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## Contents

**BUSINESS MANAGEMENT & INDUSTRIAL ENGINEERING** ................................................................. 2  
Business Improvement/Productivity Press ................................................................. 2  
Ergonomics & Human Factors .............................................................................. 3  
Software Engineering & Systems Development ...................................................... 4  
Software Networking & Security ............................................................................ 5  

**ENGINEERING** ...................................................................................................................... 6  
Biomedical Engineering ......................................................................................... 6  
Chemical Engineering ......................................................................................... 7  
Civil & Mechanical Engineering .................................................................... 9  
Electrical Engineering ...................................................................................... 14  
GIS, Remote Sensing & Cartography ................................................................ 16  
Industrial & Manufacturing Engineering .......................................................... 17  
Nanoscience & Nanotechnology ....................................................................... 21  

**FOOD & AGRICULTURE** ....................................................................................................... 22  
Agriculture ............................................................................................................ 22  
Food Science & Nutrition .................................................................................. 23  

**MATHEMATICS & STATISTICS** .......................................................................................... 24  
General Mathematics ......................................................................................... 24  
Probability & Statistics ....................................................................................... 25  

**MEDICINE & VETERINARY MEDICINE** ............................................................................ 28  
General Medicine .................................................................................................. 28  
Specialist Medicine ............................................................................................ 32  
Surgery .................................................................................................................. 37  
Veterinary Medicine ............................................................................................. 40  

**SCIENCE** .................................................................................................................................. 41  
Biology & Life Science ........................................................................................ 41  
Chemistry ............................................................................................................. 45  
Chemistry/Pharmaceutical Science .................................................................... 47  
Computer Science & Computer Graphics .......................................................... 48  
Environmental Science ....................................................................................... 51  
Forensic Science ................................................................................................... 54  
General Science & Engineering ........................................................................ 55  
Materials Science ................................................................................................ 56  
Physics .................................................................................................................. 58  

**GAME DESIGN & ANIMATION** ............................................................................................ 62  
Animation ............................................................................................................. 62  
Game Design ........................................................................................................ 63  

Index ......................................................................................................................................... 64
Change Management for Risk Professionals

James J. Leflar Jr, Johns Hopkins University, Baltimore, Maryland, USA

Change Management for Risk Professionals focuses on the dynamics of change management with an eye toward the risk professional. Since organizations are constantly changing, so too do the risks. While these organizational changes are generally intentional—directed, planned, and even mapped out by senior leadership—often the resultant changes and risks are unforeseen and unanticipated. Drawing on the author’s experience, the book presents industry insight into how organizations can migrate from current environments to new ones with minimal risk and disruption to maintain flexibility, continuity, and production.

CRC Press
Market: Management/Risk
March 2021: 6.14 x 9.21: 176pp
Hb: 978-0-367-25159-8: £89.99
ebook: 978-0-429-31857-3
* For full contents and more information, visit: www.routledge.com/9780367251598

Making Risky and Important Decisions
A Leader’s Guide

Ruth Murray-Webster and David Hillson

This executive’s guide breaks down complexity surrounding risk management, discusses risk-related influences when making decisions, and provides practical help to improve decision-making processes. The book explains what influences executives in identifying risks and in making decisions under uncertainty. It helps business leaders break habits that harm the decision-making process so they can manage risk more effectively.

Auerbach Publications
Market: Management
Hb: 978-1-032-01078-6: £67.99
ebook: 978-1-003-14513-4
* For full contents and more information, visit: www.routledge.com/9780367702342

Inspiring Remote Tech Teams
Keys to Leadership and Purposeful Performance

Hubbert Smith, Samsung Semiconductor, Inc., Sandy, Utah, USA

Remote team execution is now a competitive advantage or a competitive threat. Winners will be able to harness talent world-wide to achieve organizational goals. High performing, consistently successful remote tech teams are very possible with simple workplace neuroscience combined with hard-skills and soft-skills of project management. This is a hands-on guide to consistently successful, happy, and healthy remote teams. Remote teams are consistently successful when they work together with a positive sense of enthusiasm, engagement and contribution even when working apart. As the book shows, this is very possible through applying best practices involving workplace neuroscience.

Auerbach Publications
Market: Information Technology Management
April 2021: 235 x 156: 164pp
Hb: 978-0-367-64475-8: £89.99
ebook: 978-1-003-12469-6
* For full contents and more information, visit: www.routledge.com/9780367644758

2nd Edition
Leading Virtual Project Teams

Margaret R. Lee
Series: Best Practices in Portfolio, Program, and Project Management

The second decade of the 21st century brought unprecedented challenges to traditional work places forcing the advance of working from home (telework). Individuals with little or no background in leadership, project management or virtual team management were suddenly placed into the environment of virtual work due to the global coronavirus COVID-19 pandemic. The book provides project management checklists and templates, and includes business cases, best practices, tools and techniques for virtual project management communications. The second edition features the latest meeting technology, using inclusive language, managing virtual relationships, and the work-at-home environment.

Auerbach Publications
Market: Project Management
April 2021: 6.14 x 9.21: 224pp
Hb: 978-0-367-72418-4: £130.00
Pb: 978-0-367-63595-4: £41.99
ebook: 978-1-003-11986-9
* For full contents and more information, visit: www.routledge.com/9780367635954

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www.routledge.com
Healthcare Informatics
Strategies for the Digital Era

Stephan P. Kudyba, New Jersey Institute of Technology, Newark, USA

This book focuses on the evolving services, technologies and techniques that are evolving in the healthcare industry. It covers the types of HC service providers, corresponding technologies, and analytic methods and data issues. It delves into facets of the digital economy and how healthcare is adapting to it. The book covers such technologies as CPOE, Clinical Information Systems, Alerting Systems, EHS, medical sensors, monitoring and communications, and mobile healthcare. Finally, the book closes the loop on the efficiency enhancing process in healthcare by linking technologies, data and analytics with strategic within the healthcare organization that must be addressed to achieve success.

Auerbach Publications
Market: Healthcare Informatics
January 2021: 234x156: 265pp
Hb: 978-0-367-18485-8: £59.99
eBook: 978-1-003-14089-4

* For full contents and more information, visit: www.routledge.com/9780367184858
Automated Software Testing with Cypress

Narayanan Palani

The book provides software testers using Cypress with key code examples and instructions for automated web applications for functional, visual testing, and compatibility testing needs. Cypress is an end-to-end automation testing tool which is emerging in the software testing market. It coincides with the increasing number of jobs for automation testers that require Cypress testing skills. Cypress helps in running tests fast and in testing across six different browsers. Moreover, it is the only automation testing tool that helps in running visual regression, API testing, and device compatibility testing without any additional tools.

Building in Security at Agile Speed

James Ransome, Senior Director, Product Security, McAfee
- An Intel Company, Santa Clara California, USA and Brook S.E. Schoenfield

Detailing the people, processes, and technical aspects of software security, Building in Security at Agile Speed emphasizes that the people element remains critical because software is developed, managed, and exploited by humans. The book presents a step-by-step process for software security that is relevant to today’s technical, operational, business, and development environments with a focus on what humans can do to control and manage the process in the form of best practices and metrics. There will always be security issues, but this book helps to minimize them when software is finally released and deployed.

LTE Cellular Narrowband Internet of Things (NB-IoT)

Hossam Fattah

This book is a unique resource in understanding practical uses of the NB-IoT technology and serves as a handbook for technical and non-technical readers who are looking for practicing and exercising the cellular NB-IoT Technology. The book serves and can be used by engineers, students, researchers, system integrators, mobile operators’ technical staff, electronics enthusiasts.

Software Testing

Hossam Fattah

This book is a unique resource in understanding practical uses of the NB-IoT technology and serves as a handbook for technical and non-technical readers who are looking for practicing and exercising the cellular NB-IoT Technology. The book serves and can be used by engineers, students, researchers, system integrators, mobile operators’ technical staff, electronics enthusiasts.

Project Management Maturity Model

J. Kent Crawford, Project Management Solutions, Inc., Glen Mills, Pennsylvania, USA

This established model for measuring project management process maturity is updated to the latest version of PMI’s practice standard, the PMBOK® Guide. The fourth edition includes new, separate sections within each knowledge area to help organizations measure and improve their adaptive and agile processes, as well. The Project Portfolio Management Maturity Model is included, with a new focus on benefits realization management and organizational change management.

Software Engineering

Elvis C. Foster and Bradford A. Towlie Jr.

This text provides a comprehensive, but concise introduction to software engineering. It adopts a methodical approach to solving software engineering problems, proven over several years of teaching, with outstanding results. The book covers concepts, principles, design, construction, implementation, and management issues of software engineering. With an emphasis on object-oriented development, the second edition features new chapters on software engineering projects, management support systems, and software engineering frameworks and patterns as a significant building block for the design and construction of contemporary software systems.
Cloud Computing
Concepts and Technologies
Sunilkumar Manvi and Gopal Shyam
This book gives students a comprehensive overview of the latest technologies and guidance on cloud computing, and is ideal for those studying the subject in specific modules or advanced courses. It is designed in twelve chapters followed by laboratory setups and experiments. Each chapter has multiple choice questions with answers, as well as review questions and critical thinking questions. The chapters are practically-focused, meaning that the information will also be relevant and useful for professionals wanting an overview of the topic.

Cybersecurity in the COVID-19 Pandemic
Kenneth Okereafor
Cybersecurity in the COVID-19 Pandemic demystifies Cybersecurity concepts using real-world cybercrime incidents from the pandemic to illustrate how threat actors perpetrated computer fraud against valuable information assets particularly healthcare, financial, commercial, travel, academic, and social networking data. The book simplifies the socio-technical aspects of Cybersecurity, and draws valuable lessons from the impacts COVID-19 cyberattacks exerted on computer networks, online portals, and databases.

Countering Cyber Sabotage
Introducing Consequence-Driven, Cyber-Informed Engineering (CCE)
Andrew A. Bochman and Sarah Freeman
Countering Cyber Sabotage introduces a new methodology to help critical infrastructure owners, operators, and their security practitioners make demonstrable improvements in securing their most important functions and processes. It provides practical techniques to put target processes and functions beyond the reach of the most well-funded and capable cyber adversaries.

Practical AI for Cybersecurity
Ravi Das
The goal of this book is to explore the ways and methods as to how AI can be used in cybersecurity, with an emphasis upon its subcomponents of machine learning, computer vision, and neural networks. AI can be used to help automate the routine and ordinary tasks that are encountered by both penetration testing and threat hunting teams. The result here is that they will be able to spend more time finding and discovering all of the unknown cyber related vulnerabilities and weaknesses that their client is facing, and to come up with solid recommendations as to how they can be patched up quickly.

Crypto Wars
The Fight for Privacy in the Digital Age: A Political History of Digital Encryption
Craig Jarvis
Crypto Wars is the first, and definitive, book of its kind. It offers a history of the half century contest between the US government and its citizens to control digital cryptography, a technology allowing citizens to place their communications beyond the State’s reach, thus undermining law enforcement and intelligence capabilities. Thus, Crypto Wars is in part a history of how society balances security and privacy, whilst it also explores the power dynamic between citizenry and state, in the digital age. Whilst principally a history book on a technology topic, it draws in socio-economic, legal, and Geopolitical themes and myriad other complex disciplines.
Artificial Intelligence for the Internet of Health Things

K. Shankar, Eswaran Perumal and Deepak Gupta
Series: Biomedical and Robotics Healthcare

This book discusses research of Artificial Intelligence for the internet of health things. It investigates and explores the possible applications of machine learning, deep learning, soft computing and evolutionary computing techniques in design, implementation, and optimization of challenging healthcare solutions. It features a wide range of topics such as AI techniques, IoT, cloud, wearables, and secured data transmission. Written for a broad audience and specifically those interested in AI-based healthcare applications, this book will be useful for clinicians, health professionals, engineers, technology developers, IT consultants, researchers, and students.

CRC Press
Market: Computer Engineering
May 2021: 6.14 x 9.21: 222pp
Hb: 978-0-367-74497-7: £110.00
ebook: 978-1-003-15909-4
* For full contents and more information, visit: www.routledge.com/9780367744977

Computational Modeling and Data Analysis in COVID-19 Research

Edited by Chhabi Rani Panigrahi, Bibudhendu Pati, Mamata Rath, Assistant Professor, Birla School of Management, Birla Global University, India and Rajkumar Buyya
Series: Emerging Trends in Biomedical Technologies and Health Informatics

This book covers recent research on the COVID-19 pandemic. It includes the analysis, implementation, usage and proposed ideas and models with architecture to handle the COVID-19 outbreak. Using advanced technologies such as AI and ML techniques for data analysis, this book will be helpful to mitigate exposure and ensure public health. This book will be helpful to the academicians, researchers, scientists, students, and industrialists working in this field to further research in the design and analytical techniques in the field of data analysis, AI, ML, IoT, drone technologies, and image processing.

CRC Press
Market: Biotechnology
May 2021: 234x156: 290pp
Hb: 978-0-367-68036-7: £100.00
ebook: 978-1-003-13748-1
* For full contents and more information, visit: www.routledge.com/9780367680367

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Biodiesel Fuels
Science, Technology, Health, and Environment
Edited by Ozcan Konur
Series: Handbook of Biodiesel and Petrodiesel Fuels

CRC Press
Market: Biodiesel
April 2021: 234x156: 452pp
Hb: 978-0-367-45614-6: £130.00
ebook: 978-0-367-45623-8
* For full contents and more information, visit: www.routledge.com/9780367456146

Biodiesel Fuels Based on Edible and Nonedible Feedstocks, Wastes, and Algae
Science, Technology, Health, and Environment
Edited by Ozcan Konur
Series: Handbook of Biodiesel and Petrodiesel Fuels
Part of a three volume handbook covering major research of petrodiesel and biodiesel fuels, this volume focuses on production, properties, performance, emissions, and catalysts of biodiesel fuels from edible and nonedible biooils, as well as wastes and algae. It also addresses public concerns and benefits of each related to the use of edible oils for biodiesel fuel production as they result in the competition with the use of these edible oils as food would also be covered in this part. This book also discusses the public environmental benefits and concerns related to the use of algal biooils for biodiesel fuel production.

CRC Press
Market: Biodiesel
April 2021: 234x156: 412pp
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ebook: 978-0-367-45620-7
* For full contents and more information, visit: www.routledge.com/9780367456153

Economic Analysis of Oil and Gas Engineering Operations
Hussein K. Abdel-Aal
This book focuses on economic treatment of petroleum engineering operations and serves as a helpful resource for making practical and profitable decisions in oil and gas field development. This work will be of value to practicing engineers and industry professionals, managers, and executives working in the petroleum industry who have the responsibility of planning and decision making, as well as advanced students in petroleum and chemical engineering studying engineering economics, petroleum economics and policy, project evaluation and plant design.

CRC Press
Market: Petroleum Engineering
February 2021: 234x156: 384pp
ebook: 978-1-003-13769-6
* For full contents and more information, visit: www.routledge.com/9780367684716

Handbook of Biodiesel and Petrodiesel Fuels
Three Volume Set
Edited by Ozcan Konur
Series: Handbook of Biodiesel and Petrodiesel Fuels
This three volume handbook covers major research in petrodiesel and biodiesel fuels. The first volume focuses on the introductory chapters for the handbook, biooils, biodiesel fuels, and biodiesel fuel wastes (glycerol). The second volume focuses on biodiesel fuels based on the four generations of feedstocks: edible feedstocks, nonedible feedstocks, waste feedstocks, and algae. Finally, volume three focuses on crude oils, petrodiesel fuels in general, emissions of petrodiesel fuels, and impact of petrodiesel fuels on human health.

CRC Press
Market: Biodiesel
April 2021: 234x156: 1274pp
Hb: 978-0-367-45613-9: £375.00
ebook: 978-0-367-45619-1
* For full contents and more information, visit: www.routledge.com/9780367456139

Lithium-Ion Batteries and Solar Cells
Physical, Chemical, and Materials Properties
Ming-Fa Lin, Department of Physics, National Cheng Kung University, Wen-Dung Hsu, Department of Materials Science and Engineering 1st Daoyue Road Tainan City, Taiwan 70101 and Jow-Lay Huang, This book presents a thorough investigation of diverse physical, chemical, and material properties special functionalities of lithium-ion batteries and solar cells. It covers theoretical simulations and high-resolution experimental measurements that promote a full understanding of the basic science to develop excellent device performance. This book will be of interest to materials scientists and engineers developing enhanced batteries and solar cells for peak performance.

CRC Press
Market: Materials Science
January 2021: 234x156: 308pp
Hb: 978-0-367-68623-9: £120.00
ebook: 978-1-003-18332-7
* For full contents and more information, visit: www.routledge.com/9780367686239

Mass and Energy Balancing
Calculations for Plant Design
David Pritchard and Shaik Feroz
The text provides a comprehensive set of calculations relating to mass and energy balances for an entire process plant. An ammonia synthesis plant is taken as a calculation model to develop the relevant mass and energy balances necessary for the design and subsequent production. Instead of teaching the basics, the text gives a detailed series of process integrated and illustrated calculations to help readers develop and design a process plant. This book will serve undergraduate Chemical Engineering students as a teaching aid in capstone design and related courses and gives useful insights to advanced students, researchers, and industry personnel within the Chemical Engineering field.

CRC Press
Market: Chemical Engineering
May 2021: 234x156: 120pp
Hb: 978-0-367-70967-9: £120.00
Pb: 978-0-367-70967-9: £42.99
ebook: 978-1-003-14920-0
* For full contents and more information, visit: www.routledge.com/9780367709679
Oil Spill Occurrence, Simulation, and Behavior

M.R. Riazi, Kuwait University

Series: Fuels and Petrochemicals

Offering a unique and comprehensive view on the latest technologies related to oil spill occurrence, behavior, and modeling, this work provides practical insight for professionals and academics. It discusses various sources of oil spills, major accidents including the 2010 Gulf of Mexico oil spill, and modeling and simulation techniques to predict rate of oil spill disappearance. It also covers characteristics of crude oil and its products as well as clean-up methods.

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March 2021: 234x156: 316pp
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* For full contents and more information, visit: www.routledge.com/9781138362307

Reaction Engineering, Catalyst Preparation, and Kinetics

Jorge Marchetti

This textbook covers reaction engineering, catalyst preparation, and kinetics. It features a section of fully solved examples as well as end of chapter problems. It includes coverage of catalyst characterization and its impact on kinetics and reactor modeling. It presents simpler cases as well as fully developed complicated scenarios.

CRC Press
Market: Engineering - Chemical
April 2021: 234x156: 366pp
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ebook: 978-0-429-46684-7
* For full contents and more information, visit: www.routledge.com/9781138605985

OPEC and the World’s Energy Future

Its Legacy and Promise

Mohammed A. Alsahlawi, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

This work offers a complete account of OPEC’s past, present, and possible future in relation to economic, political, and technological changes. It focuses on the impacts of recent international political and economic developments and analyzes factors affecting OPEC as well as the world oil market. The book describes the continued importance of oil and gas as major sources of energy throughout the world. It examines OPEC’s history and merits, highlights differences among OPEC members, and discusses OPEC’s relations with the world. It spends considerable time on concentrating on the impact of new technologies and how they may challenge and change the organization in the near and long term.

CRC Press
Market: Oil & Gas Industries
May 2021: 6.14 x 9.21: 96pp
Hb: 978-0-367-34978-3: £44.99
ebook: 978-0-429-32821-3
* For full contents and more information, visit: www.routledge.com/9780367349783

Sustainable Bioprocessing for a Clean and Green Environment

Concepts and Applications

Edited by M. Jerold, A. Santhiagu, Rajulapati Sathish Babu and Narasimhulu Korapatti

This book highlights the importance of waste to health in which waste is safely converted to value-added products via bioprocess technologies. Providing fundamental concepts and applications, this book also offers readers the methodology behind the operation of a variety of biological processes used in developing valuable products from waste. This interdisciplinary book is essential for researchers in chemical, environmental, and bioprocess engineering.

CRC Press
Market: Chemical Engineering
April 2021: 234x156: 336pp
Hb: 978-0-367-45908-6: £120.00
ebook: 978-1-003-03539-8
* For full contents and more information, visit: www.routledge.com/9780367459086

Petrodiesel Fuels

Science, Technology, Health, and Environment

Edited by Ozcan Konur

Series: Handbook of Biodiesel and Petrodiesel Fuels

This book is part of a three volume set that covers the major research of petrodiesel and biodiesel fuels. This book examines petrodiesel fuels and its surrounding topics including desulfurization of petrodiesel fuels, diesel engines, performance and emissions of petrodiesel fuels, health impact of petrodiesel fuels, electricity production by petrodiesel fuels, and crude oils (production, upgrading, properties and characterization, spills and biodegradation, refining and wastewater treatment).

CRC Press
Market: Biofuels
April 2021: 234x156: 410pp
Hb: 978-0-367-45616-0: £130.00
ebook: 978-0-367-45625-2
* For full contents and more information, visit: www.routledge.com/9780367456160
2nd Edition

An Introduction to Compressible Flow

Forrest E. Ames, University of North Dakota, USA and Clement C. Tang, University of North Dakota, USA

This book is designed to better support and cover compressible flow material in gas turbine and aerodynamics courses. It begins with a brief review of thermodynamics and control volume fluid dynamics, which sets the entry point for the study of compressible flow. The book proceeds to cover isentropic flow, normal shock waves, shock tubes, oblique shock waves, Prandtl-Meyer expansion fans, Fanno-line flow, Rayleigh-line flow, and conical shock waves. The book is intended for senior undergraduate engineering students studying thermal-fluids and practicing engineers in the areas of aerospace or energy conversion.

CRC Press
Market: Engineering - Mechanical
Hb: 978-0-367-89567-9: £84.99
ebook: 978-1-003-04294-5
* For full contents and more information, visit: www.routledge.com/9780367895679

7th Edition

Applied Strength of Materials

Robert Mott, University of Dayton, Ohio, USA and Joseph A. Untener, University of Dayton, Ohio, USA

Introducing the theoretical background of the subject, with a strong visual component, the book equips the reader with problem-solving techniques. The updated seventh edition incorporates new technologies, with a pedagogical approach. It emphasizes realistic engineering applications for the analysis and design of structural members. A “Big Picture” section starts each chapter to help students grasp the overall objectives and their application in industrial applications. Step-by-step problem-solving approaches are included throughout the book. While calculus is used sparingly, detailed developments of important design-related formulas are provided.

CRC Press
Market: Mechanical Engineering
June 2021: 234x156: 1154pp
Hb: 978-0-367-82078-7: £140.00
ebook: 978-1-003-17320-5
Prev Ed Hb: 978-1-498-71675-8
* For full contents and more information, visit: www.routledge.com/9780367820787

Analysis, Design and Construction of Foundations

Yung Ming Cheng, ceymchen@polu.edu.hk undeliverable. Case 01675579 Oct 20., Chi Wai Law, Hong Kong and Leilei Liu, Central South University, China

This outlines methods for the analysis and design of shallow and deep foundations, with particular reference to case studies in Hong Kong and China. It introduces key approaches used by engineers, with precautions for planning and designing various foundation structures. Some computational methods and programs enable realistic analysis of foundation systems. It covers new and innovation methods for constructing shallow foundations, various deep foundations, excavation and lateral support systems, ground improvement techniques and ground monitoring for proper site management; along with case studies of failures and defects from actual construction projects.

CRC Press
Market: Foundations and Civil Engineering
February 2021: 234x156: 610pp
Hb: 978-0-367-25557-2: £130.00
ebook: 978-0-429-29450-1
* For full contents and more information, visit: www.routledge.com/9780367255572

Aviation Safety and Security

Utilizing Technology to Prevent Aircraft Fatality

Stephen J Wright

The book focuses on ways to better manage and prevent aircraft-based homicide events while in-flight, using alternate technology to replace the Cockpit Voice Recorder (CVR) and/or Digital Flight Data Recorder (DFDR) functions. While these events are infrequent, the implementation of real-time predictive maintenance would allow aircraft operators to better manage both scheduled and unscheduled maintenance events. The book explores historical events of in-flight homicide and includes relevant accident case study excerpts (i.e. NTSB, AAIB).

CRC Press
Market: Engineering - Aerospace
June 2021: 6.14 x 9.21: 204pp
Hb: 978-0-367-27519-8: £89.99
ebook: 978-0-429-29464-5
* For full contents and more information, visit: www.routledge.com/9780367275198

Applied Engineering Mathematics

Brian Vick, Virginia Tech, USA

Undergraduate engineering students need good mathematics skills, and this textbook supports this with a strong emphasis on visualization and the methods and tools needed across the whole of engineering. The visual approach is emphasised, and excessive proofs and derivations are avoided. The visual images explain and teach the mathematical methods. The book’s website provides dynamic and interactive codes in Mathematica to accompany the examples for the reader to explore on their own.

CRC Press
Market: Mathematics for Engineering
May 2020: 7 x 10: 246pp
ebook: 978-1-003-00224-0
* For full contents and more information, visit: www.routledge.com/9780367432768

Building Energy Simulation

A Workbook Using DesignBuilder™

Vishal Garg, International Institute of Information Technology, Hyderabad, Telangana, India, Jyotirmay Mathur, Malaviya National Institute of Technology, Jaipur, Rajasthan, India and Aviruch Bhaita, International Institute of Information Technology, Hyderabad, Telangana, India

The 2nd edition of Building Energy Simulation includes study of various components and systems of a building and their effect on energy consumption, with the help of DesignBuilderTM, a front-end for EnergyPlus simulation engine, supported by examples and exercises. Following a “learning by doing” methodology, it explains simulation input parameters and how to do analysis of the simulation output explaining building physics and energy simulation. Divided into three sections, it covers fundamentals of energy simulation followed by advanced topics in energy simulation and simulation for compliance of building codes and detailed case studies for whole building energy simulation.

CRC Press
Market: Engineering - Mechanical
September 2020: 254 x 178: 740pp
Hb: 978-0-367-37470-9: £290.00
Pb: 978-0-367-37468-6: £115.00
ebook: 978-0-429-35463-2
* For full contents and more information, visit: www.routledge.com/9780367374709

For full contents and more information, visit: www.routledge.com/9780367895679
**Consolidation Analyses of Soils**

Jian-Hua Yin, Hong Kong Polytechnic University, Hong Kong, China and Guofu Zhu, Wuhan Univ. of Technology, China

As stresses are applied to a saturated soil, deformation occurs as water in voids is squeezed out. This guide to constitutive relations of soils for one- and three-dimensional consolidation covers analytical solutions such as the finite element method, simplified methods for consolidation analysis for three-dimensional consolidation problems. Uniquely the book covers both classic solutions and state-of-the-art work in consolidation analysis.

CRC Press
Market: Civil and Geotechnical Engineering
December 2020: 234 x 156: 574pp
Hb: 978-0-367-31360-9: £69.99
Pb: 978-1-138-33517-2: £42.99
ebook: 978-1-138-33516-5
* For full contents and more information, visit: www.routledge.com/9780367313609

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**Deep Excavations in Soil**

John Endicott, AECOM, Hong Kong

The book describes the theory and current practices for design of earth lateral support for deep excavations in soil. It brings together the principles of soil mechanics, design methods, numerical methods, and more sophisticated computer modelling, along with a strong emphasis on construction practice with monitoring, safety and temporary works. It is heavily illustrated with practical applications and case histories and is written for practising geotechnical, civil and structural engineers, and especially for senior and MSc students.

CRC Press
Market: Civil Engineering / Ground Engineering
August 2020: 234 x 156: 258pp
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**Crew Resource Management Training**

A Competence-based Approach for Airline Pilots

Norman MacLeod, Cathay Pacific Airways, Hong Kong, China

The book provides a data-driven approach to real-world CRM applicable to commercial pilot performance. It addresses the shift to a systems-based resilience thinking that aims to understand how worker performance provides a buffer against failure. Airlines, pilots, and aviation industry professionals will benefit from the insights into organisational design and alternative approaches to training. Taking a competence-based approach offers a more coherent, relevant approach to CRM. The book presents relevant, real world examples of the concepts and outlines a change in thinking around pilot performance and interpretation of data that is overdue.

CRC Press
Market: Engineering - Aviation
May 2021: 6.14 x 9.21: 325pp
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**Data Analytics Applied to the Mining Industry**

Ali Soofastaei, The University of Queensland, Australia

The book describes the key challenges facing the mining sector as it transforms into a digital industry able to fully exploit process automation, remote operation centres, autonomous equipment and the opportunities offered by the industrial internet of things. It provides guidelines on how data needs to be collected, stored and managed to enable the different advanced data analytics methods to be applied effectively in practice, through use of case studies and worked examples. Each chapter ends with a section detailing lessons for mining. The final chapter explores the revised operating principles, the organizational characteristics and the new skills needed by mining companies.

CRC Press
Market: Mining Engineering
November 2020: 234 x 156: 272pp
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**Fire Safety Design for Tall Buildings**

Feng Fu

This provides structural engineers, architects and students with an understanding of the fire safety design for tall buildings based on current analysis methods, design guidelines and codes. It covers almost all the aspects of fire safety design that an engineer or an architect might face, such as performance based design and the basic principles of fire development and heat transfer, and the latest fire prevention technology, along with 3D modelling techniques to perform structural fire analysis with examples which replicate several real fire incidents from around the world.

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Fluid Mechanics, Hydraulics, Hydrology and Water Resources for Civil Engineers

Amithirigala Widanage Jayawardena, The University of Hong Kong

This textbook combines the essentials of water science and engineering needed by civil engineering students and practitioners: fluid mechanics, hydraulics, hydrology and water resources. It also touches on water related disasters and the role of water in sustainability. Traditional textbooks tend to look at these themes discretely, and so miss the natural connections between them, and the commonality of their underlying foundations. Students from junior undergraduate to Masters level should find this a useful text and key reference.

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Hydraulics in Civil and Environmental Engineering

Andrew Chadwick, former university lecturer, UK, John Morfett and Martin Borthwick, Environment Agency, UK

This classic textbook brings together the basic principles of civil engineering hydraulics with a wide-range of practical, real-world applications. This new edition gives more on hydrostatics, along with new problems for students to practice with. Uncertainty estimation and its application to design is presented in the hydrology, river and coastal engineering chapters. Recommendations for climate change predictions, impacts and adaptation measures have been updated, as has the chapter on computational hydraulics for the application of computational simulation techniques. Spreadsheets and a solutions manual for lecturers are given on the CRC Press website.

In Situ Testing Methods in Geotechnical Engineering

Alan J. Lutenegger, University of Massachusetts, USA

In situ testing methods are commonly used by geotechnical engineers to determine subsurface stratigraphy and soil characteristics for design. This book presents the latest technology on the correct methods for performing a variety of in situ tests and the correct methods of interpreting the results obtained from the tests. Uniquely, it covers both common/routine tests and also describes several tests that are not covered in other available books. It also covers application of in situ tests for design of shallow and deep foundations.

Natural Gas Installations and Networks in Buildings

Alexander V. Dimitrov, European Polytechnic University, Construction of Buildings and Facilities Department, Bulgaria

This book covers theoretical foundations of the Natural Gas (NG) installations and networks as a part of building logistic system, further illustrated with digital examples. It describes the NG oxidation phenomena and appropriate energy converting devices used in the building’s energy centres and basic sizing principals of the related pipe networks. Further, it covers usage of NG devices including system for thermal comfort control, building ventilation, indoor air quality, visual comfort, food preparation and conservation, and hygiene maintenance system. A special attention is given to applications of the NG technological equipment, using gas-driven heat pumps, micro heat and power systems.

2nd Edition
Noise Control

From Concept to Application
Colin Hansen, University of Adelaide, Australia and Kristy Hansen, Finders University, Australia

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Primer on Automotive Lightweighting Technologies
Ragh Echampi
Aluminum is replacing steel for its strength to weight ratio, equal or better stiffness and toughness properties, durability and manufacturability considerations. The book introduces basic ideas and principles of designing engineering components with aluminum. Topics include application of the knowledge to understand how automotive body and structures are designed, as well as other major and smaller automotive components, such as engine blocks and its components, chassis systems, and wheels, to name a few. Applications of aluminum in other fields such as aircraft and off-road vehicles are also covered.

Principles and Practices of Transportation Planning and Engineering
Connie Tang and Lei Zhang
Holistic coverage offers a systematic view of the transportation project development process and enables readers to both see the big picture and master the specific science and engineering. For each project development step, the book covers critical aspects of law, science, and engineering. It identifies responsible agencies and describes the duties and responsibilities of these agencies involved along with their products and deliverables. The book also discusses the science, engineering and project and program management processes.

Quantitative Methods in Transportation
Dušan Tedorović, University of Belgrade, Serbia and Miloš Nikolić
This textbook of quantitative methods in transportation engineering comes with problems and a solutions manual for adopting course instructors. Basic mathematics and calculus are prerequisites. It covers linear programming, integer programming, dynamic programming and multi-objective programming. It moves to more advanced combinatorial techniques which depend on metaheuristic algorithms. Then to probability theory and statistics, and simulation models. And progresses to computational intelligent systems, such as fuzzy logic, artificial neural networks, and genetic algorithms. These are applied to transportation problems such as demand management, network planning and traffic control.

Soil Nailing
A Practical Guide
Raymond Cheung, Civil Engineering Development Department, Hong Kong and Ken Ho, Civil Engineering Development Department, Hong Kong
Series: Applied Geotechnics
Soil nailing is a robust and economic in-situ soil reinforcement technique used for slopes, retaining walls and excavations, involving the installation of closely spaced, relatively slender tension-carrying structural elements into the ground to stabilize the soil mass.

The Observational Method in Civil Engineering
Minimising Risk, Maximising Economy
Alan Powderham, Consulting Engineer, UK and Anthony O’Brien, Mott MacDonald, UK
The observational method in civil engineering construction maximises economy while assuring safety. Presenting twelve case histories from major infrastructure projects, this book demonstrates how the OM improves communication and collaboration -- and so cuts costs and time, increases safety, enhances collaboration between design and construction teams, and facilitates learning and process improvement. Although the OM is often thought to be associated with uncertainty and high levels of risk, readers should recognise how to use it confidently and effectively, and innovate.

Unmanned Aircraft Systems Traffic Management
UTM
Michael S. Baum, Aviators Code Initiative, USA
The book introduces Unmanned Aircraft Systems Traffic Management and explains how it integrates unmanned aircraft operations into a national airspace system for innovative, viable new services. It is an essential, in-depth annotated resource for developers, operators, policy makers, researchers, and academics engaged in unmanned systems, transportation management, and the future of aviation. The book explains how the UTM concept has progressed through research and testing and considers the boundaries of UTM, ATM, and advancing surveillance technologies. It discusses governance challenges and approaches to the approval, management, and oversight of UTM components and ecosystem.
Unmanned and Autonomous Ships
An Overview of MASS

R. Glenn Wright, Consulting Engineering, USA

Unmanned ships and autonomous ships are quickly becoming a reality, making shipping safer and more efficient. Automated shipping is explored in terms of economics, technology, safety and the environment under the broad themes of ship design and engineering, command and control, navigation, communications, security, regulatory issues, and training. This book is primarily for maritime professionals, regulatory authorities, insurers, and environmental groups. It also suits undergraduate students involved in deck officer training, and graduate students and academics involved in research in ship design, operations and management.

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Mukund R. Patel, U.S. Merchant Marine Academy, Kings Point, New York, USA and Omid Beik, Enercs Inc., Canada

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Avoiding Inelastic Strains in Solder Joint Interconnections of IC Devices

Ephraim Suhir, Portland State University, Portland, USA

The book addresses analytical (mathematical) modeling approaches aimed at understanding the underlying physics and mechanics of the behavior and performance of solder materials and solder joint interconnections of IC devices. The emphasis is on design for reliability, including probabilistic predictions of the solder lifetime. It helps the reader predict and minimize, at the design stage and using analytical modeling concepts and approaches, the stresses and strains in solder joint interconnects of IC devices.

Dynamic Positioning for Engineers

Surender Kumar, Marine Professional, Navi Mumbai, India

Dynamic Positioning for Engineers enables the reader to acquire the basic knowledge about the concept and understanding of the system, from the systems perspective. It illustrates the system, the sub-systems and the components of the Dynamic Positioning system, to better tackle maintenance, problems and breakdowns, leading to an increased mean time between failures and effective fault finding on these Dynamic Positioning related equipment. Overall, it helps the professionals to reduce the downtime, and higher repair costs.

Information Spread in a Social Media Age

Modeling and Control

Michael Muhlmeyer, Sabre Engineering Consulting, USA, and Shaurya Agarwal, University of Central Florida, USA

The book provides a general understanding of modern social media systems, network fundamentals, model development techniques, and social marketing. The mathematical modeling of information spread over social media is heavily emphasized through a review of existing epidemiology and marketing based models. The book then presents novel models developed by the authors to account for modern social media concerns such as community filter bubbles, strongly polarized groups, and contentious information spread. Readers will learn how to build and execute simple case studies using Twitter data to help verify the text’s proposed models.

Introduction to Microcontroller Programming for Power Electronics Control Applications

Coding with MATLAB® and Simulink®

Mattia Rossi, Politecnico di Milano, Italy, Nicola Toscani, Politecnico di Milano, Italy, Francesco Castelli Dezza, Politecnico di Milano, Italy and Marco Mauri, Politecnico di Milano, Italy

This book focuses on the LaunchPad™F28069M board from Texas Instruments™to provide readers some basic programming strategies specified to the field of power electronics-based control applications. Starting from simple examples such as turning on/off on-board leds or to manage a Pulse-Width-Modulation peripheral, it discusses the settings of all these Simulink® blocks enabled for code translation. The book is oriented to graduate students of electrical and automation and control engineering pursuing a curriculum in power electronics and drives, and to engineers and researchers who want to acquire new competences in the design and implementations of control schemes.
Introduction to Microelectronics to Nanoelectronics
Design and Technology

Sasi K. Kottayil, Amrita Vishwa Vidyapeetham, Coimbatore

This book addresses the need to understand the development, use, construction and operation of Smart Micro Grids (SMG). Covering selected major operations of SMG like dynamic energy management, demand response, demand dispatch, etc., it covers design and operational challenges of different microgrids with providing feasible solutions for system. A communication architecture facilitating bi-directional communication for smart distribution/micro grid is brought out covering its design, development and validation aspects.

IP Routing Protocols
Two-Volume Set

James Aweya

This two-volume book describes the most common IP routing protocols used today, explaining the underlying concepts of each protocol and how the protocol components and processes fit within the typical router. Unlike other books, this title is not vendor focused. Volume 1 discusses fundamental concepts of IP routing and distance-vector routing protocols (RIPv2 and EIGRP). Volume 2 focuses on link-state routing protocols (OSPF and IS-IS) and the only path-vector routing protocol in use today (BGP). The volumes’ simple style to make them comprehensible and appealing to undergraduate and graduate level students, research and practicing engineers, scientists, IT personnel, and network engineers.

Power Transformer Design Practices

Fang Zhu, R. E. Uptegraff, USA, and Baitun Yang, R. E. Uptegraff, USA.

The book presents basic theories of transformer operation, design principles and methods used in power transformer designing work, and also includes limitation criteria, effective utilization of material and calculation examples to enhance reader's techniques of transformer design and testing. The ways to optimize design is also discussed throughout the book as a goal to achieve best performances on economic design. The book is a great reference material for engineers, students, teachers, researchers and anyone involved in the field associated with power transformer design, manufacture, testing, application and service maintenance.

Smart Microgrids

Edited by Sasi K. Kottayil, Amrita Vishwa Vidyapeetham, Coimbatore

This book addresses the need to understand the development, use, construction and operation of Smart Micro Grids (SMG). Covering selected major operations of SMG like dynamic energy management, demand response, demand dispatch, etc., it covers design and operational challenges of different microgrids with providing feasible solutions for system. A communication architecture facilitating bi-directional communication for smart distribution/micro grid is brought out covering its design, development and validation aspects.
Fundamentals of Capturing and Processing Drone Imagery and Data
Edited by Amy E. Frazier and Kunwar K. Singh
Unmanned Aircraft Systems are rapidly emerging as flexible platforms for capturing imagery and other data across sciences. Many colleges and universities are developing courses on UAS-based data acquisition. This book is a comprehensive, introductory text on how to use unmanned aircraft systems for data capture and analysis. It provides best practices for planning data capture missions and hands-on learning modules geared toward UAS data collection, processing, and applications. Readers will learn how to process different types of UAS imagery for applications such as Precision Agriculture, Forestry, Urban Landscapes, and apply this knowledge in environmental monitoring and land-use studies.

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Gender Inequalities
GIS Approaches to Gender Analysis
Edited by Esra Ozdenerol, Department of Earth Sciences, University of Memphis, TN, USA
Gender inequality is entrenched in the cultural, political and market systems that operate at household, community, and national levels. Global changes in market access, climatic conditions, and the availability of natural resources intensify disparities in income, in assets and in power among genders. This book aims to explain these gender dynamics at macro and micro levels through GIS and spatial analysis. The first part of the book introduces key concepts of how to integrate GIS in gender inequality research. The second part presents more in-depth case studies, carefully selected such as mapping gender-based violence, gender-inequality in the labor force, refugee mapping, etc.

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Remote Sensing Applications in Environmental and Earth System Sciences
Nicolas R. Dalezios, University of Thessaly, Volos Greece
This book is a contemporary, multi-disciplinary, multi-scaling, updated and upgraded approach of applied remote sensing in the environment. It aims to cover the whole spectrum of current environmental issues related to atmosphere, land, and water. This book starts with an overview of remote sensing technology, and then throughout the book, the author explains with many case studies, the types of data that can be used and the image processing and analysis methods that can be applied to each type of application. This book is an excellent resource for anyone who is interested in remote sensing technologies and their use in Earth systems, natural resources, and environmental science.

CRC Press
Market: Environmental Science
May 2021: 254 x 178: 392pp
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Spatial Analysis for Radar Remote Sensing of Tropical Forests
Gianfranco D. De Grandi and Elsa Carla De Grandi
Series: SAR Remote Sensing
This book is based on authors’ extensive involvement in large Synthetic Aperture Radar (SAR) mapping projects, targeting the health of an important earth ecosystem, the tropical forests. It highlights past achievements, explains the underlying physics that allow the radar practitioners to understand what radars image, and can’t yet image, and paves the way for future developments including wavelet-based techniques to estimate tropical forest structural measures combined with InSAR and Lidar techniques. As first book on this topic, this composite approach makes it appealing for students, learning through important case studies, and for researchers finding new ideas for future studies.

CRC Press
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Basudeb Bhattacharya, Computer Aided Design Centre, Jadavpur University, Kolkata, India
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Engineering systems and products are an important element of world economy and each year billions of dollars are spent to develop, manufacture, operate, and maintain systems and products around the globe. Because of this, global competition is forcing reliability and other professionals to work closely during the product design and manufacturing phase. This book is an attempt to meet the need for a single volume that considers a wide range of applied reliability topics.
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Cognitive Computing Using Green Technologies
Modeling Techniques and Applications
Edited by Asis Kumar Tripathy, Associate Professor, VIT, Vellore, India, Chiranjilal Chowdhary, Associate Professor, VIT, India, Mahasweta Sarkar, San Diego State University, CA, USA and Sanjaya Kumar Panda, Assistant Professor, IIITDM, Pradesh, India
Series: Green Engineering and Technology
Cognitive Computing is a new topic which aims to simulate human thought processes using computers that self-learn through data mining, pattern recognition, and natural language processing. This book focuses on the applications of Cognitive Computing in areas like Robotics, Blockchain, Deep Learning, and Wireless Technologies. This book is written for researchers, academicians, undergraduate and graduate students, and industry persons who are working on current applications of Cognitive Computing.
CRC Press
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Automotive Audits
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D. H. Stamatis, President of Contemporary Consultants, MI, USA
Series: Practical Quality of the Future
This book addresses the essentials of an automotive audit which is required by all automotive suppliers world-wide. They are based on customer specific requirements, ISO standards, and Industry specifications. This book covers both the documents and records that are necessary for compliance, with an extensive discussion on Layered Process Audits and distance auditing. It explains “why” and “how” an effective audit should be carried out. It identifies the key indicators for a culture change with an explanation of what is required to do, what to say, and how to prove it. A road map is offered for the “Process Audit” and the “Layered Audit” and defines a clear distinction between the preparation details for each. This book is for those that conduct audits, those that are interested in auditing, and those being audited. It specifically addresses how to prepare for an automotive process audit which includes readers that are involved in quality, manufacturing, operations management, and those that work with suppliers.
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Data Protection and Privacy in Healthcare
Research and Innovations
Edited by Ahmed Elngar, Associate Professor, Computers and Artificial Intelligence, Beni-Suef University, Egypt, Ambika Pawar, Symbiosis Institute of Technology and Prathamesh Churi, NMIMS University
This book uses a research-oriented approach and focuses on open source tools used to simulate privacy models. It offers details on privacy laws with real-life case studies and examples, and addresses privacy issues in newer technologies such as Cloud, Big Data, and IoT. It discusses the e-health system and preserving its privacy, and the use of wearable technologies for patient monitoring, data streaming and sharing, and use of data analysis to provide various health services.
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Subramanian Pazhani
Series: Emerging Operations Research Methodologies and Applications
Closed Loop Supply Chains and its management have become mandatory for firms to stay competitive and profitable. This book provides insights for designing supply chain networks by understanding and incorporating key return parameters into the network design, which will affect profitability. The book discusses how customer categories and their acceptance behavior is incorporated into the network design. It will also show how to analyze the interaction of parameters on supply chain network design and profitability, offers modeling framework for incorporating uncertainties in the return product parameters, and how to design a robust network.

Employer Branding for Competitive Advantage
Models and Implementation Strategies
Edited by Geeta Rana, Swami Rama Himalayan University, Dehradun, Shivani Agarwal, Assistant Professor, Dept. of Management Studies, KIET Group of Institutions, India and Ravindra Sharma, Swami Rama Himalayan University, Dehradun
This book shows how to build and maintain a distinctive and credible employer brand, and develop a set of relevant success metrics to help measure ROI. Starting with the current interest in employer branding, this book looks at the historical roots of brand management and the practical steps to achieve employer brand management success. The book will review the pressures which have generated current interest in employer branding. It goes on to look at the historical roots of brand management and the practical steps necessary to achieve employer brand management success.

Fuzzy TOPSIS
Logic, Approaches, and Case Studies
Mohamed El Alaoui
This book aims to justify the use of fuzzy logic as a logic and as a theory in the decision-making context. It also discusses the development of the TOPSIS method (Technique for Order of Preference by Similarity to Ideal Solution) with related examples and MATLAB codes. This is the first book devoted to TOPSIS and its fuzzy its version. It presents the use of fuzzy logic as a logic and as a theory in the decision-making context and discusses the development of the TOPSIS method in classical and fuzzy context. The book justifies the use of fuzzy logic as an uncertainty theory and provides illustrative examples for each fuzzy TOPSIS extension.

Internet of Medical Things
Paradigm of Wearable Devices
Edited by Manuel Cardona, Universidad Don Bosco, El Salvador, Vijender Kumar Solanki, Associate Professor - CSE, CMI Institute of Technology, India and Cecilia E. García Cenca, Professor, Centro de Automatica y Robotica, Universidad Politecnica de madrid, Spain
Series: Internet of Everything (IoE)
Internet of Things (IoT) has become a valuable tool for connection and information exchange between devices. This book provides a brief introduction to this new field, focuses on wearable medical devices, and covers the basic concepts by providing the reader with enough information to solve various practical problems.

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Gerald W. Evans, University of Louisville, Department of Industrial Engineering, Louisville, KY, USA
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Muddling Through with Purpose, Volume 6
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Edited by W. Cary Huffman, Loyola University, USA, Jon-Lark Kim and Patrick Solé, CNRS/LAGA University of Paris 8

Most coding theory experts date the origin of the subject with the 1948 publication of A Mathematical Theory of Communication by Claude Shannon. Since then, coding theory has grown into a discipline with many practical applications requiring various mathematical techniques.

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Benjamin Achipai

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Awanish Kumar, Department of Biotechnology, National Institute of Technology, Raipur, India and Ashwini Kumar, Department of Biotechnology, National Institute of Technology, Raipur, India
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This book is an authoritative and well-structured text which is both topic and curriculum oriented, aimed to appeal to a wider multi-professional audience in line with the current NHS workforce training needs in the UK. It is based on the ‘specialist certificate examination’ (SCE), awarded for the completion of higher specialist training. Following closely the published blueprint from the Royal College of Physicians, and the curriculum from MRCP, it provides an up-to-date bank of revision material. These 250 questions in the ‘single best answer’ (SBA) format (like the actual assessment), are complete with comprehensive, well-evidenced explanations and explanatory further reading material.
CRC Press
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CRC Press
Market: Medicine
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Men’s Health
Edited by Roger S. Kirby, President Royal Society of Medicine, Editor-in-chief Trends in Urology and Men’s Health, Carson C. Culley III, Emertius Rhodes Distinguished Professor, Department of Urology, University of North Carolina, Alan White, Emeritus Professor of Men’s Health, Leeds Beckett University, UK and Michael Kirby, University of Hertfordshire and the Prostate Centre, London, UK
Since its first edition, Men’s Health has established itself as the essential reference for practitioners across the spectrum of medicine - including those working in urology, andrology, cardiology, endocrinology, family practice and mental health.
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CRC Press
Market: Medicine
April 2021: 7 x 10: 490pp
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Edited by Ebby Elahi
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CRC Press
Market: Medicine
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Necrotizing Enterocolitis
pathogenesis, diagnosis and treatment
Edited by David J. Hackam, Pediatric Surgeon-in-Chief and Co-Director, Johns Hopkins Children’s Center, Baltimore, Maryland.
This textbook focuses on the medical and surgical care of patients with NEC. The scientific approach and research into the development of appropriate treatments is also included. Further, the book addresses the complex social, ethical, nursing and rehabilitative issues that clinicians face when caring for patients with NEC. Finally, a significant focus of the book is devoted to the scientific underpinnings of this disease, and the success so far in the development of novel therapeutic approaches based upon these scientific discoveries.
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Manual of Lifestyle Medicine
James M. Rippe, Professor of Medicine, University of Massachusetts Medical School
Series: Lifestyle Medicine
Written by lifestyle medicine pioneer for professionals working at all levels of medical and healthcare practice, this manual provides a clinically oriented, evidence-based look into key lifestyle factors and how to prescribe them to individuals of all ages. The book summarizes the major components of lifestyle medicine, from physical activity and nutrition to weight management and the avoidance of tobacco products, and provides information on behavior change.
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Swati Goyal, Gandhi Medical College, Bhopal, India
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CRC Press
Market: Medicine
October 2020: 254 x 178: 222pp
Hb: 978-0-367-54800-1: £170.00
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Amanda Rabone, Maidstone & Tunbridge Wells NHS Trust, UK, Benedict Thomson, Guy’s & St Thomas’ NHS Foundation Trust, UK, Nicky Dineen, Maidstone & Tunbridge Wells NHS Trust, UK, Vincent Helyar, Hampshire Hospitals NHS Foundation Trust, UK and Aidan Shaw, Maidstone & Tunbridge Wells NHS Trust, UK
Series: MasterPass

This is an SBA question book aimed at the post-graduate radiology market, specifically those taking the Fellowship of the Royal College of Radiology (FRCR) part 2 (final) exams. This is a complementary title to The Final FRCR: Complete Revision Notes, which published in 2018.

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Thyroid and Parathyroid Disorders in Children

Edited by Pallavi Iyer, University of Alabama at Birmingham, Birmingham, USA and Herbert Chen, University of Alabama at Birmingham, Birmingham, USA

This book offers a focused and practical approach to diagnostic and therapeutic (both medical and surgical) interventions in management of thyroid and parathyroid diseases in children. It is divided into two sections: thyroid and parathyroid, with each section discussing the use of the laboratory testing and radiographic modalities in the study of these glands. This guides the reader to know the utility and limitations of the findings when approaching a child with these conditions.

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Market: Medicine
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Edited by Takahiro Shiota
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Diagnosis and Management

Edited by Ajith Ananthakrishna Pillai, JIPMER, Puducherry, INDIA and Vidhyaar Balasubramanian, PSGMSR, Coimbatore, INDIA
This comprehensive text follows an evidence-based approach to thoroughly discuss Atrial septal defects. Since this congenital heart disease mostly presents in adulthood, it becomes imperative to understand the embryology, pathophysiology and anatomy in detail, for effective management of these patients. This book has strong clinical focus on anatomy, natural history, indications, imaging methods and practical aspects of disease management, which inculcates best practice in the day to day management techniques employed by cardiologists, trainees and professionals.

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Market: Medicine
May 2021: 254 x 178: 144pp
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Ebook: 978-1-003-09955-0
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Aesthetic Treatments for the Oncology Patient

Edited by Paloma Tejero, CPT Mediestetic S.L, Toledo, Spain and Hernán Pinto, I2E3 Biomedical Research Institute, Barcelona, Spain
Physicians are increasingly recognizing that helping a cancer patient feel good about themselves and about their appearance can be of vital importance in giving them the emotional support and psychological resilience to survive and recover from the side-effects of disease and its treatment. Dermatologists and other aesthetic physicians are in a prime position to help a cancer patient recover lost volume, hydration, and pigmentation in skin, nails, and hair, as well as to advise on nutrition, prostheses, and complementary therapies. This pioneering volume will be an important resource bringing together the expertise in this area, with the practical detail a physician will need.

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Pb: 978-0-367-10891-0
Ebook: 978-0-203-72888-8
* For full contents and more information, visit: www.routledge.com/9781138305571

Clinical Diagnosis and Management of Gynecologic Emergencies

Edited by Botros Rizk, University of South Alabama, USA, Mostafa A. Borahay and Abdel Maguid Ramzy, Cairo University, Egypt
This highly practical text on gynecologic emergencies includes sonographic findings and laparoscopic investigations and management for on point-of-care assessment. Gynecologists, emergency physicians, and other providers will find this an invaluable resource for information on what to do in a crisis.

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Justin C Konje
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2nd Edition

Forensic Neuropathology

Edited by Helen L. Whitwell, Emeritus Professor of Forensic Pathology, Sheffield University, United Kingdom, Christopher M. Milroy, MBChB MD LLB FRCPath FFILM FRPC DMU is Professor of Forensic Pathology at The Medico-Legal Centre, University of Sheffield, Sheffield, UK and Daniel G. du Plessis, Salford Royal NHS Foundation Trust, United Kingdom

Forensic Neuropathology is written by experts for specialists and trainees alike and succeeds in addressing the concerns of the forensic pathologist and the neuropathologist by tackling the overlapping problems that arise during the postmortem examination and subsequent legal proceedings. Totally updated and revised, the new edition contains many new chapters, including much more information on non-accidental injury in pediatric cases, alcohol, sudden death, imaging, sports and transportation injury, long term effects of chronic brain injury and anoxal death.

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Hypertrophic Cardiomyopathy

A Practical Guide to Diagnosis and Management

Edited by Sriulakshmi M. Adhyyapak, St John’s Medical College Hospital, Bangalore and V. Rao Parachuri, Narayana Hrudayalaya Institute of Medical Sciences, Bangalore

Hypertrophic cardiomyopathy is a disease of cardiac muscle leading to severe debilitating symptoms with relentless progression. Medical options in treating this disease are limited to its early stages, with the disease often becoming resistant to pharmacological interventions. This book describes the various sub-types of this condition including its unique anatomic features with an emphasis on its therapeutic approach, encapsulating several techniques. Surgical myectomy has become the gold standard of effective treatment. This book also throws light on patient selection, newer surgical techniques and novel image-based pre-operative planning modalities for surgical myectomy.

CRC Press
Market: Medicine
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Hair Pathology with Trichoscopic Correlations

Edited by Mariya Miteva

Combining pathology with trichoscopy is a powerful strategy for the optimal management of hair disorders. This highly illustrated text will help clinicians become familiar with how to obtain an optimal specimen and how to understand the pathology report, in order to create an individualized approach in management. Pathologists will become familiar with the trichoscopic morphologic correlation of hair disorders, with the diagnostic clues to spot, and the most common pitfalls in hair pathology.

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Illustrated Manual of Injectable Fillers

2nd Edition

Edited by Neil S. Sadick, Sadick Aesthetic Surgery & Dermatology, New York, New York,
Series: Series in Cosmetic and Laser Therapy

This practical text clearly evaluates the uses, limitations, and compositions of the growing variety of available fillers involved in face and body rejuvenation. It includes detailed techniques for facial analysis and diagnosis of aging conditions to help provide patients with safe, reliable, and aesthetically pleasing results, including preventing and properly treating potential complications of filler usage. With new chapters on limb and torso injections and combination treatments, this new edition will be an invaluable resource for all aesthetic practitioners.

CRC Press
Market: Medicine
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An up-to-date reference source in general clinical neurology. In addition to the anchor chapters on major areas such as headache, stroke, developmental disorders, dementia, epilepsy, acquired metabolic disorders and others, new chapters have been added to meet clinical demand. This edition features new chapters on neurotoxicology, neuroimaging, and neurogenetics including basic and more advanced concepts, a new chapter on population health and systems of care reflects current practice in team care, patient-centric approaches, and value-based care. Written for physicians in training, neurology fellows, neurologist and neurosurgeon practitioners and advanced practice professionals.

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Imaging in Clinical Neurosciences for Non-radiologists

An Atlas

Hemanshu Prabhakar, AIIMS, New Delhi, India. and S. Leve Joseph Devajaran, AIIMS, New Delhi, India

This Atlas presents both normal and pathological conditions of the Brain and Spine pictorially. Targeted towards non-radiologists, it is a unique book with well labeled and self-explanatory images. All routine conditions involving neuroradiology have been included. Images from different radiological modalities such as X-ray, Computed Tomography (CT), Magnetic Resonance Imaging (MRI) and Digital Subtraction Angiography (DSA) have also been included. This book aims to serve as a ready reckoner for clinicians, trainees, residents as well as professional radiologists.

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Market: Dermatology
January 2021: 8.25 x 11: 308pp
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Microneedling in Clinical Practice

Edited by Boris Stoeb, The University of British Columbia, 2054-6250 Applied Science Lane, Vancouver, B. C., V6T 1Z4, Canada, Raja K. Sivamani, Raja K. Sivamani, University of California, Davis, 3301 C Street, Suite 1400, Sacramento, CA 95816, USA and Howard I Maibach, University of California School of Medicine, Department of Dermatology, San Francisco, USA
Microneedles provide an artificial pathway across the skin barrier for medical and cosmetic applications. This technology has seen a significant increase in popularity over the past years; as an example, the use of multiple small needles mounted on a roller to pierce the skin, prompting it to stimulate collagen production, has undergone a resurgence of interest as an adjunctive procedure for a number of skin disorders. This monograph draws together what is known about how to integrate microneedle technology into clinical dermatologic practice.

CRC Press
Market: Medicine
October 2020: 254 x 178: 234pp
Hb: 978-1-389-63315-5: £205.00
Pb: 978-0-367-33479-6: £74.99
ebook: 978-1-315-26561-2
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Pediatric Dermatology in Skin of Color

A Practical Guide

Manish K Shah, Bai Jerbai Hospital for Children, Mumbai, and Preeti K Sheth, Bai Jerbai Hospital for Children, Mumbai
This book focuses on the clinical aspects and management of pediatric skin disorders, especially seen in darker skin types. It includes unique conditions that the authors have encountered in their lifetime with their independent observations and approach to management. Original high-quality images are used to illustrate most dermatoses described in the book enabling a strong visual impression of the discussed diseases. It hopes to provide readers with a blend of evidence and experience based pediatric dermatology. This book aims to be a hands-on manual that can be referred to during a busy practice as it discusses the practical approach to dermatoses.

CRC Press
Market: Medicine
May 2021: 210 x 280: 336pp
Hb: 978-0-367-76063-2: £110.00
Pb: 978-0-367-76064-9: £44.99
ebook: 978-0-429-31640-1
* For full contents and more information, visit: www.routledge.com/9780367760632

Techniques in the Evaluation and Management of Hair Disease

Edited by Rubina Alves and Ramon Grimalt
Series: Series in Dermatological Treatment
This book covers the aspects that will help someone starting a practice focused on hair disease or more senior practitioners needing an update on developments. World experts have here generously supplied the information needed, in an extremely practical way, to properly manage daily practice when treating hair patients.
Published in association with the Journal of Dermatological Treatment.

CRC Press
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April 2021: 254 x 178: 224pp
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Nail Therapies

Current Clinical Practice

Edited by Robert Baran, Dimitris Rigopoulos, National and Kapodistrian University of Athens, Greece, Chandra Grover and Eckart Hanke, Institut Dermatologie Klinik Bunaes, Freiburg, Germany
A succinct guide to treatment options, both medical and surgical, for both disorders and injuries of the nail.

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Market: Medicine
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Neurological Consequences of Nutritional Disorders

U. K. Misra, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, UP, India and J. Kalita, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, UP, India
This book focuses on the impact of nutritional disorders on the nervous system. Nutritional disorders are caused due to poverty, famine, infestations, ignorance in the developing world and due to food faddism, isolation, depression, addictions, and comorbidities in the developed countries. This book has chapters on various disorders covering basic knowledge, their clinical manifestations, basis and etiology, laboratory diagnosis, method of treatment and prognosis. It provides the guidelines to students and clinicians for dealing with such disorders which are easily preventable and amenable to treatment whose early diagnosis and management can avert morbidity and mortality.

CRC Press
Market: Medicine
June 2021: 254 x 178: 248pp
Hb: 978-0-367-54306-8: £125.00
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ebook: 978-0-429-31640-1
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Ultrasound in Assisted Reproduction and Early Pregnancy

Edited by Arianna D'Angelo and Nazar N. Amso

This text offers a succinct overview of the essential clinical applications of ultrasound in infertility management. It will be of benefit to established practitioners in reproductive medicine, as it details the aspects of quality, safety, training, and certification that help improve standards of practice. Those in training or with a special interest in fertility issues will also find it essential reading.

CRC Press
Market: Medicine
November 2020: 254 x 178: 300pp
Hb: 978-1-138-48617-1: £150.00
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ebook: 978-1-315-04623-7

* For full contents and more information, visit: www.routledge.com/9781138485853

Ultrasound of Mouse Fetal Development and Human Correlates

Mary C. Peavey and Sarah K. Dotters-Katz
Series: Reproductive Medicine and Assisted Reproductive Techniques Series

Fetal development in the mouse is routinely and increasingly utilized for advancing translational research and medical innovation for human obstetrical care. This is the first and only manual to provide necessary content on how this should be handled for accurate and effective data collection. Detailed descriptions and examples demonstrate how researchers and clinicians can use murine fetal and obstetrical data to improve future human applications in diseases such as infertility, recurrent pregnancy loss, intrauterine fetal growth restriction, placental insufficiency, and intrauterine fetal demise, as well as organ-specific developmental disease.

CRC Press
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April 2021: 254 x 178: 98pp
Hb: 978-1-138-07124-7: £150.00
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* For full contents and more information, visit: www.routledge.com/9781138071216
**CSF Rhinorrhea: Management and Practice**

Edited by Jyotirmay S. Hedge and Hemanth Vamashankar, Divisional Railway Hospital, Bangalore, India

Cerebrospinal fluid (CSF) rhinorrhea is a rare but potentially devastating condition that can lead to significant morbidity and mortality. This book covers the current concepts in the etiology, diagnosis, and treatment of CSF rhinorrhea, as well as long-term management of patients following successful treatment. It provides broad insight into the causes for leakage of CSF from the nose and helps in diagnosis and subsequent treatment. Its multidimensional approach caters to medical undergraduates and postgraduates along with specialists in various fields like ENT, Neurosurgery, Neurology, Medicine and Endocrinology. It thus provides a comprehensive management of CSF Rhinorrhea.

**Dilemmas in Abdominal Surgery: A Case-Based Approach**

Edited by Savio George Alberto da Piedade Barreto, Flinders University, Australia, and Shailvesh Vinayak Shrikhande, Tata Memorial Center, Mumbai, India

This book approaches a surgical disease or its management ‘through the eyes’ of a clinician by providing an evidence-based approach to a specific clinical dilemma. The chapters take the reader through a step by step ‘decision-making’ approach to commonly encountered, but difficult to manage, situations where the editors share their rationale behind the process. Emphasis is laid on the use of Tables and Algorithms to simplify understanding. They aim to empower the readers with the ability to approach complex abdominal surgery scenarios in a stream-lined manner thus improving the care and outcome of their patients.

**Endovascular Tools and Techniques Made Easy**

Edited by Vikram S. Kashyap, Harrington Healthcare and Vascular Institute, University Hospitals Cleveland Medical Center, Cleveland, OH, Matthew Janko, Division of Vascular Surgery and Endovascular Therapy, University Hospitals Cleveland Medical Center, Cleveland, OH, and Justin A. Smith, Division of Vascular Surgery and Endovascular Therapy, University Hospitals Cleveland Medical Center, Cleveland, OH

This practical resource shows the clinician how to handle and use the tools, devices, and implants required for endovascular interventions. A firm foundation in understanding the purpose, technical parameters, and function of each tool is required by vascular surgeons, interventional cardiologists, and interventional radiologists. Medical students, trainees, and physicians starting in practice will enhance their endovascular knowledge, which will allow for improved and seamless patient care.

**Fundamentals of Frontline Surgery**

Edited by Mansoor Khan, Consultant Oesophagogastric, General and Trauma Surgeon, Honorary Clinical Professor of Trauma Surgery, Brighton and Sussex University Hospitals and David Nott

Fundamentals of Frontline Surgery is an easy to read text, written by world class faculty, that provides clinicians with succinct and didactic information about what to do in high intensity, resource limited situations. With global conflicts and humanitarian emergencies on the rise, there has been a dramatic uptake in the number of volunteers for both military and humanitarian operations. This manual aids best practice and fast decision making in the field.
Laparoscopic Colorectal Surgery
A Step by Step Guide with Video Atlas

Edited by Sanjiv Haribhakti

This comprehensive book provides the reader a perspective of the current evidence-based management of Laparoscopic Colorectal Surgery. It covers sections on benign surgery for IBD, diverticulitis, rectal prolapse etc. along with the procedures for colon and rectal cancers, including laparoscopic TME. The accompanying videos complement the text imparting specific operative skills of exposure, retraction, countertraction, dissection, vascular control, hemostasis, laparoscopic Stapling, anastomosis, specimen extraction and stoma formation. This book aims to help surgeons to learn, standardize, practice and master the complex skills of Laparoscopic colorectal surgery.

CRC Press
Market: Medicine
November 2020: 279 x 216: 256pp
Hb: 978-0-367-35284-4: £150.00
ebook: 978-0-429-33037-7
* For full contents and more information, visit: www.routledge.com/9780367352844

Manual of Complex Abdominal Wall Reconstruction

Edited by Jeff Garner, Consultant General and Colorectal Surgeon, The Rotherham NHS Foundation Trust, Moorgate Road, Rotherham South Yorkshire UK and Dominic Slade, Consultant Intestinal Failure, General and Colorectal surgeon, Salford Royal NHS Foundation Trust, Stott Lane, Salford, UK

This book provides a useful guide for the management of complex abdominal wall problems from the perspective of a general surgeon, with sensible, practical clinical advice for the management of problems as they arise. Starting from managing the open abdomen and optimising the chances of achieving later definitive fascial closure, through to dealing with incisional and parastomal hernias throughout the abdomen. Expert guidance supported by an evidence-based review of the literature aids higher surgical trainees and consultant general surgeons who wish to expand their practice in this area.

CRC Press
Market: Medicine
December 2020: 744 x 969: 256pp
Hb: 978-0-367-48587-0: £220.00
Pb: 978-1-498-73946-7: £89.99
ebook: 978-0-429-18651-6
* For full contents and more information, visit: www.routledge.com/9781498739467

Minimally Invasive Cardiac Surgery
A Practical Guide

Edited by Theo Kofidis, National University Health System, Singapore

Minimally invasive cardiac surgery (MICS) is an integral component of every future cardiac surgeon’s training. Such techniques are complex and require special know-how and skill. This book offers an innovative approach to learning, utilizing QR code technology which refers the reader to essential audio-visual material, thereby focusing on practical aspects of MICS and providing clinical advice and practical solutions. Minimally Invasive Cardiac Surgery: A Practical Guide is a teaching resource, reference book and manual written by surgeons who both operate and teach the procedures described within.

CRC Press
Market: Medicine
March 2021: 254 x 178: 472pp
Hb: 978-1-498-73646-6: £150.00
ebook: 978-0-429-18872-5
* For full contents and more information, visit: www.routledge.com/9781498736466

Operative Orthopaedics

2nd Edition
Edited by Timothy WR Briggs, Royal National Orthopaedic Hospital, Stanmore, Middlesex, England, and Jonathan Miles, Royal National Orthopaedic Hospital, Stanmore, Middlesex, England, William Aston, Heledd Havard and Daud TS Chou

Updated and expanded, Operative Orthopaedics: The Stanmore Guide 2e is a comprehensive guide to elective orthopaedic surgery. Suitable for junior trainees during orthopaedic rotations, and for senior trainees preparing for the FRCS (Tr & Orth) examination, the emphasis is on surgical techniques, and the reasoning and evidence base behind them. This book is both a practical instruction manual and a revision tool for the examination.

CRC Press
Market: Medicine
December 2020: 246x189: 518pp
Hb: 978-0-367-47053-1: £150.00
Pb: 978-1-388-03176-0: £74.99
ebook: 978-1-003-18583-5
* For full contents and more information, visit: www.routledge.com/9781388031760

Operative Pediatric Surgery

8th Edition
Edited by Mark Davenport, King’s College Hospital, London, UK and James D. Geiger, University of Michigan, CS Mott Children’s Hospital, Ann Arbor, Michigan, USA

The eighth edition of the acclaimed text Operative Pediatric Surgery continues to provide a unique level of comprehensive detail on the full range of surgically treatable conditions presented in neonate and childhood as well as in utero. With an international list of authors, the chapters have been updated and complemented by the high-quality artwork that has established this operative guide as the standard reference for the pediatric surgeon. A new team of editors provides authoritative coverage of both laparoscopic and other surgical approaches to every area of pediatric surgery. An e-version with video clips further enhances this definitive resource.

CRC Press
Market: Medicine
January 2021: 279 x 216: 922pp
Hb: 978-0-815-37000-0: £195.00
Pb: 978-1-351-25080-1: £140.00*
ebook: 978-0-367-48587-0
* For full contents and more information, visit: www.routledge.com/9780815370000

Scott-Brown’s Essential Otorhinolaryngology, Head & Neck Surgery

Edited by R. James A. England, Hull teaching Hospitals NHS Trust, Hull, UK and Eamon Shaml, Specialist Registrar in ENT - Head & Neck Surgery, Guy’s and St Thomas’ NHS Foundation Trust, London, UK

A portable handbook that provides a concise summary of ENT surgery based on content from Scott-Brown’s Otorhinolaryngology, Head & Neck Surgery 8e. Of practical use in clinics, the ward and the operating room, this evidence-based resource provides easy access to information on clinical presentation, investigation, and the management of both medical and surgical ENT conditions. Of interest to healthcare professionals including ENT surgeons, nurses, speech and language therapists, audiologists, GPs, emergency physicians and members of the multidisciplinary team. Includes extra material in online resources.

CRC Press
Market: Medicine
July 2021: 234x156: 609pp
Hb: 978-1-032-00830-1: £140.00
Pb: 978-1-388-60848-1: £54.99
ebook: 978-1-003-17599-5
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Surgical and Anaesthetic Instruments for OSCEs
A Practical Study Guide
Kelvin Yan
Series: Master Pass Series
This illustrated guide to commonly used surgical instruments and anaesthetic equipment will benefit any junior doctor seeking to familiarise themselves with operating room procedure. Including standard answers to questions such as the indications, contraindications and examples of use, this book is a valuable revision guide to any student seeking to gain confidence when answering viva questions on this topic.

CRC Press
Market: Medicine
April 2021: 7 x 10: 120pp
Hb: 978-0-367-35894-5: £64.99
Pb: 978-0-367-33050-7: £24.99
eBook: 978-0-429-34251-6
* For full contents and more information, visit: www.routledge.com/9780367330507

Vascular and Endovascular Complications: A Practical Approach
Edited by Sachinder Singh Hans, Henry Ford Macomb Hosp; St John Macomb Hosp; Wayne State USM and Mark F Conrad, Director Massachusetts General Hospital; Associate Professor, Harvard Medical School. Boston, MA
Complications in vascular surgery need to be recognized and treated in a timely fashion. This concise practical text provides the reader with:
A step wise approach to diagnosis Guidance on avoiding technical pitfalls Advice on re-interventions Case examples to aid clinical practice
This well illustrated, concise and practical book ensures that vascular and endovascular surgeons will be able to optimize clinical results and patient care.

CRC Press
Market: Medicine
March 2021: 8.25 x 11: 332pp
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2nd Edition
Cardiovascular Disease in Companion Animals
Dog, Cat and Horse

Wendy A. Ware, Iowa State University, Ames, USA and John D. Bonagura, The Ohio State University College of Veterinary Medicine, Columbus, USA

This new edition of Cardiovascular Disease in Companion Animals now covers the horse as well as small animals. The book has been completely revised, expanded into five key sections, and contains a new Summary Formulary at end. Since first publication in 2007, Dr Ware’s authoritative yet user-friendly guide to cardiovascular diseases and disorders in veterinary practice has been widely praised. Coverage includes evaluation techniques, investigative procedures, diagnosis, medical and surgical management options and methods. This second edition is a must-have for general practitioners, veterinary students, and residents.

CRC Press
Market: Veterinary Medicine
May 2021: 210 x 280: 840pp
Hb: 978-1-498-76497-1: £74.99
* For full contents and more information, visit: www.routledge.com/9781498764971

Hawkey’s Atlas of Wild and Exotic Animal Haematology

Jaime Samour and Mike Hart

This revised, updated and expanded edition of Christine Hawkey’s A Colour Atlas of Comparative Veterinary Haematology is bursting with high-quality images to aid identification of blood cells and haemoparasites in the different species commonly seen in private practice and zoological collections. It will assist veterinarians in the identification of normal and abnormal blood cells and in understanding the structural differences of blood cells between the various taxa within the Animal Kingdom. With the help of this guide, readers will be able to understand haemoresponses in the presence of specific and non-specific disease processes.

CRC Press
Market: Veterinary Medicine
December 2020: 279 x 216: 286pp
Hb: 978-0-367-20741-0: £88.99
* For full contents and more information, visit: www.routledge.com/9780367207410

Demystifying Dog Behaviour for the Veterinarian

Kendal Shepherd, Royal College of Veterinary Surgeons

This practical guide for busy veterinarians demystifies canine behaviour while emphasising its importance. Authored by acclaimed veterinary behaviour consultant Kendal Shepherd, the book provides practical knowledge of dog behaviour and an understanding of how to talk about it with clients. Shepherd shows how this can enhance the relationship between owner and pet and between dog and environment as well as improve the vet’s own sense of fulfilment and enjoyment of practice. Packed with anecdotes drawn from real-life cases, the principles can be effortlessly assimilated into the average consultation.

CRC Press
Market: Veterinary Medicine
April 2021: 6.14 x 9.21: 216pp
Hb: 978-0-367-54991-6: £22.99
* For full contents and more information, visit: www.routledge.com/9780367549916

Health and Welfare of Brachycephalic (Flat-faced) Companion Animals

Edited by Rowena Packer, The Royal Veterinary College and Dan O’Neill, The Royal Veterinary College

Health and welfare issues relating to brachycephalic (flat-faced) dogs are now one of the most pressing problems facing companion animals. This book aims to equip veterinary professionals, animal welfare scientists, dog breeders and the interested owner with the full story about brachycephalic health and welfare. Cutting-edge knowledge is provided on a range of disciplines including anaesthesia, ophthalmology, dermatology, respiratory disease, neurological, dental, reproduction and weight control. The book offers substantial practical advice for veterinary teams on welfare and ethical issues around choosing, owning and caring for brachycephalic dogs to share with clients.

CRC Press
Market: Veterinary Medicine
July 2021: 254 x 178: 408pp
* For full contents and more information, visit: www.routledge.com/9780367207243

2nd Edition
Feline Orthopaedics

Harry Scott, Southern Counties Veterinary Specialists, Hangersley, Ringwood, Hampshire, United Kingdom, Juan M. Marti and Philip Witte, Southern Counties Veterinary Specialists, Hangersley, Ringwood, Hampshire, United Kingdom

Cats are not referred to specialists as frequently as dogs, meaning the general practitioner must routinely treat cats that have been involved in traffic accidents and other musculoskeletal trauma. This book was the first to provide a practical and user-friendly guide to feline orthopaedics and this second edition has been thoroughly updated, with new chapters on Physotherapy and Oncology of the Feline Skeletal System. The text is supported by high quality radiographs, colour photographs and line drawings to illustrate principles, techniques and procedures, appealing to GP veterinarians, specialist feline practitioners and students.

CRC Press
Market: Veterinary Medicine
August 2021: 210 x 280: 352pp
Hb: 978-1-498-76497-1: £95.00
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Scentwork for Horses

Rachael Draaisma

This is the first practical guide on how to implement scentwork into the lives of domesticated horses, enhancing behaviour, welfare and the human-animal bond. Draaisma demonstrates how scentwork improves the horse’s learning abilities, development, socialisation and their bond with the handler, showing how to have your horse explore their environment, participate in scentwork games and follow a footstep track. Whether veterinarian, behaviourist, trainer, animal-assisted therapist, equine physiotherapist or horse owner, this book promises to bring both you and your horse enormous benefits.

CRC Press
Market: Veterinary Science
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Behavioral Biology of Laboratory Animals
Edited by Kristine Coleman, OR National Primate Research Ctrr. USA and Steven J. Schapiro, The University of TX MD Anderson Cancer Ctrrr.
This 30-chapter volume informs students and professionals about the behavioral biology of animals commonly housed in laboratory and other captive settings. Each species evolved under specific environmental conditions, resulting in unique behavioral patterns, many of which are maintained in captivity even after generations of breeding. Understanding natural behavior is therefore a critical part of modern animal care practices. The descriptions, data, guidance, resources, and recommendations in this book will help the reader understand their animals better, refine the care and treatment that they receive, and improve their well-being, welfare, and wellness.
CRC Press
Market: Life Science
September 2021: 8.25 x 11: 560pp
ebook: 978-0-367-85531-4
* For full contents and more information, visit: www.routledge.com/9780367428167

Compost Utilization in Production of Horticultural Crops
Edited by Monica Ozores-Hampton, University of Florida
Compost Utilization in Production of Horticultural Crops provides information for the compost industry to develop horticulture production efforts and techniques. This highly practical book contains information applicable to current production issues facing the fruit and nuts, vegetable, and ornamentals and turfgrass industry. Written by scientific experts, the book provides guidelines on converting safe waste materials into composted soil amendments while minimizing negative impacts on the environment. Chapters cover the diversity and variability on compost uses of available feedstocks; composting methods, application rates, methods and timing.
CRC Press
Market: Agriculture Science
April 2021: 234x156: 178pp
Hb: 978-0-815-36646-1: £130.00
Pb: 978-0-367-69107-3: £42.99
ebook: 978-1-003-14041-2
* For full contents and more information, visit: www.routledge.com/97803677691073

Biological Systematics
History and Theory
Igor Ya. Pavlinov
Series: Species and Systematics
This book presents the theoretical foundations of the biological systematics. The history, structure and main tasks of systematics are summarized. The conceptual history and the succession of ideas are characterized. Briefly reviewed are the philosophical foundations of systematics and the structure and content of taxonomic theories. Most systematic research programs are outlined and the principal “scientific puzzles” are analyzed. The book is intended for professional systematists, students, and those interested in the history and theory of systematics and its role in the natural sciences.
CRC Press
Market: Evolutionary Biology
March 2021: 234x156: 270pp
Hb: 978-0-367-65445-0: £89.99
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* For full contents and more information, visit: www.routledge.com/9780367748524

Evolutionary Origin of Sensory and Neurosecretory Cell Types
Vertebrate Cranial Placodes, volume 2
Gerhard Schlosser
Series: Evolutionary Biology
Most of the cranial sense organs of vertebrates arise from embryonic structures known as cranial placodes. This book focuses on the development of sensory and neurosecretory cell types from cranial placodes by introducing the vertebrate head with its sense organs and neurosecretory organs and providing an overview of the various cranial placodes and their derivatives. Schlosser discusses how these primordia are established in the early embryo, how individual placodes develop, and how various placodally derived sensory and neurosecretory cell types differentiate into discrete structures.
CRC Press
Market: Life Science
June 2021: 234x156: 300pp
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At the Heart of the Coral Triangle
Celebrating Biodiversity
Alan J Powderham, Consulting Engineer, UK and Sancia van der Meij
The Coral Triangle, lying at the confluence of the Indian and Pacific Oceans, harbours the greatest biodiversity of marine life on the planet. While it is hardly immune to the growing global impacts of climate change and pollution, it is home to a wondrous variety of species living within diverse habitats. With stunning photography supported by an engaging, informative and accessible text, this book celebrates this biodiversity with the underlying message that it needs our protection before it is too late.
CRC Press
Market: Marine Science
December 2020: 252pp
Hb: 978-1-003-13017-8: £39.99
ebook: 978-1-003-14041-2
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Development of Sensory and Neurosecretory Cell Types
Vertebrate Cranial Placodes, volume 1
Gerhard Schlosser
Series: Evolutionary Cell Biology
Most of the cranial sense organs of vertebrates arise from embryonic structures known as cranial placodes. This book reviews the development of sensory and neurosecretory cell types from cranial placodes by introducing the vertebrate head with its sense organs and neurosecretory organs and providing an overview of the various cranial placodes and their derivatives. Schlosser discusses how these primordia are established in the early embryo, how individual placodes develop, and how various placodally derived sensory and neurosecretory cell types differentiate into discrete structures.
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**Handbook of Laboratory Animal Science**

**Essential Principles and Practices**

Edited by Jann Hau, University of Copenhagen & Rigshospitalet, Denmark and Steven J. Schapiro, The University of TX MD Anderson Cancer Cntr.

Building upon the success of previous editions of the *Handbook of Laboratory Animal Science*, this revision combines all three volumes in one definitive guide. It covers the essential principles and practices of Laboratory Animal Science as well as selected animal models. Each chapter focuses on an important subdiscipline of laboratory animal science meaning the chapters can be read and used as stand-alone texts. With new contributors at the forefront of their fields, the book reflects the scientific and technological advances of the past decade, responds to advances in our understanding of animal behavior and emphasizes the importance of implementing the three Rs.

CRC Press

**Market:** Life Science

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Market: Life Science

implementing the three Rs.

**Invertebrate Zoology**

**A Tree of Life Approach**

Bernd Schierwater, ITZ, TiHo University, Hannover, Germany and Rob DeSalle, American Museum of Natural History, New York, USA

Invertebrate Zoology: *A Tree of Life Approach* is a comprehensive textbook adopting an explicitly phylogenetic organization. With the explosion of Next Generation Sequencing approaches, there has been a sea-change in the recognized phylogenetic relationships among and between invertebrate lineages. In addition, the merger of evolutionary and developmental biology (evo-devo) has dramatically contributed to changes in the understanding of invertebrate biology. Synthesizing these three approaches (classical morphology, sequencing data, and evo-devo studies) offers students a unique perspective of invertebrate diversity.

CRC Press

**Market:** Life Science

May 2021: 216 x 254: 574pp

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For full contents and more information, visit: www.routledge.com/9781138341807

**2nd Edition**

**Handbook of Venoms and Toxins of Reptiles**

Edited by Stephen P. Mackessy, University of Northern Colorado, Greeley, CO, USA

A decade after publication of the first edition, this handbook responds to extensive changes in the field of toxinology to endure as the most comprehensive review of reptile venoms on the market. The six sections of this new edition, which has nearly doubled in size, complement the original handbook by presenting current information from many of the leading researchers and physicians in the field, with topics ranging from functional morphology, evolution and ecology to crystallography, -omics technologies and more. The section on snakebite now includes several chapters dealing with the problem broadly and with new technologies.

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**How Life Increases Biodiversity**

**An Autocatalytic Hypothesis**

David Seaborg, Foundation for Biological Conservation and Research, Walnut Creek, California, USA

Life maximizes biodiversity: this is the hypothesis of this book. An atmosphere favorable for life, including high oxygen and the ozone layer, and favorable nitrogen and carbon dioxide levels stimulate increases in biodiversity. Symbiosis drives diversification and macroevolution, e.g. bacteria makes nitrogen available to plants. Ecosystems interact symbiotically. Horizontal gene transfer, often mediated by viruses, is common, drives major evolutionary transitions, and is “symbiotic evolution.” These observations and others suggest that life has created a positive feedback loop stimulating biodiversity.

CRC Press

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**Kaplan’s Principles of Plant Morphology**

Donald Kaplan and Chelsea D. Specht

The principles of plant morphology are being brought into studies of crop development, biodiversity and evolution during climate change, and researchers are in need of a modern reference textbook on the subject. This book defines the field of plant morphology, providing resources, examples and theoretical constructs that illuminate the foundations of plant morphology and clearly outline the importance of integrating a fundamental understanding of plant morphology into modern research in plant genetics, development and physiology.

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**Neuron Signaling in Metabolic Regulation**

Edited by Qingchun Tong, University of Texas Health Science Center, TX, USA

*Series:* Methods in Signal Transduction Series

This book focuses on neuron signaling in the regulation of metabolism and body weight and associated methods. In the recent years, progress has been made in identifying neurons, neural pathways, and non-neuron cells regulating feeding, as well as in delineating autonomic nervous systems targeting peripheral metabolic tissues in the regulation of energy expenditure and metabolism. This proposed book will cover recent progress on neuron signaling for body weight and metabolic regulation and the state-of-the-art methods that has been applied in this field. Readers will be exposed to latest research frontiers on neuron regulation of metabolism.

CRC Press

**Market:** Neurobiology

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**How Life Increases Biodiversity**

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David Seaborg, Foundation for Biological Conservation and Research, Walnut Creek, California, USA

Life maximizes biodiversity: this is the hypothesis of this book. An atmosphere favorable for life, including high oxygen and the ozone layer, and favorable nitrogen and carbon dioxide levels stimulate increases in biodiversity. Symbiosis drives diversification and macroevolution, e.g. bacteria makes nitrogen available to plants. Ecosystems interact symbiotically. Horizontal gene transfer, often mediated by viruses, is common, drives major evolutionary transitions, and is “symbiotic evolution.” These observations and others suggest that life has created a positive feedback loop stimulating biodiversity.

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**Invertebrate Zoology**

**A Tree of Life Approach**

Bernd Schierwater, ITZ, TiHo University, Hannover, Germany and Rob DeSalle, American Museum of Natural History, New York, USA

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Origin and Evolution of Metazoan Cell Types

Edited by Sally Leys and Andreas Hejnol, Sars International Centre for Marine Molecular Biology, University of Bergen, Norway

Series: Evolutionary Cell Biology

The evolution of animal diversity is strongly affected by the origin of novel cell and tissue types and their interactions with each other. This book reveals the interplay between gains and losses and provides readers with a better grasp of the evolutionary history of cell types. In addition, the book illustrates how new cell types allow a better understanding permitting the discrimination between convergence and homology.

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Synthetic Peptide Vaccine Models

Design, Synthesis, Purification and Characterization

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Phenotypic Plasticity & Evolution

Causes, Consequences, Controversies

Edited by David W. Pfennig, University of North Carolina

Series: Evolutionary Cell Biology

Phenotypic plasticity—the ability of an individual organism to alter its features in direct response to a change in its environment—is ubiquitous. Understanding how and why this phenomenon exists is crucial because it unites all levels of biological inquiry. This book brings together researchers who approach plasticity from diverse perspectives to explore new ideas and recent findings about the causes and consequences of plasticity.

CRC Press
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The Geometric Induction of Bone Formation

Ugo Ripamonti, University of the Witwatersrand, Bone Research Lab, Johannesburg, South Africa

This novel book describes new biomaterials that offer mechanistic osteogenic surfaces for rapid autonomous bone repair and generation. The chapters frame our understanding of regenerative medicine in primate species, including humans. The goal is to unravel the fundamental biological mechanisms of bone formation and repair unique humans. The target audience is broad and dovetails with several disciplines both in the academic and private biotech sectors primarily involved in molecular biology, tissue biology, tissue engineering, biomaterial science, reconstructive surgery, orthopedic, plastic and dental surgery.

CRC Press
Market: Life Science
December 2020: 234 x 156: 258pp
Hb: 978-0-367-19578-6: £110.00
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* For full contents and more information, visit: www.routledge.com/9780367195786

Vertebrate Skeletal Histology and Paleohistology

Edited by Vivian de Buffrénil, Muséum National d’Histoire Naturelle, Paris, France (retired), Armand J. de Ricqlès, UPMC, Université Paris, France, Louise Zylberberg, Centre National de la Recherche Scientifique, Sorbonnes-Universités, Paris, France and Kevin Padian, University of California, Berkeley, USA

The goal is to unravel the fundamental biological mechanisms of regenerative medicine in primate species, including humans. The target audience is broad and dovetails with several disciplines both in the academic and private biotech sectors primarily involved in molecular biology, tissue biology, tissue engineering, biomaterial science, reconstructive surgery, orthopedic, plastic and dental surgery.

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2nd Edition

Science and Technology of Organic Farming

Allen V. Barker, University of Massachusetts, Amherst, USA

Organic farming is not only a philosophy; it is also a well-researched science. The second edition of this highly regarded book presents the scientific basis of organic farming and the methods of application needed to achieve adequate yields through plant nutrition and protection. Organic farming is a scientifically derived method of improving yields through plant nutrition and protection. As such, it can both meet public demand for reduced chemical inputs in agriculture and play a key role in feeding a growing world population. This book gives comprehensive details on how soil fertility can be maintained and how plants can be nourished in organic agriculture.

CRC Press
Market: Agriculture
April 2021: 6.14 x 9.21: 272pp
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What, if anything, are species?

Brent D. Mishler
Series: Species and Systematics

This book is an extended argument for abandoning the various single concepts and the "species" rank. The author proposes that the rank of "species" be replaced by a pluralistic view. In such taxonomy, the smallest identifiable lineages would be used within various divergent phylogenies in a context dependent manner. In such a view, "species" represents different sorts of things depending on the organism lineage being considered. In practice, this is what is already done although it is not formally recognized.

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3rd Edition

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James F. Pankow, Oregon Graduate Institute, Beaverton, USA

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Steven A. Adelman, Purdue University, Department of Chemistry, West Lafayette, Indiana, USA

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Edited by Deepak Gusain, Institute for Water and Wastewater Technology, Durban University of Technology, Republic of South Africa and Faizal Bux

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Antonio Doménech Carbó, University of Valencia, Spain

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CRC Press
Market: Chemistry
May 2020: 235 x 156: 188pp
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Medicinal Plants of Borneo
Edited by Simon Gibbons, UCL School of Pharmacy, UK and Stephen P. Teo, Forest Department Sarawak, Malaysia
Series: Natural Products Chemistry of Global Plants
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John R. Helliwell, University of Manchester, School of Chemistry, United Kingdom
Series: Global Science Education
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David E. Thurston, Kings College London and Ilona Pysz

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From Theory to Practice

Edited by Renee J. G. Arnold, Arnold Consultancy & Technology LLC, New York, USA

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**An Introduction to Computational Systems Biology**

Karthik Raman, Indian Institute of Technology Madras, Chennai  
*Series: Chapman & Hall/CRC Computational Biology Series*

The main objective of this book is to deliver a comprehensive and insightful account of applying mathematical modelling approaches to very large biological systems and networks, a fundamental aspect of computational systems biology. Several key modelling paradigms will be discussed in detail. The area is itself highly multi-disciplinary, and the audience will therefore include biologists, engineers, computer scientists, mathematicians and others. The idea is to present a sufficiently compelling account of the modelling strategies, but at the same time, retaining simplicity so as to appeal to those from less quantitative fields.

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**Big Data Systems**

Jawwad Ahmed Shamsi, National University of Computer and Emerging Sciences, Karachi, Sindh, Pakistan and Muhammad Ali Khajoaye, Sopra Steria, Glasgow, United Kingdom  
*Series: Chapman & Hall/CRC Big Data Series*

Big Data Systems encompass massive challenges related to data diversity, storage mechanisms, and requirements of massive computational power. Further, capabilities of big data systems also vary with respect to the type of problems. For instance, distributed memory systems are considered ill-suited for iterative problems. This book provides a detailed overview of big data systems. The book adopts a challenge-centric approach in which platforms are evaluated based on their capabilities to solve specific challenges.

Chapman and Hall/CRC  
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Irina Shamaeva and David Michael Galley  
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**Deep Learning and Linguistic Representation**

Shalom Lappin, Queen Mary University of London, UK  
*Series: Chapman & Hall/CRC Machine Learning & Pattern Recognition*

The application of deep learning methods to problems in natural language processing has generated significant progress across a wide range of natural language processing tasks. For some of these applications, deep learning models now approach or surpass human performance. While the success of this approach has transformed the engineering methods of machine learning in artificial intelligence, the significance of these achievements for the modelling of human learning and representation remains unclear.

Deep Learning and Linguistic Representation looks at the application of a variety of deep learning systems to several cognitively interesting NLP tasks.

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Developing Graphics Frameworks with Python and OpenGL

Lee Stemkoski and Michael Pascale

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You will learn how to combine the power of OpenGL, the most widely adopted cross-platform API for GPU programming, with the accessibility and versatility of the Python programming language. Topics you will explore include generating geometric shapes, transforming objects with matrices, applying image-based textures to surfaces, and lighting your scene.

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Hb: 978-0-367-72180-0: £89.99
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Fundamentals of Image, Audio, and Video Processing Using MATLAB®

With Applications to Pattern Recognition

Ranjit Parekh

Fundamentals of Image, Audio, and Video Processing Using MATLAB® introduces the concepts and principles of media processing and its applications in pattern recognition by adopting a hands-on approach using program implementations. The book covers the tools and techniques for reading, modifying and writing image, audio and video files using the data analysis and visualization tool MATLAB®.

CRC Press
Market: Computer Science
April 2021: 7 x 10 400pp
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Object-Oriented Design Choices

Adair Dingle

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Chapman and Hall/CRC
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Ken Steif

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Market: Computer Science/Social Science
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Ripple-Down Rules

The Alternative to Machine Learning

Paul Justin Compton, The University of New South Wales, Sydney, Australia and Byeong Ho Kang, University of Tasmania, Tasmania, Australia

Machine learning algorithms hold out extraordinary promise, but the reality is that their success depends entirely on the suitability of the data available. This book is about Ripple-Down Rules (RDR) an alternative manual technique for rapidly building AI systems. With a human in the loop, RDR is much better able to deal with the limitations of the data.

It has been proven in industrial application it takes only a minute or two per rule to build RDR systems with perhaps thousands of rules. The industrial uses of RDR have ranged from medical diagnosis, through data cleansing to chatbots in cars. RDR can be used standalone or to improve the performance of machine learning or other methods.

Chapman and Hall/CRC
Market: Computer Science
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Pb: 978-0-367-64431-4: £49.99
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The Cloud Computing Book

The Future of Computing Explained

Douglas Comer

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Market: Cloud Computing
May 2021: 229 x 178: 288pp
Hb: 978-0-367-70680-7: £74.99
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eBook: 978-1-003-14750-3
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Transitioning from Brick and Mortar to Virtual Care

Paul Cerrato and John Halamka
Series: HIMSS Book Series

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HIMSS Publishing
Market: Healthcare Informatics
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Jamie Cardoso, 3D Consultant, variety of professional organizations worldwide

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Wayne T. Davis, University of Tennessee, Knoxville, USA and Joshua S. Fu, University of Knoxville, Tennessee, USA

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Market: Environmental Engineering
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**Climate Change and Sustainable Development**

Dalia Streimikiene and Asta Mikalaukienė

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**Environmental Impacts of Mining**

Mritunjay Sengupta, University of Alaska

This second edition examines the problems facing the mining industry, and offers practical case studies, as well as new solutions for environmental restoration and remediation. New topics include bioremediation technology, mountaintop surface coal mining, reclamation procedures, environmental impacts of gold mining, mining in different countries worldwide, and the resulting environmental problems. The book is considered a “must have” book for environmental engineers and professionals in the mining industry, geologists, hydrologists, hazardous waste professionals, and academics.

CRC Press
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**Environmental Risk Communication**

Susan Zummo Forney, EHS Communication Partners, Inc. and Anthony J. Sadar, Pittsburgh, Pennsylvania, USA

Modern industry faces many communication challenges, including social media. This second edition is thoroughly updated, expanded, and reorganized to help industry communicators remain effective in addressing these new challenges. At the core of the book are foundational building blocks that address the human factors responsible for driving success or failure when communicating about environmental risk.

CRC Press
Market: Environmental Science
February 2021: 6.14 x 9.21: 222pp
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**Cost-Benefit Analysis of Groundwater Policy and Projects, with Case Studies**

Charles A. Job, U.S. Environmental Protection Agency, Montgomery Village, Maryland, USA


The competition for groundwater sources as a water supply reinforces the need for a strong economic rationale in decision-making. Evaluating economic decisions in the context of total water management and life-cycle water use is essential to making critical development and remediation choices. This revised volume provides fundamental economic and policy concepts related to groundwater, discusses important factors in cost-benefits and life-cycle evaluation, and explains triple-bottom-line analysis for different groundwater projects. It includes new and updated case studies on groundwater issues with solutions for a range of situations based on economic data.

CRC Press
Market: Water Science and Engineering
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ebook: 978-0-429-26220-3

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**Fundamentals of Wastewater-Based Epidemiology**

Frank R. Spellman, Spellman Environmental Consultants, Norfolk, Virginia, USA

Wastewater-based epidemiology is an emerging science that has proven to be a cost- and time-effective biomonitoring tool. This book provides a roadmap to detecting wastewater-borne pathogenic contaminants such as viruses, bacteria, fungi and others. It provides a basic, fundamental discussion of how sampling and monitoring of wastewater using epidemiological concepts and practices can aid in determining the presence of the COVID-19 virus in a community, for example, and may help predict future outbreaks.

CRC Press
Market: Environmental Engineering
May 2021: 234 x 156: 364pp
Hb: 978-0-367-75806-6 £89.99
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Green Engineering and Technology
Innovations, Design, and Architectural Implementation
Edited by Om Prakash Jena, Alok Ranjan Tripathy and Zdzislaw Polkowski, Jan Wyzykowski University, Poland
Series: Green Engineering and Technology
Green engineering technologies help to create sustainable, eco-friendly designs and solutions with the aid of updated tools, methods, designs, and innovations. These technologies play a significant role in optimizing sustainability in various areas of energy, agriculture, waste management, and bioremediation, and includes green computing and artificial intelligence (AI) applications. This book examines the most recent advancements in green technology, across multiple industries, and outlines the opportunities of emerging and future innovations, as well as practical real-world implementation.

Phytotechnology with Biomass Production
Sustainable Management of Contaminated Sites
Edited by Larry E. Erickson, Kansas State University, Manhattan, USA and Valentina Pidlisnyuk
This book explains the concept of using phytotechnology with biomass production to improve soil quality and produce valuable products that have economic and social value. It is focused on the application of second generation biofuel crops to slightly contaminated or marginal post-military and post-mining soils. Based on recent research from the US, Ukraine, Germany, and Poland, along with studies from other countries, this is the first comprehensive book on using phytotechnology with biomass production at contaminated sites at a global level. It's also a great new resource for those who want to study and plan phytotechnology projects as well as those who carry them out.

Management and Supervisory Practices for Environmental Professionals - Vol I
Herman Koren, Indiana State University, Terre Haute, USA and Alma Mary Anderson, Indiana State University Department of Art and Design, Indiana, U.S.A.
Based on the author’s lifelong experience as a supervisor and teacher, the fourth edition of this bestseller provides up to date information for professionals and engineers in the fields of environmental health, occupational health and safety, public health and others, who are newly promoted to supervision or aspiring for promotion into management. An excellent resource for students interested in learning management skills before they enter the workforce.

Management and Supervisory Practices for Environmental Professionals - Vol II
Herman Koren, Indiana State University, Terre Haute, USA and Alma Mary Anderson, Indiana State University Department of Art and Design, Indiana, U.S.A.
Based on the author’s lifelong experiences as supervisors and teachers, the fourth edition of this bestseller provides up to date information for professionals and engineers in the fields of environmental health, occupational health and safety, water and wastewater treatment, public health, etc., who are newly promoted to supervision or aspiring for promotion into management. An excellent resource for students interested in learning management skills before they enter the workforce. The second volume explains the advanced principles supervisors need to understand the art of communications and problems.

Site Assessment and Remediation for Environmental Engineers
Cristiane Q. Surbeck and Jeff Kuo, California State University, Fullerton, USA
Series: Fundamentals of Environmental Engineering
This book serves as a primary textbook for environmental site investigation and remediation of subsurface soil and groundwater. It introduces concepts and principles of field investigative techniques to adequately determine the extent of contamination in the subsurface for the selection of clean-up alternatives. It then focuses on practical calculations and skills needed to design and operate remediation systems that will both educate students and be useful for entry-level professionals in the field.

Site Assessment and Remediation for Environmental Engineers
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4th Edition

The Science of Environmental Pollution
Frank R. Spellman, Spellman Environmental Consultants, Norfolk, Virginia, USA

This new edition of The Science of Environmental Pollution presents common-sense approaches and practical examples based on scientific principles, models, and observations, but keeps the text lively and understandable for scientists and non-scientists alike. This fourth edition has been updated throughout, and greatly expands its coverage of endocrine disruptors and includes all new information on persistent "forever chemicals."

CRC Press
Market: Engineering - Environmental
June 2021: 7 x 10: 416pp
HB: 978-1-032-01668-2: £120.00
eBook: 978-1-032-18090-6
* For full contents and more information, visit: www.routledge.com/9781032016682

Whale Sharks
Biology, Ecology, and Conservation
Edited by Alistair D.M. Dove and Simon J. Pierce
Series: CRC Marine Biology Series

Written by the world’s leading experts in whale shark biology, ecology, and conservation, Whale Sharks: Biology, Ecology, and Conservation is the first definitive volume about the world’s biggest fish. Chapters include discussions of satellite-linked tags, used to track whale shark movements; genetic sequencing, to examine evolutionary adaptations; even the use of underwater ultrasound units to investigate the species’ reproduction. The editors hope that by collating what is known, they can make it easier for future researchers, conservationists, and resource managers to fill some of the remaining knowledge gaps, and provide the information they need to join the team.

CRC Press
Market: Life Science
August 2021: 254 x 178: 352pp
HB: 978-1-032-04940-3: £192.99
Pb: 978-1-138-57129-7: £76.99
eBook: 978-0-203-70291-8
* For full contents and more information, visit: www.routledge.com/9781138571297

2nd Edition

Understanding Global Climate Change
Modelling the Climatic System and Human Impacts
Arthur P Cracknell and Costas A Varotsos

Climate change is far more than just global warming due to atmospheric greenhouse gases including CO2. The availability of climate-related data and computer modelling is a key factor in observing and analyzing climate change today. In order to understand the nature of climate change it is necessary to consider the whole climatic system, its complexity, and the ways in which natural and anthropogenic activities act and influence that system and the environment. Using a combination of ground data, satellite data, and human impacts, this second edition discusses the state of climate research today, at a global scale, and establishes a background for future discussions on climate change.

CRC Press
Market: Environmental Engineering
May 2021: 254 x 178: 454pp
HB: 978-0-367-19591-5: £140.00
Pb: 978-1-032-00161-6: £56.99
eBook: 978-0-429-20332-9
Prev. Ed HB: 978-0-748-40124-6
* For full contents and more information, visit: www.routledge.com/9780367195915

Water and Wastewater Pipeline Assessment Technologies
Classification Systems, Sensors, and Results Interpretation
Justin Starr

Water and Wastewater Pipeline Assessment Technologies: Classification Systems, Sensors, and Results Interpretation provides a thorough guide to the technical workings of some of the most popular water and wastewater assessment technologies available, including CCTV crawlers, acoustic listening devices, laser sensors, 360° video cameras, pipe penetrating radar, and more. This book provides a mixture of theoretical and real-world, practical considerations ranging from deployment tips and data exchange formats to the technical limitations of different technologies.

CRC Press
Market: Environmental Engineering
May 2021: 6.14 x 9.21: 288pp
eBook: 978-0-429-19873-1
* For full contents and more information, visit: www.routledge.com/9780367188450

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2nd Edition

**Digital Forensics Explained**

*Edited by Greg Gogolin, Ferris State University, Big Rapids, Michigan, USA*

Digital Forensics Explained, 2nd edition, covers the full life cycle of conducting a mobile and computer digital forensic examinations including planning and performing an investigation as well as report writing and testifying. Case reviews in corporate, civil and criminal situations are described from both prosecution and defence perspectives. The book draws from years of experience in local, state, federal and international environments and highlights the challenges presented from deficient cyber security practices.

CRC Press
Market: Digital Forensics
April 2021: 234 x 156: 254pp
Hb: 978-0-367-50343-7: £48.99
Pb: 978-0-367-50281-2: £120.00
eBook: 978-1-003-04935-7

*For full contents and more information, visit: www.routledge.com/9780367503437

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3rd Edition

**DiMaio’s Forensic Pathology**

*Vincent J.M. DiMaio, Chief Medical Examiner, Bexar County, San Antonio, Texas, USA and D. Kimberley Molina*

Series: Practical Aspects of Criminal and Forensic Investigations

DiMaio’s Forensic Pathology, Third Edition is the latest edition of what many consider the original and definitive pathology text. The book is illustrated in full color and fully up-to-date to include the latest advances in DNA™ anthropology, and forensic pathology in the forensic determination of death. Maintaining its concise, easy-to-read format, with completely updated references and photographs, the book is a highly anticipated work in line with Dr. DiMaio’s legacy of producing invaluable professional resources.

CRC Press
Market: Medical/Forensic Pathology
May 2021: 254 x 178: 608pp
Hb: 978-0-367-25148-2: £110.00
ebook: 978-0-429-31876-4
Prev. Ed Hb: 978-0-849-30072-1

*For full contents and more information, visit: www.routledge.com/9780367251482

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2nd Edition

**Forensic and Clinical Autopsy**

*Edited by Cristoforo Pomara, University of Foggia, Italy and Vittorio Fineschi, University of Foggia, Italy*


CRC Press
Market: Medicine/Forensic Pathology
February 2021: 210 x 280: 226pp
Hb: 978-0-367-33071-2: £150.00
ebook: 978-1-003-04811-4

*For full contents and more information, visit: www.routledge.com/9780367330712

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2nd Edition

**Sexual Murder**

*Catathymic and Compulsive Homicides*

*Louis B. Schlesinger, John Jay College of Criminal Justice, New York, USA*

Sexual Murder: Catathymic and Compulsive Homicides, Second Edition encapsulates the authors’ 45 years of experience studying, sexually-motivated homicide. Both catathymic and compulsive homicides are covered in detail with all current research on the subject included and incorporated into this fully updated Second Edition.

CRC Press
Market: Psychology/Forensic Science
March 2021: 254 x 178: 300pp
Hb: 978-0-367-86023-3: £89.99
ebook: 978-1-003-14372-7

*For full contents and more information, visit: www.routledge.com/9780367860233

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2nd Edition

**Water-Related Death Investigation**

*Practical Methods and Forensic Applications*

*Kevin L. Erskine, Cleveland Lakefront State Park Police, Ohio, USA and Erica J. Armstrong, Office of the Cuyahoga County Coroner, Cleveland, Ohio, USA*

Water-Related Death Investigation, Second Edition is the most comprehensive book on the recovery and investigation of remains in water related death cases. Sections new to this edition cover personnel training, toxicological aspects of drowning, advancements in processing evidence and fingerprints recovered from a water environment. The book chronicles the entire investigative process of a case from the scene to the autopsy to the courtroom.

CRC Press
Market: Criminal Justice/Forensic
May 2021: 254 x 178: 432pp
Hb: 978-0-367-25154-3: £74.99
ebook: 978-0-429-31876-4
Prev. Ed Hb: 978-1-389-61363-1

*For full contents and more information, visit: www.routledge.com/9780367251543

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Success and Creativity in Scientific Research
Amaze Your Friends and Surprise Yourself

David S. Sholl

Long-term success in scientific research requires skills that go well beyond technical prowess. This book is aimed at students and early career professionals who want to achieve the satisfaction of performing creative and impactful research in any area of science or engineering. Both entertaining and thought-provoking, this essential work supports advanced students and early career professionals across a variety of technical disciplines to thrive as successful and innovative researchers.

CRC Press
Market: General Science and Engineering
March 2021: 234x156: 130pp
Hb: 978-0-367-61919-0: £68.99
eBook: 978-1-003-10709-5
* For full contents and more information, visit: www.routledge.com/9780367619183
Ceramic and Specialty Electrolytes for Energy Storage Devices
Edited by Prasanth Raghavan, Cochin University of Science and Technology, India and Jabeen Fatima, Cochin University of Science and Technology, India

This book will be of high value to researchers and engineers working on the development of next-generation energy storage devices, including materials and chemical engineers, as well as those involved in related disciplines.

CRC Press
Market: Polymer Science
April 2021: 6.14 x 9.21: 333pp
Eb: 978-0-367-70144-4: £120.00
Eboo: 978-1-003-08063-3
* For full contents and more information, visit: www.routledge.com/9780367701444

Composite Materials
Properties, Characterisation, and Applications
Edited by Amit Sachdeva, Lovely Professional University, Punjab, Pramod Kumar Singh and Hee Woo Rhee

This book provides an in-depth description of the synthesis, properties, and various characterisation techniques used for the study of composite materials. It also covers applications and simulation tests of these advanced materials. Aimed at industry professionals and researchers, this book offers readers thorough knowledge of the fundamentals as well as advanced level techniques involved in composite material characterization, development, and applications.

CRC Press
Market: Materials Science and Engineering
February 2021: 6.14 x 9.21: 280pp
Eb: 978-0-367-60976-6: £110.00
Eboo: 978-1-003-08063-3
* For full contents and more information, visit: www.routledge.com/9780367609768

Optoelectronic Organic-Inorganic Semiconductor Heterojunctions
Edited by Ye Zhou

The book summarizes advances in development of organic-inorganic semiconductor heterojunctions, challenges and possible solutions for material/device design, and prospects for commercial applications. It introduces the concept and basic mechanism of semiconductor heterojunctions. It describes a series of organic-inorganic semiconductor heterojunctions with desirable electrical and optical properties for optoelectronic devices. Typical devices such as solar cells, photo-detectors and optoelectronic memories are discussed. Materials, device challenges, and strategies are discussed to promote the commercial translation of semiconductor heterojunction based optoelectronic devices.

CRC Press
Market: Electrical Engineering
January 2021: 234x156: 378pp
Eb: 978-0-367-34212-8: £140.00
Eboo: 978-0-367-24817-5
* For full contents and more information, visit: www.routledge.com/9780367342128

4th Edition
Materials and Process Selection for Engineering Design
Mahmoud M. Farag, The American University in Cairo, Egypt

The Fourth Edition of this best-selling text helps readers develop designs, reach economic decisions, select materials, choose manufacturing processes, and assess environmental impact. It has been comprehensively revised to reflect the many advances in the fields of materials and manufacturing over the past decade. Aimed at students in mechanical, manufacturing, and materials engineering, as well as professionals in these fields, this book provides the practical know-how in order to choose the right materials and processes for development of new or enhanced products.

CRC Press
Market: Materials Science
Eboo: 978-1-003-00609-1
* For full contents and more information, visit: www.routledge.com/9780367419479

Polymer Electrolytes for Energy Storage Devices
Edited by Prasanth Raghavan, Cochin University of Science and Technology, India and Jabeen Fatima M. J., Cochin University of Science and Technology, India

This book will be of high value to researchers and engineers working on the development of next-generation energy storage devices, including materials, chemical, electrical, and mechanical engineers, as well as those involved in related disciplines.

CRC Press
Market: Polymer Science
Eb: 978-0-367-70145-1: £120.00
Eboo: 978-1-003-14479-3
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Sputtered Thin Films
Theory and Fractal Descriptions
Fredrick Madaraka Mwema, Esther Titilayo Akinlabi and Oluseyi Philip Oladijo
Series: Engineering Materials
This book provides an overview of sputtered thin films and demystifies the concept of fractal theory in analysis of sputtered thin films. It simplifies the use of fractal tools in studying the growth and properties of thin films during sputtering processes. Part 1 of the book describes the basics and theory of thin film sputtering and fractals. Part 2 consists of the case studies illustrating specific descriptions of thin films using fractal methods. The book is aimed at engineers and scientists working across a variety of disciplines including materials science and metallurgy as well as mechanical, manufacturing, electrical, and biomedical engineering.
CRC Press
Market: Materials Science and Engineering
April 2021: 6.14 x 9.21: 212pp
Hb: 978-0-367-49256-4: £130.00
ebook: 978-1-003-05550-7
* For full contents and more information, visit: www.routledge.com/9780367492564

Textile Design
Products and Processes
Michael Hann, School of Design, University of Leeds, UK
Series: Textile Institute Professional Publications
This book includes fundamentals of textile processing technology with explanation of craft techniques, various stages of processing fibres and yarns with useful, readily understandable, line drawings. Fibrous types, dyes, yarns and cloths have been explained and material is supported by glossary and explanation of processing stages from fibre to finished cloth. Further, the considerations of relevance to the development and preparation of a design collection are outlined and discussed. Various testing procedures, including fibre, yarn and cloth identification methods, and important innovations in textile products and processing are identified and explained as well.
CRC Press
Market: Textile manufacturing
October 2020: 6.14 x 9.21: 268pp
Hb: 978-0-367-31308-1: £140.00
Pb: 978-0-367-31306-7: £52.99
ebook: 978-0-429-31617-3
* For full contents and more information, visit: www.routledge.com/9780367313081

Textiles and Their Use in Microbial Protection
Focus on COVID-19 and Other Viruses
Edited by Jiri Militky, Aravin Prince Periyasamy and Mohanapriya Venkataraman
Series: Textile Institute Professional Publications
Textiles and Their Use in Microbial Protection: Focus on COVID-19 and Other Viruses provides readers with vital information about disinfection mechanisms used in textile applications in the fight against dangerous microbes and viruses. It is aimed at textile and materials engineers as well as readers in medical fields and offers a comprehensive view of fundamentals and solutions.
CRC Press
Market: Textile Engineering
June 2021: 234x156: 352pp
Hb: 978-0-367-69108-0: £190.00
Pb: 978-0-367-69105-0: £74.99
ebook: 978-1-003-14049-6
* For full contents and more information, visit: www.routledge.com/9780367691059
Auto-Segmentation for Radiation Oncology
State of the Art
Edited by Jinzhong Yang, Gregory C. Sharp and Mark J. Gooding
Series: Series in Medical Physics and Biomedical Engineering
This book provides a comprehensive introduction to current state-of-the-art auto-segmentation approaches used in radiation oncology for auto-delineation of organs-at-risk for thoracic radiation treatment planning. Containing the latest, cutting-edge technologies and treatments, it explores deep-learning methods, multi-atlas-based methods, and model-based methods that are currently being developed for clinical radiation oncology applications.

Energetic Particles in Tokamak Plasmas
Sergei Sharapov, Culham Centre for Fusion Energy
The study of energetic particles in magnetic fusion plasmas is key to the development of the next generation of "burning" plasma fusion experiments, such as the International Thermonuclear Experimental Reactor (ITER) and the Demonstration Power Station (DEMO).

Feynman Path Integrals in Quantum Mechanics and Statistical Physics
Lukong Cornelius Fai, University of Dschang, Cameroon
This book provides an ideal introduction to the use of Feynman Path Integrals in the fields of quantum mechanics and statistical physics. It is written for graduate students and researchers in physics, mathematical physics, applied mathematics as well as chemistry. The material is presented in an accessible manner for readers with little knowledge of quantum mechanics and no prior exposure to path integrals.

Fundamentals of Fibre Reinforced Composite Materials
Edited by A.R. Bunsell, Centre des Matériaux, Pierre-Marie Fourt, France, S. Joannès, Mines Paris Tech, France and A. Thionnet, MINES, Paris Tech, France
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.

Handbook of Laser Technology and Applications
Lasers: Principles and Operations (Volume One)
Edited by Chunlei Guo, The Institute of Optics, University of Rochester, NY, USA
Series: Handbook of Laser Technology and Applications
This comprehensive handbook gives a fully updated guide to lasers and laser systems, including the complete range of their technical applications. The first volume outlines the fundamental components of lasers, their properties and working principles. The second volume gives exhaustive coverage of all major categories of lasers, from solid-state and semiconductor diode to fiber, waveguide, gas, chemical, and dye lasers. The third volume covers modern applications in engineering and technology, including all new and updated case studies spanning telecommunications and data storage to medicine, optical measurement, defense and security, nanomaterials processing and characterization.

Handbook of Laser Technology and Applications
Laser Design and Laser Systems (Volume Two)
Edited by Chunlei Guo, The Institute of Optics, University of Rochester, NY, USA
Series: Handbook of Laser Technology and Applications
This comprehensive handbook gives a fully updated guide to lasers and laser systems, including the complete range of their technical applications. The first volume outlines the fundamental components of lasers, their properties and working principles. The second volume gives exhaustive coverage of all major categories of lasers, from solid-state and semiconductor diode to fiber, waveguide, gas, chemical, and dye lasers. The third volume covers modern applications in engineering and technology, including all new and updated case studies spanning telecommunications and data storage to medicine, optical measurement, defense and security, nanomaterials processing and characterization.
2nd Edition

**Introduction to Nuclear Reactions**
Carlos Bertulani and 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.

**Physical Properties of Skutterudites**
Ctirad Uher, University of Michigan, Ann Arbor, USA

This book informs the reader about a fascinating class of materials referred to as skutterudites, the atomic lattice of which has large structural voids that can be filled by a variety of foreign species, spanning from alkali to alkaline to rare earth ions. The fillers, in their unique way, drastically modify the physical properties of the parent structure, giving rise to outstanding thermoelectric properties.

**Plasma Technology in the Preservation and Cleaning of Cultural Heritage Objects**
Radňo Tiňo, Katarína Vízrová, František Krčma, Milena Reháková, Viera Jančovičová and Zdenka Kozáková

Scientists have long been looking for alternative methods for the cleaning of historical and cultural museum objects as conventional methods often fail to completely remove surface films, leaving contamination and surface residues behind. Low-temperature plasmas have recently been found to provide a new, efficient and durable approach that maintains the safety of both the materials and personnel.

**Nanosensors**
Vinod Kumar Khanna, CSIR-Central Electronics Engineering Research Institute, India

A growing and exciting field, nanosensors have recently spurred considerable research endeavors across the globe, driving a need for the development of new device concepts and engineering nanostructured materials with controlled properties. Nanosensor, Second Edition offers a panoramic view of the field and related nanotechnologies with extraordinary clarity and depth. This is an ideal reference for researchers and industry professionals engaged in the frontier areas of material science and semiconductor fabrication as well as graduate students in physics and engineering pursuing electrical engineering and electronics courses with a focus on nanoscience and nanotechnology.

**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.
Understanding the Universe
The Physics of the Cosmos from Quasars to Quarks
Andrew Norton

*Understanding the Universe: The Physics of the Cosmos from Quasars to Quarks* explores how all areas of physics, from the very smallest scales to the very largest, come together to form our current understanding of the Universe. It takes readers on a fascinating journey, from the Big Bang and how the Universe has evolved, to how it appears now, and the possibilities for how it will continue to evolve in the future. It also explores the latest exciting developments in the area and how they impact our understanding of the Universe, such as quantum chromodynamics, black holes, dark energy, and gravitational waves.

CRC Press

**Market:** Physics

* For full contents and more information, visit: [www.routledge.com/9780367748050](http://www.routledge.com/9780367748050)
2nd Edition

An Essential Introduction to Maya Character Rigging

Cheryl Briggs, Autodesk Certified Instructor in Maya, Professor at the University of Central Florida

While some rigging books focus too much on the theory of rigging and provide little instruction; others do the exact opposite and offer no reasoning behind the button-pushing. The Essential Introduction to Maya Character Rigging, 2nd Edition, however, offers a perfect balance.

CRC Press
Market: Animation & Gaming
February 2021: 7 x 10: 474pp
Hb: 978-0-367-69406-7: £115.00
Pb: 978-1-387-77984-9: £38.99
eBook: 978-1-315-77140-3

* For full contents and more information, visit: www.routledge.com/9781138777989

2nd Edition

Game Anim

Video Game Animation Explained

Jonathan Cooper

The second edition of GAME ANIM expands upon the first with an all-new chapter on 2D and Pixel Art Animation, an enhanced mocap chapter covering the latest developments in Motion Matching, and even more interviews with top professionals in the field.

CRC Press
Market: Games & Animation
April 2021: 254 x 178: 350pp
Hb: 978-0-367-70770-5: £120.00
Pb: 978-0-367-70765-1: £42.99
ebook: 978-1-003-14789-3

* For full contents and more information, visit: www.routledge.com/9780367707651

2nd Edition

Writing for Animation, Comics and Games

Christy Marx, Christy Marx is an interactive writer, story editor, series developer and game designer based in LA. Her credits include: Babylon 5, The Twilight Zone, He-Man, X-Men Evolution and Lord of the Rings.

This second edition of Writing for Animation, Comics, and Games expounds on the previous edition with more information on how to construct narratives for these three forms of visual storytelling media.

CRC Press
Market: Games and Animation
June 2021: 254 x 178: 248pp
Hb: 978-0-815-37938-6: £115.00
Pb: 978-0-815-37937-9: £38.99
ebook: 978-1-351-21598-5

* For full contents and more information, visit: www.routledge.com/9780815379379
The Multiplayer Classroom: Game Plans

Lee Sheldon, Worcester Polytechnic

The Multiplayer Classroom: Game Plans is a companion to The Multiplayer Classroom: Designing Coursework as a Game, now in its second edition from CRC Press. This book covers four multiplayer classroom projects played in the real world in real time to teach and entertain.

CRC Press
Market: Games and Education
April 2021: 7 x 10. 454pp
Hb: 978-0-367-24904-5: £73.98
Pb: 978-0-367-24901-4: £36.99
eBook: 978-0-429-28501-1

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<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual of Complex Abdominal Wall: Reconstruction</td>
<td>38</td>
</tr>
<tr>
<td>Manual of Lifestyle Medicine</td>
<td>30</td>
</tr>
<tr>
<td>Mass and Energy Balancing: Design</td>
<td>7</td>
</tr>
<tr>
<td>Materials and Process Selection for Engineering: Design</td>
<td>56</td>
</tr>
<tr>
<td>Mathematical Modeling and Computation of Real-Time Problems</td>
<td>19</td>
</tr>
<tr>
<td>Mathematical Puzzles</td>
<td>24</td>
</tr>
<tr>
<td>Medical Risk Prediction Models: Design</td>
<td>26</td>
</tr>
<tr>
<td>Medial Plasmons of Bions</td>
<td>46</td>
</tr>
<tr>
<td>Men's Health 4e</td>
<td>30</td>
</tr>
<tr>
<td>Microeconomics in Clinical Practice</td>
<td>35</td>
</tr>
<tr>
<td>Minling the Heavens</td>
<td>60</td>
</tr>
<tr>
<td>Minimally Invasive Cardiac Surgery</td>
<td>38</td>
</tr>
<tr>
<td>Modern Data Science with R: Design</td>
<td>26</td>
</tr>
<tr>
<td>Molecular Food Microbiology: Design</td>
<td>23</td>
</tr>
<tr>
<td>Monographs in Contact Allergy: Volume 1</td>
<td>46</td>
</tr>
<tr>
<td>Multiplexer Classroom: The</td>
<td>62</td>
</tr>
<tr>
<td>Multiple Objective Analytics for Criminal Justice: Systems</td>
<td>19</td>
</tr>
<tr>
<td>Nail Therapies</td>
<td>35</td>
</tr>
<tr>
<td>Nanomaterials and Nanocomposites</td>
<td>56</td>
</tr>
<tr>
<td>Nanosensors</td>
<td>60</td>
</tr>
<tr>
<td>Natural Gas Installations and Networks in Buildings</td>
<td>17</td>
</tr>
<tr>
<td>Necrotizing Enterocolitis</td>
<td>30</td>
</tr>
<tr>
<td>Neurological Consequences of Nutritional Disorders</td>
<td>35</td>
</tr>
<tr>
<td>Neuron Signaling in Metabolic Regulation</td>
<td>42</td>
</tr>
<tr>
<td>Neuroradiology</td>
<td>30</td>
</tr>
<tr>
<td>Noise Control</td>
<td>11</td>
</tr>
<tr>
<td>Nonparametric Statistical Inference</td>
<td>26</td>
</tr>
<tr>
<td>Objective-Oriented Design Choices</td>
<td>49</td>
</tr>
<tr>
<td>Observational Method in Civil Engineering: The</td>
<td>12</td>
</tr>
<tr>
<td>Oil Spill Occurrence, Simulation, and Behavior</td>
<td>8</td>
</tr>
<tr>
<td>OPC and the World’s Energy Future</td>
<td>8</td>
</tr>
<tr>
<td>Operative Orthopaedics</td>
<td>38</td>
</tr>
<tr>
<td>Operative Pediatric Surgery</td>
<td>38</td>
</tr>
<tr>
<td>Optoelectronic Organic-Inorganic Semiconductors: Heterojunctions</td>
<td>56</td>
</tr>
<tr>
<td>Origin and Evolution of Metazoan Cell Types</td>
<td>43</td>
</tr>
<tr>
<td>Pediatric Dermatology of Skin of Color</td>
<td>35</td>
</tr>
<tr>
<td>Petroleum Fuels</td>
<td>8</td>
</tr>
<tr>
<td>Pharmacoeconomics</td>
<td>47</td>
</tr>
<tr>
<td>Phenotypic Plasticity &amp; Evolution</td>
<td>43</td>
</tr>
<tr>
<td>Physical Properties of Sputumaneans Protection</td>
<td>60</td>
</tr>
<tr>
<td>Phytotechnology with Biomass Production</td>
<td>52</td>
</tr>
<tr>
<td>Plasma Technology in the Preservation and Cleaning of Cultural Heritage Objects</td>
<td>60</td>
</tr>
<tr>
<td>Polymer Electrolytes for Energy Storage</td>
<td>56</td>
</tr>
<tr>
<td>Power Transformer Design Practices</td>
<td>13</td>
</tr>
<tr>
<td>Practical Mil for Cybersecurity</td>
<td>5</td>
</tr>
<tr>
<td>Predicting Outdoor Sound</td>
<td>11</td>
</tr>
<tr>
<td>Primer on Automotive Lightweight Technologies:</td>
<td>12</td>
</tr>
<tr>
<td>Principles and Practices of Transportation Planning and Engineering</td>
<td>12</td>
</tr>
<tr>
<td>Production, Use, and Sustainability of Groundwater</td>
<td>52</td>
</tr>
<tr>
<td>Project Management Essentials</td>
<td>19</td>
</tr>
<tr>
<td>Project Management Maturity Model</td>
<td>4</td>
</tr>
<tr>
<td>Public Policy Analytics</td>
<td>49</td>
</tr>
<tr>
<td>Quality Management and Operations Research</td>
<td>19</td>
</tr>
<tr>
<td>Quantitative Methods in Transportation</td>
<td>12</td>
</tr>
<tr>
<td>Reaction Engineering, Catalyst Preparation, and Kinetics</td>
<td>8</td>
</tr>
<tr>
<td>Real Analysis</td>
<td>24</td>
</tr>
<tr>
<td>Remote Sensing Applications in Environmental and Earth System Sciences</td>
<td>16</td>
</tr>
<tr>
<td>Replication and Evidence Factors in Observational Studies</td>
<td>27</td>
</tr>
<tr>
<td>Restless Health Care</td>
<td>19</td>
</tr>
<tr>
<td>Ripple-Down Rules</td>
<td>49</td>
</tr>
<tr>
<td>Scenewor for Horses</td>
<td>40</td>
</tr>
<tr>
<td>Science and Technology of Organic Farming</td>
<td>43</td>
</tr>
<tr>
<td>Science of Environmental Pollution, The</td>
<td>53</td>
</tr>
<tr>
<td>Scott-Brown’s Essential Otorhinolaryngology, Head, &amp; Neck Surgery</td>
<td>38</td>
</tr>
<tr>
<td>Sequencing Technologies in Microbial Food Safety &amp; Quality</td>
<td>23</td>
</tr>
<tr>
<td>Sexual Murder</td>
<td>54</td>
</tr>
<tr>
<td>Site Assessment and Remediation for Environmental Engineers:</td>
<td>52</td>
</tr>
<tr>
<td>Smart Micargids</td>
<td>15</td>
</tr>
<tr>
<td>Software Engineering</td>
<td>4</td>
</tr>
<tr>
<td>Software Testing</td>
<td>4</td>
</tr>
<tr>
<td>Soil Nailing</td>
<td>12</td>
</tr>
<tr>
<td>Spatial Analysis for Radar Remote Sensing of Tropical Forests</td>
<td>16</td>
</tr>
<tr>
<td>Sputtered Thin Films</td>
<td>57</td>
</tr>
<tr>
<td>Subtle Agroliegions</td>
<td>22</td>
</tr>
<tr>
<td>Success and Creativity in Scientific Research:</td>
<td>55</td>
</tr>
<tr>
<td>Surgical and Anaesthetic Instruments for OCSÉE</td>
<td>39</td>
</tr>
<tr>
<td>Sustainability</td>
<td>28</td>
</tr>
<tr>
<td>Sustainability of Biomass through Bio-based Chemistry</td>
<td>46</td>
</tr>
<tr>
<td>Sustainable Bioprocessing for a Clean and Green Environment</td>
<td>8</td>
</tr>
<tr>
<td>Synthetic Peptide Vaccine Models</td>
<td>43</td>
</tr>
<tr>
<td>Techniques in the Evaluation and Management of Hair Disease</td>
<td>35</td>
</tr>
<tr>
<td>Textile Design</td>
<td>57</td>
</tr>
<tr>
<td>Textiles and Their Use in Microbial</td>
<td>57</td>
</tr>
<tr>
<td>Thyroid and Parathyroid Disorders in Children:</td>
<td>31</td>
</tr>
<tr>
<td>Thyroid and Parathyroid Disorders in Children:</td>
<td>31</td>
</tr>
<tr>
<td>Ultrasound in Assisted Reproduction and Early Pregnancy</td>
<td>36</td>
</tr>
<tr>
<td>Ultrasound of Mouse Fetal Development and Human Correlates</td>
<td>36</td>
</tr>
<tr>
<td>Understanding Global Climate Change</td>
<td>53</td>
</tr>
<tr>
<td>V-Ray 5 for 3ds max 2020</td>
<td>13</td>
</tr>
<tr>
<td>Vascular and Endovascular Complications: A Practical Approach</td>
<td>39</td>
</tr>
<tr>
<td>Vertebrate Skeletal Histology and Paleohistology</td>
<td>43</td>
</tr>
<tr>
<td>Water and Wastewater Pipeline Assessment Technologies</td>
<td>53</td>
</tr>
<tr>
<td>Water-Related Death Investigation</td>
<td>34</td>
</tr>
<tr>
<td>Whale Sharks</td>
<td>33</td>
</tr>
<tr>
<td>What, if anything, are species?</td>
<td>44</td>
</tr>
<tr>
<td>Wheres and Wheres of a Scientific Life, The</td>
<td>46</td>
</tr>
<tr>
<td>Wind and Solar Power Systems: A Practical Approach</td>
<td>13</td>
</tr>
<tr>
<td>Writing for Animation, Comics and Games</td>
<td>62</td>
</tr>
<tr>
<td>X Marks the Spot</td>
<td>24</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdel-Khalil, H.</td>
<td>Babu, B. Sridhar</td>
<td>Candossy, A.</td>
<td>Cano, José</td>
<td>Ehempati, Raghv</td>
</tr>
<tr>
<td>Abdel-Aziz, T.</td>
<td>Badru, A.</td>
<td>Cardoso, M.</td>
<td>Cardoso, C.</td>
<td>El-Hamad, F.</td>
</tr>
<tr>
<td>Adhikary, S.</td>
<td>Badru, A. Ayub</td>
<td>Cardoso, M.</td>
<td>Cardoso, J.</td>
<td>El-Hamad, R.</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>Badru, A. Ayub</td>
<td>Cardoso, M.</td>
<td>Cardoso, J.</td>
<td>El-Hamad, R.</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>Badru, A. Ayub</td>
<td>Cardoso, M.</td>
<td>Cardoso, J.</td>
<td>El-Hamad, R.</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>Badru, A. Ayub</td>
<td>Cardoso, M.</td>
<td>Cardoso, J.</td>
<td>El-Hamad, R.</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>Badru, A. Ayub</td>
<td>Cardoso, M.</td>
<td>Cardoso, J.</td>
<td>El-Hamad, R.</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>Badru, A. Ayub</td>
<td>Cardoso, M.</td>
<td>Cardoso, J.</td>
<td>El-Hamad, R.</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>Badru, A. Ayub</td>
<td>Cardoso, M.</td>
<td>Cardoso, J.</td>
<td>El-Hamad, R.</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>Badru, A. Ayub</td>
<td>Cardoso, M.</td>
<td>Cardoso, J.</td>
<td>El-Hamad, R.</td>
</tr>
</tbody>
</table>

**INDEX BY AUTHOR**

<table>
<thead>
<tr>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aditya, G. R.</td>
<td>27</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>34</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>34</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>34</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>34</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>34</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>34</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>34</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>34</td>
</tr>
<tr>
<td>Aditya, S.</td>
<td>34</td>
</tr>
</tbody>
</table>

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