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Encyclopedia of Actuarial Science, 3 Volume Set - Jozef L. Teugels 2004-10-29

The Encyclopedia of Actuarial Science presents a timely and comprehensive body of knowledge designed to serve as an essential reference for the actuarial profession and all related business and financial activities, as well as researchers and students in actuarial science and related areas. Drawing on the experience of leading international editors and authors from industry and academic research the encyclopedia provides an authoritative exposition of both quantitative methods and practical aspects of actuarial science and insurance. The cross-disciplinary nature of the work is reflected not only in its coverage of key concepts from business, economics, risk, probability theory and statistics but also by the inclusion of supporting topics such as demography, genetics, operations research and informatics.

Mathematical Tools for Physics - James Nearing 2021-08

Having the right answer doesn't guarantee understanding. This book helps physics students learn to take an informed and intuitive approach to solving problems. It assists undergraduates in developing their skills and provides them with grounding in important mathematical methods. Starting with a review of basic mathematics, the author presents a thorough analysis of infinite series, complex algebra, differential equations, and Fourier series. Succeeding chapters explore vector spaces, operators and matrices, multi-variable and vector calculus, partial differential equations, numerical and complex analysis, and tensors. Additional topics include complex variables, Fourier analysis, the calculus of variations, and densities and distributions. An excellent math reference guide, this volume is also a helpful companion for physics students as they work through their assignments.

Mathematics and Technology - Christiane Rousseau 2008-10-29

This book introduces the student to numerous modern applications of mathematics in technology. The authors write with clarity and present the mathematics in a clear and straightforward way making it an interesting and easy book to read. Numerous exercises at the end of every section provide practice and reinforce the material in the chapter. An engaging quality of this book is that the authors also present the mathematical material in a historical context and not just the practical one. Mathematics and Technology is intended for undergraduate students in mathematics, instructors and high school teachers. Additionally, its lack of calculus centrality as well as a clear indication of the more difficult topics and relatively advanced references make it suitable for any curious individual with a decent command of high school math.

Human Interaction, Emerging Technologies and Future Applications III - Tareq Ahram 2020-08-05

This book reports on research and developments in human-technology interaction. A special emphasis is given to human-computer interaction, and its implementation for a wide range of purposes such as healthcare, aerospace, telecommunication, and education, among others. The human aspects are analyzed in detail. Timely studies on human-centered design, wearable technologies, social and affective computing, augmented, virtual and mixed reality simulation, human rehabilitation and biomechanics represent the core of the book. Emerging technology applications in business, security, and infrastructure are also critically examined, thus offering a timely, scientifically-grounded, but also professionally-oriented snapshot of the current state of the field. The book is based on contributions presented at the 3rd International Conference on Human Interaction and Emerging Technologies: Future Applications, IHET 2020, held on August 27-29, 2020. It offers a timely survey and a practice-oriented reference guide to researchers and professionals dealing with design and/or management of the new generation of service systems.

Introduction to Nanotechnology - Charles P. Poole, Jr. 2003-05-30

This self-confessed introduction provides technical administrators and managers with a broad, practical overview of the subject and gives researchers working in different areas an appreciation of developments in nanotechnology outside their own fields of expertise.

Fundamentals of General Insurance Actuarial Analysis - Jacqueline Friedland, FCIA, FCAS, MAAA 2014-01-01

This text introduces the commonly used, basic approaches for reserving and ratemaking in General Insurance. The methods are described through detailed examples that are linked from one chapter to another to illustrate their practical application. Also, professionalism requirements and standards of practice are presented to set the context for the methods and examples.

NUREG/CR. - U.S. Nuclear Regulatory Commission 1979

Actuarial Models for Disability Insurance - S Haberman 2018-12-13

Disability insurance, long-term care insurance, and critical illness cover are becoming increasingly important in developed countries as the problems of demographic aging come to the fore. The private sector insurance industry is providing solutions to problems resulting from these pressures and other demands of better educated and more prosperous

Statistical Regression and Classification - Norman Matloff 2017-09-19

Statistical Regression and Classification: From Linear Models to Machine Learning takes an innovative look at the traditional statistical regression course, presenting a contemporary treatment in line with today's applications and users. The text takes a modern look at regression: * A thorough treatment of classical linear and generalized linear models, supplemented with introductory material on machine learning methods. * Since classification is the focus of many contemporary applications, the book covers this topic in detail, especially the multiclass case. * In view of the voluminous nature of many modern datasets, there is a chapter on Big Data. * Has special Mathematical and Computational Complements sections at ends of chapters, and exercises are partitioned into Data, Math and Complements problems. * Instructors can tailor coverage for specific audiences such as majors in Statistics, Computer Science, or Economics. * More than 75 examples using real data. The book treats classical regression methods in an innovative, contemporary manner. Though some statistical learning methods are introduced, the primary methodology used is linear and generalized linear parametric models, covering both the Description and Prediction goals of regression methods. The author is just as interested in Description applications of regression, such as measuring the gender wage gap in Silicon Valley, as in forecasting tomorrow's demand for bike rentals. An entire chapter is devoted to measuring such effects, including discussion of Simpson's Paradox, multiple inference, and causation issues. Similarly, there is an entire chapter of parametric model fit, making use of both residual analysis and assessment via nonparametric analysis. Norman Matloff is a professor of computer science at the University of California, Davis, and was a founder of the Statistics Department at that institution. His current research focus is on recommender systems, and applications of regression methods to small area estimation and bias reduction in observational studies. He is on the editorial boards of the Journal of Statistical Computation and the R Journal. An award-winning teacher, he is the author of The Art of R Programming and Parallel Computation in Data Science: With Examples in R, C++ and CUDA.

Ellipsometry in the Measurement of Surfaces and Thin Films - Elio Passaglia 1964

Statistical Methods in Nuclear Material Control - John L. Jaech 1974

Springer Handbook of Spacetime - Abhay Ashtekar 2014-09-01

The Springer Handbook of Spacetime is dedicated to the ground-breaking paradigm shifts embodied in the two relativity theories, and describes in detail the profound reshaping of physical sciences they ushered in. It includes in a single volume chapters on foundations, on the underlying mathematics, on physical and astrophysical implications, experimental evidence and cosmological predictions, as well as chapters on efforts to unify general relativity and quantum physics. The Handbook can be used as a desk reference by researchers in a wide variety of fields, not only by specialists in relativity but also by researchers in related areas that either grew out of, or are deeply influenced by, the two relativity theories: cosmology, astronomy and astrophysics, high energy physics, quantum field theory, mathematics, and philosophy of science. It should also serve as a valuable resource for graduate students and young researchers entering these areas, and for instructors who teach courses on these subjects. The Handbook is divided into six parts. Part A: Introduction to Spacetime Structure. Part B: Foundational Issues. Part C: Spacetime Structure and Mathematics. Part D: Confronting Relativity theories with observations. Part E: General relativity and the universe. Part F: Spacetime beyond Einstein.

An Introduction to the Mathematics of Finance - Stephen Garrett 2013-05-28

An Introduction to the Mathematics of Finance: A Deterministic Approach, 2e, offers a highly illustrated introduction to mathematical finance, with a special emphasis on interest rates. This revision of the McCutcheon-Scott classic follows the core subjects covered by the first professional exam required of UK actuaries, the CT1 exam. It realigns the table of contents with the CT1 exam and includes sample questions from past exams of both The Actuarial Profession and the CFA Institute. With a wealth of solved problems and interesting applications, An Introduction to the Mathematics of Finance stands alone in its ability to address the needs of its primary target audience, the actuarial student. Closely follows the syllabus for the CT1 exam of The Institute and Faculty of Actuaries Features new content and more examples Online supplements available: <http://booksite.elsevier.com/9780080982403/> Includes past exam questions from The Institute and Faculty of Actuaries and the CFA Institute

Dictionary of Acronyms and Technical Abbreviations - Jakob Vlietstra 2012-12-06

This Dictionary covers information and communication technology (ICT), including hardware and software; information networks, including the Internet and the World Wide Web; automatic control; and ICT-related computer-aided fields. The Dictionary also lists abbreviated names of relevant organizations, conferences, symposia and workshops. This reference is important for all practitioners and users in the areas mentioned above, and those who consult or write technical material. This Second Edition contains 10,000 new entries, for a total of 33,000.

Topics in Optimal Transportation - Cédric Villani 2021-08-25

This is the first comprehensive introduction to the theory of mass transportation with its many—and sometimes unexpected—applications. In a novel approach to the subject, the book both surveys the topic and includes a chapter of problems, making it a particularly useful graduate textbook. In 1781, Gaspard Monge defined the problem of “optimal transportation” (or the transferring of mass with the least possible amount of work), with applications to engineering in mind. In 1942, Leonid Kantorovich applied the newborn machinery of linear programming to Monge's problem, with applications to economics in mind. In 1987, Yann Brenier used optimal transportation to prove a new projection theorem on the set of measure preserving maps, with applications to fluid mechanics in mind. Each of these contributions marked the beginning of a whole mathematical theory, with many unexpected ramifications. Nowadays, the Monge-Kantorovich problem is used and studied by researchers from extremely diverse horizons, including probability theory, functional analysis, isoperimetry, partial differential equations, and even meteorology. Originating from a graduate course, the present volume is intended for graduate students and researchers, covering both theory and applications. Readers are only assumed to be familiar with the basics of measure theory and functional analysis.

Claim Models - Greg Taylor 2020-04-15

This collection of articles addresses the most modern forms of loss reserving methodology: granular models and machine learning models. New methodologies come with questions about their applicability. These questions are discussed in one article, which focuses on the relative merits of granular and machine learning models. Others illustrate applications with real-world data. The examples include neural networks, which, though well known in some disciplines, have previously been limited in the actuarial literature. This volume expands on that literature, with specific attention to their application to loss reserving. For example, one of the articles introduces the application of neural networks of the gated recurrent unit form to the actuarial literature, whereas another uses a penalized neural network. Neural networks are not the only form of machine learning, and two other papers outline applications of gradient boosting and regression trees respectively. Both articles construct loss reserves at the individual claim level so that these models resemble granular models. One of these articles provides a practical application of the model to claim watching, the action of monitoring claim development and anticipating major features. Such watching can be used as an early warning system or for other administrative purposes. Overall, this volume is an extremely useful addition to the libraries of those working at the loss reserving frontier.

Repeated Games with Incomplete Information - Robert J. Aumann 1995

Winner, Frederick W. Lanchester Prize given by The Institute for Operations Research and the Management Sciences (INFORMS), 1995. During the height of the Cold War, between 1965 and 1968, Robert Aumann, Michael Maschler, and Richard Stearns collaborated on research on the dynamics of arms control negotiations that has since become foundational to work on repeated games. These five seminal papers are collected here for the first time, with the addition of "postscripts" describing many of the developments since the papers were written. The basic model studied throughout the book is one in which players ignorant about the game being played must learn what they can from the actions of the others. The original work, done under contract to the United States Arms Control and Disarmament Agency, was intended to tackle the gradual disarmament problem, in which neither player knew what his own payoff would be for any given agreement, because of uncertainty about the other side's arsenal and weapons production technology. But the research soon became much more generalized, covering information concealment and revelation, signaling and learning, and related ideas in any repeated competitive situation. The first four chapters of the book treat the competitive zero-sum side of the theory of repeated games. Chapter five takes up cooperative phenomena where one player may want to signal information to another. An extensive bibliography covers all items mentioned in the main text, in the postscripts, and in the introduction. The bibliography also includes a compilation of published papers and books that refer to the original reports.

Optimal Transport - Cédric Villani 2008-10-26

At the close of the 1980s, the independent contributions of Yann Brenier, Mike Cullen and John Mather launched a revolution in the venerable field of optimal transport founded by G. Monge in the 18th century, which has made breathtaking forays into various other domains of mathematics ever since. The author presents a broad overview of this area, supplying complete and self-contained proofs of all the fundamental results of the theory of optimal transport at the appropriate level of generality. Thus, the book encompasses the broad spectrum ranging from basic theory to the most recent research results. PhD students or researchers can read the entire book without any prior knowledge of the field. A comprehensive bibliography with notes that extensively discuss the existing literature underlines the book's value as a most welcome reference text on this subject.

Insecticides Design Using Advanced Technologies - Isaac Ishaaya 2007-02-15

Among the highlights of this book are the use of nanotechnology to increase potency of available insecticides, the use of genetic engineering techniques for controlling insect pests, the development of novel insecticides that bind to unique biochemical receptors, the exploration of natural products as a source for environmentally acceptable insecticides, and the use of insect genomics and cell lines for determining biological and biochemical modes of action of new insecticides.

Solutions Manual for Actuarial Mathematics for Life Contingent Risks - David C. M. Dickson 2013-08-12

This must-have manual provides detailed solutions to all of the 200+ exercises in Dickson, Hardy and

Waters' Actuarial Mathematics for Life Contingent Risks, Second Edition. This groundbreaking text on the modern mathematics of life insurance is required reading for the Society of Actuaries' Exam MLC and also provides a solid preparation for the life contingencies material of the UK actuarial profession's exam CT5. Beyond the professional examinations, the textbook and solutions manual offer readers the opportunity to develop insight and understanding, and also offer practical advice for solving problems using straightforward, intuitive numerical methods. Companion spreadsheets illustrating these techniques are available for free download.

[Formulae and Tables for Examinations of the Faculty of Actuaries and the Institute of Actuaries - 2002-01-01](#)

Statistical Computing with R - Maria L. Rizzo 2007-11-15

Computational statistics and statistical computing are two areas that employ computational, graphical, and numerical approaches to solve statistical problems, making the versatile R language an ideal computing environment for these fields. One of the first books on these topics to feature R, Statistical Computing with R covers the traditional

Analysis of Images, Social Networks and Texts - Wil M.P. van der Aalst 2017-12-20

This book constitutes the proceedings of the 6th International Conference on Analysis of Images, Social Networks and Texts, AIST 2017, held in Moscow, Russia, in July 2017. The 29 full papers and 8 short papers were carefully reviewed and selected from 127 submissions. The papers are organized in topical sections on natural language processing; general topics of data analysis; analysis of images and video; optimization problems on graphs and network structures; analysis of dynamic behavior through event data; social network analysis.

Dynamic Systems and Dynamic Classification Problems in Geophysical Applications - Jacques Octave Dubois 2013-03-13

This book is the latest volume in the series entitled "Data and Knowledge in a Changing World", published by the Committee on Data for Science and Technology (CODATA) of the International Council of Scientific Unions (ICSU). This series was established to collect together, from many diverse fields, the wealth of information pertaining to the intelligent exploitation of data in the conduct of science and technology. This volume is the first in a two-volume series that will discuss techniques for the analysis of natural dynamic systems, and their applications to a variety of geophysical problems. The present volume lays out the theoretical foundations for these techniques. The second volume will use these techniques in applications to fields such as seismology, geodynamics, geoelectricity, geomagnetism, aeromagnetism, topography and bathymetry. The book consists of two parts, which describe two complementary approaches to the analysis of natural systems. The first, written by A. Gvisiani, deals with dynamic pattern recognition. It lays out the mathematical foundation theory and the formalized algorithms that form the basis for the classification of vector objects and the use of this classification in the study of dynamical systems, with particular emphasis on the prediction of system behavior in space and time. It discusses the construction of classification schemes, and the evaluation of their stability and reliability.

Actuarial Science - Ninian Glen 1893

[Behavioral Decision Theory](#) - Kazuhisa Takemura 2021-09-29

This book is the second edition of Behavioral Decision Theory, published in 2014. The main approach and structure of this book have been retained in the new edition. However, this second edition provides a fresh overview of the idea of behavioral decision theory and related research findings such as theoretical and empirical discoveries of preference formation, time discounting, social interaction, and social decision making. The book covers a wide range from classical to relatively recent major studies concerning behavioral decision theory, which, in brief, is a general term for descriptive theories to explain the psychological knowledge related to people's decision-making behavior. It is called a theory but is actually a combination of various psychological theories, for which no axiomatic systems—such as those associated with the utility theory widely used in economics—have been established. The utility theory is often limited to qualitative knowledge; however, as the studies of Nobel laureates H. A. Simon, D. Kahneman, and R.

Thaler have suggested, the psychological methodology and knowledge of behavioral decision theory have been applied widely in such fields as economics, business administration, and engineering and are expected to become even more useful in the future. Research into people's decision making represents an important part in those fields, various aspects of which overlap with the scope of behavioral decision theory. This theory is closely related to behavioral economics and behavioral finance, which have come into greater use in recent years. This book will appeal especially to graduate students, advanced undergraduate students, and researchers who are interested in decision-making phenomena.

Molecular Biology of Circadian Rhythms - Amita Sehgal 2004-04

This text begins with a general introduction to biochemical and biophysical aspects of circadian timing, then proceeds to its essential focus on collating the newest information on molecular mechanisms of circadian rhythms. It includes a chapter on the implications for clinical research on affective disorders, sleep disorders, and the relevance for therapeutic treatment, as well as coverage of multiple oscillators and hormonal rhythms. Sections include: Molecular Control of Circadian Rhythms: Animal Models Molecular Control of Circadian Rhythms: From Cyanobacteria to Plants Circadian Organization in Complex Organisms. Chapter topics include examinations of circadian rhythms in non-mammalian vertebrates, neurospora, and humans.

Regression Modeling Strategies - Frank E. Harrell 2013-03-09

Many texts are excellent sources of knowledge about individual statistical tools, but the art of data analysis is about choosing and using multiple tools. Instead of presenting isolated techniques, this text emphasizes problem solving strategies that address the many issues arising when developing multivariable models using real data and not standard textbook examples. It includes imputation methods for dealing with missing data effectively, methods for dealing with nonlinear relationships and for making the estimation of transformations a formal part of the modeling process, methods for dealing with "too many variables to analyze and not enough observations," and powerful model validation techniques based on the bootstrap. This text realistically deals with model uncertainty and its effects on inference to achieve "safe data mining".

Actuarial Mathematics - Harry H. Panjer 1986

These lecture notes from the 1985 AMS Short Course examine a variety of topics from the contemporary theory of actuarial mathematics. Recent clarification in the concepts of probability and statistics has laid a much richer foundation for this theory. Other factors that have shaped the theory include the continuing advances in computer science, the flourishing mathematical theory of risk, developments in stochastic processes, and recent growth in the theory of finance. In turn, actuarial concepts have been applied to other areas such as biostatistics, demography, economic, and reliability engineering.

[Molecular Modeling and Simulation](#) - Tamar Schlick 2013-04-18

Very broad overview of the field intended for an interdisciplinary audience; Lively discussion of current challenges written in a colloquial style; Author is a rising star in this discipline; Suitably accessible for beginners and suitably rigorous for experts; Features extensive four-color illustrations; Appendices featuring homework assignments and reading lists complement the material in the main text

Fundamentals of Actuarial Mathematics - S. David Promislow 2011-01-06

This book provides a comprehensive introduction to actuarial mathematics, covering both deterministic and stochastic models of life contingencies, as well as more advanced topics such as risk theory, credibility theory and multi-state models. This new edition includes additional material on credibility theory, continuous time multi-state models, more complex types of contingent insurances, flexible contracts such as universal life, the risk measures VaR and TVaR. Key Features: Covers much of the syllabus material on the modeling examinations of the Society of Actuaries, Canadian Institute of Actuaries and the Casualty Actuarial Society. (SOA-CIA exams MLC and C, CSA exams 3L and 4.) Extensively revised and updated with new material. Orders the topics specifically to facilitate learning. Provides a streamlined approach to actuarial notation. Employs modern computational methods. Contains a variety of exercises, both computational and theoretical, together with answers, enabling use for self-study. An ideal text for students planning for a professional career as actuaries, providing a solid preparation for the modeling examinations of the major North American actuarial associations. Furthermore, this book is highly suitable reference for

those wanting a sound introduction to the subject, and for those working in insurance, annuities and pensions.

The Knot Book - Colin Conrad Adams 2004

Knots are familiar objects. Yet the mathematical theory of knots quickly leads to deep results in topology and geometry. This work offers an introduction to this theory, starting with our understanding of knots. It presents the applications of knot theory to modern chemistry, biology and physics.

Cisco ISP Essentials - Barry Raveendran Greene 2002

A comprehensive guide to the best common practices for Internet service providers Learn the best common practices for configuring routers on the Internet from experts who helped build the Internet Gain specific advice through comprehensive coverage of all Cisco routers and current versions of Cisco IOS Software Understand the Cisco IOS tools essential to building and maintaining reliable networks Increase your knowledge of network security Learn how to prevent problems and improve performance through detailed configuration examples and diagrams Cisco IOS Software documentation is extensive and detailed and is often too hard for many Internet service providers (ISPs) who simply want to switch on and get going. Cisco ISP Essentials highlights many of the key Cisco IOS features in everyday use in the major ISP backbones of the world to help new network engineers gain understanding of the power of Cisco IOS Software and the richness of features available specifically for them. Cisco ISP Essentials also provides a detailed technical reference for the expert ISP engineer, with descriptions of the various knobs and special features that have been specifically designed for ISPs. The configuration examples and diagrams describe many scenarios, ranging from good operational practices to network security. Finally a whole appendix is dedicated to using the best principles to cover the configuration detail of each router in a small ISP Point of Presence.

Technical guidance manual for developing total maximum daily loads book 2streams and riverspart 1biochemical oxygen demand/dissolved oxygen and nutrients/eutrophication. -

Mathematical Demography - David P. Smith 2013-07-23

Mathematical demography is the centerpiece of quantitative social science. The founding works of this field from Roman times to the late Twentieth Century are collected here, in a new edition of a classic work by David R. Smith and Nathan Keyfitz. Commentaries by Smith and Keyfitz have been brought up to date and extended by Kenneth Wachter and Hervé Le Bras, giving a synoptic picture of the leading achievements in formal population studies. Like the original collection, this new edition constitutes an indispensable source for students and scientists alike, and illustrates the deep roots and continuing vitality of mathematical demography.

Applied Mathematics - Susmita Sarkar 2015-10-13

The book is based on research presentations at the international conference, "Emerging Trends in Applied Mathematics: In the Memory of Sir Asutosh Mookerjee, S.N. Bose, M.N. Saha and N.R. Sen", held at the Department of Applied Mathematics, University of Calcutta, during 12-14 February 2014. It focuses on various emerging and challenging topics in the field of applied mathematics and theoretical physics. The book will be a valuable resource for postgraduate students at higher levels and researchers in applied mathematics and theoretical physics. Researchers presented a wide variety of themes in applied mathematics and theoretical physics—such as emergent periodicity in a field of chaos; Ricci flow equation and Poincaré conjecture; Bose-Einstein condensation; geometry of local scale invariance and turbulence; statistical mechanics of human resource allocation: mathematical modelling of job-matching in labour markets; contact problem in elasticity; the Saha equation; computational fluid dynamics with applications in aerospace problems; an introduction to data assimilation, stochastic analysis and bounds on noise for Holling type-II model, graph theoretical invariants of chemical and biological systems; strongly correlated phases and quantum phase transitions of ultra cold bosons; and the mathematical modelling of breast cancer treatment.

Bayesian Theory - José M. Bernardo 2009-09-25

This highly acclaimed text, now available in paperback, provides a thorough account of key concepts and

theoretical results, with particular emphasis on viewing statistical inference as a special case of decision theory. Information-theoretic concepts play a central role in the development of the theory, which provides, in particular, a detailed discussion of the problem of specification of so-called prior ignorance. The work is written from the authors' committed Bayesian perspective, but an overview of non-Bayesian theories is also provided, and each chapter contains a wide-ranging critical re-examination of controversial issues. The level of mathematics used is such that most material is accessible to readers with knowledge of advanced calculus. In particular, no knowledge of abstract measure theory is assumed, and the emphasis throughout is on statistical concepts rather than rigorous mathematics. The book will be an ideal source for all students and researchers in statistics, mathematics, decision analysis, economic and business studies, and all branches of science and engineering, who wish to further their understanding of Bayesian statistics

Generalized Additive Models - Simon Wood 2006-02-27

Now in widespread use, generalized additive models (GAMs) have evolved into a standard statistical methodology of considerable flexibility. While Hastie and Tibshirani's outstanding 1990 research monograph on GAMs is largely responsible for this, there has been a long-standing need for an accessible introductory treatment of the subject that also emphasizes recent penalized regression spline approaches to GAMs and the mixed model extensions of these models. Generalized Additive Models: An Introduction with R imparts a thorough understanding of the theory and practical applications of GAMs and related advanced models, enabling informed use of these very flexible tools. The author bases his approach on a framework of penalized regression splines, and builds a well-grounded foundation through motivating chapters on linear and generalized linear models. While firmly focused on the practical aspects of GAMs, discussions include fairly full explanations of the theory underlying the methods. Use of the freely available R software helps explain the theory and illustrates the practicalities of linear, generalized linear, and generalized additive models, as well as their mixed effect extensions. The treatment is rich with practical examples, and it includes an entire chapter on the analysis of real data sets using R and the author's add-on package mgcv. Each chapter includes exercises, for which complete solutions are provided in an appendix. Concise, comprehensive, and essentially self-contained, Generalized Additive Models: An Introduction with R prepares readers with the practical skills and the theoretical background needed to use and understand GAMs and to move on to other GAM-related methods and models, such as SS-ANOVA, P-splines, backfitting and Bayesian approaches to smoothing and additive modelling.

Wind Energy Explained - James F. Manwell 2010-09-14

Wind energy's bestselling textbook- fully revised. This must-have second edition includes up-to-date data, diagrams, illustrations and thorough new material on: the fundamentals of wind turbine aerodynamics; wind turbine testing and modelling; wind turbine design standards; offshore wind energy; special purpose applications, such as energy storage and fuel production. Fifty additional homework problems and a new appendix on data processing make this comprehensive edition perfect for engineering students. This book offers a complete examination of one of the most promising sources of renewable energy and is a great introduction to this cross-disciplinary field for practising engineers. "provides a wealth of information and is an excellent reference book for people interested in the subject of wind energy." (IEEE Power & Energy Magazine, November/December 2003) "deserves a place in the library of every university and college where renewable energy is taught." (The International Journal of Electrical Engineering Education, Vol.41, No.2 April 2004) "a very comprehensive and well-organized treatment of the current status of wind power." (Choice, Vol. 40, No. 4, December 2002)

Actuarial Mathematics and Life-Table Statistics - Eric V. Slud 2012

This text covers life tables, survival models, and life insurance premiums and reserves. It presents the actuarial material conceptually with reference to ideas from other mathematical studies, allowing readers with knowledge in calculus to explore business, actuarial science, economics, and statistics. Each chapter contains exercise sets and worked examples, which highlight the most important and frequently used formulas and show how the ideas and formulas work together smoothly. Illustrations and solutions are also provided.