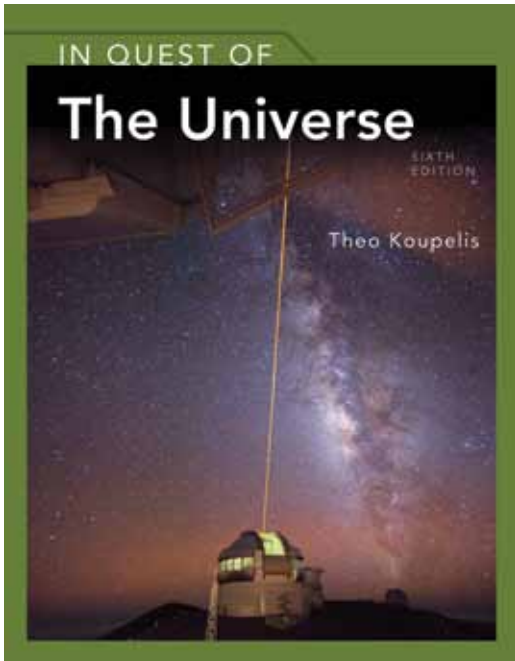
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In Quest of the Universe

Sixth Edition

Theo Koupelis,
University of Wisconsin

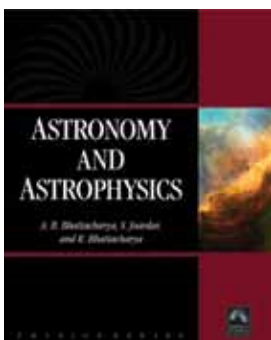
Updated with the latest discoveries in the field, the *Sixth Edition of In Quest of the Universe* provides a comprehensive, accessible introduction to astronomy for the nonscience major. The author carefully unfolds historical and contemporary theories in astronomy to provide a clear account of how science works. His lucid explanations acquaint students with their own solar system before moving on to the stars and distant galaxies. A new modern design and art program incorporates nearly 200 new and revised figures and images, and allows students to see these fascinating images in full color. *In Quest of the Universe, Sixth Edition* provides an exciting and engaging overview of this dynamic

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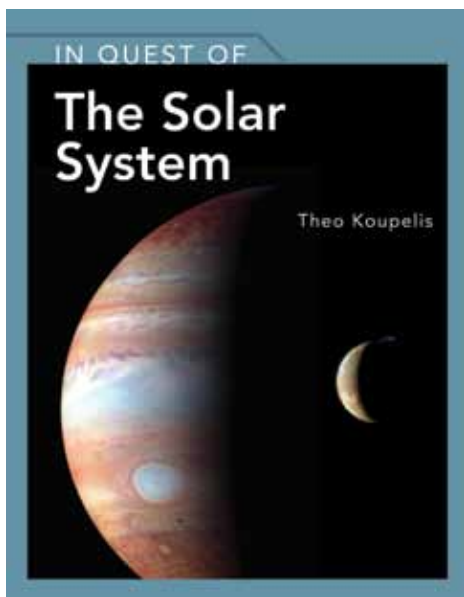
Astronomy & Astrophysics

A.B. Bhattacharya
S. Joardar
R. Bhattacharya

This book is designed for upper division courses in astronomy and as a reference for science professionals. Using four-color throughout, this text describes the different techniques and instruments employed in the study of the universe and the results obtained with discussion on both theory and observation. The book covers topics such as, “minor” planets, radio astronomy, astronomical telescopes, measurement of solar brightness distribution, black holes, and the Einstein effect. A CD-ROM with color figures and simulations accompanies the book.

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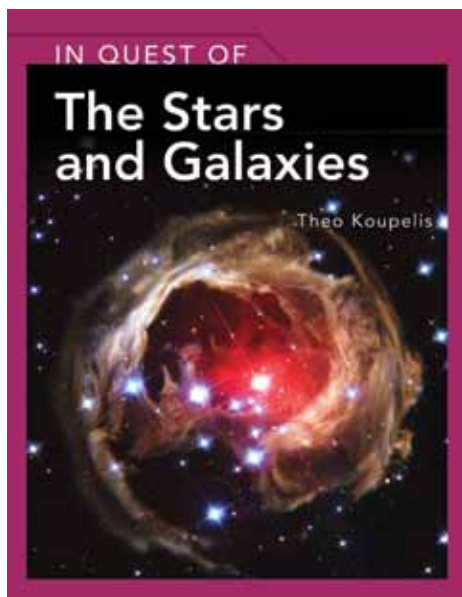
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Key Features

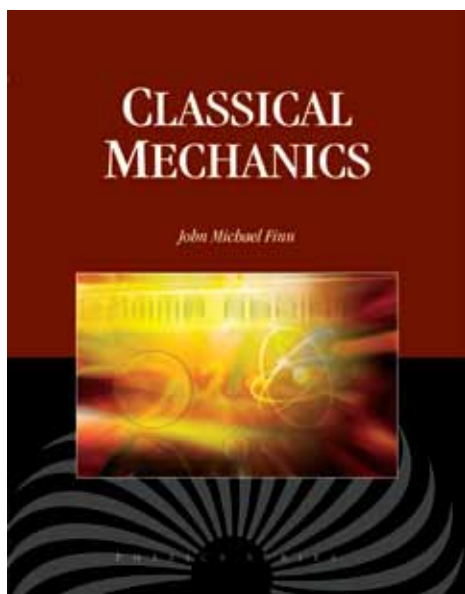
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J. Michael Finn, PhD,
William and Mary College

This updated text is suitable for students preparing for advanced study of physics and closely related fields, such as astronomy and the applied engineering sciences. Compared to older books on this subject, the mathematical treatment has been updated for the study of more advanced topics in quantum mechanics, statistical mechanics, and nonlinear and orbital mechanics. The role of symmetries and the underlying geometric structure of space-time is a key theme throughout.

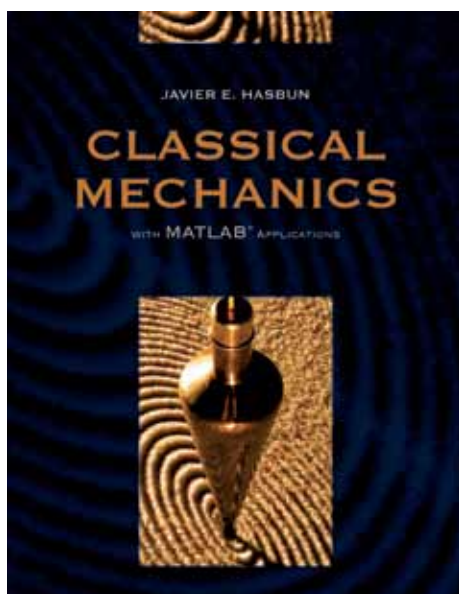
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1. Review of Newtonian Particle Mechanics
2. Curvilinear Coordinates
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Classical Mechanics with MATLAB Applications

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University of West Georgia

This text is an essential resource for the advanced undergraduate. It guides students through the complex topics of rigid body motion, moving coordinate systems, Lagrange's equations, small vibrations, the Euler algorithm, and much more. Each chapter contains MATLAB code to introduce the topic of programming scripts for the reproduction of graphs and simulations.

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1. Review of Newton's Laws
2. Application of Newton's 2nd Law of Motion in One Dimension
3. Harmonic Motion in One Dimension
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5. Vectors and Differential Calculus
6. Motion in Two and Three Dimensions
7. Systems of Coordinates
8. Central Forces
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10. Rutherford Scattering
11. Systems of Particles
12. Motion of Rigid Bodies
13. Lagrangian Dynamics

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Noise Reduction Analysis

Uno Ingard, PhD, Massachusetts Institute of Technology (Emeritus)

This text is a comprehensive study of the theory and practical application of noise reduction to numerous fields. It may be used as a reference by scientists and engineers or in a senior-undergraduate or graduate-level course. The first six chapters deal with the basic mechanisms of sound absorption by which acoustic energy is converted into heat in viscous and thermal boundaries in a sound field. The second part covers duct attenuators with a discussion of how their performance is described and measured. The main part of each chapter is planned to be descriptive, and contains numerical results that should be of direct interest for design work. Mathematical analysis is placed at the end of the chapters.

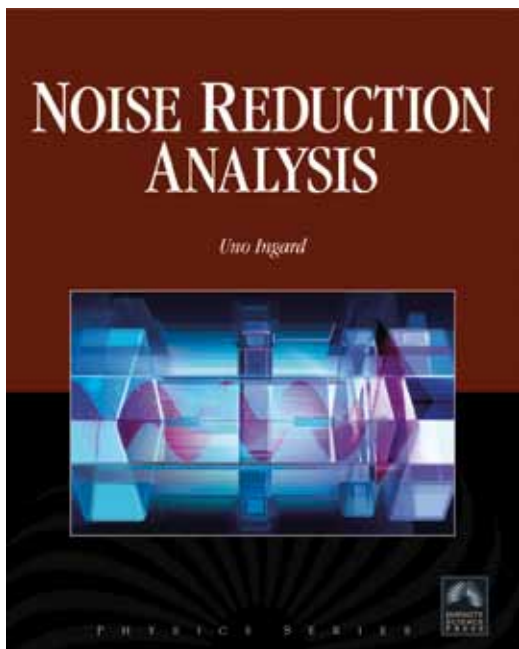


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Acoustics

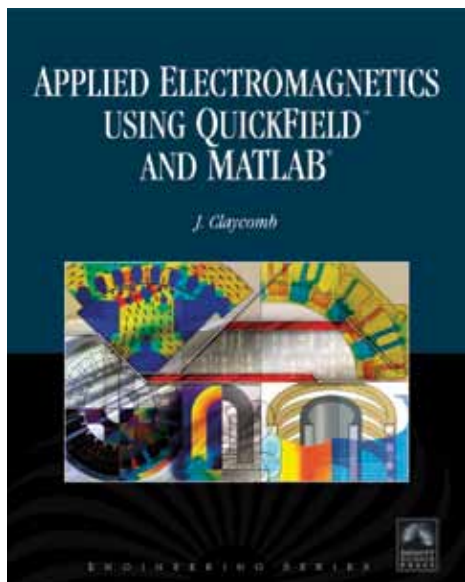
Uno Ingard, PhD, Massachusetts Institute of Technology (Emeritus)

This text may be used as a reference by scientists and engineers or as a senior-undergraduate or graduate-level course. Several of the chapters include notes and numerical results from the author's involvement in specific projects, and contain hitherto unpublished material. Items in this category are aero-acoustic instabilities, flow interaction with acoustic resonators, sound propagation in the atmosphere, sound generation by fans, aspects of nonlinear acoustics, the analysis of an oscillator with "dry friction," and a discussion of the frequency response of the ear.

Table of Contents

1. Introduction; 2. Oscillator Review; 3. Elements of Waves; 4. Wave Reflection, Absorption, & Transmission; 5. Sound Sources & Fields; 6. Wave Interference, Diffraction, & Scattering; 7. Room and Duct Acoustics; 8. Flow Induced Sound and Instabilities; 9. Sound Generation by Fans; 10. Atmospheric Acoustics; 11. Flow Effects & Non-Linear Acoustics; 12. Examples

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Applied Electromagnetics Using QuickField™ & MATLAB

J.R. Claycomb, PhD,
Houston Baptist University

This text uses QuickField™ and MATLAB for visualizing electric and magnetic fields, and for calculating their resulting forces, charge, and current distributions. The accompanying CD includes a fully functional version of QuickField™ as well as numerous simulations with MATLAB.

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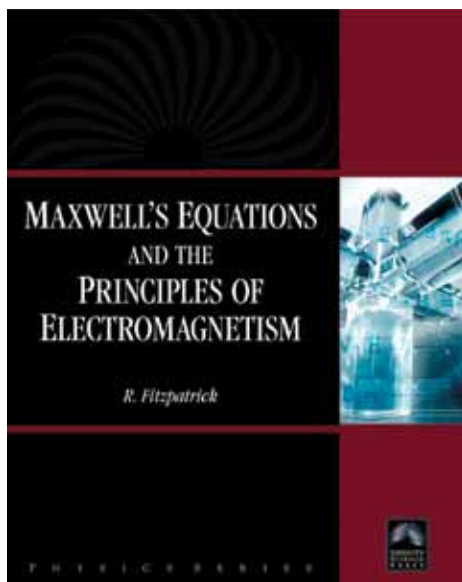
- Introduction: A QuickField™ Run Through.
1. Vector and Scalar Fields
 2. A Walk Through QuickField with MATLAB
 3. Electrostatics
 4. Magnetostatics
 5. Time Harmonic Magnetics
 6. Transient Magnetics
 7. Superconductors in External Fields
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 10. Coupled Field Applications.
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Maxwell's Equations and Principles of Electromagnetism

Richard Fitzpatrick, PhD

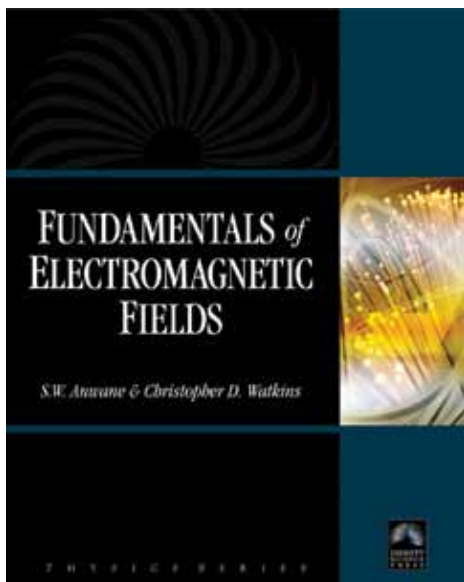
Designed for upper division electromagnetism courses or as a reference for electrical engineers and scientists, this book introduces Maxwell's equations and electromagnetic waves as soon as possible and then goes on to discuss electrostatics, magnetostatics, and induction. Unlike competing texts, this book covers topics such as advanced potentials, retarded fields, forces on dielectric liquids, antenna theory, and Faraday rotations.

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1. Introduction.
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 3. Time-independent Maxwell Equations.
 4. Time-dependent Maxwell Equations.
 5. Electrostatic Equations.
 6. Dielectric and Magnetic Media.
 7. Magnetic Induction.
 8. Electromagnetic Energy and Momentum.
 9. Electromagnetic Radiation
 10. Relativity and Electromagnetism.
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Appendix B. Useful Vector Identities
Appendix C. Gaussian Units
Appendix D. Further Reading

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Fundamentals of Electromagnetic Fields

S. W. Anwane, PhD
Christopher Watkins

This book can be used by practicing engineers, or as a text/supplement in university courses in electromagnetic fields theory. Numerous examples with complete, worked-out solutions guide the reader through the concepts under discussion. Beginning with a review on vectors and coordinate systems, the book covers basic Coulomb's law in vector form up through the propagation of the electromagnetic waves. Maxwell's equations are developed from the historical approach and experimental laws are introduced with the help of steadily increasing knowledge of vector calculus.

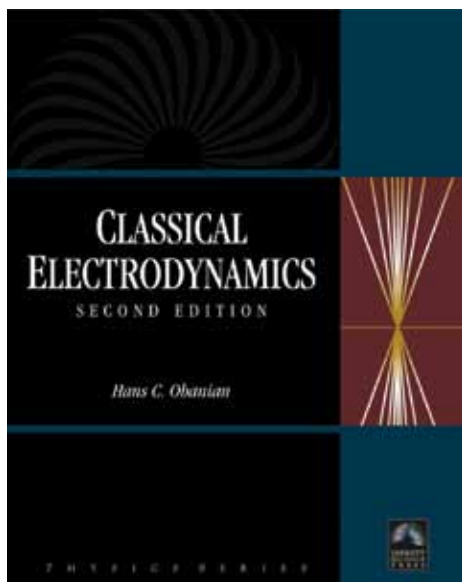
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1. Vector Analysis.
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 6. The Magnetic Field.
 7. Maxwell's Equations and Time Varying Fields.
 8. The Uniform Plane Wave.
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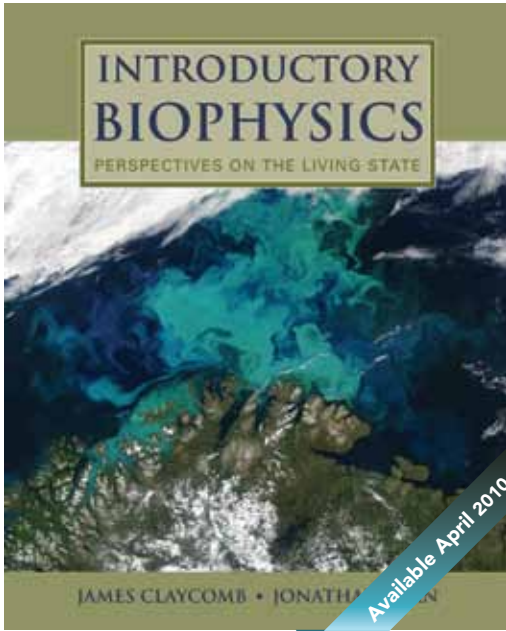
Key Features

- Updated in the second edition, including a discussion of the concept of negative oscillator strengths and a new section dealing with lasers and the threshold condition for lasing; revised experimental data; expanded explanations, additional examples and exercises.
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Introductory Biophysics

Perspectives on the Living State

J.R. Claycomb, PhD,
Houston Baptist University
Jonathan Tran,
Houston Baptist University

Designed for biology, physics, and medical students, this book provides a comprehensive overview of the complex subject of biological physics. The companion CD, with MATLAB examples and the student version of QuickField™, allows the student to perform biophysical simulations and the ability to modify the textbook example files. Included are computer simulations of thermodynamics, astrobiology, the response of living cells to external fields, chaos models of evolution, electrical circuit models of cell suspension, and neuronal action potentials.

MATLAB Examples

- Propagation of action potentials
- The Hodgkin Huxley equations
- Fractal structures in biology
- The cellular automation model (the game of life)

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- Designed to prepare students for practical applications of physics to the fields of biology and medicine
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Engineering Physics

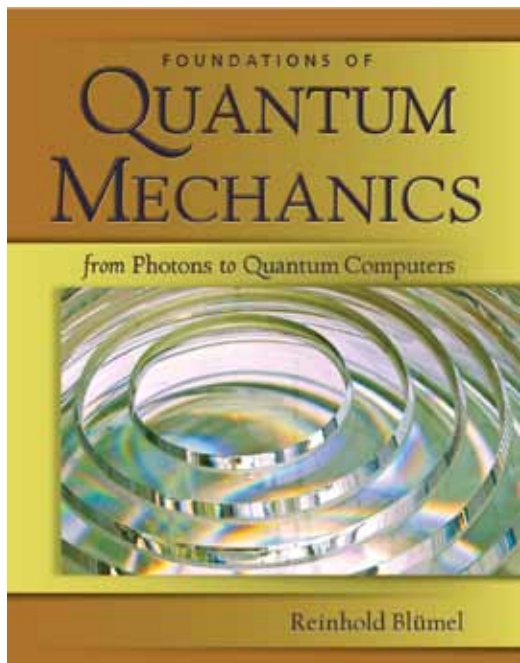
Fundamentals and Modern Applications

P. Khare, PhD
A. Swarup, PhD

This text/reference provides students, practicing engineers, and scientists with the fundamental physical laws and modern applications used in industry. Modern physics theory (e.g., quantum physics) and its applications are discussed in detail, the book can be used as a refresher for engineering licensing exams. A CD-ROM with simulations, figures, and more accompanies the text.

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Foundations of Quantum Mechanics

from Photons to Quantum Computers

Reinhold Blümel, PhD,
Wesleyan University

Quantum computers are the proposed centerpieces of a revolutionary, 21st century quantum information technology. Ideal for undergraduate and graduate courses in modern quantum physics, *Foundations of Quantum Mechanics: from Photons to Quantum Computers* takes the reader into the fascinating world of quantum mechanics and continues on an in-depth study of quantum information and quantum computing, including an entire chapter on the future of quantum technology. This accessible text with modern applications focuses on what is “quantum” about quantum

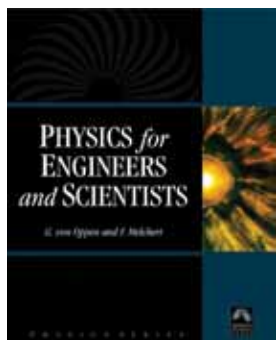
mechanics; topics discussed include the EPR paradox, entanglement, teleportation, Bell’s Theorem, quantum computing, and code-breaking with quantum computers.

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| 1. Photons | 7. Classical and Quantum Information |
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| 3. The Machinery of Quantum Mechanics | 9. Classical Cryptology |
| 4. Measurement | 10. Quantum Factoring |
| 5. Interaction-Free Measurements | 11. Ion-Trap Quantum Computers |
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Gebhard von Oppen, Technical University of Berlin
Frank Melchert, Technical University of Berlin

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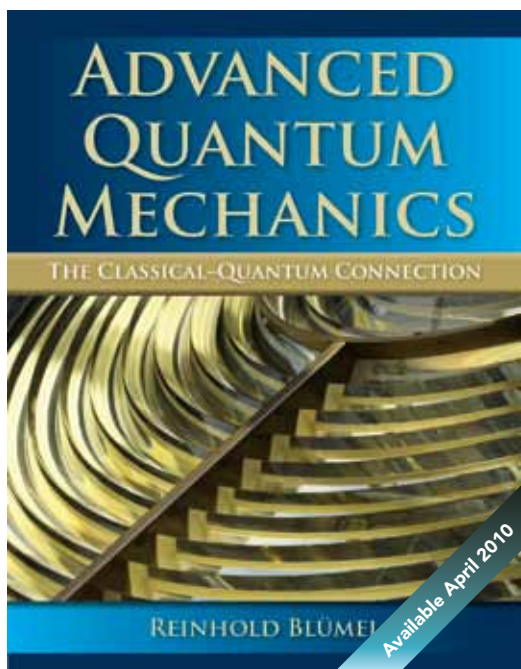
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Advanced Quantum Mechanics

Reinhold Blumel, PhD,
Wesleyan University

This book provides a coherent introduction to Gutzwiller's trace formula accessible to well-prepared science, mathematics, and engineering students who have taken introductory courses in linear algebra, classical, and quantum mechanics. In addition to providing an enrichment of the undergraduate curriculum, this book may serve as the primary text for graduate courses on semiclassical methods. An extensive bibliography and many historical remarks make this book attractive for professional scientists and engineers as well.



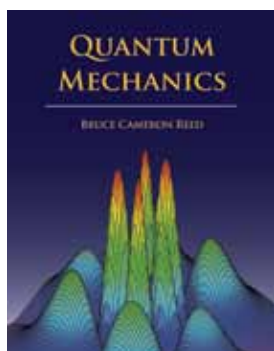
Key Features

- Contains a chapter on Feynman's Path Integrals accessible to undergraduate students
- Contains an application chapter on the solutions of a simple one-dimensional quantum problem (the step-in-a-box problem) of the usual undergraduate variety
- Places emphasis on cases where Gutzwiller's trace formula yields exact results

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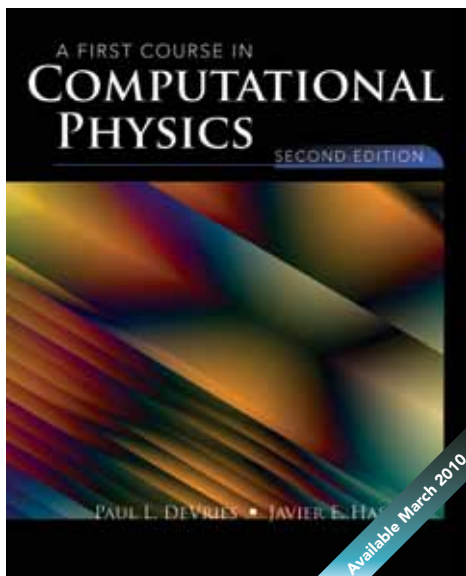
Quantum Mechanics

B. Cameron Reed, PhD, Alma College

Designed for the one-semester course, this text expertly guides students through rigorous course material, providing comprehensive explanations, accessible examples, and intuitive equations. This text's in-depth coverage of essential topics, such as harmonic oscillator, barrier penetration, and hydrogen atoms, skillfully bridges the gap between sophomore introduction texts and lower-level graduate treatments.

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A First Course in Computational Physics

Second Edition

Paul L. DeVries, PhD,
Miami University, Ohio
Javier E. Hasbun, PhD,
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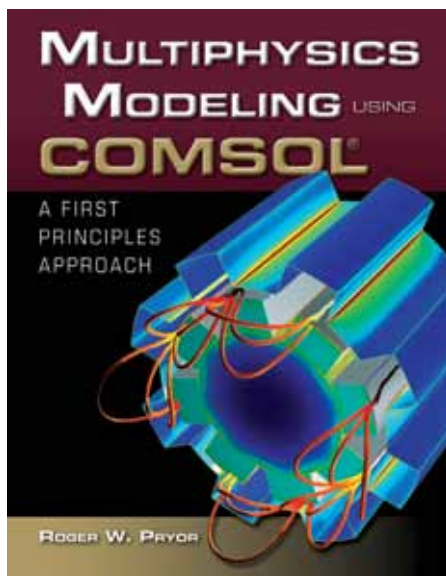
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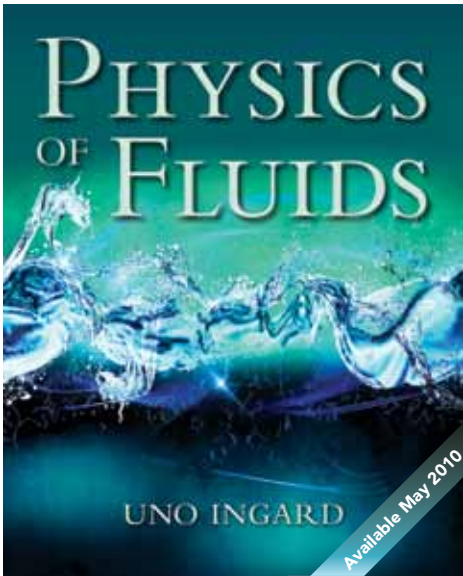
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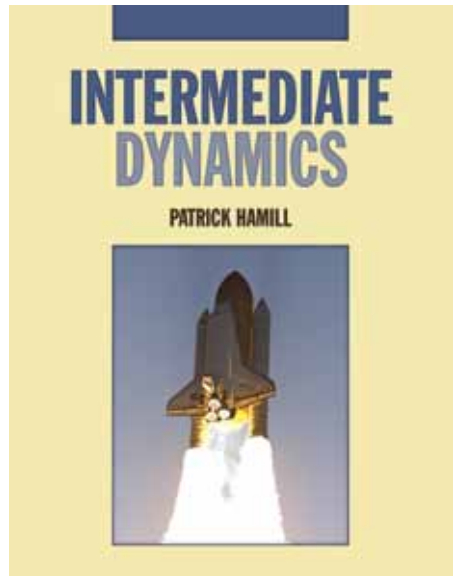
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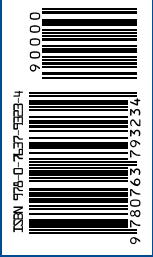
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