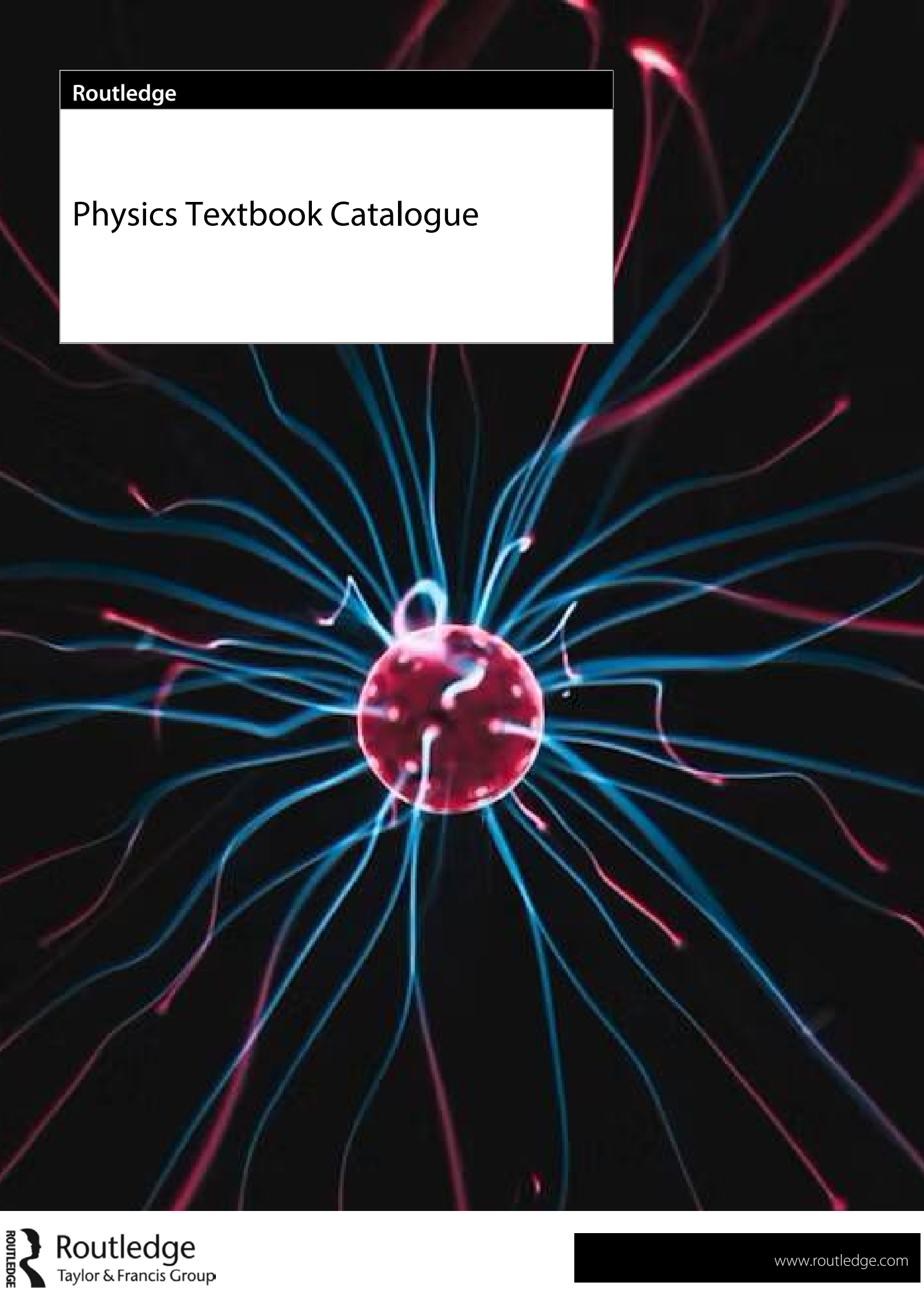




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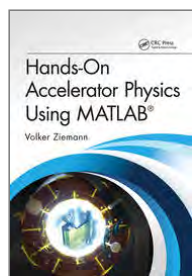
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Contents

Accelerator physics	2	Quantum Mechanics / Quantum Field Theory, Advanced	56
Astrobiology	3	Radiation	57
Astronomy	4	Radiation Physics	58
Astrophysics	6	Radiology	59
Atomic Physics	7	Relativity	60
Biomedical Engineering	8	Science Communication / General Skills	62
Biophysics	9	Semiconductor Physics	63
Biophysics, Advanced Biophysics, Advanced Biophysics, Advanced		Sensors	64
Biophysics, Advanced Biophysics, Advanced Biophysics, Advanced		Solid State Physics	65
Biophysics, Advanced	12	Spectroscopy	66
Classical and Quantum Mechanics	14	Statistical Mechanics	67
Climate Physics / Green Physics	16	Statistical Physics	68
Computational Physics	17	Statistical Thermodynamics	69
Conceptual & Theoretical Physics	19	Superconductivity	70
Condensed and Soft Matter	21	Supersymmetry	71
Condensed Matter Physics / Materials Science	22	Sustainable Energy / Energy Physics	72
Cosmology	24	Thermodynamics	73
Econophysics	25	Waves and Fluids	75
Electricity and Magnetism	26	Study skills, Research Methods and Statistics	76
Electrodynamics	27		
Gauge Theory & String Theory	28		
General & Introductory Physics	29		
Imaging	32		
Interdisciplinary / Research Skills	33		
Life Sciences	34		
Materials Science	35		
Mathematical Physics	36		
Mechanics/Classical Mechanics	38		
Medical Imaging	39		
Medical Physics	40		
Microscopy	42		
Nanomaterials	43		
Nuclear Physics	45		
Optics	46		
Optics, Advanced	47		
Particle and High Energy Physics	48		
Particle and High Energy Physics, Advanced	50		
Particle Physics	51		
Planetary Physics	52		
Plasma Physics	53		
Plasma Physics, Advanced	54		
Quantum Mechanics	55		

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Volker Ziemann

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CRC Press

March 2021:372

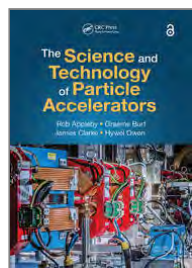
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CRC Press

August 2022:318

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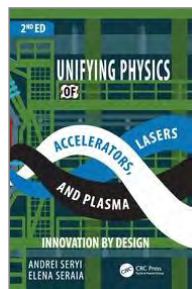
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Andrei Seryi, Elena Seraia

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CRC Press

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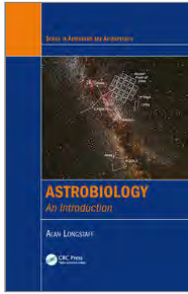
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Alan Longstaff

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March 2021:468

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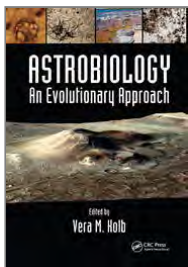
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August 2014:504

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September 2023:174

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CRC Press

June 2003:500

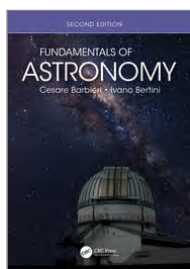
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November 2020:346

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Jonathan Marr, Ronald L. Snell, Stanley E. Kurtz

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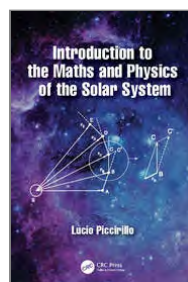
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CRC Press

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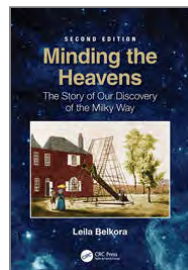
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The Story of our Discovery of the Milky Way



Leila Belkora

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May 2021:274

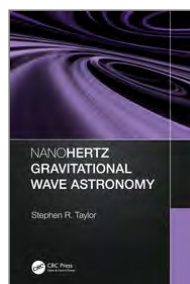
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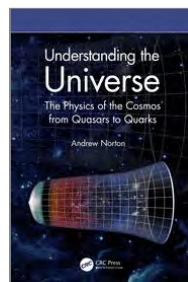
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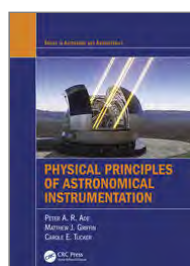
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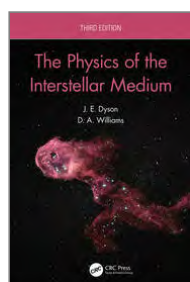
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CRC Press

July 2020:206

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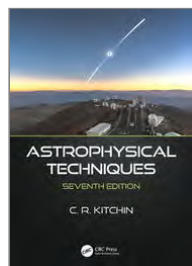
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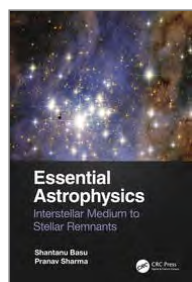
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July 2020:466
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Interstellar Medium to Stellar Remnants



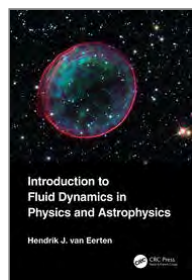
Shantanu Basu, Pranav Sharma

This book takes a reader on a tour of astronomical phenomena: from the vastness of the interstellar medium, to the formation and evolution of stars and planetary systems, through to white dwarfs, neutron stars, and black holes, the final objects of the stellar graveyard.

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Hendrik Jan van Eerten

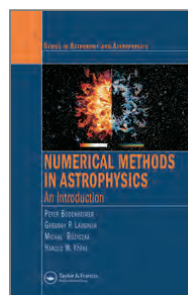
This textbook provides an accessible and self-contained introduction to the physics behind fluid dynamics; exploring the laws of nature describing three out of four fundamental states of matter (liquids, gases, and plasmas). Based on years of teaching of fluid dynamics theory and computation at advanced undergraduate level, it provides readers with the tools to understand and model fluid dynamical systems across a wide range of applications, from dense liquids to dilute space plasmas.

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An Introduction



Peter Bodenheimer, Peter Bodenheimer, Gregory P. Laughlin, Gregory P. Laughlin, Michal Rozyczka, Tomasz Plewa, Harold W. Yorke, Michal Rozyczka, Harold W. Yorke

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This guide develops many numerical techniques for solving major astrophysics problems. After an introduction to the basic equations and derivations, the book focuses on practical applications of the numerical methods. It explores hydrodynamic problems in one dimension, N-body particle dynamics, smoothed particle hydrodynamics, and stellar structure and evolution. The authors also examine advanced techniques in grid-based hydrodynamics, evaluate the methods for calculating the gravitational forces in an astrophysical system, and discuss specific problems in grid-based methods for radiation transfer. The book incorporates user manuals and a CD-ROM of the numerical codes.

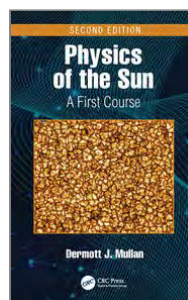
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A First Course



Dermott J. Mullan

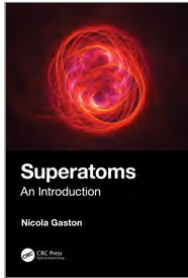
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Nicola Gaston

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CRC Press

April 2023: 114

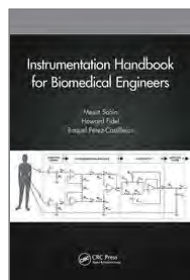
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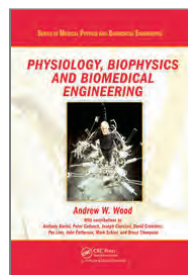
Mesut Sahin, Howard Fidel, Raquel Perez-Castillejos

The book fills a void as a textbook with hands-on laboratory exercises designed for biomedical engineering undergraduates in their senior year or the first year of graduate studies specializing in electrical aspects of bioinstrumentation. Each laboratory exercise concentrates on measuring a biophysical or biomedical entity, such as force, blood pressure, temperature, heart rate, respiratory rate, etc., and guides students through all the way from sensor level to data acquisition and analysis on the computer. The book distinguishes itself from others by providing electrical circuits and other measurement setups that have been tested by the authors.

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Physiology, Biophysics, and Biomedical Engineering



Edited by **Andrew Wood**

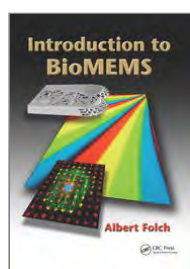
Series: Series in Medical Physics and Biomedical Engineering

Showing how biophysics and biomedical engineering have advanced modern medicine, this text provides a multidisciplinary understanding of biological phenomena and the instrumentation for monitoring these phenomena. It also explores the application of physics and engineering methods to medicine and biology. The book includes a range of numerical problems with worked solutions and offers MATLAB® code for advanced mathematical analysis of physiological and clinical monitoring systems. A solutions manual is available with qualifying course adoption.

CRC Press
February 2012:782
Hb: 978-1-420-06513-8: £84.99
eBook: 978-0-429-09713-3

* For full contents and more information, visit: www.routledge.com/9781420065138

Introduction to BioMEMS



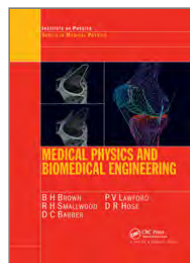
Albert Folch

This classroom-tested book—in color throughout—covers the whole breadth of this dynamic field, including classical microfabrication, microfluidics, tissue engineering, cell-based and noncell-based devices, and implantable systems. It gives readers a real sense of how the field has grown by providing historical perspectives and covering the state of the art. The text contains problem sets, design challenges, key references, and over 400 color figures, most of which are from the original researchers. Downloadable PowerPoint slides are available for instructors.

CRC Press
December 2019:528
Hb: 978-1-439-81839-8: £94.99
Pb: 978-0-367-86496-5: £51.99
eBook: 978-0-429-19404-7

* For full contents and more information, visit: www.routledge.com/9780367864965

Medical Physics and Biomedical Engineering



B.H. Brown, R.H. Smallwood, D.C. Barber, P.V. Lawford, D.R. Hose

Series: Series in Medical Physics and Biomedical Engineering

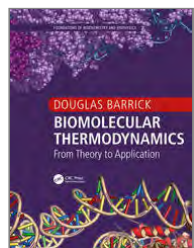
Appropriate for senior undergraduates and graduates, this text presents the underlying physics, electronics, anatomy, and physiology as well as addresses practical applications. The structured approach of the text builds and broadens the material of opening chapters in the later chapters. The book covers biomechanics, image formation techniques, biomedical devices, physiological signals and responses, and respiratory and cardiovascular function and measurement. It includes chapter problems with short questions to test understanding of the main principles and longer questions to test more in-depth knowledge, along with detailed bibliographies that provide references to introductory texts and research materials.

CRC Press
January 1998:762
Pb: 978-0-750-30368-2: £94.99
eBook: 978-1-315-27560-4

* For full contents and more information, visit: www.routledge.com/9780750303682

Biomolecular Thermodynamics

From Theory to Application



Douglas Barrick

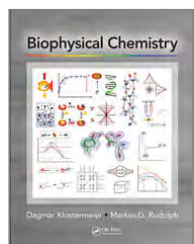
Series: Foundations of Biochemistry and Biophysics

This book introduces the concepts and practical tools necessary to understand the behavior of biological macromolecules at a quantitative level. It begins by describing biochemical phenomena using principles of classical and statistical thermodynamics. Unlike other books, this text goes beyond theory to explain in detail how the equations are applied to the analysis of experimental measurements. This emphasis on real-world applications is continued throughout and is a major feature of the book.

CRC Press
September 2017:552
Hb: 978-1-138-06884-1: £175
Pb: 978-1-439-80019-5: £110
eBook: 978-1-315-38019-3

* For full contents and more information, visit: www.routledge.com/9781439800195

Biophysical Chemistry



Dagmar Klostermeier, Markus G. Rudolph

This book is a comprehensive text for undergraduate physical chemistry courses for biophysics, biochemistry, and the life sciences. It is rich in pedagogical features, containing boxes which provide additional background information on a specific topic, as well as those that provide numerous application examples. It describes a well-balanced spectrum of topics in a concise form, and bridges between theoretical concepts/methods and their applications to enable readers to directly transfer the treated topics to their laboratory projects.

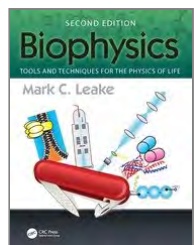
CRC Press
June 2020:792
Hb: 978-1-482-25223-1: £91.99
Pb: 978-0-367-57238-9: £49.99
eBook: 978-1-315-15691-0

* For full contents and more information, visit: www.routledge.com/9780367572389

2ND EDITION

Biophysics

Tools and Techniques for the Physics of Life



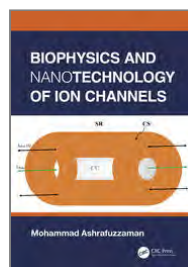
Mark C. Leake

Biophysics: Tools and Techniques for the Physics of Life covers the experimental, theoretical and computational tools and techniques of biophysics. It addresses the purpose, science, and application of all physical science instrumentation, theoretical analysis and biophysical computational methods used in current research labs. The book first presents the historical background, concepts, and motivation for using a physical science toolbox to understand biology. It then familiarizes undergraduate students from the physical sciences with essential biological knowledge.

CRC Press
December 2023:456
Hb: 978-1-032-37321-8: £140
Pb: 978-1-032-37038-5: £52.99
eBook: 978-1-003-33643-3

* For full contents and more information, visit: www.routledge.com/9781032370385

Biophysics and Nanotechnology of Ion Channels



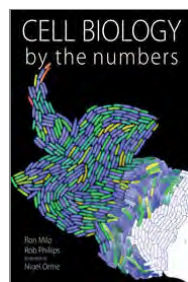
Mohammad Ashrafuzzaman

This book provides a comprehensive review of the biophysics and nanotechnology of ion channels. It details the biological and physiological entities of ion channels in cells and addresses various physical perspectives of ion channel structures and functions.

CRC Press
September 2023:318
Hb: 978-0-367-44545-4: £99.99
Pb: 978-1-032-07374-3: £44.99
eBook: 978-1-003-01065-4

* For full contents and more information, visit: www.routledge.com/9781032073743

Cell Biology by the Numbers



Ron Milo, Rob Phillips

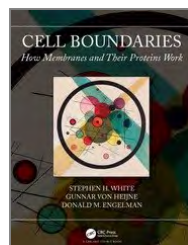
A full color book written as a pocket guide and handy reference for advanced students and practitioners in molecular and cell biology, chemistry, and biophysics. It is based on the BioNumbers website, a peer-reviewed open-source database of numbers, created and curated by author Ron Milo. Well-illustrated and approximately 350 pages long, the book explores some of the key numbers for cell biology, focusing on quantities that help us to think about the sizes, concentrations, rates, energies, information content, and other numbers that describe the living world.

Garland Science
December 2015:400
Pb: 978-0-815-34537-4: £43.99
eBook: 978-0-429-25877-0

* For full contents and more information, visit: www.routledge.com/9780815345374

Cell Boundaries

How Membranes and Their Proteins Work



Stephen White, Gunnar von Heijne, Donald Engelman

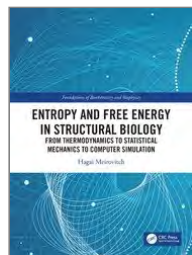
The central themes of Cell Boundaries concern the structural and organizational principles underlying cell membranes, and how these principles enable function. By building a biological and biophysical foundation for understanding the organization of lipids in bilayers and the folding, assembly, stability, and function of membrane proteins, the book aims to broaden the knowledge of bioscience students to include the basic physics and physical chemistry that inform us about membranes. Cell Boundaries was written with advanced undergraduates and beginning graduate students in the biological and physical sciences in mind.

Garland Science
December 2021:564
Hb: 978-0-815-34216-8: £84.99
eBook: 978-0-429-34132-8

* For full contents and more information, visit: www.routledge.com/9780815342168

Entropy and Free Energy in Structural Biology

From Thermodynamics to Statistical Mechanics to Computer Simulation



Hagai Meirovitch

Series: Foundations of Biochemistry and Biophysics

Computer simulation has become the main engine of development in statistical mechanics. In structural biology, computer simulation constitutes the main theoretical tool for structure determination of proteins and for calculation of the free energy of binding, which are important in drug design. Entropy and Free Energy in Structural Biology leads the reader to the simulation technology in a systematic way. Enhanced by a number of solved problems and examples, this volume will be a valuable resource to advanced undergraduate and graduate students in chemistry, chemical engineering, biochemistry biophysics, pharmacology, and computational biology.

CRC Press
April 2022:396
Hb: 978-0-367-40692-9: £105
Pb: 978-0-367-42745-0: £44.99
eBook: 978-0-367-85478-2

* For full contents and more information, visit: www.routledge.com/9780367427450

2ND EDITION

Physical Biology of the Cell



Rob Phillips, Jane Kondev, Julie Theriot, Hernan Garcia

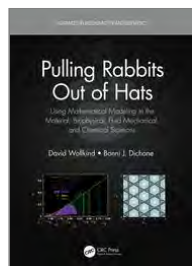
Physical Biology of the Cell is a textbook for a first course in physical biology or biophysics for undergraduate or graduate students. It maps the huge and complex landscape of cell and molecular biology from the distinct perspective of physical biology. As a key organizing principle, the proximity of topics is based on the physical concepts that unite a given set of biological phenomena. The Second Edition features full-color illustrations throughout, two new chapters, a significantly expanded set of end-of-chapter problems, and is available in a variety of e-book formats.

Garland Science
October 2012:1088
Pb: 978-0-815-34450-6: £91.99
eBook: 978-0-429-16883-3

* For full contents and more information, visit: www.routledge.com/9780815344506

Pulling Rabbits Out of Hats

Using Mathematical Modeling in the Material, Biophysical, Fluid Mechanical, and Chemical Sciences



David Wollkind, Bonni J. Dichone

Series: Advances in Biochemistry and Biophysics

Pulling Rabbits Out of Hats: Using Mathematical Modeling in the Material, Biophysical, Fluid Mechanical, and Chemical Sciences focuses on those assumptions made during applied mathematical modeling in which the phenomenological data and the model predictions are self-consistent. This comprehensive reference demonstrates how to employ a variety of mathematical techniques to quantify a number of problems from the material, biophysical, fluid mechanical, and chemical sciences. In doing so, methodology of modelling, analysis, and result generation are all covered.

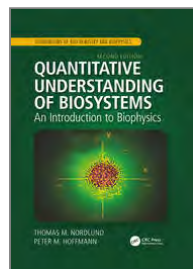
CRC Press
November 2021:554
Hb: 978-1-032-04787-4: £180
eBook: 978-1-003-19560-3

* For full contents and more information, visit: www.routledge.com/9781032047874

2ND EDITION

Quantitative Understanding of Biosystems

An Introduction to Biophysics, Second Edition



Thomas M. Nordlund, Peter M. Hoffmann

This new edition provides a complete update to the most accessible yet thorough introduction to the physical and quantitative aspects of biological systems and processes involving macromolecules, subcellular structures, and whole cells. It includes two brand new chapters covering experimental techniques, especially atomic force microscopy, complementing the updated coverage of mathematical and computational tools. The authors have also incorporated additions to the multimedia component of video clips and animations, as well as interactive diagrams and graphs.

CRC Press
March 2021:632
Hb: 978-1-138-63341-4: £130
Pb: 978-0-367-77991-7: £44.99
eBook: 978-1-315-20760-5

* For full contents and more information, visit: www.routledge.com/9780367779917

Textbook of Ion Channels

Three Volume Set



Edited by Jie Zheng, Matthew C. Trudeau

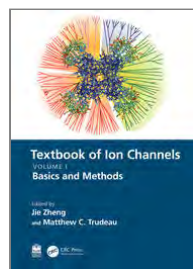
This three-volume textbook provides a wide-ranging reference source on ion channels for students, instructors, and researchers. The modern methods used in the study of ion channels are powerful and diverse, and all three volumes give the reader an introduction to the fundamental concepts of the mechanism of ion channels, a guide to technical research aspects, a modern guide to the properties of major ion channel families, and include key examples of regulatory, physiological, and disease roles for ion channels.

CRC Press
July 2023:1064
Hb: 978-1-032-42428-6: £230
eBook: 978-1-003-46194-4

* For full contents and more information, visit: www.routledge.com/9781032424286

Textbook of Ion Channels Volume I

Fundamental Mechanisms and Methodologies



Edited by Jie Zheng, Matthew C. Trudeau

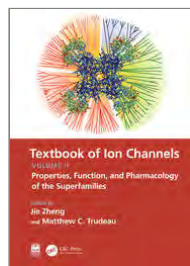
This three-volume textbook provides a wide-ranging reference source on ion channels for students, instructors, and researchers. Volume I covers fundamental topics and basic principles, and offers a practical guide of cardinal methods for researching ion channels. The modern methods used in the study of ion channels are powerful and diverse, and all three volumes give the reader an introduction to the fundamental concepts of the mechanism of ion channels, a guide to technical research aspects, a modern guide to the properties of major ion channel families, and include key examples of regulatory, physiological, and disease roles for ion channels.

CRC Press
June 2023:330
Hb: 978-0-367-53815-6: £91.99
eBook: 978-1-003-09621-4

* For full contents and more information, visit: www.routledge.com/9780367538156

Textbook of Ion Channels Volume II

Properties, Function, and Pharmacology of the Superfamilies



Edited by **Jie Zheng, Matthew C. Trudeau**

This three-volume textbook provides a wide-ranging reference source on ion channels for students, instructors, and researchers. Volume II covers the physiological role, structural components, gating mechanisms, biophysics, permeation, selectivity, regulation, and pharmacology in disease mechanisms. The modern methods used in the study of ion channels are powerful and diverse, and all three volumes give the reader an introduction to the fundamental concepts of the mechanism of ion channels, a guide to technical research aspects, a modern guide to the properties of major ion channel families, and include key examples of regulatory, physiological, and disease roles for ion channels.

CRC Press

June 2023:488

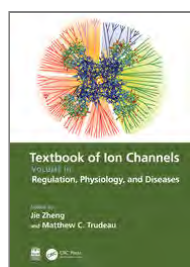
Hb: 978-0-367-53816-3: **£91.99**

eBook: 978-1-003-09627-6

* For **full contents** and more information, visit: www.routledge.com/9780367538163

Textbook of Ion Channels Volume III

Regulation, Physiology, and Diseases



Edited by **Jie Zheng, Matthew C. Trudeau**

This three-volume textbook provides a wide-ranging reference source on ion channels for students, instructors, and researchers. Volume III covers key ion channel regulators, the role of ion channels in selected physiological systems, and examples of mutations and dysfunction in selected diseases. The modern methods used in the study of ion channels are powerful and diverse, and all three volumes give the reader an introduction to the fundamental concepts of the mechanism of ion channels, a guide to technical research aspects, a modern guide to the properties of major ion channel families, and include key examples of regulatory, physiological, and disease roles for ion channels.

CRC Press

June 2023:246

Hb: 978-0-367-53819-4: **£91.99**

eBook: 978-1-003-31031-0

* For **full contents** and more information, visit: www.routledge.com/9780367538194

* For full contents and more information, visit: www.routledge.com/9780815341772

Quantitative Bioimaging

An Introduction to Biology, Instrumentation, Experiments, and Data Analysis for Scientists and Engineers



Raimund J. Ober, E. Sally Ward, Jerry Chao

Cellular microscopy for live cell imaging has become an indispensable tool for solving biological problems. This textbook provides a truly unique introduction that integrates the concepts and methods of optics, molecular and cellular biology, image analysis, and bioengineering. The coverage spans from essential aspects of molecular and cellular biology to a detailed treatment of practical aspects, addressing such topics as colocalization, intracellular trafficking, 3D reconstruction, and membrane receptor dynamics. The authors take a two-tiered approach in later chapters, providing a survey level overview followed by in-depth discussion that gives more detailed explanations.

CRC Press

January 2022:503

Hb: 978-1-138-59898-0: **£105**

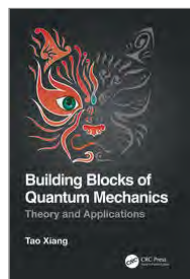
Pb: 978-0-367-61545-1: **£46.99**

eBook: 978-0-429-46989-3

* For full contents and more information, visit: www.routledge.com/9780367615451

Building Blocks of Quantum Mechanics

Theory and Applications



Tao Xiang

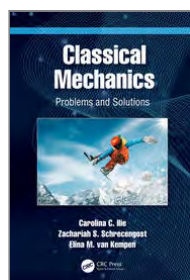
This textbook provides a concise yet comprehensive introduction to the principles, concepts, and methods of quantum mechanics. It covers the basic building blocks of quantum mechanics theory and applications, illuminated throughout by physical insights and examples of quantum mechanics, such as the one-dimensional eigen-problem, the harmonic oscillator, the Aharonov-Bohm effect, Landau levels, the hydrogen atom, the Landau-Zener transition and the Berry phase.

CRC Press
May 2022:264
Hb: 978-1-032-00610-9: **£150**
Pb: 978-0-367-77150-8: **£58.99**
eBook: 978-1-003-17488-2

* For full contents and more information, visit: www.routledge.com/9780367771508

Classical Mechanics

Problems and Solutions



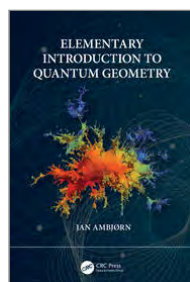
Carolina C. Ilie, Zachariah S. Schrecengost, Elina M. van Kempen

This book of problems and solutions in classical mechanics is dedicated to junior or senior undergraduate students in physics, engineering, applied mathematics, astronomy, or chemistry who may want to improve their problems solving skills, or to freshman graduate students who may be seeking a refresh of the material. The book is structured in ten chapters, starting with Newton's laws, motion with air resistance, conservation laws, oscillations, and the Lagrangian and Hamiltonian Formalisms.

CRC Press
December 2022:280
Hb: 978-0-367-76844-7: **£76.99**
eBook: 978-1-003-36570-9

* For full contents and more information, visit: www.routledge.com/9780367768447

Elementary Introduction to Quantum Geometry



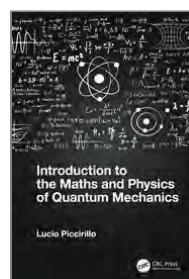
Jan Ambjorn

This graduate textbook provides an introduction to quantum gravity, when spacetime is two-dimensional. The quantization of gravity is the main missing piece of theoretical physics, but in two dimensions it can be done explicitly with elementary mathematical tools, but it still has most of the conceptional riddles present in higher dimensional (not yet known) quantum gravity.

CRC Press
November 2022:290
Hb: 978-1-032-33555-1: **£76.99**
eBook: 978-1-003-32056-2

* For full contents and more information, visit: www.routledge.com/9781032335551

Introduction to the Maths and Physics of Quantum Mechanics



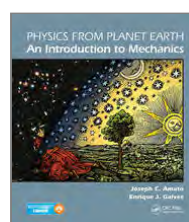
Lucio Piccirillo

This book will appeal to first- and second-year university students in physics, mathematics, engineering and other sciences studying quantum mechanics who will find material and clarifications not easily found in other textbooks. It will also appeal to self-taught readers with a genuine interest in modern physics who are willing to examine the mathematics and physics in a simple but rigorous way.

CRC Press
October 2023:246
Hb: 978-0-367-70302-8: **£76.99**
eBook: 978-1-003-14556-1

* For full contents and more information, visit: www.routledge.com/9780367703028

Physics from Planet Earth - An Introduction to Mechanics



Joseph C. Amato, Enrique J. Galvez

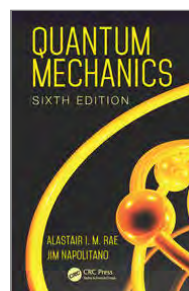
This classroom-tested text provides a one-semester, calculus-based introduction to classical mechanics for first-year undergraduate students. The authors introduce the three conservation laws as fundamental laws of nature from which secondary concepts are derived and organize topics around the conservation laws. They also illustrate many topics through real, contemporary applications in astronomy, planetary science, and space travel. The book includes short exercises throughout the text as well as novel problems at the end of each chapter.

CRC Press
June 2015:612
Hb: 978-1-439-86783-9: **£86.99**
eBook: 978-0-429-19447-4

* For full contents and more information, visit: www.routledge.com/9781439867839

6TH EDITION

Quantum Mechanics



Alastair I. M. Rae, Jim Napolitano

This sixth edition builds on its highly praised predecessors to make the text even more accessible to a wider audience. It contains three new chapters that review prerequisite physics and mathematics, laying out the notation, formalism, and physical basis necessary for the rest of the book. Along with more problems, this edition also presents short descriptions of numerous applications relevant to the physics discussed, offering a brief look at what quantum mechanics has made possible industrially and scientifically.

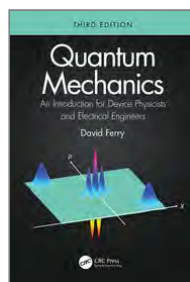
CRC Press
December 2015:440
Hb: 978-1-138-45833-8: **£185**
Pb: 978-1-482-29918-2: **£56.99**
eBook: 978-0-429-15734-9

* For full contents and more information, visit: www.routledge.com/9781482299182

3RD EDITION

Quantum Mechanics

An Introduction for Device Physicists and Electrical Engineers


David Ferry

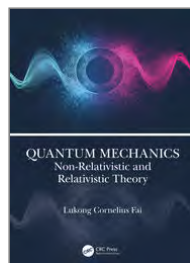
Quantum Mechanics: An Introduction for Device Physicists and Electrical Engineers, Third Edition provides a complete course in quantum mechanics for students of semiconductor device physics and electrical engineering. It provides the necessary background to quantum theory for those starting work on micro- and nanoelectronic structures and is particularly useful for those beginning work with modern semiconductor devices, lasers, and qubits.

CRC Press
December 2020:328
Hb: 978-0-367-46915-3: £210
Pb: 978-0-367-46727-2: £79.99
eBook: 978-1-003-03194-9

* For full contents and more information, visit: www.routledge.com/9780367467272

Quantum Mechanics

Non-Relativistic and Relativistic Theory


Lukong Cornelius Fai

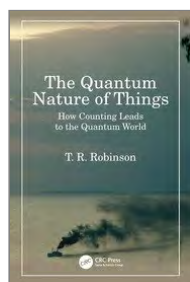
This book provides an accessible treatment of non-relativistic and relativistic quantum mechanics. It is an ideal textbook for undergraduate and graduate physics students, as well as researchers in theoretical physics, quantum mechanics, condensed matter, mathematical physics, quantum chemistry and electronic students.

CRC Press
June 2022:552
Hb: 978-1-032-22146-5: £115
eBook: 978-1-003-27307-3

* For full contents and more information, visit: www.routledge.com/9781032221465

The Quantum Nature of Things

How Counting Leads to the Quantum World


T R Robinson

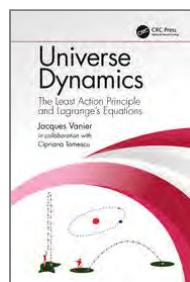
This book offers readers an entirely original and unconventional view of quantum mechanics. It is a view that accepts quantum mechanics as the natural way to think about the way nature works, rather than the view commonly expressed, especially in books on quantum physics, that quantum theory is weird and counterintuitive. It is based on the concept of itemization. From this simple premise, quantities like energy and momentum, both linear and angular emerge naturally, as do configuration space, potentials, the electromagnetic field, many-body dynamics, special relativity and relativistic wave mechanics.

CRC Press
April 2023:282
Hb: 978-1-032-44623-3: £120
Pb: 978-1-032-45546-4: £45.99
eBook: 978-1-003-37750-4

* For full contents and more information, visit: www.routledge.com/9781032455464

Universe Dynamics

The Least Action Principle and Lagrange's Equations

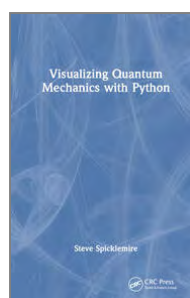

Jacques Vanier, Cipriana Tomescu

Brought together in one focused and exclusive treatment, this book provides an elementary introduction to the important role and use of the least action principle and the resulting Lagrange's equations in the analysis of the laws that govern the universe. It is an ideal complimentary resource to accompany undergraduate courses and textbooks on classical mechanics.

CRC Press
January 2019:184
Hb: 978-1-138-33589-9: £200
Pb: 978-1-138-33579-0: £56.99
eBook: 978-0-429-44347-3

* For full contents and more information, visit: www.routledge.com/9781138335790

Visualizing Quantum Mechanics with Python


Steve Spicklemire

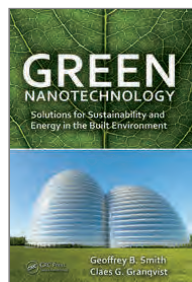
The goal of this book is to reduce the complexity and clarify the abstractions with concrete visual examples driven by simple python programs. It is assumed that the reader is concurrently taking a course in quantum mechanics, or self-studying quantum mechanics, but is looking for supplementary material to help with understanding and visualizing how quantum mechanics works.

CRC Press
June 2024:72
Hb: 978-0-367-76879-9: £48.99
Pb: 978-1-032-56924-6: £18.99

* For full contents and more information, visit: www.routledge.com/9781032569246

Green Nanotechnology

Solutions for Sustainability and Energy in the Built Environment



Geoffrey B. Smith, Claes-Goran S. Granqvist

A focused exploration of the role nanotechnology plays in meeting the challenges inherent in minimizing environmental impacts while maximizing energy resources, this book provides an overview of our energy supply, increasing energy production while reducing cost, and offering novel energy sources. It explores the ways in which nanotechnologies can improve structural engineering of energy sources, create novel methods of cooling, and inspire new approaches to water supply and treatment. In addressing these critical issues, the book provides an authoritative resource that provides the foundation for new research and product development.

CRC Press

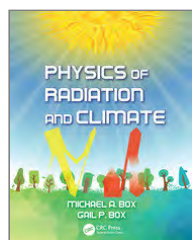
September 2010:484

Hb: 978-1-420-08532-7: **£170**

eBook: 978-0-429-19304-0

* For full contents and more information, visit: www.routledge.com/9781420085327

Physics of Radiation and Climate



Michael A. Box, Gail P. Box

This book offers an introduction to the physics of climate science. It is divided into three main sections, with the first providing an introduction to the atmosphere and ocean—their composition, thermodynamics, vertical structure, and basic flow patterns. The next chapters focus on the central physics of interactions between radiation, gases, and particles, addressing the core phenomena of absorption, emission, scattering, and radiative transfer. The final section integrates those principles and how they are applied in the study of weather and climate change.

CRC Press

October 2015:514

Hb: 978-1-138-42426-5: **£175**

Pb: 978-1-466-57205-8: **£94.99**

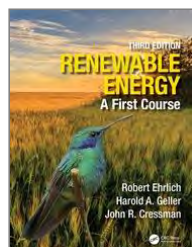
eBook: 978-0-429-19422-1

* For full contents and more information, visit: www.routledge.com/9781466572058

3RD EDITION

Renewable Energy

A First Course



Robert Ehrlich, Harold A. Geller, John R. Cressman

This revised edition is fully updated and continues to provide the best in-depth introduction to renewable energy science. It focuses mainly on renewable energy, but also addresses nonrenewable energy (fossil fuels and nuclear technology). The coverage extends from the basic physics to conservation, economic, and public policy issues, with strong emphasis on explaining how things work in practice. The authors avoid technical jargon and advanced math, but address fundamental analytical skills with wide application. Updated statistics, figures, policies, trends, and technological advancements will bring the reader up to speed with the current state of renewable energy.

CRC Press

July 2022:562

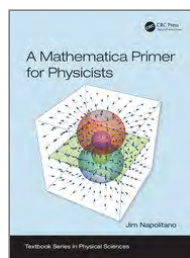
Hb: 978-1-032-00088-6: **£240**

Pb: 978-0-367-76837-9: **£91.99**

eBook: 978-1-003-17267-3

* For full contents and more information, visit: www.routledge.com/9780367768379

A Mathematica Primer for Physicists



Jim Napolitano

Series: Textbook Series in Physical Sciences

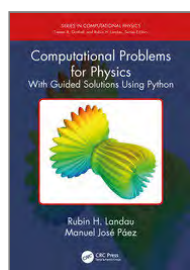
This book offers the most concise and approachable guide for quickly getting into Mathematica and using it for solving common problems. The author addresses a wide range of problems, including numerical calculations, animation, and visualization tools. Each chapter begins with simple commands, and then shows how to apply them. The goal is to give the essentials necessary for readers to get started, without getting bogged down in unnecessary details. The writing is clear and conversational, making it accessible and easy for the reader to follow.

CRC Press
March 2018:214
Hb: 978-1-138-48656-0: **£175**
Pb: 978-1-138-03509-6: **£59.99**
eBook: 978-1-315-26948-1

* For full contents and more information, visit: www.routledge.com/9781138035096

Computational Problems for Physics

With Guided Solutions Using Python



Rubin H. Landau, Manuel José Páez

Series: Series in Computational Physics

Our future scientists and professionals must be conversant in computational techniques. In order to facilitate integration of computer methods into existing physics courses, this textbook offers a large number of worked examples and problems with fully guided solutions in Python as well as other languages (Mathematica, Java, C, Fortran, and Maple) on the Web. It's also intended as a self-study guide for learning how to use computer methods in physics. The authors include an introductory chapter on numerical tools and indication of computational as well as a separate chapter with problems for beginning students.

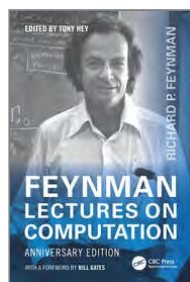
CRC Press
June 2018:430
Hb: 978-1-138-70591-3: **£105**
Pb: 978-1-138-70541-8: **£69.99**
eBook: 978-1-315-20209-9

* For full contents and more information, visit: www.routledge.com/9781138705418

2ND EDITION

Feynman Lectures on Computation

Anniversary Edition



Edited by Tony Hey

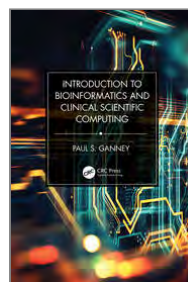
Series: Frontiers in Physics

The last lecture course that Nobel Prize winner Richard P. Feynman gave at Caltech from 1983 to 1986 was not on physics but on computer science. The first edition of this book published in 1996 and provided an overview of standard and not-so-standard topics in computer science given in Feynman's inimitable style. The material is still relevant and interesting, and Feynman's unique philosophy of learning and discovery shines through. For this new edition, editor Tony Hey has updated the lectures with invited chapters from preeminent scholars. This exciting and important work provides key reading for students and scholars in the fields of computer science and computational physics.

CRC Press
May 2023:426
Hb: 978-1-032-41588-8: **£125**
Pb: 978-0-367-85733-2: **£49.99**
eBook: 978-1-003-35881-7

* For full contents and more information, visit: www.routledge.com/9780367857332

Introduction to Bioinformatics and Clinical Scientific Computing



Paul S. Ganney

This textbook provides an introduction to computer science theory, informatics best practice, and the standards and legislation that apply to computing in a healthcare environment. It delivers an accessible discussion of databases (construction, interrogation and maintenance); networking (design and low-level application); programming (best practice rather than the specifics of any one language – design, maintenance, safety).

CRC Press
December 2022:404
Hb: 978-1-032-32413-5: **£76.99**
eBook: 978-1-003-31624-4

* For full contents and more information, visit: www.routledge.com/9781032324135

Introduction to Python for Science and Engineering



David J. Pine

Series: Series in Computational Physics

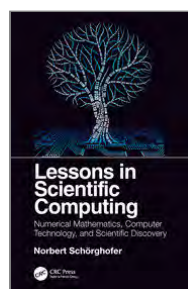
This guide offers a rapid introduction to Python programming to anyone with no experience in programming, taking a careful and methodical approach to presenting the features available and their use for performing practical scientific and engineering tasks. It shows why Python is such a widely appealing program, covering its syntax, data structures, input and output, plotting, conditionals and loops, user-defined functions, curve fitting, and numerical routines. The text includes detailed instructions on how to install Python on Windows, Apple, and Linux platforms. It includes dedicated chapters on animation, object-oriented programming, and how to use Jupyter notebooks.

CRC Press
December 2018:388
Hb: 978-1-138-58390-0: **£165**
Pb: 978-1-138-58389-4: **£54.99**
eBook: 978-0-429-50641-3

* For full contents and more information, visit: www.routledge.com/9781138583894

Lessons in Scientific Computing

Numerical Mathematics, Computer Technology, and Scientific Discovery



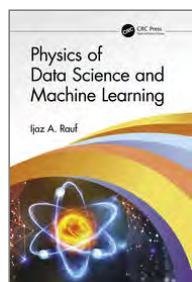
Norbert Schorghofer

Taking an interdisciplinary approach, this new book provides a modern introduction to scientific computing, exploring numerical methods, computer technology, and their interconnections, which are treated with the goal of facilitating scientific research across all disciplines. Each chapter provides an insightful lesson and viewpoints from several subject areas are often compounded within a single chapter. Written with an eye on usefulness, longevity, and breadth, Lessons in Scientific Computing will serve as a "one stop shop" for undergrad students taking a unified course in scientific computing, or seeking a single cohesive text spanning multiple courses.

CRC Press
October 2018:204
Hb: 978-1-138-07063-9: **£200**
Pb: 978-1-138-07058-5: **£59.99**
eBook: 978-1-315-10835-3

* For full contents and more information, visit: www.routledge.com/9781138070585

Physics of Data Science and Machine Learning



Ijaz A. Rauf

Physics of Data Science and Machine Learning links fundamental concepts of physics to data science, machine learning and artificial intelligence for physicists looking to integrate these techniques into their work.

CRC Press

November 2021:210

Hb: 978-0-367-76858-4: **£84.99**

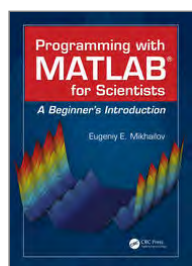
Pb: 978-1-032-07401-6: **£58.99**

eBook: 978-1-003-20674-3

* For full contents and more information, visit: www.routledge.com/9781032074016

Programming with MATLAB for Scientists

A Beginner's Introduction



Eugeny E. Mikhailov

This book offers an introduction to the basics of MATLAB programming to scientists and engineers. The author leads with engaging examples to build a working knowledge, specifically geared to those with science and engineering backgrounds. The reader is empowered to model and simulate real systems, as well as present and analyze everyday data sets. In order to achieve those goals, the contents bypass excessive "under the hood" details, and instead gets right down to the essential, practical foundations for successful programming and modeling.

CRC Press

January 2018:264

Hb: 978-1-138-57004-7: **£145**

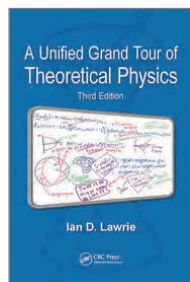
Pb: 978-1-498-73828-6: **£62.99**

eBook: 978-1-351-22818-3

* For full contents and more information, visit: www.routledge.com/9781498738286

3RD EDITION

A Unified Grand Tour of Theoretical Physics



Ian D. Lawrie

The third edition of this best-selling text continues to provide an accessible overview of the fundamental ideas underpinning our understanding of theoretical physics. The basic structure of each theory is explained in explicit mathematical detail with emphasis on conceptual understanding rather than on the technical details of specialized applications. Suitable for undergraduate and graduate courses, this new edition includes updates and advancements in string theory and quantum gravity. A supplementary website provides ancillary material and side issues to create a platform for further research and classroom discussion.

CRC Press
November 2012:711
Hb: 978-1-138-47335-5: **£185**
Pb: 978-1-439-88446-1: **£84.99**
eBook: 978-0-429-11123-5

* For full contents and more information, visit: www.routledge.com/9781439884461

Commonly Asked Questions in Physics



Andrew Rex

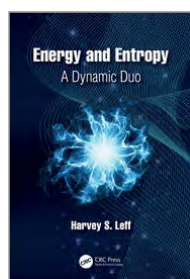
Suitable for a wide audience, this book covers a broad scope of subjects, from classical physics that goes back to the age of Newton to new ideas just formulated in the twenty-first century. The book highlights the core areas of physics that predate the twentieth century, including mechanics, electromagnetism, optics, and thermodynamics. It also focuses on modern physics, covering quantum mechanics, atomic and nuclear physics, fundamental particles, and relativity.

CRC Press
February 2014:256
Hb: 978-1-138-42956-7: **£175**
Pb: 978-1-466-56017-8: **£27.99**
eBook: 978-0-429-19405-4

* For full contents and more information, visit: www.routledge.com/9781466560178

Energy and Entropy

A Dynamic Duo



Harvey S. Leff

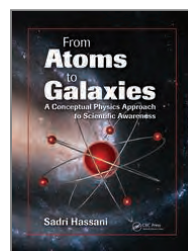
Energy is typically regarded as understandable despite its multiple forms of storage and transfer. Yet entropy is an enigma, in part because of the common view that it represents disorder. That view is flawed and hides entropy's connection with energy. However, macroscopic matter stores internal energy, and that matter's entropy is determined by how the energy is stored. Energy and entropy are intimately linked.

CRC Press
August 2020:330
Hb: 978-0-367-35141-0: **£120**
Pb: 978-0-367-34906-6: **£45.99**
eBook: 978-0-429-33001-8

* For full contents and more information, visit: www.routledge.com/9780367349066

From Atoms to Galaxies

A Conceptual Physics Approach to Scientific Awareness



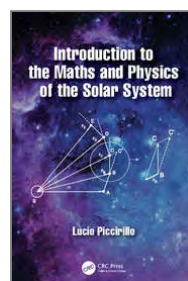
Sadri Hassani

Based on a course given by the author, this text is designed for undergraduates with little science background, demonstrating physical concepts through everyday experiences. Students learn not just how science works, but also how to counter popular misconceptions and pseudoscience. The text presents glossaries, review questions and answers, exercises, numerical problems, and quizzes.

CRC Press
July 2020:756
Hb: 978-1-439-80849-8: **£170**
Pb: 978-0-367-38411-1: **£56.99**
eBook: 978-0-429-06685-6

* For full contents and more information, visit: www.routledge.com/9780367384111

Introduction to the Maths and Physics of the Solar System



Lucio Piccirillo

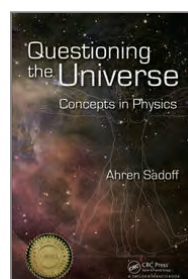
This book provides readers with an understanding of the basic physics and mathematics that governs our solar system. It explores the mechanics of our Sun and planets; their orbits, tides, craters, eclipses and many other fascinating phenomena including asteroids and comets. This book is a valuable resource for undergraduate students studying astronomy and should be used in conjunction with other introductory astronomy textbooks in the field to provide additional learning opportunities.

CRC Press
March 2020:237
Hb: 978-0-367-02271-6: **£140**
Pb: 978-0-367-00254-1: **£54.99**
eBook: 978-0-429-40048-3

* For full contents and more information, visit: www.routledge.com/9780367002541

Questioning the Universe

Concepts in Physics



Ahren Sadoff

Written for the nonscientist, this physics primer tells readers the story of what we have found out about nature so far and how we have done it. It delves into basic laws regarding motion, fundamental forces, electromagnetism, and light; introduces major theories pondered by scientists, including relativity, quantum mechanics, and particle physics; describes the key role played by that elemental building block, the atom; and discusses the evolution of the universe. While it requires only the most minimal math, it does require enough of a sense of curiosity to open one's self to consider what are the factors that keep our universe so orderly, operational, and awesomely beautiful.

Chapman & Hall
December 2008:224
Hb: 978-1-138-42968-0: **£175**
Pb: 978-1-420-08258-6: **£62.99**
eBook: 978-0-429-13812-6

* For full contents and more information, visit: www.routledge.com/9781420082586

3RD EDITION

Superstrings and Other Things

A Guide to Physics

**Carlos I. Calle**

Continuing to take readers on a uniquely accessible journey through physics, *Superstrings and Other Things*, Third Edition, explains the basic concepts of motion, energy, and gravity, right up to the latest theories about the structure of matter, the origin and structure of the universe, and the beginning of time.

CRC Press

May 2020:474

Hb: 978-1-138-36492-9: £200

Pb: 978-1-138-36488-2: £58.99

eBook: 978-0-429-43102-9

* For full contents and more information, visit: www.routledge.com/9781138364882

Essentials of Soft Matter Science



Françoise Brochard-Wyart, Pierre Nassoy, Pierre-Henri Puech

Authored by world-leading physicists, this introductory textbook explores the basic principles of polymers, colloids, liquid crystals, wetting, and foams. It is a practical 'toolbox' for readers to acquire basic knowledge in the field and facilitate further reading and advanced courses.

Undergraduate students in physics, biology, and the medical sciences will learn the basics of soft matter physics, in addition to scaling approaches in the spirit of the Nobel prize laureate in physics in 1991, Pierre-Gilles de Gennes, the inventor of soft matter physics and close collaborator to author Françoise Brochard-Wyart.

CRC Press

September 2019:290

Hb: 978-1-138-74276-5: **£195**

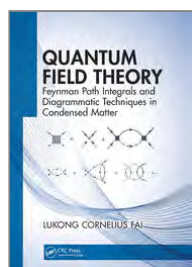
Pb: 978-1-498-77392-8: **£79.99**

eBook: 978-0-429-15435-5

* For full contents and more information, visit: www.routledge.com/9781498773928

Quantum Field Theory

Feynman Path Integrals and Diagrammatic Techniques in Condensed Matter



Lukong Cornelius Fai

This book explores quantum field theory using the Feynman functional and diagrammatic techniques as foundations to apply Quantum Field Theory to a broad range of topics in physics. This book will be of interest not only to condensed matter physicists but physicists in a range of disciplines as the techniques explored apply to high-energy as well as soft matter physics.

CRC Press

March 2021:535

Hb: 978-0-367-18574-9: **£150**

Pb: 978-0-367-77959-7: **£44.99**

eBook: 978-0-429-19694-2

* For full contents and more information, visit: www.routledge.com/9780367779597

2ND EDITION

Fundamentals of Ceramics



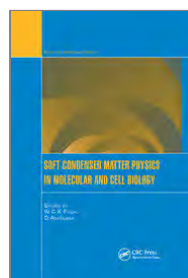
Michel Barsoum

This second edition of *Fundamentals of Ceramics* adds a section on density functional theory calculations for shedding light on properties. It also adds more on applications, including solid oxide fuel cells as a case study and a major overhaul of the last chapter on optical properties. There's also new and extended discussion of such topics as non-parabolic oxidation, dislocation creep, thermal conductivity, ferroelectric ceramics, ferromagnetic ceramics, scattering mechanisms, surface tension, and processing of ceramics from aqueous environments.

CRC Press
June 2022:644
Hb: 978-1-498-70813-5: **£120**
Pb: 978-1-032-33730-2: **£45.99**
eBook: 978-1-498-70816-6

* For full contents and more information, visit: www.routledge.com/9781032337302

Soft Condensed Matter Physics in Molecular and Cell Biology



Edited by **W.C.K. Poon, David Andelman**

The book provides a thorough grounding in the fundamental nature and properties of soft matter, and then explores its application in biology, especially with regard to DNA investigations, and the study of protein behavior. The final section of the book considers experimental techniques, covering single molecule force spectroscopy of proteins, the use of optical tweezers, and solution scattering.

CRC Press
October 2019:344
Hb: 978-0-750-31023-9: **£170**
Pb: 978-0-367-39136-2: **£59.99**
eBook: 978-0-429-14512-4

* For full contents and more information, visit: www.routledge.com/9780367391362

2ND EDITION

Fundamentals of Soft Matter Science



Linda S. Hirst

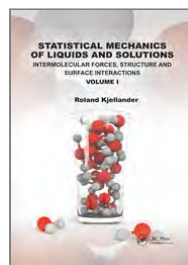
This revised edition continues to provide the most approachable introduction to the structure, characteristics, and everyday applications of soft matter. It begins with a substantially revised overview of the underlying physics and chemistry common to soft materials. Subsequent chapters comprehensively address the different classes of soft materials, from liquid crystals to surfactants, polymers, colloids, and biomaterials, with vivid, full-color illustrations throughout.

CRC Press
August 2019:304
Hb: 978-1-138-72478-5: **£220**
Pb: 978-1-138-72444-0: **£86.99**
eBook: 978-1-315-19238-3

* For full contents and more information, visit: www.routledge.com/9781138724440

Statistical Mechanics of Liquids and Solutions

Intermolecular Forces, Structure and Surface Interactions Volume I



Roland Kjellander

This book shows how you can start from basic laws for the interactions and motions of microscopic particles and calculate how macroscopic systems of these particles behave, thereby explaining properties of matter at the scale that we perceive. Using this microscopic, molecular approach, the text emphasizes clarity of physical explanations for phenomena and mechanisms relevant to fluids, addressing the structure and behavior of liquids and solutions under various conditions. A notable feature is the author's treatment of forces between particles that include nanoparticles, macroparticles, and surfaces.

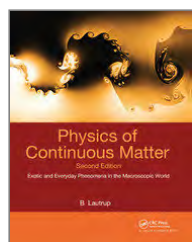
CRC Press
February 2020:546
Hb: 978-1-482-24401-4: **£105**
Pb: 978-0-367-47790-5: **£44.99**
eBook: 978-0-429-19436-8

* For full contents and more information, visit: www.routledge.com/9780367477905

2ND EDITION

Physics of Continuous Matter

Exotic and Everyday Phenomena in the Macroscopic World



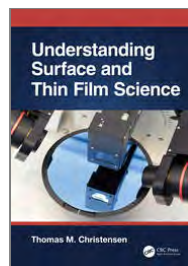
B. Lautrup

This text provides an introduction to the basic ideas of continuum physics and their application to a wealth of macroscopic phenomena. It emphasizes the importance in understanding the physical principles behind equations and the conditions underlying approximations. This edition includes three new chapters on elasticity of slender rods, energy, and entropy. It also offers more illustrations, improved physics arguments and mathematical presentations, and expanded problem sets. Ancillary materials can be found on a companion website. A solutions manual is available for qualifying instructors.

CRC Press
December 2019:696
Hb: 978-1-420-07700-1: **£64.99**
Pb: 978-0-367-86511-5: **£53.99**
eBook: 978-0-429-10950-8

* For full contents and more information, visit: www.routledge.com/9780367865115

Understanding Surface and Thin Film Science



Thomas M. Christensen

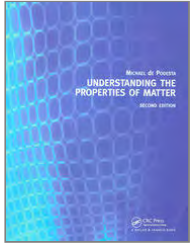
This book is a conceptual overview of surface and thin film science, providing a basic and straightforward understanding of the most common ideas and methods used in these fields. Fundamental scientific ideas, deposition methods and characterization methods are all examined. Thin film science is a natural extension of surface science, especially as applications involve thinner and thinner films; distinct from other literature in the field, this book combines the two topics in a single volume. Simple, conceptual models and figures are used, supported by some mathematical expressions, to convey key ideas to students as well as practicing engineers, scientists, and technicians.

CRC Press
December 2022:372
Hb: 978-1-482-23303-2: **£91.99**
eBook: 978-0-429-19454-2

* For full contents and more information, visit: www.routledge.com/9781482233032

2ND EDITION

Understanding the Properties of Matter

**Michael de Podesta**

Understanding the Properties of Matter: 2nd Edition is an entertaining and innovative textbook that fulfills the needs of undergraduate physics students and teachers alike. Taking a unique phenomenological approach, this book introduces the properties of matter. After an overview of basic ideas and a reminder of the importance of measurement, the author explores gases, solids, liquids, and phase changes. Students benefit from extensive examples and end-of-chapter exercises, and this edition includes an entire chapter of extended exercises. This approach allows both students and teachers to rediscover a fascination for the subjects that have excited some of the greatest physicists of our age.

CRC Press

April 2002:450

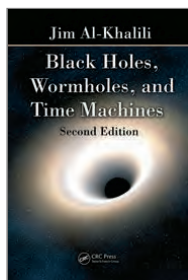
Pb: 978-0-415-25788-6: **£59.99**

eBook: 978-1-315-27475-1

* For full contents and more information, visit: www.routledge.com/9780415257886

2ND EDITION

Black Holes, Wormholes and Time Machines



Jim Al-Khalili

While retaining the popular format and style of its best-selling predecessor, this second edition explores the latest developments in high-energy astroparticle physics and Big Bang cosmology. It continues to make the ideas and theories of modern physics easily understood by anyone. Complex concepts, such as quantum mechanics, are explained simply, without the use of scientific jargon. The book takes readers on a journey through space and time, covering space warps, time travel, parallel universes, and other fascinating topics in physics.

CRC Press

December 2011:206

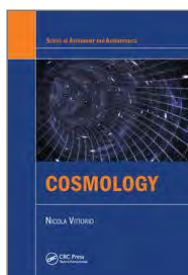
Hb: 978-1-138-40621-6: **£185**

Pb: 978-1-439-88559-8: **£43.99**

eBook: 978-0-429-11313-0

* For full contents and more information, visit: www.routledge.com/9781439885598

Cosmology



Nicola Vittorio

Modern cosmology has changed significantly over the years, from the discovery to the precision measurement era. The time is right for a fresh new textbook which captures the state-of-the art in cosmology. Written by one of the world's leading cosmologists, this brand new, thoroughly class-tested textbook provides graduate and undergraduate students with coverage of the very latest developments and experimental results in the field. Prof. Nicola Vittorio shows what is meant by precision cosmology, from both theoretical and observational perspectives.

CRC Press

June 2020:454

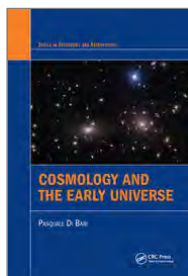
Hb: 978-1-498-73132-4: **£82.99**

Pb: 978-0-367-57269-3: **£44.99**

eBook: 978-1-315-18139-4

* For full contents and more information, visit: www.routledge.com/9780367572693

Cosmology and the Early Universe



Pasquale Di Bari

This book discusses cosmology from both an observational and a strong theoretical perspective. The first part focuses on gravitation, notably the expansion of the universe and determination of cosmological parameters, before moving onto the main emphasis of the book, the physics of the early universe, and the connections between cosmological models and particle physics. Readers will gain a comprehensive account of cosmology and the latest observational results, without requiring prior knowledge of relativistic theories, making the text ideal for students.

CRC Press

June 2020:259

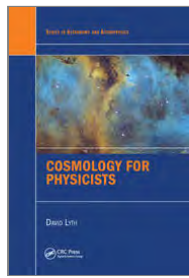
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CRC Press

June 2020:180

Hb: 978-1-498-75531-3: **£82.99**

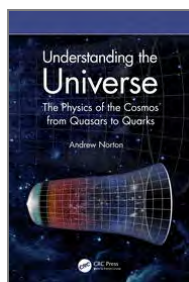
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The Physics of the Cosmos from Quasars to Quarks



Andrew Norton

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CRC Press

May 2023:252

Hb: 978-0-367-74805-0: **£120**

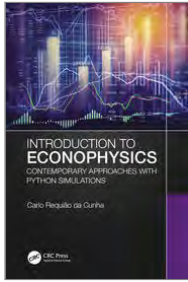
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Carlo Requião da Cunha

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CRC Press

January 2024: 294

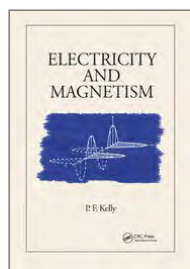
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P.F. Kelly

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CRC Press

March 2021:418

Hb: 978-1-482-20635-7: **£76.99**

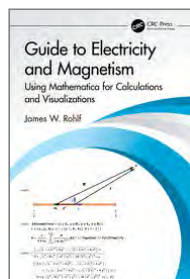
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Guide to Electricity and Magnetism

Using Mathematica for Calculations and Visualizations



James W. Rohlif

This is a "how to guide" for a calculus-based introductory course in electricity and magnetism. Students taking the subject at an intermediate or advanced level may also find it to be a useful reference. The calculations are performed in Mathematica, and stress graphical visualization, units, and numerical answers. The techniques show the student how to learn the physics without being hung up on the math.

CRC Press

March 2024:232

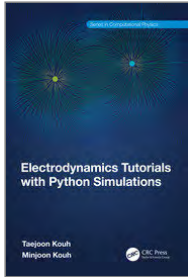
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Series: Series in Computational Physics

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CRC Press

April 2024:294

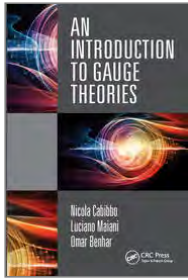
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Nicola Cabibbo, Luciano Maiani, Omar Benhar

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CRC Press

June 2020:320

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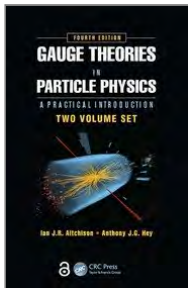
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Ian J.R. Aitchison, Anthony J.G. Hey

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CRC Press

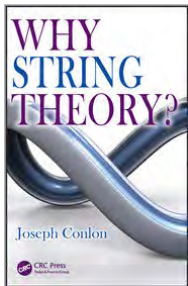
December 2012:960

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Joseph Conlon

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CRC Press

November 2015:260

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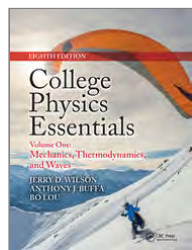
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Mechanics, Thermodynamics, Waves (Volume One)



Jerry D. Wilson, Anthony J. Buffa, Bo Lou

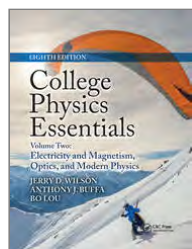
This edition provides a streamlined update of a major textbook for algebra-based physics, reflecting the demand by instructors for more substance. The authors enhance emphasis on worked examples to enhance reader engagement, together with expanded problem sets that build from conceptual understanding to numerical solutions and real-world applications. It is the textbook of choice for those seeking a basic understanding of key physics concepts and how to apply them to real problems. The first volume covers mechanics, solids and fluids, heat, thermodynamics, vibrations and waves, and sound. The second volume covers electricity and magnetism, optics, atomic, nuclear, and quantum physics.

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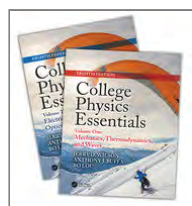
Jerry D. Wilson, Anthony J. Buffa, Bo Lou

This edition provides a streamlined update of a major textbook for algebra-based physics, reflecting the demand by instructors for more substance. The authors enhance emphasis on worked examples to enhance reader engagement, together with expanded problem sets that build from conceptual understanding to numerical solutions and real-world applications. It is the textbook of choice for those seeking a basic understanding of key physics concepts and how to apply them to real problems. The first volume covers mechanics, solids and fluids, heat, thermodynamics, vibrations and waves, and sound. The second volume covers electricity and magnetism, optics, atomic, nuclear, and quantum physics.

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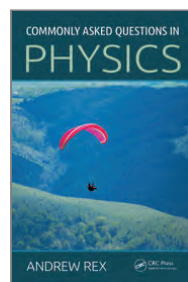
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July 2022:812
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Commonly Asked Questions in Physics



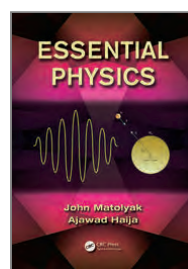
Andrew Rex

Suitable for a wide audience, this book covers a broad scope of subjects, from classical physics that goes back to the age of Newton to new ideas just formulated in the twenty-first century. The book highlights the core areas of physics that predate the twentieth century, including mechanics, electromagnetism, optics, and thermodynamics. It also focuses on modern physics, covering quantum mechanics, atomic and nuclear physics, fundamental particles, and relativity.

CRC Press
February 2014:256
Hb: 978-1-138-42956-7: **£175**
Pb: 978-1-466-56017-8: **£27.99**
eBook: 978-0-429-19405-4

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Essential Physics



John Matolyak, Ajawad Haija

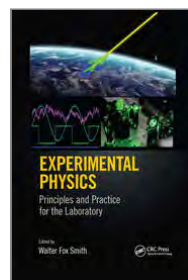
This book is designed for an algebra-based course in physics for non-physics majors and provides a thorough understanding of the fundamentals of essential physics. It omits material often found in much larger texts that cannot be covered in a yearlong course and is not needed for non-physics majors. Instead, this text focuses on providing a solid understanding of fundamental physics and physical principles. Each topic includes worked examples. Math is introduced as necessary, with an emphasis on applications in fields including some biology and chemistry.

CRC Press
December 2013:472
Hb: 978-1-466-57521-9: **£105**
eBook: 978-0-429-10150-2

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Edited by **Walter Fox Smith**

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June 2022:452
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CRC Press

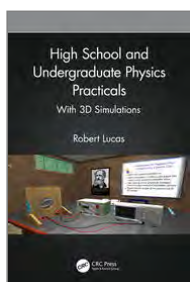
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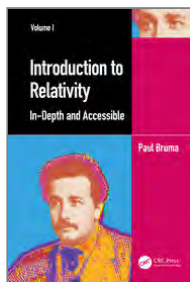
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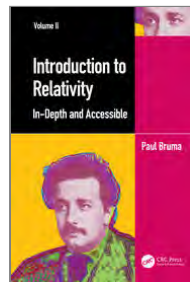
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September 2022:286

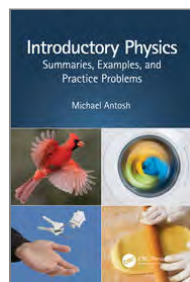
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CRC Press

February 2023:408

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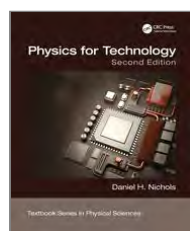
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CRC Press

March 2021:432

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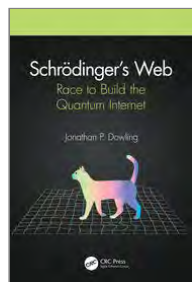
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CRC Press

August 2020:314

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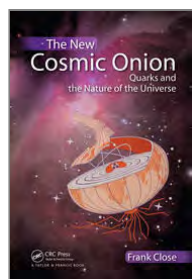
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CRC Press

December 2006:232

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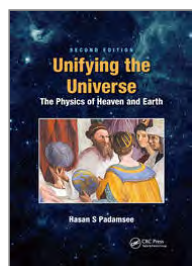
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CRC Press

September 2021:508

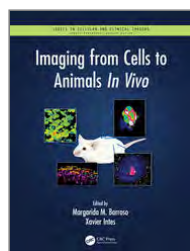
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CRC Press

May 2023:370

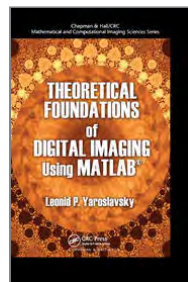
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CRC Press

September 2020:493

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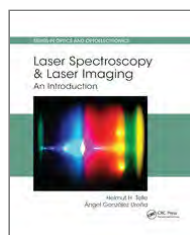
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Laser Spectroscopy and Laser Imaging

An Introduction



Helmut H. Telle, Ángel González Ureña

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CRC Press

December 2019:750

Hb: 978-1-466-58822-6: **£170**

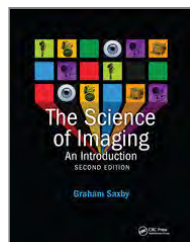
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The Science of Imaging



Graham Saxby

Updated and expanded to keep pace with the digital revolution, the new edition of this critically acclaimed work provides a comprehensive exploration of imaging science. Extensively illustrated, the second edition covers the fundamental laws of physics as well as the cutting-edge techniques defining the field. This accessible introduction takes readers on a grand tour of imaging. Starting with the fundamentals of light and basic cameras, the author journeys through television and holography to advanced scientific and medical imaging. He highlights essential formulas, while keeping the complex mathematics to a minimum.

CRC Press

September 2020:352

Hb: 978-1-439-81286-0: **£82.99**

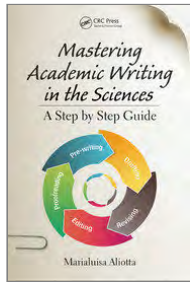
Pb: 978-0-367-86446-0: **£44.99**

eBook: 978-0-429-13191-2

* For full contents and more information, visit: www.routledge.com/9780367864460

Mastering Academic Writing in the Sciences

A Step-by-Step Guide



Marialuisa Aliotta

This book provides a comprehensive and coherent step-by-step guide to writing in scientific academic disciplines. It is an invaluable resource for those working on a PhD thesis, research paper, dissertation, or report. Writing these documents can be a long and arduous experience for students and their supervisors, and even for experienced researchers. However, this book can hold the key to success. Mapping the steps involved in the writing process - from acquiring and organizing sources of information, to revising early drafts, to proofreading the final product - it provides clear guidance on what to write and how best to write it.

CRC Press

April 2018:200

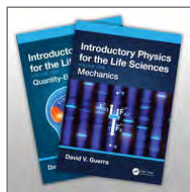
Hb: 978-1-138-74288-8: **£115**

Pb: 978-1-498-70147-1: **£46.99**

eBook: 978-1-351-00214-1

* For full contents and more information, visit: www.routledge.com/9781498701471

Introductory Physics for the Life Sciences - Two-Vol. Set



David V. Guerra

This textbook provides an accessible introduction to physics for undergraduate students in the life sciences, including those majoring in all branches of biology, biochemistry, and psychology and students working on pre-professional programs such as pre-medical, pre-dental, and physical therapy. The text is geared for the algebra-based physics course, often named College Physics in the United States. The order of topics studied are such that most of the problems in the text can be solved with the methods of Statics or Dynamics. That is, they require a free body diagram, the application of Newton's Laws, and any necessary kinematics.

CRC Press

June 2023:932

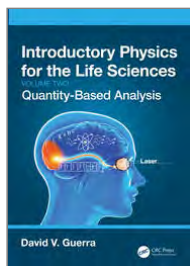
Hb: 978-1-032-49091-5: **£230**

Pb: 978-1-032-49093-9: **£89.99**

* For full contents and more information, visit: www.routledge.com/9781032490939

Introductory Physics for the Life Sciences: (Volume 2)

Quantity-Based Analysis



David V. Guerra

This textbook provides an accessible introduction to physics for undergraduate students in the life sciences, including those majoring in all branches of biology, biochemistry, and psychology and students working on pre-professional programs such as pre-medical, pre-dental, and physical therapy. The text is geared for the algebra-based physics course, often named College Physics in the United States. The order of topics studied in this volume require students to first understand a concept, such as the conservation of energy, momentum, voltage, or current, the change in a quantity such as entropy, or the rules of ray and wave optics.

CRC Press

June 2023:288

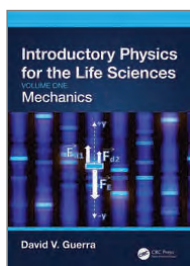
Hb: 978-1-032-30041-2: **£135**

Pb: 978-1-032-31108-1: **£54.99**

eBook: 978-1-003-30807-2

* For full contents and more information, visit: www.routledge.com/9781032311081

Introductory Physics for the Life Sciences: Mechanics (Volume One)



David V. Guerra

This textbook provides an accessible introduction to physics for undergraduate students in the life sciences, including those majoring in all branches of biology, biochemistry, and psychology and students working on pre-professional programs such as pre-medical, pre-dental, and physical therapy. The text is geared for the algebra-based physics course, often named College Physics in the United States. The order of topics studied are such that most of the problems in the text can be solved with the methods of Statics or Dynamics. That is, they require a free body diagram, the application of Newton's Laws, and any necessary kinematics.

CRC Press

May 2023:258

Hb: 978-1-032-30040-5: **£135**

Pb: 978-1-032-31106-7: **£54.99**

eBook: 978-1-003-30806-5

* For full contents and more information, visit: www.routledge.com/9781032311067

2ND EDITION

Fundamentals of Fibre Reinforced Composite Materials



A.R. Bunsell, S. Joannès, A. Thionnet

Series: Series in Materials Science and Engineering

This second edition of *Fundamentals of Fibre Reinforced Composite Materials* has been fully updated throughout, providing an authoritative and modern introduction to the topic with a brief history of composite development, a review of composite applications, manufacture and markets, types of fibres and matrices used, and their properties with a detailed introduction into the computer simulation of composite behaviour.

CRC Press

September 2022:360

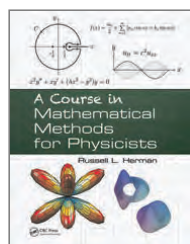
Hb: 978-0-367-02373-7: **£115**

Pb: 978-0-367-74433-5: **£44.99**

eBook: 978-0-429-39990-9

* For full contents and more information, visit: www.routledge.com/9780367744335

A Course in Mathematical Methods for Physicists



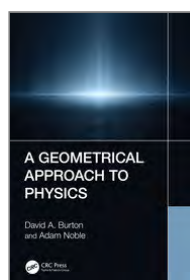
Russell L. Herman

Based on the author's junior-level undergraduate course, this classroom-tested textbook is designed for an introductory one-semester course in mathematical physics. Focusing on the physics of oscillations and waves, it helps students understand the mathematical techniques needed for their future studies in physics. The book introduces the methods while studying one underlying theme from physics. It takes a bottom-up approach that emphasizes physical applications of the mathematics.

CRC Press
December 2013:776
Hb: 978-1-138-44208-5: **£180**
Pb: 978-1-466-58467-9: **£69.99**
eBook: 978-0-429-08891-9

* For full contents and more information, visit: www.routledge.com/9781466584679

A Geometrical Approach to Physics



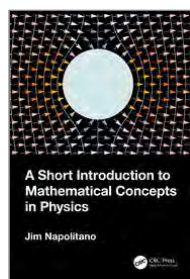
David A. Burton, Adam Noble

The purpose of the book is to act as a 'gateway' to more advanced books on the applications of differential geometry in physics. It will also help the reader to better appreciate modern physics research that makes use of differential geometry, and the common features that permeate the discipline as a whole.

CRC Press
March 2024:202
Hb: 978-1-032-13380-5: **£115**
Pb: 978-1-032-12928-0: **£44.99**
eBook: 978-1-003-22894-3

* For full contents and more information, visit: www.routledge.com/9781032129280

A Short Introduction to Mathematical Concepts in Physics



Jim Napolitano

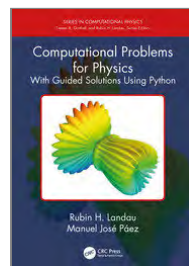
Mathematics is the language of physics and yet, mathematics is an enormous subject. This textbook provides an accessible and concise introduction to mathematical physics for undergraduate students taking a one semester course. It assumes the reader has studied a year of introductory physics and three semesters of basic calculus, including some vector calculus, but no formal training in differential equations or matrix algebra. It equips readers with the skills and foundational knowledge they need for courses that follow in classical mechanics, electromagnetism, quantum mechanics, and thermal physics.

CRC Press
January 2024:242
Hb: 978-1-032-40977-1: **£130**
Pb: 978-1-032-40430-1: **£49.99**
eBook: 978-1-003-35565-6

* For full contents and more information, visit: www.routledge.com/9781032404301

Computational Problems for Physics

With Guided Solutions Using Python



Rubin H. Landau, Manuel José Páez

Series: Series in Computational Physics

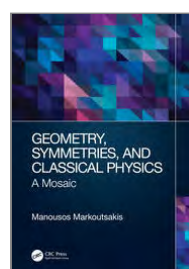
Our future scientists and professionals must be conversant in computational techniques. In order to facilitate integration of computer methods into existing physics courses, this textbook offers a large number of worked examples and problems with fully guided solutions in Python as well as other languages (Mathematica, Java, C, Fortran, and Maple) on the Web. It's also intended as a self-study guide for learning how to use computer methods in physics. The authors include an introductory chapter on numerical tools and indication of computational as well as a separate chapter with problems for beginning students.

CRC Press
June 2018:430
Hb: 978-1-138-70591-3: **£105**
Pb: 978-1-138-70541-8: **£69.99**
eBook: 978-1-315-20209-9

* For full contents and more information, visit: www.routledge.com/9781138705418

Geometry, Symmetries, and Classical Physics

A Mosaic



Manousos Markoutsakis

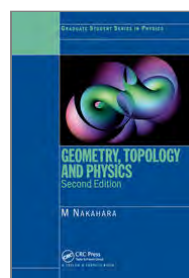
This book provides advanced undergraduate physics and mathematics students with an accessible yet detailed understanding of the fundamentals of differential geometry and symmetries in classical physics.

CRC Press
January 2024:482
Hb: 978-0-367-53523-0: **£130**
Pb: 978-0-367-54141-5: **£44.99**
eBook: 978-1-003-08774-8

* For full contents and more information, visit: www.routledge.com/9780367541415

2ND EDITION

Geometry, Topology and Physics



Mikio Nakahara

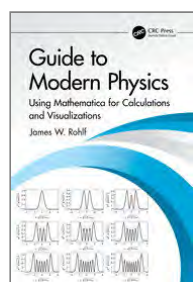
This book provides an introduction to the ideas and techniques of differential geometry and topology. It starts with a brief survey of quantum field theory, gauge theory, general relativity, vector spaces, and topology. Using many illustrations, exercises, and problems, the author demonstrates more elaborate concepts of topology and geometry, including fiber bundles, characteristic classes, and index theorems. New to this second edition is the proof of the index theorem in terms of supersymmetric quantum mechanics. The final two chapters examine anomalies in gauge field theories and the analysis of Polakov's bosonic string theory from the geometrical point of view.

CRC Press
June 2003:596
Hb: 978-1-138-41336-8: **£185**
Pb: 978-0-750-30606-5: **£84.99**
eBook: 978-1-315-27582-6

* For full contents and more information, visit: www.routledge.com/9780750306065

Guide to Modern Physics

Using Mathematica for Calculations and Visualizations



James W. Rohlf

This is a "how to guide" for making beginning calculations in modern physics. The academic level is second year college physical science and engineering students. The calculations are performed in Mathematica, and stress graphical visualization, units, and numerical answers.

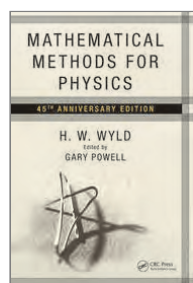
CRC Press
November 2023:218
Hb: 978-1-032-49801-0: **£110**
Pb: 978-1-032-49686-3: **£42.99**
eBook: 978-1-003-39551-5

* For full contents and more information, visit: www.routledge.com/9781032496863

2ND EDITION

Mathematical Methods for Physics

45th anniversary edition



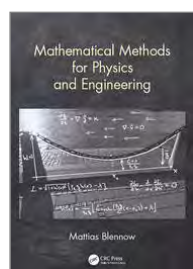
H.W. Wyld, Gary Powell

From classical mechanics and classical electrodynamics to modern quantum mechanics many physical phenomena are formulated in terms of similar partial differential equations while boundary conditions determine the specifics of the problem. Mathematical Methods for Physics demonstrates how many physics problems resolve into similar inhomogeneous partial differential equations and the mathematical techniques for solving them.

CRC Press
May 2022:476
Hb: 978-0-367-47708-0: **£120**
Pb: 978-0-367-47973-2: **£49.99**
eBook: 978-1-003-03746-0

* For full contents and more information, visit: www.routledge.com/9780367479732

Mathematical Methods for Physics and Engineering



Mattias Blennow

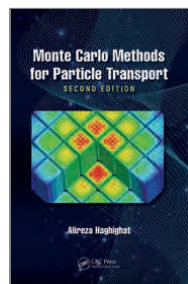
Suitable for advanced undergraduate and graduate students, this new textbook contains an introduction to the mathematical concepts used in physics and engineering. The entire book is unique in that it draws upon applications from physics, rather than mathematical examples, to ensure students are fully equipped with the tools they need. This approach prepares the reader for advanced topics, such as quantum mechanics and general relativity, while offering examples, problems, and insights into classical physics. The book is also distinctive in the coverage it devotes to modelling, and to oft-neglected topics such as Green's functions.

CRC Press
December 2017:760
Hb: 978-1-138-05690-9: **£250**
Pb: 978-1-138-05688-6: **£105**
eBook: 978-1-315-16509-7

* For full contents and more information, visit: www.routledge.com/9781138056886

2ND EDITION

Monte Carlo Methods for Particle Transport



Alireza Haghighat

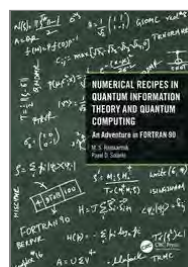
Fully updated with the latest developments in the eigenvalue Monte Carlo calculations and automatic variance reduction techniques and containing an entirely new chapter on fission matrix and alternative hybrid techniques. This second edition explores the uses of the Monte Carlo method for real-world applications, explaining its concepts and limitations.

CRC Press
April 2022:310
Hb: 978-0-367-18805-4: **£120**
Pb: 978-0-367-53809-5: **£49.99**
eBook: 978-0-429-19839-7

* For full contents and more information, visit: www.routledge.com/9780367538095

Numerical Recipes in Quantum Information Theory and Quantum Computing

An Adventure in FORTRAN 90



M.S. Ramkarthik, Payal D. Solanki

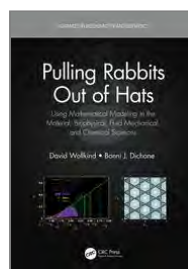
This first of a kind textbook provides computational tools in Fortran 90 that are fundamental to quantum information, quantum computing, linear algebra and one dimensional spin half condensed matter systems. Over 160 subroutines are included, and the numerical recipes are aided by detailed flowcharts. Suitable for beginner and advanced readers alike, students and researchers will find this textbook to be a helpful guide and a compendium.

CRC Press
September 2021:424
Hb: 978-0-367-75928-5: **£94.99**
eBook: 978-1-003-16467-8

* For full contents and more information, visit: www.routledge.com/9780367759285

Pulling Rabbits Out of Hats

Using Mathematical Modeling in the Material, Biophysical, Fluid Mechanical, and Chemical Sciences



David Wollkind, Bonni J. Dichone

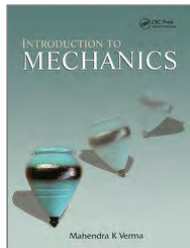
Series: Advances in Biochemistry and Biophysics

Pulling Rabbits Out of Hats: Using Mathematical Modeling in the Material, Biophysical, Fluid Mechanical, and Chemical Sciences focuses on those assumptions made during applied mathematical modeling in which the phenomenological data and the model predictions are self-consistent. This comprehensive reference demonstrates how to employ a variety of mathematical techniques to quantify a number of problems from the material, biophysical, fluid mechanical, and chemical sciences. In doing so, methodology of modelling, analysis, and result generation are all covered.

CRC Press
November 2021:554
Hb: 978-1-032-04787-4: **£180**
eBook: 978-1-003-19560-3

* For full contents and more information, visit: www.routledge.com/9781032047874

Introduction to Mechanics



Mahendra K. Verma

A modern introduction to Newtonian dynamics and the basics of special relativity, this book discusses standard topics such as Newton's laws of motion, energy, linear and angular momentum, rigid body dynamics, and oscillations, then goes on to introduce modern topics such as symmetries, phase space, nonlinear dynamics and chaos. The author presents Newton's equation of motion as a differential equation, bringing out key issues such as phase space and determinism in mechanical systems and helps introduce modern research topics such as chaos theory in a natural way. He highlights key assumptions of Newtonian mechanics and incorporates numerical solutions of many mechanical systems using MATLAB®.

CRC Press

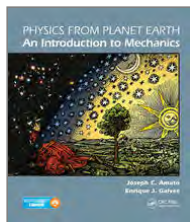
January 2019:356

Hb: 978-1-439-80127-7: **£52.99**

Pb: 978-1-138-11677-1: **£18.99**

* For full contents and more information, visit: www.routledge.com/9781138116771

Physics from Planet Earth - An Introduction to Mechanics



Joseph C. Amato, Enrique J. Galvez

This classroom-tested text provides a one-semester, calculus-based introduction to classical mechanics for first-year undergraduate students. The authors introduce the three conservation laws as fundamental laws of nature from which secondary concepts are derived and organize topics around the conservation laws. They also illustrate many topics through real, contemporary applications in astronomy, planetary science, and space travel. The book includes short exercises throughout the text as well as novel problems at the end of each chapter.

CRC Press

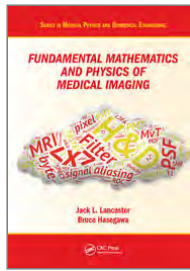
June 2015:612

Hb: 978-1-439-86783-9: **£86.99**

eBook: 978-0-429-19447-4

* For full contents and more information, visit: www.routledge.com/9781439867839

Fundamental Mathematics and Physics of Medical Imaging



Jack Lancaster, Bruce Hasegawa

Authored by a leading educator, this book is ideal for graduate medical imaging courses. Rather than focus on imaging modalities, the book delves into the mechanisms of image formation and image quality common to all imaging systems: contrast mechanisms, noise, and spatial and temporal resolution. This is an extensively revised new edition of *The Physics of Medical X-Ray Imaging* by Bruce Hasegawa (Medical Physics Publishing, 1991). A wide range of modalities are covered including X-ray CT, MRI and SPECT.

CRC Press

June 2020:346

Hb: 978-1-498-75161-2: **£84.99**

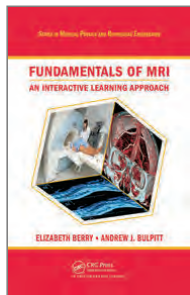
Pb: 978-0-367-57452-9: **£44.99**

eBook: 978-1-315-36821-4

* For full contents and more information, visit: www.routledge.com/9780367574529

Fundamentals of MRI

An Interactive Learning Approach



Elizabeth Berry, Andrew J. Bulpitt

Series: Series in Medical Physics and Biomedical Engineering

This interactive workbook provides a practical, self-contained introduction to the principles of MRI. Shaped by the authoritative experience of the authors, the book presents the fundamentals of MRI, while an accompanying CD offers animations and exercises that will help students develop a deeper understanding of the physical principles of MRI in practice. The text includes a number of exercises and worked examples with detailed solutions. It provides advanced students studying medical physics, radiologists, radiographers, and clinicians with a pragmatic approach to MRI that builds a solid foundation for further practice and study.

CRC Press

December 2008:316

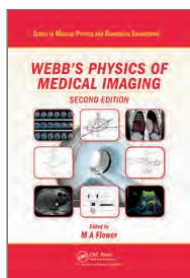
Hb: 978-1-584-88901-4: **£82.99**

eBook: 978-0-429-14342-7

* For full contents and more information, visit: www.routledge.com/9781584889014

2ND EDITION

Webb's Physics of Medical Imaging



Edited by **M Flower**

Series: Series in Medical Physics and Biomedical Engineering

Since the publication of the best-selling first edition, the technology and clinical applications of medical imaging have changed significantly. Gathering these developments into one volume, this comprehensive second edition presents the basic physics, modern technology, and up-to-date examples of clinical application across all the modalities of medical imaging for undergraduate and graduate students studying medicine and medical physics. It now covers state-of-the-art detector technology and computer processing used in medical imaging. Along with many new examples and figures, this edition includes new chapters on medical image processing and multimodality imaging.

CRC Press

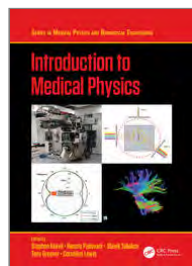
June 2012:864

Hb: 978-0-750-30573-0: **£86.99**

eBook: 978-0-429-09957-1

* For full contents and more information, visit: www.routledge.com/9780750305730

Introduction to Medical Physics



Edited by **Stephen Keevil, Renato Padovani, Slavik Tabakov, Tony Greener, Cornelius Lewis**

Series: *Series in Medical Physics and Biomedical Engineering*

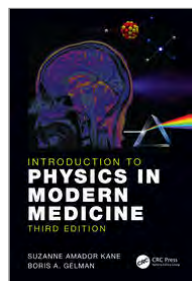
This textbook provides an accessible introduction to the basic principles of medical physics, the applications of medical physics equipment, and the role of a medical physicist in healthcare.

CRC Press
January 2022:500
Hb: 978-1-498-74479-9: **£84.99**
eBook: 978-0-429-15575-8

* For full contents and more information, visit: www.routledge.com/9781498744799

3RD EDITION

Introduction to Physics in Modern Medicine



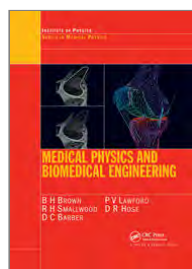
Suzanne Amador Kane, Boris A. Gelman

Covering a wide range of applications, this third edition builds on the bestselling second edition, providing medical personnel and students with an exploration of the physics-related applications found in state-of-the-art medical centers. Requiring no previous knowledge of physics, biology, or chemistry and keeping maths to a minimum, the application-dedicated chapters adhere to simple and self-contained qualitative explanations that make use of examples and illustrations. With an enhanced emphasis on digital imaging and computers in medicine, the text gives readers a fundamental understanding of the practical application of each concept and the basic science behind it.

CRC Press
March 2020:450
Hb: 978-1-138-74263-5: **£175**
Pb: 978-1-138-03603-1: **£58.99**
eBook: 978-1-315-23208-9

* For full contents and more information, visit: www.routledge.com/9781138036031

Medical Physics and Biomedical Engineering



B.H Brown, R.H Smallwood, D.C. Barber, P.V Lawford, D.R Hose

Series: *Series in Medical Physics and Biomedical Engineering*

Appropriate for senior undergraduates and graduates, this text presents the underlying physics, electronics, anatomy, and physiology as well as addresses practical applications. The structured approach of the text builds and broadens the material of opening chapters in the later chapters. The book covers biomechanics, image formation techniques, biomedical devices, physiological signals and responses, and respiratory and cardiovascular function and measurement. It includes chapter problems with short questions to test understanding of the main principles and longer questions to test more in-depth knowledge, along with detailed bibliographies that provide references to introductory texts and research materials.

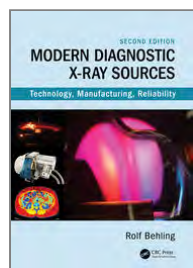
CRC Press
January 1998:762
Pb: 978-0-750-30368-2: **£94.99**
eBook: 978-1-315-27560-4

* For full contents and more information, visit: www.routledge.com/9780750303682

2ND EDITION

Modern Diagnostic X-Ray Sources

Technology, Manufacturing, Reliability



Rolf Behling

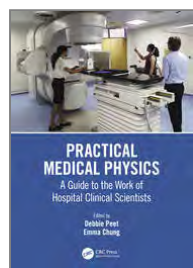
Now fully updated the second edition of Modern Diagnostic X-ray Sources: Technology, Manufacturing, Reliability gives an up-to-date summary of X-ray source design for applications in modern diagnostic medical imaging. It lays a sound groundwork for education and advanced training in the physics of X-ray production, X-ray interactions with matter, imaging modalities, and assesses their prospects. The book begins with a historical overview of X-ray tube and generator development, including key achievements leading up to the current technological and economic state of the field.

CRC Press
May 2023:412
Hb: 978-0-367-54692-2: **£155**
Pb: 978-0-367-55845-1: **£61.99**
eBook: 978-1-003-09540-8

* For full contents and more information, visit: www.routledge.com/9780367558451

Practical Medical Physics

A Guide to the Work of Hospital Clinical Scientists



Edited by **Debbie Peet, Emma Chung**

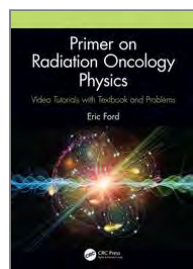
This is the first all-encompassing textbook designed to support trainee clinical scientists in medical physics as they start work in a hospital setting whilst undertaking an academic master's course.

CRC Press
August 2021:262
Hb: 978-1-138-30982-1: **£135**
Pb: 978-1-138-30753-7: **£49.99**
eBook: 978-1-315-14242-5

* For full contents and more information, visit: www.routledge.com/9781138307537

Primer on Radiation Oncology Physics

Video Tutorials with Textbook and Problems



Eric Ford

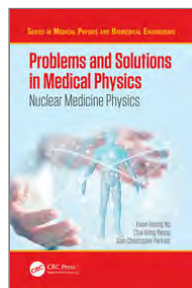
Gain mastery over the fundamentals of radiation oncology physics! This package gives you over 60 tutorial videos (each 15- 20 minutes in length) with a companion text, providing the most complete and effective introduction available. Dr. Ford has tested this approach in formal instruction for years with outstanding results. The text includes extensive problem sets for each chapter with detailed solutions provided for instructors. The videos include embedded quizzes and 'whiteboard' screen technology to facilitate comprehension. Together, this provides a valuable learning tool both for training purposes and as a refresher for those in practice.

CRC Press
May 2020:374
Hb: 978-1-138-59438-8: **£215**
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eBook: 978-0-429-48888-7

* For full contents and more information, visit: www.routledge.com/9781138591707

Problems and Solutions in Medical Physics

Nuclear Medicine Physics



Kwan Hoong Ng, Chai Hong Yeong, Alan Perkins

Series: Series in Medical Physics and Biomedical Engineering

The second in a three-volume set exploring Problems and Solutions in Medical Physics, this volume explores common questions and their solutions in Nuclear Medicine. This invaluable study guide should be used in conjunction with other key textbooks in the field to provide additional learning opportunities. Topics include radioactivity and nuclear transformation, radionuclide production and radiopharmaceuticals, instrumentation for gamma imaging, SPECT and PET/CT, radionuclide therapy, internal radiation dosimetry, and quality control and radiation protection in nuclear medicine. Each chapter provides examples, notes, and references for further reading to enhance understanding.

CRC Press

March 2019:163

Hb: 978-0-367-14797-6: **£130**

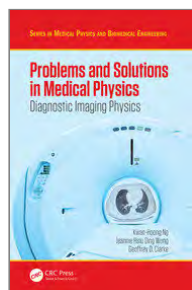
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Problems and Solutions in Medical Physics

Diagnostic Imaging Physics



Kwan Hoong Ng, Jeannie Hsiu Ding Wong, Geoffrey Clarke

Series: Series in Medical Physics and Biomedical Engineering

The first in a three-volume set exploring Problems and Solutions in Medical Physics, this volume explores common questions and their solutions in Diagnostic Imaging. This invaluable study guide should be used in conjunction with other key textbooks in the field to provide additional learning opportunities. It contains key imaging modalities, exploring X-ray, mammography, and fluoroscopy, in addition to computed tomography, magnetic resonance imaging, and ultrasonography. Each chapter provides examples, notes, and references for further reading to enhance understanding.

CRC Press

May 2018:156

Hb: 978-1-138-54258-7: **£140**

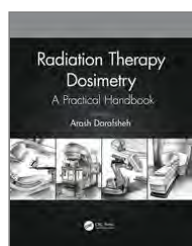
Pb: 978-1-482-23995-9: **£51.99**

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Radiation Therapy Dosimetry

A Practical Handbook



Edited by **Arash Darafsheh**

This comprehensive book covers the everyday use and underlying principles of radiation dosimeters used in radiation oncology clinics. It provides an up-to-date reference spanning the full range of current modalities with emphasis on practical know-how. The main audience is medical physicists, radiation oncology physics residents, and medical physics graduate students. The reader gains the necessary tools for determining which detector is best for a given application. Dosimetry of cutting edge techniques from radiosurgery to MRI-guided systems to small fields and proton therapy are all addressed.

CRC Press

May 2023:504

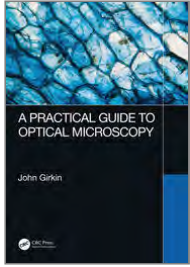
Hb: 978-1-138-54397-3: **£215**

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A Practical Guide to Optical Microscopy



John Girkin

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CRC Press

July 2019: 278

Hb: 978-1-138-06506-2: **£190**

Pb: 978-1-138-06470-6: **£77.99**

eBook: 978-1-315-11535-1

* For full contents and more information, visit: www.routledge.com/9781138064706

21st Century Nanoscience

A Handbook (Ten-Volume Set)



Edited by **Klaus D. Sattler**

Series: *21st Century Nanoscience*

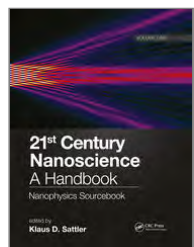
This up-to-date reference is the most comprehensive summary of the field of nanoscience and its applications. It begins with fundamental properties at the nanoscale and then goes well beyond into the practical aspects of the design, synthesis, and use of nanomaterials in various industries. It emphasizes the vast strides made in the field over the past decade – the chapters focus on new, promising directions as well as emerging theoretical and experimental methods. The contents incorporate experimental data and graphs where appropriate, as well as supporting tables and figures with a tutorial approach.

CRC Press
December 2020:4142
Hb: 978-0-815-36578-5: **£1550**
eBook: 978-1-351-26056-5

* For full contents and more information, visit: www.routledge.com/9780815365785

21st Century Nanoscience – A Handbook

Nanophysics Sourcebook (Volume One)



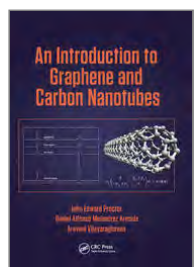
Edited by **Klaus D. Sattler**

This up-to-date reference is the most comprehensive summary of the field of nanoscience and its applications. It begins with fundamental properties at the nanoscale and then goes well beyond into the practical aspects of the design, synthesis, and use of nanomaterials in various industries. It emphasizes the vast strides made in the field over the past decade – the chapters focus on new, promising directions as well as emerging theoretical and experimental methods.

CRC Press
June 2022:372
Hb: 978-0-815-38443-4: **£115**
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* For full contents and more information, visit: www.routledge.com/9781032337319

An Introduction to Graphene and Carbon Nanotubes



John E. Proctor, Daniel Melendrez Armada, Aravind Vijayaraghavan

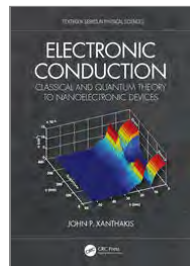
Carbon nanotubes and graphene have been the subject of intense scientific research since their relatively recent discoveries. This book introduces the reader to the science behind these rapidly developing fields, and covers both the fundamentals and latest advances. Suitable for undergraduate students with a working knowledge of basic quantum mechanics, and for postgraduate researchers commencing their studies into the field, this book will equip the reader to critically evaluate the physical properties and potential for applications of graphene and carbon nanotubes.

CRC Press
June 2020:302
Hb: 978-1-498-75179-7: **£82.99**
Pb: 978-0-367-57390-4: **£44.99**
eBook: 978-1-315-36819-1

* For full contents and more information, visit: www.routledge.com/9780367573904

Electronic Conduction

Classical and Quantum Theory to Nanoelectronic Devices



John P. Xanthakis

Series: *Textbook Series in Physical Sciences*

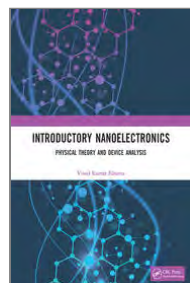
This book provides a concise, complete introduction to the fundamental principles of electronic conduction in microelectronic and nanoelectronic devices, with an emphasis on integrating the quantum aspects of conduction. The chapter coverage begins by presenting the classical theory of conduction, including introductory chapters on quantum mechanics and the solid state, then moving to a complete presentation of essential theory for understanding modern electronic devices. The author's unique approach is applicable to microscale and nanoscale device simulation, is particularly timely given the explosion in the nanoelectronics field.

CRC Press
May 2023:310
Hb: 978-1-138-58386-3: **£120**
Pb: 978-0-367-63919-8: **£45.99**
eBook: 978-0-429-50644-4

* For full contents and more information, visit: www.routledge.com/9780367639198

Introductory Nanoelectronics

Physical Theory and Device Analysis



Vinod Kumar Khanna

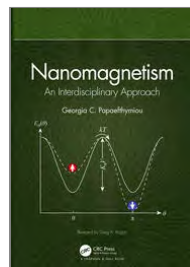
This introductory text develops the reader's fundamental understanding of core principles and experimental aspects underlying the operation of nanoelectronic devices. The author makes a thorough and systematic presentation of electron transport in quantum-confined systems such as quantum dots, quantum wires and quantum wells together with Landauer-Büttiker formalism and non-equilibrium Green's function approach. The writing throughout is straightforward and accessible, with clearly drawn illustrations and extensive self-study exercises for each chapter.

CRC Press
April 2022:446
Hb: 978-0-815-38426-7: **£115**
Pb: 978-0-367-50403-8: **£39.99**
eBook: 978-1-351-20467-5

* For full contents and more information, visit: www.routledge.com/9780367504038

Nanomagnetism

An Interdisciplinary Approach



Georgia C. Papaefthymiou

This book provides a core foundation for understanding magnetic quantum-size effects at the nanoscale and their many applications across the disciplines. This textbook will be a valuable guide for students in new interdisciplinary courses in nanomagnetism and magnetic nanomaterials, an area that has experienced immense growth in the last two decades due to advancements in sample preparation, nano patterning techniques and magnetic measurement instrumentation.

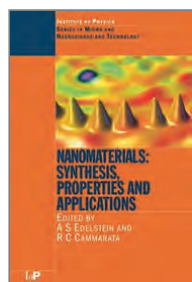
Chapman & Hall
April 2022:436
Hb: 978-1-439-81846-6: **£89.99**
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2ND EDITION

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Synthesis, Properties and Applications, Second Edition



Edited by **A.S. Edelstein, R.C. Cammarata**

Nanomaterials: Synthesis, Properties and Applications provides a comprehensive introduction to nanomaterials, from how to make them to example properties, processing techniques, and applications. Contributions by leading international researchers and teachers in academic, government, and industrial institutions in nanomaterials provide an accessible guide for newcomers to the field. The coverage ranges from isolated clusters and small particles to nanostructured materials, multilayers, and nanoelectronics. The book contains a wealth of references for further reading. Individual chapters deal with relevant aspects of the underlying physics, materials science, and physical chemistry.

CRC Press

January 1998:618

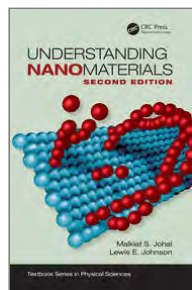
Hb: 978-0-750-30578-5: **£170**

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2ND EDITION

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Malkiat S. Johal, Lewis E. Johnson

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The authors provide the perfect training tool for the workforce in nanotech development by presenting the fundamental principles that govern the fabrication, characterization, and application of nanomaterials. This edition represents a complete overhaul, giving a much more complete, self-contained introduction. As before, the text avoids excessive mathematical detail and is written in an easy to follow, appealing style suitable for anyone, regardless of background in physics, chemistry, engineering, or biology. The organization has been revised to include fundamental physical chemistry and physics pertaining to relevant electrical, mechanical, and optical material properties.

CRC Press

April 2018:528

Hb: 978-0-815-35438-3: **£150**

Pb: 978-1-482-25322-1: **£82.99**

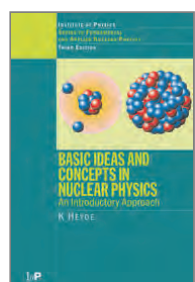
eBook: 978-1-315-15693-4

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3RD EDITION

Basic Ideas and Concepts in Nuclear Physics

An Introductory Approach, Third Edition

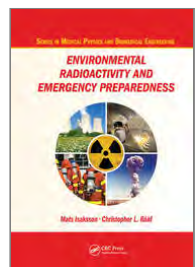
**K. Heyde**

The third edition of a classic book, this text sets out in a clear and consistent manner the various elements of nuclear physics. Divided into four main parts: the constituents and characteristics of the nucleus; nuclear interactions, including the strong, weak and electromagnetic forces; an introduction to nuclear structure; and recent developments in nuclear structure research, the book delivers a balanced account of both theoretical and experimental nuclear physics. In addition to the numerous revisions and updates to the previous edition to capture the developments in the subject over the last five years, the book contains a new chapter on the structure and stability of very light nuclei.

CRC Press
July 2004:668
Hb: 978-1-138-40638-4: £180
Pb: 978-0-750-30980-6: £86.99
eBook: 978-0-367-80657-6

* For full contents and more information, visit: www.routledge.com/9780750309806

Environmental Radioactivity and Emergency Preparedness

**Mats Isaksson, Christopher L. Raaf**

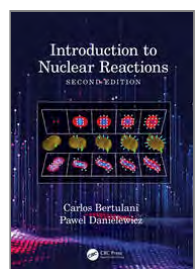
The book explores how to deal with the threats posed by different radiological sources, including those that are lost or hidden, and the issues posed by the use of such sources. It presents measurement methods and approaches to model and quantify the extent of threat, and also presents strategies for emergency preparedness, such as strategies for first-responders and radiological triage in case an accident should happen.

CRC Press
June 2020:656
Hb: 978-1-482-24464-9: £99.99
Pb: 978-0-367-57402-4: £44.99
eBook: 978-1-315-37287-7

* For full contents and more information, visit: www.routledge.com/9780367574024

2ND EDITION

Introduction to Nuclear Reactions

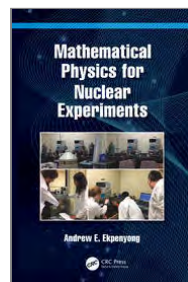
**Carlos Bertulani, Pawel Danielewicz**

Until the publication of the first edition of Introduction to Nuclear Reactions in 2004, an introductory reference on nuclear reactions had been unavailable. Now, fully updated throughout, this second edition continues to provide an authoritative overview of nuclear reactions. It discusses the main formalisms, ranging from basic laws to the final formulae used in academic research to calculate measurable quantities.

CRC Press
September 2022:420
Hb: 978-0-367-35362-9: £135
Pb: 978-0-367-34993-6: £45.99
eBook: 978-0-429-33106-0

* For full contents and more information, visit: www.routledge.com/9780367349936

Mathematical Physics for Nuclear Experiments

**Andrew E. Ekpenyong**

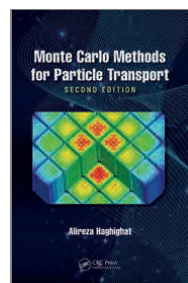
Mathematical Physics for Nuclear Experiments presents an accessible introduction to the mathematical derivations of key equations used in describing and analysing results of typical nuclear physics experiments. Instead of merely showing results and citing texts, crucial equations in nuclear physics such as the Bohr's classical formula, Bethe's quantum mechanical formula for energy loss, Poisson, Gaussian and Maxwellian distributions for radioactive decay, and the Fermi function for beta spectrum analysis, among many more, are presented with the mathematical bases of their derivation and with their physical utility.

CRC Press
January 2022:278
Hb: 978-0-367-76852-2: £150
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Monte Carlo Methods for Particle Transport

**Alireza Haghighat**

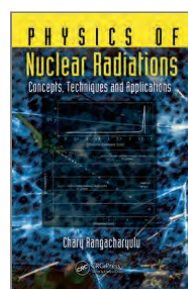
Fully updated with the latest developments in the eigenvalue Monte Carlo calculations and automatic variance reduction techniques and containing an entirely new chapter on fission matrix and alternative hybrid techniques. This second edition explores the uses of the Monte Carlo method for real-world applications, explaining its concepts and limitations.

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April 2022:310
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Pb: 978-0-367-53809-5: £49.99
eBook: 978-0-429-19839-7

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Physics of Nuclear Radiations

Concepts, Techniques and Applications

**Chary Rangacharyulu**

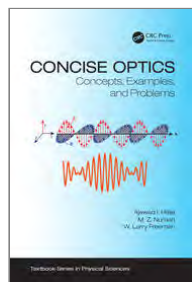
This text makes the physics of nuclear radiations accessible to students with a basic background in physics and mathematics. Rather than convince students one way or the other about the hazards of nuclear radiations, the text empowers them with tools to calculate and assess nuclear radiations and their impact. It discusses the meaning behind mathematical formulae as well as the areas in which the equations can be applied. Coverage includes archeology, health, and medical physics applications.

CRC Press
December 2013:383
Hb: 978-1-439-85777-9: £110
eBook: 978-0-429-06868-3

* For full contents and more information, visit: www.routledge.com/9781439857779

Concise Optics

Concepts, Examples, and Problems



Ajawad I. Haija, M. Z. Numan, W. Larry Freeman

Series: Textbook Series in Physical Sciences

This introductory text is a reader friendly treatment of geometrical and physical optics emphasizing problems and solved examples with detailed analysis and helpful commentary. The authors are seasoned educators with decades of experience teaching optics. Their approach is to gradually present mathematics explaining the physical concepts. It covers ray tracing to the wave nature of light, and introduces Maxwell's equations in an organic fashion. The text then moves on to explain how to analyze simple optical systems such as spectacles for improving vision, microscopes, and telescopes, while also being exposed to contemporary research topics.

CRC Press

March 2018:486

Hb: 978-1-138-10712-0: **£230**

Pb: 978-1-138-10702-1: **£89.99**

eBook: 978-1-315-10124-8

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Robert K. Tyson, Benjamin West Frazier

Principles of Adaptive Optics describes the foundations, principles, and applications of adaptive optics (AO) and its enabling technologies. This leading textbook addresses the fundamentals of AO at the core of astronomy, high-energy lasers, biomedical imaging, and optical communications.

CRC Press

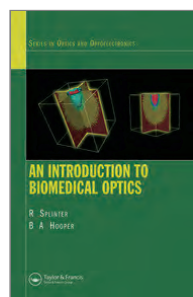
February 2022:356

Hb: 978-0-367-67603-2: **£96.99**

eBook: 978-1-003-14019-1

* For full contents and more information, visit: www.routledge.com/9780367676032

An Introduction to Biomedical Optics



Robert Splinter, Brett A. Hooper

Series: Series in Optics and Optoelectronics

This is the first comprehensive, introductory book describing both diagnostic and therapeutic optical methods in medicine. The first section covers the history of optics theory and the basic science behind light-tissue interactions. It also introduces the relevant approaches and approximations used to describe light propagation in turbid biological media. In the second section, the authors look more closely at light-tissue interactions and their applications in different medical areas, such as wound healing and tissue welding. The final section examines the various diagnostic methods that are employed using optical techniques. Throughout, the text employs numerical examples of clinical and research requirements.

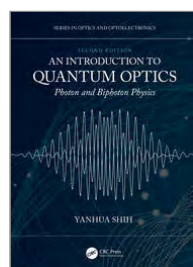
CRC Press
December 2006:624
Hb: 978-0-750-30938-7: **£99.99**
eBook: 978-0-429-14814-9

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2ND EDITION

An Introduction to Quantum Optics

Photon and Biphoton Physics



Yanhua Shih

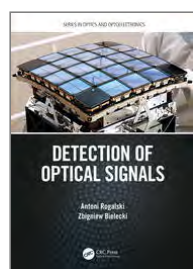
Series: Series in Optics and Optoelectronics

This text offers a complete revision for its introduction to the quantum theory of light, including notable developments as well as improvements in presentation of basic theory and concepts, with continued emphasis on experimental aspects. The author provides a thorough overview on basic methods of classical and quantum mechanical measurements in quantum optics, enabling readers to analyze, summarize, and resolve quantum optical problems. The broad coverage of concepts and tools and its practical, experimental emphasis set it apart from other available resources. New discussions of timely topics such as the concept of the photon and distinguishability bring the entire contents up to date.

CRC Press
May 2023:448
Hb: 978-1-138-60125-3: **£120**
Pb: 978-0-367-67359-8: **£45.99**
eBook: 978-1-003-13060-4

* For full contents and more information, visit: www.routledge.com/9780367673598

Detection of Optical Signals



Antoni Rogalski, Zbigniew Bielecki

Series: Series in Optics and Optoelectronics

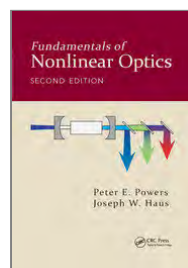
Detection of Optical Signals provides a comprehensive overview of important technologies for photon detection, from the X-ray through ultraviolet, visible, infrared to far-infrared spectral regions. It uniquely combines perspectives from many disciplines, particularly within physics and electronics, which are necessary to have a complete understanding of optical receivers. This will be an invaluable resource for graduate students in physics and engineering, as well as a helpful refresher for those already working with aerospace sensors and systems, remote sensing, thermal imaging, military imaging, optical telecommunications, infrared spectroscopy, and light detection.

CRC Press
June 2022:594
Hb: 978-1-032-05948-8: **£135**
eBook: 978-1-003-26309-8

* For full contents and more information, visit: www.routledge.com/9781032059488

2ND EDITION

Fundamentals of Nonlinear Optics



Peter E. Powers, Joseph W. Haus

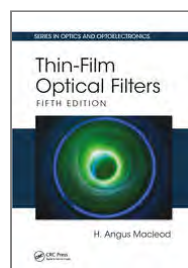
This fully revised edition of the groundbreaking text by the late Peter Powers offers enhanced coverage while remaining the most 'essentials only,' practical introductory treatment available. It includes a brand new chapter on quantum nonlinear optics, other added sections and improvements, as well as many new problems and examples. This up-to-date treatment reflects the latest device applications and importance of nonlinear optics in development of materials, optical switching and processing, and nonlinear guided wave optics.

CRC Press
December 2019:500
Hb: 978-1-498-73683-1: **£105**
Pb: 978-0-367-87411-7: **£51.99**
eBook: 978-1-315-11643-3

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5TH EDITION

Thin-Film Optical Filters



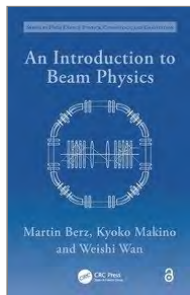
H. Angus Macleod

This book is quite simply the Bible for the field of optical thin films. It gives the most complete introduction to thin film optical coatings addressed to manufacturers and users alike. This fifth edition continues in this role, offering a complete update on current design, manufacture, performance, and applications. Among new topics are absorbers and coherent perfect absorbers, photonic crystals, and metamaterials for optical coating. In addition, the author has added substantial new information on scattering, composite materials, wire grid polarizers, laser damage, and a complete update of applications.

CRC Press
March 2021:696
Hb: 978-1-138-19824-1: **£165**
Pb: 978-0-367-78160-6: **£45.99**
eBook: 978-1-315-27049-4

* For full contents and more information, visit: www.routledge.com/9780367781606

An Introduction to Beam Physics



Martin Berz, Kyoko Makino, Weishi Wan

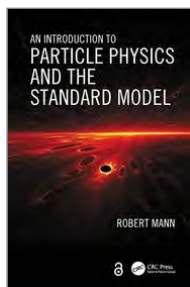
Series: Series in Particle Physics, Cosmology and Gravitation

Accessible to beginning graduate and upper-division undergraduate students in physics, mathematics, and engineering, this book is based on lectures given at Michigan State University, the online VUBeam program, the U.S. Particle Accelerator School, the CERN Academic Training Programme, and other venues. It begins with essential techniques of production, acceleration, and storage of beams, whenever possible from the historical perspective. It covers transfer maps of single- and multi-pass systems and their properties as well as some advanced topics, including aberration integrals and analysis of resonances.

CRC Press
October 2016:314
Hb: 978-0-750-30263-0: **£140**
Pb: 978-1-138-19890-6: **£48.99**
eBook: 978-0-429-14813-2

* For full contents and more information, visit: www.routledge.com/9781138198906

An Introduction to Particle Physics and the Standard Model



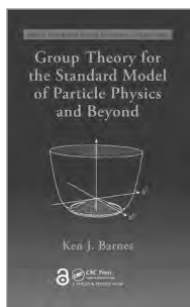
Robert Mann

Emphasizing the connections between particle physics and the rest of the physics field, this book provides an organizational framework for understanding modern particle physics. The author presents a standard model of strong, weak, and electromagnetic interactions. Undergraduate students will develop a working knowledge of some of the calculation methods and mathematical tools used in particle physics. Reviewing key experimental and theoretical achievements in the field, the text covers such topics as conservation laws, quantum electrodynamics, and wave equations. The final chapter offers a perspective on the future of particle physics.

CRC Press
November 2009:614
Hb: 978-1-420-08298-2: **£84.99**
eBook: 978-0-429-14122-5

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Group Theory for the Standard Model of Particle Physics and Beyond



Ken J. Barnes

Series: Series in Particle Physics, Cosmology and Gravitation

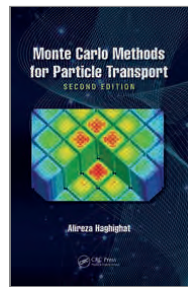
Based on the author's well-established courses, this text explores the use of symmetries through descriptions of the techniques of Lie groups and Lie algebras. It develops the models, theoretical framework, and mathematical tools to understand these symmetries. The author presents the modern framework of special relativity and describes Lie group techniques for the standard model and beyond. He also provides a stepping-stone to Einstein's work on general relativity and goes beyond the standard model to explore supertransformations, superspace methods, and more. The text includes many worked examples and problems, along with a solutions manual for qualifying instructors.

CRC Press
March 2010:256
Hb: 978-1-420-07874-9: **£82.99**
eBook: 978-0-429-18455-0

* For full contents and more information, visit: www.routledge.com/9781420078749

2ND EDITION

Monte Carlo Methods for Particle Transport



Alireza Haghighat

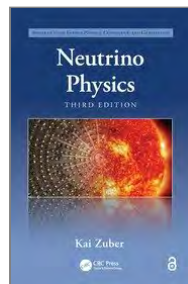
Fully updated with the latest developments in the eigenvalue Monte Carlo calculations and automatic variance reduction techniques and containing an entirely new chapter on fission matrix and alternative hybrid techniques. This second edition explores the uses of the Monte Carlo method for real-world applications, explaining its concepts and limitations.

CRC Press
April 2022:310
Hb: 978-0-367-18805-4: **£120**
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3RD EDITION

Neutrino Physics



Kai Zuber

Series: Series in Particle Physics, Cosmology and Gravitation

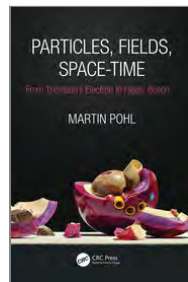
This book provides a comprehensive self-contained examination of neutrinos, covering their research history and theory, as well as their application to particle physics, astrophysics, nuclear physics, and the broad reach of cosmology. Revised as needed to be equal to the research of today, Neutrino Physics, Third Edition delves into neutrino cross sections, mass measurements, double beta decay, solar neutrinos, neutrinos from supernovae, and high energy neutrinos, as well as new experimental results in the context of theoretical models.

CRC Press
December 2021:465
Hb: 978-1-138-71889-0: **£110**
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eBook: 978-1-315-19561-2

* For full contents and more information, visit: www.routledge.com/9781032242200

Particles, Fields, Space-Time

From Thomson's Electron to Higgs' Boson



Martin Pohl

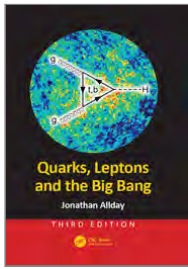
This book explores the concepts, ideas, and experimental results that brought us from the discovery of the first elementary particle in the end of the 19th century to the completion of the Standard Model of particle physics in the early 21st century.

CRC Press
September 2020:312
Hb: 978-0-367-35381-0: **£175**
Pb: 978-0-367-34723-9: **£43.99**
eBook: 978-0-429-33110-7

* For full contents and more information, visit: www.routledge.com/9780367347239

3RD EDITION

Quarks, Leptons and the Big Bang



Jonathan Allday

Quarks, Leptons and The Big Bang, Third Edition, is a clear, readable and self-contained introduction to particle physics and related areas of cosmology. It bridges the gap between non-technical popular accounts and textbooks for advanced students. The book concentrates on presenting the subject from the modern perspective of quarks, leptons and the forces between them. This book will appeal to students, teachers and general science readers interested in fundamental ideas of modern physics. This edition brings the book completely up to date by including advances in particle physics and cosmology, such as the discovery of the Higgs boson, the LIGO gravitational wave discovery and the WMAP and PLANCK results.

CRC Press

November 2016:393

Hb: 978-1-138-42717-4: £185

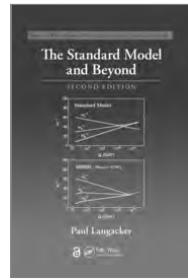
Pb: 978-1-498-77311-9: £45.99

eBook: 978-1-315-38136-7

* For full contents and more information, visit: www.routledge.com/9781498773119

2ND EDITION

The Standard Model and Beyond



Paul Langacker

Series: *Series in Particle Physics, Cosmology and Gravitation*

This new edition of The Standard Model and Beyond presents an advanced introduction to the physics and formalism of the standard model and other non-abelian gauge theories. It provides a solid background for understanding supersymmetry, string theory, extra dimensions, dynamical symmetry breaking, and cosmology. In addition to updating all of the experimental and phenomenological results from the first edition, it contains a new chapter on collider physics; expanded discussions of Higgs, neutrino, and dark matter physics; and many new problems.

CRC Press

June 2020:650

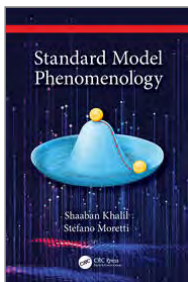
Hb: 978-1-498-76321-9: £86.99

Pb: 978-0-367-57344-7: £45.99

eBook: 978-1-315-17062-6

* For full contents and more information, visit: www.routledge.com/9780367573447

Standard Model Phenomenology



Shaaban Khalil, Stefano Moretti

This new book is fully up to date with all the latest developments on both theoretical and experimental investigations of the Standard Model (SM) of particle physics with a particular emphasis on its historical development on both sides.

CRC Press

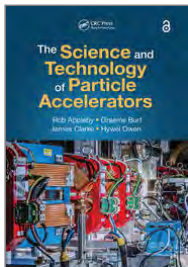
June 2022:246

Hb: 978-1-138-33643-8: £175

eBook: 978-0-429-44301-5

* For full contents and more information, visit: www.routledge.com/9781138336438

The Science and Technology of Particle Accelerators



Rob Appleby, Graeme Burt, James Clarke, Hywel Owen

This book provides integrated coverage of accelerator science and technology, this book presents the fundamental concepts alongside detailed engineering discussions and extensive practical guidance, including many numerical examples. For each topic, the authors provide a description of the physical principles, a guide to the practical application of those principles, and a discussion of how to design the components that allow the application to be realised.

CRC Press

August 2022:318

Hb: 978-1-138-49987-4: £115

Pb: 978-1-032-39984-3: £44.99

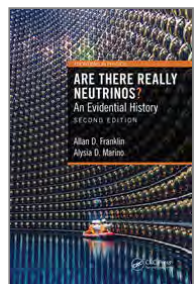
eBook: 978-1-351-00796-2

* For full contents and more information, visit: www.routledge.com/9781032399843

2ND EDITION

Are There Really Neutrinos?

An Evidential History

**Allan D. Franklin, Alysia D. Marino***Series: Frontiers in Physics*

This intriguing and accessible book examines the experiments on neutrino oscillations. It argues that this history gives us good reason to believe in the existence of neutrinos, a particle that interacts so weakly with matter that its interaction length is measured in light years of lead. Yet, the scientific process has provided evidence of the elusive neutrino. Written in a style accessible to any reader with a college education in physics, *Are There Really Neutrinos?* is of interest to students and researchers alike. This second edition contains a new epilogue highlighting the new developments in neutrino physics over the past 20 years.

CRC Press

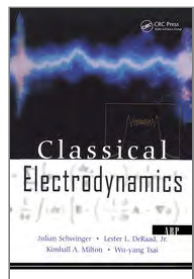
September 2021:416

Hb: 978-0-367-19002-6: **£180**Pb: 978-0-367-19005-7: **£42.99**

eBook: 978-0-429-19978-3

* For full contents and more information, visit: www.routledge.com/9780367190057

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CRC Press

September 1998:596

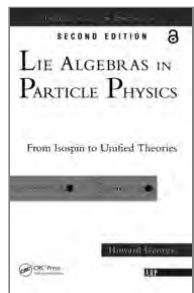
Hb: 978-0-738-20056-9: **£110**

eBook: 978-0-429-50354-2

* For full contents and more information, visit: www.routledge.com/9780738200569

Lie Algebras In Particle Physics

from Isospin To Unified Theories

**Howard Georgi***Series: Frontiers in Physics*

Howard Georgi is the co-inventor (with Sheldon Glashow) of the SU(5) theory. This extensively revised and updated edition of his classic text makes the theory of Lie groups accessible to graduate students, while offering a perspective on the way in which knowledge of such groups can provide an insight into the development of unified theories of strong, weak, and electromagnetic interactions.

CRC Press

October 1999:340

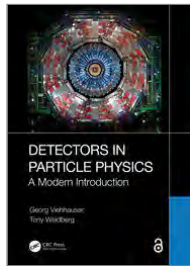
Hb: 978-0-367-09172-9: **£135**Pb: 978-0-738-20233-4: **£76.99**

eBook: 978-0-429-49921-0

* For full contents and more information, visit: www.routledge.com/9780738202334

Detectors in Particle Physics

A Modern Introduction



Georg Viehhauser, Tony Weidberg

This textbook provides an accessible yet comprehensive introduction to detectors in particle physics. It emphasises the core physics principles, enabling a deeper understanding of the subject for further and more advanced studies. In addition to the discussion of the underlying detector physics, another aspiration of this book is to introduce the reader to practically important aspects of particle detectors, like electronics, alignment, calibration and simulation of particle detectors. Case studies of the various applications of detectors in particle physics are provided.

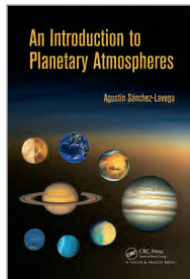
CRC Press

March 2024: 348

Hb: 978-1-032-24658-1: £74.99

* For full contents and more information, visit: www.routledge.com/9781032246581

An Introduction to Planetary Atmospheres



Agustin Sanchez-Lavega

Providing a much-needed resource for this cross-disciplinary field, this text presents current knowledge on atmospheres and the fundamental mechanisms operating on them. It offers a unified scheme of the chemical and physical processes occurring in atmospheres and extends the theoretical foundations of an atmospheric topic to all planets and satellites with an atmosphere. The text provides an up-to-date comparative vision of the phenomena in atmospheres that encompasses the latest planetary space mission discoveries. It also reviews the observational methods and current facilities used to explore planetary atmospheres on Earth and in space.

CRC Press

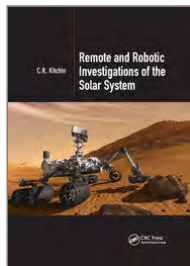
September 2010:632

Hb: 978-1-420-06732-3: **£71.99**

eBook: 978-0-429-18458-1

* For full contents and more information, visit: www.routledge.com/9781420067323

Remote and Robotic Investigations of the Solar System



C.R. Kitchen

Remote and Robotic Investigations of the Solar System covers all aspects of solar system observations: the instruments, their theory, and their practical use both on Earth and in space. It explores the state-of-the-art telescopes, cameras, spacecraft and instruments used to analyse the interiors, surfaces, atmospheres and radiation belts of solar system objects, in addition to radio waves, gamma rays, cosmic rays and neutrinos. This book would be ideal for university students undertaking physical science subjects and professionals working in the field, in addition to amateur astronomers and anyone interested in learning more about our local astronomical neighbour.

CRC Press

December 2019:376

Hb: 978-1-498-70493-9: **£130**

Pb: 978-0-367-87166-6: **£44.99**

eBook: 978-1-351-25547-9

* For full contents and more information, visit: www.routledge.com/9780367871666

Solar System

Between Fire and Ice



Thomas Hockey, Jennifer Lynn Bartlett, Daniel C. Boice

Combining the latest astronomical results with a historical perspective, Solar System: Between Fire and Ice takes you on a fabulous tour of our intriguing Solar System.

CRC Press

August 2021:352

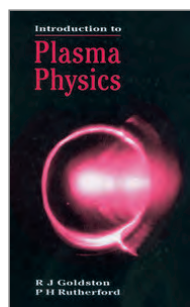
Hb: 978-1-032-05437-7: **£96.99**

Pb: 978-0-367-76869-0: **£36.99**

eBook: 978-1-003-19755-3

* For full contents and more information, visit: www.routledge.com/9780367768690

Introduction to Plasma Physics



R.J. Goldston, P.H. Rutherford

Focusing on the fundamentals of modern plasma physics, this text is ideal for an introductory lecture course on plasma physics. Sections on single-particle motion, plasmas as fluids, and collisional processes in plasmas lay the groundwork for a thorough understanding of the subject. The authors place the material in its historical context for a rich understanding of the ideas presented. They also emphasize the importance of medical imaging in radiotherapy, providing a logical link to more advanced works in the area. The text includes problems, tables, illustrations, a thorough index, and a complete list of references.

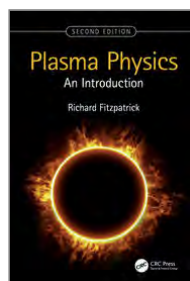
CRC Press
November 1995:510
Hb: 978-1-138-45831-4: **£180**
Pb: 978-0-750-30183-1: **£86.99**
eBook: 978-0-367-80695-8

* For full contents and more information, visit: www.routledge.com/9780750301831

2ND EDITION

Plasma Physics

An Introduction



Richard Fitzpatrick

Plasma Physics: An Introduction is based on a series of university course lectures by a leading name in the field, and thoroughly covers the physics of the fourth state of matter. This textbook provides a concise and cohesive introduction to plasma physics theory and offers a solid foundation for students of physics wishing to take higher level courses in plasma physics. This second edition has been fully updated to include new content on collisions and magnetic reconnection.

CRC Press
December 2022:306
Hb: 978-1-032-21407-8: **£125**
Pb: 978-1-032-20251-8: **£49.99**
eBook: 978-1-003-26825-3

* For full contents and more information, visit: www.routledge.com/9781032202518

Plasma Physics via Computer Simulation



C.K. Birdsall, A.B. Langdon

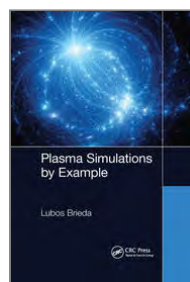
Series: Series in Plasma Physics

Divided into three main parts, Plasma Physics via Computer Simulation guides the reader to an understanding of the basic concepts in this fascinating field of research. Part 1 introduces you to the fundamental concepts of simulation. It examines one-dimensional electrostatic codes and electromagnetic codes, and describes the numerical methods and analysis. Part 2 explores the mathematics and physics behind the algorithms used in Part 1. In Part 3, it addresses some of the more complicated simulations in two and three dimensions. Using software available from the author's website, readers are encouraged to perform practical work.

CRC Press
October 2004:504
Pb: 978-0-750-31025-3: **£105**
eBook: 978-1-315-27504-8

* For full contents and more information, visit: www.routledge.com/9780750310253

Plasma Simulations by Example



Lubos Brieda

The study of plasmas is crucial in improving our understanding of the universe, and they are being increasingly utilised in key technologies such as spacecraft thrusters, plasma medicine, and fusion energy. Providing the reader with an easy to follow set of examples that clearly illustrate how simulation codes are written, this new book guides readers how to develop C++ computer codes for simulating plasmas primarily with the kinetic Particle in Cell (PIC) method. This text would be invaluable to advanced undergraduates and graduate students looking to learn how to put the theory to the test.

CRC Press
September 2021:368
Hb: 978-1-138-34232-3: **£175**
Pb: 978-1-032-17614-7: **£45.99**
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Problems and Solutions in Medical Physics - Three Volume Set



Kwan-Hoong Ng, Robin Hill, Alan Perkins, Jeannie Hsiu Ding Wong, Geoffrey Clarke, Chai Hong Yeong, Ngie Min Ung

Series: Series in Medical Physics and Biomedical Engineering

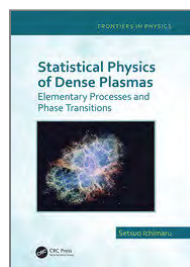
While graduate programs in medical physics are increasing across the globe, there is no graduate-level book currently dedicated to solving problems in medical physics. Filling this need, this three-volume set covers diagnostic imaging physics, nuclear medicine physics, and radiotherapy physics. It is suitable for graduate courses in medical physics, radiological sciences, and biomedical engineering. The set helps students understand how to apply theoretical concepts in real-world medical physics situations.

CRC Press
November 2022:600
Hb: 978-1-482-23985-0: **£300**
Pb: 978-1-032-33576-6: **£125**

* For full contents and more information, visit: www.routledge.com/9781032335766

Statistical Physics of Dense Plasmas

Elementary Processes and Phase Transitions



Setsuo Ichimaru

Series: Frontiers in Physics

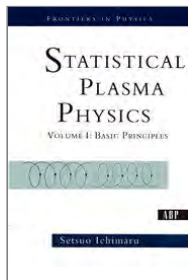
This timely book gives a complete overview on the statistical mechanics and electrodynamics elucidating the physical processes in dense plasma systems. The author emphasizes laboratory-based experiments on metallic hydrogen, and gives detailed account of the plasma phenomena in various astrophysical settings. The coverage encompasses the intersection with condensed matter physics, atomic physics, nuclear physics, and astrophysics, including such key topics as phase transitions, transport, optical and nuclear processes. This essential resource discusses important topics such as metallic hydrogen, stellar and planetary magnetisms, pycnonuclear reactions, and gravitational waves.

Chapman & Hall
December 2018:204
Hb: 978-1-138-36468-4: **£170**
Pb: 978-1-138-36466-0: **£69.99**
eBook: 978-0-429-43121-0

* For full contents and more information, visit: www.routledge.com/9781138364660

Statistical Plasma Physics, Volume I

Basic Principles



Setsuo Ichimaru

Series: Frontiers in Physics

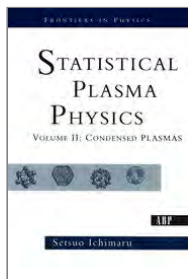
Plasma physics is an integral part of statistical physics, complete with its own basic theories. Designed as a two-volume set, Statistical Plasma Physics is intended for advanced undergraduate and beginning graduate courses on plasma and statistical physics, and as such, its presentation is self-contained and should be read without difficulty by those with backgrounds in classical mechanics, electricity and magnetism, quantum mechanics, and statistics. Major topics include: plasma phenomena in nature, kinetic equations, plasmas and dielectric media, electromagnetic properties of Vlasov plasmas in thermodynamic equilibria, transient processes, and instabilities.

CRC Press
February 2004:406
Hb: 978-0-367-09201-6: **£130**
Pb: 978-0-813-34178-1: **£66.99**
eBook: 978-0-429-49715-5

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Statistical Plasma Physics, Volume II

Condensed Plasmas



Setsuo Ichimaru

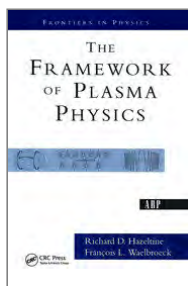
Series: Frontiers in Physics

The aim of this book is to elucidate a number of basic topics in physics of dense plasmas that interface with condensed matter physics, atomic physics, nuclear physics, and astrophysics. The different plasmas examined here include astrophysical dense plasmas - like those found in the interiors, surfaces, and outer envelopes of such astronomical objects as neutron stars, white dwarfs, the Sun, brown dwarfs, and giant planets. Condensed plasmas in laboratory settings cover metals and alloys (solid, amorphous, liquid, and compressed), semiconductors (electrons, holes, and their droplets), and various realizations of dense plasmas (shock-compressed, diamond-anvil cell, metal vaporization, pinch discharges, and more.)

CRC Press
February 2004:304
Hb: 978-0-367-09202-3: **£130**
Pb: 978-0-813-34179-8: **£66.99**
eBook: 978-0-429-49714-8

* For full contents and more information, visit: www.routledge.com/9780813341798

The Framework Of Plasma Physics



Richard D. Hazeltine, Francois L. Waelbroeck

Series: Frontiers in Physics

Plasma physics is a necessary part of our understanding of stellar and galactic structure. It determines the magnetospheric environment of the earth and other planets; it forms the research frontier in such areas as nuclear fusion, advanced accelerators, and high power lasers; and its applications to various industrial processes (such as computer chip manufacture) are rapidly increasing. It is thus a subject with a long list of scientific and technological applications. This book provides the scientific background for understanding such applications, but it emphasizes something else: the intrinsic scientific interest of the plasma state.

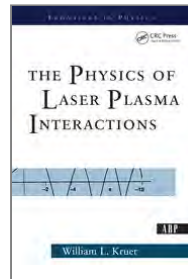
CRC Press
January 2004:343
Hb: 978-0-367-31417-0: **£130**
Pb: 978-0-813-34213-9: **£66.99**
eBook: 978-0-429-50280-4

* For full contents and more information, visit: www.routledge.com/9780813342139

The Physics Of Laser Plasma Interactions

William Kruer

Series: Frontiers in Physics

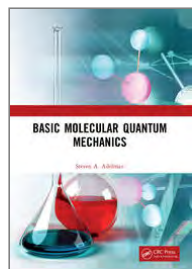


This book focuses on the physics of laser plasma interactions and presents a complementary and very useful numerical model of plasmas. It describes the linear theory of light wave propagation in plasmas, including linear mode conversion into plasma waves and collisional damping.

CRC Press
January 2003:196
Hb: 978-0-367-31418-7: **£135**
Pb: 978-0-813-34083-8: **£58.99**
eBook: 978-1-003-00324-3

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Basic Molecular Quantum Mechanics



Steven A. Adelman

This book introduces quantum mechanics by covering the fundamentals of quantum mechanics and some of its most important chemical applications: vibrational and rotational spectroscopy and electronic structure of atoms and molecules. Thoughtfully organized, the author builds up quantum mechanics systematically with each chapter preparing the student for the more advanced chapters and complex applications.

CRC Press

August 2021:464

Hb: 978-1-032-01065-6: **£180**

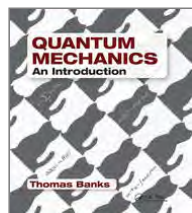
Pb: 978-1-498-73399-1: **£74.99**

eBook: 978-0-429-15574-1

* For full contents and more information, visit: www.routledge.com/9781498733991

Quantum Mechanics

An Introduction



Thomas Banks

This new introductory textbook gives a complete, modern perspective on quantum mechanics as the basis of so much of physical sciences and today's electronic technologies. It clarifies for the first time many common misconceptions regarding wave/particle duality and the correct interpretation of measurements. The author, a recognized authority in the field and dedicated educator, presents information at an elementary level, avoiding the detailed, complex derivations in favor of simple, clear explanations.

CRC Press

March 2021:568

Hb: 978-1-482-25506-5: **£105**

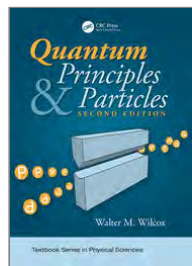
Pb: 978-0-367-78062-3: **£44.99**

eBook: 978-0-429-43842-4

* For full contents and more information, visit: www.routledge.com/9780367780623

2ND EDITION

Quantum Principles and Particles, Second Edition



Walter Wilcox

Series: Textbook Series in Physical Sciences

This textbook offers a unique introduction to quantum mechanics progressing gradually from elementary quantum mechanics to aspects of particle physics. It presents the microscopic world by analysis of the simplest possible quantum mechanical system (spin 1/2). A special feature is the author's use of visual aids known as process diagrams, which show how amplitudes for quantum mechanical processes are computed. The second edition include a new chapter on time-dependent processes, in addition to many new problems and improved illustrations.

CRC Press

August 2019:600

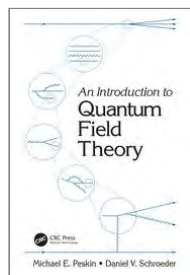
Hb: 978-1-138-09041-5: **£150**

Pb: 978-1-138-09037-8: **£99.99**

eBook: 978-1-138-09043-9

* For full contents and more information, visit: www.routledge.com/9781138090378

An Introduction To Quantum Field Theory



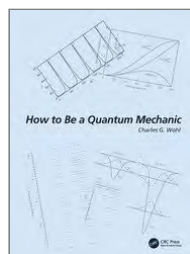
Michael E. Peskin, Daniel V. Schroeder

This is a textbook intended for the graduate physics course covering relativistic quantum mechanics, quantum electrodynamics, and Feynman diagrams. The authors make these subjects accessible through carefully worked examples illustrating the technical aspects of the subject, and intuitive explanations of what is going on behind the mathematics. After presenting the basics of quantum electrodynamics, the authors discuss the theory of renormalization and its relation to statistical mechanics, and introduce the renormalization group. This discussion sets the stage for a discussion of the physical principles that underlie the fundamental interactions of elementary particle physics and their d

CRC Press
September 2019:868
Hb: 978-0-201-50397-5: £120
Pb: 978-0-367-32056-0: £64.99
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How to Be a Quantum Mechanic



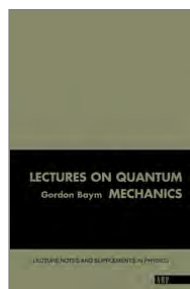
Charles G. Wohl

These lecture notes comprise an advanced undergraduate course in quantum mechanics as taught by Charles Wohl for over 30 years at the University of California, Berkeley. Each chapter covers a major subject in quantum mechanics, beginning with an accessible introduction and unfolding in subsections to signpost the reader's progression through the topic. And, because examples are the best way to get into a subject, every chapter ends with a series of problems—over 175 total in the book—to provide hands-on practice in calculating. Targeted to upper-division physics students and lecturers, this textbook and its worked examples will teach students how to think like a quantum mechanic.

CRC Press
October 2022:396
Hb: 978-1-032-25603-0: £115
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Lectures On Quantum Mechanics



Gordon Baym

These lecture notes comprise a three-semester graduate course in quantum mechanics at the University of Illinois. There are a number of texts which present the basic topics very well; but since a fair quantity of the material discussed in my course was not available to the students in elementary quantum mechanics books, I was asked to prepare written notes. In retrospect these lecture notes seemed sufficiently interesting to warrant their publication in this format. The notes, presented here in slightly revised form, constitute a self-contained course in quantum mechanics from first principles to elementary and relativistic one-particle mechanics. Prerequisite to reading these notes is some familiarity with elementary quantum mechanics, at least at the undergraduate level. Preferably the reader should already have met the uncertainty principle and the concept of a wave function. Prerequisites also include sufficient acquaintance with complex variables to be able to do simple contour i

CRC Press
January 1974:606
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Nicholas Tsoulfanidis, Sheldon Landsberger

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CRC Press

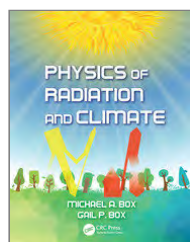
September 2021:642

Hb: 978-0-367-43401-4: **£110**

eBook: 978-1-003-00984-9

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Physics of Radiation and Climate



Michael A. Box, Gail P. Box

This book offers an introduction to the physics of climate science. It is divided into three main sections, with the first providing an introduction to the atmosphere and ocean—their composition, thermodynamics, vertical structure, and basic flow patterns. The next chapters focus on the central physics of interactions between radiation, gases, and particles, addressing the core phenomena of absorption, emission, scattering, and radiative transfer. The final section integrates those principles and how they are applied in the study of weather and climate change.

CRC Press

October 2015:514

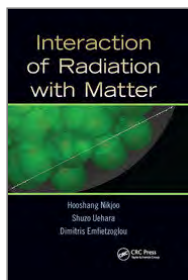
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Interaction of Radiation with Matter



Hooshang Nikjoo, Shuzo Uehara, Dimitris Emfietzoglou

Clearly progressing from an elementary level to the state of the art, this text focuses on the physics of the interactions of ionizing radiation in living matter and the Monte Carlo simulation of radiation tracks. It explores the classical physics of track description as well as modern aspects based on condensed matter physics. The authors include the relevant atomic physics background, show how to simulate radiation tracks in a computer experiment, and highlight applications in medical/health physics and radiation biology. A solutions manual is available with qualifying course adoption.

CRC Press

September 2020:364

Hb: 978-1-439-85357-3: **£145**

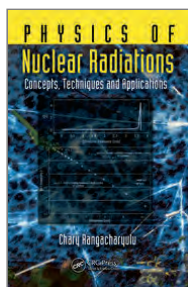
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Physics of Nuclear Radiations

Concepts, Techniques and Applications



Chary Rangacharyulu

This text makes the physics of nuclear radiations accessible to students with a basic background in physics and mathematics. Rather than convince students one way or the other about the hazards of nuclear radiations, the text empowers them with tools to calculate and assess nuclear radiations and their impact. It discusses the meaning behind mathematical formulae as well as the areas in which the equations can be applied. Coverage includes archeology, health, and medical physics applications.

CRC Press

December 2013:383

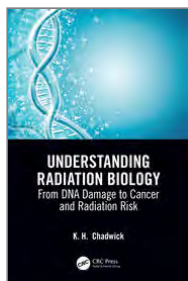
Hb: 978-1-439-85777-9: **£110**

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Understanding Radiation Biology

From DNA Damage to Cancer and Radiation Risk



Kenneth Chadwick

This textbook provides a qualitative and quantitative exploration of the action of radiation on living matter. It takes readers from radiation-induced molecular damage in the nucleus of the cell and links this damage to cellular effects such as cell killing, chromosome aberrations and mutations and on to organ damage, organism killing (lethality) and cancer induction. It also touches upon radiological protection and predicting the dose effect relationship for low dose and dose rate radiation risk. This book will provide the basic foundations of radiation biology for undergraduate and graduate students in medical physics, biomedical engineering, and medicine and radiology.

CRC Press

December 2019:252

Hb: 978-0-367-25515-2: **£230**

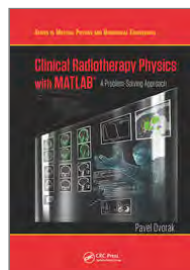
Pb: 978-0-367-25376-9: **£94.99**

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Clinical Radiotherapy Physics with MATLAB

A Problem-Solving Approach



Pavel Dvorak

The first MATLAB programming book written specifically for clinical radiotherapy medical physicists and medical physics trainees, this much-needed book teaches users how to create their own clinical applications using MATLAB, as a complement to commercial software particularly when the latter does not cover specific local clinical needs. Chapters explore key radiotherapy areas such as handling volumes, 3D dose calculation, comparing dose distributions, reconstructing treatment plans and their summations, and automated tests for machine quality assurance.

CRC Press

June 2020:280

Hb: 978-1-498-75499-6: £115

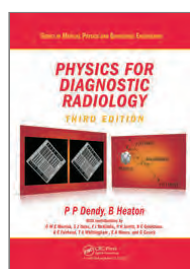
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3RD EDITION

Physics for Diagnostic Radiology



Philip Palin Dendy, Brian Heaton

Series: Series in Medical Physics and Biomedical Engineering

Fully revised and updated, this bestselling text helps readers understand how various imaging techniques work. This edition includes new chapters on PET and PACS as well as new material on digital receptors, radiation doses and risks to patients, and special radiographic techniques, including subtraction techniques and interventional radiology. It also emphasizes the differences between analogue and digital images and covers multi-slice CT and three-dimensional resolution, dual energy applications, and cone beam CT. Exercises, multiple choice questions, extensive references, and further reading aid in understanding.

CRC Press

August 2011:716

Hb: 978-1-420-08315-6: £84.99

eBook: 978-0-429-18436-9

* For full contents and more information, visit: www.routledge.com/9781420083156

An Overview of General Relativity and Space-Time



Nicola Vittorio

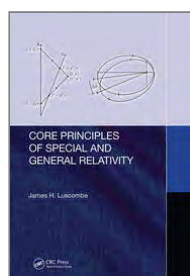
Series: Series in Astronomy and Astrophysics

This textbook equips Masters' students studying Physics and Astronomy with the necessary mathematical tools to understand the basics of General Relativity and its applications. It begins by reviewing classical mechanics with a more geometrically oriented language, continues with Special Relativity and, then onto a discussion on the pseudo-Riemannian space-times.

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Core Principles of Special and General Relativity



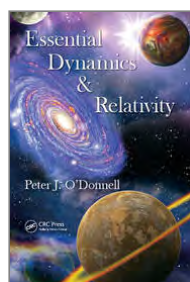
James Luscombe

This book provides an accessible, yet thorough, introduction to special and general relativity, crafted and class-tested over many years of teaching. Suitable for advanced undergraduate and graduate students, this book provides clear descriptions of how to approach the mathematics and physics involved. It is also contains the latest exciting developments in the field, including dark energy, gravitational waves, and frame dragging. The table of contents has been carefully developed in consultation with a large number of instructors teaching courses worldwide, to ensure its wide applicability to modules on relativity and gravitation.

CRC Press
March 2021:400
Hb: 978-1-138-54294-5: **£84.99**
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Essential Dynamics and Relativity



Peter J. O'Donnell

This text provides undergraduate students with an introduction to the core aspects of dynamics and special relativity. It helps students understand the precise nomenclature of dynamics and presents the mathematics of special relativity in a straightforward way. The author reiterates important ideas and terms throughout and covers concepts that are often missing from other textbooks at this level. He also places each topic within the wider constructs of the theory, without jumping from topic to topic to illustrate a point.

CRC Press
November 2014:336
Hb: 978-1-138-40418-2: **£175**
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General Relativity and its Applications

Black Holes, Compact Stars and Gravitational Waves



Valeria Ferrari, Leonardo Gualtieri, Paolo Pani

Containing the latest, groundbreaking discoveries in the field, this text outlines the basics of Einstein's theory of gravity with a focus on its most important astrophysical consequences, including stellar structures, black holes, and the physics of gravitational waves. Pedagogical feature boxes including examples, mathematical tools, and practical applications of theory to maximise learning make this text ideal for graduate students.

CRC Press
December 2020:494
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Newtonian Dynamics

An Introduction



Richard Fitzpatrick

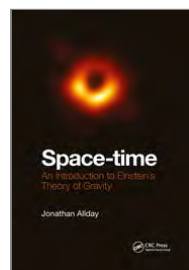
This textbook provides a comprehensive review of Newtonian dynamics at a level suitable for undergraduate physics students. It demonstrates that Newton's three laws of motion, combined with a few simple force laws, can not only describe the motions of everyday objects observed on the surface of the Earth, but can also account for the motions of celestial objects seen in the sky. The book will start off at a level suitable for undergraduate (freshman) physics students and will very gradually increase, until, towards the end, it will approach (but not quite reach) a level characteristic of a graduate (senior) physics course.

CRC Press
January 2024:284
Hb: 978-1-032-04662-4: **£82.99**
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Space-time

An Introduction to Einstein's Theory of Gravity



Jonathan Allday

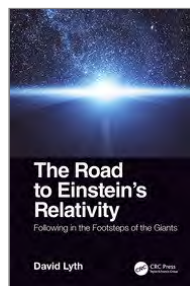
This book, suitable for interested post-16 school pupils or undergraduates looking for a supplement to their course text, develops our modern view of space-time and its implications in the theories of gravity and cosmology. While aspects of this topic are inevitably abstract, the book seeks to ground thinking in observational and experimental evidence where possible. In addition, some of Einstein's philosophical thoughts are explored and contrasted with our modern views. Written in an accessible yet rigorous style, Jonathan Allday, a highly accomplished writer, brings his trademark clarity and engagement to these fascinating subjects, which underpin so much of modern physics.

CRC Press
March 2021:370
Hb: 978-1-138-05668-8: **£99.99**
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The Road to Einstein's Relativity

Following in the Footsteps of the Giants



David Lyth

Expertly guided by renowned cosmologist Dr. David Lyth, learn about the pioneering scientists whose work provided the foundation for Einstein's formulation of his theories of relativity, and about Einstein's groundbreaking life and work as well. This highly readable and accessible panorama of the field delicately balances history and science as it takes the reader on an adventure through the centuries. Without complex mathematics or scientific formulae, this book will be of interest to all, even those without a scientific background, who are intrigued to find out more about what paved the way for one of our most famous physicists to push the boundaries of physics to new lengths.

CRC Press

January 2019:168

Hb: 978-0-367-02285-3: **£99.99**

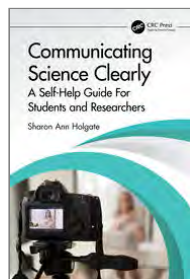
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Communicating Science Clearly

A Self-Help Guide For Students and Researchers



Sharon Ann Holgate

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November 2023: 162

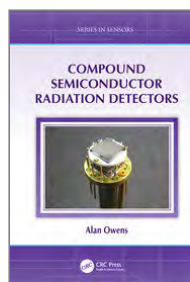
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Alan Owens

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CRC Press

October 2016:567

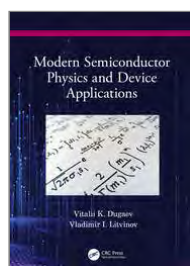
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Vitalii Dugaev, Vladimir Litvinov

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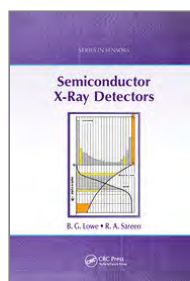
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Semiconductor X-Ray Detectors



B. G. Lowe, R. A. Sareen

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This book focuses on the history and development of Si(Li) X-Ray Detectors, while providing an up-to-date review of the principles, practical applications, and state of the art of semiconductor x-ray detectors. It describes many of the facets of x-ray detection and measurement using semiconductors, from manufacture to implementation. The initial chapters summarize relevant background physics, materials science, and engineering aspects. Later chapters compare and contrast the manufacture and physical properties of systems and materials currently employed, enabling readers to fully understand the materials and scope for applications.

CRC Press

November 2017:624

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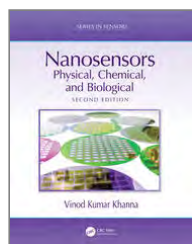
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CRC Press

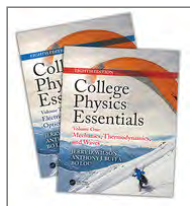
August 2022: 578

Hb: 978-0-367-45705-1: **£250**Pb: 978-0-367-51480-8: **£96.99**

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College Physics Essentials, Eighth Edition (Two-Volume Set)



Jerry D. Wilson, Anthony J. Buffa, Bo Lou

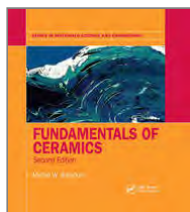
This edition provides a streamlined update of a major textbook for algebra-based physics, reflecting the demand by instructors for more substance. The authors enhance emphasis on worked examples to enhance reader engagement, together with expanded problem sets that build from conceptual understanding to numerical solutions and real-world applications. It is the textbook of choice for those seeking a basic understanding of key physics concepts and how to apply them to real problems. The first volume covers mechanics, solids and fluids, heat, thermodynamics, vibrations and waves, and sound. The second volume covers electricity and magnetism, optics, atomic, nuclear, and quantum physics.

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Fundamentals of Ceramics



Michel Barsoum

This second edition of Fundamentals of Ceramics adds a section on density functional theory calculations for shedding light on properties. It also adds more on applications, including solid oxide fuel cells as a case study and a major overhaul of the last chapter on optical properties. There's also new and extended discussion of such topics as non-parabolic oxidation, dislocation creep, thermal conductivity, ferroelectric ceramics, ferromagnetic ceramics, scattering mechanisms, surface tension, and processing of ceramics from aqueous environments.

CRC Press
June 2022:644
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Fundamentals of Soft Matter Science



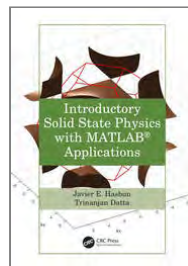
Linda S. Hirst

This revised edition continues to provide the most approachable introduction to the structure, characteristics, and everyday applications of soft matter. It begins with a substantially revised overview of the underlying physics and chemistry common to soft materials. Subsequent chapters comprehensively address the different classes of soft materials, from liquid crystals to surfactants, polymers, colloids, and biomaterials, with vivid, full-color illustrations throughout.

CRC Press
August 2019:304
Hb: 978-1-138-72478-5: £220
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Introductory Solid State Physics with MATLAB Applications



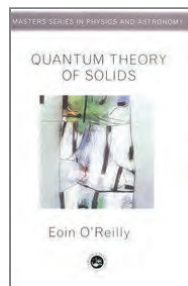
Javier E. Hasbun, Trinanjan Datta

Solid state physics, the study and prediction of the fundamental physical properties of materials, forms the backbone of modern materials science and has many technological applications. The unique feature of this text is the MATLAB®-based computational approach with several numerical techniques and simulation methods included. This is highly effective in addressing the need for visualization and a direct hands-on approach in learning the theoretical concepts of solid state physics. The code is freely available to all textbook users.

CRC Press
October 2019:570
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* For full contents and more information, visit: www.routledge.com/9781466512306

Quantum Theory of Solids



Eoin O'Reilly

Series: Master's Series in Physics and Astronomy

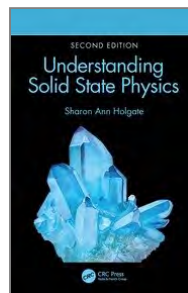
Although the topic is a well established sub-set of solid state physics, Quantum Theory of Solids develops the concepts of quantum theory for the solid state in a single, one-stop reference. Readers with previous courses in quantum mechanics and solid state physics can develop further, learning the three most significant topics in solid state physics: semiconductors, magnetism, and superconductivity. The author explains quantum mechanics techniques, such as the variational method and perturbation theory, not usually found in introductory courses. Covering the necessary physics from a basic to advanced level, the text is suitable for a stand-alone final year course.

CRC Press
September 2002:264
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2ND EDITION

Understanding Solid State Physics



Sharon Ann Holgate

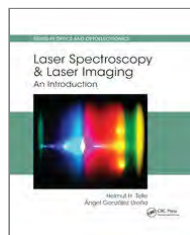
Keeping the mathematics to a minimum yet losing none of the required rigor, Understanding Solid State Physics, Second Edition clearly explains basic physics principles to provide a firm grounding in the subject. This new edition has been fully updated throughout, with recent developments and literature in the field, including graphene and the use of quasicrystalline materials, in addition to featuring new journalistic boxes and the reciprocal lattice.

CRC Press
April 2021:392
Hb: 978-0-367-25528-2: £240
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Laser Spectroscopy and Laser Imaging

An Introduction



Helmut H. Telle, Ángel González Ureña

Developments in and applications of laser spectroscopy and laser imaging are growing rapidly, specifically now that spectral analytical methodologies are merging with laser imaging techniques. It is the intention of this book to provide researchers, both in industry and academia, with a concise collection of laser analysis and imaging techniques. Written by two leaders in the field, it will introduce the reader to individual techniques in a tutorial-fashion and provide key examples and including details of the latest techniques.

CRC Press

December 2019:750

Hb: 978-1-466-58822-6: **£170**

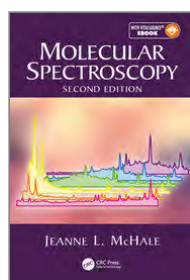
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eBook: 978-1-315-15698-9

* For full contents and more information, visit: www.routledge.com/9780367868215

2ND EDITION

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Jeanne L. McHale

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CRC Press

May 2017:475

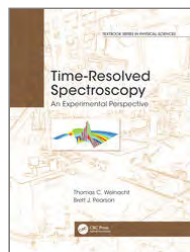
Hb: 978-1-466-58658-1: **£91.99**

eBook: 978-1-315-11521-4

* For full contents and more information, visit: www.routledge.com/9781466586581

Time-Resolved Spectroscopy

An Experimental Perspective



Thomas Weinacht, Brett J. Pearson

This concise and carefully developed text offers a reader friendly guide to the basics of time-resolved spectroscopy with an emphasis on experimental implementation. The authors carefully explain and relate for the reader how measurements are connected to the core physical principles. They use the time-dependent wave packet as a building block for understanding quantum dynamics, progressively advancing to more complex topics. The topics are discussed in paired sections, one discussing the theory and the next presenting the related experimental methods. A wide range of readers including students and newcomers to the field will gain a clear and practical und

CRC Press

March 2021:372

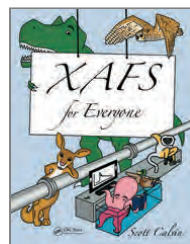
Hb: 978-1-498-71673-4: **£115**

Pb: 978-0-367-78040-1: **£44.99**

eBook: 978-0-429-44082-3

* For full contents and more information, visit: www.routledge.com/9780367780401

XAFS for Everyone



Scott Calvin

This text provides a practical, thorough guide to x-ray absorption fine-structure (XAFS) spectroscopy for both novices and seasoned practitioners from a range of disciplines. Cartoon characters and easy-to-follow illustrations introduce multiple viewpoints without distracting from the main narrative. Whether you are encountering this technique for the first time or looking to hone your craft, this innovative and engaging book gives you insight on implementing XAFS spectroscopy and interpreting XAFS experiments and results. It helps you understand real-world trade-offs and the reasons behind common rules of thumb.

CRC Press

May 2013:460

Pb: 978-1-439-87863-7: **£115**

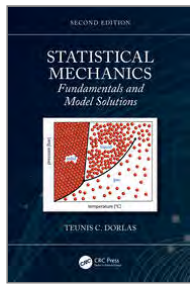
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* For full contents and more information, visit: www.routledge.com/9781439878637

2ND EDITION

Statistical Mechanics

Fundamentals and Model Solutions

**Teunis C Dorlas**

Fully updated throughout and with new chapters on the Mayer expansion for classical gases and on cluster expansion for lattice models, this new edition of *Statistical Mechanics: Fundamentals and Model Solutions* provides a comprehensive introduction to equilibrium statistical mechanics for advanced undergraduate and graduate students of mathematics and physics.

CRC Press

April 2021: 348

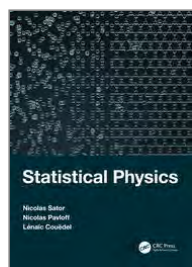
Hb: 978-0-367-47881-0: £205

Pb: 978-0-367-47175-0: £82.99

eBook: 978-1-003-03717-0

* For full contents and more information, visit: www.routledge.com/9780367471750

Statistical Physics



Nicolas Sator, Nicolas Pavloff, Lenaïc Couedel

This book presents an introduction to the main concepts of statistical physics, followed by applications to specific problems and more advanced concepts, selected for their pedagogical or practical interest. Particular attention has been devoted to the presentation of the fundamental aspects, including the foundations of statistical physics, as well as to the discussion of important physical examples.

CRC Press

August 2023:450

Hb: 978-1-032-20706-3: **£155**

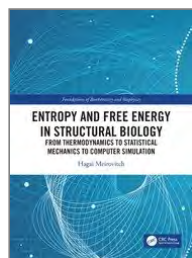
Pb: 978-1-032-22396-4: **£45.99**

eBook: 978-1-003-27242-7

* For full contents and more information, visit: www.routledge.com/9781032223964

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Hagai Meirovitch

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CRC Press

April 2022:396

Hb: 978-0-367-40692-9: £105

Pb: 978-0-367-42745-0: £44.99

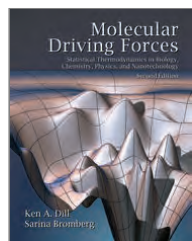
eBook: 978-0-367-85478-2

* For full contents and more information, visit: www.routledge.com/9780367427450

2ND EDITION

Molecular Driving Forces

Statistical Thermodynamics in Biology, Chemistry, Physics, and Nanoscience



Ken Dill, Sarina Bromberg

Molecular Driving Forces, Second Edition is an introductory statistical thermodynamics text that describes the principles and forces that drive chemical and biological processes. The second edition includes an additional chapter on thermodynamics and two new chapters: (1) "Microscopic Dynamics" which explores single molecule experiments; and (2) "Bio and Nano Machines" which describes the workings of biological molecules including proteins and DNA. New examples and practical applications are integrated throughout the revised and updated text, exploring topics in biology, environmental and energy science, and nanotechnology. It also includes new end-of-chapter problems, and purely mathematical topics are now in appendices. Written in a clear and reader-friendly style, the book provides an excellent introduction to the subject for novices while remaining a valuable resource for experts.

Garland Science

October 2010:784

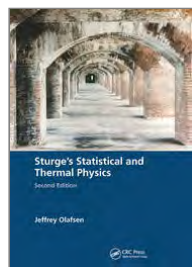
Pb: 978-0-815-34430-8: £135

eBook: 978-0-203-80907-5

* For full contents and more information, visit: www.routledge.com/9780815344308

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CRC Press

March 2021:422

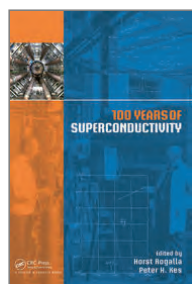
Hb: 978-1-482-25600-0: £99.99

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100 Years of Superconductivity



Edited by **Horst Rogalla, Peter H. Kes**

Tracing the historical developments in superconductivity, this comprehensive collection includes contributions from many pioneers who are responsible for important steps forward in the field. These leaders discuss interesting stories of the discovery and gradual progress of theory and experimentation. Emphasizing key developments in the early 1950s and 1960s, the book looks at how superconductivity started to permeate society and how most of today's applications are based on the innovations of those years. It also explores the genuine revolution that occurred with the discovery of high temperature superconductors.

CRC Press

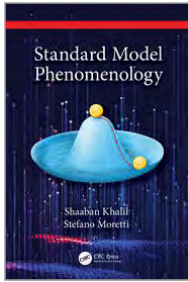
November 2011: 864

Hb: 978-1-439-84946-0: **£170**

eBook: 978-0-429-06586-6

* For **full contents** and more information, visit: www.routledge.com/9781439849460

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Shaaban Khalil, Stefano Moretti

This new book is fully up to date with all the latest developments on both theoretical and experimental investigations of the Standard Model (SM) of particle physics with a particular emphasis on its historical development on both sides.

CRC Press

June 2022:246

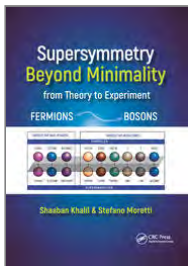
Hb: 978-1-138-33643-8: £175

eBook: 978-0-429-44301-5

* For full contents and more information, visit: www.routledge.com/9781138336438

Supersymmetry Beyond Minimality

From Theory to Experiment



Shaaban Khalil, Stefano Moretti

Series: Series in Particle Physics, Cosmology and Gravitation

Supersymmetry is an elegant and simple theory, but its existence lacks direct proof. Instead of dismissing supersymmetry altogether, *Supersymmetry Beyond Minimality: from Theory to Experiment* suggests that supersymmetry may exist in more complex and subtle manifestation than the minimal model. The book explores in detail non-minimal supersymmetry models, in a bottom-up approach that interconnects experimental phenomena in the fermionic and bosonic sectors. The book considers with equal emphasis the Higgs and Superparticle sectors, and explains both collider and non-collider experiments. Uniquely, the book explores charge/parity and lepton flavour v

CRC Press

December 2019:400

Hb: 978-1-498-75673-0: £145

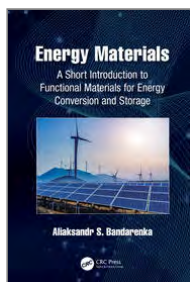
Pb: 978-0-367-87662-3: £44.99

eBook: 978-1-315-36790-3

* For full contents and more information, visit: www.routledge.com/9780367876623

Energy Materials

A Short Introduction to Functional Materials for Energy Conversion and Storage



Aliaksandr S. Bandarenka

This textbook provides readers with an accessible overview of the functional materials currently employed or investigated for energy provision, conversion, and storage.

CRC Press

May 2023:252

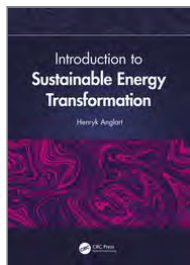
Hb: 978-0-367-45736-5: **£120**

Pb: 978-0-367-45810-2: **£45.99**

eBook: 978-1-003-02549-8

* For full contents and more information, visit: www.routledge.com/9780367458102

Introduction to Sustainable Energy Transformation



Henryk Anglart

This textbook provides an accessible introduction to various energy transformation technologies and their influences on the environment. Here the energy transformation is understood as any physical process induced by humans, in which energy is intentionally transformed from one form to another. This book provides an accessible introduction to the subject: covering the theory, principles of design, operation, and efficiency of the systems in addition to discerning concepts such as energy, entropy, exergy, efficiency, and sustainability.

CRC Press

November 2021:386

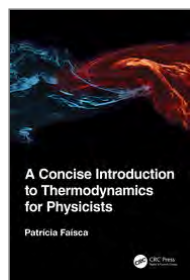
Hb: 978-0-367-47861-2: **£205**

Pb: 978-0-367-47080-7: **£82.99**

eBook: 978-1-003-03698-2

* For full contents and more information, visit: www.routledge.com/9780367470807

A Concise Introduction to Thermodynamics for Physicists



Patricia Faisca

This introductory textbook on thermodynamics is designed for undergraduate students in physics, physics engineering, biophysics and biomedical engineering who are being exposed to the ideas and concepts of thermal physics for the first time. While this is a self-contained text on thermodynamics (i.e. focused on macroscopic physics), emphasis is placed on the microscopic underlying model in order to facilitate the understanding of thermodynamics concepts and properties, and motivate a future course on statistical physics. This book will equip the readers with an understanding of the scope and applicability of this discipline and will be able to apply it to study any physical system.

CRC Press
September 2022:236
Hb: 978-0-367-55084-4: **£120**
Pb: 978-0-367-54641-0: **£45.99**
eBook: 978-1-003-09192-9

* For full contents and more information, visit: www.routledge.com/9780367546410

3RD EDITION

Finn's Thermal Physics



Andrew Rex, C.B.P. Finn

This book continues to provide the most readable, concise, and easy-to-follow introduction to thermal physics. While maintaining the style of the original work, this new edition now covers statistical mechanics and incorporates worked examples systematically throughout the text. It also includes more problems and essential updates, such as discussions on superconductivity, magnetism, Bose-Einstein condensation, and climate change. Anyone needing to acquire an intuitive understanding of thermodynamics from first principles will find this third edition indispensable.

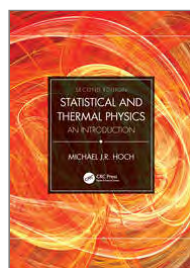
CRC Press
April 2017:386
Hb: 978-1-138-70378-0: **£130**
Pb: 978-1-498-71887-5: **£46.99**
eBook: 978-1-315-15718-4

* For full contents and more information, visit: www.routledge.com/9781498718875

2ND EDITION

Statistical and Thermal Physics

An Introduction



Michael J.R. Hoch

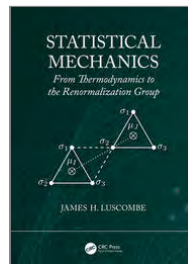
Thermal and statistical physics has established the principles and procedures needed to understand and explain the properties of systems consisting of macroscopically large numbers of particles. By developing microscopic statistical physics and macroscopic classical thermodynamic descriptions in tandem, Statistical and Thermal Physics: An Introduction provides insight into basic concepts and relationships at an advanced undergraduate level.

CRC Press
May 2021:348
Hb: 978-0-367-46410-3: **£205**
Pb: 978-0-367-46134-8: **£82.99**
eBook: 978-1-003-02860-4

* For full contents and more information, visit: www.routledge.com/9780367461348

Statistical Mechanics

From Thermodynamics to the Renormalization Group



James Luscombe

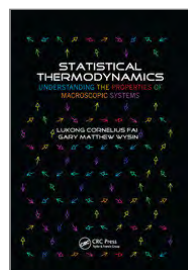
This textbook provides a comprehensive, yet accessible, introduction to statistical mechanics. Crafted and class-tested over many years of teaching, it carefully guides advanced undergraduate and graduate students who are encountering statistical mechanics for the first time through this – sometimes – intimidating subject. The book provides a strong foundation in thermodynamics and the ensemble formalism of statistical mechanics.

CRC Press
December 2020:400
Hb: 978-0-367-68927-8: **£170**
Pb: 978-1-138-54297-6: **£64.99**
eBook: 978-1-003-13966-9

* For full contents and more information, visit: www.routledge.com/9781138542976

Statistical Thermodynamics

Understanding the Properties of Macroscopic Systems



Lukong Cornelius Fai, Gary Matthew Wysin

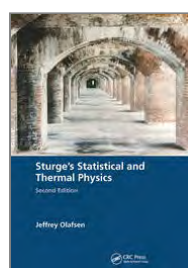
Presenting a look at the evolution of modern statistical thermodynamics, this book provides a detailed overview of the statistical principles used to obtain the physical and thermodynamic properties of macroscopic systems. Going further than many advanced textbooks, it includes Bose-Einstein, Fermi-Dirac statistics, and Lattice dynamics as well as applications in polaron theory, electronic gas in a magnetic field, thermodynamics of dielectrics, and magnetic materials in a magnetic field. The text also examines statistical thermodynamics using functional integration and Feynman path integrals. In addition, it features physical results as well as worked problems and a solutions manual.

CRC Press
September 2019:548
Hb: 978-1-466-51067-8: **£170**
Pb: 978-0-367-38076-2: **£56.99**
eBook: 978-0-429-08674-8

* For full contents and more information, visit: www.routledge.com/9780367380762

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Jeffrey Olafsen

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CRC Press
March 2021:422
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Pb: 978-0-367-77949-8: **£44.99**
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* For full contents and more information, visit: www.routledge.com/9780367779498

Thermal Physics Tutorials with Python Simulations



Minjoon Kouh, Taejoon Kouh

Series: Series in Computational Physics

This book may serve as a thermal physics textbook for a semester-long undergraduate thermal physics course or may be used as a tutorial on scientific computing with focused examples from thermal physics. This book will also appeal to engineering students studying intermediate-level thermodynamics as well as computer science students looking to understand how to apply their computer programming skills to science.

CRC Press

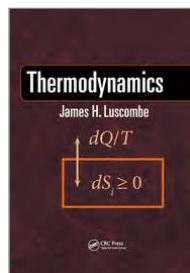
March 2023:238

Hb: 978-1-032-25756-3: **£76.99**

eBook: 978-1-003-28784-1

* For full contents and more information, visit: www.routledge.com/9781032257563

Thermodynamics



James Luscombe

This book provides an accessible yet thorough introduction to thermodynamics, crafted and class-tested over many years of teaching. Suitable for advanced undergraduate and graduate students, this book delivers clear descriptions of how to think about the mathematics and physics involved. The content has been carefully developed in consultation with a large number of instructors teaching courses worldwide, to ensure wide applicability to modules on thermodynamics. Modern applications of thermodynamics (in physics and related areas) are included throughout—something not offered to the same degree by existing texts in the field.

CRC Press

June 2020:240

Hb: 978-1-138-54298-3: **£84.99**

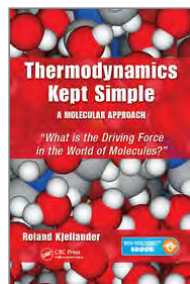
Pb: 978-0-367-57199-3: **£44.99**

eBook: 978-0-429-50762-5

* For full contents and more information, visit: www.routledge.com/9780367571993

Thermodynamics Kept Simple - A Molecular Approach

What is the Driving Force in the World of Molecules?



Roland Kjellander

This book offers a unique way of teaching and thinking about basic thermodynamics that helps students overcome common conceptual problems. It delivers a brilliantly conceived introduction to thermodynamics at the molecular level, presenting the core laws with clear explanations. The text covers key concepts such as entropy, energy transfer, heat exchange, work, enthalpy, free energy, irreversible and reversible processes, chemical equilibrium, and phase transitions in the molecular world, employing simple but well-chosen examples to supply insight into the molecular events underlying the thermodynamic macroscopic description.

CRC Press

August 2015:252

Pb: 978-1-482-24410-6: **£46.99**

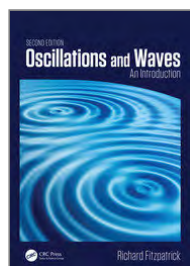
eBook: 978-0-429-19437-5

* For full contents and more information, visit: www.routledge.com/9781482244106

2ND EDITION

Oscillations and Waves

An Introduction, Second Edition

**Richard Fitzpatrick**

Emphasizing physics over mathematics, this popular, classroom-tested text helps advanced undergraduates acquire a sound physical understanding of wave phenomena. This second edition of *Oscillations and Waves: An Introduction* contains new widgets, animations in Python, and exercises, as well as updated chapter content throughout; continuing to ease the difficult transition for students between lower-division courses that mostly encompass algebraic equations and upper-division courses that rely on differential equations.

CRC Press

July 2018:309

Hb: 978-1-138-48035-3: £200

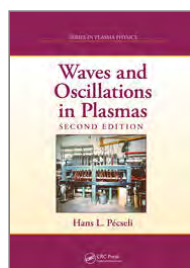
Pb: 978-1-138-47971-5: £77.99

eBook: 978-1-351-06310-4

* For full contents and more information, visit: www.routledge.com/9781138479715

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CRC Press

December 2021:554

Hb: 978-1-138-59129-5: £180

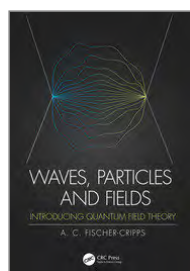
Pb: 978-1-032-23642-1: £44.99

eBook: 978-0-429-48997-6

* For full contents and more information, visit: www.routledge.com/9781032236421

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Introducing Quantum Field Theory

**Anthony C. Fischer-Cripps**

This book presents a background to the concepts of quantum physics; from its inception and the original quantum physics of the Schrodinger Equation through to modern-day theories. It discusses the basics of mechanics, relativity, old and new quantum theory, and Feynman and the concept of a quantum field. It provides the necessary foundation for readers to then progress to more advanced texts on quantum field theory. This book will be of interest to undergraduate students in physics and mathematics and an interested, general audience.

CRC Press

July 2019:350

Hb: 978-0-367-19878-7: £195

Pb: 978-0-367-19876-3: £76.99

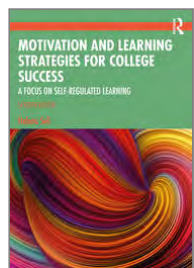
eBook: 978-0-429-24384-4

* For full contents and more information, visit: www.routledge.com/9780367198763

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A Focus on Self-Regulated Learning

**Helena Seli**

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Routledge
August 2023:304
Hb: 978-1-032-47255-3: **£130**
Pb: 978-1-032-47020-7: **£48.99**
eBook: 978-1-003-38527-1

* For full contents and more information, visit: www.routledge.com/9781032470207

How to Become a Successful College Student

The Tools, Habits, and Skills Needed to Foster College Readiness

**Scotty Dunlap, Brian Dudak**

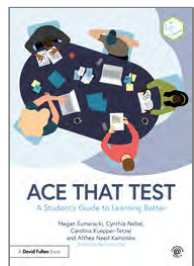
This book is your one-stop shop for the academic tools and habits needed to make your transition from high school to college a resounding success! The shift from high school to college can be a challenge, with many students finding the skills that had previously worked so well no longer seem to be enough. *How to Become a Successful College Student* outlines the strategies you need to 'level up' your current processes in order to foster learning and retention of information in a new and rigorous environment. This guide is a must-have resource for anyone who wants to maximize their higher education experience.

Prufrock Press
November 2023:202
Pb: 978-1-032-52409-2: **£12.99**
eBook: 978-1-003-41268-7

* For full contents and more information, visit: www.routledge.com/9781032524092

Ace That Test

A Student's Guide to Learning Better

**Megan Sumeracki, Cynthia Nebel, Carolina Kuepper-Tetzel, Althea Need Kaminske**

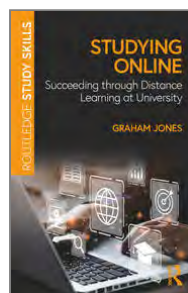
This exciting new text reveals the effective study strategies that will help you to use your time more efficiently, ace your tests, and retain information over time. In full colour and accompanied by beautifully illustrated graphics, *Ace That Test* offers evidence-based learning strategies that students can use during their study sessions, including dual coding and the power of retrieving what they know. With QR codes linking to answers to embedded questions and supplemental material, this is essential reading for college, university, and school students as well as educators teaching study skills or learning to learn courses.

Routledge
July 2023:146
Hb: 978-1-032-35586-3: **£120**
Pb: 978-1-032-35585-6: **£16.99**
eBook: 978-1-003-32753-0

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Succeeding through Distance Learning at University

**Graham Jones**Series: *Routledge Study Skills*

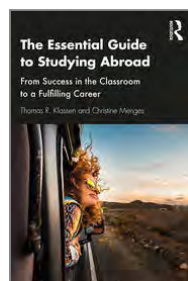
Helping you get to grips with online learning, this book contains a wealth of practical tips and strategies that will make studying online easier. Covering the advantages of online learning as well as the problems you might face, this book provides tried and tested advice to help you overcome those difficulties so that you can work to the best of your abilities. Identifying techniques designed specifically for studying online, with step-by-step instructions, as well as guidance on using online study software to the best effect, this must-have student companion provides tips and tricks to make university distance studying both effective and enjoyable.

Routledge
July 2022:244
Hb: 978-1-032-19538-4: **£120**
Pb: 978-1-032-19539-1: **£16.99**
eBook: 978-1-003-25969-5

* For full contents and more information, visit: www.routledge.com/9781032195391

The Essential Guide to Studying Abroad

From Success in the Classroom to a Fulfilling Career

**Thomas R. Klassen, Christine Menges**

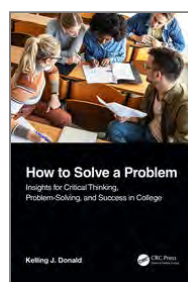
This book is an indispensable how-to-guide on flourishing when studying abroad, and how to use an international education to begin a fulfilling career after graduation. Written in an engaging and accessible style, using many examples, case studies and links to resources, the book reduces the stress of studying abroad. Covering all aspects of the international student experience – inside and outside the classroom – the book encourages young people to perform their very best and succeed in their new environment. International students preparing for cross cultural learning and recent graduates looking for employment will find this book both practical and inspiring.

Routledge
August 2019:238
Hb: 978-0-367-23515-4: **£130**
Pb: 978-0-367-23516-1: **£31.99**
eBook: 978-0-429-28011-5

* For full contents and more information, visit: www.routledge.com/9780367235161

How to Solve A Problem

Insights for Critical Thinking, Problem-Solving, and Success in College

**Kelling J. Donald**

This concise and accessible resource offers new college students, especially those in science degree programs, guidance on engaging successfully with the classroom experience and skillfully tackling technical or scientific questions. The author provides insights on identifying, from the outset, individual markers for what success in college will look like for students, how to think about the engagement with professors as a partnership, and how to function effectively in that partnership toward achieving their pre-defined goals or markers of success. It is an ideal companion for science degree prospects and first-generation students seeking insight into the college experience.

CRC Press
April 2023:152
Hb: 978-1-032-20368-3: **£56.99**
Pb: 978-1-032-20361-4: **£22.99**
eBook: 978-1-003-26334-0

* For full contents and more information, visit: www.routledge.com/9781032203614

Making Your Doctoral Research Project Ambitious

Developing Large-Scale Studies with Real-World Impact



Edited by **Nadia Siddiqui, Stephen Gorard**

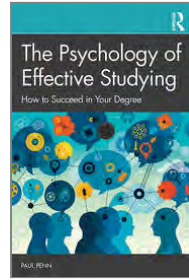
This edited collection provides real and outstanding examples of multiple research design methodologies which will allow doctoral researchers to develop a wide set of research skills, leading to the development of a high-quality academic thesis from which peer reviewed research papers and books can emerge. Ideal reading for doctoral students and supervisors, this book is a source of encouragement and motivation for new researchers seeking to challenge general perceptions in the social sciences that PhD or other doctoral research projects must be small-scale rather trivial studies, but can instead produce robust findings that have real-world implications.

Routledge
April 2022:278
Hb: 978-1-032-05975-4: **£130**
Pb: 978-1-032-06245-7: **£27.99**
eBook: 978-1-003-20136-6

* For full contents and more information, visit: www.routledge.com/9781032062457

The Psychology of Effective Studying

How to Succeed in Your Degree



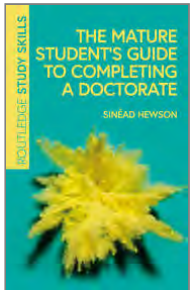
Paul Penn

This book provides a vital guide for students to key study skills that are instrumental in success at university. It uses a combination of research from cognitive psychology, humour and practical examples to convey where students often go fundamentally wrong in their studying practices and provides clear and concise advice on how they can improve. The book covers time management, academic integrity, writing essays, team work, and other key required skills for academic study. Written in a humorous and irreverent tone, and including illustrations and examples from popular culture, this is the ideal alternative and accessible study skills resource for any student at undergraduate level.

Routledge
August 2019:244
Hb: 978-1-138-57090-0: **£115**
Pb: 978-1-138-57092-4: **£19.99**
eBook: 978-0-203-70311-3

* For full contents and more information, visit: www.routledge.com/9781138570924

The Mature Student's Guide to Completing a Doctorate



Sinéad Hewson

Series: *Routledge Study Skills*

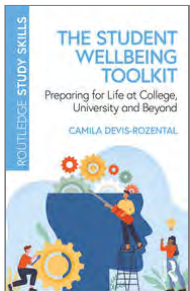
Carefully structured to make it accessible and easy to follow, this thought-provoking book encourages the reader to facilitate a dialogue across disciplines so that unconventional students are acknowledged and can discover a successful path towards admission and PhD completion. It is a must-read for advanced academic researchers, advanced post-graduate students and experienced professionals with vocational backgrounds who are seeking recognition for their knowledge and alternative pathways to contribute to the sector.

Routledge
April 2024:280
Hb: 978-1-032-53801-3: **£130**
Pb: 978-1-032-53800-6: **£16.99**

* For full contents and more information, visit: www.routledge.com/9781032538006

The Student Wellbeing Toolkit

Preparing for Life at College, University and Beyond



Camila Devis-Rozental

Series: *Routledge Study Skills*

The Student Wellbeing Toolkit puts wellbeing at the centre of your journey into university and beyond. By encouraging self-efficacy and a focus on the things you can control, it provides clear guidance to enhance wellbeing and opportunities for self-reflection that help develop self-awareness and prosocial skills for life. Drawing on research evidenced theories around positive psychology, theories of learning, motivation, and self-development, the book explores what, how, and why these areas are key to our wellbeing and the rationale for taking them into account to enable you to flourish and thrive at university.

Routledge
June 2023:286
Hb: 978-1-032-32965-9: **£130**
Pb: 978-1-032-32966-6: **£16.99**
eBook: 978-1-003-31754-8

* For full contents and more information, visit: www.routledge.com/9781032329666

Academic Writing for University Students



Stephen Bailey

Designed to help students succeed in writing university-level essays and reports, this book has been carefully designed for use both in the classroom and for self-study. Covering three key areas: the writing process, elements of writing and writing models, it encourages critical writing and developing a voice. Academic Writing in the University provides all of the tools necessary to produce excellent written work. With progress checks, practical examples and self-testing units, this practical, user-friendly book covers all stages of the writing process and is an invaluable guide to academic writing in the university.

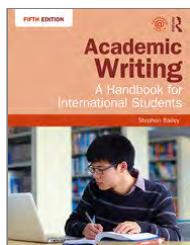
Routledge
December 2021:324
Hb: 978-0-367-44538-6: **£130**
Pb: 978-0-367-44539-3: **£21.99**
eBook: 978-1-003-01021-0

* For full contents and more information, visit: www.routledge.com/9780367445393

5TH EDITION

Academic Writing

A Handbook for International Students



Stephen Bailey

Academic Writing is the must-have guide both for international students and those teaching them. Packed full of authentic examples, practice exercises and progress checks this book has been fully updated to reflect the academic writing needs of international students being taught in the English language. With brand new chapters, further material to challenge the high achieving student and a fully updated companion website, this book is suitable for use in the classroom or for self-study. With the concerns of the international student at its heart this practical book is an invaluable guide, essential for those wanting to maximise their academic potential.

Routledge
December 2017:344
Hb: 978-1-138-04873-7: **£115**
Pb: 978-1-138-04874-4: **£27.99**
eBook: 978-1-315-16999-6

* For full contents and more information, visit: www.routledge.com/9781138048744

3RD EDITION

Academic Writing for International Students of Business and Economics



Stephen Bailey

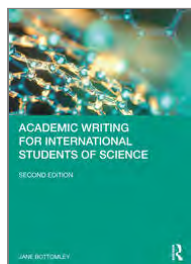
Now in its third edition, this key text helps international students succeed in writing essays and reports for their business and economics course. Thoroughly revised and updated, it is designed to be used by teachers in the classroom and students for self-study. New topics in this edition include writing in groups, written British and American English, and reflective writing. In addition, the new interactive website has a full set of teaching notes as well as more challenging exercises, revision material and links to other sources. Written to deal with the specific language issues faced by international students, this practical, user-friendly book is an invaluable guide.

Routledge
January 2020:346
Hb: 978-0-367-28030-7: **£130**
Pb: 978-0-367-28031-4: **£27.99**
eBook: 978-0-429-29927-8

* For full contents and more information, visit: www.routledge.com/9780367280314

2ND EDITION

Academic Writing for International Students of Science



Jane Bottomley

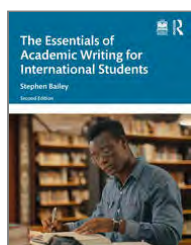
This second edition is an accessible companion designed to help science and technology students develop the knowledge, skills and strategies needed to produce clear and coherent academic writing in their university assignments. Using authentic texts to explore the nature of scientific writing, the book covers key areas such as scientific style, effective sentence and paragraph structure, and coherence in texts and arguments. Throughout the book, a range of tasks offers the opportunity to put theory into practice. This is an invaluable tool for the busy science or technology student looking to improve their writing and reach their full academic potential.

Routledge
October 2021:220
Hb: 978-0-367-63271-7: **£130**
Pb: 978-0-367-63272-4: **£27.99**
eBook: 978-1-003-11857-2

* For full contents and more information, visit: www.routledge.com/9780367632724

2ND EDITION

The Essentials of Academic Writing for International Students



Stephen Bailey

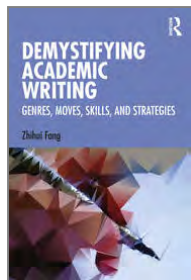
Written to help international students write essays and reports for their English-language university courses, this key title covers the essentials needed to achieve academic writing success. An easy-to-follow course that builds writing confidence and can be used both in the classroom and for self-study, this second edition has been thoroughly revised and updated to contain relevant examples, explanations and exercises. All international students wanting to maximise their academic potential will find this practical, concise and easy-to-use book an invaluable guide to writing in English for their degree courses.

Routledge
March 2024:252
Hb: 978-1-032-72173-6: **£130**
Pb: 978-1-032-72170-5: **£19.99**

* For full contents and more information, visit: www.routledge.com/9781032721705

Demystifying Academic Writing

Genres, Moves, Skills, and Strategies



Zhihui Fang

Accessible and informative, this book is designed to enhance the capacity of graduate and undergraduate students, as well as early career scholars, to write for academic purposes. Fang describes the key genres and types of academic writing, explains common rhetorical moves, offers linguistic strategies and insights to give students the skills they need for effective academic writing across genres and disciplines. Assuming no technical knowledge, this text is ideal for both non-native and native English speakers alike, and for courses in academic writing, composition, and L2 writing instruction.

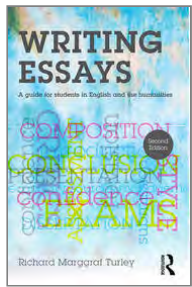
Routledge
April 2021:286
Hb: 978-0-367-67508-0: **£130**
Pb: 978-0-367-65354-5: **£38.99**
eBook: 978-1-003-13161-8

* For full contents and more information, visit: www.routledge.com/9780367653545

2ND EDITION

Writing Essays

A guide for students in English and the humanities



Richard Marggraf Turley

Essays are a major form of assessment in higher education today and this is a fact that causes some writers a great deal of anxiety. Fortunately, essay writing is a skill that can be learned, like any other. Writing Essays demystifies the entire process of essay writing and reveals the tricks of the trade, making your student life easier. You'll learn how to impress tutors by discovering exactly what markers look for when they read your work. Using practical examples selected from real student assignments and tutor feedback, this book covers every aspect of composition, from introductions and conclusions, down to presentation and submission.

Routledge

November 2015:158

Hb: 978-1-138-91668-5: **£130**

Pb: 978-1-138-91669-2: **£19.99**

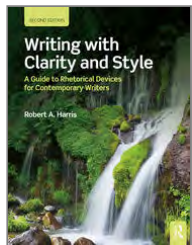
eBook: 978-1-315-68944-9

* For full contents and more information, visit: www.routledge.com/9781138916692

2ND EDITION

Writing with Clarity and Style

A Guide to Rhetorical Devices for Contemporary Writers



Robert A. Harris

Writing with Clarity and Style, 2nd Edition, will help you to improve your writing dramatically. The book shows you how to use dozens of classical rhetorical devices to bring power, clarity, and effectiveness to your writing. You will also learn about writing styles, authorial personas, and sentence syntax as tools to make your writing interesting and persuasive. If you want to improve the appeal and persuasion of your speeches, this is also the book for you.

Routledge

December 2017:232

Hb: 978-1-138-56010-9: **£130**

Pb: 978-1-138-56009-3: **£35.99**

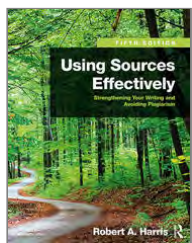
eBook: 978-0-203-71204-7

* For full contents and more information, visit: www.routledge.com/9781138560093

5TH EDITION

Using Sources Effectively

Strengthening Your Writing and Avoiding Plagiarism



Robert Harris

Now in its fifth, expanded edition, Using Sources Effectively, Fifth Edition targets the two most prominent problems in current research-paper writing: the increase in unintentional plagiarism and the ineffective use of research source material. Designed as a supplementary textbook for both undergraduate and graduate courses, this book will help every student who uses research in writing. Included in this edition is coverage of research strategies and source selection (Chapter 2), a chapter on quoting sources effectively (Chapter 4), and a chapter on sentence patterns (Chapter 10). APA and MLA citation styles have been updated throughout the text.

Routledge

January 2017:210

Hb: 978-1-138-28966-6: **£160**

Pb: 978-1-138-28968-0: **£52.99**

eBook: 978-1-315-26706-7

* For full contents and more information, visit: www.routledge.com/9781138289680

2ND EDITION

Renovating Your Writing

Shaping Ideas and Arguments into Clear, Concise, and Compelling Messages



Richard Kallan

Renovating Your Writing outlines the principles of effective composition by focusing on the essential skill set and mindset every successful writer must possess. Now in its second edition, this novel text provides readers with unique strategies for crafting and revising their writing, whether for school, work, or play. The new edition emphasizes, in particular, the importance of the writer embracing a rhetorical perspective, distinguishing between formal and social media compositional styles, and appreciating the effort needed to produce clear, concise, and compelling messages.

Routledge

July 2017:190

Hb: 978-1-138-72676-5: **£130**

Pb: 978-1-138-72677-2: **£27.99**

eBook: 978-1-315-18660-3

* For full contents and more information, visit: www.routledge.com/9781138726772

Clarity and Coherence in Academic Writing

Using Language as a Resource



David Nunan, Julie Choi

This book presents a lively, rich, and concise introduction to the key concepts and tools for developing clarity and coherence in academic writing. Well-known authors and linguists David Nunan and Julie Choi provide examples of the linguistic procedures that writers can draw on to enhance clarity and coherence for the reader. This resource makes complex concepts accessible to the emergent writer and illustrates how these concepts can be applied to their own writing. In-text projects and tasks invite you, the reader, to experiment with principles and ideas in developing your identity and voice as a writer.

Routledge

March 2023:224

Hb: 978-1-032-01559-0: **£120**

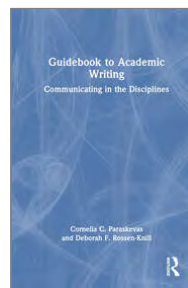
Pb: 978-1-032-01382-4: **£26.99**

eBook: 978-1-003-17909-2

* For full contents and more information, visit: www.routledge.com/9781032013824

Guidebook to Academic Writing

Communicating in the Disciplines



Cornelia C. Paraskevas, Deborah F. Rossen-Knill

This innovative guidebook is a concise introduction to discipline-specific academic language. Using authentic texts written by both novice and expert writers and 'translating' current, corpus-based research of academic language into a practical guide, the book gives students the tools to navigate the linguistic features of various disciplines. With exercises and additional online resources, this guidebook provides students with a range of tools they can choose from in order to create effective texts that meet discipline and reader expectations. Accessibly written, it is an essential guide for all students in humanities and sciences writing academic texts in English.

Routledge

July 2024:216

Hb: 978-1-032-48472-3: **£130**

Pb: 978-1-032-48470-9: **£34.99**

* For full contents and more information, visit: www.routledge.com/9781032484709

How to Write Qualitative Research



Marcus B. Weaver-Hightower

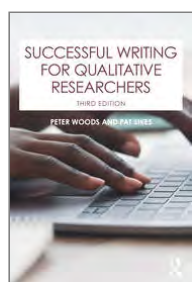
Qualitative research has exploded in popularity in nearly every discipline from the social sciences to health fields to business. While many qualitative textbooks explain how to conduct an interview or analyze fieldnotes, rarely do they give more than a few scant pages to the skill many find most difficult: writing. That's where *How to Write Qualitative Research* comes in. Using clear prose, helpful examples and lists, it breaks down and explains the most common writing tasks in qualitative research, and each chapter suggests step-by-step how-to approaches writers can use to tackle those tasks.

Routledge
October 2018:282
Hb: 978-1-138-06630-4: **£130**
Pb: 978-1-138-06631-1: **£39.99**
eBook: 978-1-315-15926-3

* For full contents and more information, visit: www.routledge.com/9781138066311

3RD EDITION

Successful Writing for Qualitative Researchers



Peter Woods, Pat Sikes

The third edition of this text has been brought fully up to date to cover developments in funding and institutional requirements. With new material on the responsibilities of the writer, technological developments, the ability to reach wider audiences and arts-based research, this book is designed to give practical advice to aspiring and established academic writers on mind-sets, strategies, techniques and opportunities. A must-read guide for all those looking to translate their qualitative research into writing.

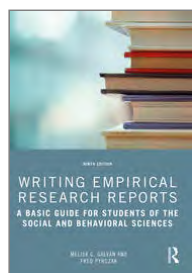
Routledge
March 2022:190
Hb: 978-0-367-69822-5: **£130**
Pb: 978-0-367-69823-2: **£27.99**
eBook: 978-1-003-14340-6

* For full contents and more information, visit: www.routledge.com/9780367698232

9TH EDITION

Writing Empirical Research Reports

A Basic Guide for Students of the Social and Behavioral Sciences



Melisa C. Galvan, Fred Pyrczak

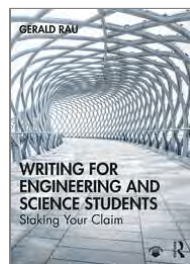
Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioral Sciences, Ninth Edition, offers clear and practical guidance on how to write research proposals, reports, theses, and dissertations. Accompanied by online resources for students and instructors, this book is ideal for use in research methods courses, thesis/dissertation preparation courses, research seminars where writing a research report is a culminating activity, and any graduate-level seminar in which the instructor covers the vital components necessary to prepare a research manuscript for submission for publication.

Routledge
October 2023:196
Hb: 978-1-032-13678-3: **£130**
Pb: 978-1-032-13680-6: **£54.99**
eBook: 978-1-003-23041-0

* For full contents and more information, visit: www.routledge.com/9781032136806

Writing for Engineering and Science Students

Staking Your Claim



Gerald Rau

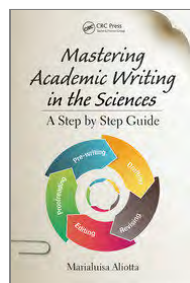
Drawing on his extensive experience of teaching international students, Gerald A. Rau provides a clear "argument structure" for students to follow when undertaking both academic and technical writing. This is the first book to make clear the different structures required for engineering versus scientific articles. Tasks and exercises are provided throughout. Using the research article as a model and covering lab reports, research proposals, dissertations, poster presentations, industry reports, emails and job applications, this book is essential reading for all students of science and engineering who are taking a course in writing, or seeking a resource to aid in their writing assignments.

Routledge
August 2019:324
Hb: 978-1-138-38824-6: **£130**
Pb: 978-1-138-38825-3: **£35.99**
eBook: 978-0-429-42568-4

* For full contents and more information, visit: www.routledge.com/9781138388253

Mastering Academic Writing in the Sciences

A Step-by-Step Guide



Marialuisa Aliotta

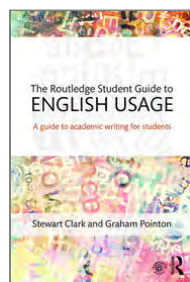
This book provides a comprehensive and coherent step-by-step guide to writing in scientific academic disciplines. It is an invaluable resource for those working on a PhD thesis, research paper, dissertation, or report. Writing these documents can be a long and arduous experience for students and their supervisors, and even for experienced researchers. However, this book can hold the key to success. Mapping the steps involved in the writing process - from acquiring and organizing sources of information, to revising early drafts, to proofreading the final product - it provides clear guidance on what to write and how best to write it.

CRC Press
April 2018:200
Hb: 978-1-138-74288-8: **£115**
Pb: 978-1-498-70147-1: **£46.99**
eBook: 978-1-351-00214-1

* For full contents and more information, visit: www.routledge.com/9781498701471

The Routledge Student Guide to English Usage

A guide to academic writing for students



Stewart Clark, Graham Pointon

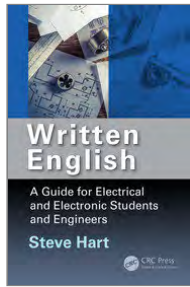
The Routledge Student Guide to English Usage is an authoritative A-Z guide to key aspects of English usage. Covering approximately 4000 carefully selected words, the authors focus on groups of confusable words that sound alike, look alike or are frequently mixed up. Examples of good usage are drawn from corpora such as the British National Corpus and the Corpus of Contemporary American English. A substantial reference section is also provided with stylistic guidance on academic writing skills, email standards, punctuation and grammar tips. This is the essential reference text for all students working on improving their academic writing skills.

Routledge
May 2016:402
Hb: 978-1-138-93358-3: **£130**
Pb: 978-1-138-93359-0: **£36.99**
eBook: 978-1-315-67843-6

* For full contents and more information, visit: www.routledge.com/9781138933590

Written English

A Guide for Electrical and Electronic Students and Engineers



Steve Hart

This book covers all aspects of English grammar relevant to electrical and electronic engineers. It discusses working with numbers and algebra, including correct formatting procedures (both body citations and references). The book addresses vocabulary and stylistic issues, describes the level of writing expected in the field, reveals often-made mistakes, and indicates areas where engineers should focus their efforts. The text also offers unique insight into problems students and academics face on a day-to-day basis when writing in a language that is not their mother tongue.

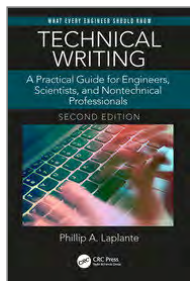
CRC Press
December 2015:216
Hb: 978-1-138-42241-4: **£175**
Pb: 978-1-498-73962-7: **£36.99**
eBook: 978-1-315-21412-2

* For full contents and more information, visit: www.routledge.com/9781498739627

2ND EDITION

Technical Writing

A Practical Guide for Engineers, Scientists, and Nontechnical Professionals, Second Edition



Phillip A. Laplante

Series: What Every Engineer Should Know

The second edition enables readers to write, edit, and publish materials of a technical nature, including books, articles, reports, and electronic media. In addition, a focus on writing for the nontechnical persons working in the technology world and the nonnative English speaker has been incorporated.

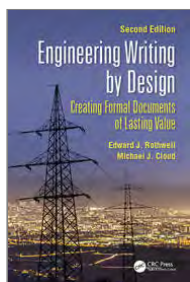
CRC Press
August 2018:300
Hb: 978-1-138-60696-8: **£140**
Pb: 978-1-138-62810-6: **£44.99**
eBook: 978-0-429-46739-4

* For full contents and more information, visit: www.routledge.com/9781138628106

2ND EDITION

Engineering Writing by Design

Creating Formal Documents of Lasting Value, Second Edition



Edward J. Rothwell, Michael J. Cloud

This book shows how effective writing can be achieved by thinking like an engineer. Based on the authors' combined experience as engineering educators, the book presents a novel approach to technical writing, positioning formal writing tasks as engineering design problems with requirements, constraints, protocols, standards, and customers (readers) to satisfy. Featuring illustrative examples, chapter summaries and exercises, quick-reference tables, and recommendations for further reading, this book is packed with valuable tips and information practicing and aspiring engineers need to become effective writers.

CRC Press
January 2020:257
Hb: 978-0-367-89682-9: **£99.99**
Pb: 978-0-367-34754-3: **£48.99**
eBook: 978-0-429-32769-8

* For full contents and more information, visit: www.routledge.com/9780367347543

50 Things to Think About When Writing a Thesis

Paving Your Own Path to Submission



Donna Starks, Margaret J. Robertson

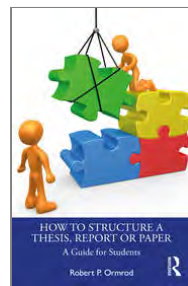
This book shows thesis writers how to embrace the individual nature of writing, bringing their own unique identities and skillsets to their thesis. Each idea is presented as one that has multiple solutions depending on who the readers are and what they want to achieve. The book guides the reader on identifying their own ways of working, their own particular strengths, as well as their unique voice and how to use these as tools to navigate the process of writing and surviving the thesis. It also provides practical guidance on elements such as the literature review and methodology, considerations around language and how to deal with life after submission.

Routledge
August 2023:136
Hb: 978-1-032-34700-4: **£130**
Pb: 978-1-032-34699-1: **£24.99**
eBook: 978-1-003-32340-2

* For full contents and more information, visit: www.routledge.com/9781032346991

How to Structure a Thesis, Report or Paper

A Guide for Students



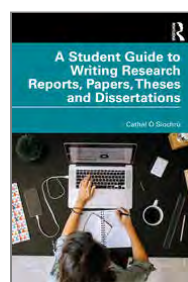
Robert P. Ormrod

This book provides concise practical guidance for students to help make their student's writing process more structured for their group work or thesis at any level. It therefore shows how to demonstrate meaningfully what they have learned in the relevant course or degree programme in a way that is accessible to the supervisor and the examiner. Suitable for students completing theses at Bachelors and Masters level, as well as other types of report-based work, and for supervisors looking for a clear and practical guide to help students with their writing process. The book will also provide a bridge to writing papers for journals in an academic career.

Routledge
November 2022:130
Hb: 978-1-032-36948-8: **£120**
Pb: 978-1-032-36946-4: **£16.99**
eBook: 978-1-003-33463-7

* For full contents and more information, visit: www.routledge.com/9781032369464

A Student Guide to Writing Research Reports, Papers, Theses and Dissertations



Cathal Ó Siochrú

This useful guide for students combines all the guidance, advice, and key tips needed to write successful research reports, theses, or dissertations, exploring, in detail, each of the elements involved in writing an academic paper. The book will guide you through all the key sections of a report including the Introduction, Literature Review, Method, Results, Discussion and more.

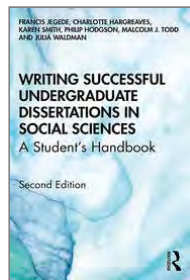
Routledge
November 2022:234
Hb: 978-0-367-62103-2: **£120**
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eBook: 978-1-003-10796-5

* For full contents and more information, visit: www.routledge.com/9780367621049

2ND EDITION

Writing Successful Undergraduate Dissertations in Social Sciences

A Student's Handbook



Francis Jegede, Charlotte Hargreaves, Karen Smith, Philip Hodgson, Malcolm Todd, Julia Waldman

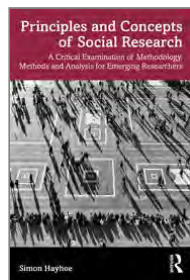
A practical guide for students undertaking their dissertation, this book uses real examples of dissertations across the Social Sciences. Providing an accessible overview of the essential steps in conducting research and writing dissertations, each chapter has clear learning outcomes and research objectives with relevant themes. Using a mixture of useful information, exercises, practical strategies, case study material and further reading, it gives hints and tips on beginning and managing a research project and working with supervisors. Packed with proven practical advice it is a dependable starting point and guide throughout the dissertation journey.

Routledge
February 2020:240
Hb: 978-0-367-25523-7: £130
Pb: 978-0-367-25525-1: £22.99
eBook: 978-0-429-28825-8

* For full contents and more information, visit: www.routledge.com/9780367255251

Principles and Concepts of Social Research

A Critical Examination of Methodology, Methods and Analysis for Emerging Researchers



Simon Hayhoe

This text covers the foundations of social science research, outlining the history and core elements of Western social research, along with a variety of topics, ranging from the history of scientific beliefs from Ancient Greece to the contemporary world. This book will be of use to core research units and training programs that universities provide at postgraduate level, at doctoral level and for early career post-doctoral researchers, to develop greater understanding of issues surrounding research. In addition to its theory, the contents of the book will include questions for discussion in seminars and small group work.

Routledge
December 2022:200
Hb: 978-1-032-14966-0: £120
Pb: 978-1-032-14967-7: £32.99
eBook: 978-1-003-24199-7

* For full contents and more information, visit: www.routledge.com/9781032149677

2ND EDITION

A Concise Guide to Writing a Thesis or Dissertation

Educational Research and Beyond



Halyna M. Kornuta, Ron W. Germaine

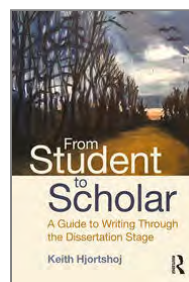
A Concise Guide to Writing a Thesis or Dissertation provides clear, concise, and intentional practice guidelines about organizing and writing a thesis or dissertation. Part I provides an overview for writing a thesis or dissertation. It describes the big picture of planning and formatting a research study, from identifying a topic through to writing quality. Part II describes the framework and substance of a research study. It models the pattern generally found in a formal, five-chapter research study.

Routledge
May 2019:134
Hb: 978-0-367-17457-6: £115
Pb: 978-0-367-17458-3: £16.99
eBook: 978-0-429-05688-8

* For full contents and more information, visit: www.routledge.com/9780367174583

From Student to Scholar

A Guide to Writing Through the Dissertation Stage



Keith Hjortshoj

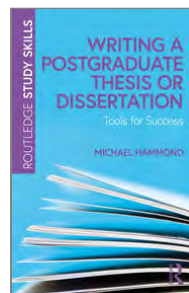
From Student to Scholar guides graduate students through the "hidden" developmental transition required in writing a dissertation and moving beyond, to become a successful scholar. Identifying common rhetorical challenges across disciplines, author Hjortshoj explains how to accommodate evolving audiences, motivations, standards, writing processes, and timelines. One full chapter is devoted to "writing blocks," and another offers advice to international students who are non-native speakers of English. The text also offers advice for managing relations with advisors and preparing for the diverse careers that PhDs, trained primarily as research specialists, actually enter.

Routledge
August 2018:204
Hb: 978-1-138-56942-3: £130
Pb: 978-1-138-56944-7: £44.99
eBook: 978-0-203-70426-4

* For full contents and more information, visit: www.routledge.com/9781138569447

Writing a Postgraduate Thesis or Dissertation

Tools for Success



Michael Hammond

Series: Routledge Study Skills

Writing a Postgraduate Dissertation or Thesis discusses the challenges that students encounter in their writing and provides thoughtful advice on how to address those challenges. It provides key advice on how to write about a field of research, the tradition of methodology and methods undertaken, and the contribution to knowledge that is being made.

Routledge
July 2022:172
Hb: 978-0-367-75281-1: £130
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eBook: 978-1-003-16182-0

* For full contents and more information, visit: www.routledge.com/9780367752828

2ND EDITION

Thesis and Dissertation Writing in a Second Language

A Handbook for Students and their Supervisors



Brian Paltridge, Sue Starfield

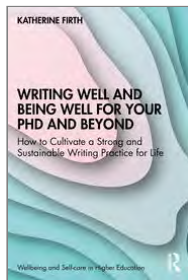
This fully updated edition is the guide for non-native speakers writing a thesis or dissertation in English. It explicitly unpacks academic writing, using accessible language and practical examples and discusses the issues that are crucial to success. These include: understanding the setting and purpose, understanding writer/reader relationships, issues of writer identity and what examiners really value. Suitable for students from all disciplines writing in a second language this book is equally valuable for supervisors of non-native speakers as it provides tasks that can be used with students to guide them in their writing.

Routledge
August 2019:248
Hb: 978-1-138-04869-0: £120
Pb: 978-1-138-04870-6: £28.99
eBook: 978-1-315-17002-2

* For full contents and more information, visit: www.routledge.com/9781138048706

Writing Well and Being Well for Your PhD and Beyond

How to Cultivate a Strong and Sustainable Writing Practice for Life



Katherine Firth

Series: Wellbeing and Self-care in Higher Education

Prioritising wellbeing alongside academic development, this book provides practical advice to help students write well, and be well, during their PhD and throughout their career. Relevant at any stage of the writing process, this book will help doctoral students and early career researchers to produce great words that people want to read, examiners want to pass and editors want to publish.

Routledge

September 2023:200

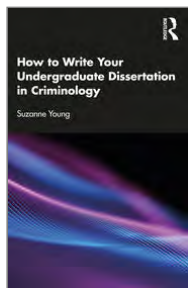
Hb: 978-1-032-31082-4: **£130**

Pb: 978-1-032-31081-7: **£21.99**

eBook: 978-1-003-30794-5

* For full contents and more information, visit: www.routledge.com/9781032310817

How to Write Your Undergraduate Dissertation in Criminology



Suzanne Young

This book provides a guide for undergraduate criminology and criminal justice students undertaking their final year dissertation. Drawing on empirical case studies and including a range of resources and templates, this book takes students through each stage of the dissertation and offers useful guidance on structure and content.

Routledge

April 2022:146

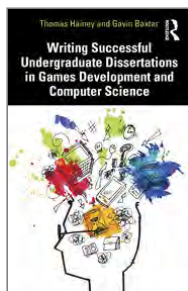
Hb: 978-0-367-85998-5: **£130**

Pb: 978-0-367-85999-2: **£21.99**

eBook: 978-1-003-01633-5

* For full contents and more information, visit: www.routledge.com/9780367859992

Writing Successful Undergraduate Dissertations in Games Development and Computer Science



Thomas Hailey, Gavin Baxter

Writing a dissertation in the final year at university can be a daunting task, but particularly if the degree is practically oriented and implementation-based. This book provides a concise guide to producing a dissertation in Computer Science, Software Engineering or Games Development degrees with research projects typically involving design, implementation, testing and evaluation. Drawing on the authors' knowledge and experience of supervising dissertation students, the book offers a step-by-step guide to the key areas of writing a dissertation alongside real-life examples.

Routledge

November 2022:304

Hb: 978-0-367-51707-6: **£120**

Pb: 978-0-367-51708-3: **£19.99**

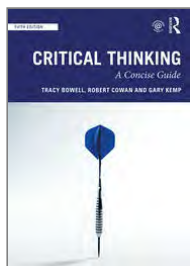
eBook: 978-1-003-05488-7

* For full contents and more information, visit: www.routledge.com/9780367517083

5TH EDITION

Critical Thinking

A Concise Guide

**Tracy Bowell, Robert Cowan, Gary Kemp**

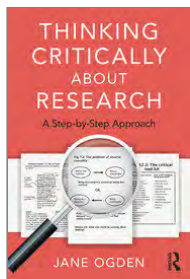
We are frequently confronted with arguments. Critical Thinking equips students with the concepts and techniques used in the analysis and assessment of arguments whatever the context. Through precise and accessible discussion, this book provides the tools to become a successful critical thinker, who can act and believe in accordance with good reasons, and who can articulate and make explicit those reasons. This fifth edition has been revised and updated throughout, including an expanded range of 'complete examples', the introduction of Venn diagrams, and the discussion of fake news and related phenomena arising in the contemporary scene.

Routledge
August 2019:348
Hb: 978-0-815-37142-7: £130
Pb: 978-0-815-37143-4: £34.99
eBook: 978-1-351-24373-5

* For full contents and more information, visit: www.routledge.com/9780815371434

Thinking Critically about Research

A Step by Step Approach

**Jane Ogden**

This book is designed to help readers develop a critical understanding of evidence and the ways in which evidence is presented, and to challenge the information they receive in both academic and non-academic sources. The author presents a step by step approach with a focus on knowing methods, culminating in a bespoke 'critical tool kit' which offers a practical checklist designed to be used when carrying out research. There are also learning features including tasks and worked examples, drawing on real research studies. This is an essential resource for students and researchers, and those putting research into practice, who want to have better critical thinking skills.

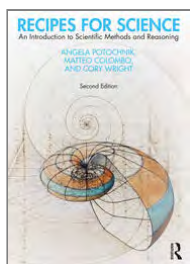
Routledge
December 2018:176
Hb: 978-0-367-00019-6: £130
Pb: 978-0-367-00020-2: £35.99
eBook: 978-0-429-44496-8

* For full contents and more information, visit: www.routledge.com/9780367000202

2ND EDITION

Recipes for Science

An Introduction to Scientific Methods and Reasoning

**Angela Potochnik, Matteo Colombo, Cory Wright**

Today, scientific literacy is an essential aspect of any undergraduate education. Recipes for Science responds to this need by providing an accessible introduction to the nature of science and scientific methods, reasoning, and concepts

Routledge
March 2024:370
Hb: 978-1-032-29097-3: £170
Pb: 978-1-032-29096-6: £39.99

* For full contents and more information, visit: www.routledge.com/9781032290966

2ND EDITION

Scientific Method

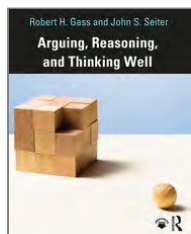
How Science Works, Fails to Work, and Pretends to Work

**John Staddon**

This expanded second edition of Scientific Method shows how science works, fails to work, or pretends to work, by looking at examples from physics, biomedicine, psychology, sociology, and economics. Scientific Method is essential reading for students and professionals trying to make sense of the role of science in society, and of the meaning, value, and limitations of scientific methodology.

Routledge
June 2024:224
Hb: 978-1-032-68389-8: £130
Pb: 978-1-032-65771-4: £29.99

* For full contents and more information, visit: www.routledge.com/9781032657714

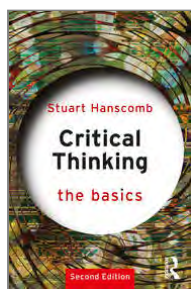
Arguing, Reasoning, and Thinking Well**Robert Gass, John Seiter**

Arguing, Reasoning, and Thinking Well offers an engaging and accessible introduction to argumentation and critical thinking. Authors Gass and Seiter, renowned for their friendly writing style, include real-world examples, hypothetical dialogues, and editorial cartoons to invite readers in. The text includes a full chapter devoted to the ethics of argument, as well as content on refutation and formal logic. It is designed for students in argumentation and critical thinking courses in communication, philosophy, and psychology departments, and is suitable for students and general education courses across the curriculum.

Routledge
June 2019:280
Hb: 978-0-815-37432-9: £150
Pb: 978-0-815-37433-6: £74.99
eBook: 978-1-351-24249-3

* For full contents and more information, visit: www.routledge.com/9780815374336

2ND EDITION

Critical Thinking: The Basics**Stuart Hanscomb***Series: The Basics*

An accessible and engaging introduction to the field of critical thinking, drawing on philosophy, communication and psychology. This 2nd edition has been revised and updated throughout and includes a new chapter on emotion and argument and how to build persuasive arguments. There are also many fresh examples, including conspiracy theories, trust, leadership and cultural cognition. With updated discussion questions/exercises and suggestions for further reading, this book is an essential read for students approaching the field of critical thinking for the first time, and for the general reader wanting to improve their thinking skills.

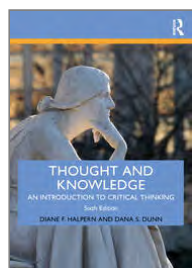
Routledge
June 2023:286
Hb: 978-1-032-16301-7: £130
Pb: 978-1-032-16299-7: £18.99
eBook: 978-1-003-24794-4

* For full contents and more information, visit: www.routledge.com/9781032162997

6TH EDITION

Thought and Knowledge

An Introduction to Critical Thinking



Diane F. Halpern, Dana S. Dunn

Thought and Knowledge applies theory and research from the learning sciences to teach students the critical thinking skills that they need to succeed in today's world. The text is grounded in psychological science and brought to life through humorous and engaging language and numerous practical and real-world examples and anecdotes. Critical thinking skills are presented in every chapter, empowering students to learn more efficiently, research more productively, and present logical, critical, and informed arguments. The skills are reviewed at the end of the chapter, and a complete list of skills with definitions and examples are included in the appendix.

Routledge

October 2022:428

Hb: 978-1-138-65516-4: £190

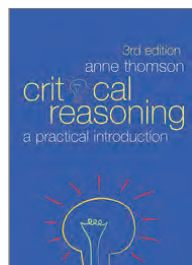
Pb: 978-1-138-65517-1: £59.99

* For full contents and more information, visit: www.routledge.com/9781138655171

3RD EDITION

Critical Reasoning

A Practical Introduction



Anne Thomson

We all engage in the process of reasoning, but we don't always pay attention to whether we are doing it well. This book offers the opportunity to practise reasoning in a clear-headed and critical way, with the aims of developing an awareness of the importance of reasoning well and of improving the reader's skill in analyzing and evaluating arguments. Anne Thomson has updated and revised the book to include fresh and topical examples, and new chapters on evaluating the credibility of evidence and decision making and dilemmas. By the end of the book students should be able to identify flaws in arguments, analyze the reasoning in newspaper articles, books and speeches, assess the credibility of evidence and authorities and approach any topic with the ability to reason and think critically.

Routledge

September 2008:256

Hb: 978-0-415-44586-3: £130

Pb: 978-0-415-44587-0: £35.99

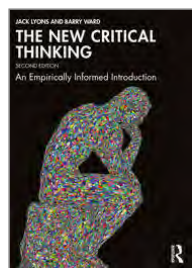
eBook: 978-0-203-87099-0

* For full contents and more information, visit: www.routledge.com/9780415445870

2ND EDITION

The New Critical Thinking

An Empirically Informed Introduction



Jack Lyons, Barry Ward

This highly innovative text aims to improve real-world critical thinking, incorporating insights from epistemology and philosophy of science to formulate best practices for assessing information sources and circumnavigate our natural intellectual blind spots. The book covers introductory logic in a way that emphasizes practical application, rather than formal completeness. This new edition provides ample resources and exercises for students and instructors alike both in-text and online.

Routledge

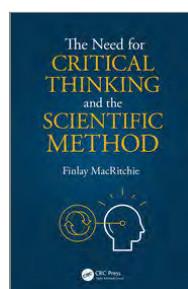
May 2024:448

Hb: 978-1-032-31730-4: £130

Pb: 978-1-032-31728-1: £64.99

* For full contents and more information, visit: www.routledge.com/9781032317281

The Need for Critical Thinking and the Scientific Method



Finlay MacRitchie

The book exposes many of the misunderstandings about the scientific method and its application to critical thinking. It argues for a better understanding of the scientific method and for nurturing critical thinking in the community. This knowledge helps the reader to analyze issues more objectively, and warns about the dangers of bias and propaganda. The principles are illustrated by considering several issues that are currently being debated. These include anthropogenic global warming (often loosely referred to as climate change), dangers to preservation of the Great Barrier Reef, and the expansion of the gluten-free food market and genetic engineering.

CRC Press

May 2018:152

Hb: 978-0-815-36815-1: £140

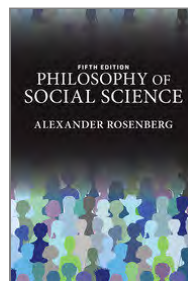
Pb: 978-0-815-36775-8: £42.99

eBook: 978-1-351-25587-5

* For full contents and more information, visit: www.routledge.com/9780815367758

5TH EDITION

Philosophy of Social Science



Alexander Rosenberg

Philosophy of Social Science provides a tightly argued yet accessible introduction to the philosophical foundations of the human sciences, including economics, anthropology, sociology, political science, psychology, history, and the disciplines emerging at the intersections of these subjects with biology. Philosophy is unavoidable for social scientists because the choices they make in answering questions in their disciplines force them to take sides on philosophical matters. Conversely, the philosophy of social science is equally necessary for philosophers since the social and behavior sciences must inform their understanding of human action, norms, and social institutions.

Routledge

July 2015:360

Hb: 978-0-367-09807-0: £130

Pb: 978-0-813-34973-2: £42.99

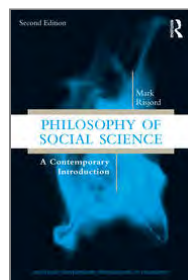
eBook: 978-0-429-49484-0

* For full contents and more information, visit: www.routledge.com/9780813349732

2ND EDITION

Philosophy of Social Science

A Contemporary Introduction



Mark Risjord

Series: *Routledge Contemporary Introductions to Philosophy*

This accessible text offers a comprehensive overview of debates in the field, with special attention to new research programs. Topics include the relationship of social policy to social science, interpretive research, cognitive and evolutionary explanations, intentional action explanation, rational choice theory, conventions and social norms, joint intentionality, causal inference, and experimentation. The Second Edition provides updates with the most recent literature and adds two new chapters: one on modeling and one on the role of race and gender in the social sciences.

Routledge

July 2022:336

Hb: 978-1-032-07587-7: £175

Pb: 978-1-032-07586-0: £38.99

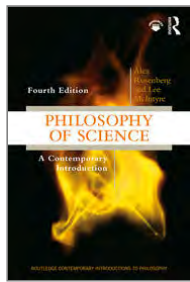
eBook: 978-1-003-20779-5

* For full contents and more information, visit: www.routledge.com/9781032075860

4TH EDITION

Philosophy of Science

A Contemporary Introduction



Alex Rosenberg, Lee McIntyre

Series: Routledge Contemporary Introductions to Philosophy

Any serious student attempting to better understand the nature, methods, and justification of science will value this book. Weaving lucid explanations with clear analyses, the volume is as a much-used, thematically-oriented introduction to the field. The new edition has been thoroughly rewritten based on instructor and student feedback, to improve readability and accessibility, without sacrificing depth. It retains all of the logically structured, extensive coverage of earlier editions, which the journal *Teaching Philosophy* called, "the industry standard" and "essential reading" in a 2010 review.

Routledge

November 2019:308

Hb: 978-1-138-33148-8: **£130**

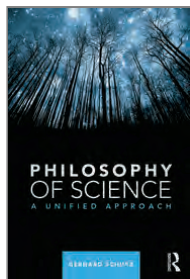
Pb: 978-1-138-33151-8: **£42.99**

eBook: 978-0-429-44726-6

* For full contents and more information, visit: www.routledge.com/9781138331518

Philosophy of Science

A Unified Approach



Gerhard Schurz

Philosophy of Science: A Unified Approach combines an elementary introduction to philosophy of science with an integrated survey of all of its important subfields. Focusing on the methodological unity of the sciences, the book provides chapters with introductory sections, followed by complementary, advanced topics. By restricting the teaching materials to the introductory sections, one obtains the basis for a semester-long course. Covering all of the material contained in the book fills a year-long course.

Routledge

November 2013:480

Hb: 978-0-415-82934-2: **£130**

Pb: 978-0-415-82936-6: **£46.99**

eBook: 978-0-203-36627-1

* For full contents and more information, visit: www.routledge.com/9780415829366

Doing Academic Research

A Practical Guide to Research Methods and Analysis



Ted Gournelos, Joshua R. Hammonds, Maridath A. Wilson

Doing Academic Research is a concise, accessible, and tightly organized overview of the research process in the humanities, social sciences, and business. Rather than a book about research, this is a practical guide to doing research, and guides budding researchers along the process of developing an effective workflow, where to go for help, and how to actually complete the project. It addresses diversity in abilities, interest, discipline, and ways of knowing by focusing not just on the process of conducting any one method in detail, but also the ways in which someone might choose a research method and conduct it successfully.

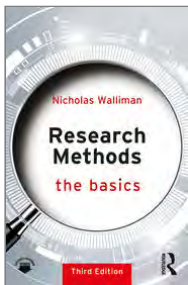
Routledge
May 2019:208
Hb: 978-0-367-20791-5: **£115**
Pb: 978-0-367-20793-9: **£16.99**
eBook: 978-0-429-26355-2

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3RD EDITION

Research Methods

The Basics



Nicholas Walliman

Series: The Basics

Research Methods: The Basics is an accessible, user-friendly introduction to the different aspects of research theory, methods and practice. This third edition provides an expanded and fully updated resource suitable for students and practitioners in a wide range of disciplines including the natural sciences, social sciences and humanities. It is structured in two parts - the first covers the nature of knowledge and the reasons for doing research, the second explains the specific methods used to conduct an effective research project and how to propose, plan, carry out and write up a research project.

Routledge
December 2021:280
Hb: 978-0-367-69407-4: **£130**
Pb: 978-0-367-69408-1: **£18.99**
eBook: 978-1-003-14169-3

* For full contents and more information, visit: www.routledge.com/9780367694081

2ND EDITION

Research Methods

The Key Concepts



Michael Hammond, Jerry Wellington

Series: Routledge Key Guides

This invaluable resource provides a comprehensive overview of the many methods and methodologies of social research. Each entry provides a critical definition and examines the value and difficulties of a particular method or methodology of concept across different fields of social research. With thematic further reading stretching across the social sciences, this second edition will help readers develop a firm understanding of the rationale and principles behind key research methods, and is a must-have for new researchers at all levels, from undergraduate to postgraduate and beyond.

Routledge
September 2020:232
Hb: 978-0-367-17873-4: **£94.99**
Pb: 978-0-367-17874-1: **£19.99**
eBook: 978-0-429-05816-5

* For full contents and more information, visit: www.routledge.com/9780367178741

A-Z of Digital Research Methods



Catherine Dawson

This book provides a quick and easy, alphabetical reference guide for any student or researcher looking for an introduction to digital research methods. It provides a pathway through the often confusing digital research landscape, giving a concise introduction to each method.

Routledge
July 2019:424
Hb: 978-1-138-48679-9: **£115**
Pb: 978-1-138-48680-5: **£24.99**
eBook: 978-1-351-04467-7

* For full contents and more information, visit: www.routledge.com/9781138486805

11TH EDITION

Understanding Research Methods

An Overview of the Essentials



Michelle Newhart, Mildred L. Patten

A perennial bestseller since 1997, this updated eleventh edition of Understanding Research Methods provides a detailed overview of all the important concepts traditionally covered in a research methods class. It covers the principles of both qualitative and quantitative research, and how to interpret statistics without computations, so is suitable for all students regardless of their math background. The book is organized so that each concept is treated independently and can be used in any order without resulting in gaps in knowledge—allowing it to be easily and precisely adapted to any course.

Routledge
June 2023:528
Hb: 978-0-367-55117-9: **£215**
Pb: 978-0-367-55118-6: **£84.99**
eBook: 978-1-003-09204-9

* For full contents and more information, visit: www.routledge.com/9780367551186

2ND EDITION

The Research Companion

A practical guide for those in the social sciences, health and development



Petra M. Boynton

Books on social and behavioral research too often focus on theory and methods and overlook the practical skills needed to undertake a research project. The Research Companion brings hard-earned lessons from the real world to offer clear and honest advice to all students and practitioners within the social and health sciences. The structure of the book makes it useful for researchers at all levels of experience: the numerous examples and case histories make it ideal for students just beginning their first research project, while the breadth of coverage and wealth of practical tips will also help more experienced researchers.

Routledge
September 2016:300
Hb: 978-1-138-91760-6: **£130**
Pb: 978-1-138-91761-3: **£46.99**
eBook: 978-1-315-68890-9

* For full contents and more information, visit: www.routledge.com/9781138917613

Are You Making a Meal Out of Research?

A Recipe for Research Success



Steve Reay, Cassie Khoo, Gareth Terry, Guy Collier, Trent Dallas, Valance Smith

Research methods in a comic! This visual guide to common research methods paradigms will get you started on thinking about your research journey - what research is and understanding different types of methods, how you choose them, and how you get started. The book includes several worksheets to start making your own research menu and further reading to learn more. Suitable for upper level undergraduate and first level postgraduate students in the social and behavioural sciences, healthcare, and those interested in indigenous and Māori research methods.

Routledge
May 2023:72
Hb: 978-1-032-39230-1: £120
Pb: 978-1-032-39232-5: £14.99
eBook: 978-1-003-34892-4

* For full contents and more information, visit: www.routledge.com/9781032392325

Literature Review and Research Design

A Guide to Effective Research Practice



Dave Harris

Graduate students executing their first independent research project often struggle to use academic literature effectively in the process of designing, developing, executing, and presenting their work. This book gives an overview of how to develop an effective research practice supported by the academic literature. Particularly suitable for those pursuing professional doctorates in subjects such as education and psychology.

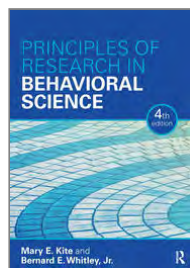
Routledge
December 2019:176
Hb: 978-0-367-25036-2: £115
Pb: 978-0-367-25037-9: £24.99
eBook: 978-0-429-28566-0

* For full contents and more information, visit: www.routledge.com/9780367250379

4TH EDITION

Principles of Research in Behavioral Science

Fourth Edition



Bernard E. Whitley, Jr., Mary E. Kite

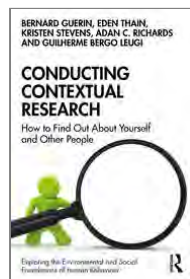
This book provides a comprehensive overview of research methods in the behavioral sciences, focusing primarily on the conceptual issues inherent in conducting research. It covers topics that are often omitted from other texts, including measurement issues, correlational research, qualitative research, and integrative literature reviews. The book also includes discussions of diversity issues as they related to behavioral science research. New to this edition are chapter boxes that focus on applied issues related to each chapter topic. Throughout the book, readable examples and informative tables and figures are provided.

Routledge
June 2018:852
Hb: 978-1-138-68787-5: £110
eBook: 978-1-315-45008-7

* For full contents and more information, visit: www.routledge.com/9781138687875

Conducting Contextual Research

How to Find Out About Yourself and Other People



Bernard Guerin, Eden Thain, Kristen Stevens, Adan C. Richards, Guilherme Bergo Leugi

Series: Exploring the Environmental and Social Foundations of Human Behaviour

This innovative book proposes an entirely new approach to social research, presenting practical ways to discover people's life contexts in order to understand why they do what they do, which is essential for any forms of research that need to understand people. Conducting Contextual Research is essential reading for postgraduate students and professionals in the fields of counselling, psychology and social work, and will be useful to anyone conducting research or inquiries to understand human behaviour, including academic researchers, detectives, intelligence operators, social workers, government service researchers, social policy analysts, and biographers.

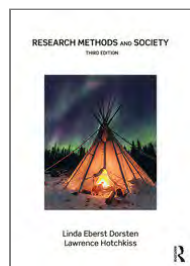
Routledge
June 2024:184
Hb: 978-1-032-60825-9: £130
Pb: 978-1-032-60818-1: £42.99

* For full contents and more information, visit: www.routledge.com/9781032608181

3RD EDITION

Research Methods and Society

Foundations of Social Inquiry



Linda Eberst Dorsten, Lawrence Hotchkiss

Research Methods and Society, Third Edition is designed to help undergraduate students acquire basic skills in methods of social science research. These skills provide a foundation for understanding research findings in the social sciences and for conducting social research. Just as important, such skills sets and principles can be applied to everyday situations to make sense of endless stream of claims and counterclaims confronted daily in print and electronic forms, including social media.

Routledge
December 2018:410
Hb: 978-0-815-36616-4: £210
Pb: 978-0-815-36615-7: £84.99
eBook: 978-1-351-25981-1

* For full contents and more information, visit: www.routledge.com/9780815366157

2ND EDITION

Social Research Methods by Example

Applications in the Modern World



Yasemin Besen-Cassino, Dan Cassino

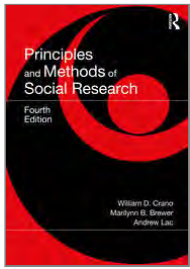
This book sharpens students' understanding of the research process and the essential methods that researchers use to perform their work on the cutting edge of the social sciences. The new edition features updated examples across the chapters, reflecting new directions within the social sciences and both a diversity of voices and research output in recent years. The authors also expand their chapter overviews in key areas and weave discussion of validity and ethics carefully into the fabric of each chapter's focus. Written not only to introduce students to the basic principles of social science research, this book provides readers with a toolkit to carry out the process on their own.

Routledge
May 2023:342
Hb: 978-1-032-21005-6: £120
Pb: 978-1-032-20920-3: £34.99
eBook: 978-1-003-26632-7

* For full contents and more information, visit: www.routledge.com/9781032209203

4TH EDITION

Principles and Methods of Social Research



William D. Crano, Marilynn B. Brewer, Andrew Lac

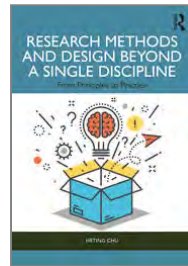
Through a multi-methodology approach, *Principles and Methods of Social Research*, Fourth Edition covers the latest research techniques and designs and guides readers toward the design and conduct of social research from the ground up. Applauded for its comprehensive coverage, the breadth and depth of content of this new edition is unparalleled. It is intended for graduate or advanced undergraduate courses in research methods in psychology, communication, sociology, education, public health, and marketing, and further appeals to researchers in various fields of social research, such as social psychology and communication.

Routledge
July 2023:486
Hb: 978-1-032-22241-7: **£130**
Pb: 978-1-032-22240-0: **£82.99**
eBook: 978-1-003-27173-4

* For full contents and more information, visit: www.routledge.com/9781032222400

Research Methods and Design Beyond a Single Discipline

From Principles to Practice



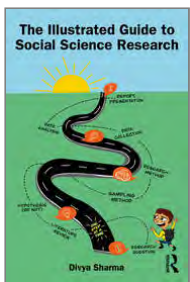
Heting Chu

This book presents and discusses 15 research methods after an overview of each, an illustration of the research process and an examination of related topics. The focus of this book is on data collection techniques and research design. This book is essential for masters and doctoral students, and researchers who wish to learn about research methods and design comprehensively and systematically, as well as instructors delivering research methods courses across the social and behavioral sciences.

Routledge
April 2024:360
Hb: 978-0-367-89883-0: **£130**
Pb: 978-0-367-89885-4: **£54.99**

* For full contents and more information, visit: www.routledge.com/9780367898854

The Illustrated Guide to Social Science Research



Divya Sharma

This accessible and engaging textbook helps students to get to grips with key concepts, issues, and practices in social science research through the use of fun and informative illustrations and examples.

Routledge
June 2024:248
Hb: 978-1-032-32379-4: **£130**
Pb: 978-1-032-32377-0: **£34.99**

* For full contents and more information, visit: www.routledge.com/9781032323770

Methodological Concepts

A Critical Guide



Martyn Hammersley

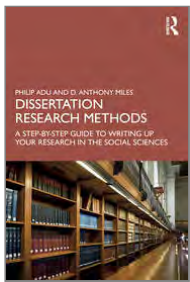
Methodological Concepts: A Critical Guide clarifies many key terms and issues in social research methodology. It outlines the conventional meanings of these terms, but also addresses their contentious character. The aim is to offer interpretations of them that provide a coherent conception of the nature of social science.

Routledge
February 2023:186
Hb: 978-1-032-39573-9: **£120**
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eBook: 978-1-003-35035-4

* For full contents and more information, visit: www.routledge.com/9781032395746

Dissertation Research Methods

A Step-by-Step Guide to Writing Up Your Research in the Social Sciences



Philip Adu, D. Anthony Miles

Dissertation Research Methods: A Step-by-Step Guide to Writing Up Your Research in the Social Sciences focuses specifically on methodology when planning, writing and submitting your dissertation thesis. Written by two methodology experts in the social sciences, the book provides a step-by-step guide through each stage of the dissertation process. This compact book will be of use to all graduate students and their supervisors in the Social Sciences, Education and Behavioural Sciences, looking for a guide for working with robust and defensible methodological principles in their dissertation research and theses.

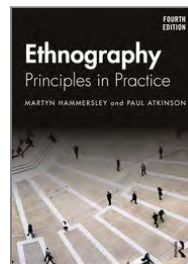
Routledge
September 2023:470
Hb: 978-1-032-21383-5: **£130**
Pb: 978-1-032-21385-9: **£39.99**
eBook: 978-1-003-26815-4

* For full contents and more information, visit: www.routledge.com/9781032213859

4TH EDITION

Ethnography

Principles in Practice



Martyn Hammersley, Paul Atkinson

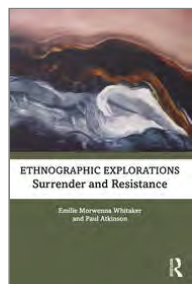
This edition has been expertly updated to reflect the important developments in digital and mobile technologies and social media. The ease with which recordings, audio or video, as well as photographs, can be produced via the use of mobile devices has opened up new tools and foci for ethnographers.

Routledge
April 2019:292
Hb: 978-1-138-50445-5: **£145**
Pb: 978-1-138-50446-2: **£38.99**
eBook: 978-1-315-14602-7

* For full contents and more information, visit: www.routledge.com/9781138504462

Ethnographic Explorations

Surrender and Resistance



Emilie Morwenna Whitaker, Paul Atkinson

In *Ethnographic Explorations: Surrender and Resistance*, Whitaker and Atkinson, two experienced ethnographers, explore the complexities of fieldwork, analysis and writing from new perspectives. It takes the opportunity to reflect on Ethnography not just as a methodological perspective, but at a fundamental level. The book is intended for researchers at postgraduate and postdoctoral levels and at experienced researchers who want to read a different, sometimes challenging, take on ethnographic research and its outcomes.

Routledge
March 2023:184
Hb: 978-0-367-17440-8: **£120**
Pb: 978-0-367-17441-5: **£34.99**
eBook: 978-0-429-05680-2

* For full contents and more information, visit: www.routledge.com/9780367174415

2ND EDITION

The Researcher's Toolkit

The Complete Guide to Practitioner Research



David Wilkinson, Dennis Dokter

Designed for those undertaking research for the first time, the second edition of *The Researcher's Toolkit* is a practical and accessible guide for all those partaking in small-scale research. Jargon-free and assuming no prior knowledge, it covers the entire research process, from defining a research topic or question through to its completion. This book is a must-read guide for students and budding researchers as well as educators seeking to explain academic research and writing to their pupils. It will benefit anyone looking to complete a research project whether inside academia or beyond.

Routledge
May 2023:178
Hb: 978-1-032-01809-6: **£120**
Pb: 978-1-032-01810-2: **£24.99**
eBook: 978-1-003-18015-9

* For full contents and more information, visit: www.routledge.com/9781032018102

2ND EDITION

Engaging in Narrative Inquiry



D. Jean Clandinin

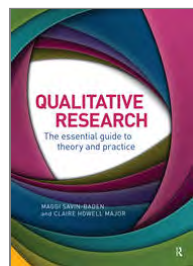
In *Engaging in Narrative Inquiry*, Second Edition, D. Jean Clandinin, a pioneer in narrative research, updates her classic formulation on narrative inquiry, clarifying, extending, and refining methods. The increasing interest in narrative inquiry as research methodology across disciplines makes this an essential guide and an excellent text for graduate courses in qualitative inquiry, education and nursing research, sociology, and all courses in autobiographical and narrative research and inquiry.

Routledge
September 2022:176
Hb: 978-1-032-14609-6: **£130**
Pb: 978-1-032-14610-2: **£38.99**
eBook: 978-1-003-24014-3

* For full contents and more information, visit: www.routledge.com/9781032146102

Qualitative Research

The Essential Guide to Theory and Practice



Maggi Savin-Baden, Claire Major

This book provides beginning researchers with an overview of qualitative research and practical advice and guidance about how to conduct a qualitative study. The book's focus enables researchers to choose the most appropriate methodology by providing them with underpinning theory in a practical way alongside specific examples and proven tips. Beginning by exploring the key differences between qualitative and quantitative research the authors clearly explain the specific features of qualitative research and importantly clarify what qualitative research isn't.

Routledge
December 2022:608
Pb: 978-1-032-45637-9: **£38.99**
eBook: 978-1-003-37798-6

* For full contents and more information, visit: www.routledge.com/9781032456379

Transformative Moments in Qualitative Research

Method, Theory, and Reflection



Anna Cohen-Miller

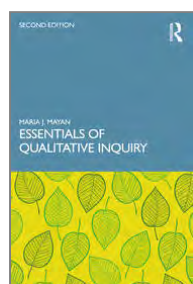
This groundbreaking book, eloquently fuses powerful stories of research with methodological insight and theory. Each chapter offers a clear, practical, and engaging exploration of qualitative inquiry, emphasizing the power of research to foster equity, inclusion, and justice-centered practice (e.g., social justice, economic justice, environmental/ecological justice). This book is an invaluable resource for graduate students, practitioners, and researchers to enhance their research and praxis. It will appeal to audiences across disciplinary backgrounds including social sciences, educational sciences, humanities, and STEM and health fields.

Routledge
December 2023:314
Hb: 978-1-032-38168-8: **£130**
Pb: 978-1-032-38170-1: **£38.99**
eBook: 978-1-003-34381-3

* For full contents and more information, visit: www.routledge.com/9781032381701

2ND EDITION

Essentials of Qualitative Inquiry



Maria J. Mayan

Series: Qualitative Essentials

Essentials of Qualitative Inquiry, Second Edition is the key resource for introducing applied researchers into the qualitative tradition due to its clear exposition, step-by-step approach, and emphasis on methodological coherence. Concise and inexpensive, this edition includes new material on methods, sampling, and analysis and introduces current trends in community-based research and arts-based research, among other updates.

Routledge
May 2023:328
Hb: 978-1-629-58326-6: **£120**
Pb: 978-1-629-58327-3: **£29.99**
eBook: 978-1-003-38575-2

* For full contents and more information, visit: www.routledge.com/9781629583273

2ND EDITION

Thinking with Theory in Qualitative Research



Alecia Y. Jackson, Lisa A. Mazzei

Thinking with Theory in Qualitative Research, Second Edition demonstrates how to enact various philosophical concepts in practices of inquiry, effectively opening up the process of thought in qualitative studies. In the ten years since the first edition was published, Thinking with Theory has become a vanguard text in the field of postfoundational inquiry for its accessible but thorough introductions to philosophically informed inquiry. This book is for experienced and novice researchers, and students in introductory, general, and advanced qualitative inquiry courses, who may also be first-time readers of philosophy.

Routledge
July 2022:170
Hb: 978-1-138-95213-3: **£130**
Pb: 978-1-138-95214-0: **£38.99**
eBook: 978-1-315-66776-8

* For full contents and more information, visit: www.routledge.com/9781138952140

Qualitative Research Using Social Media



Gwen Bouvier, Joel Rasmussen

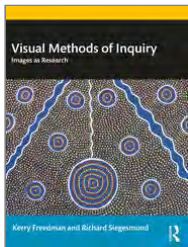
This book shows how to conduct qualitative research projects using social media data. It takes the reader through the stages of choosing data, formulating a research question, and choosing and applying method(s).

Routledge
March 2022:214
Hb: 978-0-367-33350-8: **£130**
Pb: 978-0-367-33347-8: **£39.99**
eBook: 978-0-429-31933-4

* For full contents and more information, visit: www.routledge.com/9780367333478

Visual Methods of Inquiry

Images as Research



Kerry Freedman, Richard Siegesmund

Visual Methods of Inquiry: Images as Research presents qualitative researchers in the social sciences with the benefits, applications, and forms of visual research methods. It includes a wide variety of images to illustrate the many uses of visual methods for social research. Students of social science and the visual arts will find this book useful in expanding and improving their methods of inquiry. Artists and researchers already familiar with visual methods will find that this book clarifies the ways the visual works in various research contexts and provides helpful language to describe and explain those methods.

Routledge
October 2023:238
Hb: 978-0-367-25049-2: **£130**
Pb: 978-0-367-25048-5: **£34.99**
eBook: 978-0-429-28572-1

* For full contents and more information, visit: www.routledge.com/9780367250485

2ND EDITION

Research Methods for Environmental Studies

A Social Science Approach



Mark Kanazawa

The methodological needs of environmental studies are unique in the breadth of research questions that can be posed, calling for a textbook that covers a broad swath of approaches to conducting research with potentially many different kinds of evidence. Drawing on a variety of extended and updated examples to encourage problem-based learning and fully addressing the challenges associated with interdisciplinary investigation, this book will be an essential resource for students embarking on courses exploring research methods in environmental studies.

Routledge
July 2023:498
Hb: 978-1-032-19841-5: **£130**
Pb: 978-1-032-19840-8: **£34.99**
eBook: 978-1-003-26111-7

* For full contents and more information, visit: www.routledge.com/9781032198408

Research Methodologies for Business Management



Vanessa Ratten

Most existing research methodologies texts take a more general approach or are edited books of previously published articles or chapters written by different authors. This book, written by a business management scholar, covers the fundamentals of business management research and its methodologies in a seamless, unified manner. It builds upon the knowledge by examining both qualitative and quantitative research methodologies in the context of business management. It will help business management students and junior researchers quickly build an essential base of knowledge and gain a strategic advantage in publishing and reviewing business related research.

Routledge
February 2023:158
Hb: 978-1-032-32338-1: **£120**
Pb: 978-1-032-32337-4: **£39.99**
eBook: 978-1-003-31451-6

* For full contents and more information, visit: www.routledge.com/9781032323374

Researching and Analysing Business

Research Methods in Practice



Edited by **Pantea Foroudi, Charles Dennis**

Researching and Analysing Business provides an accessible and practical guide to various data collection and data analysis techniques within management. Unique in its practical approach, this book is required and recommended reading for advanced undergraduate and postgraduate students studying research methods.

Routledge
December 2023:456
Hb: 978-0-367-62064-6: **£140**
Pb: 978-0-367-62065-3: **£39.99**
eBook: 978-1-003-10777-4

* For full contents and more information, visit: www.routledge.com/9780367620653

2ND EDITION

Management Research

Applying the Principles of Business Research Methods

**Susan Rose, Nigel Spinks, Ana Isabel Canhoto**

Management Research supports new researchers on every step of the research journey, from defining a project to communicating its findings, as well as balancing the technical aspects of research with the management of the project itself. Management Research provides essential reading for undergraduate and postgraduate students undertaking a dissertation, thesis or research project, as well as professionals currently practicing in the field.

Routledge

December 2023:482

Hb: 978-1-032-46296-7: **£170**Pb: 978-1-032-46295-0: **£49.99**

eBook: 978-1-003-38100-6

* For full contents and more information, visit: www.routledge.com/9781032462950

2ND EDITION

Design Methods and Practices for Research of Project Management

*Edited by* **Beverly Pasian, Rodney Turner**

Design Methods and Practices for Research of Project Management is the most comprehensive guide on how to do research of and in project management. This second edition of the authoritative reference book offers a substantial update on the first edition with over 60% new content and so provides both practitioner and student researchers with a fully up-to-date and complete guide to research practice on project management.

Routledge

May 2024:368

Hb: 978-1-032-74496-4: **£130**Pb: 978-1-032-12387-5: **£35.99*** For full contents and more information, visit: www.routledge.com/9781032123875

3RD EDITION

Planning Research in Hospitality and Tourism

**Levent Altinay, Alexandros Paraskevas, Faizan Ali**

Planning Research in Hospitality and Tourism, 3rd Edition is an accessible, concise and practical guide to planning, conducting and analysing research in tourism and hospitality. Enriched with insightful case studies throughout, this volume is essential reading for all tourism and hospitality researchers.

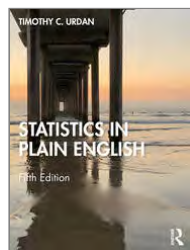
Routledge

June 2024:272

Hb: 978-1-032-52257-9: **£130**Pb: 978-1-032-52258-6: **£44.99*** For full contents and more information, visit: www.routledge.com/9781032522586

5TH EDITION

Statistics in Plain English



Timothy C. Urdan

Statistics in Plain English is a straightforward, conversational introduction to statistics that delivers exactly what its title promises. Each chapter begins with a brief overview of a statistic that describes what the statistic does and when to use it, followed by a detailed step-by-step explanation of how the statistic works and exactly what information it provides. Chapters also include an example of the statistic (or statistics) in use in real-world research, "Worked Examples," "Writing It Up" sections that demonstrate how to write about each statistic, "Wrapping Up and Looking Forward" sections, and practice work problems.

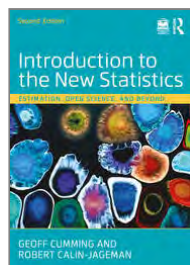
Routledge
March 2022:322
Hb: 978-0-367-34282-1: **£170**
Pb: 978-0-367-34283-8: **£32.99**

* For full contents and more information, visit: www.routledge.com/9780367342838

2ND EDITION

Introduction to the New Statistics

Estimation, Open Science, and Beyond



Geoff Cumming, Robert Calin-Jageman

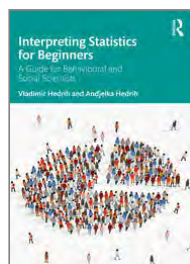
This fully revised and updated second edition is an essential introduction to inferential statistics. It is the first introductory statistics text to use an estimation approach with meta-analysis ("the new statistics") from the start and also to explain the new and exciting Open Science practices, which encourage replication and enhance the trustworthiness of research. Designed for introduction to statistics, data analysis or quantitative methods courses in psychology, education and other social and health sciences, researchers interested in understanding Open Science and the new statistics will also appreciate this book.

Routledge
March 2024:610
Hb: 978-0-367-53149-2: **£190**
Pb: 978-0-367-53150-8: **£62.99**

* For full contents and more information, visit: www.routledge.com/9780367531508

Interpreting Statistics for Beginners

A Guide for Behavioural and Social Scientists



Vladimir Hedrih, Andjelka Hedrih

Interpreting Statistics for Beginners teaches readers to correctly read and interpret results of basic statistical procedures as they are presented in scientific literature, and to understand what they can and cannot infer from such results. Written in an easy-to-read style and focusing on explaining concepts behind statistical calculations, the book is most helpful for readers with no previous training in statistics, and also those wishing to bridge the conceptual gap between doing the statistical calculations and interpreting the results.

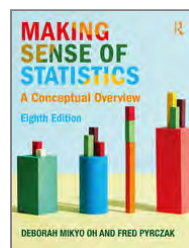
Routledge
February 2022:204
Hb: 978-0-367-62051-6: **£130**
Pb: 978-0-367-61852-0: **£34.99**
eBook: 978-1-003-10771-2

* For full contents and more information, visit: www.routledge.com/9780367618520

8TH EDITION

Making Sense of Statistics

A Conceptual Overview



Deborah M. Oh, Fred Pyrczak

Making Sense of Statistics, Eighth Edition, is the ideal introduction to the concepts of descriptive and inferential statistics for students undertaking their first research project. It presents each statistical concept in a series of short steps, then uses worked examples and exercises to enable students to apply their own learning. This conceptual book is useful for all study levels, from undergraduate to doctoral level across disciplines. Once students understand and feel comfortable with the statistics presented in this book, they should find it easy to master additional statistical concepts.

Routledge
June 2023:284
Hb: 978-1-032-28962-5: **£120**
Pb: 978-1-032-28964-9: **£46.99**
eBook: 978-1-003-29935-6

* For full contents and more information, visit: www.routledge.com/9781032289649

2ND EDITION

Statistical Methods

An Introduction to Basic Statistical Concepts and Analysis



Cheryl Ann Willard

Statistical Methods explains core statistical concepts and basic analysis techniques for the beginning undergraduate student in statistics or quantitative research methods. Each chapter covers a core concept before guiding students through a series of exercises designed to apply and demonstrate their knowledge. Expanded coverage of the second edition includes two new chapters on essential topics such as factorial analysis of variance, additional chapter exercises, and a full suite of instructor resources – powerpoint slides, instructor manual and test bank questions.

Routledge
March 2020:364
Hb: 978-0-367-20351-1: **£170**
Pb: 978-0-367-20352-8: **£52.99**
eBook: 978-0-429-26103-9

* For full contents and more information, visit: www.routledge.com/9780367203528

9TH EDITION

Interpreting Basic Statistics

A Workbook Based on Excerpts from Journal Articles



Zealure C. Holcomb, Keith S. Cox, Zealure C. Holcomb

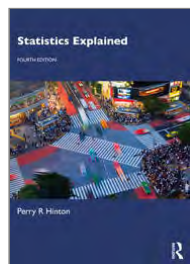
Interpreting Basic Statistics gives students valuable practice in interpreting statistical reporting as it actually appears in peer-reviewed journals. The questions in each exercise are divided into two parts: (1) Factual Questions and (2) Questions for Discussion. The factual questions require careful reading for details, while the discussion questions show that interpreting statistics is more than a mathematical exercise. Each exercise covers a limited number of topics, making it easy to coordinate the exercises with lectures or a traditional statistics textbook.

Routledge
September 2021:258
Hb: 978-0-367-56051-5: **£175**
Pb: 978-0-367-56197-0: **£56.99**
eBook: 978-1-003-09676-4

* For full contents and more information, visit: www.routledge.com/9780367561970

4TH EDITION

Statistics Explained



Perry R. Hinton

Statistics Explained is an accessible introduction to statistical concepts and ideas for undergraduate and postgraduate students new to the field. It makes few assumptions about the reader's statistical knowledge, carefully explaining each step of the analysis and the logic behind it. This new edition will include instructions and tips on how to present data and findings from SPSS output files, updated and more extensive case studies, and a section on alternative statistical software like R.

Routledge

June 2024:368

Hb: 978-0-367-36638-4: £130

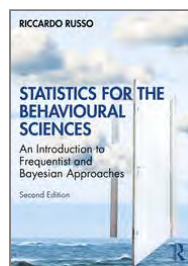
Pb: 978-0-367-36635-3: £36.99

* For full contents and more information, visit: www.routledge.com/9780367366353

2ND EDITION

Statistics for the Behavioural Sciences

An Introduction to Frequentist and Bayesian Approaches



Riccardo Russo

This accessible textbook is for those without a mathematical background (just some notions of basic algebra are sufficient) and provides a comprehensive introduction to all topics covered in introductory behavioural science statistics courses. This timely and highly readable text will be invaluable to undergraduate students of psychology and research methods courses in related disciplines, as well as anyone with an interest in understanding and applying the basic concepts and inferential techniques associated with statistics in the behavioural sciences.

Routledge

November 2020:330

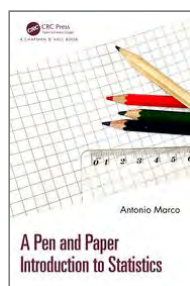
Hb: 978-1-138-71148-8: £130

Pb: 978-1-138-71150-1: £34.99

eBook: 978-1-315-20041-5

* For full contents and more information, visit: www.routledge.com/9781138711501

A Pen and Paper Introduction to Statistics



Antonio Marco

This book proposes to reverse the way statistics is taught, by starting with the introduction of linear models. The reader will have the opportunity to work through the examples and compute sums of squares by just drawing and counting, and finally evaluating whether observed differences are statistically significant by using the tables provided. Intended for students, professional life scientists, and those with little prior knowledge of statistics, this book is for all with simple and clear examples, computations and drawings helping the reader to, not only do, but also to understand statistics.

Chapman & Hall

December 2023:160

Hb: 978-1-032-50511-4: £89.99

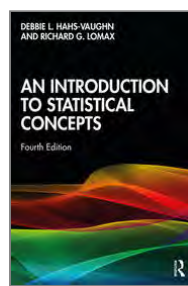
Pb: 978-1-032-50510-7: £31.99

eBook: 978-1-003-39882-0

* For full contents and more information, visit: www.routledge.com/9781032505107

4TH EDITION

An Introduction to Statistical Concepts



Debbie L. Hahs-Vaughn, Richard Lomax

This comprehensive, flexible text is used in both one- and two-semester courses to review introductory through intermediate statistics. Instructors select the topics that are most appropriate for their course. Its conceptual approach helps students more easily understand the concepts and interpret SPSS and research results. Noted for its crystal clear explanations, key concepts are simply stated and occasionally reintroduced and related to one another for reinforcement. Numerous examples demonstrate their relevance. This edition features even more explanation to increase understanding of the concepts and has annotated script for using R.

Routledge

February 2020:1186

Hb: 978-1-138-65055-8: £110

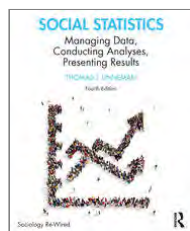
eBook: 978-1-315-62435-8

* For full contents and more information, visit: www.routledge.com/9781138650558

4TH EDITION

Social Statistics

Managing Data, Conducting Analyses, Presenting Results



Thomas J. Linneman

Series: *Sociology Re-Wired*

With a clear, engaging writing style and fascinating examples using a variety of real data, this text covers the contemporary statistical techniques that students will encounter in the world of social research. It covers these techniques at an introductory level and carefully guides students through increasingly complex examples without intimidating them. Recurrent examples using four timely topics – health, immigration, income inequality, and everyday harassment – help students understand how the techniques fit together, and how to use the techniques in combination with one another. Author created web resource accompanies the text.

Routledge

December 2021:678

Hb: 978-1-032-11623-5: £175

Pb: 978-1-032-11528-3: £94.99

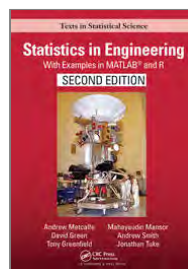
eBook: 978-1-003-22077-0

* For full contents and more information, visit: www.routledge.com/9781032115283

2ND EDITION

Statistics in Engineering

With Examples in MATLAB® and R, Second Edition



Andrew Metcalfe, David Green, Tony Greenfield, Mayhayaudin Mansor, Andrew Smith, Jonathan Tuke

This is a textbook for an undergraduate course in statistics for engineers with a minimal calculus prerequisite. The second edition differs from existing books in three main aspects: it is the only introductory statistics textbook written for engineers that uses R throughout the text, there is an emphasis on statistical methods most relevant to engineers that are illustrated with practical applications, and there is an emphasis on random number generation and simulation, all very useful features in engineering.

Chapman & Hall

June 2020:810

Hb: 978-1-439-89547-4: £84.99

Pb: 978-0-367-57062-0: £44.99

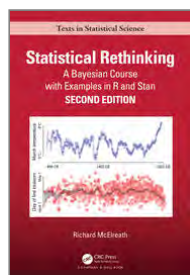
eBook: 978-1-315-11723-2

* For full contents and more information, visit: www.routledge.com/9780367570620

2ND EDITION

Statistical Rethinking

A Bayesian Course with Examples in R and STAN

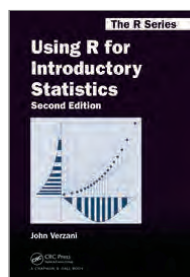
**Richard McElreath***Series: Chapman & Hall/CRC Texts in Statistical Science*

The very popular Statistical Rethinking: A Bayesian Course with Examples in R and Stan, Second Edition builds readers' knowledge of and confidence in statistical modeling. Reflecting the need for even minor programming in today's model-based statistics, the book pushes readers to perform step-by-step calculations that are usually automated. This unique computational approach ensures that readers understand enough of the details to make reasonable choices and interpretations in their own modeling work.

Chapman & Hall
March 2020:612
Hb: 978-0-367-13991-9: **£74.99**
eBook: 978-0-429-02960-8

* For full contents and more information, visit: www.routledge.com/9780367139919

2ND EDITION

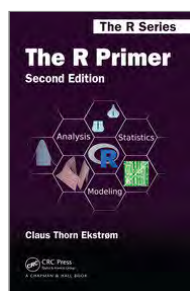
Using R for Introductory Statistics**John Verzani***Series: Chapman & Hall/CRC The R Series*

The second edition of a bestselling textbook, Using R for Introductory Statistics guides students through the basics of R, helping them overcome the sometimes steep learning curve. The author does this by breaking the material down into small, task-oriented steps. The second edition maintains the features that made the first edition so popular, while updating data, examples, and changes to R in line with the current version.

Chapman & Hall
June 2014:518
Hb: 978-1-466-59073-1: **£59.99**
eBook: 978-1-315-37308-9

* For full contents and more information, visit: www.routledge.com/9781466590731

2ND EDITION

R Primer**Claus Thorn Ekström***Series: Chapman & Hall/CRC The R Series*

Newcomers to R are often intimidated by the command-line interface, the vast number of functions and packages, or the processes of importing data and performing a simple statistical analysis. The R Primer provides a collection of concise examples and solutions to R problems frequently encountered by new users of this statistical software. This new edition adds coverage of R Studio and reproducible research.

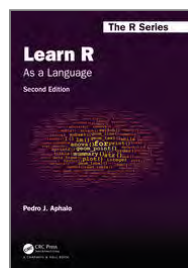
Chapman & Hall
March 2017:426
Hb: 978-1-498-77255-6: **£105**
Pb: 978-1-138-63197-7: **£51.99**
eBook: 978-1-315-15441-1

* For full contents and more information, visit: www.routledge.com/9781138631977

2ND EDITION

Learn R

As a Language

**Pedro J. Aphalo***Series: Chapman & Hall/CRC The R Series*

Learning a computer language like R can be either frustrating, fun, or boring. Having fun requires challenges that wake up the learner's curiosity but also provide an emotional reward on overcoming them. This is the second edition of a book designed so that it includes smaller and bigger challenges, in what I call playgrounds, in the hope that all readers will enjoy their path to R fluency.

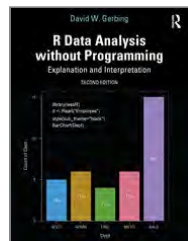
Chapman & Hall
April 2024:462
Hb: 978-1-032-51843-5: **£150**
Pb: 978-1-032-51699-8: **£59.99**

* For full contents and more information, visit: www.routledge.com/9781032516998

2ND EDITION

R Data Analysis without Programming

Explanation and Interpretation

**David W. Gerbing**

The new edition of this innovative book, prepares the readers to quickly analyse data and interpret statistical results using R. Professor Gerbing has developed lessR, which is a ground-breaking method in alleviating the challenges of R programming. The lessR extends R, removing the need for programming. This edition expands upon the first edition's introduction to R through lessR which enables the readers to learn how to organize data for analysis, read the data into R, and generate output without performing numerous functions and programming exercises first.

Routledge
January 2023:378
Hb: 978-1-032-24402-0: **£120**
Pb: 978-1-032-24403-7: **£48.99**
eBook: 978-1-003-27841-2

* For full contents and more information, visit: www.routledge.com/9781032244037

3RD EDITION

SPSS Explained**Perry R. Hinton, Isabella McMurray, Charlotte Brownlow, Peter C. Terry**

SPSS Explained provides the student with all that they need to undertake statistical analysis using SPSS. It combines a step-by-step approach to each procedure with easy-to-follow screenshots at each stage of the process. The authors have many years of experience in teaching SPSS to students from a wide range of disciplines. Their understanding of SPSS users' concerns, as well as a knowledge of the type of questions students ask, form the foundation of this book.

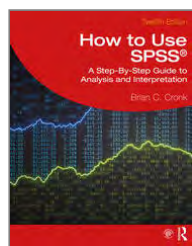
Routledge
September 2023:386
Hb: 978-0-367-36698-8: **£130**
Pb: 978-0-367-36699-5: **£48.99**
eBook: 978-0-429-35086-3

* For full contents and more information, visit: www.routledge.com/9780367366995

12TH EDITION

How to Use SPSS®

A Step-By-Step Guide to Analysis and Interpretation

**Brian C. Cronk**

This book is designed with the novice computer user in mind and for people who have no previous experience using SPSS. Each chapter is divided into short sections that describe the statistic being used, important underlying assumptions, and how to interpret the results and express them in a research report. The book begins with the basics, such as starting SPSS, defining variables, and entering and saving data. It covers all major statistical techniques typically taught in beginning statistics classes, such as descriptive statistics, graphing data, prediction and association, parametric inferential statistics, nonparametric inferential statistics and statistics for test construction.

Routledge

January 2024:252

Hb: 978-1-032-58519-2: **£130**Pb: 978-1-032-58235-1: **£58.99**

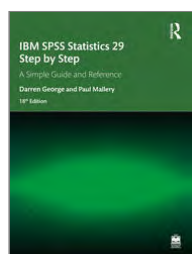
eBook: 978-1-003-45046-7

* For full contents and more information, visit: www.routledge.com/9781032582351

18TH EDITION

IBM SPSS Statistics 29 Step by Step

A Simple Guide and Reference

**Darren George, Paul Mallery**

IBM SPSS Statistics 29 Step by Step: A Simple Guide and Reference, eighteenth edition, takes a straightforward, step-by-step approach that makes SPSS software clear to beginners and experienced researchers alike. Accompanied by updated online instructor's materials and website data files, this is an essential resource for instructors and students needing a guide to using SPSS in their work, across the social sciences, behavioural sciences, education, and beyond.

Routledge

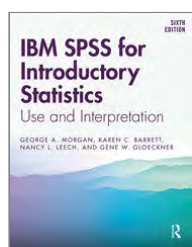
March 2024:440

Hb: 978-1-032-62212-5: **£200**Pb: 978-1-032-62193-7: **£66.99*** For full contents and more information, visit: www.routledge.com/9781032621937

6TH EDITION

IBM SPSS for Introductory Statistics

Use and Interpretation, Sixth Edition

**George A. Morgan, Karen C. Barrett, Nancy L. Leech, Gene W. Gloeckner**

Designed to help students analyze and interpret research data using IBM SPSS, this user-friendly book, written in easy-to-understand language, shows readers how to choose the appropriate statistic based on the design, and to interpret outputs appropriately. The sixth edition includes updated screenshots and instructions for IBM SPSS 24 and Windows 10, and adds helpful callouts to make the book even clearer and easy to use.

Routledge

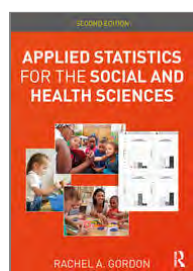
July 2019:266

Hb: 978-1-138-57822-7: **£150**Pb: 978-1-138-57821-0: **£39.99**

eBook: 978-0-429-28765-7

* For full contents and more information, visit: www.routledge.com/9781138578210

2ND EDITION

Applied Statistics for the Social and Health Sciences**Rachel A. Gordon**

Covering basic univariate and bivariate statistics and regression models for nominal, ordinal, and interval outcomes, this textbook provides graduate students in the social and health sciences with fundamental skills to estimate, interpret, and publish quantitative research using contemporary standards. Reflecting the growing importance of 'Big Data', this thoroughly revised and streamlined new edition, outlines changes in best practice in use of statistics in social and health sciences, draws upon new literatures and empirical examples, and highlights the importance of statistical programming, including coding, reproducibility, transparency, and open science.

Routledge

July 2023:800

Hb: 978-1-032-32343-5: **£130**Pb: 978-1-032-32344-2: **£39.99**

eBook: 978-1-003-31453-0

* For full contents and more information, visit: www.routledge.com/9781032323442**Data Analytics for the Social Sciences**

Applications in R

**G. David Garson**

This book presents a complete exploration of statistical data analysis in R for a wide variety of social science disciplines and quantitative methods courses. Covering all the bases including multilevel modeling and ANOVA / ANCOVA, the book also goes further by looking at topics such as: neural networks to implement deep learning, thus solving complex problems other algorithms cannot; how to deal with missing values in real world data; and the use of text analytics. R code input and output is included. Suitable for all advanced level undergraduate and postgraduate students learning statistical data analysis.

Routledge

November 2021:704

Hb: 978-0-367-62429-3: **£230**Pb: 978-0-367-62427-9: **£82.99**

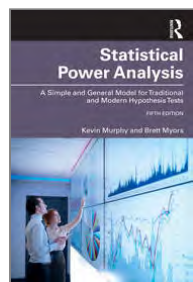
eBook: 978-1-003-10939-6

* For full contents and more information, visit: www.routledge.com/9780367624279

5TH EDITION

Statistical Power Analysis

A Simple and General Model for Traditional and Modern Hypothesis Tests, Fifth Edition

**Brett Myers, Kevin R. Murphy**

Statistical Power Analysis explains the key concepts in statistical power analysis and illustrates their application in both tests of traditional null hypotheses. It provides readers with the tools to understand and perform power analyses for virtually all the statistical methods used in the social and behavioral sciences. This edition includes new material and new power software. The programs used for power analysis in this book have been re-written in R, a language that is widely used and freely available. Statistical Power Analysis helps readers design studies, diagnose existing studies, and understand why hypothesis tests come out the way they do.

Routledge

March 2023:224

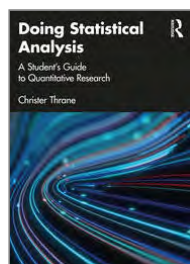
Hb: 978-1-032-28301-2: **£120**Pb: 978-1-032-28300-5: **£49.99**

eBook: 978-1-003-29622-5

* For full contents and more information, visit: www.routledge.com/9781032283005

Doing Statistical Analysis

A Student's Guide to Quantitative Research



Christer Thrane

Doing Statistical Analysis looks at three kinds of statistical research questions – descriptive, associational and inferential – and shows students how to conduct statistical analyses and interpret the results. Keeping equations to a minimum, it uses a conversational style and relatable examples such as football, covid-19 and tourism, to aid understanding. Each chapter contains practice exercises, and a section showing students how to reproduce the statistical results in the book using Stata and SPSS. Its accessible approach means this is the ideal textbook for undergraduate students across the social and behavioural sciences needing to build their confidence with statistical analysis.

Routledge
July 2022:266
Hb: 978-1-032-18030-4: £130
Pb: 978-1-032-17132-6: £48.99
eBook: 978-1-003-25255-9

* For full contents and more information, visit: www.routledge.com/9781032171326

3RD EDITION

Multilevel and Longitudinal Modeling with IBM SPSS



Ronald H. Heck, Scott L. Thomas, Lynn N. Tabata

Series: Quantitative Methodology Series

This text demonstrates how to use the multilevel- and longitudinal-modeling techniques available in IBM SPSS (Version 26). Adopting a workbook format, the text walks readers through setting up, running, and interpreting a variety of different types of multilevel and longitudinal models using the linear mixed-effects model (MIXED and GENLIMIXED) platforms in SPSS. This text is an essential resource for graduate students taking courses on multilevel, longitudinal, and latent variable modeling, multivariate statistics, or advanced quantitative techniques.

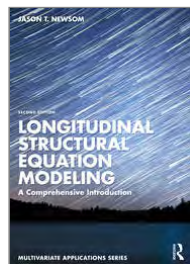
Routledge
April 2022:494
Hb: 978-0-367-42460-2: £160
Pb: 978-0-367-42461-9: £46.99
eBook: 978-0-367-82427-3

* For full contents and more information, visit: www.routledge.com/9780367424619

2ND EDITION

Longitudinal Structural Equation Modeling

A Comprehensive Introduction



Jason T. Newsom

Series: Multivariate Applications Series

Longitudinal Structural Equation Modeling, Second Edition provides an in-depth, comprehensive overview of structural equation modeling (SEM) strategies for longitudinal data to help readers see which modeling options are available for which hypotheses. Ideal for graduate courses on longitudinal (data) analysis, advanced SEM, longitudinal SEM, and/or advanced data (quantitative) analysis taught in the behavioral, social, and health sciences, Longitudinal Structural Equation Modeling, Second Edition, also appeals to researchers in these fields, and the first edition has been popular as a standard reference for this type of analysis.

Routledge
October 2023:522
Hb: 978-1-032-20283-9: £130
Pb: 978-1-032-20286-0: £68.99
eBook: 978-1-003-26303-6

* For full contents and more information, visit: www.routledge.com/9781032202860

7TH EDITION

Advanced and Multivariate Statistical Methods

Practical Application and Interpretation



Craig A. Mertler, Rachel A. Vannatta, Kristina N. LaVenja

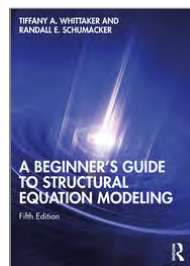
Ideal for non-math majors, Advanced and Multivariate Statistical Methods teaches students to interpret, present, and write up results for each statistical technique without overemphasizing advanced math. This highly applied approach covers the why, what, when and how of advanced and multivariate statistics in a way that is neither too technical nor too mathematical. Students also learn how to compute each technique using SPSS software. New to the seventh edition: Updated to SPSS 26 All screenshots and images in full colour Fully updated ancillaries including how to videos for both statistical techniques and SPSS walkthroughs

Routledge
November 2021:350
Hb: 978-0-367-49720-0: £325
Pb: 978-0-367-49747-7: £130
eBook: 978-1-003-04722-3

* For full contents and more information, visit: www.routledge.com/9780367497477

5TH EDITION

A Beginner's Guide to Structural Equation Modeling



Tiffany A. Whittaker, Randall E. Schumacker

A Beginner's Guide to Structural Equation Modeling, fifth edition, has been redesigned with consideration of a true beginner in structural equation modeling (SEM) in mind. The book covers introductory through intermediate topics in SEM in more detail than in any previous edition. This book is intended for true beginners in structural equation modeling and is designed for introductory graduate courses in structural equation modeling taught in psychology, education, business, and the social and healthcare sciences. This book also appeals to researchers and faculty in various disciplines. Prerequisites include correlation and regression methods.

Routledge
May 2022:418
Hb: 978-0-367-49015-7: £130
Pb: 978-0-367-47796-7: £66.99
eBook: 978-1-003-04401-7

* For full contents and more information, visit: www.routledge.com/9780367477967

2ND EDITION

Regression Analysis

A Practical Introduction



Jeremy Arkes

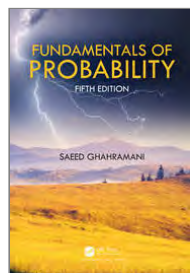
Regression Analysis covers the concepts needed to design optimal regression models and to properly interpret regressions. It details the most common pitfalls, including three sources of bias not covered in other textbooks. This second edition features a new chapter on integrity and ethics, and has been updated throughout to include more international examples. It is ideal for anyone learning quantitative methods in the social sciences, business, medicine, and data analytics. It will also appeal to researchers and academics looking to better understand regressions.

Routledge
January 2023:412
Hb: 978-1-032-25784-6: £120
Pb: 978-1-032-25783-9: £39.99
eBook: 978-1-003-28500-7

* For full contents and more information, visit: www.routledge.com/9781032257839

5TH EDITION

Fundamentals of Probability



Saeed Ghahramani

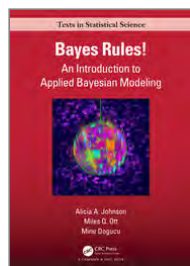
This one- or two-term calculus-based basic probability text is written for majors in mathematics, physical sciences, engineering, statistics, actuarial science, business and finance, operations research, and computer science. It presents probability in a natural way: through interesting and instructive examples and exercises that motivate the theory, definitions, theorems, and methodology. This book is mathematically rigorous and, at the same time, closely matches the historical development of probability. Whenever appropriate, historical remarks are included, and the 2096 examples and exercises have been designed to arouse curiosity and encourage students to delve into the theory.

Chapman & Hall
May 2024:704
Hb: 978-1-032-36608-1: £110

* For full contents and more information, visit: www.routledge.com/9781032366081

Bayes Rules!

An Introduction to Applied Bayesian Modeling



Alicia A. Johnson, Miles Q. Ott, Mine Dogucu

Series: Chapman & Hall/CRC Texts in Statistical Science

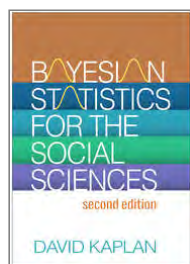
An engaging, sophisticated, and fun introduction to the field of Bayesian Statistics, Bayes Rules! An Introduction to Bayesian Modeling with R brings the power of modern Bayesian thinking, modeling, and computing to a broad audience. In particular, it is an ideal resource for advanced undergraduate Statistics students and practitioners with comparable experience. Bayes Rules! empowers readers to weave Bayesian approaches into their everyday practice.

Chapman & Hall
March 2022:544
Hb: 978-1-032-19159-1: £170
Pb: 978-0-367-25539-8: £59.99
eBook: 978-0-429-28834-0

* For full contents and more information, visit: www.routledge.com/9780367255398

2ND EDITION

Bayesian Statistics for the Social Sciences, Second Edition



David Kaplan

This book equips social science researchers to apply the latest Bayesian methodologies to their data analysis problems. The second edition includes new chapters on model uncertainty, Bayesian variable selection and sparsity, and Bayesian workflow for statistical modeling, and emphasizes use of the RStan software package. Topics include frequentist and epistemic probability, prior distributions, Hamiltonian Monte Carlo, Bayesian linear regression and generalized linear models, model evaluation and comparison, multilevel modeling, missing data, and more. The book includes worked-through examples with annotated RStan code, and features a helpful companion website.

Guilford Press
December 2023:250
Hb: 978-1-462-55354-9: £57.99

* For full contents and more information, visit: www.routledge.com/9781462553549

The Effect

An Introduction to Research Design and Causality



Nick Huntington-Klein

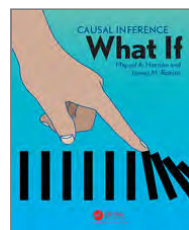
The Effect: An Introduction to Research Design and Causality is about research design, specifically concerning research that uses observational data to make a causal inference. It is separated into two halves, each with different approaches to that subject. The first half goes through the concepts of causality, with very little in the way of estimation. It introduces the concept of identification thoroughly and clearly and discusses it as a process of trying to isolate variation that has a causal interpretation. Subjects include heavy emphasis on data-generating processes and causal diagrams.

Chapman & Hall
January 2022:646
Hb: 978-1-032-12745-3: £82.99
Pb: 978-1-032-12578-7: £29.99
eBook: 978-1-003-22605-5

* For full contents and more information, visit: www.routledge.com/9781032125787

Causal Inference

What If



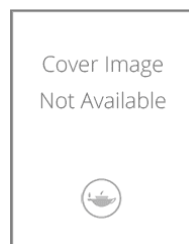
Miguel A. Hernan, James M. Robins

The application of causal inference methods is growing exponentially in fields that deal with observational data. Written by pioneers in the field, this practical book presents an authoritative yet accessible overview of the methods and applications of causal inference. With a wide range of detailed, worked examples using real epidemiologic data as well as software for replicating the analyses, the text provides a thorough introduction to the basics of the theory for non-time-varying treatments and the generalization to complex longitudinal data.

CRC Press
April 2024:312
Hb: 978-1-420-07616-5: £36.99

* For full contents and more information, visit: www.routledge.com/9781420076165

A First Course in Causal Inference



Peng Ding

Series: Chapman & Hall/CRC Texts in Statistical Science

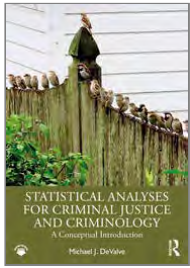
This textbook, based on the author's course on causal inference at UC Berkeley taught over the past seven years, only requires basic knowledge of probability theory, statistical inference, and linear and logistic regressions. It assumes minimal knowledge of causal inference, and reviews basic probability and statistics in the appendix. It covers causal inference from a statistical perspective and includes examples and applications from biostatistics and econometrics. This book is suitable for an advanced undergraduate or graduate-level course on causal inference, or postgraduate and PhD-level course in statistics and biostatistics departments.

Chapman & Hall
June 2024:448
Hb: 978-1-032-75862-6: £59.99

* For full contents and more information, visit: www.routledge.com/9781032758626

Statistical Analyses for Criminal Justice and Criminology

A Conceptual Introduction



Michael J. DeValve

This book is a how-to guide for statistical analyses designed for undergraduates and others new to the subject. Written in an easy-going and clear style, the book uses policing data to illustrate concepts and includes a short narrative at the beginning of each chapter to engage readers. Easily identified Main Take-Aways and Key Terms features aid student understanding. Designed to combat the fear of mathematics and statistics often held by students in the social sciences, plain verbiage, multiple examples, and clear demonstrations combine to achieve the actualization and proper contextualized use of univariate and bivariate statistics.

Routledge

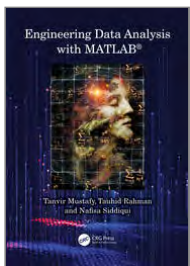
June 2024:272

Hb: 978-1-032-63858-4: **£130**

Pb: 978-1-032-63854-6: **£34.99**

* For full contents and more information, visit: www.routledge.com/9781032638546

Engineering Data Analysis with MATLAB®



Tanvir Mustafy, Tauhid Rahman, Nafisa Siddiqui

This book provides a concise overview of a variety of techniques for analyzing statistical, scientific, and financial data, using MATLAB® to integrate several approaches to data analysis and statistics. Chapters offer a broad review of computational data analysis, illustrated with many examples and applications. Each chapter combines theoretical concepts with practical MATLAB® applications and includes practice exercises, ensuring a comprehensive understanding of the material. With coverage of both basic and more complex ideas in applied statistics, the book has broad appeal for undergraduate students up to practicing engineers.

CRC Press

June 2024:850

Hb: 978-1-032-50658-6: **£140**

Pb: 978-1-032-50771-2: **£69.99**

* For full contents and more information, visit: www.routledge.com/9781032507712

Data Science

A First Introduction



Tiffany Timbers, Trevor Campbell, Melissa Lee

Series: Chapman & Hall/CRC Data Science Series

Data Science: A First Introduction focuses on using the R programming language in Jupyter notebooks to perform data manipulation and cleaning, create effective visualizations, and extract insights from data using classification, regression, clustering, and inference. The text emphasizes workflows that are clear, reproducible, and shareable, and includes coverage of the basics of version control. All source code is available online, demonstrating the use of good reproducible project workflows.

Chapman & Hall
July 2022:456
Hb: 978-0-367-53217-8: **£120**
Pb: 978-0-367-52468-5: **£48.99**
eBook: 978-1-003-08097-8

* For full contents and more information, visit: www.routledge.com/9780367524685

A Tour of Data Science

Learn R and Python in Parallel



Nailong Zhang

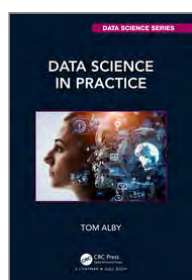
Series: Chapman & Hall/CRC Data Science Series

This book covers the fundamentals of data science, including programming, statistics, optimization, and machine learning in a single and short book. It does not cover everything, but instead, teaches the key concepts and topics. It also covers two of the most popular programming languages used in Data Science, R and Python, in one source.

Chapman & Hall
November 2020:216
Hb: 978-0-367-89706-2: **£130**
Pb: 978-0-367-89586-0: **£48.99**
eBook: 978-1-003-02064-6

* For full contents and more information, visit: www.routledge.com/9780367895860

Data Science in Practice



Tom Alby

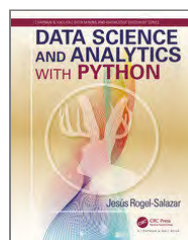
Series: Chapman & Hall/CRC Data Science Series

Data Science in Practice is the ideal introduction to data science. With or without math skills: Here you get the all-round view that you need for your projects. This book describes how to properly question data, to unearth the treasure that data can be. As technology alone is not enough, this book also deals with problems in project implementation, illuminates various fields of application and addresses ethical aspects. Data Science in Practice includes many examples, notes on errors, decision-making aids and other practical tips, and is ideal as a complementary text for university students, or as a useful learning tool for those starting more data-related roles.

Chapman & Hall
September 2023:318
Hb: 978-1-032-50524-4: **£140**
Pb: 978-1-032-50526-8: **£54.99**
eBook: 978-1-003-42636-3

* For full contents and more information, visit: www.routledge.com/9781032505268

Data Science and Analytics with Python



Jesus Rogel-Salazar

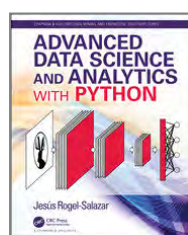
Series: Chapman & Hall/CRC Data Mining and Knowledge Discovery Series

The book is designed for practitioners in data science and data analytics in both academic and business environments. The aim is to present the reader with the main concepts used in data analytics using tools developed in Python, such as SciKit Learn, Pandas, Numpy, etc. The use of Python is of particular benefit given its recent popularity in the data science community, and the book can be used by seasoned programmers and newcomers alike.

Chapman & Hall
August 2017:412
Hb: 978-1-138-04317-6: **£115**
Pb: 978-1-498-74209-2: **£52.99**
eBook: 978-1-315-15167-0

* For full contents and more information, visit: www.routledge.com/9781498742092

Advanced Data Science and Analytics with Python



Jesus Rogel-Salazar

Series: Chapman & Hall/CRC Data Mining and Knowledge Discovery Series

The book is intended for practitioners in data science and data analytics in both academic and business environments. It aims to present the reader with concepts in data science and analytics that were deemed to be more advanced or simply out of scope in the author's first book, and are used in data analytics using tools developed in Python such as SciKit Learn, Pandas, Numpy, etc. The use of Python is of particular benefit given its recent popularity in the data science community. The book is therefore a reference to be used by seasoned programmers and newcomers alike and the key benefit is the practical approach presented throughout the book.

Chapman & Hall
May 2020:424
Hb: 978-0-429-44661-0: **£110**
Pb: 978-1-138-31506-8: **£48.99**
eBook: 978-0-429-44664-1

* For full contents and more information, visit: www.routledge.com/9781138315068

Foundations of Data Science with Python



John M. Shea

Series: Chapman & Hall/CRC The Python Series

Foundations of Data Science with Python introduces readers to the fundamentals of data science, including data manipulation and visualization, probability, statistics, and dimensionality reduction. This book is targeted toward engineers and scientists, but it should be readily understandable to anyone who knows basic calculus and the essentials of computer programming. This book can be used as an undergraduate textbook for an Introduction to Data Science course or to provide a more contemporary approach in courses like Engineering Statistics. It is also intended to be accessible to practicing engineers and scientists.

Chapman & Hall
February 2024:496
Hb: 978-1-032-34674-8: **£175**
Pb: 978-1-032-35042-4: **£68.99**

* For full contents and more information, visit: www.routledge.com/9781032350424

2ND EDITION

Modern Data Science with R



Benjamin S. Baumer, Daniel T. Kaplan, Nicholas J. Horton

Series: Chapman & Hall/CRC Texts in Statistical Science

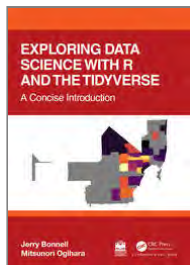
New data technologies and database systems facilitate scraping data and merging information from different sources and formats and restructuring data into a form suitable for analysis. State-of-the-art workflow and tools foster well-documented and reproducible analysis. Modern statistical methods allow the analyst to fit and assess models as well as to undertake supervised or unsupervised learning to extract information. Contemporary data science requires tight integration of these statistics, computing, data skills, mathematics, and communication. The text is intended for readers with some background in statistics and modest prior experience in scripting and programming.

Chapman & Hall
April 2021:650
Hb: 978-0-367-19149-8: **£82.99**
eBook: 978-0-429-20071-7

* For full contents and more information, visit: www.routledge.com/9780367191498

Exploring Data Science with R and the Tidyverse

A Concise Introduction



Jerry Bonnell, Mitsunori Ogihara

This book introduces the reader to data science using R and the tidyverse. No prerequisite knowledge is needed in college-level programming or mathematics (e.g., calculus or statistics). The book is self-contained so readers can immediately begin building data science workflows without needing to reference extensive amounts of external resources for onboarding. The contents are targeted for undergraduate students but are equally applicable to students at the graduate level and beyond. The book develops concepts using many real-world examples to motivate the reader. An exercise set is made available and designed for compatibility with automated grading tools for instructor use.

Chapman & Hall
August 2023:492
Hb: 978-1-032-32950-5: **£190**
Pb: 978-1-032-34170-5: **£74.99**
eBook: 978-1-003-32084-5

* For full contents and more information, visit: www.routledge.com/9781032341705

Statistical Inference via Data Science: A ModernDive into R and the Tidyverse



Chester Ismay, Albert Y. Kim

Series: Chapman & Hall/CRC The R Series

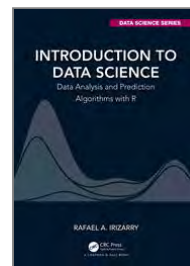
This is a modern textbook in statistical inference, using the principles of data science through R and the Tidyverse. It assumes minimal background knowledge of the reader: there is no algebra, no calculus, and no prior programming/coding experience. It is designed to be a gentle introduction to the practice of analyzing data and answering questions using data the way data scientists, statisticians, data journalists, and other researchers would. This book is suitable for teaching a first course in statistical inference at undergraduate level.

Chapman & Hall
December 2019:460
Hb: 978-0-367-40987-6: **£170**
Pb: 978-0-367-40982-1: **£66.99**
eBook: 978-0-367-40991-3

* For full contents and more information, visit: www.routledge.com/9780367409821

Introduction to Data Science

Data Analysis and Prediction Algorithms with R



Rafael A. Irizarry

Series: Chapman & Hall/CRC Data Science Series

The book begins by going over the basics of R and the tidyverse. You learn R throughout the book, but in the first part we go over the building blocks needed to keep learning during the rest of the book.

Chapman & Hall
November 2019:743
Hb: 978-0-367-35798-6: **£82.99**
eBook: 978-0-429-34183-0

* For full contents and more information, visit: www.routledge.com/9780367357986

Telling Stories with Data

With Applications in R



Rohan Alexander

Series: Chapman & Hall/CRC Data Science Series

The book equips students with the end-to-end skills needed to do data science. That means gathering, cleaning, preparing, and sharing data, then using statistical models to analyse data, writing about the results of those models, drawing conclusions from them, and finally, using the cloud to put a model into production, all done in a reproducible way. This book will achieve the goals by working through extensive case studies in terms of gathering and preparing data, and integrating ethics throughout. It is specifically designed around teaching how to write about the data and models, so aspects such as writing are explicitly covered.

Chapman & Hall
July 2023:622
Hb: 978-1-032-13477-2: **£74.99**
eBook: 978-1-003-22940-7

* For full contents and more information, visit: www.routledge.com/9781032134772

Practitioner's Guide to Data Science



Hui Lin, Ming Li

Series: Chapman & Hall/CRC Data Science Series

This book aims to increase the visibility of data science in real-world, which differs from what you learn from a typical textbook. Many aspects of day-to-day data science work are almost absent from conventional statistics, machine learning, and data science curriculum. This book is for readers who want to explore possible career paths and eventually become data scientists. This book comprehensively introduces various data science fields, and programming skills in data science projects. Traditional data-related practitioners such as statisticians, business analysts, and data analysts will find this book helpful in expanding their skills for future data science careers.

Chapman & Hall
May 2023:402
Hb: 978-0-815-35447-5: **£140**
Pb: 978-0-815-35439-0: **£52.99**
eBook: 978-1-351-13291-6

* For full contents and more information, visit: www.routledge.com/9780815354390

2ND EDITION

Big Data and Social Science

Data Science Methods and Tools for Research and Practice



Edited by **Ian Foster, Rayid Ghani, Ron S. Jarmin, Frauke Kreuter, Julia Lane**

Series: *Chapman & Hall/CRC Statistics in the Social and Behavioral Sciences*

This classroom-tested book fills a major gap in graduate- and professional-level data science and social science education. It can be used to train a new generation of social data scientists to tackle real-world problems and improve the skills and competencies of applied social scientists and public policy practitioners. It empowers you to use the massive and rapidly growing amounts of available data to interpret economic and social activities in a scientific and rigorous manner.

Chapman & Hall

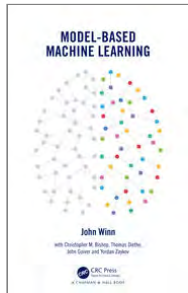
November 2020:412

Hb: 978-0-367-34187-9: **£130**Pb: 978-0-367-56859-7: **£52.99**

eBook: 978-0-429-32438-3

* For full contents and more information, visit: www.routledge.com/9780367568597

Model-Based Machine Learning



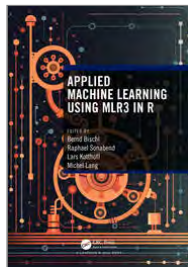
John Winn

Machine learning is being applied to a growing variety of problems in a variety of domains. A fundamental challenge when using machine learning is connecting the abstract mathematics of a machine learning technique to real world problems. This book tackles this through model-based machine learning, focusing on understanding the assumptions encoded in a machine learning system and their impact on the behaviour of the system. The key ideas of model-based machine learning are introduced through case studies involving real-world applications. It aims not just to explain machine learning methods, but also how to create, debug, and evolve them to solve a problem.

Chapman & Hall
October 2023:468
Hb: 978-1-498-75681-5: **£68.99**
eBook: 978-0-429-19268-5

* For full contents and more information, visit: www.routledge.com/9781498756815

Applied Machine Learning Using mlr3 in R



Edited by **Bernd Bischl, Raphael Sonabend, Lars Kottthoff, Michel Lang**

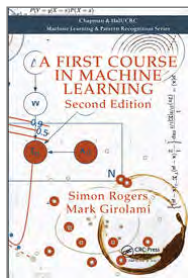
mlr3 is an award-winning ecosystem of R packages that have been developed to enable state-of-the-art machine learning capabilities in R. This book gives an overview of flexible and robust machine learning methods, with an emphasis on how to implement them using mlr3 in R. It covers many key topics, including basic machine learning tasks, such as building and evaluating a predictive model; hyperparameter tuning of machine learning approaches to obtain peak performance; building machine learning pipelines that perform complex operations

Chapman & Hall
January 2024:356
Hb: 978-1-032-51567-0: **£150**
Pb: 978-1-032-50754-5: **£59.99**
eBook: 978-1-003-40284-8

* For full contents and more information, visit: www.routledge.com/9781032507545

2ND EDITION

A First Course in Machine Learning



Simon Rogers, Mark Girolami

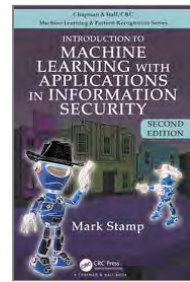
The new edition of this popular, undergraduate textbook has been revised and updated to reflect current growth areas in Machine Learning. The new edition includes three new chapters with more detailed discussion of Markov Chain Monte Carlo techniques, Classification and Regression with Gaussian Processes, and Dirichlet Process models. Previous chapters have also been updated to reflect new developments in Machine Learning, and correct any previous errors in the text.

Chapman & Hall
June 2020:428
Hb: 978-1-498-73848-4: **£64.99**
Pb: 978-0-367-57464-2: **£39.99**
eBook: 978-1-315-38215-9

* For full contents and more information, visit: www.routledge.com/9780367574642

2ND EDITION

Introduction to Machine Learning with Applications in Information Security



Mark Stamp

Series: Chapman & Hall/CRC Machine Learning & Pattern Recognition

Introduction to Machine Learning with Applications in Information Security, Second Edition provides a classroom-tested introduction to a wide variety of machine learning and deep learning algorithms and techniques, reinforced via realistic applications. The book is accessible and doesn't prove theorems, or dwell on mathematical theory. The goal is to present topics at an intuitive level, with just enough detail to clarify the underlying concepts. The applications presented serve to demystify the topics by illustrating the use of various learning techniques in straightforward scenarios.

Chapman & Hall
September 2022:548
Hb: 978-1-032-20492-5: **£62.99**
eBook: 978-1-003-26487-3

* For full contents and more information, visit: www.routledge.com/9781032204925

Machine Learning Toolbox for Social Scientists

Applied Predictive Analytics with R



Yigit Aydede

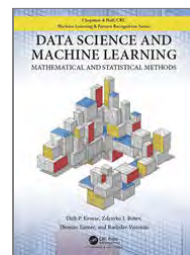
Machine Learning Toolbox for Social Scientists covers predictive methods with complementary statistical "tools" that make it mostly self-contained. The inferential statistics is the traditional framework for most data analytics courses in social science and business fields, especially in Economics and Finance. The new organization that this book offers goes beyond standard machine learning code applications, providing intuitive backgrounds for new predictive methods that social science and business students can follow. The modern statistical methods the book provides allows it to be effectively used in teaching in the social science and business fields.

Chapman & Hall
September 2023:600
Hb: 978-1-032-46395-7: **£74.99**
eBook: 978-1-003-38150-1

* For full contents and more information, visit: www.routledge.com/9781032463957

Data Science and Machine Learning

Mathematical and Statistical Methods



Dirk P. Kroese, Zdravko Botev, Thomas Taimre

Series: Chapman & Hall/CRC Machine Learning & Pattern Recognition

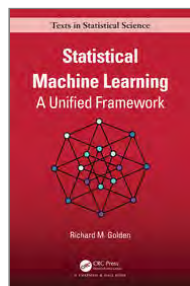
The purpose of this book is to provide an accessible, comprehensive textbook in data science and machine learning. The book will provide a solid basis in linear algebra, optimization, probability, and statistics. The main body will discuss the major topics in machine learning and data science: data manipulation, supervised and unsupervised learning, modelling of data, linear models, regression, classification, principal component analysis, deep learning, high dimensional data, regularization, kernel methods, support vector machines, etc.

Chapman & Hall
November 2019:538
Hb: 978-1-138-49253-0: **£84.99**
eBook: 978-0-367-81697-1

* For full contents and more information, visit: www.routledge.com/9781138492530

Statistical Machine Learning

A Unified Framework



Richard Golden

Series: *Chapman & Hall/CRC Texts in Statistical Science*

For advanced undergraduate students, graduate students, and professional. Presents a wide range of popular, disparate, and diverse machine learning algorithms within a unified theoretical framework, characterized by a collection of carefully chosen theorems from the fields of nonlinear optimization theory and mathematical statistics which respectively characterize both asymptotic behavior and generalization performance. The purpose is to teach students how to confidently apply these theorems in practice. The only required mathematical prerequisites are lower-division linear algebra, lower-division calculus, and an upper-division calculus-based course in probability theory.

Chapman & Hall

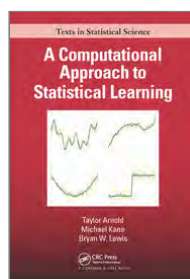
July 2020:524

Hb: 978-1-138-48469-6: **£99.99**

eBook: 978-1-351-05150-7

* For **full contents** and more information, visit: www.routledge.com/9781138484696

A Computational Approach to Statistical Learning



Taylor Arnold, Michael Kane, Bryan W. Lewis

This book synthesizes those techniques from numerical analysis, algorithms, data structures, and optimization theory most commonly employed in statistics and machine learning. We provide concrete applications of these methods by giving complete reference implementations for a large set of the most commonly used statistical estimators. The goal is to provide a self-contained textbook explaining the inner algorithmic workings of statistical estimators.

Chapman & Hall

June 2020:374

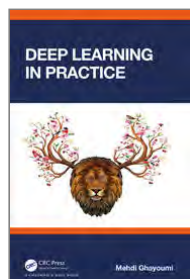
Hb: 978-1-138-04637-5: **£74.99**

Pb: 978-0-367-57061-3: **£44.99**

eBook: 978-1-315-17140-1

* For **full contents** and more information, visit: www.routledge.com/9780367570613

Deep Learning in Practice



Mehdi Ghayoumi

Deep Learning in Practice helps you learn how to develop and optimize a model for your projects using Deep Learning (DL) methods and architectures. This book is useful for undergraduate and graduate students, as well as practitioners in industry and academia. It will serve as a useful reference for learning deep learning fundamentals and implementing a deep learning model for any project, step by step.

Chapman & Hall

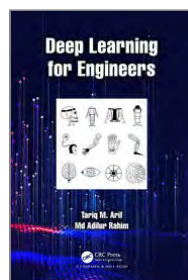
December 2021:218

Hb: 978-0-367-45862-1: **£77.99**

eBook: 978-1-003-02581-8

* For **full contents** and more information, visit: www.routledge.com/9780367458621

Deep Learning for Engineers



Tariq M. Arif, Md Adilur Rahim

As a comprehensive guideline for applying deep learning models in practical settings, this book features an easy-to-understand coding structure using Python and PyTorch with an in-depth explanation of four typical deep learning case studies on image classification, object detection, semantic segmentation, and image captioning. Science and engineering students, academic researchers, and industry professionals will find the contents useful.

Chapman & Hall

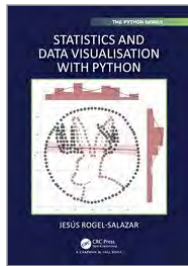
February 2024:170

Hb: 978-1-032-50473-5: **£82.99**

Pb: 978-1-032-51581-6: **£46.99**

* For **full contents** and more information, visit: www.routledge.com/9781032515816

Statistics and Data Visualisation with Python



Jesus Rogel-Salazar

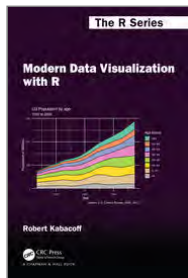
Series: Chapman & Hall/CRC The Python Series

Statistics and Data Visualisation with Python aims to build statistical knowledge from the ground up by enabling the reader to understand the ideas behind inferential statistics, and begin to formulate hypotheses that form the foundations for the applications and algorithms in statistical analysis, business analytics, machine learning and applied machine learning. This book is intended to serve as a bridge in statistics for graduates and business practitioners interested in using their skills in the area of statistical science, and data science and analytics, acting as a refresher for readers that have taken some courses in statistics, but not necessarily use it in their daily work.

Chapman & Hall
January 2023:554
Hb: 978-0-367-74936-1: **£120**
Pb: 978-0-367-74451-9: **£44.99**
eBook: 978-1-003-16035-9

* For full contents and more information, visit: www.routledge.com/9780367744519

Modern Data Visualization with R



Robert Kabacoff

Series: Chapman & Hall/CRC The R Series

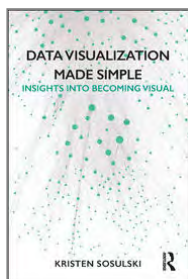
Describes ways that raw and summary data can be turned into visualizations that convey meaningful insights: basic graphs, bar charts, scatter plots, and line charts, and progresses to tree maps, alluvial plots, radar charts, mosaic plots, grouped dot plots, effects plots, multivariate presentations such as corrgrams, biplots, network diagrams.

Chapman & Hall
March 2024:256
Hb: 978-1-032-28949-6: **£150**
Pb: 978-1-032-28760-7: **£59.99**

* For full contents and more information, visit: www.routledge.com/9781032287607

Data Visualization Made Simple

Insights into Becoming Visual



Kristen Sosulski

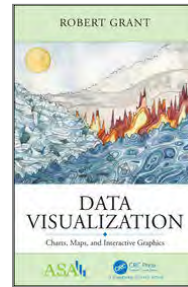
Data Visualization Made Simple is a practical guide to the fundamentals, strategies, and real-world cases for data visualization, an essential skill required in today's information-rich world. With foundations rooted in statistics, psychology, and computer science, data visualization offers practitioners in almost every field a coherent way to share findings from original research, big data, learning analytics, and more. Both novices and seasoned designers in education, business, and other areas can use this book's effective, linear process to develop data visualization literacy and promote exploratory, inquiry-based approaches to visualization problems.

Routledge
October 2018:284
Hb: 978-1-138-50387-8: **£140**
Pb: 978-1-138-50391-5: **£36.99**
eBook: 978-1-315-14609-6

* For full contents and more information, visit: www.routledge.com/9781138503915

Data Visualization

Charts, Maps, and Interactive Graphics



Robert Grant

Series: ASA-CRC Series on Statistical Reasoning in Science and Society

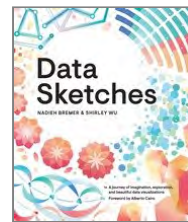
This is the age of data. There are more innovations and more opportunities for interesting work with data than ever before, but there is also an overwhelming amount of quantitative information being published every day. Data visualisation has become big business, because communication is the difference between success and failure, no matter how clever the analysis may have been. The ability to visualize data is now a skill in demand across business, government, NGOs and academia. Data Visualization: Charts, Maps, and Interactive Graphics gives an overview of a wide range of techniques and challenges, while staying accessible to anyone interested in working with and understanding data.

Chapman & Hall
December 2018:248
Hb: 978-1-138-55359-0: **£84.99**
Pb: 978-1-138-70760-3: **£22.99**
eBook: 978-1-315-20135-1

* For full contents and more information, visit: www.routledge.com/9781138707603

Data Sketches

A journey of imagination, exploration, and beautiful data visualizations



Nadieh Bremer, Shirley Wu

Series: AK Peters Visualization Series

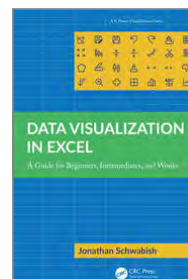
In Data Sketches, Nadieh Bremer and Shirley Wu document the creative and collaborative process behind 24 unique data visualization projects, spanning different topics, technologies, and forms. Features: Technical write-ups with beginner-friendly explanations of core concepts; Practical lessons on data and design challenges; Full-color; Interview with Tamara Munzner; Foreword by Alberto Cairo. This book is perfect for anyone interested or working in data visualization and information design, especially those who want to take their work to the next level and are inspired by unique and compelling data-driven storytelling.

A K Peters/CRC Press
February 2021:428
Hb: 978-0-367-00012-7: **£105**
Pb: 978-0-367-00008-0: **£39.99**
eBook: 978-0-429-44501-9

* For full contents and more information, visit: www.routledge.com/9780367000080

Data Visualization in Excel

A Guide for Beginners, Intermediates, and Wonks



Jonathan Schwabish

Series: AK Peters Visualization Series

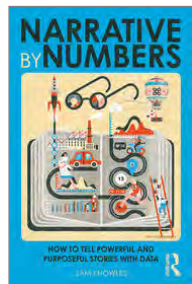
Data Visualization in Excel closes the gap between what people think Excel can do and what they can achieve in the tool. Over the past few years, recognition of the importance of effectively visualizing data has led to an explosion data analysis and visualization software tools. But for many people, Microsoft Excel continues to be the workhorse for their data visualization needs, not to mention the only tool that many data workers have access to. This book is the perfect guide for anyone who wants to create better, more effective, and more engaging data visualizations.

A K Peters/CRC Press
May 2023:400
Hb: 978-1-032-34328-0: **£74.99**
Pb: 978-1-032-34326-6: **£26.99**

* For full contents and more information, visit: www.routledge.com/9781032343266

Narrative by Numbers

How to Tell Powerful and Purposeful Stories with Data



Sam Knowles

Series: Using Data Better

As jobs in the knowledge economy become increasingly similar, there are two core skills that everyone needs if they are going to thrive and succeed and to make a difference. These are the ability to interrogate and make sense of data, and the ability to use the insights extracted from the data to persuade others to take action. Analytics + storytelling = influence. Humans are hardwired to respond to stories and story structure. There are some simple and effective rules of data-driven storytelling that will help everyone tell more compelling, evidence-based stories, whoever they need to convince to create positive change. Narrative by Numbers shows you how.

Routledge

March 2018:176

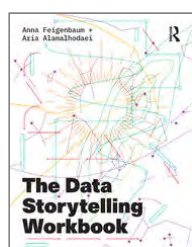
Hb: 978-0-815-35315-7: **£130**

Pb: 978-0-815-35314-0: **£35.99**

eBook: 978-1-351-13722-5

* For full contents and more information, visit: www.routledge.com/9780815353140

The Data Storytelling Workbook



Anna Feigenbaum, Aria Alamalhodaie

From tracking down information to symbolising human experiences, this book is your guide for telling more effective, empathetic and evidence-based data stories. Wide-ranging and in-depth, this interdisciplinary book is essential for students and researchers in journalism, communication, media, visual arts and cultural studies, as well as any who use data analysis and visualisation within their field.

Routledge

March 2020:256

Hb: 978-1-138-05210-9: **£130**

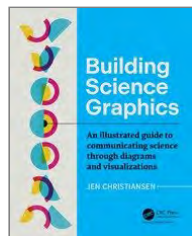
Pb: 978-1-138-05211-6: **£34.99**

eBook: 978-1-315-16801-2

* For full contents and more information, visit: www.routledge.com/9781138052116

Building Science Graphics

An Illustrated Guide to Communicating Science through Diagrams and Visualizations



Jen Christiansen

Series: AK Peters Visualization Series

Building Science Graphics is a practical guide for anyone interested in creating science-centric illustrated explanatory diagrams. Starting with a clear introduction to the concept of information graphics and their role in contemporary science communication, it then outlines a process for creating graphics using evidence-based design strategies. The heart of the book is composed of two step-by-step graphical worksheets, designed to help jump-start any new project.

A K Peters/CRC Press

August 2022:357

Hb: 978-1-032-10940-4: **£94.99**

Pb: 978-1-032-10674-8: **£38.99**

eBook: 978-1-003-21781-7

* For full contents and more information, visit: www.routledge.com/9781032106748

Presenting in English

A Practical Guide



Dick Smakman

This practical guide introduces students to the language and other skills needed to deliver a presentation in English. Concise and accessible, the guide will be particularly helpful to learners of English. Accompanied by online support material with recordings, the book is an essential guide to delivering a successful presentation in English.

Routledge
June 2024: 248
Hb: 978-1-032-62787-8: £130
Pb: 978-1-032-62532-4: £35.99

* For full contents and more information, visit: www.routledge.com/9781032625324

7TH EDITION

Skilled Interpersonal Communication

Research, Theory and Practice



Owen Hargie

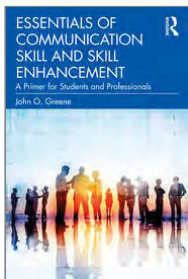
Established as the foremost textbook on communication, the seventh edition of Owen Hargie's Skilled Interpersonal Communication is thoroughly revised and updated with the latest research findings, theoretical developments and applications. Written by one of the foremost international experts in the field, this is essential reading for students of interpersonal communication in general, and to qualified personnel and trainees in many fields.

Routledge
November 2021: 678
Hb: 978-1-032-02185-0: £130
Pb: 978-1-032-00878-3: £48.99
eBook: 978-1-003-18226-9

* For full contents and more information, visit: www.routledge.com/9781032008783

Essentials of Communication Skill and Skill Enhancement

A Primer for Students and Professionals



John O. Greene

For those who wish to learn or teach the tools of skillful communication, this book provides concrete insight into what makes a person a successful communicator. Predicated on four simple notions—that communication can be done well or poorly, that communication skills matter, that people differ in those skills, and that those skills can be improved—the book helps readers identify and enhance their own communication strengths and address weaknesses, assess the communication skills of others, and coach others to improvement. This book is written for students and professionals in fields such as human resources, sales, training, counseling, customer relations, education, and healthcare.

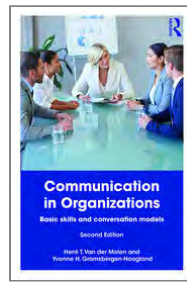
Routledge
March 2021: 174
Hb: 978-0-367-53838-5: £130
Pb: 978-0-367-53428-8: £35.99
eBook: 978-1-003-08345-0

* For full contents and more information, visit: www.routledge.com/9780367534288

2ND EDITION

Communication in Organizations

Basic Skills and Conversation Models



Henk T. Van der Molen, Yvonne Gramsbergen-Hoogland

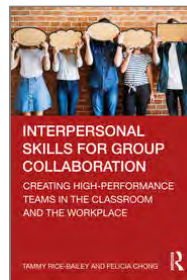
This new edition continues to give clear advice and guidance on communicating in a range of different contexts in the workplace. From handling complaints and breaking bad news to negotiating deals and giving presentations, the book explores the building blocks to effective communication skills, nurturing the leadership qualities required in any organization. Illustrated with concrete examples throughout, the new edition includes a new chapter on career coaching, as well as exercises and ideas for role-play to enable the ideas to come alive. This will be an invaluable book for students of management and business psychology, as well as those taking courses who are already in the workplace.

Routledge
October 2018: 214
Hb: 978-1-138-55210-4: £130
Pb: 978-1-138-55212-8: £31.99
eBook: 978-1-315-14796-3

* For full contents and more information, visit: www.routledge.com/9781138552128

Interpersonal Skills for Group Collaboration

Creating High-Performance Teams in the Classroom and the Workplace



Tammy Rice-Bailey, Felicia Chong

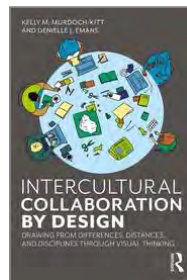
This lively and engaging text introduces readers to the core interpersonal and organizational skills needed to effectively collaborate on group projects in the classroom and the workplace. This guide can be used a supplementary text for any courses involving group projects, and will also be of interest to professionals in communication, business, and many other fields.

Routledge
February 2023: 142
Hb: 978-1-032-25907-9: £120
Pb: 978-1-032-25906-2: £34.99
eBook: 978-1-003-28557-1

* For full contents and more information, visit: www.routledge.com/9781032259062

Intercultural Collaboration by Design

Drawing from Differences, Distances, and Disciplines Through Visual Thinking



Kelly Murdoch-Kitt, Denielle Emans

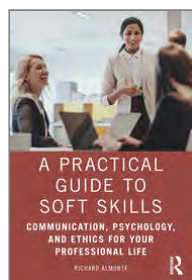
Intercultural Collaboration by Design introduces a framework for collaborating across cultures and learning to use multicultural perspectives to address pressing global issues. With over 30 hands-on activities, this book will be of great interest to diverse teams from a variety of disciplines who want to enhance intercultural learning and co-working. Whether in the classroom or workplace, the activities are appropriate for a variety of collaboration contexts, without a need for background in art or design.

Routledge
January 2020: 308
Hb: 978-0-367-21932-1: £115
Pb: 978-0-367-21931-4: £31.99
eBook: 978-0-429-26882-3

* For full contents and more information, visit: www.routledge.com/9780367219314

A Practical Guide to Soft Skills

Communication, Psychology, and Ethics for Your Professional Life



Richard Almonte

This accessible text overviews the range of soft skills sought after by employers and provides a practical guide to developing and effectively demonstrating these skills. The book can be used as a supplement for communication, business, and career-oriented courses, and will be of interest to individual students and junior professionals as well as career counsellors, postsecondary instructors across the curriculum, and professionals in human resources and learning and development.

Routledge
December 2021:188
Hb: 978-1-032-08101-4: **£130**
Pb: 978-1-032-07105-3: **£38.99**
eBook: 978-1-003-21294-2

* For full contents and more information, visit: www.routledge.com/9781032071053

English for Business Communication



Mable Chan

Series: Routledge Applied English Language Introductions

This textbook provides a comprehensive introduction for students and professionals who are studying English for business or workplace communication and covers both spoken and written English. Based on up-to-date research in business communication and incorporating an international range of real-world authentic texts, this book deals with the realities of communication in business today. This book goes beyond the traditional coverage of business English to provide a broad and practical textbook for those studying English in a workplace setting.

Routledge
January 2020:246
Hb: 978-1-138-48167-1: **£130**
Pb: 978-1-138-48168-8: **£34.99**
eBook: 978-1-351-06003-5

* For full contents and more information, visit: www.routledge.com/9781138481688

Creating a Successful Digital Presence

Objectives, Strategies and Tactics



Gordon Fletcher, Noel Adolphus

Increasingly graduates, and anyone entering employment, need an individual digital presence to showcase themselves to secure their first professional role. It takes an employability approach to encourage readers to recognise and deliver an effective digital presence. By using a strategic and systematic process, this book draws together academic thinking with practical outcomes. It is essential reading for advanced undergraduate and postgraduate students studying any discipline related to the digital world, particularly digital marketing and digital business, entrepreneurship and strategy, as well as those taking employability and personal professional development programmes.

Routledge
July 2021:212
Hb: 978-0-367-46034-1: **£130**
Pb: 978-0-367-46037-2: **£36.99**
eBook: 978-1-003-02658-7

* For full contents and more information, visit: www.routledge.com/9780367460372

21ST EDITION

Principles of Public Speaking



Dakota Horn

Now in its 21st edition, this introductory public speaking textbook encourages the reader to see public speaking as a way to build community in today's diverse world. This textbook is ideal for general courses on public speaking as well as specialized programs in business, management, political communication, and public affairs.

Routledge
April 2024:240
Hb: 978-1-032-54052-8: **£200**
Pb: 978-1-032-53763-4: **£94.99**

* For full contents and more information, visit: www.routledge.com/9781032537634

3RD EDITION

Advanced Public Speaking

A Leader's Guide



Michael J. Hostetler, Mary L. Kahl

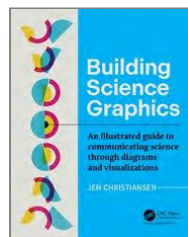
Providing users with the opportunity to increase their speaking abilities across a wide variety of complex and specific contexts, this student-engagement focused and flexible text serves as a core textbook for upper-level undergraduate public speaking courses.

Routledge
March 2024:214
Hb: 978-1-032-53187-8: **£125**
Pb: 978-1-032-53186-1: **£56.99**

* For full contents and more information, visit: www.routledge.com/9781032531861

Building Science Graphics

An Illustrated Guide to Communicating Science through Diagrams and Visualizations



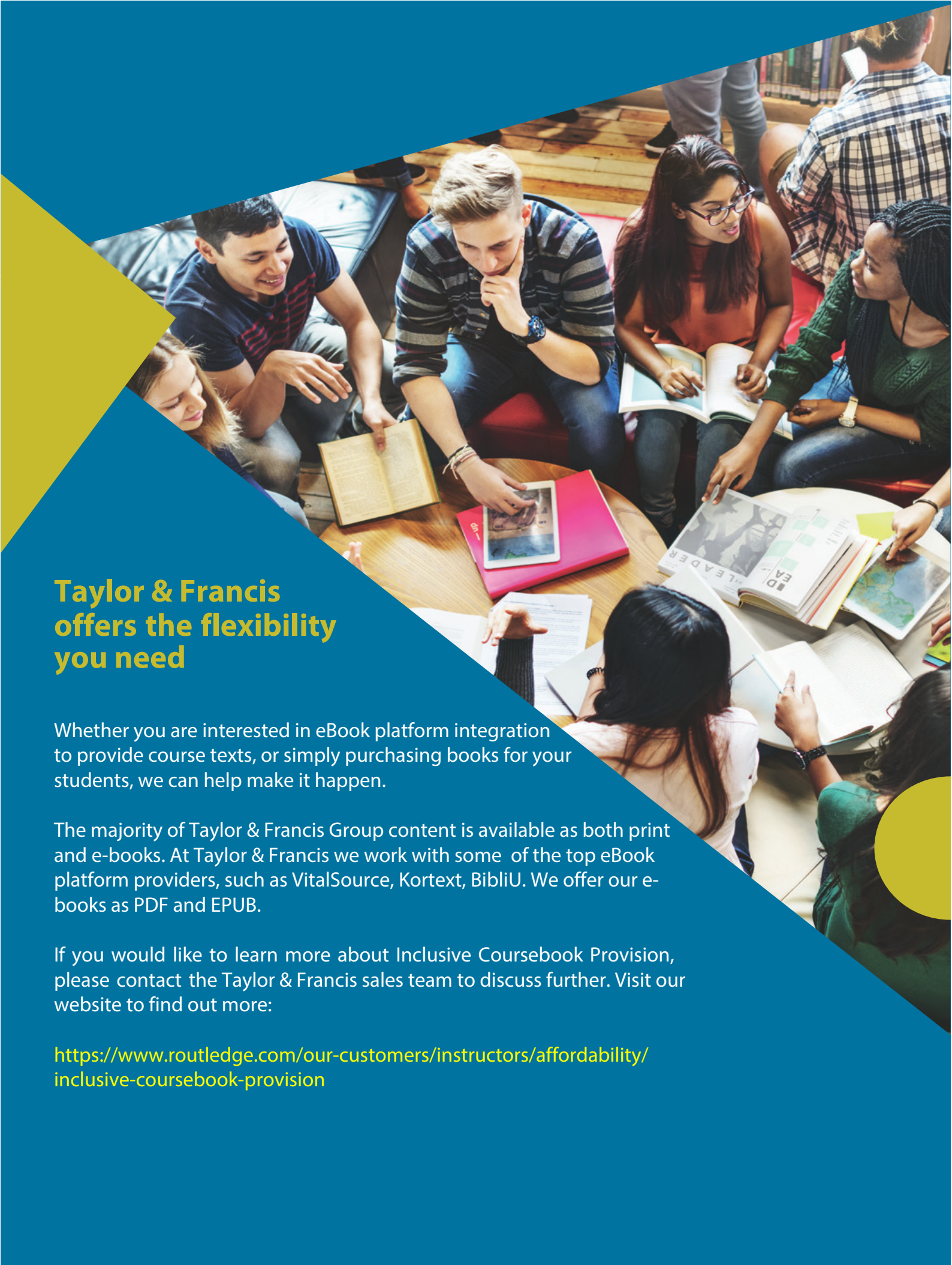
Jen Christiansen

Series: AK Peters Visualization Series

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A K Peters/CRC Press
August 2022:357
Hb: 978-1-032-10940-4: **£94.99**
Pb: 978-1-032-10674-8: **£38.99**
eBook: 978-1-003-21781-7

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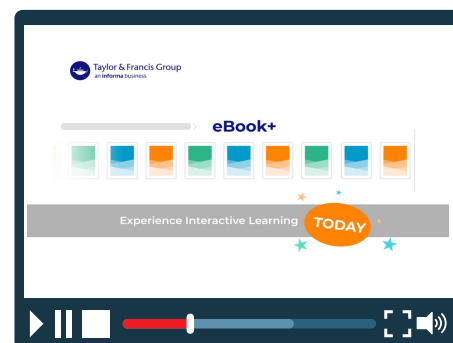
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