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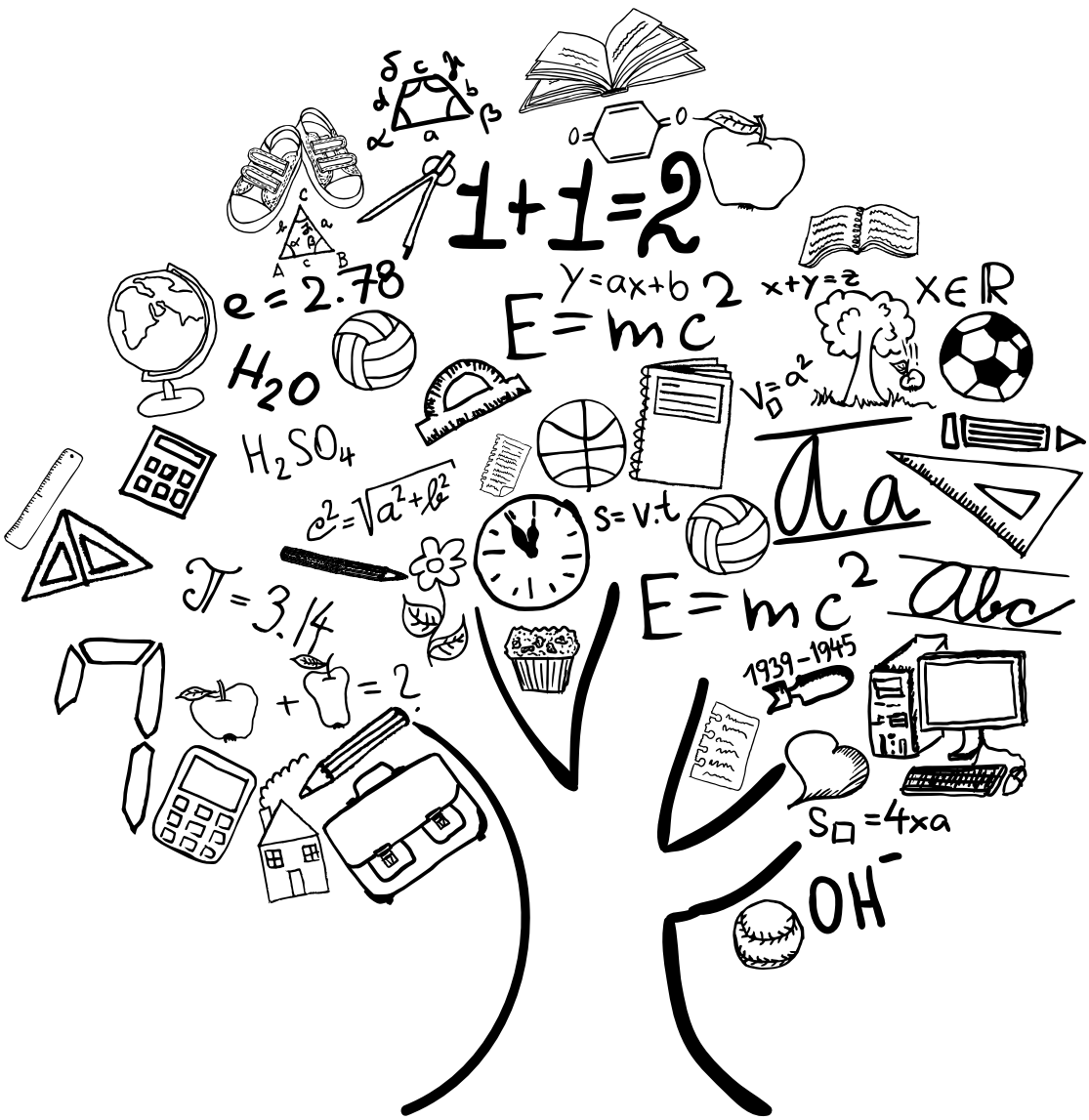
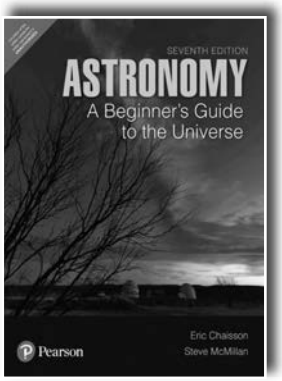



# Physics

## CONTENTS




ISBN: 9789332586871

## Astronomy: A Beginner's Guide to the Universe, 7/e

**Eric Chaisson | Steve McMillan**

**576 | © 2017 |**

### ABOUT THE BOOK

For one-semester Introduction to Astronomy courses. With Astronomy: A Beginner's Guide, Seventh Edition, the briefer version of their two seminal textbooks, trusted authors Eric Chaisson and Steve McMillan continue to emphasize three major themes: the process of science, the size and scale of the universe, and the evolution of the cosmos. In the Seventh Edition, Chaisson and McMillan ignite student interest with increased coverage of the most exciting, current discoveries in astronomy and create a bridge to scientific understanding with student-friendly art and enhanced pedagogy.

### FEATURES

- With Astronomy: A Beginner's Guide, Seventh Edition, the briefer version of their two seminal textbooks, trusted authors Eric Chaisson and Steve McMillan continue to emphasize three major themes: the process of science, the size and scale of the universe, and the evolution of the cosmos.
- In the Seventh Edition, Chaisson and McMillan ignite your interest with increased coverage of the most exciting, current discoveries in astronomy and create a bridge to scientific understanding with student-friendly art and better learning tools.

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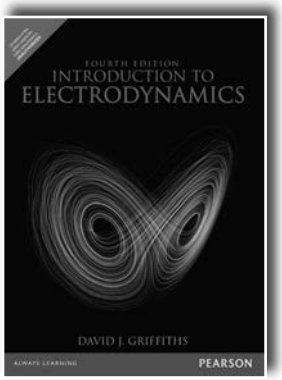
### ABOUT THE AUTHORS

Eric Chaisson, Tufts University, Steve McMillan, Drexel University

# Introduction to Electrodynamics, 4/e




ISBN: 9789332550445

**David J Griffiths**

**624** | © **2015**

Web Supplements

## ABOUT THE BOOK

For junior/senior-level electricity and magnetism courses. This book is known for its clear, concise, and accessible coverage of standard topics in a logical and pedagogically sound order. The highly polished Fourth Edition features a clear, easy-to-understand treatment of the fundamentals of electromagnetic theory, providing a sound platform for the exploration of related applications (AC circuits, antennas, transmission lines, plasmas, optics, etc.). Its lean and focused approach employs numerous new examples and problems.

## FEATURES

- The book features a friendly, informal style.
- Focuses clearly on basic electromagnetic theory, providing a sound platform for future exploration of related applications (such as AC circuits, antennas, transmission lines, plasmas, optics, etc.).
- A large collection of problems includes short, highly-focused problems that are placed immediately following the relevant text section while longer/more broadly-based problems are at the end of the chapter.
- Features a more extensive coverage of radiation theory than most texts at this level.

## CONTENTS

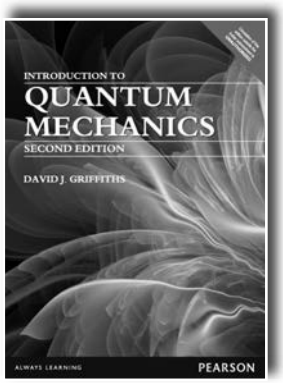


## ABOUT THE AUTHOR

**David Griffiths** received his BA and PhD from Harvard University. He held post-doctoral positions at the University of Utah and the University of Massachusetts (Amherst), and taught at Hampshire College, Mount Holyoke College, and Trinity College (Hartford) before joining the faculty at Reed College, where he has taught for over 30 years. In 2001-2002 he was visiting Professor of Physics at the Five Colleges (UMass, Amherst, Mount Holyoke, Smith, and Hampshire), and in the spring of 2007 he taught electrodynamics at Stanford.

Griffiths is a Consulting Editor of The American Journal of Physics, and a Fellow of the American Physical Society. In 1997 he was awarded the Millikan Medal by the American Association of Physics Teachers. He has spent sabbaticals at SLAC, Lawrence Berkeley Laboratory, and UC Berkeley. Although his PhD was in elementary particle theory, his recent research is in electrodynamics and quantum mechanics. He is the author of forty-five papers and three books: Introduction to Electrodynamics (Fourth Edition, Prentice Hall, 2013), Introduction to Elementary Particles (Second Edition, Wiley-VCH, 2008), and Introduction to Quantum Mechanics (Second Edition, Prentice Hall, 2005).

# Introduction to Quantum Mechanics, 2/e*




**David J Griffiths**

**496** | © **2015**

**ISBN: 9789332542891**

Web Supplements

## ABOUT THE BOOK

This text first teaches students how to apply the theories of quantum mechanics, and then provides them with a more insightful discussion of what it means. Fundamental principles are covered, quantum theory presented, and special techniques developed for solving realistic problems. The two-part coverage organizes topics under basic theory, and assembles an arsenal of approximation schemes with illustrative applications.

The book avoids the temptation to include every possible relevant topic, in order to give students a complete treatment that is not oppressively long. It follows a straightforward writing style entertains and informs without intimidating.

## FEATURES

- Completely rewritten chapter on the formalism of quantum mechanics -NEW
- Chapter on measurement and interpretation -NEW
- Additional problems and worked examples -NEW
- Concise yet comprehensive presentation
- Streamlines the treatment for more effective instructor presentation and student comprehension
- Introduces students to computer-based material using Mathematica

## CONTENTS

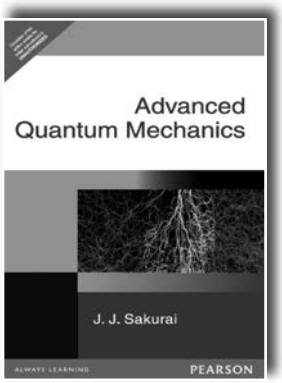


## ABOUT THE AUTHOR

**David J. Griffiths**, Reed College

* Only available till September 2019

# Advanced Quantum Mechanics




**J. J. Sakurai**

**336** | © **2006**

**ISBN: 9788177589160**

## ABOUT THE BOOK

This widely-regarded classic presents the major advances in the fundamentals of quantum physics. No familiarity with relativistic quantum mechanics or quantum field theory is presupposed, but the reader is assumed to be familiar with non-relativistic quantum mechanics, classical thermodynamics and classical mechanics.

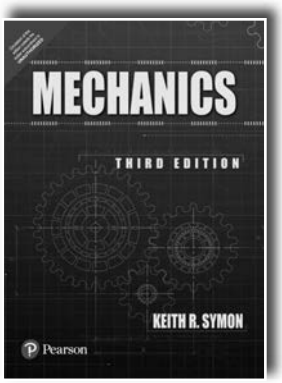
## CONTENTS



## ABOUT THE AUTHOR

The late **J. J. Sakurai**, noted theorist in particle physics, was born in Tokyo, Japan, in 1933. He received his B.A. from Harvard University in 19565, and his Ph. D. from Cornell University in 1958. Appointed assistant professor at the University of Chicago, he worked there until he became a professor at the University of California, Los Angeles in 1970. Sakurai died in 1982 while he was a visiting professor at CERN in Geneva, Switzerland.

# Mechanics, 3/e




**Keith R. Symon**

**656** | © **2016**

**ISBN: 9789332573918**

## ABOUT THE BOOK

This text is intended as the basis for an intermediate course in mechanics at the undergraduate level. Such a course, as essential preparation for advanced work in physics, has several major objectives. It must develop in the student a thorough understanding of the fundamental principles of mechanics. It should treat in detail certain specific problems of primary importance in physics, for example, the harmonic oscillator and the motion of a particle under a central force

## FEATURES

- The treatment throughout the book is intended to emphasize the modern point of view with mathematical rigor
- The examples treated in the text have been worked out so as to integrate as far as possible, the mathematical treatment with physical interpretation
- Two chapters on the theory of relativity has been added in this edition.
- The problems at end of each chapter requires more or less physical ingenuity in addition to an understanding of the text.

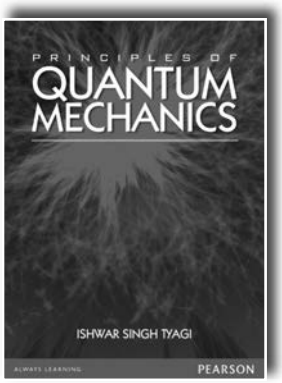
## CONTENTS



## ABOUT THE AUTHOR

**Keith R. Symon**, University of Wisoconsin

# Principles of Quantum Mechanics




**Ishwar Singh Tyagi**

**584** | © **2013**

**ISBN: 9788131773352**

## ABOUT THE BOOK

Any course in physics cannot be completed without learning quantum mechanics. This subject helps in understanding the individual behaviour of the subatomic particles that constitute all forms of matter. Principles of Quantum Mechanics comprehensively covers all relevant topics to meet the requirements of both undergraduate and postgraduate students of physics. The initial chapters of the book introduce the basic fundamentals of the subject to help the first-time learners and the later chapters cover aspects that will prepare them to apply quantum mechanics to understand the various physical phenomena, for example, the working of micro- and nano-devices. The book includes a detailed discussion on why classical mechanics, which is applicable at macroscopic level, cannot be applicable at microscopic level.

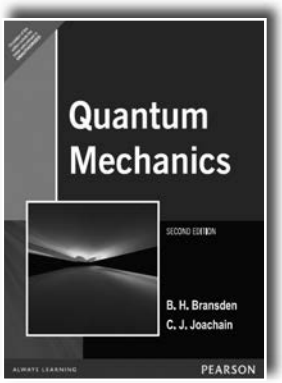
## CONTENTS



## ABOUT THE AUTHOR

**Ishwar Singh Tyagi** is Emeritus Fellow at the Physics Dept. of IIT Roorkee. After completing his Ph.D. in 1976 from the University of Roorkee (now IIT Roorkee) he joined the Department of Physics as a faculty member in 1977 and became professor in 1996. His assignments as post-doctoral as well as visiting scientist took him to the New University of Ulster (NUU), Coleraine, in North Ireland and the Freie Universitat Berlin.

# Quantum Mechanics, 2/e




**B. H. Bransden | C. J. Joachain**

**808 | © 2006**

**ISBN: 9788131708392**

Web Supplements

## ABOUT THE BOOK

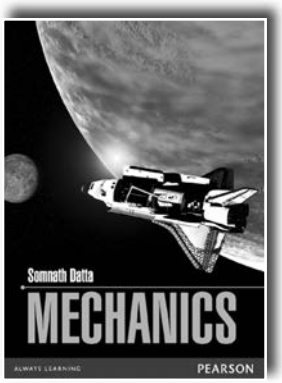
This book gives a modern, comprehensive introduction to the principles of quantum mechanics, to the main approximation methods and to the application of quantum theory to a wide variety of systems. The needs of students having an average mathematical ability are kept very much in mind, with the avoidance of complex mathematical arguments and any undue compression of material.

## FEATURES

- Comprehensive coverage of core material in quantum mechanics.
- Full and detailed explanations to help students of average mathematical ability.
- Additional topics covered in this edition include: Feynman's path integrals; the Berry phase; quantum dots; quantum jumps; and Bose-Einstein condensation.
- New chapter on relativistic quantum mechanics.
- Problems set to help students monitor their progress and increase understanding.

## CONTENTS

## Mechanics




ISBN: 9788131773734

**Somnath Datta**

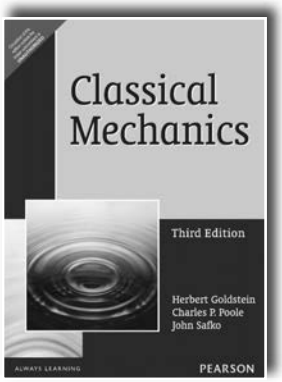
**650** | © **2012**

Web Supplements

### ABOUT THE BOOK

This book meets the requirement for an ideal text on Mechanics for undergraduate students. The book gives the readers a better understanding of topics like Rectilinear Motion, Conservation of Energy and Equation of Motion. Provides a good number of examples with good use real time illustration and exercises for practice and challenge.

## Classical Mechanics, 3/e




ISBN: 9788131758915

**Herbert Goldstein** | **Charles P. Poole** | **John Safko**

**664** | © **2011**

### ABOUT THE BOOK

For 30 years, this classic text has been the acknowledged standard in classical mechanics courses. *Classical Mechanics* enables students to make connections between classical and modern physics " an indispensable part of a physicist's education. The authors have updated the topics, applications, and notations to reflect today's physics curriculum. They introduce students to the increasingly important role that nonlinearities play in contemporary applications of classical mechanics. New numerical exercises help students develop skills in the use of computer techniques to solve problems in physics. Mathematical techniques are presented in detail so that the text remains fully accessible to students who have not had an intermediate course in classical mechanics.

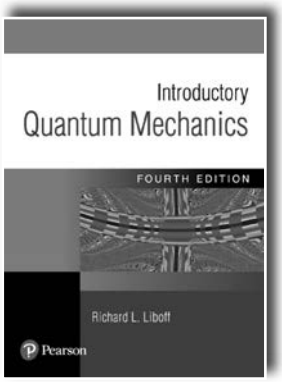
### FEATURES

- The classical approach of this leading text book has been revised and updated
- A section on the Euler and Lagrange exact solutions to the three-body problem
- A section on the damped driven oscillator as an example of the workings of the Josephson junction
- Chapter on canonical perturbation theory has been streamlined and the mathematics has been simplified
- Approximately 45 new problems, mostly in Chapters 1–8 and 11.
- Problems sets are now divided into "Derivations" and "Exercises"
- Solutions for 19 select problems have been provided in Appendix C

### CONTENTS

1. Survey of the Elementary Principles
2. Variational Principles and Lagrange's Equations
3. The Central Force Problem
4. The Kinematics of Rigid Body Motion
5. The Rigid Body Equations of Motion
6. Oscillations
7. The Classical Mechanics of the Special Theory of Relativity
8. The Hamilton Equations of Motion
9. Canonical Transformations

10. Hamilton–Jacobi Theory and Action-Angle Variables
11. Classical Chaos
12. Canonical Perturbation Theory
13. Introduction to the Lagrangian and Hamiltonian Formulations for Continuous Systems and Fields




**ISBN: 9788131704417**

## Introductory Quantum Mechanics, 4/e

**Richard Liboff**

**896** | © **2006**

Web Supplements

### ABOUT THE BOOK

Careful and detailed explanations of challenging concepts, and comprehensive and up-to-date coverage in this best-selling quantum mechanics text, continue to set the standard in physics education. In this new edition, a new chapter on the revolutionary topic of quantum computing (not currently covered in any other text at this level) and thorough updates to the rest of the text bring it up to date.

### FEATURES

- Introductory Quantum Mechanics, Fourth Edition is well known for its wealth of great problems (869 in total).
- Comprehensive coverage makes the book adaptable to any course.
- The book uses precise presentation and careful use of appropriate math.
- A new chapter on the revolutionary topic of quantum computing and numerous revisions throughout the rest of the book bring it up to date.
- More than 30 new problems have been added.

### CONTENTS

**Part I. Elementary Principles and Applications to Problems in One Dimension.**

1. Review of Concepts of Classical Mechanics.
2. Historical Review: Experiments and Theories.
3. The Postulates of Quantum Mechanics: Operators, Eigenfunctions, and Eigenvalues.
4. Preparatory Concepts: Function Spaces and Hermitian Operators.
5. Time Development, Conservation Theorems, and Parity.
6. Time Development, Conservation Theorems, and Parity.
7. Additional One-Dimensional Problems: Bound and Unbound States.
8. Finite Potential Well, Periodic Lattice, and Some Simple Problems with Two Degrees of Freedom.

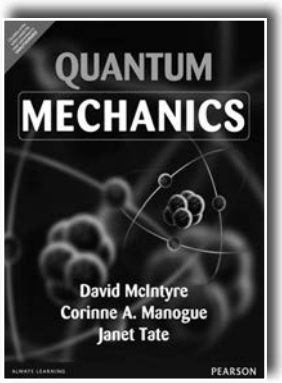
**Part II. Further Development of the Theory and Applications to Problems in Three Dimensions.**

9. Angular Momentum.
10. Problems in Three Dimensions.
11. Elements of Matrix Mechanics: Spin Wavefunctions.
12. Application to Atomic, Molecular, Solid-State, and Nuclear Physics: Elements of Quantum Statistics.
13. Perturbation Theory.
14. Scattering in Three Dimensions.
15. Relativistic Quantum Mechanics.
16. Quantum Computing.

### ABOUT THE AUTHOR

**Richard Liboff** is presently a Professor of Applied Physics, Applied Math, and Electrical Engineering at Cornell University. He has served as visiting professor at numerous universities and was awarded a Fulbright Scholarship in 1984 in support of a Visiting Professorship of Physics at Tel Aviv University. He has written over 100 scientific articles and has authored four textbooks. His research specialties include condensed-matter theory, kinetic theory, applied math, and elements of astrophysics.

# Quantum Mechanics




**David McIntyre | Corinne A. Manogue | Janet Tate**

**624 | © 2016**

**ISBN: 9789332571648**

## ABOUT THE BOOK

This innovative new text approaches ***Quantum Mechanics*** in a manner more closely aligned with the methods used in real modern physics research. Most texts start with a bit of history and then move directly to wave-particle problems with the incumbent heavy mathematical analysis; McIntyre, Manogue, and Tate aim to ground the student's knowledge in experimental phenomena and use a more approachable, less intimidating, more powerful mathematical matrix model.

Beginning with the Stern-Gerlach experiments and the discussion of spin measurements, and using bra-ket notation, ***Quantum Mechanics*** introduces students to an important notational system that is used throughout quantum mechanics. This non-traditional presentation is designed to enhance students' understanding and strengthen their intuitive grasp of the subject, and has been class tested extensively. The text takes advantage of the versatile SPINS software, which allows the student to simulate Stern-Gerlach measurements in succession. This interaction gets to the heart of Quantum Mechanics, and introduces the student to the mathematics they will be using throughout the course. A solid alternative to the classical texts currently available, it is designed for junior- to senior-level Quantum Mechanics courses taken by physics majors.

## FEATURES

- A more moderate transition to the essential mathematics is characterized by the authors' new approach, which focuses on modern research (quantum computing, etc), along with coverage of bra-ket notation and matrix mechanics. Students who are able to take advantage of the strengths of matrices and bra-ket will likely find the complex mathematics less daunting than in a standard quantum text.
- The focus on modern experimental quantum mechanics makes the material more engaging, and allows the student to stay connected with current research trends.
- A wide range of online activities are used to integrate and expand upon the features in the physical text. The activities on the website are organized both by topic, as well as by learning objective, allowing instructors to develop their course around topical knowledge or work on a specific learning objective.
- Online activities are organized in a wiki environment so that users can share their reflections on their use/adaptation of any one activity. Some activities take advantage of various pieces of software, such as SPINS, which is a cross-platform java program used to simulate Stern-Gerlach experiments. The online activities section, in the author's words, is a "living, growing thing," and the number of activities will grow as the website expands.
- The Web page as a whole serves not only as a resource for this Quantum book, which constitutes two pages within the wiki, but also for other courses in the Paradigms of Physics curriculum. In the physical text there is a concentration on making the mathematics of quantum mechanics easier to digest. Working with modern experimental quantum mechanics makes the material more engaging, and allows the student to stay connected with current research trends.

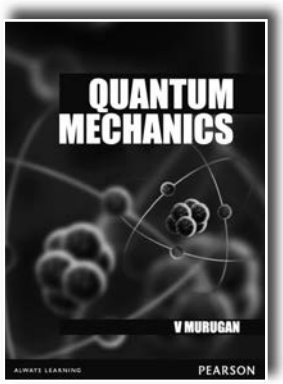
## CONTENTS

## ABOUT THE AUTHOR

**David H. McIntyre** received a B.S. degree in physics from the University of Arizona and M.S. and Ph.D. degrees in physics from Stanford University. He has been on the physics faculty at Oregon State University since 1989 and is one of the original developers of the Paradigms in Physics program. His other teaching interests include computational physics, computer interfacing, and optical physics. His laboratory research interests are in laser spectroscopy and optical physics.

**Corinne A. Manogue** received an A.B. degree in mathematics and physics from Mount Holyoke Collegeand a Ph.D. degree in physics from the University of Texas at Austin. She has been on the physics faculty at Oregon State University since 1988 and is the Director and one of the original developers of the Paradigms in Physics program. She is a Fellow of the American Physical Society and was awarded the Excellence in Undergraduate Physics Teaching Award from the American Association of Physics Teachers in 2008. She is coauthoring a textbook on The Geometry of Vector Calculus. Her theoretical research interests use the octonions to parameterize higher dimensional theories of particle physics.

**Janet Tate** received a B.Sc. degree in physics and chemistry from the University of Natal and M.S. and Ph.D. degrees in physics from Stanford University. She has been on the physics faculty at Oregon State University since 1989 and is one of the original developers of the Paradigms in Physics program. She is particularly interested in helping students to improve their critical thinking skills, especially through experimental work and writing. Her laboratory research interests are in experimental condensed matter physics.




**ISBN: 9788131773628**

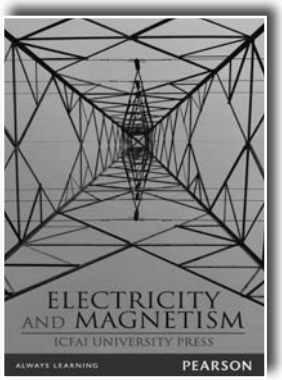
## Quantum Mechanics

**V. Murugan**

**728** | © **2014**

## ABOUT THE BOOK

Spread over 16 chapters, this book gives a comprehensive introduction to the fundamental postulates and the mathematical formalism of quantum mechanics. It spells the rules that facilitate translation of abstract mathematical information into physical terms to enable students understand the emergence of particle property in all quantum objects. With the right balance of theory and problems, this book gives an insight to the conceptual framework of quantum systems, which shaped our understanding of the physical universe and its evolution through the years.




ISBN: 9788131773727

## Electricity and Magnetism

**ICFAI University Press**

**440** | © **2012**

### ABOUT THE BOOK

***Electricity and Magnetism*** is designed for undergraduate courses in Physics. It comprehensively covers the topics of electricity and magnetism and brings out the relationship between the two forces with adequate emphasis on principles, theory and pedagogy. Illustrations are specially made to suit classroom presentation. Written in a simple and lucid language, the book progresses from the basic laws, which help the students to stay focused on the key tenets, without getting lost in the maze of intricate details

### FEATURES

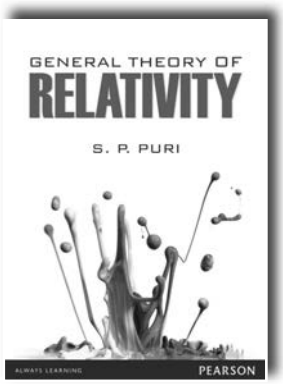
- It traces the origin of electromagnetic radiations, starting from the first principles.
- In-depth coverage of Current, Resistance and Electric Circuits, Gauss's Law and Magnetism
- Electric Charge and Electric Field and Electric Potential discussed in detail
- Student centric pedagogy with 90 solved examples and over 120 exercises.

### CONTENTS

1. Electric Charge and Electric Field
2. Electric Potential
3. Current, Resistance and Electric Circuits
4. Gauss's Law
5. Capacitance and Dielectrics
6. Magnetism
7. Sources of Magnetic field
8. Electromagnetic Induction
9. Inductance
10. Alternating Current
11. Electromagnetic Waves

### ABOUT THE AUTHOR

ICFAI University Press, Hyderabad




ISBN: 9788131795682

## General Theory of Relativity

S P Puri

Web Supplements

368 | © 2013

### ABOUT THE BOOK

**General Theory of Relativity** is the generalization of special relativity to include gravitation. It emphasizes that the law of Physics must be same for all observers and thereby extended it to non-inertial frames.This text is intended as a textbook for the students of Physics at the undergraduate and postgraduate level. It gives equal importance to the mathematical and physical aspects of general theory of relativity and hence strengthening the foregrounds.

### FEATURES

- Detailed study of Tensor analysis
- In-depth coverage on cosmology
- An introductory chapter on Special Theory of Relativity
- 36 figures, 18 solved problems and 82 unsolved problems with answers

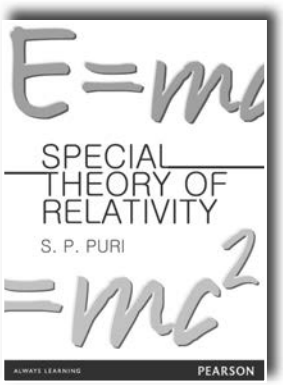
### CONTENTS



### ABOUT THE AUTHOR

**SP Puri** is a former U.G.C Emeritus Fellow. He was also a Professor and Chairman at Department of Physics in Panjab University, Chandigarh.

# Special Theory of Relativity




**S P Puri**

**232** | © **2013**

**ISBN: 9788131785010**

Web Supplements

## ABOUT THE BOOK

***Special Theory of Relativity*** is primarily intended as a textbook for the students of physics at the undergraduate level. Examining developments in the field as well as the predictions of special relativity that have taken place since 1959, its comprehensive coverage includes engaging explanations of the mathematical treatment as well as the applications of the special theory of relativity.

## FEATURES

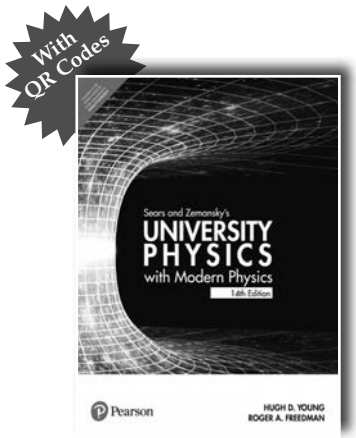
- Includes applications of special theory of relativity in a chapter
- 45 solved problems and 100 unsolved problems for practice
- Answers to unsolved problems included

## CONTENTS



## ABOUT THE AUTHOR

**S. P. Puri**, is a former U.G.C. Emeritus Fellow, was Professor and Chairman, Department of Physics, Punjab University, Chandigarh.




# University Physics with Modern Physics, 14/e

**Hugh D. Young** | **Roger A. Freedman**

**1600** | © **2017**

Web Supplements

**ISBN: 9789332586284**

***University Physics*** has been revered for its emphasis on fundamental principles and how to apply them. This text is known for its clear and thorough narrative, as well as its uniquely broad, deep, and thoughtful sets of worked examples that provide students with key tools for developing both conceptual understanding and problem-solving skills.

The Fourteenth Edition improves the defining features of the text while adding new features influenced by education research to teach the skills needed by today's students.

## NEW AND ENHANCED FEATURES

- More than **620 QR codes** throughout the book allow students to use a mobile phone to watch an interactive video of a physics instructor giving a relevant physics demonstration or a narrated and animated worked example
- A research-based problem-solving approach **Identify, Set Up, Execute, Evaluate** used in every example to teach students to tackle problems thoughtfully rather than cutting straight to the math
- Updated modern physics content includes sections on **quantum measurement and quantum entanglement**, as well as recent data on the **Higgs boson and cosmic background radiation**
- Additional **bioscience applications** throughout the text, in the form of marginal photos with explanatory captions
- Looking back at lists essential past concepts at the beginning of each chapter, for the students to know what to master before digging into the current chapter

## CONTENTS



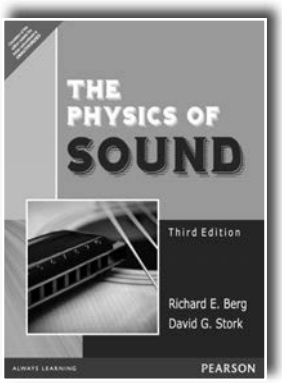
## ABOUT THE AUTHOR

**Hugh D. Young** - Carnegie Mellon University

**Roger A. Freedman** - University of California, Santa Barbara

**A. Lewis Ford** - Texas A&M University

## The Physics of Sound, 3/e




ISBN: 9788131768587

**Richard E Berg | David G. Stork**

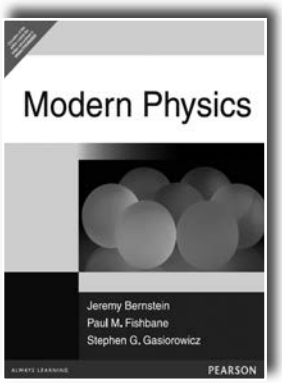
**416 | © 2011**

Web Supplements

### ABOUT THE BOOK

Using a hands-on and experimental approach, this book incorporates developments in digital audio technology—including consumer products—into a firm foundation of the physics of sound. Selected topics are interesting to a broad audience, with many applications of sound and waves beyond strictly musical applications. No background in physics, mathematics, or music is required.

## Modern Physics




ISBN: 9788131724668

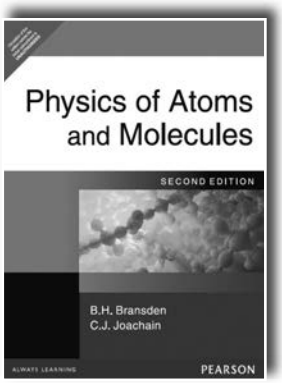
**Jeremy Bernstein | Paul M. Fishbane | Stephen G. Gasiorowicz**

**624 | © 2008**

### ABOUT THE BOOK

This comprehensive text provides a clear, correct, and up-to-date introduction and survey of the topics of importance to tomorrow's engineers and scientists. The presentation includes the description of the history of the topics, to show students how we got to where we are; it stresses the importance of observation and experiment; and it emphasizes numbers, so that students develop a feel for the magnitudes involved and for when different principles become important.

# Physics of Atoms and Molecules, 2/e




**ISBN: 9788177582796**

**B.H. Bransden | C. J. Joachain**

**1128 | © 2005**

## ABOUT THE BOOK

The study of atomic and molecular physics is a key component of undergraduate courses in physics, because of its fundamental importance to the understanding of many aspects of modern physics. The aim of this new edition is to provide a unified account of the subject within an undergraduate framework, taking the opportunity to make improvements based on the teaching experience of users of the first edition, and cover important new developments in the subject.

## FEATURES

- Revised material on molecular structure and spectra.
- Extended material on electronic and atomic collisions.
- A new chapter describing applications based on the use of the maser and the laser, including laser spectroscopy, laser cooling and trapping of atoms, Bose Einstein condensation, atom lasers and atomic systems in intense laser fields.
- A new chapter describing other applications, including magnetic resonance, atom optics, atoms in cavities, ions in traps, atomic clocks and astrophysics.
- Revised appendices include new material on molecules and updated tables of physical constants.
- Solutions of selected problems.

## CONTENTS

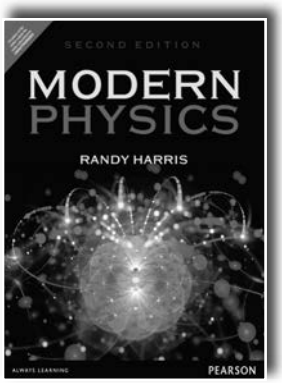
- Electrons, photons and atoms.
- The elements of quantum mechanics.
- One-electron atoms.
- Interaction of one-electron atoms with electomagnetic radiation.
- One-electron atoms: fine structure and hyperfine structure.
- Interaction of one-electron atoms with external electric and magnetic fields.
- Two-electron atoms.
- Many-electron atoms.
- Interaction of many-electron atoms with electromagnetic radiation and with static electric and magnetic fields.
- Molecular structure.
- Molecular spectra.
- Atomic collisions: basic concepts and potential scattering.
- Electron-atom collisions and atomic photoionisation.
- Atom-atom collisions.
- Masers, lasers and their interaction with atoms and molecules.
- Further developments and applications of atomic and molecular physics.
- Appendices.

## ABOUT THE AUTHOR

**B.H. Bransden**, Department of Physics, University of Durham

**C.J. Joachain**, Physique Theorique, Universite Libre de Bruxelles

# Modern Physics, 2/e




**Randy Harris**

**640** | © **2016**

**ISBN: 9789332570962**

## ABOUT THE BOOK

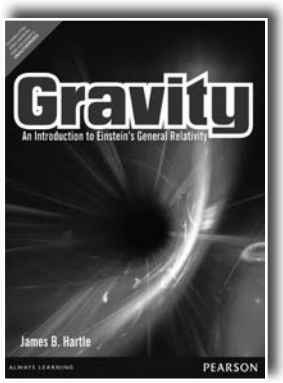
***Modern Physics***, Second Edition provides a clear, precise, and contemporary introduction to the theory, experiment, and applications of modern physics. Ideal for both physics majors and engineers, this eagerly awaited second edition puts the modern back into modern physics courses. Pedagogical features throughout the text focus the reader on the core concepts and theories while offering optional, more advanced sections, examples, and cutting-edge applications to suit a variety of students and courses. Critically acclaimed for his lucid style, in the second edition, Randy Harris applies the same insights into recent developments in physics, engineering, and technology.

## FEATURES

- A contemporary approach that incorporates recent developments in physics and up-to-date applications in engineering and technology make the physics relevant and engaging.
- Critically acclaimed for a lucid and precise style, the book carefully balances concepts, theory, experimental data, and theory. It strives for complete exposition of fundamental ideas while addressing common misconceptions.
- Progress and Applications sections survey current applications of the theories described in the chapter. Students see how what they learn applies to their chosen career and the opportunities available for professional physicists and engineers.
- Worked Examples in the text carefully walk students step-by-step through solving problems to better prepare them to tackle the end-of-chapter problems.
- Optional/Advanced sections are clearly labeled so that professors can pick and choose sections to optimally match the level, scope, and emphasis of their course.
- Chapter Outlines and brief introductions give students a learning roadmap to the chapter ahead.
- Chapter Summaries now incorporate a Basic Equations section to show how each equation relates to the key topics in the chapter, and to one another.
- Challenge Problems are highlighted so professors can easily build assignments of ideal level, and know where they can push their best students.

## CONTENTS

# Gravity: An Introduction to Einstein's General Relativity




**James B. Hartle**

**560** | © **2014**

**ISBN: 9789332535084**

## ABOUT THE BOOK

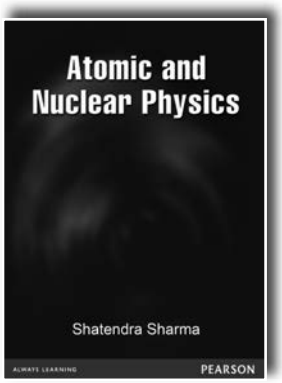
Einstein's theory of general relativity is a cornerstone of modern physics. It also touches upon a wealth of topics that students find fascinating—black holes, warped spacetime, gravitational waves, and cosmology. Until now, it has not been included in the curriculum of many undergraduate physics courses because the required math is too advanced. The aim of this ground-breaking new text is to bring general relativity into the undergraduate curriculum and make this fundamental theory accessible to virtually all physics majors. Using a "physics first" approach to the subject, renowned relativist James Hartle provides a fluent and accessible introduction that uses a minimum of new mathematics and illustrates a wealth of applications. Recognizing that there is typically not enough time in a short introductory course for the traditional, math-first, approach to the subject, Hartle presents a physics-first introduction to general relativity that begins with the essential physical applications.

## FEATURES

- Examples come first, derivations later. In this "physics first" approach, relevant simple solutions of the Einstein equation are presented first, before introducing the field equations of general relativity and their supporting mathematics. This brings the student to the heart of the physical phenomena as quickly as possible.
- The emphasis is on the exciting phenomena of gravitational physics and the growing connection between theory and observation. Global positioning system, black holes, X-ray sources, pulsars, quasars, gravitational waves, the big bang, and the large scale structure of the universe, for example, are used to illustrate the widespread role of how general relativity describes a wealth of everyday and exotic phenomena.
- Novel and simple examples are presented to keep the presentation concise and accessible: for instance, Schwarzschild black hole, spherical stars, weak gravitational waves in flat spacetime.
- Mathematics, beyond the typical advanced calculus knowledge, is kept to a minimum. Only absolutely essential new mathematical concepts are introduced, and these only when needed.
- The text's layered structure allows the text to be used for a range of courses depending on the length and level of the course—from junior level to introductory graduate level in physics and astronomy. After just the first few chapters, a student will take away a broad introduction to some of the basic phenomena of gravitational physics, and not just mathematical tools.
- Illustrative boxes are interspersed throughout, providing students with applications, experiments, ideas, examples, and interesting sidelights that extend and complement concepts presented in the basic text without interrupting its flow

## CONTENTS

## Atomic and Nuclear Physics




**ISBN: 9788131719244**

**Shatendra K. Sharma**

**620** | © **2008**

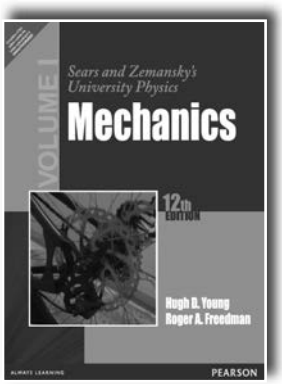
Web Supplements

### ABOUT THE BOOK

The book describes the basics of Atomic and Nuclear Physics, related phenomena, and the physics of Nuclear Reactors and the Instruments and Applications for the same.

The flow of the chapters in the book gradually moves from Atomic Physics, then to Quantum Physics, and finally to Nuclear Physics.

## Sears and Zemansky's University Physics-Volume I: Mechanics




**ISBN: 9788131759851**

**Hugh D. Young** | **Roger A. Freedman**

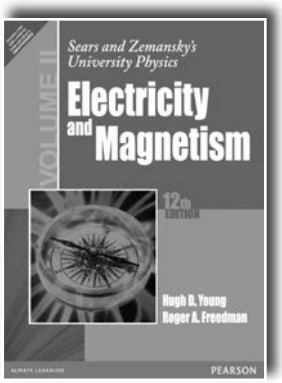
**544** | © **2011**

### ABOUT THE BOOK

***University Physics – Mechanics***, encapsulated the chapters relating to Mechanics from Sears and Zemansky's University Physics Twelfth Edition. The book continues an unmatched history of innovation and careful execution that was established by the bestselling eleventh edition. Assimilating the best ideas from education research, this new edition provides enhanced problem-solving instruction, pioneering visual and conceptual pedagogy, the first systematically enhanced problems, and the most pedagogically proven and widely used homework and tutorial systems available.

### CONTENTS

# Sears and Zemansky's University Physics Volume II: Electricity and Magnetism, 12/e




ISBN: 9788131758625

**Hugh D. Young | Roger A. Freedman**

**452 | © 2011**

## ABOUT THE BOOK

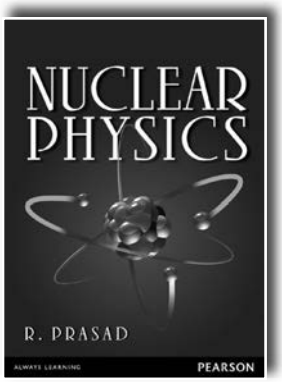
The book continues an unmatched history of innovation and careful execution that was established by the bestselling eleventh edition. Assimilating the best ideas from education research, this new edition provides enhanced problem-solving instruction, pioneering visual and conceptual pedagogy, the first systematically enhanced problems, and the most pedagogically proven and widely used homework and tutorial systems available.

## FEATURES

- The acclaimed, consistent, and explicit four-step problem-solving framework (Identity, Set Up, Execute, and Evaluate) is used throughout every worked example, chapter-specific problem-solving strategy, and solution. Worked examples incorporate vivid sketches to guide you through this important step
- Student interest in the subject is kindled by a thought-provoking probe, which kicks off each new chapter. Based on real-life situations, these questions, pertinent to the topic under discussion, are convincingly addressed at the chapter-end and enable you to correlate observed effects with physical causes
- A streamlined and systematic learning path of instruction followed by practice includes Learning Goals at the start of each chapter and Visual Chapter Summaries that consolidate each concept in figures, math, and words
- The instructional power of figures is enhanced by using the research-proven technique of "annotation" (chalkboard-style commentary integrated into the figures to guide you in interpreting the figure)
- Renowned for providing the widest-ranging and most effective problems available, the twelfth edition goes further " its provides the first library of physics problems systematically enhanced based on feedback about student performance
- There is also a Chapter Opening Question and a list of Learning Goals to make the reader think about the subject matter of the chapter ahead. (To find the answer for the question, look for the? icon.)
- At the end of each chapter is a collection of Discussion Questions that probe and extend the student's conceptual understanding

## CONTENTS

# Nuclear Physics




**R Prasad**

**504** | © **2014**

**ISBN: 9789332522657**

## ABOUT THE BOOK

***Nuclear Physics*** provides a clear and concise introduction to the subject. Fundamentals aside, the book reviews the evolution of the subject from its emergence to its present-day advancements and critically examines the future directions of nuclear and particle physics. The book brings together the essence of nuclear, particle and cosmic ray physics, serving as an ideal text for undergraduate students.

## FEATURES

- Exclusive chapters on elementary particles and cosmic rays
- Focus on contemporary developments like heavy ion reactions, in-complete fusion, neutrino oscillations, big accelerators, colliding beam experiments & Higg's particle
- Over 220 illustrations
- Rich pedagogy comprising over 300 multiple choice questions and problems for practice

## CONTENTS

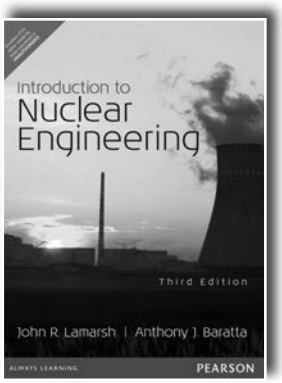


## ABOUT THE AUTHOR

**R. Prasad** has more than 40 years experience of teaching physics and nuclear physics to graduate and postgraduate students. He is an ex-professor of nuclear physics at the Aligarh Muslim University, Aligarh, India.

Throughout his career, Prof. Prasad supervised half a dozen Ph.D, about two dozen M.Phil, large number of M.Sc projects, eleven research projects funded by various agencies in India and carried out post doctoral research at many international and national institutes/universities including the First Institute of Experimental Physics, University of Hamburg, Germany and Atom Institute, Technical Universities of Austria, Vienna, Austria among many. He has also attended and chaired sessions of a large number of international and national conferences, seminars and symposia and delivered invited talks. He has published more than 80 research papers in various reputed international and national journals and presented six science-based television films under the UGC higher education programme. He is a recipient of prestigious DAAD (German) Fellowship, Post-doc fellowship of the Government of Austria, and Emeritus fellowship of UGC, India. He is a life member of many academic societies of the country.

# Introduction to Nuclear Engineering, 3/e




**John R. Lamarsh | Anthony J. Baratta**

**744 | © 2014**

**ISBN: 9789332536708**

## ABOUT THE BOOK

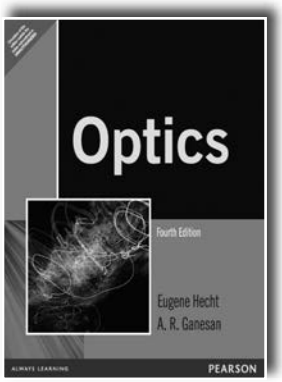
The text is designed for junior and senior level Nuclear Engineering students. The third edition of this highly respected text offers the most current and complete introduction to nuclear engineering available. ***Introduction to Nuclear Engineering*** has been thoroughly updated with new information on French, Russian, and Japanese nuclear reactors. All units have been revised to reflect current standards. In addition to the numerous end-of-chapter problems, computer exercises have been added.

## FEATURES

- Discussions of new reactor types including the AP600, ABWR, and SBWR as well as an extensive section on non-US design reactors.
- The authors have added a discussion on the nuclear Navy and its impact on the development of nuclear energy.
- Basic nuclear theory chapters include additional discussions on binding energy and such topics as the semi-empirical mass formula and elementary quantum mechanics.
- Changes in reactor theory sections include a more complete discussion of solutions to the diffusion equation and a more general derivation of the point kinetics equation.
- Chapter on radiation effects updated to include the latest standards—Both SI and conventional units are discussed and used in examples and problems in this chapter.
- Topics in reactor safety now include a complete discussion of the Chernobyl accident and an updated section on TMI and the use of computer codes in safety analysis.

## CONTENTS

## Optics, 4/e




ISBN: 9788131718070

**Eugene Hecht | A. R. Ganesan**

**650 | © 2008**

### ABOUT THE BOOK

Accurate, authoritative, and comprehensive, ***Optics***, Fourth Edition has been revised to provide students with the most up-to-date coverage of optics. The market leader for over a decade, this text provides a balance of theory and instrumentation, while also including the necessary classical background. The writing style is lively and accessible.

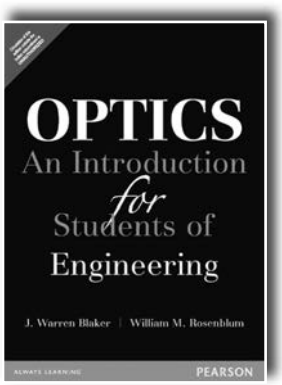
### FEATURES

- New illustrations and photos, as well as revised art, are included throughout enhancing the already outstanding visual pedagogy of this textbook.
- Chapter 3 Electromagnetic Theory, Photons, and Light has been fully revised and updated to reflect advances in the field.
- The text employs a careful balance of theory and instrumentation and provides students with the necessary classical background.
- Coherence is introduced early on in the text and leads immediately into a discussion of Young's Experiments. To underscore the quantum mechanical nature of interference, many optical interference photos are accompanied by equivalent material particle fringe patterns.

### CONTENTS



## Optics: An Introduction for Students of Engineering



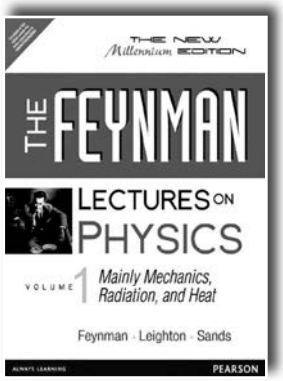

ISBN: 9789332559431

**J. Warren Blaker | William M. Rosenblum**

**336 | © 2015**

### ABOUT THE BOOK

This book provides a concise overview of optic design and a thorough examination of engineering applications.




ISBN: 9788131792117

# The Feynman Lectures on Physics: Volume I: The New Millennium Edition: Mainly Mechanics, Radiation, and Heat

**Richard P. Feynman | Robert B. Leighton | Matthew Sands**

**560 | © 2012**

## ABOUT THE BOOK

Timeless and collectible, ***The Feynman Lectures on Physics*** are essential reading, not just for students of Physics, but for anyone seeking an insightful introduction to the field from the inimitable Richard P. Feynman.

When I look at The Feynman Lectures on Physics, I feel a very personal sense of closeness to them," said Feynman, looking back at the origins of these books. Ranging from Newton's laws through the special theory of relativity, optics, statistical mechanics, and thermodynamics, the lectures collected in Volume I of ***The Feynman Lectures on Physics*** stand as a monument to clear exposition and deep insightand to Feynman's deep connection with the field.

## CONTENTS

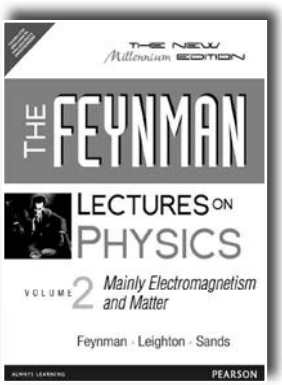


## ABOUT THE AUTHOR

**Richard P. Feynman** was a professor of physics at Caltech from 1959 to 1988. In 1965 he shared a Nobel Prize in Physics for his work on the development of quantum electrodynamics.

**Robert B. Leighton** was a physicist and astronomer, an esteemed teacher and textbook author, and professor at Caltech for many years.

**Matthew Sands** has been a professor at Caltech, deputy director of the Stanford Linear Accelerator Centre, and vice chancellor for science at the University of California, Santa Cruz.




ISBN: 9788131792124

# The Feynman Lectures on Physics: Volume II: The New Millennium Edition: Mainly Electromagnetism and Matter

**Richard P. Feynman | Robert B. Leighton | Matthew Sands**

**592 | © 2012**

## ABOUT THE BOOK

Timeless and collectible, ***The Feynman Lectures on Physics*** are essential reading, not just for students of Physics, but for anyone seeking an insightful introduction to the field from the inimitable Richard P. Feynman.

When I look at The Feynman Lectures on Physics, "I feel a very personal sense of closeness to them," said Feynman, looking back at the origins of these books. Ranging from Gauss's law and Maxwell's electrodynamics to waveguides, dielectrics, magnetic materials, and elasticity, the lectures collected in Volume II of ***The Feynman Lectures on Physics*** stand as a monument to clear exposition and deep insightand to Feynman's deep connection with the field.

## CONTENTS

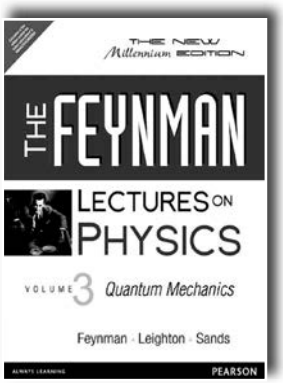


## ABOUT THE AUTHOR

**Richard P. Feynman** was a professor of physics at Caltech from 1959 to 1988. In 1965 he shared a Nobel Prize in Physics for his work on the development of quantum electrodynamics.

**Robert B. Leighton** was a physicist and astronomer, an esteemed teacher and textbook author, and professor at Caltech for many years.

**Matthew Sands** has been a professor at Caltech, deputy director of the Stanford Linear Accelerator Centre, and vice chancellor for science at the University of California, Santa Cruz.




ISBN: 9788131792131

# The Feynman Lectures on Physics: Volume III: The New Millennium Edition: Quantum Mechanics

**Richard P. Feynman | Robert B. Leighton | Matthew Sands**

**400 | © 2012**

## ABOUT THE BOOK

Timeless and collectible, ***The Feynman Lectures on Physics*** are essential reading, not just for students of Physics, but for anyone seeking an insightful introduction to the field from the inimitable Richard P. Feynman.

When I look at The Feynman Lectures on Physics, I feel a very personal sense of closeness to them," said Feynman, looking back at the origins of these books. Ranging from probability amplitudes to spin, two-state systems, propagation in a crystal lattice, semiconductors, symmetry, and conservation laws, the lectures collected in Volume Ill of ***The Feynman Lectures on Physics*** stand as a monument to clear exposition and deep insightand to Feynman's deep connection with the field.

## CONTENTS



## ABOUT THE AUTHOR

**Richard P. Feynman** was a professor of physics at Caltech from 1959 to 1988. In 1965 he shared a Nobel Prize in Physics for his work on the development of quantum electrodynamics.

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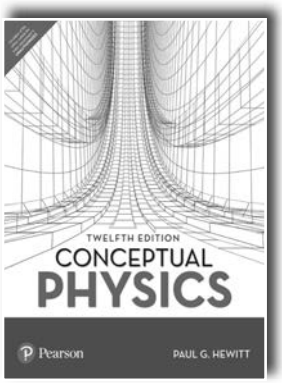
**Matthew Sands** has been a professor at Caltech, deputy director of the Stanford Linear Accelerator Centre, and vice chancellor for science at the University of California, Santa Cruz.

# Conceptual Physics, 12/e




ISBN: 9789352861774

**Paul G. Hewitt**

**816** | © **2018**

## ABOUT THE BOOK

Intended for non-science majors Physics Courses, Since defining this course 30 years ago, Paul Hewitt's best-selling text continues as the benchmark by which all others are judged. In ***Conceptual Physics*** Twelfth Edition Paul Hewitt makes physics interesting, understandable, and relevant for non-science majors. The Twelfth Edition will delight students with informative and fun Hewitt-Drew-It screencasts, updated content and applications.

Hewitt's text is guided by the principle of "concepts before calculations" and is famous for engaging students with analogies and imagery from the real-world that build a strong conceptual understanding of physical principles ranging from classical mechanics to modern physics.

This program presents a better teaching and learning experience-for you and your students.

***Prepare for lecture:*** NEW! 100 Hewitt-Drew-It screencasts, authored and narrated by Paul Hewitt, explain physics concepts through animation and narration. The exciting new Screencasts, accessed through QR codes in the textbook, will enable students to engage with the physics concepts more actively outside of class.

***Make physics delightful:*** Relevant and accessible narrative, analogies from real-world situations, and simple representations of the underlying mathematical relationships make physics more appealing to students.

***Build a strong conceptual understanding of physics:*** Students gain a solid understanding of physics through practice and problem solving in the book.

## FEATURES

- Make physics delightful
- Updated applications are available for digital technology, environment, and energy. These topics are at the forefront of everyone's consciousness these days and an intelligent awareness of their scientific foundations will give rise to better decision making in the political arena.
- A new interior design provides an attractive, fresh, and accessible new look, updating a classic text to be even more student friendly.
- An extensive full-color figure and photo program includes the author's hallmark cartoons, which are both approachable and informative.
- Fun and easy-to-perform projects involve students in the scientific process of exploration and observation.
- Insight boxes provide short snippets of information about how topics in the text relate to real-life situations, experiments, and other parts of the book.
- Enhanced coverage of topics in energy and environment are included and help to keep students aware of current events.

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17. Change of Phase
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**IV. SOUND**

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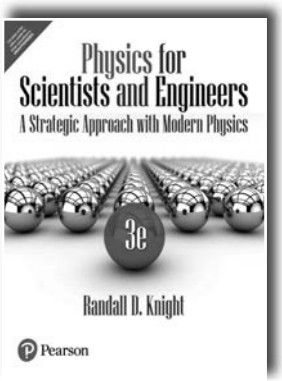
B. More About Motion
C. Graphing
D. More About Vectors
E. Exponential Growth and Doubling Time

## ABOUT THE AUTHOR

**Paul G. Hewitt**, former silver-medal boxing champion, sign painter, uranium prospector, and soldier, Paul began college at the age of 27, with the help of the GI Bill. He pioneered the conceptual approach to teaching physics at the City College of San Francisco. He has taught as a guest teacher at various middle schools and high schools, the University of California at both the Berkeley and Santa Cruz campuses, and the University of Hawaii at both the Manoa and Hilo campuses. He also taught for 20 years at the Exploratorium in San Francisco, which honored him with its Outstanding Educator Award in 2000. He is the author of Conceptual Physics and a co-author of Conceptual Physical Science and Conceptual Physical Science Explorations (with John Suchocki and Leslie Hewitt).

# Physics for Scientists and Engineers: A Strategic Approach with Modern Physics, 3/e




**Randall D. Knight**

**1472** | © **2016**

**ISBN: 9789332575721**

## ABOUT THE BOOK

As the most widely adopted new physics book in more than 50 years, Knight's ***Physics for Scientists and Engineers*** was published to widespread critical acclaim from professors and students. In the Third Edition, Knight builds on the research-proven instructional techniques he introduced in the first and second editions, as well as national data of student performance, to take student learning even further. Knight's unparalleled insight into student learning difficulties, and his impeccably skillful crafting of text and figures at every level–from macro to micro–to address these difficulties, results in a uniquely effective and accessible book, leading students to a deeper and better-connected understanding of the concepts and more proficient problem-solving skills.

For the Third Edition, Knight continues to apply the best results from educational research, and to refine and tailor them for this course and its students. New pedagogical features (Chapter Previews, Challenge Examples, and Data-based Examples), end-of-chapter problem sets enhanced through analysis of national student metadata, and fine-tuned and streamlined content take the hallmarks of the previous editions–exceptionally effective conceptual explanation and problem-solving instruction–to a new level.

## FEATURES

- Builds problem-solving skills and confidence using an explicit, methodical, and consistent approach.
- Detailed problem-solving strategies for different topics and categories of problems are developed throughout the book, each one built on the MODEL/VISUALIZE/SOLVE/ASSESS framework.
- Tactics Boxes give step-by-step procedures for developing specific skills (drawing free-body diagrams, using ray tracing, etc.).
- Worked examples follow the 4-step strategies and include careful explanations of the underlying, and often unstated, reasoning.
- The Student Workbook provides straightforward confidence- and skill-building exercises, bridging the gap between worked examples and end-of-chapter problems. Worksheets following the MODEL/VISUALIZE/SOLVE/ASSESS framework provide tear-out templates for students to follow when practicing solving problems.
- Promotes a deeper and better-connected understanding using a structured learning path and an inductive approach with exceptional clarity.
- Each chapter begins with a roadmap of the upcoming material (see "Chapter Previews" below). Looking Back references consolidate connections with previous topics.
- Unique and critically acclaimed visual chapter summaries consolidate understanding by providing each concept in words, math, and figures and organizing these into a vertical hierarchy—from General Principles (top) to Applications (bottom).
- The student's understanding of groups of chapters is also consolidated. Each Part begins with a two-page introductory Overview of the chapters ahead. Each Part ends with a Summary that draws together key concepts from the preceding chapter into a visual Knowledge Structure.
- New concepts are introduced through observations about the real world and theories grounded by making sense of observations. This inductive approach illustrates how science operates, and has been shown to improve student learning by reconciling new ideas with what they already know.
- NOTE paragraphs throughout guide students away from known preconceptions and around common sticking points and highlight many math- and vocabulary-related issues that have been proven to cause difficulties.
- Stop to Think questions at the end of a section allow students to quickly check their understanding. Using powerful ranking-task and graphical techniques, they are designed to efficiently probe key misconceptions and encourage active reading. (Answers are provided at the end of the chapter.)
- Hand-drawn sketches are incorporated into select worked examples to provide a clear model of what students should draw during their own problem solving.

- Pioneers the implementation of proven visual techniques that cognitive science has shown significantly increase engagement, assimilation, and retention of science concepts.
- Figures are carefully streamlined in detail and color so students focus on the physics—or instance, the object of interest in mechanics.
- Explicit instruction as annotations directly on figures helps students to interpret figures and graphs.
- Analogy is used throughout the text and figures to consolidate student understanding by comparing with a more familiar concept or situation.
- Conceptual Questions require careful reasoning and can be used for group discussions or individual work.
- Exercises (for each section) allow students to build up their skills and confidence with straightforward, one-step questions.
- Problems (spanning concepts from the whole chapter), require in-depth reasoning and planning, and allow students to practice their problem-solving strategies. Context-rich problems require students to simplify and model more complex real-world situations. Specifically labeled problems integrate concepts from multiple previous chapters.
- Challenge Problems push the best students even further.
- The end-of-chapter problems are rated by students to show difficulty level with the variety expanded to include more real-world, challenging, and explicitly calculus-based problems.
- The revised Workbook is tightly integrated with the main text—following the same textbook strategies, and is explicitly referenced throughout the text.

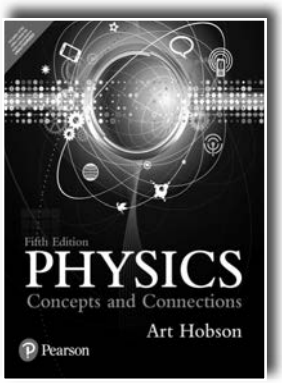
## CONTENTS



## ABOUT THE AUTHOR

**Randy Knight** has taught introductory physics for nearly 30 years at Ohio State University and California Polytechnic University, where he is currently Professor of Physics and Director of the Minor in Environmental Studies. Randy received a Ph.D. in physics from the University of California, Berkeley, and was a post-doctoral fellow at the Harvard-Smithsonian Center for Astrophysics before joining the faculty at Ohio State University. It was at Ohio State, under the mentorship of Professor Leonard Jossem, that he began to learn about the research in physics education that, many years later, led to Five Easy Lessons: Strategies for Successful Physics Teachingand this book. Randy's research interests are in the field of lasers and spectroscopy. When he's not in the classroom or in front of a computer, you can find Randy hiking, sea kayaking, playing the piano, or spending time with his wife Sally and their seven cats.

# Physics: Concepts and Connections, 5/e




ISBN: 9789332575769

**Art Hobson**

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## ABOUT THE BOOK

Written for the non-science major, this text emphasizes modern physics and the scientific process—and engages students by drawing connections between physics and everyday experience. Hobson takes a conceptual approach, with an appropriate focus on quantitative skills. The Fifth Edition increases coverage of key environmental topics such as global warming and energy, and adds new topics such as momentum. Hobson's text remains the least expensive textbook available for students taking nonmajors physics.

## FEATURES

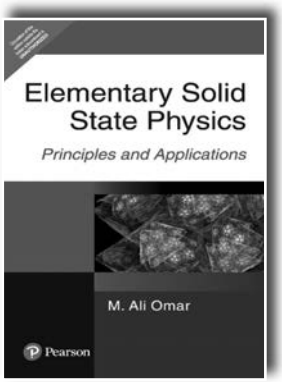
- Modern physics is introduced early in the text and integrated throughout.
- The "great ideas" of physics are covered in depth–versus an encyclopedic approach to all of the topics of physics.
- "How Do We Know…?" sections emphasize the process of science throughout. An interesting question is posed with a conclusion which provides scientific evidence.
- Making Estimates examples and exercises help students develop the ability to make "back of the envelope calculations"–often a goal of this course.
- Concept Checks, integrated throughout each chapter, prompt students to stop and check their understanding of key concepts. Answers are provided at the end of each chapter.
- End-of-chapter Review Questions, Conceptual Exercises, and Problems can be assigned as homework or used by students for self-study.

## CONTENTS



## ABOUT THE AUTHOR

**Art Hobson**, University of Arkansas

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## Elementary Solid State Physics: *Principles and Applications*

**M. Ali Omar**

**669** | © **2005**

### ABOUT THE BOOK

The volume is intended to serve as a general text in solid state physics for undergraduates in physics, applied physics, engineering, and other related scientific disciplines. It covers a wide range of topics with as many practical applications as possible.

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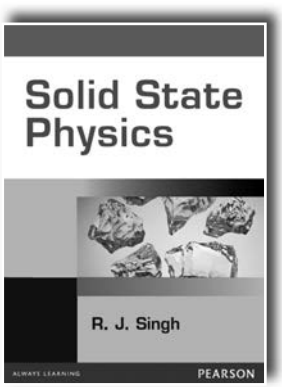


ISBN: 9788131754016

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**R. J. Singh**

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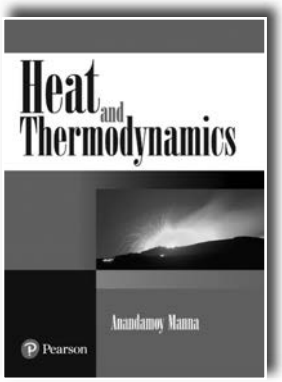
Web Supplements

### ABOUT THE BOOK

This book is written as per the core module syllabus of the major universities and targets undergraduate B.Sc students. The book uses lecture style in explaining the concepts which would facilitate easy understanding of the concepts.

## Heat and Thermodynamics




ISBN: 9788131754009

**Anandamoy Manna**

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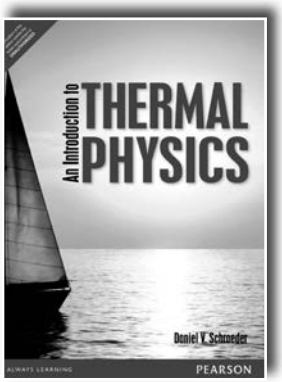
### ABOUT THE BOOK

The book is meant for an introductory course on Heat & Thermodynamics. The book uses variety of diagrams, charts and learning aids to enable easy understanding of the subject.

## An Introduction to Thermal Physics




ISBN: 9789332535077

**Daniel V. Schroeder**

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### ABOUT THE BOOK

This text provides a balanced, well-organized treatment of thermodynamics and statistical mechanics, making thermal physics interesting and accessible to anyone who has completed a year of calculus-based introductory physics. Part I introduces essential concepts of thermodynamics and statistical mechanics from a unified view, applying concepts in a select number of illustrative examples. Parts II and III explore further applications of classical thermodynamics and statistical mechanics. Throughout, the emphasis is on real-world applications.

### FEATURES

- A balanced treatment of both classical thermodynamics and statistical mechanics, showing the relation between them without confusing the student.
- A rich supply of applications capture students' attention and show how thermal physics relates to engineering, chemistry, earth science, condensed matter physics, astrophysics, and everyday life.
- Integrated problems at the ends of sections and subsections encourage students to actively apply what they have been reading and check their understanding.
- The text includes many problems that require the use of the computer; for instance, spreadsheet calculations, plotting, numerical integration, root finding, and Monte Carlo simulation.
- The text is accessible to anyone who has completed a year of calculus-based introductory physics.
- A clear and lively writing style engages readers.

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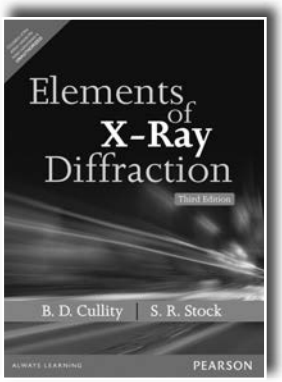


ISBN: 9789332535169

## Elements of X-Ray Diffraction, 3/e

**B. D. Cullity | S.R. Stock**

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### ABOUT THE BOOK

This revision of a classical text is intended to acquaint the reader, who has no prior knowledge of the subject, with the theory of x-ray diffraction, the experimental methods involved, and the main applications. The text is a collection of principles and methods designed directly for the student and not a reference tool for the advanced reader

### FEATURES

- No metallurgical data are given beyond that necessary to illustrate the diffraction methods involved.
- X-ray diffraction is stressed rather than metallurgy.
- The book is divided into three main parts—Fundamentals; experimental methods; and applications.
- The subject of crystal structure is approached through, and, based on, the concept of the point lattice (Bravais lattice), because the point lattice of a substance is so closely related to its diffraction pattern.
- The book is written entirely in terms of the Bragg law and can be read without any knowledge of the reciprocal lattice.

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