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### INTRODUCTION TO PROBABILITY AND MATHEMATICAL STATISTICS

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**Duxbury Press** The Second Edition of INTRODUCTION TO PROBABILITY AND MATHEMATICAL STATISTICS focuses on developing the skills to build probability (stochastic) models. Lee J. Bain and Max Engelhardt focus on the mathematical development of the subject, with examples and exercises oriented toward applications.

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### MATHEMATICAL STATISTICS

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**Springer Science & Business Media** This graduate textbook covers topics in statistical theory essential for graduate students preparing for work on a Ph.D. degree in statistics. This new edition has been revised and updated and in this fourth printing, errors have been ironed out. The first chapter provides a quick overview of concepts and results in measure-theoretic probability theory that are useful in statistics. The second chapter introduces some fundamental concepts in statistical decision theory and inference. Subsequent chapters contain detailed studies on some important topics: unbiased estimation, parametric estimation, nonparametric estimation, hypothesis testing, and confidence sets. A large number of exercises in each chapter provide not only practice problems for students, but also many additional results.

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### MODERN ACTUARIAL RISK THEORY

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**Springer Science & Business Media** Modern Actuarial Risk Theory contains what every actuary needs to know about non-life insurance mathematics. It starts with the standard material like utility theory, individual and collective model and basic ruin theory. Other topics are risk measures and premium principles, bonus-malus systems, ordering of risks and credibility theory. It also contains some chapters about Generalized Linear Models, applied to rating and IBNR problems. As to the level of the mathematics, the book would fit in a bachelors or masters program in quantitative economics or mathematical statistics. This second and.

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### INTRODUCTION TO MATHEMATICAL STATISTICS

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### INTRODUCTION TO PROBABILITY

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### SPACECRAFT STRUCTURES

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**Springer Science & Business Media** Space flight is a comprehensive and innovative part of technology. It encompasses many fields of technology. This monograph presents a cross section of the total field of expertise that is called "space flight". It provides an optimal reference with insight into the design, construction and analysis aspects of spacecraft. The emphasis of this book is put on unmanned space flight, particularly on the construction of spacecraft rather than the construction of launch vehicles.

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### STATISTICAL THEORY AND INFERENCE

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**Springer** This text is for a one semester graduate course in statistical theory and covers minimal and complete sufficient statistics, maximum likelihood estimators, method of moments, bias and mean square error, uniform minimum variance estimators and the Cramer-Rao lower bound, an introduction to large sample theory, likelihood ratio tests and uniformly most powerful tests and the Neyman Pearson Lemma. A major goal of this text is to make these topics much more accessible to students by using the theory of exponential families. Exponential families, indicator functions and the support of the distribution are used throughout the text to simplify the theory. More than 50 "brand name" distributions are used to illustrate the theory with many examples of exponential families, maximum likelihood estimators and uniformly minimum variance unbiased estimators. There are many homework problems with over 30 pages of solutions.

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### THE PENTAGON

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### A MATHEMATICS MAGAZINE FOR STUDENTS

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### MATHEMATICAL STATISTICS AND DATA ANALYSIS

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**Cengage Learning** This is the first text in a generation to re-examine the purpose of the mathematical statistics course. The book's approach interweaves traditional topics with data analysis and reflects the use of the computer with close ties to the practice of statistics. The author stresses analysis of data, examines real problems with real data, and motivates the theory. The book's descriptive statistics, graphical displays, and realistic applications stand in strong contrast to traditional texts that are set in abstract settings. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

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### AN INTRODUCTION TO PROBABILITY AND STATISTICS

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**John Wiley & Sons** A well-balanced introduction to probability theory and mathematical statistics Featuring updated material, An Introduction to Probability and Statistics, Third Edition remains a solid overview to probability theory and mathematical statistics. Divided into three parts, the Third Edition begins by presenting the fundamentals and foundations of probability. The second part addresses statistical inference, and the remaining chapters focus on special topics. An Introduction to Probability and Statistics, Third Edition includes: A new section on regression analysis to include multiple regression, logistic regression, and Poisson regression A reorganized chapter on large sample theory to emphasize the growing role of asymptotic statistics Additional topical coverage on bootstrapping, estimation procedures, and resampling Discussions on invariance, ancillary statistics, conjugate prior distributions, and invariant confidence intervals Over 550 problems and answers to most problems, as well as 350 worked out examples and 200 remarks Numerous figures to further illustrate examples and proofs throughout An Introduction to Probability and Statistics, Third Edition is an ideal reference and resource for scientists and engineers in the fields of statistics, mathematics, physics, industrial management, and engineering. The book is also an excellent text for upper-undergraduate and graduate-level students majoring in probability and statistics.

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### COMPUTATIONAL STATISTICS HANDBOOK WITH MATLAB

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**CRC Press** As with the bestselling first edition, Computational Statistics Handbook with MATLAB, Second Edition covers some of the most commonly used contemporary techniques in computational statistics. With a strong, practical focus on implementing the methods, the authors include algorithmic descriptions of the procedures as well as

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## ECONOMETRIC METHODS WITH APPLICATIONS IN BUSINESS AND ECONOMICS

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**OUP Oxford** Nowadays applied work in business and economics requires a solid understanding of econometric methods to support decision-making. Combining a solid exposition of econometric methods with an application-oriented approach, this rigorous textbook provides students with a working understanding and hands-on experience of current econometrics. Taking a 'learning by doing' approach, it covers basic econometric methods (statistics, simple and multiple regression, nonlinear regression, maximum likelihood, and generalized method of moments), and addresses the creative process of model building with due attention to diagnostic testing and model improvement. Its last part is devoted to two major application areas: the econometrics of choice data (logit and probit, multinomial and ordered choice, truncated and censored data, and duration data) and the econometrics of time series data (univariate time series, trends, volatility, vector autoregressions, and a brief discussion of SUR models, panel data, and simultaneous equations). · Real-world text examples and practical exercise questions stimulate active learning and show how econometrics can solve practical questions in modern business and economic management. · Focuses on the core of econometrics, regression, and covers two major advanced topics, choice data with applications in marketing and micro-economics, and time series data with applications in finance and macro-economics. · Learning-support features include concise, manageable sections of text, frequent cross-references to related and background material, summaries, computational schemes, keyword lists, suggested further reading, exercise sets, and online data sets and solutions. · Derivations and theory exercises are clearly marked for students in advanced courses. This textbook is perfect for advanced undergraduate students, new graduate students, and applied researchers in econometrics, business, and economics, and for researchers in other fields that draw on modern applied econometrics.

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## WEIBULL MODELS

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**John Wiley & Sons** A comprehensive perspective on Weibull models The literature on Weibull models is vast, disjointed, and scattered across many different journals. Weibull Models is a comprehensive guide that integrates all the different facets of Weibull models in a single volume. This book will be of great help to practitioners in reliability and other disciplines in the context of modeling data sets using Weibull models. For researchers interested in these modeling techniques, exercises at the end of each chapter define potential topics for future research. Organized into seven distinct parts, Weibull Models: \* Covers model analysis, parameter estimation, model validation, and application \* Serves as both a handbook and a research monograph. As a handbook, it classifies the different models and presents their properties. As a research monograph, it unifies the literature and presents the results in an integrated manner \* Intertwines theory and application \* Focuses on model identification prior to model parameter estimation \* Discusses the usefulness of the Weibull Probability plot (WPP) in the model selection to model a given data set \* Highlights the use of Weibull models in reliability theory Filled with in-depth analysis, Weibull Models pulls together the most relevant information on this topic to give everyone from reliability engineers to applied statisticians involved with reliability and survival analysis a clear look at what Weibull models can offer.

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## STATISTICAL INFERENCE

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**Cengage Learning** This book builds theoretical statistics from the first principles of probability theory. Starting from the basics of probability, the authors develop the theory of statistical inference using techniques, definitions, and concepts that are statistical and are natural extensions and consequences of previous concepts. Intended for first-year graduate students, this book can be used for students majoring in statistics who have a solid mathematics background. It can also be used in a way that stresses the more practical uses of statistical theory, being more concerned with understanding basic statistical concepts and deriving reasonable statistical procedures for a variety of situations, and less concerned with formal optimality investigations. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

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## INTRODUCTION TO PROBABILITY

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**Cambridge University Press** This classroom-tested textbook is an introduction to probability theory, with the right balance between mathematical precision, probabilistic intuition, and concrete applications. Introduction to Probability covers the material precisely, while avoiding excessive technical details. After introducing the basic vocabulary of randomness, including events, probabilities, and random variables, the text offers the reader a first glimpse of the major theorems of the subject: the law of large numbers and the central limit theorem. The important probability distributions are introduced organically as they arise from applications. The discrete and continuous sides of probability are treated together to emphasize their similarities. Intended for students with a calculus background, the text teaches not only the nuts and bolts of probability theory and how to solve specific problems, but also why the methods of solution work.

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## ENVSTATS

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### AN R PACKAGE FOR ENVIRONMENTAL STATISTICS

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**Springer Science & Business Media** This book describes EnvStats, a new comprehensive R package for environmental statistics and the successor to the S-PLUS module EnvironmentalStats for S-PLUS (first released in 1997). EnvStats and R provide an open-source set of powerful functions for performing graphical and statistical analyses of environmental data, bringing major environmental statistical methods found in the literature and regulatory guidance documents into one statistical package, along with an extensive hypertext help system that explains what these methods do, how to use these methods, and where to find them in the environmental statistics literature. EnvStats also includes numerous built-in data sets from regulatory guidance documents and the environmental statistics literature. This book shows how to use EnvStats and R to easily: \* graphically display environmental data \* plot probability distributions \* estimate distribution parameters and construct confidence intervals on the original scale for commonly used distributions such as the lognormal and gamma, as well as do this nonparametrically \* estimate and construct confidence intervals for distribution percentiles or do this nonparametrically (e.g., to compare to an environmental protection standard) \* perform and plot the results of goodness-of-fit tests \* compute optimal Box-Cox data transformations \* compute prediction limits and simultaneous prediction limits (e.g., to assess compliance at multiple sites for multiple constituents) \* perform nonparametric estimation and test for seasonal trend (even in the presence of correlated observations) \* perform power and sample size computations and create companion plots for sampling designs based on confidence intervals, hypothesis tests, prediction intervals, and tolerance intervals \* deal with non-detect (censored) data \* perform Monte Carlo simulation and probabilistic risk assessment \* reproduce specific examples in EPA guidance documents EnvStats combined with other R packages (e.g., for spatial analysis) provides the environmental scientist, statistician, researcher, and technician with tools to "get the job done!"

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## SAMPLES:FROM THE PATIENT TO THE LABORATORY

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### THE IMPACT OF PREANALYTICAL VARIABLES ON THE QUALITY OF LABORATORY RESULTS

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**John Wiley & Sons** This forth updated edition contains the latest developments in analytical techniques. An international team of authors summarizes the information on biological influences, analytical interferences and on the variables affecting the collection, transport and storage as well as preparation of samples. They cover age, gender, race, pregnancy, diet, exercise and altitude, plus the effects of stimulants and drugs. National and international standards are described for sampling procedures, transport, sample identification and all safety aspects, while quality assurance procedures are shown for total laboratory management. In addition, the authors provide a glossary as well as a separate list of analytes containing the available data on reference intervals, biological half-life times, stability and influence and interference factors. For everyone involved in patient care and using or performing laboratory tests.

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## A CASEBOOK FOR A FIRST COURSE IN STATISTICS AND DATA ANALYSIS

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**John Wiley & Sons Incorporated** Containing 61 cases studies from business, the media and the natural and social sciences, this text is organized by broad applicational areas: data analysis; applied probability; inference; and regression models.

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## UNIVARIATE DISCRETE DISTRIBUTIONS

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**John Wiley & Sons** This Set Contains: Continuous Multivariate Distributions, Volume 1, Models and Applications, 2nd Edition by Samuel Kotz, N. Balakrishnan and Normal L. Johnson Continuous Univariate Distributions, Volume 1, 2nd Edition by Samuel Kotz, N. Balakrishnan and Normal L. Johnson Continuous Univariate Distributions, Volume 2, 2nd Edition by Samuel Kotz, N. Balakrishnan and Normal L. Johnson Discrete Multivariate Distributions by Samuel Kotz, N. Balakrishnan and Normal L. Johnson Univariate Discrete Distributions, 3rd Edition by Samuel Kotz, N. Balakrishnan and Normal L. Johnson Discover the latest advances in discrete distribution theory The Third Edition of the critically acclaimed Univariate Discrete Distributions provides a self-contained, systematic treatment of the theory, derivation, and application of probability distributions for count data. Generalized zeta-function and q-series distributions have been added and are covered in detail. New families of distributions, including Lagrangian-type distributions, are integrated into this thoroughly revised and updated text. Additional applications of univariate discrete distributions are explored to demonstrate the

flexibility of this powerful method. A thorough survey of recent statistical literature draws attention to many new distributions and results for the classical distributions. Approximately 450 new references along with several new sections are introduced to reflect the current literature and knowledge of discrete distributions. Beginning with mathematical, probability, and statistical fundamentals, the authors provide clear coverage of the key topics in the field, including: Families of discrete distributions Binomial distribution Poisson distribution Negative binomial distribution Hypergeometric distributions Logarithmic and Lagrangian distributions Mixture distributions Stopped-sum distributions Matching, occupancy, runs, and q-series distributions Parametric regression models and miscellanea Emphasis continues to be placed on the increasing relevance of Bayesian inference to discrete distribution, especially with regard to the binomial and Poisson distributions. New derivations of discrete distributions via stochastic processes and random walks are introduced without unnecessarily complex discussions of stochastic processes. Throughout the Third Edition, extensive information has been added to reflect the new role of computer-based applications. With its thorough coverage and balanced presentation of theory and application, this is an excellent and essential reference for statisticians and mathematicians.

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## AN INTRODUCTION TO PROBABILITY THEORY AND MATHEMATICAL STATISTICS

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**John Wiley & Sons Incorporated** Sets and classes; Calculus; Linear Algebra; Probability; Random variables and their probability distributions; Moments and generating functions; Random vectors; Some special distributions; Limit theorems; Sample moments and their distributions; The theory of point estimation; Neyman-pearson theory of testing of hypotheses; Some further results on hypotheses testing; Confidence estimation; The general linear hypothesis; nonparametric statistical inference; Sequential statistical inference.

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## STATISTICAL AND PROBABILISTIC METHODS IN ACTUARIAL SCIENCE

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**CRC Press** Statistical and Probabilistic Methods in Actuarial Science covers many of the diverse methods in applied probability and statistics for students aspiring to careers in insurance, actuarial science, and finance. The book builds on students' existing knowledge of probability and statistics by establishing a solid and thorough understanding of

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## STATISTICS FOR TECHNOLOGY

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## A COURSE IN APPLIED STATISTICS

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## PARAMETRIC STATISTICAL THEORY

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Walter de Gruyter

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## RECURRENT EVENTS DATA ANALYSIS FOR PRODUCT REPAIRS, DISEASE RECURRENCES, AND OTHER APPLICATIONS

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**SIAM** Survival data consist of a single event for each population unit, namely, end of life, which is modeled with a life distribution. However, many applications involve repeated-events data, where a unit may accumulate numerous events over time. This applied book provides practitioners with basic nonparametric methods for such data.

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## METHODS IN GUT MICROBIAL ECOLOGY FOR RUMINANTS

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**Springer Science & Business Media** As a result of various human activities, such as increase in human population, decrease in arable land due to soil degradation, urbanization, industrialization and associated increase in the demand for livestock products, dramatic changes are occurring in the global ruminant livestock sector. These changes include shifts in the size of regional livestock populations and in the types of management and feeding systems under which ruminant livestock are held, and increased demand of a wider range of quality attributes from animal agriculture, not just of the products themselves but also of the methods used in their production. The livestock sector will need to respond to new challenges of increasing livestock productivity while protecting environment and human health and conserving biodiversity and natural resources. The micro-organisms in the digestive tracts of ruminant livestock have a profound influence on the conversion of feed into end products, which can impact on the animal and the environment. As the livestock sector grows particularly in developing countries, there will be an increasing need to understand these processes for better management and use of both feed and other natural resources that underpin the development of sustainable feeding systems.

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## GOLDEN GULAG

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## PRISONS, SURPLUS, CRISIS, AND OPPOSITION IN GLOBALIZING CALIFORNIA

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**Univ of California Press** Since 1980, the number of people in U.S. prisons has increased more than 450%. Despite a crime rate that has been falling steadily for decades, California has led the way in this explosion, with what a state analyst called "the biggest prison building project in the history of the world." Golden Gulag provides the first detailed explanation for that buildup by looking at how political and economic forces, ranging from global to local, conjoined to produce the prison boom. In an informed and impassioned account, Ruth Wilson Gilmore examines this issue through statewide, rural, and urban perspectives to explain how the expansion developed from surpluses of finance capital, labor, land, and state capacity. Detailing crises that hit California's economy with particular ferocity, she argues that defeats of radical struggles, weakening of labor, and shifting patterns of capital investment have been key conditions for prison growth. The results—a vast and expensive prison system, a huge number of incarcerated young people of color, and the increase in punitive justice such as the "three strikes" law—pose profound and troubling questions for the future of California, the United States, and the world. Golden Gulag provides a rich context for this complex dilemma, and at the same time challenges many cherished assumptions about who benefits and who suffers from the state's commitment to prison expansion.

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## STATISTICAL TOLERANCE REGIONS

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## THEORY, APPLICATIONS, AND COMPUTATION

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**John Wiley & Sons** A modern and comprehensive treatment of tolerance intervals and regions The topic of tolerance intervals and tolerance regions has undergone significant growth during recent years, with applications arising in various areas such as quality control, industry, and environmental monitoring. Statistical Tolerance Regions presents the theoretical development of tolerance intervals and tolerance regions through computational algorithms and the illustration of numerous practical uses and examples. This is the first book of its kind to successfully balance theory and practice, providing a state-of-the-art treatment on tolerance intervals and tolerance regions. The book begins with the key definitions, concepts, and technical results that are essential for deriving tolerance intervals and tolerance regions. Subsequent chapters provide in-depth coverage of key topics including: Univariate normal distribution Non-normal distributions Univariate linear regression models Nonparametric tolerance intervals The one-way random model with balanced data The multivariate normal distribution The one-way random model with unbalanced data The multivariate linear regression model General mixed models Bayesian tolerance intervals A final chapter contains coverage of miscellaneous topics including tolerance limits for a ratio of normal random variables, sample size determination, reference limits and coverage intervals, tolerance intervals for binomial and Poisson distributions, and tolerance intervals based on censored samples. Theoretical explanations are accompanied by computational algorithms that can be easily replicated by readers, and each chapter contains exercise sets for reinforcement of the presented material. Detailed appendices provide additional data sets and extensive tables of univariate and multivariate tolerance factors. Statistical Tolerance Regions is an ideal book for courses on tolerance intervals at the graduate level. It is also a valuable reference and resource for applied statisticians, researchers, and practitioners in industry and pharmaceutical companies.

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## STATISTICAL COMPUTING WITH R

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**CRC Press** 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

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## UNDERSTANDING CREDIT DERIVATIVES AND RELATED INSTRUMENTS

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**Academic Press** *Understanding Credit Derivatives and Related Instruments, Second Edition* is an intuitive, rigorous overview that links the practices of valuing and trading credit derivatives with academic theory. Rather than presenting highly technical explorations, the book offers summaries of major subjects and the principal perspectives associated with them. The book's centerpiece is pricing and valuation issues, especially valuation tools and their uses in credit models. Five new chapters cover practices that have become commonplace as a result of the 2008 financial crisis, including standardized premiums and upfront payments. Analyses of regulatory responses to the crisis for the credit derivatives market (Basel III, Dodd-Frank, etc.) include all the necessary statistical and mathematical background for readers to easily follow the pricing topics. Every reader familiar with mid-level mathematics who wants to understand the functioning of the derivatives markets (in both practical and academic contexts) can fully satisfy his or her interests with the comprehensive assessments in this book. Explores the role that credit derivatives played during the economic crisis, both as hedging instruments and as vehicles that potentially magnified losses for some investors Comprehensive overview of single-name and multi-name credit derivatives in terms of market specifications, pricing techniques, and regulatory treatment Updated edition uses current market statistics (market size, market participants, and uses of credit derivatives), covers the application of CDS technology to other asset classes (CMBX, ABX, etc.), and expands the treatment of individual instruments to cover index products, and more

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## APPLIED EXTREME VALUE STATISTICS

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**MacMillan**

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## STATISTICAL ANALYSIS OF RELIABILITY AND LIFE-TESTING MODELS

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### THEORY AND METHODS

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Probabilistic models; Basic statistical inference; The exponential distribution; The weibull distribution; The gamma distribution; Extreme-value distribution; The logistic and other distribution; Goodness-of-fit tests.

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### TESTING STATISTICAL HYPOTHESES

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**Springer Verlag** This classic work, now available from Springer, summarizes developments in the field of hypotheses testing. Optimality considerations continue to provide the organizing principle; however, they are now tempered by a much stronger emphasis on the robustness properties of the resulting procedures. This book is an essential reference for any graduate student in statistics.

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## INTRODUCTION TO MATHEMATICAL PHYSICS

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### METHODS & CONCEPTS

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**Oxford University Press** *Introduction to Mathematical Physics* explains why and how mathematics is needed in describing physical events in space. It helps physics undergraduates master the mathematical tools needed in physics core courses. It contains advanced topics for graduate students, short tutorials on basic mathematics, and an appendix on Mathematica.

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## TRENDS AND INNOVATIONS IN INFORMATION SYSTEMS AND TECHNOLOGIES

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### VOLUME 1

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**Springer Nature** This book gathers selected papers presented at the 2020 World Conference on Information Systems and Technologies (WorldCIST'20), held in Budva, Montenegro, from April 7 to 10, 2020. WorldCIST provides a global forum for researchers and practitioners to present and discuss recent results and innovations, current trends, professional experiences with and challenges regarding various aspects of modern information systems and technologies. The main topics covered are A) Information and Knowledge Management; B) Organizational Models and Information Systems; C) Software and Systems Modeling; D) Software Systems, Architectures, Applications and Tools; E) Multimedia Systems and Applications; F) Computer Networks, Mobility and Pervasive Systems; G) Intelligent and Decision Support Systems; H) Big Data Analytics and Applications; I) Human-Computer Interaction; J) Ethics, Computers & Security; K) Health Informatics; L) Information Technologies in Education; M) Information Technologies in Radiocommunications; and N) Technologies for Biomedical Applications.

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## NOVEL BIODEGRADABLE MICROBIAL POLYMERS

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**Springer Science & Business Media** The NATO Advanced Research Workshop from which this book derives was conceived during Biotech-88, the Second Spanish Conference on Biotechnology, held at Barcelona in June 1988. The President of the Conference, Dr. Ricardo Guerrero, had arranged sessions on bacterial polymers which included lectures by five invited participants who, together with Dr. Guerrero, became the Organizing Committee for a projected meeting that would focus attention upon the increasing international importance of novel biodegradable polymers. The proposal found favour with the NATO Science Committee and, with Dr. R. Clinton Fuller and Dr. Robert W. Lenz as the co-Directors, Dr. Edwin A. Dawes as the Proceedings Editor, and Dr. Hans G. Schlegel, Dr. Alexander J.B. Zehnder and Dr. Ricardo Guerrero as members of the Organizing Committee, the meeting quickly took shape. To Dr. Guerrero we owe the happy choice of Sitges for the venue, a pleasant coastal resort 36 kilometres from Barcelona, which proved ideal. The sessions were held at the Palau de Maricel in appropriately impressive surroundings, and invaluable local support was provided by Mr. Jordi Mas-Castella and by Ms. Merce Piqueras. Much of the preparatory work fell upon the broad shoulders of Mr. Edward Knee, whose efforts are deeply appreciated. The Organizing Committee hopes that this Workshop will prove to be the first of a series which will aim to keep abreast of a rapidly expanding and exciting area of research that is highly relevant to environmental and industrial interests.

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## STATISTICS, TESTING, AND DEFENSE ACQUISITION

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### BACKGROUND PAPERS

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**National Academies Press** The Panel on Statistical Methods for Testing and Evaluating Defense Systems had a broad mandate to examine the use of statistics in conjunction with defense testing. This involved examining methods for software testing, reliability test planning and estimation, validation of modeling and simulation, and use of modern techniques for experimental design. Given the breadth of these areas, including the great variety of applications and special issues that arise, making a contribution in each of these areas required that the Panel's work and recommendations be at a relatively general level. However, a variety of more specific research issues were either brought to the Panel's attention by members of the test and acquisition community, e.g., what was referred to as Dubin's challenge (addressed in the Panel's interim report), or were identified by members of the panel. In many of these cases the panel thought that a more in-depth analysis or a more detailed application of suggestions or recommendations made by the Panel would either be useful as input to its deliberations or could be used to help communicate more individual views of members of the Panel to the defense test community. This resulted in several research efforts. Given various criteria, especially immediate relevance to the test and acquisition community, the Panel has decided to make available three technical or background papers, each authored by a Panel member jointly with a colleague. These papers are individual contributions and are not a consensus product of the Panel; however, the Panel has drawn from these papers in preparation of its final report: *Statistics, Testing, and Defense Acquisition*. The Panel has found each of these papers to be extremely useful and they are strongly recommended to readers of the Panel's final report.

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## CRYPTOGRAPHY AND NETWORK SECURITY

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### PRINCIPLES AND PRACTICE

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**Pearson** This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. *The Principles and Practice of Cryptography and Network Security Stallings' Cryptography and Network Security, Seventh Edition,*

introduces the reader to the compelling and evolving field of cryptography and network security. In an age of viruses and hackers, electronic eavesdropping, and electronic fraud on a global scale, security is paramount. The purpose of this book is to provide a practical survey of both the principles and practice of cryptography and network security. In the first part of the book, the basic issues to be addressed by a network security capability are explored by providing a tutorial and survey of cryptography and network security technology. The latter part of the book deals with the practice of network security: practical applications that have been implemented and are in use to provide network security. The Seventh Edition streamlines subject matter with new and updated material — including Sage, one of the most important features of the book. Sage is an open-source, multiplatform, freeware package that implements a very powerful, flexible, and easily learned mathematics and computer algebra system. It provides hands-on experience with cryptographic algorithms and supporting homework assignments. With Sage, the reader learns a powerful tool that can be used for virtually any mathematical application. The book also provides an unparalleled degree of support for the reader to ensure a successful learning experience.

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## THE WEIBULL DISTRIBUTION

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### A HANDBOOK

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**CRC Press** The Most Comprehensive Book on the Subject Chronicles the Development of the Weibull Distribution in Statistical Theory and Applied Statistics Exploring one of the most important distributions in statistics, The Weibull Distribution: A Handbook focuses on its origin, statistical properties, and related distributions. The book also presents various approaches to estimate the parameters of the Weibull distribution under all possible situations of sampling data as well as approaches to parameter and goodness-of-fit testing. Describes the Statistical Methods, Concepts, Theories, and Applications of This Distribution Compiling findings from dozens of scientific journals and hundreds of research papers, the author first gives a careful and thorough mathematical description of the Weibull distribution and all of its features. He then deals with Weibull analysis, using classical and Bayesian approaches along with graphical and linear maximum likelihood techniques to estimate the three Weibull parameters. The author also explores the inference of Weibull processes, Weibull parameter testing, and different types of goodness-of-fit tests and methods. Successfully Apply the Weibull Model By using inferential procedures for estimating, testing, forecasting, and simulating data, this self-contained, detailed handbook shows how to solve statistical life science and engineering problems.

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### HANDBOOK OF THE NORMAL DISTRIBUTION

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**Marcel Dekker Incorporated** A collection of results relating to the normal distribution, tracing the historical development of normal law and providing a compendium of properties. The revised edition introduces the most current estimation procedures for normally distributed samples for researchers and students in theoretical and applied statistics, including expanded treatments of: bivariate normal distribution, normal integrals, Mills' ratio, asymptotic normality, point estimation, and statistical intervals. Annotation copyright by Book News, Inc., Portland, OR

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### EXPONENTIATED DISTRIBUTIONS

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**Springer** This book contains entirely new results, not to be found elsewhere. Furthermore, additional results scattered elsewhere in the literature are clearly presented. Several well-known distributions such as Weibull distributions, exponentiated Burr type XII distributions and exponentiated exponential distributions and their properties are demonstrated. Analysis of real as well as well-simulated data are analyzed. A number of inferences based on a finite mixture of distributions are also presented.