

CRC Rights Guide

SPRING/SUMMER 2026



CRC Press
Taylor & Francis Group

In focus this season

This collection exemplifies our commitment to aligning with global priorities and emerging trends, offering a curated selection of titles that reflect the forefront of innovation and thought leadership. With nearly 175 key titles included, this catalog showcases the wide breadth and depth of our publishing portfolio, spanning Science, Technology, Engineering, Mathematics, and Medicine.

Highlighting the work of the brightest minds tackling the most pressing challenges of our time, the op-ed pieces and Q&As provide a glimpse into what's ahead in cancer drug discovery, veterinary humanities, chemical product design, ecology, cartography, dementia, and AI

Our Civil & Structural Engineering program, one of our premier collections for industry professionals and academics, features a standout contribution from Patrick Ssempeera's *Introduction to Civil Engineering: A Guide for Students and Professionals*. In his op-ed, Ssempeera shares insights on teaching readers to "think like a civil engineer." Richard Li Chengzhe of China Railway Engineering Corporation and Weihai International Economic & Technical Cooperative Co., Limited (WIETC) praises the book, stating, "This book guides graduates through the essential concepts of civil engineering and the practicalities of working as an engineer. The author possesses profound insight into civil engineering and extensive practical experience in the industry. This book offers readers not just the author's valuable insights, but also a perspective on the most cutting-edge developments shaping the field of civil engineering."

Another standout is *Mentoring in Healthcare: The Definitive Guide to Cultivating Individual and*

Organizational Success, which has received widespread acclaim. As Dr. Namita Seth Mohta, Executive Editor of *NEJM Catalyst* and Assistant Professor at Harvard Medical School, notes, "Mentoring in Healthcare brilliantly integrates the inspirational with the practical. The authors have creatively leveraged evidence and their experience to build a toolkit applicable in the real world." Mary Dixon-Woods, Health Foundation Professor at the University of Cambridge, describes it as "a blueprint for human flourishing," while Dr. Sachin Jain, President and CEO of SCAN Group & Health Plan, calls it "a must-read for trainees, faculty, and leaders in healthcare."

And *Digital Accessibility Ethics: Disability Inclusion in All Things Tech*, by globally recognized disability rights lawyer, Lainey Feingold, alongside co-authors Reginé Gilbert and Chancey Fleet addresses the critical intersection of technology and accessibility, offering actionable insights for creating a more inclusive digital future.

This season's collection is a testament to the power of how Science, Technology, Engineering, Mathematics, and Medicine will shape all facets of our lives. With a focus on critical areas such as artificial intelligence, healthcare, materials science, sustainability, data science, digital transformation, civil, structural engineering, electrical, mechanical, and industrial engineering, human-centered design, mathematics, statistics, animal sciences, food security, genetics, quantum computing, and cybersecurity, our content informs, inspires, and drives essential change around the world.

Our 2026 publications will deliver specialized expertise, practical solutions, and innovative applications, empowering forward-thinking perspectives to address today's challenges and tomorrow's opportunities.

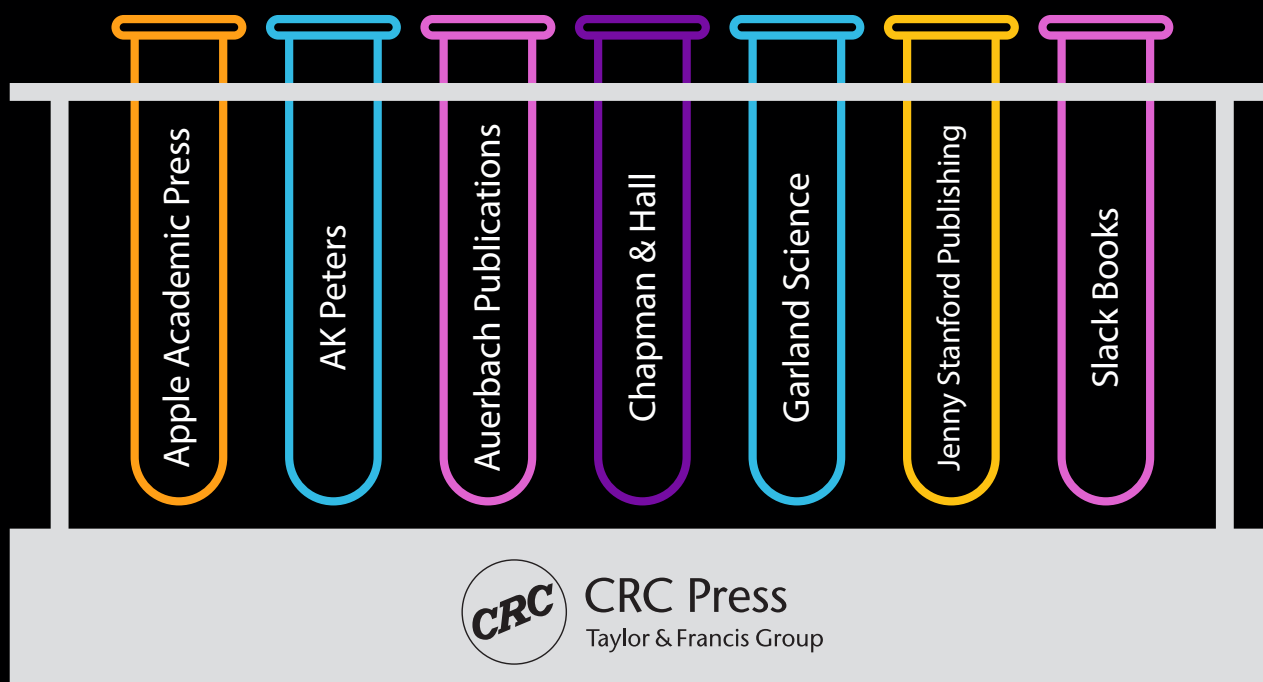


Nora Konopka



Sunil Nair

Editorial Directors for STEM



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Exploring Medicinal Plants

Medicinal plants render a rich source of bioactive compounds used in drug formulation and development; they play a key role in traditional or indigenous health systems. As the demand for herbal medicines increases worldwide, supply is declining as most of the harvest is derived from naturally growing vegetation. Considering global interests and covering several important aspects associated with medicinal plants, the Exploring Medicinal Plants series comprises volumes valuable to academia, practitioners, and researchers interested in medicinal plants. Topics provide information on a range of subjects including diversity, conservation, propagation, cultivation, physiology, molecular biology, growth response under extreme environment, handling, storage, bioactive compounds, secondary metabolites, extraction, therapeutics, mode of action, and healthcare practices.

Led by Azamal Husen, PhD, this series is directed to a broad range of researchers and professionals consisting of topical books exploring information related to medicinal plants. It includes edited volumes, references, and textbooks available for individual print and electronic purchases.



Alkaloids From Medicinal Plants and Their Transformative Applications

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Rakesh Kumar Bachheti,
Archana Bachheti,
Azamal Husen

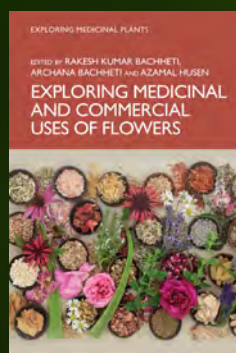
ISBN: 9781032866079



Phenolic Compounds from Medicinal Plants: Pharmaceutical and Health Benefits

Edited by
Rakesh Kumar Bachheti,
Archana Bachheti,
Azamal Husen

ISBN: 9781032854014



Exploring Medicinal and Commercial Uses of Flowers

Edited by
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Archana Bachheti,
Azamal Husen

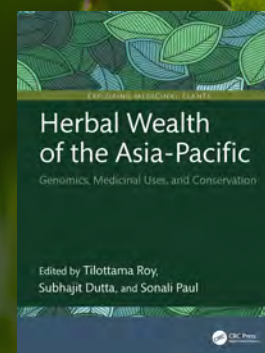
ISBN: 9781032845623



Exploring Herbal Synergies for Optimal Human Health

Edited by
Arti Devi, Nancy George,
Zaved Ahmed Khan,
Vagish Dwibedi

ISBN: 9781032870793



Herbal Wealth of the Asia-Pacific: Genomics, Medicinal Uses, and Conservation

Edited by
Tilottama Roy,
Subhajit Dutta, Sonali Paul

ISBN: 9781032773582

For more information, please visit

www.routledge.com/Exploring-Medicinal-Plants/book-series/CRCEMP



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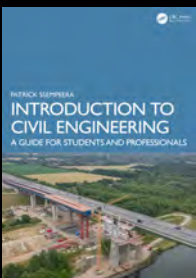
Game Design & Animation

Jenny Stanford Publishing



Patrick Ssempeera

is a chartered civil engineer and a member of the institution of civil engineers, UK. He has previously authored, 'Integrated drainage systems planning and design for municipal engineers.' He holds a master's degree in engineering and has practiced widely.



Introduction to Civil Engineering

A Guide for Students and Professionals

Patrick Ssempeera

February 2026

ISBN 9781032911502

384 Pages, 215 B/W Illustrations

Subject: Civil Engineering

www.routledge.com/9781032911502

Patrick Ssempeera

talks about *Introduction to Civil Engineering*, explains what it means to think like a civil engineer.

Who did you have in mind as your 'typical' reader?

Insights from both lived experience and targeted research reveal an increasing desire for individuals to pursue meaningful lives, especially in today's rapidly changing world. Groups and associations constantly germinate, claiming 'this is us' and 'this is what we can do!' We are specialists in A and/or B and so on. This mindset is driven out of an effort to help people resolve the dilemmas of contemporary life such as isolation and alienation.

Most professionals and students seek affiliation with specialist organizations, which is positive but cannot escape shortcomings such as professional fragmentation. For example, prioritizing project management over civil engineering competencies may be premature. This shift can perpetuate knowledge illusions within the civil engineering industry, challenging the sustainability of our profession. We must enhance the timing, context, and methods through which both skill sets are delivered.

Engineering skills are threatened by the increase in alternatives from specialist organizations that prioritize managerial, digital, soft, or interdisciplinary approaches over deep technical expertise. While there is an urgent need for engineers to develop soft skills, that does not make hard skills obsolete. It is challenging to lead and manage solutions to complex engineering problems without sound technical knowledge.

As the need to sustainably develop economies accelerates, our civil engineering profession is under threat. We urgently need a resource that brings together these professional fragments in one place to sustain the overarching goal of civil engineers, as contrasted with military engineering since its inception by John Smeaton.

In the 18th and 19th centuries, civil engineers had not taken much from nature. Today, civil engineers give back to nature by designing sustainable structures—from dams to highways, buildings, and more. Thus, civil engineers direct the great sources of power in nature for human use sustainably—updating Thomas Tredgold's 1828 definition and echoing the ICE UK Council's 2007 resolution.

Dear civil engineers in training, in practice, and in the making: while shaping the built environment by directing nature's great sources of power is vital, our highest calling is to lead the sustainability of Earth.

With these insights, the creation of *Introduction to Civil Engineering: A Guide for Students and Professionals* becomes inevitable, connecting civil engineering fundamentals to broader philosophical concepts to motivate readers while revitalizing the role of civil engineering.

The typical reader is 16–30 years old, either an undergraduate student in civil engineering or a recent graduate—an engineer in the making or in training. The former must have foundational math and science knowledge and may be



enrolled in or recently completed introductory engineering courses, while the latter must be interested in becoming a practicing civil engineer.

The reader wants to understand how civil engineering works today and seeks guidance transitioning from student to professional. With conceptual explanations, visual aids, case studies, and practical examples, the textbook captures curiosity about ethical, historical, technical, sustainability, and technological dimensions. It is especially useful for anyone who wants the big picture of civil engineering and engages students, professionals, and educators alike.

- **Undergraduate civil engineering students:** ‘Civil engineers in the making,’ primarily in first or second year, seeking a broad overview before specialization, understanding how subjects connect in real-world engineering.
- **Early-career civil engineers:** ‘Civil engineers in training,’ recent graduates or interns, seeking guidance on professional conduct, career development, and applying academic knowledge.
- **Educators, professionals, mentors:** Instructors designing courses or professionals mentoring students, wanting a resource to teach readers to “think like a civil engineer” and understand interdisciplinary connections.

KEY FEATURES

- **Clear explanations of core principles:** Breaks down intricate topics into manageable sections.
- **Real-life case studies:** Emphasizes practical applications.
- **Student-to-professional transition:** Guides students and early-career professionals with skills, mindset, and career readiness.
- **Comprehensive coverage:** 10 chapters bridging academic theory with practice, including fundamentals, ethics, material science, biomimicry, modeling, design tools, career strategies, and modern techniques.
- **Historical and technological context:** Traces civil engineering evolution and modern technologies.
- **Integrated learning approach:** Connects separate course units into a cohesive framework.
- **Visual learning support:** 215 B/W illustrations.
- **Authoritative insight:** Draws from professional experience.



What civil engineering is

Civil engineering harnesses natural power for human convenience, but it is also a mindset integrating science, math, physics, ethics, creativity, and societal responsibility.

- **More than structures:** Shapes societies, solves complex problems, and leads responsibly.
- **Way of thinking:** Encourages “thinking like civil engineers,” understanding societal and environmental impact, and applying creativity and logic.

Overall, civil engineering is a profession, a mindset, and a mission to serve humanity sustainably.

Envisioned impact

This book aims to revolutionize civil engineering education in today’s AI-driven world. Foundational concepts like sustainability and biomimicry are essential, such as how tree structures inspire column and support design. Civil engineering has evolved from slide rules to advanced modeling and sustainable design, and education must evolve accordingly.

The book challenges outdated pedagogy, introducing engaging, inclusive, and effective learning approaches. Readers—students, professionals, and educators—are encouraged to rethink practices, moving from passive learning to active transformation. The book can serve as a cornerstone for mentoring, curriculum design, and self-study, especially where high-quality resources are limited, bridging academic theory and real-world practice.



Nishanth G. Chemmangattuvalappil

is a Professor at Sunway University, specializing in sustainable chemical product design and machine learning.



Jacksin Ooi

is an Assistant Professor at Heriot-Watt University Malaysia, specializing in molecular and sustainable chemical product design.



Mario Eden

is Dean at Auburn University, specializing in chemical process and product design, integration, and optimization.

Nishanth G. Chemmangattuvalappil, Jacksin Ooi and Mario R. Eden

talks about *Introduction to Chemical Product Design*, about training the next generation of chemical engineers.

What inspired you to write this book?

Chemical products are ubiquitous, and chemical engineers play a central role in their commercial production. These products range from detergents, perfumes, and food additives to pesticides, pharmaceuticals, and many others. Unlike commodity chemicals, the development and manufacture of chemical products involve multiple interconnected stages requiring expertise from several, often unrelated, disciplines. Understanding these relationships and the roles of personnel involved in product development is crucial to succeed in this field.

This textbook offers an essential introduction to chemical product design for undergraduate chemical engineering students who already have a strong foundation in core engineering principles. At this stage, students are typically trained to apply knowledge to the design and production of commodity chemicals. However, the crucial question of what product should be designed, and why, often receives less attention in undergraduate programs. In chemical product design, deciding what to create is often more significant than the manufacturing process itself, as it links marketing, scientific understanding, and engineering principles. Individuals with scientific training who understand the entire design process hold immense value in developing chemical products.

What factors should chemical engineers consider when designing new products?

The manufacture of non-commodity chemical products requires considerations beyond traditional economic analysis. Customer demands often drive the search for new products, while advances in scientific research can create new possibilities and convince consumers of previously unrecognized needs. Chemical engineers specializing in product design play a central role in translating these abstract needs into measurable and practical specifications. When developing a new product, factors such as functionality, market demand, safety, sustainability, and regulatory compliance must be considered. Intellectual property rights and the protection of innovations are also important. The ability to integrate technical knowledge with market, legal, and societal considerations is critical for engineers in this field.

How does your book approach chemical product design education?

To address these challenges, this book presents a systematic approach to chemical product design, guiding students through the entire process—from identifying product opportunities and making design decisions to developing detailed manufacturing strategies. The initial chapters focus on cultivating a product-centric design mindset by showing how consumer requirements translate into well-defined engineering problems. Once the problem is formulated, engineers can apply a range of analytical and computational tools. The book also highlights topics often underemphasized in traditional chemical engineering curricula but crucial to product development and manufacture.

What are the key features of your text?

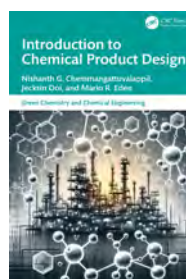
- **Bridging Product Design and Manufacturing:**
The book balances chemical product design and manufacturing. It presents a stepwise approach for designing various chemical products in detail. Beyond what chemical products should be made, it explores how they can be manufactured, covering topics often overlooked such as intellectual property protection, scale-up from laboratory scale, batch process scheduling, and common unit operations. It provides detailed discussion on widely used separation units including steam distillation, extraction, adsorption, crystallization, and spray drying, presenting underlying theory and design concepts, with illustrative examples and exercises.
- **Integration of Scientific Tools in Chemical Product Design:**
The text overviews scientific and decision-support tools that facilitate final selection of product ideas, including property prediction methods, machine learning, computer-aided molecular design (CAMD), selection matrices, and the Analytic Hierarchy Process (AHP). It also introduces tools for quantifying safety, environmental, and health (SHE) aspects, allowing these considerations to be addressed early in product design.

- **Beyond Conventional Unit Operations:**

In addition to common unit operations, the book covers diverse unconventional processing techniques important for producing complex formulated and functional products such as coatings, soaps, detergents, and chemical devices. Techniques include physical and chemical vapor deposition, sol-gel, and thermal spraying processes, agglomeration processes, and 3D printing for membranes and filters. Surface removal processes such as etching and breakage mechanisms in solids, liquids, and gases are also explored, particularly relevant to food, cosmetic, and pharmaceutical sectors.

- **Applied Learning through Solved Examples, Exercise Problems, and Case Studies:**

The text provides extensive examples and practice problems to develop understanding with minimal external assistance. The final chapter includes four comprehensive case studies illustrating chemical product design in practice. The first three focus on consumer product design, guiding readers from problem formulation to manufacturing. The fourth demonstrates how CAMD techniques combine with chemical product design, using mathematical programming to generate potential solutions.



Introduction to Chemical Product Design

Nishanth G. Chennangattuvalappil, Jacksin Ooi and Mario R. Eden

March 2026

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344 Pages, 80 B/W Illustrations

Subject: Chemical Engineering

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Michael Goedde

is a Certified Clinical Data Manager with 35 years of experience in the pharmaceutical and biotechnology industry. His expertise ranges from hands-on clinical data management (CDM) activities to executive roles with responsibility for large international teams and strategic positioning for the companies he engages with. Michael has dedicated his professional career to the advancement of CDM as a recognized and respected profession in our industry, as well as providing mentoring for the next generation of CDM enthusiasts.



Mastering Clinical Data Management

The Background, Experience, and Soft Skills Needed to Succeed in CDM

Michael Goedde

May 2026

ISBN 9781041090724

224 Pages, 34 B/W Illustrations, 5 Colour Illustrations

Subject: Statistical Computing

www.routledge.com/9781041090724

Michael Goedde

talks about *Mastering Clinical Data Management*, about the evolving role and value of Clinical Data Management.

Clinical Research is a fascinating industry because 99.9% of humans interact with it from day one and throughout their lives. From pain relievers and vaccines to life-saving medicines, most of us have direct or indirect experiences of how these products can improve lives. However, only a small percentage understand the effort required to bring a new medical product to patients, and fewer appreciate the pivotal role Clinical Data Management (CDM) professionals play in this endeavor.

Mastering Clinical Data Management offers a glimpse into my 3+ decades of experience in the field, sharing hands-on insights and concrete examples to propel one's CDM career. The goal is to provide valuable guidance for all levels of CDM professionals and those considering a career in CDM. Topics include Decentralized Clinical Trials (DCTs), Risk-Based Quality Management (RBQM), evaluating the trustworthiness of clinical research data, and using Artificial Intelligence (AI) in CDM. These are explained through real-life examples suitable for all competency levels.

The success—or failure—of a clinical trial relies entirely on robust and trustworthy clinical data. Yet biometrics functions typically account for only 10–14% of clinical trial budgets. Why are we still relying largely on manual review and allocating 40+% of study budgets to on-site monitoring and 100% Source Data Verification (SDV) in hopes of improving data quality?

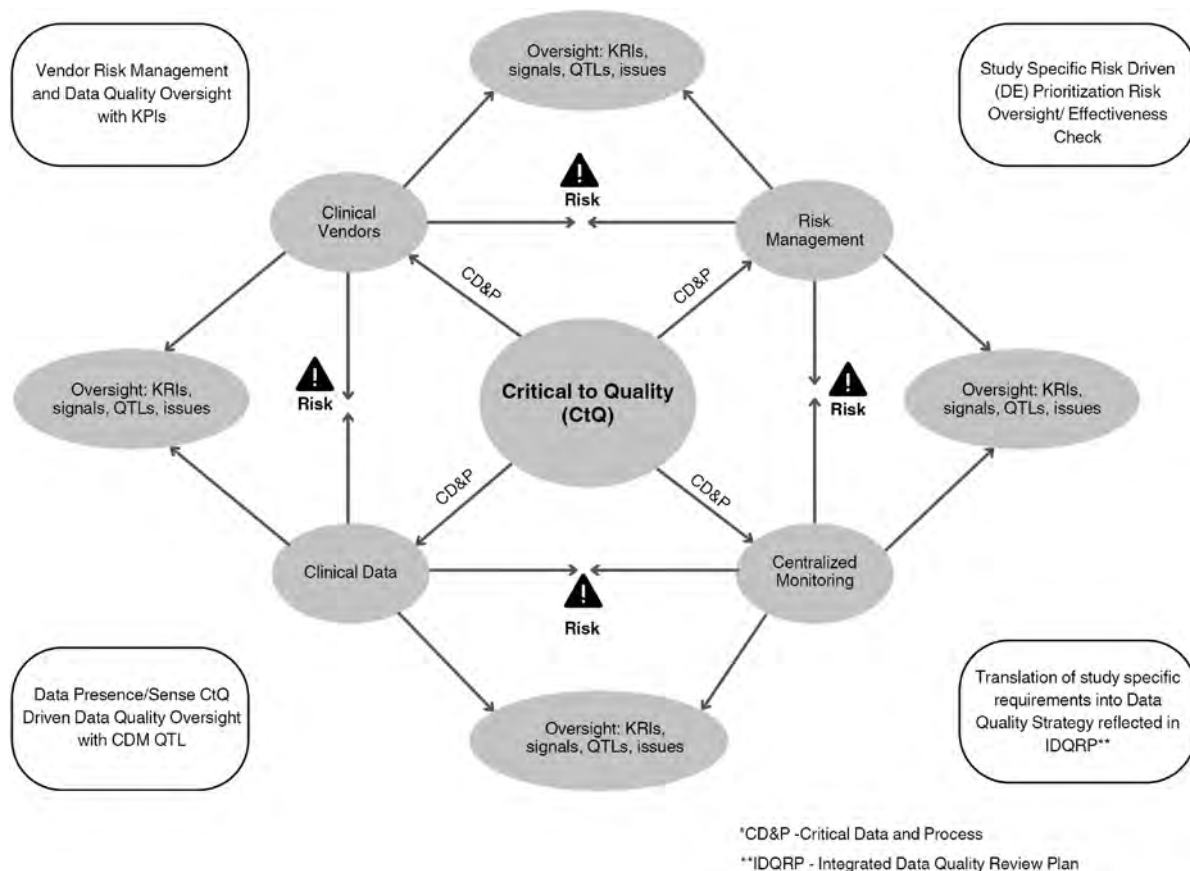
With ballooning global healthcare costs and exponentially growing clinical study data, the Pharmaceutical Industry and its Service Providers must pivot toward focusing on the professionals and technology driving Clinical Data Management & Science excellence.

Mastering Clinical Data Management provides arguments, examples, and talking points for CDM professionals to help shift the industry away from last-century, clinically focused approaches toward this century's technological advancements—all with the goal of improving human lives more efficiently, diversely, and affordably.

The era of thinking of CDM as merely a support function—building databases, sending queries, or generating listing reviews—is over. Readers will see how CDM can and must become a differentiating, value-adding asset in any life science company. The insights gained will benefit individual careers while enabling companies to implement newly learned skills and strategies.

Despite being a heavily regulated, tech-driven environment, this book emphasizes the human in the loop. Readers gain insights into CDM while learning the art of advancing their careers.

This book is for professionals within Clinical Research who are directly involved in day-to-day CDM activities or interact frequently with CDM. It caters to readers with a baseline understanding of CDM who want to expand their knowledge in depth and breadth. It is also accessible to those outside the CDM community, providing real-life examples to give a solid understanding of this growing and high-demand career. Whether at a sponsor company (Biotech, Pharma, or Academia) or a Service Provider (CRO or Technology), this book equips readers



with new arguments, examples, and perspectives to enhance their careers.

Short overview of areas this book covers to develop necessary CDM skills:

- Become a CDM industry expert for your company by deepening existing knowledge and advancing your career
- Understand clinical data and its value from perspectives rarely explored before
- Lead the journey from Clinical Data Management to Clinical Data Science using AI/ML technologies
- Grasp the full potential and remit of CDM
- Learn to advance your career within any CDM role
- Drive meaningful AI/ML implementations at your company
- Identify key problem areas in the Clinical Data universe
- Take the lead in RBQM implementation
- Develop and expand a Clinical Data Science mindset

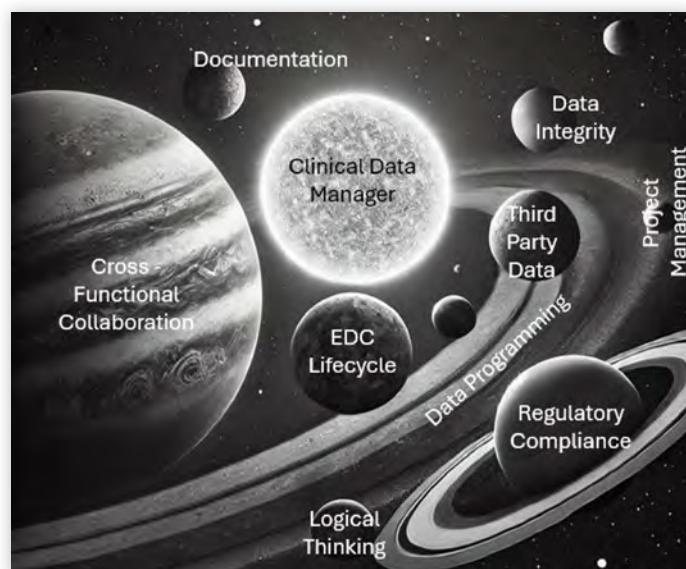
Endorsements

“As a long-standing leader in the Society for Clinical Data Management (SCDM), Michael has a unique perspective on the evolving needs of our field. This book will serve as a much-needed, practical guide for ensuring high-quality, on-time clinical data deliverables—an essential part of bringing new treatments to patients around the world.”

— Jonathan Andrus, Co-CEO, CRIO & Treasurer, SCDM

“As one of the leaders in the Society for Clinical Data Management (SCDM), the clinical data management industry’s recognized forum for nurturing best practices, Michael has a unique lens into the needs of the industry. I am confident that the book he is striving to get published will assist personnel in practicing end-to-end data management steps that ensure on-time, high-quality deliverables. Clinical Data Management deliverables will be a key factor in bringing much-needed cures to patients worldwide.”

— Zia Haque, Head of Data Management,
 Otsuka-US Pharmaceuticals





George Szpiro

He earned an MSc in mathematics from ETH Zurich, an MBA from Stanford, and a doctorate in mathematical economics from Hebrew University, Jerusalem. After consulting with McKinsey, he pursued academia, teaching at Wharton and Hebrew University. Later, he became a foreign correspondent and mathematics columnist for *Neue Zürcher Zeitung*, reporting from Israel and New York. Author of nine popular books and two dozen academic papers, he has received the Prix Média, the Medienpreis of the German Mathematical Society, and was a finalist for the EU Descartes Prize.



The Random Number Code

Unlocking the Secrets of Numbers That You Can't Predict but Can Rely On

George Szpiro

February 2026

ISBN 9781041073291

240 Pages, 14 B/W Illustrations

Subject: Mathematics

www.routledge.com/9781041073291

George Szpiro

talks about *The Random Number Code*, about generating and using random numbers in science and daily life.

Random Numbers Are Not Random

Random numbers have had a bad press. Unlike prime numbers like 17 or 1031, imaginary numbers like $\sqrt{-1}$, or irrational numbers like π , e , or $\sqrt{2}$, random numbers are rarely discussed. After all, they seem only needed for gambling and can be produced by tossing coins or dice. Correct? No—not at all. Random numbers are vitally important in many fields and extremely difficult to generate. This book is aimed at general readers who want an accessible introduction to what random numbers are, what they are used for, how we produce them, why we need them, and how they can be faked, requiring only high school mathematics.

Equally Likely, Independent, Unpredictable

When coins are tossed, heads and tails each occur half the time. Rolling dice produces numbers one through six with probability one-sixth. In roulette, the ball lands on a number between zero and 36 about 2.7 percent of the time. What these outcomes have in common is independence: later throws do not depend on earlier ones. Gamblers who think a run of tails must be followed by heads go bankrupt sooner or later.

Number sequences meeting three criteria—each number equally likely, independent of previous ones, and unpredictable—are called uniformly random. Random numbers are essential beyond games of chance: in political polling, randomly selected phone numbers are used; in medical research, test subjects receive drugs or placebos according to drawn numbers.

Random numbers are crucial for simulations, determining which alternatives occur in a scenario. This began with the Manhattan Project during World War II when the U.S. developed atomic bombs. Nuclear explosions cannot be tested experimentally, so simulations were essential. Complex systems with many interacting influences also rely on simulations.

For example, a factory director can simulate workdays using dozens of random numbers: the first number determines how many employees arrive, the second whether a machine screw comes loose, the third whether another machine overheats, and so on. Hundreds of scenarios can be generated, some more frequent or serious than others, roughly mirroring real life.

If You Can't Make It, Fake It

In computer science, algorithms can be massively accelerated using random numbers. For instance, Quicksort, introduced in 1961, utilized random numbers to sort millions of names far faster than the older Bubblesort. In cryptography, random numbers complement prime numbers. Simulations can even approximate π .



Generating millions of random numbers on a computer is challenging because computers are deterministic: they follow exact instructions. The best they can produce are pseudo-random numbers, which appear random but are generated by complex, deterministic algorithms. Since the Manhattan Project, mathematicians have worked to design algorithms producing numbers that are equally likely, independent, and unpredictable.

Most algorithms make each number depend on earlier numbers, violating independence. Typically, a “seed” is chosen as randomly as possible—like the millisecond you press “Enter”—and later numbers depend on the seed in a way that is opaque. One-way functions, easy to compute but hard to invert, are often used. By examining pseudo-random sequences, one cannot discern the dependence of numbers.

Purists argue pseudo-random numbers are inadequate. IBM’s RANDU generator (1968) was flawed: projected into three dimensions, numbers fell on planes instead of scattering randomly. In 1992, Alan Ferrenberg simulated a model for ferromagnets, obtaining incorrect results due to subtle correlations in his random number generator, biasing outcomes like coin tosses toward heads.

Lava Lamps, Atmospheric Noise, Stock Prices

Researchers often use natural sources for randomness: heated wax in lava lamps, atmospheric noise, weather fluctuations, or human activities such as stock-price jumps, mouse movements, or typing delays. Last digits from these processes serve as random numbers. Multiple imperfect time series can be combined to extract as much randomness as possible.

However, these methods are also imperfect. Meteorologists and financial analysts can sometimes predict weather or stock prices. Coin and dice throws are not entirely random—they obey Newton’s laws and could, in principle, be predicted with complete information. Roulette balls, similarly, are not perfectly probabilistic.

Is Quantum Mechanics the Solution?

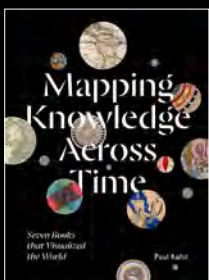
Quantum mechanics is widely considered a source of truly unbiased random numbers. ID Quantique in Geneva, for example, developed a generator exploiting quantum effects: photons fired at a half-silvered mirror either pass through or are deflected. Photon counters register a bit 0 or 1. Quantum mechanics dictates that which outcome occurs is fundamentally unpredictable, producing completely random sequences.

Even so, physical devices are imperfect. Mirrors must be precisely angled, and setups must be flawless to avoid distortions. This raises the philosophical question: does pure randomness exist? Albert Einstein doubted it, even in quantum mechanics. Many scientists maintain that nature is deterministic. Paradoxically, if a sequence were truly random, we could never confirm it—because recognition implies predictability, which contradicts randomness.



Paul Kahn

has been engaged with the visualization of large knowledge structures since his hypertext research at Brown University in the 1980s, continuing with diagram techniques for describing information architecture. He co-founded Dynamic Diagrams in Providence, Kahn+Associates in Paris, and served as Experience Design Director at Mad*Pow in Boston. He also taught Information Design History at Northeastern University.



Mapping Knowledge Across Time image 1

Paul Kahn

June 2026

ISBN 9781041148920

xxx Pages, xxx B/W Illustrations, xxx Colour Illustrations

Subject: Cartography/Graphics

www.routledge.com/9781041148920

Paul Kahn

talks about *Mapping Knowledge Across Time*, about how books visualize the world.

What is *Mapping Knowledge Across Time* about?

As the subtitle says, it is a study of books that visualized the world. It brings together seven ambitious books spanning eight hundred years from different cultures and languages. Each uses information design to form a picture of the world through the eyes and into the reader's mind. Examining them reveals not only individual maps and illustrations but entire visual systems. Together they show how design strategies repeat across time and cultures, revealing how images represent the surrounding world.

What is a “book that describes the world through the eyes”?

It is not new—it is a very old, under-recognized category, often classified as travel or reference books. Examples appear in all traditions. They overlap with atlases and encyclopedias but differ in ambition. Atlases collect maps; encyclopedias collect articles. Books that describe the world through the eyes aim to visualize the entire world through images and language.

They are coherent information designs with shared visual codes. Their authors combine multiple strategies into unified systems to express a vision of the world.

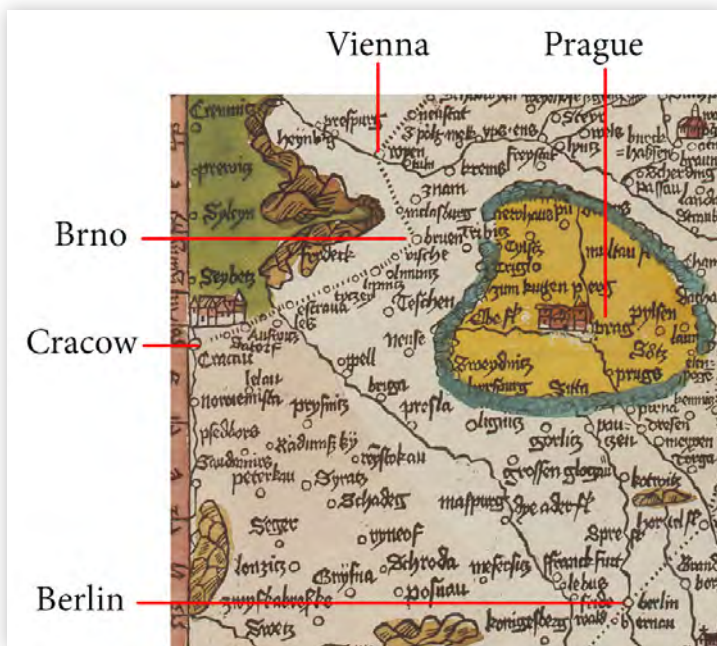
How did you choose the seven books?

These books demonstrate bridges between periods and cultures. *World Geo-Graphic Atlas* (1950) resonates with the *Nuremberg Chronicle* from early printing. The *Tabula Rogeriana* bridges European and Islamic book traditions, created in multicultural Sicily. The *Catalan Atlas* shows medieval Europe's knowledge of Africa and Asia. The *Tushu Bian* offers a vast visual summary of Chinese culture as Asia and the West first interacted. The *Atlas Historique* connects geography and history, while the *Physikalische Atlas* bridges into the data visualization themes of the *World Geo-Graphic Atlas* a century later.

How is *Mapping Knowledge Across Time* different from other books about the history of data visualization?

This book focuses on information design rather than visualization techniques. Information design communicates qualities as well as quantities—it tells stories with or without data.

It also studies the design of entire books, not just individual diagrams. For years I have written about global design themes—maps, timelines, transportation diagrams, economic charts. Individual examples can teach lessons for current



practice, but outside their original context, we miss larger design achievements: entire books that visualize the world.

By comparing these books, we uncover a history of design patterns and strategies. Authors, illuminators, cartographers, and designers transmitted their vision through the reader's eyes. As we increasingly absorb information through screens, it's vital to understand how information design worked on the page—across cultures and centuries—using tools from brush and ink to copperplate and four-color printing.

How does your background in computer research, information architecture, and interaction design inform this book?

My work has always aimed to connect digital technology with existing knowledge networks—building bridges between literature, science, and engineering. Professionally, I focused on representing large information spaces: navigation systems for museum collections, global corporate websites, or maps of national libraries.

I've lived through the transition from print to screen, from analog to digital. I worked with print shops shifting from metal to photo type and from plate printing to digital imaging. Book design evolved through adaptive structures—tables of contents, footnotes, indexes—developed over centuries. During the digital transition, few understood their origins.

Today, hypertext links act as dynamic footnotes—click to see something related—but without a shared understanding of how to use them. Early HTML could not reproduce the sophistication of printed page design. As software matured, portability became the main appeal: we now look at small screens holding endlessly scrolling ribbons of information.

This book reflects on what we may have overlooked. Lessons from historical book design can guide digital design today. We can now do more on a screen, but we must know *why*—what information we seek to communicate. Studying book design offers deep inspiration.

We design in the present. To design better, we must understand the past to shape the future. To grasp how information transfers from page to reader's mind, we must renew our understanding of the book tradition. As data visualization evolves rapidly with new tools, we must ask: *What do we want these tools to do?* I believe answers lie in studying book design and observing today's digital landscape.

How do you compare such diverse design examples?

The book's six chapters organize relationships among these works. Each gathers images and details around a theme, moving backward, forward, and across centuries.

The first five—**Circles, Time, Tracing Lineage, Transportation and Trade**, and **Classifying Humanity**—compare visualizations from six Western books created in Sicily, Mallorca, Nuremberg, Amsterdam, Potsdam, and Aspen. They explore how the Euro-Mediterranean perspective shifts over centuries.

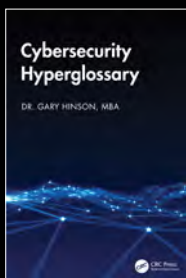
The sixth—**Heaven is Round, Earth is Square**—examines how texts and images record what an educated citizen should know, exploring the world from an Asian perspective through the *Tushu Bian*.

The **Afterword**, *Imagine a Book*, reflects on digital archives and asks: *What form will 21st-century books take?* How will new media and static pages combine to drive a picture of the world through the eyes and into the reader's mind?



Gary Hinson PhD MBA

is an information security specialist focused on the human and business aspects of protecting and exploiting information. Since the mid-1980s, he has worked as a practitioner, manager, and consultant in IT administration, information security, and auditing for multinational companies. For over a decade until COVID, he created monthly security awareness materials for subscribers. Today, he consults and teaches on the ISO/IEC 27000-series information security standards and security metrics. Gary's projects include Cybersecurity Hyperglossary and resources at ISO27001security.com, SecAware.com, and SecurityMetametrics.com. His professional profile is available at [linkedin.com/in/garyhinson](https://www.linkedin.com/in/garyhinson).



Cybersecurity Hyperglossary

Gary Hinson

February 2026

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552 Pages

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Gary Hinson

talks about *Cybersecurity Hyperglossary*, on understanding what “cybersecurity” really means.

What is ‘cybersecurity’? Seriously, what is it, to you? What does the word mean? What does it imply? Think about that for a moment ...

OK, now go ahead and describe it.

Maybe you have in mind a definition that you’ve read somewhere, one that resonates with you and makes sense in your context. Perhaps you know about its linguistic origins in ancient Greek. However, language evolves. The ancient Greeks didn’t have computer systems, although there was the odd Trojan.

Chances are, your particular definition or understanding of ‘cybersecurity’ is unique. The precise form of words that make most sense to you probably differs from anyone else’s. In other words, the definition is ...



I’ve been asking professional colleagues to explain what they mean by ‘cybersecurity’ for more than a decade, ever since the term started appearing, first in social media then in articles, standards and legislation. Few responded, presumably believing that I was being facetious... but in fact it was and remains a genuine question. According to some, the following topics and concepts potentially fall within the cybersecurity domain:

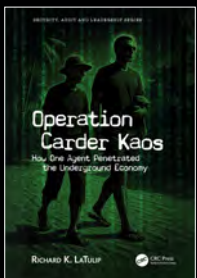
1. Access control
2. Artificial Intelligence
3. Backups, archives
4. Biometrics
5. Business and commercial management
6. Business continuity, resilience, recovery and contingency
7. Cloud computing, virtualisation
8. Compliance, conformity
9. Confidentiality, integrity and availability of information (the CIA triad)
10. Controls, countermeasures
11. Corporate and executive security

12. Cryptography
 13. Cybersecurity! It is self-evident, self-referential
 14. Computer & technology security, IT, ICT, OT etc.
 15. Datacentre design, operation, facilities and security
 16. Finance and accounting
 17. Forensics, digital forensics, investigations, cases
 18. Fraud and deception, fakery, scams
 19. Hacking, penetration testing, corporate surveillance, offensive security, red teaming
 20. Health and safety, competence, mental health
 21. Identification and authentication
 22. Incident management, response, crisis management, emergencies, triage, learning, improvement
 23. Information risk and security management, tools and techniques, frameworks, methods
 24. Intellectual property, copyright, patents, trademarks and protective technologies
 25. Intelligence, spies and spooks, competitive/market intelligence
 26. IoT/Internet of Things - devices, services, networking, design, development, marketing
 27. Knowledge management and exploitation
 28. Law and regulation, supervision, oversight
 29. Malware including ransomware and antivirus
 30. Management, supervision, oversight and governance
 31. Marketing e.g. use and security of contact databases
 32. Methods, models, frameworks, approaches
 33. Misinformation, disinformation, propaganda and other forms of social engineering e.g. teaching, marketing & advertising, politics, lobbying
 34. Network security and data communications
 35. Operational Technology, industrial control systems
 36. Human Resources
 37. Physical architecture and design, facilities management
 38. Physical security
 39. Policies and procedures – security, privacy, design, conformity/compliance, monitoring
 40. Pressure groups, advocacy groups looking to understand and respond to IT security and privacy-related proposals, drafts for comment, policy statements etc.
 41. Privacy and data protection including GDPR, HIPAA, privacy officers
 42. Product design (goods and services, devices) – security and privacy aspects
 43. Professional qualifications such as CISSP, CISM, CRISC, Security+, CISA, GIAC, CIA ...
 44. Risk management: risk identification, assessment, analysis, quantification, evaluation, treatment
 45. Security architecture and design
 46. Security awareness, education and training of all sorts, academic and vocational
 47. **Security/Network Operations Centres**, security monitoring and response, CERTs
 48. Security products e.g. customer training for enterprise-scale antivirus services and firewall appliances, AI-enabled products
 49. Social networking security, misinformation, disinformation, propaganda
 50. Software/systems development e.g. waterfall, AGILE, RAD, APIs, microservices
 51. Strategies, tactics, plans, dynamics
 52. Supplier and customer relations, supply chain security, **Third Party Risk Management**, supplier assessments, certification and accreditation, checklists, audits, collaboration, liaisons, disputes, incidents ...
- Formal definitions of 'cybersecurity' in standards, laws, glossaries, surveys and methods may be *broadly* aligned (I've found at least a dozen so far, most of which are poorly worded and none of which is truly definitive), but is that good enough? I fear not.
- That is just one of *many* examples. As with any other technical field, new terms are coined frequently and old ones get modified, repurposed or abbreviated: did any in the list above catch your eye?
- In short, discrepancies and uncertainties in the language are holding us back, unnecessarily. There are risks here, information risks that I have identified, analysed and evaluated. The **Cybersecurity Hyperglossary** is my way of mitigating them.



Richard K. LaTulip

is a cybersecurity expert, retired U.S. Secret Service Special Agent, and Field Chief Information Security Officer (Field CISO) for Recorded Future. He has led high-profile investigations into cybercrime, financial fraud, and digital threats. He holds a bachelor's degree in Criminal Justice and is pursuing an MS in Cybersecurity Policy and Governance at Boston College. His professional certifications include CISM, CISSP, CEH, and CySA+. A sought-after speaker on cybersecurity, insider threats, and cybercriminal methods, Richard draws on his firsthand experience in undercover cyber investigations and penetrating criminal networks to offer a unique perspective on digital crime and espionage.



Operation Carder Kaos

How One Agent Penetrated the Underground Economy

Richard K. LaTulip

December 2025

ISBN 9781041082064

256 Pages, 38 B/W Illustrations

Subject: IT Security

www.routledge.com/9781041082064

Richard K. LaTulip

talks about *Operation Carder Kaos*.

From Underground to Enterprise: Why Resilience Is the New Front Line in Cybersecurity

When I went undercover for *Operation Carder Kaos*, one of the earliest large-scale infiltrations of the cyber underground, the internet was a different place. Criminals traded stolen credit cards and identities on obscure forums using pseudonyms and ICQ or Yahoo Messenger. These spaces seemed fragmented, yet they operated on traceable infrastructure.

What struck me most wasn't the hackers' skill—it was how unprepared their targets were. Overworked teams managed fragile systems few realized were under threat. The same pattern persists today. Hackers still exploit familiar gaps—unpatched systems, misconfigurations, over-privileged accounts, and third-party dependencies. Only the scale and stakes have multiplied.

The Resilience Gap

In the early 2000s, "IT security" meant firewalls and antivirus software. Breaches were treated as technical failures, not business crises. Today, cybersecurity is a board-level concern, yet organizations continue to falter from a single compromised credential.

The root issue? Most focus on defense, not resilience.

The World Economic Forum defines cyber resilience as the ability to minimize the impact of major cyber incidents on core operations. It's about ensuring the business continues when—not if—an intrusion occurs. Resilience requires visibility, intelligence, and recovery capability. Whether protecting nations or enterprises, the principle is the same: resilience is the new front line.

Attackers no longer just steal data—they disrupt hospitals, supply chains, and energy grids. They don't care whether they breach a small vendor or a global enterprise; they target the weakest link.

The Same Old Mistakes—With More Zeros

During *Operation Carder Kaos*, most breaches began with something simple: a misconfigured server, an exposed password, or a duped employee. The easiest way in wasn't technical—it was human.

Today, despite billions spent on cybersecurity, attackers still exploit the same weaknesses, now at global scale. What used to be one compromised database might now cripple an entire supply chain. Cloud, remote work, and automation have expanded the attack surface faster than security teams can keep up.

If the 2000s were the age of data theft, today is the age of infrastructure control. Adversaries aim not just to steal information but to halt operations entirely.

The Third-Party Blind Spot

A consistent weakness I've seen over decades is hidden in plain sight: third parties. During my undercover work, criminals often targeted small service providers precisely because they offered access to larger organizations.

That strategy hasn't changed. Recent intrusions through managed service providers and software supply chains prove how fragile trust can be. Many organizations secure their own networks but neglect the pathways connecting them to vendors and partners—pathways attackers exploit relentlessly.

An organization's attack surface now extends across every integration and shared credential. True resilience requires managing that entire ecosystem, not just what you directly control.

Identity: The Modern Perimeter

If there's one thread linking my undercover past to today's enterprise landscape, it's identity. In underground markets, stolen identities were the most valuable commodity. In the enterprise world, they still are.

Every major breach boils down to one question: who was allowed in, and who shouldn't have been? Identity management has evolved from a technical function into a strategic imperative. Zero-trust, least-privilege access, and continuous authentication aren't buzzwords—they're the pillars of digital resilience.

When I operated undercover, I gained trust by manipulating human behavior, not code. That's still how attackers operate. Resilience today means verifying trust continuously—across systems, users, and third parties alike.

Why Intelligence Matters

Resilience without intelligence is like the Titanic at full speed—confident, but blind to the ice ahead. Many enterprises share that same mindset: faith in tools without visibility into threats. Intelligence is what separates survival from catastrophe.

During *Operation Carder Kaos*, intelligence helped us filter noise, identify true adversaries, and target them precisely. The same applies now. Threat intelligence gives context—who the attackers are, what tools they use, and where they'll strike next.

Resilient organizations integrate intelligence into every layer of defense. They don't just detect anomalies; they understand intent. They adapt faster than adversaries.

The Human Factor

Despite technological progress, cybersecurity remains human. The same motives—greed, ego, and challenge—still drive attackers. And the same weaknesses—fatigue, oversight, and misplaced trust—still expose organizations.

Resilience begins with awareness. The companies that survived early cybercrime waves built cultures of vigilance. Technology

evolves quickly; culture doesn't. Yet it's culture, not code, that determines how an organization performs under pressure.

A National Imperative

As Field CISO, I now see resilience evolving from an IT concern to a national priority. Governments recognize that cybersecurity protects not just data but economies, healthcare systems, and critical infrastructure. Public-private collaboration, intelligence sharing, and unified response frameworks are vital.

Attackers targeting hospitals, transportation, or energy aren't just testing networks—they're testing national stability. The threats I once chased in the underground now operate at state-sponsored scale. The battlefield has expanded, but the defense remains the same: resilience built on visibility, trust, and intelligence.

The Lesson That Still Holds

After two decades, one truth endures: cybersecurity isn't about preventing every attack—it's about ensuring no single attack defines you.

Resilience is built over time—through continuous learning, rigorous testing, and committed leadership. Every breach is both a threat and an opportunity to rebuild smarter and respond faster.

Some organizations fail because they never prepare. Others survive because they planned, practiced, and adapted. True resilience isn't just surviving an attack—it's emerging stronger.

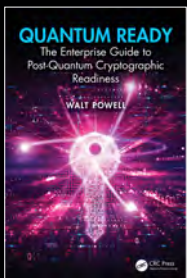
During my undercover years, my mission was to expose the world of cybercrime. Today, my mission is to ensure that world doesn't win. The ingenuity that drives attackers can—and must—power our defense.

Resilience isn't just a shield. It's our greatest advantage.



Walt Powell

is an Executive Coach and CISO Advisor with extensive experience developing cybersecurity programs and working with CISOs across organizations and industries. A pioneer of the Field CISO role and founding member of CDW's Global Security Strategy Office, he leads a team of former executives providing coaching, mentorship, and strategic guidance. Previously, Walt was owner and vCISO at Left Brain Security and has served as an award-winning cybersecurity leader, advisor, architect, pre-sales engineer, and professor of networking and security. He holds multiple certifications, including CISSP, CISM, C|CISO, and Stanford Advanced Cybersecurity. Walt is also the author of *The CISO 3.0*, a guide for CISOs aiming to evolve into strategic business partners.



Quantum Ready

The Enterprise Guide to Post-Quantum Cryptographic Readiness

Walt Powell

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Subject: IT Security / Cryptology

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Walt Powell

talks about *Quantum Ready*, about preparing organizations for post-quantum cryptography and preserving digital trust.

When I set out to write *Quantum Ready*, I wasn't trying to trigger a panic about quantum doomsday or churn out another math and theory "future of quantum" book. My aim was to reframe the conversation around post-quantum cryptography from a hypothetical technology problem into a present-day business risk—the kind that threatens the trust upon which all our systems are built.

The world has always built its security on trust. We trust that bank transactions stay private, identities won't be forged, and installed software is authentic. For decades, cryptography has been the invisible contract underpinning that trust. But every contract eventually expires, and the arrival of quantum computing marks the start of that expiration.

At the heart of this book is one argument enterprise leaders often fail to internalize: Q-Day isn't just when quantum computers break encryption. It's when all assumptions about data confidentiality, transaction integrity, and digital identity stop being valid. Much like Y2K, Q-Day stems from a systemic blind spot growing from the quiet accumulation of technical debt that threatens core operations. Unlike Y2K, there's no countdown clock or single failure moment—no SOC alert. Just the realization that everything encrypted under today's public key cryptography, including archived, transmitted, or recorded data, may already be compromised.

Adversaries don't need to wait—they can steal data in advance. Encrypted data is already being captured in "Harvest Now, Decrypt Later" attacks by nation-states and threat actors betting on the quantum future. VPN sessions, email archives, intellectual property, and military communications are all being collected, knowing that decryption is only a matter of time. When quantum computers can break classical encryption at scale, everything harvested becomes readable in hindsight, collapsing confidentiality retroactively and invalidating identity, non-repudiation, and data provenance. Even perfectly secure systems become untrustworthy.

Quantum Ready isn't just a framework for migrating crypto; it's a roadmap for maintaining trust in a post-quantum era. It starts with acknowledging that time is not on your side. I reference the Mosca Model, developed by Canadian mathematician Michele Mosca, which asks leaders to weigh three numbers: how long data must remain secure, how long migration to new cryptography will take, and how long experts predict quantum computers will break existing encryption. If the first two exceed the third, you're already behind. Many organizations discover that data must remain protected for decades while migration projects take years. Quantum computing's timeline is shrinking faster than either.

Every company encrypts valuable assets, but few know where that encryption lives. Most can't point to every algorithm, key, or certificate in use. That's why the book begins with discovery and inventory. You can't protect what you can't find. A cryptographic bill of materials, or CBOM, becomes as vital as a financial audit or compliance record. Without it, you're managing trust blindfolded.

Yet discovery is only the beginning. Cryptographic modernization can't be confined to security teams; it requires executive attention akin to digital transformation or cloud migration. Boards and CEOs need to view quantum readiness as enterprise risk management, not technical hygiene. The most effective CISOs act less like defenders and more like diplomats, translating quantum risk into business terms: revenue protection, cost avoidance, and compliance posture. Organizations that thrive in the quantum era integrate cryptographic strategy into financial and operational DNA.

The book's framework, called Q-Ready, makes post-quantum cryptography actionable. It guides organizations through five phases: discovery, planning, implementation, validation, and maintenance. Each includes practical steps: inventory cryptography, assess business exposure, plan migration to post-quantum algorithms, test hybrid implementations, and establish a continuous maintenance cycle. Beneath the steps lies a deeper message: readiness is not a project, it's a mindset.

That mindset matters because waiting is costly. Early movers can integrate post-quantum cryptography into normal refresh cycles, saving time and money. Late adopters pay a premium to fix critical systems under duress. This isn't a threat you can outsource, though cloud providers, vendors, and partners must be part of a quantum-safe supply chain. The weakest link defines exposure.

Technical leaders often underestimate the narrative power of trust. Encryption is storytelling: it tells systems who to believe, what to accept, and when to reject. Quantum computing will rewrite that story unless we draft a new one first. Leadership communication matters as much as algorithm selection. A CISO who can't articulate quantum risk in business terms

won't secure the budget. A board that sees cryptography as a compliance checkbox will miss the existential stakes.

The challenge of the quantum era isn't that it will break encryption—it's that it will test our ability to adapt before it does. Organizations that fare best won't have the strongest algorithms but the most flexible architecture and clearest sense of purpose. Quantum readiness is both a technical and cultural imperative.

We need to recognize what's truly at stake. This isn't just defending against future attacks—it's about preserving trust in digital systems underpinning everything from government to global finance. Trust in e-signatures, secure transactions, and medical records. If that trust collapses, confidence in all dependent systems collapses. Quantum Ready isn't a prophecy; it's a call to action: stop waiting and start preparing for the erosion of digital trust already underway.

We stand at the edge of the largest cryptographic migration in history. It won't happen overnight and it won't be easy, but it is achievable with leadership that sees quantum not as a threat but as an opportunity to rebuild trust on stronger foundations. The book bridges abstract science and executive action, translating a technical subject into a roadmap leaders can follow without a PhD in physics. It connects cryptography to business continuity, regulatory foresight, and brand integrity, arguing that the future of cybersecurity will be defined not by algorithms but by how we prepare our people, governance, and mindset for change.



Lainey Feingold

is a disability rights lawyer and speaker advancing digital accessibility since 1995.



Reginé Gilbert

is an inclusive design and emerging technology expert, researcher, and transformational advocate.



Chancey Fleet

is a Blind tech educator, activist, and accessibility advocate focusing on equity and impact.

Lainey Feingold, Reginé Gilbert and Chancey Fleet

talks about *Digital Accessibility Ethics*, about making technology inclusive and ethically responsible for people with disabilities.

What inspired you to create *Digital Accessibility Ethics*? Was there a specific gap you wanted to address?

Yes there was! Digital accessibility enables people with disabilities to use, create, and interact with technology and digital content. When websites, mobile apps, workplace tools, AI technologies, kiosks, learning platforms, social media, and more are not accessible, disabled people are excluded.

With over one billion people with disabilities globally, the exclusion is vast. I was inspired to create this book because of this digital accessibility gap—the mismatch between people with disabilities and today's technology and content. The editors and authors of this collection believe an ethics lens can help close the gap. Through stories, best practices, and actionable strategies, the Digital Accessibility Ethics Framework introduced in 32 chapters shows readers how.

Another inspiration was frustration. I'm a disability rights lawyer in the U.S., working on tech accessibility for over thirty years. Laws worldwide increasingly require tech access. Accessible technology benefits everyone and is good for business, yet exclusion persists. The time is now for an ethics lens to guide inclusive design, development, purchase, and maintenance of technology.

The book introduces the Digital Accessibility Ethics Framework. Can you explain its core components and applications?

The Framework is an action-oriented, three-part tool with values, actions, and questions, designed to:

- Influence and disrupt patterns of disability exclusion across sectors and countries.
- Help organizations avoid risks—including legal, business, security, reputational, and health and safety risks—that flow from exclusion.

Its ten values include privacy, confidentiality, and security; honesty, transparency, trust, and accountability; avoiding harm; legal compliance; sustainability; awareness and education; and equitable experiences. Actions and questions provide tools to apply these values.

The book applies the Framework to two categories: accessibility practices and ethics across sectors. For example:

- A chapter by cybersecurity and accessibility experts shows how digital accessibility is crucial to sustainable cybersecurity initiatives.
- A chapter by a business leader in India highlights the harms of limiting accessibility leadership to the West and encourages global leadership development.



- A disabled accessibility leader in the Bahamas applies the Framework to emergency preparedness in *No One Left Behind*.
- A blind accessibility expert in the UK provides practical guidance on building accessible technology in *Achieving Ethical Accessibility in the Development Process*.
- A U.S./Canadian expert offers a roadmap for inclusive procurement in *Don't Buy Broken Things*.
- A Kenyan activist co-wrote a chapter on digital accessibility across African countries.

Other chapters explore robots and autonomous vehicles, product and system design, gaming, publishing, AI hiring tools, voting systems, hackathons, marketing, and more.

With contributions from 39 authors across 10 countries, how did you manage collaboration?

One of the best parts was waking up to emails and drafts from far-flung time zones. For my chapters, I interviewed accessibility and legal experts including blind lawyers in Ethiopia and India, a deaf lawyer in Japan, and an EU accessibility leader.

We managed the process with patience, attention to detail, and appreciation of everyone's perspective. Author diversity was crucial. Over half the authors have disabilities, and all were deeply engaged. The book includes personal stories that bring concepts to life. Challenges? Too many emails. Insights? Diversity of disability, geography, race, gender, and professional background strengthens the book. Authors include scientists, doctors, lawyers, cybersecurity experts, educators, businesspeople, designers, librarians, and published writers.

The diversity of authors is one of the book's biggest assets, and their commitment makes every chapter exciting.

What do you hope readers take away?

I hope readers understand that digital accessibility is an ethical issue and essential to all technology and content. Accessibility is non-negotiable: without it, 20% of the population cannot participate in our digital world.

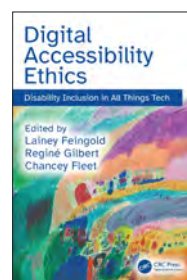
I hope the stories and strategies help readers disrupt patterns of exclusion and avoid associated risks. Students should be motivated to demand inclusion for voters, doctors, workers, shoppers, gamers, and students with disabilities. The Ethics Takeaways at the end of each chapter translate values, actions, and questions into practical steps for sectors worldwide.

What are the next steps for advancing digital accessibility and inclusion globally?

Legal mandates are growing:

- Kenya published digital accessibility standards in 2022 and the 2025 Persons with Disabilities Act.
- India's Supreme Court ruled digital accessibility is part of the right to life.
- The European Accessibility Act took effect in 2025 across 27 EU states.

Law is essential, but the future depends on understanding digital accessibility as a human right. When technology excludes, it excludes people—an ethical issue. The future requires action: designing, building, maintaining, and purchasing tech for everyone. *Digital Accessibility Ethics* provides a roadmap for this critical work.



Digital Accessibility Ethics

Disability Inclusion in All Things Tech

Edited by Lainey Feingold, Reginé Gilbert and Chancey Fleet

March 2026

ISBN 9781041018681

368 Pages, 20 B/W Illustrations, 21 Colour Illustrations

Subject: Computer Science / Ethics

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Tai Lee Siang

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Ong Eng Hong

is Program Director at DesignZ, former ASME Chair, ex-Senior Scientist at A*STAR, and has over 20 years' experience in research, R&D, and teaching.



The Power of Design and Convergence of AI

Edited by Tai Lee Siang and Ong Eng Hong

December 2025

ISBN 9781032793856

261 Pages, 96 B/W Illustrations

Subject: Design

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Tai Lee Siang and Ong Eng Hong

talks about *The Power of Design and Convergence of AI*, about the role of design in the AI-driven future.

Tell us more about design and its convergence with AI

Design has played a critical role in human civilization and will be even more critical as we enter the digital age, characterized by emerging technologies like AI, blockchain, quantum computing, and the metaverse. These technologies bring new issues and concerns regarding safe and secure deployment.

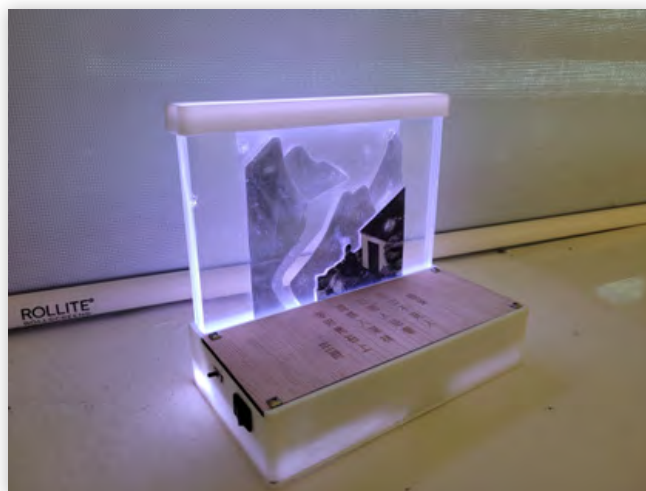
Over the past 50 years, rapid urban growth has leveraged design to create better products and solutions and influence consumer preferences. A classic example is the rise and dominance of mobile devices. The roots of modern design trace to the Bauhaus movement of the early 1900s, which, backed by the industrial revolution, made mass production and design accessible to the public.

Despite this, design's contribution as an economic and human experience enhancer is still underappreciated. The emergence of AI now brings the world to a crossroads: while opinions differ on whether AI replaces or supports human designers, it represents a major opportunity to revolutionize design. We may be at the brink of another design movement—a digital "Bauhaus."

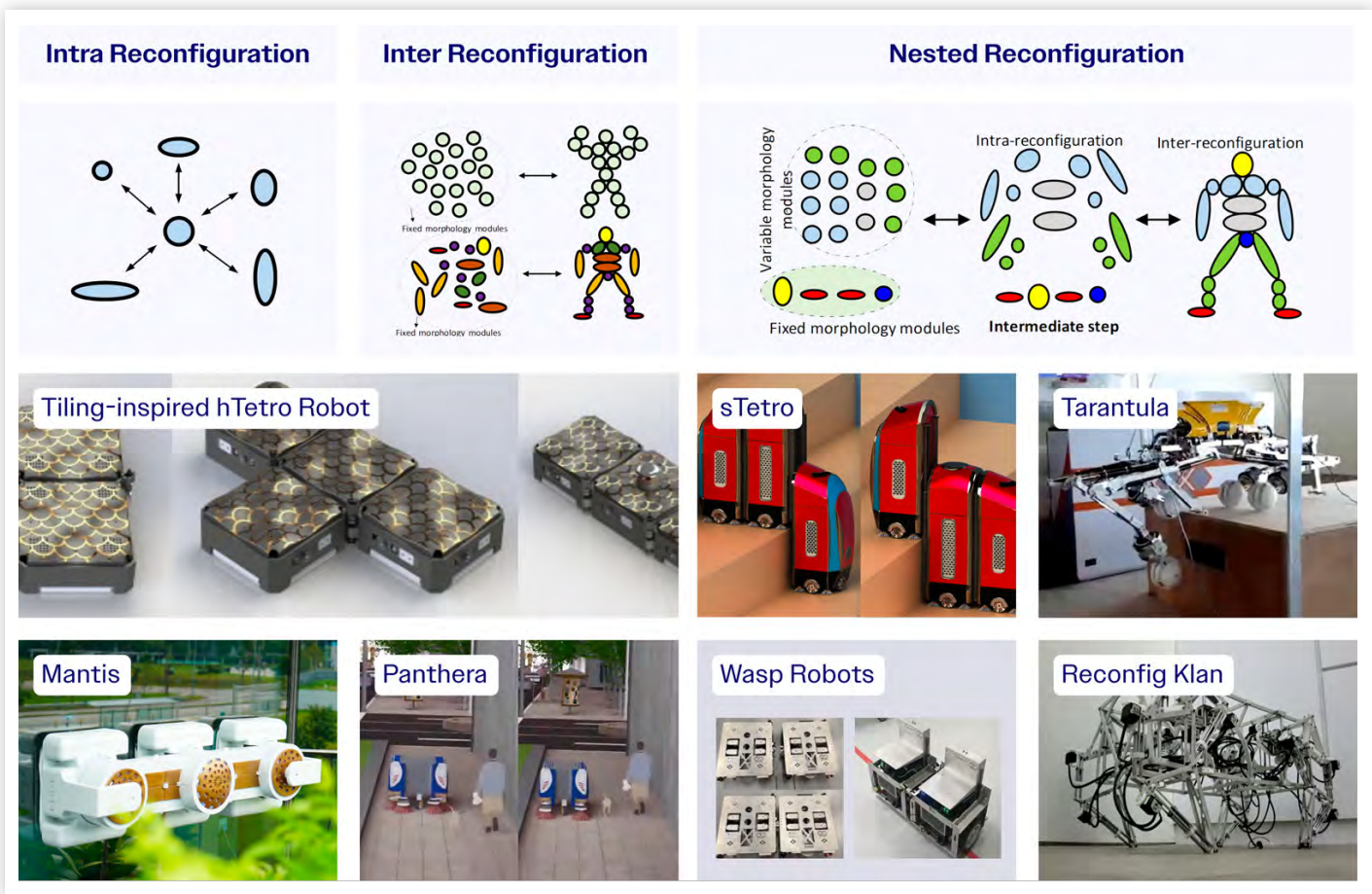
What is the aim of this book?

The purpose of this inaugural publication is to illustrate the power of design through contributed articles from experts covering myriad areas, including AI. Readers learn how to integrate emerging technologies like AI with human-centered design principles, creating solutions that are technologically advanced and meaningful to users.

The book addresses modern design challenges—from resource limitations to cultural sensitivities—while delivering solutions that exceed expectations and create measurable value for clients and communities.



3D printed shadow light box



Taxonomy of reconfigurable robot.

What are the key highlights of this book?

The book provides a transformation framework empowering design professionals, innovators, and business leaders to create meaningful, lasting impact. Across three sections and twelve chapters, it demonstrates how design is renewing itself to be more impactful and sustainable.

- **Future-Ready Design Evolution:** Covers AI and humanities integration, data-driven design frameworks, and “limited design” principles for maximizing impact with minimal resources. It also introduces culture adaptation protocols for resilient, globally relevant solutions.
- **Sustainable World-Building:** Shares architectural and environmental design best practices to improve quality of life. Social innovation frameworks address real-world problems, from urban planning to community development. Sustainability tools help professionals create a responsible legacy and embrace environmental stewardship.
- **Industry Transformation:** Presents innovation acceleration strategies and cross-industry transformation models to create new market opportunities. Business evolution frameworks support revolutionary change, positioning individuals and organizations as change agents rather than trend followers.

What are the takeaways for the reader?

The book transforms readers’ approach to design thinking, problem-solving, and innovation. It provides tools and best practices to tackle complex design challenges across architecture, environment, social innovation, and business transformation.

Readers gain expertise to create solutions that are aesthetically compelling, functionally superior, environmentally responsible, and socially beneficial. Mastering these frameworks positions readers as leaders capable of driving positive change across industries and communities while building a career that combines professional success with societal contribution and sustainable growth.

What is the future of Design and AI you envisage?

Design and AI will increasingly complement and enhance each other. AI can inspire and empower designers to create better solutions, while human intelligence is critical to improving AI functionality, governance, and ethical deployment. Challenges such as safe, secure, and responsible AI implementation require design thinking to resolve effectively.



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Also with...

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Digital Convergence

Better Solutions for People with Dementia

Edited by Nilmini Wickramasinghe,
Thu Ha Dang, Tuan Anh Nguyen and
Sasan Adibi

December 2025

ISBN 9781032779775

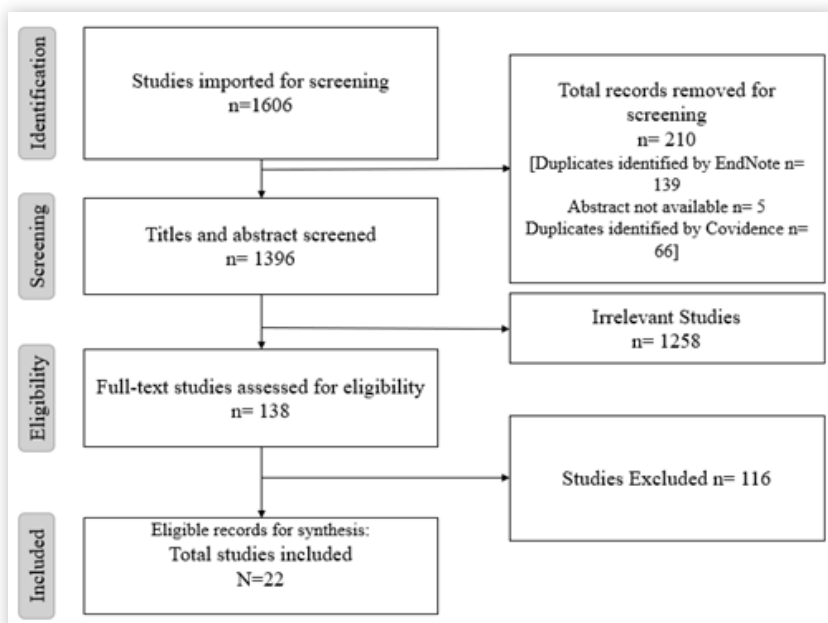
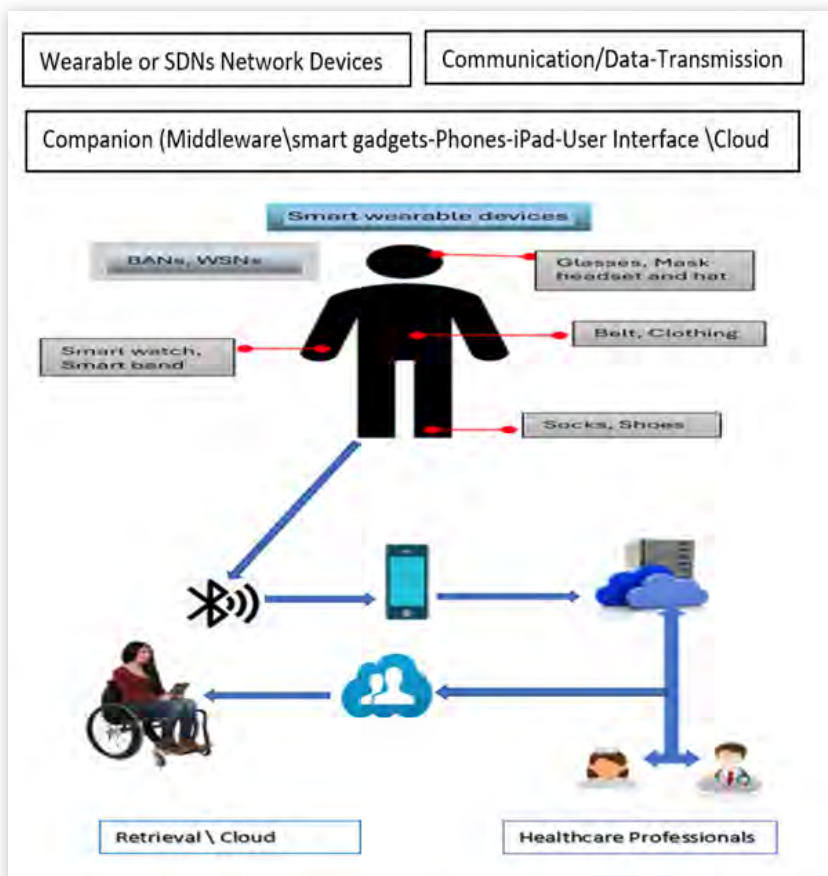
384 Pages, 20 B/W Illustrations

Subject: Design

www.routledge.com/9781032779775

Nilmini Wickramasinghe

talks about *Digital Convergence*, about dementia care and AI applications.



What was your motivation for developing this edited volume?

As noted in *The Age*, “every three seconds someone in the world develops a form of dementia,” making it a growing global healthcare problem. People living with dementia (PLWD) face challenges affecting their quality of life and their families. Diagnosis is often missed or delayed, and no curative medications exist. Current treatments focus on symptoms but are often ineffective due to poor decision support, medical errors, and generic strategies. Individuals respond differently to therapies, causing emotional and psychological trauma. Early diagnosis and proper treatment are therefore essential.

Given advances in digital technologies, including analytics and mobile platforms, we can leverage medical records and technology to support PLWD, their carers, and families, identifying more personalized solutions. The book aims to demystify dementia while upskilling healthcare professionals, hospital managers, consultants, researchers, students, and the public on how AI and digital technologies can improve care quality, access, and value for PLWD globally.

What is the primary aim of your book?

Our book seeks to educate and upskill stakeholders about dementia and demonstrate how analytics, AI, and digital technologies can deliver high-value healthcare solutions for PLWD. While dementia incidence rises, technology and computational power are advancing, offering unprecedented opportunities to support PLWD, carers, and clinicians. This can help slow cognitive decline and improve quality of life.

What is an important topic in this book readers should focus on?

The book builds awareness and understanding for all stakeholders and highlights early diagnosis and strategies to reduce cognitive decline. Dementia is deeply personal, complex, and challenging for PLWD, their families, and healthcare practitioners. While no universal cure exists, its progression can be slowed, improving quality of life.

Pushing science and technology forward can reshape dementia care. The book explores digital health solutions’ opportunities to improve outcomes. The 17 chapters cover critical issues, including a lived experience chapter sharing a personal dementia story, making the book personal and impactful.

How has AI evolved as an important tool for dementia patient care?

AI, ML, and analytics now enable the creation of digital twins—digital replicas of PLWD. These provide better insights into disease manifestation and support hyper-personalized treatment strategies.

Key strengths include:

- **Precision and Personalization:** Digital twins generate personalized care plans based on patient data and cohort matching, improving outcomes and quality of life.
- **Continuous Learning:** Cloud-based systems allow solutions to adapt as new data and research emerge.
- **Enhanced Decision-Making:** Facilitates shared decision-making among clinicians, patients, and caregivers with tailored insights into conditions and interventions.

What do you expect next in AI healthcare?

AI in healthcare is limited only by imagination. Recent advances enabled rapid COVID-19 vaccine development and hyperspectral imaging for diseases like cancer, Parkinson’s, Alzheimer’s, and dementia. Clinicians remain essential, but AI equips them with insights for effective diagnosis, treatment, and patient management globally.

The future will see AI integrated into treatment strategies, clinical decision support, and self-management regimens. These tools aim to improve clinical outcomes, quality of life, and high-value healthcare delivery. Researchers are excited to continue advancing AI to provide better care and more precise solutions for PLWD.



Dr. Ruth Gotian

is Chief Learning Officer at Weill Cornell Medicine and an internationally recognized mentorship expert.



Dr. Vineet Chopra

is Professor and Chair of Medicine at University of Colorado, specializing in hospital safety.



Dr. Sanjay Saint

is Chief of Medicine at VA Ann Arbor, expert in patient safety and mentoring.

Ruth Gotian, Vineet Chopra and Sanjay Saint

talks about *Mentoring in Healthcare*, about the power, practice, and global impact of mentorship.

A mentoring story that began with mentorship itself

In 2018, the three of us, Ruth, Vineet, and Sanjay, first met at a mentoring conference. What began as a chance connection quickly became a friendship grounded in curiosity, respect, and a shared belief that mentorship is the invisible thread connecting every great career in healthcare.

At the time, Ruth was the inaugural Assistant Dean of Mentoring at Weill Cornell Medicine, launching a mentoring academy to help faculty build stronger relationships. Vineet and Sanjay, physician-leaders and researchers, had coauthored a *JAMA* article, *Mentorship Malpractice*, exploring the unspoken dark side of mentoring, which became one of Ruth's most-cited favorites.

That article sparked ongoing dialogue among us. We referenced each other's work, presented together at conferences, and noticed that when people discussed mentorship, our names often arose. Although each of us had written and spoken widely, we realized we were circling the same ideas from different directions.

In early 2020, we decided to write a book. Then the pandemic arrived, pausing the project. Vineet also assumed the Chair of Medicine at the University of Colorado. By 2023, we reunited, and the idea felt urgent again.

A shared mission to close the mentorship gap

We had each written books on mentoring, but healthcare lacked structure for it. Mentoring often depended on goodwill rather than clear frameworks or shared understanding.

We combined our experience to design a practical blueprint: *Mentoring in Healthcare* integrates research, lived experience, and proven models to make mentorship accessible, scalable, and inclusive.

The book answers universal questions: How do I find a mentor? How do I become one? What do I do when it isn't working? How can institutions sustain programs?

It offers frameworks, adaptable tools, and relatable stories for nurses in Tokyo, students in Mumbai, administrators in Madrid, and researchers in Toronto.

Three authors, three perspectives, one voice

Our different backgrounds shaped the book's richness:

- Ruth is an adult educator and social scientist studying high achievers and translating lessons into practical pathways.
- Vineet is a physician, researcher, and department chair, leading mentoring programs for hundreds.
- Sanjay is a healthcare leader and scholar focusing on mentoring, patient safety, and provider wellness.

Together, we represent educator, clinician, and researcher perspectives, united by the belief that mentorship is teachable, measurable, and transformative. Writing across time zones became mentorship in itself, exchanging feedback and asking: Would this help someone mentoring a colleague today?

Why mentorship matters now more than ever

The pandemic reinforced mentorship as a lifeline. When routines collapsed, mentorship held clinicians, researchers, educators, and administrators together.

Mentorship remains inconsistent, often depending on chance encounters. *Mentoring in Healthcare* demonstrates how deliberate, evidence-based mentorship boosts engagement, strengthens retention, fosters resilience, and cultivates leadership. It builds ecosystems that create cultures of growth, collaboration, and trust.

The making of the book

Writing was meticulous and deeply personal. Between us, we have mentored hundreds and studied thousands more, built mentoring academies, implemented programs, and learned from successes and failures.

We wrote from offices, corridors, and airport lounges, sharing an online document filled with tracked comments, questions, and laughter. Every example and framework was debated and refined for universal applicability. Mentorship, we realized, is iterative—requiring openness, humility, and learning from one another.

Lessons that transcend healthcare

Although written for healthcare professionals, the book's lessons resonate broadly. Mentorship is universal: build trust, create psychological safety, and help others succeed on their own terms.

We explore emerging models—team-based mentorship, peer circles, sponsorship, and virtual mentoring—that transform how organizations nurture talent. These frameworks transcend culture and geography, adaptable anywhere people care about growth and development.

A book rooted in gratitude

If the book has a heartbeat, it is gratitude. It honors mentors who guided us, mentees who challenged us, and colleagues who modeled excellence. Their influence is woven into every story.

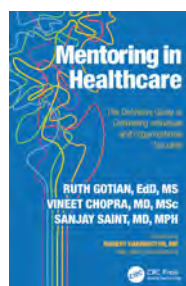
Mentoring in Healthcare is more than a manual—it is a global invitation to reimagine mentorship as a shared responsibility that uplifts individuals and strengthens communities.

Looking ahead

We believe mentorship will define the next era of healthcare leadership. Successful organizations will prioritize people over processes and connection over hierarchy.

Our hope is that readers worldwide will mentor intentionally and build systems making mentorship a cultural norm, not a fortunate exception.

We met through mentorship, wrote about mentorship, and were mentored by each other in the process. *Mentoring in Healthcare* is our blueprint and our thank-you to a global community dedicated to helping others rise.



Mentoring in Healthcare

The Definitive Guide to Cultivating Individual and Organizational Success

Ruth Gotian, Vineet Chopra and Sanjay Saint

January 2026

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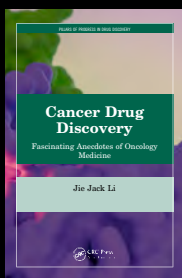
Subject: General Medicine

www.routledge.com/9781041006930



Dr. Jie Jack Li

is an established chemist with over 30 years of experience in both medicinal chemistry and process chemistry. He is also widely published as an author or co-author of 34 peer-reviewed articles, 12 patents, and 35 books. Dr. Li worked at Pfizer, BMS, and Revolution Medicines in oncology, antivirals, metabolic disease, CNS, anti-inflammatory, and dermatology, targeting enzymes, receptors, or ion channels. Dr. Li was also a professor at the University of San Francisco for four years, teaching organic and medicinal chemistry. He earned his Ph.D. from Indiana University and was a post-doctoral fellow at MIT.



Cancer Drug Discovery

Fascinating Anecdotes of
Oncology Medicine

Jie Jack Li

June 2026

ISBN 9781041248026

xxx Pages, xxx B/W Illustrations, xxx Colour Illustrations

Subject: Chemistry / Pharmacology

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Jie Jack Li

talks about *Cancer Drug Discovery*,
on the evolution and breakthroughs in
cancer therapies.

Cancer Drug Discovery: Fascinating Anecdotes of Oncology Medicine focuses on the human stories behind cancer drug development.

It begins by exploring early theories of cancer origins. The carcinogen theory, which proposed that carcinogens are mutagens, gained wide acceptance and was supported by the Ames test in the 1970s. However, cancer is now recognized as a genetic disease. In 1974, Michael Bishop and Harold Varmus discovered proto-oncogenes, exemplified by the src oncogene. Since then, numerous oncogenes, including ras, have been identified, alongside tumor suppressor genes such as Rb and p53, which interact with oncogenes in tumorigenesis.

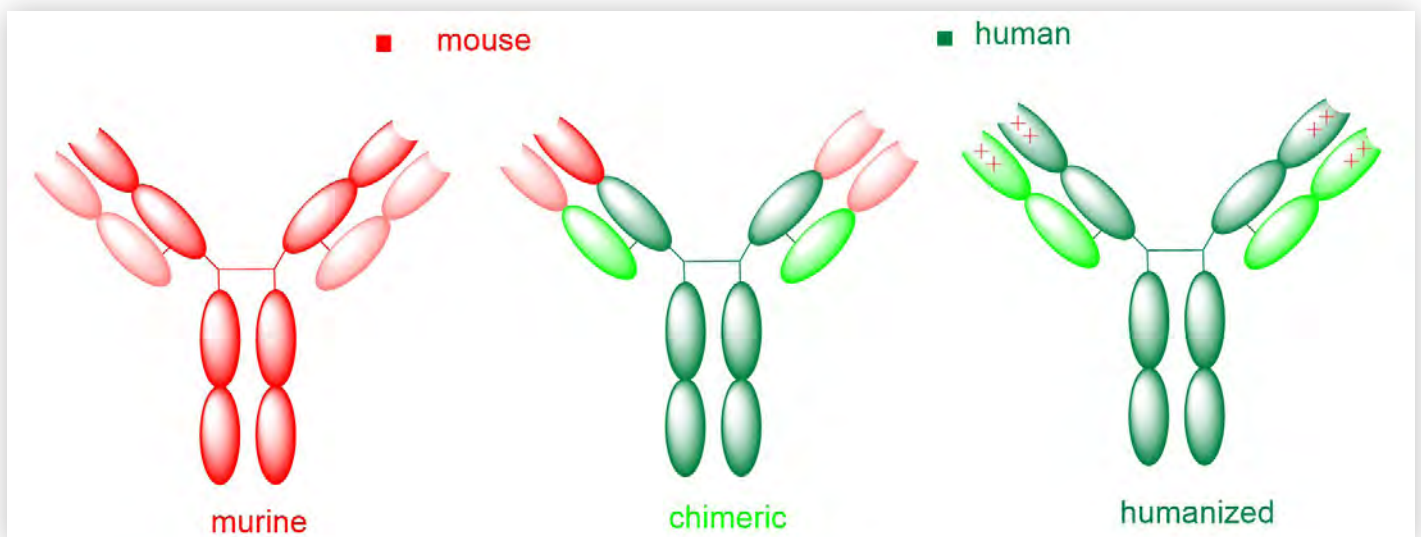
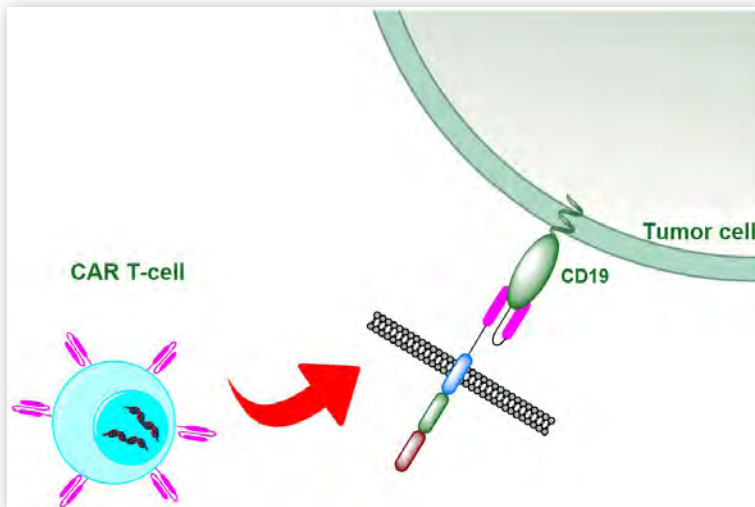
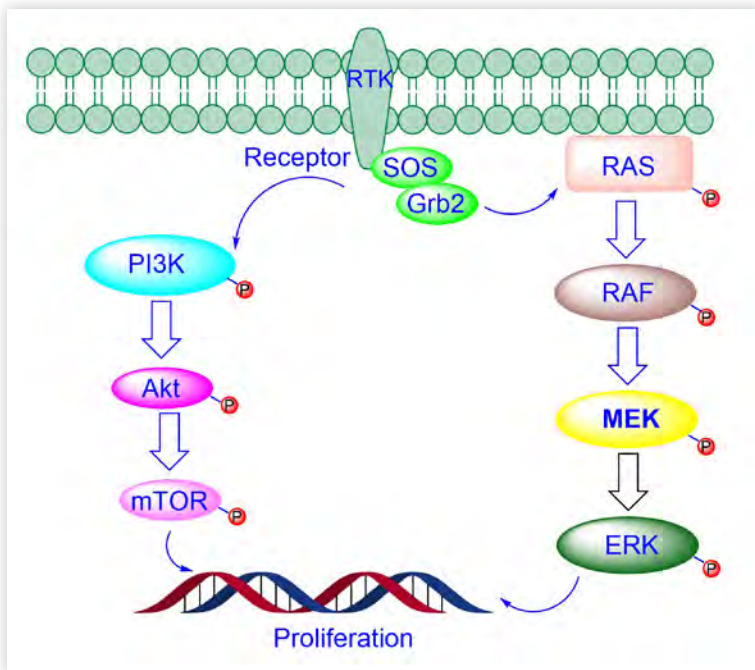
The chapter on cancer chemotherapies highlights five indispensable classes of cytotoxic drugs—platinum compounds, doxorubicin, taxanes, gemcitabine, and methotrexate—still unmatched in efficacy. Each drug class and its discovery story is explored in detail.

As personalized medicine advanced, protein kinase inhibitors emerged as targeted therapies. Unlike chemotherapies, kinase inhibitors selectively target cancer cells, causing fewer adverse effects. The human kinome contains over 500 protein kinases, and more than 85 kinase inhibitors have been FDA-approved for cancer, inflammatory, and immune diseases. Drug resistance remains a key challenge in this class.

The 1975 discovery of hybridoma technology by Milstein and Köhler ushered in the era of biologic drugs. Monoclonal antibodies have expanded significantly in oncology and medicine overall. Today, over 200 monoclonal antibodies are on the market, and hundreds are in clinical trials, a third of which are cancer drugs. Antibody-drug conjugates (ADCs) have emerged as an important modality, maximizing efficacy while minimizing toxicity.

Numerous novel cancer therapies have since been developed. Protein degraders, including molecular glues and PROTACs, degrade disease-causing proteins rather than inhibit them. Immunotherapy, particularly PD-1/PD-L1 inhibitors, has transformed immuno-oncology. Recombinant DNA technology, pioneered by Paul Berg in the 1970s, enabled gene therapies such as CAR T-cell therapy, though safety, efficacy, and cost remain challenges.

Finally, artificial intelligence (AI) is increasingly applied in cancer diagnosis, drug discovery, and drug development. AI shows particular promise in target identification and validation, drug–target interaction prediction, personalized medicine, drug repurposing, and drug safety evaluation. The AlphaFold3 model, released in 2024, uses a diffusion-based architecture to predict joint structures of proteins, nucleic acids, small molecules, ions, and modified residues, representing a major advancement for precision medicine.





Alison Skipper

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An Introduction to Veterinary Humanities

Edited by Alison Skipper, Ruth Serlin and Carol Gray

April 2026

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300 Pages, 14 B/W Illustrations, 12 Colour Illustrations

Subject: Veterinary

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Alison Skipper, Ruth Serlin and Carol Gray

talks about *An Introduction to Veterinary Humanities*, on exploring the role of humanities in veterinary practice.

In a nutshell, what is *An Introduction to Veterinary Humanities* all about? What is veterinary humanities?

The humanities are academic subjects that consider human society and culture – history, literature, art, ethics, etc. Although veterinary professionals must be highly skilled in science and medicine, clinical decisions are always made within a wider context, where human factors influence both the issues and the solutions. Science alone cannot solve these problems, nor can it help people thrive in this challenging sector. Veterinary humanities applies perspectives from the humanities and social sciences to the veterinary world, bringing insights that help us understand and navigate the difficulties of supporting animal and human welfare while also looking after ourselves. This book is an anthology offering a broad introduction to this developing field.

What motivated you to write the book?

In a way, this book is an unintended consequence of the pandemic. Two editors, Alison and Carol, are vets with PhDs in the humanities (history and law) who met online during lockdown and started a network, Veterinary Humanities UK, to connect with others working in this area. Our third editor, Ruth, is a vet with an MA in applied linguistics, who has been active in the network from the start. During Covid, we held regular online events, attended by veterinary professionals and humanities or social science academics interested in the veterinary sector. Participants showcased the variety and value of their work, and we had many engaging discussions. We wanted to share these insights more broadly, so we asked network members to contribute to *An Introduction to Veterinary Humanities*.

How did you decide which topics to include?

Our authors are mostly self-selected, but their contributions give a great overview of the possibilities of veterinary humanities. The book does not provide clinical or scientific information, although most authors are veterinary professionals. As the editors are all British, we limited contributions to those linked to the UK context, though we hope the book will have international appeal. It covers a wide range of species, from zoo animals and horses to cattle, dogs, and rabbits. There are over 40 contributors, from senior professors to PhD students and practicing veterinary professionals. Some chapters are personal reflections, while others examine veterinary topics from a humanities or social science perspective. There is something for everyone.



How is the book structured?

Apart from introductory material and an opening essay outlining the history of veterinary humanities, chapter topics were chosen by contributors. We used an inductive approach to group the material. The book is divided into two main sections, *Care and Professionalism*, with broad themes within each. For example, Care includes “Perceiving Animals and Ourselves” and “End of Life,” while Professionalism includes “Developing Professional Identity” and “Professional Communities and Relationships.” Some themes are focused, others more varied. Many contributions speak across themes, linking in ways we haven’t explicitly signposted, which adds interest for the reader.

Are there any particular concepts that link the chapters together?

The book includes a wide range of perspectives, and some contributions look at the same issues in different or even contradictory ways. We see this as a strength, as each chapter helps the reader view the veterinary world from a humanities perspective and form their own conclusions. One concept many authors consider is “contextualised care,” introduced to the profession by Veterinary Humanities UK in 2021 and topical as the book was written. Contextualised care is not a major theme but is subtly woven throughout. We are proud of our role in developing this concept, which has become part of the professional hive mind in the UK, and it reflects the veterinary humanities worldview, where the human context is fundamental in every veterinary encounter.



Who did you have in mind as your ‘typical’ reader?

We assume readers have a basic understanding of the veterinary sector and the UK context and expect that most will be linked to this world. We hope veterinary educators will use chapters for class discussions, students may find support for reflection, and professionals will find elements useful for ongoing development. The book may also interest scholars of veterinary or medical humanities and those interested in animal welfare ethics more broadly.

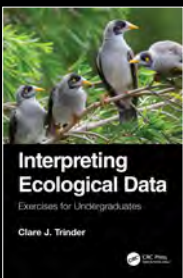
What kind of impact do you hope this text might have?

We see this book as a starting point to open minds and spark conversations. It is not controversial, but we hope it encourages readers to think in new ways and question assumptions about the veterinary world. We are grateful to Alice Owen, our editor at T&F, for supporting this project, and we are excited to see how the book is received in the UK and internationally.



Dr. Clare J. Trinder

is Emeritus Senior Lecturer in the School of Biological Sciences, University of Aberdeen, UK. She worked as a research plant ecologist from 2007–2011 at the University of Aberdeen in collaboration with the James Hutton Institute and has practical experience in both national and international nature conservation as an Environmental Education Officer and Conservation Officer.



Interpreting Ecological Data

Exercises for Undergraduates

Clare J. Trinder

April 2026

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176 Pages, 80 Colour Illustrations

Subject: Environmental Science

www.routledge.com/9781041081746

Clare J. Trinder

talks about *Interpreting Ecological Data*, on creating a practical ecology textbook.

What is *Interpreting Ecological Data* all about?

Ecology is very much about searching for patterns and commonalities in interactions between individuals of the same and different species. Over the last hundred or so years, many hypotheses and theories have been proposed and developed, and these form a core part of students' learning about Ecology. I'd been teaching an intermediate-level Ecology course to undergraduates for a few years, covering a range of topics such as competition, predation, food webs, and biogeochemical cycles. It was clear that our students were generally very good at learning the material presented to them in lectures and practical classes and then reproducing it in exams. However, when we gave them new data that they had not previously seen and asked them to apply one of the theories they had been learning about, most of them struggled. Their learning had been context-specific: for example, they could explain how competitive exclusion occurred in barnacles because that was the example we'd used in class, but they couldn't see how to apply the same principle to wood ants, American mink, or otters.

Rote learning had worked well for the students until this stage of their learning, but in Ecology (and many other disciplines), being able to apply existing knowledge to new situations is a critical skill. Developing this skill is difficult. We'd been assuming that students would 'pick up' this ability as we taught them different subjects, but in reality, we simply weren't doing enough to help the students make sense of data and apply knowledge and understanding.

With all this in mind, I redesigned my Ecology course so we spent one lecture session each week looking at new data and figuring out how it related to the ideas we had covered in class. Initially, students wrote a two-paragraph answer in class, showing that they understood the relevant theory and how it applied (or didn't) to the example. Students often fell into the trap of giving very detailed descriptions of the data without providing much ecological interpretation. Later, I developed multiple-choice and focused short-answer questions. These allowed me to guide students in the right direction and considerably reduced marking time when using these questions in exams. Initially, I used examples from textbooks, but I soon exhausted suitable material and started scouring journals. Finding data that worked for these types of exercises was massively time-consuming. Experimental material worked best and ideally contained a clear message that the students could figure out from data and supporting information, but it also needed to be appropriate to the level at which the students were working.

Chapter 4 Intra-specific competition & life histories

Exercise 4.4: Trade-offs in life histories

New Mexico spadefoot toads *Scaphiopus multiplicatus* spend most of their lives buried in sand in deserts, emerging only after rain to mate and lay eggs in pools. Pools generally don't persist for long in these environments. There are 2 morphs of tadpole in this species – one is carnivorous (feeding on fairy shrimps and other tadpoles), the other is omnivorous (feeding on algae and detritus). All tadpoles are initially the omnivorous morph. The trigger for development as a carnivore appears to be the abundance of shrimp in the pool – more shrimp result in more carnivores. Carnivorous tadpoles develop up to 50% faster than omnivorous morphs but omnivorous tadpoles are able to build up greater fat reserves than carnivorous tadpoles.

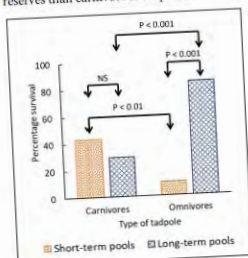
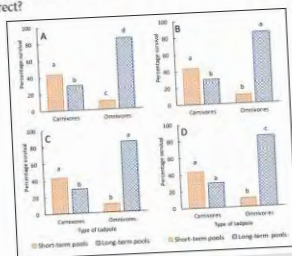


Figure 4.4a. Survival of toads over 2 months after metamorphosis for both types of morph in both types of pool. Adapted from Pfennig, 1992. Reproduced with permission, copyright © 1992 The Society for the Study of Evolution.

Question 4.4.1. The bars with associated P-values are another way of showing the results of statistical tests, in this case a two-tailed Mann Whitney U-test. If you had to display these results using a letter over each bar with different letters showing significantly different pairwise combinations, which of the graphs (A, B, C or D) below would be correct?



Exercise 4.4 Trade-offs in life histories

Question 4.4.2. Select the correct statement from the list below.

- The most successful option is to be an omnivore.
- The most successful option is to be a carnivore.
- It is always better to be in a long-term pool.
- It is always better to be in a short-term pool.
- The worst option is to be in a short-term pool.

Question 4.4.3. In no more than one type of life-history for this species.

Pfennig manipulated the starting proportions of carnivores shown in Figure 4.4c.

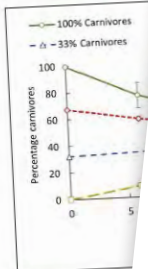


Figure 4.4c. Change in proportions of carnivores over time. Pfennig, 1992. Reproduced with permission, copyright © 1992 The Society for the Study of Evolution.

Question 4.4.4. Pfennig demonstrated that there was a trade-off between being omnivorous and being carnivorous.

Chapter 10: Sources, Answers & Explanations

Exercise 4.4: Trade-offs in life histories

PFENNIG, D.W., 1992. Polyphenism in spadefoot toad tadpoles as a locally adjusted evolutionarily stable strategy. *Evolution*, 46(5), pp. 1408–1420.

Question 4.4.1: D

All the bars were significantly different from each other except for the carnivores in the two types of pool. These two bars therefore shared a letter, which was different from the letters above both the bars for the omnivorous tadpoles.

Question 4.4.2: E

The 'best' life-history varied according to the environment so the only correct statement relates to the combination of omnivory in short-term pools.

Question 4.4.3

In the long-run, it was probably better to be a carnivore, but the large number of omnivores that survived when pools persisted can flood the gene pool with individuals that also favour this morph. Pools will have to persist for a certain proportion of the time for this strategy to persist; too infrequently and carnivores will be favoured.

Question 4.4.4

There was probably greater competition for food resources in the 100% carnivore pools encouraging a change to morphs that can take advantage of alternative food sources.

Exercise 4.5 Lack clutch size

PETTIFOR, R.A., PERRINS, C.M. and MCCLEERY, R.H., 2001. The individual optimization of fitness: variation in reproductive output, including clutch size, mean nestling mass and offspring recruitment, in manipulated broods of great tits *Parus major*. *Journal of Animal Ecology*, 70(1), pp. 62–79.

Additional reference: MONAGHAN, P. and NAGER, R.G., 1997. Why don't birds lay more eggs? Trends in Ecology & Evolution, 12(7), pp. 270–274.

Question 4.5.1: B

Adding eggs to the nests reduced (rather than increased) the numbers being recruited to the adult population, relative to the unmanipulated nests (A), presumably due to increased competition or inability of parent birds to provide enough food; having fewer young to raise (when eggs were removed from nests) may reduce intra-specific competition and survival to recruitment (C) but this wasn't enough to offset raising fewer young overall.

What motivated you to write the textbook?

I couldn't find any books with enough example exercises. I needed material to use in class each week, plus additional examples to provide extra practice and for mock and final exams. I slowly developed and built up my stock of exercises over the years. I could see the value in a book that provided a range of interesting examples across the topic of Ecology, using real, often messy, sometimes contradictory, experimental results with worked-up questions and full explanations of the answers. Essentially, this is the book that I wished someone else had written 12 years ago when I started this approach!

Who did you have in mind as your 'typical' reader?

There are two broad targets for this book: students and the academics who teach them. Interested and motivated students can use the book for self-study, picking out the topics relevant to them as they cover these in class, answering the questions, and checking if they got them right. In addition, academics can use the exercises in structured classes, such as regular problem-solving lecture sessions or tutorials. Academics are always busy, and many don't have the time to find and work up exercises for interpreting data and applying theory. I hope that this book may enable some of these lecturers to use different approaches to teaching and assessment.



Machine Learning Codebook for Engineers and Scientists

Siddharth Misra

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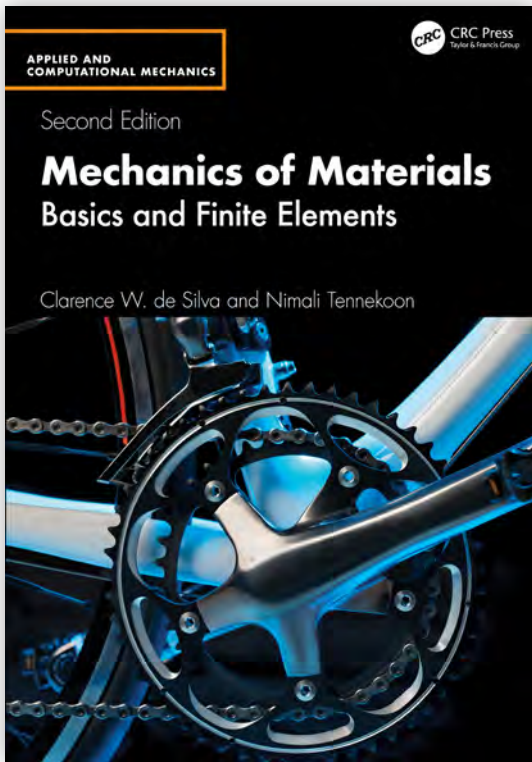
Siddharth Misra

received a Ph.D. in Petroleum Engineering from the University of Texas at Austin, after earning a B.Tech. in Electrical Engineering from the Indian Institute of Technology Bombay. Upon graduation, Dr. Misra joined the Petroleum Engineering Department at University of Oklahoma as an Assistant Professor. In 2019, he joined the Petroleum Engineering Department at Texas A&M University as an Associate Professor with a courtesy joint-appointment in the Department of Geophysics. Dr. Misra's research and teaching focus is on formation evaluation, scientific machine learning, and petroleum data analytics. He developed an undergraduate elective and graduate course that significantly improved the data-analytics offerings in the department. Dr. Misra has helped several energy companies implement machine learning for earth resource and energy exploration and production

This comprehensive textbook provides a practical guide to machine learning, tailored specifically for engineers, scientists, and students. It offers a hands-on approach, combining theoretical concepts with real-world engineering case studies and accompanying Python code implementations, allowing readers to experiment and learn by doing. Readers will come away with knowledge, codes, workflows, case studies, solutions, and methods to address a diverse range of interdisciplinary engineering problems. The book features integrated Jupyter notebooks to facilitate a deeper understanding of the material and foster an engaging learning environment.

KEY FEATURES:

- Establishes a strong foundation in data manipulation using popular Python libraries like Pandas, NumPy, and Matplotlib and offers integrated Jupyter notebooks.
- Highlights the importance of data preprocessing, covering techniques like outlier detection, dimensionality reduction, feature engineering, and data transformation.
- Explores both regression and classification techniques in detail, including their underlying principles, hyperparameters, and practical implementations.
- Features a section dedicated to neural networks, covering their architecture, hyperparameters, and applications to regression and classification problems.
- Discusses clustering techniques, including K-means, mean shift, DBSCAN, and agglomerative methods, and applies them to engineering datasets.
- Includes worked problems with full solutions at the end of each chapter.
- Offers 25+ engineering case studies, demonstrating the application of machine learning techniques to solve practical problems from various engineering disciplines.



Mechanics of Materials

Basics and Finite Elements, 2nd Edition

Clarence W. de Silva and Nimali Tennekoon

February 2026
ISBN 9781032825892
648 Pages 638 B/W Illustrations
Subject: Mechanical Engineering
www.routledge.com/9781032825892



Dr. Clarence W. de Silva

is Professor Emeritus of Mechanical Engineering at the University of British Columbia. A Fellow of ASME, IEEE, the Canadian Academy of Engineering, and the Royal Society of Canada, he has held prestigious chairs including the Senior Canada Research Chair in Mechatronics. He earned PhDs from MIT and Cambridge, an ScD from Cambridge, and an honorary D.Eng. from Waterloo. He has authored 26 books, 51 chapters, 300+ journal articles, and contributed extensively to mechatronics, dynamic systems, and engineering mechanics.



Nimali Tennekoon

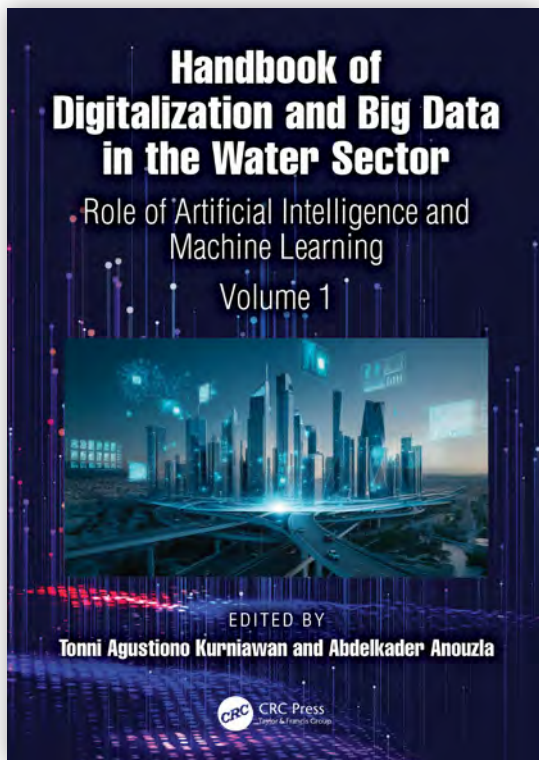
is Senior Lecturer at the Open University of Sri Lanka and Principal Investigator of its Soft Robotics Research Group (SORRG). She holds a BSc in Mechanical Engineering from the University of Peradeniya and an MPhil from Sheffield Hallam University. A Chartered Engineer and member of IESL, IEEE, and SLAAS, her research focuses on soft robotics, finite element analysis, and multi-axial fatigue. She has published over 100 papers in journals and conferences.

This second edition is an introductory book on the subject of Mechanics of Materials with a focus on integrating the basics of Finite Element Analysis. *Mechanics of Materials* provides the basis for understanding structural mechanics in engineering systems such as buildings, bridges, vehicles, and machines.

This new edition incorporates the fundamentals of the subject into analytical methods, modeling approaches, numerical methods, experimental procedures, numerical evaluation procedures, and design techniques. It introduces the fundamentals, and then moves on to more advanced concepts and applications. It discusses analytical methods using simple mathematics, examples and experimental techniques, and it includes a large number of worked examples and case studies that illustrate practical and real-world usage.

Mechanics of Materials serves as both a textbook and a reference book for engineering students and practicing professionals.

A solutions manual and figures slides are valuable for all qualified textbook adoptions.



Handbook of Digitalization and Big Data in the Water Sector

Role of Artificial Intelligence and Machine Learning (Volume 1)

Edited by **Tonni Agustiono Kurniawan** and **Abdelkader Anouzla**

March 2026
ISBN 9781032880310
328 Pages 5 Color & 33 B/W Illustrations
Subject: Water Engineering
www.routledge.com/9781032880310



Tonni Agustiono Kurniawan

is a global leader in addressing complex environmental challenges with societal impact. He has authored over 355 journal articles, 25 conference papers, 12 monographs, and 28 book chapters, with 15% as first author. His work has an h-index of 68 and more than 19,500 citations (Scopus), demonstrating significant competence and research impact in environmental science.

Abdelkader Anouzla

earned his Ph.D. in Science & Technology from Hassan II University, specializing in water treatment. He has published nearly 100 peer-reviewed articles and 20 books. His research focuses on water and wastewater treatment, landfill management, composting, nitrogen pollution, microplastics, and the water-food-energy nexus, and he has presented widely at international conferences.

This 3-volume set delves into the intersection of cutting-edge technology and environmental science to address pressing challenges in the water sector and develop digitalization solutions that can have practical implementation in decision making and management of wastewater treatment.

With special emphasis on the integration of big data, artificial intelligence (AI), and machine learning (ML), Volume 1 provides theoretical foundational and practical insights for water systems optimization, resource conservation, and sustainable operations; Volume 2 explores pathways to a sustainable, low-carbon future by emphasizing predictive maintenance, energy-efficient operations, leak detection, and climate-adaptive planning; and Volume 3 pursues real-world applications in water supply, wastewater treatment and flood management through a host of diverse and well-researched case studies.

Ideal for water engineers, researchers, policymakers, and sustainability practitioners, this handbook serves as an essential guide for professionals seeking to harness digitalization for smarter, data-driven water management. It is equally valuable for graduate students, academics, and technology innovators interested in bridging the gap between emerging AI capabilities and practical water sector applications.

Practical Probability and Reliability Methods for Civil and Environmental Engineering

BAK KONG LOW



Practical Probability and Reliability Methods for Civil and Environmental Engineering

Bak Kong Low

April 2026
ISBN 9781032956510
248 Pages 132 Color Illustrations
Subject: Civil & Mechanical Engineering
www.routledge.com/9781032956510



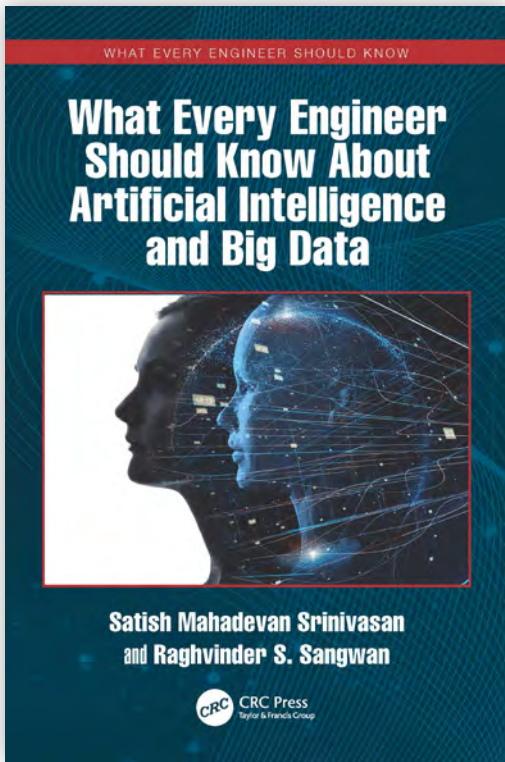
Dr. Bak Kong Low

is senior professor at the Universiti Tunku Abdul Rahman (UTAR) main campus of Perak, Malaysia. Dr. Low earned a PhD at the University of California, Berkeley, and a BS and an MS at the Massachusetts Institute of Technology. He has taught at Nanyang Technological University (Singapore) for 35 years (1985-2020) and is a Fellow of the American Society of Civil Engineers. He also remains a registered professional engineer of Malaysia. In 2019, Dr. Low received the Thomas A. Middlebrooks Award from ASCE.

Practical Probability and Reliability Methods for Civil and Environmental Engineering sets out useful probabilistic methods and their efficient implementations across civil engineering, including transportation and traffic, hydrosystems, environmental, geotechnical and structural engineering.

The book aims to overcome conceptual and implementation hurdles surrounding probability methods for civil and environmental engineers and serves as a textbook for upper-level undergraduates and beginning graduate students. It makes use of Microsoft Excel's versatile constrained optimization Solver tool, using some simple VBA codes, including FORM, SORM, system reliability, importance sampling, direct MCS, and response surface techniques.

Solutions can be downloaded free for hands-on appreciation and deeper understanding. PowerPoint slides based on the book are available for adopting course instructors. The book pairs well with the author's *Reliability-Based Design in Soil and Rock Engineering* (CRC Press, 2021).



What Every Engineer Should Know About Artificial Intelligence

Satish Mahadevan Srinivasan
and Raghvinder S. Sangwan

June 2026
ISBN 9781032829852
X Pages X Color Illustrations
Subject: Civil & Mechanical Engineering
www.routledge.com/9781032829852



Satish Mahadevan Srinivasan

is an Associate Professor of Information Science at Pennsylvania State University. He holds degrees from Bharathidasan University, IIT Kharagpur, and the University of Nebraska at Omaha, where he also worked as a postdoctoral research associate. He teaches courses in database design, data mining, data collection and cleaning, security, and business process management. His research interests include social network analysis, machine learning, big data analytics, software engineering, and bioinformatics.



Raghvinder S. Sangwan

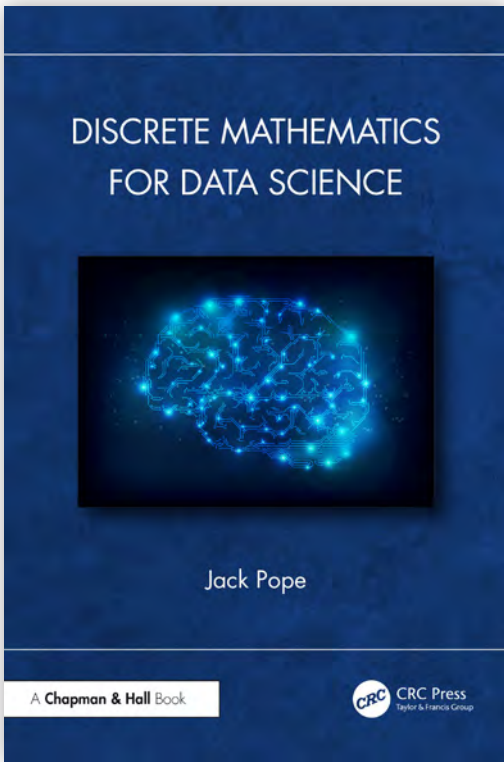
earned his Ph.D. in Computer and Information Sciences from Temple University and is a Professor of Software Engineering at Pennsylvania State University. His expertise includes large-scale software-intensive systems and AI engineering for safe, secure, and trustworthy systems. He teaches and consults widely, including with Siemens Corporate Technology and the Software Engineering Institute at Carnegie Mellon University. He also mentors entrepreneurial teams and is an IEEE distinguished contributor and ACM senior member.

Recognizing the vast potential in analyzing big data through machine learning (ML) and artificial intelligence (AI) technologies, companies are acknowledging these technologies as essential for maintaining relevance. A prevailing trend is emerging towards the adoption of distributed open-source computing for storing big data assets and performing advanced ML/AI analytics to predict future trends and risks for businesses. This book offers readers an overview of the essentials of big data and ML/AI, while acknowledging that the field is extensive and evolving. Rather than focusing on theory, the book shares real-life experiences building AI and big data analytics systems of value to practitioners.

KEY FEATURES:

- Features practical case studies on building big data and AI models for large scale enterprise solutions.
- Discusses the use of design patterns for architecting AI that are safe, secure, and testable.
- Covers an array of concepts including deep big data analytics, natural language processing, transformer architecture and evolution of ChatGPT, swarm intelligence, and genetic programming.

Informed by the authors' many years of teaching ML, AI, and working on predictive data analytics/AI projects, this book is suitable for use by graduates, professionals, and researchers within the field of data science and engineers and scientists interested in learning more about these essential technologies.



Discrete Mathematics for Data Science

Jack Pope

March 2026
ISBN 9781032687735
400 Pages 72 B/W Illustrations
Subject: Mathematics / Data Science
www.routledge.com/9781032687735



Jack Pope

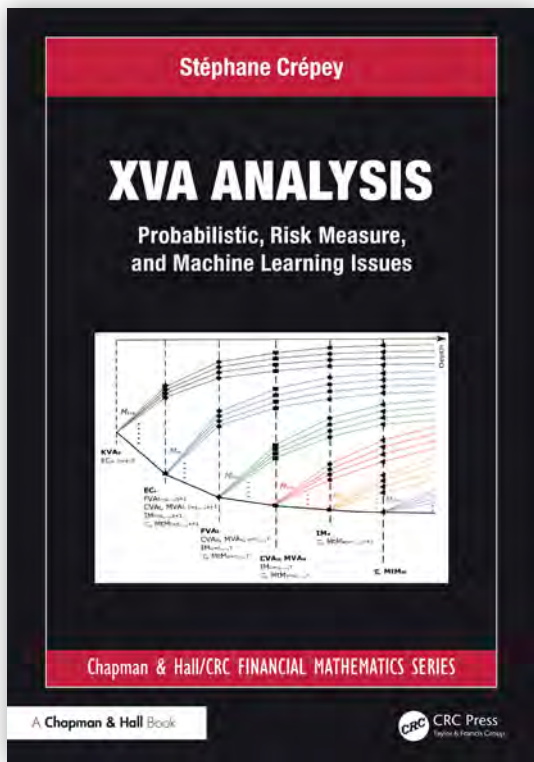
has wrangled financial data since Big Data meant a big pile of floppy disks. He works at Investment Economics (aka, System Goats) providing system configuration, guidance, and training for organizations interested in data science infrastructure. He is also department coordinator for Computer Science and Data Science at North Hennepin Community College and chairman of the Twin Cities IEEE Computer Society.

Discrete Mathematics for Data Science provides an early course in both data science and discrete mathematics, focusing on how a deeper understanding of the former can unlock a more effective implementation of the latter. Students of data science come from a variety of disciplines, with Business, Statistics, Computer Science, Economics, and Psychology among the departments offering courses on the subject. Therefore, for many students, data science is considered a means of insight into a particular field of interest, with the study of its underlying discrete mathematics not a primary objective.

This book covers the topics of discrete mathematics relevant to students of data science, offering an introduction to both the theoretical and practical elements required to be a successful data scientist. The relaxed, accessible style makes it a perfect textbook for undergraduates.

KEY FEATURES

- Numerous exercises and examples
- Ideal as a textbook for a discrete mathematics course, for data science and computer science students
- Source code and solutions provided as a supplementary resource.



XVA Analysis

Probabilistic, Risk Measure,
and Machine Learning Issues

Stéphane Crépey

December 2025
ISBN 9781041014201
456 Pages 70 B/W Illustrations
Subject: Mathematics
www.routledge.com/9781041014201



Stéphane Crépey

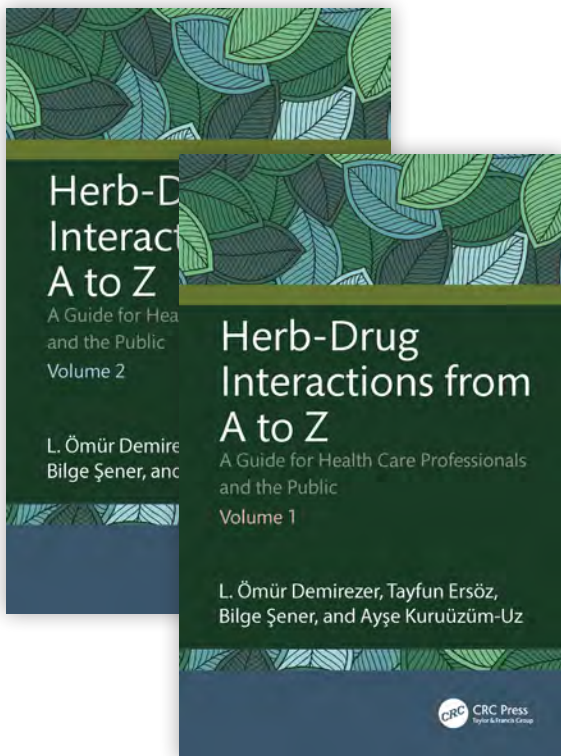
is a professor at the mathematics department of Université d'Evry Paris-Saclay, in charge of the probability and finance group and of the quantitative finance master 2 program.

XVA Analysis: Probabilistic, Risk Measure, and Machine Learning Issues offers readers an up-to-date and comprehensive exploration of the X-Value Adjustment (XVA) universe and of the embedded risk measure issues inherent within it. The book tackles this subject through the triple lens of finance (wealth transfers), stochastic analysis (enlargement of filtration and BSDEs), and numerical computations.

The traditional Credit Valuation Adjustment (CVA) desk compensates the trading desks for the cash flows that they lose in case of defaults of their counterparties. The Treasury of the bank funds the activity of the trading desks and of the CVA desk at the risk-free rate. The CVA desk and the Treasury charge their costs to the clients of the bank at a valuation level ensuring corresponding PnL processes that are martingales relative to a fininsurance probability measure calibrated to the market and consistent with the physical probability measure given the market. The management of the bank charges to the clients of the bank an additional risk premium, turning the overall dividend process of the bank shareholders into a submartingale in line with a target hurdle rate on their capital at risk within the bank.

KEY FEATURES

- Numerous illustrative figures and examples
- Unprecedented coverage of neural network regression methodologies
- Suitable as supplementary reading for graduate students and as a practical reference for professional quantitative analysts and risk managers.



Herb-Drug Interactions from A to Z

A Guide for Health Care Professionals and the Public

L. Ömür Demirezer, Tayfun Ersöz, Bilge Şener and Ayşe Kuruüzüm-Uz

Volume 1

April 2026
ISBN 9781032986487
368 Pages 42 B/W Illustrations
Subject: Botany / Pharmacology

www.routledge.com/9781032986487

Volume 2

April 2026
ISBN 9781032986494
272 Pages 31 B/W Illustrations
Subject: Botany / Pharmacology

www.routledge.com/9781032986494



Prof. Dr. L. Ömür Demirezer

pharmacognosy expert, focuses on medicinal plants, drug discovery, phytotherapy, and aromatherapy. Former Hacettepe University professor and dean, now Head of Pharmacognosy at Girne American University.



Tayfun Ersöz

pharmacognosy expert, focuses on medicinal plants, active compounds, and phytotherapy. Former Hacettepe University professor, now teaches at European University of Lefke and serves on ESCOP's advisory board.



Prof. Dr. Bilge Şener

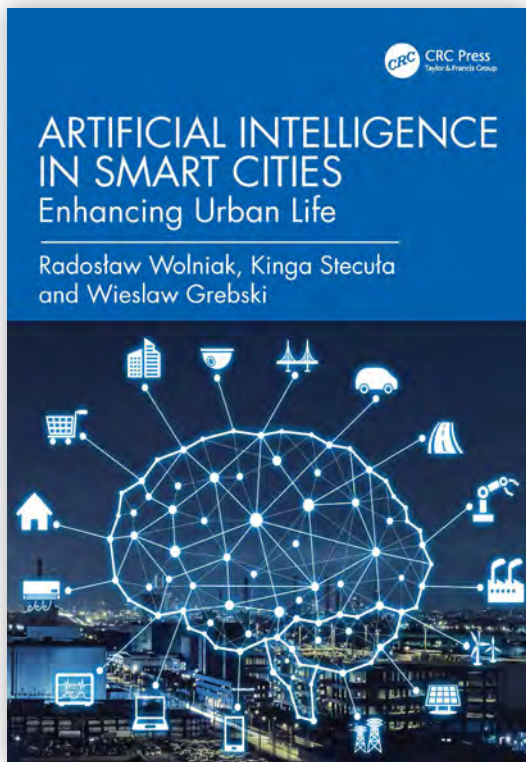
pharmacognosy expert and former Gazi University professor and dean, continues teaching and supervising students at ICCBS-Karachi, with research focused on medicinal plants and natural products.



Prof. Dr. Ayşe Kuruüzüm-Uz

Hacettepe University professor, researches medicinal plants, phytochemistry, and phytotherapy. She has contributed to numerous articles, projects, and international collaborations while continuing to teach and mentor students.

This 2-volume set provides information about herb-drug interactions that may arise as a result of the increasing interest in medicinal plants or herbal products and the concomitant use of conventional drugs. Medicinal plant-drug interactions are inevitable, especially when the elderly use medicinal plant products in addition to polypharmacy. Concurrent consumption of herbal products and conventional drugs is a serious concern. Over-the-counter herbal drug's doses can inhibit the metabolism of conventional drugs, increasing plasma levels of the drug. This book highlights evidence on herb-drug interactions from a systematic review, providing rapid access to information on their clinical use.



Artificial Intelligence in Smart Cities

Enhancing Urban Life

Radosław Wolniak, Kinga Stecula
and Wiesław Grebski

February 2026
ISBN 9781032960197
224 Pages
Subject: AI / Urban Development
www.routledge.com/9781032960197



Radosław Wolniak

is a Professor at Silesian University of Technology, Poland, specializing in management, Industry 4.0, smart cities, digitalization, and AI. Author of 500+ publications, collaborator with industry projects. Scopus: 1321 citations, h-index 21. Listed in Stanford's Top 2% most cited scientists globally, 2023.



Kinga Stecula

holds PhD in mechanical engineering, Silesian University of Technology. Research in production engineering, human-machine interaction, VR/AR, smart cities, Industry 4.0, and management. Scopus: 250 citations, h-index 12.



Wiesław Grebski

is Professor Emeritus, Penn State University, USA. Focused on engineering, computer-aided manufacturing, renewable energy, and industry-academia collaboration. Coauthored 200 publications and nine books. Awarded Milton S. Eisenhower Award and 11 other recognitions for teaching, advising, and promoting engineering education.

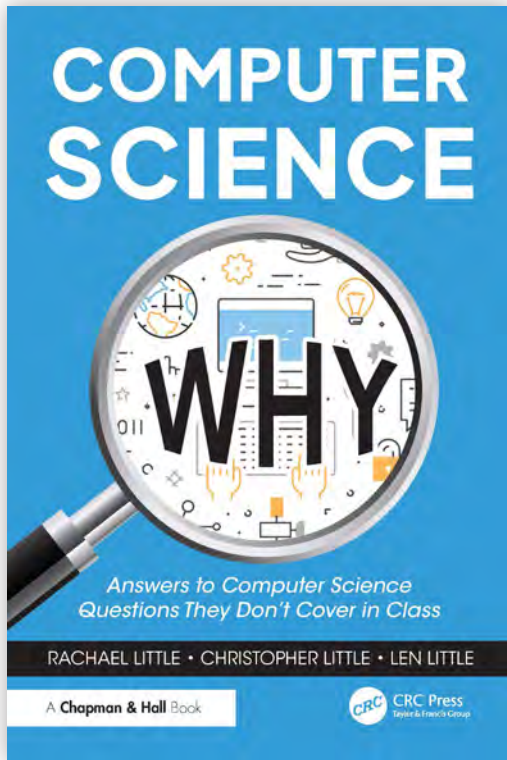
Artificial Intelligence in Smart Cities presents an interdisciplinary analysis of how AI reshapes urban life, governance, and infrastructure. It explores smart government, economy, environment, living, people, cybersecurity, and innovation, illustrated with Central European case studies. Each chapter examines AI technologies—machine learning, natural language processing, and IoT integration—and their impact on decision-making, sustainability, health, education, urban resilience, and social inclusion.

The book combines empirical evidence, conceptual reflection, and practical deployment to show how AI can support inclusive urban growth. It addresses ethics, economics, and privacy while offering insights on algorithmic fairness, data protection, public trust, and innovation. Advocating a human-centered approach, it balances technological advancement with societal needs.

Intended for researchers, urban planners, policymakers, technologists, and graduate students, the book provides policy-driven expertise and analytical tools. Readers gain perspectives on the convergence of AI and urban futures, equipping them to navigate the opportunities and challenges of AI-enhanced cities while ensuring technology serves the public good.

KEY FEATURES:

- Case studies of successful AI implementations in Central European cities.
- Practical lessons for urban planners, policymakers, and business leaders.
- Interdisciplinary insights from urban planning, computer science, engineering, economics, and social sciences.
- Analysis of AI's applications in governance, economy, environment, mobility, living, and social inclusion.
- Vision for AI-enabled, liveable, sustainable, and resilient cities.



Computer Science Why

Answers to Computer Science Questions
They Don't Cover in Class

Rachael Little, Christopher Little and Len Little

March 2026
ISBN 9781032856742
150 Pages 22 B/W Illustrations
Subject: Computer Science
www.routledge.com/9781032856742

Rachael Little

has a lifelong passion for computer technology and is currently finishing a PhD in Computer Science studies.

Christopher Little

has a lifelong career in (and passion for) software and computer technology.

Len Little

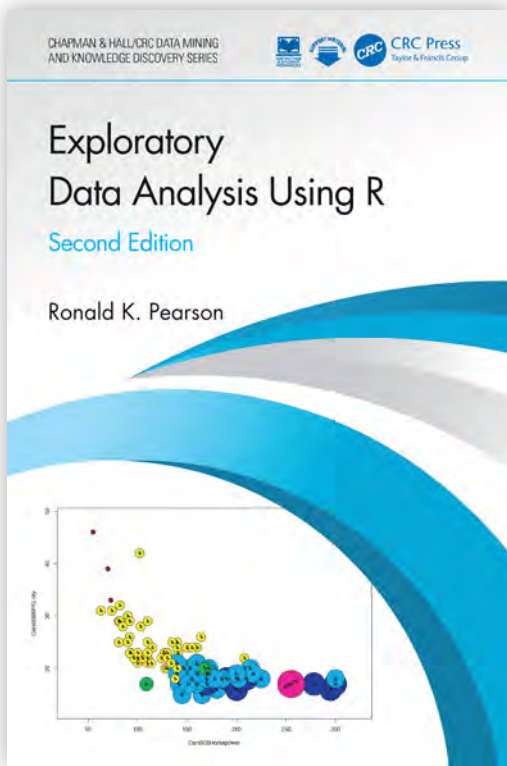
has a lifelong passion for technology and is currently in undergraduate Computer Science studies.

CS Why is a book that presents a straightforward, curiosity-based approach to filling in the blanks around common, introductory material taught in Computer Science classes. If you have ever wondered “why is that?” about a programming phenomenon, historical tidbit, or common terminology, this book may have an answer that explains it.

Questions include:

- Why do computers have trouble with floating point numbers?
- Why is it called Bluetooth? Why does it use that symbol?
- Why is it called bootstrapping?
- Why don't modifications to function parameters persist once the function returns?
- Why do we use the QWERTY keyboard?
- ... and many more.

Perfect for both students and IT professionals, this book provides the clear “why” to answer so many unstated CS questions. Take any example in the book, from base 2 to timezones, and you will have an answer that cements your insight on the “why” of the topic, reinforcing your rote memorization with deeper understanding and insight.



Exploratory Data Analysis Using R

2nd Edition

Ronald K. Pearson

April 2026
ISBN 9781032814803
592 Pages 35 Color & 74 B/W Illustrations
Subject: Computer Science / Data
www.routledge.com/9781032814803



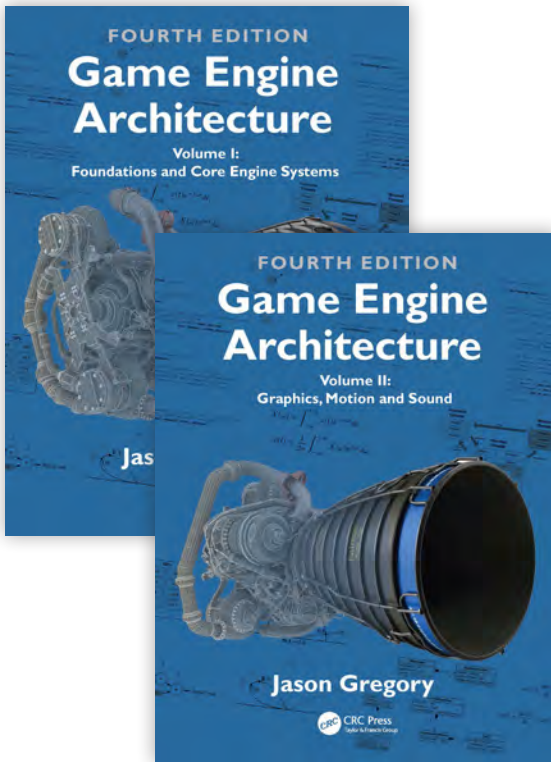
Ronald K. Pearson

holds a PhD in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology and has more than 40 years professional experience in exploratory data analysis. Dr. Pearson has held industrial, business, and academic positions in the fields of industrial process control, bioinformatics, drug safety data analysis, software development, and insurance. He has authored or co-authored books including *Exploring Data in Engineering, the Sciences, and Medicine* (Oxford University Press, 2011) and *Mining Imperfect Data with Examples in R and Python* (SIAM, 2020).

Exploratory Data Analysis Using R offers a classroom-tested introduction to exploratory data analysis (EDA), accompanied by the ExploreTheData R package, which implements many of the book's techniques. The focus is on identifying "interesting" features—good, bad, and problematic—in datasets, why they matter, how to address them, and how R can be used to explore and explain data and analytical results.

The book opens with a brief overview of EDA in R, followed by guidance on creating graphical data summaries. It then provides a thorough introduction to EDA principles and an in-depth discussion of 13 common data anomalies, their importance, how to detect them, and options for handling them. Subsequent chapters cover working with external data, using SQL to interact with relational databases, performing linear regression—the simplest and historically most important predictive modeling technique—and crafting clear data stories to communicate results. R is used throughout as an interactive analysis platform. A dedicated chapter introduces programming in R, emphasizing custom functions that streamline repetitive tasks. Later chapters extend the scope to advanced topics, including considerations for text data, a deeper look at EDA, and broader predictive modeling approaches.

Designed for advanced undergraduates, entry-level graduate students, and professionals with little or no background in data analysis, statistics, or programming, the book maintains a non-mathematical approach to an inherently mathematical field. Most chapters include exercises, and an instructor's solution manual is available.



Game Engine Architecture

Two Volume Set, 4th Edition

Jason Gregory

January 2026
ISBN 9781041162599
1424 Pages 105 Color & 385 B/W Illustrations
Subject: Game Development
www.routledge.com/9781041162599



Jason Gregory

has been a professional software engineer since 1994 and has worked in the games industry since 1999. He began his game programming career at Midway Home Entertainment in San Diego, contributing tools, engine technology, and gameplay code to Hydro Thunder™ 2 (arcade) and developing the PlayStation®2/Xbox animation system for Freaky Flyers™ and Crank the Weasel.

In 2003, he joined Electronic Arts Los Angeles, where he worked on engine and gameplay systems for Medal of Honor™: Pacific Assault and served as a lead engineer on Medal of Honor™: Airborne.

Jason is now a Lead Programmer at Naughty Dog Inc., where he has developed engine and gameplay software for major titles including Uncharted: Drake's Fortune™, Uncharted 2™, Uncharted 3™, Uncharted 4™, Uncharted: The Lost Legacy™, The Last of Us Part I™, and The Last of Us Part II™, released on PlayStation®5, PlayStation®4, PlayStation®3, and PC. He and his team are currently working on a new PlayStation®5 title.

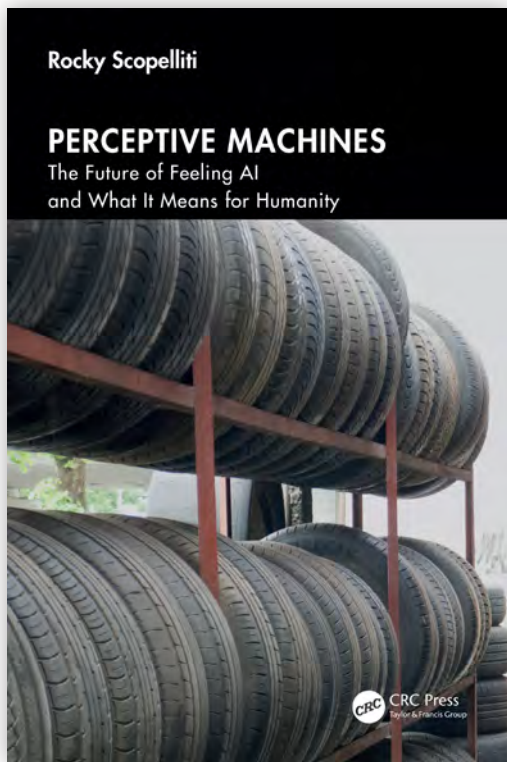
In this new and improved fourth edition of the highly popular *Game Engine Architecture*, Jason Gregory draws on his two decades of experience at Midway, Electronic Arts and Naughty Dog to present both the theory and practice of game engine software development. In this book, the broad range of technologies and techniques used by AAA game studios are each explained in detail, and their roles within a real industrial-strength game engine are illustrated.

This fourth edition offers the same comprehensive coverage of game engine architecture provided by previous editions, along with new material that includes:

- 2 brand new chapters covering 3D rendering and photorealistic lighting
- A discussion of motion matching technology for character animation
- Improved coverage of undefined behavior in the context of compiler optimizations
- Fuller coverage of C++ language standards up to C++23
- An improved index, plus fixes for various errata found by our readers in previous editions

KEY FEATURES

- Covers both the theory and practice of game engine software development
- Examples are grounded in specific technologies, but discussion extends beyond any particular engine or API
- Includes all mathematical background needed
- Comprehensive text for beginners and also has content for senior engineers



Perceptive Machines

The Future of Feeling AI and
What It Means for Humanity

Rocky Scopelliti

April 2026
ISBN 9781041232360
TBC Pages TBC B/W Illustrations
Subject: Computer Science
www.routledge.com/9781041232360



Rocky Scopelliti

is a world-renowned futurologist, best-selling author, and technologist. His pioneering research on emerging technologies and human evolution has shaped global thinking on AI, society, and identity. His books explore the frontier where machines don't just think—but feel.

This book offers a compelling look into the future of artificial intelligence, where AI systems are no longer limited to just processing information, but can perceive the world through synthetic senses. The author explores how this shift from purely cognitive AI to embodied sensory experiences is blurring the lines between human and machine intelligence. It's a deep dive into how multisensory AI, powered by breakthroughs in areas like haptics and neural interfaces, will fundamentally alter what it means to experience, connect, and ultimately, to be human.

The book's key features lie in its multidisciplinary approach, drawing insights from neuroscience, philosophy, ethics, and frontier technologies to examine the far-reaching implications of artificial perception. It explores how synthetic senses will impact everything from personal identity and social relationships to cultural norms and moral agency. The book contains discussions on AI systems that can genuinely "feel" a hug and virtual environments that engage all five human senses, challenging our very definition of reality. There is a deep dive into the technologies of the sixth sense, from theory to engineering, introducing the infrastructure of synthetic sensing - multimodal models, brain-machine interfaces, and sensory AI architectures. An interesting topic discussed is the privacy of the senses, which raises urgent ethical questions about biometric sensing, perceptual sovereignty, and the right to emotional privacy. Another topic of great concern is designing for dignity that outlines principles for creating AI-perception systems that centre dignity, inclusivity, and user sovereignty.

This book is a useful resource for with technologists, researchers, philosophers, ethicists, and futurists who are grappling with the implications of advanced AI. It can also be read by anyone curious about the cutting edge of AI and its profound impact on human existence.



An Introduction to Radiation Protection

8th Edition

Alan Martin, Sam Harbison, Karen Beach
and Peter Cole

April 2026
ISBN 9781041095866
268 Pages 73 Color & 16 B/W Illustrations
Subject: General Medicine
www.routledge.com/9781041095866

Alan Martin

formerly ran the consultancy
Alan Martin Associates, UK.

Sam Harbison

was formerly Her Majesty's Chief
Inspector of Nuclear Installations
and Director of Nuclear Safety,
Health & Safety Executive, UK.

Karen Beach

is a consultant lecturer in radiation
protection and a Radiation
Protection Advisor, UK.

The late

Peter Cole

was Radiation Protection Advisor
and Professor in the Department of
Physics, University of Liverpool and
was a past President of the Society
of Radiation Protection and the
Association of University Radiation
Protection Officers, UK.

The eighth edition of this highly readable book continues to cover the technical principles underlying the control of radiation hazards, radiation detection and measurement and the biological effects of radiation, followed by a consideration of radiation protection issues in the nuclear, non-nuclear and medical fields. Further specialised topics include safety and risk assessment, waste management and decommissioning of nuclear and radiation facilities, radiological emergencies, as well as relevant legislation and organizational issues.

KEY FEATURES:

- Essential reading – introduces all aspects of radiation protection in a single book
- Accessible and concise – highly structured text supplemented by clear diagrams and photographs, summary sections and revision questions, suitable for the beginner and more advanced radiation practitioner
- Up to date – convenient 'one stop shop', reflecting current national and international recommendations and requirements
- New to this edition – radiation protection in space exploration and travel
- Online supplements – including an image library and sample lectures with worked examples

An accessible account of the nature of the hazards presented by ionizing radiations and the methods of protection against such hazards, the book remains the ideal introductory text for those new to the field, and for the non-specialist, and a useful ready reference for more experienced radiation protection professionals.



Human Sectional Anatomy

Atlas of annotated body sections,
CT and MRI images, *5th Edition*

Bari Logan, Harold Ellis, Adrian K. Dixon
and David J. Bowden

April 2026
ISBN 9781041142744
340 Pages 344 Color & 157 B/W Illustrations
Subject: Anatomy / Radiology
www.routledge.com/9781041142744



Bari M. Logan

MA FMA Hon MBIE MAMAA

Former University Prosector,
Cambridge; Prosector, Royal
College of Surgeons, London;
Anatomical Preparator, University
of Nottingham, Queen's Medical
School, UK.



Harold Ellis

CBE MA DM MCh FRCS FRCP

FRCOG FACS (Hon) Former Clinical
Anatomist, Guy's, King's, St Thomas';
Department of Anatomy,
Cambridge; Emeritus Professor of
Surgery, Charing Cross and
Westminster Medical School, UK;
Examiner in Anatomy, FRCS (Eng).



Adrian K. Dixon

MD FRCP FRCR FRCS FMedSci

Emeritus Professor of Radiology,
University of Cambridge; Former
Honorary Consultant Radiologist,
Addenbrooke's Hospital; Former
Master, Peterhouse, University of
Cambridge, UK.



David J. Bowden

MA VetMB MB BChir FRCR

Consultant Radiologist,
Addenbrooke's Hospital; Former
Teaching Bye-Fellow, Christ's
College, University of Cambridge,
UK.

First published in 1991, *Human Sectional Anatomy* set new standards for the quality of cadaver sections and corresponding radiological images. Now in its fifth edition, it maintains this benchmark while incorporating substantial new material.

As in previous editions, superb full-colour cadaver sections are presented alongside CT and MRI images with clearly labelled line diagrams. The expertly selected dissections help readers observe and interpret human anatomy in cross-section, while updated radiological images and explanatory diagrams—captured using the latest imaging technologies—ensure excellent anatomical visualization. Helpful notes highlight key anatomical and radiological features, and expanded introductory material offers additional guidance for interpreting the atlas pages.

KEY FEATURES:

- High-quality, full-colour cadaver sections with added examples across many body regions
- Comprehensive labelling reflecting the latest terminology
- Additional notes offering further detail on anatomical and radiological landmarks
- New to this edition: dedicated coverage of the breast and kidney; osteology of the skull, vertebral column, foot, and hand; and new dissections of the ear, lung, heart, and male and female pelvis

Beautifully presented in a generous format, *Human Sectional Anatomy* remains an essential resource for radiologists, radiographers, surgeons, and medical practitioners and trainees. It is also an indispensable component of departmental and general medical library collections.

SECOND EDITION

DIAGNOSTIC MRI IN DOGS AND CATS

EDITED BY WILFRIED MAI



CRC Press
Taylor & Francis Group

Diagnostic MRI in Dogs and Cats

2nd Edition

Wilfred Mai

April 2026

ISBN 9781032550640

TBC Pages TBC B/W Illustrations

Subject: Veterinary

www.routledge.com/9781032550640



Dr. Wilfred Mai

earned his Doctor of Veterinary Medicine (Dr Méd Vét) from the School of Veterinary Medicine of Maisons-Alfort, France, in 1995. Following a two-year internship in small animal internal medicine, he completed a residency in radiology and a Master's degree in Biomedical Engineering in Lyon, France. Dr. Mai went on to pursue a PhD in Biomedical Engineering at Université Claude Bernard in Lyon, in collaboration with Duke University in North Carolina.

He became a Diplomate of the European College of Veterinary Diagnostic Imaging in 2000 and a Diplomate of the American College of Veterinary Radiology in 2006.

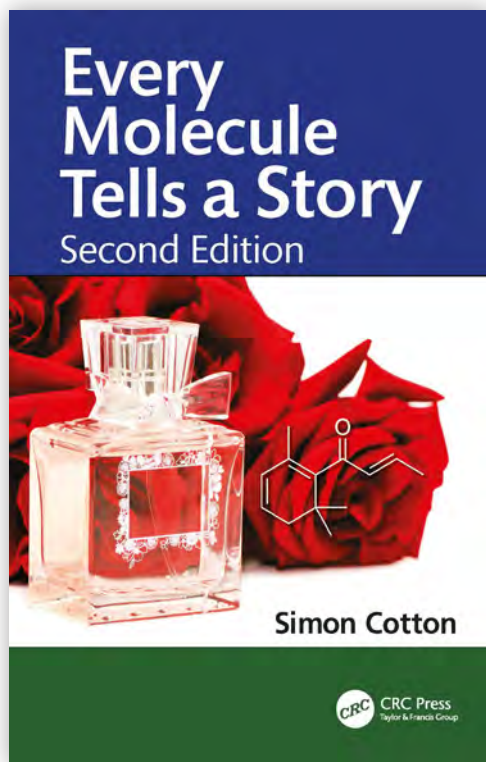
Since joining the University of Pennsylvania School of Veterinary Medicine in 2004, Dr. Mai has been a dedicated clinician, educator, and researcher in veterinary radiology. He currently serves as Professor and Chief of Radiology, as well as Director of the Radiology Residency Program at Penn Vet.

Diagnostic MRI in Dogs and Cats makes the vast and increasingly complex topic of clinical MRI in small animals accessible to all veterinarians. With the increasing availability of MRI technology, there is a pressing need for expertise in interpreting these images. Now fully updated, this remains the first reference textbook to provide a comprehensive, image-rich overview of the current knowledge, focusing on imaging appearance rather than on clinical signs or treatment. MRI images from low, mid, and high-field magnets reflect the diversity of equipment in clinical use today.

This second edition reflects our broader understanding of MRI's clinical utility, bringing in the latest research, additional or better case examples, and refinements that reflect how far the field has come and where it's going. It newly includes:

- a chapter dedicated to MRI pulse sequences in use in veterinary imaging
- a chapter covering MRI safety
- expansion of the technical particularities of 3.0 T MRI scanners
- a chapter on MRI anatomy of the brain and spinal cord with detailed illustrations
- two chapters dedicated to the differential diagnoses based on the main findings observed on MR images of the brain or spine, helping learners to organize and improve their interpretative skills
- replacement of many images with better examples and higher-quality illustrations.

With chapters on MRI physics and technology as well as sections on specific anatomical regions, the book functions as a stand-alone reference for the reader, whether a radiology/neurology resident in training or a practitioner with a need to learn about veterinary clinical MRI.



Every Molecule Tells a Story

2nd Edition

Simon Cotton

March 2026
ISBN 9781032616247
248 Pages 471 B/W Illustrations
Subject: Chemistry
www.routledge.com/9781032616247



Simon Cotton

earned his BSc and PhD in Chemistry from Imperial College London, followed by research and teaching positions at Queen Mary College, London, and the University of East Anglia. He taught chemistry in state and independent schools for over 30 years, and in 2011 became an honorary senior lecturer at the University of Birmingham, teaching inorganic and organic chemistry. His research has focused on the chemistry of iron, cobalt, scandium, yttrium, and the lanthanides.

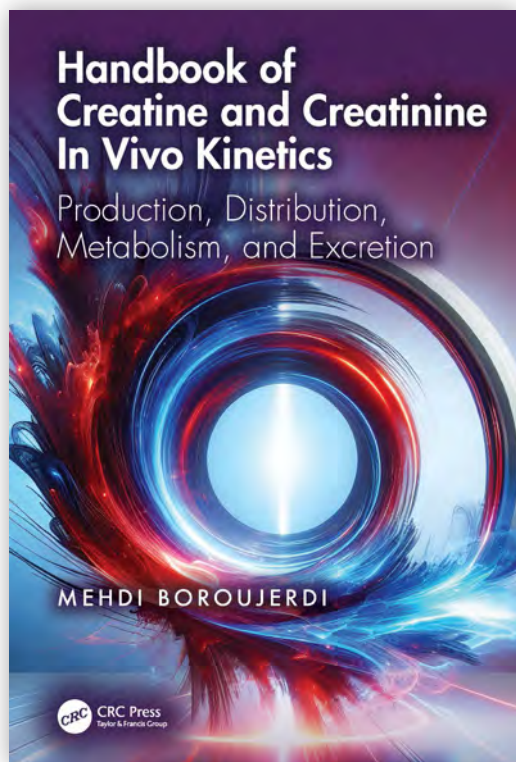
From 1996 to 2012, his "Soundbite Molecules" column appeared regularly in Education in Chemistry, reaching every UK secondary school. He has written over 100 "Molecules of the Month" articles, widely recognised online, and delivered more than forty "Chemistry in Its Element" podcasts for the Royal Society of Chemistry's Chemistry World.

He received the Royal Society of Chemistry Schools Education Award in 2005 and the British Empire Medal in 2014 for services to chemistry and education. He also contributed to key reference works, including Lanthanide and Actinide Compounds, Comprehensive Coordination Chemistry, and the Encyclopedia of Inorganic Chemistry.

This latest edition continues the celebration of molecules responsible for the experiences of everyday life such as the air we breathe, the water we drink, the chemicals that fuel our living. It presents new sections, notably the chemistry of molecules in food, including spices; vitamins; molecules with unpleasant smells (which seem to interest many people!); organic halogen compounds, substances which have an undeserved reputation. It also covers developments such as the chemistry of drugs; drugs of abuse, for example opioid painkillers. Based on the highly successful first edition, this book brushes away any preconceived notions about chemistry to demonstrate its importance.

KEY FEATURES:

- The author introduces his molecular collection by explaining the relevance of chemistry in our everyday lives.
- The second edition is considerably expanded, and new areas include food chemistry, vitamins, drugs of abuse.
- New discoveries are reflected in existing chapters.
- The chemicals are frequently put in context of their human associations, so that the book goes beyond just 'the chemistry'.
- A celebration of the molecules of chemistry



Handbook of Creatine and Creatinine In Vivo Kinetics

Production, Distribution, Metabolism, and Excretion

Mehdi Boroujerdi

May 2026
ISBN 9781032995281
312 Pages 49 B/W Illustrations
Subject: Chemistry
www.routledge.com/9781032995281



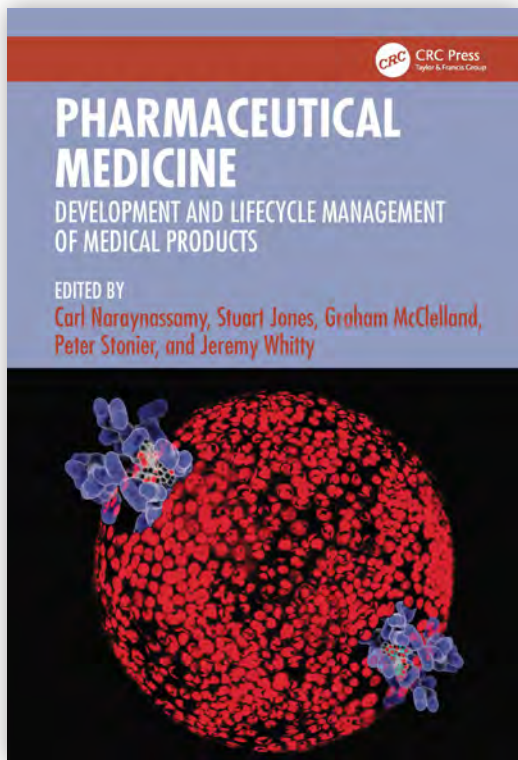
Dr. Mehdi Boroujerdi

earned his Ph.D. in pharmaceuticals and pharmacokinetics, with a minor in biochemistry, from UNC Chapel Hill (1978), and completed postdoctoral training at the NIH. He held professorships at Northeastern University, MCPHS University, Albany College of Pharmacy, and UMass Lowell, and served as Dean and Director at multiple institutions.

He has published 112 peer-reviewed articles and authored three books on pharmacokinetics and toxicokinetics. His research focuses on the pharmacokinetics and toxicodynamics of anticancer drugs, carcinogenesis, and efflux proteins, and he has trained numerous graduate and undergraduate students. He has also consulted for five pharmaceutical companies.

He has taught graduate courses in advanced pharmacokinetics, biopharmaceutics, and drug delivery, and undergraduate courses in drug discovery, pharmacokinetics, and physical pharmacy.

The conceptual basis to summarize and predict the in vivo behavior and the related mathematical descriptions and models of creatine and creatinine are currently based on the principles and the methodologies of pharmacokinetics and pharmacodynamics. Most in vivo kinetic analyses and models of creatine and creatinine are assumed linear. The presence of nonlinear in vivo kinetics for creatine are assessed by the author due to the affinity and preferential uptake of the molecule in the muscle. This book is an inquiry into the application of these principles and methodologies for the endogenous compounds creatine and creatinine, and provides new pathways for studies and bench research.



Pharmaceutical Medicine

Carl Naraynassamy, Stuart Jones,
Graham McClelland, Peter Stonier
and Jeremy Whitty

June 2026
ISBN 9781041221128
TBC Pages TBC Illustrations
Subject: Pharmacology
www.routledge.com/9781041221128

Carl Naraynassamy

is Senior Lecturer at King's College London, teaching and researching pharmaceutical medicine and medical affairs.

Prof. Stuart Jones

King's College London, researches and teaches pharmaceutical medicine, with industry and academic experience.

Graham McClellandis

Professor of Pharmaceutical Medicine at King's College London and Honorary Professor internationally.

Peter Stonier

is a Professor of Pharmaceutical Medicine, CPMR, King's College London.

Professor Jeremy Whitty

directs the MSc in Global Medicines Development at King's College London.

Today, much generic non-referenced knowledge is easily retrievable from the internet. The book is based on the recently redeveloped curriculum for pharmaceutical medicine in the Centre for Pharmaceutical Medicine Research at King's College London, UK. The authors were motivated to engage analytically with knowledge drawing from their unique professional experience. The book balances knowing-how with to knowing-why. Instead of presenting the learning along the traditional sequence of molecule to marketplace, the learner is introduced first to the healthcare market and to the relationships between stakeholders. The patient is the central stakeholder around which the book's narrative is woven. Ethics is also central. There are cases and short questions at the end of each chapter. The book is in line with the PharmaTrain Federation (2024) syllabus.

Atlas of European Mammals

Edited by Anthony J. Mitchell-Jones, Giovanni Amori, Boris Kryštufek, Ferdia Marnell, Svetlana Miteva, Alexandra Sallay-Mošoi, Laurent Schley, Johan Thissen and Vladimír Vohralík



Second Edition



Atlas of European Mammals

2nd Edition

Edited by Anthony J. Mitchell-Jones, Giovanni Amori, Boris Kryštufek, Ferdia Marnell, Svetlana Miteva, Alexandra Sallay, Laurent Schley, Johan Thissen and Vladimír Vohralík

February 2026
ISBN 9780367186869
594 Pages 429 Color & 1 B/W Illustrations
Subject: Natural History / Zoology
www.routledge.com/9780367186869

Anthony J. Mitchell-Jones

spent most of his career working for the UK government's conservation agency as a specialist in the conservation of mammals in England. During this time, he developed many conservation programmes, particularly for bats, and authored or contributed to influential guidance on the conservation and management of various species. In 1988 he went by chance to a meeting in Paris to discuss the preparation of an atlas of European mammals, ending up 11 years later as the Editor-in-chief of the publication. Following retirement in 2011, Tony has continued his interest in mammal conservation and revived a second edition of the atlas.

As the threats to wildlife continue to increase, precise and timely information on species distribution is essential. Since 1999, *The Atlas of European Mammals* has proved a widely cited and valuable resource for mammalogists across the globe. Now thoroughly updated, the new edition has extended the coverage of Europe to include Belarus, Moldova and Ukraine. Specialists have collected and validated distribution data for each country using an agreed species list and a standard mapping system.

This landmark volume presents maps of 247 species from 42 countries with more than 125,200 unique records, taking into account recent extinctions to give the most up-to-date picture possible.

Accounts for each species include details of taxonomy and variation, habitat, population and international legal and conservation status.



Concepts in Reproduction

From Evolution of Mechanisms to Clinical Impact

Gary M. Wessel, Julian L. Wong, Harvey Florman, Carmen J. Williams and Mark A. Johnson

March 2026
ISBN 9780367652692
502 Pages 229 Color & 12 B/W Illustrations
Subject: Natural History / Cell Biology
www.routledge.com/9780367652692

Gary M. Wessel

Ph.D., Professor of Biology at Brown University.

Julian L. Wong

Ph.D., is an active Scientist working to find therapeutics.

Carmen J. Williams

M.D., Ph.D., Senior Investigator at the National Institute for Environmental Health Sciences.

Mark A. Johnson

Ph.D., Professor of Biology at Brown University.

Harvey Florman

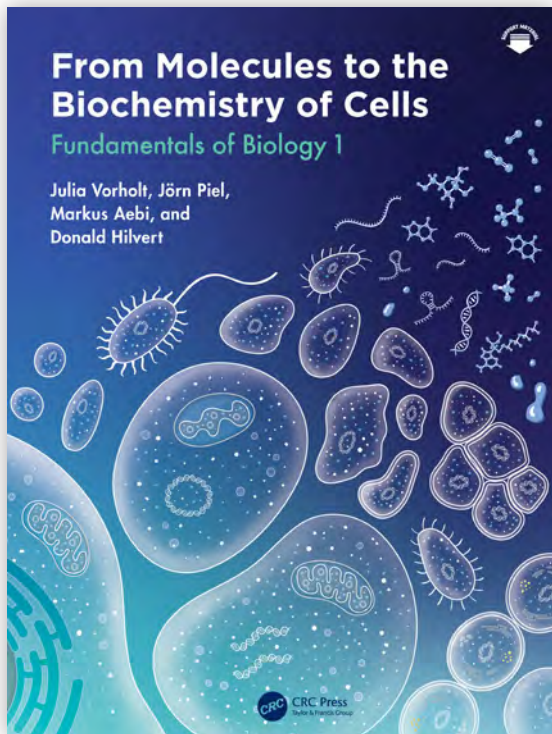
Ph.D., is Professor Emeritus of Cell and Developmental Biology at the University of Massachusetts Medical School.

Concepts in Reproduction integrates the principal mechanisms of reproduction among eukaryotes, with a focus on animals and plants. The text emphasizes processes and approaches that evolved to address specific problems inherent in reproduction using examples from morphology, functional studies, and genetic studies. The many high-quality figures complement the text and provide visual storyboards. Footnotes and boxes are used throughout to provide depth and to enrich understanding. Information is compartmentalized to guide new readers through complex material while offering in-depth coverage of significant and impactful topics for experts.

KEY FEATURES:

- Accessibility for a broad audience, using figures that complement the text to explain key concepts and mechanisms
- Integrative presentation that emphasizes the science behind the story
- Breadth of coverage to promote comparative thought
- Rich multiple-choice questions that span the content

Concepts in Reproduction is recommended for advanced undergraduate students, new graduate students, and investigators or clinicians seeking breadth in their knowledge in the field. The book provides foundational knowledge of fertilization, gametogenesis, primordial germ cell formation, and ontogeny of reproductive organs. Key principles of developmental biology, genetics, endocrinology, protein biochemistry, and molecular and cellular biology are included to tell holistic stories of reproduction among eukaryotes. Later chapters tackle how the field applies these findings to address societal issues.



From Molecules to the Biochemistry of Cells

Fundamentals of Biology 1

Julia Vorholt, Jörn Piel, Markus Aebi
and Donald Hilvert

February 2026
ISBN 9781032518367
274 Pages 238 Color & 4 B/W Illustrations
Subject: Biochemistry / Cell Biology
www.routledge.com/9781032518367



Julia A. Vorholt

is Professor of Microbiology at ETH Zurich; studies one-carbon metabolism, plant microbiomes, and endosymbioses; EMBO, Academia Europaea, Leopoldina, US National Academy of Sciences member.



Jörn Piel

is Professor of Microbiology at ETH Zurich; researches bacterial natural product biosynthesis; member of the German National Academy of Sciences Leopoldina.



Markus Aebi

is Professor emeritus of Mycology at ETH Zurich; focused on microbial glycobiology; member of the German National Academy of Sciences Leopoldina.



Donald Hilvert

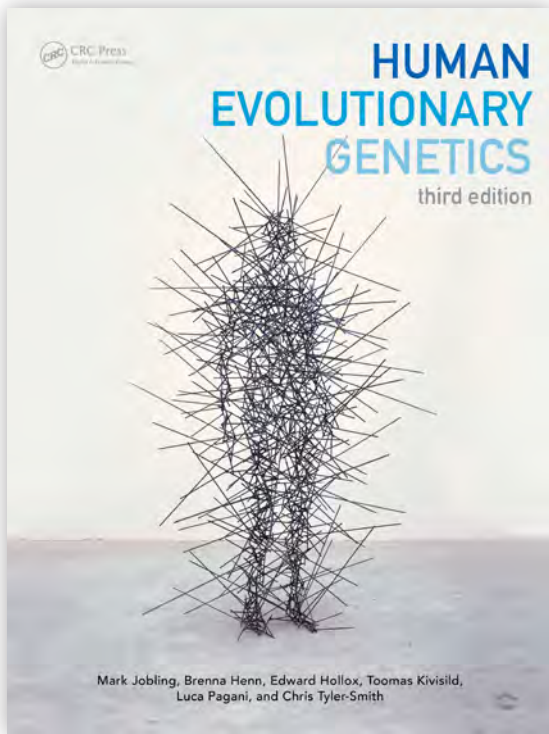
is Professor emeritus of Organic Chemistry at ETH Zurich; develops proteins with customized catalytic properties; American Academy of Arts and Sciences member.

This textbook introduces biology as an interdisciplinary science, linking physics and chemistry to biological processes that operate within the laws of thermodynamics. Based on an evolutionary narrative, the focus is on the molecular composition and the biochemistry of cells. By grounding biology in its molecular foundations, this approach reveals unifying principles underlying life's diversity and provides a conceptual framework for biological complexity. Core concepts include macromolecular structure and function, information encoding and decoding, and universal principles of energy conversion.

KEY FEATURES:

- Reflects a novel biology teaching approach
- Uses evolution as the unifying framework
- Introduces a narrative towards complexity in life
- Bridges chemistry and physics to make molecular biology accessible
- Focuses on bacteria and archaea as the simplest life forms to illustrate fundamental principles
- Progresses from molecules through molecular interactions to cellular processes
- Highlights key biological concepts with summaries and reflective questions

This textbook is designed for students seeking an integrated introduction to biology that connects molecular mechanisms to cellular structures.



Human Evolutionary Genetics

3rd Edition

Mark Jobling, Brenna Henn, Edward Hollox,
Toomas Kivisild, Luca Pagani and Chris Tyler-Smith

January 2026
ISBN 9780815345633
630 Pages 354 Color & 2 B/W Illustrations
Subject: Cell Biology / Genetics
www.routledge.com/9780815345633

Mark Jobling

is Professor of Genetics, University of Leicester.

Ed Hollox

is Professor of Genetics, University of Leicester.

Toomas Kivisild

is Professor of Human Evolutionary Genetics, KU Leuven.

Luca Pagani

is Professor of Molecular Anthropology, University of Padova.

Chris Tyler-Smith

is Led Human Evolution team, Wellcome Sanger Institute.

Brenna Henn

is Associate Director, Human Genomics, UC Davis.

Human Evolutionary Genetics reaches its third edition at a time when sequencing and analyzing whole genomes, modern and ancient, has become rapid, affordable, and routine. These advances have led to an avalanche of data on present-day and archaic humans, and a remarkable series of revelations about our past. This new and completely revised edition makes sense of this rich and complex information, tying it into other sources of evidence from paleontology, archaeology, paleoclimatology and linguistics. The book takes readers on a journey from the prehistoric origins of our ancestors through to the historical era.

Chapters describing genome variation and how it can tell us about demography and selection provide a firm foundation for readers to understand the rest of the content. The book then describes the functional and evolutionary consequences of genome variation for genetic disorders, infectious disease susceptibility, and normal phenotypic variation. A new chapter places other species in the human evolutionary story, including domesticated animals, and the parasites and microbes that live within us. The book ends by examining the personal genome, the rise of direct-to-consumer testing, and the possible future of human evolution.

KEY FEATURES

- Embraces genomewide approaches throughout while explaining the contribution of studies of single genes and loci
- Comprehensively integrates evidence from present-day and ancient genomes
- Explores social and cultural influences on current patterns of genetic diversity
- Addresses the ethical issues around studying human genetic variation
- Comprehensively and beautifully illustrated, with artwork elucidating different concepts and presenting complex experimental data clearly



Proteins

Concepts in Biochemistry, 2nd Edition

Paulo Almeida

November 2025
ISBN 9781032518404
410 Pages 107 Color & 249 B/W Illustrations
Subject: Biochemistry
www.routledge.com/9781032518404



Paulo Almeida

is a Professor in the Department of Chemistry and Biochemistry at the University of North Carolina Wilmington. Prior to his academic appointment at UNCW, he was an Assistant Professor of Chemistry at the University of Coimbra and at the University of Algarve, Portugal. His research seeks to understand the mechanism of antimicrobial, cytolytic peptides, and cell-penetrating peptides, as well as study domain formation in lipid membranes in terms of the molecular interactions between lipids, and how they are influenced by proteins and peptides bound or incorporated into the membrane. Almeida is a member of the Editorial Board of Biophysical Journal, as well as a member of the Biophysical Society and American Chemical Society. Almeida has written several book chapters in addition to being an active reviewer for professional journals and author of numerous papers.

Proteins: Concepts in Biochemistry teaches the biochemical concepts underlying protein structure, evolution, stability, folding, and enzyme kinetics, and explains how interactions in macromolecular structures determine protein function. Intended for a one-semester course in biochemistry or biophysical chemistry with a focus on proteins, this textbook emphasizes the logic underlying biophysical chemical principles.

Problems throughout the book encourage statistical and quantitative thinking. The text is ideal for senior undergraduates, first-year graduate students, and practitioners in chemistry, biochemistry, biology and biophysics.

KEY FEATURES:

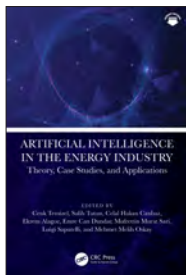
- Focuses on the interdisciplinary aspect of protein biophysical chemistry, offering a quantitative description of proteins that integrates concepts from organic chemistry, physical chemistry and biology
- Written in consideration of the requirements for an ACS-certified BS degree in chemistry, the text meets the recommendations of the American Chemical Society, National Research Council, and National Science Foundation to feature more biochemistry and quantitative study in the life sciences
- Each chapter ends with problem sets, with a complete solutions manual available to instructors, and key references for further reading



CHEMICAL ENGINEERING

Artificial Intelligence in the Energy Industry

Theory, Case Studies, and Applications



Edited by **Cenk Temizel, Salih Tutun, Celal Hakan Canbaz, Ekrem Alagoz, Emre Can Dundar, Mufrettin Murat Sari, Luigi Saputelli and Mehmet Melih Oskay**

This comprehensive resource bridges the knowledge gap in applying modern artificial intelligence and machine learning methods to the petroleum sector. It explores how AI, ML, and data analytics enhance efficiency, safety, and productivity in operations across various segments of the oil and gas value chain, including exploration, drilling, production, reservoir management, and renewables integration. With the growing importance of advanced data-driven approaches, this book provides value to both technical professionals looking for hands-on solutions and

academics seeking a well-structured textbook for advanced studies.

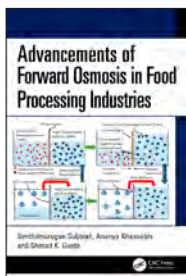
CRC Press

Market: Energy Engineering

February 2026: 234x156: 750pp: 39 illus, 31 halftones, 8 line drawings

Hb: 978-1-041-02007-3: **£160.00**★ For full contents and more information, visit: www.routledge.com/9781041020073

Advancements of Forward Osmosis in Food Processing Industries



Senthilmurugan Subbiah, Ananya Khasnabis and Sharad K. Gupta

This book provides a comprehensive exploration of forward osmosis (FO) technology and its transformative impact on the food processing industry including fundamental principles, its current applications, and the emerging trends that promise to revolutionize food processing.

CRC Press

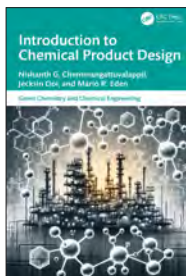
Market: Separation Science/Chromatography

March 2026: 234x156: 272pp: 28 illus, 28 line drawings

Hb: 978-1-041-10526-8: **£91.99**★ For full contents and more information, visit: www.routledge.com/9781041105268

TEXTBOOK

Introduction to Chemical Product Design



Nishanth G. Chemmangattuvalappil, Jacksin Ooi and Mario R. Eden

Series: *Green Chemistry and Chemical Engineering*

Chemical engineering has traditionally focused on the design of chemical processes to produce commodity chemicals, but there has been increased attention on the engineering of high-performance chemical products. This book provides an overview of chemical product design, explains the role of chemical engineers in chemical product design, and covers stepwise approaches used to design different types of chemical products. The text provides undergraduate and graduate chemical engineering students with practical know-how to

apply chemical product design principles. It will also be of interest to chemical engineers seeking to expand their knowledge of chemical product design.

CRC Press

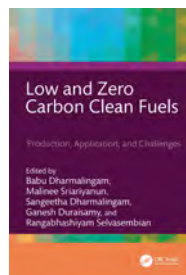
Market: Chemical Engineering

March 2026: 234x156: 344pp: 80 illus, 42 halftones, 38 line drawings

Hb: 978-1-032-70889-8: **£91.99**★ For full contents and more information, visit: www.routledge.com/9781032708898

Low and Zero Carbon Clean Fuels

Production, Application, and Challenges



Edited by **Babu Dharmalingam**, National Institute of Technology, Trichy, India, **Malinee Sriariyanun, Sangeetha Dharmalingam, Ganesh Duraisamy and Rangabhashiyam Selvasembian**

This book comprehends characteristics, creation and utilization of biofuels derived from different feedstocks like edible oil, non-edible oil and cooked waste, chicken fat and algae. It covers recent energy scenarios, environmental issues and solutions, biodiesel production techniques and optimization of process parameters, selection of feedstock for biofuels production. Bioethanol production from different feedstocks and pretreatment techniques, biogas upgrading technology, storage and utilization

in dual fuel engines is also included. This book is aimed at graduate students and researchers in chemical and mechanical engineering, alternate fuels and combustion engines.

CRC Press

Market: Energy, Fuels, and Petrochemicals

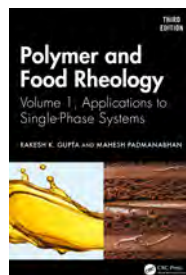
April 2026: 254x178: 448pp: 141 illus, 5 halftones, 136 line drawings

Hb: 978-1-032-81886-3: **£150.00**★ For full contents and more information, visit: www.routledge.com/9781032818863

3rd Edition

Polymer and Food Rheology

Volume 1, Applications to Single-Phase Systems



Rakesh K. Gupta and Mahesh Padmanabhan

Emphasizing physics rather than mathematics, *Polymer and Food Rheology: Applications to Single-Phase Systems* focuses on rheological characteristics and properties of single substances and homogeneous mixtures. It introduces fundamental principles, types of flows, types of instruments, their theory, capabilities, limitations, and sources of error. Both sophisticated rheometers and simple devices and their uses are considered. This text is aimed at researchers and industrial practitioners in materials and chemical engineering as well as chemistry.

CRC Press

February 2026: 234x156: 208pp: 119 illus, 20 halftones, 99 line drawings

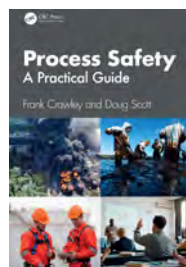
Hb: 978-0-367-43847-0: **£99.99**

Prev. Ed Hb: 978-0-8247-9922-9

★ For full contents and more information, visit: www.routledge.com/9780367438470

Process Safety

A Practical Guide



Frank Crawley and Doug Scott

This book provides early career engineers with a strong practical background in Process Safety. It contains basic theory to bolster understanding of the subject, and gives practical information covering both design and operation of process plants. It offers an interactive approach with frequent links between chapters and inclusion of numerous case histories to illustrate and support the text. With its accessible and hands-on approach, this book gives early career chemical engineers a deeper understanding of the issues they will face while on the job and practical solutions to address and avoid problems. The book's many case studies will also be of value to more experienced engineers.

CRC Press

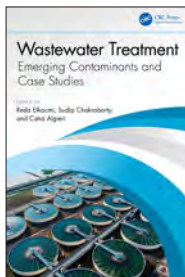
Market: Chemical Engineering

January 2026: 254x178: 408pp: 86 illus, 15 halftones, 71 line drawings

Hb: 978-1-032-83983-7: **£110.00**★ For full contents and more information, visit: www.routledge.com/9781032839837

Wastewater Treatment

Emerging Contaminants and Case Studies



Edited by **Reda Elkacmi, Sudip Chakraborty and Catia Algieri**

This book explores advanced methodologies and practical applications in the treatment and valorization of wastewater. It synthesizes cutting-edge research and practical insights into various techniques used to address the environmental challenges posed by liquid waste streams. From fundamental principles to applied solutions, each chapter delves into specific methodologies such as adsorption, electrochemical methods, biological treatments using microalgae, advanced oxidation processes, and integrated treatment systems. The intended audience includes researchers, engineers, and practitioners in environmental and chemical engineering.

CRC Press

Market: Chemical and Environmental Engineering

February 2026: 234x156: 392pp: 68 illus, 62 halftones, 6 line drawings

Hb: 978-1-041-03696-8: **£120.00**

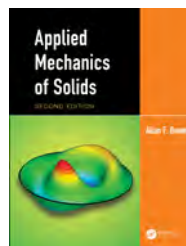
★ For full contents and more information, visit: www.routledge.com/9781041036968



CIVIL & MECHANICAL ENGINEERING

TEXTBOOK • 2-Volume Set

Applied Mechanics of Solids



Allan F. Bower, Brown University, Providence, Rhode Island, USA

The second edition of *Applied Mechanics of Solids* provides a concise description of all the concepts needed to predict how solid materials deform and fail under stress. With its companion volume of solved example problems, it is an invaluable class textbook or reference for personal study or review. *Solved Problems in Mechanics of Solids* offers a large number of example problems that are designed to help students and practicing engineers learn to predict stresses and deformation in solids that are subjected to mechanical or thermal loading.

CRC Press

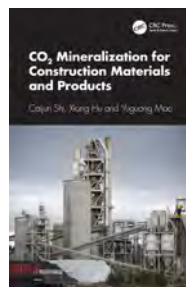
Market: Physics

April 2026: 280x210: 1274pp: 923 illus, 923 line drawings

Hb: 978-1-041-23720-4: **£145.00**

★ For full contents and more information, visit: www.routledge.com/9781041237204

CO₂ Mineralization for Construction Materials and Products



Caijun Shi, Hunan University, China, **Xiang Hu** and **Yuguang Mao**

This book provides a comprehensive exploration of this emerging field, offering a detailed overview of the science, technology, and applications of CO₂ mineralization techniques in the construction industry. The book covers the basics of mineralization; principles, microstructure and techniques; mineralization of a range of cementitious products; and then the main practical application issues. This book is essential for graduate students and academic researchers pursuing studies in sustainable construction and engineering as well as innovative concrete professionals aiming to apply CO₂ mineralization technologies to construction projects.

CRC Press

Market: Civil Engineering

March 2026: 234x156: 432pp: 281 illus, 55 halftones, 226 line drawings

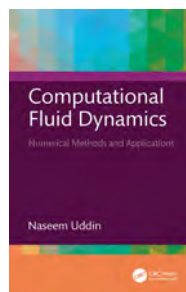
Hb: 978-1-041-03783-5: **£89.99**

★ For full contents and more information, visit: www.routledge.com/9781041037835

TEXTBOOK

Computational Fluid Dynamics

Numerical Methods and Applications



Naseem Uddin, Universiti Teknologi Brunei

Computational Fluid Dynamics: Numerical Methods and Applications offers a comprehensive exploration of computational fluid dynamics (CFD) methods, focusing on numerical techniques for solving fluid flow problems through both finite difference and finite-volume methods. It explores numerical schemes, advection-diffusion equations, shock-capturing methods, and turbulence modeling. Emphasizing stability and accuracy preservation as part of modern CFD practice, the book addresses both laminar and turbulent regimes. Senior undergraduate aerospace and mechanical engineering students taking a CFD course will find this book particularly valuable.

CRC Press

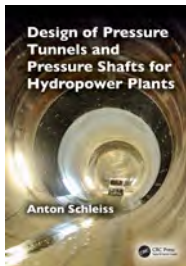
Market: Engineering - Computational Fluid Dynamics

February 2026: 234x156: 664pp: 150 illus, 4 halftones, 146 line drawings

Hb: 978-1-041-12136-7: **£115.00**

★ For full contents and more information, visit: www.routledge.com/9781041121367

Design of Pressure Tunnels and Shafts for Hydropower Plants



Anton Schleiss, Swiss Federal Institute of Technology Lausanne (EPFL)

Pressure tunnels and shafts are essential for hydropower plants, and their cost and linings is significant. This outlines the design basis, including rock hydraulics, then details the need and use of various types of linings. Pervious linings are often the most economical solution, but seepage forces in the lining and the rock mass result in hydraulic-mechanical interactions. In tight linings, the use of high-grade steels facilitates very high heads at storage level and pumped storage powerplant projects, but these require new risk-based design approaches. It covers design criteria and calculation methods, including safety assessment.

CRC Press

Market: Hydraulic and Civil Engineering

April 2026: 246x174: 432pp: 214 illus, 43 halftones, 171 line drawings

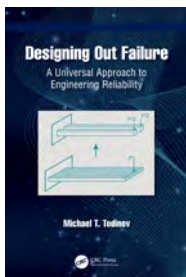
Hb: 978-1-032-12284-7: **£165.00**

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TEXTBOOK

Designing Out Failure

A Universal Approach to Engineering Reliability



Michael T. Todinov, Professor, Dept. of Mechanical Engineering and Mathematical Sciences, Oxford Brookes University, UK

Designing Out Failure is a comprehensive textbook that introduces a unique, domain-independent methodology for eliminating failure modes and improving reliability across all engineering disciplines.

CRC Press

Market: Mechanical Engineering

April 2026: 234x156: 280pp: 146 illus, 146 line drawings

Hb: 978-1-041-13934-8: **£91.99**

★ For full contents and more information, visit: www.routledge.com/9781041139348

Digital Manufacturing of Bioimplants

Technology and Applications



Edited by **Durwesh Jhodkar**, WCE, Nagpur, India, **Parnika Shrivastava** and **Puneet Tandon**, IIITDM Jabalpur, India

Series: Smart Innovations and Technological Advancements in Mechanical and Materials Engineering

This book provides a comprehensive exploration of cutting-edge developments in biomaterials, bioimplants, and emerging manufacturing techniques that are revolutionizing the healthcare and medical device industries. It delves into the latest trends in biomaterials, recent innovations in composite materials, classification and characterization of multifunctional biomaterials, and their impact on biomedical applications.

CRC Press

Market: Manufacturing Engineering

January 2026: 234x156: 320pp: 70 illus, 29 halftones, 41 line drawings

Hb: 978-1-032-94677-1: **£120.00**

★ For full contents and more information, visit: www.routledge.com/9781032946771

TEXTBOOK

Engineering Mechanics of Solids and Structures



Gerald Wempner, Georgia Institute of Technology (retired), Atlanta, USA

Edited by **Abdul-Hamid Zureick**, **Paul Wempner** and **Susan Wempner Hobbs**

This textbook for advanced students in aerospace, mechanical, and civil engineering sets out the underlying concepts, methods, and theories. As well as giving the Newtonian approach to motion and equilibrium, it offers the Lagrangean criteria of work and energy as the most effective means to formulate finite elements and other discrete approximations. Thorough mathematics demonstrates the limitations of the approximations and provides the tools for more precise analyses. This can then

be applied to a broad spectrum of structural and mechanical components – the analysis and design of a dome or a bridge, the hull of a ship or a spacecraft, or the mechanical component of an engine.

CRC Press

Market: Structural and Mechanical Engineering

April 2026: 246x174: 696pp: 457 illus, 7 halftones, 450 line drawings

Hb: 978-1-041-12570-9: **£120.00**

★ For full contents and more information, visit: www.routledge.com/9781041125709

TEXTBOOK

Fundamentals of Turbomachinery



Ernesto Benini, University of Padua, Italy

Fundamentals of Turbomachinery simplifies complex turbomachinery concepts, helping engineering students understand the basics step-by-step to prepare for more advanced studies and real-world applications. It provides the theoretical details needed to explain the principles underlying turbomachinery behavior with an emphasis on a solid mathematical foundation. Designed to guide readers through an understanding of machines in terms of increasing complexity, this textbook focuses on core principles instead of advanced approximations or computational tools. This book is intended for senior undergraduate engineering students taking

turbomachinery and fluid mechanics courses.

CRC Press

Market: Engineering - Turbomachinery

April 2026: 234x156: 360pp: 166 illus, 8 halftones, 158 line drawings

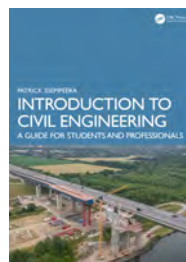
Hb: 978-1-041-02566-5: **£99.99**

★ For full contents and more information, visit: www.routledge.com/9781041025665

TEXTBOOK

Introduction to Civil Engineering

A Guide for Students and Professionals



Patrick Ssempeera, CRB Network, Uganda

This comprehensive new textbook bridges the gap between academic knowledge and professional practice in civil engineering, connecting traditionally separate course units into a cohesive whole that teaches readers to "think like a civil engineer". Written primarily for civil engineering students transitioning to industry and early-career professionals seeking to master the profession, this guide also serves as a valuable resource for educators teaching civil engineering courses and experienced professionals requiring a refresher on fundamental principles that unite the various branches of this constantly evolving field.

CRC Press

Market: Civil Engineering

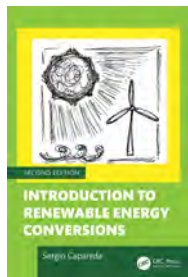
February 2026: 297x210: 384pp: 215 illus, 64 halftones, 151 line drawings

Pb: 978-1-032-91150-2: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781032911502

TEXTBOOK • 2nd Edition

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Sergio C. Capareda, Texas A&M University, College Station, USA

Introduction to Renewable Energy Conversions examines all the major renewable energy conversion technologies and provides step-by-step procedures for readers to formulate renewable energy resource assessments and design appropriate renewable energy systems and strategies. The new edition features extended discussions on circular economy with newer concepts such as carbon capture and sequestrations (CCS), carbon footprint (CF), and carbon intensity (CI) of fuels. Upper-level undergraduate engineering and science students taking courses in Renewable Energy, Energy Systems, Energy Conversion, and Sustainability will find this book a valuable resource.

CRC Press

Market: Engineering - Energy

February 2026: 234x156: 536pp: 115 illus, 2 halftones, 113 line drawings

Hb: 978-1-032-87466-1: **£115.00**

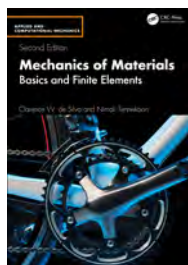
Prev. Ed Hb: 978-0-367-18850-4

★ For **full contents** and more information, visit: www.routledge.com/9781032874661

TEXTBOOK • 2nd Edition

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Basics and Finite Elements



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This second edition is an introductory book on the subject of Mechanics of Materials with a focus on integrating the basics of Finite Element Analysis. Mechanics of Materials provides the basis for understanding structural mechanics in engineering systems such as buildings, bridges, vehicles, and machines.

CRC Press

Market: Mechanical Engineering

February 2026: 254x178: 648pp: 638 illus, 16 halftones, 622 line drawings

Hb: 978-1-032-82589-2: **£99.99**

Prev. Ed Hb: 978-1-4398-7736-4

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CRC Press

Market: Petroleum Engineering

January 2026: 254x178: 446pp: 238 illus, 22 halftones, 216 line drawings

Hb: 978-1-041-02208-4: **£160.00**

Prev. Ed Hb: 978-0-415-88467-9

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TEXTBOOK

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Bak Kong Low

This lucidly sets out useful probabilistic methods and their efficient implementations across civil engineering, including transportation, hydrosystems, environmental, geotechnical and structural engineering. It serves as a textbook for upper-level undergraduates and beginning graduate students. It makes use of Microsoft Excel's versatile constrained optimization Solver tool, using some simple VBA codes, including FORM, SORM, system reliability, importance sampling, direct MCS, and response surface techniques. Solutions can be downloaded free for hands-on appreciation and deeper understanding. PowerPoint slides based on the book are available for adopting course instructors.

CRC Press

Market: Civil Engineering

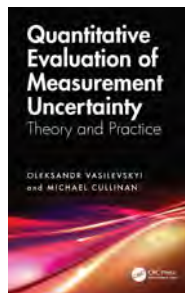
April 2026: 234x156: 248pp: 132 illus, 132 line drawings

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CRC Press

Market: Engineering - Structural Mechanics

March 2026: 234x156: 490pp: 347 illus, 347 line drawings

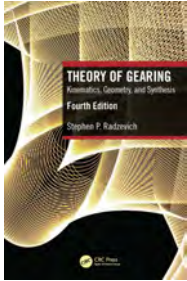
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CRC Press

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Prev. Ed Hb: 978-1-032-31857-8

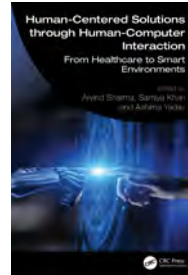
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From Healthcare to Smart Environments



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CRC Press

Market: Electrical Engineering

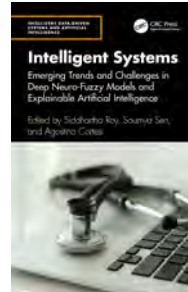
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CRC Press

Market: Electrical Engineering

February 2026: 234x156: 400pp: 114 illus, 91 halftones, 23 line drawings

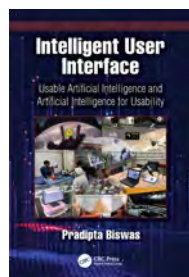
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TEXTBOOK

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Usable Artificial Intelligence and Artificial Intelligence for Usability

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Hb: 978-1-032-61898-2: **£110.00**★ For **full contents** and more information, visit: www.routledge.com/9781032618982**GENERAL ENGINEERING**

TEXTBOOK

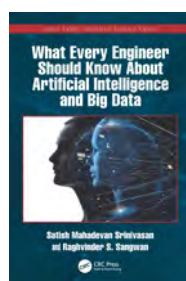
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CRC Press

Market: General Engineering/Artificial Intelligence

February 2028: 234x156: 250pp: 75 illus

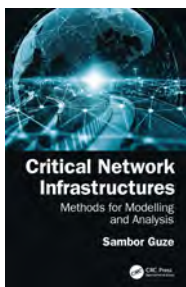
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INDUSTRIAL, MANUFACTURING AND MECHANICAL ENGINEERING

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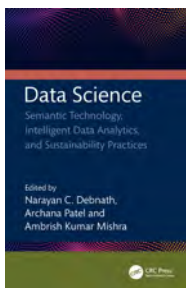
CRC Press

Market: Engineering - Industrial Engineering and Manufacturing
February 2026: 234x156: 160pp: 20 illus, 2 halftones, 18 line drawings
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CRC Press

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including fashion and textile Technologists, scientists and engineers interested in anthropometry for a variety of disciplines as well as development of VR/AR and AI tools especially for clothing end uses.

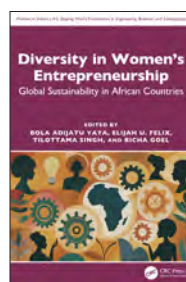
CRC Press

Market: Textile and Fashion Technology
March 2026: 234x156: 272pp: 89 illus, 75 halftones, 14 line drawings
Pb: 978-1-032-97615-0: **£74.99**

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Global Sustainability in African Countries



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CRC Press

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February 2026: 234x156: 200pp: 27 illus, 4 halftones, 23 line drawings
Hb: 978-1-032-83337-8: **£81.99**

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CRC Press

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March 2026: 234x156: 252pp: 70 illus, 6 halftones, 64 line drawings

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CRC Press

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May 2026: 234x156: 264pp: 111 illus, 10 halftones, 101 line drawings

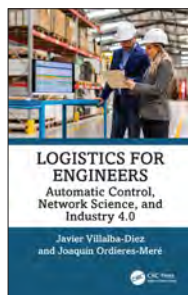
Hb: 978-1-032-69466-5: **£105.00**

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TEXTBOOK

Logistics for Engineers

Automatic Control, Network Science, and Industry 4.0



Javier Villalba-Diez, Professor, Hochschule Heilbronn University of Applied Sciences, Germany and **Joaquín Ordieres-Meré**, Professor, Universidad Politécnica de Madrid, Spain

In our rapidly evolving technological landscape, the field of logistics has undergone a significant transformation. This new textbook seeks to facilitate this transition by providing a framework rooted in engineering fundamentals, empowering students to navigate the complexities of the modern logistics industry. This textbook is designed for undergraduate engineering students studying Industrial Engineering, Mechanical Engineering, Systems Engineering, and Operations Engineering. It serves as a foundational resource for courses in

logistics, supply chain management, and operations engineering and is particularly beneficial for graduate students.

CRC Press

Market: Engineering - Industrial Engineering and Manufacturing

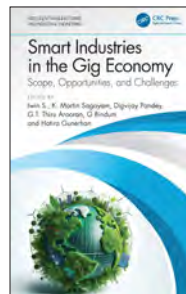
April 2026: 234x156: 216pp: 19 illus, 9 halftones, 10 line drawings

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★ For full contents and more information, visit: www.routledge.com/9781041042136

Smart Industries in the Gig Economy

Scope, Opportunities, and Challenges



Edited by **Iwin Thankumar Joseph S., K. Martin Sagayam, Digvijay Pandey**, Senior Lecturer, Dept. of Technical Edu., Uttar Pradesh, India, **G.T. Thiru Arooran, G. Bindu and Hatira Gunerhan**

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Gig Economy to weave a tapestry of innovation and change.

CRC Press

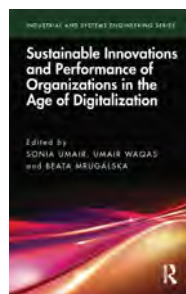
Market: Engineering - Industrial Engineering and Manufacturing

February 2026: 234x156: 248pp: 66 illus, 12 halftones, 54 line drawings

Hb: 978-1-032-74507-7: **£120.00**

★ For full contents and more information, visit: www.routledge.com/9781032745077

Sustainable Innovations and Performance of Organizations in the Age of Digitalization



Edited by **Sonia Umair, Umair Waqas and Beata Mrugalska**, Poznan University of Technology, Poznan, Poland

Series: Industrial and Systems Engineering Series

The digital era leverages blockchain and IoT technologies to revolutionize sustainability by enabling real-time resource monitoring, reducing waste, and providing transparent supply chain verification. This book examines sustainability and organizational transformation through comprehensive analysis supported by tables, charts, and references, offering practical guidance for modern sustainable business practices. A valuable resource for students, graduates, educators, researchers, and professionals in logistics, supply chain management, green logistics, production, leadership, organization, sustainability, and digitalization.

Routledge

Market: Engineering - Industrial Engineering and Manufacturing

April 2026: 234x156: 280pp: 20 illus, 20 line drawings

Hb: 978-1-041-00841-5: **£110.00**

★ For full contents and more information, visit: www.routledge.com/9781041008415

Women in the Technology and Innovation Ecosystem

From Movers to Makers in America



Edited by **Manleenjot Kaur**, Ind. Researcher, IN, **Melissa Hyunh**, Respiratory Therapist, Texas, USA and **Tilottama Singh**, Assoc. Prof., UIM, UU, IN

Series: Women in Industry 4.0

This book explores the lives of women expatriates in America, particularly in the technology and innovation industry. It highlights their resilience, adaptability, and pursuit of dreams in unfamiliar lands, while also exploring themes of identity, belonging, and cultural negotiation. With the increasing number of women expatriates in America, who are making significant economic and financial contributions, this book serves as a valuable resource for aspiring female expatriates looking to

succeed as professionals and entrepreneurs in the United States.

CRC Press

Market: Engineering - Industrial Engineering and Manufacturing

March 2026: 234x156: 184pp: 9 illus, 3 halftones, 6 line drawings

Pb: 978-1-032-98539-8: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781032985398



OCCUPATIONAL HEALTH & SAFETY

Airmanship

Ethnography of Aviation Safety



Vegard Nergård, UIT The Arctic University of Norway, Tromsø, Norway

This book takes readers beyond the technical capabilities of aviation to explore the human experience of flight. This book examines the culture, mindset, and teamwork that define airmanship, offering a glimpse into the lives of pilots, flight attendants, and crew members who navigate the skies. Through years of immersive fieldwork, the author captures the human essence of what it means to fly though looking at it not just as a mechanical act, but as an endeavor shaped by judgment, communication, and trust. This title offers a compelling exploration of the people, practices, and philosophies that make aviation possible.

CRC Press

Market: Ergonomics & Human Factors

March 2026: 234x156: 184pp: 18 illus, 17 halftones, 1 line drawing

Hb: 978-1-041-21165-5: **£81.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041211655

Decremental and Incremental Safety Cultures

Safety-I and Safety-II Revisited



Erik Hollnagel

Safety is a concept as complex as it is crucial. In this new book, Erik Hollnagel reimagines how we approach, understand, and manage safety in modern contexts. It challenges traditional perspectives while weaving together historical insights, cultural analysis, and practical guidance to offer a richer understanding of what it means to work and live safely. *Decremental and Incremental Safety Cultures: Safety-I and Safety-II Revisited* goes beyond identifying and analyzing safety issues to offer practicable strategies that balance protection and productivity.

CRC Press

Market: Occupational Health & Safety

March 2026: 234x156: 264pp: 34 illus, 34 line drawings

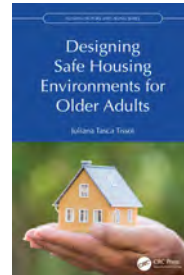
Pb: 978-1-041-06407-7: **£49.99**

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Designing Safe Housing Environments for Older Adults

Juliana Tasca Tissot

Series: Human Factors and Aging Series



This book addresses the key issues to consider when focusing on the design for safe and comfortable living for older adults. This book presents design strategies for housing environments for older adults, based on concepts of aging in place, human factors, and safety. It covers topics such as activities of daily living, independence, autonomy, and dependence, risk factors for falls, types of environmental adaptations and safe housing. Design solutions are offered and each housing space reveals explanations and ideas for improving activities for residents.

CRC Press

Market: Occupational Health & Safety

March 2026: 234x156: 120pp: 13 illus, 11 halftones, 2 line drawings

Hb: 978-1-032-89618-2: **£81.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032896182

TEXTBOOK • 4th Edition

Human Factors and Ergonomics for Beginners



Jan Dul, Rotterdam School of Management, Erasmus University, the Netherlands and **Bernard Weerdmeester**

Human Factors and Ergonomics for Beginners offers a useful introduction to the broad field of human factors. Now in its fourth edition, this book is the go-to beginner guide to the field as it describes real, practical guidelines that are based on solid knowledge and experience. It will help any reader to enhance human-system performance and reduce the undesirable effects and unintended consequences of many human interactions with technology and the organizational environment.

CRC Press

Market: Ergonomics & Human Factors

May 2026: 234x156: 128pp: 80 illus, 80 line drawings

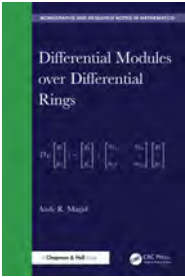
Hb: 978-1-032-52494-8: **£91.99**

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MATHEMATICS

Differential Modules over Differential Rings



Andy R. Magid, The University of Oklahoma, Norman, USA

Series: Chapman & Hall/CRC Monographs and Research Notes in Mathematics

This book provides an introduction and reference for researchers in commutative and differential algebra and could be used as the basis for a graduate course or seminar. The book is best suited to an audience for whom the terminology of rings, modules, homomorphisms, and categories is already familiar. Although the topic is rooted in differential algebra, and the book should be of interest to workers in that area, no particular prior knowledge of differential algebra is assumed. When it is necessary to use specialized results from differential algebra, especially Picard–Vessiot theory, the necessary definitions and theorems are supplied.

Chapman and Hall/CRC

Market: Mathematics

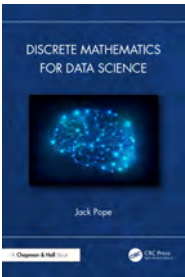
April 2026: 234x156: 240pp: 15 illus, 15 line drawings

Hb: 978-1-032-58810-0: **£105.00**

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TEXTBOOK

Discrete Mathematics for Data Science



Jack Pope

Discrete Mathematics for Data Science provides an early course in both Data Science and Discrete Mathematics, focusing on how a deeper understanding of the former can unlock a more effective implementation of the latter.

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Market: Mathematics

March 2026: 234x156: 400pp: 72 illus, 72 line drawings

Pb: 978-1-032-68773-5: **£49.99**

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2nd Edition

Finite Element Methods for Eigenvalue Problems



Jiguang Sun, Michigan Technological University, Houghton, USA and **Aihui Zhou**, Chinese Academy of Sciences, Beijing, China

Series: Chapman & Hall/CRC Monographs and Research Notes in Mathematics

Covers finite element methods for several typical eigenvalues that arise from science and engineering. Both theory and implementation are covered in depth at the graduate level.

Chapman and Hall/CRC

Market: Mathematics

April 2026: 254x178: 382pp: 60 illus, 60 line drawings

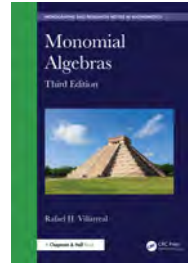
Hb: 978-1-032-98302-8: **£155.00**

Prev. Ed Hb: 978-1-4822-5464-8

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3rd Edition

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Rafael H. Villarreal

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Monomial Algebras presents algebraic, combinatorial, and computational methods for studying monomial algebras and their ideals, including Stanley–Reisner rings, monomial subrings, Ehrhart rings, and blowup algebras

Chapman and Hall/CRC

Market: Mathematics

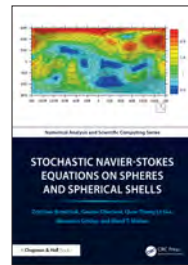
April 2026: 254x178: 784pp: 69 illus, 69 line drawings

Hb: 978-1-041-06529-6: **£195.00**

Prev. Ed Hb: 978-1-4822-3469-5

★ For **full contents** and more information, visit: www.routledge.com/9781041065296

Stochastic Navier-Stokes Equations on Spheres and Spherical Shells



Zdzisław Brzeźniak, Department of Mathematics, University of York, **Gaurav Dhariwal**, Lloyds Banking Group, **Quoc Thong Le Gia**, University of New South Wales, **Benjamin Goldys**, University of Sydney, School of Mathematics and **Manil T. Mohan**, Indian Institute of Technology Roorkee, Uttarakhand

Series: Chapman & Hall/CRC Numerical Analysis and Scientific Computing Series

Stochastic Navier-Stokes Equations on Spheres and Spherical Shells provides a systematic and self-contained introduction to both deterministic and stochastic Navier–Stokes equations on the unit sphere and spherical shells. It is intended for graduate students at the M.S. and Ph.D. levels, as well as researchers and scientists from any academic field interested in the Navier–Stokes equations and their applications to atmospheric science and global climate models.

Chapman and Hall/CRC

Market: Mathematics

May 2026: 254x178: 320pp: 3 illus, 3 line drawings

Hb: 978-1-032-00705-2: **£105.00**

★ For **full contents** and more information, visit: www.routledge.com/9781032007052

Sustainable Financial Structured Products

Managing Risk Appetites across Modelling, Structuring, and Hedging



Aymeric Kalife

Series: Chapman and Hall/CRC Financial Mathematics Series

Sustainable Financial Structured Products: Managing Risk Appetite across Modelling, Structuring, and Hedging gives an overview of all relevant aspects of Financial Structured Products (i.e. long-term savings products) from the risk perspective of both issuers (banks, insurers) and customers.

Chapman and Hall/CRC

Market: Mathematics

March 2026: 280x210: 448pp: 680 illus, 680 line drawings

Hb: 978-1-032-65887-2: **£99.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032658872

Random Numbers Unveiled

The Secrets of Numbers That You Can't Predict but Can Rely On



George Szpiro

The book discusses random numbers under five headings: What are they? What are they good for? How do we produce them? Why do we need them? How do we fake them? The book has been written with a sophisticated general reader in mind, but should be of much interest to students and academics of all levels who have an interest in mathematics and randomness.

Chapman and Hall/CRC

Market: Mathematics

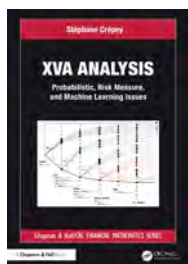
January 2026: 234x156: 240pp: 14 illus, 6 halftones, 8 line drawings

Hb: 978-1-041-07644-5: **£190.00**

★ For full contents and more information, visit: www.routledge.com/9781041076445

XVA Analysis

Probabilistic, Risk Measure, and Machine Learning Issues



Stéphane Crépey, Université d'Evry-Val-d'Essonne, Evry, France

Series: Chapman and Hall/CRC Financial Mathematics Series

XVA Analysis: Probabilistic, Risk Measure, and Machine Learning Issues offers readers an up-to-date and comprehensive exploration of the X-Value Adjustment (XVA) universe and of the embedded risk measure issues inherent within it.

Chapman and Hall/CRC

Market: Mathematics

December 2025: 254x178: 456pp: 70 illus, 70 line drawings

Hb: 978-1-041-01420-1: **£100.00**

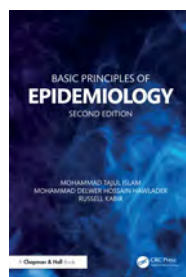
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STATISTICS AND DATA SCIENCE

TEXTBOOK

Basic Principles of Epidemiology



Mohammad Tajul Islam,
Mohammad Delwer Hossain Hawlader
and **Russell Kabir**

User-friendly textbook written with the aim of making easy learning of epidemiological methods and applying them in public health research.

Chapman and Hall/CRC

Market: Epidemiology

January 2026: 234x156: 302pp: 33 illus, 33 line drawings

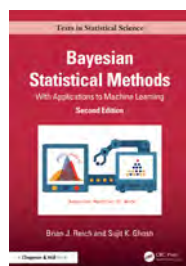
Hb: 978-1-041-10177-2: **£74.99**

★ For full contents and more information, visit: www.routledge.com/9781041101772

TEXTBOOK • 2nd Edition

Bayesian Statistical Methods

With Applications to Machine Learning



Brian J. Reich, N.C. State University and **Sujit K. Ghosh**

Series: Chapman & Hall/CRC Texts in Statistical Science

Bayesian Statistical Methods: With Applications to Machine Learning provides data scientists with the foundational and computational tools needed to carry out a Bayesian analysis. Compared to others, this book is more focused on Bayesian methods applied routinely in practice including multiple linear regression, mixed effects models and generalized linear models. This second edition includes a new chapter on Bayesian machine learning methods to handle large and complex datasets and several new applications to illustrate the benefits the Bayesian approach in terms of uncertainty quantification.

Chapman and Hall/CRC

Market: Statistics

February 2026: 254x178: 360pp: 116 illus, 3 halftones, 113 line drawings

Hb: 978-1-032-48632-1: **£77.99**

★ For full contents and more information, visit: www.routledge.com/9781032486321

Mastering Clinical Data Management

The Background, Experience, and Soft Skills Needed to Succeed in CDM



Michael Goedde

99.9% of human beings interact with the Clinical Research industry throughout their lives however very few understand the effort to bring a new medical product to patients in need and an even smaller number understand the pivotal role that CDM professionals play in this endeavor. Ranging from sharing hands-on experiences to providing examples of how to propel one's CDM career, *Mastering Clinical Data Management: The Background, Experience, and Soft Skills Needed to Succeed in CDM* is a glimpse of the author's three decades long experience in the field and aims to provide valuable insights for all levels of CDM professionals and those that might consider a career in CDM.

Chapman and Hall/CRC

Market: Statistics

March 2026: 234x156: 224pp: 39 illus, 20 halftones, 19 line drawings

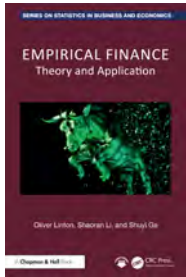
Hb: 978-1-041-09072-4: **£74.99**

★ For full contents and more information, visit: www.routledge.com/9781041090724

TEXTBOOK

Empirical Finance

Theory and Application



Oliver Linton, Shaoran Li and Shuyi Ge

Series: Chapman and Hall/CRC Series on Statistics in Business and Economics

This book offers a modern, data-driven introduction to the field of finance, tailored for undergraduate students and practitioners seeking to bridge theory with real-world evidence. In an era defined by abundant data and computational power, this book emphasizes hands-on learning by integrating financial theory, empirical analysis, and practical implementation using Python and R. Each chapter balances intuitive explanations with mathematical rigor, ensuring that readers not only understand key concepts but also learn how to test them with actual data.

Chapman and Hall/CRC

Market: Statistics

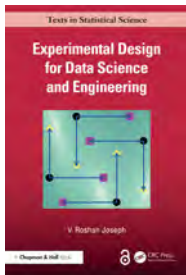
April 2026: 234x156: 280pp: 146 illus, 3 halftones, 143 line drawings

Hb: 978-1-032-89470-6: **£76.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032894706

TEXTBOOK

Experimental Design for Data Science and Engineering



V. Roshan Joseph, Georgia Institute of Technology

Series: Chapman & Hall/CRC Texts in Statistical Science

The book describes efficient statistical methods for making the experiments cheaper and computations faster for extracting valuable information from data and help identify discrepancies in the theory. It also includes recent advances in experimental designs for dealing with large amounts of observational data. Traditionally the design and analysis of physical and computer experiments are treated differently, but this book attempts to create a unified framework using Gaussian process models. A wide variety of topics are covered -- from designs for interpolating or integrating simple functions to designs that are useful for optimizing and calibrating complex computer models.

Chapman and Hall/CRC

Market: Statistics

March 2026: 234x156: 302pp: 87 illus, 2 halftones, 85 line drawings

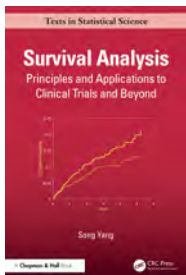
Hb: 978-1-041-11752-0: **£74.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041117520

TEXTBOOK

Survival Analysis

Principles and Applications in Clinical Trials and Beyond



Song Yang, National Heart, Lung, and Blood Institute, National Institutes of Health, Clarksburg, MD, USA

Series: Chapman & Hall/CRC Texts in Statistical Science

Survival Analysis provides an up-to-date and reader-friendly account of topics progressing from the log-rank test, stratified analysis, and Cox regression to more advanced analyses. Heuristic arguments are used, leaving rigorous results to the appendices. The book dedicates separate chapters to critical topics like clinical trials basics, modeling and analysis for non-proportional hazards, testing and summarizing treatment effects, trial design and interim monitoring, and the analysis of terminal and non-terminal events. A separate chapter is also devoted to detailed martingale heuristics beyond what is typically offered in other texts.

Chapman and Hall/CRC

Market: Statistics

April 2026: 234x156: 544pp: 38 illus, 38 line drawings

Hb: 978-0-367-34186-2: **£89.99**

★ For **full contents** and more information, visit: www.routledge.com/9780367341862

Test-Driven Data Analysis



Nicholas J. Radcliffe

Series: Chapman & Hall/CRC Data Science Series

Test-driven data analysis is the synthesis of ideas from test-driven development of software to data-intensive work including data science, data analysis, and data engineering. It is a methodology for improving the quality of data and of analytical pipelines and processes. It can be thought of as *data analysis as if the answers actually matter*. Extensive checklists are provided that can be used to improve quality before, during, and after analysis. Test-driven data analysis can be thought of as a sibling to *reproducible research*, with similar concerns, but greater emphasis on automated testing, and less requirement for a human to reproduce results.

Chapman and Hall/CRC

Market: Statistics

April 2026: 234x156: 432pp: 54 illus, 8 halftones, 46 line drawings

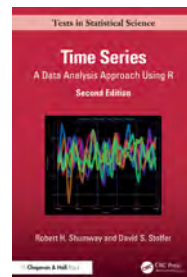
Hb: 978-1-032-89715-8: **£59.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032897158

TEXTBOOK • 2nd Edition

Time Series

A Data Analysis Approach Using R



Robert H. Shumway and David S. Stoffer, University of Pittsburgh, Pennsylvania, USA

Series: Chapman & Hall/CRC Texts in Statistical Science

The goals of this second edition are to develop the skills and an appreciation for the richness and versatility of modern time series analysis as a tool for analyzing dependent data. An expanded feature of this edition is the inclusion of many nontrivial data sets illustrating the wealth of potential applications to problems in the biological, physical, and social sciences as well as in economics and medicine. The book can be used for a one semester/quarter introductory time series course where the prerequisites are an understanding of linear regression, basic calculus-based probability and statistics skills, and math skills at the high school level.

Chapman and Hall/CRC

Market: Statistics

February 2026: 234x156: 292pp: 109 illus, 1 halftone, 108 line drawings

Pb: 978-1-041-03164-2: **£67.99**

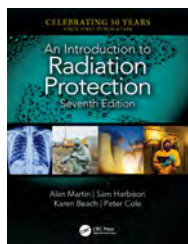
★ For **full contents** and more information, visit: www.routledge.com/9781041031642



GENERAL MEDICINE

TEXTBOOK • 8th Edition

An Introduction to Radiation Protection



Alan Martin, Sam Harbison, Health & Safety Consultant, Kent, UK, Karen Beach and Peter Cole

The eighth edition of this book continues to cover the technical principles underlying the control of radiation hazards, radiation detection and measurement and the biological effects of radiation, followed by a consideration of industry-specific radiation protection issues. Specialised topics include risk assessment, waste management and radiological emergencies. A highly-readable account of the nature of the hazards presented by ionizing radiations and the methods of protection against such hazards, the book is an ideal introductory text for those new to the field, and for the non-specialist, and a useful ready reference for more experienced radiation protection professionals.

CRC Press

Market: Medicine

April 2026: 246x189: 268pp: 89 illus, 24 halftones, 65 line drawings

Pb: 978-1-041-09586-6: £44.99

Prev. Ed Pb: 978-1-138-33307-9

★ For full contents and more information, visit: www.routledge.com/9781041095866

Digital Healthcare and Artificial Intelligence

A Primer for Clinicians and Students



Edited by Clare Rainey, Sonya McFadden and Jonathan McConnell

Series: *AI in Clinical Practice*

Digital technologies are essential to future-proof our health service. With an ageing population and the landscape of the post-pandemic world making increasing demands on an already stretched human workforce, maximizing the potential of a digital future is necessary. This book introduces the concepts and underpinning technology behind recent developments to give a snapshot of the state of the art in the field of digital health and provides information for clinicians of all levels of experience. The reader will gain insight into digital health in general with clinical, technical and industrial insights providing context to the theory.

CRC Press

Market: Medicine

February 2026: 254x178: 182pp: 53 illus, 20 halftones, 33 line drawings

Pb: 978-1-032-70989-5: £64.99

★ For full contents and more information, visit: www.routledge.com/9781032709895

TEXTBOOK • 2nd Edition

Get Ahead! Medicine

300 SBAs for Finals



Hiruni Jayasena, Kotelawala Defence University, Colombo, Sri Lanka, Benjamin Wood and Marilena Giannoudi

Series edited by Saran Shantikumar

Series: *Get ahead!*

Get ahead! Medicine: 300 SBAs for Finals, fully revised and updated in this second edition, provides invaluable revision for all medical students preparing for finals exams through plentiful practice questions, similar to those you can expect in the real exam. Covering the entire syllabus in a clear and comprehensive style, this book provides reliable and effective revision practice to help you pass your final medical exams

CRC Press

Market: Medicine

March 2026: 234x156: 276pp

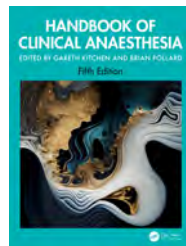
Pb: 978-1-041-09047-2: £28.99

Prev. Ed Pb: 978-1-85315-732-5

★ For full contents and more information, visit: www.routledge.com/9781041090472

5th Edition

Handbook of Clinical Anaesthesia



Edited by Gareth Kitchen, University of Manchester, UK and Brian Pollard, The University of Manchester, UK

The Handbook of Clinical Anaesthesia provides the vital practical knowledge anaesthetists require across co-existing medical conditions, operative procedures, and techniques. This 5th edition retains the concise yet comprehensive approach to deliver everything needed for the FRCA syllabus in easily digestible, practical entries. This handbook remains an invaluable resource for all anaesthetists, from residents to seasoned consultants and specialists. Designed for quick access and reliable insights, it skips prolonged discussions and multiple references, making it the

perfect resource to "dip into" for immediate advice or broader learning.

CRC Press

Market: Anaesthesia

February 2026: 280x210: 432pp: 96 illus, 16 halftones, 80 line drawings

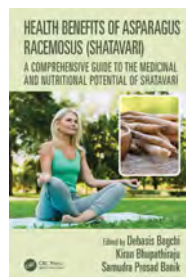
Pb: 978-1-032-58738-7: £110.00

Prev. Ed Pb: 978-1-4987-6289-2

★ For full contents and more information, visit: www.routledge.com/9781032587387

Health Benefits of Asparagus Racemosus (Shatavari)

A Comprehensive Guide to the Medicinal and Nutritional Potential of Shatavari



Edited by Debasis Bagchi, Kiran Bhupathiraju and Samudra Prosad Prosad Banik

This vast edited collection details the ethnobotany, phytochemistry, pharmacognosy, and therapeutic benefits of *Asparagus racemosus* (Shatavari) used in India as a phytomedicine for the alleviation of symptoms found in various conditions and diseases in humans. It comprehensively details various therapeutic potential applications including antioxidant, antidiabetic, and anti-aging properties, women's health, gastrointestinal health, immune competency enhancement, neurological conditions, and depression. Designed for scientists in natural product research, complementary and alternative medicine, dietitians and nutritionists, food scientists, and other health professionals.

CRC Press

Market: Herbal Medicine

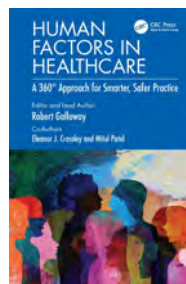
January 2026: 280x210: 584pp: 96 illus, 37 halftones, 59 line drawings

Hb: 978-1-032-90476-4: £165.00

★ For full contents and more information, visit: www.routledge.com/9781032904764

Human Factors in Healthcare

A 360° Approach for Smarter, Safer Practice



Eleanor J. Crossley and Mitul Patel

Edited by Rob Galloway, Emergency Medicine Consultant & Sn Lecturer, Brighton & Sussex University Hospitals NHS Trust and Medical School, UK, Chloe Rutherford and Melanie Whitfield

Healthcare is full of brilliant, dedicated people but the conditions we work in often mean we fall short of the care we want to give. Mistakes aren't usually the result of bad individuals. Instead, they are the predictable outcome of poorly designed systems and cultures that don't make safety easy and when staff don't feel supported or listened to, it is almost impossible for them to deliver safe care.

CRC Press

March 2026: 234x156: 244pp

Pb: 978-1-138-49877-8: £34.99

★ For full contents and more information, visit: www.routledge.com/9781138498778

5th Edition

Human Sectional Anatomy

Atlas of annotated body sections, CT and MRI images



Bari M. Logan, , **Harold Ellis**, Professor, Applied Clinical Anatomy Group, Applied Biomedical Research, Guy's Hospital London, UK, **Adrian K. Dixon**, Professor Emeritus, Dept of Radiology, University of Cambridge; Honorary Consultant Radiologist, Addenbrooke's Hospital, and **David J. Bowden**, Abdominal Imaging Fellow, Department of Medical Imaging Sunnybrook Health Sciences Centre, Toronto, Canada and Formerly Teaching Bye-Fellow Christ's College University of Cambridge, UK

First published in 1991, *Human Sectional Anatomy* set new standards for the quality of cadaver sections and accompanying radiological

images. Now in its fifth edition, this unsurpassed quality remains and is further enhanced by additional new material. The superb full-colour cadaver sections are compared with CT and MRI images, with accompanying, labelled, line diagrams. *Human Sectional Anatomy* continues to be an invaluable resource for all radiologists, radiographers, surgeons and medics, in training and in practice, and an essential component of departmental and general medical library collections.

CRC Press

Market: Medicine

April 2026: 340pp: 501 illus, 251 halftones, 250 line drawings

Hb: 978-1-041-14274-4: **£190.00**

Prev. Ed Hb: 978-1-4987-0360-4

★ For full contents and more information, visit: www.routledge.com/9781041142744

Informed Consent

The Cornerstone of Surgical Practice



Stephen Chadwick

This unique exploration examines informed consent as a social construct within surgical practice. Drawing on 30 years of surgical experience, the author traces consent's evolution from informal agreements to formalized processes, analyzing its philosophical foundations and legal history within the NHS. The book addresses growing litigation concerns while questioning why patients readily trust surgeons they've just met. It explores specific challenges to obtaining truly informed consent, including cultural diversity and health literacy barriers. This unprecedented work illuminates how consent has developed into its current form, offering valuable insights for practitioners.

CRC Press

Market: Medicine

June 2026: 198x129: 190pp: 45 illus

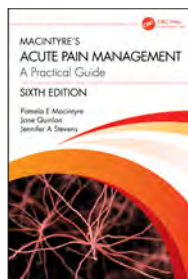
Pb: 978-1-041-23433-3: **£24.99**

★ For full contents and more information, visit: www.routledge.com/9781041234333

6th Edition

Macintyre's Acute Pain Management

A Practical Guide



Pamela E. Macintyre, Consultant Anaesthetist and Pain Medicine Physician, Royal Adelaide Hospital, Australia, **Jane Quinlan** and **Jennifer A. Stevens**

With updated information for all medications and techniques, the 6th edition of this established text firmly addresses the controversial issues in analgesic stewardship, as well as the pharmacology of opioids in the context of the opioid epidemic, identifying possible strategies to minimise the risks. Combining evidence-based information with practical guidelines and protocols, it offers vital knowledge on the management of acute pain, including in patients with spinal cord injuries and burns, as well as more complex issues such as treating older patient, those with addiction disorders, pregnant or lactating patients,

and patients with obstructive sleep apnoea.

CRC Press

Market: Pain Medicine

April 2026: 234x156: 392pp: 9 illus, 8 halftones, 1 line drawing

Pb: 978-1-032-60920-1: **£52.99**

Prev. Ed Pb: 978-0-367-27139-8

★ For full contents and more information, visit: www.routledge.com/9781032609201

Mastering the Hidden Curriculum

Unlocking Success in Medical Training



Vance T. Lehman

Medical students and residents are immersed in a busy world with unspoken expectations, invisible challenges, and other influences that comprise a hidden curriculum. This book provides a deeper understanding of this complex system, unique "insider" perspectives, and practical advice. To do this, it provides a platform built on applied sociology, history, organizational psychology, and science that reimagines how to manage medical training. This book seeks to level the playing field by demystifying the hidden curriculum, enabling medical trainees to achieve their full potential using well-defined effective strategies.

CRC Press

Market: Medicine

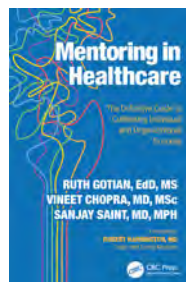
January 2026: 234x156: 324pp: 8 illus, 8 line drawings

Pb: 978-1-041-05988-2: **£29.99**

★ For full contents and more information, visit: www.routledge.com/9781041059882

Mentoring in Healthcare

The Definitive Guide to Cultivating Individual and Organizational Success



Ruth Gotian, Vineet Chopra and Sanjay Saint

Mentoring in Healthcare is a focused guide addressing the pressing need for effective mentorship amid challenges such as burnout, increasing extramural grant requirements, and professional workforce shortages. Targeted at a wide range of healthcare professionals from medical students to executives in related fields, this book illustrates the transformative journey from medical student to accomplished healthcare professional, helping to refine the mentorship experience for healthcare professionals and contributing to enhanced performance in the healthcare sector with practical, research-based advice for an area of critical importance to healthcare outcomes.

CRC Press

Market: Medicine in General

January 2026: 234x156: 218pp: 6 illus, 6 line drawings

Pb: 978-1-041-00693-0: **£26.99**

★ For full contents and more information, visit: www.routledge.com/9781041006930

TEXTBOOK • 4th Edition

Mnemonics and Study Tips for Medical Students



Khalid Khan, South Croydon, UK

This fun, pocket-sized and practical guide is jam-packed with helpful tips on how to remember those all-important medical facts crucial to exam success and invaluable throughout the medical career. New to this edition are 35 additional mnemonics, more information on prescribing, a section on the use of 'smart drugs' when studying, additional SWOT boxes and an improved interior layout with more colour for added clarity. The third edition remains an essential read for every medical student.

CRC Press

Market: Medicine

May 2026: 198x129: 240pp: 50 illus

Pb: 978-1-032-52919-6: **£49.99**

Prev. Ed Pb: 978-1-4987-3938-2

★ For full contents and more information, visit: www.routledge.com/9781032529196

3rd Edition

Cardiovascular Catheterization and Intervention

A Textbook of Coronary, Peripheral, and Structural Heart Disease



Edited by **Debabrata Mukherjee**, University of Kentucky, Lexington, USA and **Srihari Naidu**

Interventional cardiology has evolved dramatically over the past decade, and this new edition addresses recent advances in coronary, structural, congenital and endovascular arenas. New chapters cover mechanical circulatory support devices including cardiogenic shock, intravascular lithotripsy and calcified lesion management, endovascular therapy for pulmonary embolism, and percutaneous therapies for tricuspid and pulmonary valve disease. Features evidence-based discussion on patient selection, vascular access, intervention principles, and optimal post-procedure management, making it a practical reference guide for clinicians.

CRC Press

Market: Medicine

June 2026: 280x210: 800pp: 500 illus

Hb: 978-1-032-82326-3: **£190.00**

Prev. Ed Hb: 978-1-4987-5019-6

★ For full contents and more information, visit: www.routledge.com/9781032823263

Cardiovascular Disease Prevention



Edited by **Massimo Volpe**

Prevention of cardiovascular (CV) disease represents a pillar of contemporary medicine, as CV diseases are the most frequent cause of death and disability and a heavy socioeconomic burden. This is a concise and practical book that provides internationally applicable evidence-based standards of good practice. It discusses major advances in diagnosis and therapy. It continues to emphasize the importance of secondary prevention to reduce the recurrence of myocardial infarction, stroke, etc., improving the sustainability of the healthcare system.

CRC Press

Market: Medicine

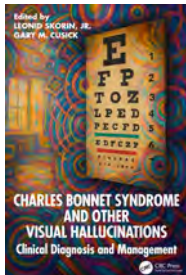
June 2026: 216x138: 150pp: 50 illus

Pb: 978-1-041-01758-5: **£44.99**

★ For full contents and more information, visit: www.routledge.com/9781041017585

Charles Bonnet Syndrome and Other Visual Hallucinations

Clinical Diagnosis and Management



Edited by **Leonid Skorin** and **Gary M. Cusick**

This book examines Charles Bonnet Syndrome and other visual hallucinations beyond the basic neuroscience concepts by providing the reader with a prevailing clinically applicable overview. It is a practical guide for those clinicians who are assessing patients who present with visual hallucinations and require additional evaluation to make a diagnosis. It helps the clinician to formulate a clear management approach.

CRC Press

Market: Medicine

March 2026: 234x156: 192pp: 57 illus, 32 halftones, 25 line drawings

Pb: 978-1-041-05986-8: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781041059868

Clark's Essential Guide to Holistic Care in Radiography

Putting the Patient First



Nicholas Cantlay, Amanda Martin and Angela Meadows

Series: *Clark's Companion Essential Guides*

Reflecting the multidisciplinary nature of patient care, this new book in the Clark's family of radiography resources provides guidance for practitioners seeking to achieve holistic care within medical imaging and therapy. Grounded in the principles of narrative medicine, which cultivates attention, empathy and reflective judgement, the content is developed through a series of fictional stories describing engagements with patients that draw on real-life experiences across a range of modalities.

By explaining the fundamental concepts driving patient interactions, the book guides readers to consider adopting a

holistic approach to patient care which is a win-win for everyone.

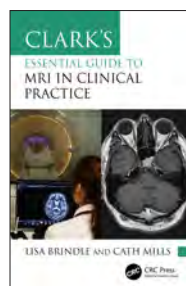
CRC Press

June 2026: 198x129: 220pp: 50 illus

Pb: 978-1-032-47985-9: **£29.99**

★ For full contents and more information, visit: www.routledge.com/9781032479859

Clark's Essential Guide to MRI in Clinical Practice



Lisa Brindle and Cath Mills

Series: *Clark's Companion Essential Guides*

This easy-to-understand guide in the highly respected Clark's stable of diagnostic imaging texts is an essential handbook for daily practice in magnetic resonance imaging, providing clear and practical advice to help both experienced practitioners and those new to the modality at both undergraduate and postgraduate levels. The book provides guidance on general procedures in MRI, summarising current relevant literature and professional body guidelines. Clark's Essential Guide to MRI takes the systematic approach of the Clark's family, introducing readers to techniques from first principles and covering MRI by body region with selected images demonstrating positioning techniques.

CRC Press

May 2026: 198x129: 304pp: 344 illus, 336 halftones, 8 line drawings

Pb: 978-1-032-13629-5: **£29.99**

★ For full contents and more information, visit: www.routledge.com/9781032136295

2nd Edition

Clinical Handbook of Interstitial Lung Disease



Edited by **Keith C. Meyer**, MD, MS University of Wisconsin, Madison, USA, **Muhunthan Thillai**, MBBS, MRCP, PhD Papworth Hospital, Cambridge, UK and **Steven D. Nathan**

The 2nd Edition of *The Clinical Handbook of Interstitial Lung Disease* is an update of the 1st Edition and provides a comprehensive guide for practicing physicians and other health care providers who are involved in the diagnosis and management of diverse forms of Interstitial Lung Disease (ILD). Key global opinion leaders in respiratory medicine have drawn on their knowledge and experience to generate an authoritative, comprehensive, and concise guidebook for use in clinical settings and clinical research.

CRC Press

Market: Medicine

May 2026: 254x178: 528pp: 112 illus, 100 halftones, 12 line drawings

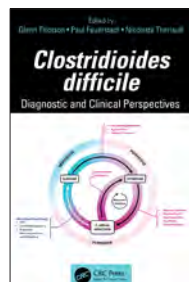
Pb: 978-1-032-58731-8: **£150.00**

Prev. Ed Pb: 978-1-4987-6825-2

★ For full contents and more information, visit: www.routledge.com/9781032587318

Clostridioides difficile

Diagnostic and Clinical Perspectives



Edited by **Glenn Tillotson, Paul Feuerstadt and Nicolette Theriault**

This book is a practical guide for clinicians and other healthcare providers on a holistic approach to understanding and managing *Clostridioides difficile* infection. It covers pathophysiology, the role of the microbiome, diagnostic testing, management guidelines, and treatment options, including newly approved therapeutics. It also describes the patient experience and burden of *C. difficile*, treatment and clinical care pathways, patient education, and economic considerations. The topics covered are based on identified real-world needs of microbiologists, clinicians and patients and include updates on treatment and data.

CRC Press

Market: Medicine

May 2026: 216x138: 150pp: 25 illus

Pb: 978-1-032-95091-4: **£29.99**

★ For full contents and more information, visit: www.routledge.com/9781032950914

Imaging of the Pharynx and the Esophagus



Giovanni Fontanella

Often neglected or wrongfully discarded as obsolete, barium swallows still are a staple of the daily routine of Radiology departments worldwide, an important tool to support the clinical and endoscopic diagnosis of the upper GI tract. As for other imaging methods, even barium radiography and fluoroscopy have undergone radical technological changes and upgrades.

CRC Press

Market: Medicine

January 2026: 254x178: 222pp: 149 illus, 142 halftones, 7 line drawings

Pb: 978-1-032-79178-4: **£59.99**

★ For full contents and more information, visit: www.routledge.com/9781032791784

Investigation & Management of Eye Disease in Primary Care

Infection, Inflammation and Immune Response



David V. Seal, London, UK, Uwe Pleyer, Michelle L. Hennelly, John Lawrenson and Bhavina Patel

This book provides practical guidance to primary care eye professionals. It is fully illustrated with online links for making an initial diagnosis with advice on management and therapy. It covers the common sight-threatening conditions including glaucoma, AMD, diabetes, cataract, inflammatory and immune-based diseases, conjunctival and corneal infections.

CRC Press

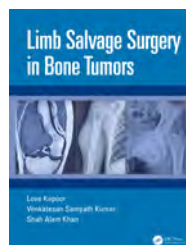
Market: Medicine

March 2026: 254x178: 208pp: 142 illus, 126 halftones, 16 line drawings

Pb: 978-1-032-99936-4: **£54.99**

★ For full contents and more information, visit: www.routledge.com/9781032999364

Limb Salvage Surgery in Bone Tumors



Love Kapoor, Venkatesan Sampath Kumar and Shah Alam Khan

This book brings together a wide spectrum of surgical techniques for tumor excision and limb reconstruction, with special emphasis on practical biological options often used in developing countries. A unique section on pelvic tumors explores reconstruction strategies beyond megaprotheses. Unlike most books on musculoskeletal neoplasms that focus primarily on tumor pathology and outcomes, this volume emphasizes reconstruction techniques and presents the wide range of available options. It bridges a critical gap in surgical

oncology literature, making it a valuable reference that deserves a place on every oncologist's shelf.

CRC Press

Market: Medicine

April 2026: 280x210: 232pp: 200 illus, 200 halftones

Hb: 978-0-367-42130-4: **£130.00**

★ For full contents and more information, visit: www.routledge.com/9780367421304

Practical Medical Retina

Navigating the Net



Christiana Dinah, Central Middlesex Hospital, London, UK and **Gwyn Samuel Williams**, Singleton Hospital, Eye Department, Sketty Lane, Sketty, Swansea, SA2 8QA, Wales, UK

Practical Medical Retina will be the third instalment in the 'practical' range to complement Practical Uveitis and Practical Emergency Ophthalmology books. Medical Retina is one of the largest and most important sub-specialties of ophthalmology. Many new and exciting treatments are happening at breakneck speed, making it difficult for ophthalmologists to keep up with developments and understand the best way to treat patients. This book, as with the other two, will provide an easy-to-understand breakdown of developments, a description of current and future therapies, and an accessible assessment of evidence, of which there is currently a bewildering amount.

CRC Press

Market: Medicine

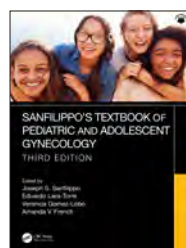
March 2026: 234x156: 200pp: 50 illus, 49 halftones, 1 line drawing

Pb: 978-1-041-04420-8: **£59.99**

★ For full contents and more information, visit: www.routledge.com/9781041044208

3rd Edition

Sanfilippo's Textbook of Pediatric and Adolescent Gynecology



Edited by **Joseph S. Sanfilippo, Eduardo Lara-Torre, Veronica Gomez-Lobo and Amanda V. French**

This textbook addresses all the common and less often encountered pediatric and adolescent gynecology (PAG) problems in daily practice, both in the ambulatory as well as in the surgical setting, and is closely aligned to what generalists in obstetrics & gynecology as well as other primary care providers will want to know when dealing with a pediatric or adolescent gynecology patient.

CRC Press

Market: Gynecology

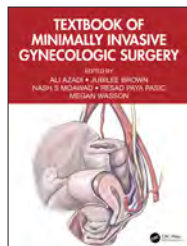
February 2026: 280x210: 356pp: 166 illus, 137 halftones, 29 line drawings

Hb: 978-1-032-79637-6: **£150.00**

Prev. Ed Hb: 978-1-138-55157-2

★ For full contents and more information, visit: www.routledge.com/9781032796376

Textbook of Minimally Invasive Gynecologic Surgery



CRC Press

Market: Gynecology

March 2026: 280x210: 488pp: 426 illus, 399 halftones, 27 line drawings

Pb: 978-1-032-31940-7: **£120.00**

★ For full contents and more information, visit: www.routledge.com/9781032319407

Edited by **Ali Azadi, Jubilee Brown, Nash S. Moawad, Resad Paya Pasic and Megan Wasson**

This comprehensive review of the field of Gynecology with emphasis on Minimally Invasive approaches, with contributions from more than 100 experts in the field, presents a great resource for fellows and residents seeking to master Complex Gynecology and Minimally Invasive Gynecologic skills.

4th Edition

Textbook of Pleural Diseases



CRC Press

Market: Medicine

April 2026: 280x210: 600pp: 250 illus

Hb: 978-1-032-56475-3: **£195.00**

Prev. Ed Hb: 978-1-4822-2250-0

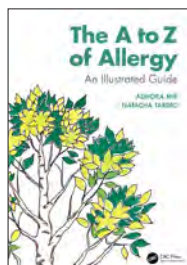
★ For full contents and more information, visit: www.routledge.com/9781032564753

Edited by **Y.C. Gary Lee, David Feller-Kopman and Nick Maskell**

Textbook of Pleural Diseases is a comprehensive reference that covers both the basic and clinical science on pleural diseases. Building on the highly respected previous editions, it includes a detailed basic science section for enhanced understanding of both the physiological and pathophysiological mechanisms that underpin diseases of the pleura.

The A to Z of Allergy

An Illustrated Guide



CRC Press

Market: Medicine

October 2026: 254x178: 180pp: 70 illus

Pb: 978-1-041-05987-5: **£39.99**

★ For full contents and more information, visit: www.routledge.com/9781041059875

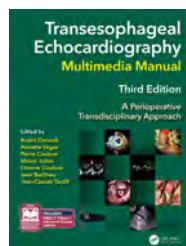
Adhora Mir and Natacha Tardio

The A to Z of Allergy: An Illustrated Guide provides comprehensive visual summaries of atopic conditions, designed to spark curiosity and deepen understanding of key topics in Allergy & Clinical Immunology. This expertly crafted resource empowers general practitioners, internists, and medical learners to confidently navigate the rapidly evolving field of allergic diseases. Through its illustrated approach, the book transforms complex immunological concepts into accessible, practical knowledge that enhances clinical understanding and patient care in this dynamic medical specialty.

3rd Edition

Transesophageal Echocardiography Multimedia Manual

A Perioperative Transdisciplinary Approach



Edited by **André Denault MD PhD**, Institut de Cardiologie de Montréal, Québec, Canada, **Annette Vegas**, Toronto General Hospital, Ontario, Canada, **Pierre Couture, Marco Julien, Etienne Couture, Jean Buithieu and Jean-Claude Tardif**, Institut de Cardiologie de Montréal, Québec, Canada

The third edition of the *Transesophageal Echocardiography Multimedia Manual* is a comprehensive resource and essential guide to the rapidly expanding field of perioperative transesophageal echocardiography (TEE), encompassing its role in newer cardiac surgery techniques, diverse interventional

procedures, and the intensive care unit. This well-illustrated manual, accompanying videos and self-test questions demonstrate recent developments and challenges for the anesthesiologist, cardiologist, cardiac surgeon, critical care physician, and those interested in perioperative TEE.

CRC Press

Market: Medicine

February 2026: 280x210: 1036pp: 892 illus, 824 halftones, 68 line drawings

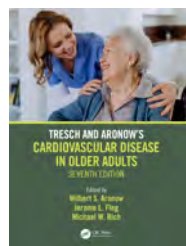
Hb: 978-1-032-42460-6: **£190.00**

Prev. Ed Hb: 978-1-4200-8070-4

★ For full contents and more information, visit: www.routledge.com/9781032424606

7th Edition

Tresch and Aronow's Cardiovascular Disease in Older Adults



Edited by **Wilbert S. Aronow**, Westchester Medical Center and New York Medical College, New York, USA, **Jerome L. Fleg**, National Heart, Lung, and Blood Institute, Bethesda, USA and **Michael W. Rich**, Washington University School of Medicine, St Louis, USA

The 7th Edition of *Tresch and Aronow's Cardiovascular Disease in Older Adults* thoroughly updates the material in the 6th edition by renowned experts in geriatric cardiology. New features include a short list of Key Points at the start of each chapter to help guide the reader, a new chapter on Cardio-oncology in Older Adults, a topic of increasing importance, and new sections

on geroscience, lifestyle factors in cardiovascular disease prevention, and cardiac amyloidosis added to existing chapters. These new features will enhance the value and relevance of this book as the definitive text in this growing field.

CRC Press

Market: Medicine

March 2026: 280x210: 560pp: 105 illus, 40 halftones, 65 line drawings

Hb: 978-1-032-94095-3: **£140.00**

Prev. Ed Hb: 978-1-138-55829-8

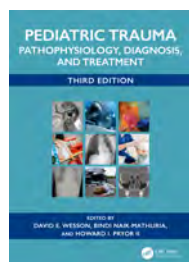
★ For full contents and more information, visit: www.routledge.com/9781032940953

SURGERY

3rd Edition

Pediatric Trauma

Pathophysiology, Diagnosis, and Treatment



Edited by **David E. Wesson**, Baylor College of Medicine, Texas Children's Hospital, Houston, USA, **Bindu Naik-Mathuria**, Texas Children's Hospital Surgery, Houston, USA and **Howard Irwin Pryor II**

Injuries cause more than half of all childhood deaths, with blunt forces causing most injuries. As the leading cause of death and disability in children over one year of age in the United States and among older children worldwide, trauma care requires specialized knowledge of pediatric differences. Designed for all healthcare providers who treat injured children, this book provides evidence-based recommendations and contemporary practices within the field. The content has been thoroughly

revised and updated from prior editions to reflect the most current approaches to pediatric trauma care.

CRC Press

Market: Medicine

January 2026: 280x210: 502pp: 318 illus, 253 halftones, 65 line drawings

Pb: 978-1-032-54724-4: **£94.99**

★ For full contents and more information, visit: www.routledge.com/9781032547244

9th Edition • 2-Volume Set

Scott-Brown's Otorhinolaryngology and Head and Neck Surgery



Edited by **Adam Donne** and **Iain Nixon**

Whether you're a resident, fellow, or experienced practitioner, this essential resource provides the depth and breadth of knowledge required for excellence in contemporary ENT practice. Available in both print and digital formats, it combines nearly a century of otolaryngology excellence with contemporary clinical approaches. Perfect for training, examination preparation, and consultant practice, the 9th edition upholds Scott Brown's legacy while embracing modern medical education needs through its concise,

accessible presentation in two streamlined, authoritative volumes that maintain its position as the cornerstone text in ear, nose, and throat surgery.

CRC Press

Market: Medicine

April 2026: 280x210: 2800pp: 2387 illus, 2259 halftones, 128 line drawings

Hb: 978-1-032-53507-4: **£495.00**

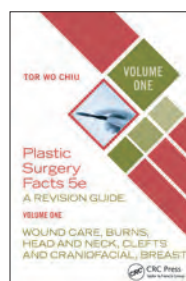
Prev. Ed Hb: 978-1-4441-7589-9

★ For full contents and more information, visit: www.routledge.com/9781032535074

5th Edition

Plastic Surgery Facts: A Revision Guide Volume One

Wound Care, Burns, Head and Neck, Clefts and Craniofacial, Breast



Tor Wo Chiu, Plastic Surgery, Dept of Surgery, Prince of Wales Hospital, Hong Kong

Now in its 5th edition, *Plastic Surgery Facts* has been extended into two volumes and continues to provide comprehensive coverage of plastic surgery in a format that is easy for the trainee to assimilate. At its heart, this book is still a set of 'notes', but has now been revised to make it more readable and to more effectively deliver important concepts. The emphasis remains on brevity, making this an indispensable revision guide for Residents specialising in plastic surgery, particularly those sitting the FRCS (PLAST) and equivalent postgraduate exams. It is also a valuable quick reference for the busy practicing surgeon on the wards or in the consulting room.

CRC Press

Market: Medicine

February 2026: 254x178: 380pp: 67 illus, 67 line drawings

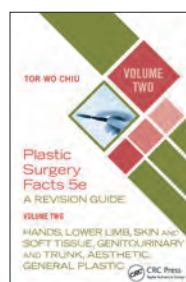
Pb: 978-1-041-21588-2: **£69.99**

★ For full contents and more information, visit: www.routledge.com/9781041215882

5th Edition

Plastic Surgery Facts: A Revision Guide Volume Two

Hands, Lower Limb, Skin and Soft Tissue, Genitourinary and Trunk, Aesthetic, General Plastic



Tor Wo Chiu

Now in its 5th edition, *Plastic Surgery Facts* has been extended into two volumes and continues to provide comprehensive coverage of plastic surgery in a format that is easy for the trainee to assimilate. At its heart, this book is still a set of 'notes', but has now been revised to make it more readable and to more effectively deliver important concepts. The emphasis remains on brevity, making this an indispensable revision guide for Residents specialising in plastic surgery, particularly those sitting the FRCS (PLAST) and equivalent postgraduate exams. It is also a valuable quick reference for the busy practicing surgeon on the wards or in the consulting room.

CRC Press

Market: Medicine

February 2026: 254x178: 380pp: 63 illus, 63 halftones

Pb: 978-1-041-21613-1: **£69.99**

★ For full contents and more information, visit: www.routledge.com/9781041216131

Technology in Head & Neck Surgery



Edited by **Abdul Ahmed**

Incorporating the latest insights into developing technologies, this book explores the practical aspects of learning, implementing, and treating patients with these tools in head and neck surgery. This comprehensive volume features detailed explorations into a range of pioneering areas, from robotic surgery to virtual reality and augmented reality. Illustrating the various ways in which new technologies can be practically applied to head and neck surgery, this book will be a valuable tool for practicing ENT surgeons and students interested in the ways that tech is transforming modern healthcare.

CRC Press

Market: Medicine

May 2026: 234x156: 220pp: 80 illus

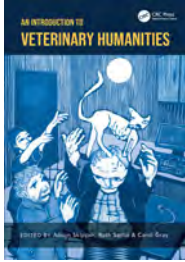
Pb: 978-1-032-73969-4: **£69.99**

★ For full contents and more information, visit: www.routledge.com/9781032739694



VETERINARY MEDICINE

An Introduction to Veterinary Humanities



Edited by **Alison Skipper**, Ruth Serlin and Carol Gray, Hartpury Univ.

This book offers new ways to think about these issues through the emerging interdisciplinary field of veterinary humanities. It breaks new ground in bringing together insights from multiple academic perspectives – history, art, ethics, social sciences and many more – to think about veterinary topics in a new way through contributions from over forty authors. Addressing topics from across the veterinary sector, their writing ranges from deeply personal reflections to academic essays. This anthology will be particularly relevant to those training or working in the veterinary sector, whatever the role or level of experience.

CRC Press

Market: Veterinary Studies

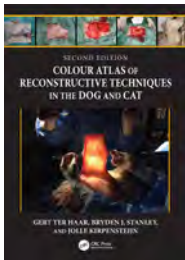
April 2026: 254x178: 300pp: 26 illus, 10 halftones, 16 line drawings

Pb: 978-1-032-42722-5: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781032427225

2nd Edition

Colour Atlas of Reconstructive Techniques in the Dog and Cat



Gert ter Haar, Bryden J. Stanley, Michigan State Univ. and Jolle Kirpensteijn, Hills Pet Nutrition, Topeka, Kansas, USA

The new edition of this practical atlas describes and illustrates, step-by-step, all currently available reconstructive surgical techniques. With new real-life cases and detailed sketches, the book covers both dogs and cats with skin defects caused by injury or tumor resection. The reader is given the widest possible range of treatment options for dealing with individual cases.

CRC Press

Market: Veterinary Medicine

February 2026: 280x210: 370pp: 1168 illus, 1144 halftones, 24 line drawings

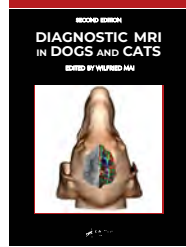
Hb: 978-0-367-02999-9: **£160.00**

Prev. Ed Hb: 978-1-84076-163-4

★ For full contents and more information, visit: www.routledge.com/9780367029999

2nd Edition

Diagnostic MRI in Dogs and Cats



Edited by **Wilfried Mai**, Univ. of Pennsylvania

Making the vast and complex topic of clinical MRI in small animals accessible to all veterinarians, this remains the first reference textbook to provide a comprehensive, image-rich overview of the current knowledge, focusing on imaging appearance rather than on clinical signs or treatment.

MRI images from low, mid, and high-field magnets reflect the diversity of equipment used today. This second edition reflects our broader understanding of MRI's clinical utility, bringing in the latest research, additional or better case examples, and refinements that reflect how far the field has come. It includes

five new chapters and replacement of many lower resolution images.

CRC Press

Market: Veterinary Medicine

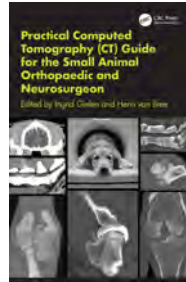
May 2026: 280x210: 888pp: 765 illus, 663 halftones, 102 line drawings

Hb: 978-1-032-55064-0: **£230.00**

Prev. Ed Hb: 978-1-4987-3770-8

★ For full contents and more information, visit: www.routledge.com/9781032550640

Practical Computed Tomography (CT) Guide for the Small Animal Orthopaedic and Neurosurgeon



Edited by **Ingrid Gielen**, Ghent University, Merelbeke, Belgium and **Henri van Bree**, Ghent University, Merelbeke, Belgium

More clinics and large practices are investing in Computed Tomography (CT) equipment, meaning veterinary surgeons are often confronted with unfamiliar technical challenges like positioning and handling of the equipment. Even after obtaining the CT images, the interpretation can often be confusing. Split into two parts, looking first at the principles of CT and then drilling down to specific procedures by body region, this book is packed with over 200 high quality images, practical protocols and easy-to-locate information. It provides much needed support in choosing the right equipment, providing the exact

protocol and coming to a final diagnosis.

CRC Press

Market: Veterinary Medicine

February 2026: 254x178: 370pp: 466 illus, 450 halftones, 16 line drawings

Hb: 978-1-4822-2588-4: **£130.00**

★ For full contents and more information, visit: www.routledge.com/9781482225884



AGRICULTURE & FOOD SCIENCE AND NUTRITION

TEXTBOOK

Biotechnological Advances in Aquaculture

Enhancing Genetics, Nutrition, Health, Disease Prevention, and Food Security



Edited by **Muhammad Dawood Shah, Fui Fui Ching, Wei Sheng Chong** and **Mohammad Tamrin Mohamad Lal**

This textbook provides a comprehensive exploration of the latest biotechnological innovations transforming the aquaculture industry. With contributions from leading experts, it offers actionable insights and practical solutions to the challenges facing aquaculture. It will be an indispensable resource for students and researchers who want to understand the integration of biotechnology to promote sustainable aquaculture practices, innovation and resilience in global seafood production.

CRC Press

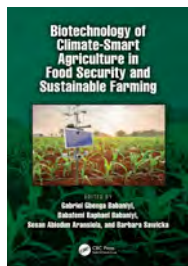
Market: Aquaculture

June 2026: 254x178: 272pp: 50 illus

Pb: 978-1-041-13296-7: **£59.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041132967

Biotechnology of Climate-Smart Agriculture in Food Security and Sustainable Farming



Edited by **Gabriel Gbenga Babaniyi, Babafemi Raphael Babaniyi, Sesan Abiodun Aransiola** and **Barbara Sawicka**

Biotechnology of Climate-Smart Agriculture in Food Security and Sustainable Farming reviews the transformative role of science in helping agriculture adapt to the challenges of climate change. This comprehensive book bridges the gap between biotechnology, digital innovation, and sustainability, offering invaluable guidance to researchers, policymakers, and farmers.

CRC Press

Market: Agriculture

January 2026: 254x178: 454pp: 43 illus, 24 halftones, 19 line drawings

Hb: 978-1-041-01557-4: **£195.00**

★ For **full contents** and more information, visit: www.routledge.com/9781041015574

Smart Agriculture

Concepts, Strategies, and Case Studies



Edited by **Veronica Saiz-Rubio, Francisco Rovira-Mas** and **Chittaranjan Kole**

Series: Nextgen Agriculture

Smart Agriculture: Concepts, Strategies, and Case Studies showcases improvements in agricultural technology, bringing together work from leading experts in the field. It explores techniques and disciplines essential for the widespread adoption of precision agriculture, including artificial intelligence (AI), machine learning, the Internet of Things (IoT), Agriculture 5.0, smart spraying systems, and decision support tools that are transforming modern farming practices.

CRC Press

Market: Agriculture

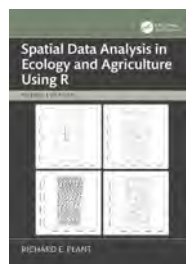
March 2026: 254x178: 256pp: 135 illus, 82 halftones, 53 line drawings

Hb: 978-1-032-82338-6: **£105.00**

★ For **full contents** and more information, visit: www.routledge.com/9781032823386

TEXTBOOK • 3rd Edition

Spatial Data Analysis in Ecology and Agriculture Using R



Richard E. Plant, University of California, Davis, USA

Since the publication of the second edition of Richard Plant's bestselling textbook *Spatial Data Analysis in Ecology and Agriculture Using R*, the methodology of spatial data analysis and the suite of R tools for carrying out this analysis have evolved dramatically. This third edition explores both the leading software tools for the analysis of vector and raster data; the first based on *sf* and associated libraries, the second based on the *terra* package as it has evolved out of the earlier raster package. The book's practical coverage of spatial statistics, real-world examples and user-friendly approach make this an essential textbook for ecology and agriculture graduate students.

CRC Press

Market: Environmental Science

January 2026: 254x178: 670pp: 204 illus, 149 halftones, 55 line drawings

Pb: 978-1-032-93535-5: **£89.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032935355

Sustainable Solutions for Agricultural Waste

Applications, Challenges, and Management



Edited by **Archana Bachheti**, Graphic Era University, India, **Rakesh Kumar Bachheti**, Addis Ababa Science and Technology University, Ethiopia and **Azamal Husen**, Wolaita Sodo University, Ethiopia

As global agricultural activities continue to grow, so does the generation of significant amounts of organic waste. *Sustainable Solutions for Agricultural Waste: Applications, Challenges, and Management* delves into sustainable agricultural waste management, highlighting its critical role in environmental protection, resource efficiency, and economic growth.

CRC Press

Market: Agriculture

February 2026: 254x178: 320pp: 58 illus, 34 halftones, 24 line drawings

Hb: 978-1-032-72620-5: **£190.00**

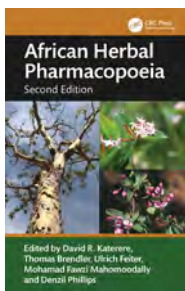
★ For **full contents** and more information, visit: www.routledge.com/9781032726205



BIOLOGY, LIFE & PLANTS SCIENCE

2nd Edition

African Herbal Pharmacopoeia



Edited by **David R. Katerere**, Tshwane University of Technology, Pretoria, South Africa, **Thomas Brendler**, Plantaphile, Collinswood, New Jersey, USA, **Ulrich Feiter**, **Mohamad Fawzi Mahomoodally**, Department of Health Sciences, Faculty of Science, University of Mauritius and **Lawrance Denzil Phillips**, Director, Denzil Phillips International Ltd., Surrey, UK

The African Herbal Pharmacopoeia, Second Edition, is a definitive reference work that brings together the most authoritative scientific and ethnobotanical knowledge on 30 of the most important medicinal plants in Africa. Developed in collaboration with leading international and African researchers, this second edition offers expanded monographs, updated analytical

standards, and in-depth ethnobotanical insights into high-priority medicinal plant species used across the continent.

CRC Press

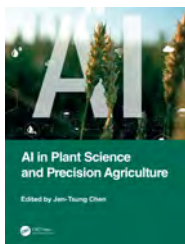
Market: Life Science

January 2026: 254x178: 410pp: 103 illus, 71 halftones, 32 line drawings

Hb: 978-0-8153-7424-4: **£165.00**

★ For full contents and more information, visit: www.routledge.com/9780815374244

AI in Plant Science and Precision Agriculture



Edited by **Jen-Tsung Chen**

This book summarizes advancements in artificial intelligence (AI) technologies, particularly for applications in plant research. It discusses agricultural applications, including AI-enabled smart agriculture and speed breeding, as well as ethical considerations of AI applications in plant sciences and agriculture. It focuses on the application of AI in omics-based plant sciences and crop breeding; digital technologies used in farming, smart agricultural practices, and basic knowledge of AI tools and applications in disease classification and detection.

CRC Press

Market: Agriculture/Plant Sciences

March 2026: 280x210: 448pp: 52 illus, 36 halftones, 16 line drawings

Hb: 978-1-032-88989-4: **£190.00**

★ For full contents and more information, visit: www.routledge.com/9781032889894

4th Edition

Circadian Physiology



Roberto Refinetti, PhD., Boise State University, Idaho, USA

Circadian rhythms influence most of our life activities, notably getting up and going to sleep every day. This new edition of *Circadian Physiology* delves into the mechanisms surrounding how these rhythms work, the physiology and biology behind them, and the latest research on this cutting-edge field. The book also discusses a wide variety of practical topics including the prevention of jet lag, management of shift work, sleep disorders, depression, and the optimal times for physical and intellectual activities.

CRC Press

Market: Neuroscience

April 2026: 280x210: 896pp: 861 illus, 335 halftones, 526 line drawings

Hb: 978-1-032-29855-9: **£230.00**

Prev. Ed Hb: 978-1-4665-1497-3

★ For full contents and more information, visit: www.routledge.com/9781032298559

2nd Edition

Atlas of European Mammals



Edited by **Anthony J. Mitchell-Jones**, The European Mammal Foundation, **Giovanni Amori**, CNR-IRET, Italy, **Boris Kryštufek**, Natural History Museum, **Ferdia Marnell**, Nat. Parks and Wildlife Service, **Svetlana Miteva**, The Habitat Foundation, **Alexandra Sallay**, BOKU Univ., **Laurent Schley**, Nature and Forest, **Johan Thissen**, European Mammal Foundation and **Vladimír Vohralík**, Chares Univ.

Since 1999, this atlas has proved a valuable resource for mammalogists across the globe. Now thoroughly updated, the new edition has extended the coverage of Europe to include Belarus, Moldova and Ukraine. Specialists have collected

distribution data for each country using an agreed species list and a standard mapping system. This landmark volume presents maps of 247 species from 42 countries with more than 125,200 unique records, taking into account recent extinctions to give the most up-to-date picture possible. Accounts for each species include details of taxonomy and variation, habitat, population and international legal and conservation status.

CRC Press

Market: Life Science

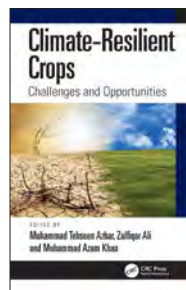
February 2026: 280x210: 594pp: 430 illus, 430 halftones

Hb: 978-0-367-18686-9: **£165.00**

★ For full contents and more information, visit: www.routledge.com/9780367186869

Climate-Resilient Crops

Challenges and Opportunities



Edited by **Zulfiqar Ali**, **Muhammad Tehseen Azhar** and **Muhammad Azam Khan**

Climate-Resilient Crops: Challenges and Opportunities offers a clear and concise guide to the development of crops that can withstand the increasing threats of climate change. With rising global temperatures and more frequent extreme weather events, this book highlights innovative approaches in breeding, biotechnology, and crop management to meet future food demands.

CRC Press

Market: Plant Sciences

April 2026: 234x156: 296pp: 23 illus, 13 halftones, 10 line drawings

Hb: 978-1-032-71223-9: **£105.00**

★ For full contents and more information, visit: www.routledge.com/9781032712239

TEXTBOOK

Concepts in Reproduction

From Evolution of Mechanisms to Clinical Impact



Gary M. Wessel, **Julian L. Wong**, **Harvey Florman**, **Carmen J. Williams** and **Mark A. Johnson**

Concepts in Reproduction integrates the principal mechanisms of reproduction among eukaryotes. The text emphasizes processes and approaches that evolved to address specific problems inherent in reproduction using examples from morphology, functional studies, and genetic studies. The many high-quality figures complement the text and provide visual storyboards. Footnotes and boxes found throughout provide depth and enrich understanding. This textbook is recommended for advanced undergraduate students, new graduate students,

and investigators or clinicians seeking breadth in their knowledge in the field.

CRC Press

Market: Reproductive Biology

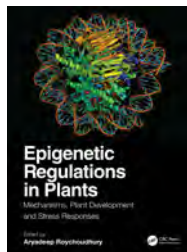
March 2026: 280x210: 502pp: 241 illus, 83 halftones, 158 line drawings

Pb: 978-0-367-65269-2: **£74.99**

★ For full contents and more information, visit: www.routledge.com/9780367652692

Epigenetic Regulations in Plants

Mechanisms, Plant Development and Stress Responses



Edited by **Aryadeep Roychoudhury**

This book provides a detailed overview of the significance of epigenetic regulation as an important mechanism underlying the regulation of gene expression in plants. It highlights the role played by epigenetic mechanisms in the overall physiology of plants and how these mechanisms can improve quality traits by conferring tolerance and resistance against abiotic and biotic stresses. This is an essential read for researchers and scientists working in the fields of plant physiology, molecular biology and biotechnology, as well as related disciplines of biochemistry, agricultural science and botany.

CRC Press

Market: Botany and Agriculture

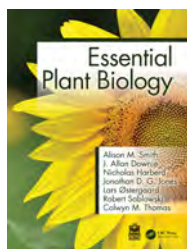
March 2026: 280x210: 552pp: 58 illus, 58 line drawings

Hb: 978-1-032-94313-8: **£165.00**

★ For full contents and more information, visit: www.routledge.com/9781032943138

TEXTBOOK

Essential Plant Biology



Alison M. Smith, J. Allan Downie, Nicholas Harberd, Jonathan D.G. Jones, Lars Østergaard, Robert Sablowski and Colwyn M. Thomas

This exciting new textbook presents current knowledge of plant biology, highlighting important topics for future research. It addresses the dynamic nature of plant genomes, the conversion of products of photosynthesis into molecules that comprise the plant, and the nature and coordination of growth, development, and reproduction. It describes how these properties of plants are impacted by their surroundings. Finally, it outlines the history, importance and future of human

interactions with plants. Designed for undergrad biology students who have a grounding in the fundamentals of molecular biology/biochemistry, it is also a valuable resource for postgrads in plant research.

CRC Press

Market: Plant Science

January 2026: 280x210: 586pp: 567 illus, 221 halftones, 346 line drawings

Pb: 978-1-041-08173-9: **£59.99**

★ For full contents and more information, visit: www.routledge.com/9781041081739

TEXTBOOK

Experimental Evolution

The Making of a Modern Science



Tony Dean and Dan Dykhuizen

The book shows how well-designed experiments can be used to test evolutionary theory decisively. The focus is on microbes, their small size, rapid reproduction in chemically defined environments, ease of manipulation and stability in long-term storage make them ideal subjects for laboratory experiments. Its organization also facilitates outsiders entering the field as it closely follows the biological siloes, separating molecular phenomena from ecological phenomena, while clearly delineating how these levels interact to produce. This is a valuable resource for anyone interested in natural selection, evolutionary process and insights from approaches not familiar in their own fields.

CRC Press

Market: Evolutionary Biology

March 2026: 254x178: 394pp: 218 illus, 51 halftones, 167 line drawings

Hb: 978-1-032-99769-8: **£135.00**

★ For full contents and more information, visit: www.routledge.com/9781032997698

Exploring Herbal Synergies for Optimal Human Health



Edited by **Arti Devi, Nancy George, Zaved Ahmed Khan and Vagish Dwivedi**

Series: Exploring Medicinal Plants

Exploring Herbal Synergies for Optimal Human Health offers a comprehensive examination of the combined effects of medicinal herbs and their potential to enhance human well-being. This book bridges traditional knowledge and modern scientific research, highlighting how herbal combinations can provide more effective, holistic approaches to health management.

CRC Press

Market: Herbal Medicine

February 2026: 254x178: 464pp: 42 illus, 27 halftones, 15 line drawings

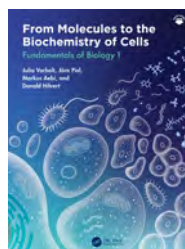
Hb: 978-1-032-87079-3: **£195.00**

★ For full contents and more information, visit: www.routledge.com/9781032870793

TEXTBOOK

From Molecules to the Biochemistry of Cells

Fundamentals of Biology 1



Julia A. Vorholt, Jörn Piel, Markus Aebi and Donald Hilvert

This textbook introduces biology as an interdisciplinary science, linking physics and chemistry to biological processes. Based on an evolutionary narrative, the focus is on the molecular composition and biochemistry of cells. By grounding biology in its molecular foundations, this approach reveals unifying principles underlying life's diversity and provides a conceptual framework for biological complexity. Core concepts include macromolecular structure and function, information encoding and decoding, and universal principles of energy conversion. This book is designed for students seeking an integrated

introduction to biology that connects molecular mechanisms to cellular structures.

CRC Press

Market: Biology

February 2026: 280x210: 274pp: 242 illus, 47 halftones, 195 line drawings

Pb: 978-1-032-51836-7: **£39.99**

★ For full contents and more information, visit: www.routledge.com/9781032518367

TEXTBOOK • 3rd Edition

Human Evolutionary Genetics



Mark Jobling, University of Leicester, UK, **Brenna Henn**, **Edward Hollox**, University of Leicester, UK, **Toomas Kivisild**, University of Cambridge, UK, **Luca Pagani** and **Chris Tyler-Smith**, The Wellcome Trust Sanger Institute, UK

Human Evolutionary Genetics reaches its third edition at a time when sequencing and analyzing whole genomes has become rapid, affordable, and routine. This new and completely revised edition makes sense of this rich information, tying it into other sources of evidence from paleontology, archaeology, and linguistics. The book takes readers on a journey from the prehistoric origins of our ancestors through to the historical era.

It embraces genomewide approaches throughout while explaining the contribution of studies of single genes and loci. Each chapter concludes with review questions, allowing students to test their understanding of chapter content.

CRC Press

Market: Undergraduates Studying Human Genetics, Anthropology, Human Evolution and Population Genetics

January 2026: 280x210: 630pp: 356 illus, 37 halftones, 319 line drawings

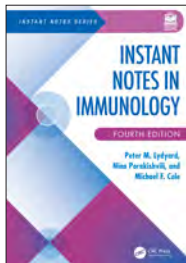
Pb: 978-0-8153-4563-3: **£69.99**

Prev. Ed Pb: 978-0-8153-4148-2

★ For full contents and more information, visit: www.routledge.com/9780815345633

TEXTBOOK • 4th Edition

Instant Notes in Immunology



Peter M. Lydyard, Royal Free & Univ. College Medical School, UK, **Nina Porakishvili** and **Michael F. Cole**

Series: *Instant Notes*

Instant Notes in Immunology, Fourth Edition, is the perfect text for science undergraduates and medical students looking for a concise introduction to the subject, or a study guide to use before examinations. Thoroughly updated in all areas, especially in mucosal immunity, regulation of the immune response and cancer immunotherapy, each topic begins with a summary of essential facts, an ideal revision checklist followed by a description of the subject that focuses on core information, with clear, simple diagrams easy for students to

understand and recall in essays and exams.

Taylor & Francis

Market: Immunology

January 2026: 254x178: 496pp: 149 illus, 5 halftones, 144 line drawings

Pb: 978-1-032-56044-1: **£26.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032560441

Intelligent Nanotechnology in Plant Science and Agriculture



Edited by **Jen-Tsung Chen**

Intelligent Nanotechnology in Plant Science and Agriculture features information on intelligent strategies for nanocarriers, nanosensors, nanorobotics, biogenic nanoparticles, and nano-fertilizers. It proposes literature on AI-nano systems highlighting their applications in stress management, plant protection, crop improvement, and water/soil management. The book discusses ethical and regulatory considerations for combinatorial AI-nanotechnology in agriculture and agrifood systems.

CRC Press

Market: Plant Sciences

March 2026: 254x178: 352pp: 49 illus, 37 halftones, 12 line drawings

Hb: 978-1-041-04212-9: **£170.00**

★ For **full contents** and more information, visit: www.routledge.com/9781041042129

Migrating and Wintering Waterfowl



Edited by **Bart M. Ballard**, **Michael G. Brasher** and **Joseph P. Fleskes**

This book explores the remarkable journeys that ducks, geese, and swans undertake each year in search of suitable migratory stopover and wintering habitats. Combining scientific insights with field observations, it offers a detailed understanding of the remarkable adaptations of these birds and the conservation efforts undertaken to ensure their sustainability. It discusses the major migratory routes in North America, such as the Atlantic, Mississippi, Central, and Pacific Flyways. It serves as a thoroughly researched synthesis of our historical and contemporary understanding of waterfowl.

CRC Press

Market: Wildlife Science

March 2026: 280x210: 456pp: 143 illus, 104 halftones, 39 line drawings

Hb: 978-1-041-12374-3: **£150.00**

★ For **full contents** and more information, visit: www.routledge.com/9781041123743

Nanotechnology in Pre- and Postharvest Horticulture

Applications and Developments



Edited by **Olaniyi Amos Fawole** and **Ibrahim Kahramanoglu**, European University of Lefke, Cyprus

Nanotechnology in Pre- and Postharvest Horticulture: Applications and Developments provides a comprehensive exploration of the dynamic intersection between nanotechnology and horticulture, showcasing cutting-edge research and practical applications. Across its four sections and sixteen chapters, readers will discover how engineered nanomaterials, nanosensors, smart delivery systems, and nano-enabled packaging are revolutionizing horticultural practices—from pre-harvest strategies to postharvest preservation.

CRC Press

Market: Agriculture

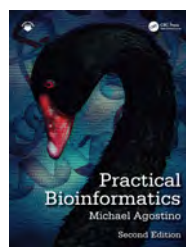
February 2026: 254x178: 432pp: 32 illus, 25 halftones, 7 line drawings

Hb: 978-1-032-85302-4: **£105.00**

★ For **full contents** and more information, visit: www.routledge.com/9781032853024

TEXTBOOK • 2nd Edition

Practical Bioinformatics



Michael Agostino, Merrimack College, USA and Pfizer Inc., USA

Practical Bioinformatics is designed as an introduction to bioinformatics sequence analysis. There is heavy emphasis on the steps required to perform bioinformatics analysis to answer biological questions. The book contains many exercises such as database searches, protein analysis, and data interpretation to complement the straightforward and practical topics. The chapters are focused on DNA, RNA, and protein sequence analysis—frequently performed subsets of the field of bioinformatics—taking the reader through the commonly asked question “what

can I learn about this sequence?”

Garland Science

Market: Bioinformatics

January 2026: 280x210: 354pp: 264 illus, 143 halftones, 121 line drawings

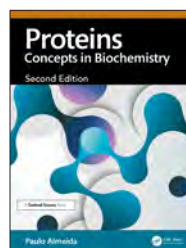
Pb: 978-1-032-61062-7: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032610627

TEXTBOOK • 2nd Edition

Proteins

Concepts in Biochemistry



Paulo Almeida

Proteins: Concepts in Biochemistry teaches the biochemical concepts underlying protein structure, evolution, stability, folding, and enzyme kinetics, and explains how interactions in macromolecular structures determine protein function. Intended for a one-semester course in biochemistry or biophysical chemistry with a focus on proteins, this textbook emphasizes the logic underlying biophysical chemical principles.

Garland Science

Market: Biochemistry

November 2025: 280x210: 410pp: 356 illus, 139 halftones, 217 line drawings

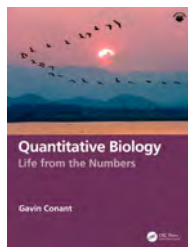
Hb: 978-1-032-51842-8: **£185.00**

★ For **full contents** and more information, visit: www.routledge.com/9781032518428

TEXTBOOK

Quantitative Biology

Life from the Numbers



Gavin Conant

Biology has become a data-driven science, with large-scale datasets driving fields from population genomics to ecology. Practicing biologists have no choice but to use computational approaches, statistics and modeling in their research. This book provides students whose background is in biology with an introduction to modeling biological systems using mathematical, computational and statistical tools. It is based around a series of hands-on analyses conducted with open-source tools that allow the students to discover for themselves emergent properties of biological systems that are not evident without using

model-based approaches.

CRC Press

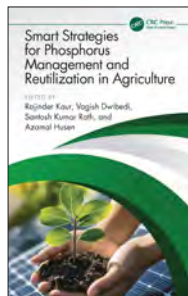
Market: Biology

February 2026: 280x210: 306pp: 153 illus, 40 halftones, 113 line drawings

Hb: 978-1-041-17016-7: £125.00

★ For full contents and more information, visit: www.routledge.com/9781041170167

Smart Strategies for Phosphorus Management and Reutilization in Agriculture



Edited by **Rajinder Kaur, Vagish Dwibedi, Santosh Kumar Rath and Azamal Husen**, Wolaita Sodo University, Ethiopia

Smart Strategies for Phosphorus Management and Reutilization in Agriculture gives a comprehensive exploration of the state of phosphorus in soil, addressing the urgent challenge of its depletion while unveiling cutting-edge technologies designed to recycle this vital resource for future sustainability.

CRC Press

Market: Agriculture

March 2026: 254x178: 272pp: 28 illus, 12 halftones, 16 line drawings

Hb: 978-1-032-90307-1: £145.00

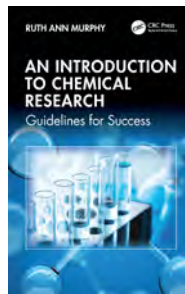
★ For full contents and more information, visit: www.routledge.com/9781032903071

CHEMISTRY & PHARMACEUTICAL SCIENCE

TEXTBOOK

An Introduction to Chemical Research

Guidelines for Success



Ruth Ann Murphy

This user-friendly student text presents a comprehensive and novel approach to preparation for chemical research. It can be adopted as a textbook for research courses, but also for individual study. Useful details such as ordering supplies and dealing with granting foundations are included. Even working with maintenance crews is discussed. The text saves research directors valuable time in the development of courses and it even highlights foundational material with examples and case studies from the research world. It serves as the 'go-to' text and first resource in the exciting field of chemical research.

CRC Press

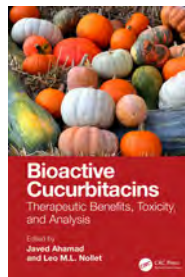
April 2026: 234x156: 280pp: 55 illus, 52 halftones, 3 line drawings

Pb: 978-1-032-46639-2: £49.99

★ For full contents and more information, visit: www.routledge.com/9781032466392

Bioactive Cucurbitacins

Therapeutic Benefits, Toxicity, and Analysis



Edited by **Javed Ahamad and Leo M.L. Nollet**, University College Ghent

This book provides an important guideline for the extraction, isolation, identification, and characterization of bioactive cucurbitacins present in vegetables and fruits. It emphasizes recent preclinical and clinical studies on cucurbitacins role as a lead molecule for the prevention and treatment of various types of cancers, human infections, metabolic syndrome, and their role as antioxidants and anti-inflammatory agents. This book summarizes the current state of knowledge in the key research areas and provides ideas for future scientific research to identify lead molecules "cucurbitacins" from vegetables and fruits and to use them in drug discovery and development.

CRC Press

Market: Pharmaceutical Science

January 2026: 234x156: 276pp: 29 illus, 4 halftones, 25 line drawings

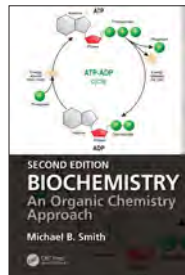
Hb: 978-1-032-95140-9: £105.00

★ For full contents and more information, visit: www.routledge.com/9781032951409

TEXTBOOK • 2nd Edition

Biochemistry

An Organic Chemistry Approach



Michael B. Smith, University of Connecticut, Storrs, USA

Reactions in biochemistry can be explained by an understanding of fundamental organic chemistry principles and reactions. This paradigm is extended to biochemical principles and to a myriad of biomolecules. The text provides a framework for understanding various topics of biochemistry including the chemical behavior of biomolecules, enzyme activity and more. Using several techniques to develop a relational understanding, including homework, this text helps students fully grasp and better correlate the essential organic chemistry concepts with those concepts at the root of biochemistry. The goal is to better understand the fundamental principles of biochemistry.

CRC Press

Market: Chemistry

January 2026: 254x178: 376pp: 262 illus, 71 halftones, 191 line drawings

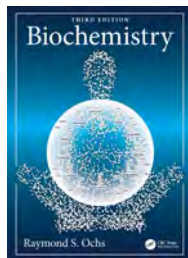
Pb: 978-1-032-99619-6: £110.00

Prev. Ed Pb: 978-0-8153-6645-4

★ For full contents and more information, visit: www.routledge.com/9781032996196

TEXTBOOK • 3rd Edition

Biochemistry



Raymond S. Ochs

Biochemistry, Third Edition, is a single-semester text designed for undergraduate non-biochemistry majors. Accessible, engaging, and informative, it is the perfect introduction to the subject for students who may approach chemistry with apprehension. Its unique emphasis on metabolism and its kinetic underpinnings gives the text up-to-the-minute relevance for students investigating current public health concerns, such as obesity and diabetes. This text will encourage students to explore the basics of chemistry and its influence on biological problems.

CRC Press

Market: Chemistry

March 2026: 280x210: 376pp: 409 illus, 59 halftones, 350 line drawings

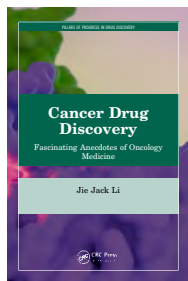
Pb: 978-1-032-81414-8: **£99.99**

Prev. Ed Pb: 978-0-367-46187-4

★ For full contents and more information, visit: www.routledge.com/9781032814148

Cancer Drug Discovery

Fascinating Anecdotes of Oncology Medicine



Jie Jack Li, Revolution Medicines, California, USA

Series: Pillars of Progress in Drug Discovery

History is an erudite teacher, from which we can learn invaluable lessons, both positive and negative. This is especially true for drug discovery and development. While creativity demands we think outside of the box, past successes and failures in creating medicines are gifts that keep on giving. Creation of human medicines involves so many scientific and medical disciplines that history is our indispensable resources of institutional knowledge. This volume in a new series sheds light on successes to emulate and pitfalls to avoid in oncology drug discovery. The series editor blends education with engaging content for aspiring drug developers and helps to foster a deeper understanding.

CRC Press

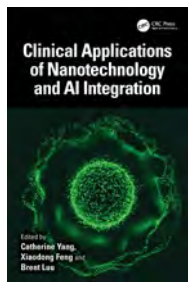
Market: Drug discovery

May 2026: 234x156: 240pp: 102 illus, 7 halftones, 95 line drawings

Pb: 978-1-041-24802-6: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781041248026

Clinical Applications of Nanotechnology and AI Integration



Edited by Xiaodong Feng, Brent B. Luu and Catherine Yang

The convergence of nanomedicine and artificial intelligence (AI) is revolutionizing healthcare, offering unprecedented advancements in diagnostics, drug delivery, and personalized treatment. Nanomedicine and AI-Enabled Technology in Clinical Application provides an in-depth exploration of these fields, shedding light on cutting-edge innovations and their real-world clinical implications. Edited by leading experts, this book serves as a valuable resource for researchers, clinicians, medical professionals, and industry leaders striving to harness the potential of nanomedicine and AI for improved global healthcare.

CRC Press

March 2026: 254x178: 490pp: 66 illus, 40 halftones, 26 line drawings

Pb: 978-1-032-52412-2: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781032524122

TEXTBOOK

Drug Delivery

From Fundamentals to the Future



Edited by Dimitrios A. Lamprou and Matthew P. Wylie

This new text assist students in understanding the important science underpinning the formulation of modern dosage forms and how pharmaceutical and biopharmaceutical formulations are developed. Moreover, it covers the design and development of a wide range of pharmaceutical formulations and problem-solving issues associated with their production. The chapters support undergraduate and graduate students to develop the knowledge required for their studies or prepare for employment in the pharmaceutical industry that is estimated to be worth \$1.42 trillion. The book covers topics from basic drug delivery to the future, including machine

learning and sustainability approaches.

CRC Press

Market: Pharmaceutical Sciences

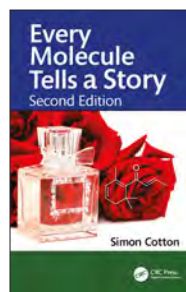
May 2026: 254x178: 600pp: 131 illus, 61 halftones, 70 line drawings

Pb: 978-1-032-77235-6: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781032772356

TEXTBOOK • 2nd Edition

Every Molecule Tells a Story



Simon Anthony Cotton, University of Birmingham, UK

This latest edition continues the celebration of molecules responsible for the experiences of everyday life such as the air we breathe, the water we drink, the chemicals that fuel our living. It presents new sections, notably the chemistry of molecules in food, including spices; vitamins; molecules with unpleasant smells (which seem to interest many people!); organic halogen compounds, substances which have an undeserved reputation. It also covers developments such as the chemistry of drugs; drugs of abuse, for example opioid painkillers. Based on the highly successful first edition, this book brushes away any preconceived notions about chemistry to demonstrate its importance.

CRC Press

Market: Textbook

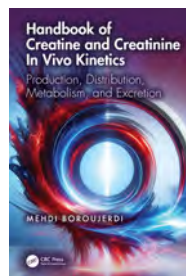
March 2026: 234x156: 248pp: 471 illus, 1 halftone, 470 line drawings

Pb: 978-1-032-61624-7: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781032616247

Handbook of Creatine and Creatinine In Vivo Kinetics

Production, Distribution, Metabolism, and Excretion



Mehdi Boroujerdi, College of Health Sciences - School of Pharmacy, University of Massachusetts Lowell, USA

The conceptual basis to summarize and predict the in vivo behavior and the related mathematical descriptions and models of creatine and creatinine are currently based on the principles and the methodologies of pharmacokinetics and pharmacodynamics. Most in vivo kinetic analyses and models of creatine and creatinine are assumed linear. The presence of nonlinear in vivo kinetics for creatine are assessed by the author due to the affinity and preferential uptake of the molecule in the muscle. This book is an inquiry into the application of these principles and methodologies for the endogenous compounds creatine and creatinine, and

provides new pathways for studies and bench research.

CRC Press

Market: Biochemistry

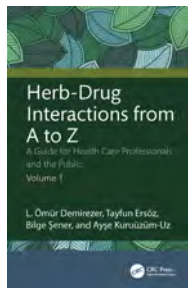
May 2026: 234x156: 312pp: 49 illus, 49 line drawings

Pb: 978-1-032-99528-1: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781032995281

Herb-Drug Interactions from A to Z

A Guide for Health Care Professionals and the Public Volume 1



L. Ömür Demirezer, Tayfun Ersöz, Bilge Şener and Ayşe Kuruüzüm-Uz

This volume provides information about herb-drug interactions that may arise as a result of the increasing interest in medicinal plants or herbal products and the concomitant use of conventional drugs. Medicinal plant-drug interactions are inevitable, especially when the elderly use medicinal plant products in addition to polypharmacy. Concurrent consumption of herbal products and conventional drugs is a serious concern. Over-the-counter herbal drug's doses can inhibit the metabolism of conventional drugs, increasing plasma levels of the drug. This book highlights evidence on herb-drug interactions from a systematic review,

providing rapid access to information on their clinical use.

CRC Press

Market: Chemistry

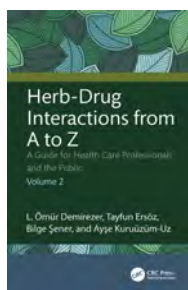
April 2026: 234x156: 368pp: 42 illus, 42 line drawings

Pb: 978-1-032-98648-7: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032986487

Herb-Drug Interactions from A to Z

A Guide for Health Care Professionals Volume 2



L. Ömür Demirezer, Tayfun Ersöz, Bilge Şener and Ayşe Kuruüzüm-Uz

This volume provides information about herb-drug interactions that may arise as a result of the increasing interest in medicinal plants or herbal products and the concomitant use of conventional drugs. Medicinal plant-drug interactions are inevitable, especially when the elderly use medicinal plant products in addition to polypharmacy. Concurrent consumption of herbal products and conventional drugs is a serious concern. Over-the-counter herbal drug's doses can inhibit the metabolism of conventional drugs, increasing plasma levels of the drug. This book highlights evidence on herb-drug interactions from a systematic review,

providing rapid access to information on their clinical use.

CRC Press

Market: Chemistry

April 2026: 234x156: 272pp: 31 illus, 31 line drawings

Pb: 978-1-032-98649-4: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032986494

Integrative Approach to Fungal Infections and Bioprospecting for Drug Discovery

Volume 1



Edited by **Eti Sharma, Rekha Puria and Karan Kumar**

Series: Medicinal Plants and Natural Products for Human Health

Research into plant-based antifungals offers a viable alternative to discover potent, eco-friendly, and sustainable treatments. Natural antifungal compounds offer a promising solution, as they tend to have fewer side effects and reduced risk of resistance development compared to synthetic alternatives. This book delves into the application of metagenomics in identifying and harnessing the microbial communities associated with medicinal plants. By integrating bioprospecting techniques with cutting-edge genomic technologies, this work opens up promising new avenues to provide insights into the potential of natural products for developing novel antifungal therapies.

CRC Press

Market: Chemistry

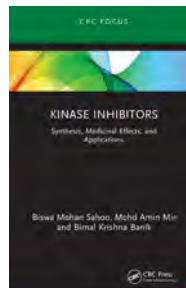
May 2026: 234x156: 296pp: 22 illus, 14 halftones, 8 line drawings

Hb: 978-1-041-06138-0: **£190.00**

★ For **full contents** and more information, visit: www.routledge.com/9781041061380

Kinase Inhibitors

Synthesis, Medicinal Effects, and Applications



Biswa Mohan Sahoo, Mohd Amin Mir and Bimal Krishna Banik

Series: Global Science Education

Kinase inhibitors are the type of medications that target enzymes called kinases, which play a crucial role in signaling pathways involved in cell growth, proliferation, and survival. These inhibitors are used in the treatment of various cancers and other diseases. This book provides essential information in the design of new drug molecules for the development of kinase inhibitors. It includes the existing drugs and those under clinical trial that are involved in the development process.

CRC Press

Market: Biochemistry

March 2026: 216x138: 140pp: 20 illus

Hb: 978-1-041-22115-9: **£52.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041221159

Modeling Prevalent Cancers

Understanding and Innovating Therapeutic Approaches



Edited by **Yash Sharma, Kumud Bala, Sudhir Kumar Pal and Monu Monu**

This volume offers a comprehensive exploration of prevalent cancers and the innovative Modeling techniques driving advancements in treatment strategies. In today's landscape of cancer research and therapeutic development, understanding the complexities of cancer biology and translating these insights into effective treatments is paramount. This book fills a crucial gap in the literature by providing a detailed examination of the diverse Modeling approaches utilized in the study of prevalent cancers, including breast, lung, colorectal, prostate, ovarian, and melanoma.

CRC Press

Market: Pharmaceutical Science

February 2026: 234x156: 304pp: 26 illus, 26 halftones

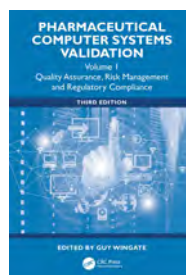
Hb: 978-1-032-95138-6: **£105.00**

★ For **full contents** and more information, visit: www.routledge.com/9781032951386

3rd Edition

Pharmaceutical Computer Systems Validation

Quality Assurance, Risk Management and Regulatory Compliance, Volume 1



Edited by **Guy Wingate**

Computerised systems play a fundamental role in the development, manufacture and supply of medical treatments.

This is the third and thoroughly updated edition of the best-selling book dealing with validation, compliance and software in the pharmaceutical, healthcare and medical device industries. The first volume provides a comprehensive walk-through of lifecycle and development methodologies bringing together technological advances, latest regulatory requirements, inspection findings, and compliance strategies.

New chapters have been added on agile development methodologies, data integrity, artificial intelligence and machine learning. The second volume comprises an extensive set of

refreshed case studies spanning laboratory, manufacturing and supply chain systems with new contributions on databases, spreadsheets, LIMS, blockchain, mobile devices, AI-enabled systems, big data and digital twins authored by various industry experts.

CRC Press

Market: Pharmaceutical Science

April 2026: 254x178: 800pp: 150 illus

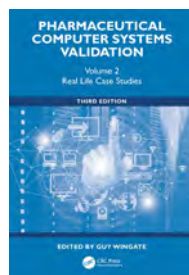
Hb: 978-1-032-98108-6: **£99.99**

Prev. Ed Hb: 978-1-4200-8894-6

★ For **full contents** and more information, visit: www.routledge.com/9781032981086

Pharmaceutical Computer Systems Validation

Quality Assurance, Risk Management and Regulatory Compliance, Volume 2



Edited by **Guy Wingate**

Computerised systems play a fundamental role in the development, manufacture and supply of medical treatments. This is the third and thoroughly updated edition of the best-selling book dealing with validation, compliance and software in the pharmaceutical, healthcare and medical device industries. The first volume provides a comprehensive walk-through of lifecycle and development methodologies bringing together technological advances, latest regulatory requirements, inspection findings, and compliance strategies. New chapters have been added on agile development methodologies, data integrity, artificial intelligence and machine learning. The second volume comprises an extensive set of

refreshed case studies spanning laboratory, manufacturing and supply chain systems with new contributions on databases, spreadsheets, LIMS, blockchain, mobile devices, AI-enabled systems, big data and digital twins authored by various industry experts.

CRC Press

Market: Pharmaceutical Science
June 2026: 254x178: 800pp: 150 illus
Hb: 978-1-032-98110-9: **£99.99**

★ For full contents and more information, visit: www.routledge.com/9781032981109

Receptor Dynamics in Pharmacology



Edited by **Neelkanth Pujari, Mohammad Khushtar and Deepika Gupta**

Receptor pharmacology forms the backbone of drug discovery and development, influencing therapeutic interventions across diverse medical fields. This volume provides a comprehensive overview of foundational principles, including receptor structure, ligand binding and signal transduction, while also addressing cutting-edge advancements such as biased agonism, allosteric modulation, pharmacogenomics and artificial intelligence applications in drug discovery. It features practical works and translational research examples that connect receptor pharmacology to the development of innovative therapies,

showcasing its impact on modern medicine.

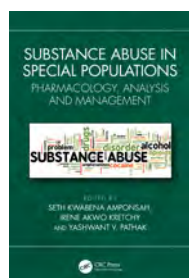
CRC Press

Market: Pharmacology
June 2026: 234x156: 350pp: 75 illus
Pb: 978-1-041-12261-6: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781041122616

Substance Abuse in Special Populations

Pharmacology, Analysis and Management



Edited by **Seth Kwabena Amponsah**, UGMS, Ghana, **Irene Akwo Kretchy** and **Yashwant V. Pathak**, USF, USA

Substance abuse and addiction is the use of illegal drugs, prescription or over-the-counter drugs or household substances in a way that is detrimental to self, society or both. This volume discusses social, psychological, cultural, biological, and medical perspectives of substance abuse and addiction in special populations; with appropriate case study examples. It captures the various abused substances, novel assay techniques, laws governing use of these substances and management strategies. It includes a compendium of information on recent trends in substance abuse and addiction in special populations like adolescents, pregnant women,

athletes, health professionals, among others.

CRC Press

Market: Pharmacology
February 2026: 234x156: 276pp: 18 illus, 11 halftones, 7 line drawings
Pb: 978-1-041-02940-3: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781041029403



COMPUTER SCIENCE & COMPUTER GRAPHICS

Advances using AI - The Next Wave



Edited by **Vanamali Somanchi, Richard R. Khan and Tulay Guneyssel**

Advances using AI – The Next Wave offers a timely and comprehensive exploration of the latest breakthroughs and future directions in Artificial Intelligence, presenting a forward-looking perspective on how AI is reshaping industries and daily life. This essential volume brings together expert insights on AI's practical applications, ethical considerations, and its profound impact on society, making complex concepts accessible and relevant. This book is indispensable for AI professionals, researchers, academics, policymakers, students, and anyone eager to grasp the current state and future potential of Artificial Intelligence across diverse sectors.

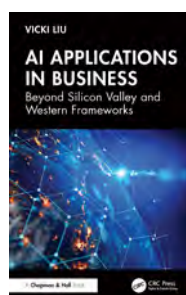
Chapman and Hall/CRC

Market: Computer Science
February 2026: 234x156: 296pp
Pb: 978-1-041-23740-2: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781041237402

AI Applications in Business

Beyond Silicon Valley and Western Frameworks



Vicki Liu

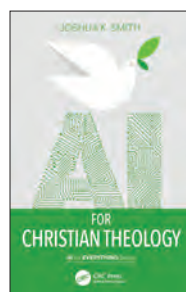
This book offers a unique perspective on how ancient philosophies hold the key to AI success. From Chinese *wu wei* (effortless action) to Japanese *kaizen* (continuous improvement) to South African *ubuntu* (interconnectedness), time-tested wisdom offers powerful frameworks for navigating AI's promises and pitfalls. Whether you're a CEO, manager, or entrepreneur, this book provides cultural insights and practical frameworks you need to deploy AI thoughtfully, strategically, and successfully.

Chapman and Hall/CRC

Market: Artificial Intelligence / Business Studies
April 2026: 234x156: 224pp: 7 illus, 1 halftone, 6 line drawings
Pb: 978-1-041-08288-0: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781041082880

AI for Christian Theology



Joshua K. Smith

Series: AI for Everything

What if theology was never meant to be static? What happens when the act of faith is reimagined across generations, cultures, and now, code? How can diverse theological perspectives work together to build ethical AI? This book explores how AI offers a new lens for understanding faith, challenging communities to see theology as a dynamic, creative process rather than a static tradition. This book examines how Christianity itself is a tradition of reimagining and reinventing. From Scripture woven from fragments of law, prophecy, and poetry to Christ as the Logos made flesh, faith has always been transmitted, transformed, and re-voiced in response to new contexts.

CRC Press

Market: Computer Science / Theology
April 2026: 198x129: 120pp
Pb: 978-1-032-32969-7: **£22.99**

★ For full contents and more information, visit: www.routledge.com/9781032329697

AI for Time Series

Volume 1: Unlocking Patterns with Deep Learning



Edited by **Min Wu, Emadeldeen Eldele, Zhenghua Chen, Shirui Pan, Qingsong Wen and Xiaoli Li**

This book provides a thorough exploration of the latest innovations in AI for general time series analysis, distribution shift and foundation models. It offers an in-depth look at cutting-edge techniques and methodologies, using advance algorithms that are transforming time series analysis across industries. The book can be used as a supplementary reading for graduate students taking advanced topics/seminars on advanced deep learning and foundation models.

CRC Press

Market: Computer Science, Artificial Intelligence, Deep Learning

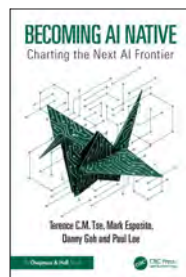
May 2026: 234x156: 234pp: 86 illus, 86 line drawings

Pb: 978-1-041-01031-9: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041010319

Becoming AI Native

Charting the Next AI Frontier



Terence C.M. Tse, Mark Esposito, Danny Goh and Paul Lee

This engaging guide is designed to demystify artificial intelligence (AI) in the business world, no advanced maths degrees or robotic companions are necessary. It tackles everything from traditional AI to the exciting realm of Generative AI, clearly distinguishing between what is genuinely beneficial and what is merely hype, all while demonstrating how to leverage AI to address real-world business challenges.

Chapman and Hall/CRC

Market: Artificial Intelligence / Business / Entrepreneurship

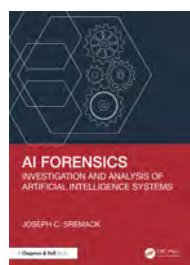
February 2026: 234x156: 190pp: 29 illus, 12 halftones, 17 line drawings

Pb: 978-1-032-90763-5: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032907635

AI Forensics

Investigation and Analysis of Artificial Intelligence Systems



Joseph C. Sremack

AI Forensics provides the first comprehensive framework for investigating artificial intelligence systems when they fail, cause harm, or become subjects of legal or regulatory scrutiny. As AI systems power critical decisions, traditional digital forensics proves inadequate for understanding their complex, opaque, and dynamic behaviors. This practical guide equips forensic investigators, legal professionals, and AI practitioners with specialized methodologies tailored to AI's unique characteristics. It provides both technical depth for expert practitioners and accessible explanations for legal professionals who must understand and present AI evidence in court proceedings.

Chapman and Hall/CRC

Market: Computer Science

March 2026: 254x178: 440pp: 25 illus, 25 line drawings

Pb: 978-1-041-06303-2: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041063032

Becoming Homo lucidus



Min Ding, Pennsylvania State University, US

What happens when humanity steps beyond the limits of biology and creates intelligence greater than its own? *Becoming Homo lucidus* offers a bold vision of that future and a roadmap for how to prepare. The book traces humanity's journey from Biological Intelligence (BI) to Digital Intelligence (DI), showing how the two will converge to usher in *Homo lucidus*. If you wonder what the rise of Digital Intelligence (DI) means for your life, your children, or the world you live in, this is both a guide and an invitation: to endure until 2035, navigate the turbulent transition to 2045, and prosper in lifespans that may extend for centuries and more.

Chapman and Hall/CRC

Market: Technology

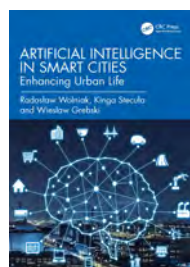
February 2026: 234x156: 232pp: 20 illus, 20 line drawings

Pb: 978-1-041-19241-1: **£36.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041192411

Artificial Intelligence in Smart Cities

Enhancing Urban Life



Radosław Wolniak, Kinga Stecula and Wiesław Grebski

Artificial Intelligence in Smart Cities presents an interdisciplinary and comprehensive analysis of how AI re-engineers urban life, governance, and infrastructure. The book explores key thematic areas including smart government, economy, environment, living, people, cybersecurity, and innovation, complemented by Central European empirical case studies.

CRC Press

Market: Artificial Intelligence/Urban Studies

February 2026: 254x178: 224pp

Pb: 978-1-032-96019-7: **£44.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032960197

Before, After, and Beyond AlphaGo



Woosuk Park

This book is a unique exploration designed for both philosophers and Baduk (Go, Weiqi) players, bridging two worlds that rarely intersect. AlphaGo, the groundbreaking AI, has been both a challenge and a revelation for these communities. As someone who belongs to both groups, the author feels a profound responsibility to connect them and share insights that resonate across disciplines. This book is not just for philosophers or Go players—it is for anyone seeking to understand the profound implications of AI on human thought, interaction, and the future of our species.

CRC Press

Market: Computer Science

April 2026: 234x156: 248pp: 76 illus, 76 line drawings

Hb: 978-1-041-15351-1: **£110.00**

★ For **full contents** and more information, visit: www.routledge.com/9781041153511

BiteSize Python for Intermediate Learners

With Practice Labs, Real-World Examples, and ChatGPT



Di Wu

Series: Chapman & Hall/CRC The Python Series

This book is designed for intermediate learners with a basic understanding of Python. It allows readers to take a slow and steady approach to building upon their understanding of Python code. Python programming is broken down into easily digestible lessons of less than 5 minutes each, following a tried and tested BiteSize approach. The reader will also play with case studies to solve real-world problems. Tips on how to incorporate Generative AI into a learning toolkit are provided, for purposes like feedback, practice exercises, code reviews, and exploring advanced topics. Recommended AI prompts can help readers

identify areas for improvement, review key concepts, and track progress.

Chapman and Hall/CRC

Market: Programming Languages / Python

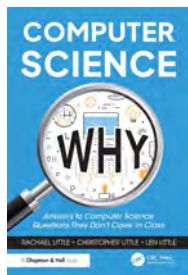
March 2026: 254x178: 352pp: 165 illus, 165 line drawings

Pb: 978-1-041-03682-1: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041036821

Computer Science Why

Answers to Computer Science Questions They Don't Cover in Class



Rachael Little, Christopher Little and Len Little

CS Why is a book that presents a straightforward, curiosity-based approach to filling in the blanks around common, introductory material taught in Computer Science classes. If you have ever wondered "why is that?" about a programming phenomenon, historical tidbit, or common terminology, this book may have an answer that explains it. Perfect for both students and IT professionals, this book provides the clear "why" to answer so many unstated CS questions. Take any example in the book, from base 2 to timezones, and you will have an answer that cements your insight on the "why" of the topic, reinforcing your rote memorization with deeper understanding and insight.

Chapman and Hall/CRC

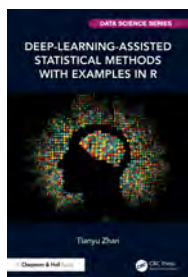
Market: Computer Science

March 2026: 234x156: 150pp: 22 illus, 15 halftones, 7 line drawings

Pb: 978-1-032-85674-2: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032856742

Deep-Learning-Assisted Statistical Methods with Examples in R



Tianyu Zhan

Series: Chapman & Hall/CRC Data Science Series

This book explores how deep learning enhances statistical methods for hypothesis testing, point estimation, optimization, interpretation, and other aspects. It uniquely demonstrates leveraging deep learning to improve traditional statistical approaches, showcasing their superior performance in practical applications. This book is a valuable resource for students, practitioners, and researchers integrating statistics and data science techniques to solve impactful real-world problems.

Chapman and Hall/CRC

Market: Statistics, Data Science, Deep Learning

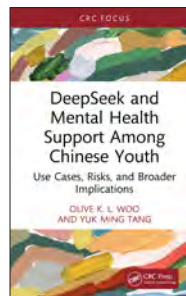
March 2026: 234x156: 188pp: 5 illus, 5 line drawings

Pb: 978-1-041-15843-1: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041158431

DeepSeek and Mental Health Support Among Chinese Youth

Use Cases, Risks, and Broader Implications



Olive K.L. Woo, Private practice, Hong Kong and Yuk Ming Tang

DeepSeek and Mental Health Support Among Chinese Youth: Use Cases, Risks, and Broader Implications explores how artificial intelligence is revolutionizing mental health care, providing innovative solutions to some of humanity's most pressing emotional challenges. In a society where stigma, cultural barriers, and insufficient resources prevent countless people from seeking help, DeepSeek has emerged as a lifeline, offering accessible, empathetic, and culturally tailored emotional support to millions.

CRC Press

Market: Artificial Intelligence / Mental Health

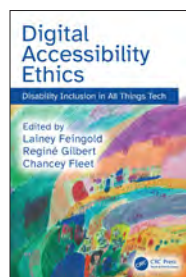
February 2026: 216x138: 100pp: 12 illus, 12 line drawings

Hb: 978-1-041-09244-5: **£51.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041092445

Digital Accessibility Ethics

Disability Inclusion in All Things Tech



Edited by Lainey Feingold, Reginé Gilbert and Chancey Fleet

Digital Accessibility Ethics is a practical guide with an urgent goal: to help end tech exclusion of 1.3 billion people across the world with disabilities. The book introduces the first Digital Accessibility Ethics Framework – an action-oriented, three-part tool designed to influence, change, and disrupt patterns of exclusion with values, actions, and questions. This book is for technologists, educators, students, marketers, policy makers and everyone who has ever posted on social media or sent an email. It encourages us to stop and ask ourselves: who are we excluding by our actions? Who are we harming, what are we risking, by our decisions?

Chapman and Hall/CRC

Market: Ethics

March 2026: 254x178: 368pp: 41 illus, 19 halftones, 22 line drawings

Pb: 978-1-041-01868-1: **£29.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041018681

Digital Convergence

Better Solutions for People with Dementia



Edited by Nilmini Wickramasinghe, Thu Ha Dang, Tuan Anh Nguyen and Sasan Adibi

This book focuses on using analytics and Artificial Intelligence (AI), to offer a high-quality value proposition to address dementia, a growing and concerning global healthcare problem. By enabling better decision support making, minimizing medical errors and use of specific treatment strategies, digital technologies are key to effective care for People Living with Dementia (PLWD). This book is a new and comprehensive text, which would serve as an important resource for practitioners and professionals in healthcare and beneficial as a supplementary text for students undertaking studies relating to health informatics and public healthcare.

CRC Press

Market: Healthcare, Digital Health, Analytics

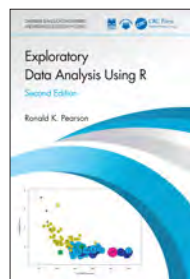
December 2025: 234x156: 384pp: 20 illus, 4 halftones, 16 line drawings

Pb: 978-1-032-77977-5: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032779775

TEXTBOOK • 2nd Edition

Exploratory Data Analysis Using R



Ronald K. Pearson, GeoVera Holdings, Inc., CA, USA

Series: *Chapman & Hall/CRC Data Mining and Knowledge Discovery Series*

Exploratory Data Analysis Using R provides a classroom-tested introduction to exploratory data analysis (EDA), and this revised edition is accompanied by the R package ExploreTheData. The primary focus is on identifying “interesting” features - good, bad, and ugly - in a dataset, why it is important to find them, how to treat them, and the use of R to explore and explain datasets and the analysis results derived from them. The book is designed for both advanced undergraduate, entry-level graduate students, and working professionals with little to no prior experience.

Exercises conclude most chapters, and an instructor's solution manual is available.

Chapman and Hall/CRC

Market: Computer Science

April 2026: 234x156: 592pp: 109 illus, 109 line drawings

Pb: 978-1-032-81480-3: **£48.99**

Prev. Ed Pb: 978-0-367-57156-6

★ For **full contents** and more information, visit: www.routledge.com/9781032814803

Generative AI and Generative AI of Things for Sustainable Smart Cities

Pioneering Environmental Innovations, Climate Solutions, and Infrastructural Transformations



Simon Elias Bibi

This pioneering book invites readers on a compelling journey into Generative Artificial Intelligence (AI) and its groundbreaking convergence with AI of Things (AIoT), introducing GAIoT as a transformative frontier in urban computing and intelligence. What sets this book apart is its first-of-its-kind focus on GAIoT as an innovative frontier shaping the future of sustainable urban development. It delivers actionable insights, conceptual and operational frameworks, case studies, and policy guidance—equipping diverse stakeholders with the tools to build cities that not only respond to change but also anticipate and shape it.

CRC Press

Market: Computer Science, Artificial Intelligence, Climate Action

December 2025: 234x156: 580pp: 29 illus, 29 line drawings

Pb: 978-1-041-13982-9: **£59.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041139829

Human-Engaged Computing



Edited by **Xiangshi Ren** and **Chen Wang**

This book introduces Human-Engaged Computing (HEC), a pioneering thought that reimagines the relationship between humans and computers. Unlike traditional Human-Computer Interaction (HCI), HEC offers a philosophical and practical foundation for designing technologies that prioritize human survival, flourishing, and spiritual growth. This book is a must-read for professionals and students across diverse fields, including human-computer interaction (HCI), computer science, philosophy, psychology, and sociology. Policymakers concerned with technology's societal impact will also find it invaluable.

Chapman and Hall/CRC

Market: Human-Computer Interaction

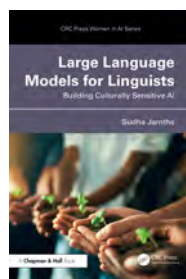
March 2026: 234x156: 368pp: 59 illus, 22 halftones, 37 line drawings

Hb: 978-1-032-75294-5: **£140.00**

★ For **full contents** and more information, visit: www.routledge.com/9781032752945

Large Language Models for Linguists

Building Culturally Sensitive AI



Sudha Jamthe

Series: *CRC Press Women in AI Series*

Bridges the gap between linguistics and technology. It provides an in-depth education on large language models for linguists and demonstrates how AI is being taught today using language as data without the nuances of language. It gives a playbook for linguists to get involved in teaching AI in a way that preserves the world's diverse linguistic and cultural heritage.

Chapman and Hall/CRC

Market: Artificial Intelligence

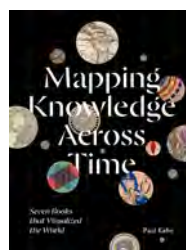
February 2026: 234x156: 232pp: 29 illus, 24 halftones, 5 line drawings

Pb: 978-1-032-88955-9: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781032889559

Mapping Knowledge Across Time

Seven Books which Visualized the World



Paul Kahn

Through information design, art, and social history, this book examines seven extraordinary works that transformed how humanity visualized the world. Spanning continents and centuries - from Arabic cosmography to Bauhaus-influenced atlases - these books reveal striking patterns in cross-cultural visual systems for embedding complex knowledge. Each chapter analyzes visual strategies used to construct comprehensive worldviews, demonstrating remarkable continuity in information design across cultures and its enduring relevance today.

CRC Press

Market: Visualization/History/Design

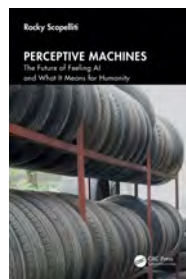
July 2026: 254x178: 350pp: 300 illus

Pb: 978-1-041-14892-0: **£49.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041148920

Perceptive Machines

The Future of Feeling AI and What It Means for Humanity



Rocky Scopelliti

This book offers a compelling look into the future of artificial intelligence, where AI systems are no longer limited to just processing information, but can perceive the world through synthetic senses. The author explores how this shift from purely cognitive AI to embodied sensory experiences is blurring the lines between human and machine intelligence. It's a deep dive into how multisensory AI, powered by breakthroughs in areas like haptics and neural interfaces, will fundamentally alter what it means to experience, connect, and ultimately, to be human.

CRC Press

Market: Computer Science, Artificial Intelligence, Sensory AI

April 2026: 234x156: 276pp

Pb: 978-1-041-23236-0: **£64.99**

★ For **full contents** and more information, visit: www.routledge.com/9781041232360

Python 3 Using DeepSeek



Oswald Campesato

This book is your definitive guide to mastering DeepSeek, a leading open-source Large Language Model (LLM), and leveraging its power through practical Python programming. It is structured to build your expertise from foundational Python data structures and object-oriented programming to advanced model deployment. *Python 3 Using DeepSeek* is essential reading for Python developers (intermediate to advanced), machine learning practitioners, and data scientists. It is your guide to integrating high-performing, open-source LLMs into your workflows, particularly for code generation, algorithmic reasoning, and highly efficient local model deployment.

Chapman and Hall/CRC

Market: Computer Science

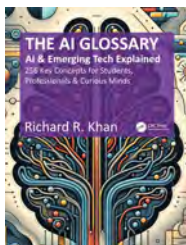
April 2026: 234x156: 264pp: 2 illus, 2 line drawings

Pb: 978-1-041-14951-4: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781041149514

The AI Glossary

AI and Emerging Tech Explained - 256 Key Concepts for Students, Professionals & Curious Minds



Richard R. Khan

Embark on a journey of clarity and discovery with *The AI Glossary: AI and Emerging Tech Explained - 256 Key Concepts for Students, Professionals & Curious Minds*. In a world increasingly shaped by AI and rapid advances across adjacent fields, understanding the language of technology is no longer optional. Whether you're a student beginning your journey, a professional seeking an edge, a policymaker weighing impact, or a curious mind eager to understand what's next, this glossary is your essential companion. You'll find clear explanations, cross-references, and context that accelerate learning and decision-making.

Chapman and Hall/CRC

Market: Computer Science

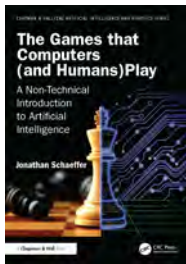
January 2026: 280x210: 582pp: 21 illus, 21 line drawings

Pb: 978-1-041-16072-4: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781041160724

The Games that Computers (and Humans) Play

A Non-Technical Introduction to Artificial Intelligence



Jonathan Schaeffer, University of Alberta Computing Science, 2-21 Athabasca Hall, Edmonton, Alberta, Canada T6G 2E8

Series: Chapman & Hall/CRC Artificial Intelligence and Robotics Series

The Games that Computers (and Humans) Play is a non-technical introduction to AI using games to illustrate the concepts, written by an internationally known researcher in Artificial Intelligence. The secrets of the computer's successes are revealed, giving you new-found understanding of how AI enables computers to achieve super-human performance at games, and how this transformative technology is going to revolutionize our world. With easily understandable descriptions, this book is an ideal introduction for the non-scientist and anyone interested in how games have shaped the history and development of Artificial Intelligence.

Chapman and Hall/CRC

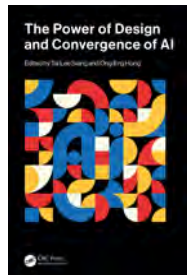
Market: Artificial Intelligence

April 2026: 254x178: 320pp: 97 illus, 59 halftones, 38 line drawings

Pb: 978-1-041-25270-2: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781041252702

The Power of Design and Convergence of AI



Edited by **Tai Lee Siang**, Singapore University of Technology and Design, Singapore and **Ong Eng Hong**, Singapore University of Technology and Design, Singapore

This book aims to illustrate the value of design in a systematic and scientific manner, to reap the full benefits of design. The authors aim to address the challenges in the quantification and evaluation of the value of design. It will also help the readers understand how impactful design can support future of innovation a sustainable future life when coupled with the power of Artificial Intelligence (AI). The sharing of knowledge from subject matter experts from institutes of higher learning and industry brings content rigor and real-life scenarios which enhances the learning of the reader.

CRC Press

Market: Design, Artificial Intelligence, Sustainability

December 2025: 234x156: 261pp: 96 illus, 96 halftones

Pb: 978-1-032-79385-6: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781032793856

TEXTBOOK

Theory of Computing

For Software Development



Mozgovoy Maxim, The University of Aizu

The theory of computation is often viewed as one of the most abstract areas of computer science, mostly reserved for university courses. This book aims to bridge the gap between the formal world of the theory of computation and the realities of everyday programming practice.

Covering material aligned with the ACM/IEEE Computer Science Curricula, this book can serve both as a gentle textbook and a self-contained crash course for curious professionals.

Chapman and Hall/CRC

April 2026: 234x156: 300pp: 150 illus

Pb: 978-1-032-61480-9: **£48.99**

★ For full contents and more information, visit: www.routledge.com/9781032614809

Can Transformative AI Shape a New Age for Our Civilization?

Navigating between Speculation and Reality



Jesus L. Lobo and Javier Del Ser

Artificial Intelligence is moving beyond incremental innovation toward a threshold of transformative potential, where its capabilities may surpass human performance in critical cognitive, creative, and strategic domains. This shift could mark the beginning of a new epoch, reshaping economies, scientific discovery, and the very fabric of human society. *Can Transformative AI Shape a New Age for Our Civilization? Navigating between Speculation and Reality* offers a concise yet comprehensive guide to understanding this pivotal technological frontier.

CRC Press

Market: Artificial Intelligence

March 2026: 216x138: 100pp: 6 illus

Hb: 978-1-041-20895-2: **£51.99**

★ For full contents and more information, visit: www.routledge.com/9781041208952



ENVIRONMENTAL SCIENCE

Boreal Forests Under Global Warming

Empirical Simulation Predictive Modeling



Erland G. Kolomyts

This groundbreaking book presents an innovative predictive concept in geographical ecology that reveals local and regional mechanisms of global environmental changes. This work provides environmental scientists with formalized tools for analysis and prediction that can be applied to real-world ecological challenges. Ecological modeling through the application of discrete mathematics for processing extensive empirical data from field and laboratory landscape studies.

CRC Press

Market: Environment Engineering

March 2026: 234x156: 288pp: 69 illus, 20 halftones, 49 line drawings

Hb: 978-1-041-22595-9: **£120.00**

★ For full contents and more information, visit: www.routledge.com/9781041225959

Environmental Monitoring with AI and IoT

Smart Systems for a Sustainable Future



Sneha Gautam, Chafai Azri and Md. Badiuzzaman Khan

This book aims to provide a comprehensive understanding of how modern technologies like Artificial Intelligence (AI) and the Internet of Things (IoT) revolutionize environmental monitoring. It bridges the gap between traditional environmental assessment methods and advanced, technology-driven approaches to enhance efficiency, accuracy, and scalability. It includes essential topics like sensor technologies, AI techniques for data analysis, IoT communication protocols, and ethical considerations in environmental monitoring. Real-world case studies and practical examples make the content relatable and actionable.

CRC Press

Market: Environmental Engineering

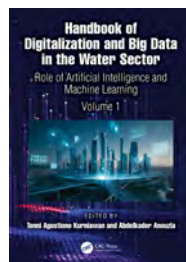
January 2026: 234x156: 156pp: 17 illus, 17 line drawings

Pb: 978-1-041-19653-2: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781041196532

Handbook of Digitalization and Big Data in the Water Sector

Role of Artificial Intelligence and Machine Learning (Volume 1)



Edited by Tonni Agustiono Kurniawan, University Teknologi Malaysia, Skudai and Abdelkader Anouzla

This 3-volume set delves into the intersection of cutting-edge technology and environmental science to address pressing challenges in the water sector. With special emphasis on the integration of big data, artificial intelligence (AI), and machine learning (ML), Volume 1 provides theoretical foundational and practical insights for water systems optimization, resource conservation, and sustainable operations. Ideal for water engineers, researchers, policymakers, and sustainability practitioners, this handbook serves as an essential guide for professionals and is equally valuable for graduate students, academics, and technology innovators.

CRC Press

Market: Environmental Engineering

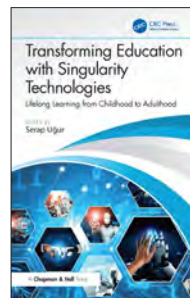
March 2026: 246x174: 328pp: 38 illus, 3 halftones, 35 line drawings

Hb: 978-1-032-88031-0: **£165.00**

★ For full contents and more information, visit: www.routledge.com/9781032880310

Transforming Education with Singularity Technologies

Lifelong Learning from Childhood to Adulthood



Edited by Serap Uğur

This book presents a transformative vision of education in the era of technological singularity, where artificial intelligence and immersive technology redefine how we learn and teach. Bringing together a global team of experts, the chapters explore the potential of technological singularity to create more equitable and accessible learning experiences for learners of all ages. This book will serve as a valuable resource for educators, researchers and professionals seeking to understand the transformative power of emerging technologies on education and how to navigate the exciting challenges and opportunities ahead.

Chapman and Hall/CRC

Market: Artificial Intelligence / Educational Technologies

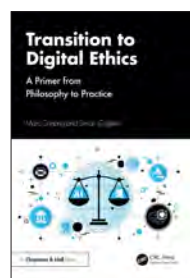
March 2026: 234x156: 344pp: 26 illus, 2 halftones, 24 line drawings

Hb: 978-1-032-95325-0: **£140.00**

★ For full contents and more information, visit: www.routledge.com/9781032953250

Transition to Digital Ethics

A Primer from Philosophy to Practice



Marc Cheong and Simon Coghlan

As digital technologies become more pervasive and powerful, they raise increasingly pressing ethical questions that need to be understood and addressed. The book will benefit those who design and implement digital technologies and, more broadly, anyone with an interest in the compelling ethical and social issues arising from digital technologies. It carefully and clearly describes the philosophical ideas as well as technical considerations behind contemporary digital technology use, to provide the reader with a solid footing for further exploration of this rapidly expanding field.

Chapman and Hall/CRC

Market: Computer Science/Ethics

December 2025: 234x156: 148pp: 4 illus, 4 halftones

Pb: 978-1-032-49384-8: **£49.99**

★ For full contents and more information, visit: www.routledge.com/9781032493848

TEXTBOOK

Interpreting Ecological Data

Exercises for Undergraduates



Clare J. Trinder

With over 70 exercises containing more than 270 questions, *Interpreting Ecological Data* allows students to apply ecological theory learned in classes to new, 'real' data from the scientific literature. Rather than simply rote learning word-perfect answers, they are empowered to apply their knowledge and develop critical thinking skills: core attributes for science undergraduates. The book covers ecological principles such as predation, competition, mutualism, food-webs and biogeochemical cycling. The answers are all included in the final chapter, with detailed explanations where relevant.

CRC Press

Market: Ecology

April 2026: 234x156: 176pp: 80 illus, 1 halftone, 79 line drawings

Pb: 978-1-041-08174-6: £48.99

★ For full contents and more information, visit: www.routledge.com/9781041081746

Smart Technologies for a Sustainable Environment



Edited by **Mourade Azrou**, Moulay ismail University of Meknes, Morocco, **Azidine Guezaz**, Cadi Ayyad University Marrakech, Morocco and **Said Jabbour**

In an era defined by unprecedented environmental challenges and technological breakthroughs, *Smart Technologies for a Sustainable Environment* stands as a visionary compendium of cutting-edge research and transformative solutions. This curated collection of insights explores how ground-breaking advancements are reshaping the landscape of sustainability, from renewable energy and precision agriculture to healthcare and smart urban systems.

CRC Press

Market: Agriculture and Environmental Sciences

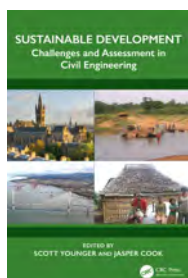
January 2026: 234x156: 272pp: 114 illus, 27 halftones, 87 line drawings

Hb: 978-1-041-12109-1: £105.00

★ For full contents and more information, visit: www.routledge.com/9781041121091

Sustainable Development

Challenges and Assessment in Civil Engineering



Edited by **Scott Younger** and **Jasper Cook**, OTB Engineering, UK

This compelling collection of insights from seasoned civil engineering professionals sheds light on crucial aspects of sustainable development through the unique perspective of those who help build our world. While not designed as a traditional textbook or formal guide, this comprehensive volume serves as an invaluable resource and reference for development professionals and graduate civil engineers passionate about sustainable development. Its accessible yet authoritative approach makes complex concepts understandable without sacrificing depth or nuance.

CRC Press

Market: Environmental Engineering

March 2026: 234x156: 304pp: 34 illus, 9 halftones, 25 line drawings

Pb: 978-1-032-93524-9: £65.99

★ For full contents and more information, visit: www.routledge.com/9781032935249

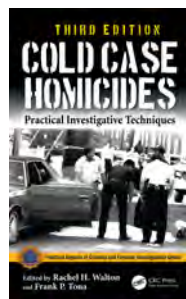


FORENSIC SCIENCE

3rd Edition

Cold Case Homicides

Practical Investigative Techniques



Edited by **Rachel H. Walton**, Utah State University Eastern, Price, USA and **Frank P. Tona**

Series: *Practical Aspects of Criminal and Forensic Investigations*

The Third Edition of *Cold Case Homicides* remains a vital resource for students and professionals alike, offering a comprehensive guide to the investigation and resolution of unsolved cases. Updated with the latest advancements, this edition emphasizes the evolving landscape of cold case work, including cutting-edge forensic tools, the expanding role of digital and mobile evidence, and the transformative impact of DNA technologies, especially forensic genealogy and familial matching. Richly illustrated and grounded in practical application, the text underscores how emerging technologies and a reassessment of earlier missteps can breathe new life into dormant investigations.

CRC Press

Market: Forensics Science / Investigation

February 2026: 234x156: 640pp: 127 illus, 121 halftones, 6 line drawings

Hb: 978-1-032-54195-2: £64.99

★ For full contents and more information, visit: www.routledge.com/9781032541952

Forensic Biotechnology

Basics and Beyond



Edited by **Hirak Dash**, **Ritesh K. Shukla**, Ahmedabad University, India and **Kamayani Vajpayee**

Forensic Biotechnology: The Basics and Beyond provides a comprehensive exploration of biotechnology's transformative role in modern forensic science. This essential resource covers the field through carefully structured chapters, beginning with foundational concepts including sample collection, preservation, and data interpretation, then progressing through practical applications such as microbial forensics, wildlife forensics, and DNA barcoding. The book advances to sophisticated topics including DNA mixture interpretation, forensic DNA phenotyping, epigenetic signatures, and proteomics. It concludes with a critical examination of DNA evidence admissibility in courtroom proceedings.

CRC Press

Market: Forensic Science/ DNA and Biology

June 2026: 234x156: 352pp: 50 illus

Hb: 978-1-032-75500-7: £145.00

★ For full contents and more information, visit: www.routledge.com/9781032755007

Forensic Investigative Genetic Genealogy (FIGG) and DNA Evidence

A Guide for Practitioners



Edited by **John R. Vacca**, TechWrite, Pomeroy, Ohio, USA

Forensic Investigative Genetic Genealogy (FIGG) and DNA Evidence is a vital guide for professionals and practitioners, providing the most complete and current view of the use of DNA from crime scenes and its comparison with DNA test results available on online databases. With contributing chapters from leading experts in the field this book offers invaluable insights into the evolving landscape of forensic genetics and genealogy usage in criminal and cold case investigations. It is an essential resource for professionals seeking to understand the current capabilities and future possibilities of these groundbreaking investigative tools."

CRC Press

Market: Forensic Science/ Genealogy

April 2026: 234x156: 272pp: 14 illus, 14 line drawings

Hb: 978-1-032-71497-4: £56.99

★ For full contents and more information, visit: www.routledge.com/9781032714974

3rd Edition

Forensic Recovery of Human Remains

Archaeological Approaches



John J. Schultz, University of Central Florida, Orlando, USA,
Lana J. Williams, University of Central Florida, Orlando, USA
 and **James Pokines**

Forensic Recovery of Human Remains: Archaeological Approaches, Third Edition is intended to continue to fill the need for a current, comprehensive volume on the recovery and excavation of human remains—for both the classroom and as a reference for practicing professionals.

CRC Press

Market: Forensic Science

July 2026: 254x178: 320pp: 255 halftones

Hb: 978-1-138-70672-9: **£145.00**

Prev. Ed Hb: 978-1-4398-5030-5

★ For full contents and more information, visit: www.routledge.com/9781138706729

6th Edition

Successful Expert Testimony

Max Houck, **Christine Funk** and **Harlan A. Feder**,
 Glenwood Springs, Colorado, USA

This book outlines the role of expert testimony in a trial, including explanations of methods, testing, and science, the legal process, and an overview of the roles of each player. In this, it details the expert witness's role in promoting effective, impactful courtroom testimony. It is an essential reference for forensic science students entering the work force—in labs and investigative positions—in addition to serving as a crucial resource for more experienced civil, private, and testifying experts in all disciplines.

CRC Press

Market: Legal/Forensic Science

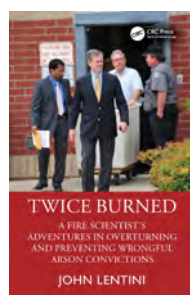
April 2026: 234x156: 176pp: 10 illus, 2 halftones, 8 line drawings

Hb: 978-1-041-00575-9: **£59.99**

Prev. Ed Hb: 978-1-138-03358-0

★ For full contents and more information, visit: www.routledge.com/9781041005759**Twice Burned**

A Fire Scientist's Adventures in Overturning and Preventing Wrongful Arson Convictions



John Lentini, Scientific Fire Analysis, USA

This book tells the story of renowned fire investigator John J. Lentini's 50 years as a forensic scientist. In recounting his most significant cases, Lentini highlights the critical challenges faced by forensic science, including ignorance, cognitive biases, and errors that have led to wrongful convictions. The book is a testament to the power of collaboration between scientists and lawyers in correcting injustices that occur at the intersection between science and the law. Written in an accessible style, this book is perfect for fire science professionals, litigators, and discerning true crime readers.

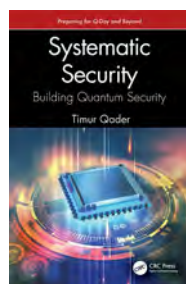
CRC Press

Market: Forensic/Fire Investigation

February 2026: 234x156: 320pp: 28 illus, 28 halftones

Hb: 978-1-032-99386-7: **£34.99**★ For full contents and more information, visit: www.routledge.com/9781032993867**SOFTWARE NETWORKING & SECURITY****Systematic Security: Building Quantum Security**

Preparing for Q-Day and Beyond

**Timur Qader**

The emergence of quantum computing introduces a significant shift in the digital and security landscape—prompting organizations to reassess the foundations of how we protect information. *Systematic Security: Building Quantum Security* is a practical guide for security professionals, technologists, engineers, and organizational leaders seeking to prepare for the long-term impact of quantum technology on existing and future systems. In this structured and accessible book, cybersecurity expert Timur Qader presents a step-by-step approach to quantum security.

CRC Press

Market: Cybersecurity

January 2026: 234x156: 256pp: 10 illus, 1 halftone, 9 line drawings

Pb: 978-1-041-16664-1: **£44.99**★ For full contents and more information, visit: www.routledge.com/9781041166641**Cybersecurity Hyperglossary****Gary Hinson***Series: Security, Audit and Leadership Series*

Precise and consistent communication is vital in the complex and ever-expanding field of cybersecurity and its related domains. This hyperglossary offers more than just plain English definitions of 5,555 terms and abbreviations; it's a meticulously crafted resource designed to foster a shared understanding across a diverse audience, from seasoned professionals to newcomers.

CRC Press

Market: Cybersecurity

February 2026: 254x178: 552pp

Pb: 978-1-041-09553-8: **£44.99**★ For full contents and more information, visit: www.routledge.com/9781041095538**Operation Carder Kaos**

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Walt Powell

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CRC Press

Market: Cybersecurity

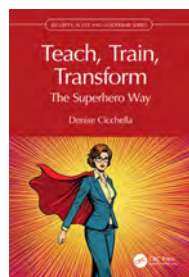
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Market: Metallurgical Engineering

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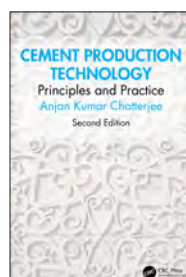
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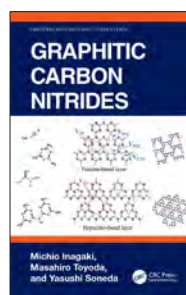
May 2026: 234x156: 480pp: 228 illus, 10 halftones, 218 line drawings

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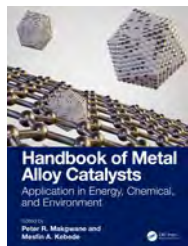
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This book offers a thorough and up-to-date exploration of advancements in both traditional metal alloys and innovative high-entropy alloy catalytic materials. It highlights the tunable properties of these materials—achieved through nanoscale reduction, shape control, compositional adjustments, and interface engineering—that optimize electronic structures, electrical conductivity, optical characteristics, and surface

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This handbook offers a thorough examination of the complex world of perovskite materials, emphasizing their fundamental chemistry and a variety of practical uses. It explores the synthesis techniques, structural attributes, and distinctive features of perovskite materials to close the knowledge gap between theory and real-world applications. An essential resource

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CRC Press

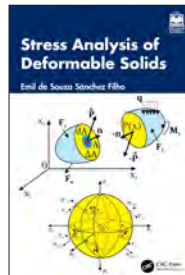
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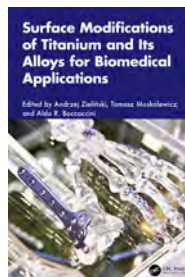
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CRC Press

Market: Materials Engineering/Biomedical Engineering

February 2026: 234x156: 530pp: 73 illus, 18 halftones, 55 line drawings

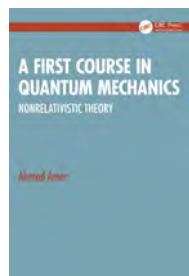
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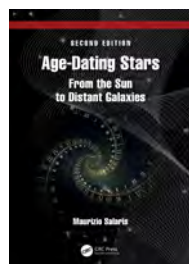
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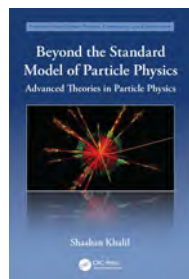
April 2026: 254x178: 248pp: 55 illus, 55 line drawings

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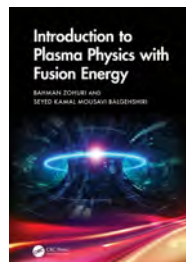
Market: Physics

February 2026: 234x156: 260pp: 46 illus, 12 halftones, 34 line drawings

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March 2026: 254x178: 416pp: 260 illus, 149 halftones, 111 line drawings

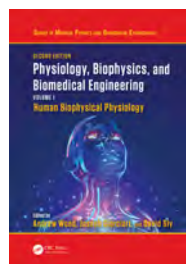
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CRC Press

Market: Physics

February 2026: 254x178: 352pp: 226 illus, 26 halftones, 200 line drawings

Hb: 978-0-367-56767-5: **£185.00**

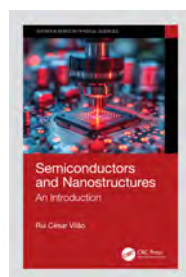
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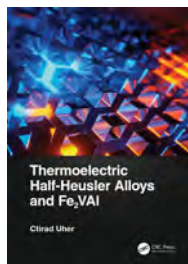
CRC Press

Market: Physics

April 2026: 254x178: 448pp: 254 illus, 57 halftones, 197 line drawings

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Thermoelectric Half-Heusler Alloys and Fe₂VAl

**Ctirad Uher**, University of Michigan, Ann Arbor, USA

Thermoelectric Half-Heusler Alloys and Fe₂VAl outlines the key properties an efficient thermoelectric material should have, covers the structural aspects of Heusler and half-Heusler compounds, and discusses in detail the thermoelectric properties of various families of half-Heusler compounds, including the fabrication and performance of thermoelectric modules based on these compounds. This reference monograph is of interest to everyone working or interested in the field of thermoelectricity as well as graduate students, postdocs, and researchers in the broad field of Heusler and half-Heusler compounds.

CRC Press

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Lee Stocks

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CRC Press

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CRC Press

Market: Game Development

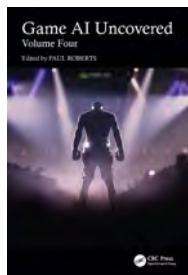
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CRC Press

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CRC Press

Market: Game Development

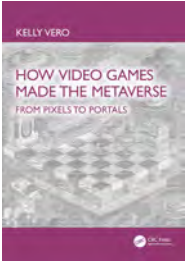
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From Pixels to Portals



Kelly Vero

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CRC Press

Market: Game Development

January 2026: 254x178: 168pp: 4 illus, 4 line drawings

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CRC Press

Market: Game Design

May 2026: 246x174: 502pp

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Pooya Soltani

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Market: Game Development

March 2026: 254x178: 274pp: 3 illus, 3 halftones

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Risk Management for Video Game Professionals

Navigating Uncertainty in Game Development



Liam Wickham

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CRC Press

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January 2026: 254x178: 296pp

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James Sheahan

This book explains the steps in creating a licensed tabletop game and the factors which influence its design using examples, including the designer's first-hand experience of converting the Fallout videogames into Fallout: Wasteland Warfare.

CRC Press

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May 2026: 234x156: 250pp

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Miguel Sicart and Bo Kampmann Walther

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CRC Press

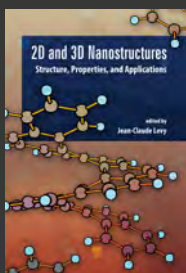
Market: Game Studies

April 2026: 234x156: 192pp: 11 illus, 6 halftones, 5 line drawings

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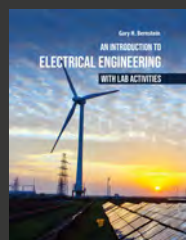


2D and 3D Nanostructures Structures, Properties, and Applications

Jean-Claude Serge Levy

This book is devoted to the study of a few typical nanostructures and arrays of nanostructures that are expected to find many applications, such as metamaterials. Beginning with a brief discussion on a general historical perspective of this new emergent field, new methods to deal with it, such as the available numerical methods, the principle of biomimetic applications, and the powerful field of artificial intelligence, the book covers a variety of topics, including semiconductors, magnetic materials of different components, of different structures, and of different arrangements, and new chemical compounds.

February 2026: 229x152: 346pp: 90 illus, 16 halftones, 74 line drawings
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An Introduction to Electrical Engineering with Lab Activities

Gary H. Bernstein

This book has the dual goals of teaching difficult fundamental concepts in a way that will set them up for success in later courses while also providing the context for those concepts relative to the advances in electrical engineering technology.

The topics covered are basic electricity, laboratory bench equipment, the power grid and residential wiring, complex impedance, time and frequency domains, filters, phasors, radio-frequency electromagnetic waves, modulation, semiconductor materials and devices, light emission, energy and power, energy efficiency, digital signal processing, Nyquist criterion, aliasing, battery technology, and power supplies.

December 2025: 544pp: 598 illus, 267 halftones, 331 line drawings
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CMOS RF and mm-Wave Transceivers and Synthesizers

Bharatha Kumar Thangarasu, Nagarajan Mahalingam, Kaixue Ma and Kiat Seng Yeo

During the past decade, the research on solid acid catalysis has progressed in some fields. This new edition presents some important developments in these fields in a new chapter. The topics include (1) catalytic biodiesel production, (2) water-tolerant Lewis acid catalysts, (3) detailed IR study of adsorption and reaction of 1-butene, (4) on-purpose propene formation from light alkenes, (5) novel solid acid catalysts: crystalline zirconium sulfate (Zr3SO9) and boron nitride (BN), and (6) acidity characterization of solid acid catalysts by solid-state 31P NMR.

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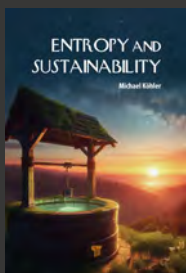


Collected Essays on Stravinsky and Classical Music

Pieter C. van den Toorn

The most celebrated of 20th-century composers, Igor Stravinsky may also have been the greatest. The early chapters in this volume address the dynamics of his music from a number of analytic-theoretical perspectives. Examined initially are the features of harmony, melody, and rhythm that would remain characteristic of his music regardless of the changes in stylistic orientation.

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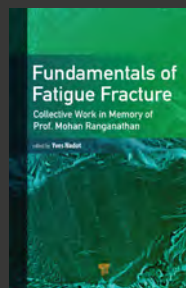


Entropy and Sustainability

Michael Köhler

This book introduces the physical basics and the historical scientific background of the concept of entropy and explains the importance of entropy for living beings, machines, computers, industrial facilities, ecological systems, and the earth as whole. It discusses the necessity of the production of entropy, on the one hand, and the required strategies for entropy export, on the other. The mechanisms of entropy production and export are discussed in order to make clear that entropy not only is a special physical parameter but also plays a role everywhere in daily life.

February 2026: 229x152: 234pp: 82 illus, 4 halftones, 78 line drawings
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Fundamentals of Fatigue Fracture

Collective Works in the Memory of
Prof. Mohan Ranganathan

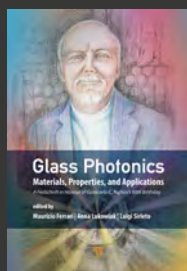
Edited by Yves Nadot

This book is written in the memory of late Prof. Mohan Narayanaswami Ranganathan (University of Tours, France), whose contributions to the fields of materials science, engineering, and fatigue have inspired generations of researchers. He had unrelenting intellectual curiosity that made

him a truly gifted researcher. However, it was his interaction with colleagues and students where he left his profound mark. He had a unique way of looking at things and drawing in knowledge from different areas to provide a very different perspective. His optimistic view was particularly valuable when a given path seemed unnavigable—he always managed to find a path with his charm and charisma.

January 2026: 229x152: 420pp: 163 illus, 39 halftones, 124 line drawings
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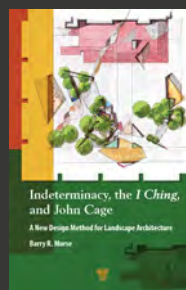
Glass Photonics

Materials, Properties, and Applications

Maurizio Ferrari, Anna Łukowiak and Luigi Sirleto

This book, devoted to glass photonics, is homage to Prof. Dr. Giancarlo C. Righini on his 80th birthday. This milestone signifies a lifetime of rich scientific experiences and notable achievements in optics and photonics, with special regard to glass and other optical materials. The book shows how glass photonics plays a crucial role in the current Age of Light. The former part of book focuses on photonic devices in fiber and integrated optics format.

February 2026: 229x152: 414pp: 113 illus
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Indeterminacy, the I Ching, and John Cage

A New Design Method for Landscape Architecture

Barry R. Morse

The creative use of indeterminacy, i.e., "chance," is an often overlooked design opportunity despite the universality of change in art, nature, science, and life. How can "chance," a seemingly capricious phenomenon, be made to work for someone? One controlled use of chance is through the Chinese I Ching "chance operations" method of composer and artist John Cage (1912–1992). This book addresses the questions of how one might approach using this method in landscape architectural design, what the outcome of such an indeterminate design would be, and whether or not it could lead to a viable constructed landscape.

December 2025: 229x152: 218pp: 64 illus, 39 halftones, 25 line drawings
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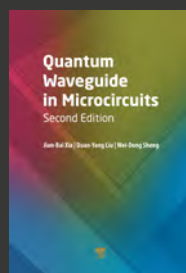
Microplastic Pollution

Environmental Impact and Solutions

Edited by **Julia Martin, Juan Luis Santos, Irene Aparicio and Esteban Alonso**

This book presents case studies pertaining to worldwide geographical areas and scientific disciplines, including material sciences, analytical chemistry, environmental toxicology, and public health among others. It introduces the complex issue of global ubiquitous microplastics in the environment. It reviews the tools and protocols for the detection, separation, and identification of microplastics using complex cases of environmental matrices. It discusses the fate and distribution of microplastics in wastewater treatment plants (water and solid line) and natural media.

November 2025: 229x152: 368pp: 32 illus, 5 halftones, 27 line drawings
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Quantum Waveguide in Microcircuits

2nd Edition

Jian-Bai Xia, Duan-Yang Liu, Chinese Academy of Sciences, Beijing, PR of China and **Wei-Dong Sheng**, Chinese Academy of Sciences, Beijing, PR of China

This book introduces some theories and experiments of quantum transport and consists of two parts: (1) Non-Classical and Non-Linear Transport and (2) Quantum Waveguide Theory.

It provides some foundations of semiconductor micro- and nanoelectronics for the after-Moore age. The two new chapters in this edition present investigations on (1) mesoscopic transport and (2) Rashba electron's spin transport in a straight waveguide with a stub that has a smooth boundary.

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Raman Spectroscopy of Biomaterials

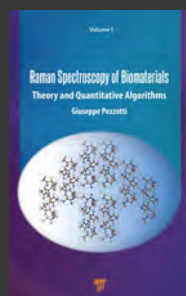
Applications

Giuseppe Pezzotti

This book applies the equations and algorithms developed in the companion book (Raman Spectroscopy of Biomaterials: Theory and Quantitative Algorithms) to illustrative examples in the field of biomedical science, which include healthy and diseased hard and soft tissues in the human body, synthetic materials for biomedical devices, and a number of biological molecules in cells and bacteria. Through the above-selected applications,

it is shown that Raman spectroscopy represents a key methodology to develop prompt and low-cost preventive care, to effectively diagnose diseases, to quantitatively assess the performance of biomedical devices, and to propose novel therapies.

December 2025: 229x152: 582pp
Hb: 978-981-5129-48-9: **£270.00**
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Raman Spectroscopy of Biomaterials

Theory and Quantitative Algorithms

Giuseppe Pezzotti

This book rigorously establishes some key aspects of Raman basic science in the biomedical field and discusses the physics governing its application to both synthetic and natural biomaterials by disentangling spectrally convoluted dependencies on crystal orientation, chemical and stoichiometric alterations, and mechanical stress. A completely new set of working algorithms is given to extract structural, chemical, and mechanical information from the

experimentally collected spectra, while orientation distribution functions are employed to obtain statistical descriptions of crystallographic textures in practical applications.

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