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## Practical Implementation of an Antibiotic Stewardship Program

**Cambridge University Press** This practical reference guide from experts in the field details why and how to establish successful antibiotic stewardship programs.

## Calculus for Biology and Medicine

**Prentice Hall** This volume teaches calculus in the biology context without compromising the level of regular calculus. The material is organized in the standard way and explains how the different concepts are logically related. Each new concept is typically introduced with a biological example; the concept is then developed without the biological context and then the concept is tied into additional biological examples. This allows readers to first see why a certain concept is important, then lets them focus on how to use the concept without getting distracted by applications, and then, once readers feel more comfortable with the concepts, it revisits the biological applications to make sure that they can apply the concepts. The book features exceptionally detailed, step-by-step, worked-out examples and a variety of problems, including an unusually large number of word problems. The volume begins with a preview and review and moves into discrete time models, sequences, and difference equations, limits and continuity, differentiation, applications of differentiation, integration techniques and computational methods, differential equations, linear algebra and analytic geometry, multivariable calculus, systems of differential equations and probability and statistics. For faculty and postdocs in biology departments.

## Communicating Risks and Benefits

## An Evidence Based User's Guide

**Government Printing Office** Effective risk communication is essential to the well-being of any organization and those people who depend on it. Ineffective communication can cost lives, money and reputations. Communicating Risks and Benefits: An Evidence-Based User's Guide provides the scientific foundations for effective communications. The book authoritatively summarizes the relevant research, draws out its implications for communication design, and provides practical ways to evaluate and improve communications for any decision involving risks and benefits. Topics include the communication of quantitative information and warnings, the roles of emotion and the news media, the effects of age and literacy, and tests of how well communications meet the organization's goals. The guide will help users in any organization, with any budget, to make the science of their communications as sound as the science that they are communicating.

## Humiliation, Degradation, Dehumanization

## Human Dignity Violated

**Springer Science & Business Media** Degradation, dehumanization, instrumentalization, humiliation, and nonrecognition – these concepts point to ways in which we understand human beings to be violated in their dignity. Violations of human dignity are brought about by concrete practices and conditions; some commonly acknowledged, such as torture and rape, and others more contested, such as poverty and exclusion. This volume collates reflections on such concepts and a range of practices, deepening our understanding of human dignity and its violation, bringing to the surface interrelationships and commonalities, and pointing to the values that are thereby shown to be in danger. In presenting a streamlined discussion from a negative perspective, complemented by conclusions for a positive account of human dignity, the book is at once a contribution to the body of literature on what dignity is and how it should be protected as well as constituting an alternative, fresh and focused perspective relevant to this significant recurring debate. As the concept of human dignity itself crosses disciplinary boundaries, this is mirrored in the unique range of perspectives brought by the book's European and American contributors – in philosophy and ethics, law, human rights, literature, cultural studies and interdisciplinary research. This volume will be of interest to social and moral philosophers, legal and human rights theorists, practitioners and students.

## The Structuring of Organizations

## A Synthesis of the Research

**Prentice Hall** How do organizations structure themselves? A synthesis of the empirical literature in the field, supported by numerous examples and illustrations, provides images that produce a theory. The author introduces five basic configurations of structure – the simple structure, the machine bureaucracy, the professional bureaucracy, the divisionalized form, and the adhocracy. This book reveals that structure seems to be at the root of many questions about organizations and why they function as they do.

## Organizational Culture and Leadership

**John Wiley & Sons** Regarded as one of the most influential management books of all time, this fourth edition of Leadership and Organizational Culture transforms the abstract concept of culture into a tool that can be used to better shape the dynamics of organization and change. This updated edition focuses on today's business realities. Edgar Schein draws on a wide range of contemporary research to redefine culture and demonstrate the crucial role leaders play in successfully applying the principles of culture to achieve their organizational goals.

## Ecological Models and Data in R

**Princeton University Press** Introduction and background; Exploratory data analysis and graphics; Deterministic functions for ecological modeling; Probability and stochastic distributions for ecological modeling; Stochastic simulation and power analysis; Likelihood and all that; Optimization and all that; Likelihood examples; Standar statistics revisited; Modeling variance; Dynamic models.

## Frontiers in Massive Data Analysis

**National Academies Press** Data mining of massive data sets is transforming the way we think about crisis response, marketing, entertainment, cybersecurity and national intelligence. Collections of documents, images, videos, and networks are being thought of not merely as bit strings to be stored, indexed, and retrieved, but as potential sources of discovery and knowledge, requiring sophisticated analysis techniques that go far beyond classical indexing and keyword counting, aiming to find relational and semantic interpretations of the phenomena underlying the data. *Frontiers in Massive Data Analysis* examines the frontier of analyzing massive amounts of data, whether in a static database or streaming through a system. Data at that scale--terabytes and petabytes--is increasingly common in science (e.g., particle physics, remote sensing, genomics), Internet commerce, business analytics, national security, communications, and elsewhere. The tools that work to infer knowledge from data at smaller scales do not necessarily work, or work well, at such massive scale. New tools, skills, and approaches are necessary, and this report identifies many of them, plus promising research directions to explore. *Frontiers in Massive Data Analysis* discusses pitfalls in trying to infer knowledge from massive data, and it characterizes seven major classes of computation that are common in the analysis of massive data. Overall, this report illustrates the cross-disciplinary knowledge--from computer science, statistics, machine learning, and application disciplines--that must be brought to bear to make useful inferences from massive data.

## Bioprocess Engineering Principles

**Elsevier** The emergence and refinement of techniques in molecular biology has changed our perceptions of medicine, agriculture and environmental management. Scientific breakthroughs in gene expression, protein engineering and cell fusion are being translated by a strengthening biotechnology industry into revolutionary new products and services. Many a student has been enticed by the promise of biotechnology and the excitement of being near the cutting edge of scientific advancement. However, graduates trained in molecular biology and cell manipulation soon realise that these techniques are only part of the picture. Reaping the full benefits of biotechnology requires manufacturing capability involving the large-scale processing of biological material. Increasingly, biotechnologists are being employed by companies to work in co-operation with chemical engineers to achieve pragmatic commercial goals. For many years aspects of biochemistry and molecular genetics have been included in chemical engineering curricula, yet there has been little attempt until recently to teach aspects of engineering applicable to process design to biotechnologists. This textbook is the first to present the principles of bioprocess engineering in a way that is accessible to biological scientists. Other texts on bioprocess engineering currently available assume that the reader already has engineering training. On the other hand, chemical engineering textbooks do not consider examples from bioprocessing, and are written almost exclusively with the petroleum and chemical industries in mind. This publication explains process analysis from an engineering point of view, but refers exclusively to the treatment of biological systems. Over 170 problems and worked examples encompass a wide range of applications, including recombinant cells, plant and animal cell cultures, immobilised catalysts as well as traditional fermentation systems. \* First book to present the principles of bioprocess engineering in a way that is accessible to biological scientists \* Explains process analysis from an engineering point of view, but uses worked examples relating to biological systems \* Comprehensive, single-authored \* 170 problems and worked examples encompass a wide range of applications, involving recombinant plant and animal cell cultures, immobilized catalysts, and traditional fermentation systems \* 13 chapters, organized according to engineering sub-disciplines, are grouped in four sections - Introduction, Material and Energy Balances, Physical Processes, and Reactions and Reactors \* Each chapter includes a set of problems and exercises for the student, key references, and a list of suggestions for further reading \* Includes useful appendices, detailing conversion factors, physical and chemical property data, steam tables, mathematical rules, and a list of symbols used \* Suitable for course adoption - follows closely curricula used on most bioprocessing and process biotechnology courses at senior undergraduate and graduate levels.

## Transdisciplinary Theory, Practice and Education

## The Art of Collaborative Research and Collective Learning

**Springer** This exciting new state-of-the art book reviews, explores and advocates ways in which collaborative research endeavours can, through a transdisciplinary lens, enhance student, academic and social experiences. Drawing from a wide range of knowledges, contexts, geographical locations and internationally renowned expertise, the book provides a unique look into the world of transdisciplinary thinking, collaborative learning and action. In doing so, the book is action orientated, reflective, theoretical and intriguing and provides a place for all of these to meet and mingle in the spirit of curiosity and imagination.

## Healthcare Operations Management

"This book aims to help healthcare management students and working professionals find ways to improve the delivery of healthcare, even with its complex web of patients, providers, reimbursement systems, physician relations, workforce challenges, and intensive government regulation. Taking an integrated approach, the book puts the tools and techniques of operations improvement in the context of healthcare so that readers learn how to increase the effectiveness and efficiency of tomorrow's healthcare system." -- back of the book

## The Routledge Handbook of Research Methods for Social-Ecological Systems

**Routledge** The *Routledge Handbook of Research Methods for Social-Ecological Systems* provides a synthetic guide to the range of methods that can be employed in social-ecological systems (SES) research. The book is primarily targeted at graduate students, lecturers and researchers working on SES, and has been written in a style that is accessible to readers entering the field from a variety of different disciplinary backgrounds. Each chapter discusses the types of SES questions to which the particular methods are suited and the potential resources and skills required for their implementation, and provides practical examples of the application of the methods. In addition, the book contains a conceptual and practical introduction to SES research, a discussion of key gaps and frontiers in SES research methods, and a glossary of key terms in SES research. Contributions from 97 different authors, situated at SES research hubs in 16 countries around the world, including South Africa, Sweden, Germany and Australia, bring a wealth of expertise and experience to this book. The first book to provide a guide and introduction specifically focused on methods for studying SES, this book will be of great interest to students and scholars of sustainability science, environmental management, global environmental change studies and environmental governance. The book will also be of interest to upper-level undergraduates and professionals working at the science-policy interface in the environmental arena.

## The Exoplanet Handbook

**Cambridge University Press** A complete and in-depth review of exoplanet research, covering the discovery methods, physics and theoretical background.

## The Analysis of Biological Data

**Macmillan Higher Education** The *Analysis of Biological Data* provides students with a practical foundation of statistics for biology students. Every chapter has several biological or medical examples of key concepts, and each example is prefaced by a substantial description of the biological setting. The emphasis on real and interesting examples carries into the problem sets where students have dozens of practice problems based on real data. The third edition features over 200 new examples and problems. These include new calculation practice problems, which guide the student step by step

through the methods, and a greater number of examples and topics come from medical and human health research. Every chapter has been carefully edited for even greater clarity and ease of use. All the data sets, R scripts for all worked examples in the book, as well as many other teaching resources, are available to qualified instructors (see below).

## Surgical Arithmetic

## Epidemiological, Statistical and Outcome-Based Approach to Surgical Practice

**CRC Press** This book is intended for the practicing surgeon. It is designed to offer practical insights into the essentials of an epidemiological, statistical and outcomes-based approach to surgical practice. Surgeons are invited to begin to develop the requisite skills that will allow them to communicate effectively with their colleagues in epidemiology and

## Ecological Statistics

## Contemporary Theory and Application

**Oxford University Press** The application and interpretation of statistics are central to ecological study and practice. Ecologists are now asking more sophisticated questions than in the past. These new questions, together with the continued growth of computing power and the availability of new software, have created a new generation of statistical techniques. These have resulted in major recent developments in both our understanding and practice of ecological statistics. This novel book synthesizes a number of these changes, addressing key approaches and issues that tend to be overlooked in other books such as missing/censored data, correlation structure of data, heterogeneous data, and complex causal relationships. These issues characterize a large proportion of ecological data, but most ecologists' training in traditional statistics simply does not provide them with adequate preparation to handle the associated challenges. Uniquely, Ecological Statistics highlights the underlying links among many statistical approaches that attempt to tackle these issues. In particular, it gives readers an introduction to approaches to inference, likelihoods, generalized linear (mixed) models, spatially or phylogenetically-structured data, and data synthesis, with a strong emphasis on conceptual understanding and subsequent application to data analysis. Written by a team of practicing ecologists, mathematical explanations have been kept to the minimum necessary. This user-friendly textbook will be suitable for graduate students, researchers, and practitioners in the fields of ecology, evolution, environmental studies, and computational biology who are interested in updating their statistical tool kits. A companion web site provides example data sets and commented code in the R language.

## Ecological Systems

## Selected Entries from the Encyclopedia of Sustainability Science and Technology

**Springer Science & Business Media** Earth is home to an estimated 8 million animal species, 600,000 fungi, 300,000 plants, and an undetermined number of microbial species. Of these animal, fungal, and plant species, an estimated 75% have yet to be identified. Moreover, the interactions between these species and their physical environment are known to an even lesser degree. At the same time, the earth's biota faces the prospect of climate change, which may manifest slowly or extremely rapidly, as well as a human population set to grow by two billion by 2045 from the current seven billion. Given these major ecological changes, we cannot wait for a complete biota data set before assessing, planning, and acting to preserve the ecological balance of the earth. This book provides comprehensive coverage of the scientific and engineering basis of the systems ecology of the earth in 15 detailed, peer-reviewed entries written for a broad audience of undergraduate and graduate students as well as practicing professionals in government, academia, and industry. The methodology presented aims at identifying key interactions and environmental effects, and enabling a systems-level understanding even with our present state of factual knowledge.

## Mobile Solutions and Their Usefulness in Everyday Life

**Springer** This book provides an insight into recent technological trends and innovations in solutions and platforms to improve mobility of visually impaired people. The authors' goal is to help to contribute to the social and societal inclusion of the visually impaired. The book's topics include, but are not limited to, obstacle detection systems, indoor and outdoor navigation, transportation sustainability systems, and hardware/devices to aid visually impaired people. The book has a strong focus on practical applications tested in a real environment. Applications include city halls, municipalities, and companies that must keep up to date with recent trends in platforms, methodologies and technologies to promote urban mobility. Also discuss are broader realms including education, health, electronics, tourism, and transportation. Contributors include a variety of researchers and practitioners around the world.

## Cerebellar Disorders

## A Practical Approach to Diagnosis and Management

**Cambridge University Press** During the last three decades, many laboratories worldwide have dedicated their research activities to understanding the roles of the cerebellum in motor control, cognitive processes and the biology of mental processes, behavioral symptoms and emotion. These advances have been associated with discoveries of new clinical disorders, in particular in the field of genetic ataxias, and the growing number of diseases presents a source of difficulty for clinicians during daily practice. This practical guide summarizes and evaluates current knowledge in the field of cerebellar disorders. Encompassing details of both common and uncommon cerebellar ataxias, including vascular, immune, neoplastic, infectious, traumatic, toxic and inherited disorders, this book will assist clinicians in the diagnosis and management of the full spectrum of cerebellar ataxias encountered in daily practice. Essential reading for clinicians, including general practitioners, neurologists, pediatricians, radiologists, psychiatrists and neuropsychologists, this will also prove a valuable tool for students, trainees and researchers.

## Basic Statistics

## Understanding Conventional Methods and Modern Insights

**Oxford University Press on Demand** Basic Statistics introduces students to basic principles and concepts in a simple manner that takes into account the many relevant advances and insights developed during the last half century that are ignored in the typical introductory course.

## Tungsten

### Properties, Chemistry, Technology of the Element, Alloys, and Chemical Compounds

**Springer Science & Business Media** Why does someone write a book about Tungsten? There are several reasons and precedents for this, the most important of which is that the last book on tungsten was written more than 20 years ago, in 1977, by St. W.H. Yih and Ch.T. Wang. During the intervening period there have been many new scientific and technological developments and innovations, so it was not only our opinion but the view of many other members of the "tungsten family" that it was time to start writing a new book about tungsten. Preparations of the new book began in 1994. Further impetus to the project was provided by the realization that in spite of this new knowledge having been presented at seminars or published in the technical press, a general acknowledgement of it by the majority of technicians and scientists is still far from being realized. It is our hope that this book will significantly contribute to a broader acceptance of recent scientific and technological innovations. An important prerequisite for such a project is the availability of a recently retired, experienced person willing to devote his time and talents to the tedious part of the exercise.

## Making Health Care Safer

### A Critical Analysis of Patient Safety Practices

**Department of Health and Human Services** "This project aimed to collect and critically review the existing evidence on practices relevant to improving patient safety"--P. v.

## International Handbook of Health Literacy

### Research, practice and policy across the life-span

**Policy Press** Available Open Access under CC-BY-NC license. Health literacy addresses a range of social dimensions of health including knowledge, navigation, communication as well as individual and organizational skills for accessing, understanding, evaluating and using of information. Especially over the past decade, health literacy has become a major public health concern globally as an asset for promoting health, wellbeing and sustainable development. This comprehensive handbook provides an invaluable overview of current international thinking about health literacy, highlighting cutting edge research, policy and practice in the field. With a diverse team of contributors, the book addresses health literacy across the life-span and offers insights from different populations and settings. Providing a wide range of major findings, the book outlines current discourse in the field and examines necessary future dialogues and new perspectives.

## Disciplining Interdisciplinarity

### Integration and Implementation Sciences for Researching Complex Real-world Problems

This book provides collaborative research teams with a systematic approach for addressing complex real-world problems like widespread poverty, global climate change, organised crime, and escalating health care costs. The three core domains are 1. Synthesising disciplinary and stakeholder knowledge, 2. Understanding and managing diverse unknowns, and 3. Providing integrated research support for policy and practice change. Each of these three domains is organised around five questions 1. For what and for whom? 2. Which knowledge, unknowns and aspects of policy or practice? 3. How? 4. Context? 5. Outcome? This simple framework lays the foundations for developing compilations of concepts, methods and case studies about applying systems thinking, scoping and boundary setting, framing, dealing with values, harnessing and managing differences, undertaking dialogue, building models, applying common metrics, accepting unknowns, advocacy, end-user engagement, understanding authorisation, dealing with organisational facilitators and barriers, and much more. The book makes a case for a new research style--integrative applied research--and a new discipline of Integration and Implementation Sciences or I2S. It advocates for progressing these through an I2S Development Drive. It builds on theory and practice-based research in multi-, inter- and transdisciplinarity, post-normal science, systemic intervention, integrated assessment, sustainability science, team science, mode 2, action research and other approaches. The book concludes with 24 commentaries by Simon Bronitt; L. David Brown; Marcel Bursztyn and Maria Beatriz Maury; Lawrence Cram; Ian ElΣ Holly J. Falk-Krzesinski; Fasihuddin; Howard Gadlin and L. Michelle Bennett; Budi Haryanto; Julie Thompson Klein; Ted Lefroy; Catherine Lyall; M. Duane Nellis; Linda Neuhauser; Deborah O'Connell with Damien Farine, Michael O'Connor and Michael Dunlop; Michael O'Rourke; Christian Pohl; Merritt Polk; Alison Ritter; Alice Roughley; Michael Smithson; Daniel Walker; Michael Wesley; and Glenn Withers. These begin a process of appraisal, discussion and debate across diverse networks.

## Imaging Acute Neurologic Disease

### A Symptom-Based Approach

**Cambridge University Press** "Acute neurologic diseases encompass a wide spectrum of medical illnesses with neurological manifestations which require rapid clinical, paraclinical and laboratory evaluation as patients are evaluated in the emergency department or acute care clinics. In the last decade, imaging has assumed far greater importance in the initial assessment of these patients, and is responsible for much of the cost and resources in the early, critical evaluation. However the optimal approach to utilization of imaging for thorough, yet efficient and cost-responsible care remains poorly defined for many acute neurologic presentations"--Provided by publisher.

## The Plasma Boundary of Magnetic Fusion Devices

**CRC Press** The Plasma Boundary of Magnetic Fusion Devices introduces the physics of the plasma boundary region, including plasma-surface interactions, with an emphasis on those occurring in magnetically confined fusion plasmas. The book covers plasma-surface interaction, Debye sheaths, sputtering, scrape-off layers, plasma impurities, recycling and control, 1D and 2D fluid and kinetic modeling of particle transport, plasma properties at the edge, diverter and limiter physics, and control of the plasma boundary. Divided into three parts, the book begins with Part 1, an introduction to the plasma boundary. The derivations are heuristic and worked problems help crystallize physical intuition, which is emphasized throughout. Part 2 provides an introduction to methods of modeling the plasma edge region and for interpreting computer code results. Part 3 presents a collection of essays on currently active research hot topics. With an extensive bibliography and index, this book is an invaluable first port-of-call for researchers interested in plasma-surface interactions.

## Ebersole and Hess' Gerontological Nursing and Healthy Aging

**Mosby** With a strong focus on health and wellness, this gerontological nursing text offers you a holistic perspective to caring for older adults. Designed to facilitate the healthiest adaptation possible, this text identifies potential problems that may occur and the means to address complications, alleviate discomfort, and help older adults lead healthy lives. Disease processes are discussed in the context of healthy adaptation, nursing support, and nursing responsibilities to help you gain an understanding of your clients' experience. Focus on health and wellness establishes a positive perspective to aging. Careful attention to age, cultural, and gender differences are integrated throughout to help you understand these important considerations when caring for older adults. Healthy aging strategies maximize the healthiest behaviors of clients with dementia and their caregivers. Consistent chapter organization includes learning objectives, research, and study questions/activities to make information easy to find and use. Incorporates assessment guidelines throughout provide useful tools for practice. End-of-chapter activities and discussion questions help you expand your knowledge and understanding of the content. Resource lists provide you with additional means to explore ways to care for the older adult. Incorporates the core competencies identified by the AACN and the Hartford Foundation Institute for Geriatric Nursing. Healthy People 2010 boxes assist you in integrating knowledge about healthy aging considerations. Evidence-Based Practice boxes summarize research findings that confirm effective practices or identify practices with unknown, ineffective, or harmful effects. Expanded sexuality-related content includes older adults living with AIDS and STDs. Genetics section reflects the emergence of the role of genetics in gerontological assessment.

## Russian Economic Reform

**Psychology Press** Transitions from socialism to capitalism are complex, both in theory and practice. Russian Economic Reform enables the reader to come to a much better understanding of these momentous changes, by providing a clear and accessible account of the major features of transition. It argues that attempts to portray the reform process as a disaster are misconceived, because they fail to take account of just how badly the pre-reform economy was doing. Many of the problems that are emerging now have their antecedents in the earlier economic system.

## Delivering Superior Health and Wellness Management with IoT and Analytics

**Springer Nature** This in-depth book addresses a key void in the literature surrounding the Internet of Things (IoT) and health. By systematically evaluating the benefits of mobile, wireless, and sensor-based IoT technologies when used in health and wellness contexts, the book sheds light on the next frontier for healthcare delivery. These technologies generate data with significant potential to enable superior care delivery, self-empowerment, and wellness management. Collecting valuable insights and recommendations in one accessible volume, chapter authors identify key areas in health and wellness where IoT can be used, highlighting the benefits, barriers, and facilitators of these technologies as well as suggesting areas for improvement in current policy and regulations. Four overarching themes provide a suitable setting to examine the critical insights presented in the 31 chapters: Mobile- and sensor-based solutions Opportunities to incorporate critical aspects of analytics to provide superior insights and thus support better decision-making Critical issues around aspects of IoT in healthcare contexts Applications of portals in healthcare contexts A comprehensive overview that introduces the critical issues regarding the role of IoT technologies for health. Delivering Superior Health and Wellness Management with IoT and Analytics paves the way for scholars, practitioners, students, and other stakeholders to understand how to substantially improve health and wellness management on a global scale.

## An Introduction to Optical Stellar Interferometry

**Cambridge University Press** During the last two decades, optical stellar interferometry has become an important tool in astronomical investigations requiring spatial resolution well beyond that of traditional telescopes. This book, first published in 2006, was the first to be written on the subject. The authors provide an extended introduction discussing basic physical and atmospheric optics, which establishes the framework necessary to present the ideas and practice of interferometry as applied to the astronomical scene. They follow with an overview of historical, operational and planned interferometric observatories, and a selection of important astrophysical discoveries made with them. Finally, they present some as-yet untested ideas for instruments both on the ground and in space which may allow us to image details of planetary systems beyond our own.

## Inferring Phylogenies

**Sinauer Associates Incorporated** Phylogenies, or evolutionary trees, are the basic structures necessary to think about and analyze differences between species. Statistical, computational, and algorithmic work in this field has been ongoing for four decades now, and there have been great advances in understanding. Yet no book has summarized this work. Inferring Phylogenies does just that in a single, compact volume. Phylogenies are inferred with various kinds of data. This book concentrates on some of the central ones: discretely coded characters, molecular sequences, gene frequencies, and quantitative traits. Also covered are restriction sites, RAPDs, and microsatellites.

## Conservation of the Last Judgment Mosaic, St. Vitus Cathedral, Prague

**Getty Publications** Illustrated in color throughout, this handsome volume presents selected papers from an international symposium held in June 2001 marking the completion of a ten-year project to conserve the Last Judgment mosaic, at St. Vitus Cathedral in Prague. The project was a partnership between the Office of the President of the Czech Republic, the Prague Castle Administration, and the Getty Conservation Institute. The goal of the symposium was to present the methodology, research, and results of the project, which involved conserving one of the finest examples of monumental medieval mosaic art in Europe. The volume's essays are divided into three parts, which cover the historical and art-historical context, conservation planning and methodology, and project implementation and maintenance. Topics addressed include the history, iconography, and visual documentation of the mosaic; the development and application of surface cleaning and protective coating techniques for the mosaic's glass tesserae; and post-treatment monitoring and maintenance.

## The Art of Carbohydrate Analysis

**Springer Nature**

## Molecular Identification of Fungi

**Springer Science & Business Media** Fungi enjoy great popularity in pharmaceutical, agricultural, and biotechnological applications. Recent advances in the decipherment of whole fungal genomes promise an acceleration of these trends. This timely book links scientists from different parts of the world who are interested in the molecular identification of fungi combined with the exploration of the fungal biodiversity in different ecosystems. It provides a compendium for scientists who rely on a rapid and reliable detection of fungal specimens in environmental as well as clinical resources in order to ensure the benefit of industrial and clinical applications. Chapters focus on the opportunities and limits of the molecular marker-mediated identification of fungi. Various methods, procedures and strategies are outlined. Furthermore, the book offers an update of the current progress in the development of fungal molecular techniques, and draws attention to potential and associated problems, as well as integrating theory and practice.

## Evolutionary Biology of Land Isopods

**Springer Science & Business Media** Already as a young boy, I used to walk with my late father, an ardent naturalist at heart, though to his regret not by profession, in the fields and woods on Mt. Carmel where we lived. My father, being largely an amateur ornithologist but also loving other vertebrates, was less interested in the little creatures (the invertebrates) so abundant under stones. These were, more often than not, isopods which are particularly abundant in the Mediterranean region of northern Israel, and therefore not difficult to encounter (Fig. 1). Thus, my interest in the terrestrial isopods started at an early stage. Many years later, after graduating from the Hebrew University, Jerusalem, I worked as an assistant to my late friend and colleague, Professor Michael Costa, at the Teachers Seminary in Oranim. One day I found on my desk a copy of Edney's (1954) paper:

Woodlice and the land habitat, which my friend left for me knowing of my interest in this group. Therefore, due to the stimulus of Edney's paper, and the many interesting questions it raised in my mind, I developed a lifelong interest in this amazing crustacean group. My research in the ecophysiology of this group followed to a large extent the directions formulated by Edney and Cloudsley-Thompson whose name will be mentioned throughout this book. I am also indebted to the many stimulating discussions with my friends and colleagues C. S. Crawford, K. E. Linsenmair, and E.

## Methods to Study Litter Decomposition

### A Practical Guide

**Springer Science & Business Media** The primary objective of this book is to provide students and laboratory instructors at universities and professional ecologists with a broad range of established methods to study plant litter decomposition. Detailed protocols for direct use in the field or laboratory are presented in an easy to follow step-by-step format. A short introduction to each protocol reviews the ecological significance and principles of the technique and points to key references.

### An Introduction to Finite Tight Frames

**Springer** This textbook is an introduction to the theory and applications of finite tight frames, an area that has developed rapidly in the last decade. Stimulating much of this growth are the applications of finite frames to diverse fields such as signal processing, quantum information theory, multivariate orthogonal polynomials, and remote sensing. Featuring exercises and MATLAB examples in each chapter, the book is well suited as a textbook for a graduate course or seminar involving finite frames. The self-contained, user-friendly presentation also makes the work useful as a self-study resource or reference for graduate students, instructors, researchers, and practitioners in pure and applied mathematics, engineering, mathematical physics, and signal processing.

## The New CBT

### Clinical Evolutionary Psychology

Filling a void in the clinical literature, *The New CBT: Clinical Evolutionary Psychology* integrates new techniques of cognitive behavioral therapy (CBT) with evidence-based evolutionary psychology and behavioral genetics. The text addresses the need for clinicians to be conversant with the burgeoning research that has linked evolutionary and genetic processes to psychological problems. This text makes these essential elements accessible to both clinicians and their clients so they can develop a deeper understanding of crucial clinical topics, such as emotional feelings, cognition, and behavioral change. The New CBT explains the processes of the mind and provides solutions to many of the problems that arise when these processes lead to dysfunction or distress. The text reviews how the application of evolutionary psychology and behavioral genetics provides both etiological insights and novel treatments for each of the major psychological disorders. Readers are offered evidenced-based explanations of how evolution and genetics can pragmatically resolve the enduring problem of nature versus nurture. Additionally, they come to understand how eons of environmental changes have guided the way people deal with distress, perceive their environment, and judge others as well as themselves. By viewing both normative and problematic behavior through an evolutionary lens, readers gain new perspectives in applying CBT that are thoroughly modern, effective, and take into consideration cutting-edge research. The New CBT is an ideal text for upper-division courses in psychology, psychotherapy, and psychopathology, especially those with an emphasis on CBT. It is also an excellent resource for practicing clinicians who wish to update or reframe their understanding and use of CBT, evolutionary psychology, or behavioral genetics. Mike Abrams is a practicing psychologist and clinical researcher with a specialty in cognitive behavioral therapy. He is an adjunct full professor in the M.A. program in psychology at New York University and Managing partner of Psychology for New Jersey, LLC a clinical research corporation. He is a board-certified diplomate of the American Board of Professional Psychology and a supervisor, fellow, and diplomate of the Albert Ellis Institute. Dr. Abrams studied and worked closely with Dr. Albert Ellis, with whom he published several books, chapters, and articles on REBT and CBT. Dr. Abrams has also authored four other books on psychology and has practiced or taught professional psychology for more than thirty years. His research into the evolutionary basis of sexual and trauma disorders led the publication along with David Buss of the first clinical protocol combining evolutionary psychology and CBT.

### The Paroxysmal Disorders

**Cambridge University Press** The paroxysmal disorders present neurologists and other medical professionals with diagnostic problems across a range of disorders, including multiple sclerosis, migraine and epilepsy. This new English language edition of a compendium of the paroxysmal disorders, originally published in German as *Paroxysmale Störungen in der Neurologie*, is an informative and practical resource for clinicians, which provides invaluable help with differential diagnosis and management. Fully updated throughout, this new edition comprehensively covers the entire spectrum of the paroxysmal disorders, including sudden falls, headache, vertigo attacks, memory loss, visual disturbances, seizures and anxiety. Each chapter is practice oriented, covering definitions, etiology, epidemiology, diagnosis, examination techniques and therapy. Detailed guidelines for gathering case-histories, essential for accurate diagnosis, are also provided. Important reading for clinicians, professionals and academic researchers working in neurology, psychiatry, epilepsy, internal medicine and ENT.

## Accurate Results in the Clinical Laboratory

### A Guide to Error Detection and Correction

**Elsevier** *Accurate Results in the Clinical Laboratory: A Guide to Error Detection and Correction, Second Edition*, provides a comprehensive review of the factors leading to errors in all areas of clinical laboratory testing. This trusted guide addresses interference issues in all laboratory tests, including patient epigenetics, processes of specimen collection, enzymes and biomarkers. Clinicians and laboratory scientists will both benefit from this reference that applies discussions to both accurate specimen analysis and optimal patient care. Hence, this is the perfect reference for clinical laboratorians, from trainees, to experienced pathologists and directors. Provides comprehensive coverage across endocrine, oncology, hematology, immunohistochemistry, immunology, serology, microbiology, and molecular testing Includes new case studies that highlight clinical relevance and errors to avoid Highlights the best titles published within a variety of medical specialties Reviewed by medical librarians and content specialists, with key selections compiled in their annual list